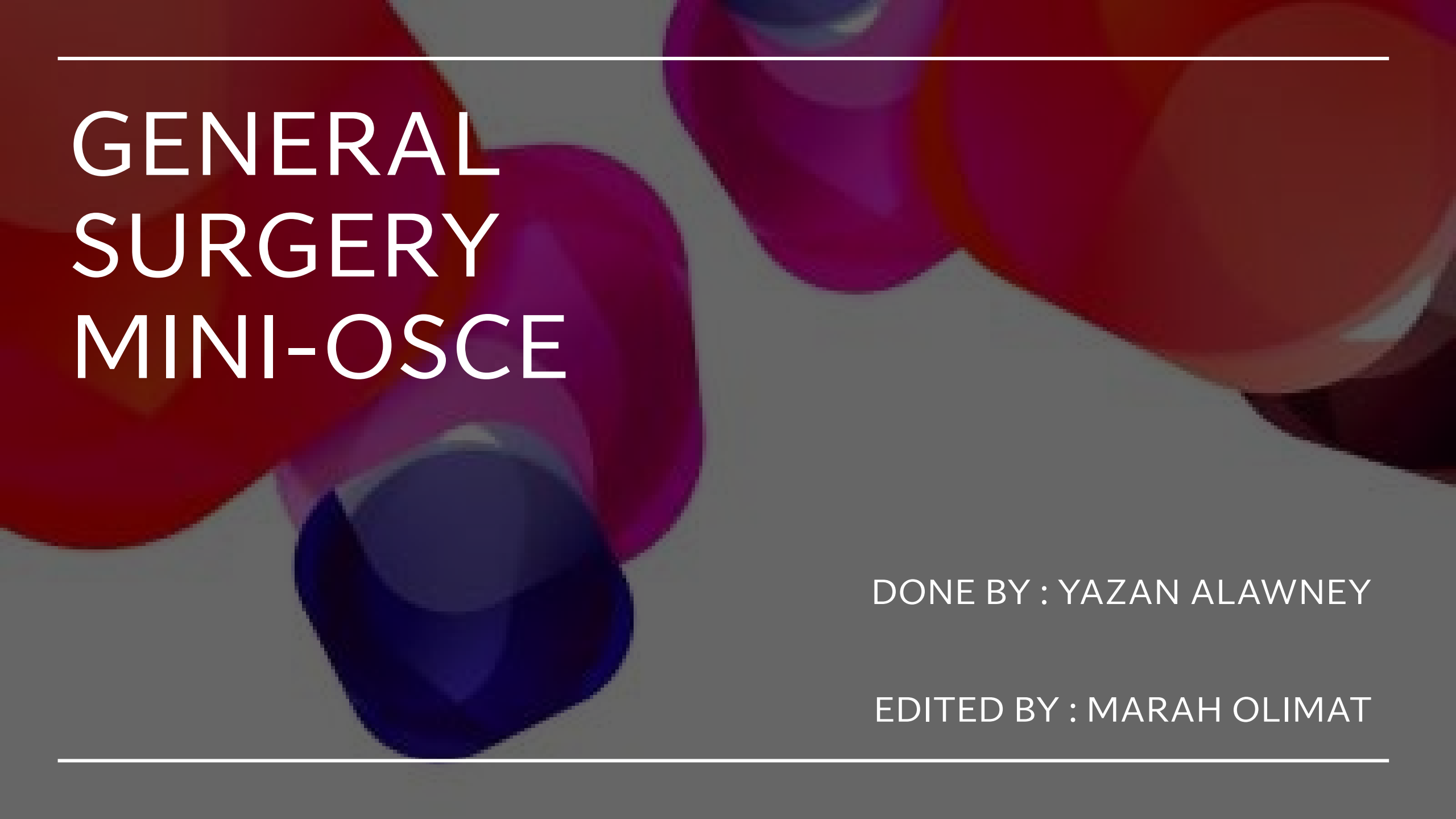


GENERAL SURGERY MINI-OSCE

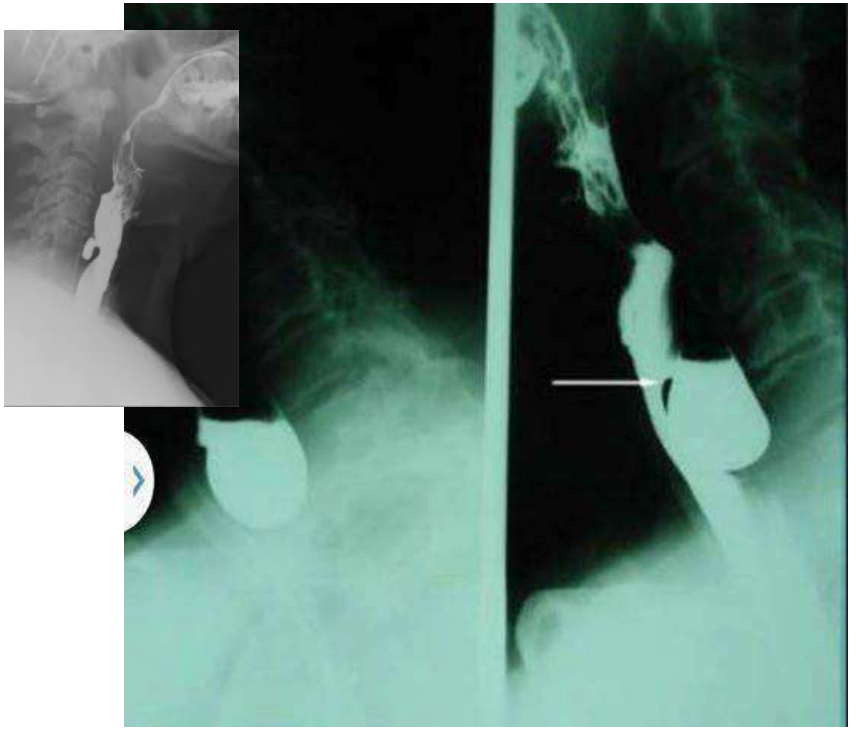
DONE BY : YAZAN ALAWNEY

EDITED BY : MARAH OLIMAT

CONTENTS

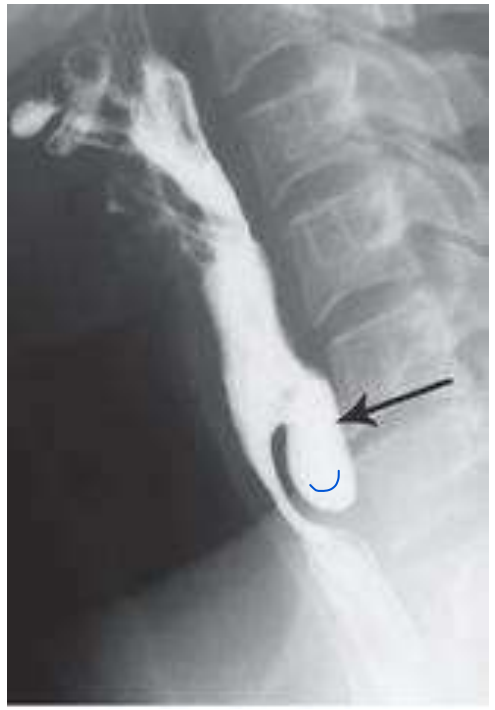
Gastrointestinal Tract (Esophagus, Stomach & Intestines)

Q: A 60 yo male patient came complaining of Dysphagia, halitosis, swelling in the neck:



Q1: What is the Dx?

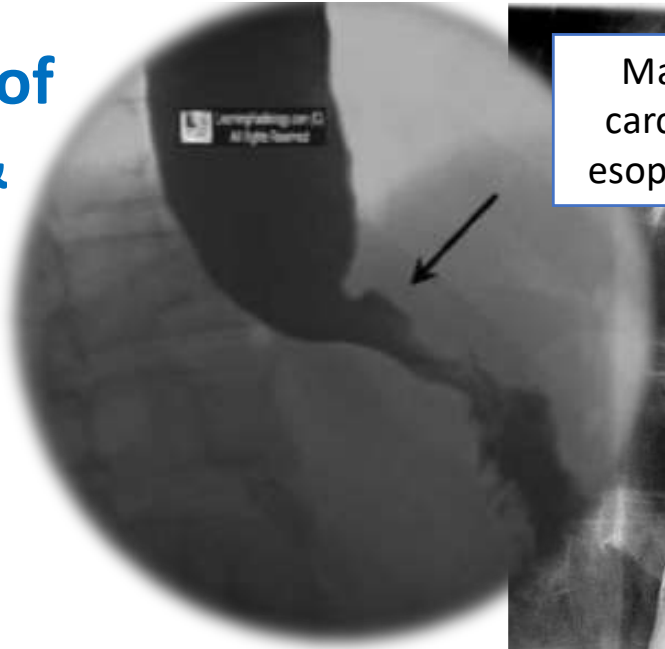
Pharyngeal pouch (also called zenker)



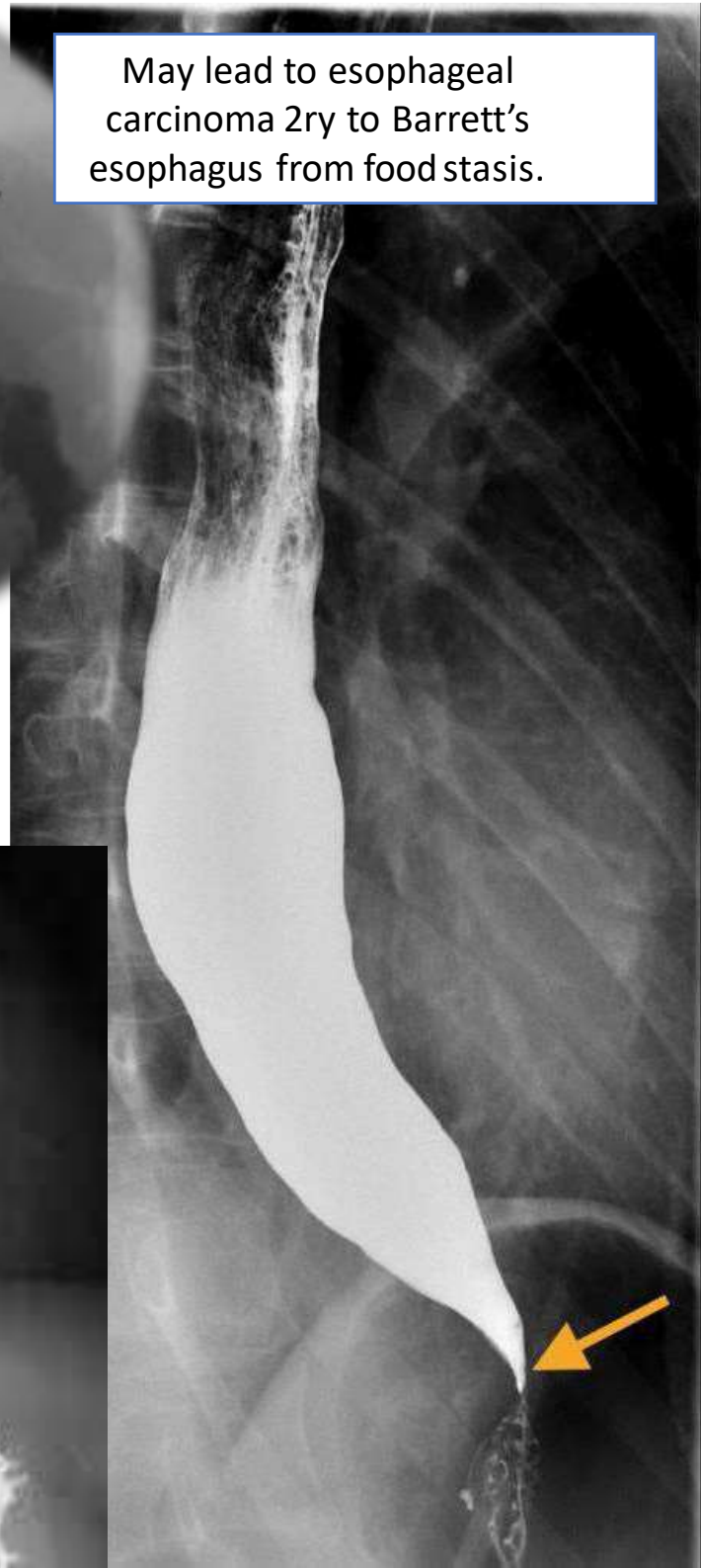
Q2: How to Dx the pt?

Barium Swallow

Q: Patient came complaining of dysphagia for both liquids & solids:



May lead to esophageal carcinoma 2ry to Barrett's esophagus from food stasis.



Q1: What is the sign?

- Bird peak sign

Q2: Name the study?

- Barium swallow

Q3: What is the definitive Dx?

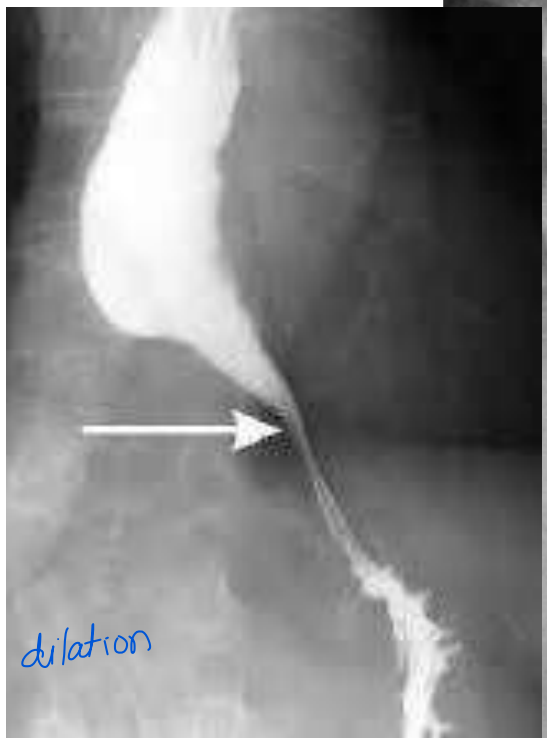
- Achalasia

Q4: What is the definitive diagnostic test?

- Manometry

Q5: Mention 2 modalities of Mx?

1) Esophageal sphincter (Hellers) Myotomy
2) Balloon dilation Pneumatic dilation



Q: a pt came complaining of dysphagia for both solids and liquids. + Regurgitation + Chest pain

Q1: What is the Dx?

Diffuse Esophageal Spasm (DES)

Q2: What is the sign?

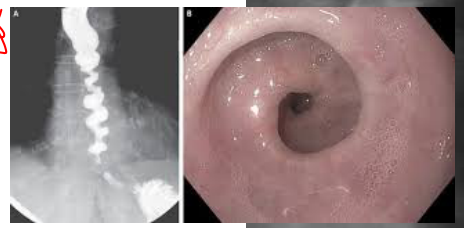
corkscrew appearance

Q3: How to Diagnose?

1) Barium

2) Manometry (most accurate)

3) endoscopy



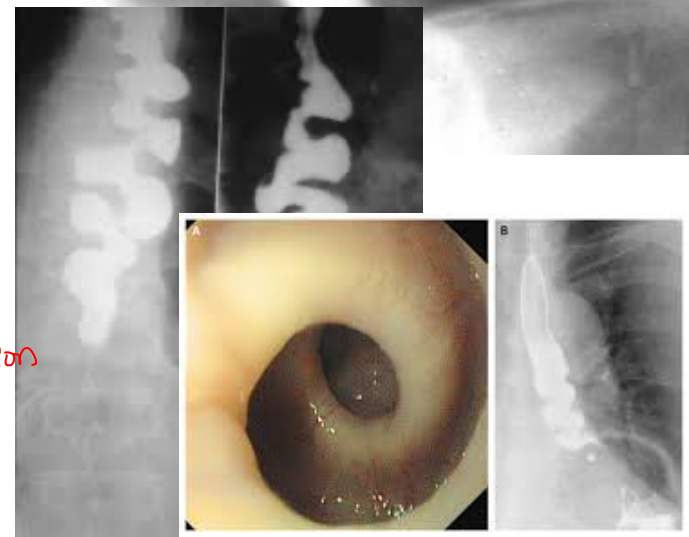
Q4: What is the Mx?

diltiazem or nifidipine and nitrates (CCB)

Q5: How to differentiate it from Nut-cracker esophagus?

By manometry (the nut cracker: peristaltic contractions with high amplitude, while the DES is non-peristaltic with high contractions)

so powerful contraction



Q1: Define Barret's esophagus?

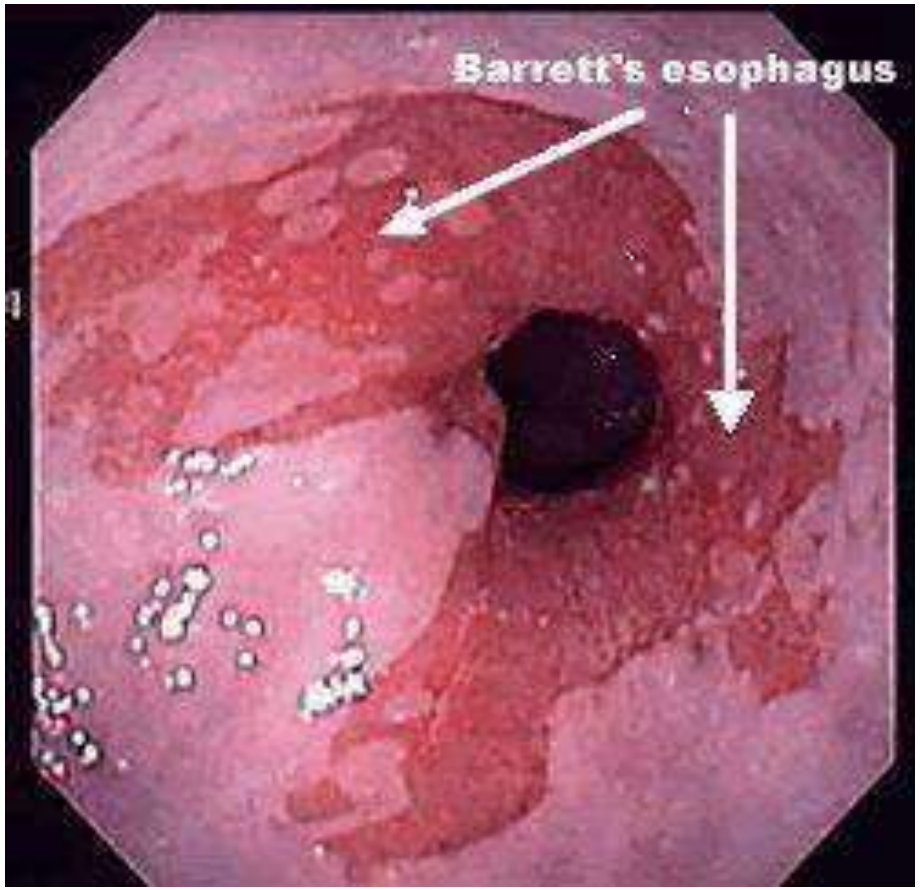
Change in the normally squamous lining of the lower esophagus to columnar epithelium (metaplasia)

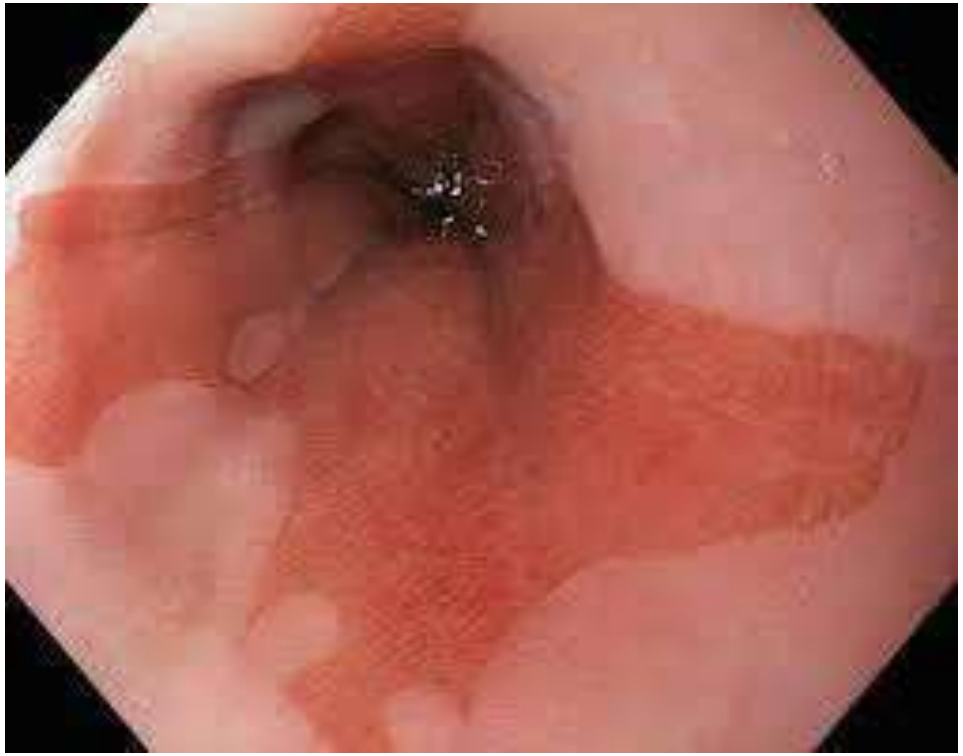
Q2: What common type of cancer you will see? Adenocarcinoma

Q3: What is the cause? Chronic GERD

Q4: How to Dx? Endoscopy

Q5: Mx? PPI and follow up





Q1: What is the Dx?

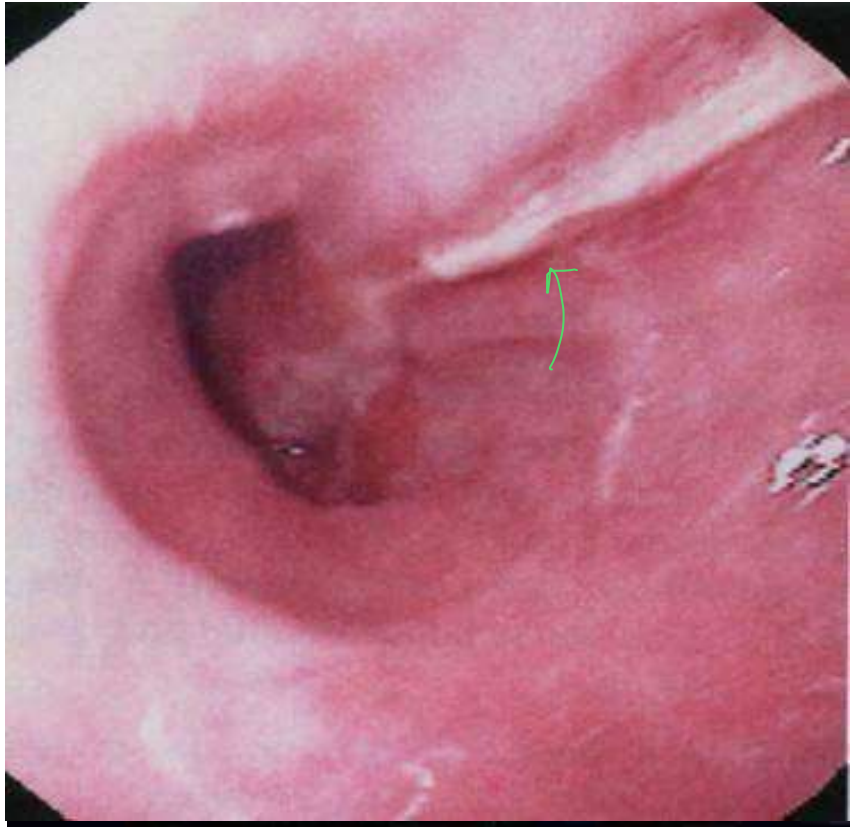
Mallory Weiss Tear Syndrome

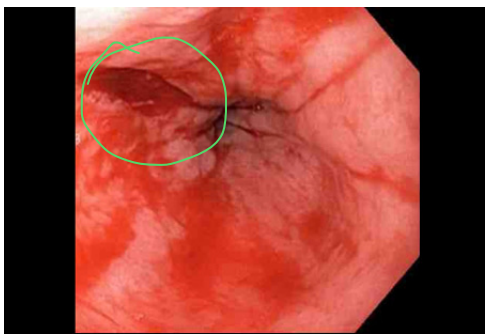
Q2: How to Diagnose it?

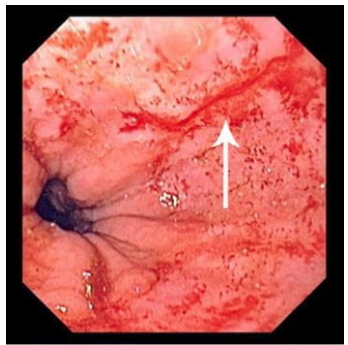
Hx & Upper Endoscopy

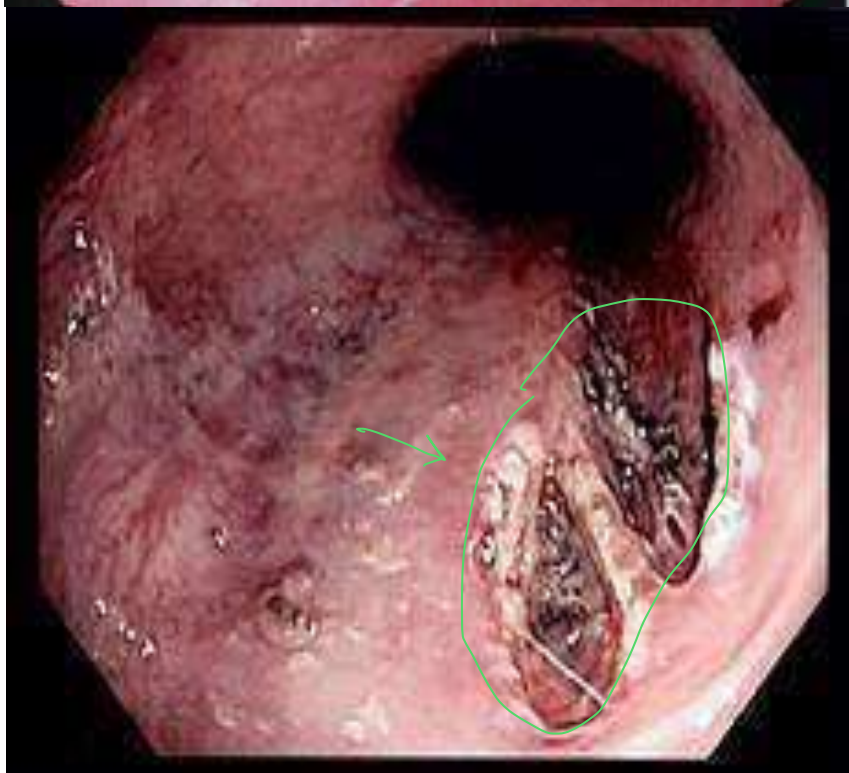
Q3: Mx?

It resolves spontaneously









Q: Patient with Intermittent dysphagia for solids only with no pain:

Q1: What is the Dx?

Schatzki ring (lower esophageal ring)

Q2: Name an abnormality associated with it?

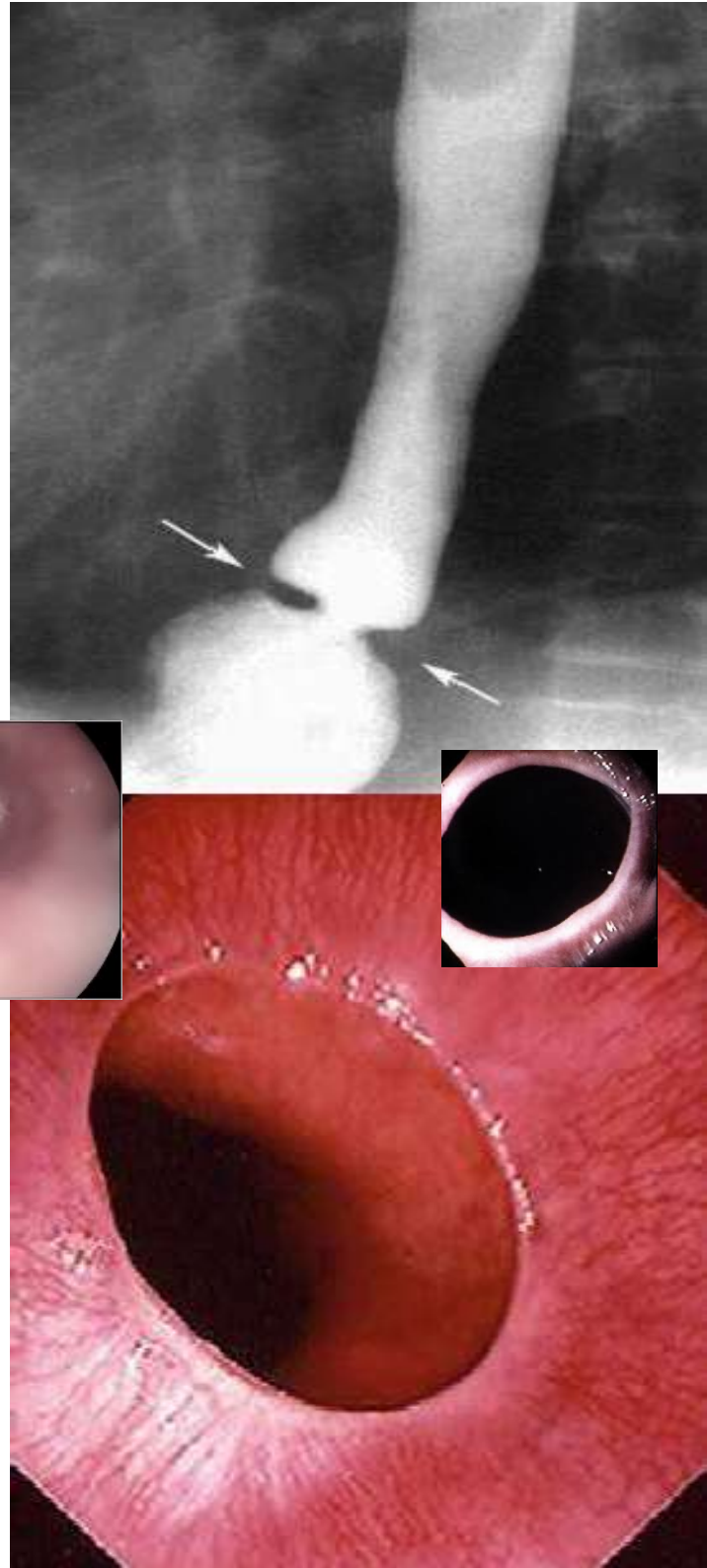
Hiatal Hernia

Q3: How to diagnose it?

Barium swallow and endoscopy

Q4: Mx?

Dilation by bougie method or through the scope hydrostatic balloon, and the patients are placed on PPI after dilation



Q: Patient with Intermittent dysphagia for solids only with no pain:

Q1: What is the Finding?

Esophageal Webs

(E.g. Plummer vinson syndrome)

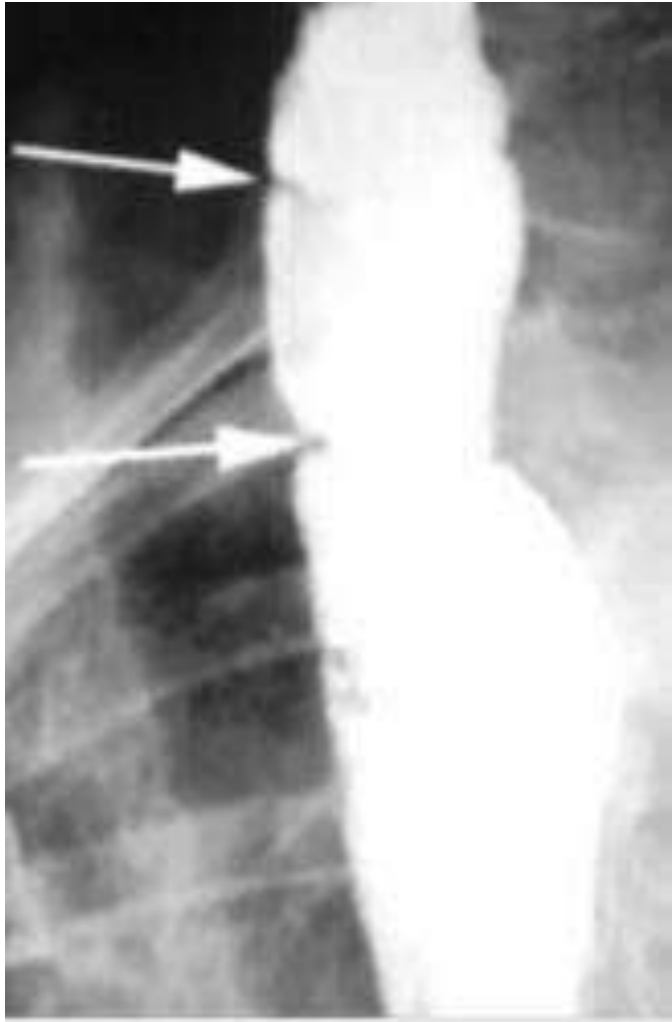
↳ iron deficency anemia + dysphagia + esophageal webs

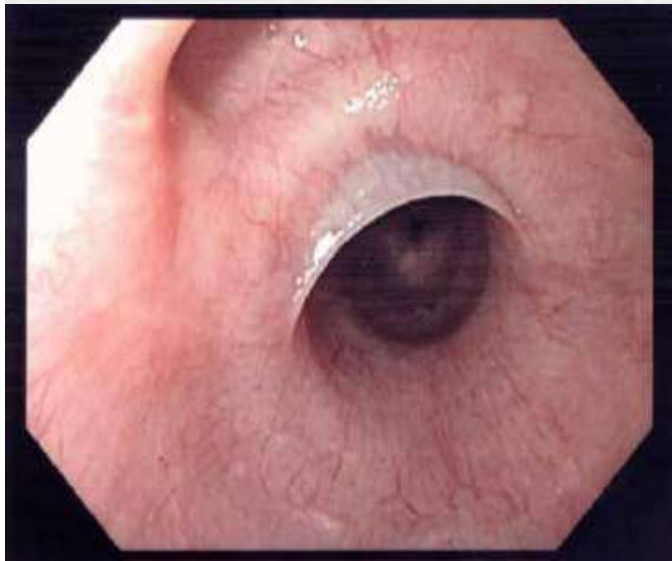
Q2: How to diagnose it?

Barium swallow and endoscopy

Q3: Mx?

Dilation





Plummer-Vinson syndrome:

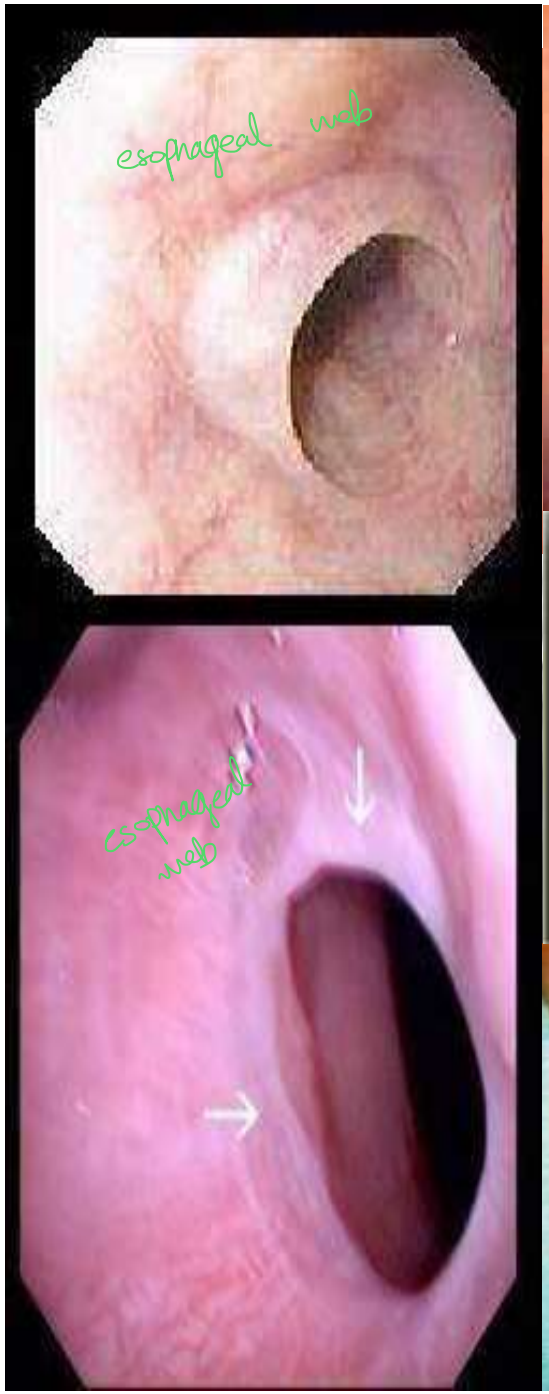
the classic triad

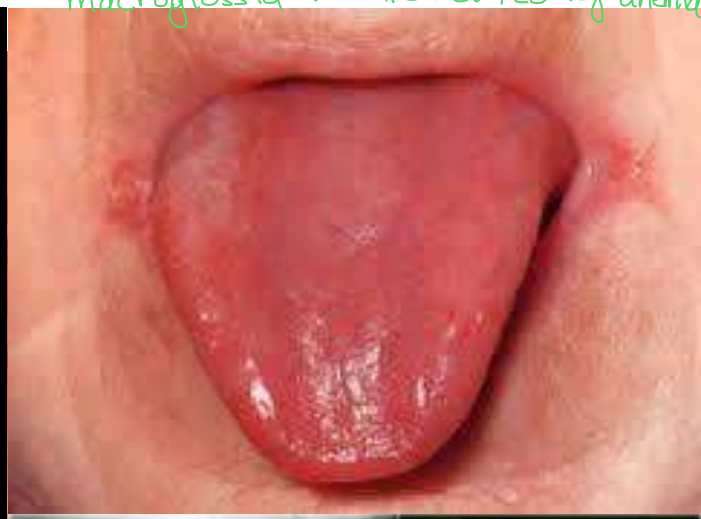
1. Esophageal web
2. IDA
3. Dysphagia.
4. **Spoon-shaped nails**
5. Atrophic oral & tongue mucosa.

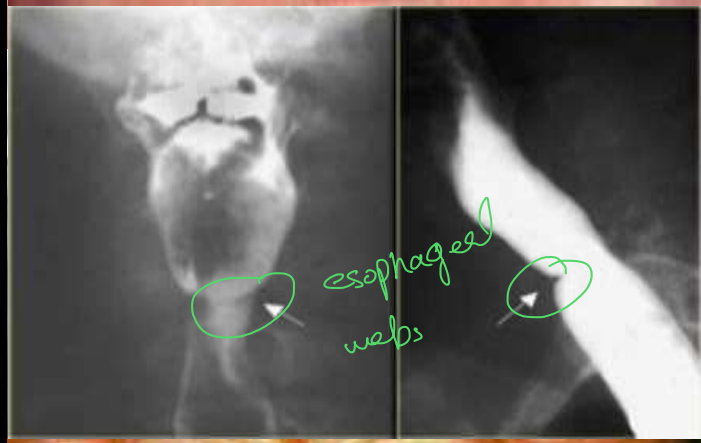
signs of IDA only

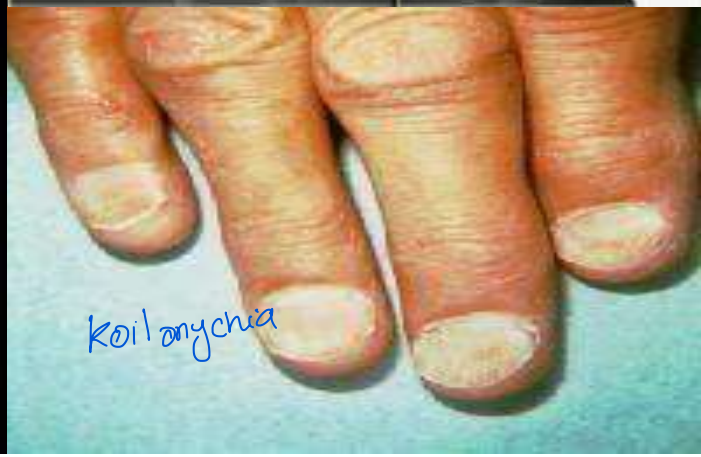
*especially occurs in elderly women; 10% develop squamous cell carcinoma.

*May respond to treatment of IDA.



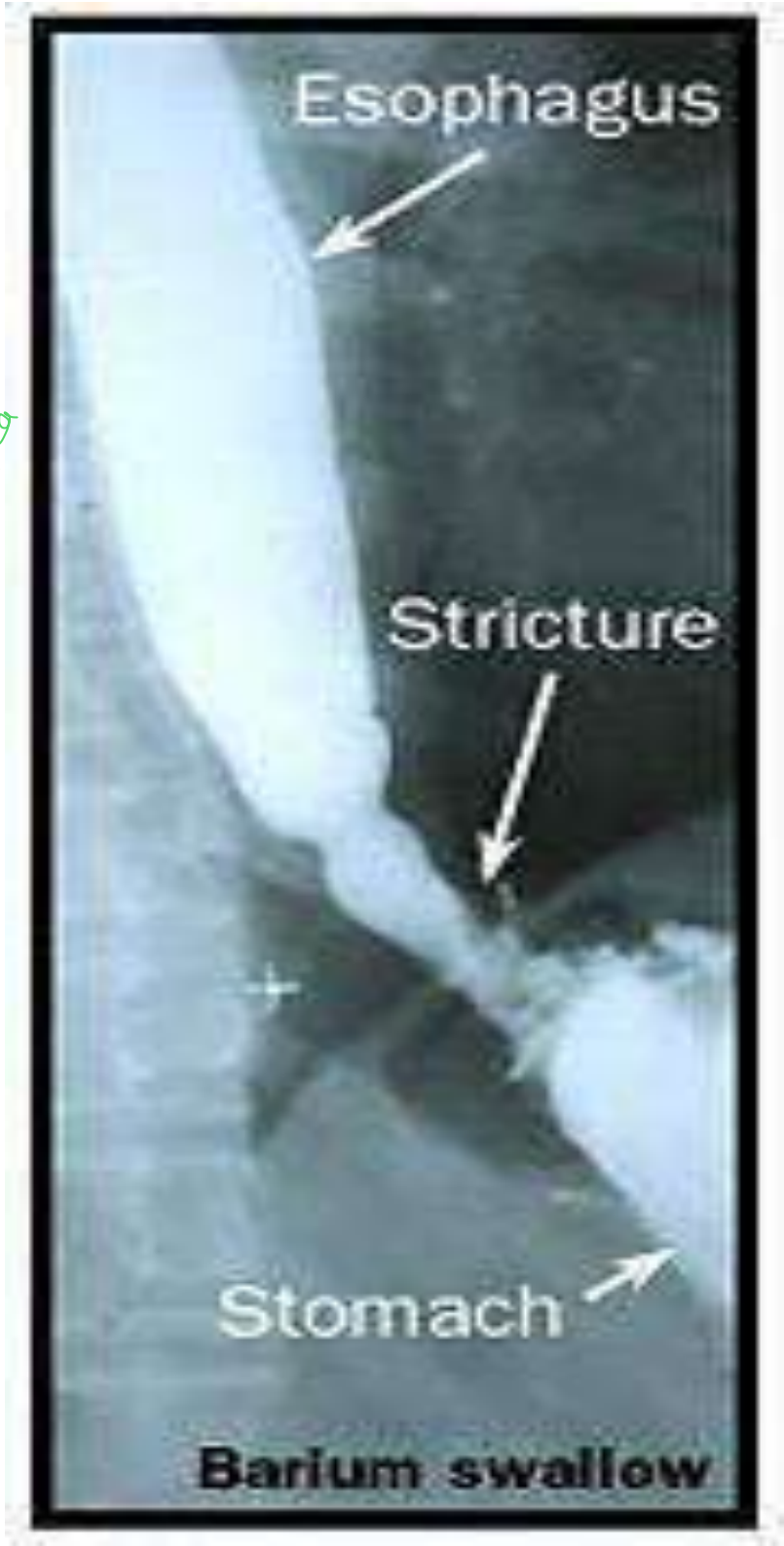






Esophageal stricture

- Dysphagia : constant/ slowly progressive/ solids then liquids.
- Causes : long history of incomplete treated reflux/ prolonged NG tube placement/ lye ingestion.
  - Dx : barium swallow.
  - Treatment: dilation.

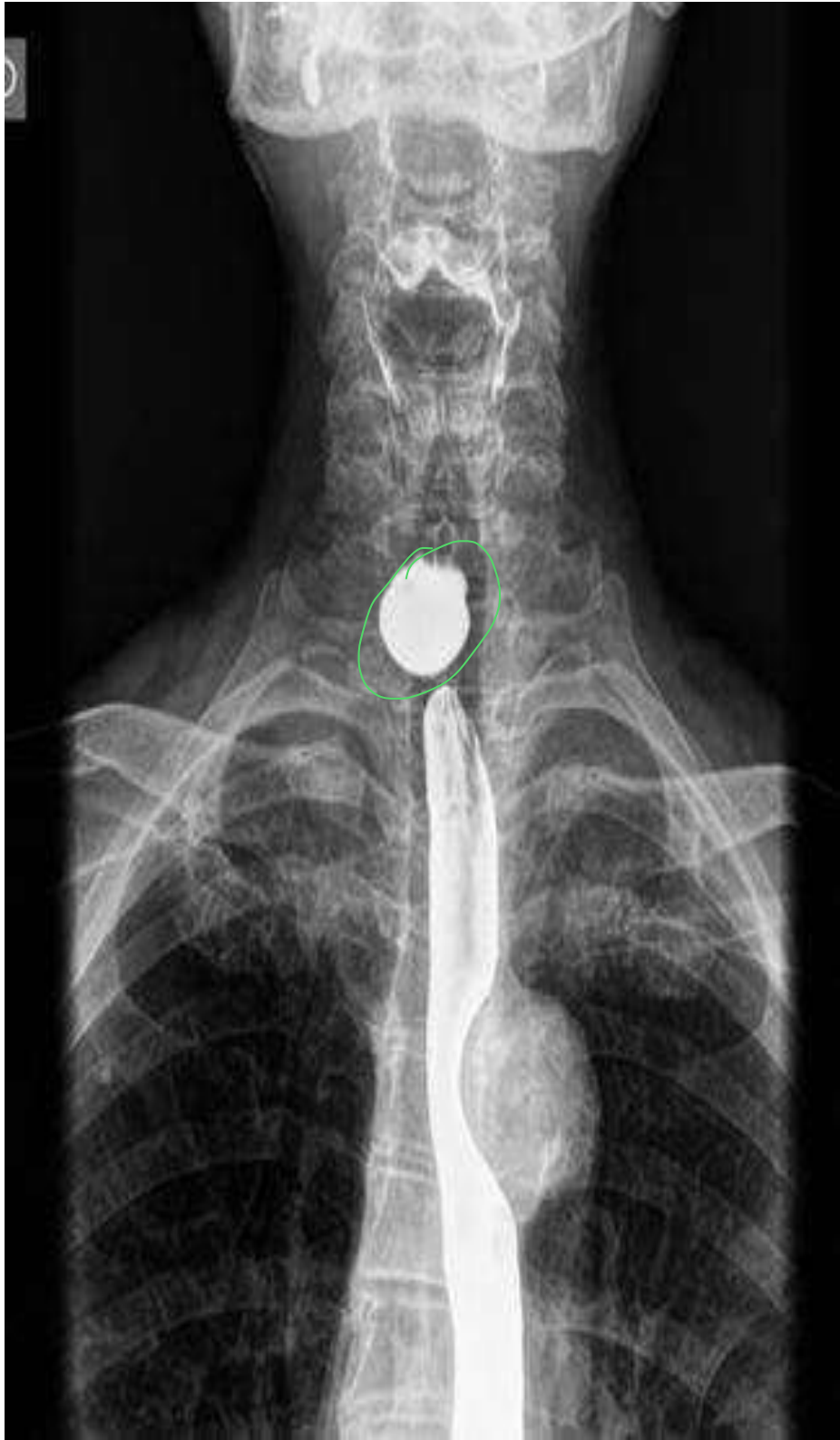


Zenker's diverticulum:

- It is a **false diverticulum** (not involving all layers of the esophageal wall).
- Outpouching of the upper esophagus.
- **Halitosis** / food regurgitation/ dysphagia.
- Elderly.
- Dx : **barium swallow**/ endoscopy and NG tube are contraindicated (risk of perforation).
- Treatment : **surgical resection.**

gold standard

Flexible endoscopic cricopharyngeal myotomy

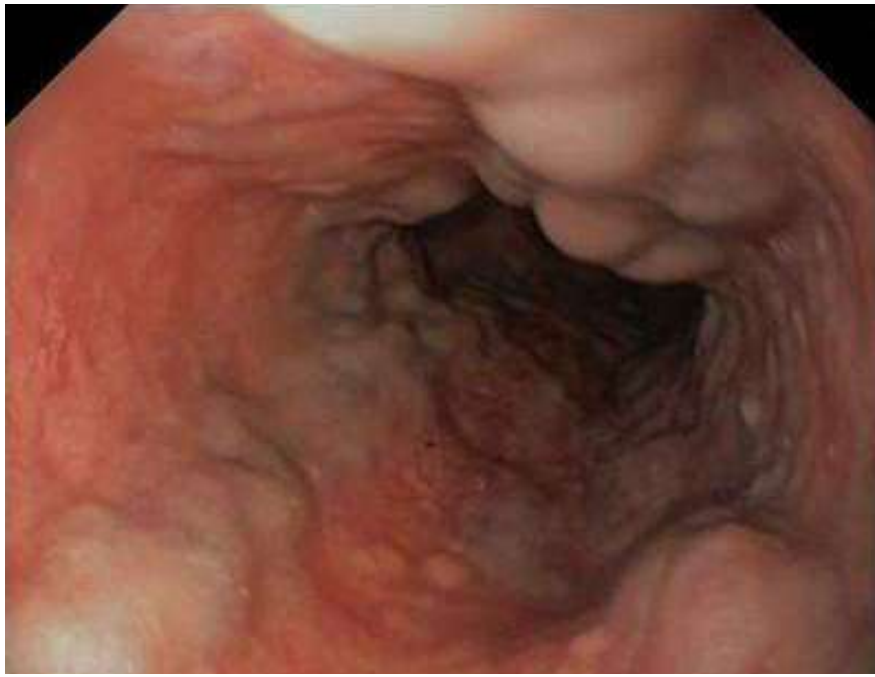


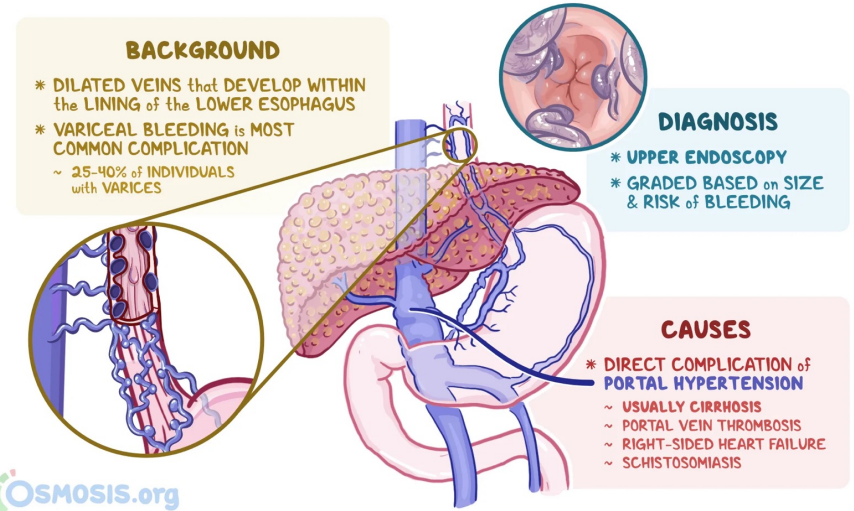
Q1: What is the Dx?

Esophageal Varices

Q2: Mx?

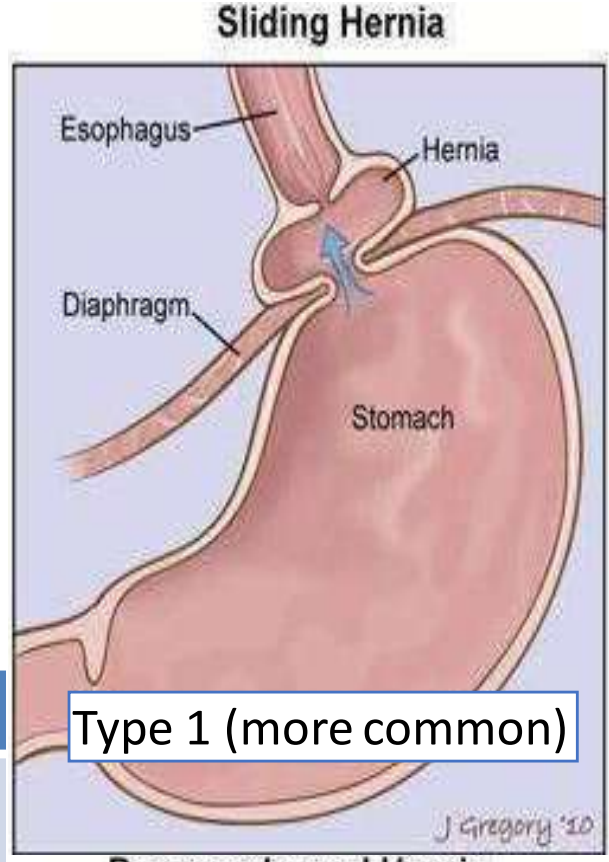
1) Therapeutic endoscopy
2) Ligation, banding, sclerotherapy
3) β-blockers (e.g. propranolol).

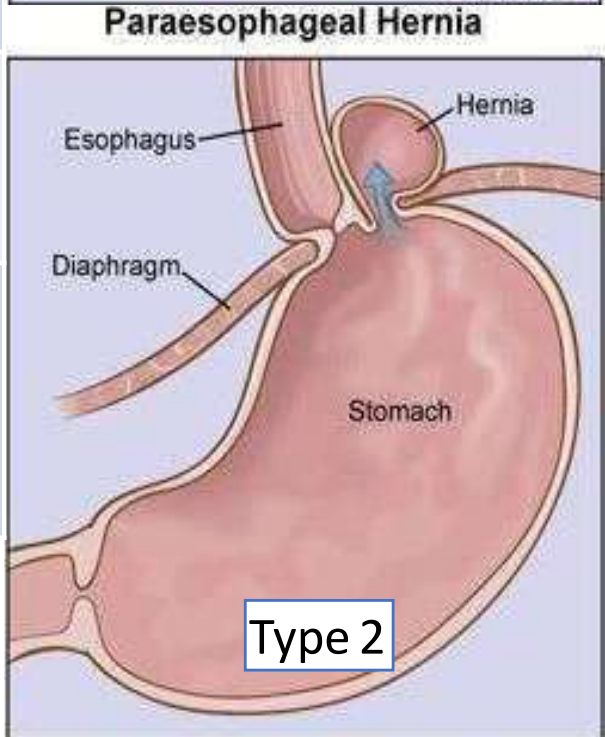


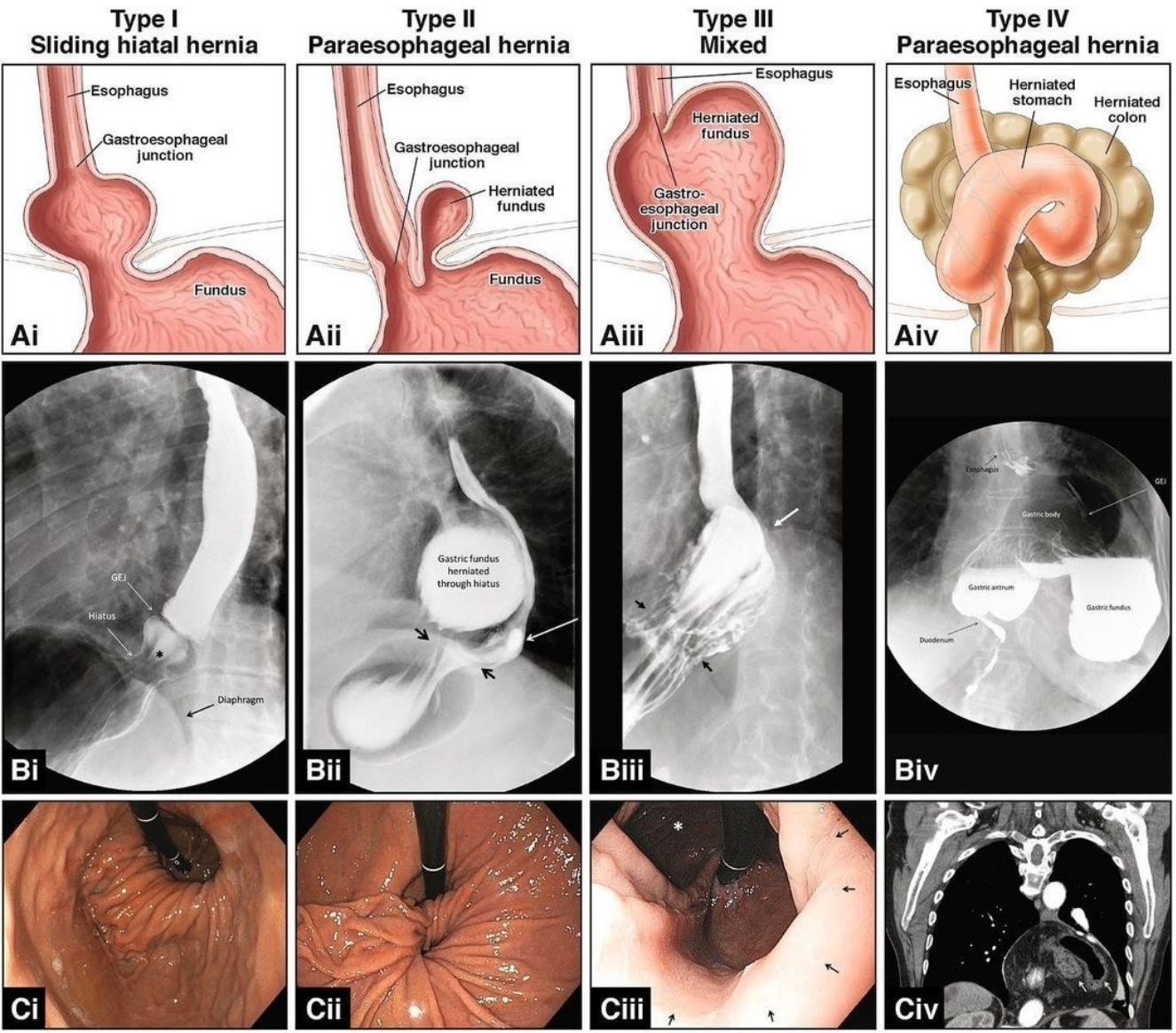


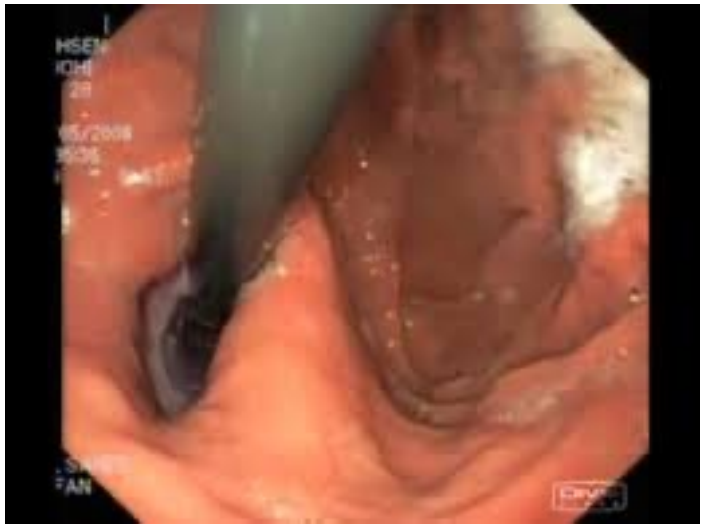
Hiatal hernia

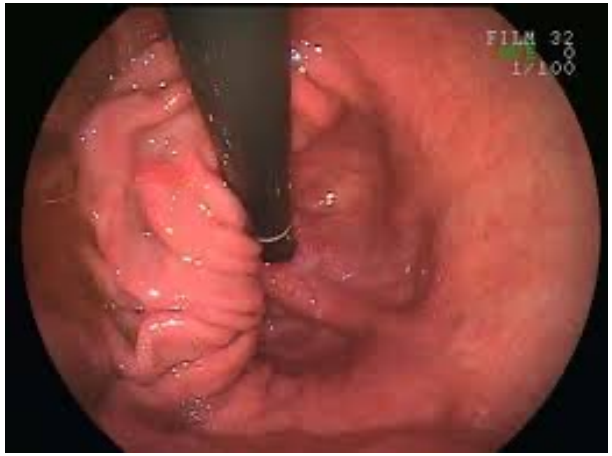
Sliding hernia (type 1)	Para esophageal hernia (2)
Mostly asymptomatic but can cause reflux	Dysphagia/ stasis gastric ulcer/ no reflux
Complications :reflux> esophagitis> Barrett's esophagus > cancer/ aspiration pneumonia	Complications: hemorrhage/obstruction/ strangulation.
Treatment: medical with antacids, PPI, H_2 blockers/ if failed : surgical (lap. Nissen fundoplication)	Treatment : surgical.

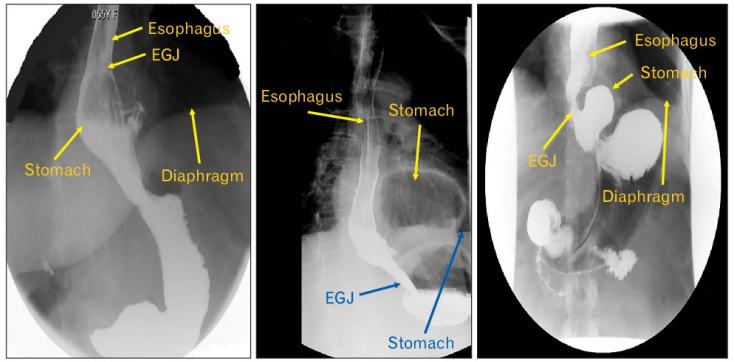










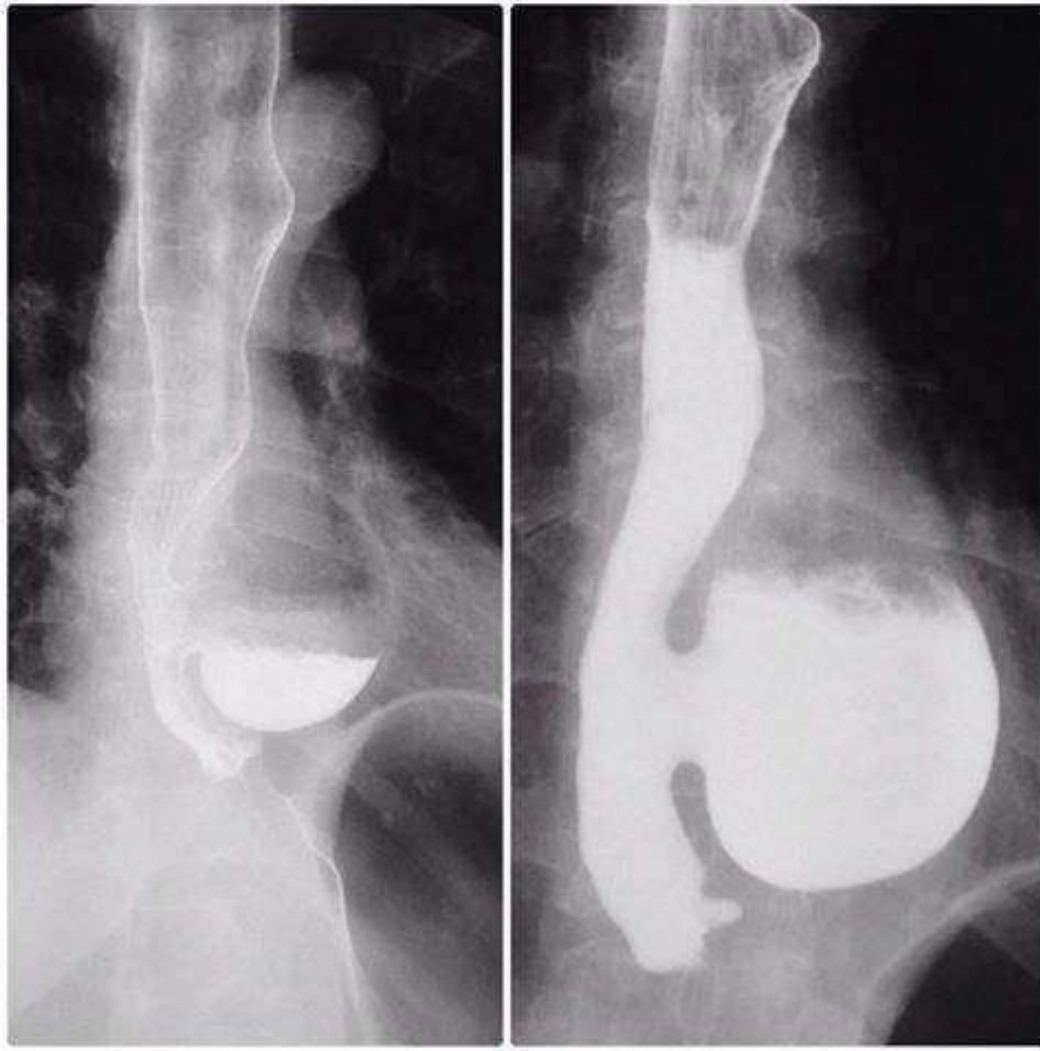


Sliding/type 1 Paraesophageal/type 2 Mixed/type 3

Epiphrenic diverticulum

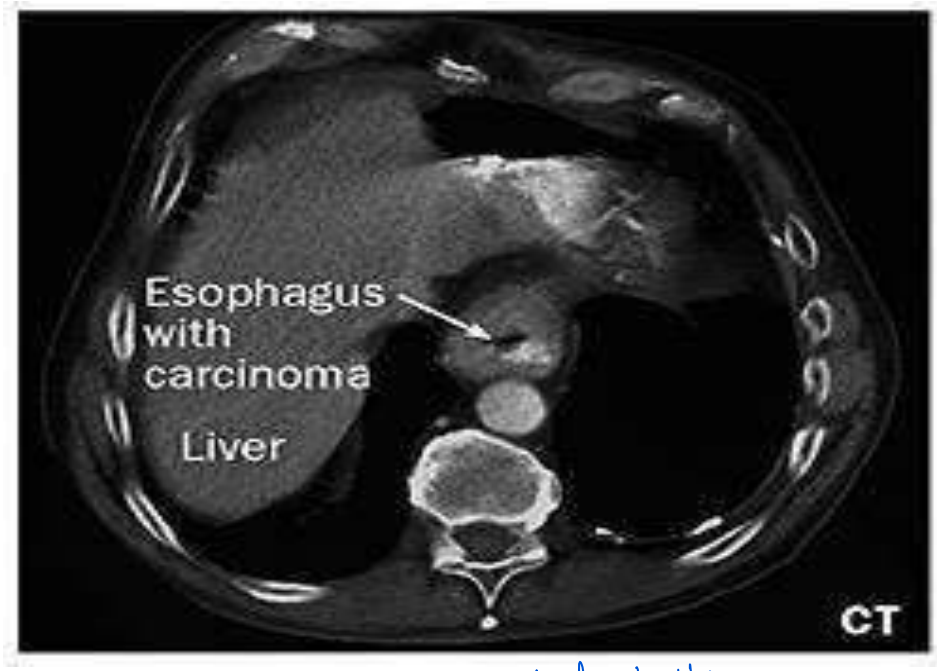
Presentation: Dysphagia to solid foods with upper abdominal discomfort.

Often associated with hiatal hernia.

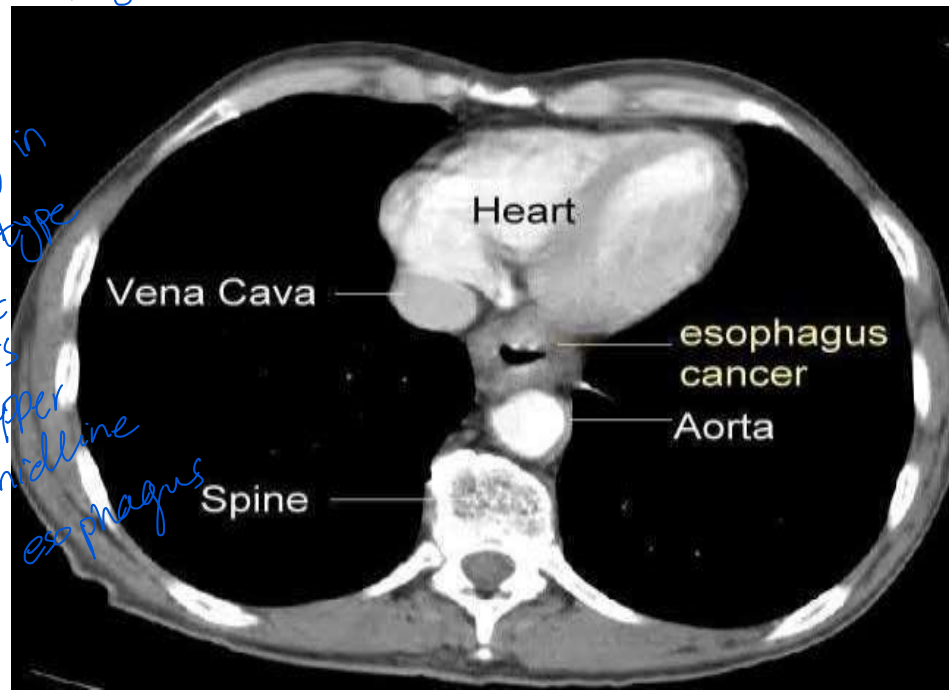


esophageal cancer

-is more after 50 years, most between 60-70 years.
-more in males.
-**risk factors**: smoking, alcohol, and hot fluid drinkers.
-**Relevant Hx:** GERD and Barrett's, stricture, Plummer Vinson syndrome, Celiac disease, Esophageal achalasia and diverticulum.
-common **symptoms** are dysphagia, reflux, weight loss, and mediastinal invasion symptoms (chest pain, hoarseness, etc.)
-they might also suffer from anemia due to nutritional deficiency.
-**treatment** : surgical resection if small and localized.
- If large or Metz: combination of CTX and RTX prior to surgery.



Progressive continous to solid intially



especially in scc type as it occurs in upper & middline of esophagus

easy mnemonic to remember esophageal CA risk factors
ABCDEFGH:

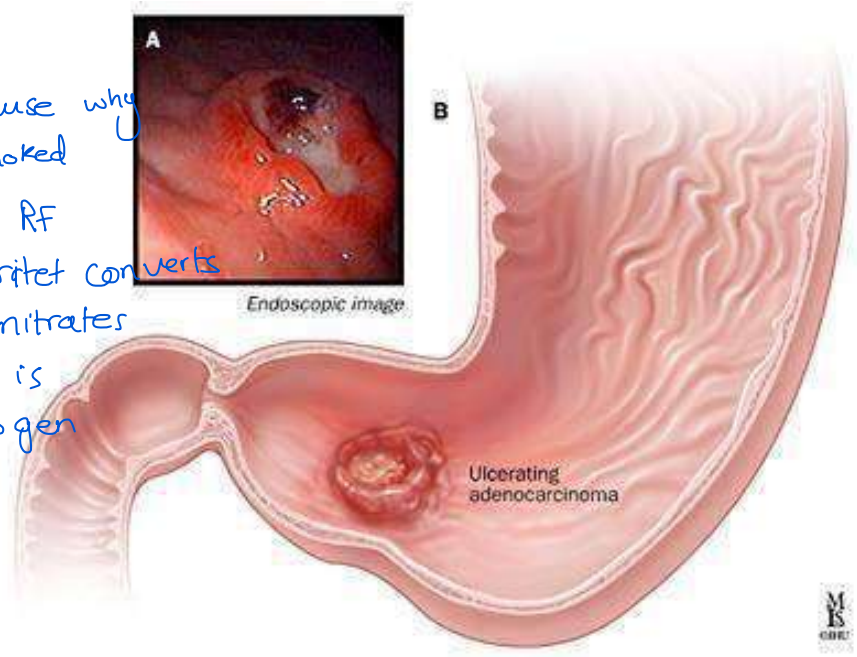
A- Achalasia/Alcohol
B- Barrett's esophagus
C- Cigarettes
D- Diverticula
E- Esophageal web, stricture
F- Fat/Family hx
G- GERD
H- Hot liquid

Gastric cancer

the cause why its high in Japan :C

Adenocarcinoma: m.c type (95%).
R.F: diet (smoked meat , high nitrates , low fruits and vegetables) , smoking , family history , blood group type A , H. pylori , prev. partial gastrectomy , adenomatous gastric polyps , atrophic gastritis .

the cause why the smoked Food is RF as nitrites converts into nitrates which is carcinogen



Ulcerating adenocarcinoma

Subtypes:

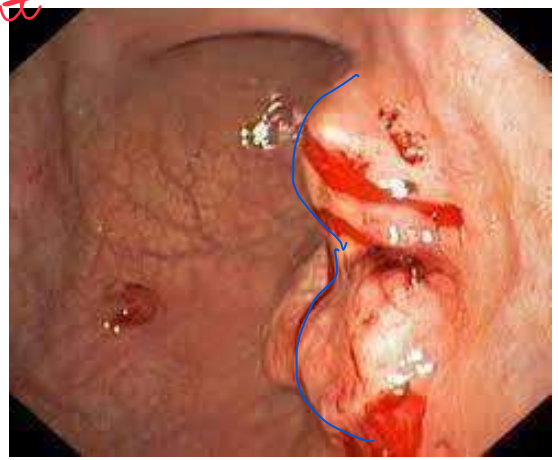
mets by lymphatic & transmural

diffuse type: 70% ,from lamina propria, proximal , worse than intestinal type , invasive and Metz , in younger pt.

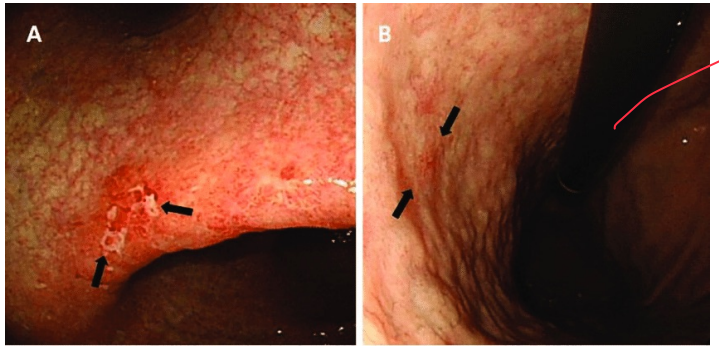
so important early dx!

mets by hematogenus

intestinal type: 30%,from gastric mucosa, distal , ass with H.pylori , well formed glandular structures.



Intestinal type

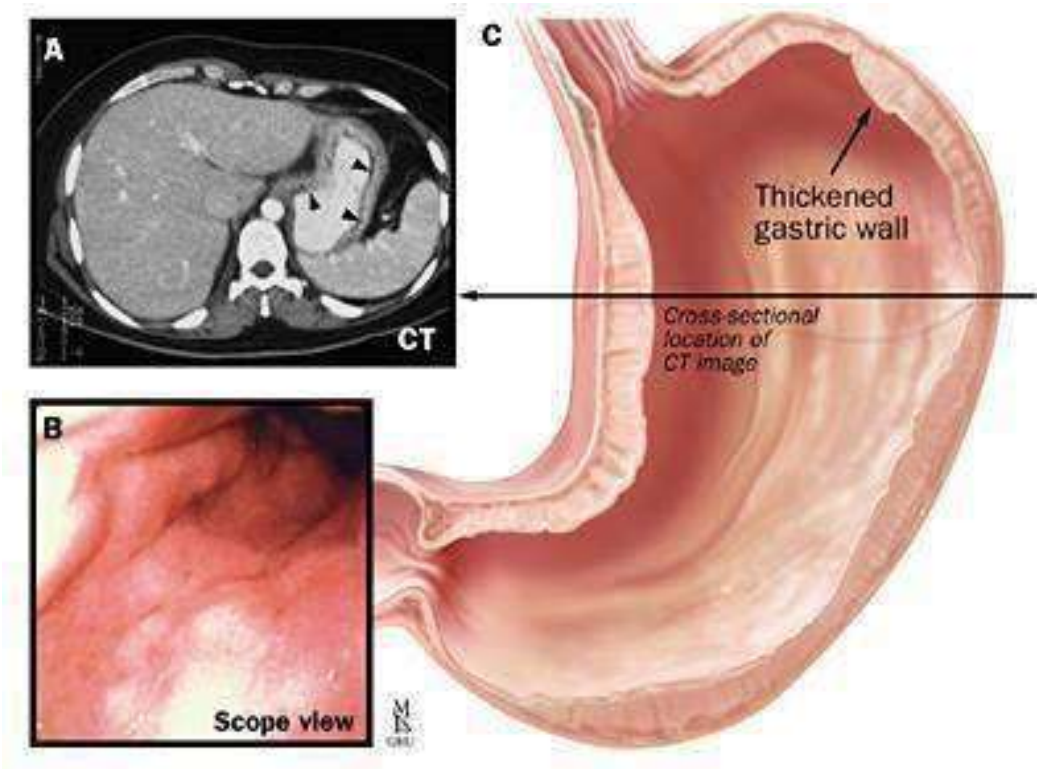


diffuse type

Diagnosis: endoscopic with biopsy is the method of choice/ double contrast barium meal .

Treatment: surgical resection with wide margin >5cm and lymph nodes dissection .

If tumor is proximal or midbody do total gastrectomy with roux-en-y ,if tumor is distal do distal subtotal gastrectomy .



A. CT image of Linitis plastic (arrows denotes a thickened gastric wall).

Linitis Plastica (leather bottle): when the entire stomach is involved and looks thickened .

Q1: What is the Dx?

Gastrointestinal Stromal Tumor (GIST)

Q2: What is the MC site?

Greater curvature (Stomach)

Q3: What are the cells of origin?

Cells of Cajal

Q4: Name the Gene Mutation?

C-KIT

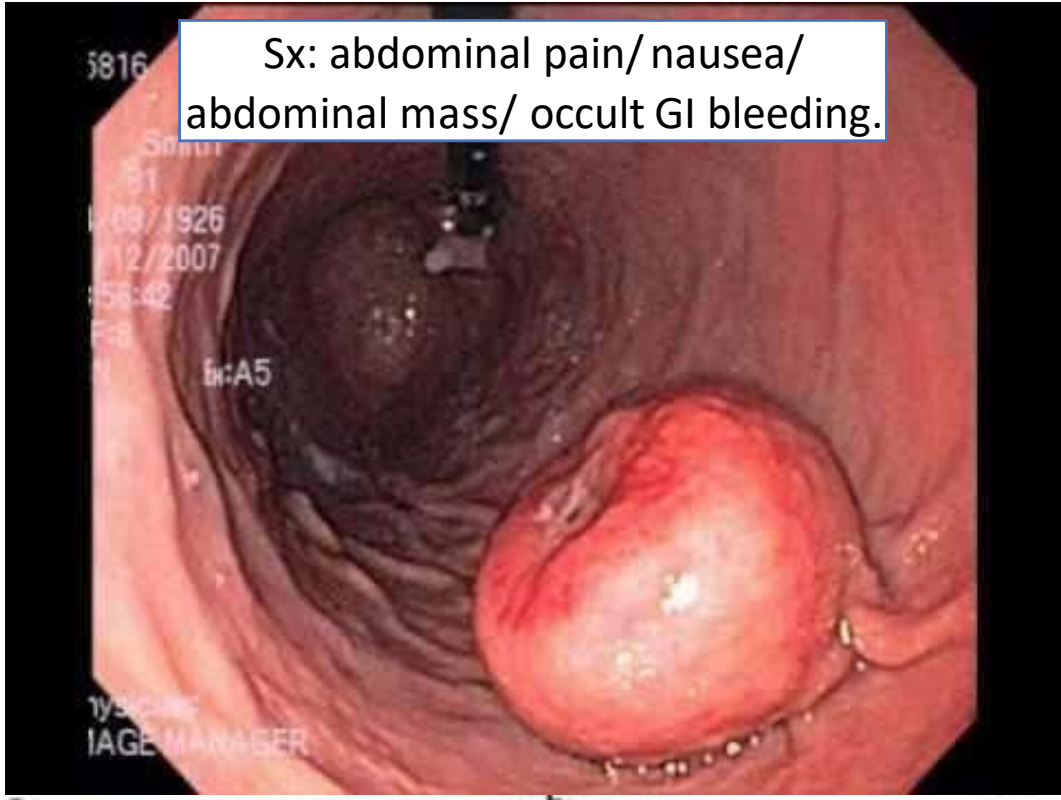
Q5: How to Mx?

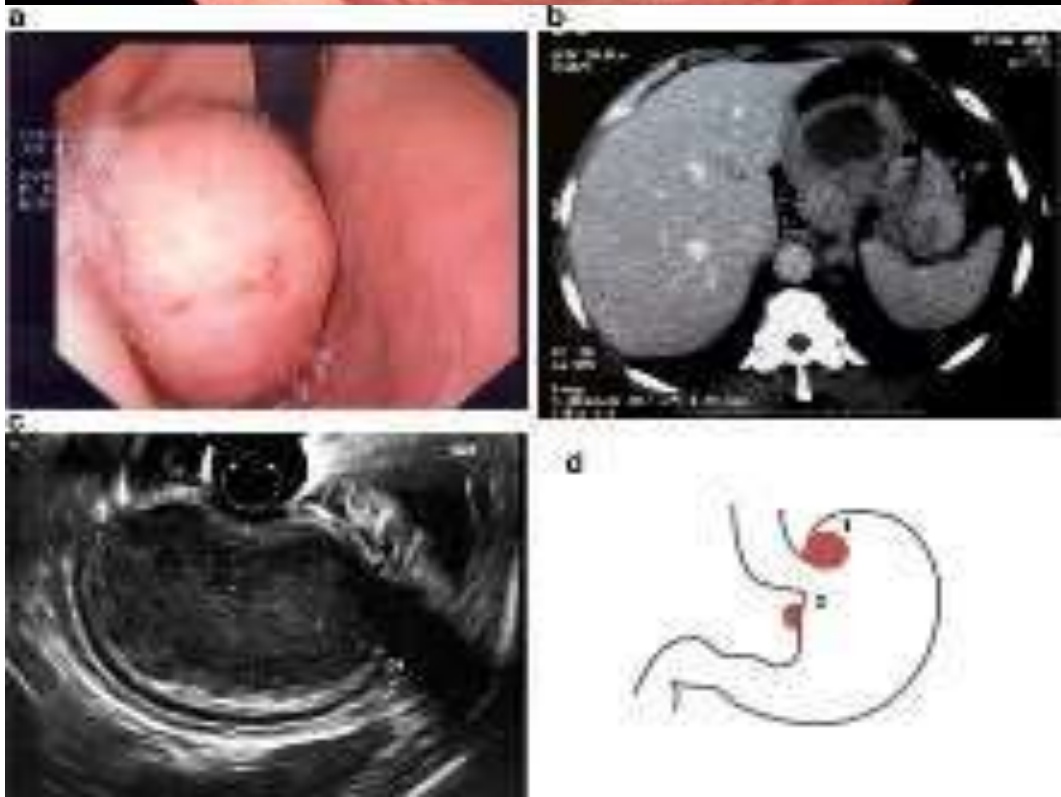
Resection

Chemo (Imatinib)

Q6: How to Diagnose?

CT / EGD/ colonoscopy





altered metabolic activity occurs in 2/3 pt with advanced cancers

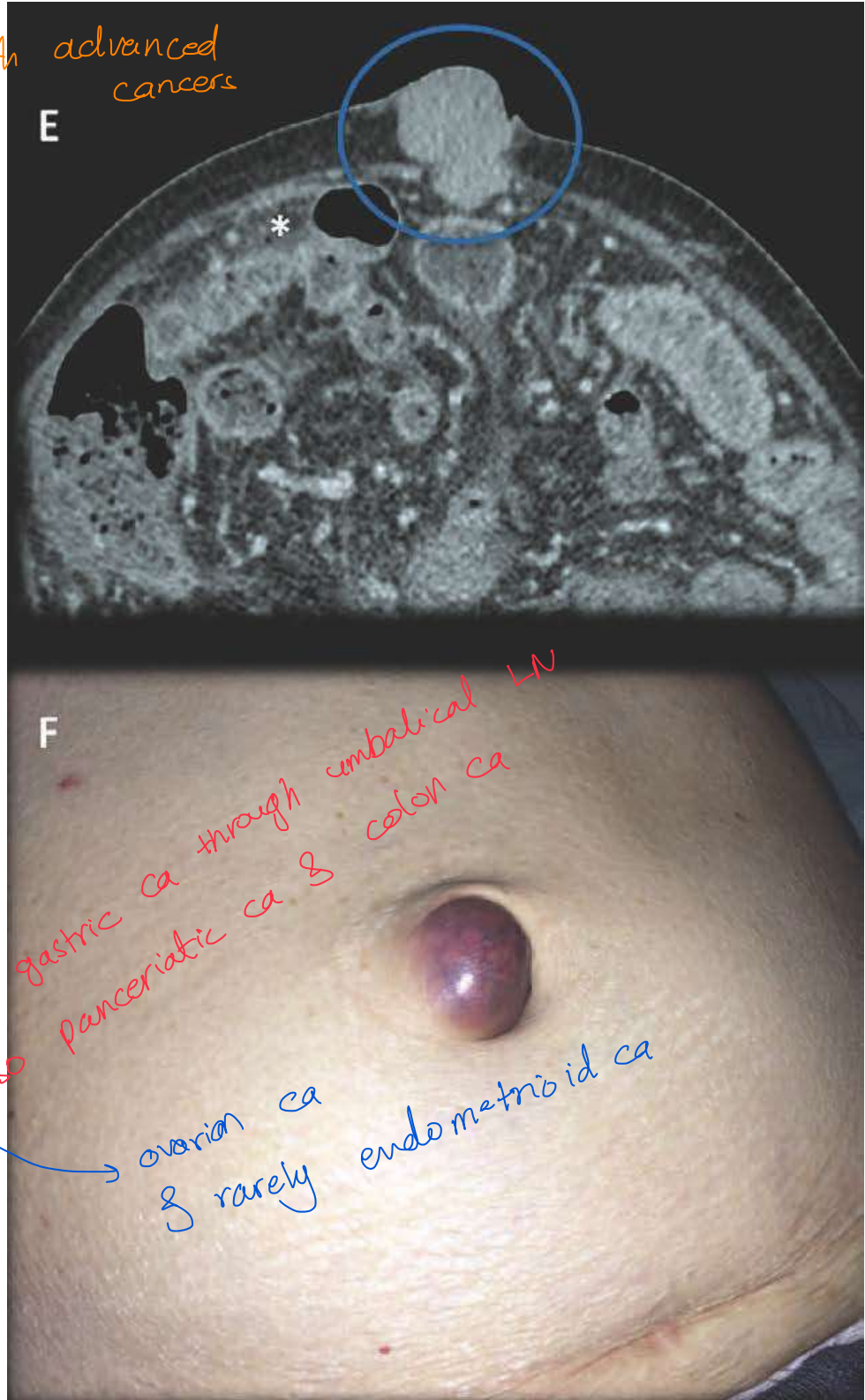
Q: A 50-years old male patient has recently become cachectic and developed ascites.

1. Name the findings on examination (lower picture) and CT scan (upper picture).

- Sister Mary Joseph Nodule

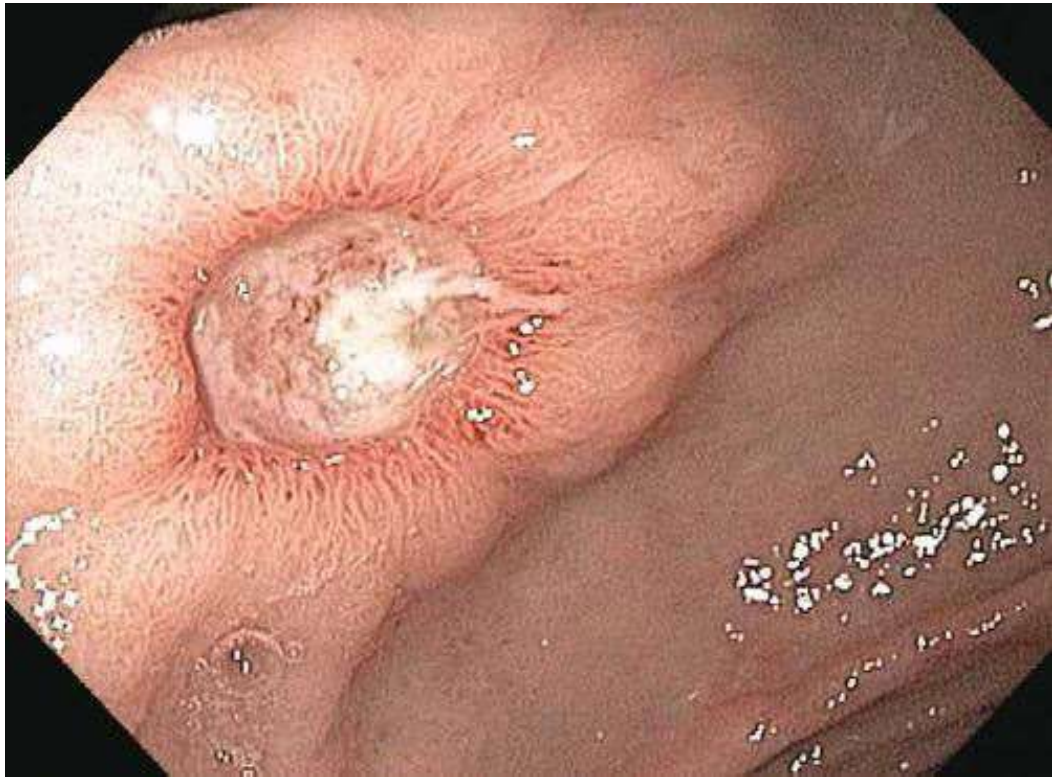
2. Mention 2 possible sources for this lesion.

- GI cancers, Gynecological cancers, Melanoma



especially gastric ca through umbalical LN
also panceriatic ca & colon ca
ovarian ca & rarely endometrioid ca

Q: You are doing endoscopy and you found this lesion?



Q1: Describe what you see?

- Comment on the shape, size, location, color, presence of necrosis, discharge, etc..

Q2: What is the likely Dx?

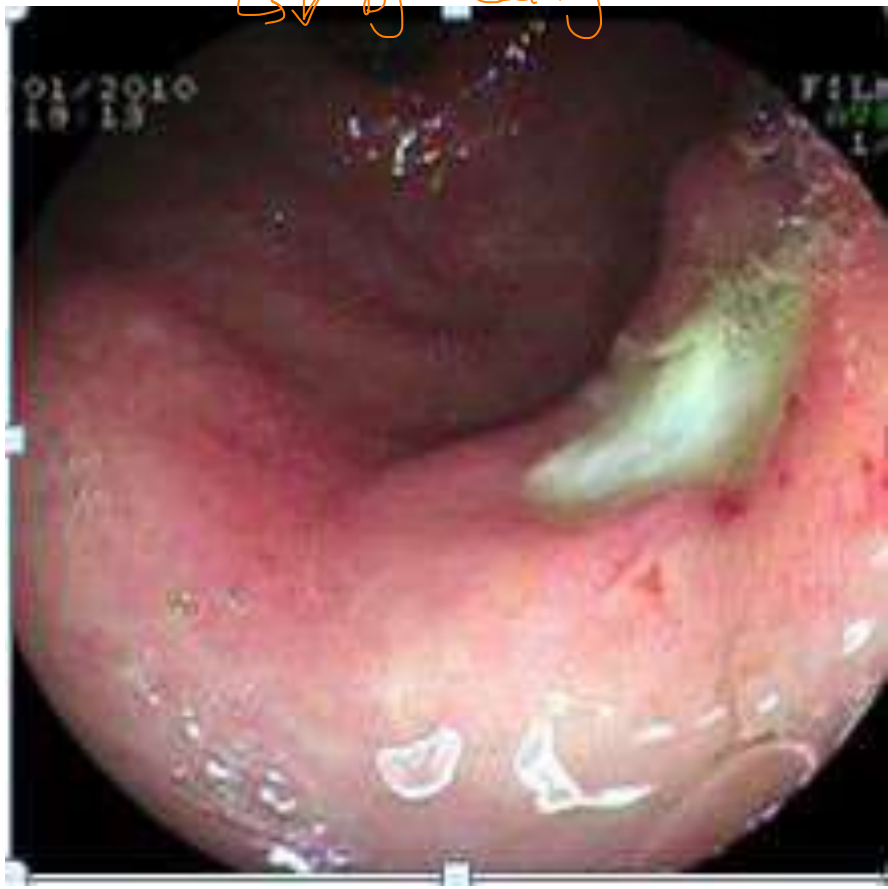
- Stomach cancer or ulcer

Q3: Next step in Mx?

- Biopsy

gastric ↔ duodenal → caused by ↑ gastric acid
↳ in young age
↳ ↓ by eating

Q: You are doing endoscopy and you found this lesion, pain is relived by eating and exacerbated in empty stomach?



Q1: What is the likely Dx?

- Peptic (duodenal) ulcer

Q2: name 2 complications?

1) Perforation
2) Bleeding

Q1: What is A and B?

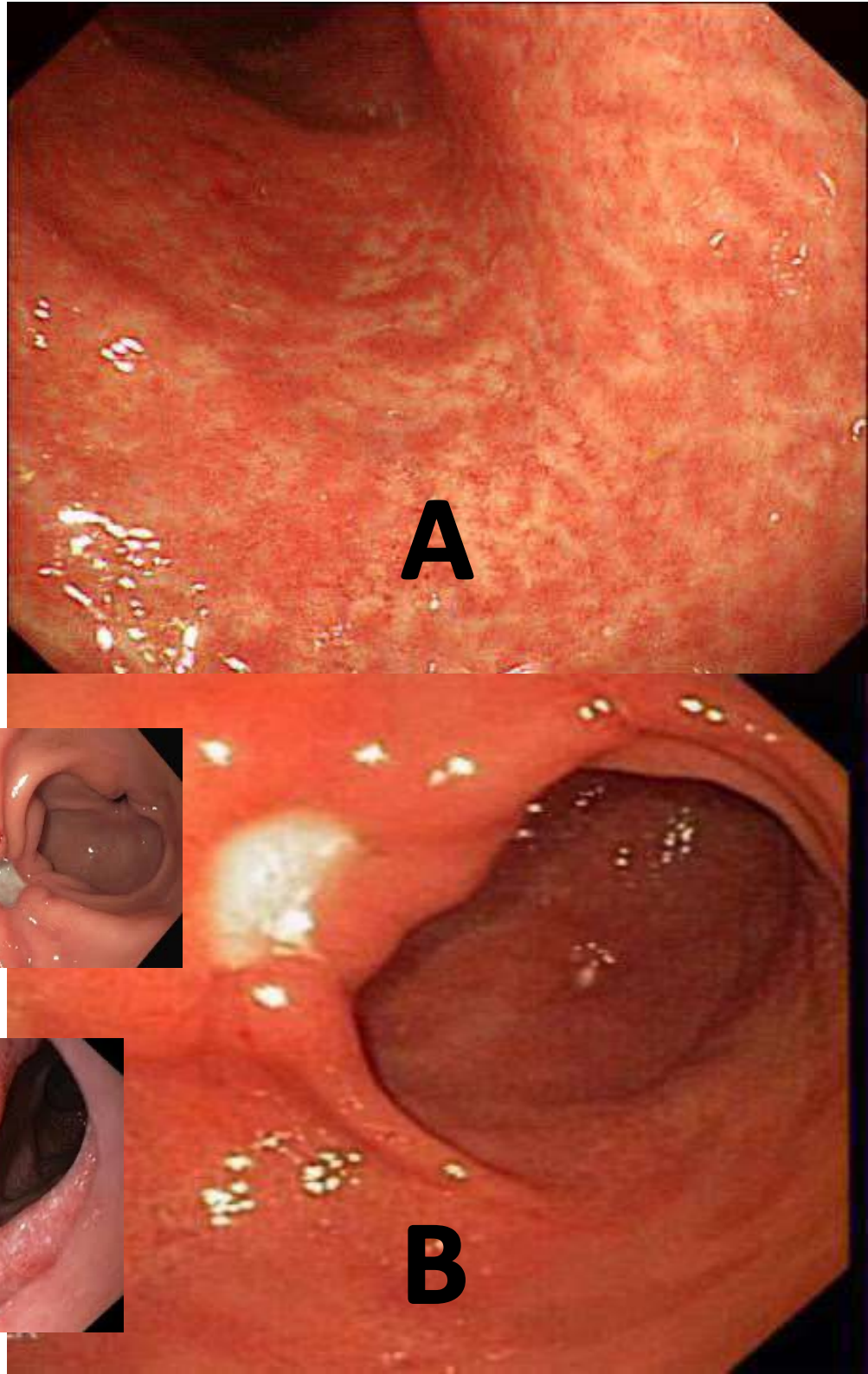
A > Gastritis “not sure”

B > Duodenal Ulcer

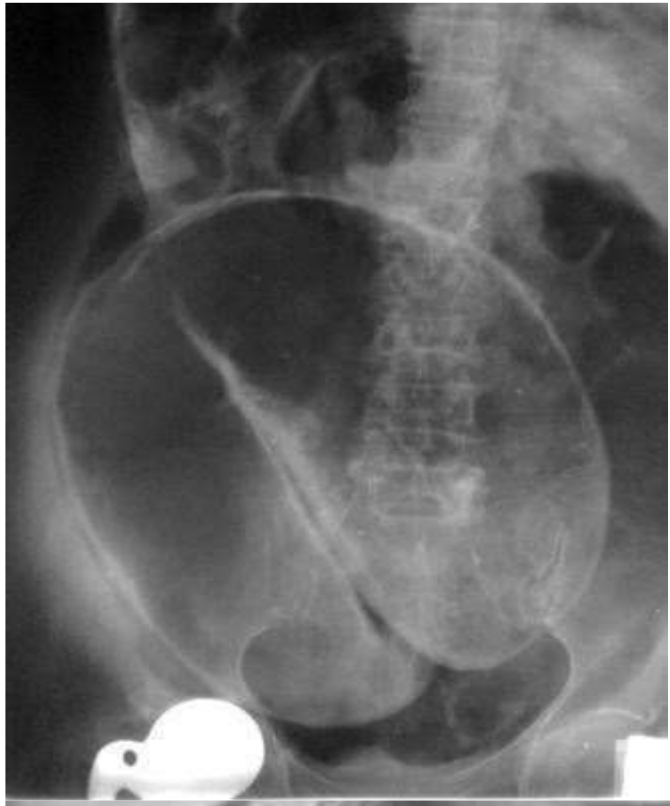
Q2: Name 2 causes?

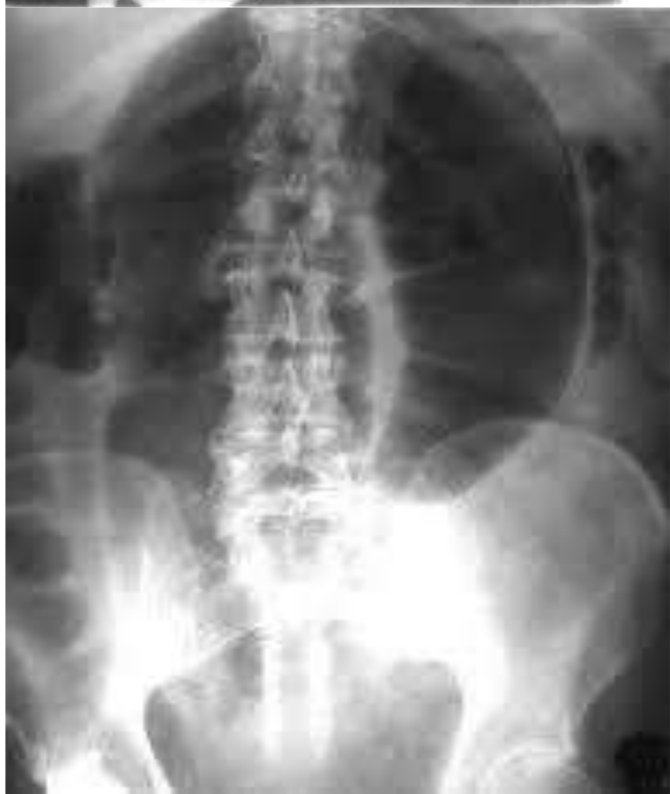
1) NSAID

2) H. Pylori



Q: The patient presented with sudden severe pain and abdominal distension:





Q1: What is the sign?

- Coffee bean sign

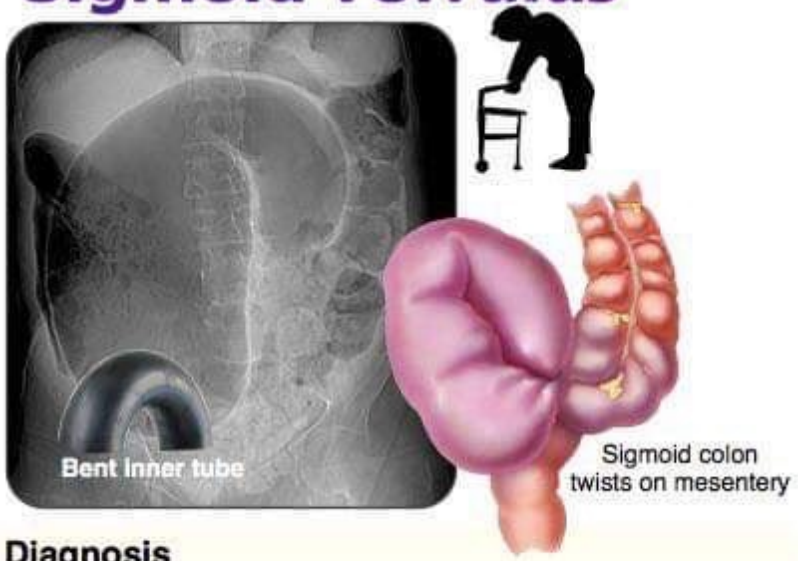
Q2: Name the signs you?

1) Dilated large bowel
2) Coffee bean sign

Q3: What is your Dx? Sigmoid volvulus

Q4: What is the MC site? in Sigmoid

Sigmoid Volvulus



Diagnosis
- Plain film (low specificity) [U-shaped, bent inner tube]
- Abdominal CT scan
- Contrast enema

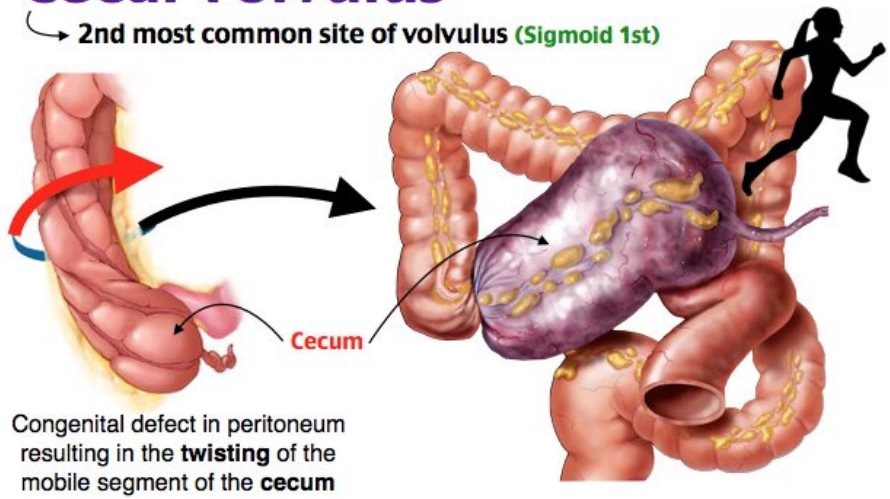
Risk factors
- Nursing home patients
- Elderly
- Bed bound
- Chronic constipation

Clinical
- Insidious onset of slowly progressive abdominal pain
- Abdominal distension
- Nausea, constipation
- Vomiting (several days after pain onset)

Management
- Flexible sigmoidoscopy (to reduce volvulus)
- Surgery (to prevent recurrence)

Cecal Volvulus

2nd most common site of volvulus (Sigmoid 1st)

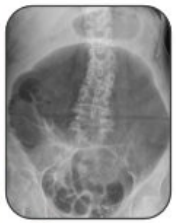


Congenital defect in peritoneum resulting in the **twisting** of the mobile segment of the **cecum**

Risk factors
- Relatively **younger** than sigmoid volvulus (30s-50s)
- Associated with **marathon runners**
- Increased in GI malignancy

Diagnosis
- Plain film (coffee-bean or comma cecum) [Low specificity]
- Abdominal CT (90% of patients) **[Whirl sign]**
- Surgical exploration (10% of patients)

Management
- Surgical



Coffee bean appearance

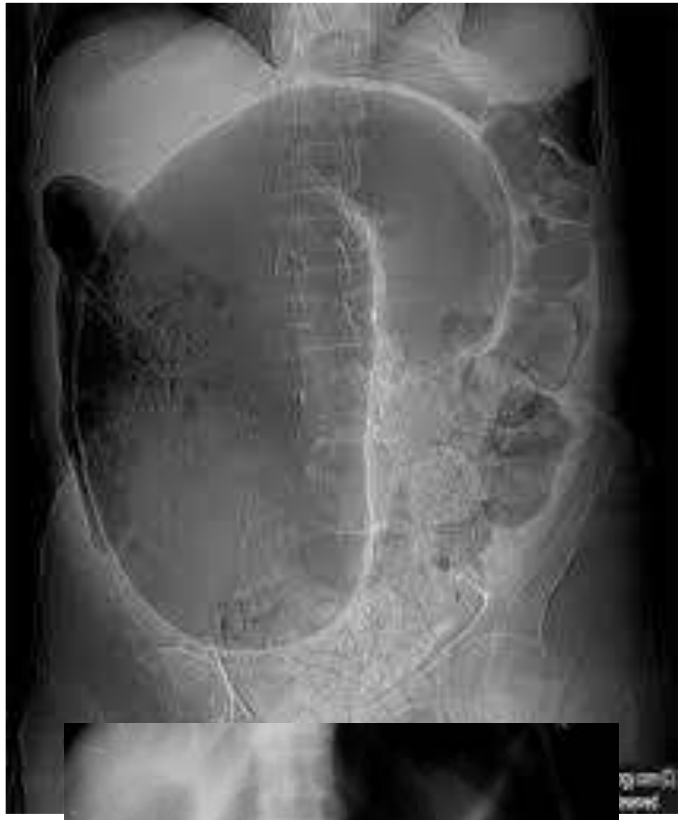
Comma appearance

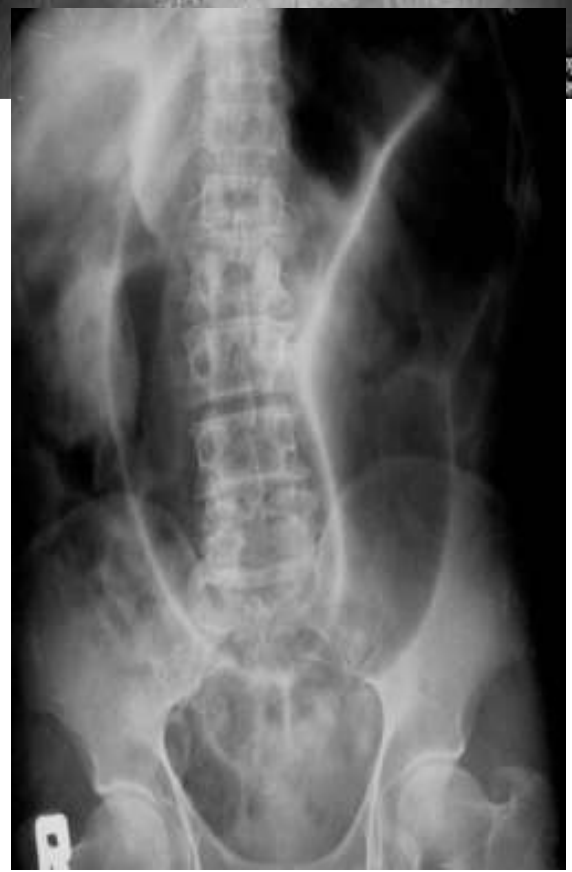
Q5: Mx?

- Resuscitation and untwist (detorsion) the bowel and go for surgery (this is done by means of sigmoidoscopy or colonoscopy

Q6: Mention 2 causes for this condition?

- Chronic constipation
- Sigmoid tumor





Q1: What is the study?

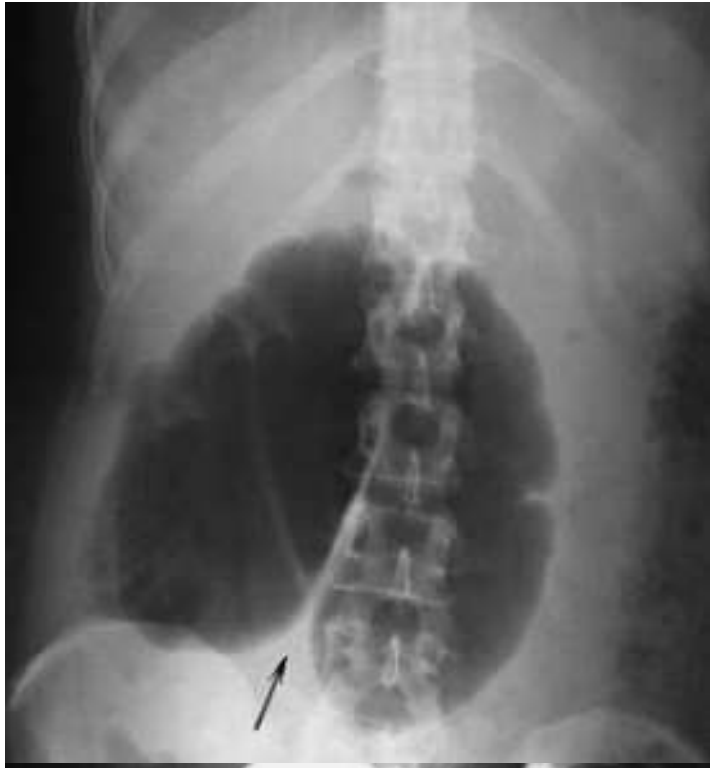
- Barium Enema

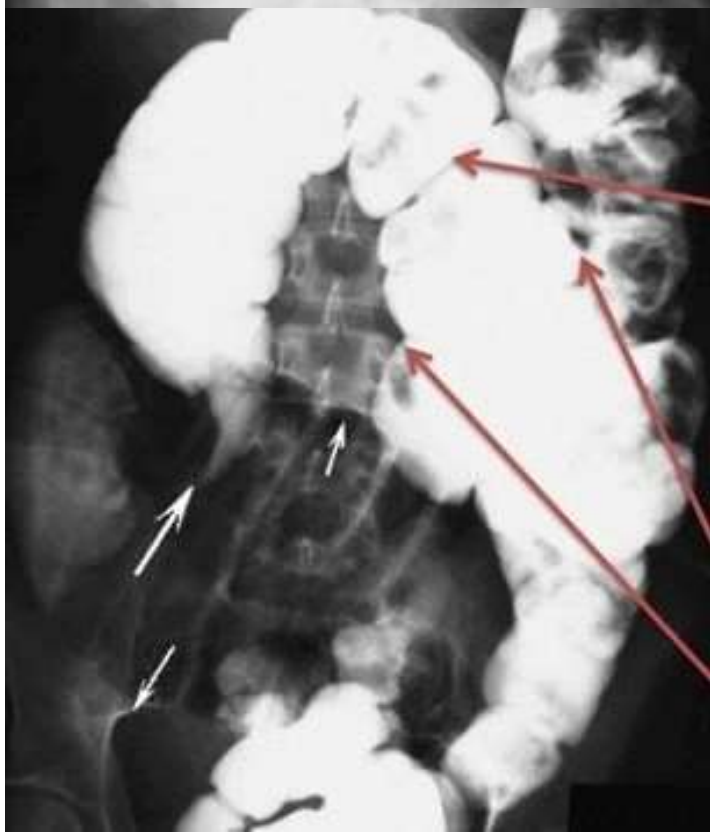
Q2: What is the Dx?

- Volvulus

Q3: What is the Mx?

- Detorsion



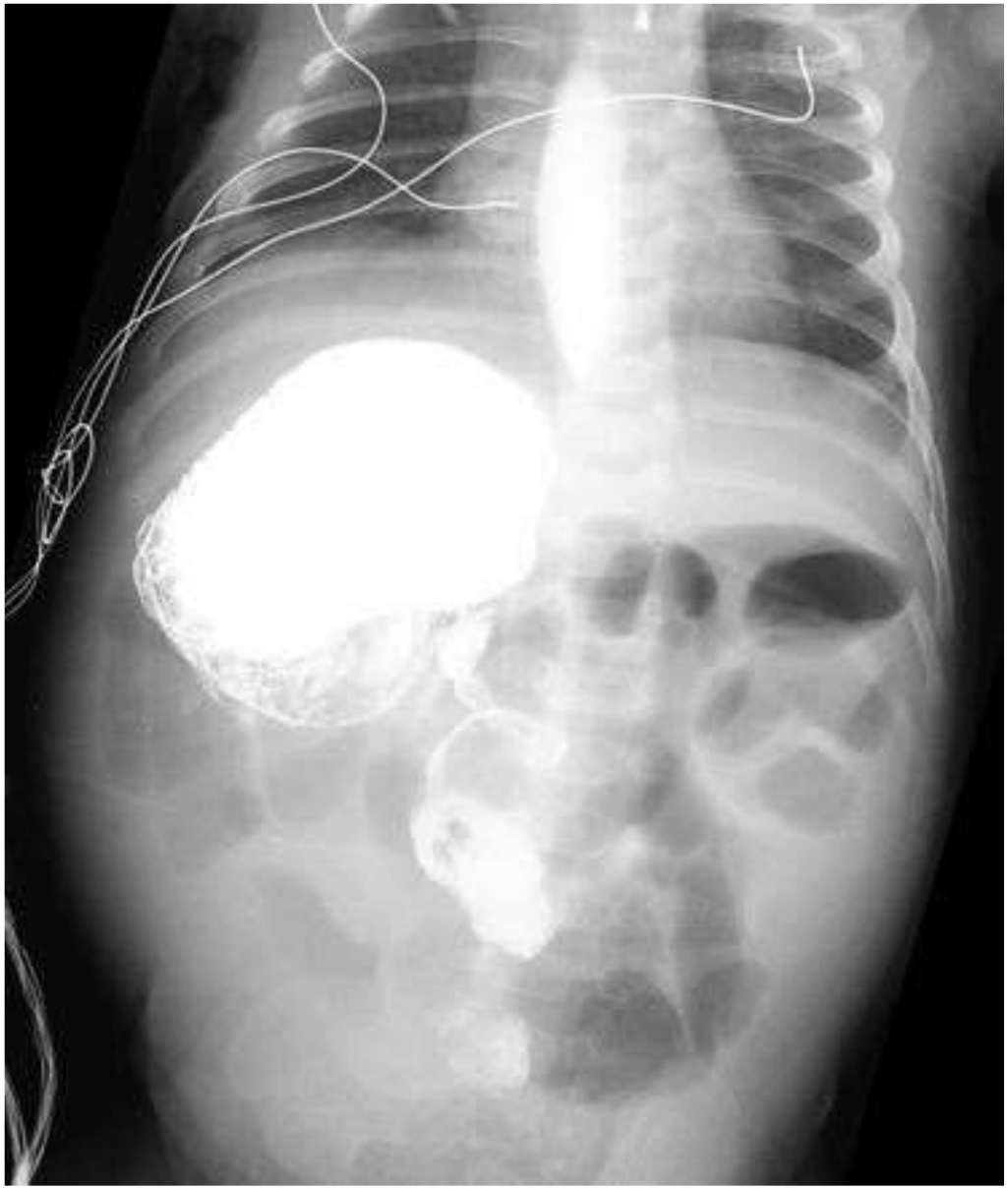


Q1: What is the study?

- Barium follow through

Q2: What is the pathology?

- Midgut volvulus



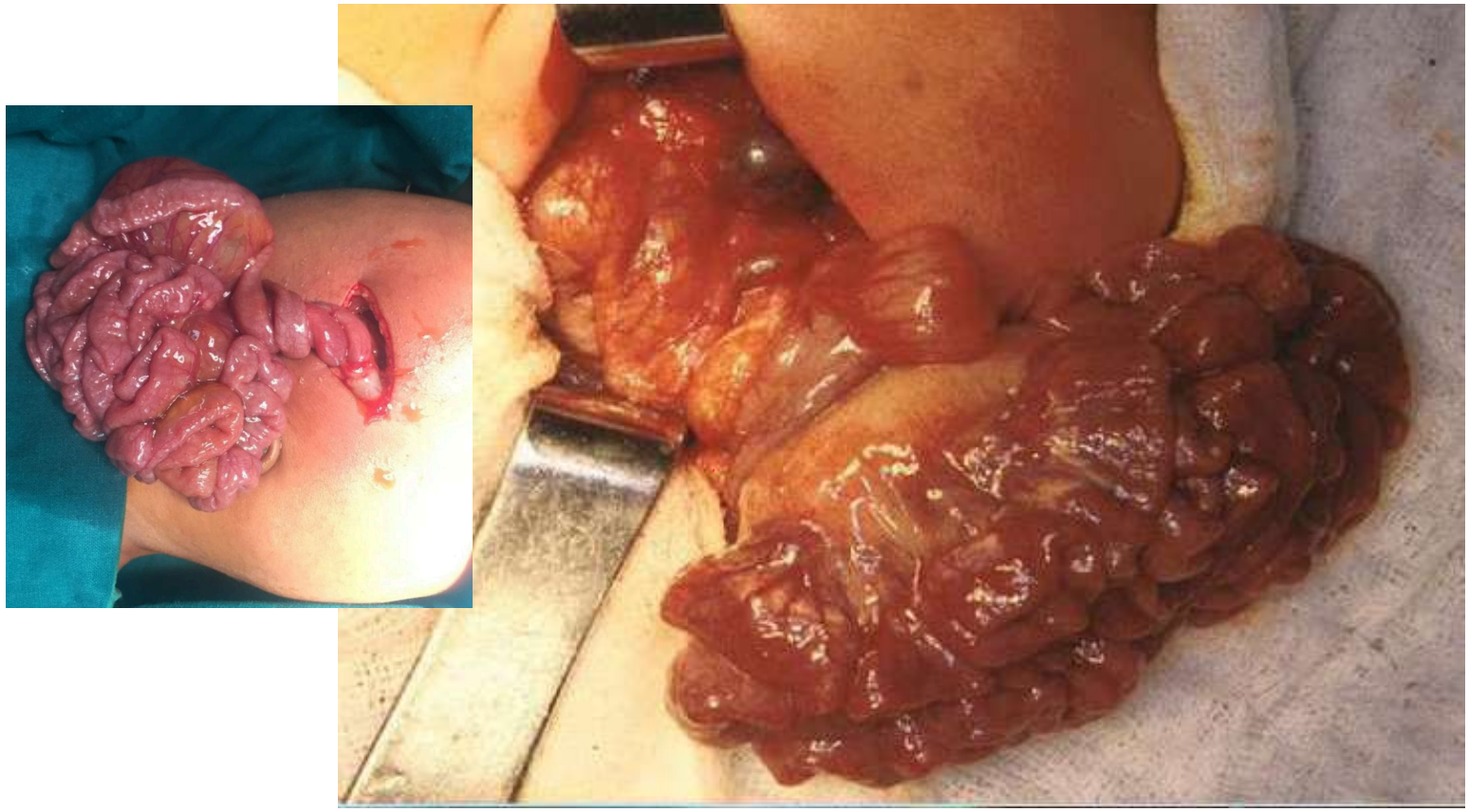
Q1: What is the Dx?

- Volvulus (Midgut)

Q2: If the bowel was viable and not gangrenous, what to do?

- Viable SB > Close and observe

- Other option: Ladd's Procedure



Q1: What is the study?

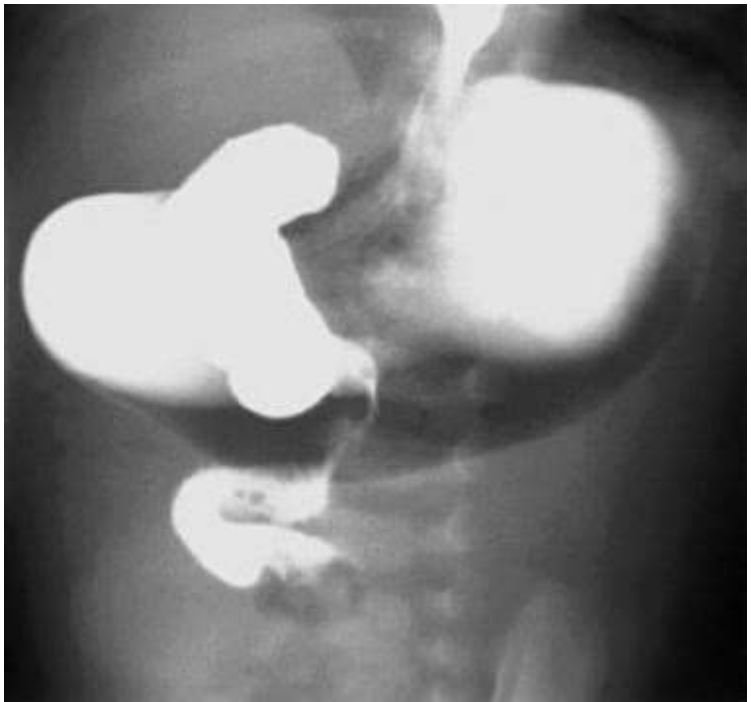
- Barium follow through

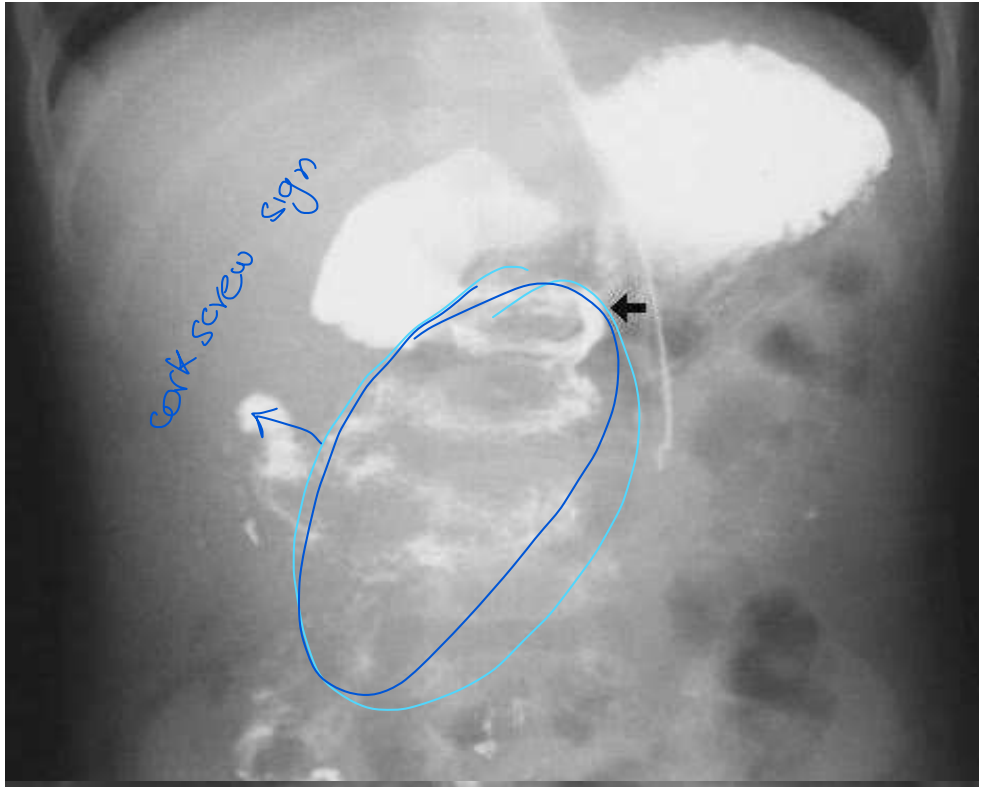
Q2: What is the pathology?

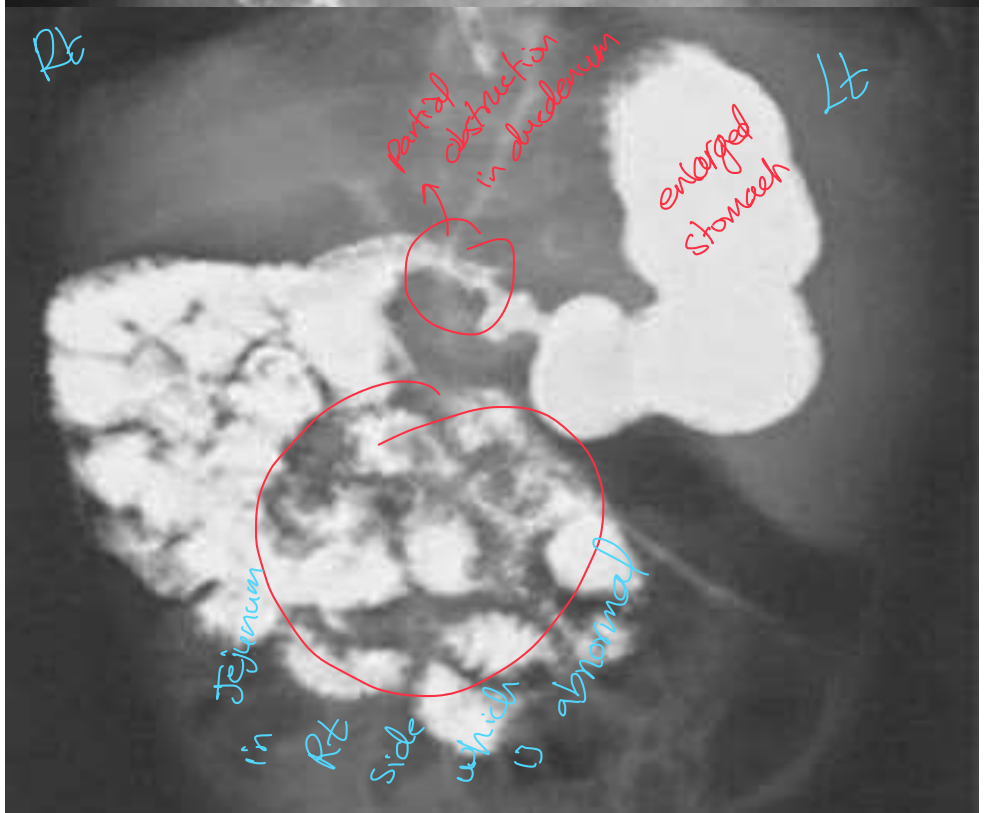
- Midgut volvulus due to malrotation

Q3: What is the Clinical ER Presentation?

- acute abdominal pain , destination , constipation , vomiting

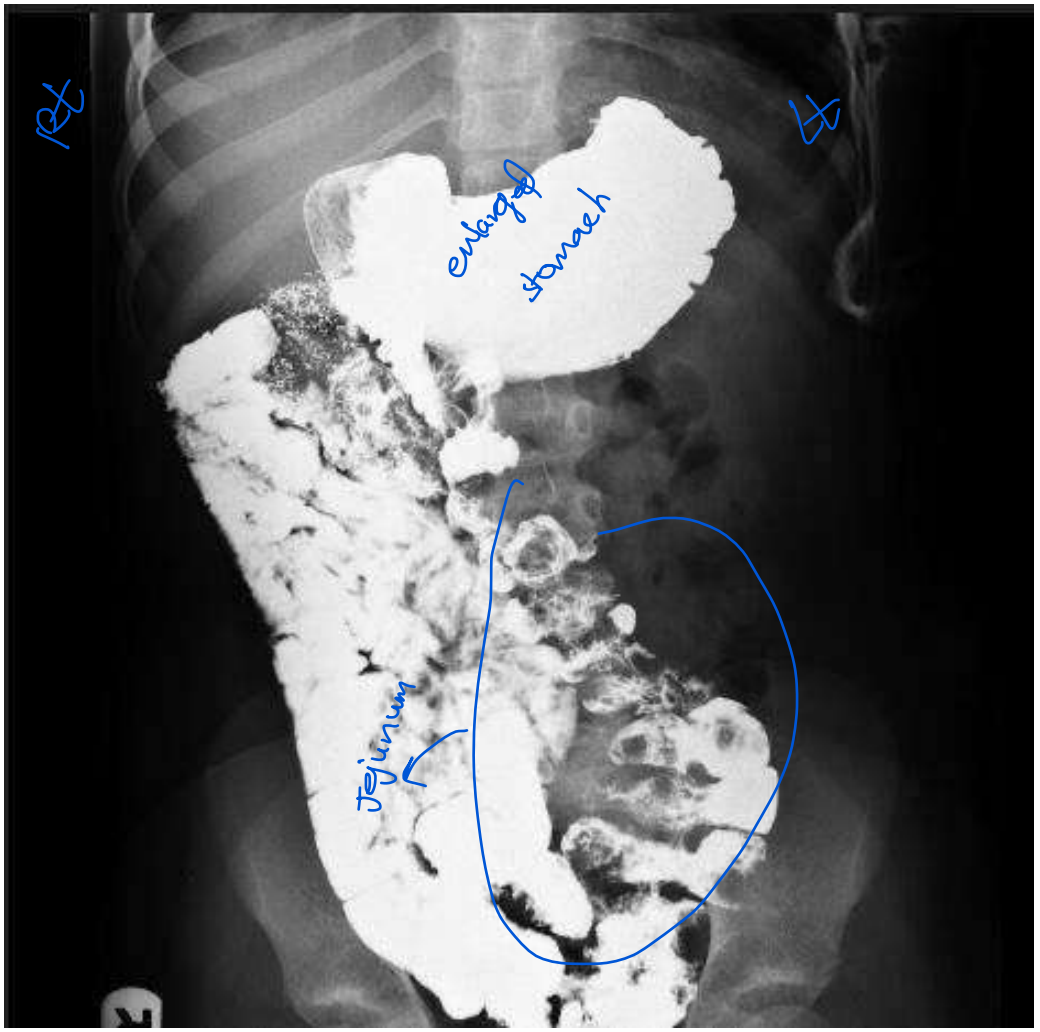






Malrotation

normally the duodenojejunal junction is to the left of the spine. In malrotation it is to the right of the spine .



Q1: What is the Dx?

Small intestinal obstruction (centrally)

Q2: What is the radiological findings?

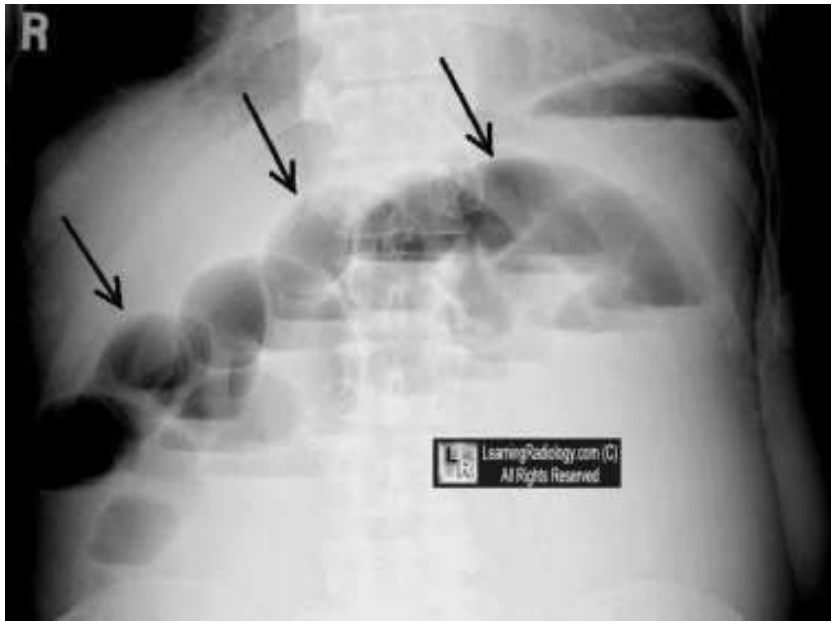
Dilated bowel loops (Jejunal), and air in the rectum

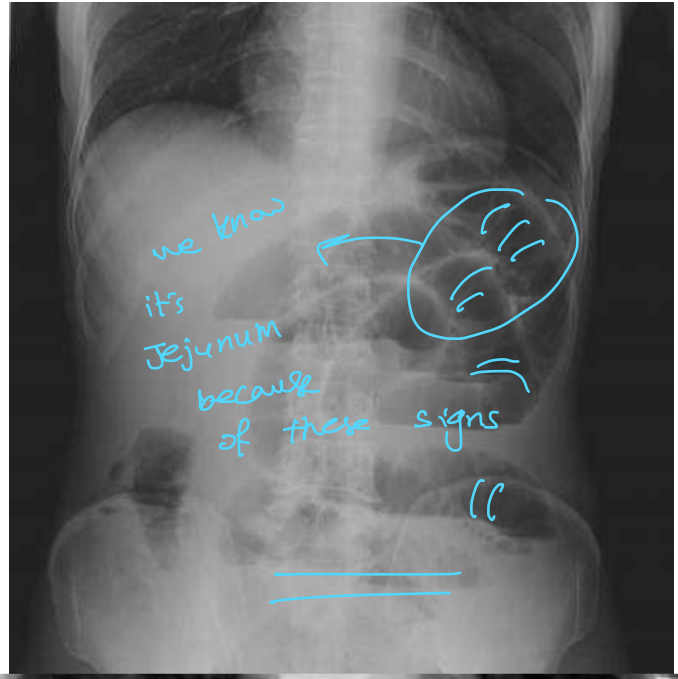
Q3: This is a picture of obstruction, Is it partial/complete? Why?

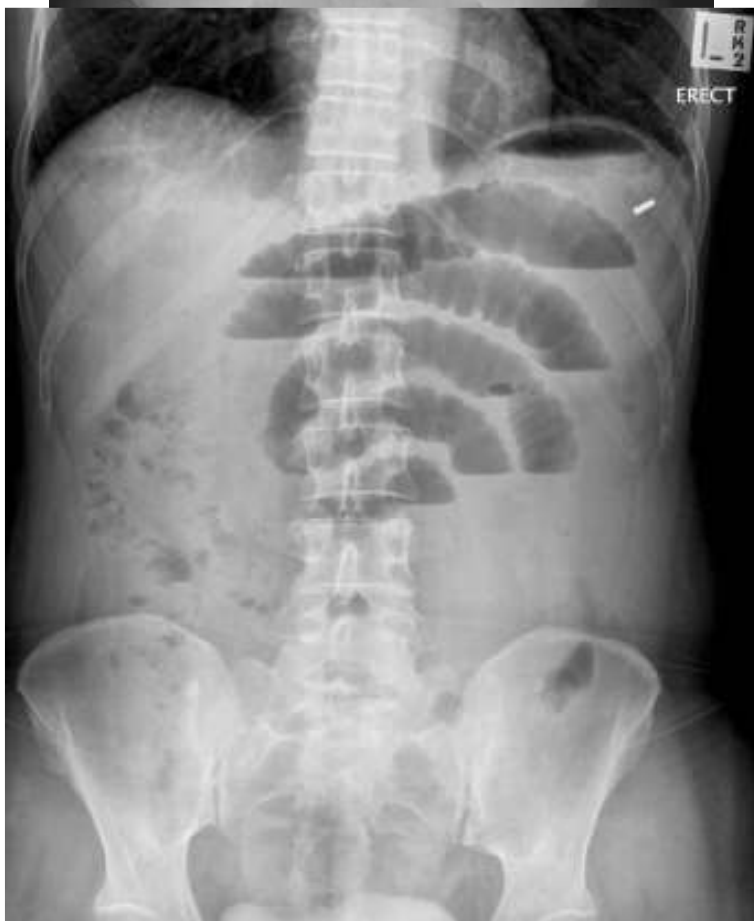
- Partial obstruction
- Because there is air in rectum

Q4: What is the appearance?

Step-ladder appearance







Q: A 30 year old female presented with sudden abdominal pain and fever and diffuse tenderness of the abdomen:

Q1: What is the Dx?

Perforated viscus

Q2: What is the radiological finding?

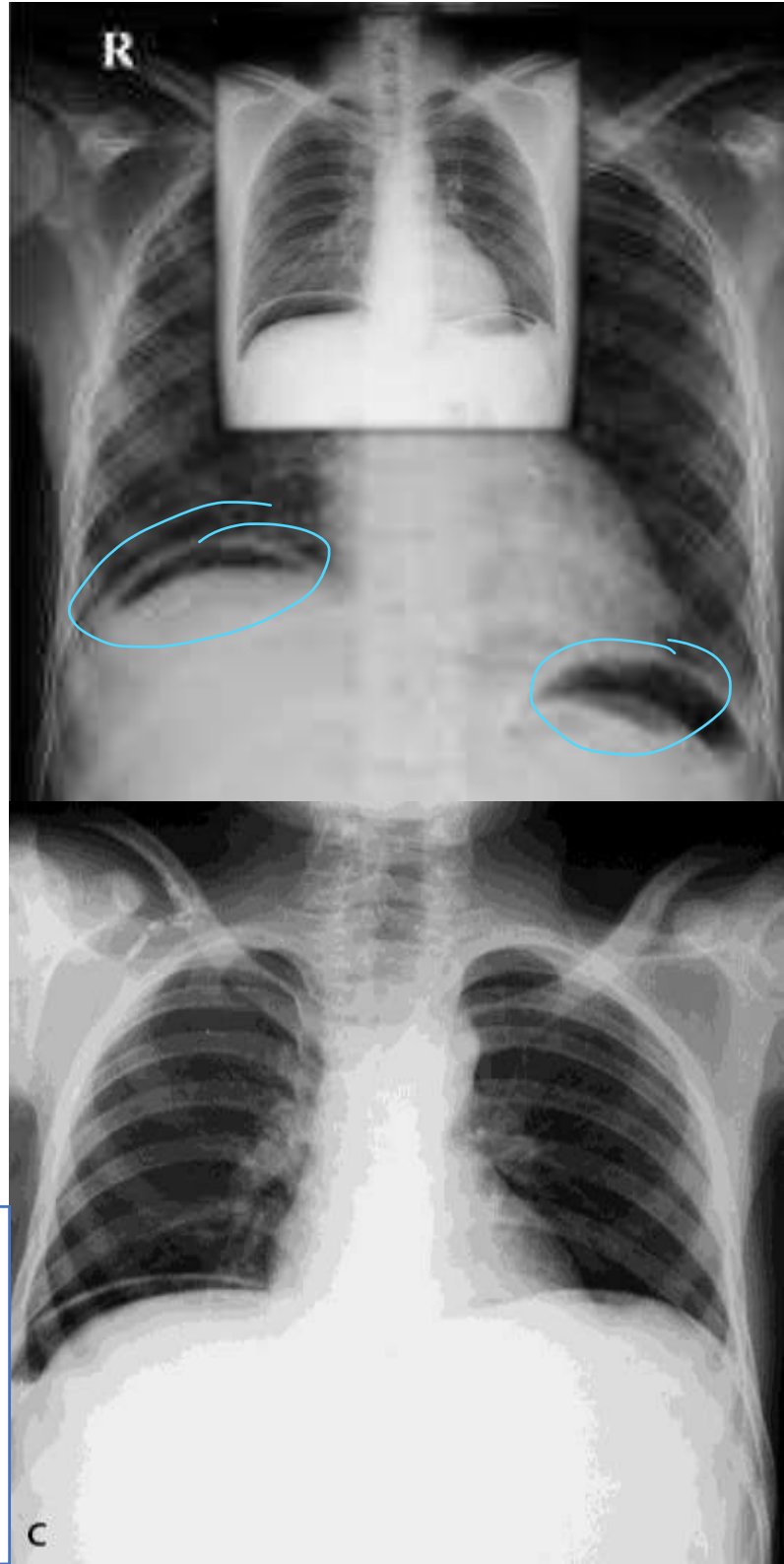
Air under diagram

Q3: What is the Mx?

Laparotomy and exploration

Q4: What is the mcc?

Post-op



Causes:

1. Perforation of duodenal ulcer.
2. Following Laparoscopic procedure
3. Following Tubal Insufflation Test
4. Infection with gas forming organisms
5. Most common cause is post operative.
6. Chilaiditi's sign-due to interposition of colon between the Diaphragm and the Liver such a gas shadow can be obtained even in a normal individual.

Q: A 55 years old patient with PUD came with forceful vomiting:

Q1: What is the pathology?

- Gastric outlet obstruction (pyloric obstruction) – Pyloric Stenosis

Q2: What is the electrolyte disturbances the patient has?

- Hypokalemic hypochloremic metabolic alkalosis

Q3: What is the gold standard for Dx?

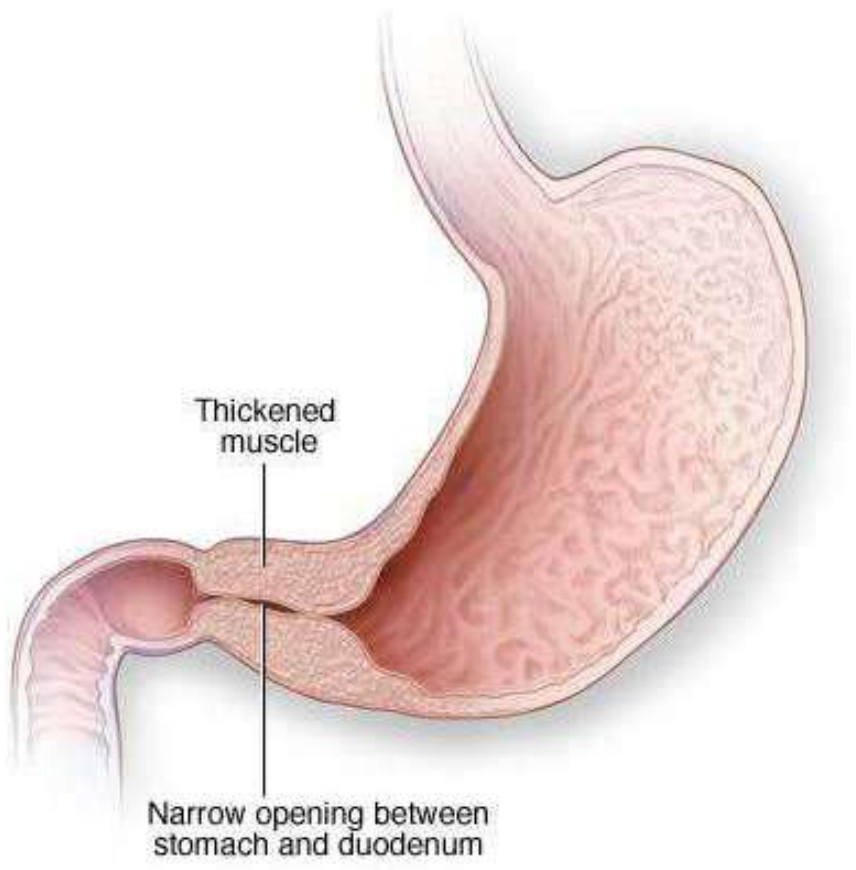
- US "~~not sure~~"

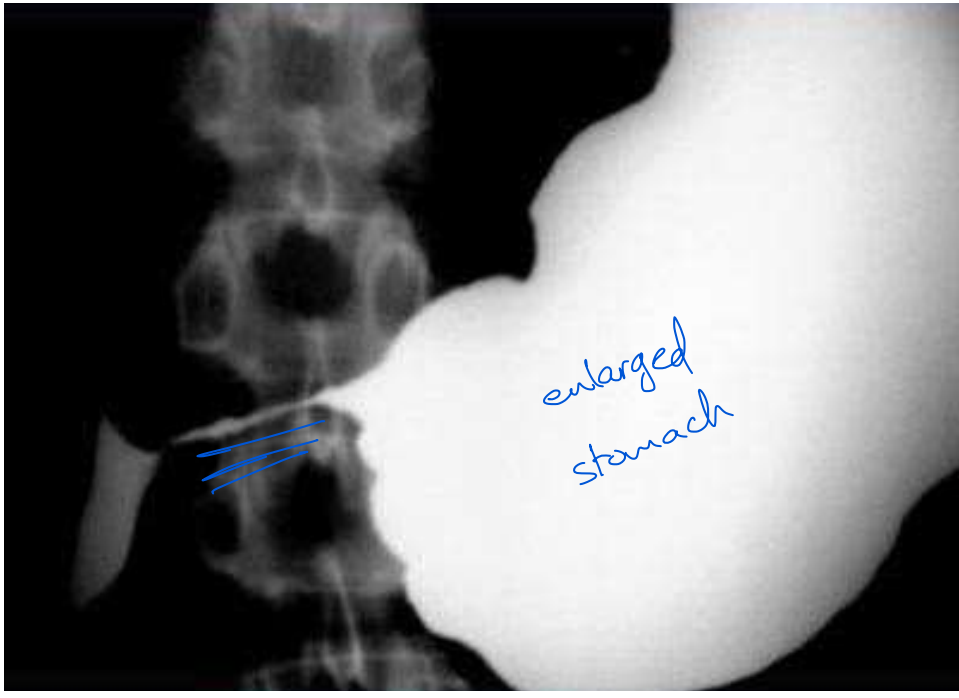
Q4: Mention 2 causes?

1) Gastric Carcinoma
2) Peptic ulcer disease (PUD)

Q5: Name it's effect on ventilation?

- Hypoventilation

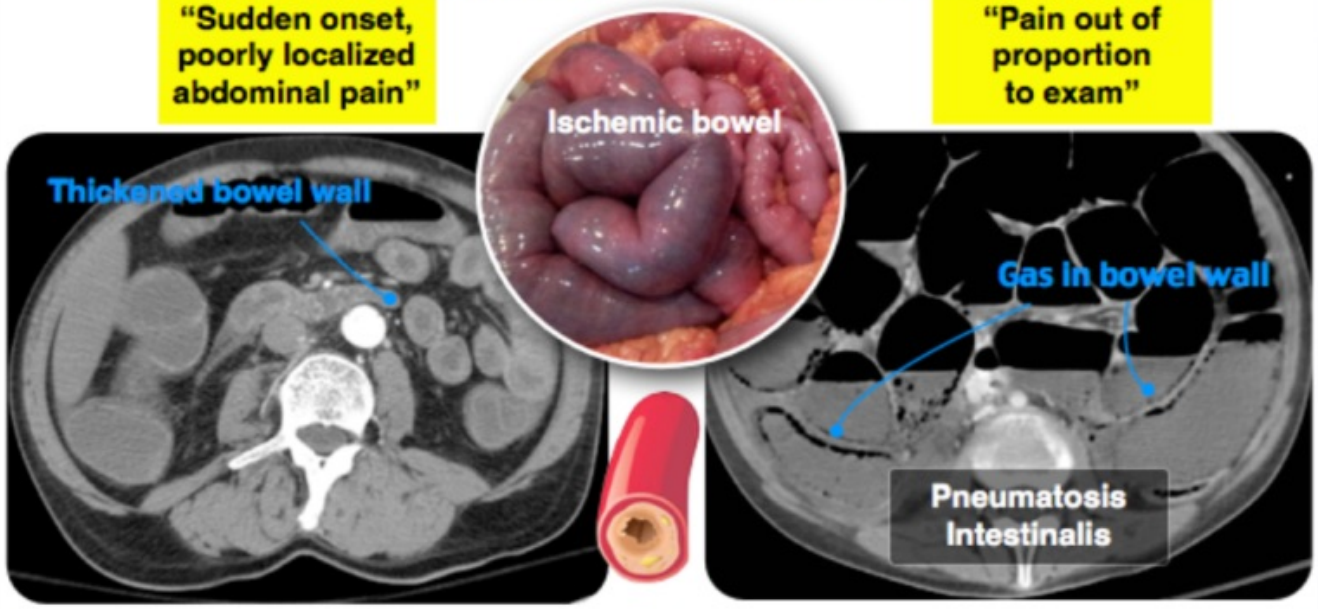




Acute Mesenteric Ischemia

"Sudden onset, poorly localized abdominal pain"

"Pain out of proportion to exam"



Mesenteric Ischemia	
Type of occlusion	**Predisposing factor**
Arterial occlusion	• Dysrhythmias (atrial fibrillation) • Atherosclerotic heart disease • Valvular heart disease • Recent MI
Venous thrombosis	• History of prior thromboembolic events • Hypercoagulable states
Non-occlusive ischemia	• Use of diuretics or vasoconstrictive medications • Heart failure

Q: A 48-years old patient presented with acute abdomen. PMH shows atrial fibrillation. Laparotomy was done:

Q1: What is the Dx?

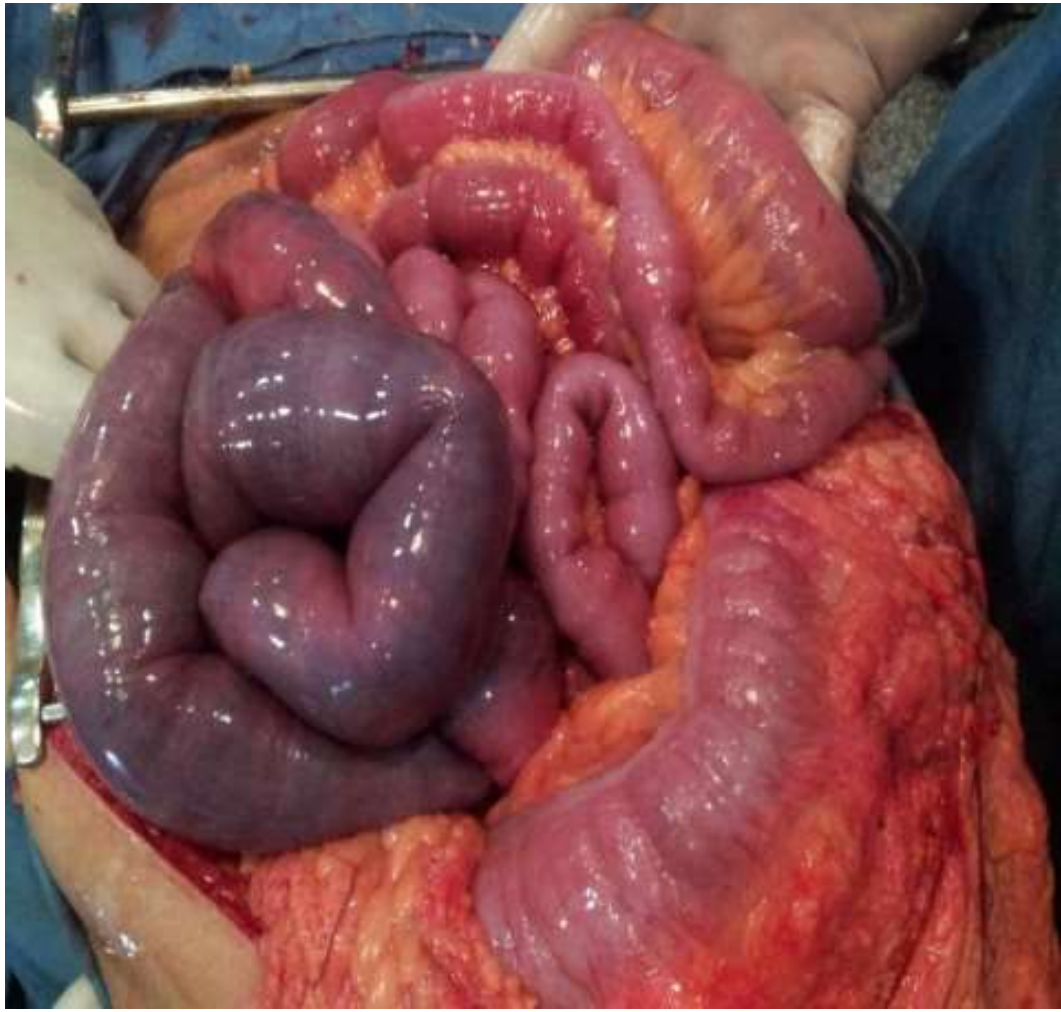
- Acute Mesenteric Ischemia

Q2: What is the most affected artery in this condition?

- Superior mesenteric artery

Q3: Appropriate Mx?

- Resection & Anastomosis



occurs with ↑ age
+ low fiber diet

Q1: What is the Dx?

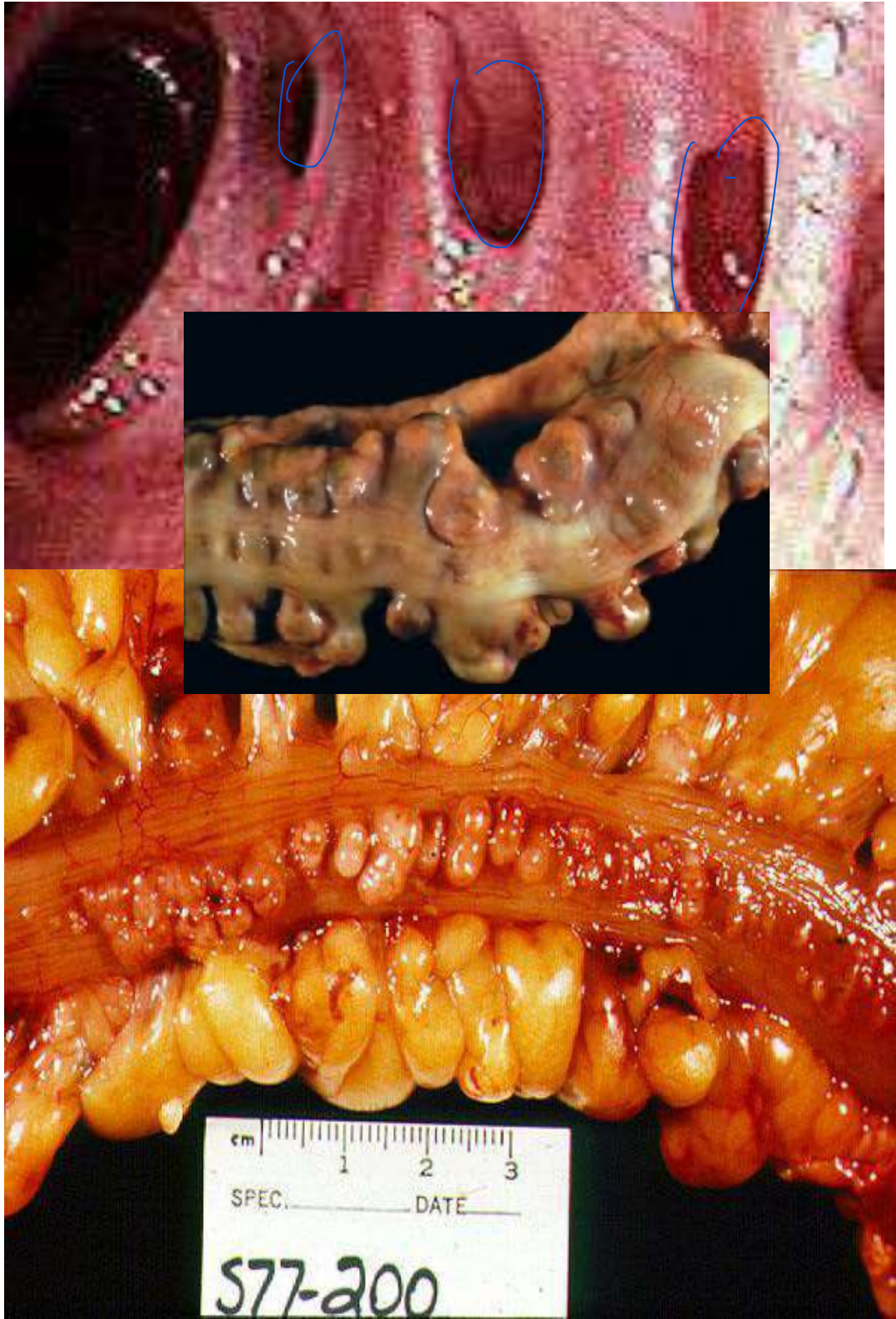
- Diverticulosis

Q2: Mention 2 complications?

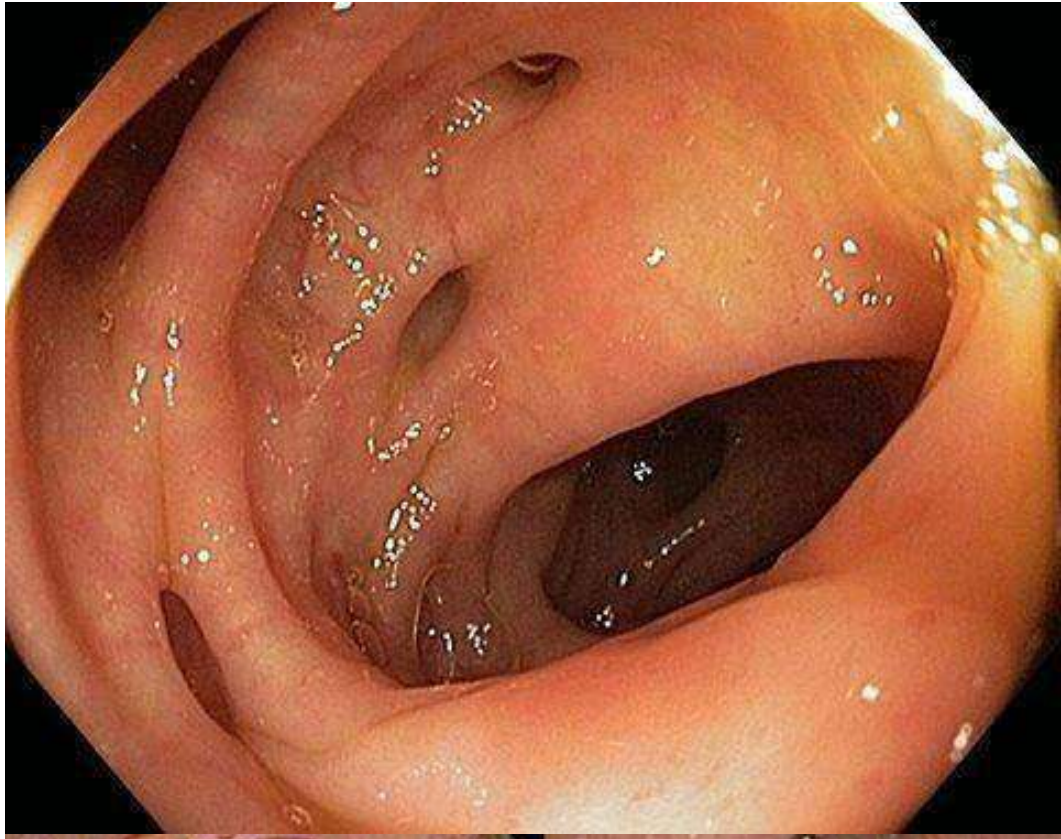
1) Infection
2) Perforation
3) Obstruction

Q3: What is the most common site?

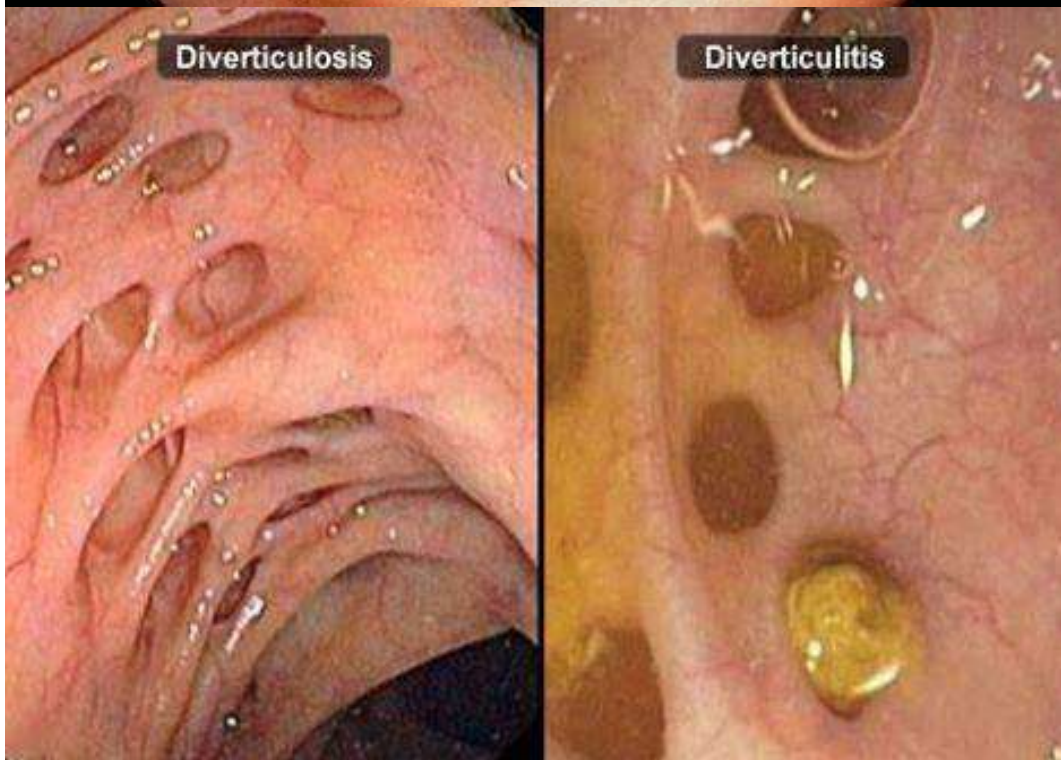
- Sigmoid



Diverticulosis or
Diverticular disease
of the sigmoid colon



Dx. Colonoscopy
Mx. Mainly supportive: diet rich of fiber

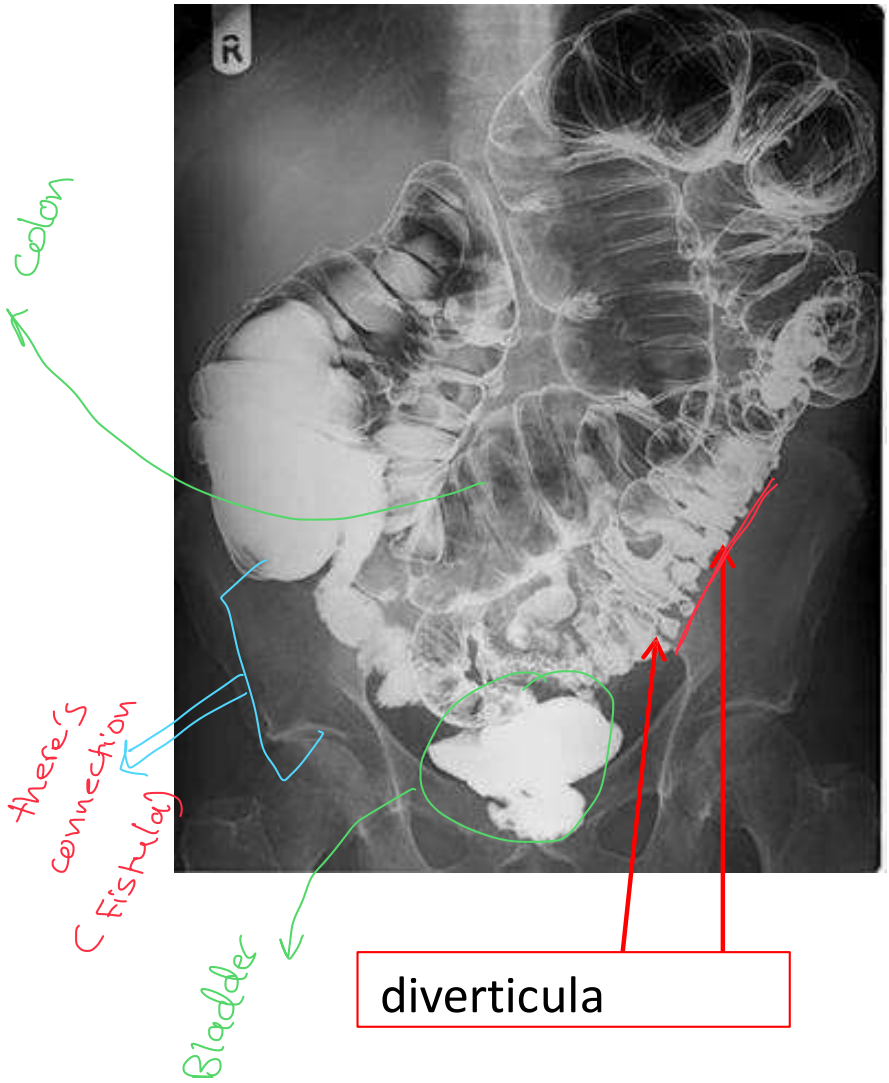


Colovesical fistula

- the most common cause is diverticulitis and it's the most common fistula formed in DD.

- other causes : colon CA , crohn's , radiotherapy ,trauma.

- This picture is double contrast barium enema.



Q: Female patient came complaining from fistulas and other symptoms and a colonoscopy was done:

Q1: What is the Dx?

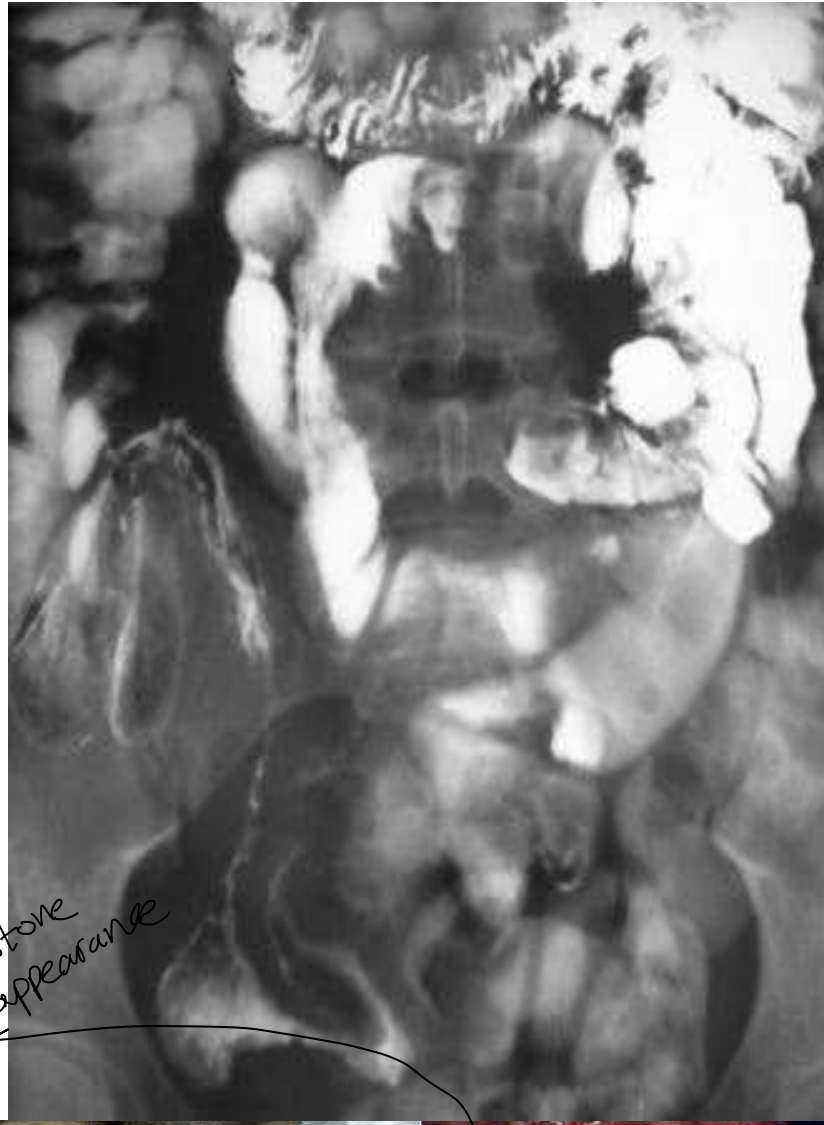
- Crohn's Disease

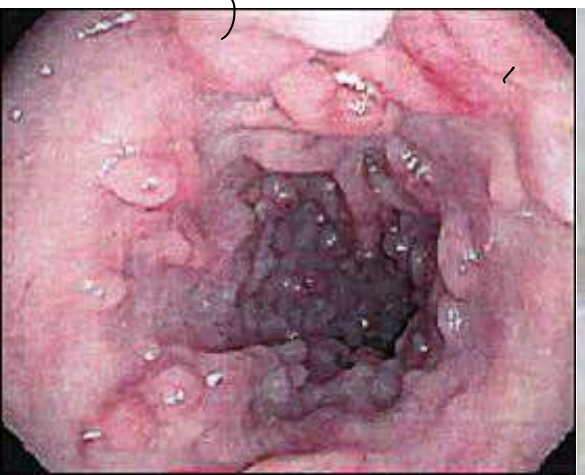
Q2: What are the usual Sx?

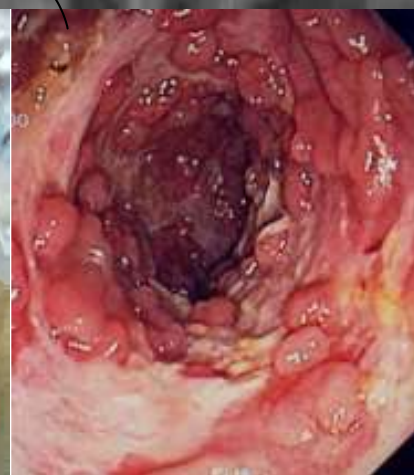
- Abdominal pain
- Fever with weight loss
- Diarrhea

Q3: How do we treat those patients?

- Azathioprine (6 mecaptopurine) + steroids

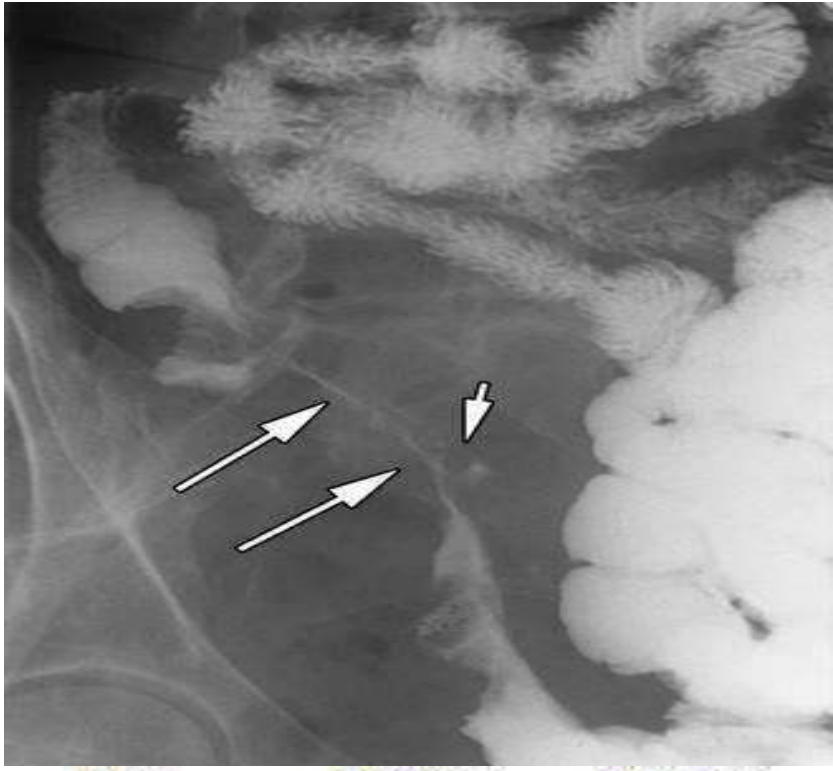


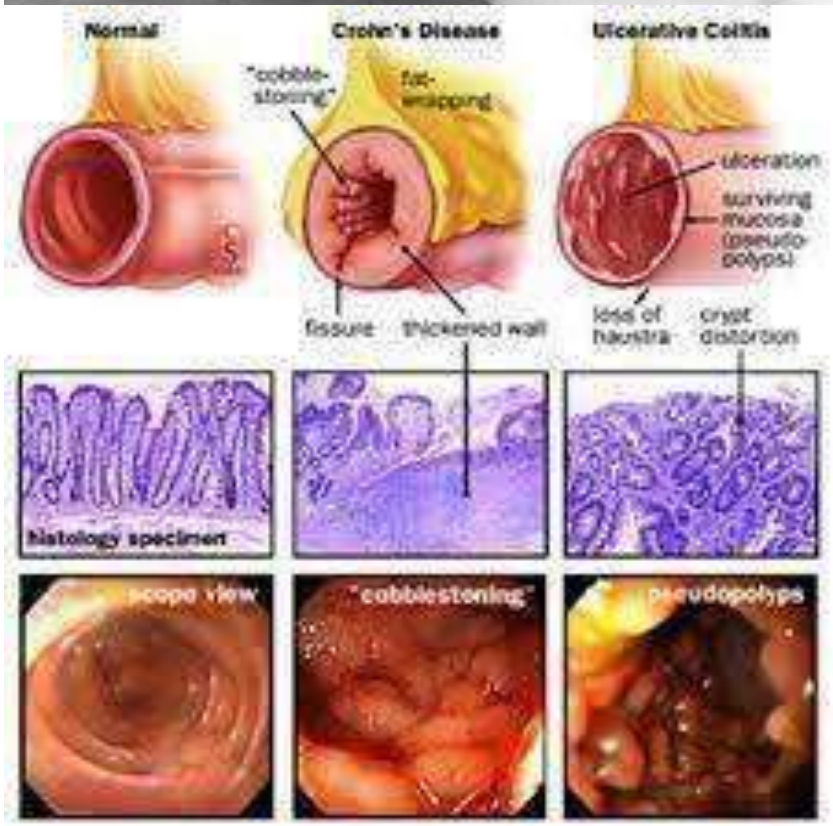




Crohn's disease (IBD):

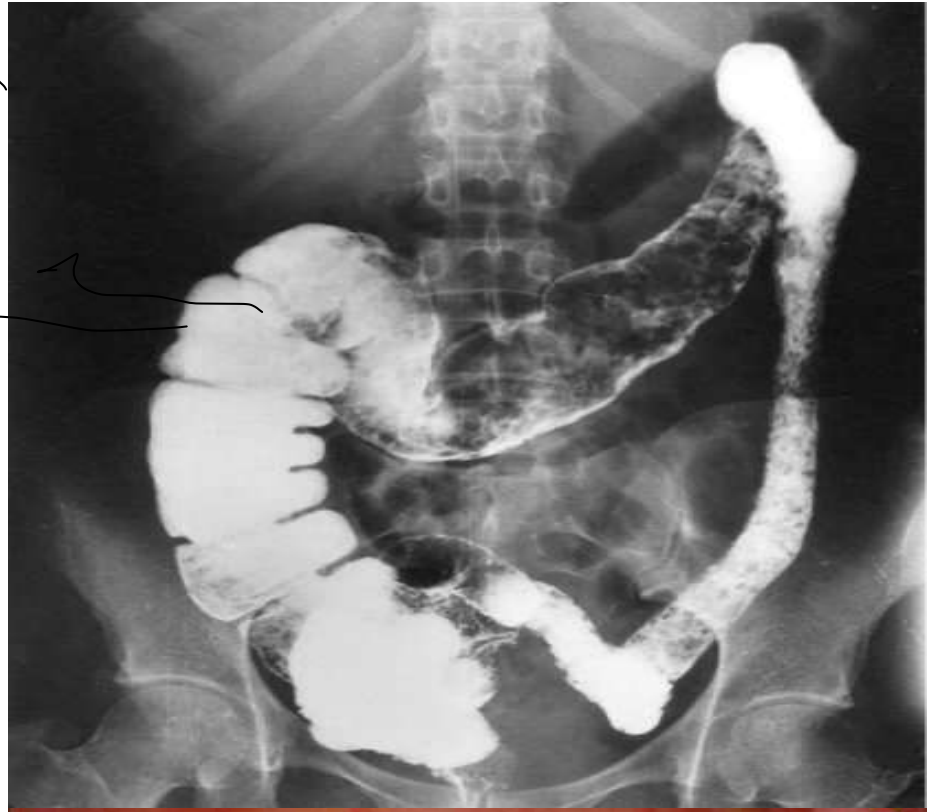
- Autoimmune disease
- SKIP LESIONS
- the m.csite is the terminal ileum,
- often no involvement of the rectum (in UC the rectum is always involved)
- Extraintestinal manifestations: arthritis , pyoderma gangrenosum ,erythema nodosum
- it involves the full thickness of the bowel wall , with the serosa ,mesentery and regional LNs (while in UC it was only the mucosa that's involved)
- Macroscopically : the bowel wall in thick and red (in UC its very thin), the mucosa has a cobblestone appearance
- Microscopically we will find non- caseating granulomas , with narrow deep fissure ulcers.
- Complications : strictures and fistulae (in UC : hemorrhage , perforation , CA , and toxic megacolon)
- Radiology : Barium enema --> STRING SIGN
- Surgery plays a minor role in the treatment





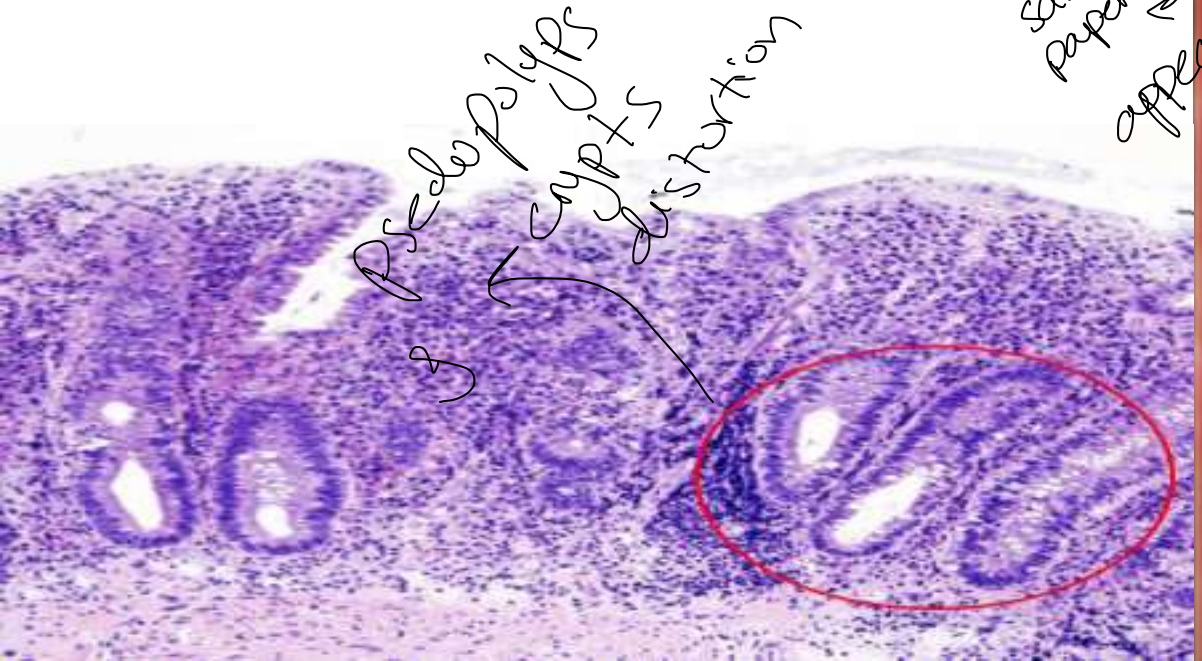
Q1: What is the Dx?

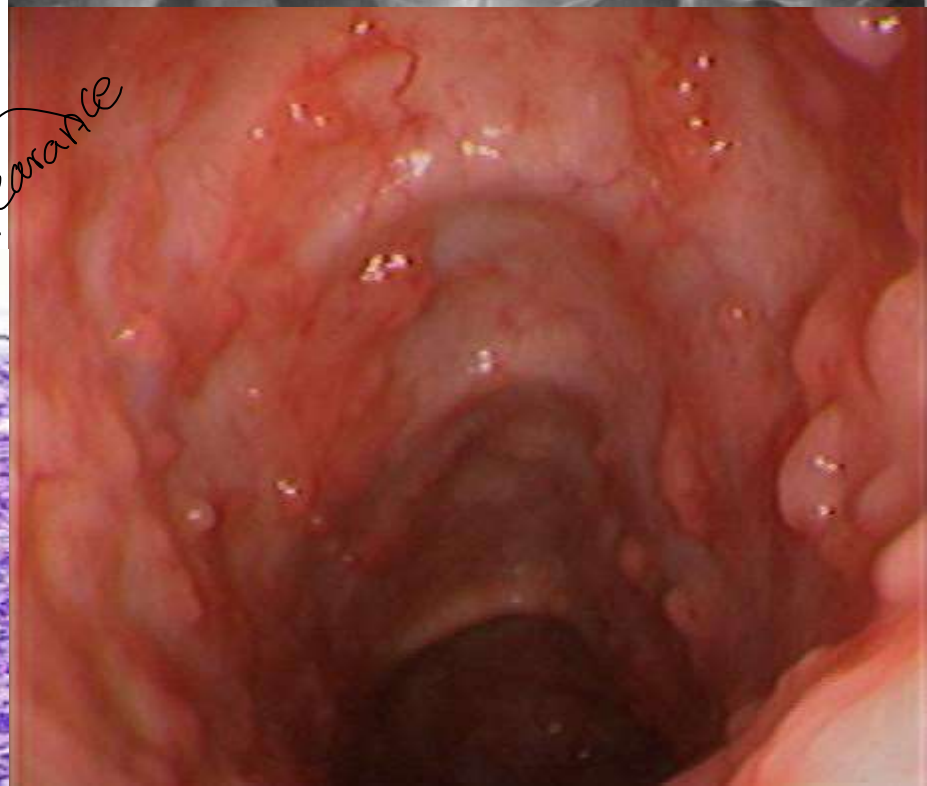
- Ulcerative colitis



Q2: Mention 2 drugs used in Mx?

1) Steroid
2) Azathioprine





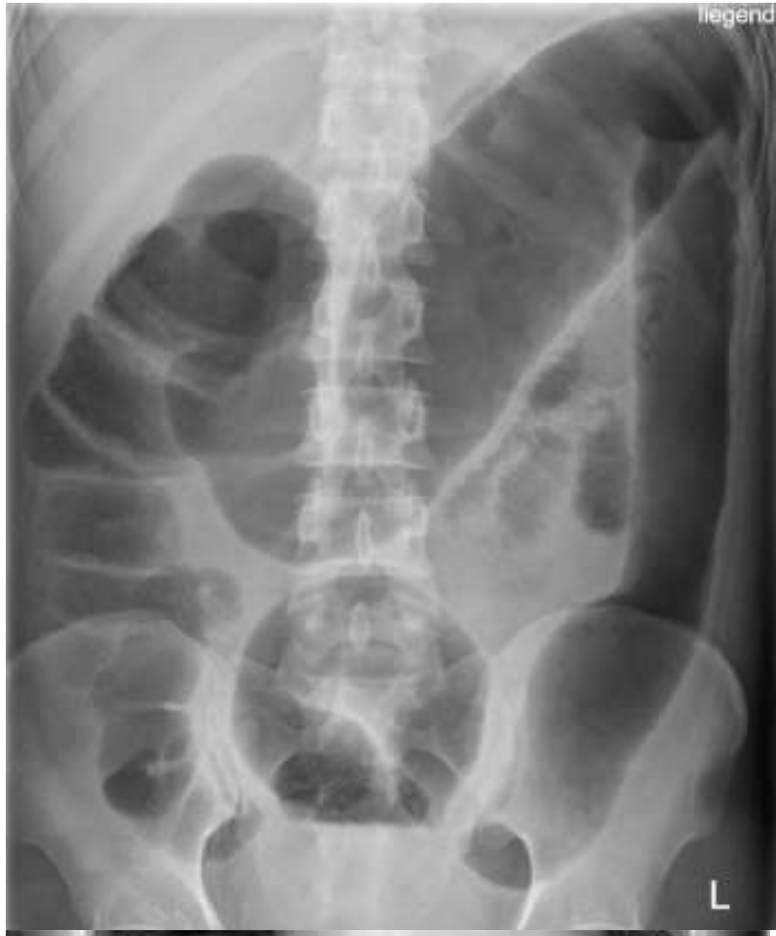
Q: Known case of UC, with Hx of bloody diarrhea and abdominal pain:

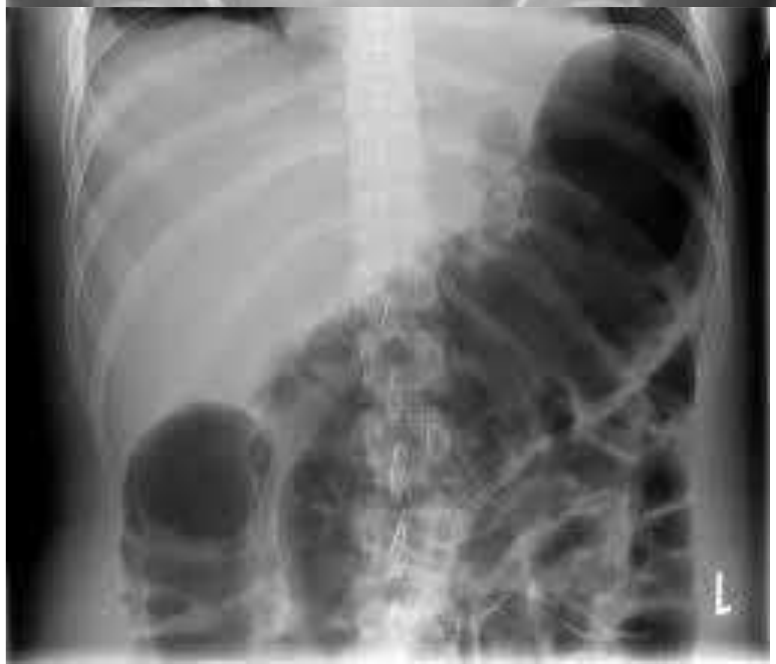
Q1: What is the abnormality?

- Transverse Toxic megacolon

Q2: One complication?

- Perforation
- Peritonitis





Ulcerative colitis (IBD)

UC is an autoimmune disease

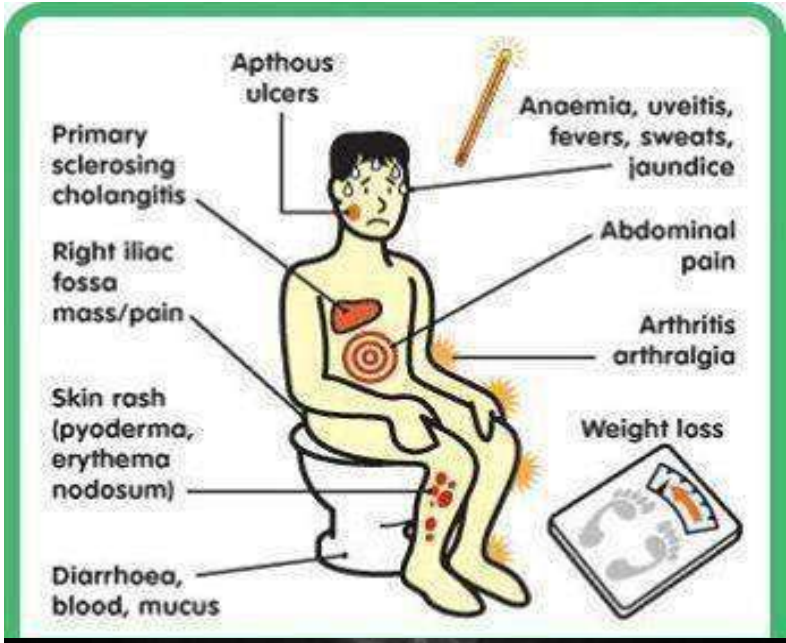
the rectum is always involved

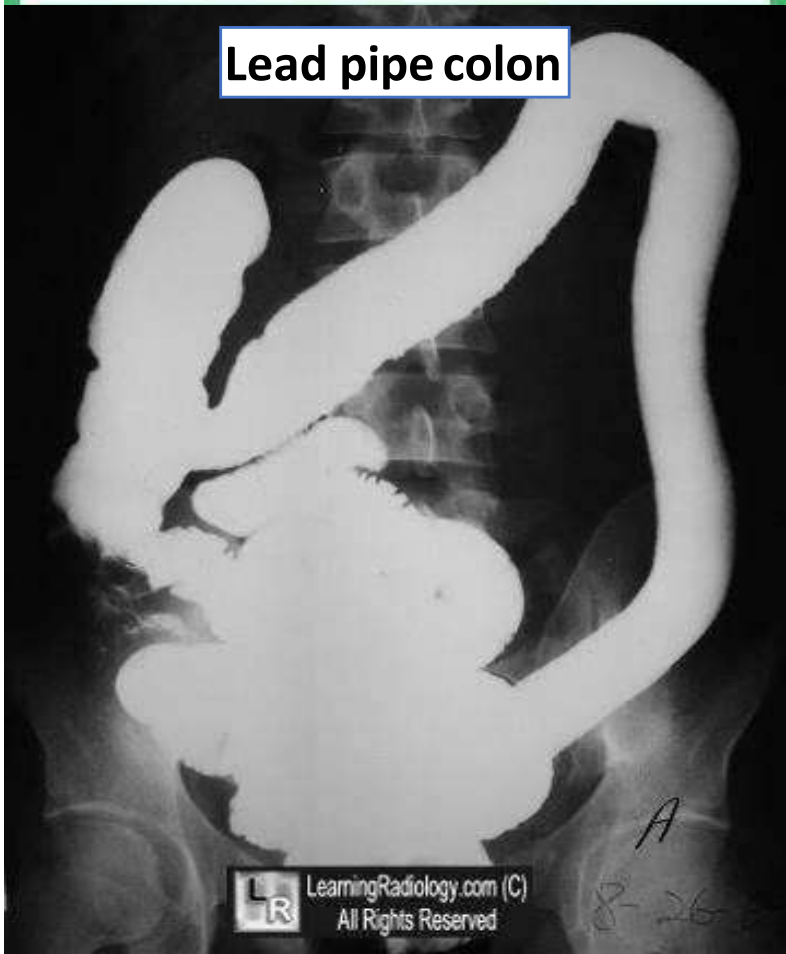
* smoking: protective.

- extracolonic manifestations :

arthritis (sacroiliitis and ankylosing spondylitis), eyes (iritis , keratitis) , renal (calculi & pyelonephritis , Skin (erythema nodosum & pyoderma gangrenosum), blood (anemia & higher risk of DVT), hepatic disease & cholangitis (PSC)

- investigations:
  - if perforated --> Air under diaphragm on AXR
  - in chronic UC --> LEAD PIPE colon + and TOXIC MEGACOLON on AXR .
- Treatment :
  - medical : mainly steroids ,/
  - Surgery (proctocolectomy with Brooke ileostomy) is indicated when : medical treatment is failed , toxic megacolon , perforation and subsequent peritonitis , too frequent relapses , duration of more than 10 years (>15 years --> 5% risk of CA)





Q1: What is the Dx?

Colon Cancer

Q2: What is the screening method?

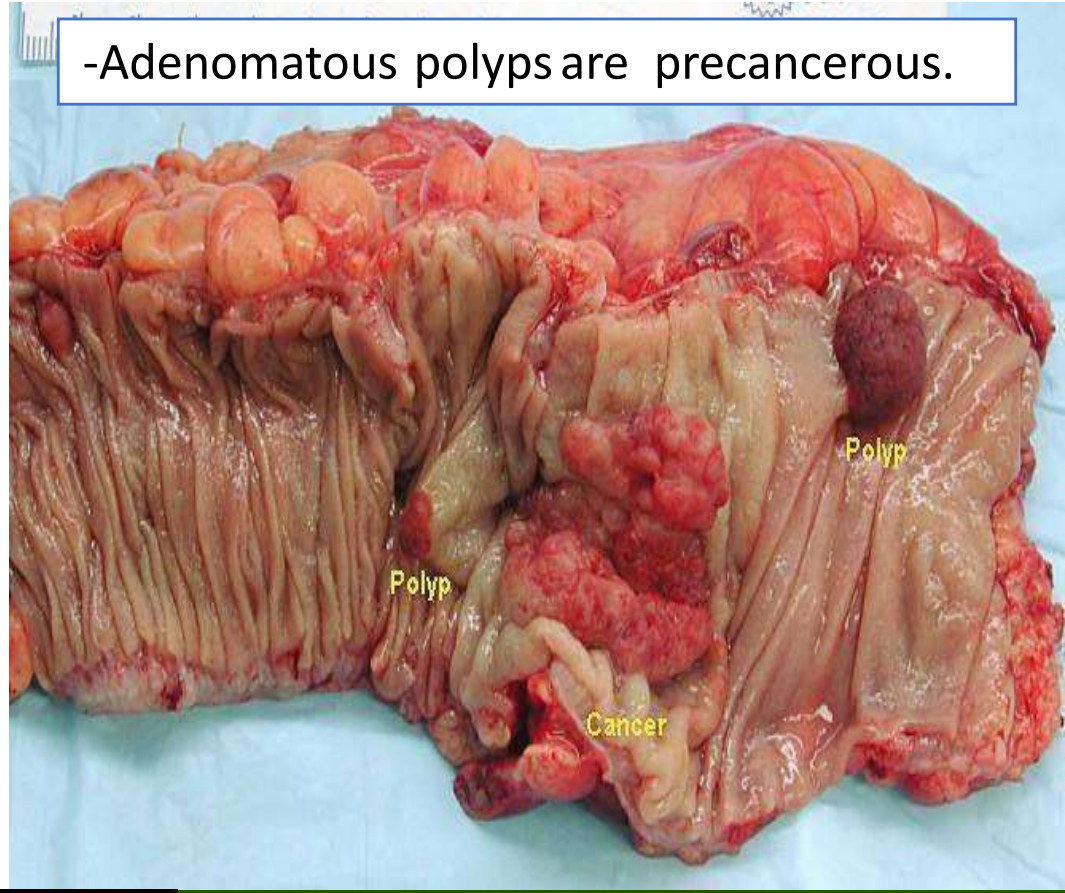
Colonoscopy

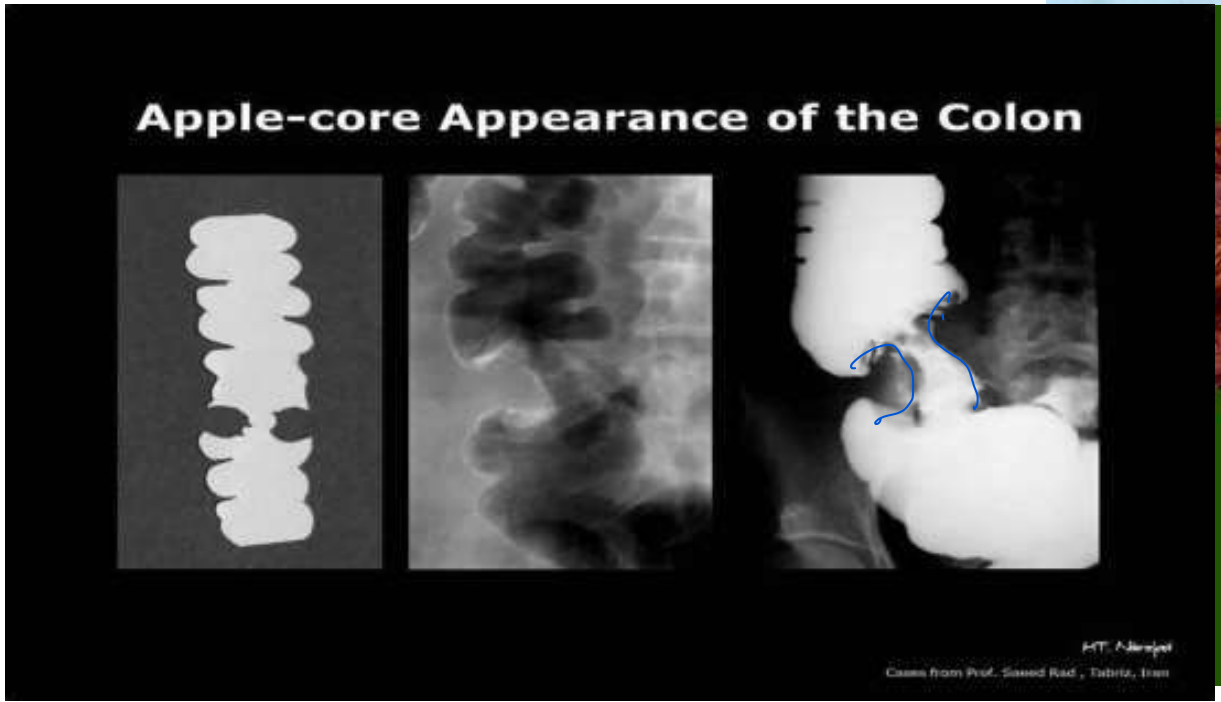
Q3: What is the tumor marker?

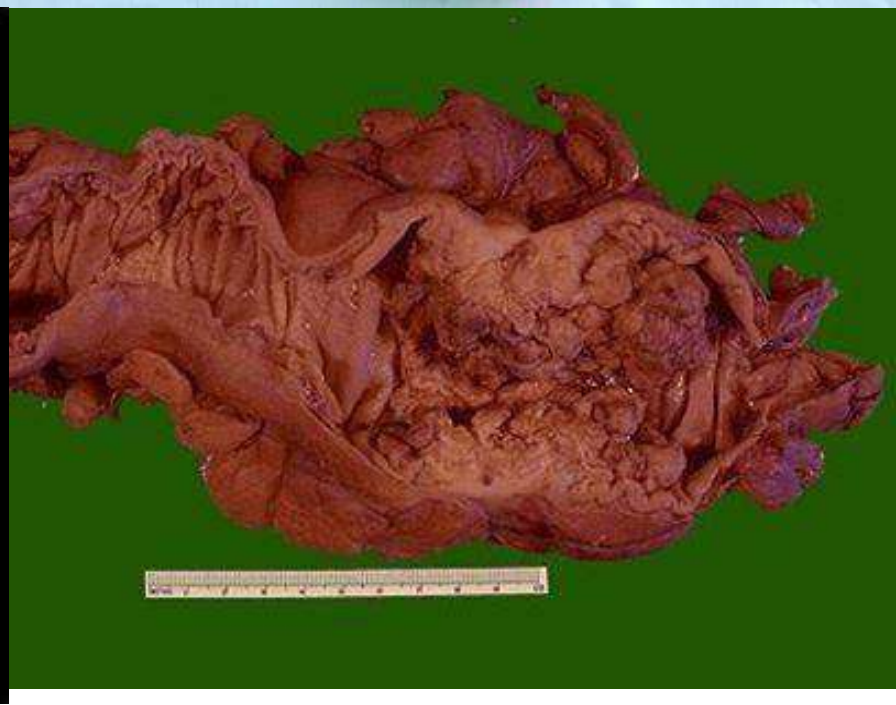
CEA

Q4: What is the appearance?

Apple-core







Gardner's Syndrome

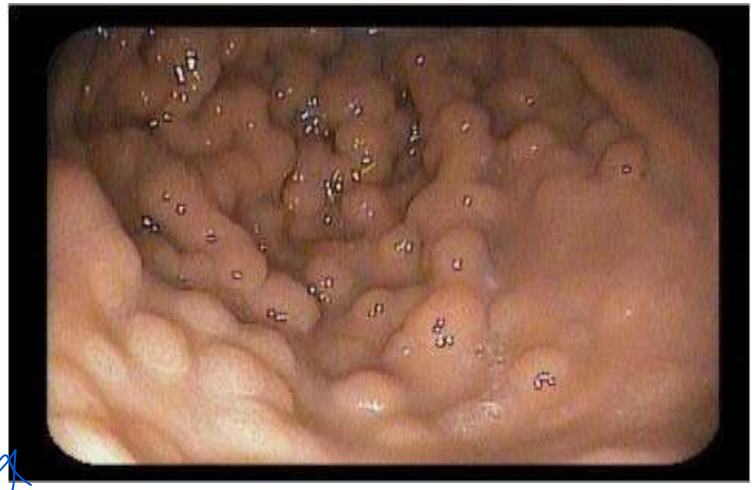
(AD)

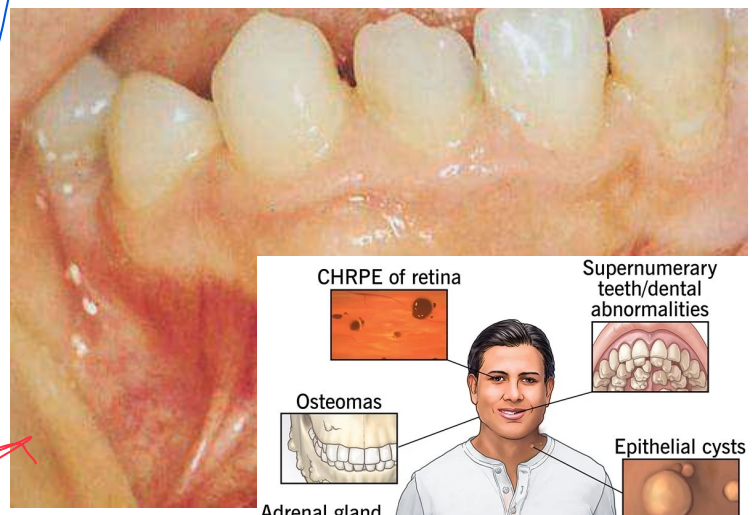
a familial adenomatous polyposis syndrome with cutaneous manifestations.

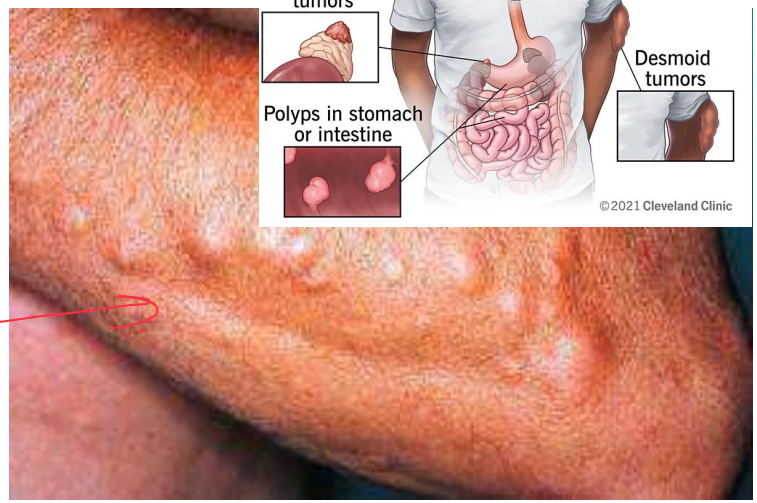
1) Colonic polyps (hundreds with 100% risk of malignancy if untreated).

2) Ostromas (the picture of an osteoma of the mandible).

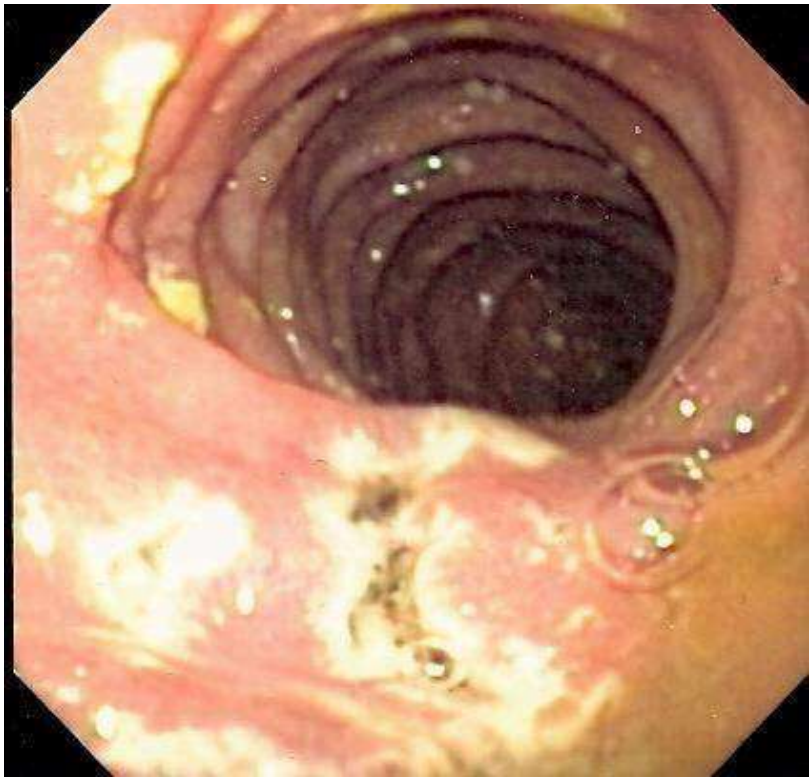
3) Lipomas and epidermoid cysts (on the forearm)





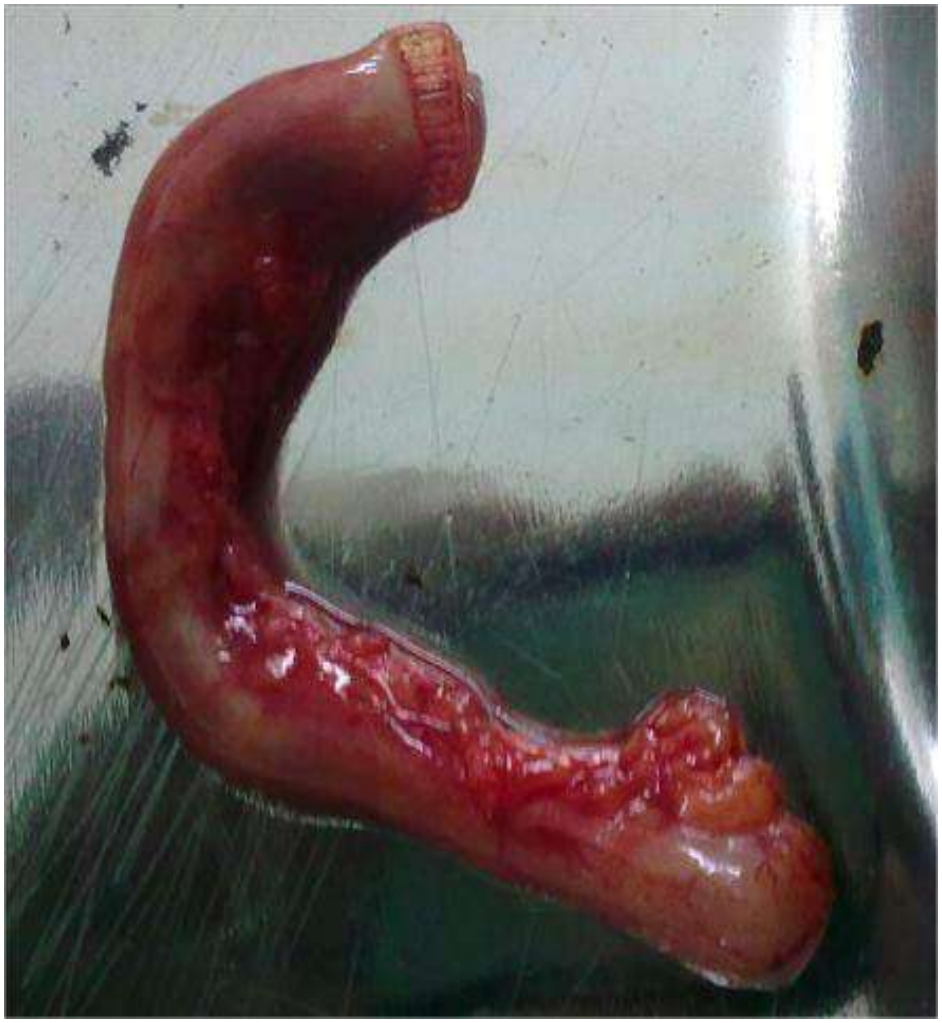


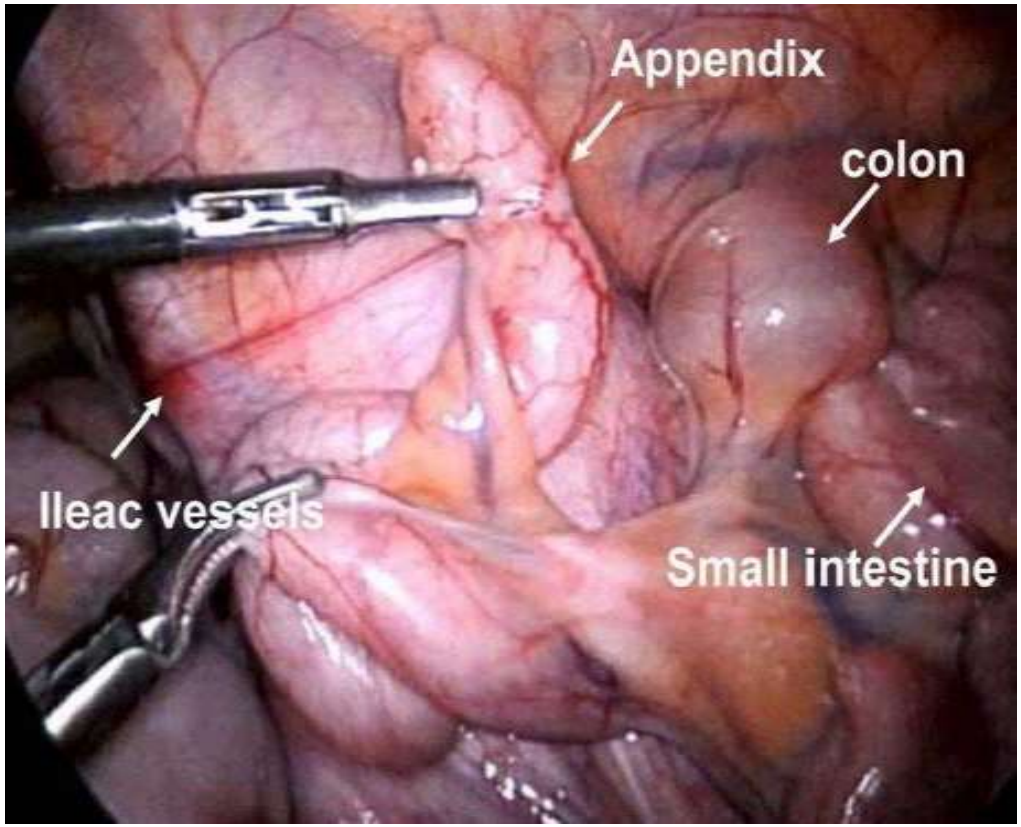
multiple small ulcers located in the distal duodenum in a patient with gastrinoma **(Zollinger- Ellison syndrome)**



Q: What is the Dx?

Gross Appendicitis

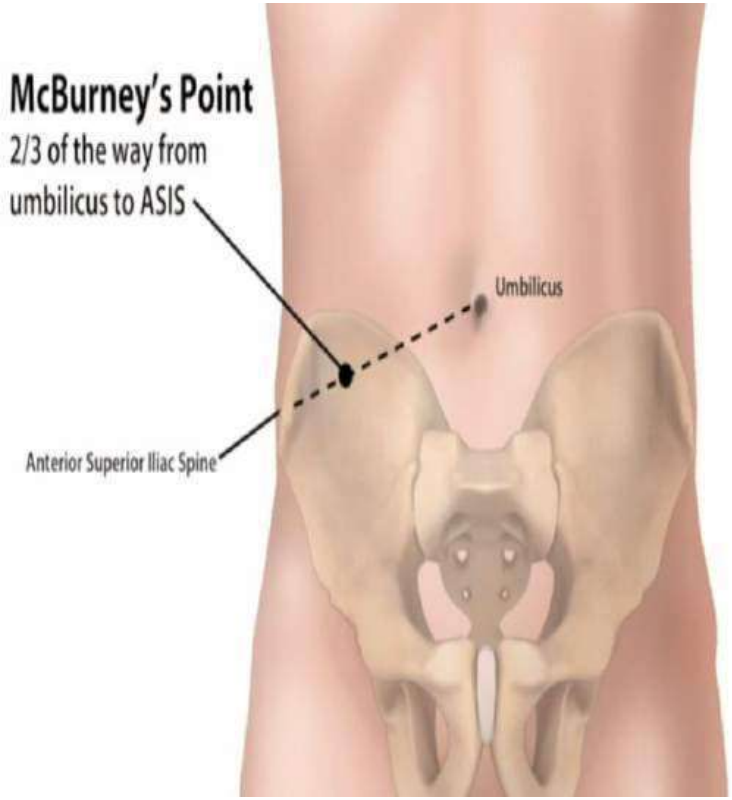




Acute appendicitis

- Sx : pain (periumbilical area) >> nausea and vomiting >> anorexia >> pain migrates to RLQ (constant and intense, usually < 24 hrs.).
- Tenderness maximally at **McBurney's point**.
- Obturator sign/ psoas sign/ rovsing sign/ valentino sign.

- **Appendectomy** is the m.c.c of emergent abdominal surgery.
- Dx of ruptured appendix : fever >39 / high WBC/ rebound tenderness/ periappendiceal fluid collection on ultrasound.
- If normal appendix is found upon exploration, take it out (even in chron's).
- Appendiceal abscess : percutaneous drainage/antibiotics / elective surgery 6 wks later.



Q: Appendicitis Scenario:

Q1: What is the pathology?

- Acute Appendicitis

Q2: What is the name of it's scoring system?

- Alvarado scoring system

Q3: What is the sequence of the pain?

- Visceral somatic sequence of pain

Q4: Write 2 features found on US?

1) Blind-ending tubular dilated structure >6mm
2) Appendiocolith with acoustic shadow
3) Distinct appendiceal wall layers
4) Periappendiceal fluid collection
5) Periappendiceal reactive nodal enlargement

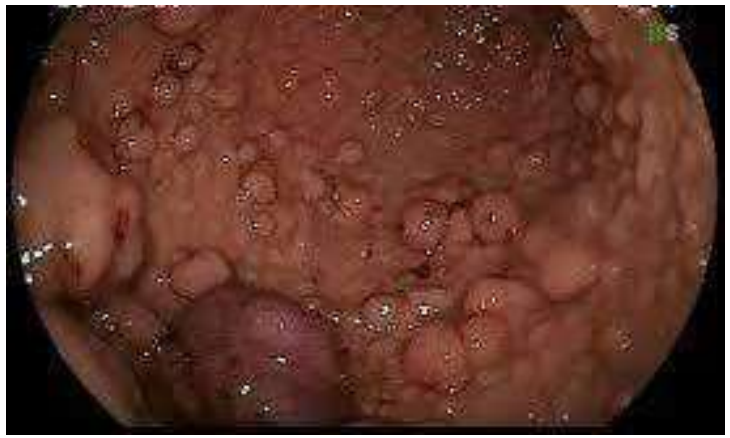
Alvarado scoring system (Appendicitis)

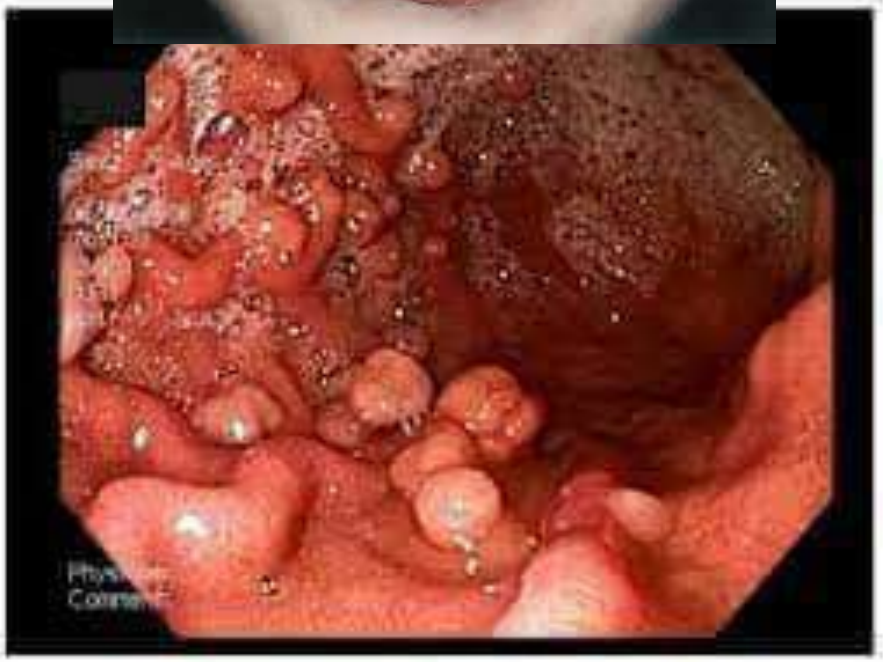
Mnemonic (MANTRELS)	Value
Symptom	
Migration	1
Anorexia-acetone	1
Nausea-vomiting	1
Signs	
Tenderness in right lower quadrant	2
Rebound pain	1
Elevation of temperature >37.3°C	1
Laboratory	
Leukocytosis	2
Shift to the left	1
Total score	10

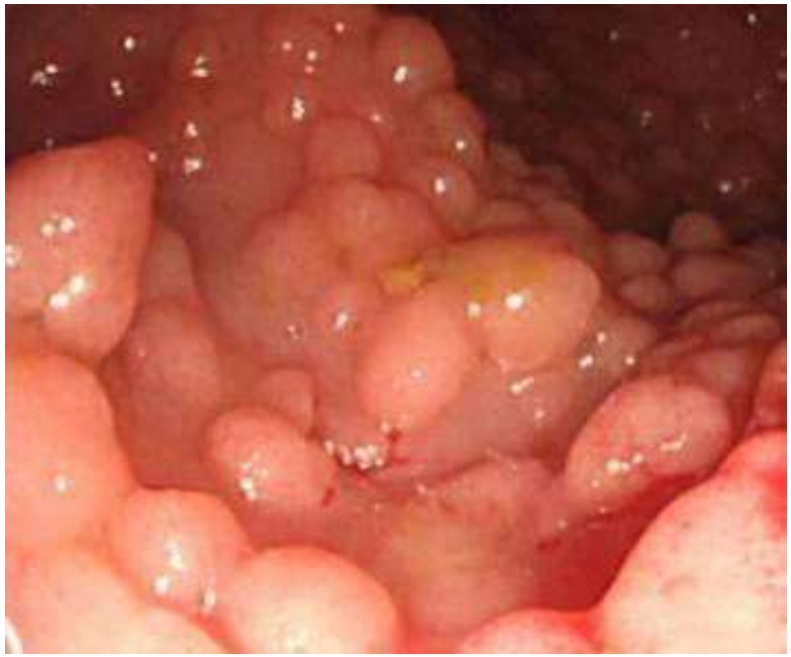
Q: What is the Dx?

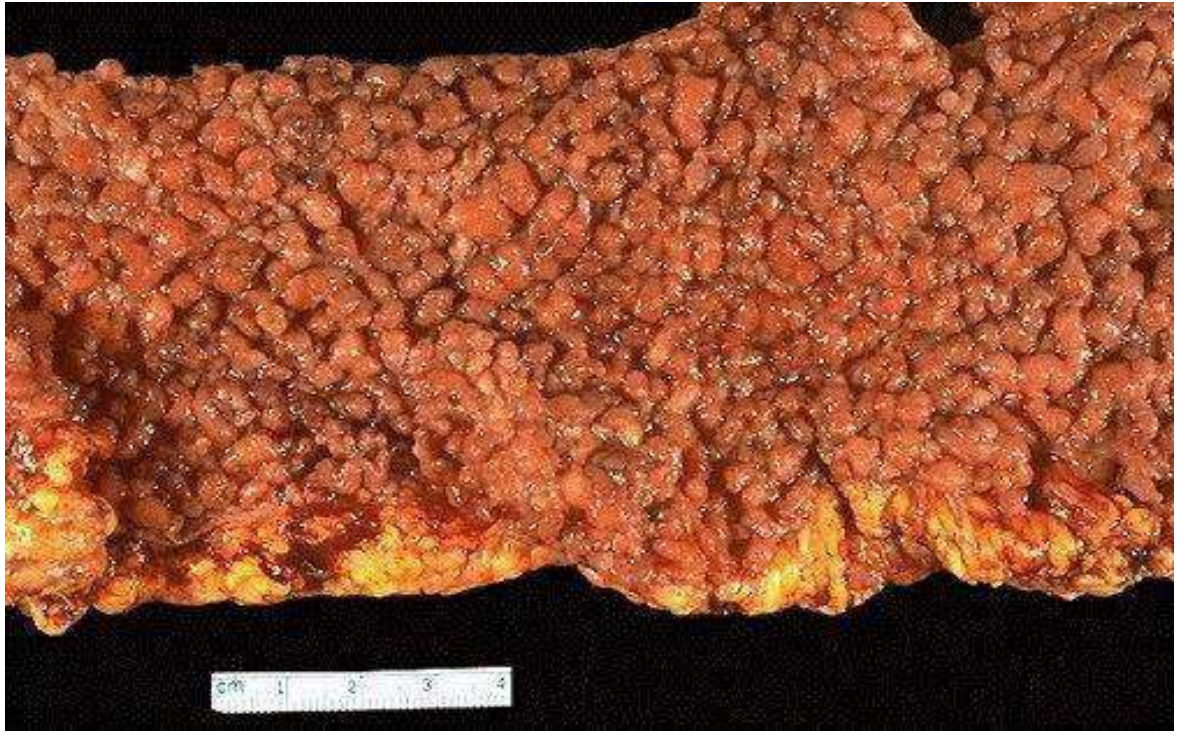
- Peutz-Jeghers syndrome

- autosomal dominant.
- hereditary intestinal polyposis syndrome.
- hamartomatous polyps in the GI tract.
- **circumoral pigmented nevi.**









Q1: What is you diagnosis ?

FAP (focal adenomatous polyposis – in the colon & rectum)

Q2: What is the cause of death before the age of 50?

Cancer (untreated patients develop cancer by the age of 40-50)

Q3: MOI? Autosomal Dominant

Q4: Associated tumors? Duodenal Tumors

Q5: Mx? Total Proctocolectomy and ileostomy

Q: patient with Hx of lower GI bleeding & this is the colonoscopy:

Q1: What is the Dx?

- Angiodysplasia

Q2: the Cause?

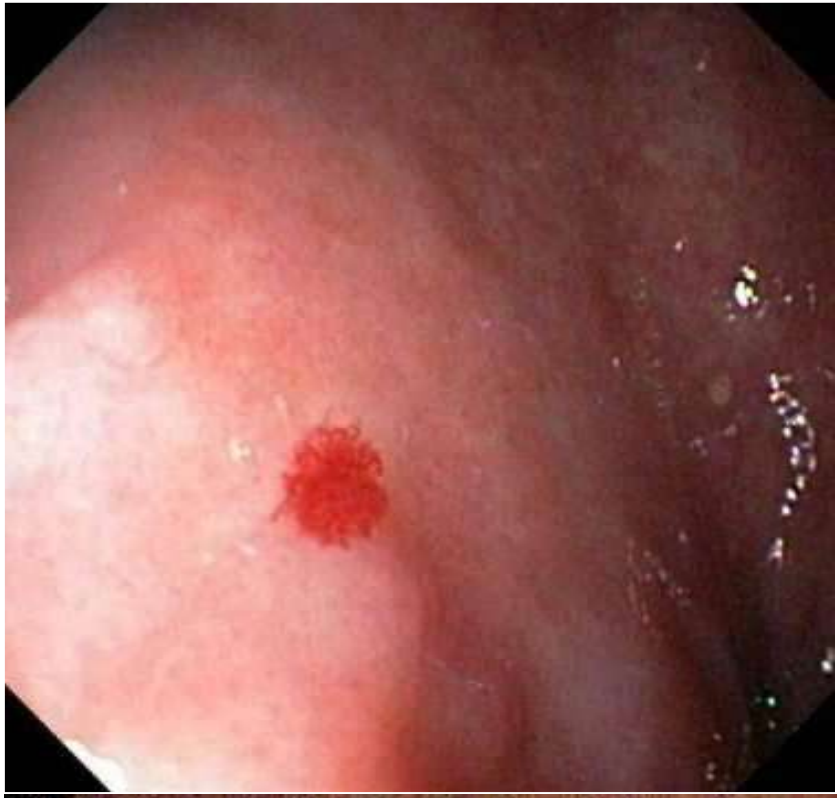
- Degeneration of submucosal venous wall and formation of AVM

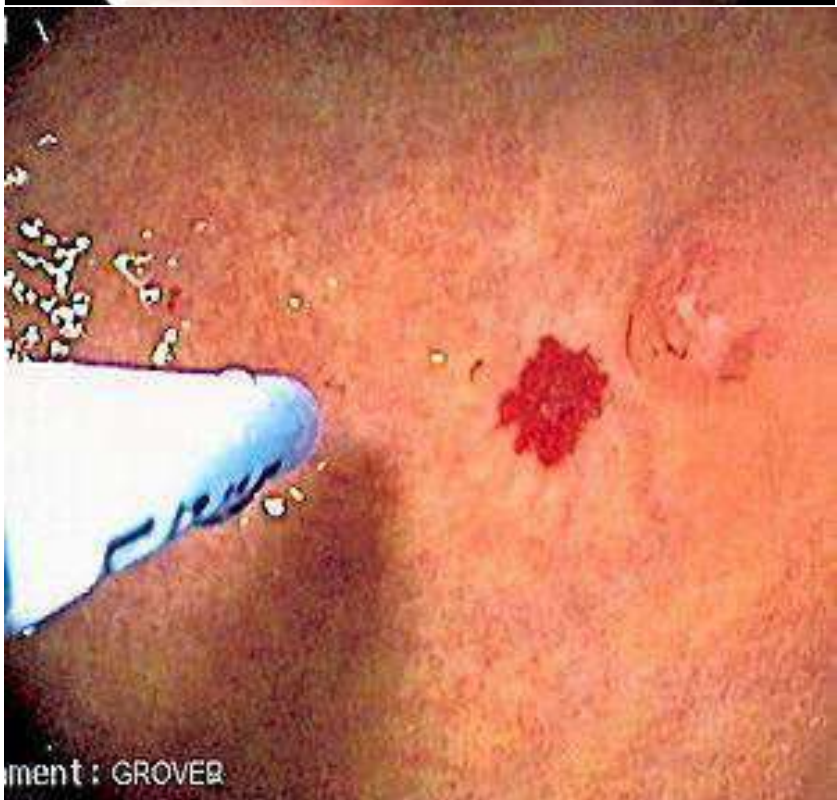
Q3: the Mx?

1) Laser
2) Electrocoagulation
3) Surgery

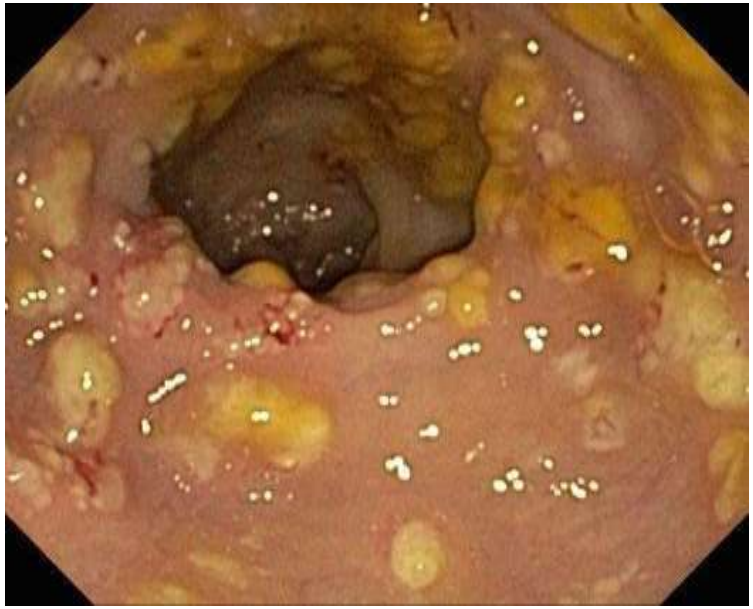
Q4: What is the most common site?

- the cecum or ascending colon

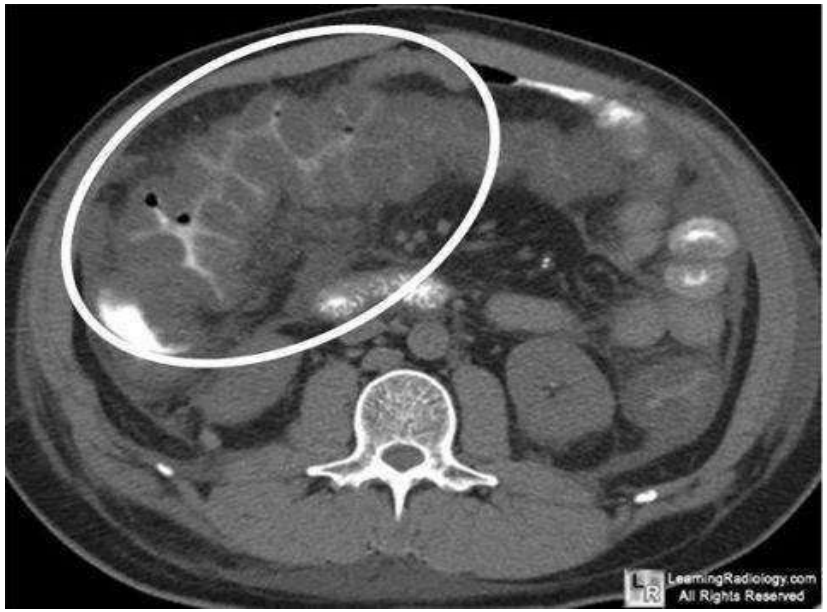




Pseudomembranous colitis



Colonoscopy showing pseudomembranes



cause: C. difficle

risk factors: use of Antibiotics.

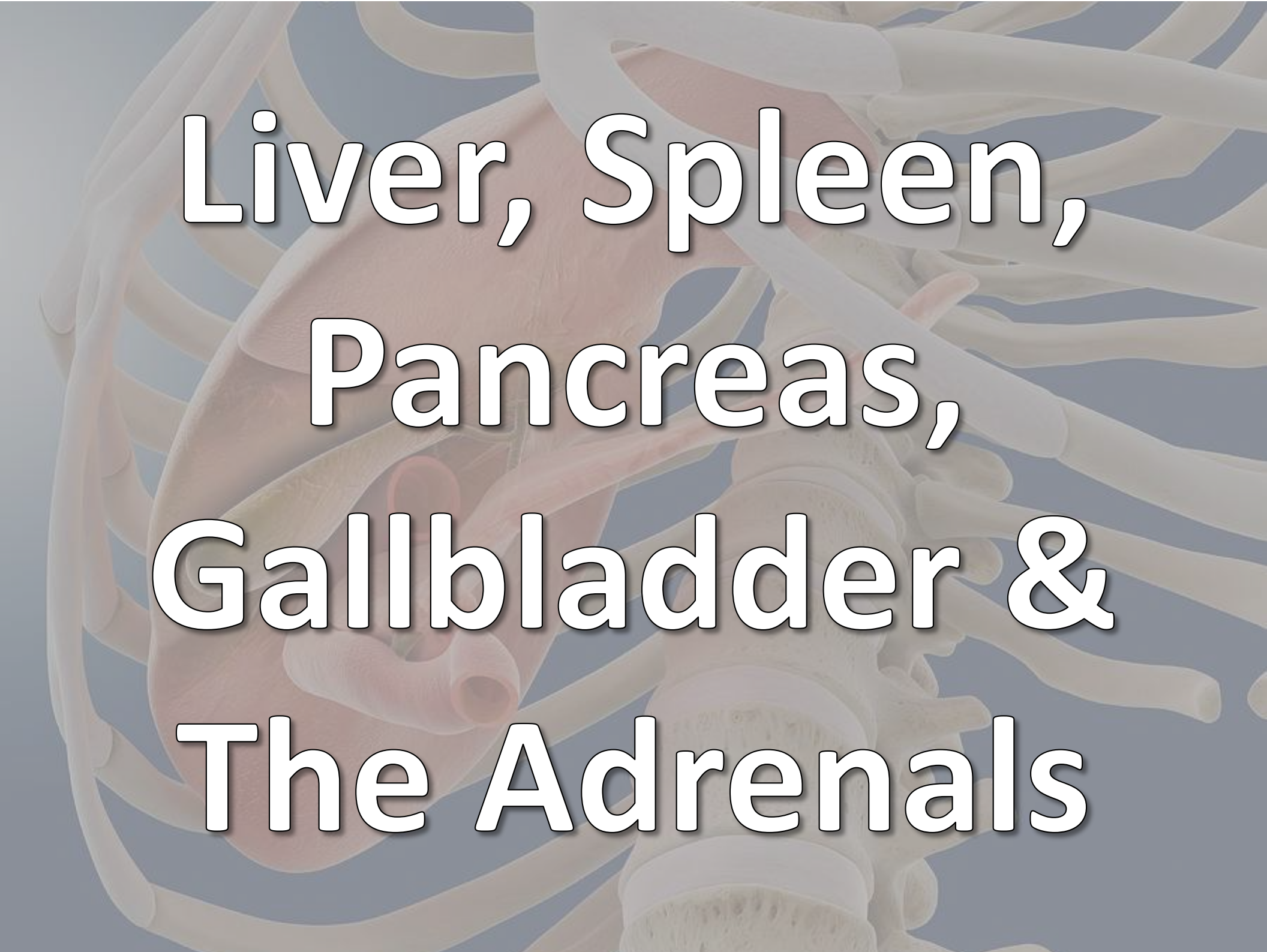
diagnosis: toxin assay in stool.

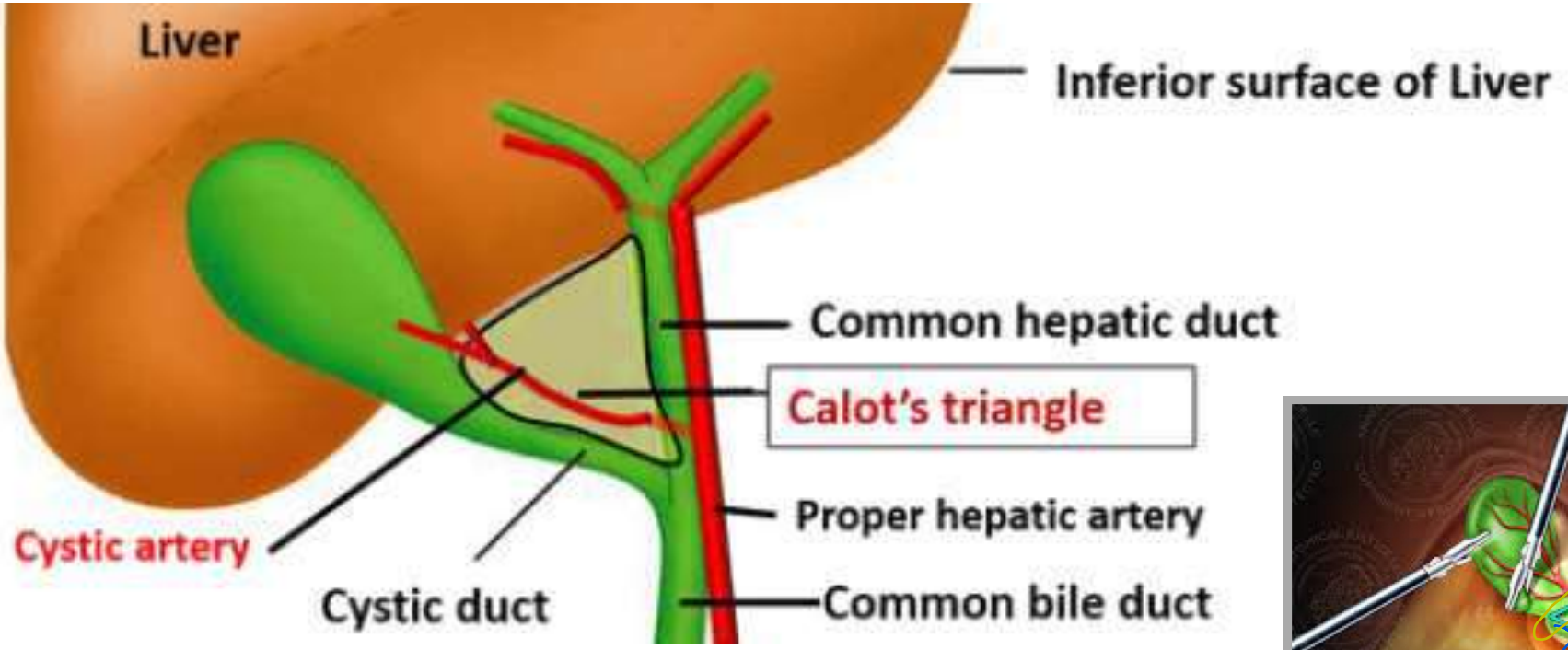
treatment: Metronidazole

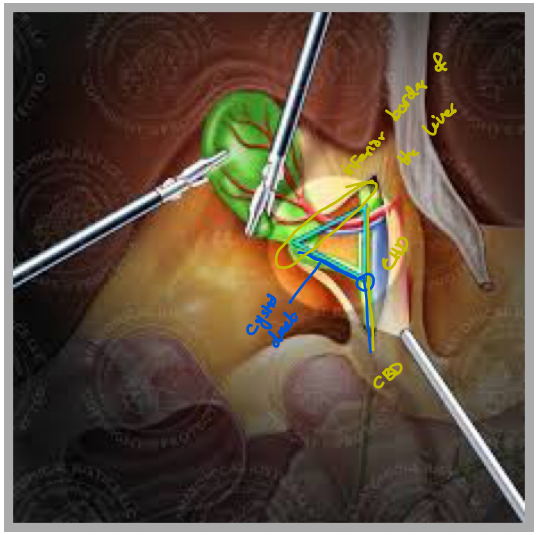
- Abdominal CT.
- similarity between the thickened edematous wall of pseudomembranous colitis to that of an accordion.

- What is the sign?
  Accordion sign.

Name	Region & info	Indications
Barium Swallow	to visualize the area from the mouth to the stomach (esophagus)	a. Symptoms of gastro-esophageal reflux b. Dysphagia, related to: Esophageal (Web, stricture, tumor, achalasia), vascular abnormalities
Barium Meal	Double contrast (gas+barium) to visualize the stomach and the duodenum	a. Gastro-edophageal reflux b. Gastric or duodenal ulcer c. Hiatus hernia d. Gastric tumors
Barium follow-through	To visualize the small intestine, taken every 1/2 hr till we reach the large intestine (stool white)	a. IBS (crohns mostly) b. small bowel tumor/lymphoma (filling defect) c. Small bowel obstruction
Barium Enema	Double contrast (barium + air), to visualize the colon, and it's the only contrast given in the rectum (by Folly's)	a. Abdominal mass b. Large bowel obstruction / volvulus c. Diverticular disease d. Colonic tumor


Liver, Spleen,
Pancreas,
Gallbladder &
The Adrenals





Q1: What is this triangle?

- Calot's Triangle

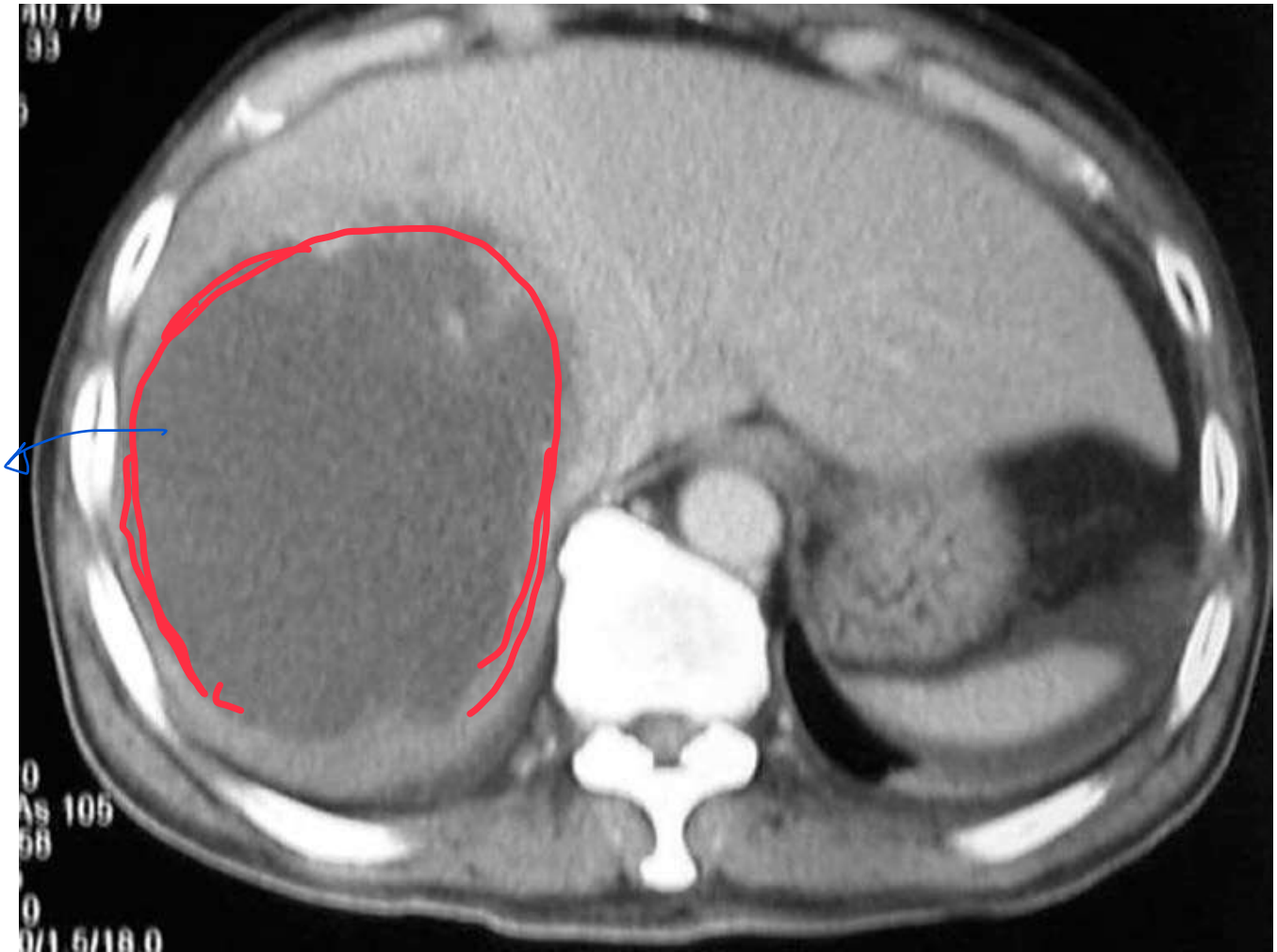
Q2: Name 3 borders?

1) Inferior border of the liver
2) Cystic duct
3) Common hepatic duct

Q: This 60-years old patient developed abdominal pain, bloody diarrhea and fever. He came back from a tour trip to a south west Asian country 3 weeks ago. CT was done.

1. What is the most likely diagnosis? Liver Abscess (Ameobic)

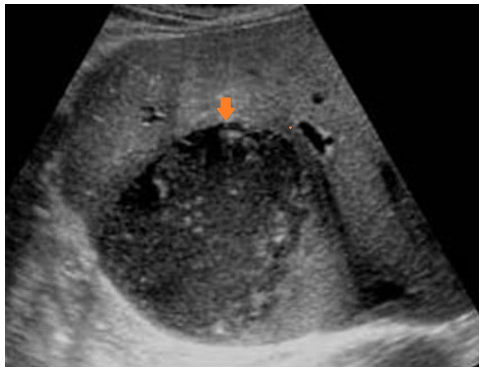
2. What is the treatment of choice? Metronidazle



hypodense area surrounded by liver parynchma

the MC extra intestinal manifestation of ameoba is Liver abcess

1) amoebic abscess



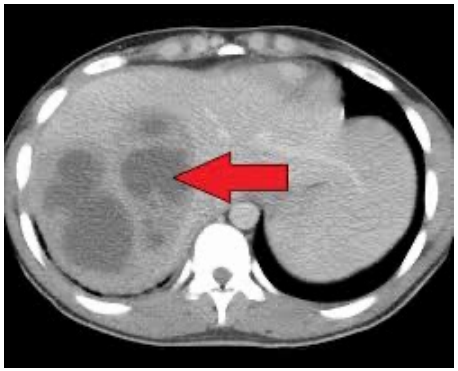
pt comes with:- ① RUQ pain [continous & stapping]

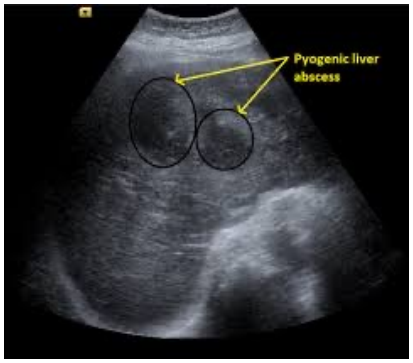
② cough

③ Fever & Chills

④ diarrhea [non-bloody in 1/3 cases]

2) Pyogenic Liver abscess

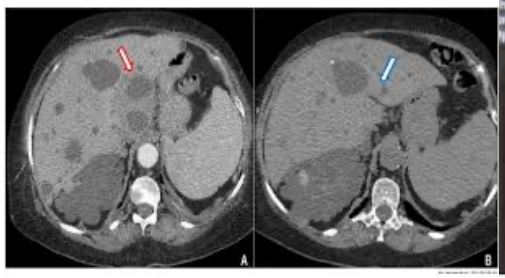




pt comes with:- ① Hx of gallbladder dz

triad
- ② RUQ pain
- ③ Fever & Chills
- ④ malaise

3) Fungal abscess



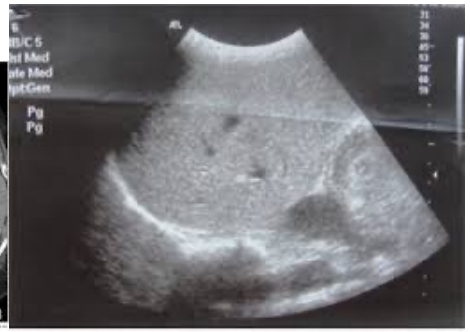


Figure 2: USG abdomen showing resolution of abscess

① caused by candida

② pt may expose prolongely to Ab

③ or may have malignancy

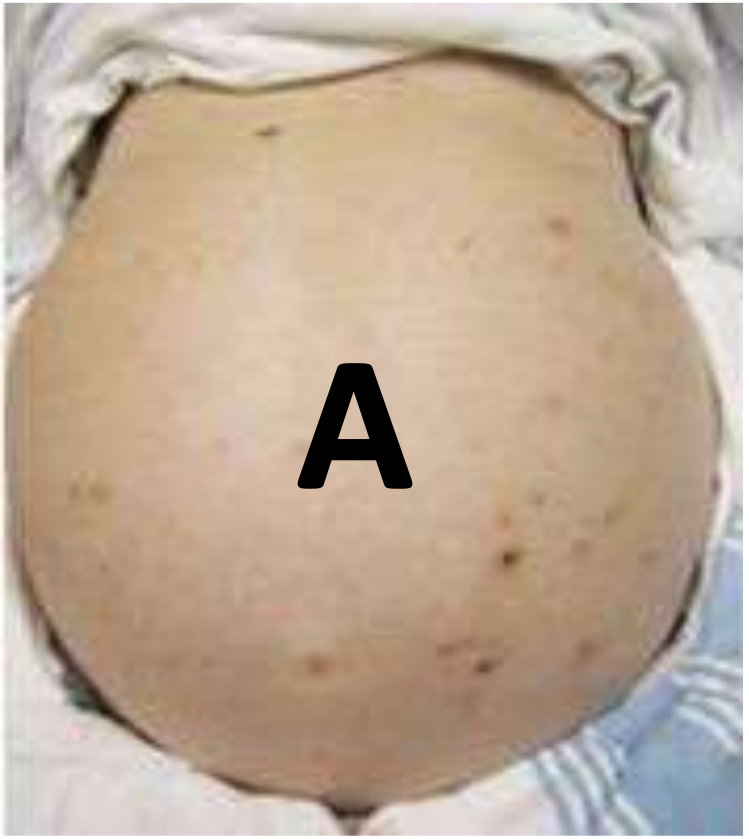
④ immunodeficient

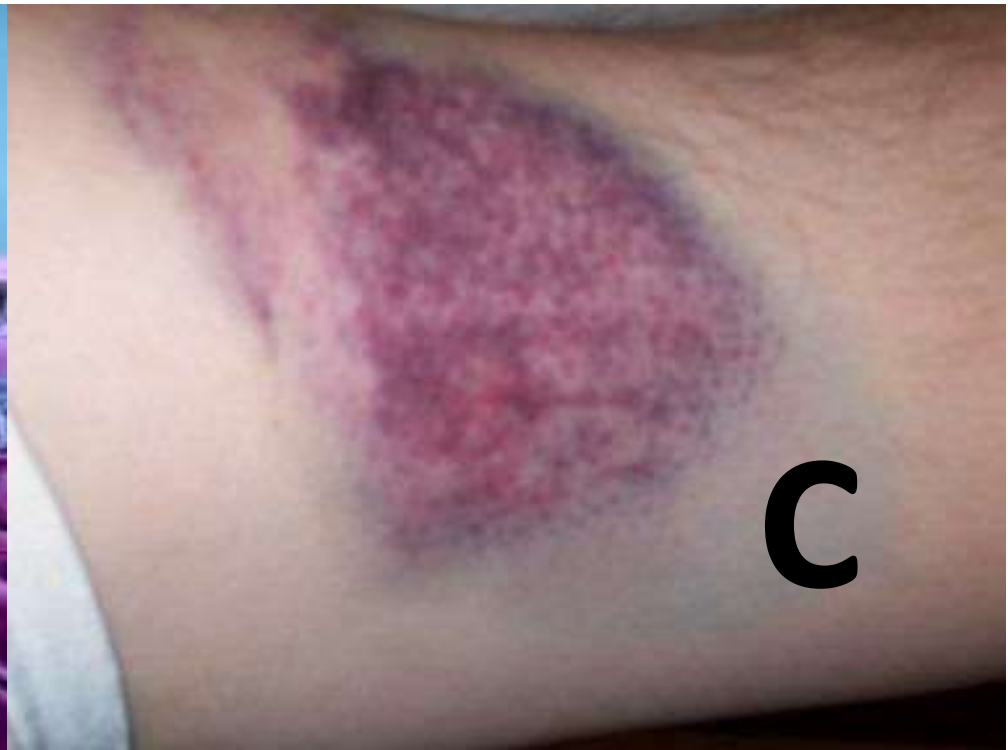
Q: Name the following complications of liver cirrhosis:

A > Ascites

B > Caput medusa (dilated veins)

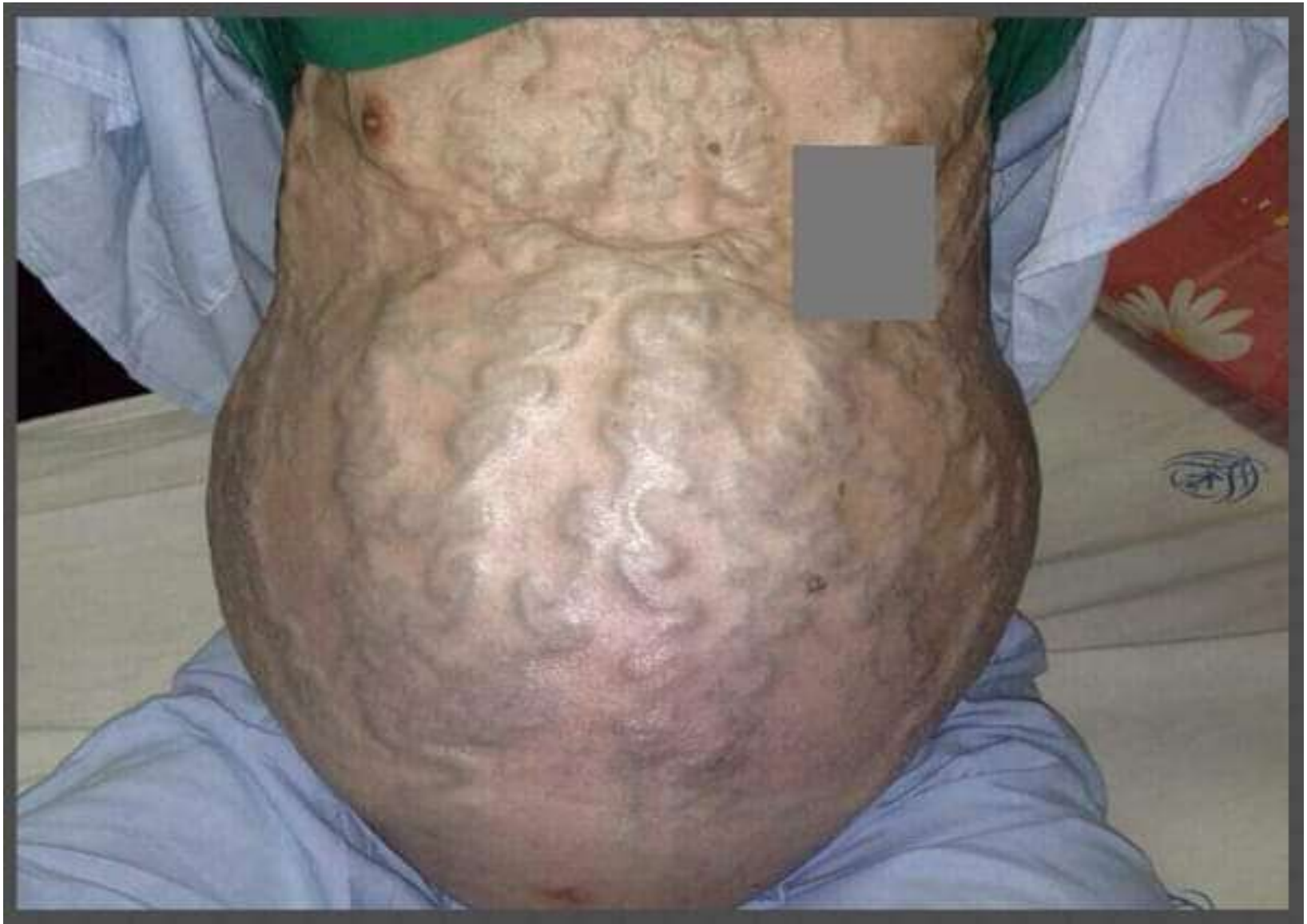
C > Hematoma (easily bruised)





Q1: What is the sign? Caput Medusa

Q2: What is the Dx? Liver Cirrhosis



Liver Abscess

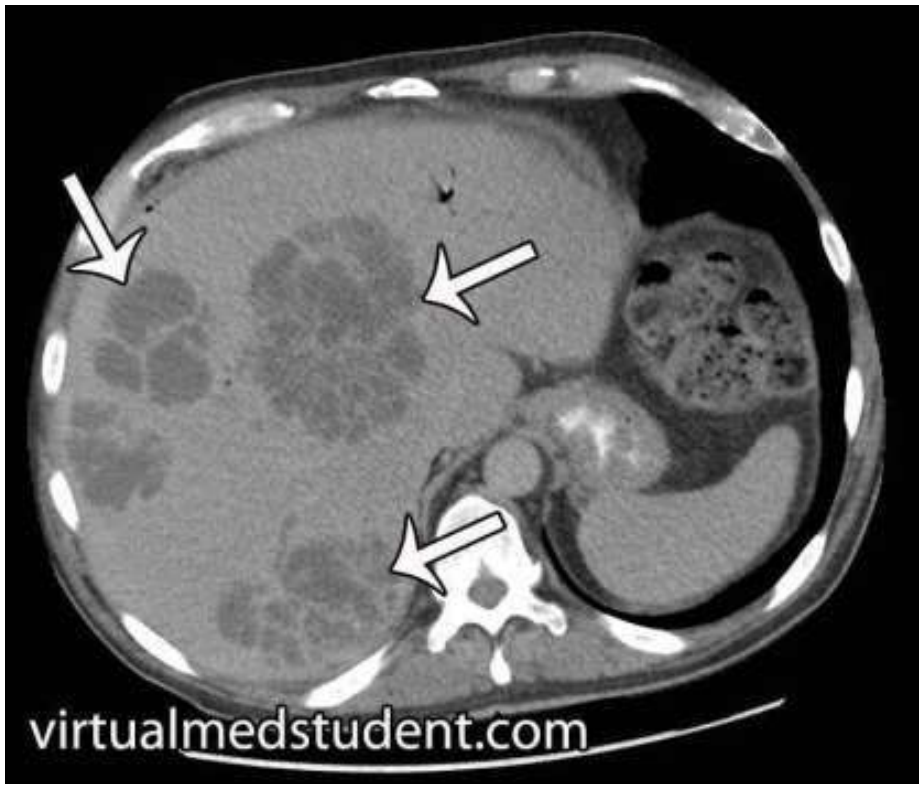
- Pyogenic (bacterial “gram negative’’) / parasitic (amebic) / fungal.

- Most common site is right lobe.

- Treatment : pyogenic (IV antibiotics + percutaneous drainage) / amebic (metronidazole+ drainage).

- Indications of surgical drainage in pyogenic : multiple lobulated abscesses/ multiple percutaneous attempts failed.

- Indications of surgical drainage in amebic: refractory to metronidazole/ bacterial co-infection/ peritoneal rupture.



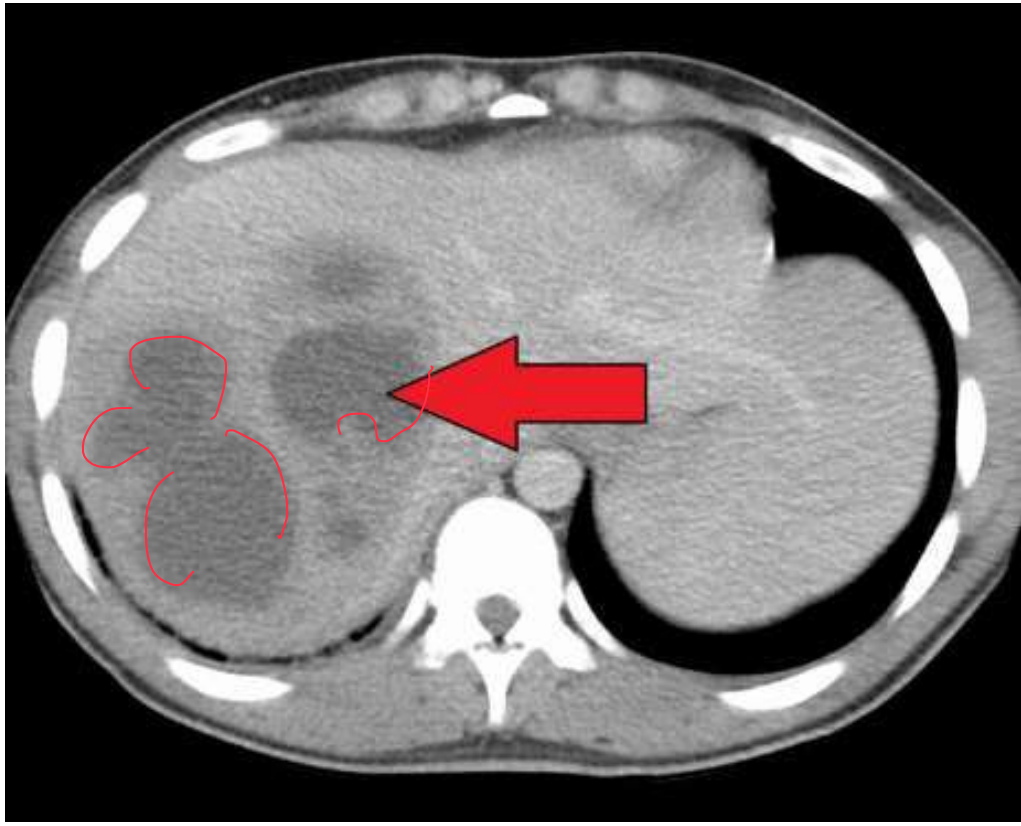
Q: Patient presented lethargic and febrile a week after a surgery for cholangitis:

Q1: What is your Dx?

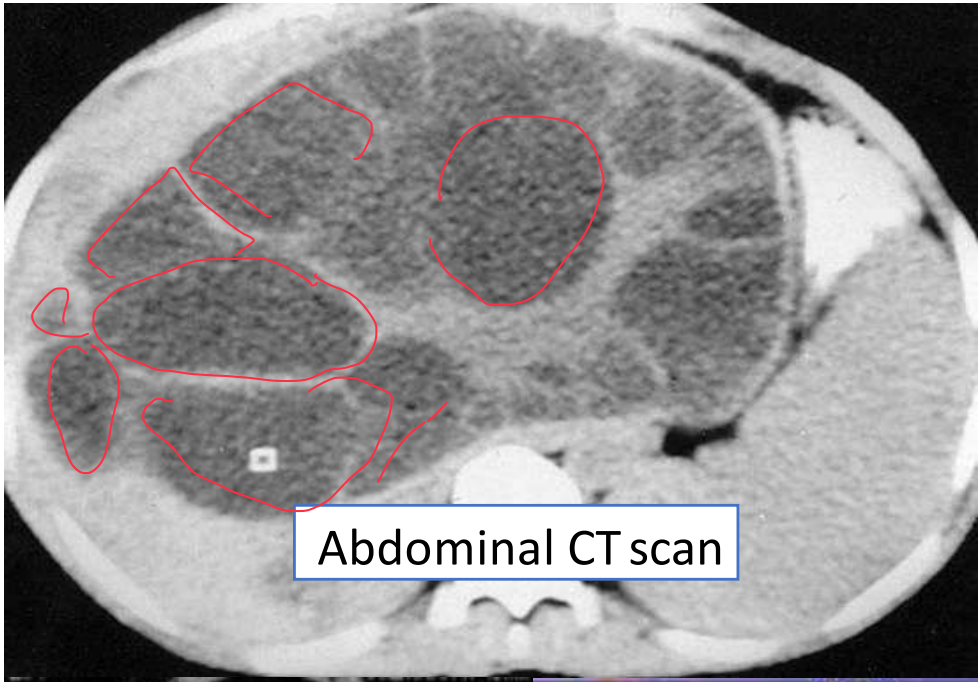
- Liver abscess (pyogenic)

Q2: Mx?

- Percutaneous drainage, &
- Antibiotic administration

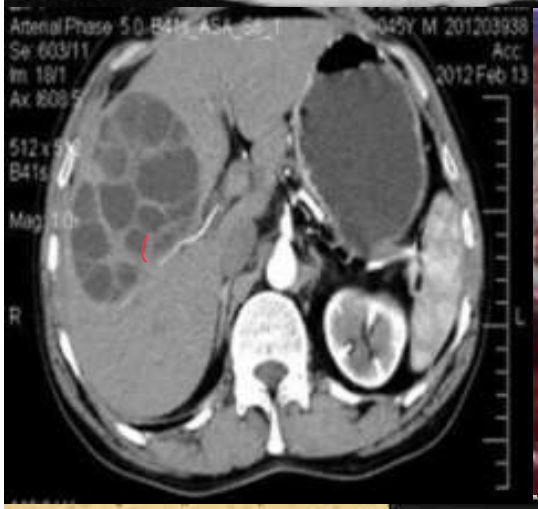


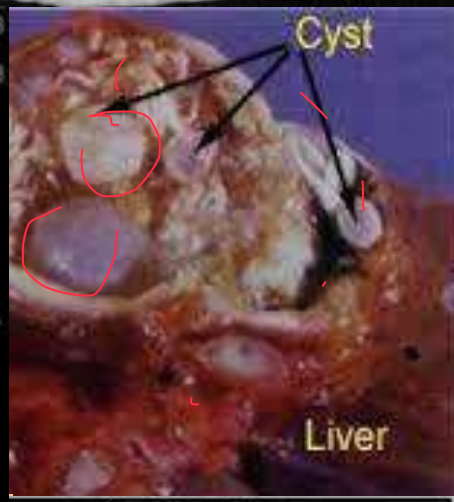
Q: A 45 year old male presented with RUQ discomfort and pain, this is his abdominal CT.



Q1: What is the radiological finding?

Peri-cyst and daughter cysts (hydatid cyst disease).



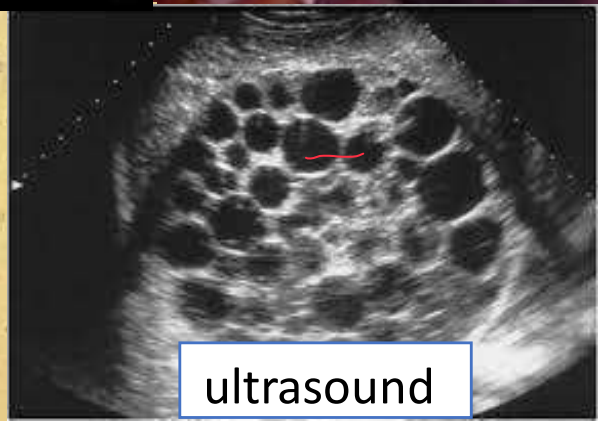


Q2: Mention 2 complications:

Rupture and anaphylaxis/ obstructive jaundice.

Q3: Give 2 drug that can be used?

Albendazole, Mebendazole



is a **parasitic infestation** by a tapeworm of the genus **Echinococcus.**

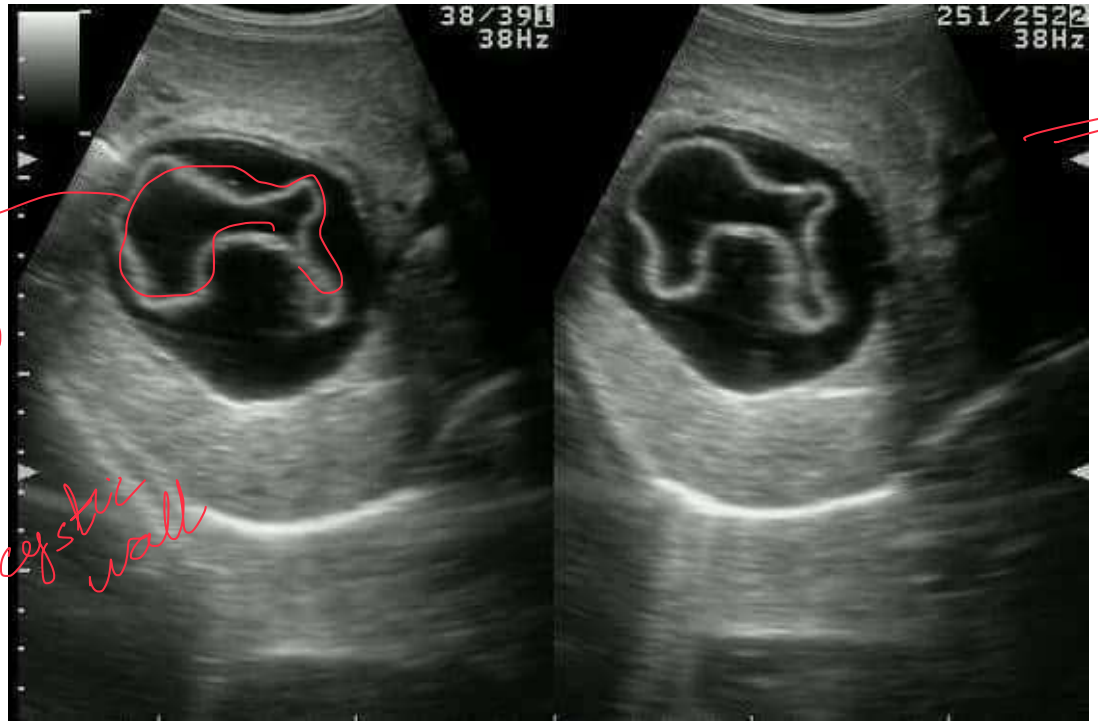
Q: Abdominal US image for a woman lives in rural area:

Q1: What is the name of this sign?

- Water lily sign

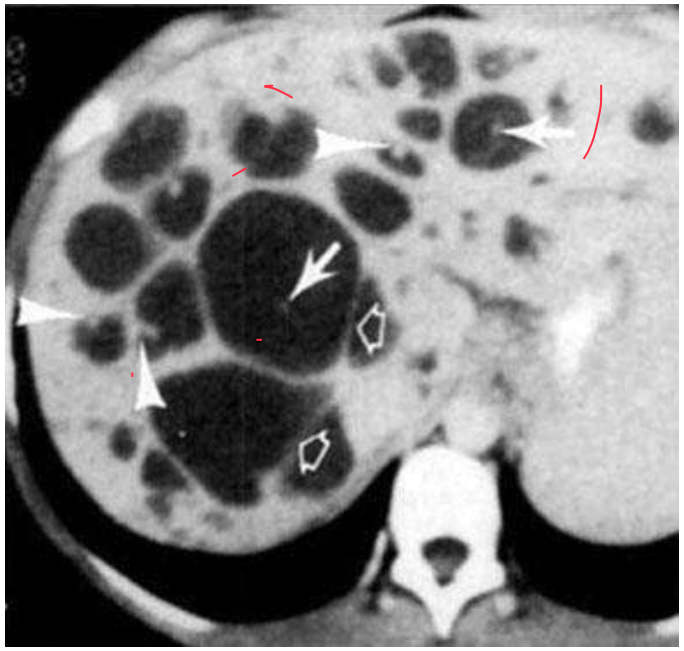
Q2: Most probable etiology for this sign?

- Caused by tapeworm Echinococcus granulosus
- Another cause is E. multiocularis

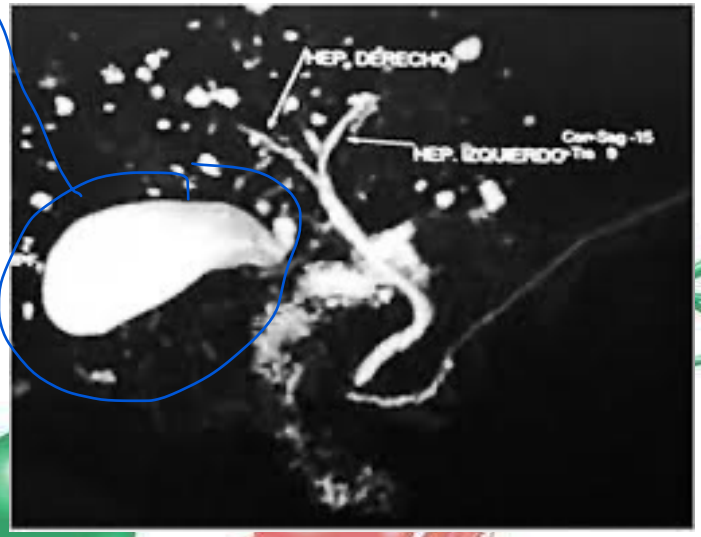


Caroli disease

is a congenital disorder comprising of multifocal cystic dilatation of segmental intrahepatic bile ducts.

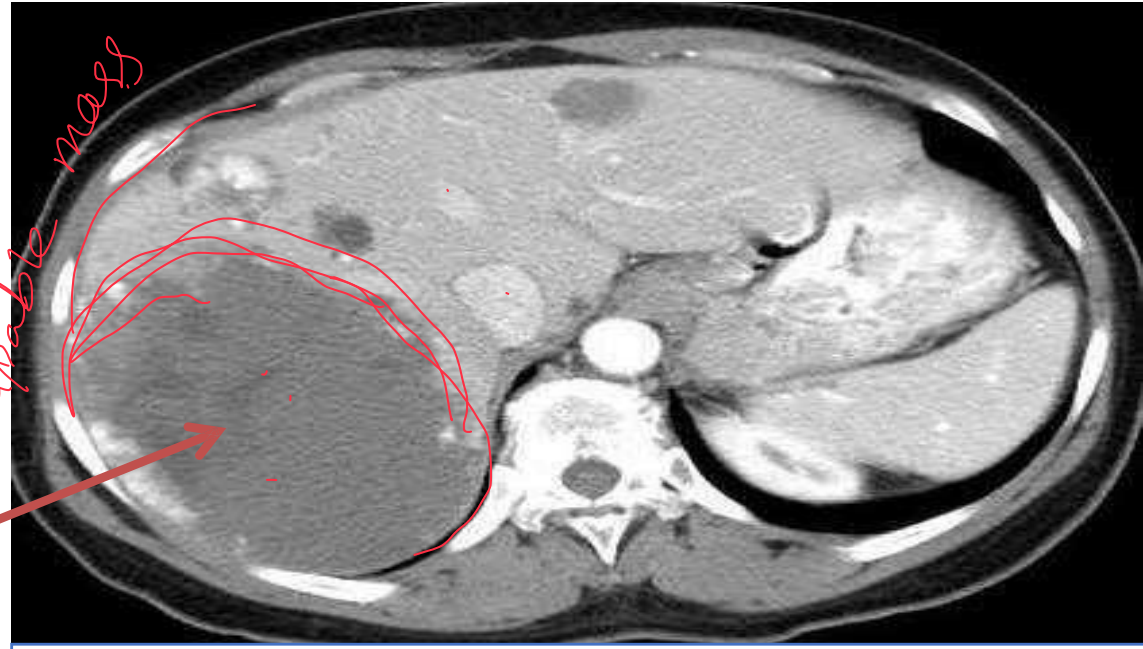


<u>presentation</u> is in childhood or young adulthood. The simple type presents with RUQ pain and recurrent attacks of cholangitis with fever and jaundice.



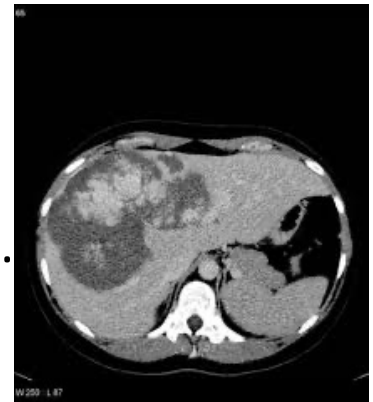
<u>Prognosis</u> is generally poor. If disease is localized, segmentectomy or lobectomy may be offered. In diffuse disease management is generally with conservative measures; liver transplantation may be an option.

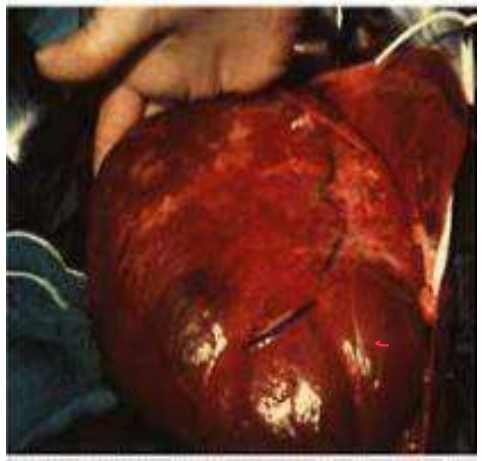
Hepatic Hemangioma



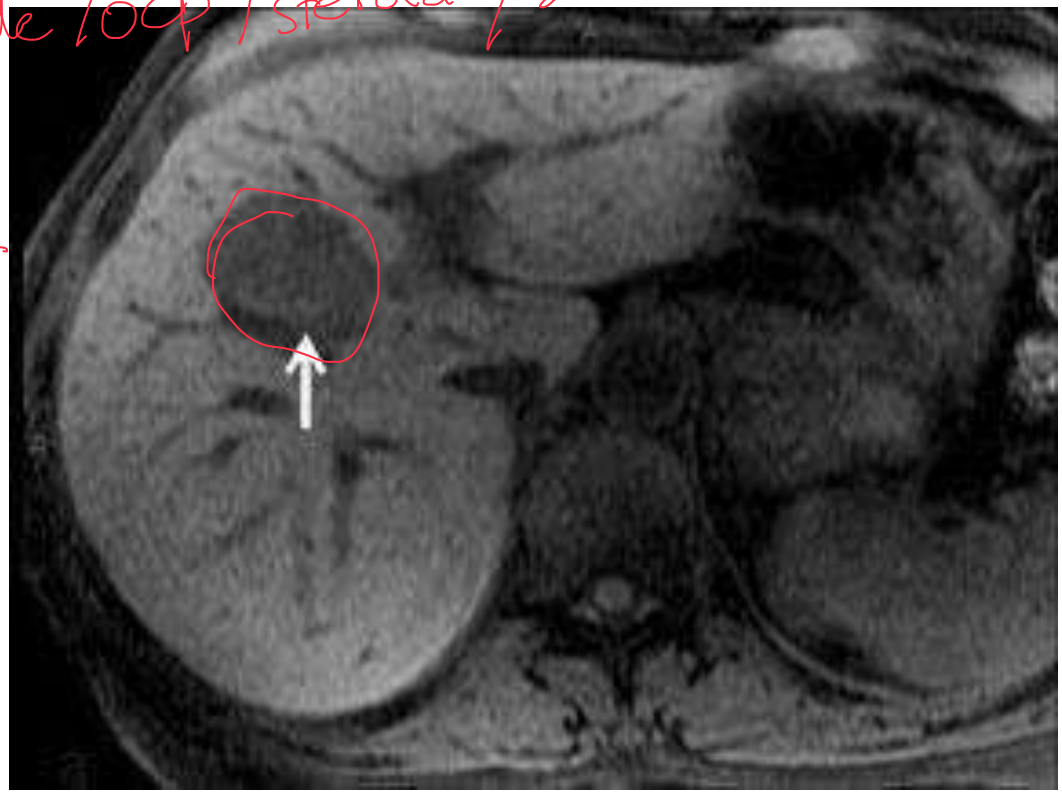
- Most common benign solid tumor.
- Variants:
  - Capillary : m.c / <2cm /no need for surgery.
  - Cavernous : giant.
- Vague upper abdominal tenderness with no mass.
- **Not premalignant**.
- **Percutaneous biopsy is contraindicated** (risk of hemorrhage).
- U/S is the first test.
- MRI is the most sensitive & specific.

- Until recently, no medical therapy capable of reducing the size of hepatic hemangiomas had been described.
- Surgical treatment may be appropriate in cases of rapidly growing tumors. Surgery may also be warranted in cases where a hepatic hemangioma cannot be differentiated from hepatic malignancy on imaging studies.





Hepatic Adenoma



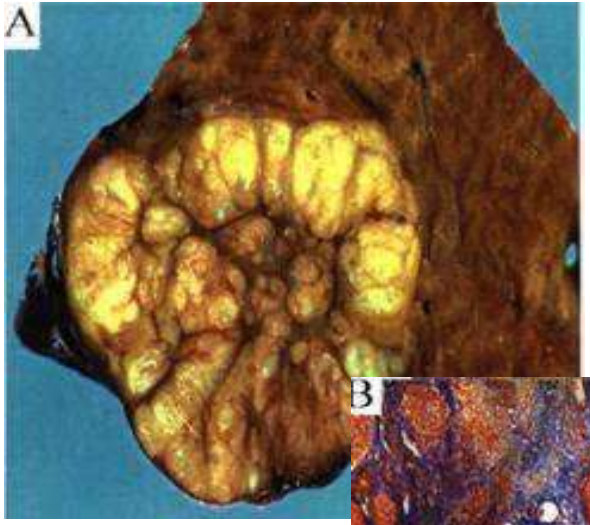
Risk factors:
Female/ birth control pills/ anabolic steroids/ glycogen storage disease.

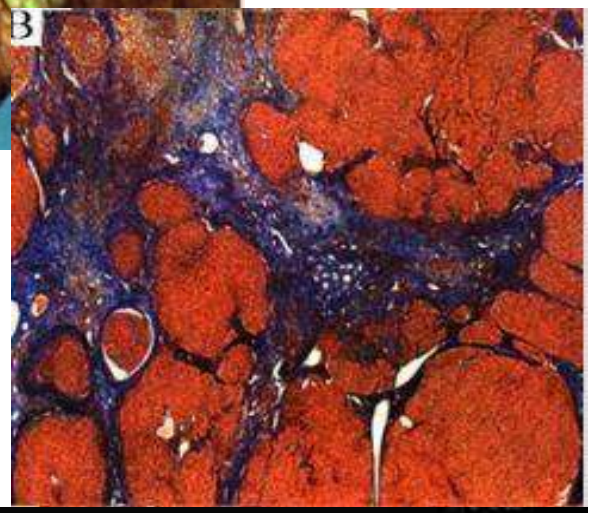
it is estrogen sensitive (pregnancy may cause it to increase in size, OCP).

Complications: rupture with bleeding/ necrosis/ **risk of cancer.**

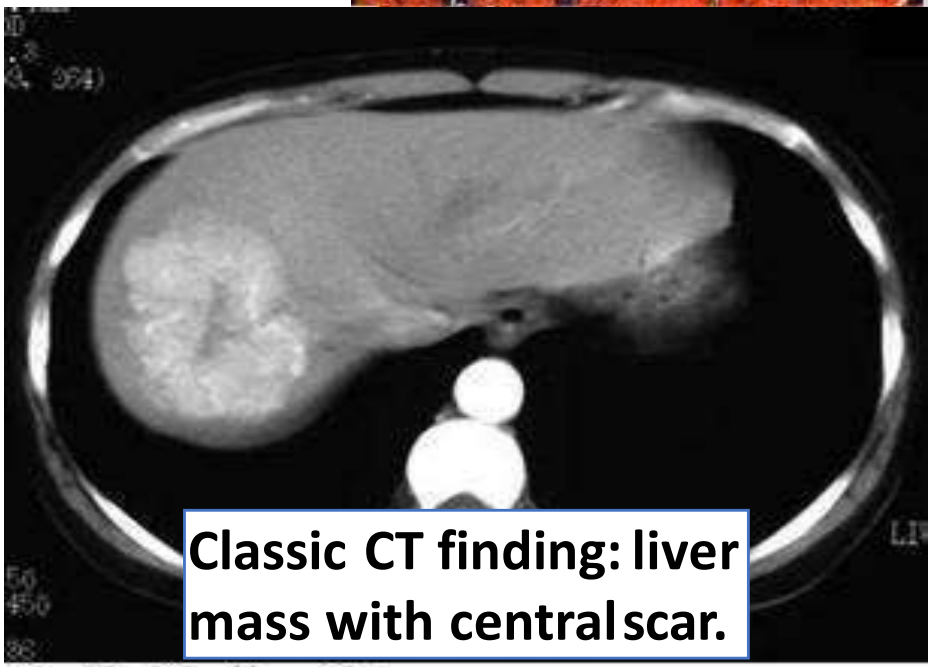
Treatment: if small, stop pills> it may regress> if not, surgical resection.
If large or complicated : surgical resection

Focal nodal hyperplasia





- Use of estrogen OCP may have a role.
- **Not premalignant.**
- Most are solitary, 20% multiple.
- Most common indication for surgery is inability to exclude malignancy.
- LFT : normal.
- Angiography : hypervascular mass with enlarged peripheral vessels and a single central feeding artery.
- ttt : nucleation/ diagnostic uncertainty will require an open excisional biopsy.



Focal Nodular Hyperplasia

Hepatocellular carcinoma (hepatoma)

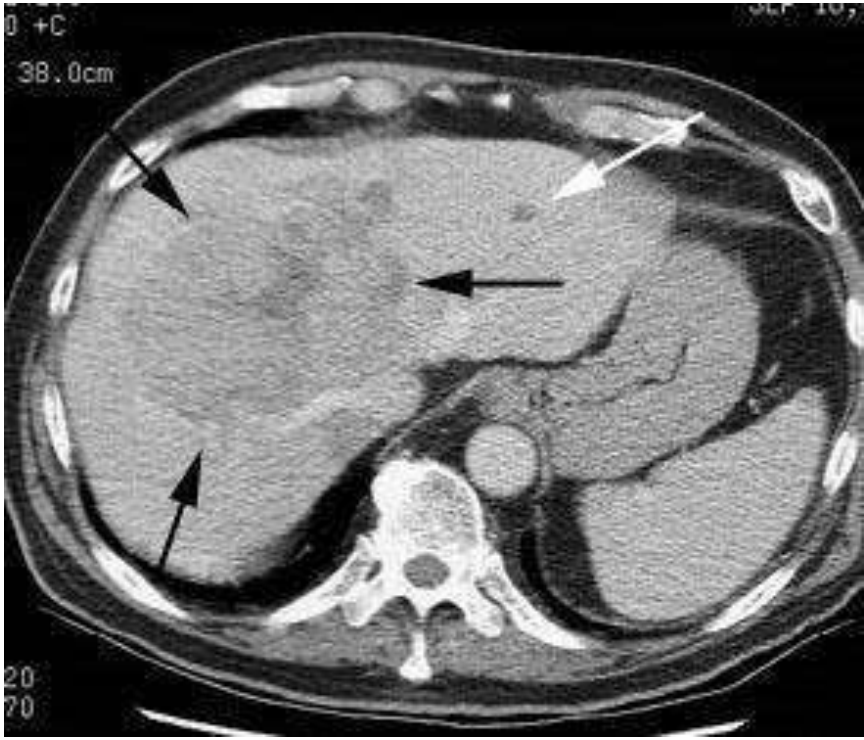
- Most common 1ry malignant liver tumor.
- Risk factors: hepatitis B / cirrhosis/ Alfa toxin/ alpha 1 antitrypsin deficiency.

- Painful hepatomegaly.

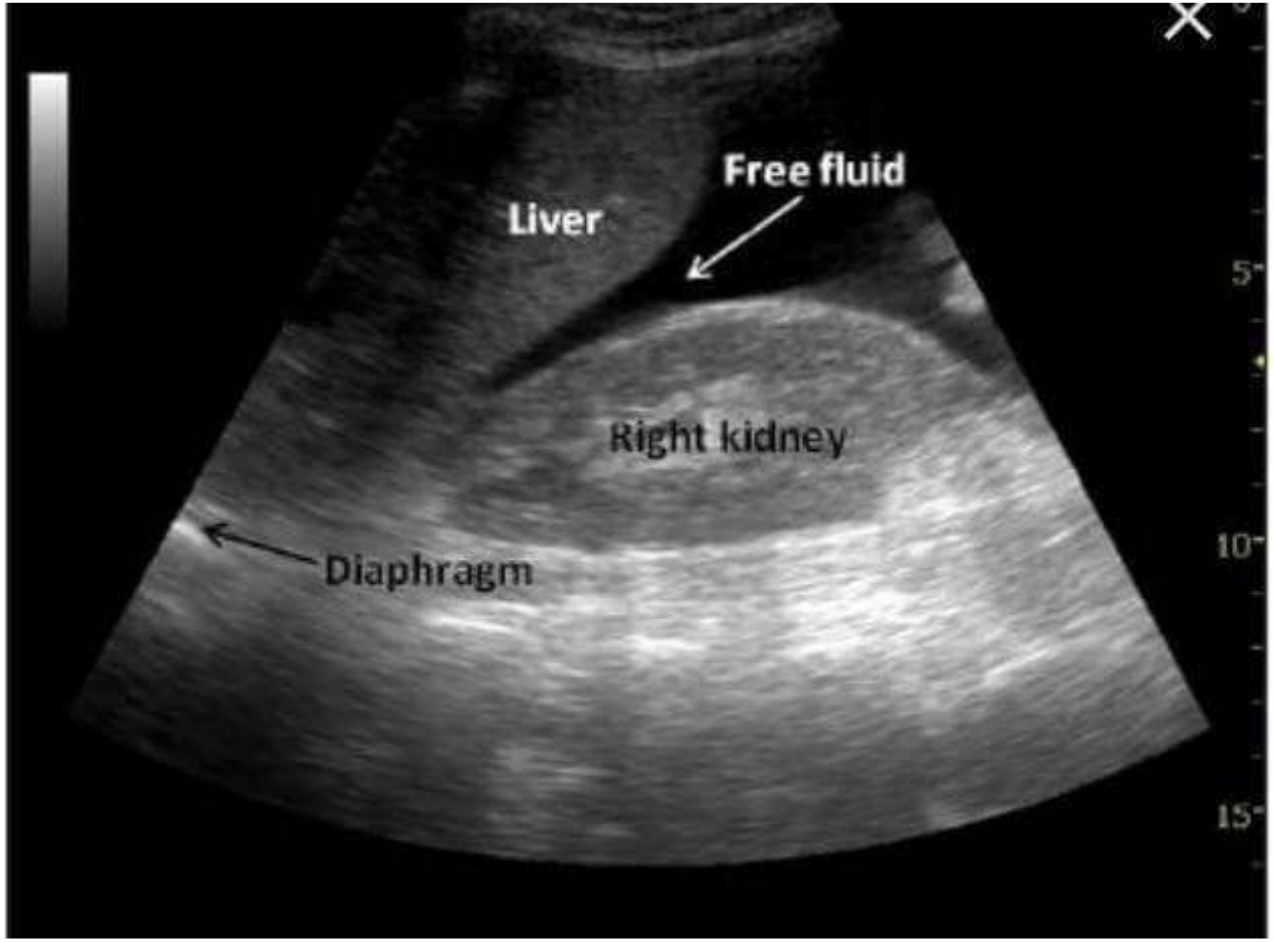
- **Tumor marker: alpha fetoprotein.**

- Dx: needle biopsy with CT or U/S guidance.

- The m.c site of Metz : lungs.



CT : black arrows (hepatoma)



Q1: What is the finding?

- Fluid in Morrison's pouch

Morison's pouch: The hepatorenal recess is the space that separates the liver from the right kidney.

Q2: The Dx?

- Hemoperitoneum (blood)
- Ascitis (fluid)

Q: a patient with RUQ pain:

Q1: What is the Dx?

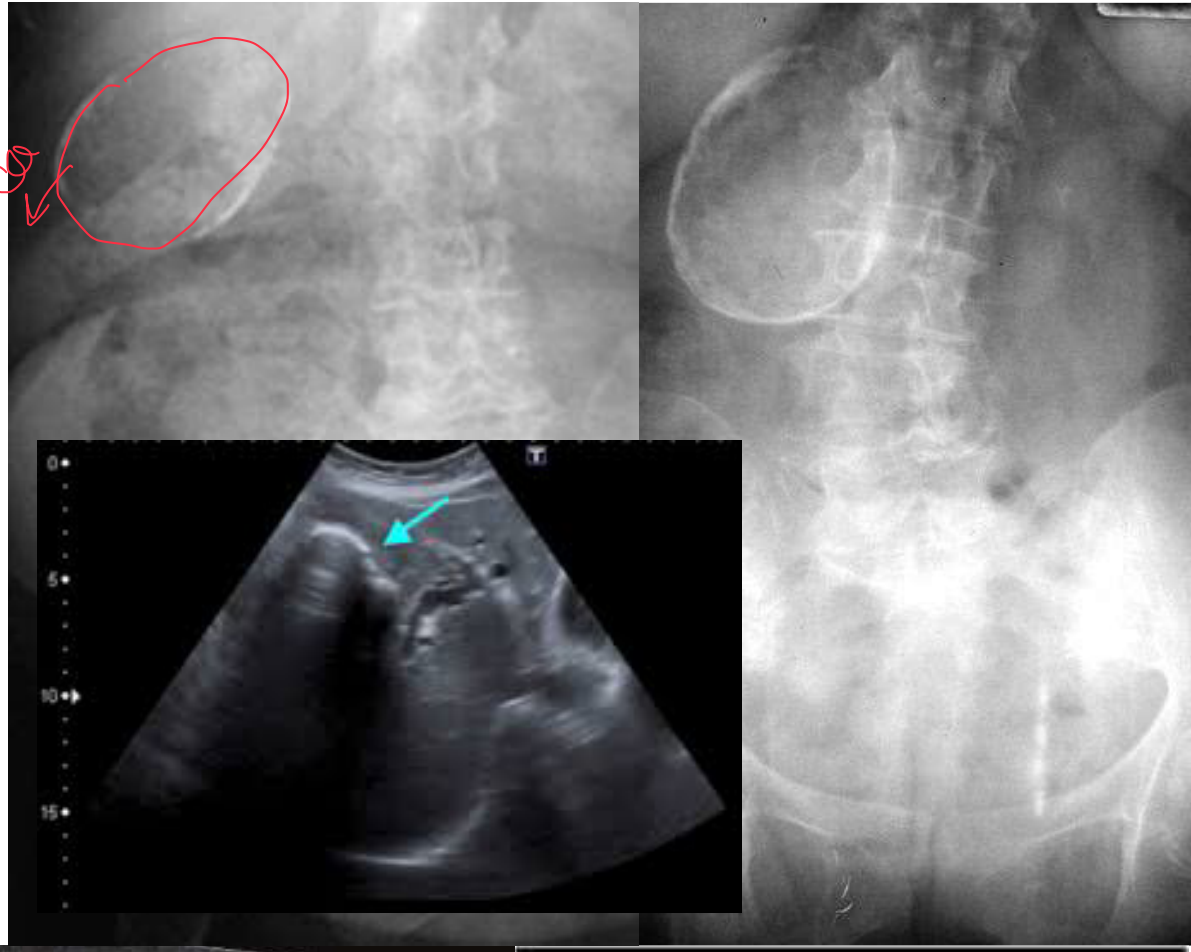
- Porcelain gallbladder

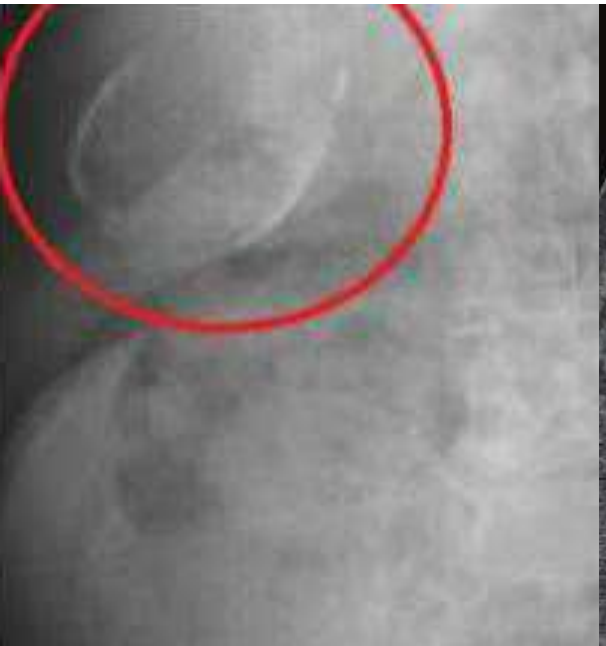
Q2: What is the major risk?

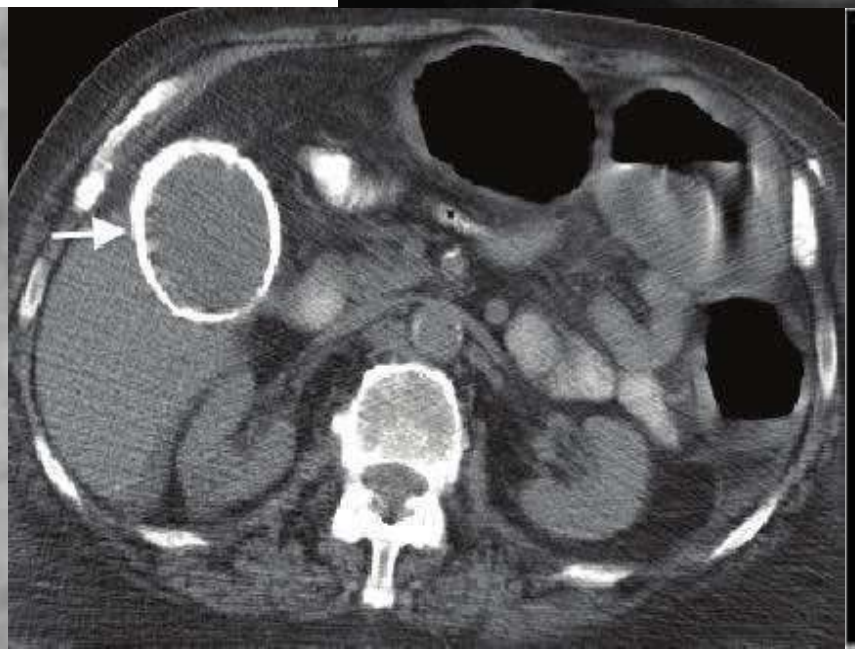
- Adenocarcinoma of gallbladder

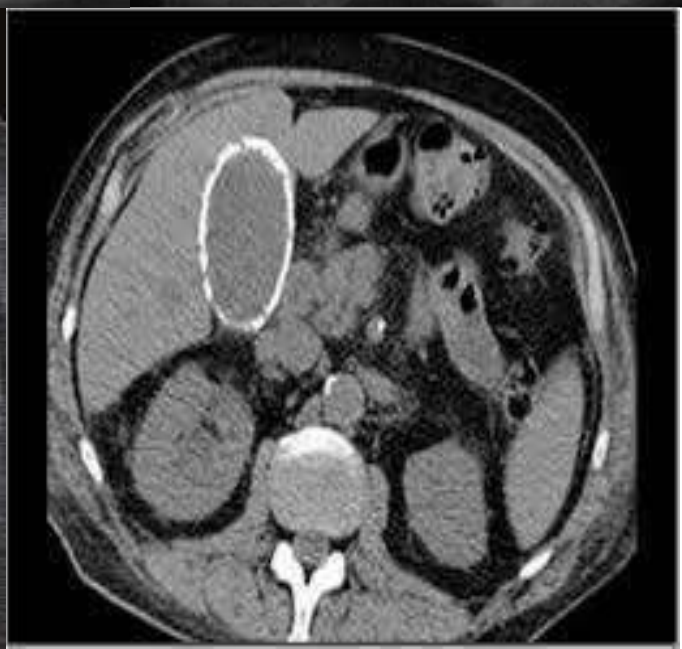
Q3: What is the Mx?

- Elective Cholecystectomy









Q: A 40 year old female patient after a bariatric surgery, presented with this US?

Fat ↑

Q1: What is the Dx?

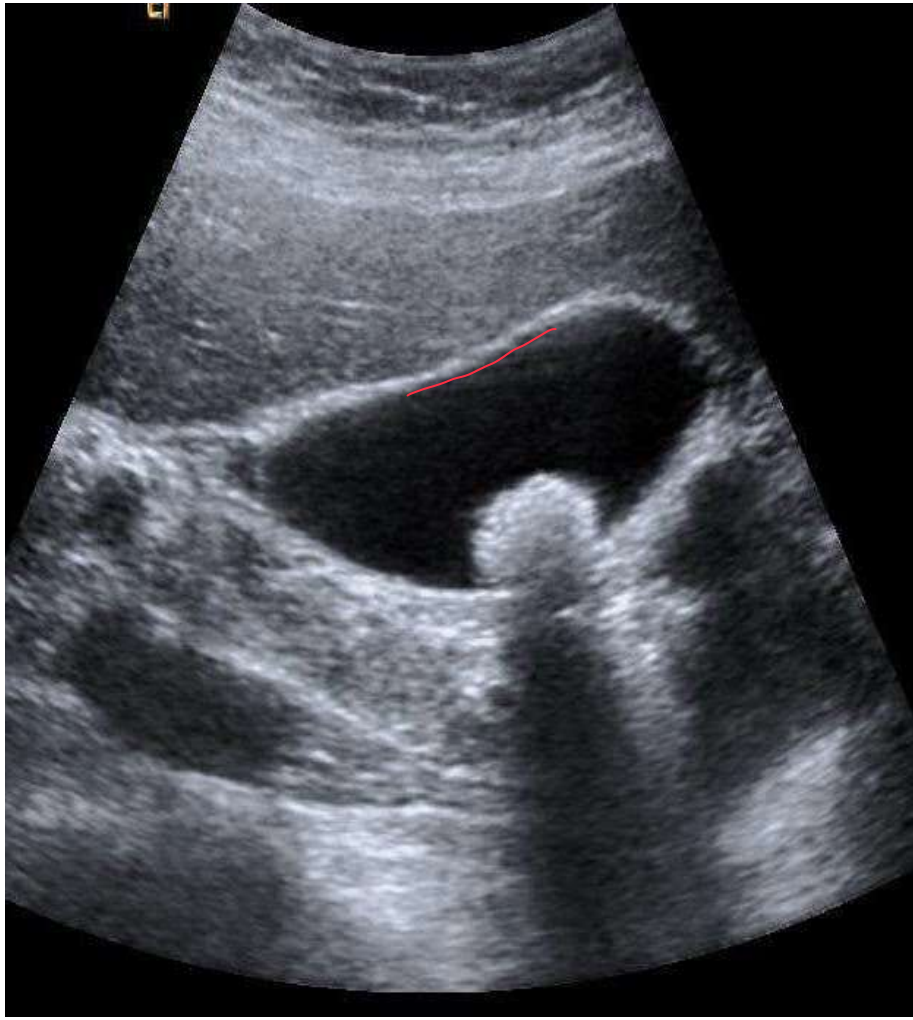
- Gallstone

Q2: What are the indications of performing a surgery in asymptomatic patient for this condition?

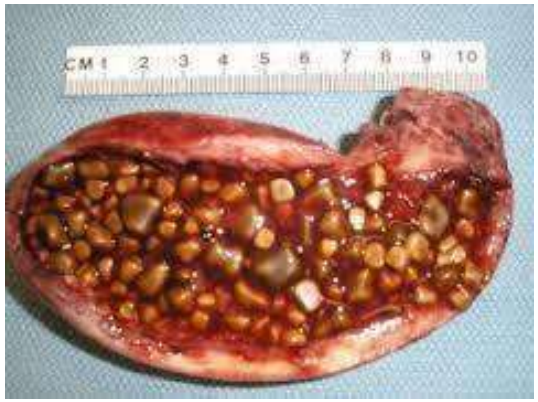
- Porcelain gallbladder
- Congenital hemolytic anemia
- Gallstone >2.5 cm

Q3: If the organ got inflamed where would be the pain and where it would radiate?

- Pain would be in the RUQ, and radiate into the right subscapular area



Gallbladder stones (Cholelithiasis)



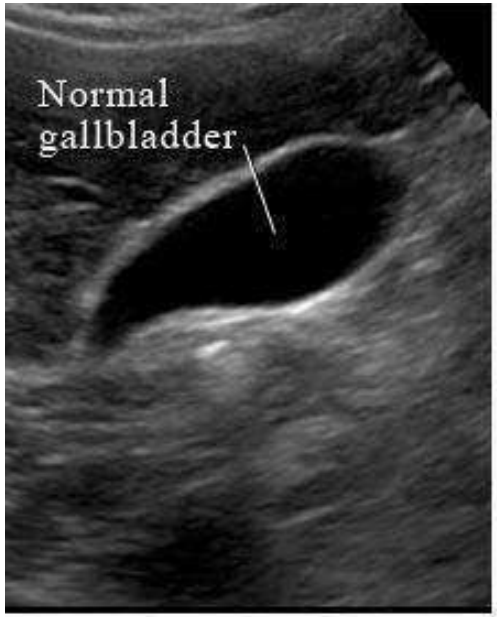


Figure 1

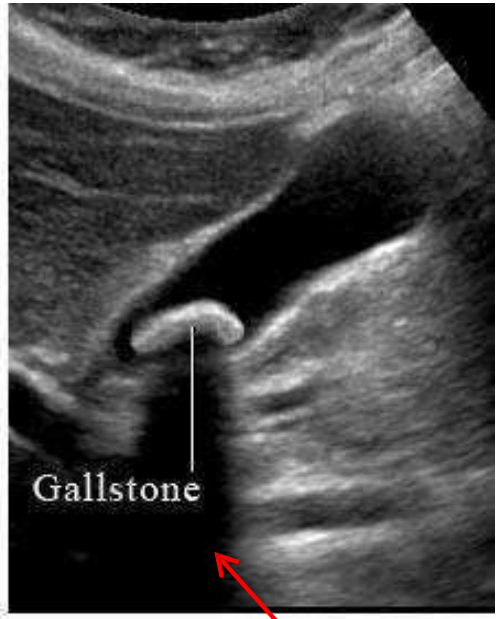
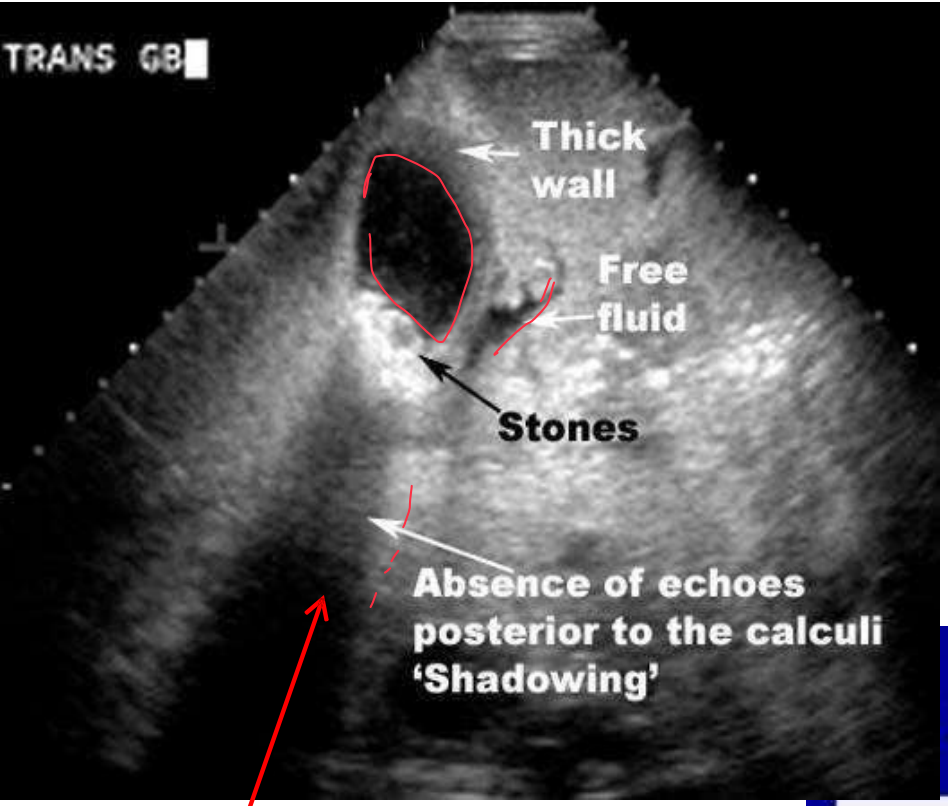


Figure 2

Acoustic shadow

- 80% of patients are asymptomatic.
- Complications: acute and chronic cholecystitis/ CBD stones/ gallstone pancreatitis/ cholangitis.
- **U/S detects GB stones in more than 98% of cases.**
- Abdominal X-ray detects only 15%.
- If symptomatic/ complicated / asymptomatic but (sickle cell diseas, DM, pediatric, porcelain GB, immunosuppression) : cholecystectomy.



acoustic shadow

Acute cholecystitis

- HIDA scan (the most accurate test).
- U/S (the diagnostic test of choice).
- Constant pain (not biliary colic).

Sonographic findings in acute cholecystitis

- **Impacted stone in cystic duct or GB neck**
- **Positive sonographic Murphy's sign**
- Thickening of GB wall (**>3 mm**)
- Distention of GB lumen (**> 4 cm**)
- Pericholecystic fluid collections (frequent)
- Hyperemic GB wall on color Doppler (**supportive test**)

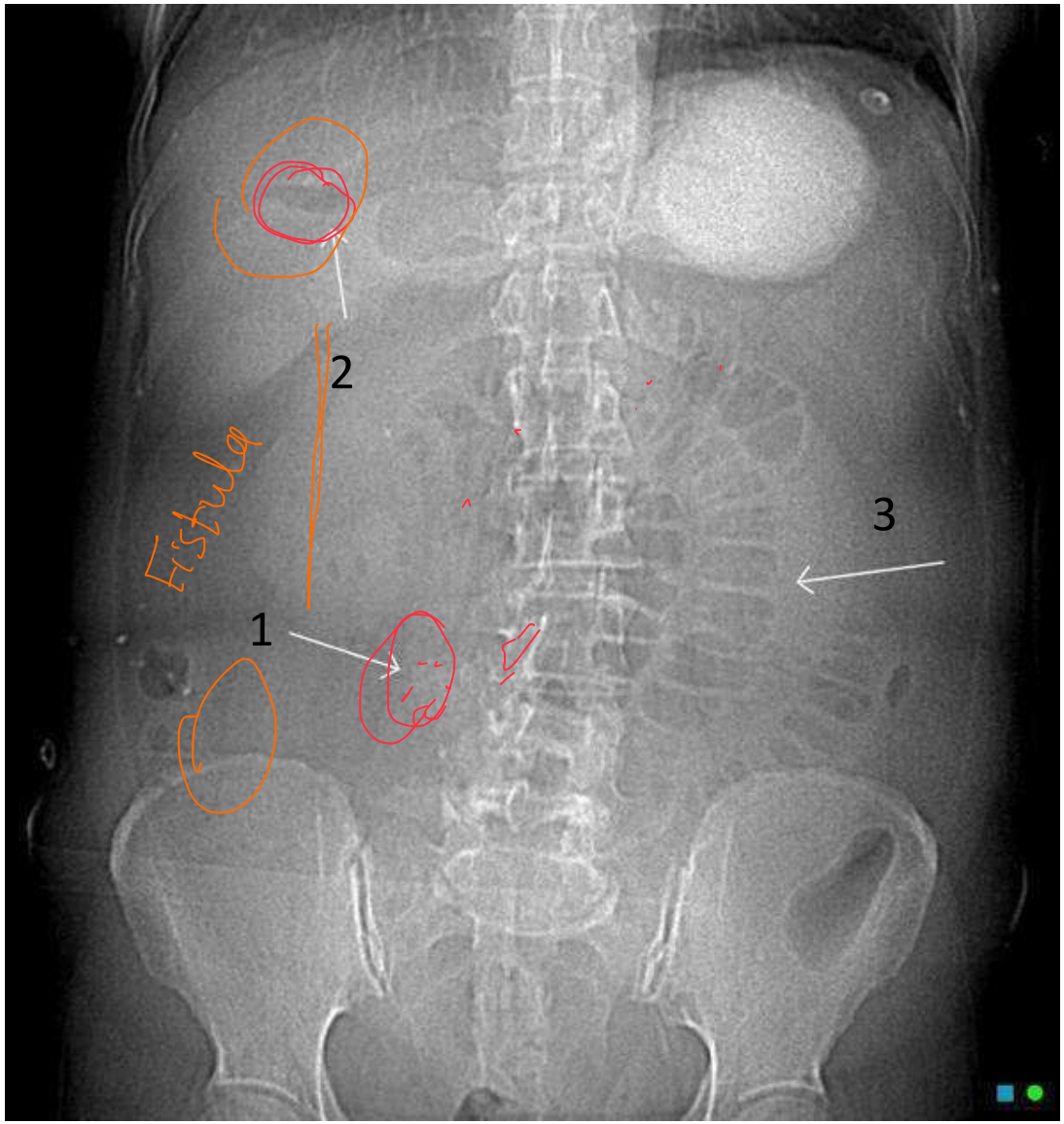
None of above signs pathognomonic

Combination of multiple signs make correct diagnosis

Rumack CM et al. Diagnostic Ultrasound. Elsevier-Mosby, St. Louis, USA, 3rd edition, 2005.

Gallstone ileus

- occurs when a large gallbladder stone erodes into the duodenum via a fistula, eventually obstructing the ileal lumen usually some centimeters proximal to the ileocaecal junction.



On the X-ray :
1radiopaque gallstone in the bowel.
2 gas in the gallbladder.
4- small bowel distention.

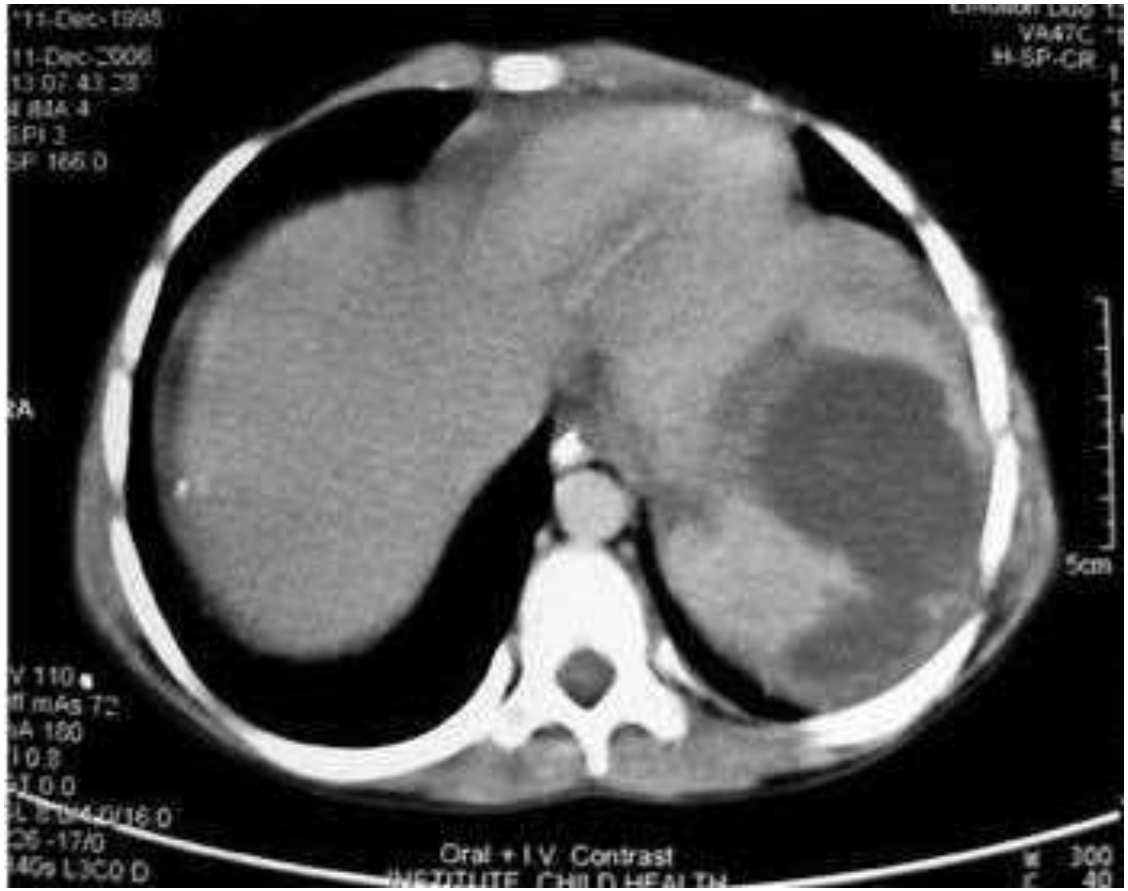
emphysematous cholecystitis

- Gas forming bacteria (E.coli).
- Often results in perforation.
- Usually in males/ elderly/ DM.

Blurred vision + change in mental status

Q: After RTA, the patient present with left shoulder pain:

Kehr's sign



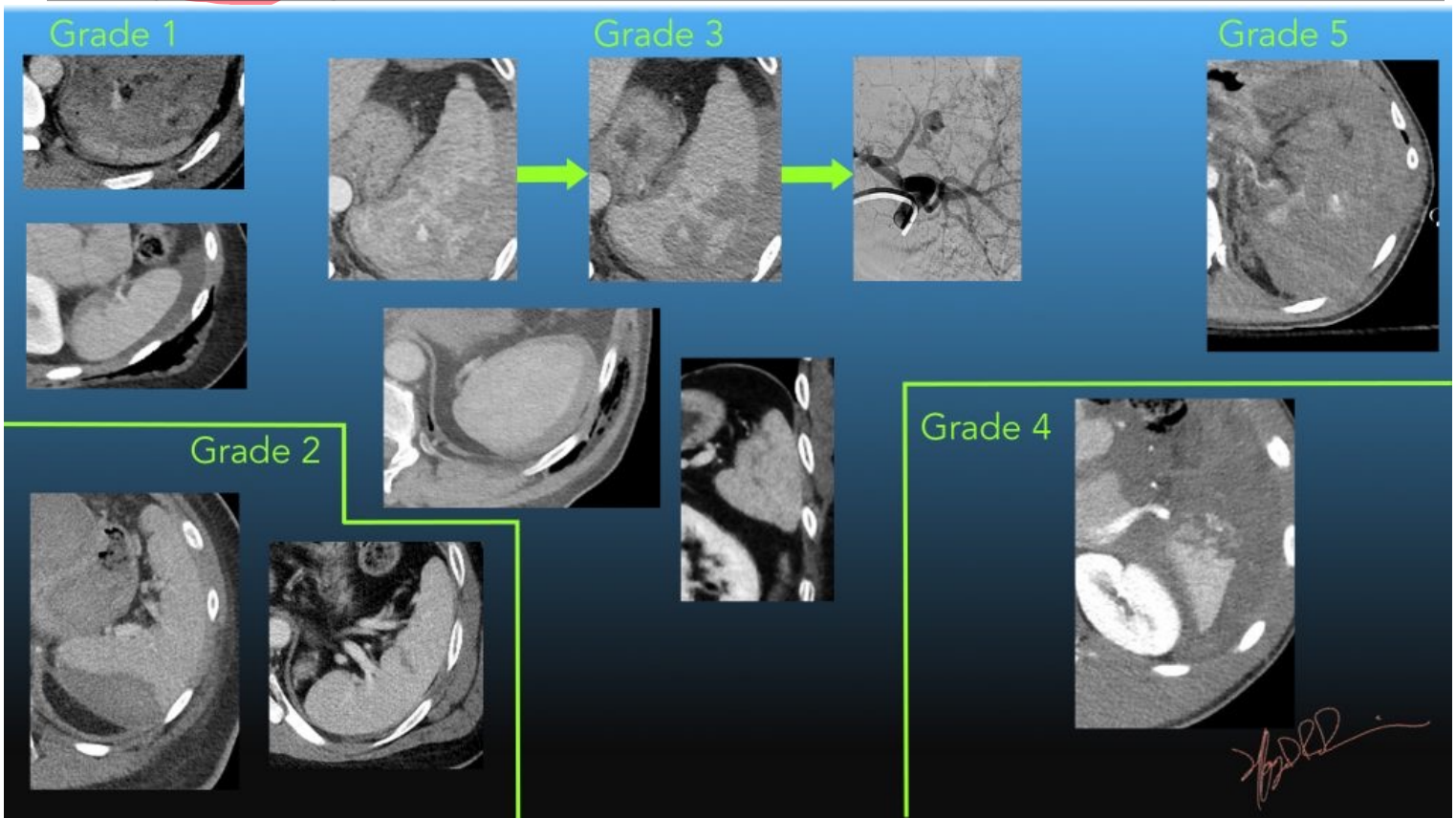
Q1: What is your Dx?

- Splenic Rupture

Q2: What is your Mx?

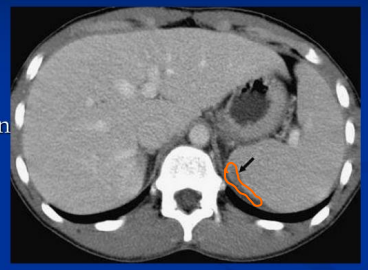
- Splenectomy

Grade[a]	Type	Description of Injury
1	Hematoma	Subcapsular, < 10% surface area
	Laceration	Capsular tear, < 1 cm parenchymal depth
2	Hematoma	Subcapsular, 10–50% surface area
		Intraparenchymal, < 5 cm in diameter
	Laceration	1–3 cm parenchymal depth; does not involve a trabecular vessel
3	Hematoma	Subcapsular, > 50% surface area or expanding; ruptured subcapsular or parenchymal hematoma
	Laceration	> 3 cm parenchymal depth or involved trabecular vessels
4	Laceration	Laceration involving segmental or hilar vessels and producing major devascularization (> 25% of spleen)
5	Laceration	Completely shattered spleen
	Vascular	Hilar vascular injury that devascularizes spleen



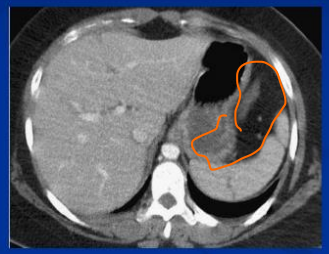
Grade 1

- Subcapsular hematoma of less than 10% of surface area.
- Capsular tear of less than 1 cm in depth.



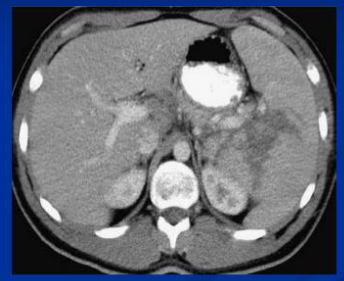
Grade 2

- Subcapsular hematoma 10-50% of surface area
- Intraparenchyml hematoma < 5cm diameter
- Laceration of 1-3cm in depth and not involving trabecular vessels



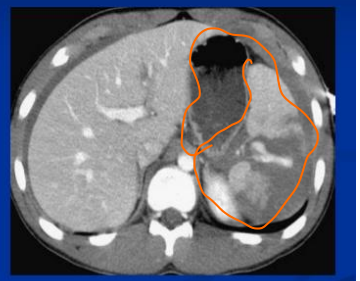
Grade 3

- Subcapsular >50% surface area or expanding
- Ruptured subcapsular or intraparenchymal hematoma
- Intraparenchymal haematoma >5 cm or expanding
- Laceration of greater than 3 cm in depth or involving trabecular vessels



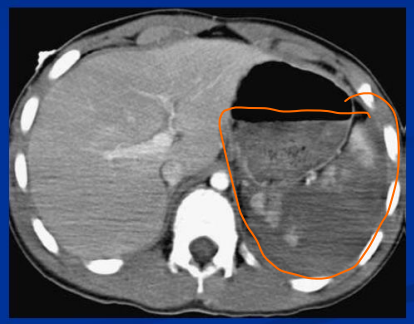
Grade 4

- Laceration involving segmental or hilar vessels producing major devascularization (>25% of spleen)



Grade 5

- Shattered spleen / Hilar vascular injury



Q: RTA patient, HR = 130, he was hypotensive, a CT was done and shows the following?

Q1: How much blood did he loss?

- Stage 3 hypovolemic shock – 30-40% - 1500-2000 ml

Q2: What does the CT show?

- Splenic Rupture

Stage	I (compensated)	II (mild)	III (moderate)	IV (severe)
Blood loss	<15% (750 – 1,000 ml)	15% – <30% (1,000 – 1,500 ml)	30% – <40% (1,500 – 2,000 ml)	>40% (2,000 ml or more)
Heart rate	Normal (<100 bpm)	Tachycardia (>100 bpm)	Tachycardia (>120 bpm)	Tachycardia (>140 bpm)
BP	Normal; vasoconstriction redistributes blood flow, slight rise in diastolic pressure seen	Orthostatic changes in BP; vasoconstriction intensifies in non-critical organs (skin, muscles, gut)	Markedly decreased (SBP <90 mm Hg); vasoconstriction decreases perfusion to kidneys, pancreas, liver, and spleen	Profoundly decreased (SBP <80 mm Hg); decreased perfusion affects the brain and heart
Respiration	Normal	Rate mildly increased	Moderate tachypnea	Marked tachypnea; respiratory collapse
Capillary refill time	Normal (<2 seconds)	>2 seconds; clammy skin	Usually >3 seconds; cool, pale skin	>3 seconds; cold, mottled skin
Bowel sounds	Present, all four quadrants	Hypoactive	Absent (paralytic ileus)	Absent (paralytic ileus, mucosal necrosis)
Urinary output	>30 ml/hr	20 – 30 ml/hr	<20 ml/hr	None (anuria)
Mental status	Normal or slightly anxious	Mildly anxious or agitated	Confused, agitated	Obtunded

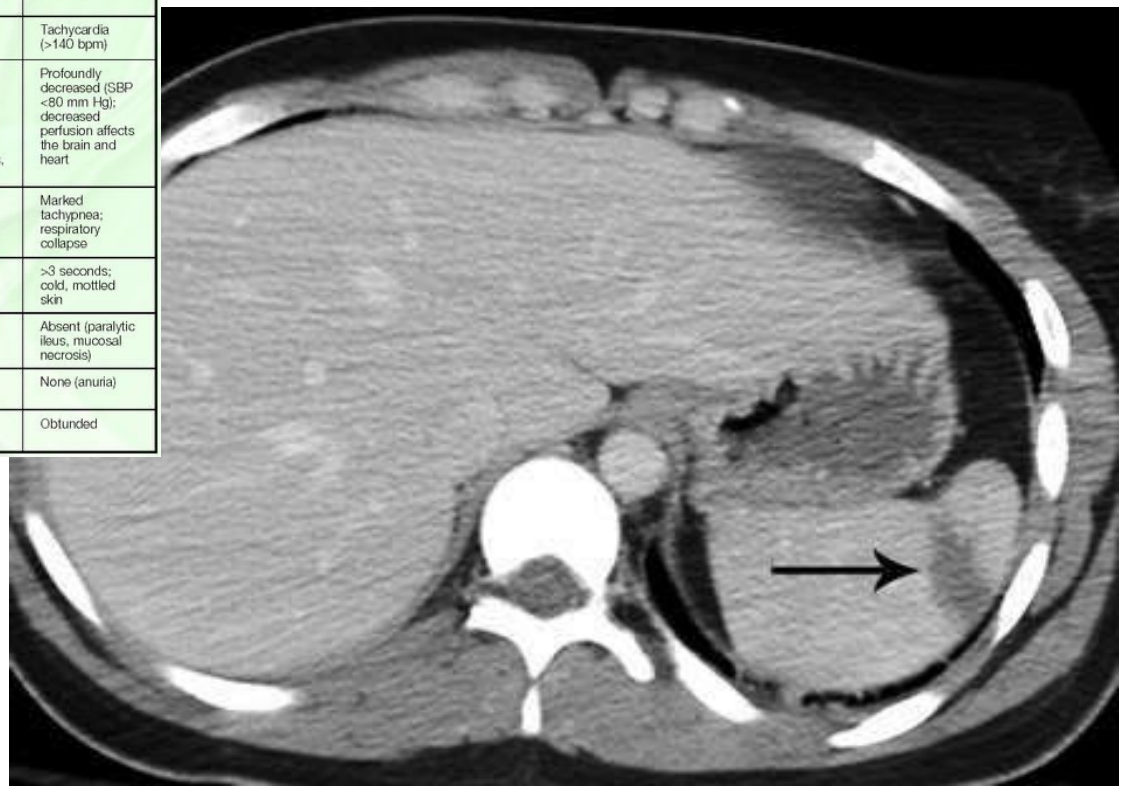


Table 7-4 Signs and Symptoms of Advancing Stages of Hemorrhagic Shock				
	Class I	**Class II**	**Class III**	**Class IV**
Blood loss (mL)	Up to 750	750–1500	1500–2000	>2000
Blood loss (%BV)	Up to 15%	15–30%	30–40%	>40%
Pulse rate	<100	>100	>120	>140
Blood pressure	Normal	Normal	Decreased	Decreased
Pulse pressure (mmHg)	Normal or increased	Decreased	Decreased	Decreased
Respiratory rate	14–20	20–30	30–40	>35
Urine output (mL/h)	>30	20–30	5–15	Negligible
CNS/mental status	Slightly anxious	Mildly anxious	Anxious and confused	Confused and lethargic

BV = blood volume; CNS = central nervous system.

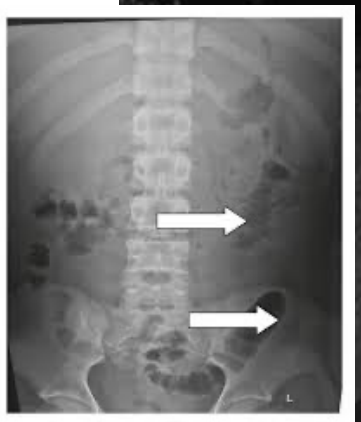
Acute Pancreatitis

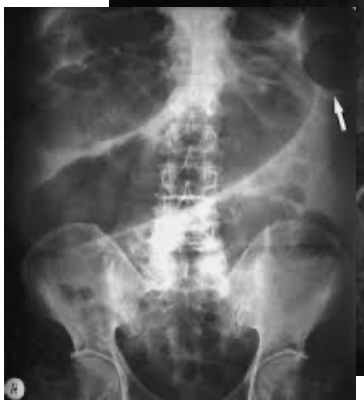
-**Cut off sign** and Ileus.

-White arrow points to Transverse colon cut off at Splenic flexure.

-No air in descending colon.

-TC: Transverse colon.
- I: Represents small bowel loops with air suggestive of Ileus.





Causes : gallstones/ ethanol/ trauma/ steroids/ mumps/ autoimmune/ scorpion bite/ hyperlipidemia/ drugs (diuretics, INH)/ ERCP.

Treatment : supportive (90% resolve spontaneously)

Q: A 45-years old male patient, alcoholic, presented with a 24-hour history of upper abdominal pain and repeated vomiting. On examination of the abdomen, he was found to have these signs.

Q1: Name those signs?

A > Cullen's

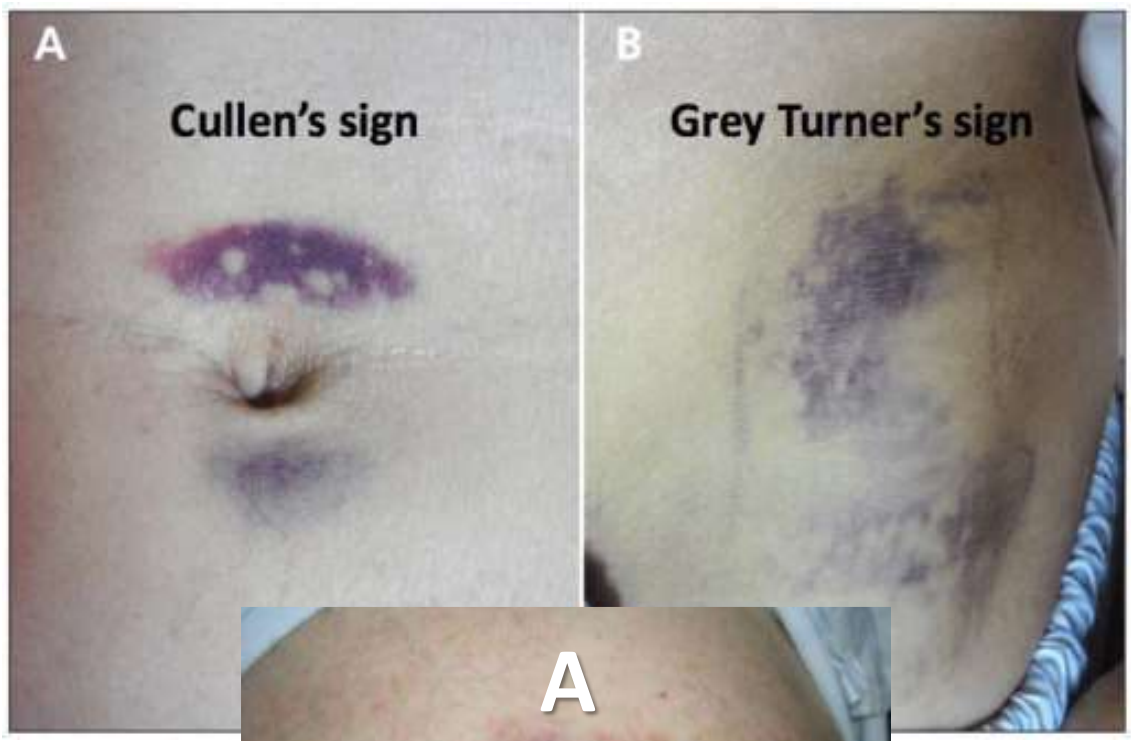
B > Grey Turner's

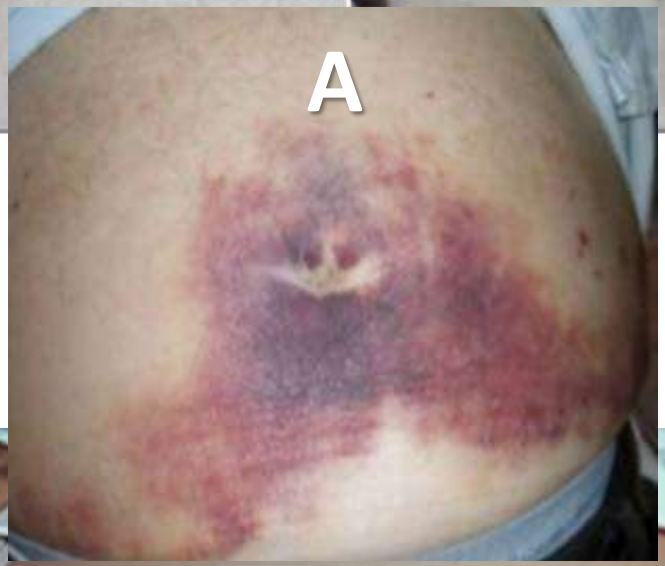
Q2: Mention 2 causes?

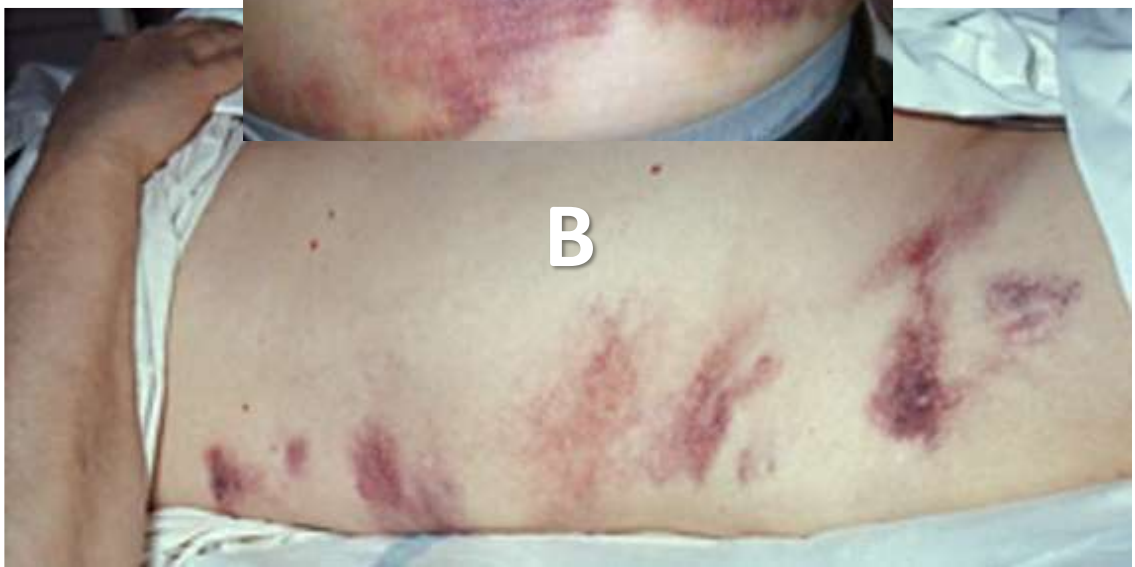
- Any retroperitoneal hemorrhage

1) Acute hemorrhagic pancreatitis

2) Abdominal trauma bleeding from aortic rupture

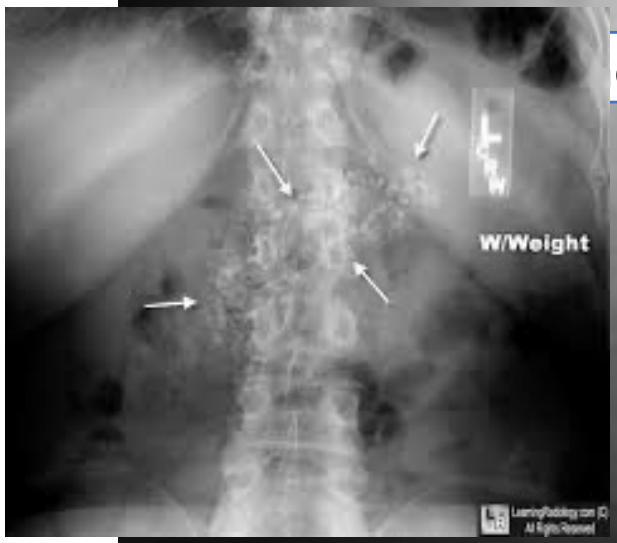




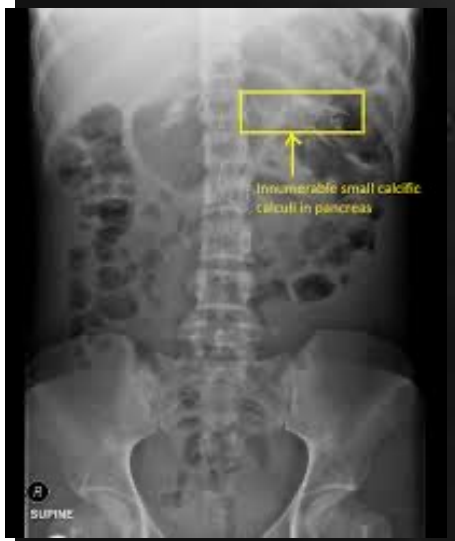


Chronic Pancreatitis

most common cause is chronic alcoholism.

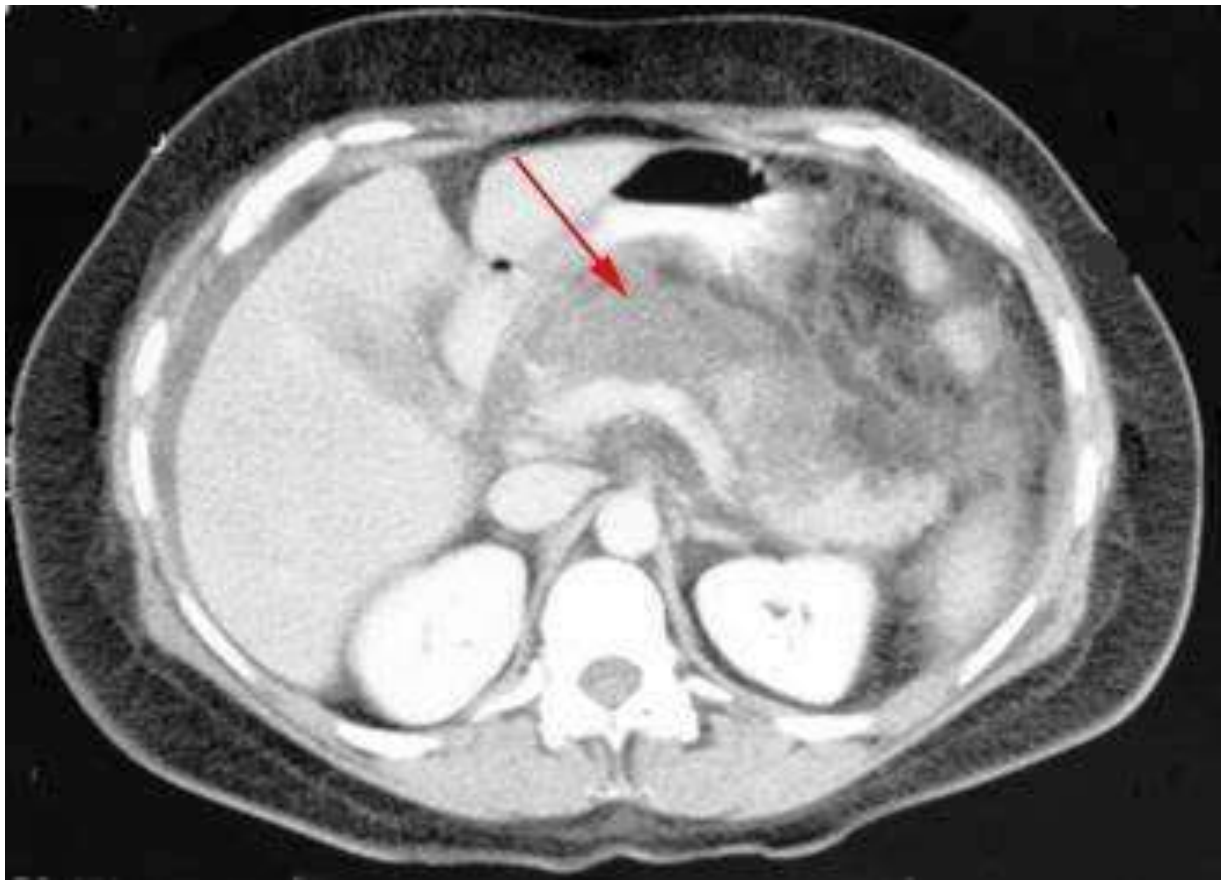


en x-ray showing pancreatic calcifications.



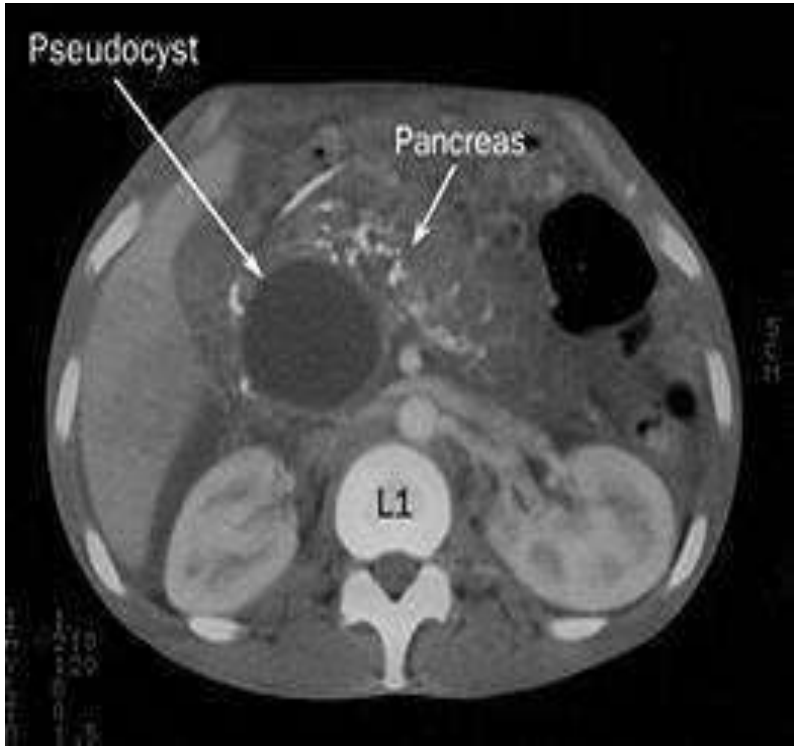
Pancreatic necrosis

- Dx: abdominal CT with contrast.
- Dead pancreatic tissue doesn't take up the contrast.



Pancreatic pseudocyst

- **The m.c.c is chronic alcoholic pancreatitis**.
- findings : high amylase/ fluid filled mass on ultrasound/
- it is a collection of fluid rich in pancreatic enzymes, blood, and necrotic tissue.
- to exclude malignancy >>you have to check the level of CA 19-9 (tumor marker).
- Complications: bleeding into the cyst/ infection/ pancreatic ascites.



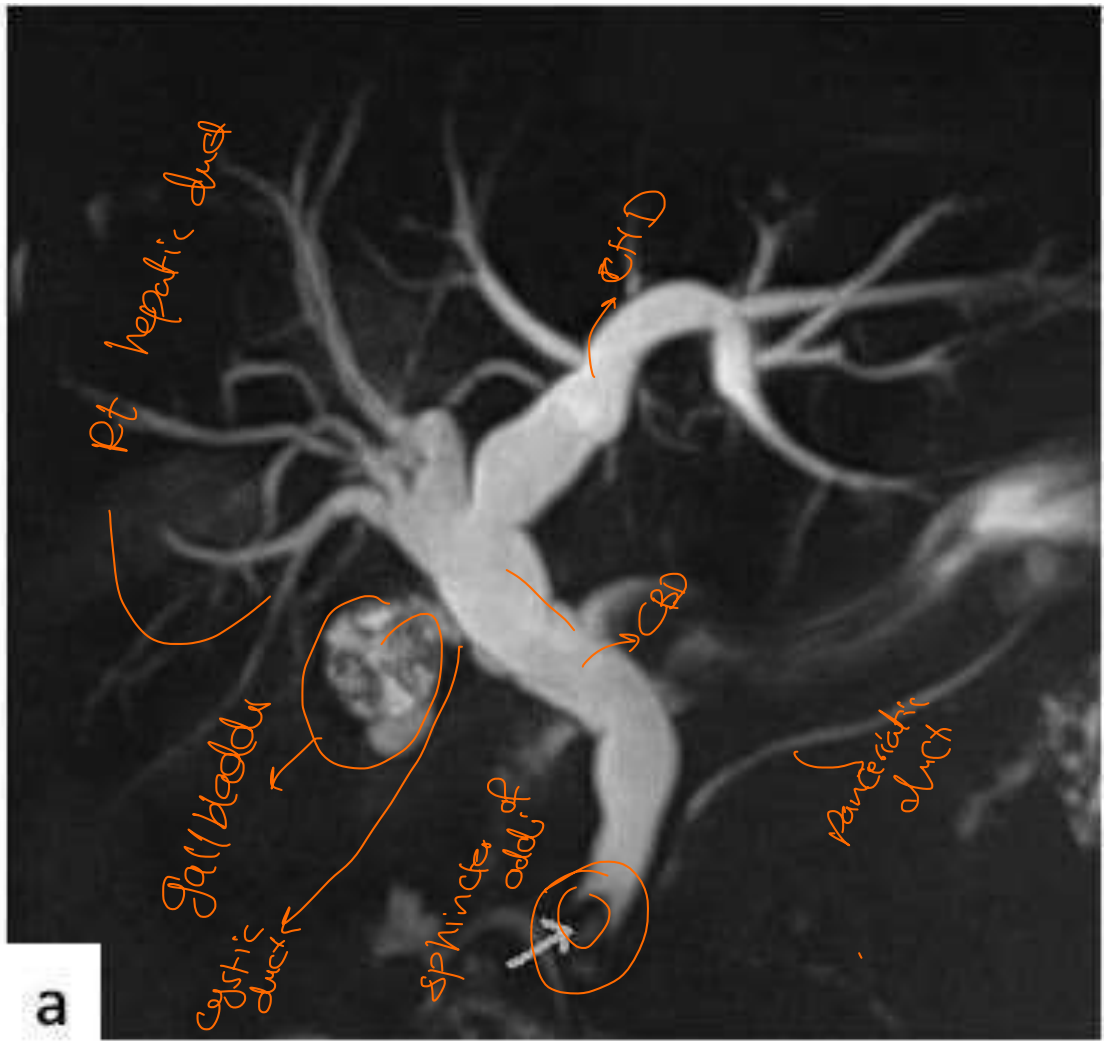
- **If not resolved spontaneously within 6 weeks : drainage.**

Q1: What is the type of imaging?

- MRCP

Q2: Mention 2 abnormalities?

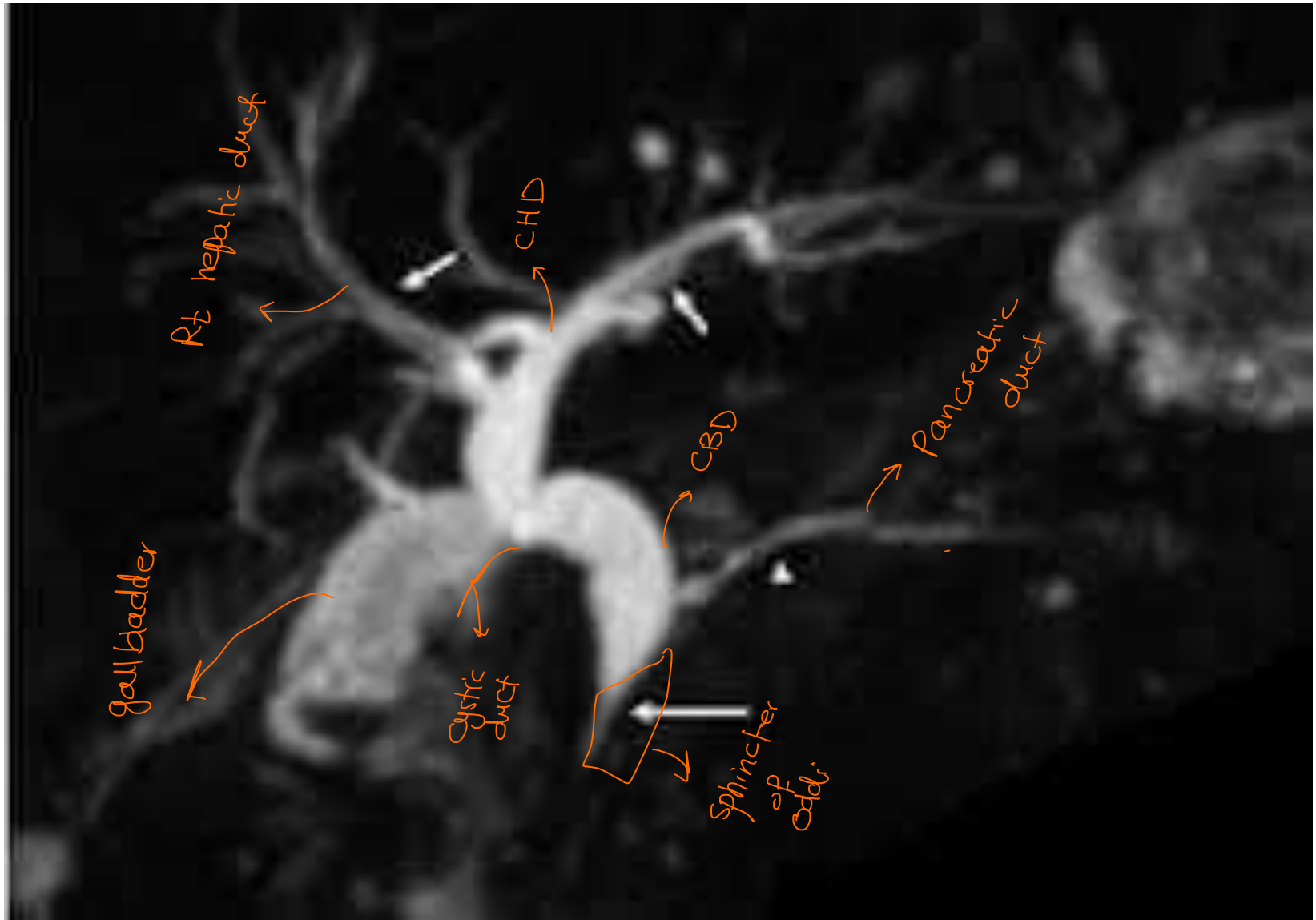
1) Stone in the CBD (arrow – filling defect)
2) Dilated CBD



Q1: What is the study? MRCP

Q2: The structure pointed? Pancreatic duct (Stricture)

Q3: What is the next step? ERCP



Q: 60 year old female with RUQ pain and fever.

Q1: Identify this type of image:

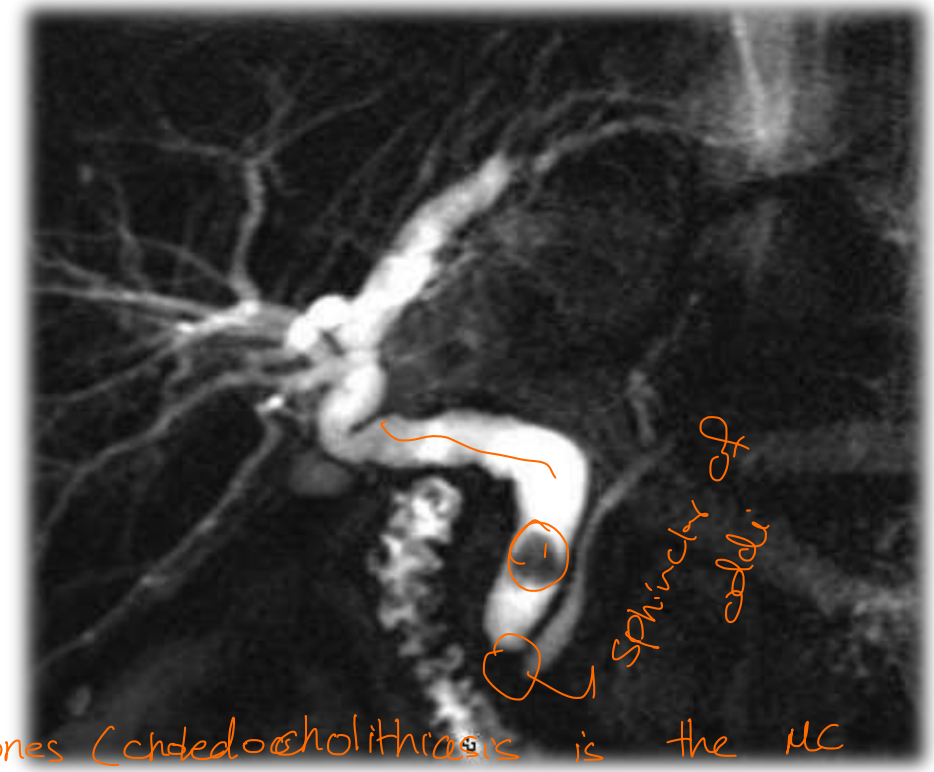
MRCP

Q2: Give two radiological findings:

CBD stone shadow/ CBD dilation.

Q3: What is your diagnosis?

Ascending cholangitis.

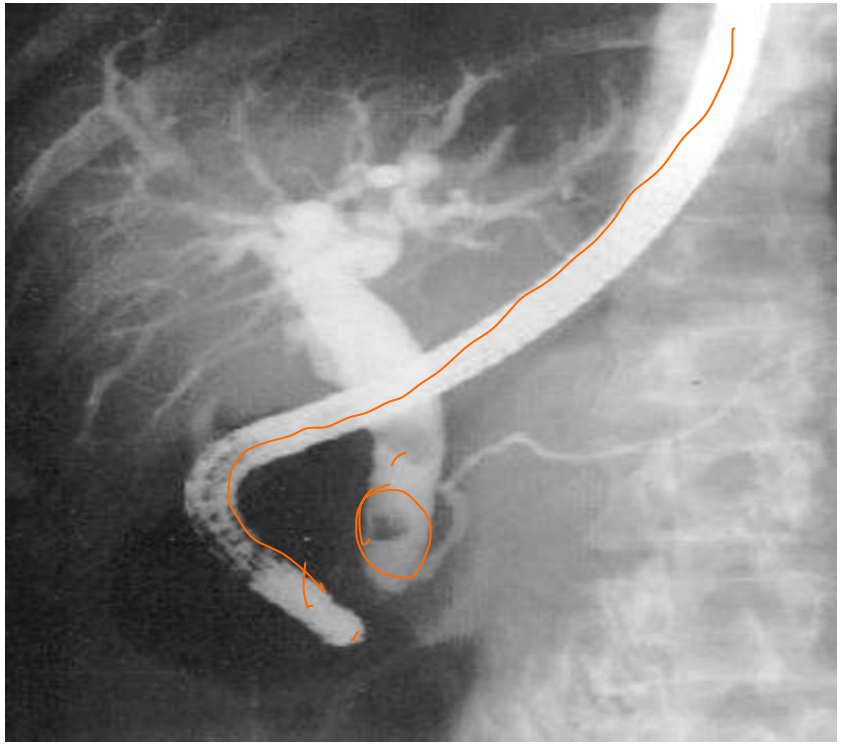


CBD stones (choledocholithiasis) is the MC cause of cholangitis

Choledocolithiasis

- Common bile duct stones.
- ERCP (the diagnostic test of choice, also therapeutic).
- If ERCP fails, CBD is opened surgically and stones removed.

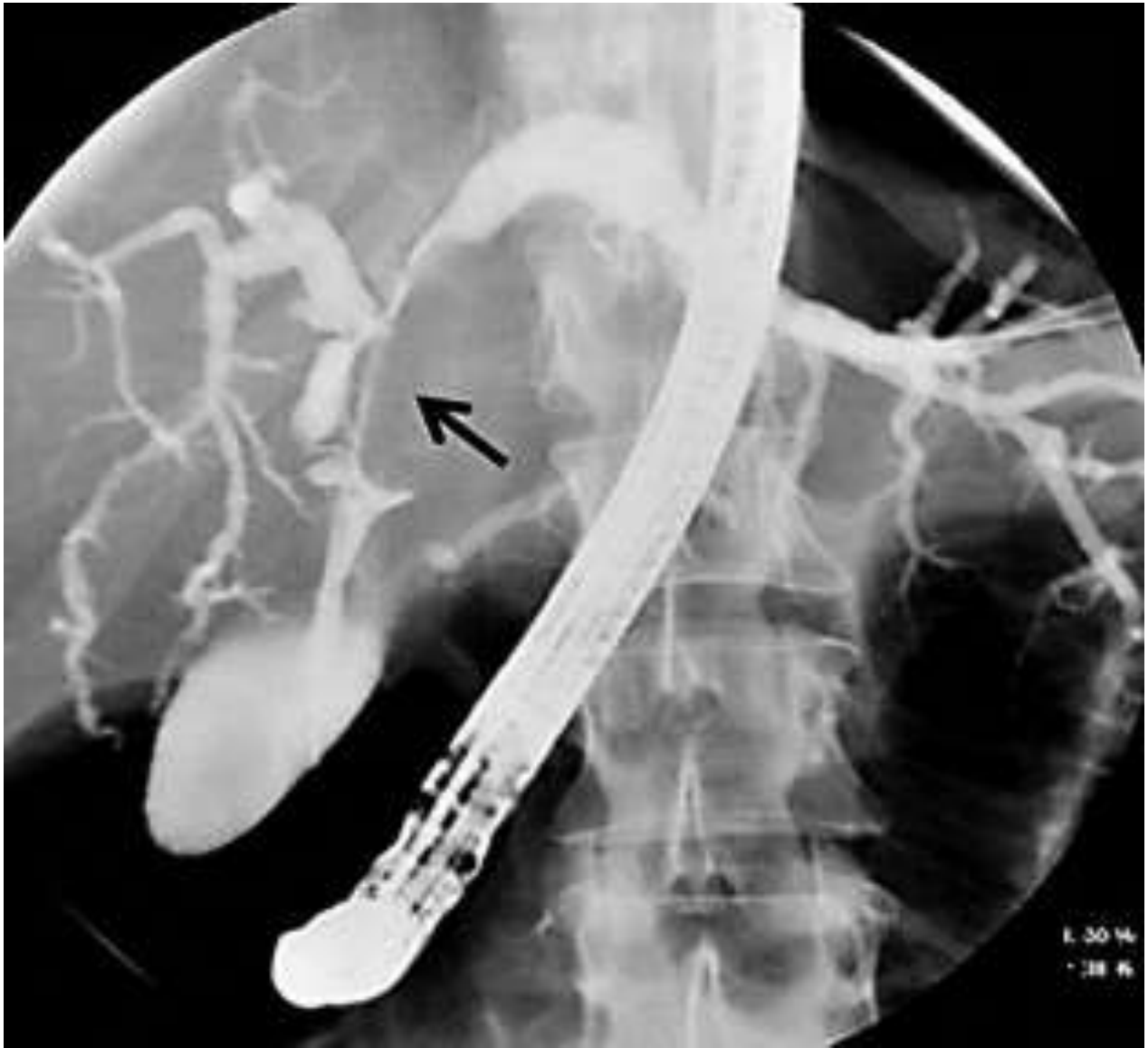
The huge tube is the endoscope. It is going down from the esophagus, through the stomach, to the duodenum (1st then 2nd parts), and stops near the ampulla of vater.
A tube in the endoscope is pushed into the ampulla and fills the CBD with a dye.
X-ray is taken.
As you can see, there is a black shadow stone in the CBD.



Q1: What is the name of this investigation? ERCP

Q2: Mention two abnormalities seen in this picture:

Filling defect & distended common bile duct



Q1: What is the type of imaging?

- ERCP

Q2: Indications?

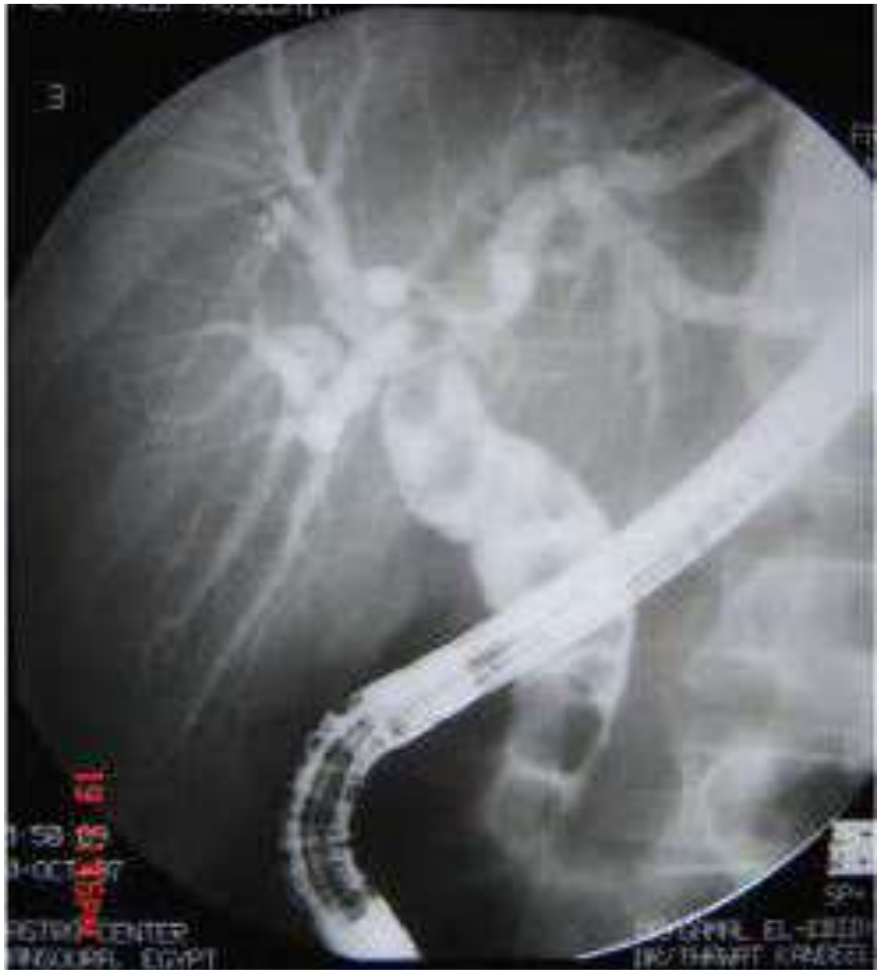
- Obstructive jaundice

Q3: Complications of ERCP?

- Pancreatitis

Q4: Mention 2 findings?

1) Dilated CBD
2) Multiple stones



Q1: What is the Dx?

- Primary sclerosis cholangitis (Beading)

Q2: Which disease is associated with it?

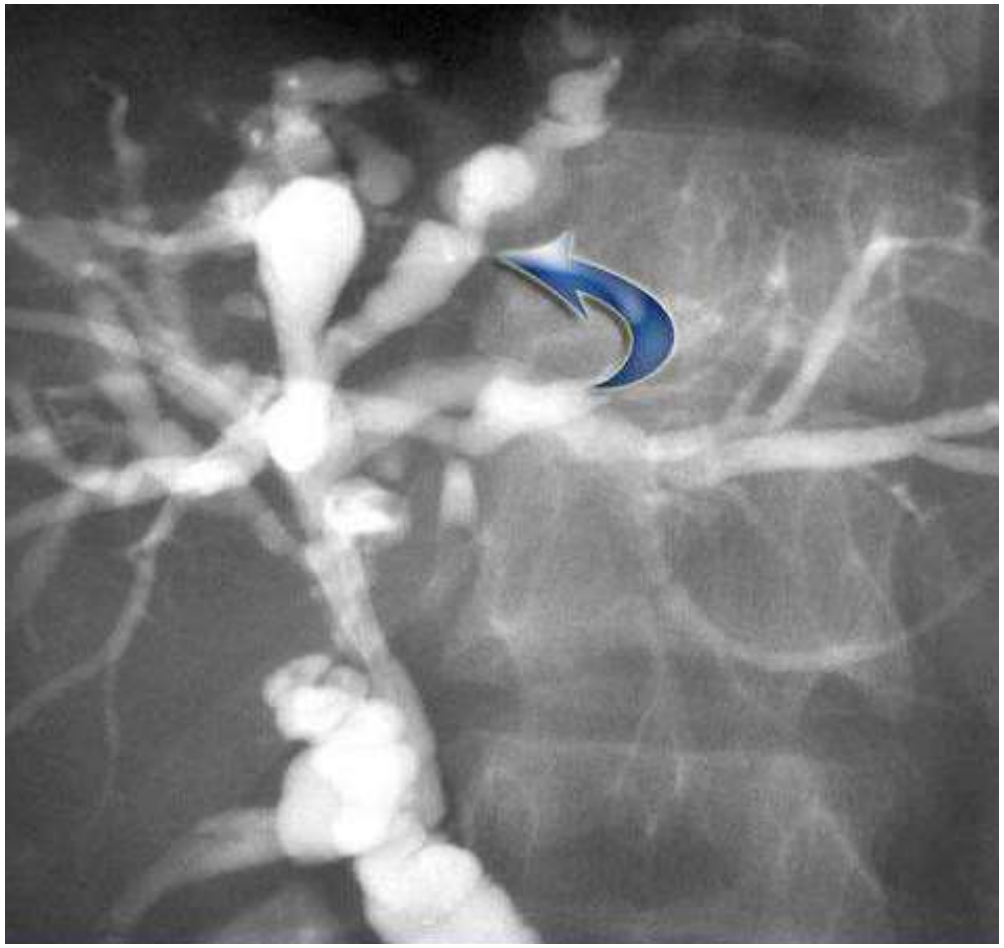
- Ulcerative colitis

Q3: Which type of malignancy the patient may develop?

- Cholangiocarcinoma

Q4: Diagnostic test?

- ERCP



endo

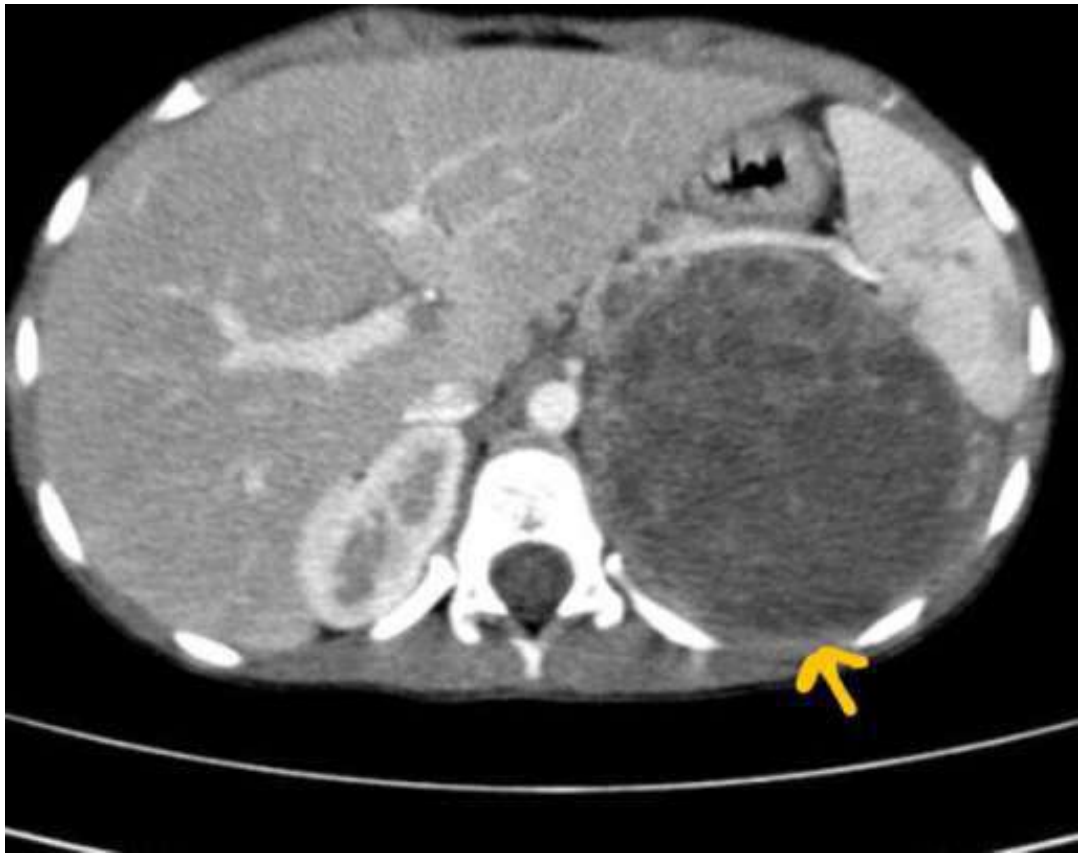
Q: a patient with thyroid medullary cancer, & a CT was done:

Q1: What is your next step? (not sure what the dr. meant so here is the possibilities):

- Assess the functionality of the adrenal tumor by hx, physical ex and ordering lab tests: KFT (Na, K, Creatinine, Urea) / Aldosterone levels/ cortisol/ metanephrine / noremetanephrine / vanillyl mandelic acid (VMA)
- pheochromocytoma
- 24h urine analysis for catecholamine metabolites (VMA/Meta)

Q2: If the patient has no genetic abnormality and the lesion is not functioning what will you do next?

- Because it is very large > surgery adrenalectomy, the dr said : If it was more than 4 cm then you have to remove it immediately



Q: a patient presented with episodic sweating and hypertension:

Q1: What is the Dx?

- Pheochromocytoma

Q2: What is the 1st thing to do?

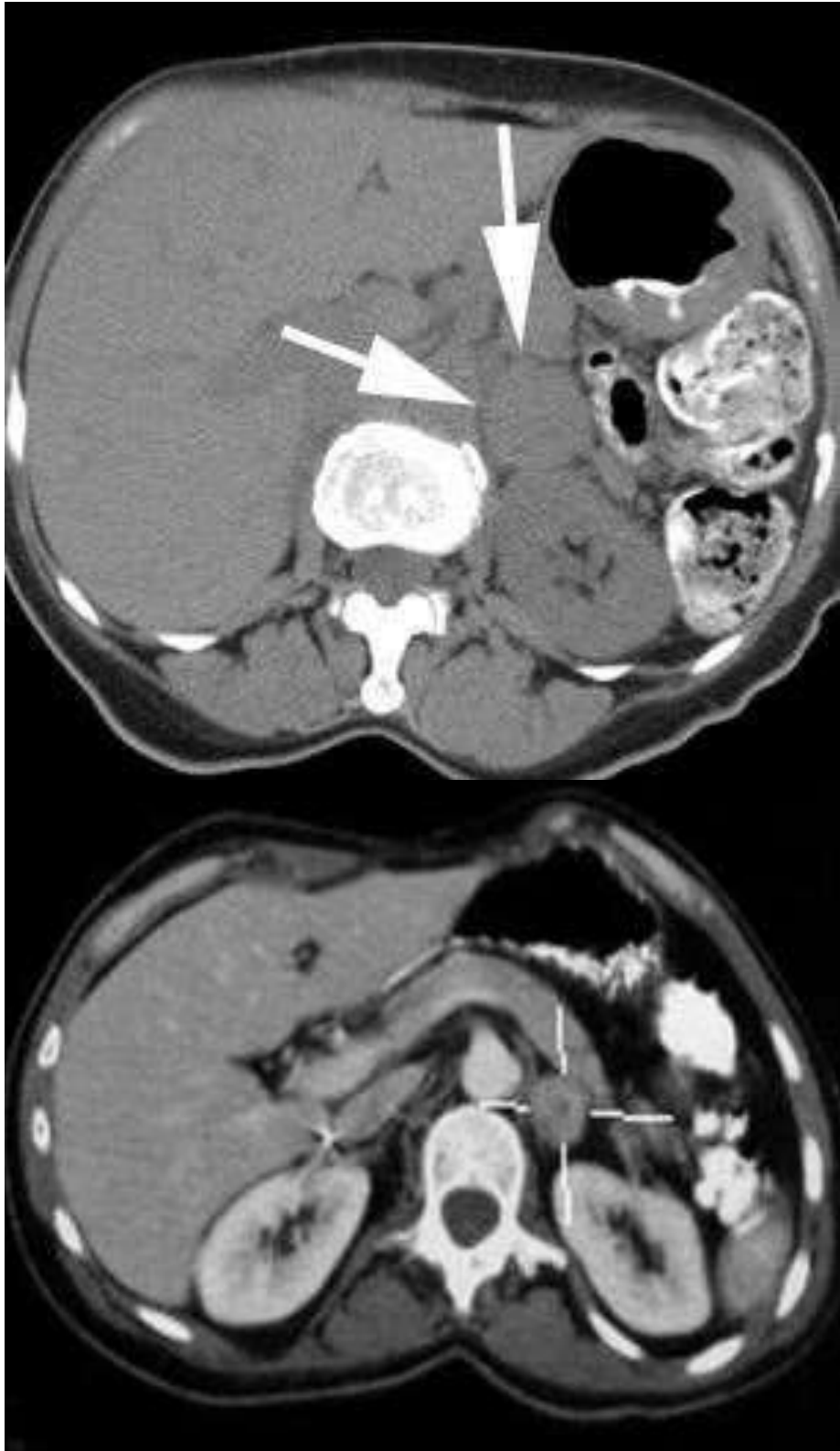
- Check if functional or not by checking cortisol, renin, angiotensin and VMA,… etc

Q3: What raise the possibility of malignancy?

- >4 cm
- necrosis
- hemorrhage

Q2: What is the size that would be considered an indication for surgery?

- >4 cm



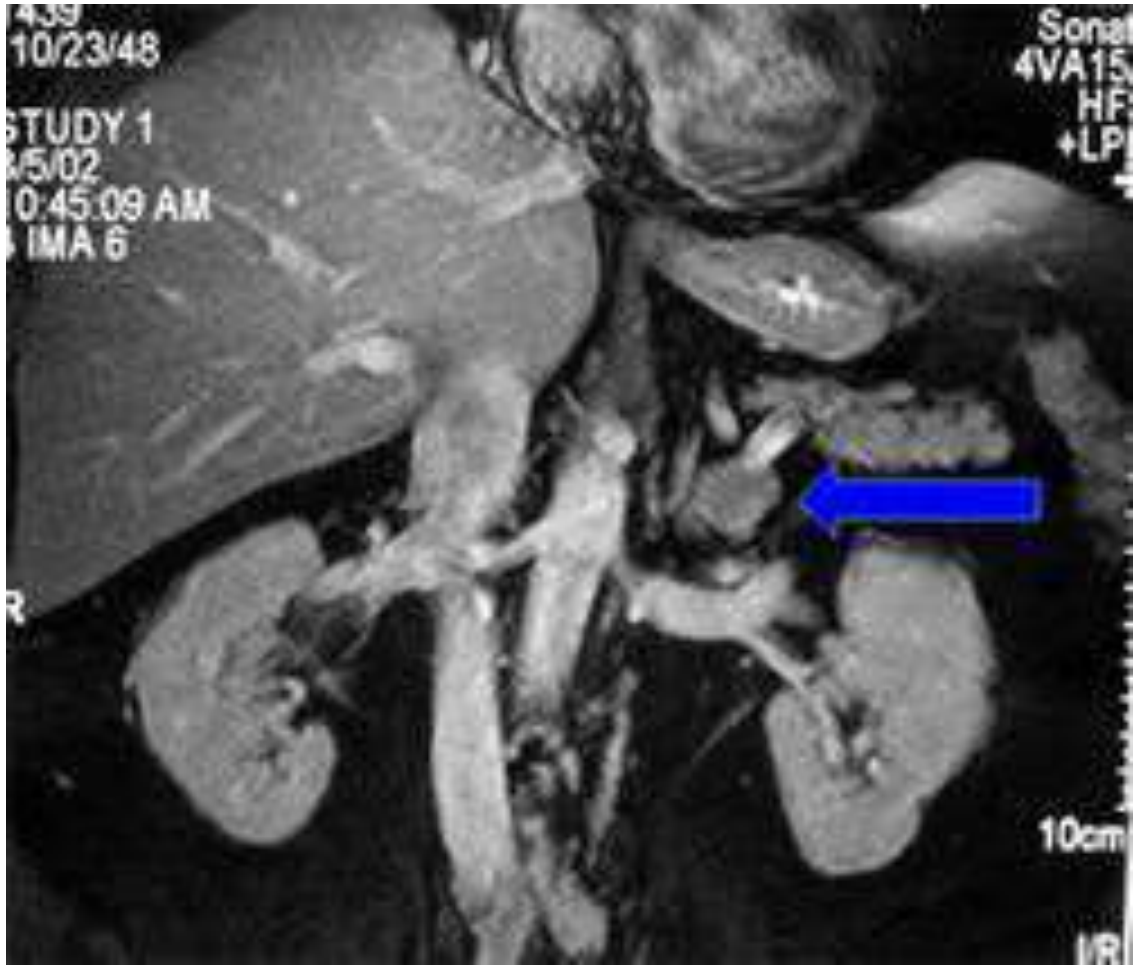
Q: Lab investigations show high aldosterone level and high ratio of PAC to PRA:

Q1: What is your Dx?

- Conn's tumor

Q2: Mention a common presentation for this patient?

- Hypertension



Functional adrenal tumors can cause several problems depending on the hormone released. These problems include:

1. Cushing's Syndrome:

This condition occurs when the tumor leads to excessive secretion of cortisol. While most cases of Cushing's Syndrome are caused by tumors in the pituitary gland in the brain, some happen because of adrenal tumors. **Symptoms of this disorder include diabetes, high blood pressure, obesity and sexual dysfunction.**

2. Conn's Disease:

This condition occurs when the tumor leads to excessive secretion of aldosterone. **Symptoms include personality changes, excessive urination, high blood pressure, constipation and weakness.**

3. Pheochromocytoma:

This condition occurs when the tumor leads to excessive secretion of adrenaline and noradrenaline. **Symptoms include sweating, high blood pressure, headache, anxiety, weakness and weight loss.**

Q: A 40-years-old female, previously healthy, presented with acute abdominal pain, fever and itching

1. What is the diagnosis?

Ascending Cholangitis

more in Female / NO IBD

VS

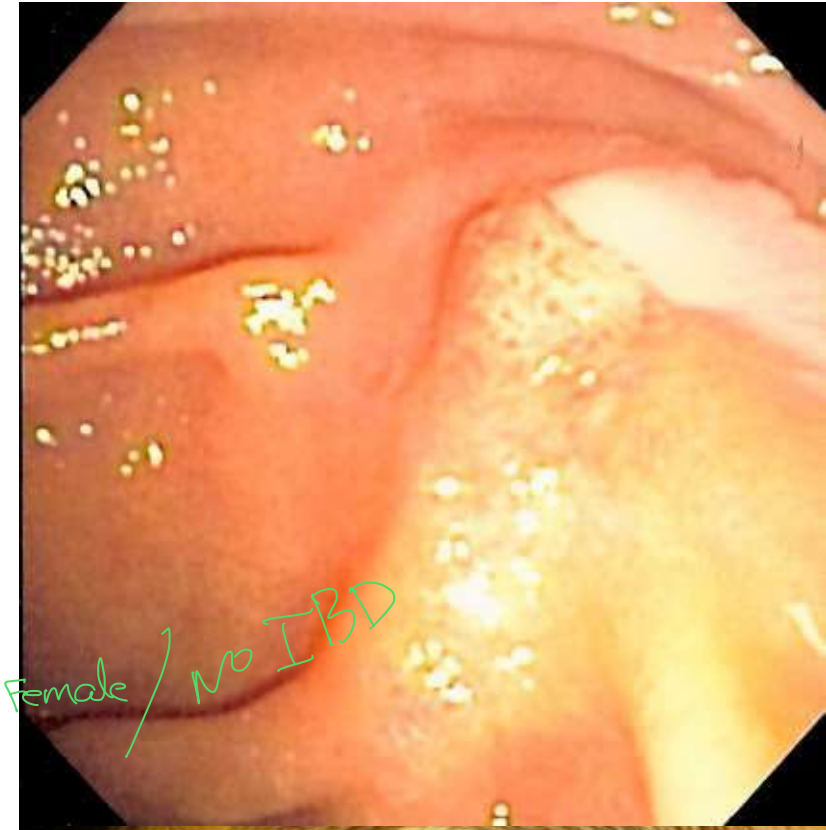
Primary sclerosing cholangitis more in male associated with IBD

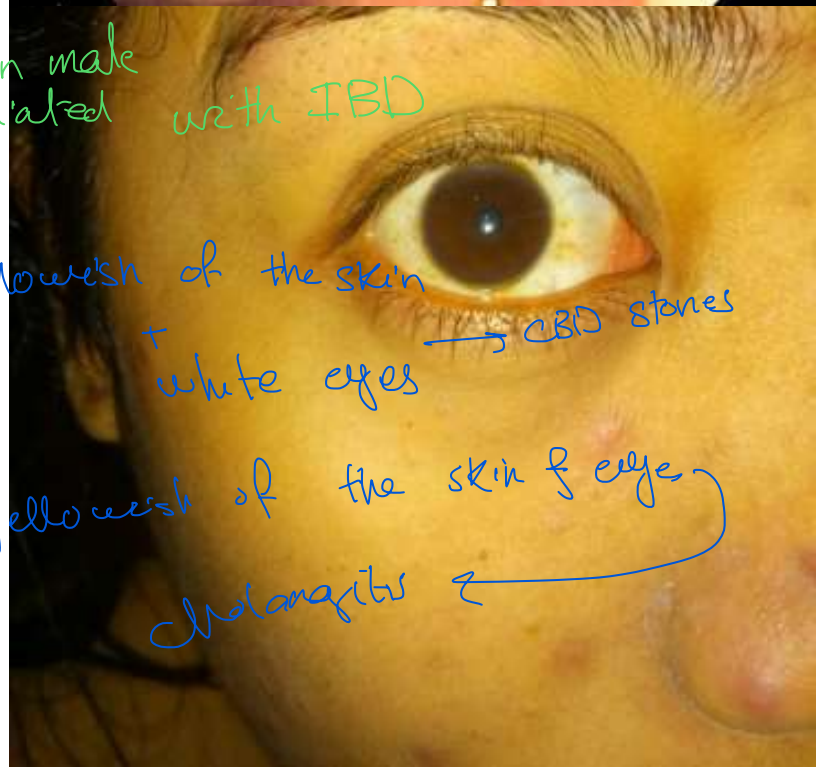
2. What is the next imaging test to order for this patient?

MRCP, ERCP

3. Why is she having itching?

Bile salts accumulation





Pneumobilia

(Air in the biliary tree)

Causes :

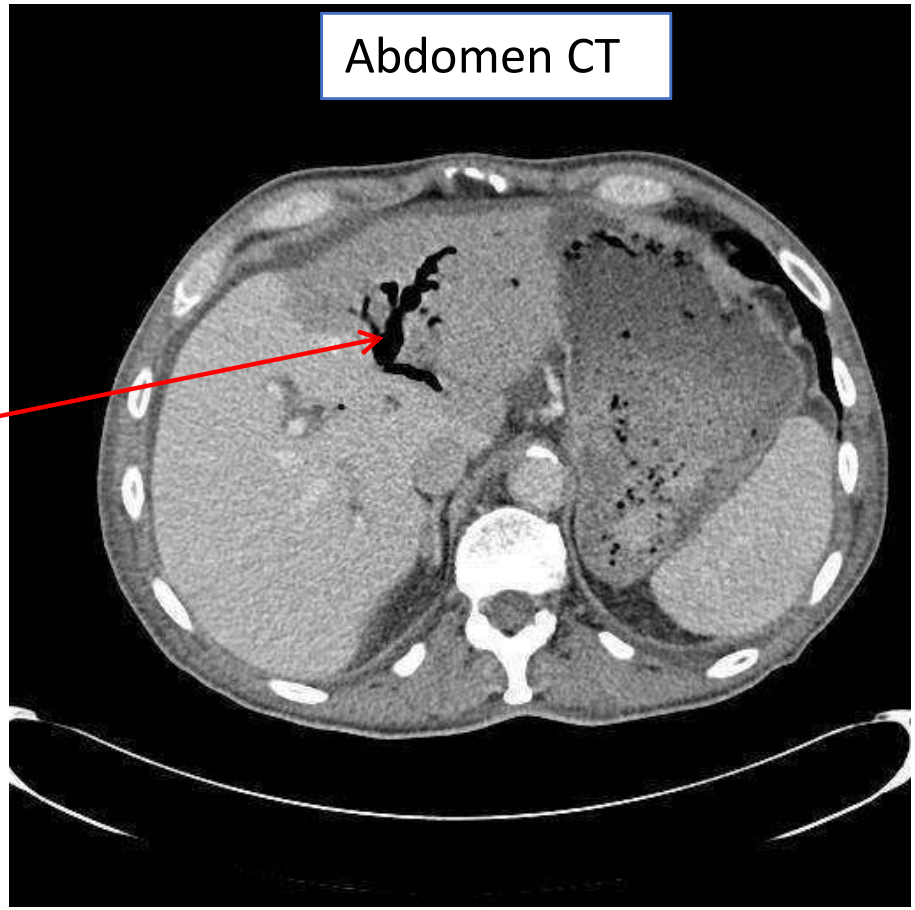
-Recent biliary instrumentation (e.g. ERCP or PTC)

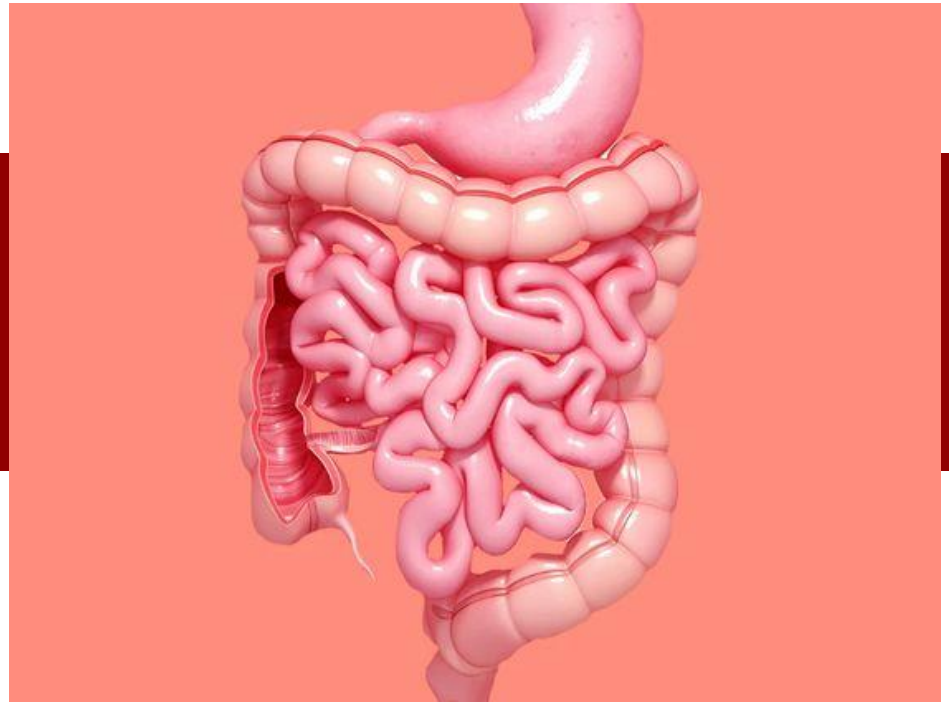
-Incompetent sphincter of Oddi (e.g. sphincterotomy, following passage of gallstone.)

-Biliary-enteric surgical anastomosis.

-Spontaneous biliary-enteric fistula (cholecystoduodenal accounts for ~70%).

-Infection (rare) (e.g. ascending cholangitis, anaerobes).





GI TRACT

(ESOPHAGUS , STOMACH, INTESTINE)

Hashemite University
H · U · M
Medical School Committee

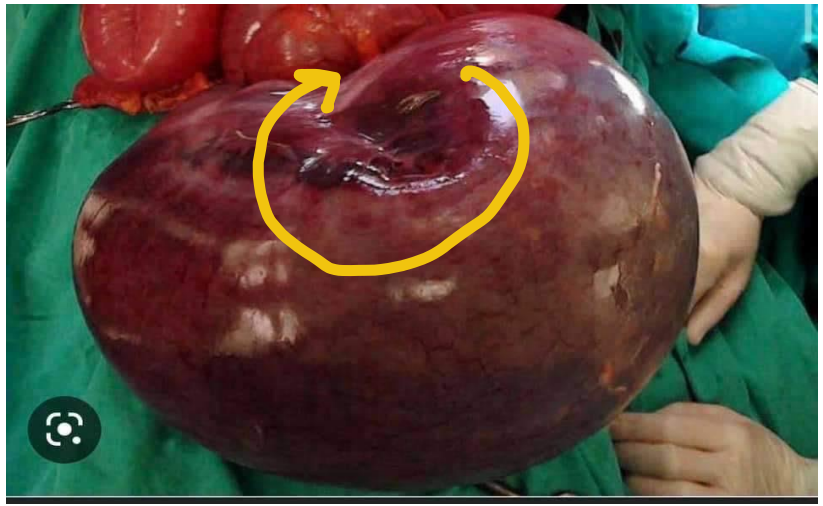
QUESTION

Yaqeen 2025

60 yo Patient bedridden with intestinal obstruction symptoms

1. What is the diagnosis?

2 mention 2 risk factors(causes):



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.colon Volvulus

2.bedridden (decrease motility of bowel) + chronic constipation, sigmoid tumer + elderly

Hashemite University
H · U · M
Medical School Committee

• QUESTION

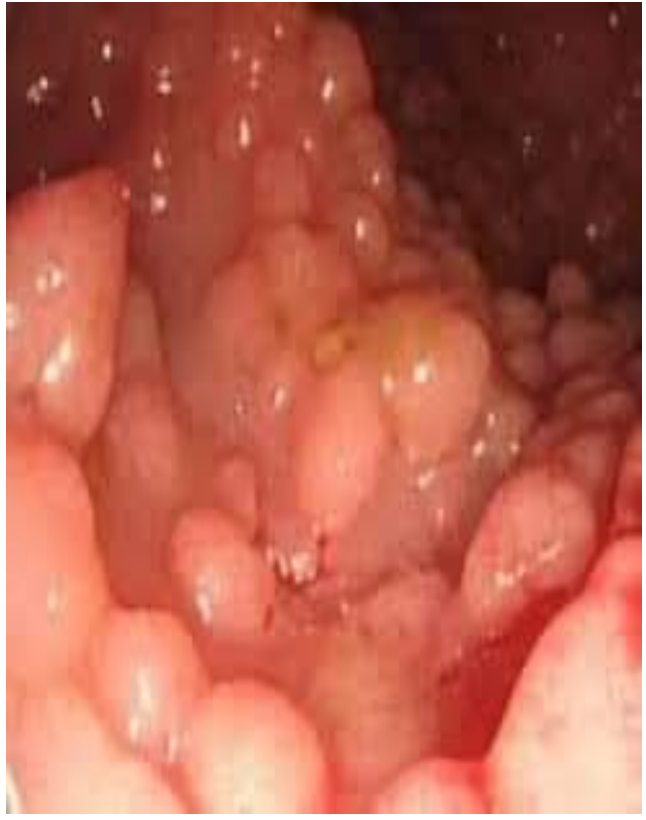
صحكد ـ يونن

Yaqeen 2025

15 y/o with hundreds of this lesions:

1.What is the diagnosis?

2.What is the cause?



Hashemite University
H • U • M
Medical School Committee

ANSWER

if the Q mintion other extra intestinal manifestion along to the's lesion, then the answer is Gardner's syndrome

1- DDx : FAP (Familial adenomatous polyposis)

2- the cause : hereditary (autosomal dominant)

Hashemite University
H · U · M
Medical School Committee

• QUESTION

Wateen 2023

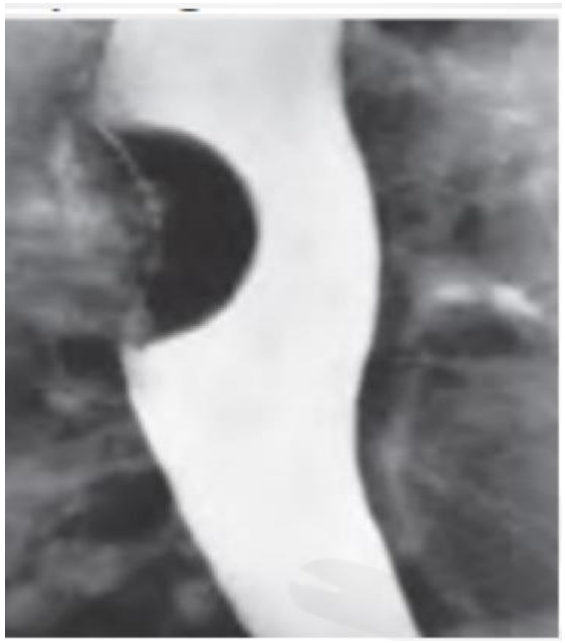
If it's grant, regurgitation & chest pain may occur

A young adult female with complain of dysphagia had this barium image.

A) Your Diagnosis?

B) What is the treatment?

c) dx



Hashemite University
H · U · M
Medical School Committee

ANSWER

A. Esophageal lieomyoma Mc benign tumor

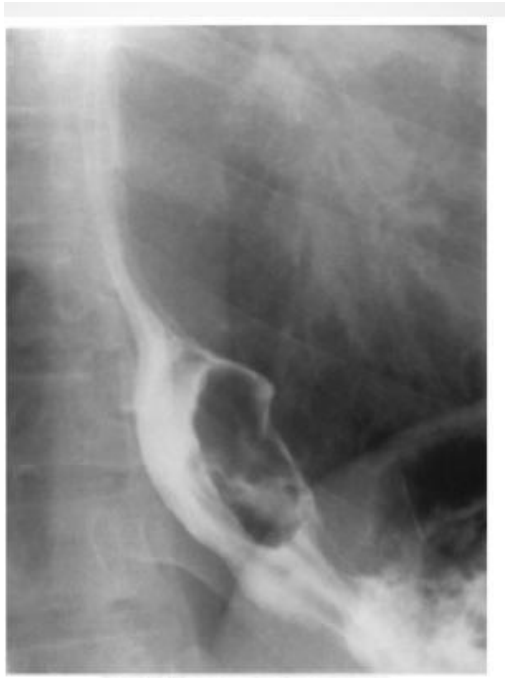
B. Excision

C. endoscopic ultrasonography & biopsy is contraindicated

• QUESTION

Wateen 2023

this is barium swallow for the esophagus, what is the diagnosis?



Hashemite University
H • U • M
Medical School Committee

ANSWER

Leiomyoma

• QUESTION

Wateen 2023

60 year old male with chronic constipation, left iliac fossa pain and episodes of painless bleeding per rectum. Resection of affected segment of bowel had this gross appearance.

What is your diagnosis?

clear case without Pic

Hashemite University
H • U • M
Medical School Committee

• ANSWER

Diverticular disease

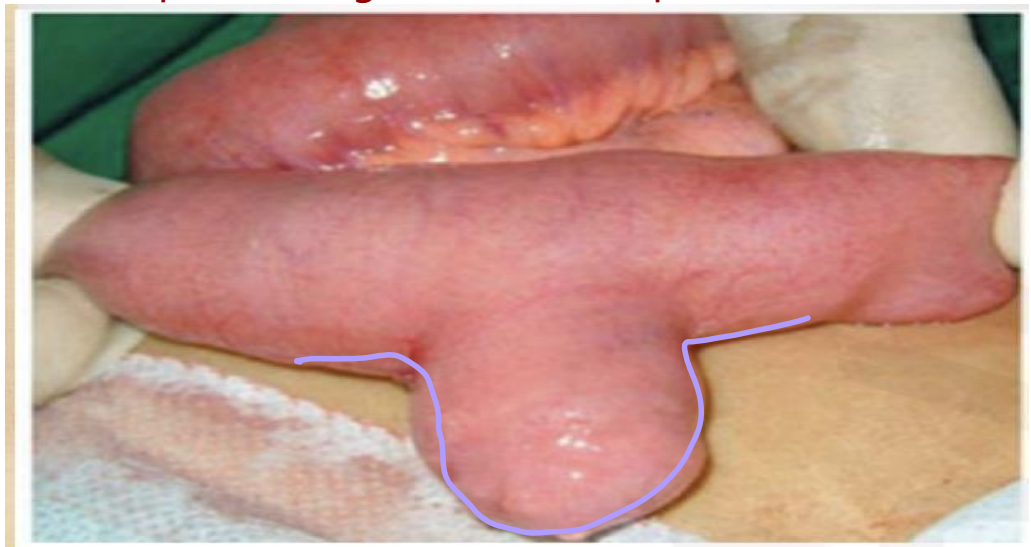
• QUESTION

Wateen 2023

During an appendectomy for an acute appendicitis for a 21 year old male, the surgeon encountered a structure as appears in this image

. A. Name this finding?

B. what is the best next step in management of this patient?



Hashemite University
H • U • M
Medical School Committee

ANSWER

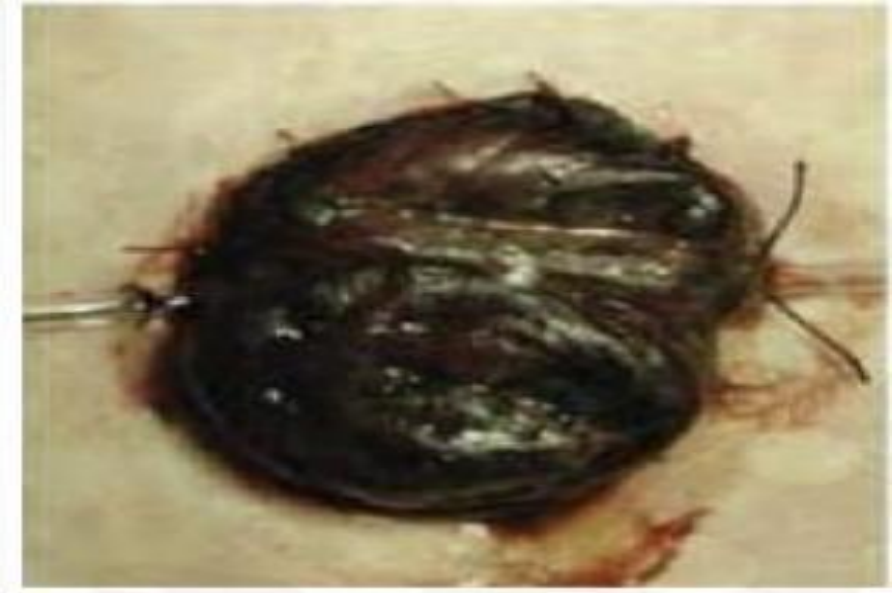
A. Meckel's diverticulum

B. Diverticulum resection ,if inflammed - high fiber diet

• QUESTION

Wateen 2023

Name the finding



Hashemite University
H • U • M
Medical School Committee

• ANSWER

It could be : ① Gist ② Melanoma

But theres no case presentation !!

Stromal tumor

Not sure

• QUESTION

Harmony 2022

7. This is a Barium swallow of the Esophagus, what is your provisional diagnosis?

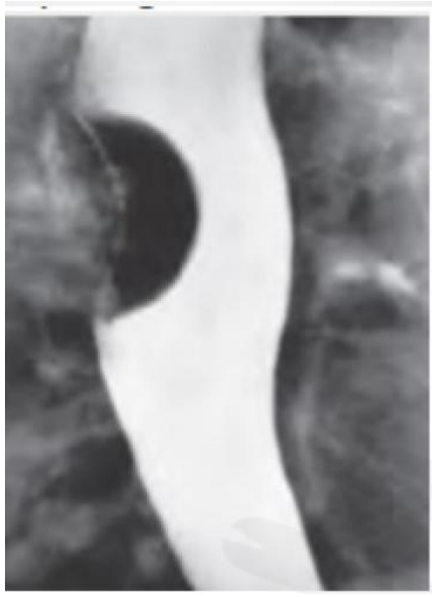
a. Nutcracker Esophagus

b. Simple cyst

c. Leiomyoma

d. Adenocarcinoma

Answer: C



Hashemite University
H • U • M
Medical School Committee

QUESTION

SOUL 2021

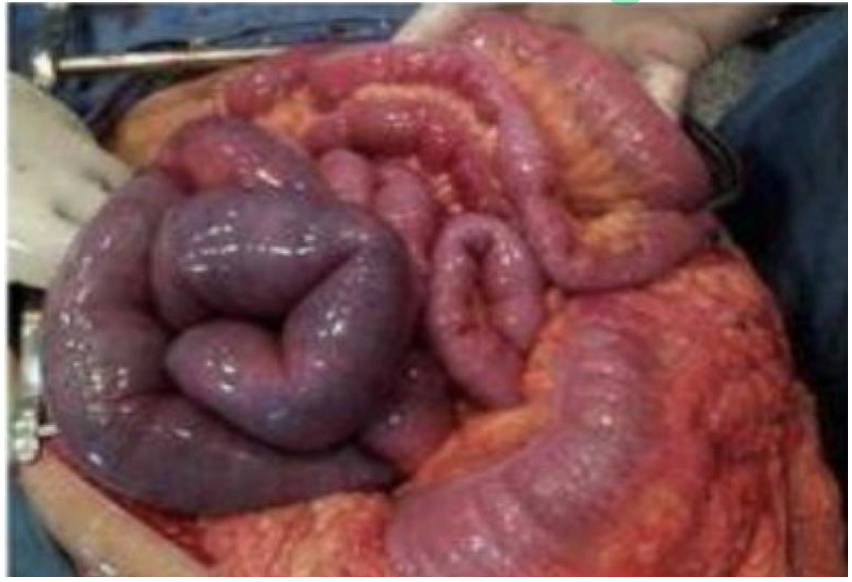
محمود ملف يونن

A 48-years old patient presented with acute abdomen. PMH shows atrial fibrillation. Laparotomy was done:

1: What is the Dx?

2: What is the most affected artery in this condition?

3:Appropriate management?



Hashemite University
H · U · M
Medical School Committee

ANSWER :

1. Acute Mesenteric Ischemia
2. Superior Mesenteric Artery (main mesentric artery)
3. Resection & Anastomosis

• QUESTION

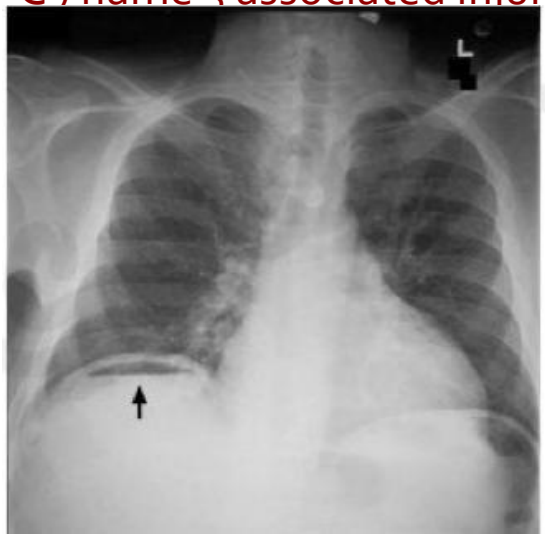
SOUL 2021

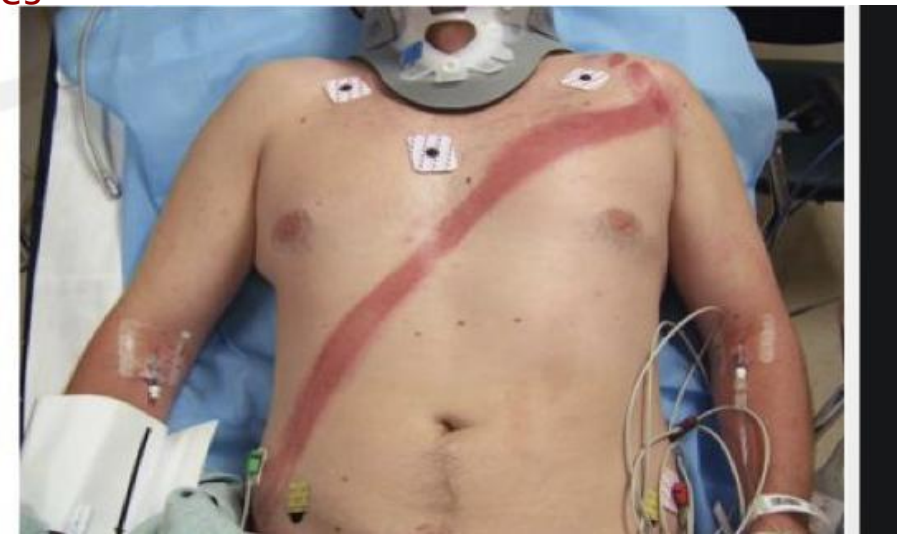
31 year old male, presented to ER after RT

A) Name the signs

B) What is the management

C) name 3 associated injuries





Hashemite University
H • U • M
Medical School Committee

• ANSWER

MC cause is perforation of abdominal viscus

A. 1 Air under the diaphragm 2. Seat belt injury

IV Fluid + Ab +

B. Diagnostic Laparotomy and bowel repair

C)1) Flail chest

2) Small bowel injury

3) Cervical spine injury

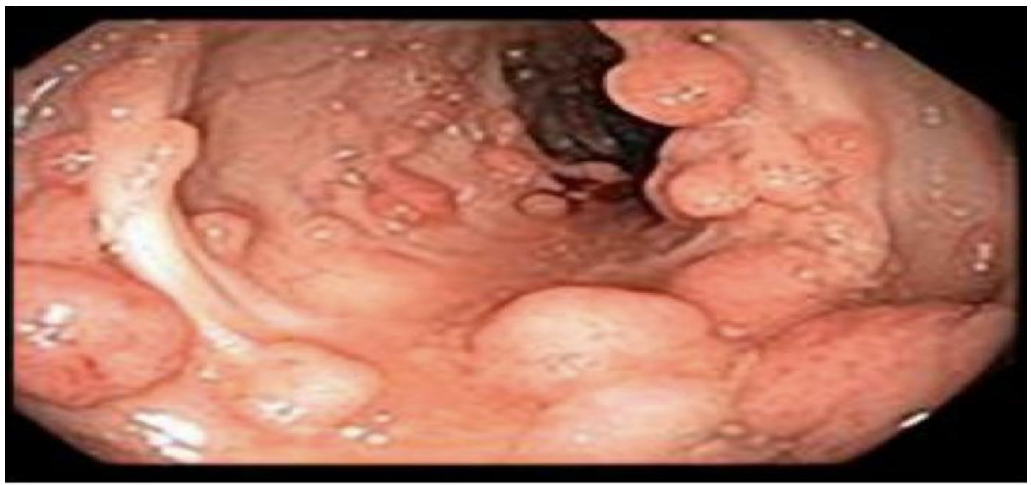
• QUESTION

SOUL 2021

female, with family history of colon ca, did this colonoscopy:

A) What is the diagnosis

B) What is the surgical management



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. familiäre adenomatöse polyposis coli

B. Prophylaxis colectomy

• QUESTION

Gerd is associated with esophageal ca

SOUL 2021

40 yr old male , present with GERD symptoms

A) During history taking , name symptoms that indicate to do gastroscopy:

B) Mention an indication for anti-reflux surgery:

(No picture)

Hashemite University

H • U • M

Medical School Committee

- upper abdominal pain/mass

ANSWER:

indicates esophageal Ca

A. Wt loss, atypical symptoms (pulmonary) ,no response to prior medical ttt ,...

B. Faliure of medical treatment

Complications like stricture, cough , aspiration

usually associated with Squmus cell Ca

Hashemite University
H · U · M
Medical School Committee

• QUESTION

SOUL 2021

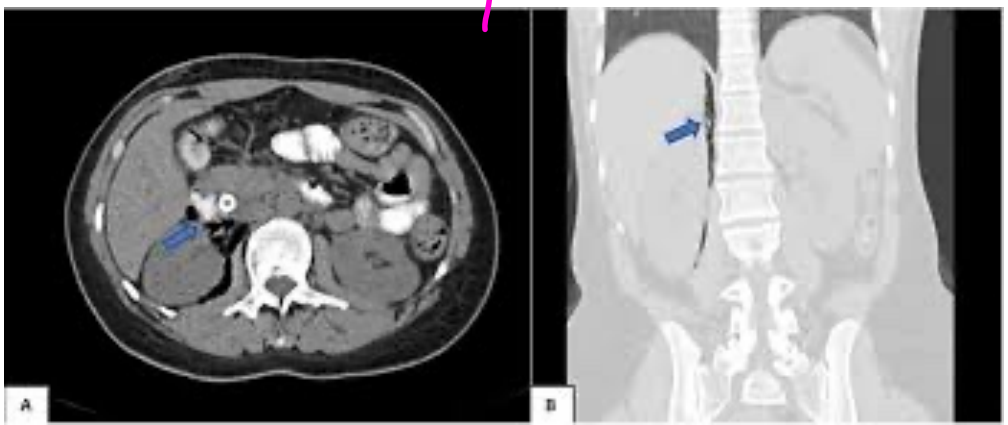
From google

Pt presented with right lower fossa pain, nausea appendicitis, was suspected, Ct showed free fluids around duodenum

2ry to PU perforation

A) What is the diagnosis:

B) What is the next step in management:
(No picture)



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Valentino sign (read about it) ⟹ considered ddx to appendicitis

B. Appendectomy with bowel repair → repair the ruptured PU

Hashemite University
H • U • M
Medical School Committee

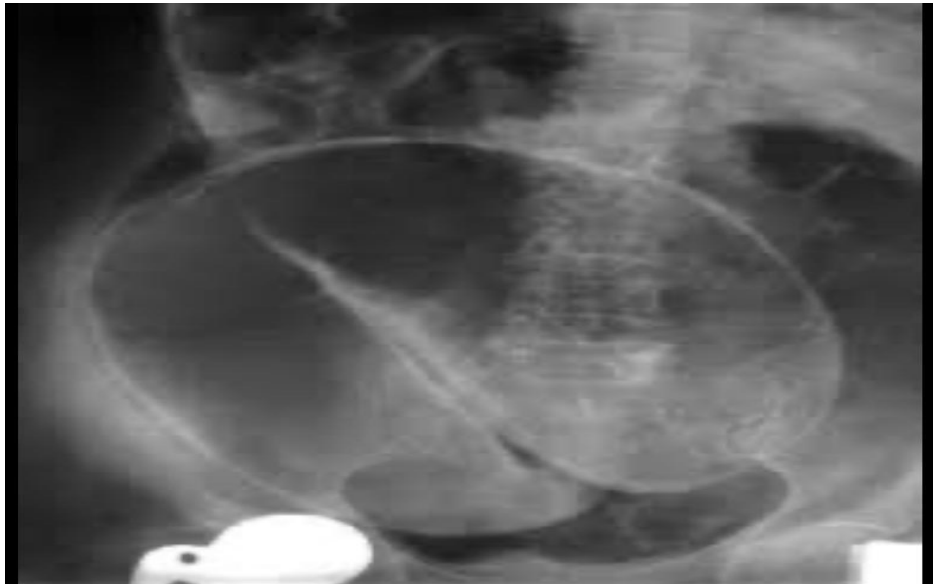
• QUESTION

معتصم بن [illegible]

SOUL 2021

1. What is the name of this sign ?

2. Where is the Most common site?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Coffee bean sign

2. in sigmoid colon

• QUESTION

محمد برن [6]

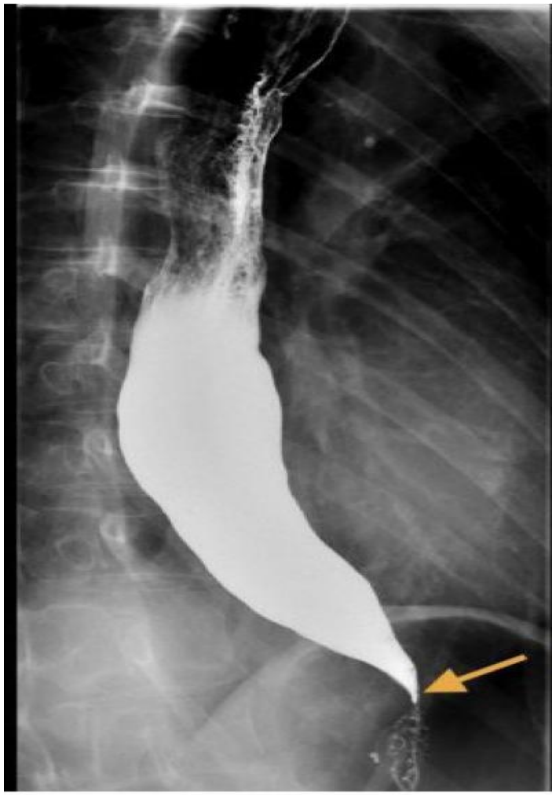
SOUL 2021

1.What is the name of this sign ?

2.Name the study ?

3.What is the definitive Dx?

4.Mention 2 modalities of Mx?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Bird peak sign

2. Barium swallow

3.Achalasia

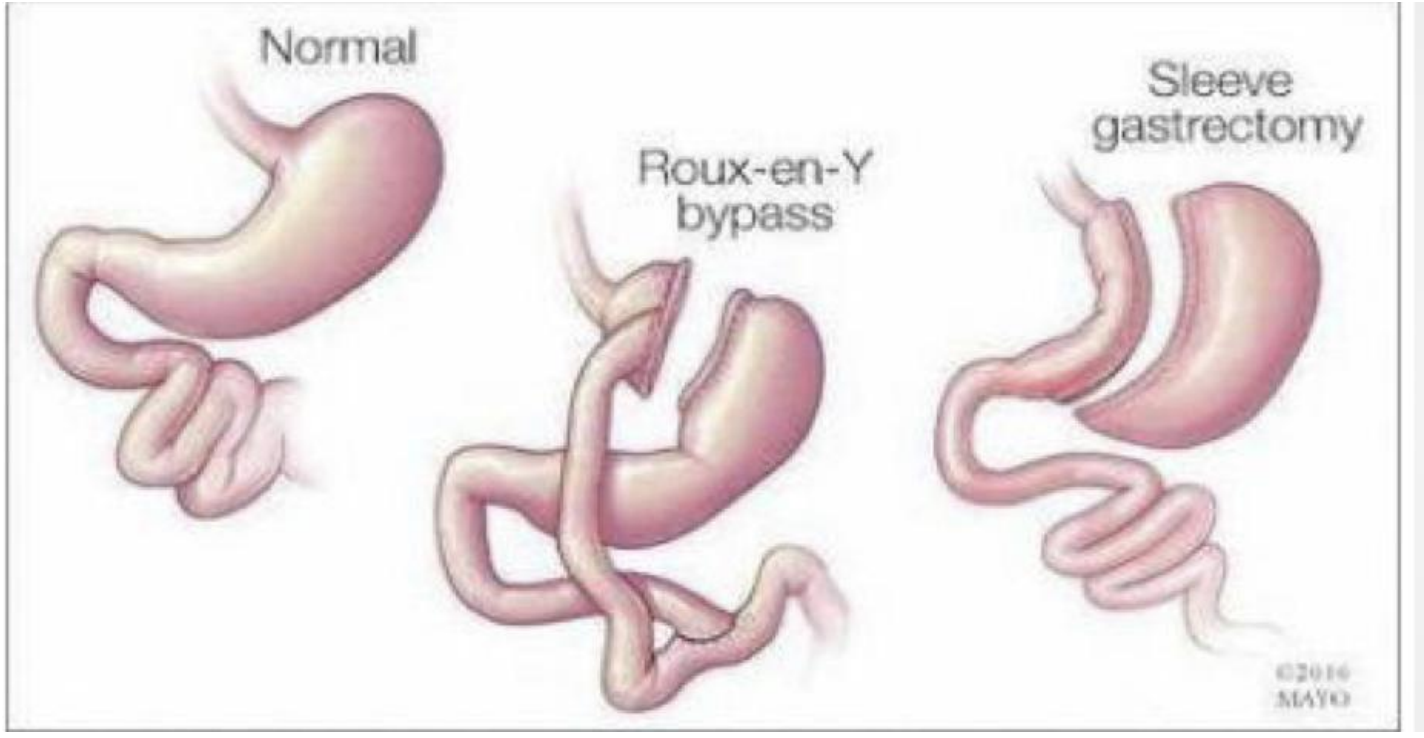
4.1) Esophageal sphincter (Heller's) Myotomy 2) Balloon dilation

Hashemite University
H · U · M
Medical School Committee

• QUESTION

SOUL 2021

Name the procedures :



ANSWER

1. Roux en y bypass
2. Sleeve gastrectomy

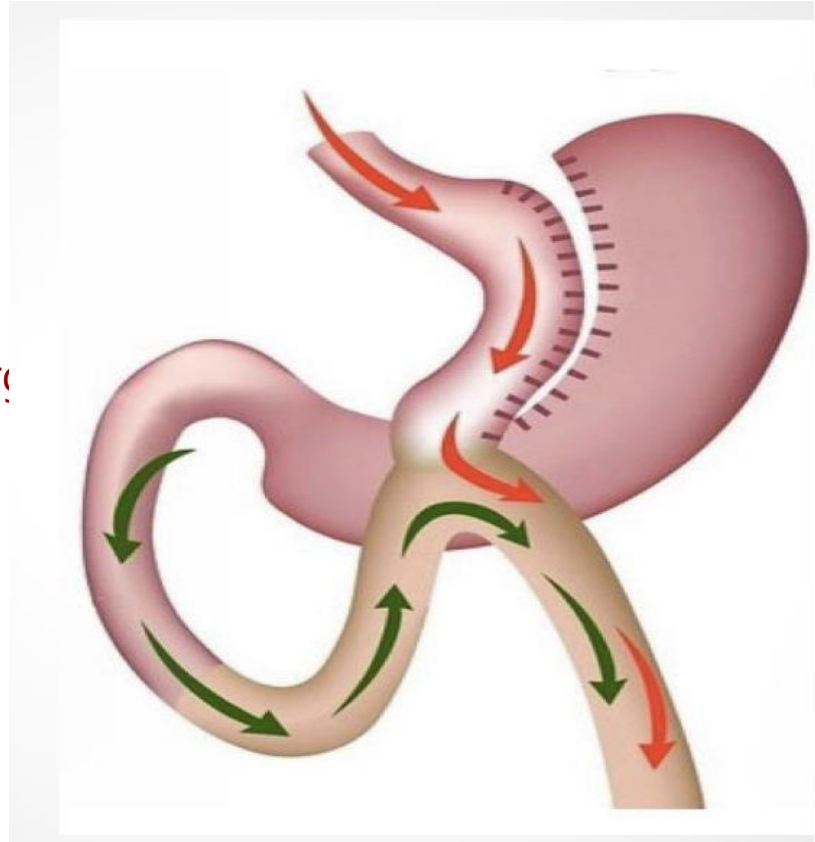
• QUESTION

SOUL 2021

1. Name this Surgery ?

2. Mention 2 mechanisms (types)?

3.What BMI is an indication for a sur



ANSWER

1.Mini-Gastric By pass

2. 1)Roux-en-Y gastric bypass 2) Duodenal switch 3) Jejunoileal bypass

3) >35 ⟹ >35–40 without metabolic dz
>30 with metabolic dz

حسب مستشفى حرّة
وفق حسب ال
new guidlines

Hashemite University
H · U · M
Medical School Committee

• QUESTION

IHSAN 2020

cholangitis usually (20–40 yrs)

A 40-years-old female, previously healthy, presented with acute abdominal pain, fever and itching → obstructive jaundice

A.What is the diagnosis?

B.What is the next imaging test to order for this patient?

Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Ascending cholangitis — triad [RUQ pain, Fever, Jaundice]

B. Some said ERCP ~~& some said MRCP~~ — the definitive dx is ERCP or PTC حسب البنك

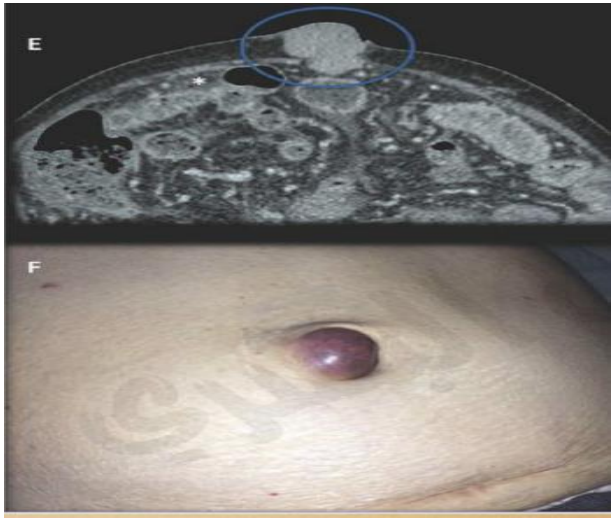
• QUESTION

صعود بوت ٨

IHSAN 2020

A 50-years old male patient has recently become cachectic and developed ascites

1. Name the findings on examination
(lower picture) and CT scan .(upper picture)
2. Mention 2 possible underlying
sources for .this lesion



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Sister Mary Joseph Nodule

2.GI cancers, Gynecological cancers, Melanoma

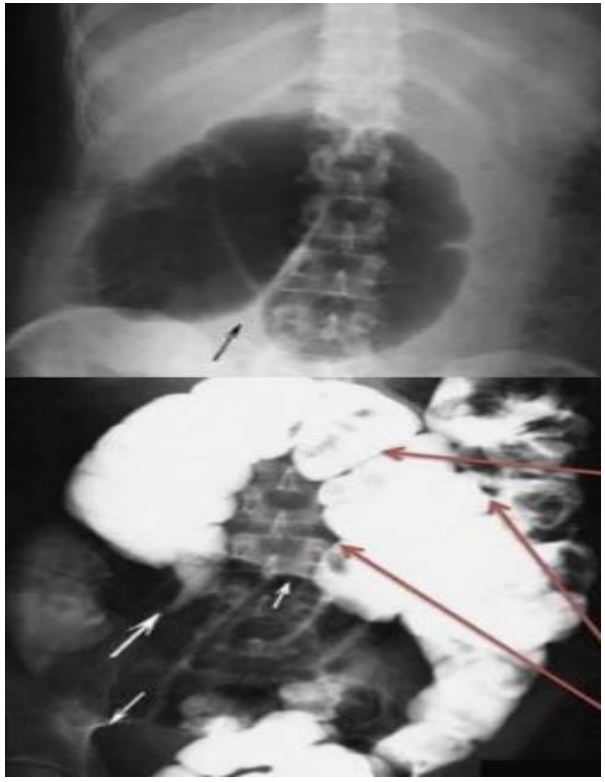
• QUESTION

IHSAN 2020

1: What is the study?

2.What is the Dx ?

3.What is the Mx ?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Barium Enema

2. Volvulus

l3.. Detorsion

• QUESTION

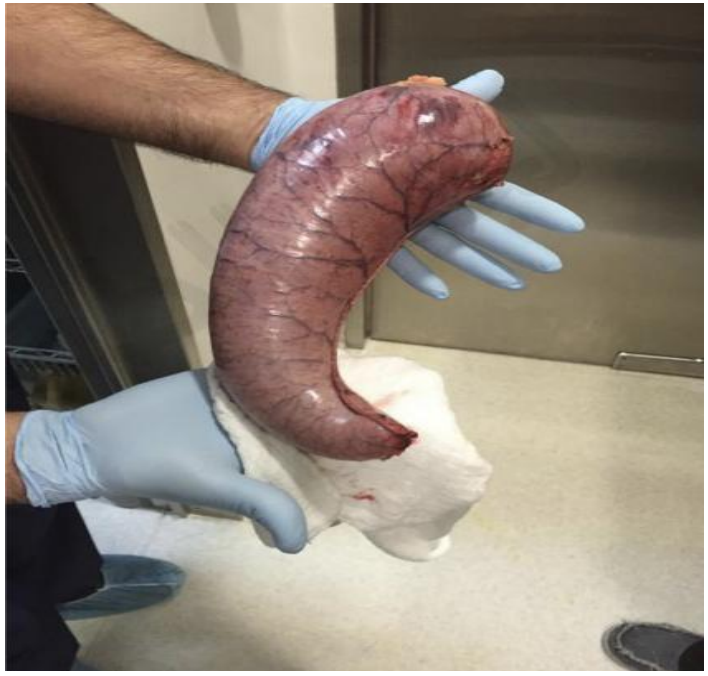
محمد رزق ١

IHSAN 2020

A Patient that needed to reduce weight ASAP, and this surgery was :done

I: Which procedure is this?

2.: mention 2 Complications for it?



Hashemite University
H • U • M
Medical School Committee

ANSWER

I. Gastric Sleeve

II. Complications: 1) Blood clots. 2) Gallstones 3) Hernia. 4) Internal bleeding 5) Leakage. 6) Perforation 7) Stricture

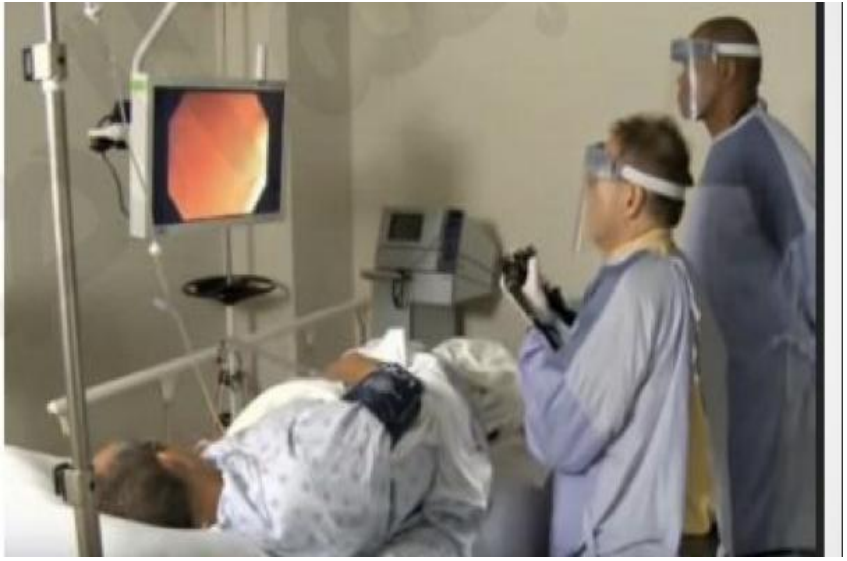
• QUESTION

IHSAN 2020

I: What is this?

II: Name 2 pathologic finding?

III: Name 2 therapeutic procedures done with it?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

I. Colonoscopy

II. 1)Angiodysplasia Diverticulosis (2 Colon tumor (3 Polyps, 4)masses

III. 1) Laser Ablation

2)Polyps Resection

• QUESTION

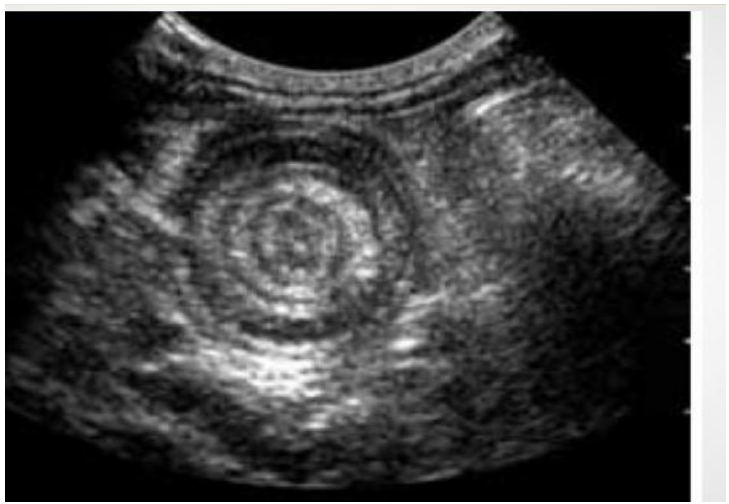
2019 – Before

1.What is thename of this modality of investigation?

2- what is this pathology?

3- how do we treat those patients in uncomplicated cases?

4. What is the pathology?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Abdominal Ultrasound

2.Intussusception

3.Resuscitatio ,Hydrostatic (pressure) reduction using gas air or barium enema

4.Intussusception

• QUESTION

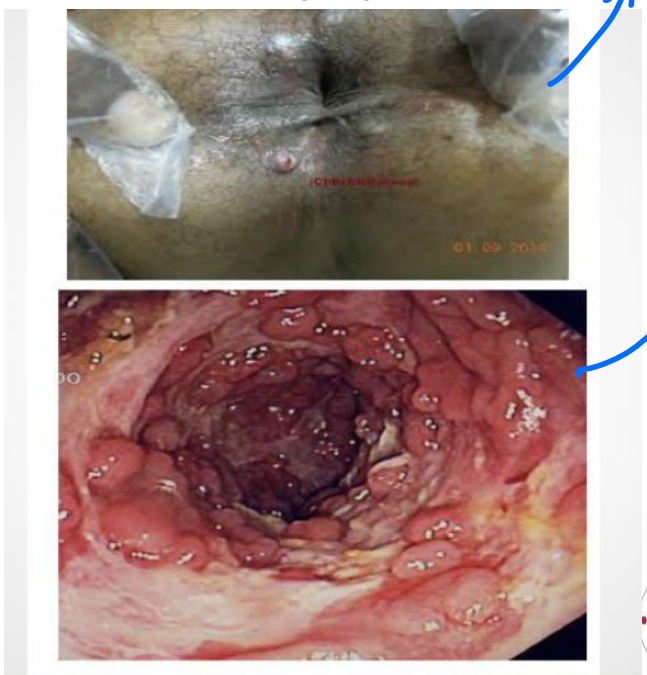
2019 – Before

Female patient came complaining from fistulas and other symptoms.
Colonoscopy was done

1.What is the likely diagnosis ?

2. What are the patients usual symptoms ?

3. How do we treat those patients ?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Crohns Disease

2.abdominal pain, fever, weight loss,diarrhea

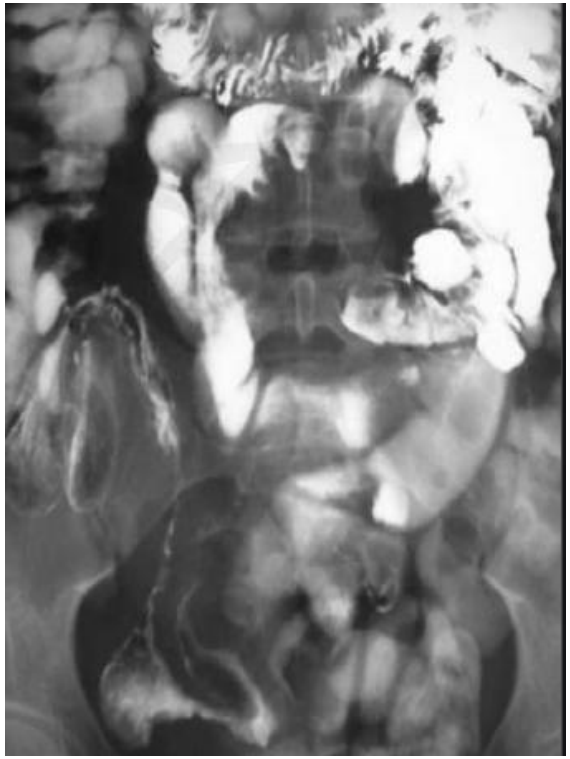
3. I am not sure if they wanted a surgical or medical approach

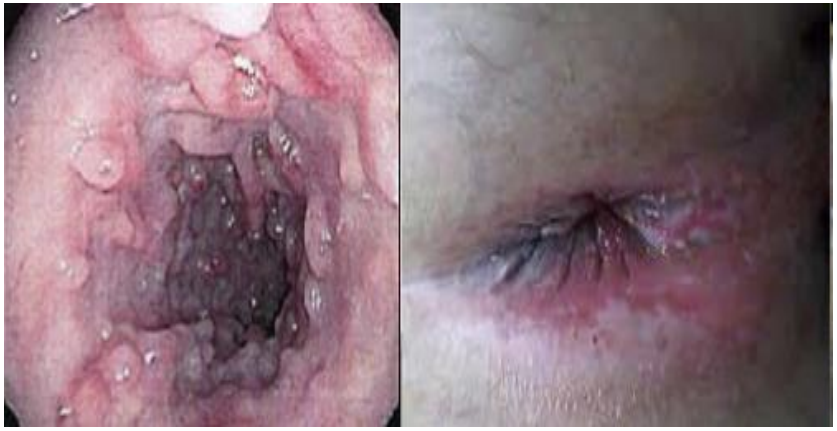
medical= 6 mercaptopurine and steroids

Surgury → For Fistula or (abscess if found)
→ colectomy
→ proctocolectomy

OTHER PICTURES FOR THE PREVIOUS QUESTION

بدون صور ⑪





• QUESTION

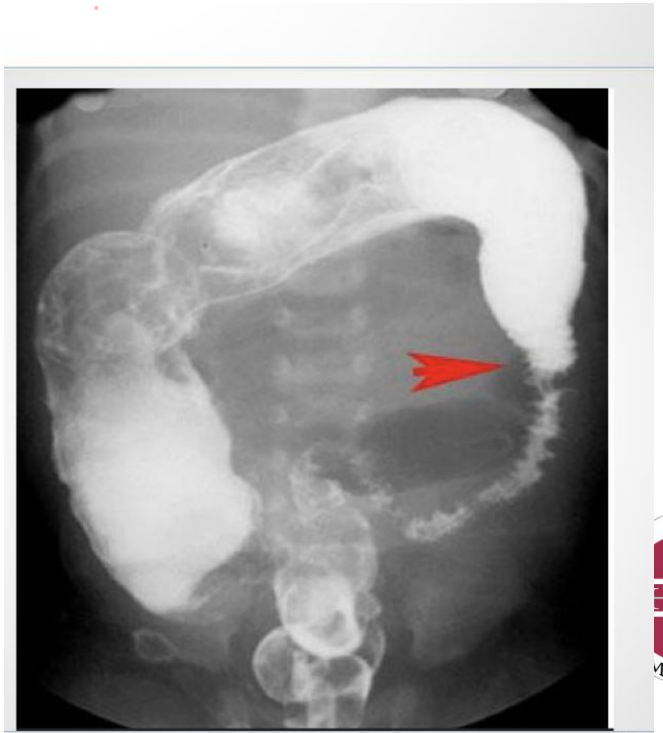
gi حش pedi

2019 – Before

2-month-old male with abdominal distention and history of delayed passage of meconium at birth.

1. • Name this imaging study

2. Name the gold standard diagnostic method for this .problem



Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Contrast/ barium enema

2. Rectal biopsy

Note: diagnosis is Hirschsprung's disease

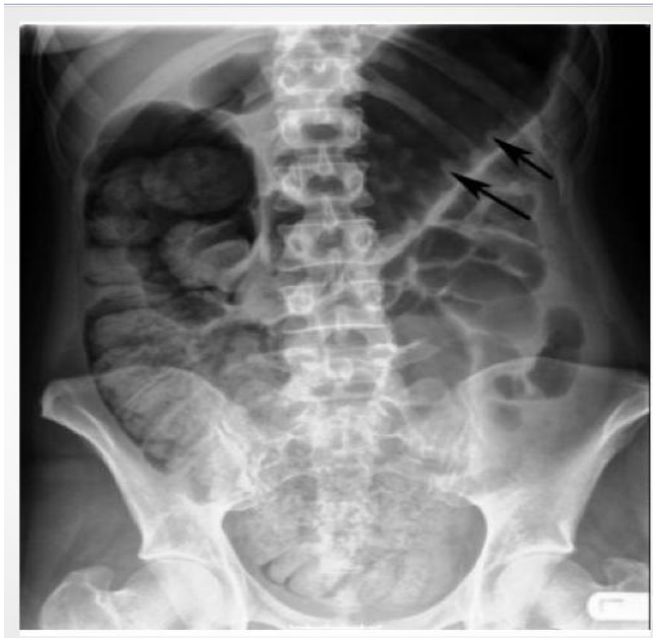
• QUESTION

2019 – Before

This is an abdominal x-ray of 40-year-old patient known case of ulcerative colitis and presented with abdominal pain and increasing abdominal distension

1. What is the most likely Diagnosis?

2. Mention one possible complication



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Toxic dilatation of transverse colon(toxic mega-colon)

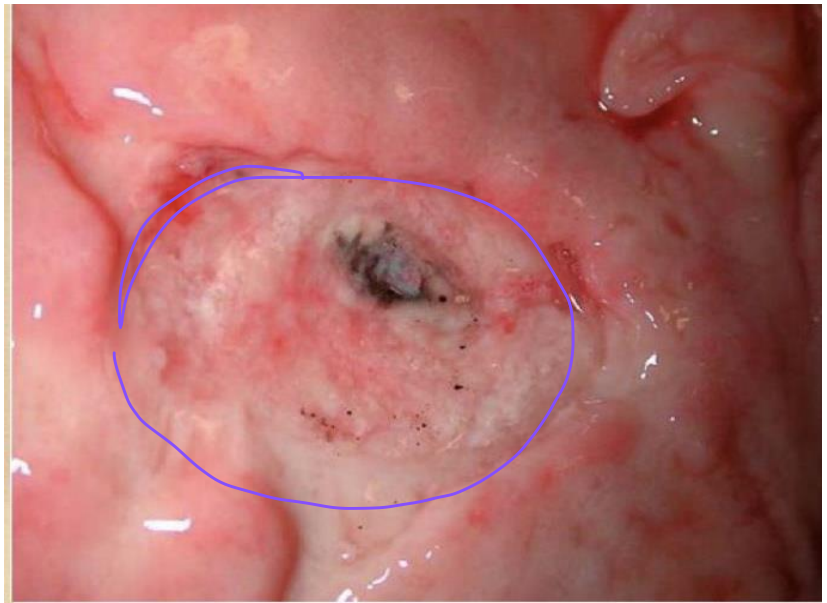
2. perforation + severe bleeding & dehydration + osteoprosis

• QUESTION

2019 – Before

While performing an upper GI endoscopy, you saw this lesion in the stomach

1. Describe what you see
2. What is the most likely diagnosis
3. What is your next step?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Ulcer

2. Gastric Cancer

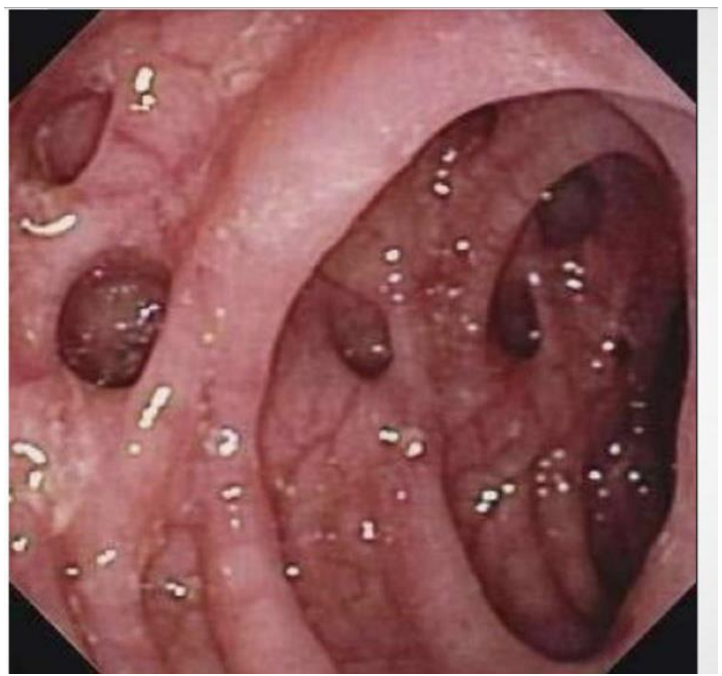
3. Biopsy

• QUESTION

2019 – Before

While performing a colonoscopy you found this abnormality

1. Name this pathology
2. What is the most common location
3. Mention 2 possible complications



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.diverticular disease

2. sigmoid colon

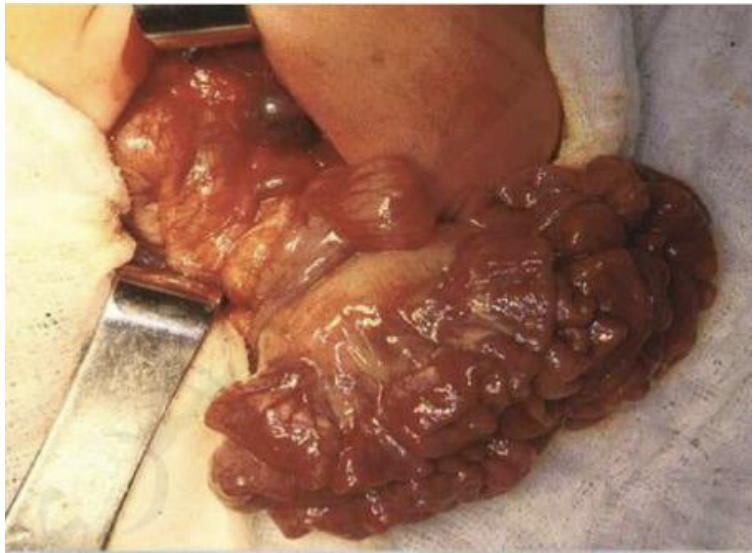
3. Bleeding, perforation, stricture, diverticulitis

• QUESTION

2019 – Before

1.What is the Dx?

2.the bowel was viable and not gangrenous, what to do?



ANSWER

1.Volvulus (Midgut)

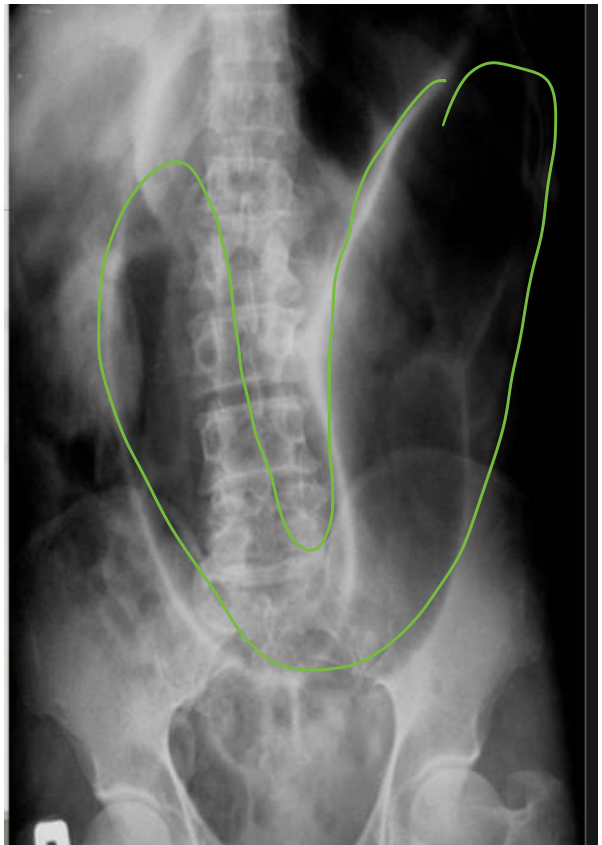
2.Viable SB > Close and observe

• QUESTION

2019 – Before

1. What is the diagnosis?

2.most common site?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Sigmoid volvulus

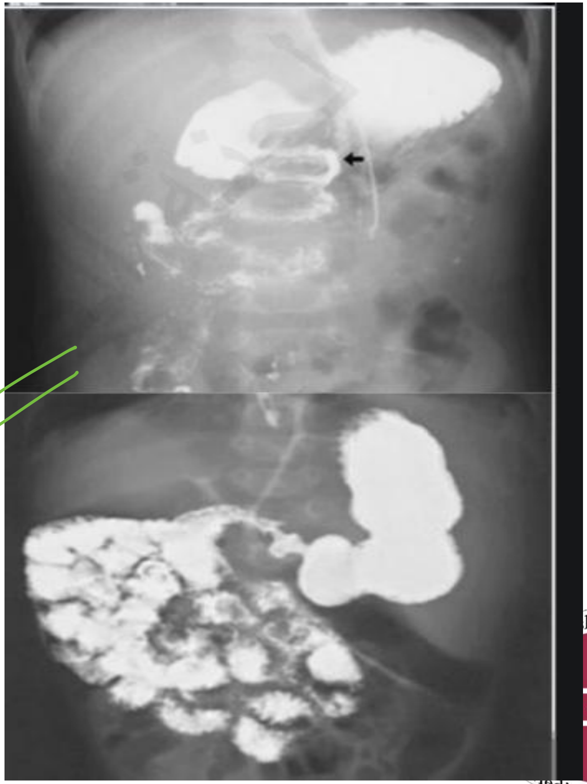
2.Sigmoid colon

. QUESTION

2019 – Before

1.What is the study?

2.What is the pathology / Clinical ER Presentation?



ANSWER

1.Barium meal

2. Midgut volvulus due to malrotation

• NOTE

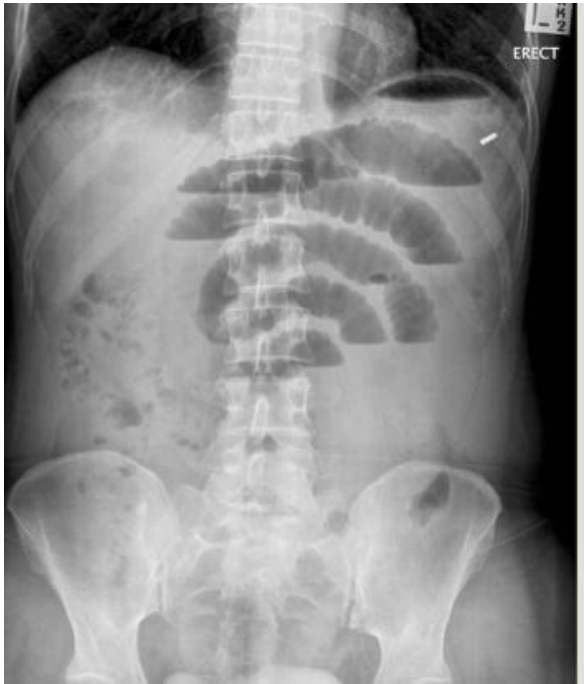
Name	Region & info	Indications
Barium Swallow	to visualize the area from the mouth to the stomach (esophagus)	a. Symptoms of gastro-esophageal reflux b. Dysphagia, related to: Esophageal (Web, stricture, tumor, achalasia), vascular abnormalities
Barium Meal	Double contrast (gas+barium) to visualize the stomach and the duodenum	a. Gastro-edophageal reflux b. Gastric or duodenal ulcer c. Hiatus hernia d. Gastric tumors
Barium follow-through	To visualize the small intestine, taken every 1/2 hr till we reach the large intestine (stool white)	a. IBS (crohns mostly) b. small bowel tumor/lymphoma (filling defect) c. Small bowel obstruction
Barium Enema	Double contrast (barium + air), to visualize the colon, and it's the only contrast given in the rectum (by Folly's)	a. Abdominal mass b. Large bowel obstruction / volvulus c. Diverticular disease d. Colonic tumor

Hashemite University
H • U • M
Medical School Committee

• QUESTION

2019 – Before

1.This is a picture of obstruction, Is it partial/complete? Why?



Hashemite University
H • U • M
Medical School Committee

ANSWER

Partial obstruction - Because there is air in rectum

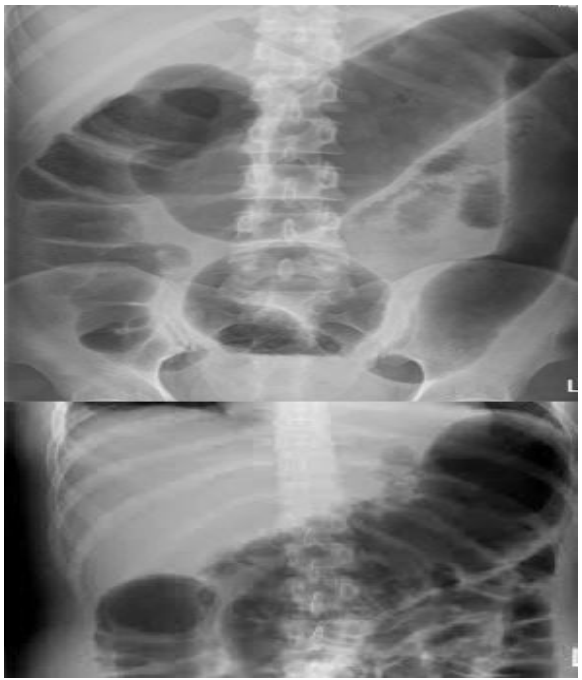
• QUESTION

2019 – Before

case of UC, with a history of bloody diarrhea and abdominal pain:

1.What is the abnormality?

2.What is the abnormality?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Transverse Toxic megacolon

2.Perforation - Peritonitis

Hashemite University
H • U • M
Medical School Committee

• QUESTION

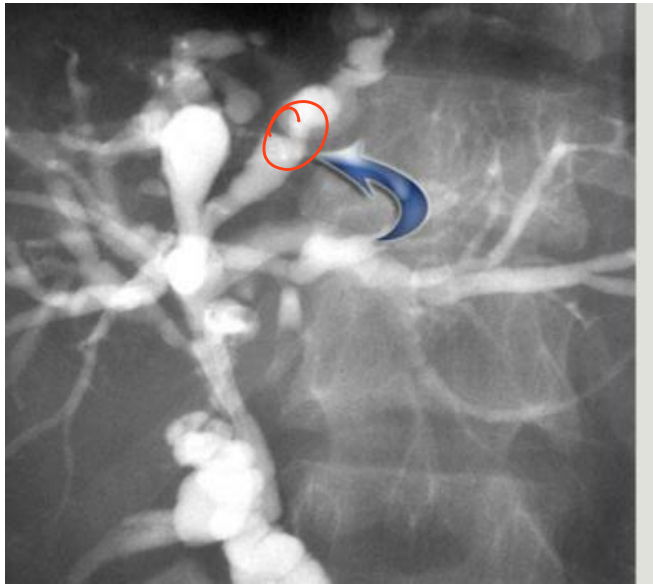
2019 – Before

1. What is the Dx?

2. Which disease is associated with it?

3. which type of malignancy the patient may develop?

4. Diagnostic test?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.primary sclerosis cholangitis (Beading)

2.Ulcerative colitis

3.Cholangiocarcinoma

4.ERCP

• QUESTION

2019 – Before

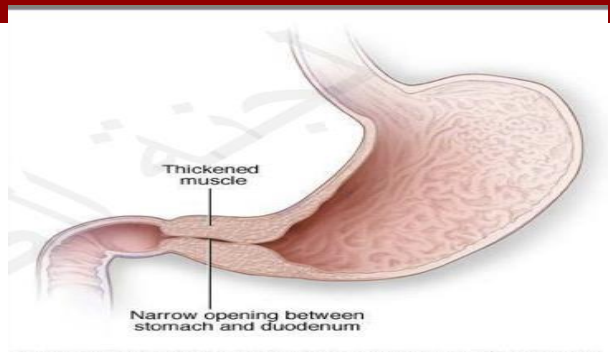
A 55 years old patient with PUD came with forceful vomiting

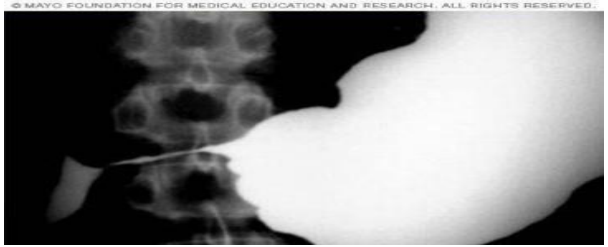
1.What is the pathology?

2.What is the electrolyte disturbances the patient has?

3. What is the gold standard for Dx?

4.Mention 2 causes?





ANSWER

1.gastric outlet obstruction (pyloric obstruction) – Pyloric Stenosis

2.hypokalemic hypochloremic metabolic alkalosis

3.US "~~not sure~~"

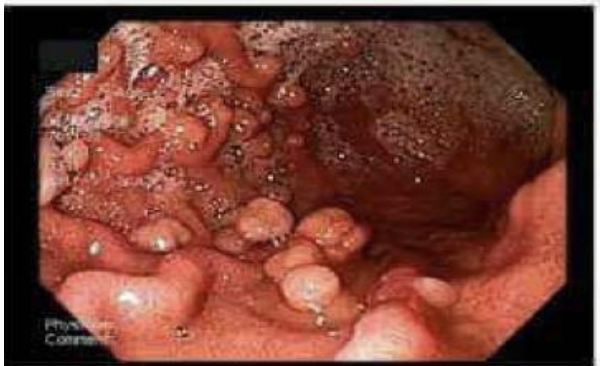
4.1)Gastric Carcinoma 2) Peptic ulcer disease (PUD

Hashemite University
H · U · M
Medical School Committee

• QUESTION

2019 – Before

What is the diagnosis?



ANSWER

Peutz-Jeghers syndrome

Note: PJS is an autosomal dominant inherited disorder characterized by intestinal hamartomatous polyps in association with a distinct pattern of skin and mucosal macular melanin deposition

• QUESTION

2019 – Before

Appendicitis Scenario

1.What is the pathology?

2.What is the name of it's scoring system?

3.What is the sequence of the pain?

4.Write 2 features found on US?

Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Acute Appendicitis

2.Alvarado scoring system

3.Visceral somatic sequence of pain

4.1) Blind-ending tubular dilated structure >6mm 2) Appendiocolith with acoustic shadow 3) Distinct appendiceal wall layers 4) Peri appendiceal fluid collection 5) Peri appendiceal reactive nodal enlargement

NOTE ALVARADO SCORING SYSTEM (APPENDICITIS)

Mnemonic (MANTRELS)	Value
Symptom	
Migration	1
Anorexia-acetone	1
Nausea-vomiting	1
Signs	
Tenderness in right lower quadrant	2
Rebound pain	1
Elevation of temperature >37.3°C	1
Laboratory	
Leukocytosis	2
Shift to the left	1
Total score	10

• QUESTION

2019 – Before

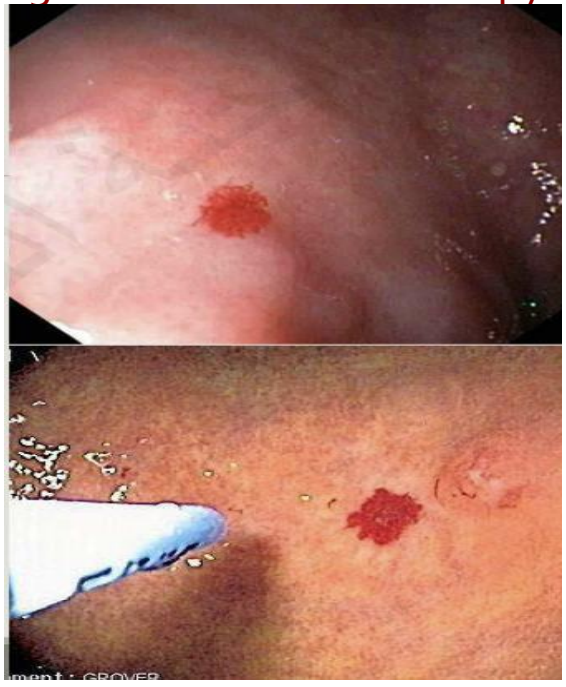
Patient with a history of lower GI bleeding & this is his colonoscopy:

1.What is the diagnosis?

2.the Cause?

3.the management?

4.What is the most common site?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Angiodysplasia

2.Atherosclerotic cardiovascular disease

3.1) Laser 2) Electrocoagulation 3) Surgery

4.the cecum or ascending colon

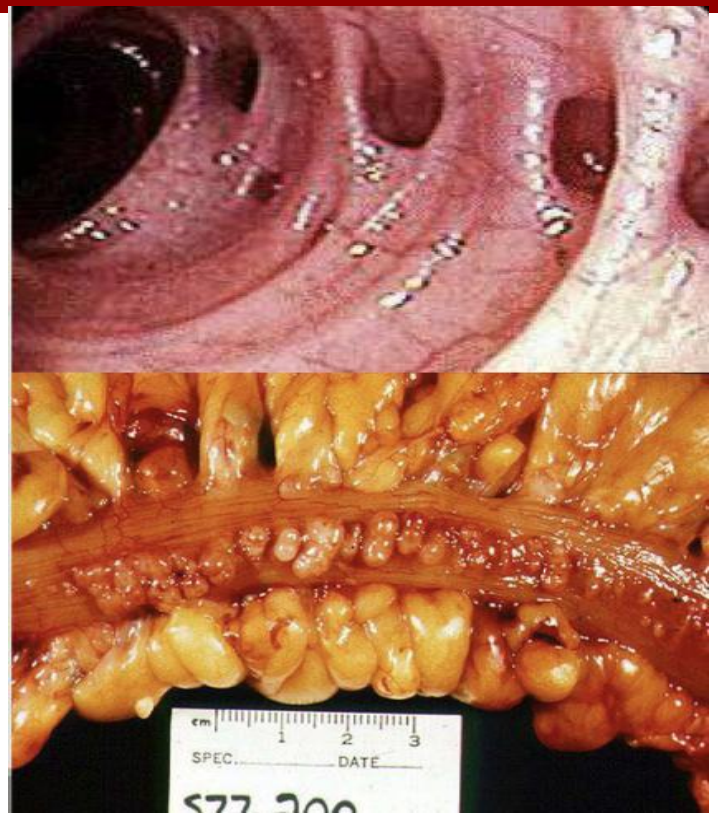
• QUESTION

2019 – Before

1.What is the Dx?

2.mention 2 complications?

3.What is the most common site?



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Diverticulosis

2.1) Infection 2) Perforation 3) Obstructio

3.Sigmoid colon

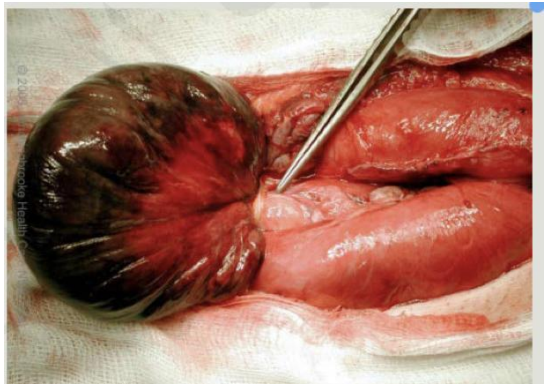
• QUESTION

2019 – Before

Patient presented with painful lump in his belly button:

1.What is the Dx?

2.if the bowel bowel still the same despite of all measures, what's your next step?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Strangulated Hernia

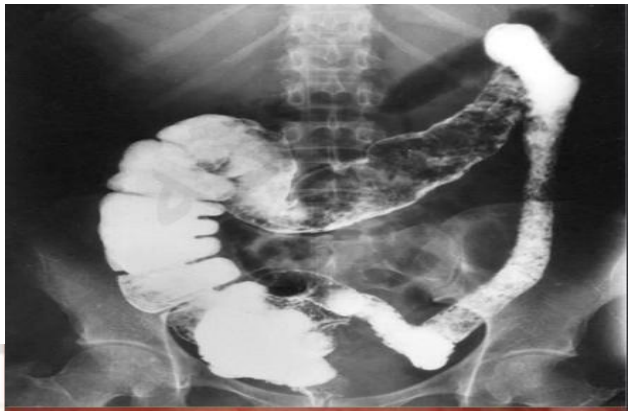
2.Resection and Anastomosis

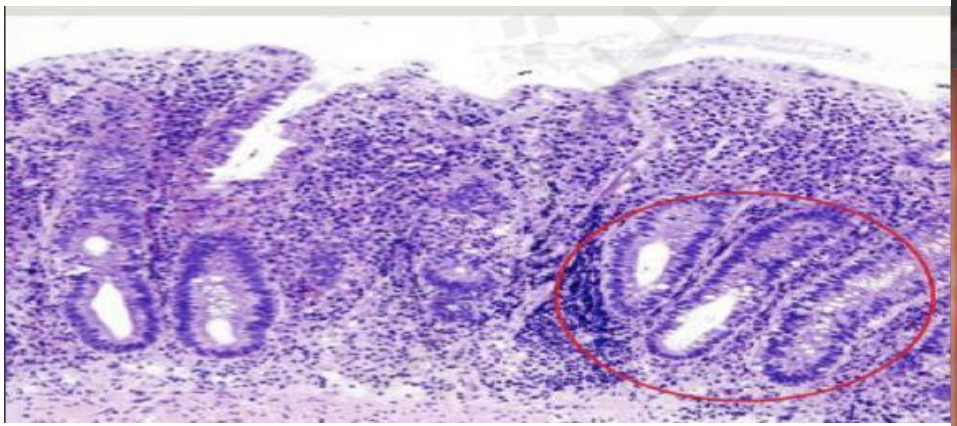
• QUESTION

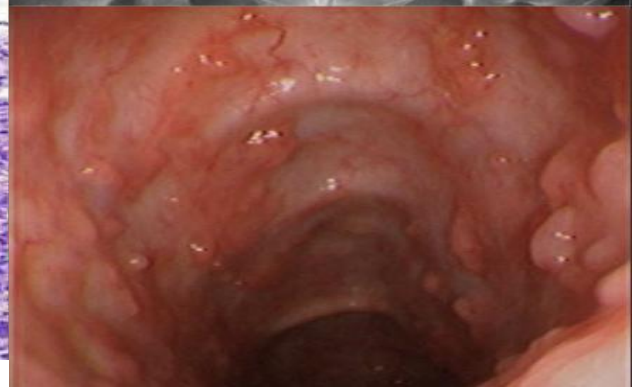
2019 – Before

1.What is the diagnosis?

2.Mention 2 drugs used in the management:







Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Ulcerative colitis

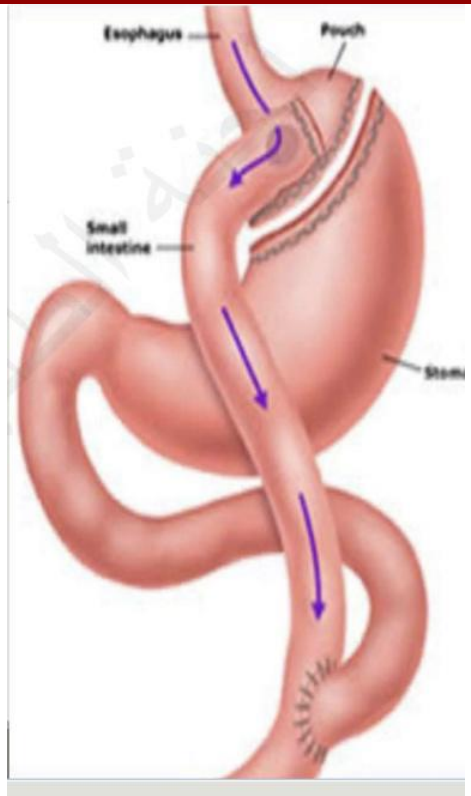
2.1) Steroid 2) Azathioprin

• QUESTION

2019 – Before

1.Name this surgery?

2.Mention 2 mechanisms?



مكرر سؤال 24

Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Roux-en-y bypass

2.1)decrease gastric absorption

2) Early satiety

• QUESTION

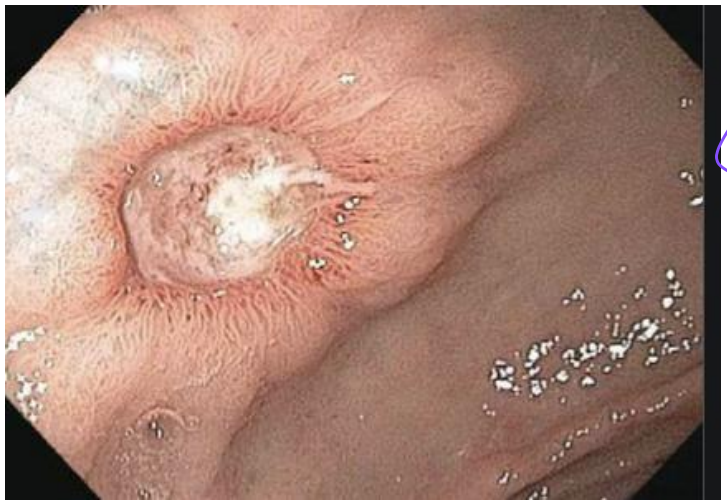
2019 – Before

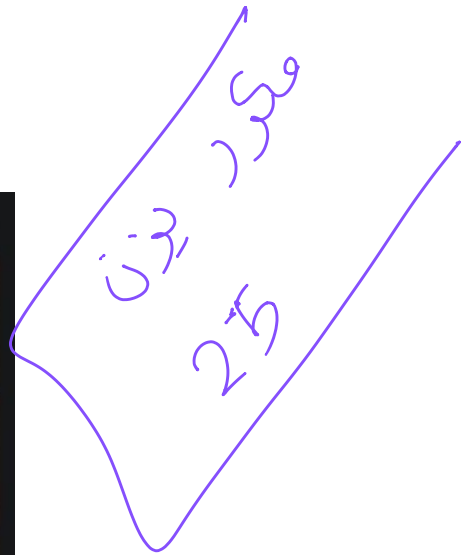
You are doing endoscopy and you found this lesion?

1.Describe what you see?

2.What is the likely Dx?

3.Next step in Mx?





ANSWER

1.comment on the shape, size, location, color, presence of necrosis, discharge, etc..

2.Stomach cancer or ulcer

3.Biopsy

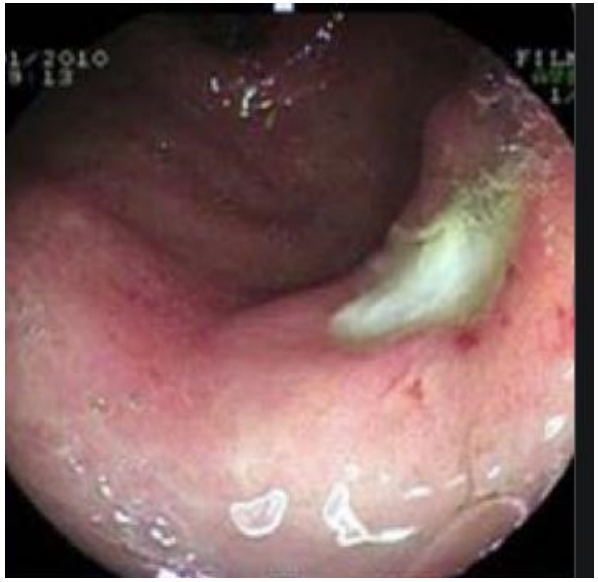
• QUESTION

2019 – Before

You are doing endoscopy and you found this lesion; pain is relived by eating and exacerbated in empty stomach?

1.What is the likely diagnosis?

2.name 2 complications?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Peptic (duodenal) ulcer

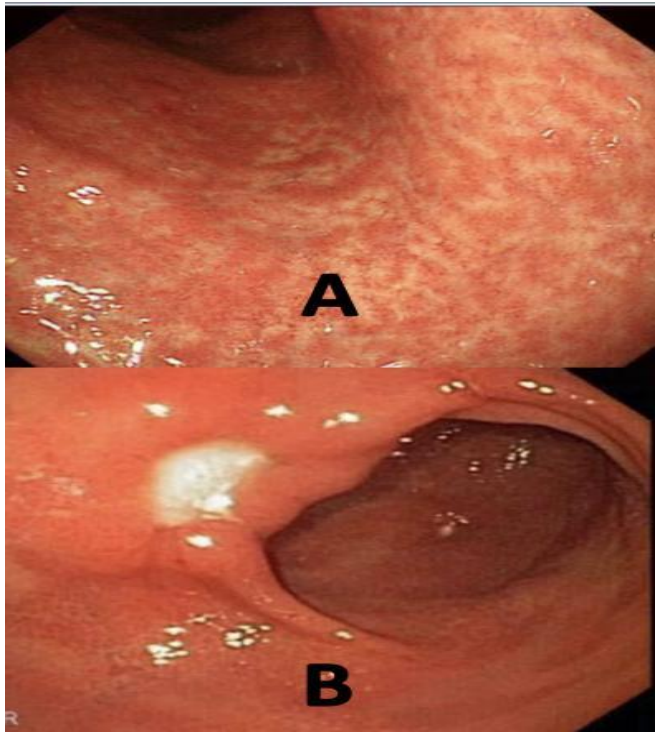
2.Perforation,Bleeding

• QUESTION

2019 – Before

1.What is A and B?

2.Name 2 causes?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. A> Gastritis "not sure" B > Duodenal Ulcer

2.1)) NSAID 2) H. Pylori

• QUESTION

2019 – Before

Picure of GIST (Gastrointestinal Stromal Tumor):

1.What is the most common site?

2.What are the cells of origin?

• ANSWER

1.Greater curvature

2.cells of cajal

• QUESTION

2019 – Before

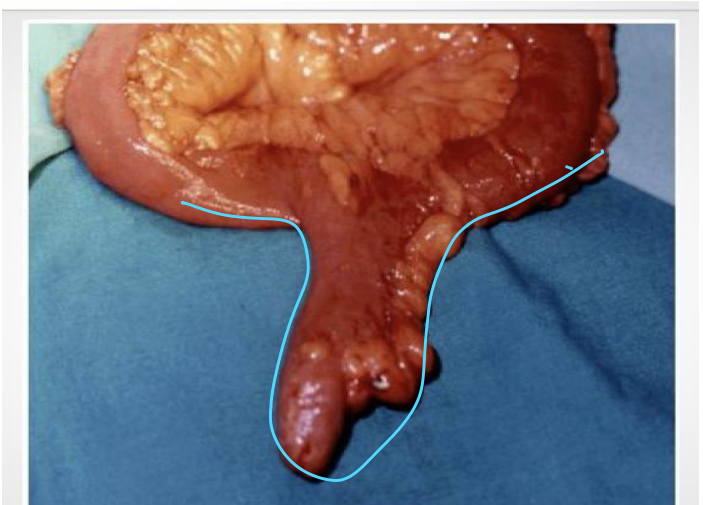
16 years old female patient with 24 hours complaint of right lower abdominal pain, this pathology was found in the distal small bowel

1. What is the pathology shown?

2. This structure is the remnant of which embryological duct?

3. Name 3 possible complications for this structure :

4.Mention One common ectopic tissue you can find?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Meckel's Diverticulum

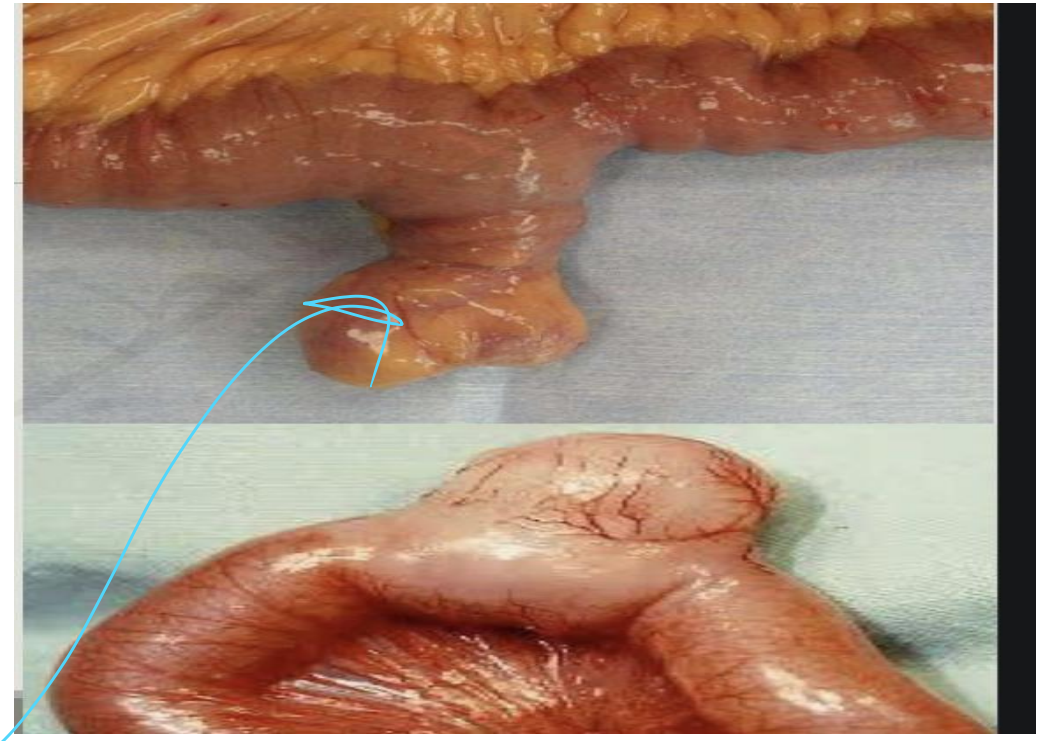
2. omphalomesenteric duct

3.Intestinal hemorrhage, Intestinal obstruction, Diverticulitis

4.Gastric and pancreatic tissues

Hashemite University
H · U · M
Medical School Committee

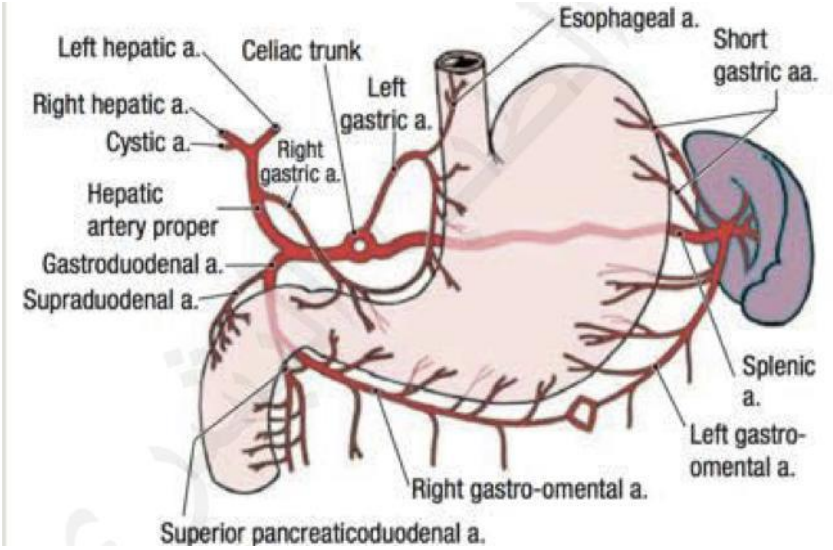
OTHER PICTURES FOR THE SAME QUESTION



• QUESTION

2019 – Before

Question was asking about the following arteries?



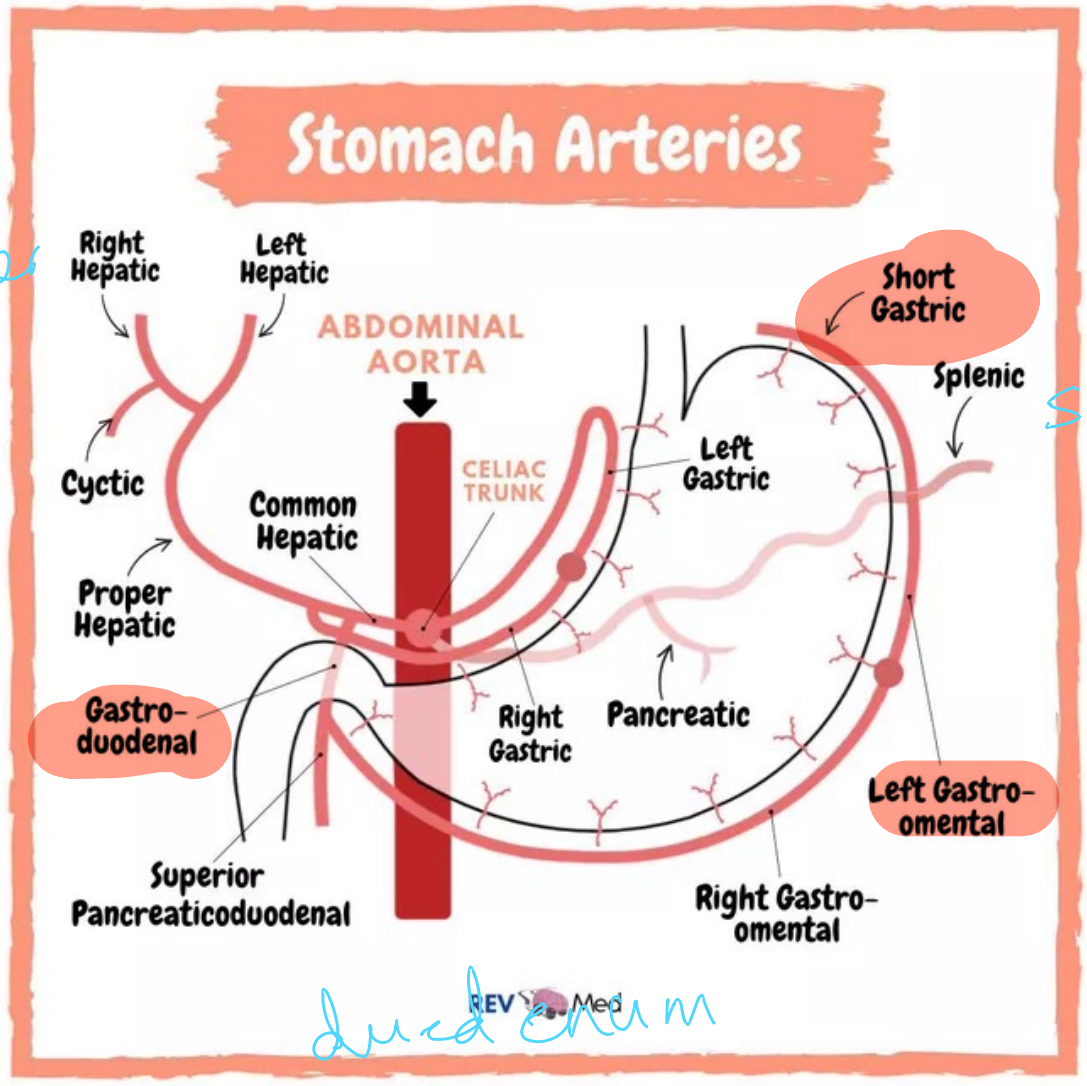
Hashemite University
H • U • M
Medical School Committee

• ANSWER

1- Left gastroepiploic artery

2- Gastroduodenal artery

3- Short gastric arteries

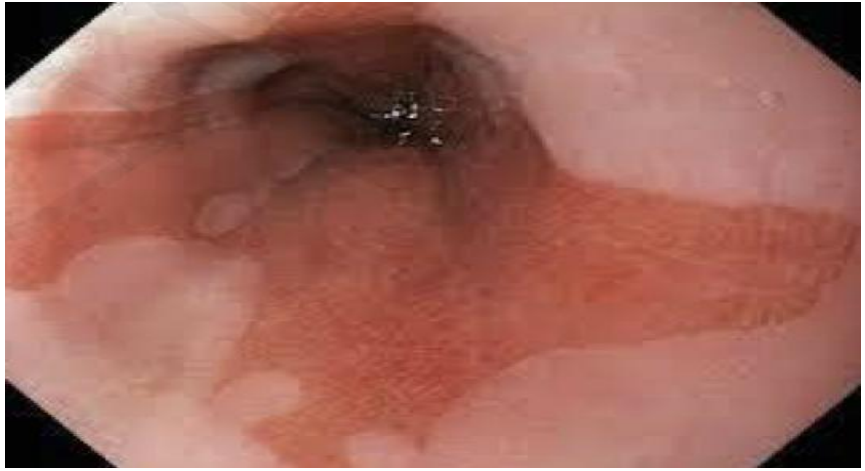


• QUESTION

2019 – Before

1. Define Barret's esophagus?

2.What common type of cancer you will see?



ANSWER

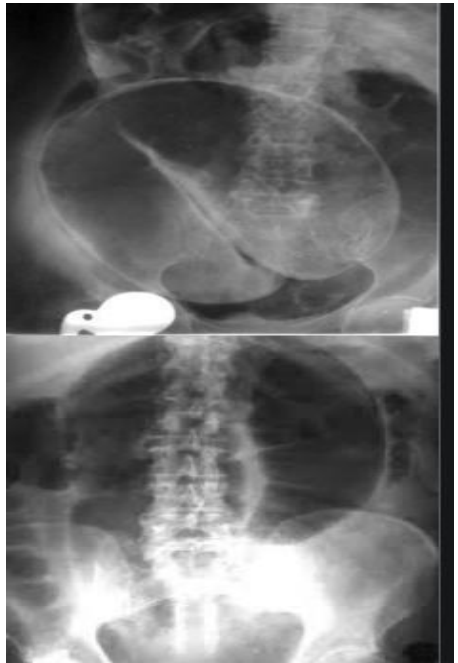
1. Change in the normally squamous lining of the lower esophagus to columnar epithelium (metaplasia)

1. Adenocarcinoma

• QUESTION 2019 – Before

presented with sudden severe pain and abdominal distension:

1. What is the sign?
2. Name the signs you?
3. What is your diagnosis?
4. the most common site
5. What is the management?
6. Mention 2 causes for this condition?



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Coffee bean sign

2.1) Dilated large bowel 2) Coffee bean sign

3.Sigmoid volvulus

4.in Sigmoid colon

5.Resuscitation And untwist (detorsion) the bowel and go for surgery (this is done by means of sigmoidoscopy or colonoscopy

6.Chronic constipation - Sigmoid tumor

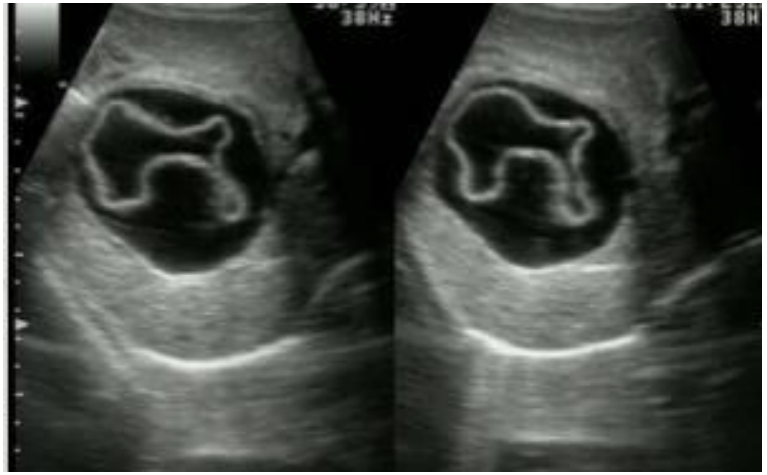
• QUESTION

2019 – Before

woman living in a rural area presents with pressure symptoms and her US reveals the following image.

Q1: What is the name of this sign?

Q2: Most probable etiology for this sign?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Water lily sign

2.- Caused by tapeworm Echinococcus granuloses

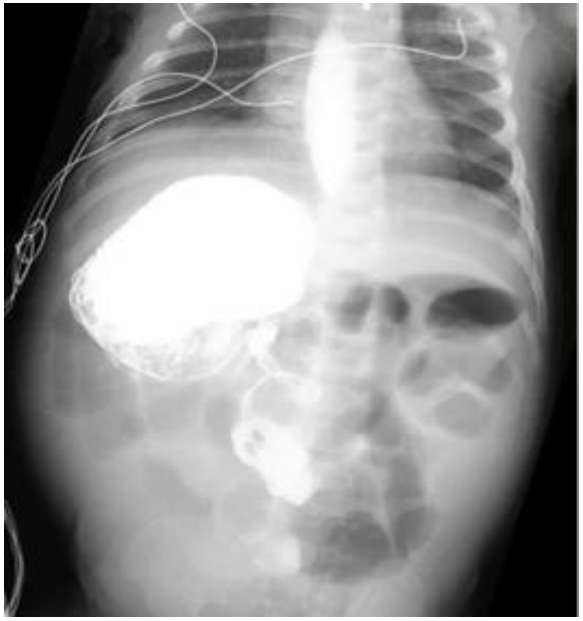
- Another cause is E. multiocularis

• QUESTION

32 مكرر بدون **2019 – Before**

1.What is the study?

2. What is the pathology?



ANSWER

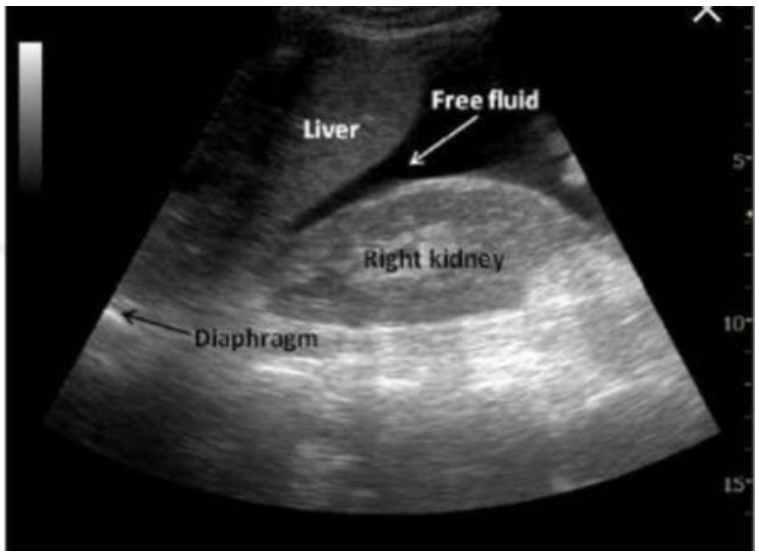
1.Barium meal

2.Midgut volvulus

• QUESTION 33 بدون محمد 2019 – Before

1. What is the finding?

2.The Diagnosis?



Hashemite University
H • U • M
Medical School Committee

ANSWER

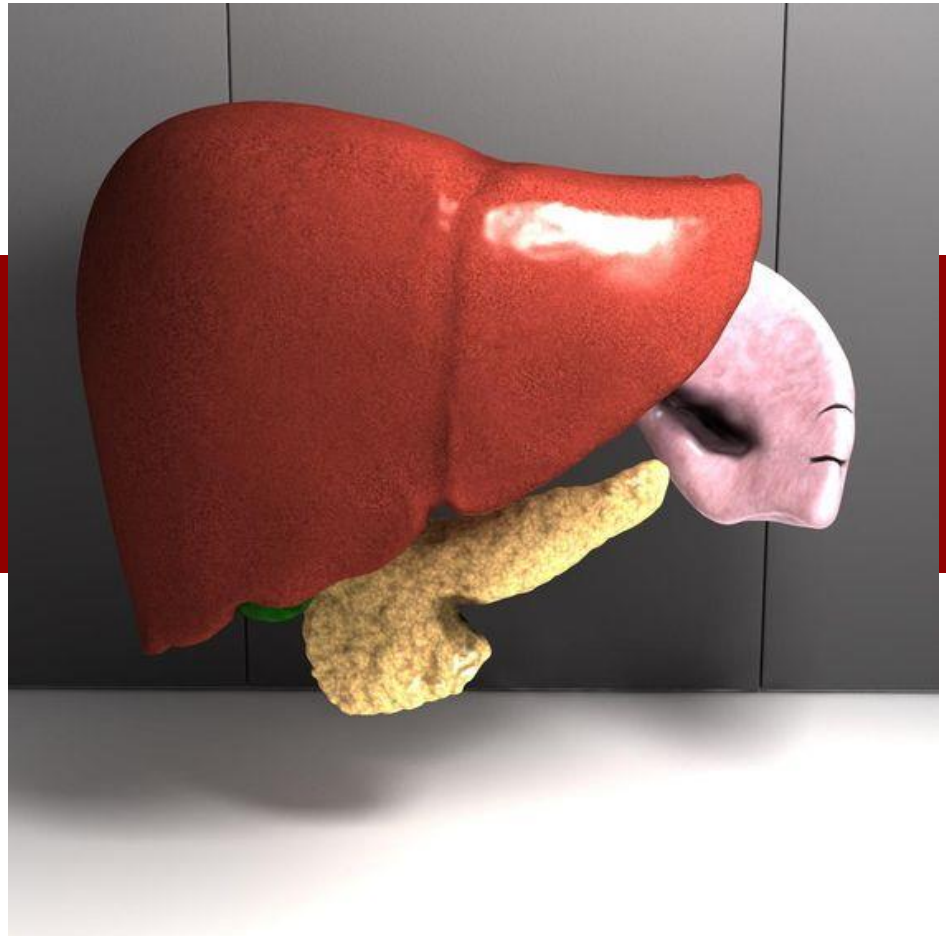
1.Fluid in Morrison’s pouch

2.Hemoperitoneum(blood)

Ascites(fluid)

Note

Morison's pouch: The hepatorenal recess is the space that separates the liver from the right kidney.**



LIVER ,SPLEEN ,PANCREAS, GALLBLADDER & ADRENALS

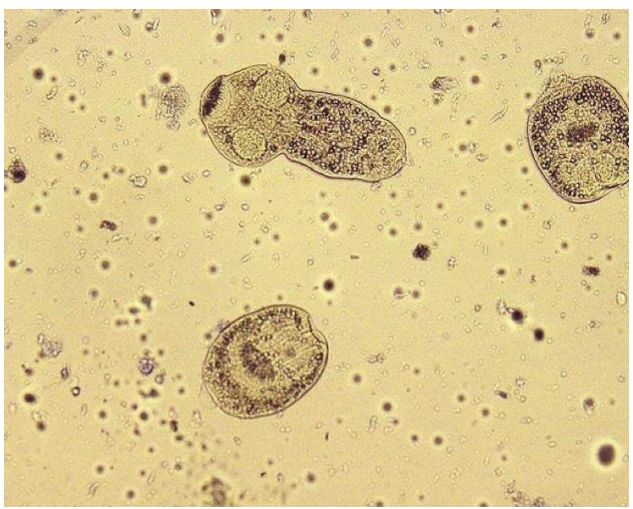
Hashemite University
H · U · M
Medical School Committee

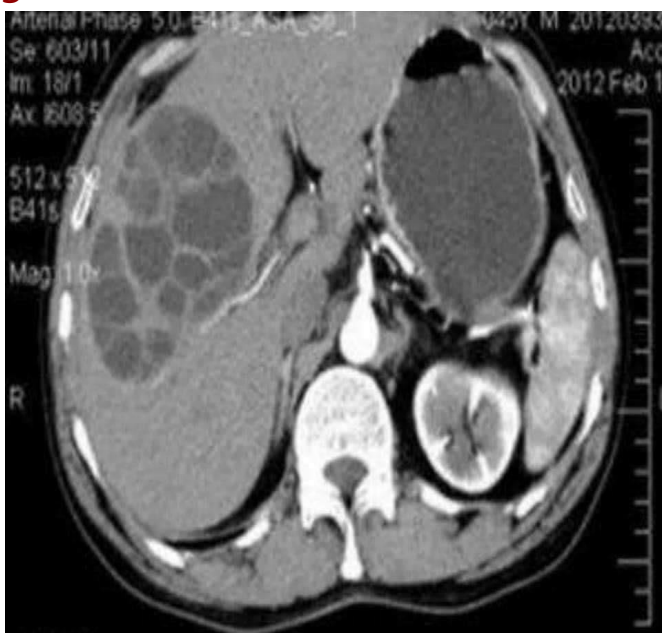
QUESTION

محمود يونس ٣٤

Yaqeen 2025

1. What is the diagnosis?
2. What is the investigation?
3. Mention 2 drugs used in the management:





Hashemite University
H · U · M
Medical School Committee

• ANSWER .

1.Hydatid cyst

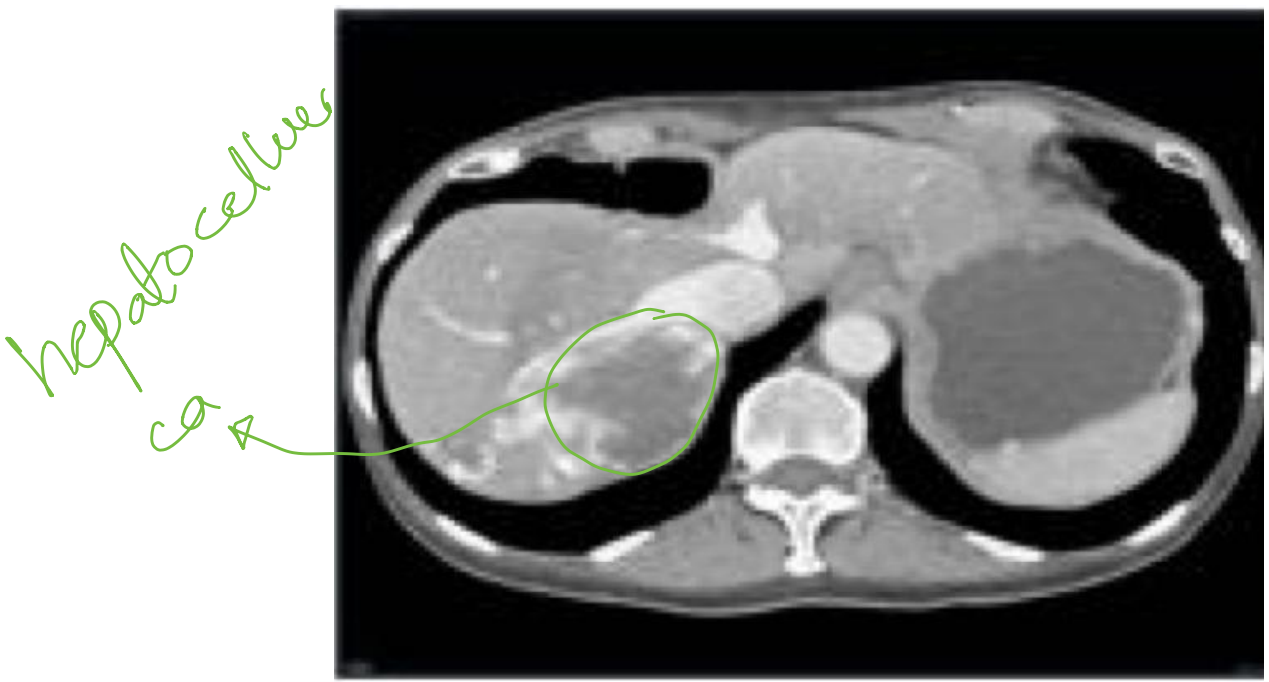
2. CT scan

3. Albendazole ,Mebendazole

• QUESTION.

Hope 2024

Name two possible tumor markers for this lesion



Hashemite University
H • U • M
Medical School Committee

ANSWER

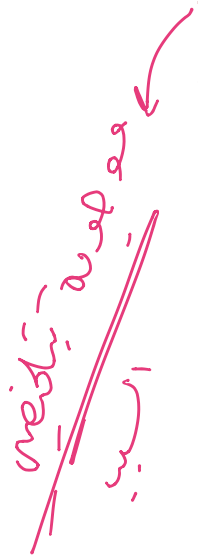
CA 19,9 , alpha feto protein

• QUESTION

Hope 2024

35 Year old female patient presented with acute abdominal pain and epitastric tenderness. The CI scan confirmed the diagnosis of acute panceratitis?

1. Is there any prognostic value for serum amylase or serum lipase?
2. What are the two commonest causes of acute pancreatitis?



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. lipase

B. Gallstones , alcohol

• QUESTION

Hope 2024

ascending colangitis

30 day old with yellowish discoloration of skin and sclera

1.Name 2 diagnostic imaging modalities helpful in diagnosing this condition pre-operatively?

2. Name the most likely surgical diagnosis after excluding all medical conditions ?

causes of obstructive Jaundice

as hepatitis & hemolytic dz

colangitis

Hashemite University
H • U • M
Medical School Committee

- ANSWER

I think the answers are wronge

A. Mrcp , ct → I think (ERCP & PTC) as they're considered the definitive dx procedures

B. ercp → obstructive jaundice caused by ascending colangitis

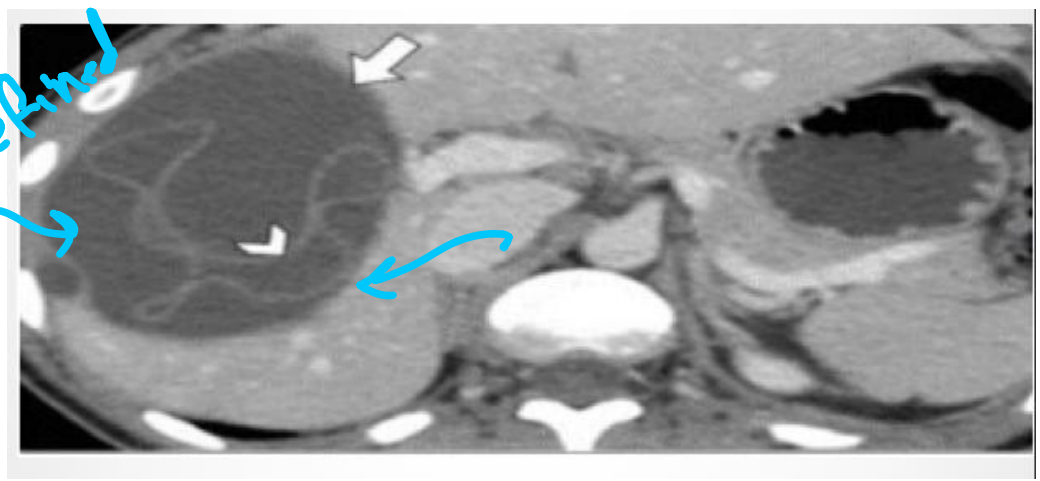
• QUESTION

Wateen 2023

This is a liver CT scan for a 22 years male patient with RUQ Pain

A) What is the diagnosis ?

B) Mention other possible site for this pathology?



Hashemite University
H • U • M
Medical School Committee

• ANSWER ;

A. Hydatid cyst

B. Lung - long bone

• QUESTION

Wateen 2023

This 40 year old male patient with history of cholecystectomy 3 weeks ago presented with painless jaundice, pale stool and dark urine.

A) The diagnostic imaging for this patient is?

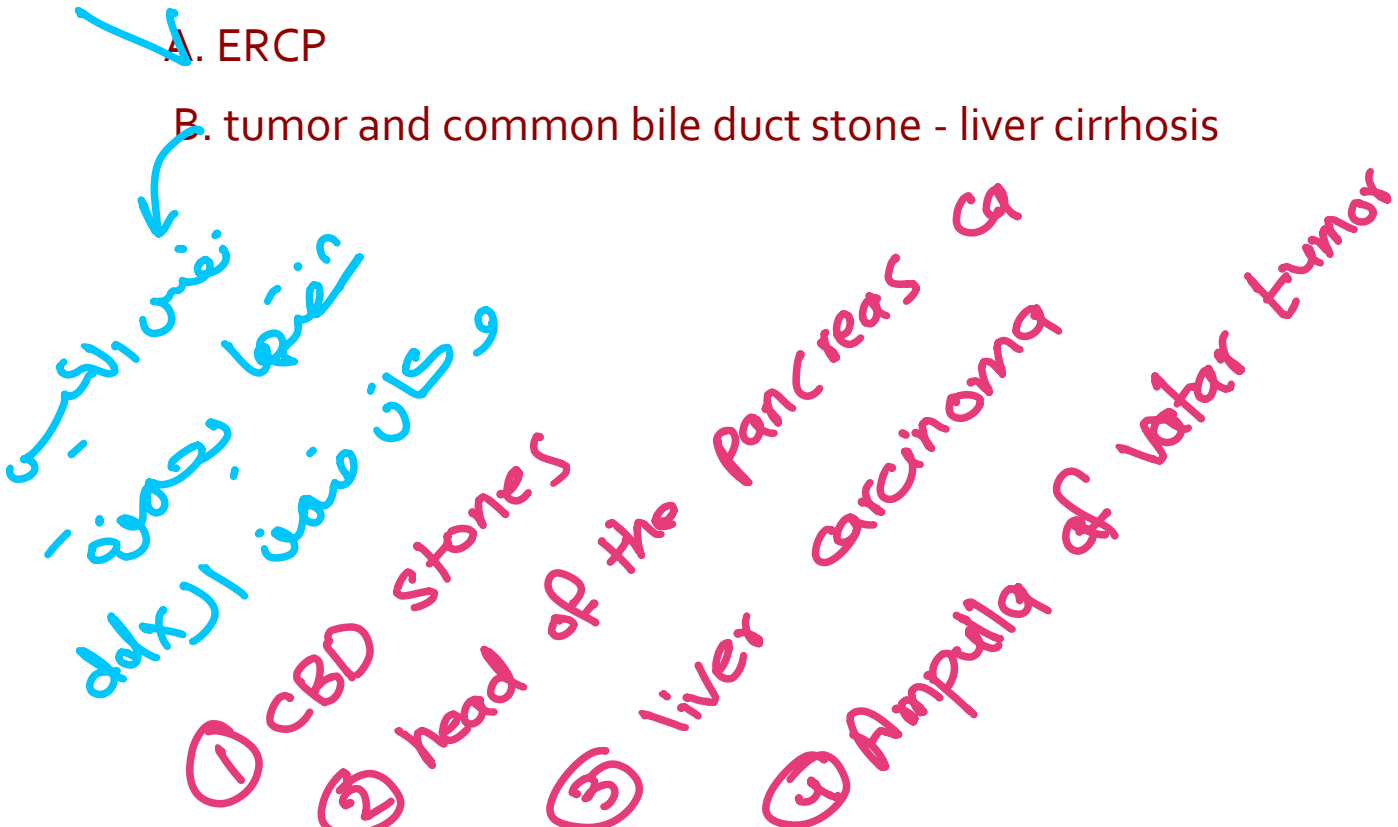
B) Mention two causes for obstructive jaundice?

Hashemite University
H • U • M
Medical School Committee

ANSWER

A. ERCP

B. tumor and common bile duct stone - liver cirrhosis



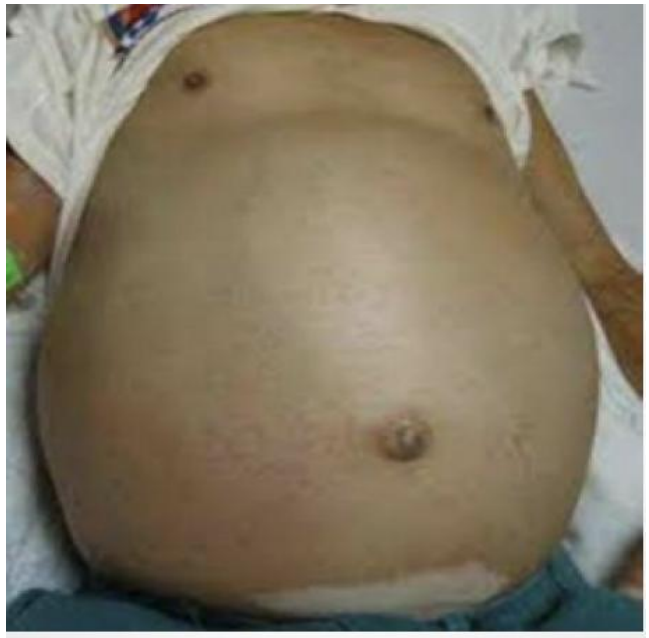
• QUESTION

Wateen 2023

45 year old male known case of hepatitis C for 10 years duration, presented with abdominal distention as in this image.

A. What is your spot diagnosis?

B. mention a clinical maneuver to prove your diagnosis?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

Simple

A. Ascites

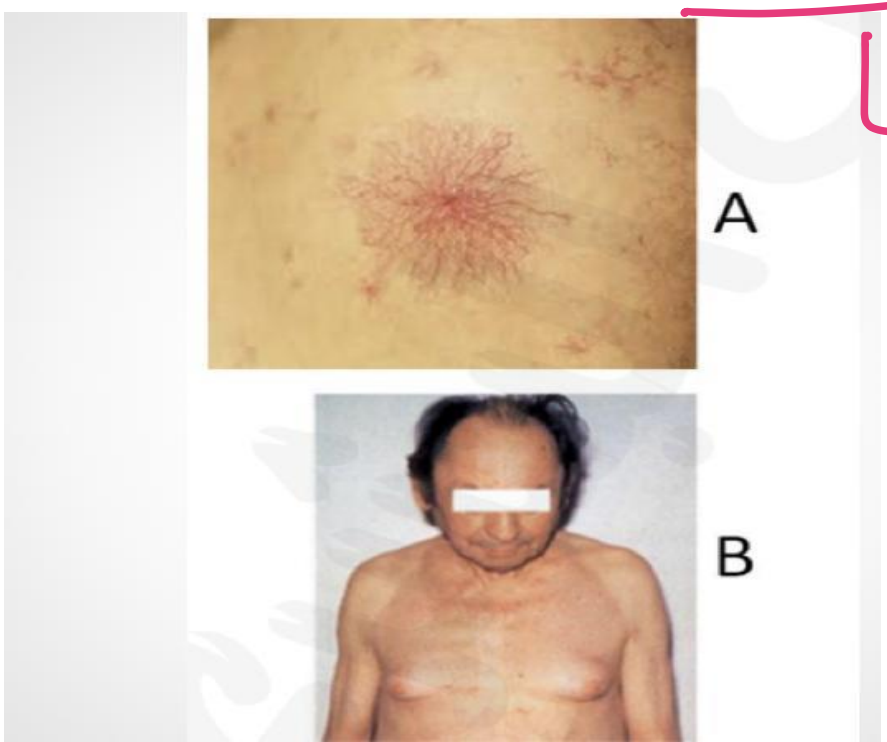
B. Fluid thrill and shifting dullness

Hashemite University
H • U • M
Medical School Committee

• QUESTION

Wateen 2023

Name these abdominal and chest physical signs in this jaundiced male Patient



Chronic Liver d2

Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Spider nevi

B. Gynecomastia

• QUESTION

13. All of the following are possible early post ope complication of trauma related splenectomy except

a. Wound infection

b. Bowel injury

c. Pneumococcus pneumonia

d. Abscess formation

e. Bleeding

Answer: C

Image not found

• QUESTION

Harmony 2022

19. The gene at site B is:

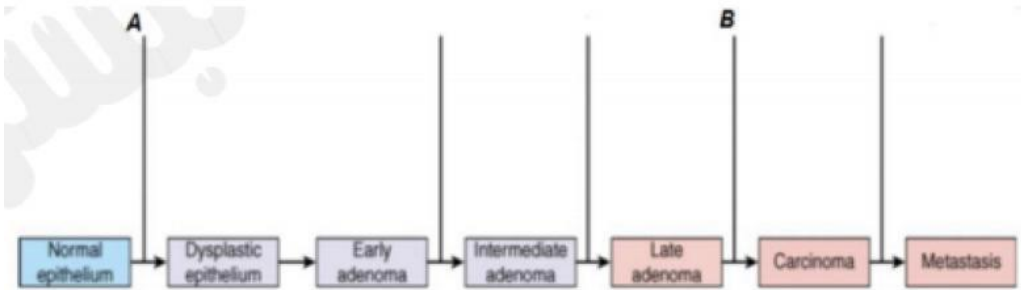
a. FAP

b. KRAS

c. APC

d. P53

Answer: D



Hashemite University
H • U • M
Medical School Committee

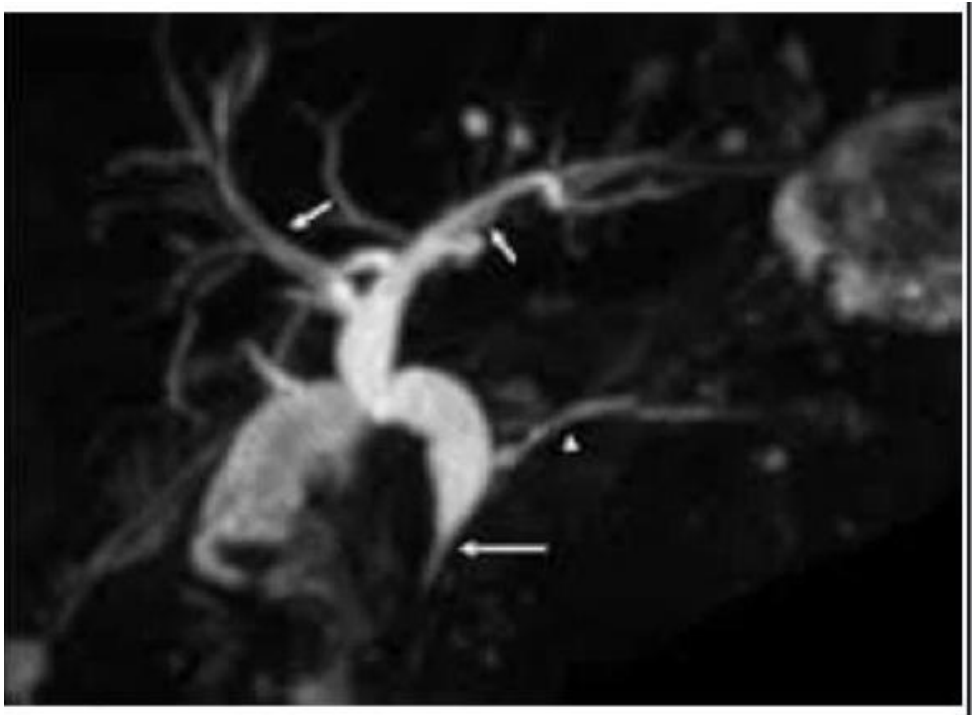
• QUESTION

Harmony 2022

A. What is the following study?

B. the structure pointed?

C. what is the next step?



ANSWER

A. MRCP

B. pancreatic duct (stricture)

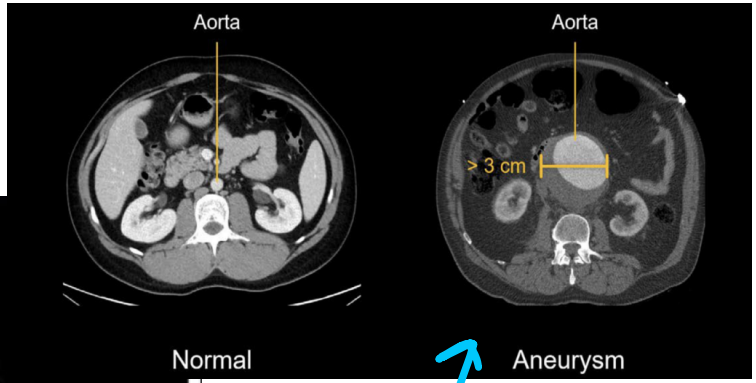
C. ERCP

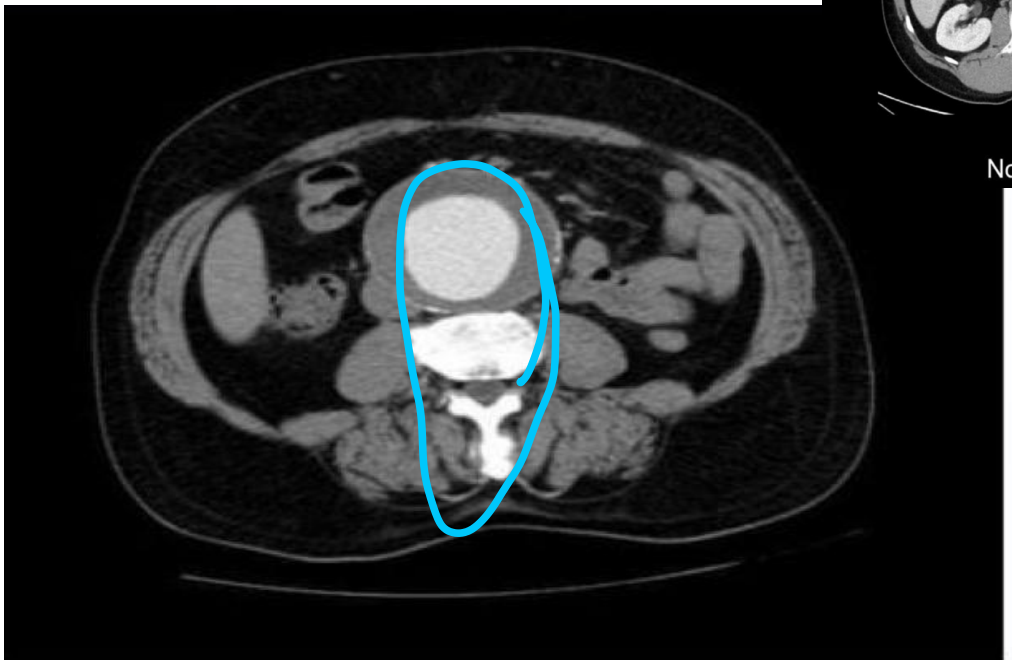
• QUESTION

Harmony 2022

A. What is the following study?

B. what is the spot diagnosis?





Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. CT scan

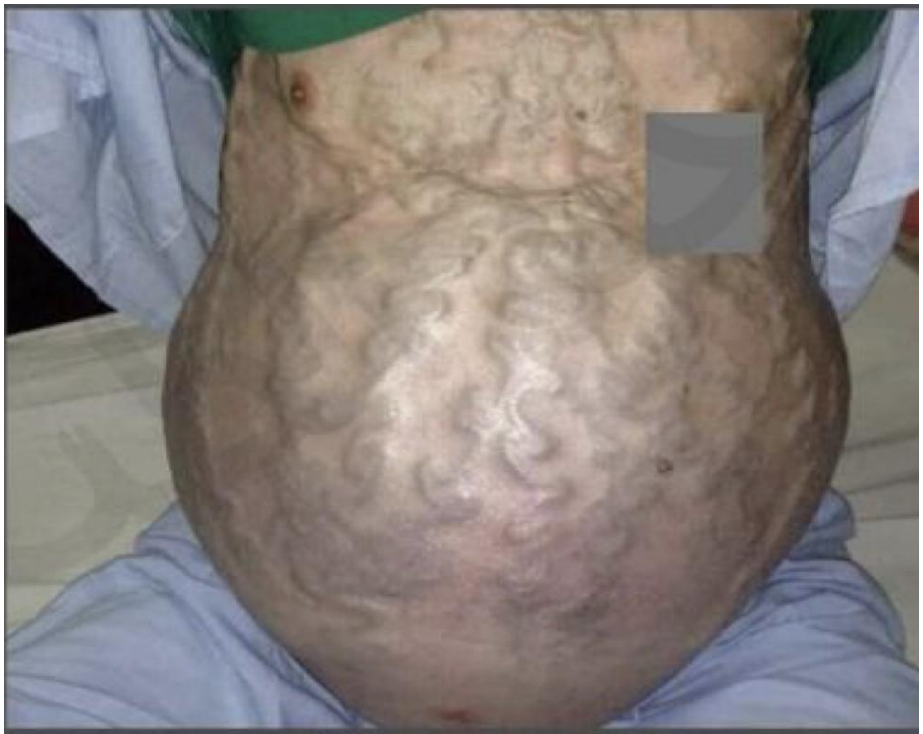
B. AAA (aortic artery aneurysm)

• QUESTION

Harmony 2022

A. What is the sign in the following picture?

B. what is the diagnosis?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Caput medusa

B. Liver cirrhosis

• QUESTION

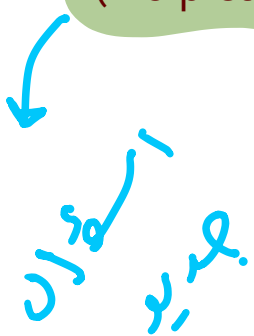
Harmony 2022

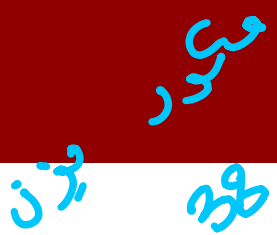
GIST,

A. most common site?

B. gene mutation?

(No picture found)





• ANSWER

A. Stomach

B. KIT

• QUESTION

endo

SOUL 2021

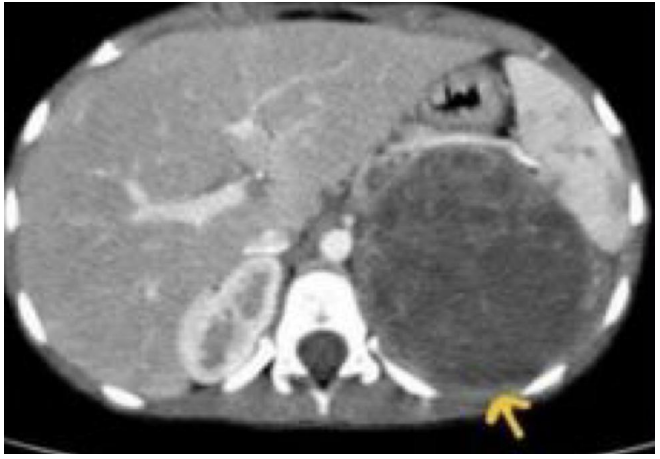
patient with thyroid medullary cancer & a CT was done:

Q1: What is your next step?

Q2: If the patient has no genetic abnormality and the lesion is not functioning what will you do next?

Q3: What disease you have to rule out?

Q4: cut off size to remove?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. (not sure what the dr. meant so here are the possibilities):

Assess the functionality of the adrenal tumor by hx, physical ex and ordering lab tests: KFT (Na, K, Creatinine, Urea) / Aldosterone levels/ cortisol/ metanephrine/normetanephrine/vanillylmandelic acid (VMA)// pheochromocytoma// 24h urine analvsis forcatecholamine metabolites

2. Because it is very large > surgery adrenalectomy, the dr said : If it was

more than 4 cm then you have to remove it immediately

3. Pheochromocytoma

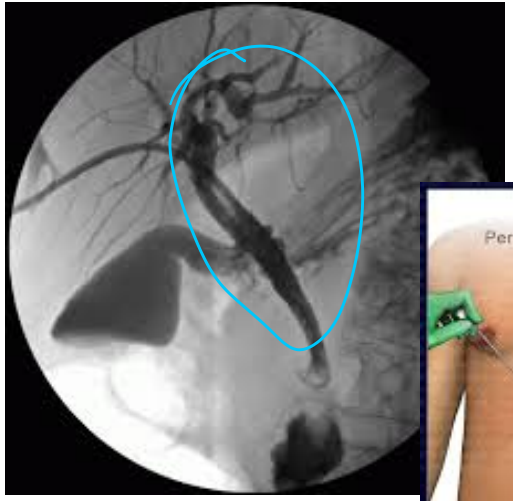
4. more than 4 cm

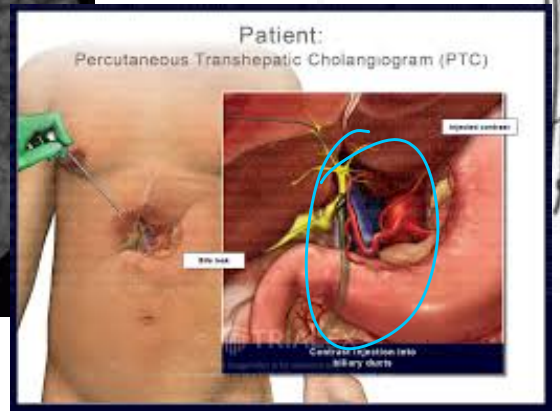
Hashemite University
H · U · M
Medical School Committee

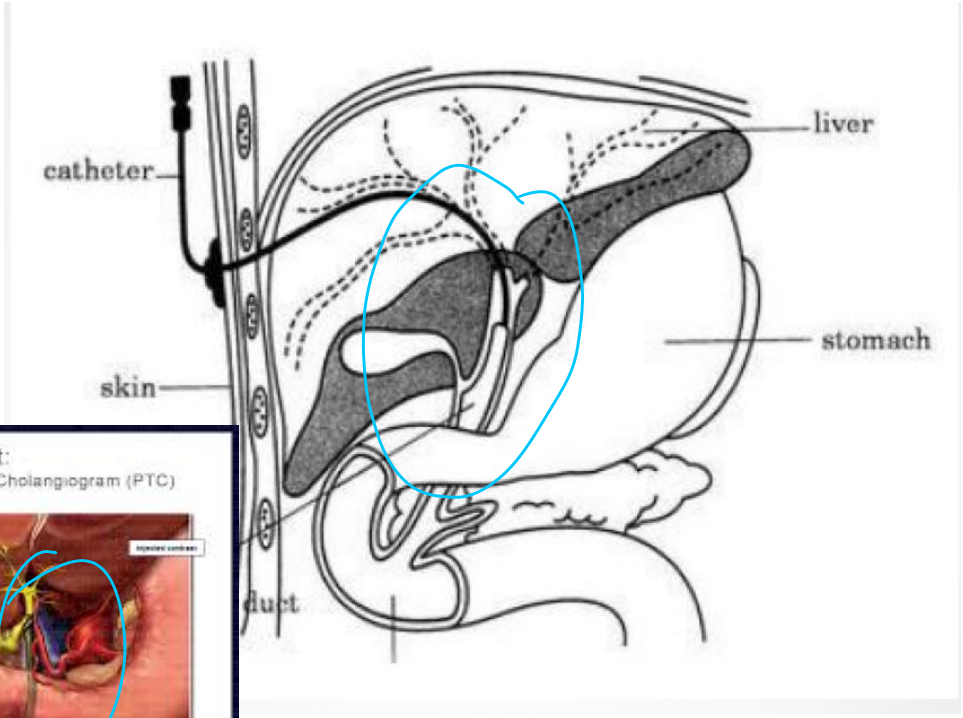
• QUESTION

SOUL 2021

1. Name the device ?
2. Give one indication?







Hashemite University
H • U • M
Medical School Committee

ANSWER

1. PTC (Percutaneous Transhepatic Cholangiography)
2. Failed ERCP attempt

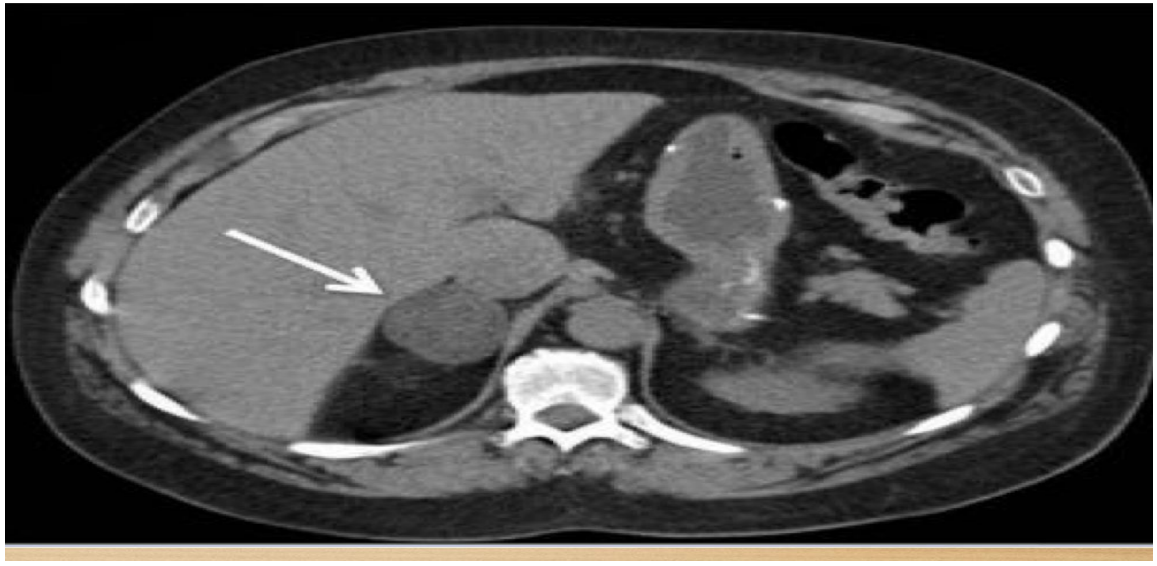
• QUESTION

endo

SOUL 2021

This is an MRI of 37 years old patient complains of uncontrolled hypertension,

A) List 2 possible causes



Hashemite University
H • U • M
Medical School Committee

ANSWER

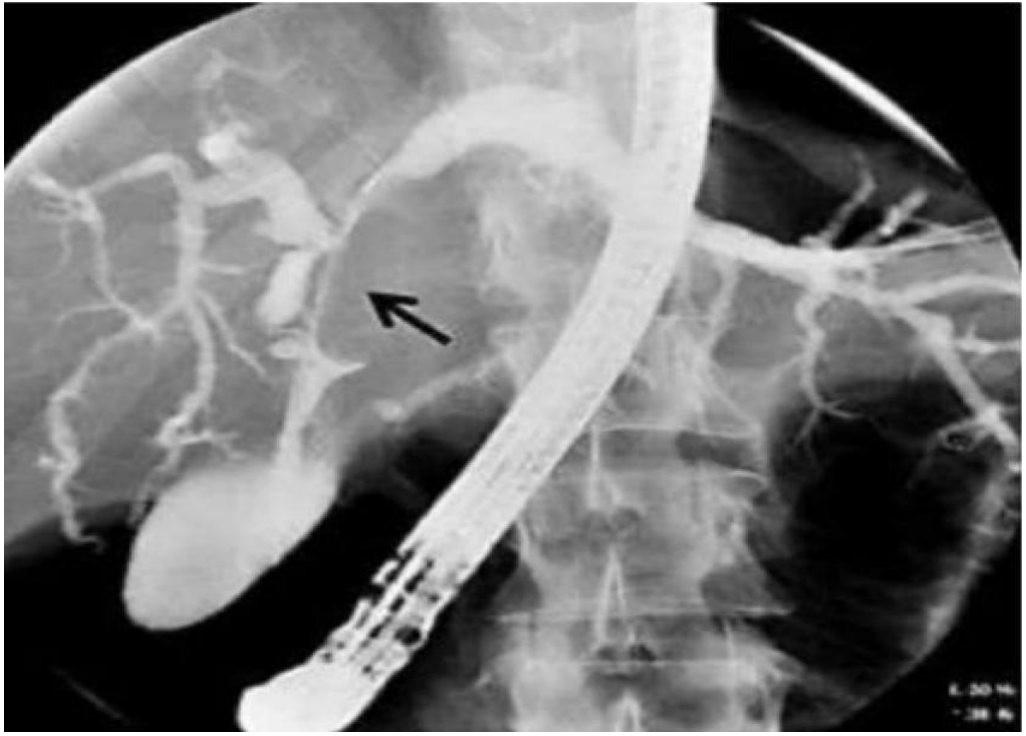
1. pheochromocytoma
2. Cushing's disease

• QUESTION

SOUL 2021

A) What is the name of the investigation:

B) What is the :finding



Hashemite University
H • U • M
Medical School Committee

• ANSWER.

A. ERCP

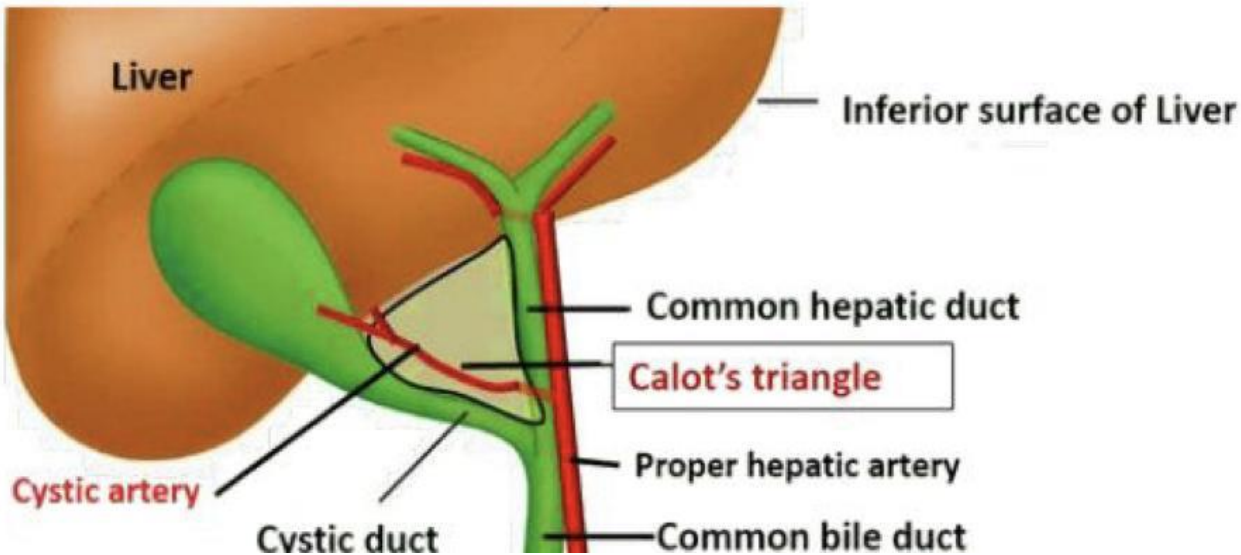
B. Dilated CBD Filling defect

• QUESTION

SOUL 2021

1. What is the name of this triangle ?

2. Name three border?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Calot triangle

2. Inferior border of the liver

Cyst duct

Common hepatic duct

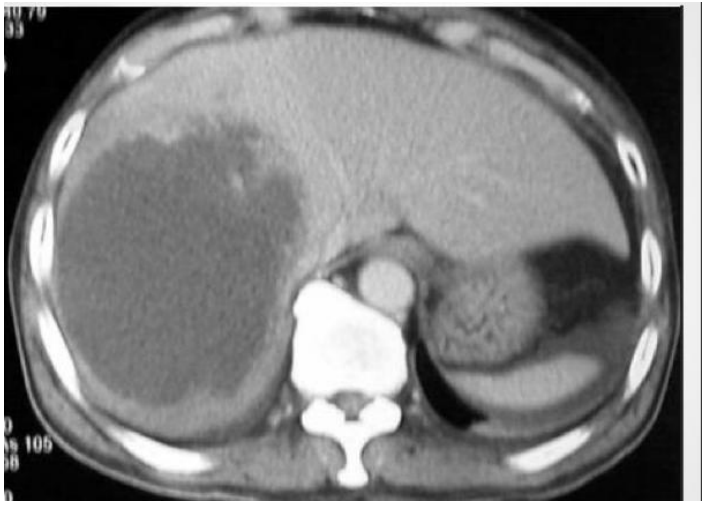
• QUESTION

IHSAN 2020

This 60-years old patient developed abdominal pain, bloody diarrhea and fever. He came back from a tour trip to a south west Asian country 3 weeks .ago. CT was done

1. What is the most likely diagnosis

2. What is the treatment of choice



Hashemite University
H • U • M
Medical School Committee

ANSWER.

1.Liver Abscess (Ameobic)

2.Metronidazole

• QUESTION

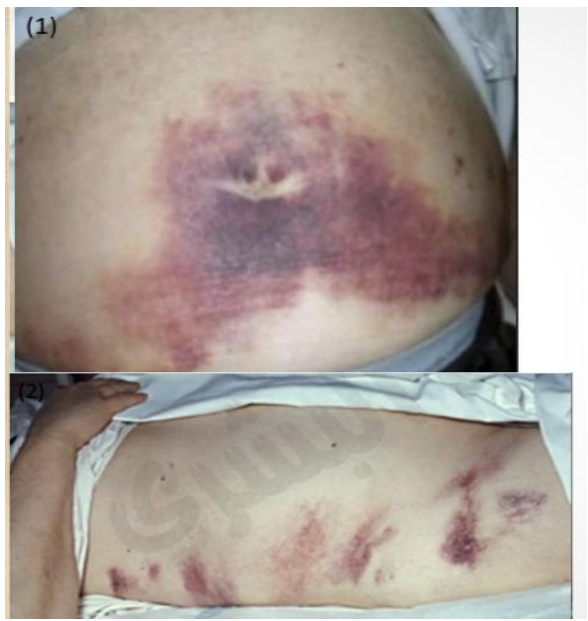
IHSAN 2020

A 45-years old male patient, alcoholic, presented with a 24-hour history of upper abdominal pain and repeated vomiting. On examination of the abdomen, he was found to have the following .signs

.1.Name the signs shown in (1) and (2)

2. Name the most likely underlying pathology that .caused these signs

3.Mention2 causes



Hashemite University
H • U • M
Medical School Committee

• ANSWER.

1.Cullen's sign (2) Grey-Turner's sign (1)

2.Acute Hemorrhagic Pancreatitis

3. any retroperitoneal hemorrhage

1) Acute pancreatitis

2) Abdominal trauma bleeding from aortic rup

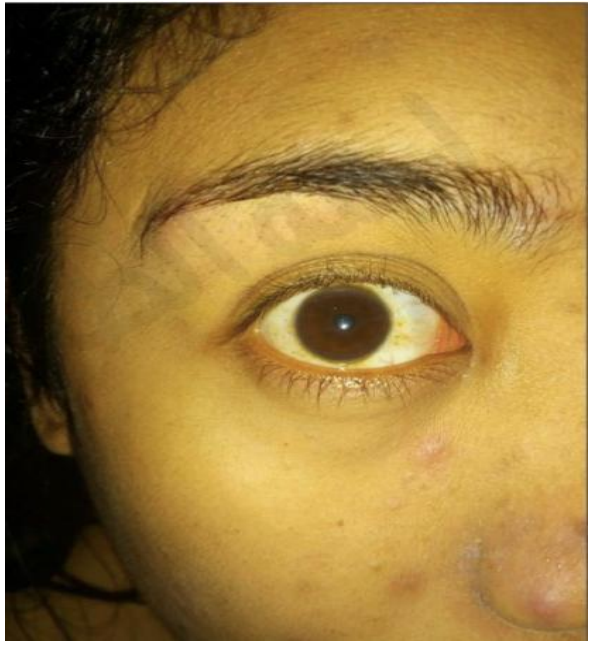
• QUESTION

IHSAN 2020

Female present with fever and itching and jaundice

1.: What is the Dx

2.Why she is having Itching



يرقان
حكة
حمى

Hashemite University
H • U • M
Medical School Committee

• ANSWER

I. Ascending cholangitis

II. Bile salts accumulation

• QUESTION

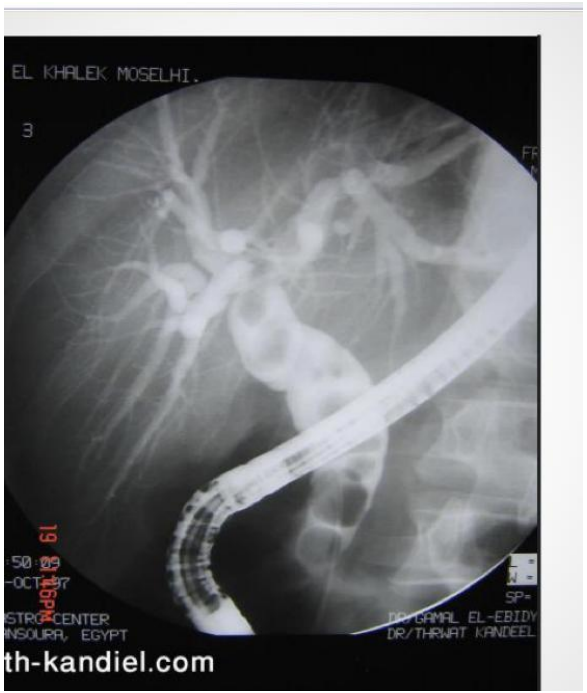
2019 – Before

1.What is the name of this investigation?

2. Mention two abnormalities seen .in this picture

3.Indications

4.Complications of ERCP?



• ANSWER

1.ERCP

2. -

1) Dilated CBD 2)Multiple filling defects (stones) in CBD

3.Obstructive jaundice

4.Pancreatitis

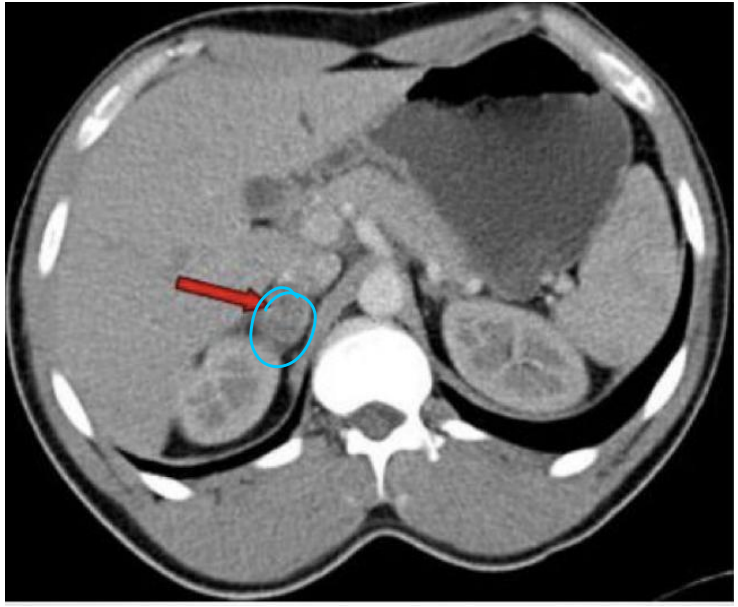
• QUESTION

2019 – Before

This lesion was detected incidentally on CT of the abdomen.

1. The next step in evaluating the patient is

2. Name 2 indications for surgery



Hashemite University
H • U • M
Medical School Committee

ANSWER

Not sure about the answer but I think it's adrenal mass so the answer would be

1.cortisol blood test

2.>4cm , functional,CT density>20

• QUESTION

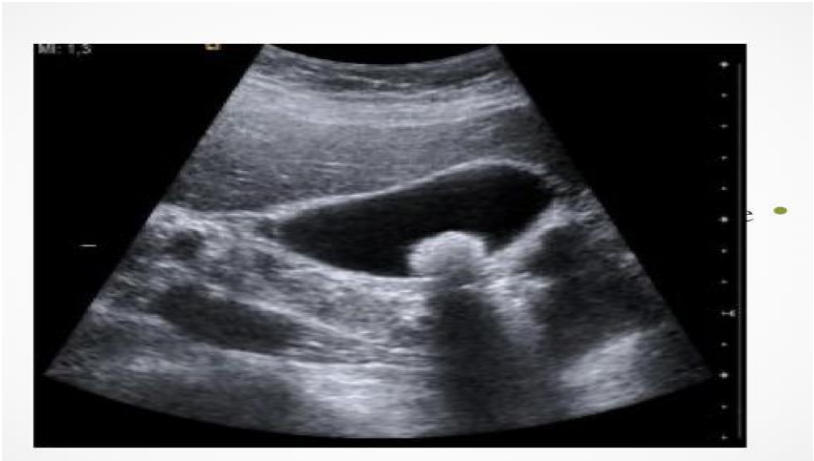
2019 – Before

The figure represents a finding in a 40-year-old female undergoing abdominal US prior to a bariatric procedure

1.What is the diagnosis?

2. Name two indications for surgery in asymptomatic patients with this condition.

3. In case of inflammation, name two locations where the pain will be felt.



Hashemite University
H • U • M
Medical School Committee

• ANSWER.

1.Gallstone

2. Porcelain gallbladder,Congenital hemolytic anemia, Gallstone > 2.5cm

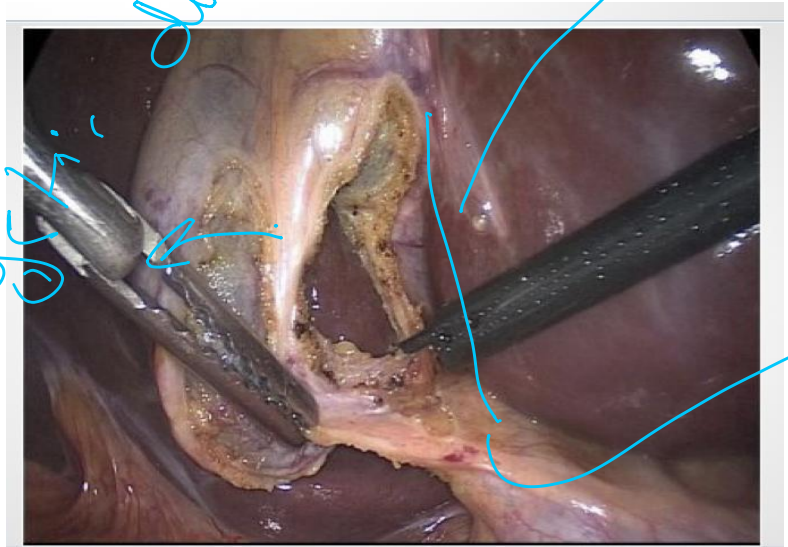
3.pain would be in the RUQ, and radiate into the right subscapular area

• QUESTION

2019 – Before

You are holding the laparoscope

1. What is the name of the procedure
2. Name the area the surgeon is dissecting



Hashemite University
H • U • M
Medical School Committee

• ANSWER

mostly the answers are correct

1.cholecystectomy

2.callot triangle

Not sure

Hashemite University
H • U • M
Medical School Committee

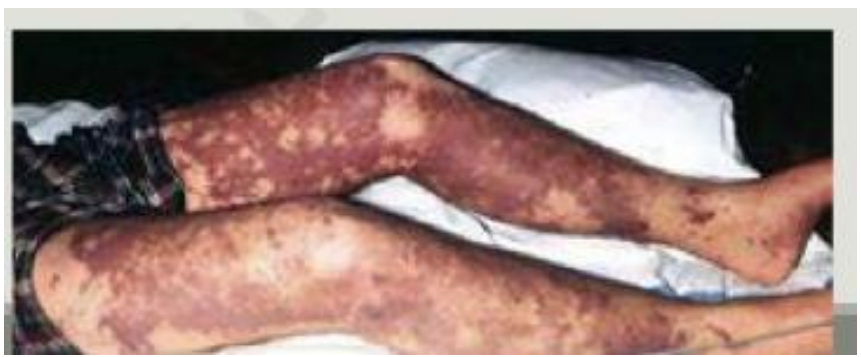
• QUESTION

2019 – Before

patient post-splenectomy due to RTA:

1.What is the micro-organism causing this?

2.How can you prevent it?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Meningococcus

2.meningococcal vaccine on day 14 post splenectomy, then revaccination at the appropriate time interval

NOTE : POST SPLENECTOMY VACCINATION

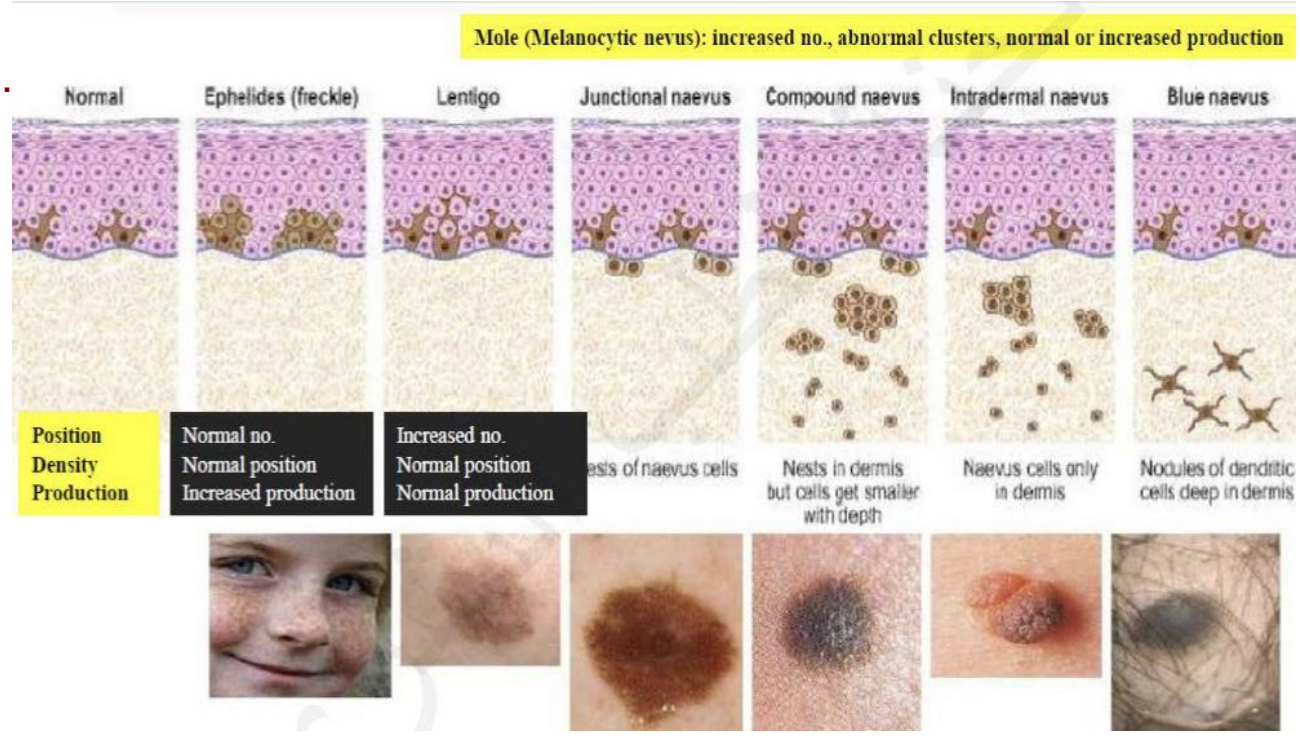
- **Non-elective**
  - Non-elective splenectomy patients should be vaccinated on or after postoperative day 14.
  - Asplenic patients should be revaccinated at the appropriate time interval for each vaccine.
- **Elective**
  - Elective splenectomy patients should be vaccinated at least 14 days prior to the operation.
  - Asplenic or immunocompromised patients (with an intact, but nonfunctional spleen) should be vaccinated as soon as the diagnosis is made.
  - Pediatric vaccination should be performed according to the recommended pediatric dosage and vaccine types with special consideration made for children less than 2 years of age.
  - When adult vaccination is indicated, the following vaccinations should be administered:
    - ***Streptococcus pneumoniae***
      - Polyvalent pneumococcal vaccine (Pneumovax 23)
    - ***Haemophilus influenzae* type B**
      - *Haemophilus influenzae* b vaccine (HibTITER)
    - ***Neisseria meningitidis***
      - Age 16-55: Meningococcal (groups A, C, Y, W-135) polysaccharide diphtheria toxoid conjugate vaccine (Menactra)
      - Age >55: Meningococcal polysaccharide vaccine (Menomune-A/C/Y/W-135)

Vaccine	Dose	Route	Revaccination
Polyvalent pneumococcal	0.5 mL	SC*	Every 6 years
Quadravalent meningococcal/diphtheria conjugate	0.5 mL	IM upper deltoid	Every 3-5 years†
Quadravalent meningococcal polysaccharide	0.5 mL	SC*	Every 3-5 years
Haemophilus b conjugate	0.5 mL	IM*	None

*Administered in the deltoid or lateral thigh region.
†Contact the manufacturer for the latest recommendations prior to revaccination.

Hashemite University
H · U · M
Medical School Committee

• NOTE



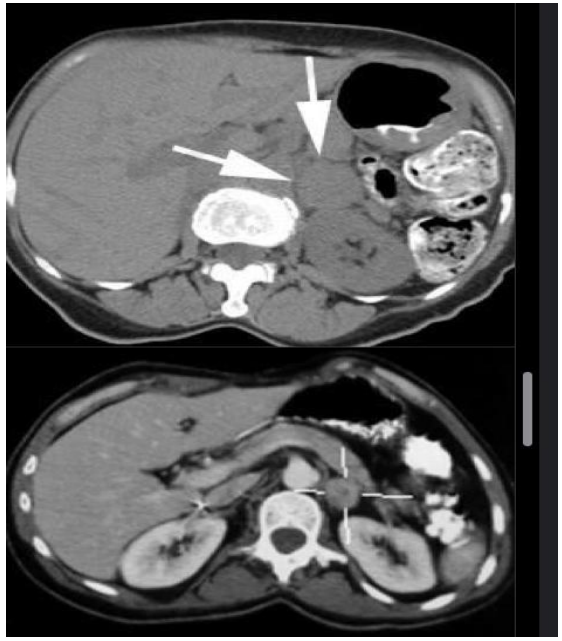
• QUESTION

endo

2019 – Before

Apatient presented with episodic sweating and hypertension:

1. What is the diagnosis?
2. What is the 1st thing to do?
3. What raise the possibility of malignancy?
4. What is the size that would be considered
5. an indication for surgery?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Incidentaloma (Dr. Sohail's answer)

2.Check if functional or not by checking cortisol, renin, angiotensin and VMA,… etc.

3.>4 cm - Rapid growth

- Necrosis - Family history - Hemorrhage - Calcifications

4.>=4cm

• QUESTION

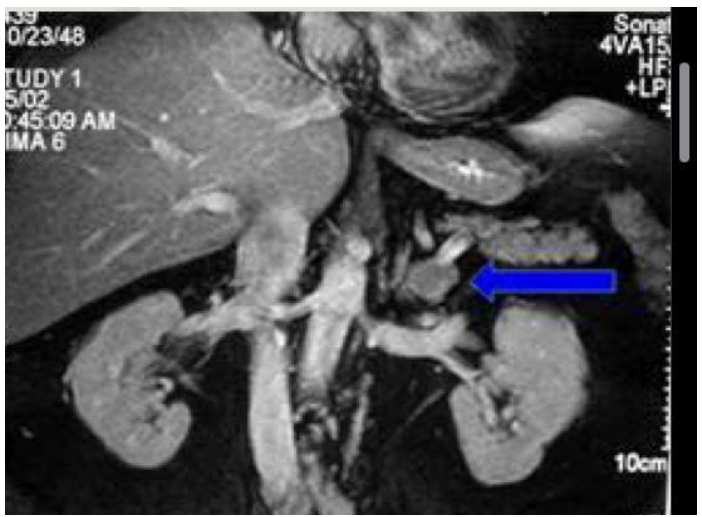
endo

2019 – Before

Lab investigations show high aldosterone level and high ratio of PAC to PRA

1.What is your Dx?

2.Mention a common presentation for this patient



Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Conns disease

2.Hypertension

• NOTE

Functional adrenal tumors can cause several problems depending on the hormone released. These problems include:

1. Cushing's Syndrome:

This condition occurs when the tumor leads to excessive secretion of cortisol. While most cases of Cushing's Syndrome are caused by tumors in the pituitary gland in the brain, some happen because of adrenal tumors. Symptoms of this disorder include diabetes, high blood pressure, obesity and sexual dysfunction.

2. Conn's Disease:

This condition occurs when the tumor leads to excessive secretion of aldosterone. Symptoms include personality changes, excessive urination, high blood pressure, constipation and weakness.

3. Pheochromocytoma:

This condition occurs when the tumor leads to excessive secretion of adrenaline and noradrenaline. Symptoms include sweating, high blood pressure, headache, anxiety, weakness and weight loss.

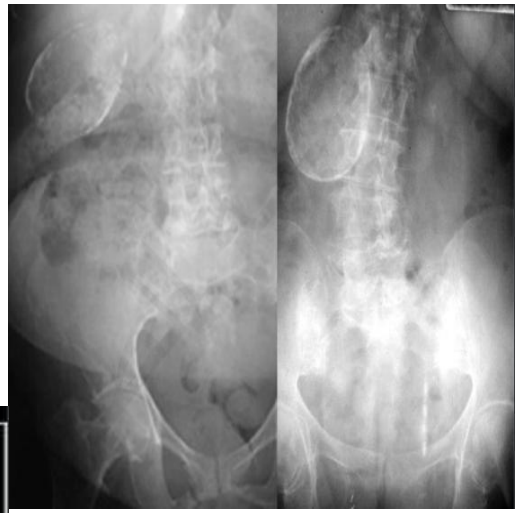
• QUESTION

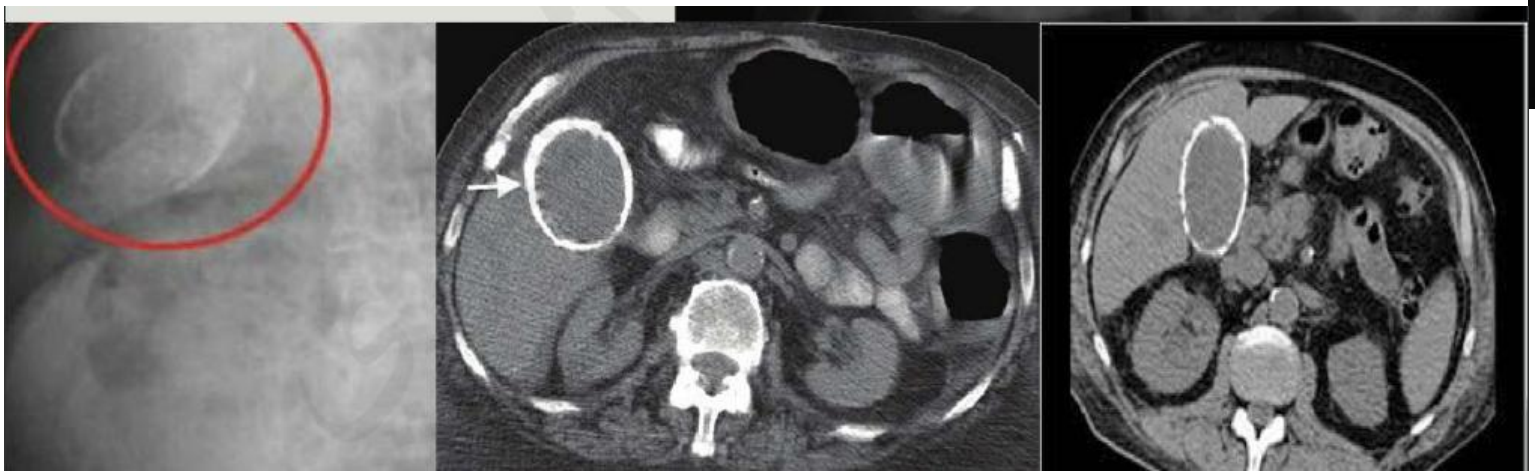
2019 – Before

A patient presented with RUQ pain:

1.What is the diagnosis?

2.What is the major risk?





Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Porcelain gallbladder

2.Adenocarcinoma of gallbladder

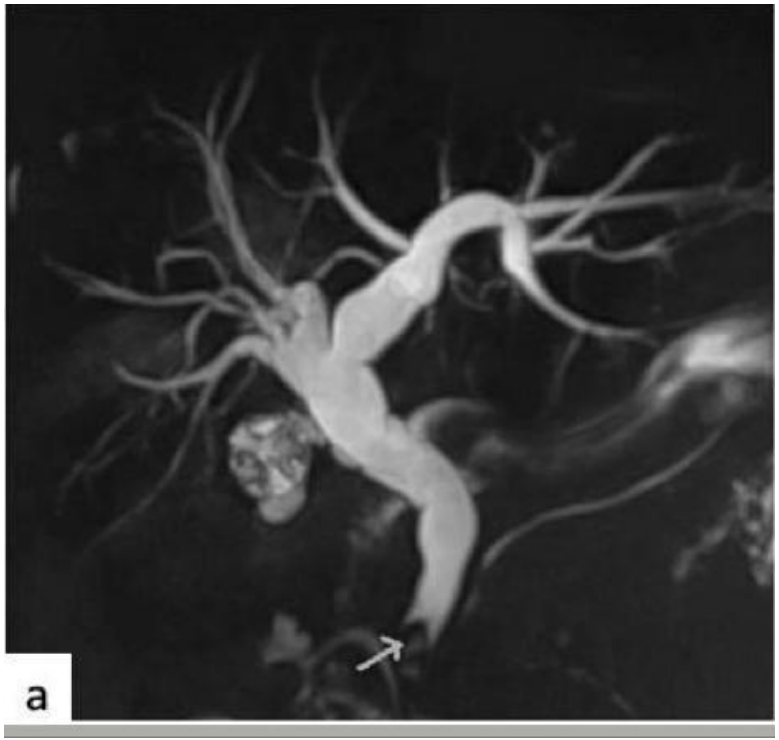
3.Elective Cholecystectomy

• QUESTION

2019 – Before

1. What is the type of imaging

2.Mention 2 abnormalities?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.MRCP

2.1)Stone in the CBD (arrow – filling defect) 2) Dilated CBD

Hashemite University
H • U • M
Medical School Committee

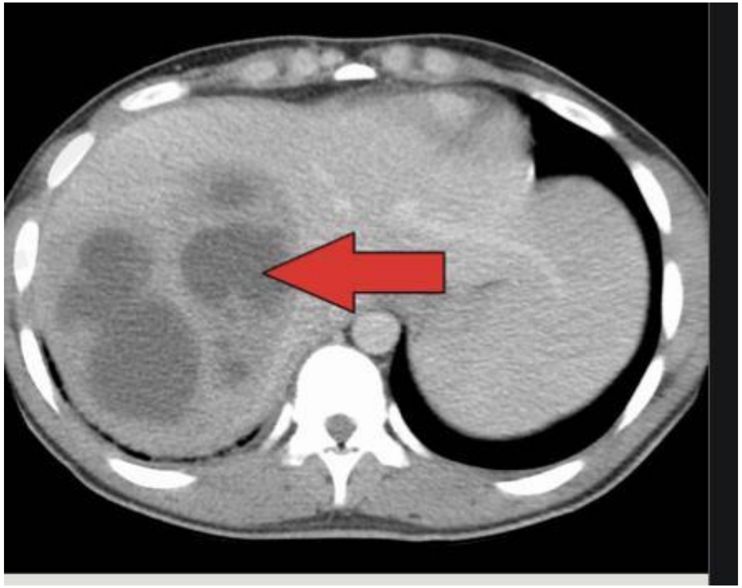
. QUESTION

2019 – Before

Apatient presented lethargic and febrile a week after a surgery for cholangitis:

1.What is your diagnosis?

2.What is the management?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

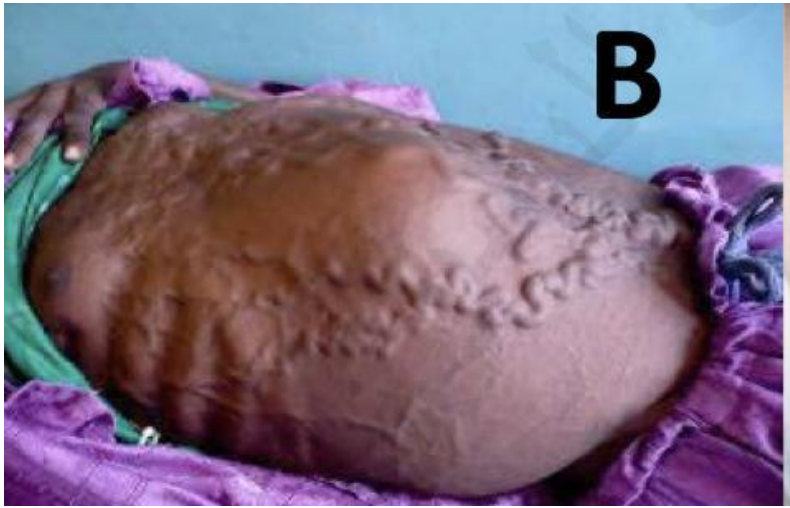
1.Liver abscess

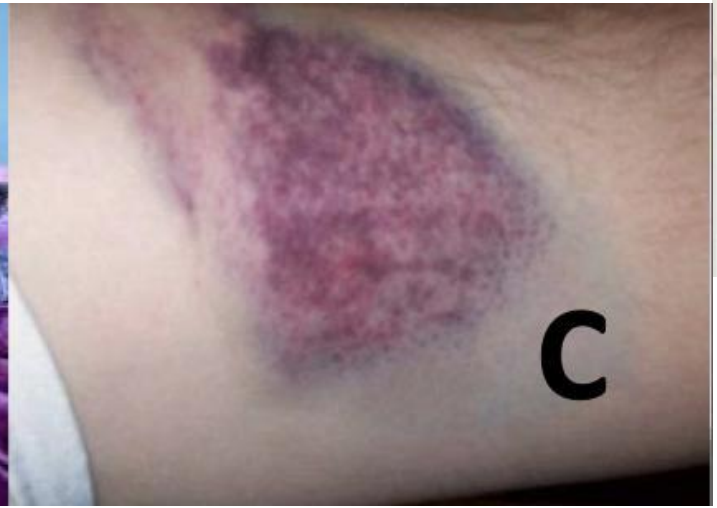
2.Percutaneous drainage, & - Antibiotic administration

• QUESTION

2019 – Before

Name the following complications of liver cirrhosis:





Hashemite University
H · U · M
Medical School Committee

ANSWER

A. Ascites

B. Caputmedusa (dilated veins))

C. Hematoma (easily bruised)

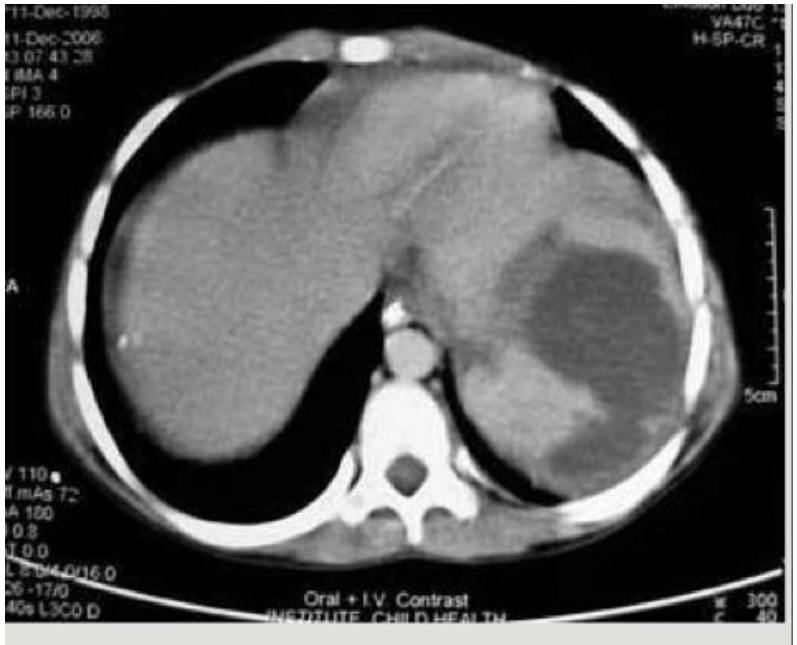
• QUESTION

2019 – Before

After RTA, the patient presented with left shoulder pain:

Q1: What is your diagnosis?

2.What is your management?

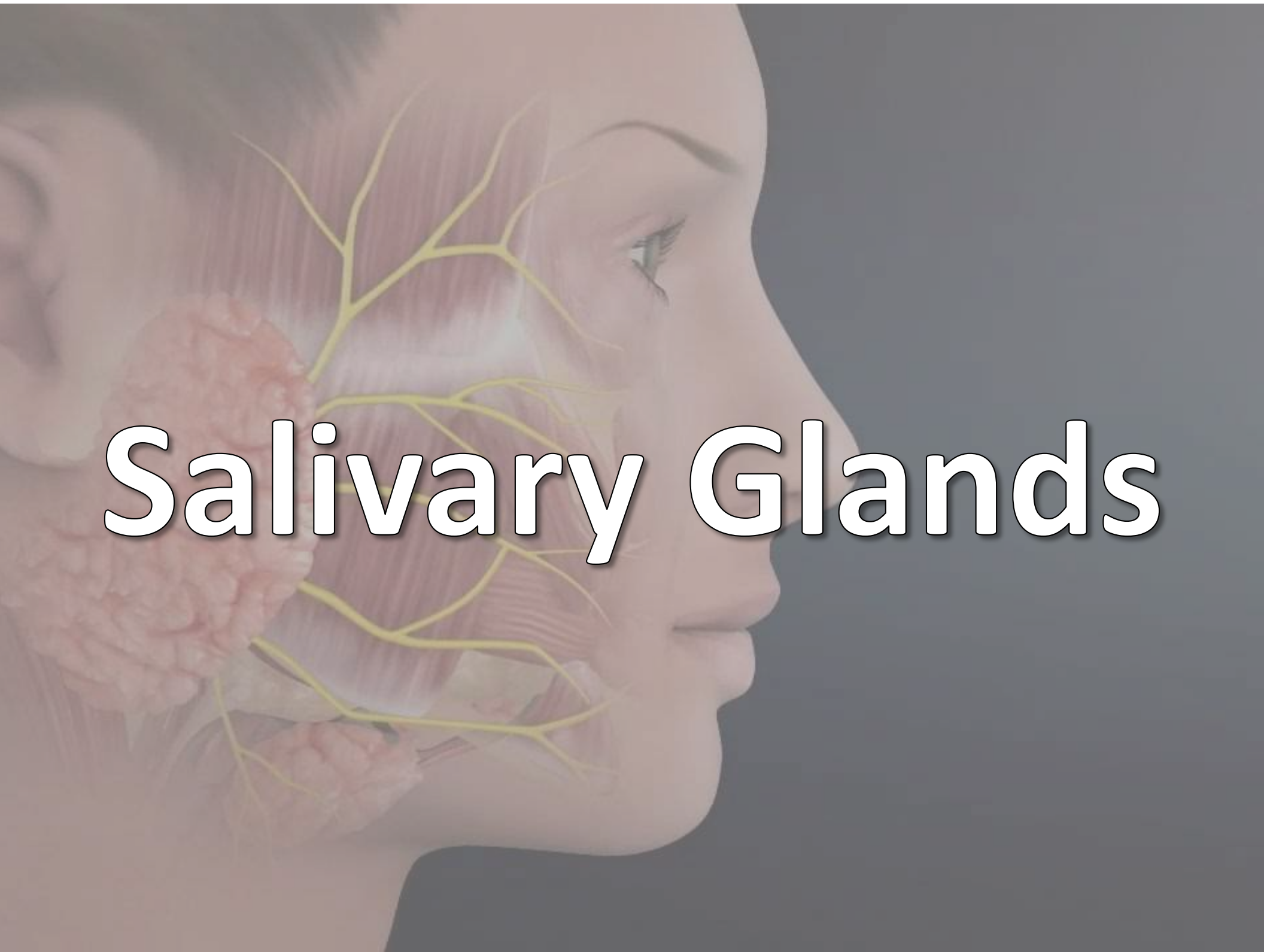


Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Splenic Rupture

2.Splenectomy

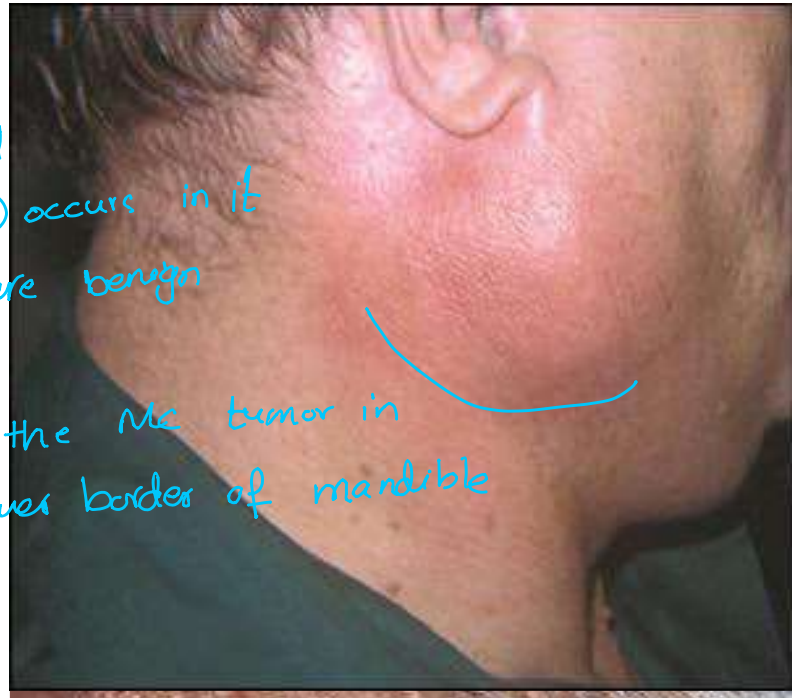

Salivary Glands

Q1: What is the organ affected?

- Parotid gland → major salivary gland
  ↳ most tumors (80%) occurs in it
  ↳ most of them are benign

Q2: What is the most likely Dx?

- Parotid Pleomorphic Adenoma → as it's the Mc tumor in Parotid gland + lies at lower border of mandible



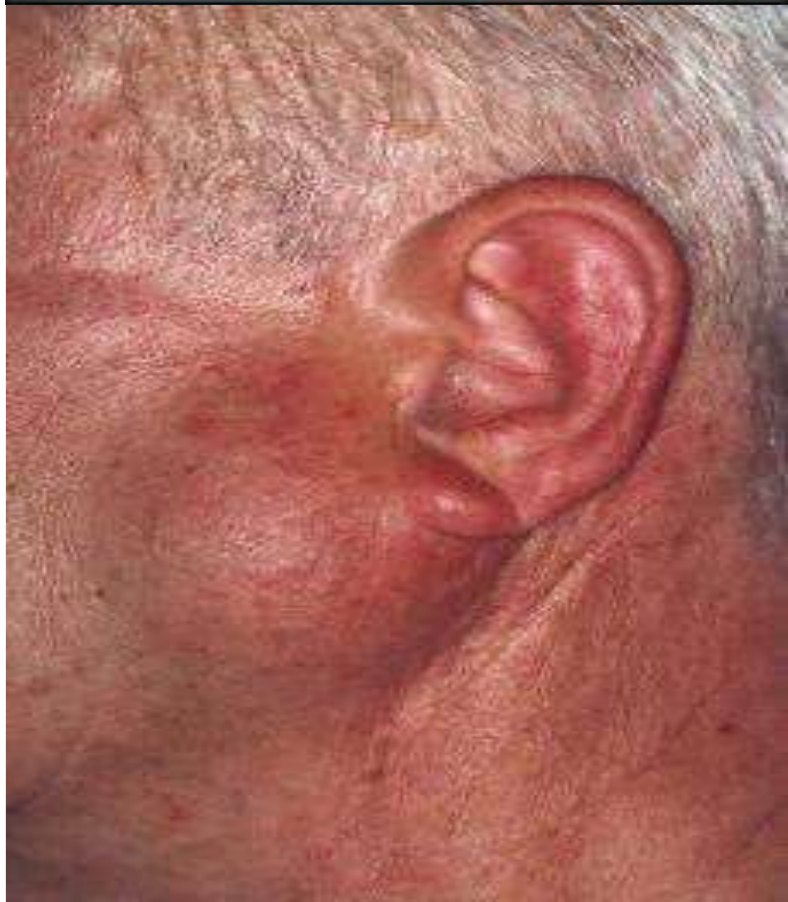
Q3: What is the most common subtype?

- Myoxoid (not sure)

subtypes are:
① myoxoid (stroma-rich)
② cellular
③ mixed

Q4: What is 1 sign that will confirm your Dx?

- Rubbery-hard (①), does not fluctuate (②) and of limited mobility (③) on physical examination

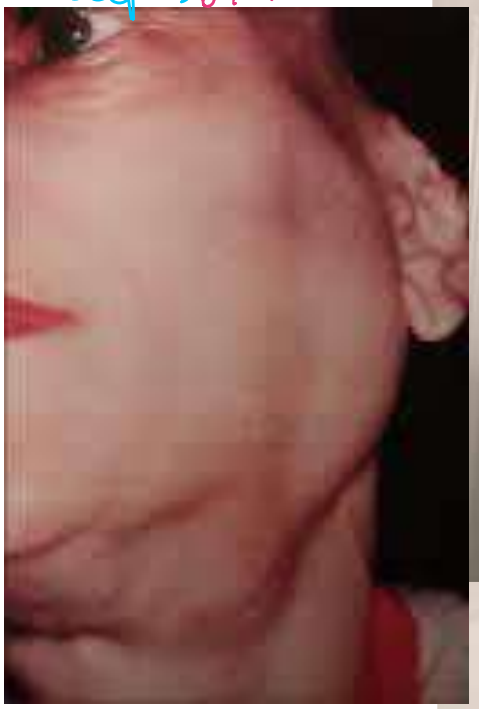


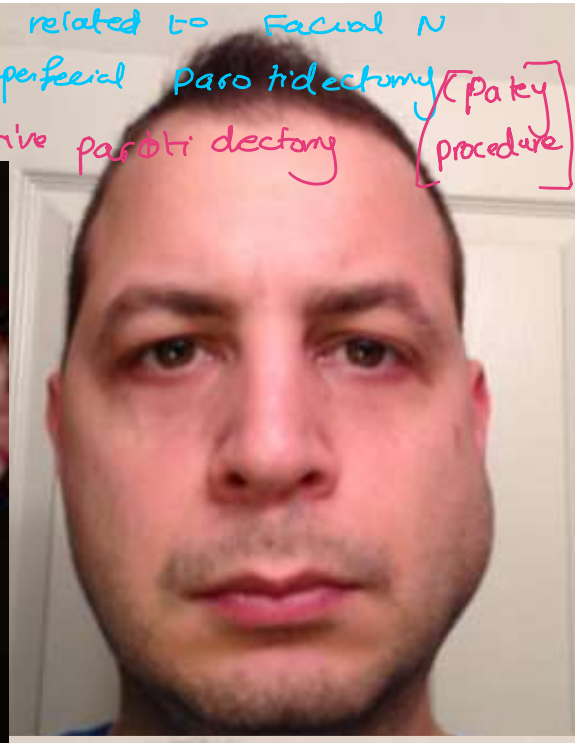
- **Benign** salivary gland tumor.
- The most common salivary gland tumor.
- Usual location : parotid gland.
- single firm, mobile, well- circumscribed mass.
- **Painless.**
- Slow growing.

Q5: How do we treat this pt?

- Superficial parotidectomy, some said total parotidectomy

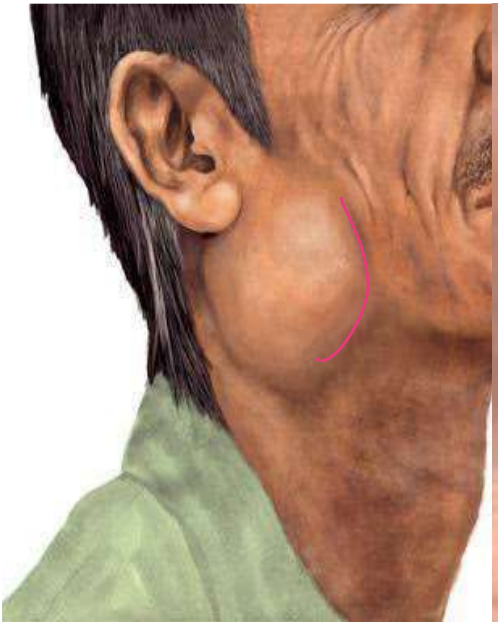
→ according to its location in related to Facial N
① If it's superficial to it → superficial Paro tidectomy (Pakey procedure)
② If it's deep → total conservative parotidectomy

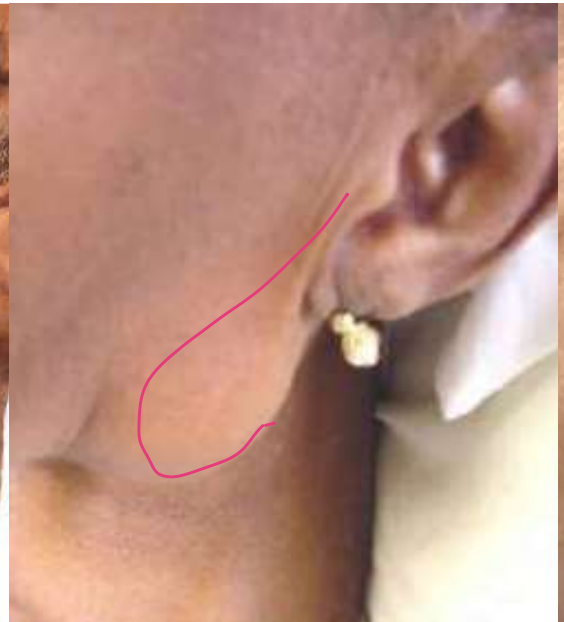


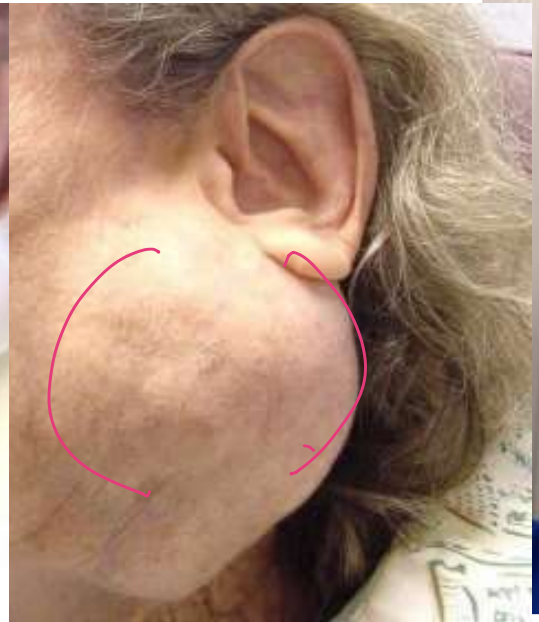


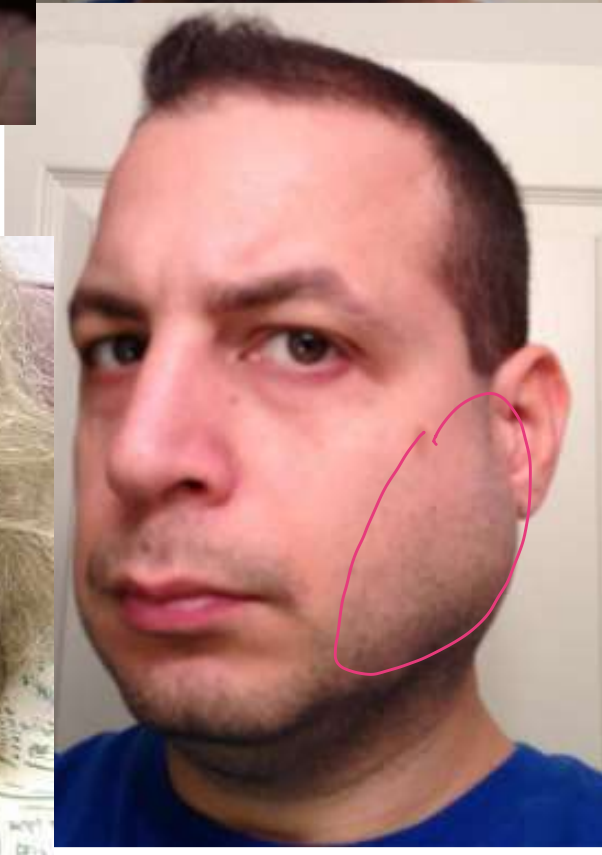
Q6: Histology?

1. Epithelial
2. Myoepithelial
3. Stroma
4. Pseudopods
5. No true capsule





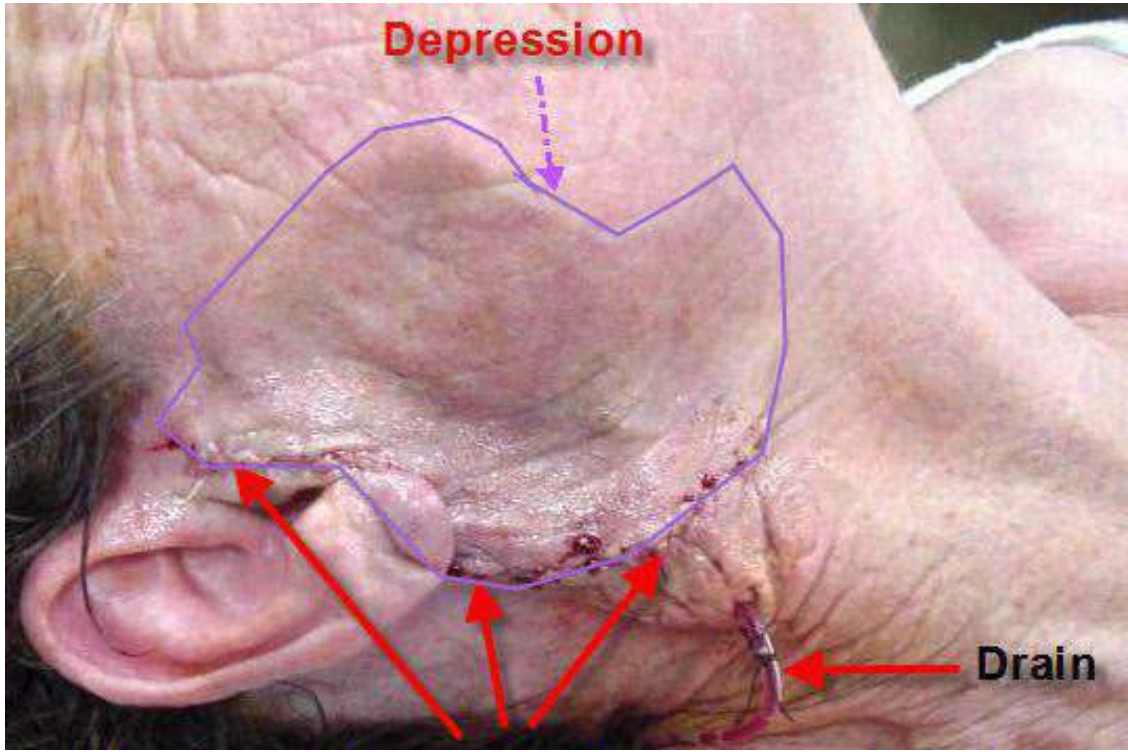




Q: a patient had a superficial parotidectomy:

Q1: What is the most likely indication?

- Parotid gland tumor (most likely pleomorphic adenoma)



Q2: What is the nerve in risk of being damaged?

- Facial nerve

Some said: great auricular nerve

Both are at risk but the NC is great auricular N

Q: 50 yo pt presented with bilateral neck swelling:

10% bilateral

>50 yrs

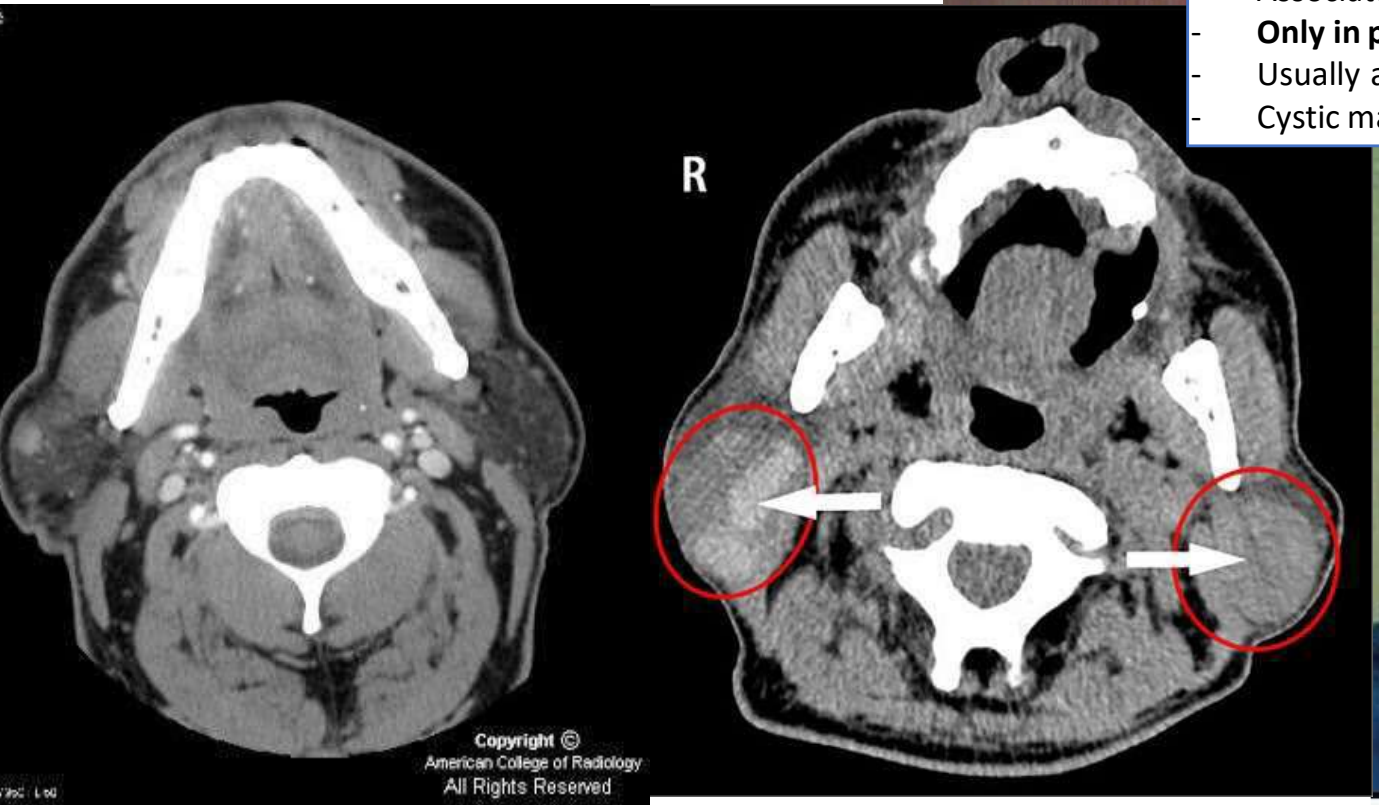
Q1: What is the Dx?

- Warthin's tumor

Q2: What is the malignancy risk?

- 0.3%

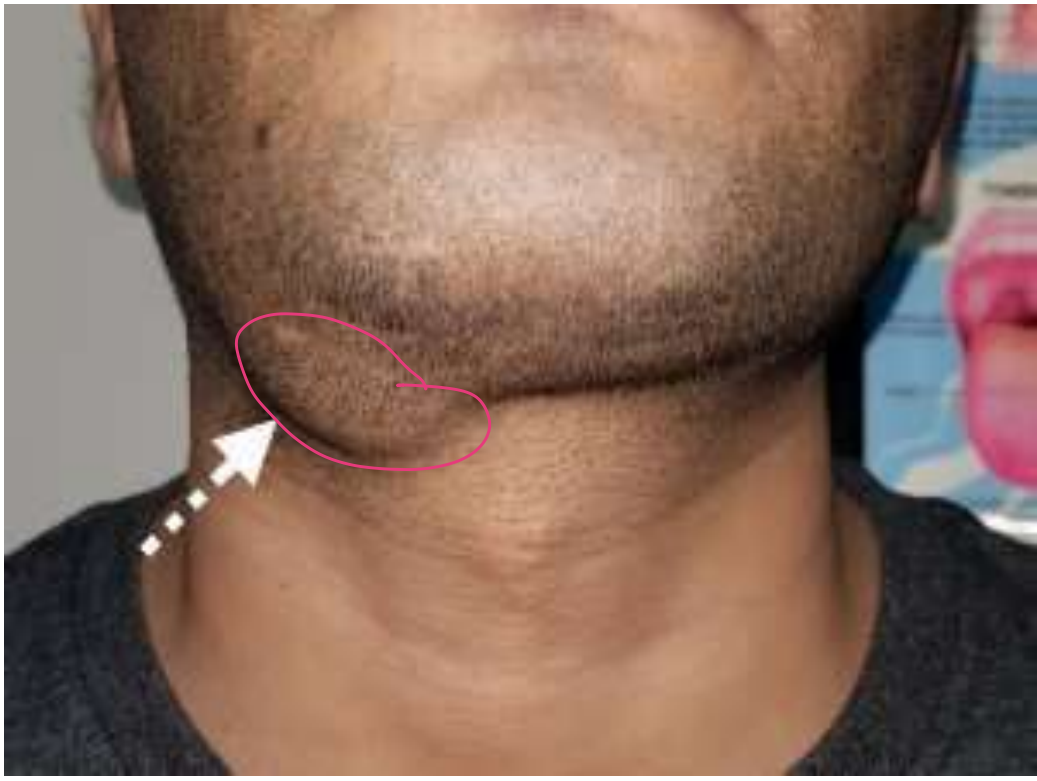
- is the 2nd mc benign salivary gland tumor.
- More in males. but in last decades
- Associated with smoking. ↑ in Females
- **Only in parotid.**
- Usually at parotid tail. still lower than male
- Cystic mass.



pleomorphic adenoma		warthar in
in lower border of mandible	location	inferior pole of superficial lobe (parotid tail
male / young middle age	epidemology	≥50 , ↑ Female because of smoking
asymptomatic , painless , limited mobality, Hard - Rubbery, not fluctuated , well circumscribed	grossly	- Soft, fluctuant, painless - large cystic spaces - multifocal
—	bilateral	~10
same the answer above	Histo	mix of epithelial & lymphatic tissue + Fibrouse capsule
same the answer above	ttt	↱ sup lobe → patey ↳ deep lobe → total conservative Parotidectomy
≤ 5%.	Risk of malignancy	0,3%.

Q1: if a surgery was done what is the nerve at risk to be injured?

- Marginal Mandibular Nerve



Q2: What is the risk of malignancy?

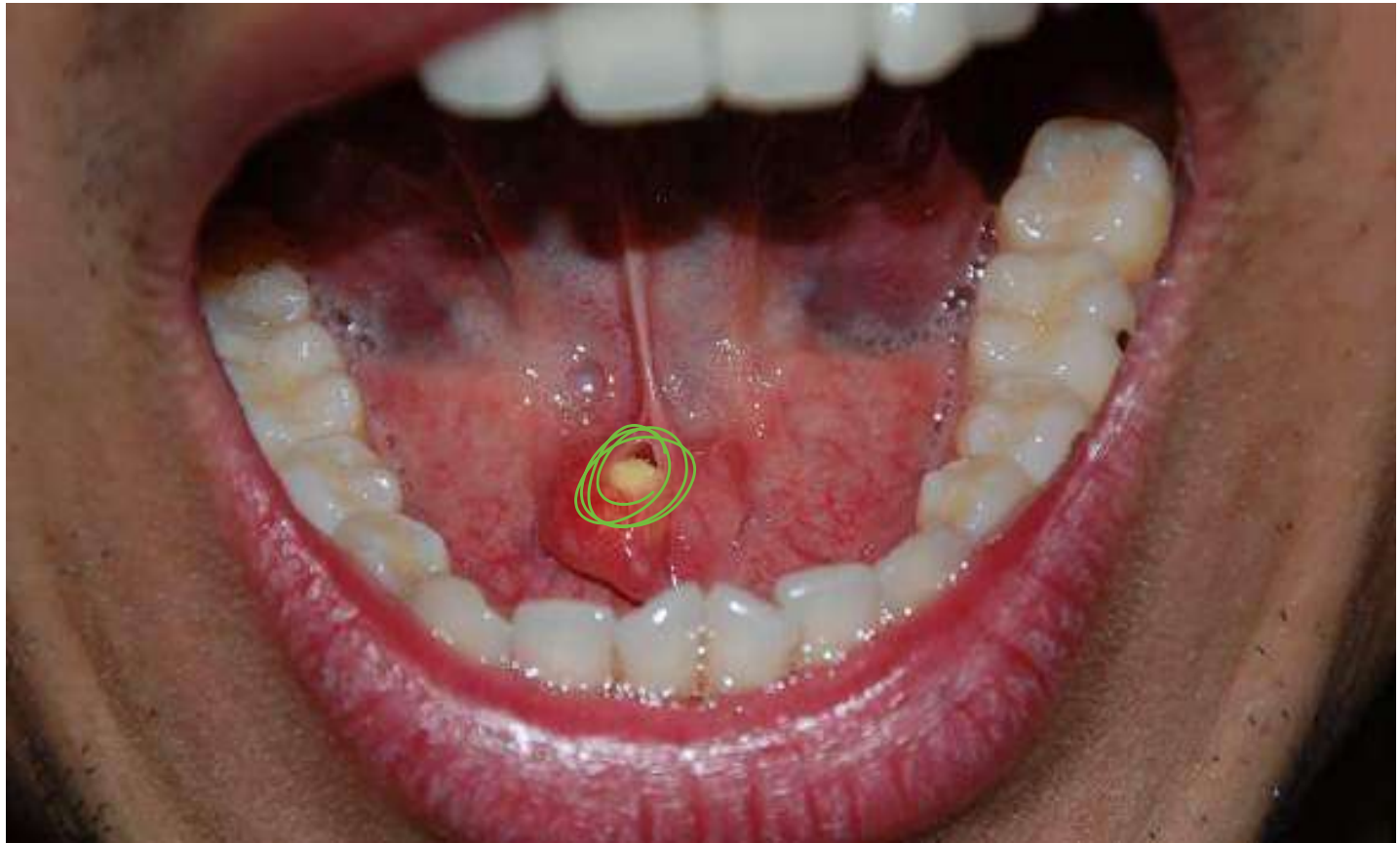
-50%

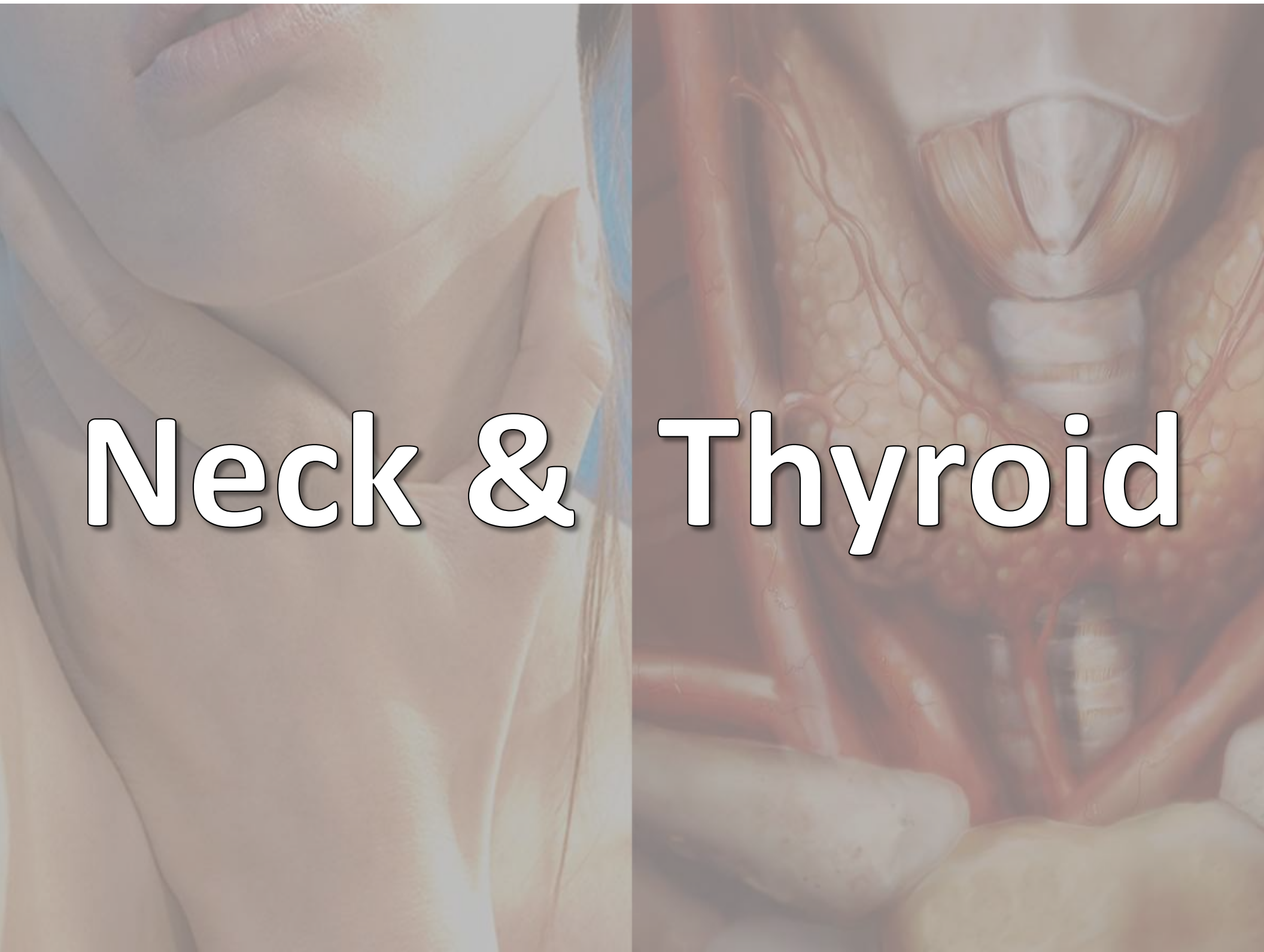
Salivary Gland	Malignancy Rate	Incidence of Tumor
Parotid	20%	80%
Submandibular	50%	15%
Sublingual & Minor	70%	5%

Sialolithiasis = salivary stones

Submandibular salivary gland stone

- The stone is located in the Wharton's duct (most common site) : in the floor of the mouth near the frenulum of the tongue.




Neck & Thyroid

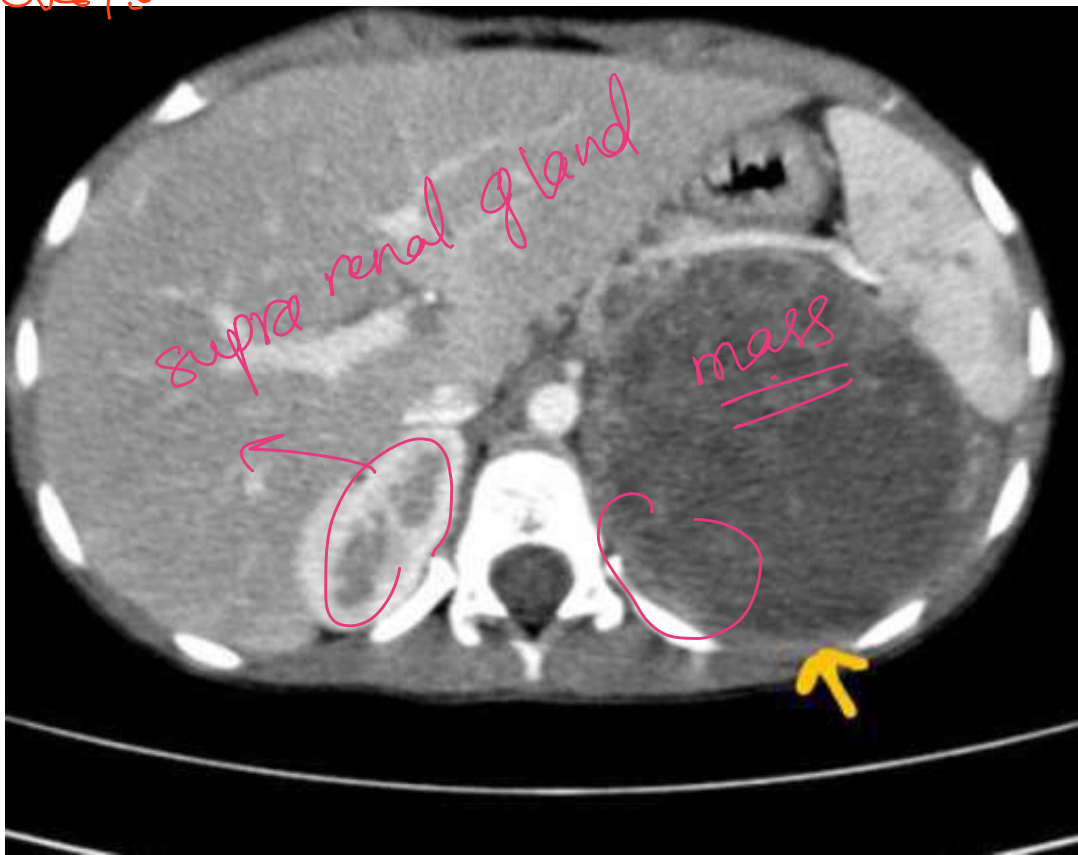
Q: a patient with thyroid medullary cancer, & a CT was done:

Q1: What is your next step? (not sure what the dr. meant so here is the possibilities):

- Assess the functionality of the adrenal tumor by hx, physical ex and ordering lab tests: KFT (Na, K, Creatinine, Urea) / Aldosterone levels/ cortisol/ metanephrine / noremetanephrine / vanillyl mandelic acid (VMA)
- pheochromocytoma
- 24h urine analysis for catecholamine metabolites (VMA/Meta)

Q2: If the patient has no genetic abnormality and the lesion is not functioning what will you do next?

- Because it is very large > surgery adrenalectomy, the dr said : If it was more than 4 cm then you have to remove it immediately



any adrenal mass → the 1st thing you should do is to assess the Function, why?

- 73% incidentaloma → 25% malignant if its size ≥ 4 cm
- 7% cushing adenoma
- 4% pheochromocytoma
- 4% adrenocortical adenoma
- 2% myalipoma
- 1% conn's adenoma

(could be malignant)

do Biochemical profile:

Aldosterone, renin, serum Na & K → conn's
morning cortisol, 1mg dexa suppression test → cushing
serum NVE & meta nephrin → pheochromocytoma

If everything is normal, then cheack for size:

< 4 cm → Follow up after 6 months (≥ 1 cm growth Rate? Remove)
(< 1 cm ? Follow up yearly)

≥ 4 cm → Remove it

Q: a patient presented with episodic sweating and hypertension:

Q1: What is the Dx?

- Pheochromocytoma

Q2: What is the 1st thing to do?

- Check if functional or not by checking cortisol, renin, angiotensin and VMA,… etc

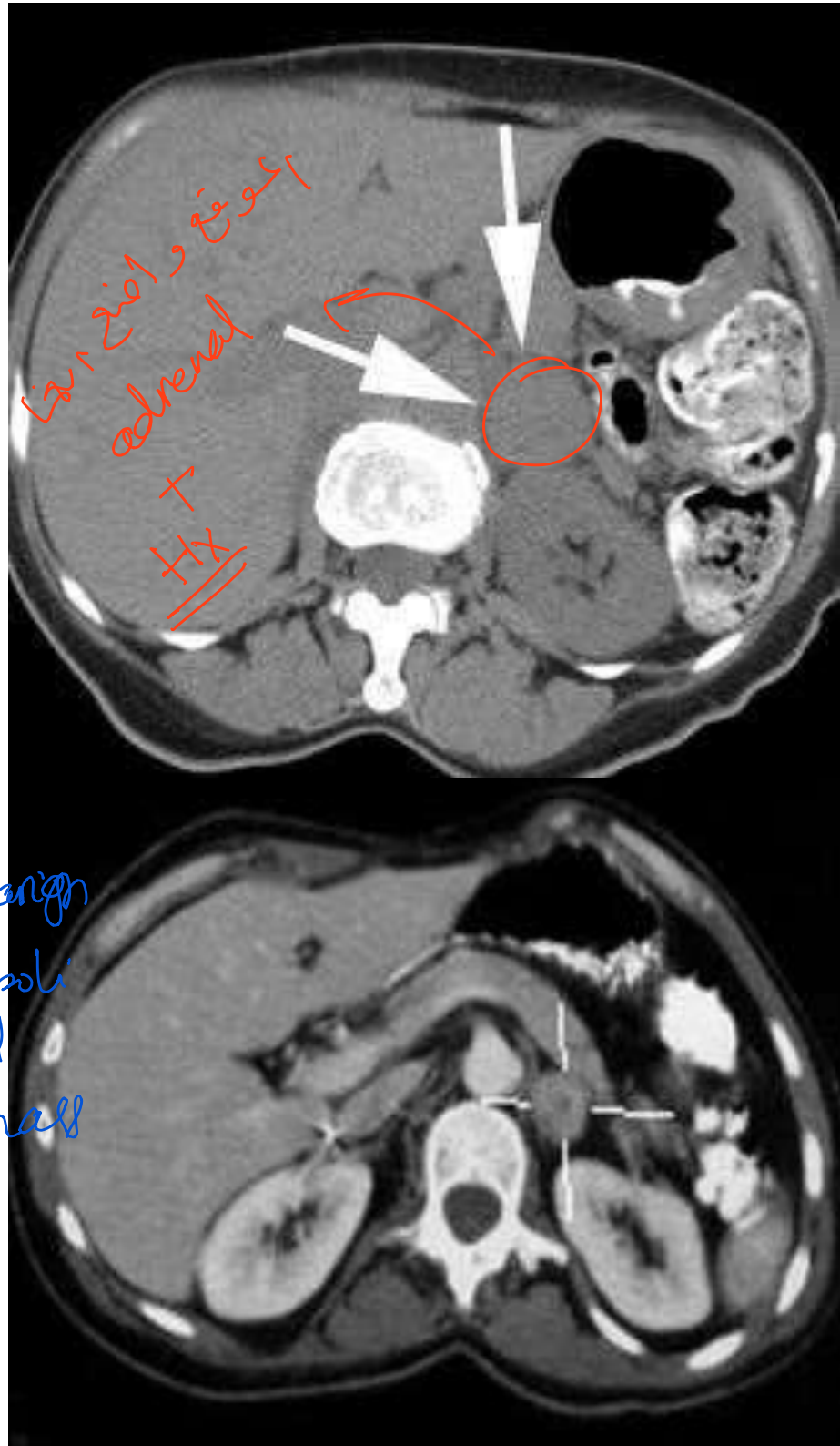
Q3: What raise the possibility of malignancy?

- >4 cm
- necrosis
- hemorrhage
  - Heterogenus

- irregular margin
- venous emboli in proximal vein to mass

Q2: What is the size that would be considered an indication for surgery?

- ≥4 cm



Q: Lab investigations show high aldosterone level and high ratio of PAC to PRA:

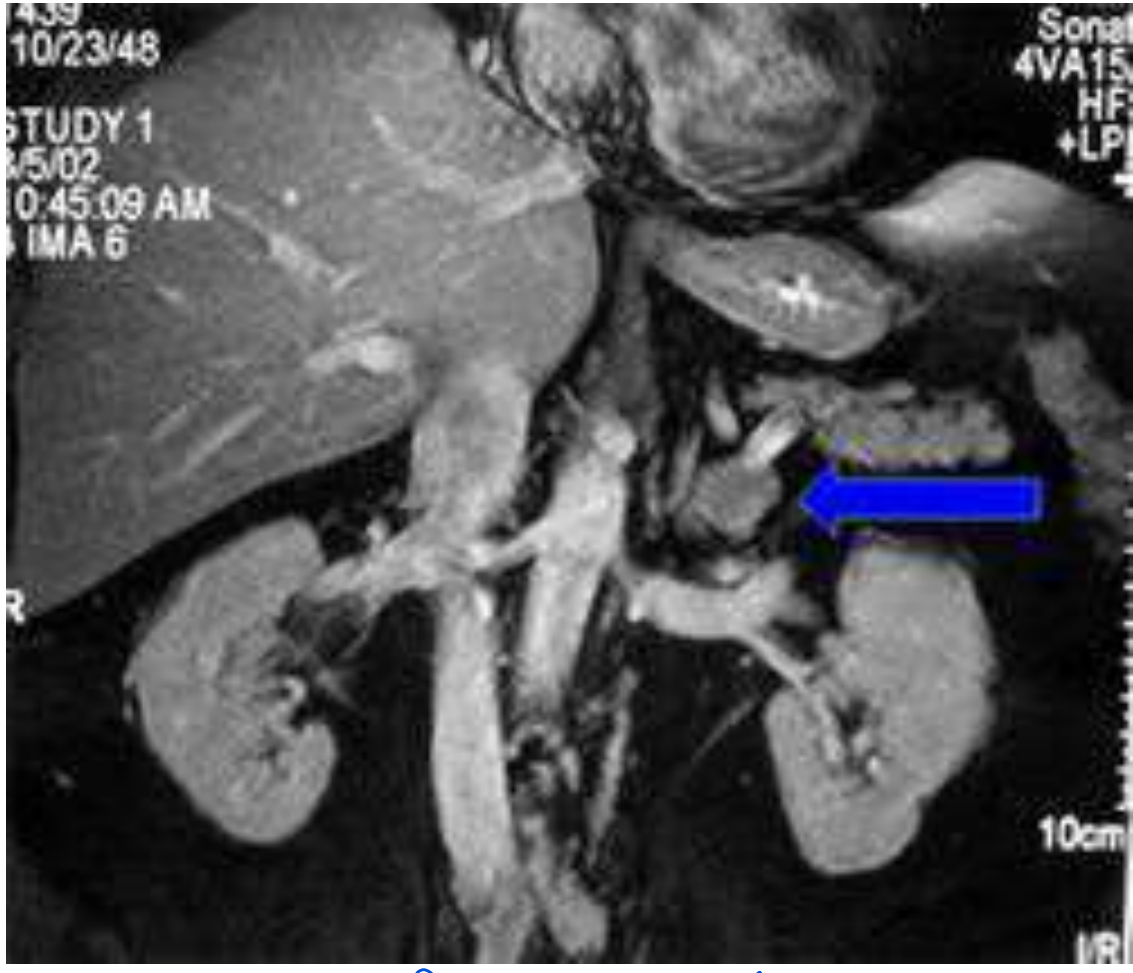
endo

Q1: What is your Dx?

- Conn's tumor

Q2: Mention a common presentation for this patient?

- Hypertension as ↑ reabsorption of Na & water
  ↑ excretion of K & H



DDx of neck lumps

	Midline	Lateral
Neoplastic	Thyroid Parathyroid Pharyngeal/Laryngeal	Most tumors (lymphoma, carotid…)
Congenital	Thyroglossal duct cyst Laryngocele	Cystic Hygroma Branchial cleft cyst
Infectious	Ludwig's Angina	Most infections (cat-scratch, mononucleosis, sialadenitis…)
Inflammatory	Submental reactive lymphadenopathy Thyroiditis	Most reactive lymphadenopathy

Q1: What is the Dx?

- Lacerated neck wound

Q2: What zone?

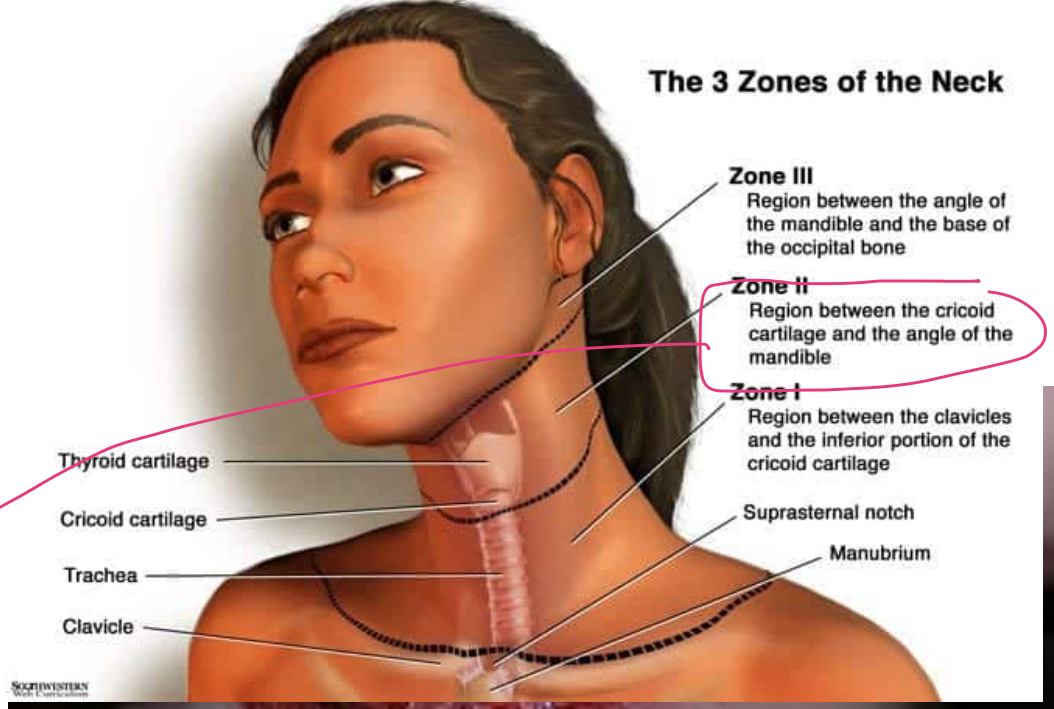
- Zone 2

Q3: Name the borders for it?

- From the angle of the mandible to the cricoid cartilage

Q4: When to intubate the patient?

1) Expanding hematoma
2) Obstructive complication
3) Cervical vertebrae injury



PENETRATING NECK INJURIES

What depth of neck injury must be further evaluated?

Penetrating injury through the platysma

Define the anatomy of the neck by trauma zones:

Zone III

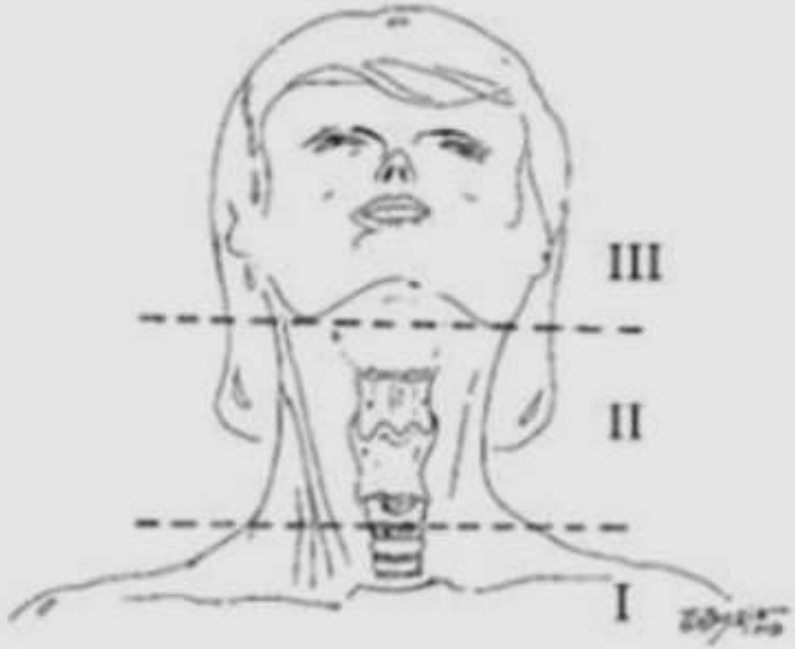
Angle of the mandible and up

Zone II

Angle of the mandible to the cricoid cartilage

Zone I

Below the cricoid cartilage



How do most surgeons treat penetrating neck injuries (those that penetrate the platysma) by neck zone:	
Zone III	Selective exploration
Zone II	Surgical exploration vs. selective exploration
Zone I	Selective exploration
What is selective exploration?	Selective exploration is based on diagnostic studies that include A-gram or CT A-gram, bronchoscopy, esophagoscopy
What are the indications for surgical exploration in all penetrating neck wounds (Zones I, II, III)?	"**Hard** signs" of significant neck damage: **shock,** exsanguinating hemorrhage, expanding hematoma, pulsatile hematoma, neurologic injury, subQ

VERY COMMON QUESTION!

Bethesda diagnostic category			Risk of malignancy	Usual management
I	Nondiagnostic or unsatisfactory	Cyst fluid only Virtually acellular specimen Other (obscuring blood, clotting artifact, etc.)	1% to 4%	Repeat FNA with ultrasound guidance
II	Benign	Consistent with a benign follicular nodule (includes adenomatoid nodule, colloid nodule, etc.) Consistent with lymphocytic (Hashimoto) thyroiditis in the proper clinical context Consistent with granulomatous (subacute) thyroiditis Other	0% to 3%	Clinical follow-up
III	Atypia of undetermined significance or follicular lesion of undetermined significance		5% to 15%	Repeat FNA
IV	Follicular neoplasm or suspicious for a follicular neoplasm	Specify if Hurthle cell (oncocytic) type	15% to 30%	Surgical lobectomy
V	Suspicious for malignancy	Suspicious for papillary carcinoma Suspicious for medullary carcinoma Suspicious for metastatic carcinoma Suspicious for lymphoma Other	60% to 75%	Near-total thyroidectomy or surgical lobectomy
VI	Malignant	Papillary thyroid carcinoma Poorly differentiated carcinoma Medullary thyroid carcinoma Undifferentiated (anaplastic) carcinoma Squamous cell carcinoma Carcinoma with mixed features (specify) Metastatic carcinoma Non-Hodgkin lymphoma Other	97% to 99%	Near-total thyroidectomy

Q1: What is the Dx?

- Thyroglossal duct cyst

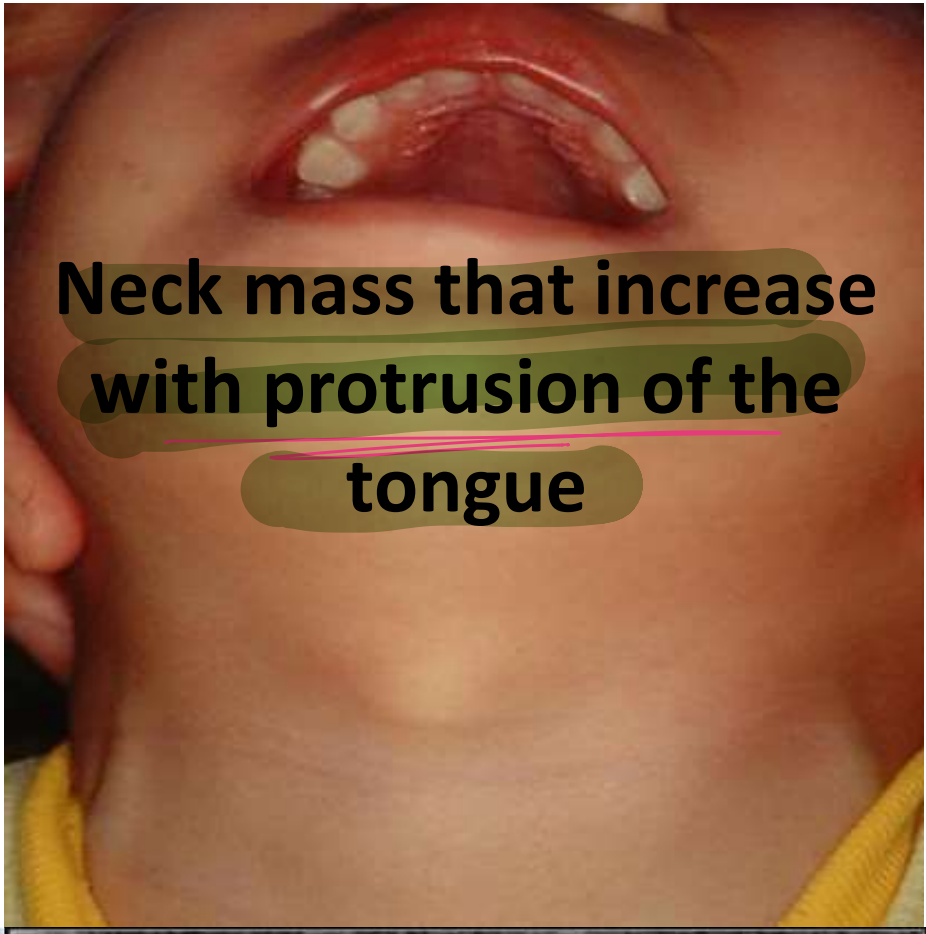
Q2: What is the structure on U/S (involved bone)?

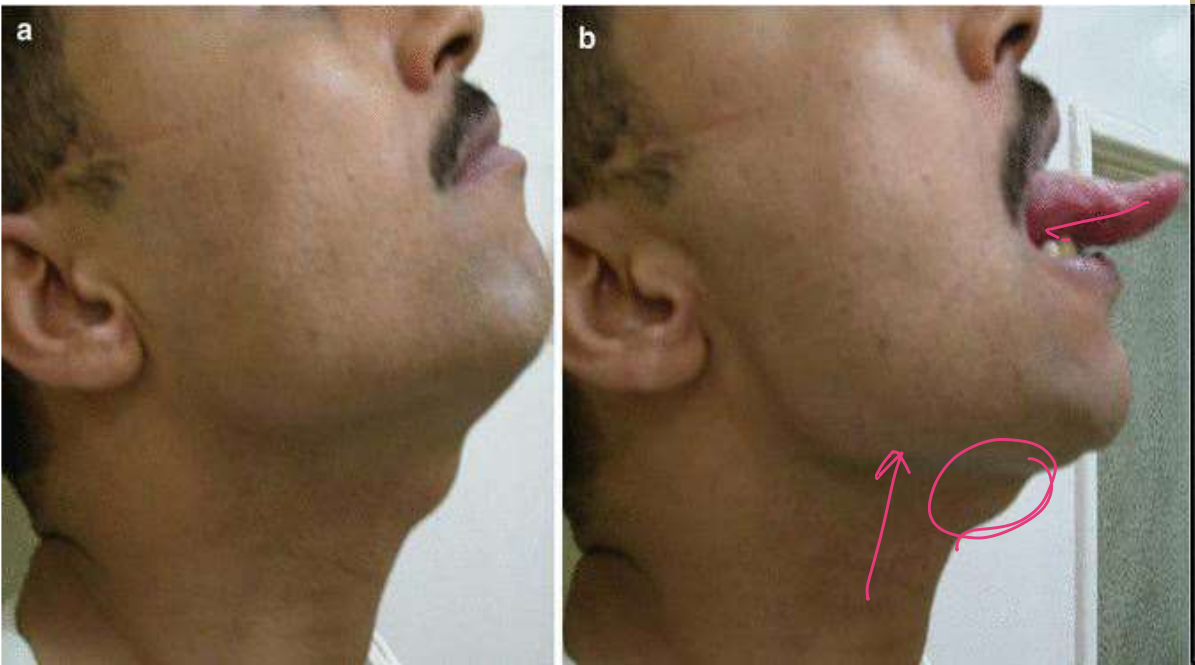
- Hyoid bone

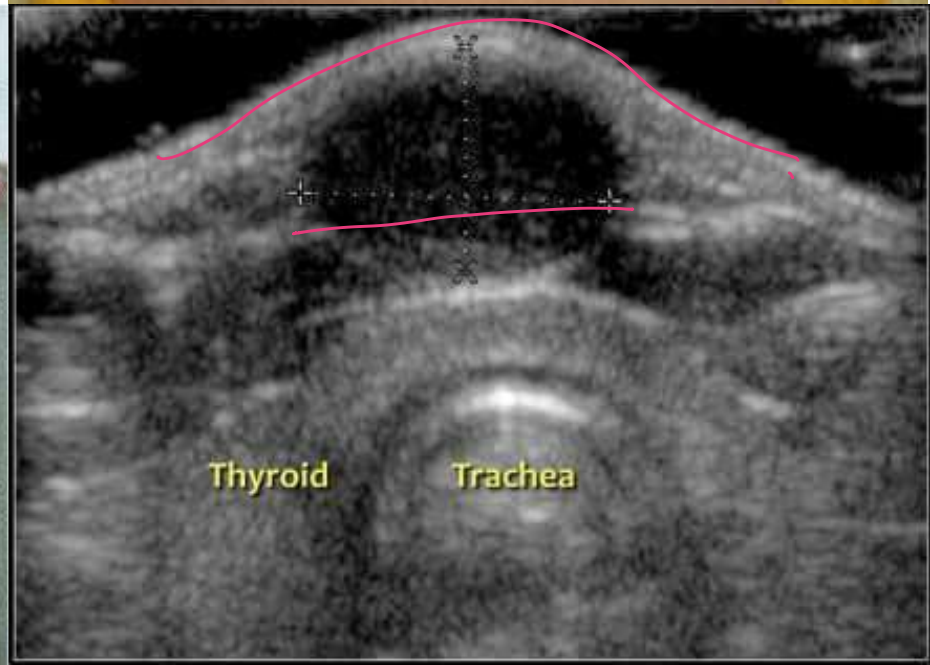
Q3: What is the Mx?

- Sistrunk's procedure

(if the hyoid bone not removed the recurrence rate is > 50-60%)







Q4: What is the malignancy risk?

- 2%

MC is papillary then SCC

Q5: Name the malignancy that does not occur here?

- ~~Medullary Ca~~ → not seen also in pyramidal lobe & isthmus

neural crest

Q6: Complications?

(1) (2)

- Infection, malignant risk

(3) Sinus Formation due to ruptured cyst

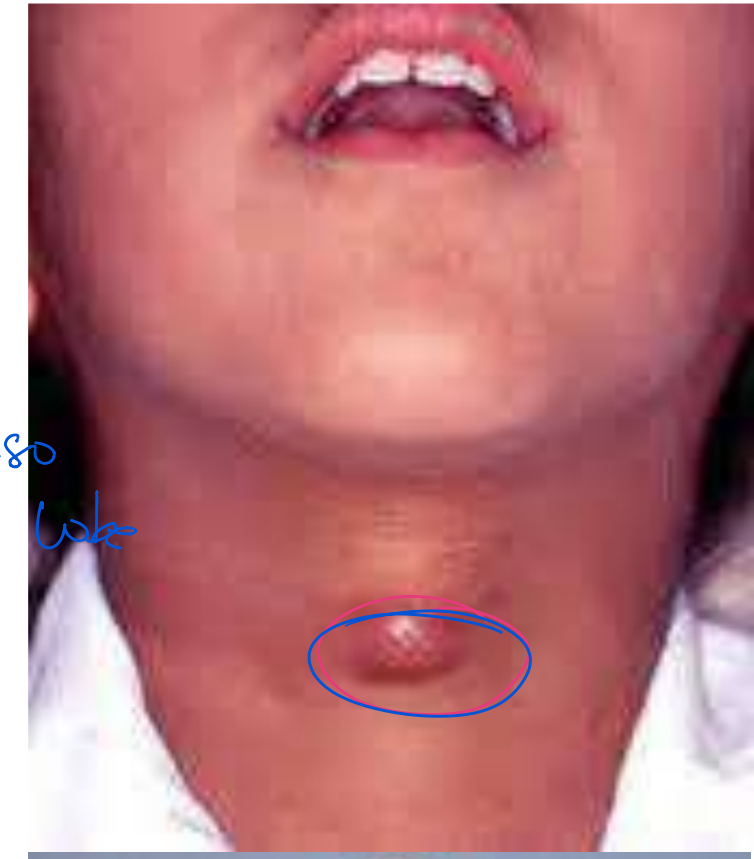
Q7: Sign to confirm your Dx?

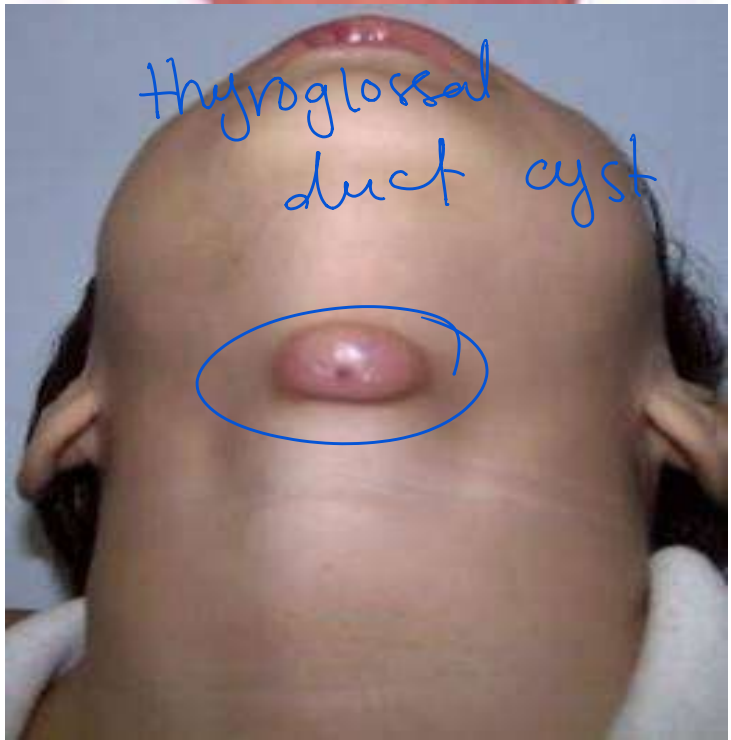
- Movement with tongue protrusion

by inspection or palpation

Q8: What is the risk of recurrence?

- Sistrunk procedure reduces the recurrence risk from 60% to < 10%

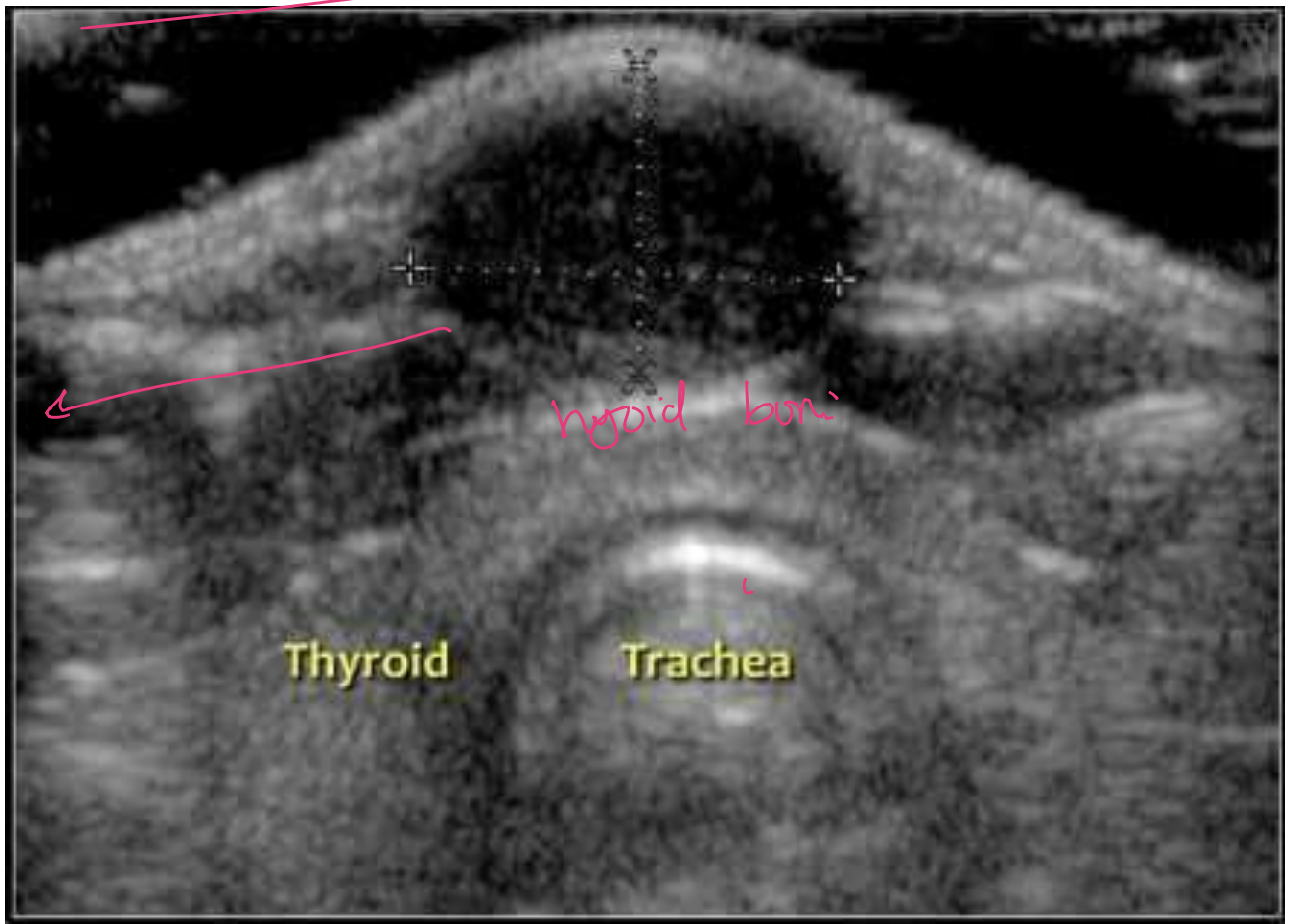




Q: This is the US of a 20 yo male with a neck lump.

1. What is the next step in approaching his condition? FNAC → US داخل سن to exclude malignancy

2. What is the most likely Dx? Thyroglossal Duct Cyst

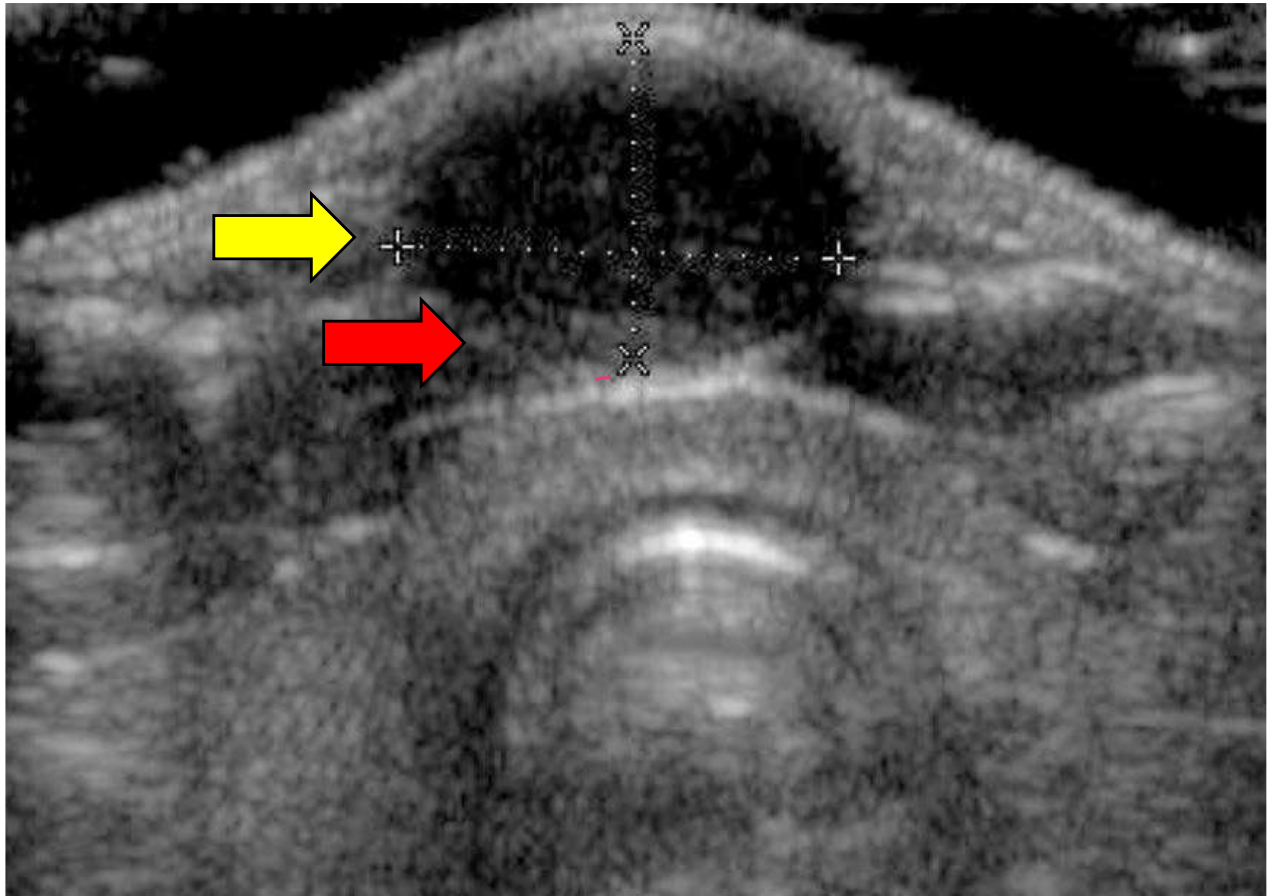


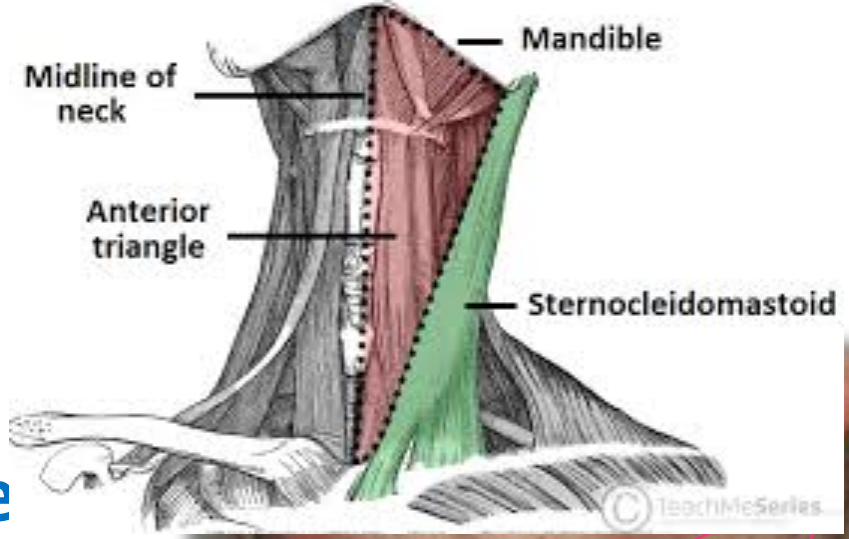
سبب توقعها عوفنا انها thyroglossal duct cyst

Q: This patient underwent surgery for the pathology depicted by the yellow arrow. Histology reported a malignancy of non-thyroid origin.

What is the most likely malignancy? SCC

What structure does the red arrow point to? Hyoid bone





Q1: Name the triangle of the neck in which the lesion is situated:

anterior triangle.

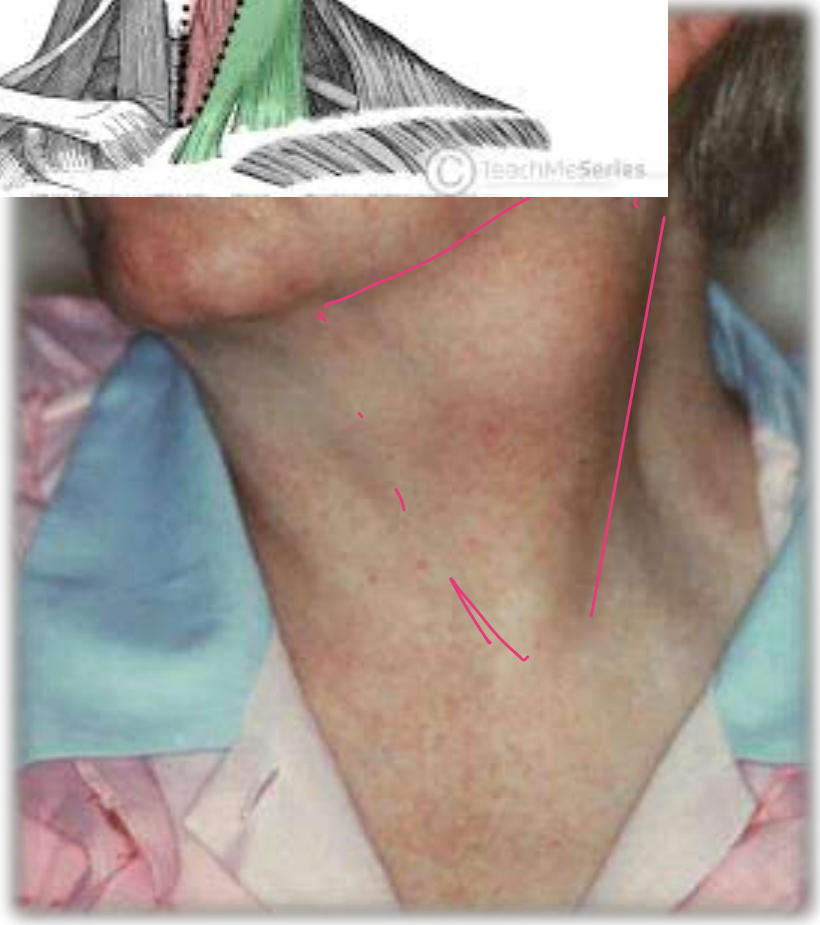
salivary gland infection

Q2: Give 2 DDx for the lump:

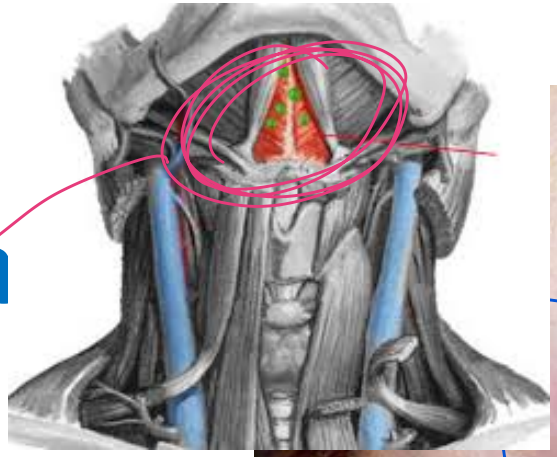
1 sialodenitis/ 2 lipoma.

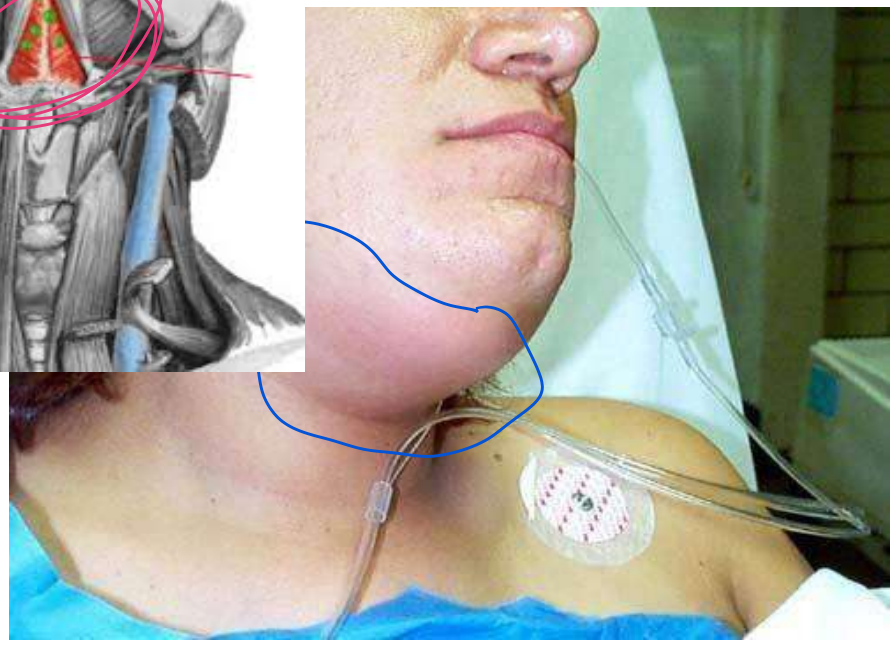
3 epidermoid cyst

4 lymphodenitis

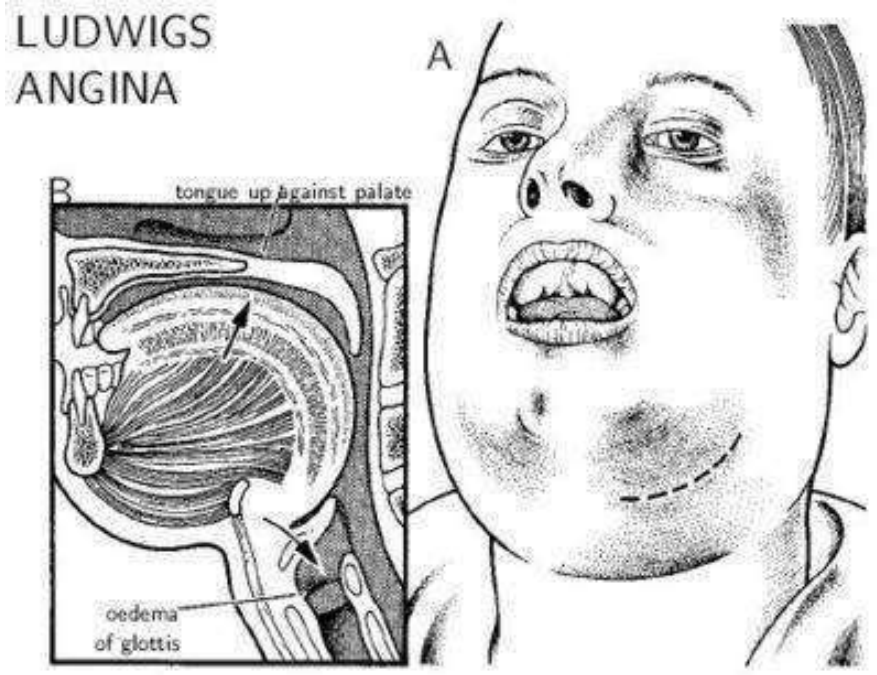


Ludwig angina

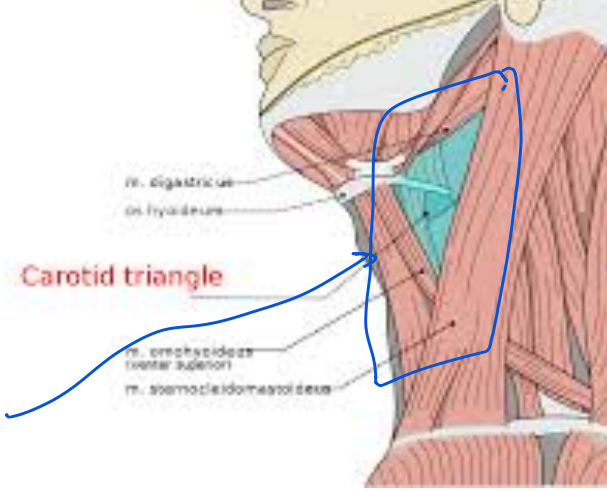




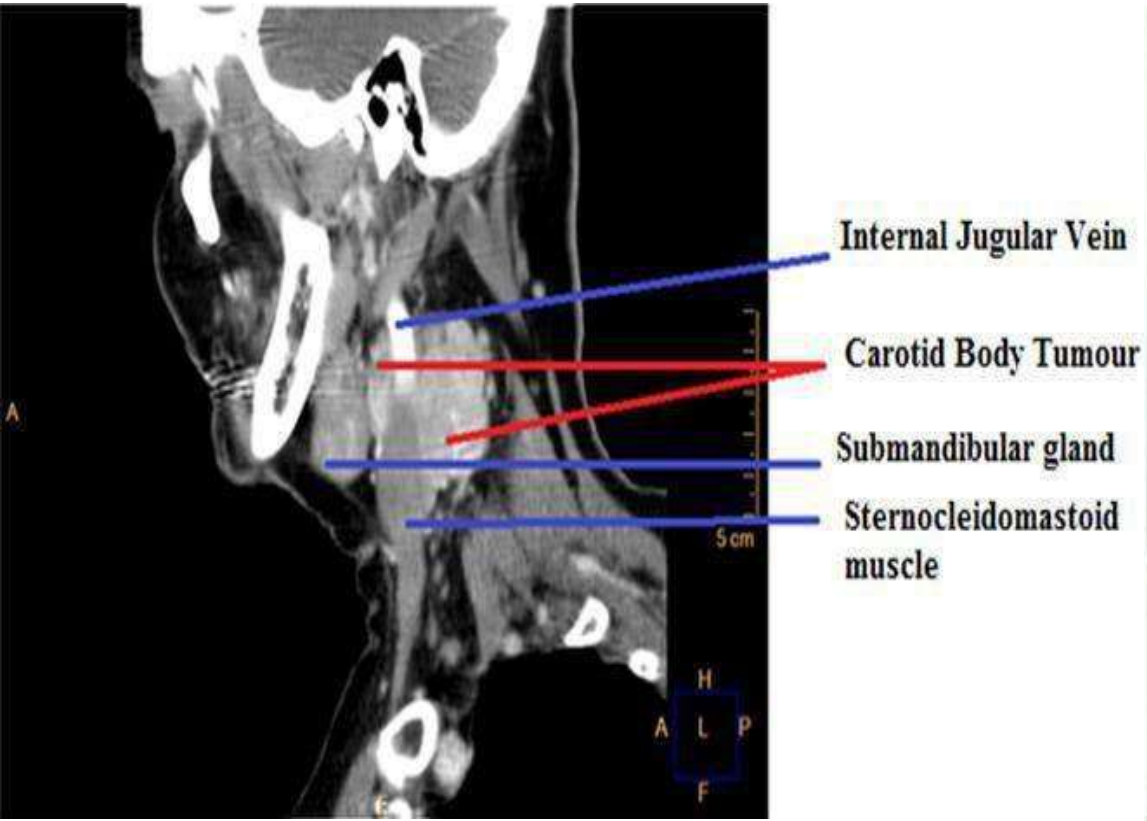
pus accumulation in the **submental triangle.**
causes pressure on the larynx and epiglottis and suffocation.
treated surgically by opening the submental area and draining the pus.

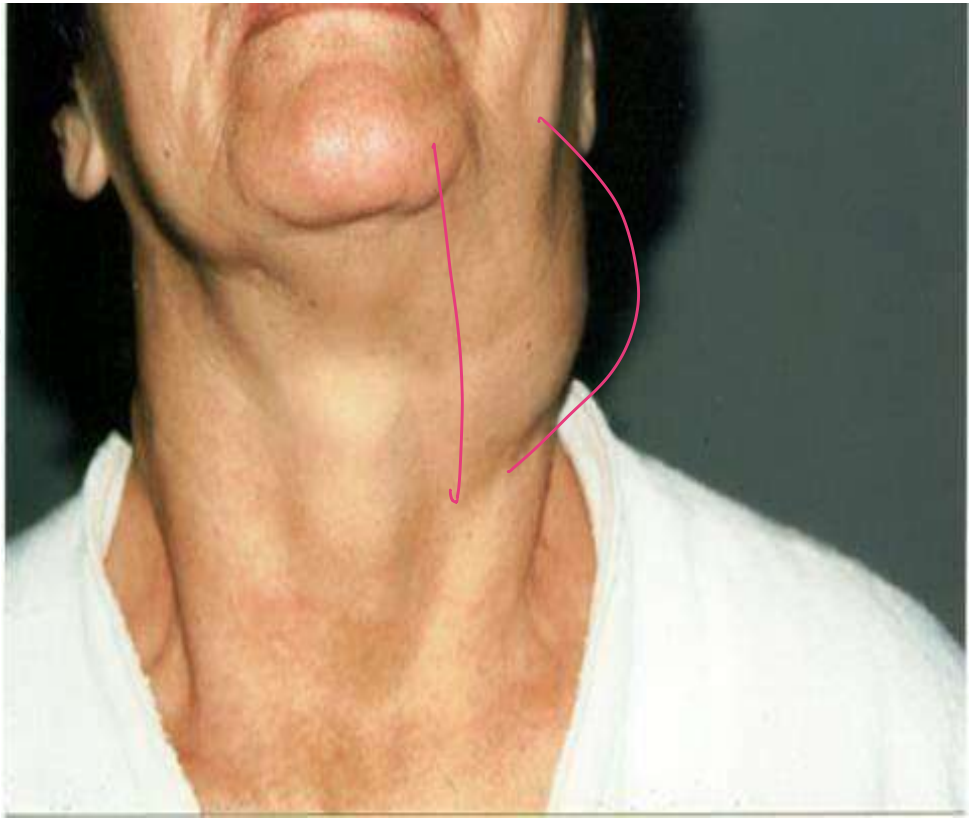


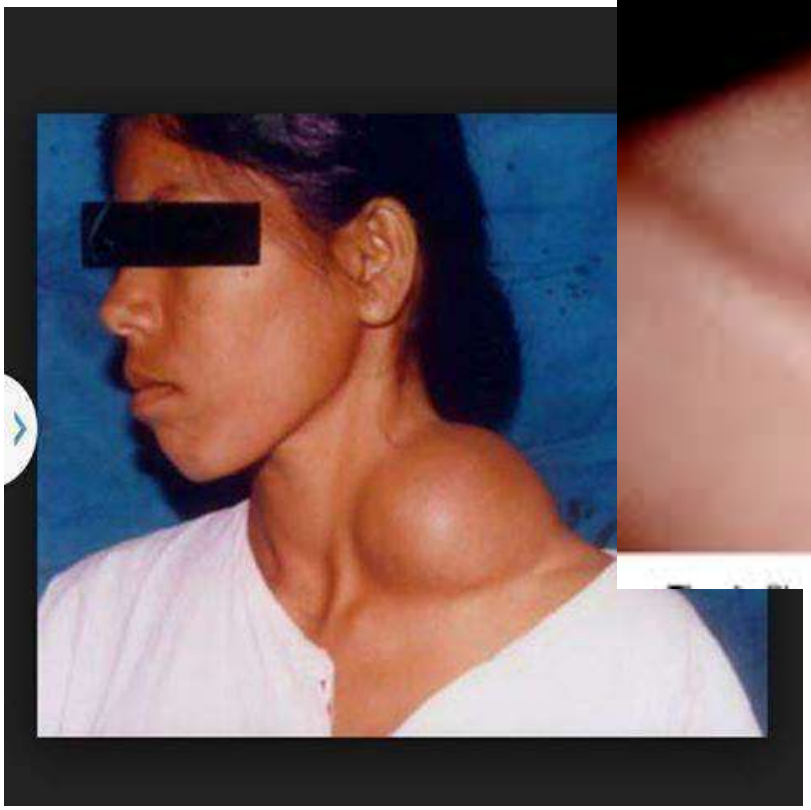
Carotid body tumor : in carotid triangle

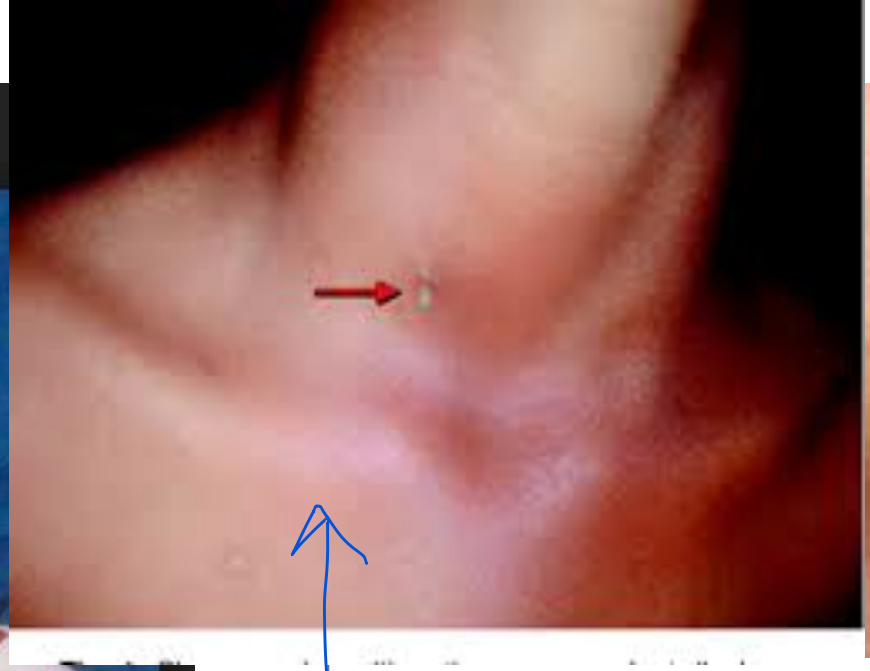


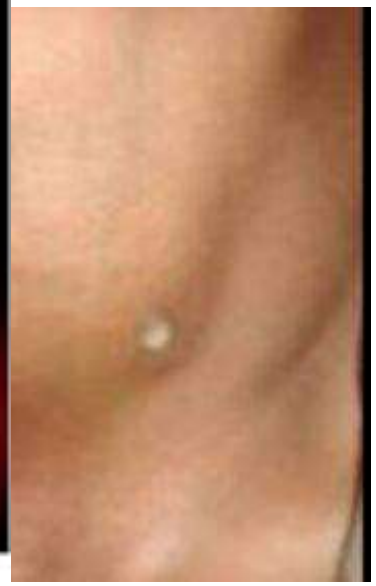
- moves side by side.
- Dx: carotid angiogram.
- Surgical excision and preoperative embolization.
- Lateral mass.









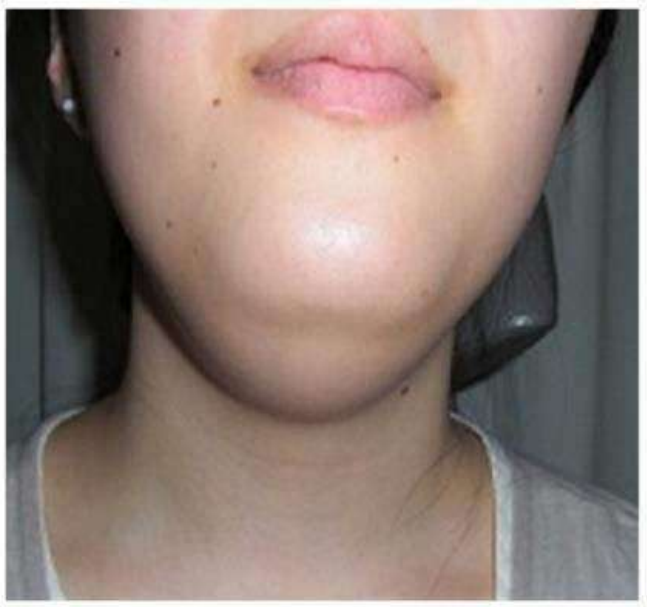


Branchial cyst

- Smooth surface and globular.
- At the level of junction between upper and middle 1/3 of SCM.

Branchial fistula

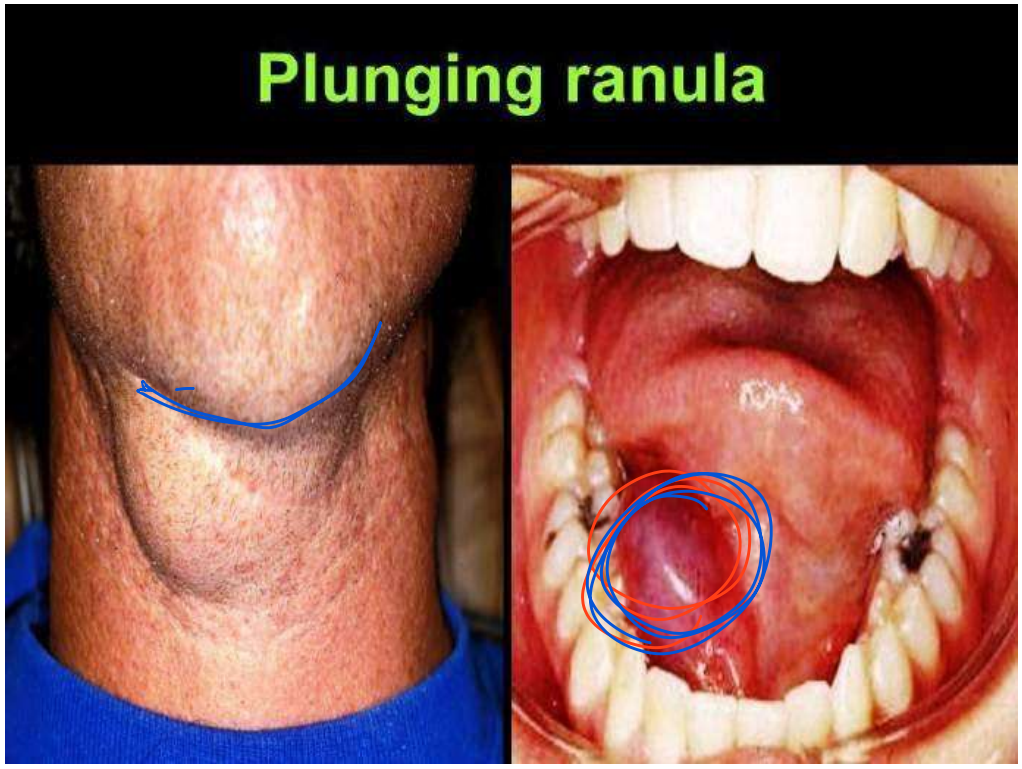
- formed by the 2nd branchial cleft and pouch.
- lined by ciliated columnar epithelium.
- Discharge : mucus or muco-pus.
- in anterior triangle.
- at junction between middle and lower third of SCM.
- congenital.
- surgery (excision).



Sublingual dermoid cyst

- Medline congenital mass.
- Contents : hair follicles/ sebaceous cyst/ sweat glands.

- painless swelling
- dysphagia
- dysphonia
- SOB



Ranula : cystic mucosa extravasation from sublingual salivary gland.

Plunging : if extended through myelohyoid muscle.

Treatment : excision.

Q: Hx that suggest a thyroid nodule:

MC of all nodules

Q1: What is the Dx?

- Multi-nodular goiter

Q2: How to approach the patient with this Dx?

- TFT → hyperthyroidism (↑T4 & T3 & ↓ TSH)
- US
  - ② thyroid scan (I^{123}, Tc^{99})
  - + FNA in cold nodules

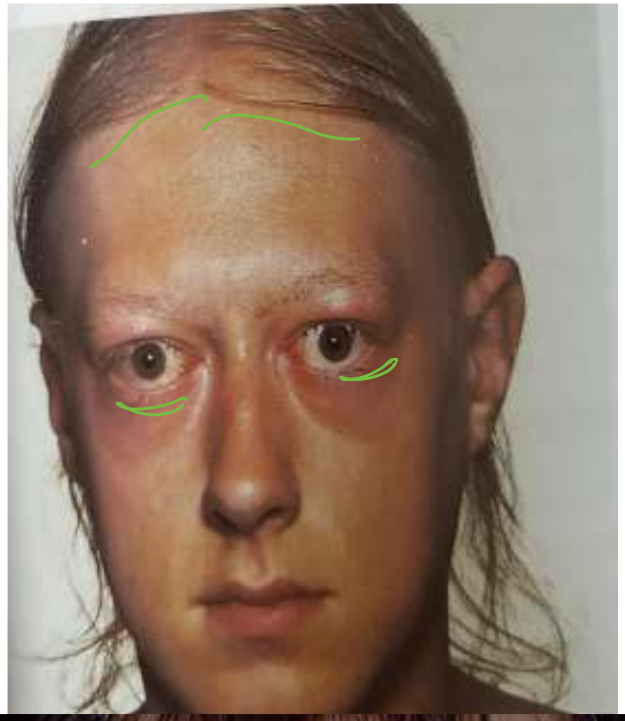
معظمها بالعادة benign

Q1: What is the Dx?

- Graves disease

Q2: Mention 2 signs that you can see?

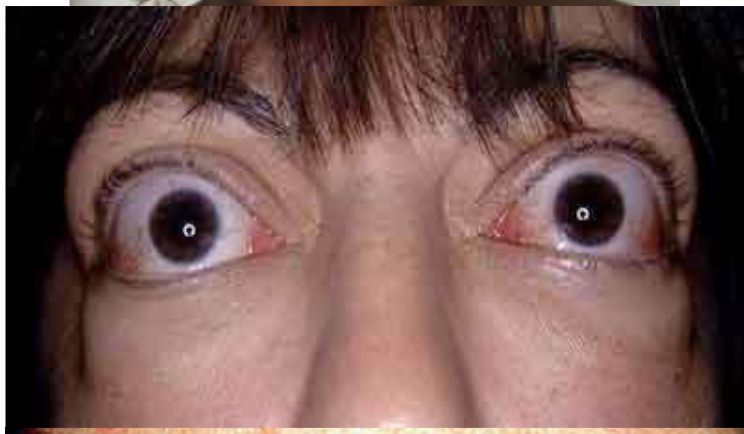
- Exophthalmos
- Significant hair loss
- Lid retraction

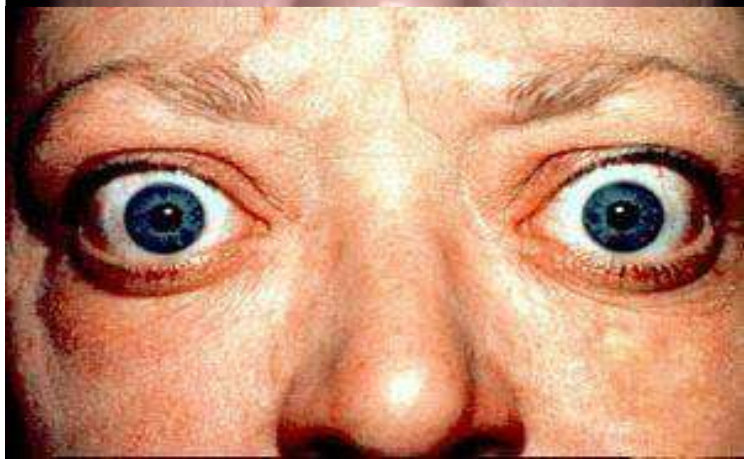


Q3: What is the 1st Sx patient will develop if she develops opthalmoplagia?

- ~~Diplopia~~ or Proptosis (~~not sure~~)

bulging eye





Q4: What is a drug you can give this patient before getting into surgery?

- PTU (Propyl thiouracil), propanlol

or carbimazol or methimazole

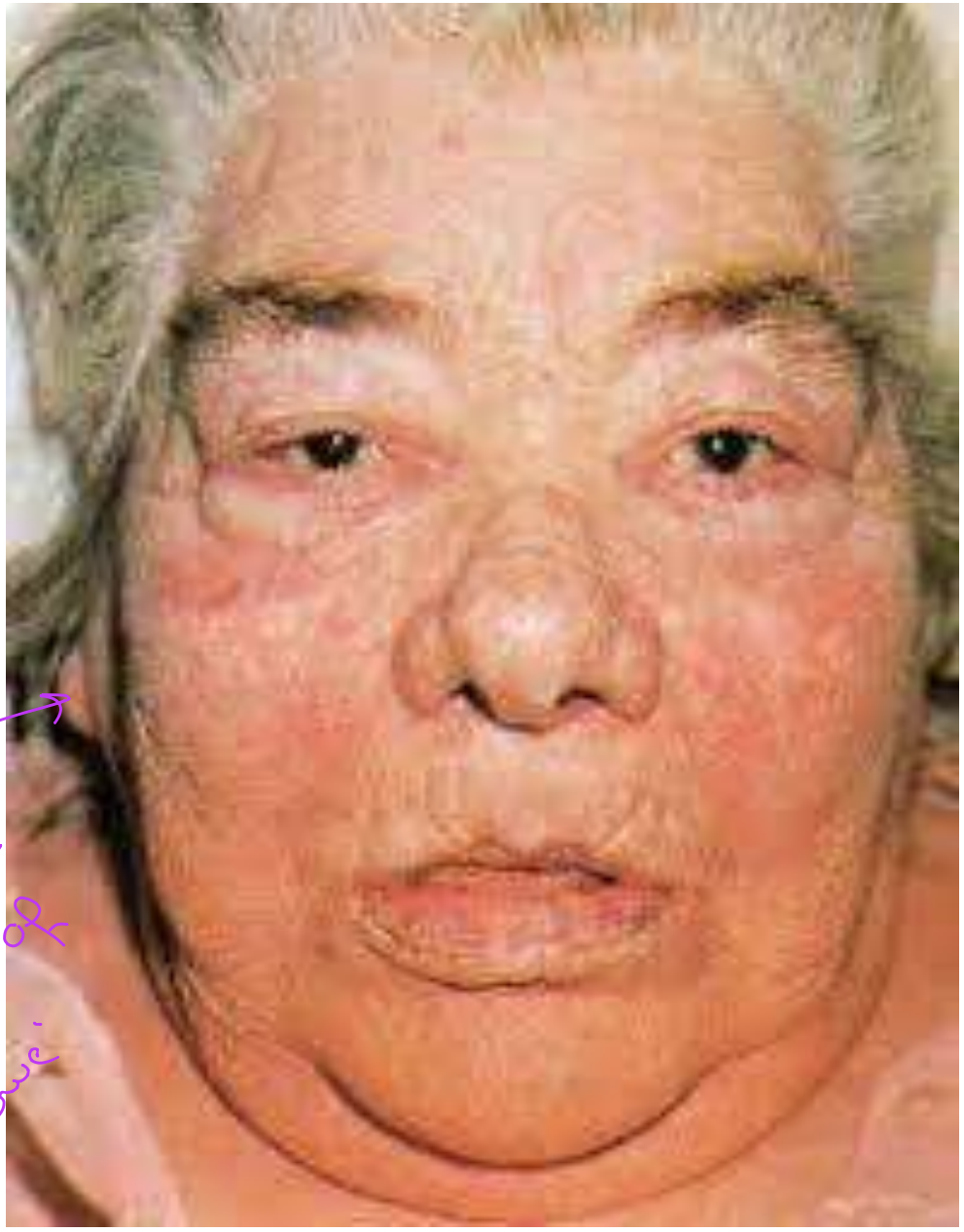
Q: 50 year old female patient present with hypothermia:

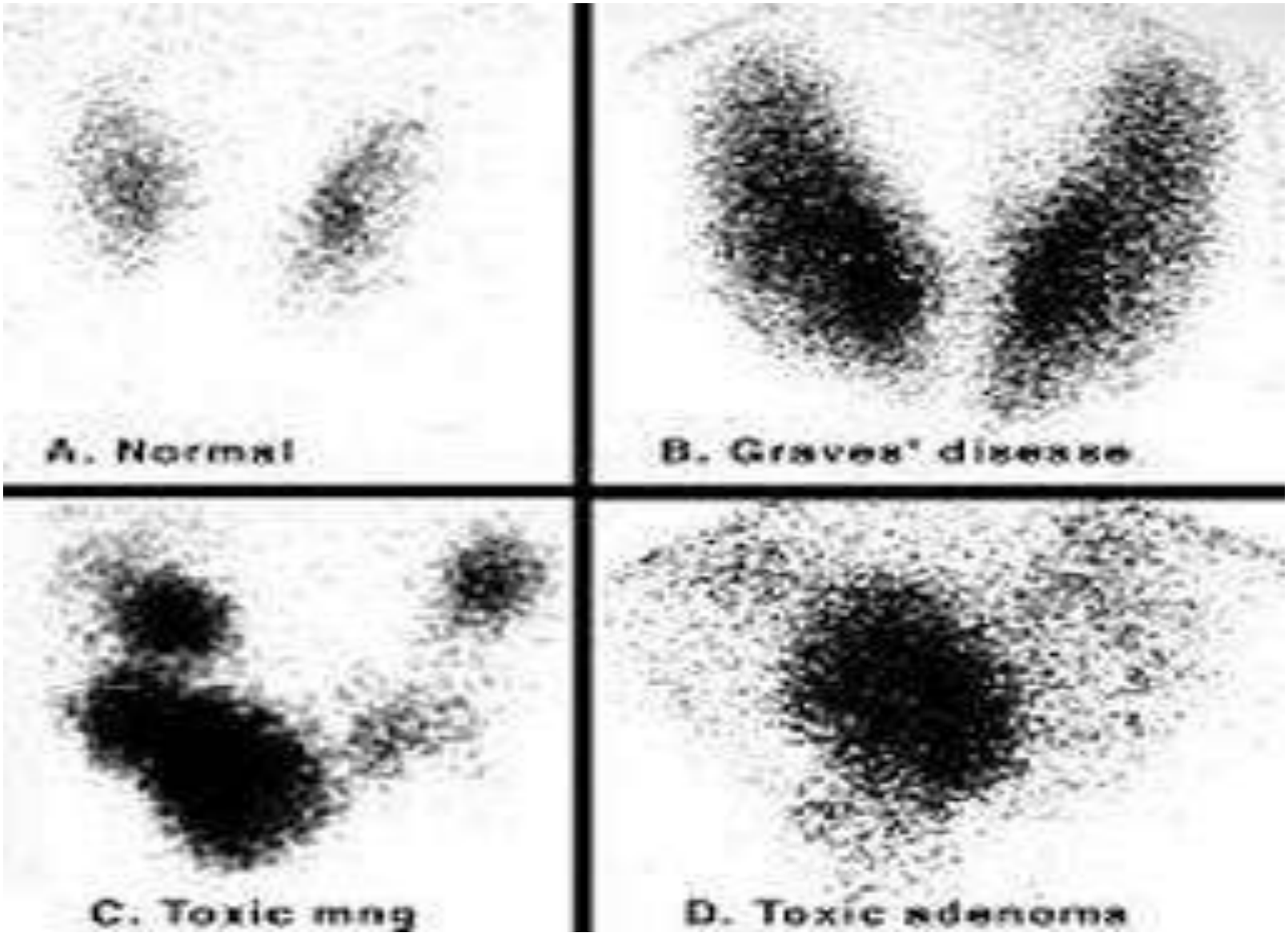
Q1: What is the endocrine disorder?

- Hypothyroidism

Q2: Mention 3 signs on face?

1) Puffy face
2) Periorbital edema
3) Coarse hair




A. Normal
B. Graves' disease
C. Toxic mng
D. Toxic adenoma

Q: Patient with hyper diffuse functioning thyroid:

Q1: What is the Dx?

- Graves Disease

Q2: What is the serological marker?

- TSI (thyroid stimulating immunoglobulin)

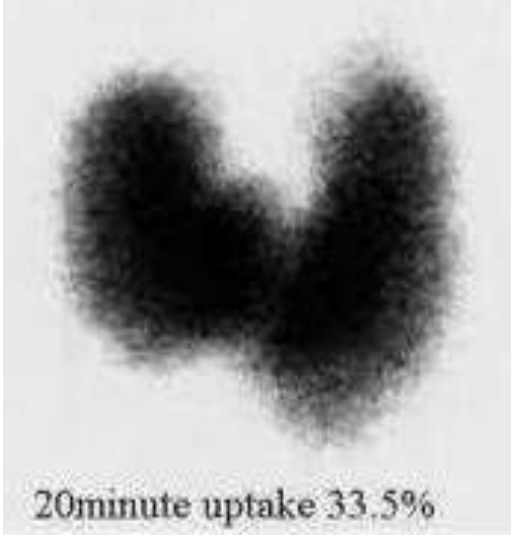
Q3: Mention 3 lines of Mx?

1) Anti-thyroid drugs (carbimazole) + β-blockers

2) Radio-iodine

3) Surgery

** All 3 are considered 1st line Mx



Q1: What is the pathology?

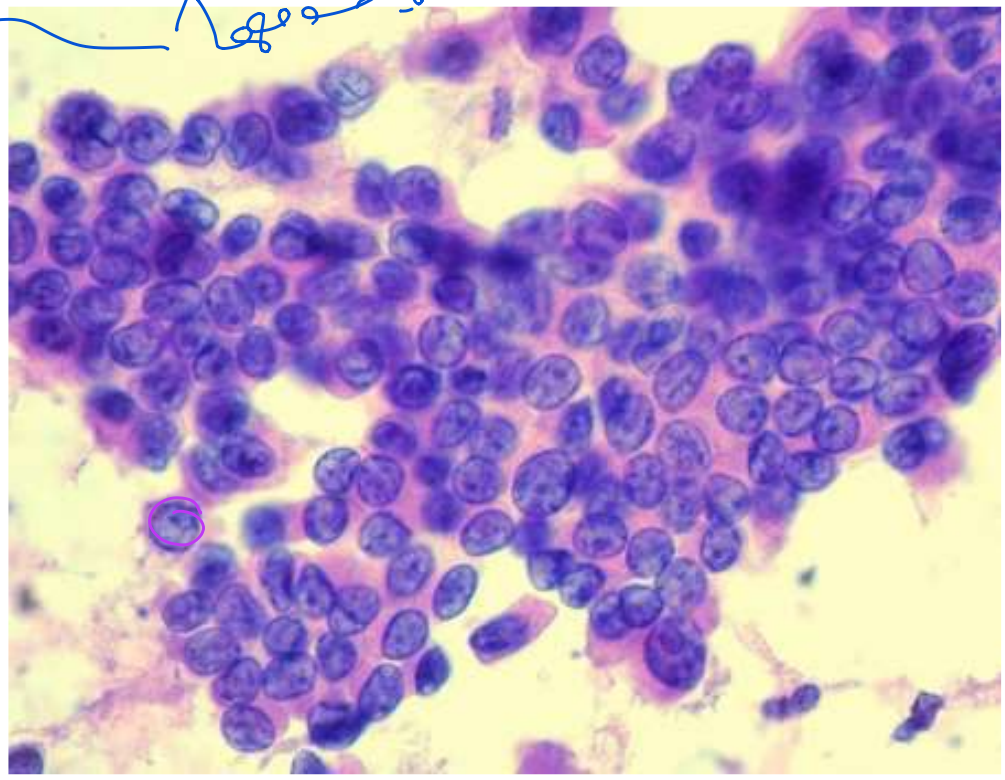
- Papillary Thyroid Carcinoma

Q2: What is the rate of the malignancy?

- 97-99%

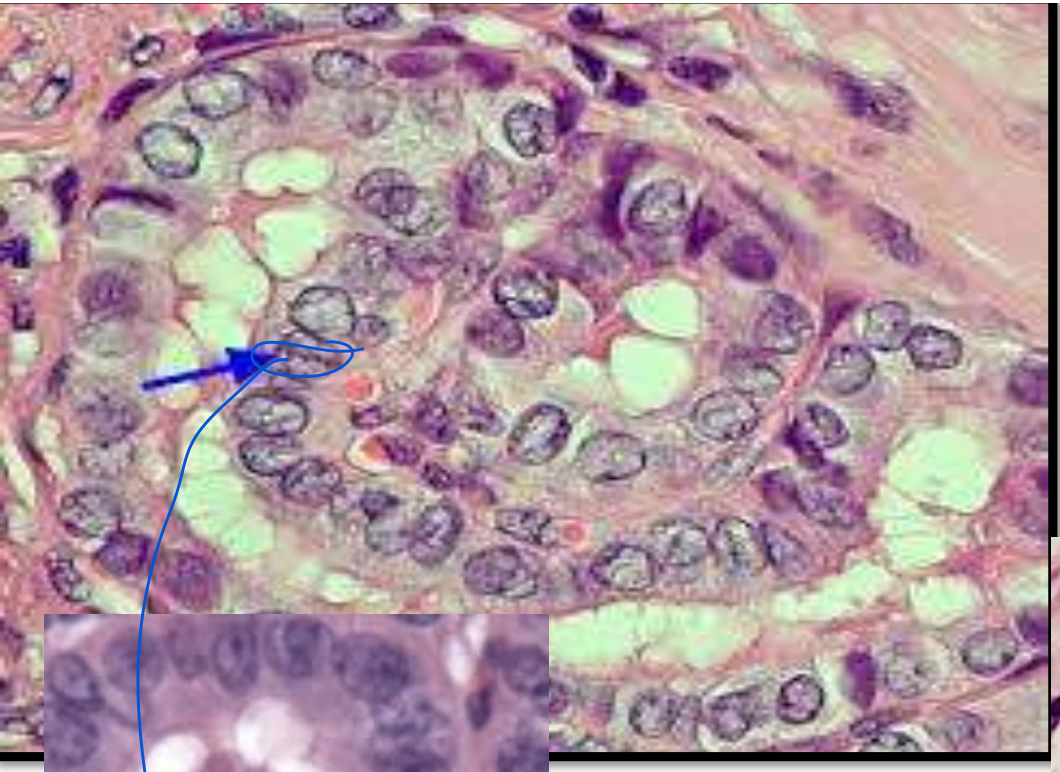
Q3: Mention 2 features seen in the picture?

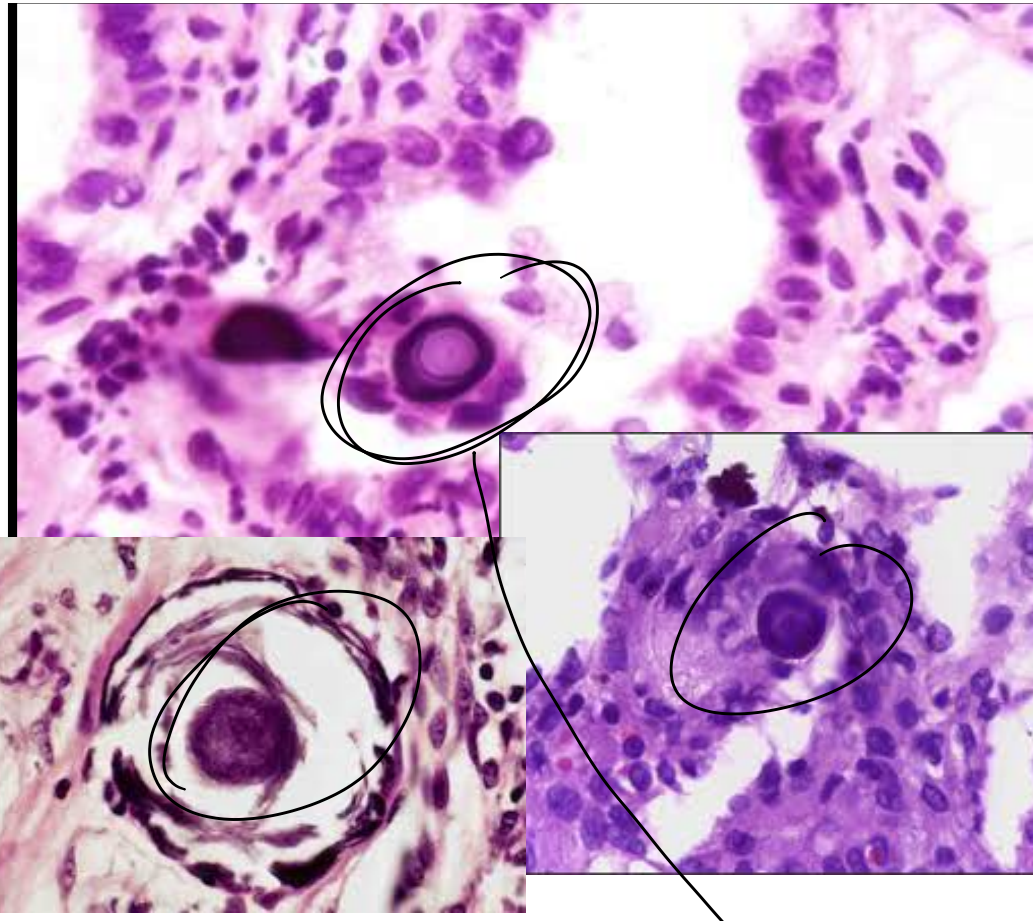
1) Nuclear Crowding
2) Orphan Annie Nuclei

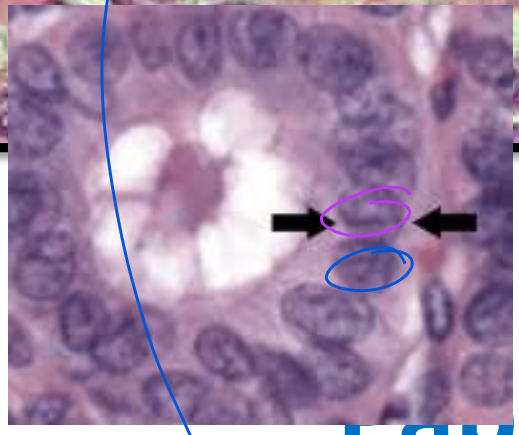


من تواضع الأنوية وتجمعها مع بعض نعرف انه هاي orphan anni اللي نشوفها

optical clear nuclei



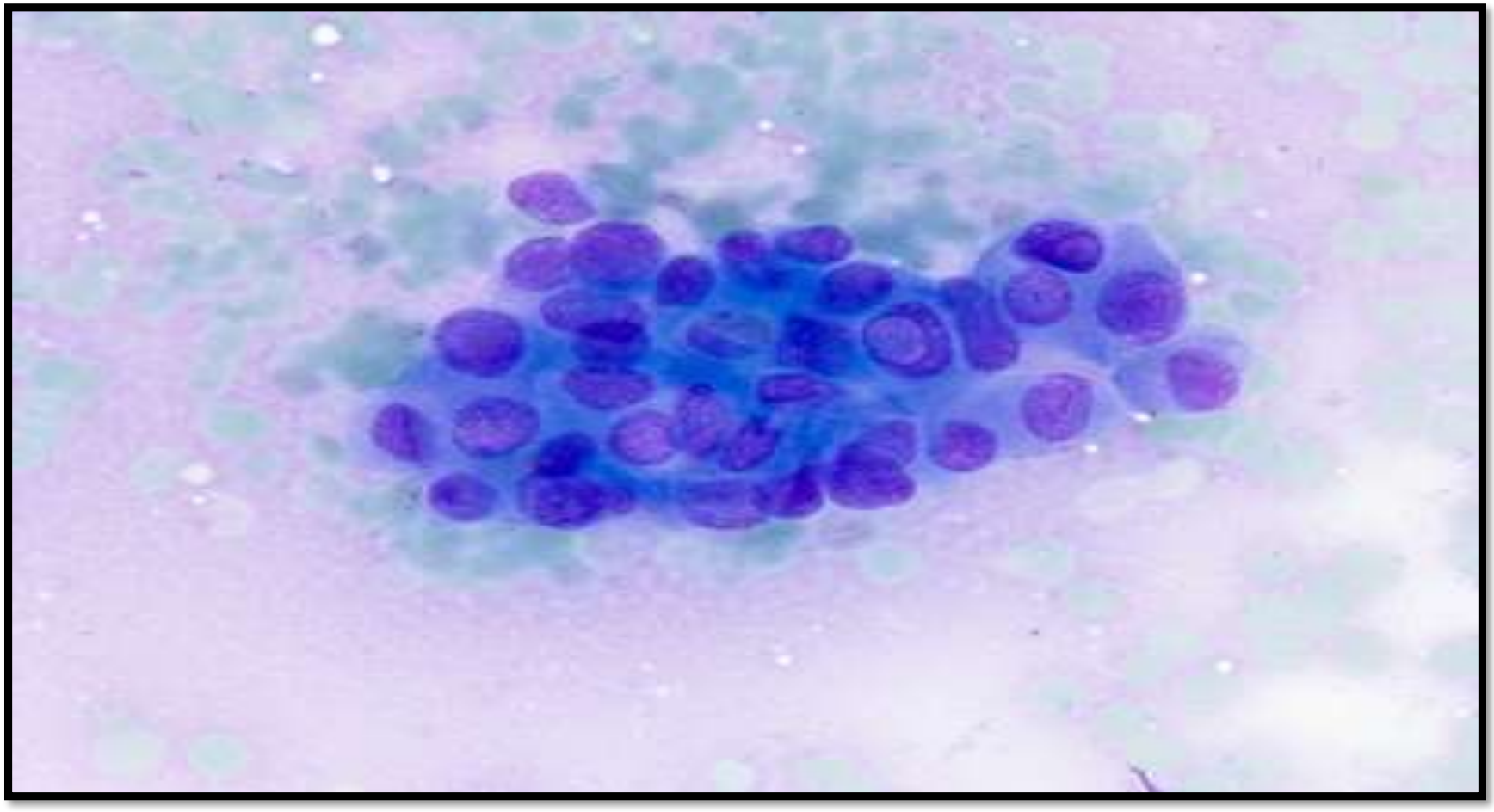




Papillary thyroid carcinoma:

a. Nuclear groove (blue arrow).

b. Psammoma body.

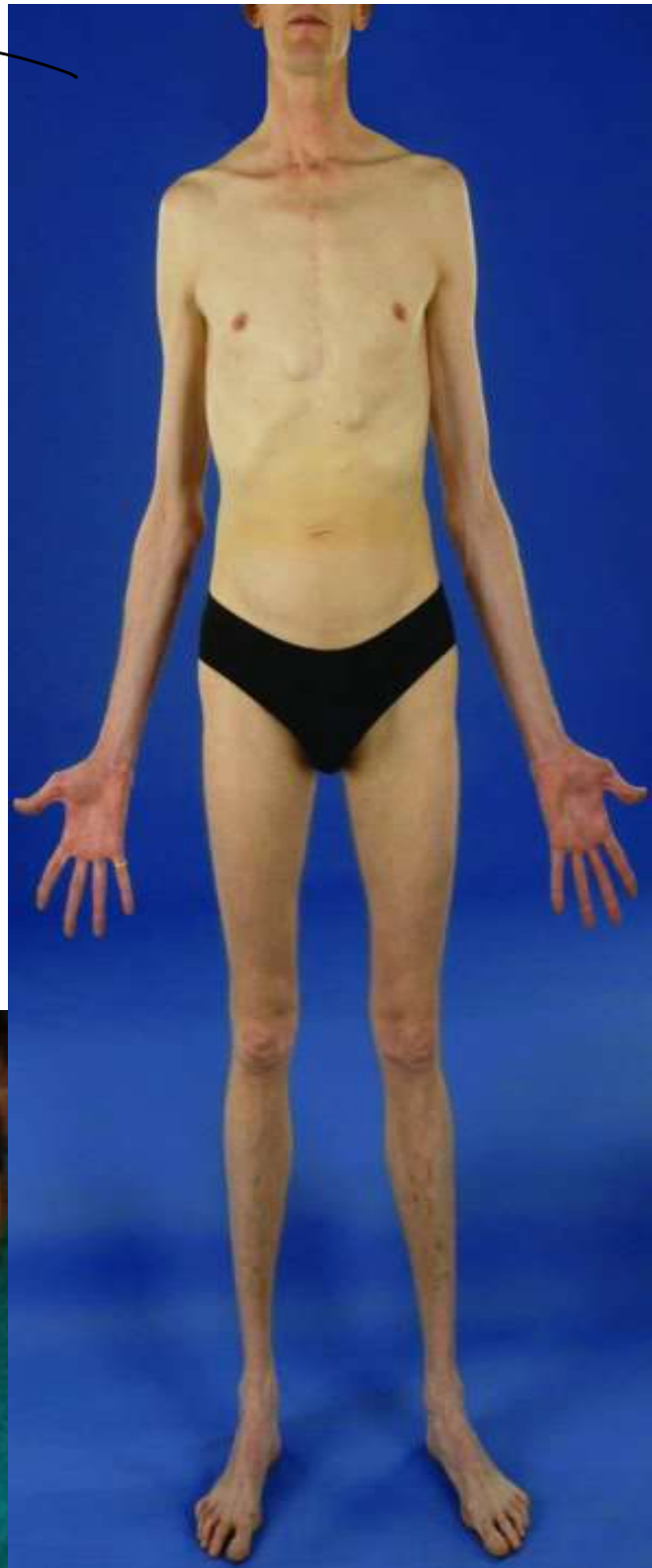


Papillary thyroid carcinoma:

(Intranuclear cytoplasmic inclusions)

spider fingers
(Marfanoid habitus)

+ wt loss



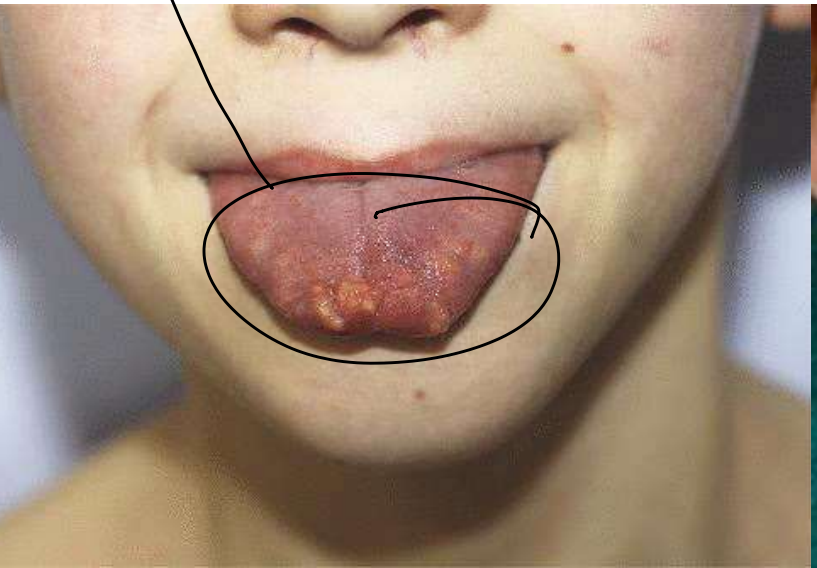
Q1: What type of thyroid cancer do you expect to see in this patient?

- Medullary

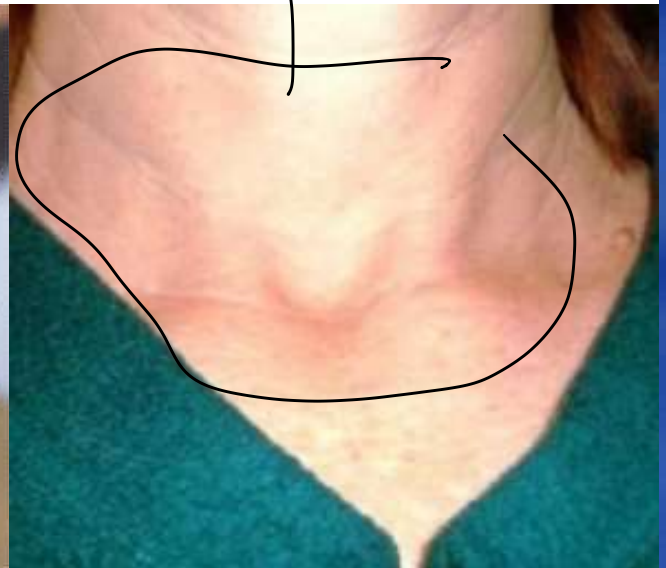
Q2: What's the marker?

- Calcitonin & CEA

neuromas of the tounge



lump



Q1: What type of thyroid cancer do you expect to see in this patient?

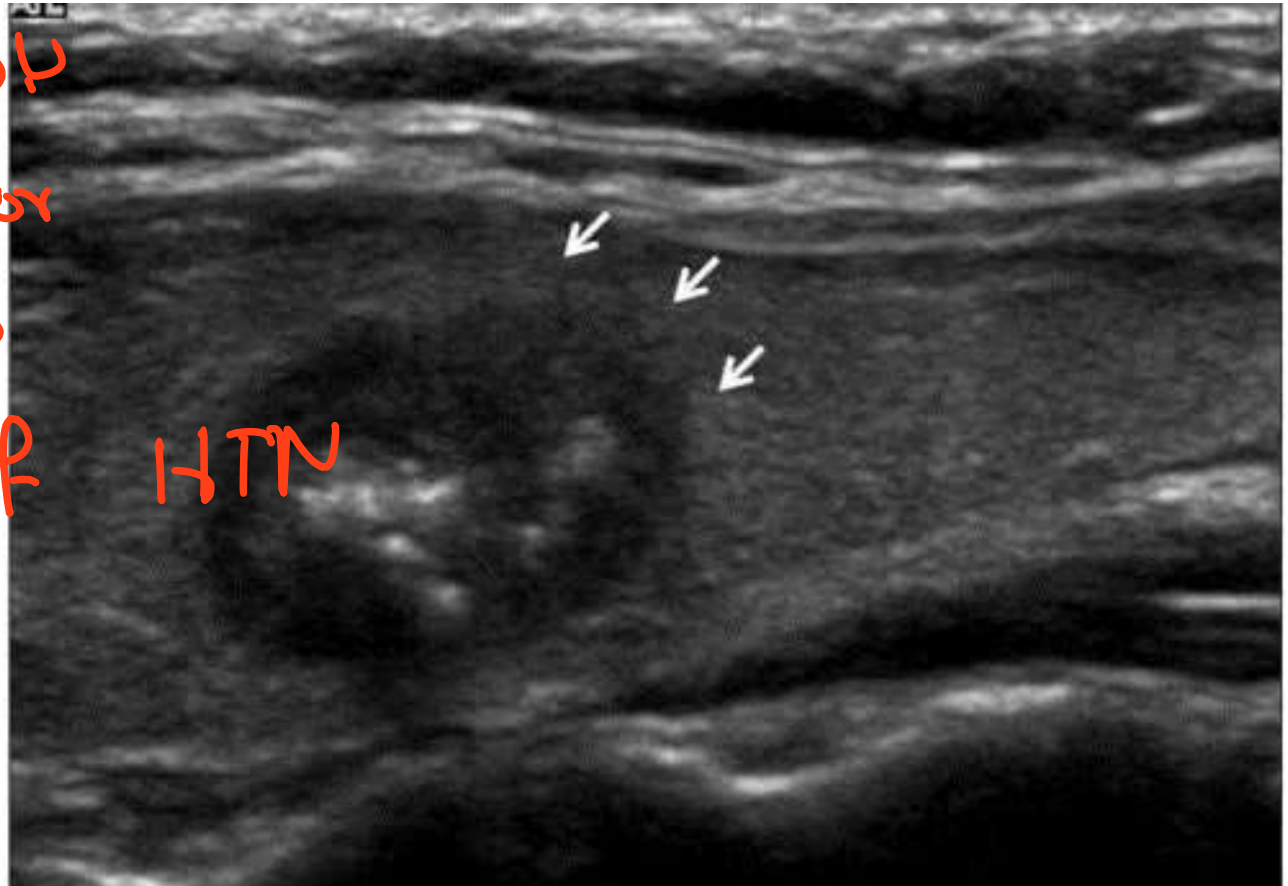
- Medullary cancer

بسبب its site

Q2: Before surgery what type you must exclude?

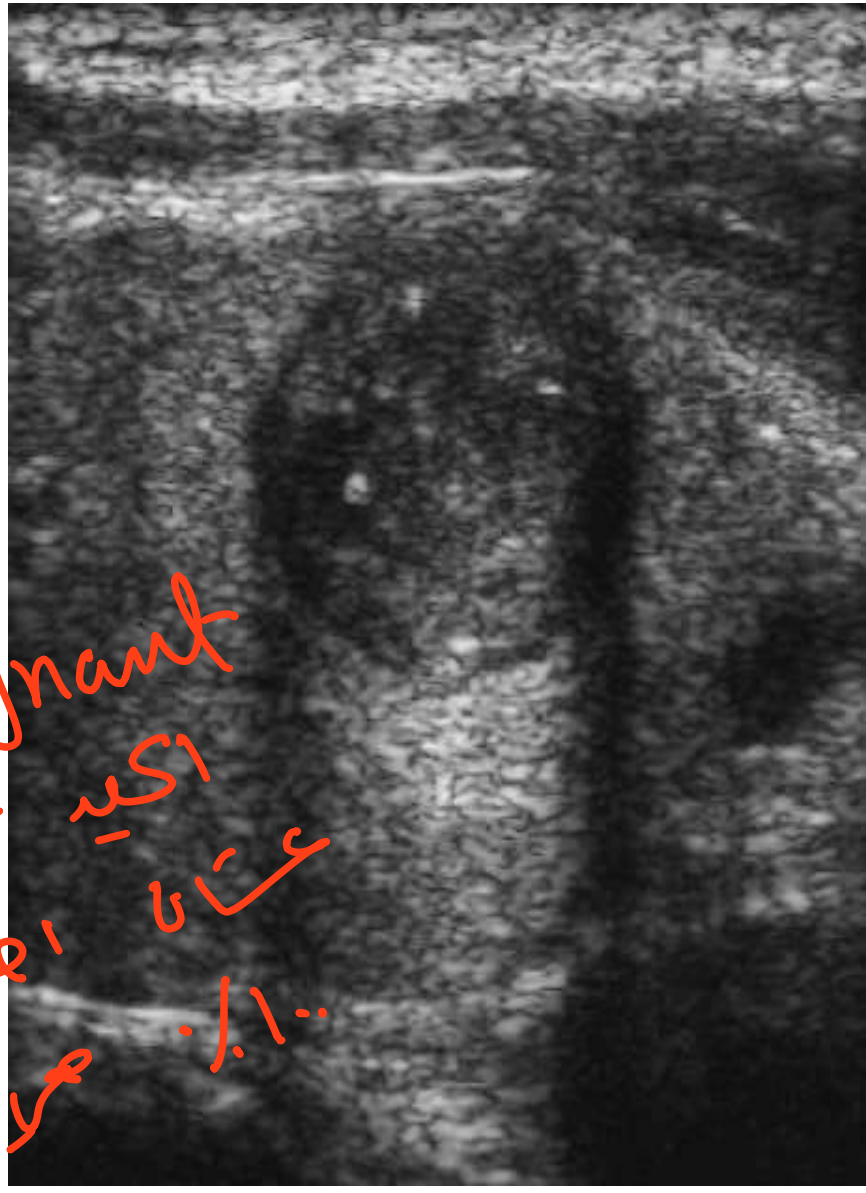
- MEN 2 (Pheochromocytoma)

لازم نستبعدهم لانه علاجهم قبل الاول



tumor هو اللي of HTN

Q: Hx of thyroid nodule, US showing: micro-calcifications, investigation of blood vessels and reactive LN:



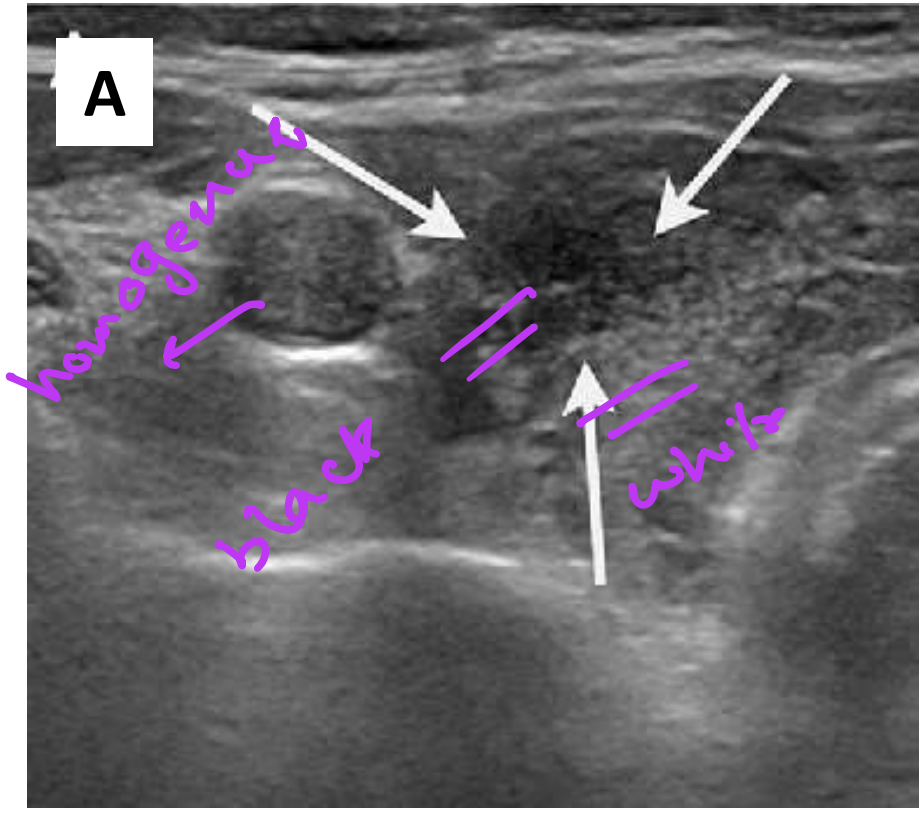
Q1: Bethesda Grade?

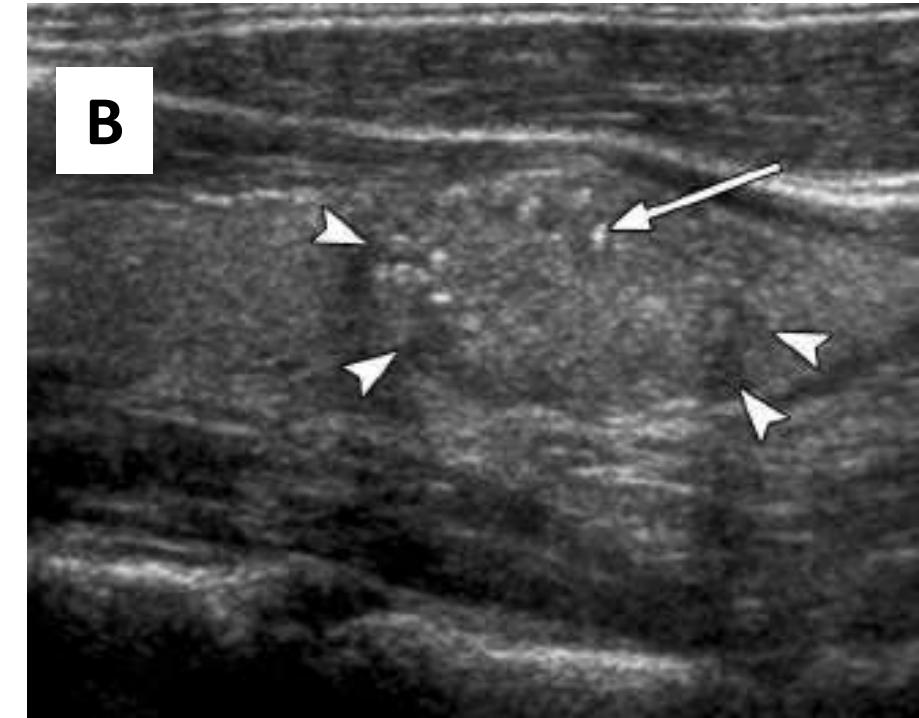
- Bethesda 5

Q2: What is your Mx?

- Total Thyroidectomy

Q: Images A & B demonstrate thyroid nodules that are considered sonographically suspicious for malignancy. Name the feature labelling each nodule suspicious.





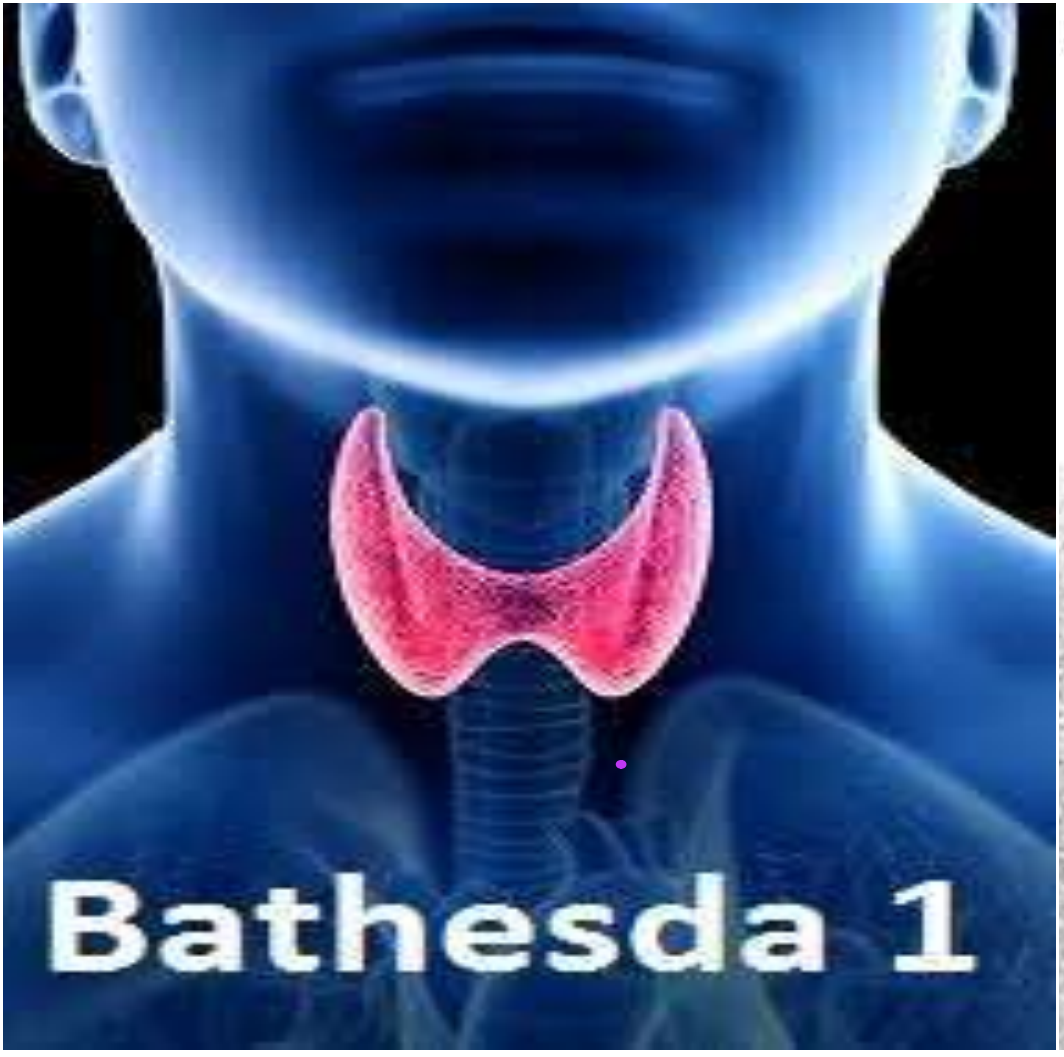
A > Heterogeneous

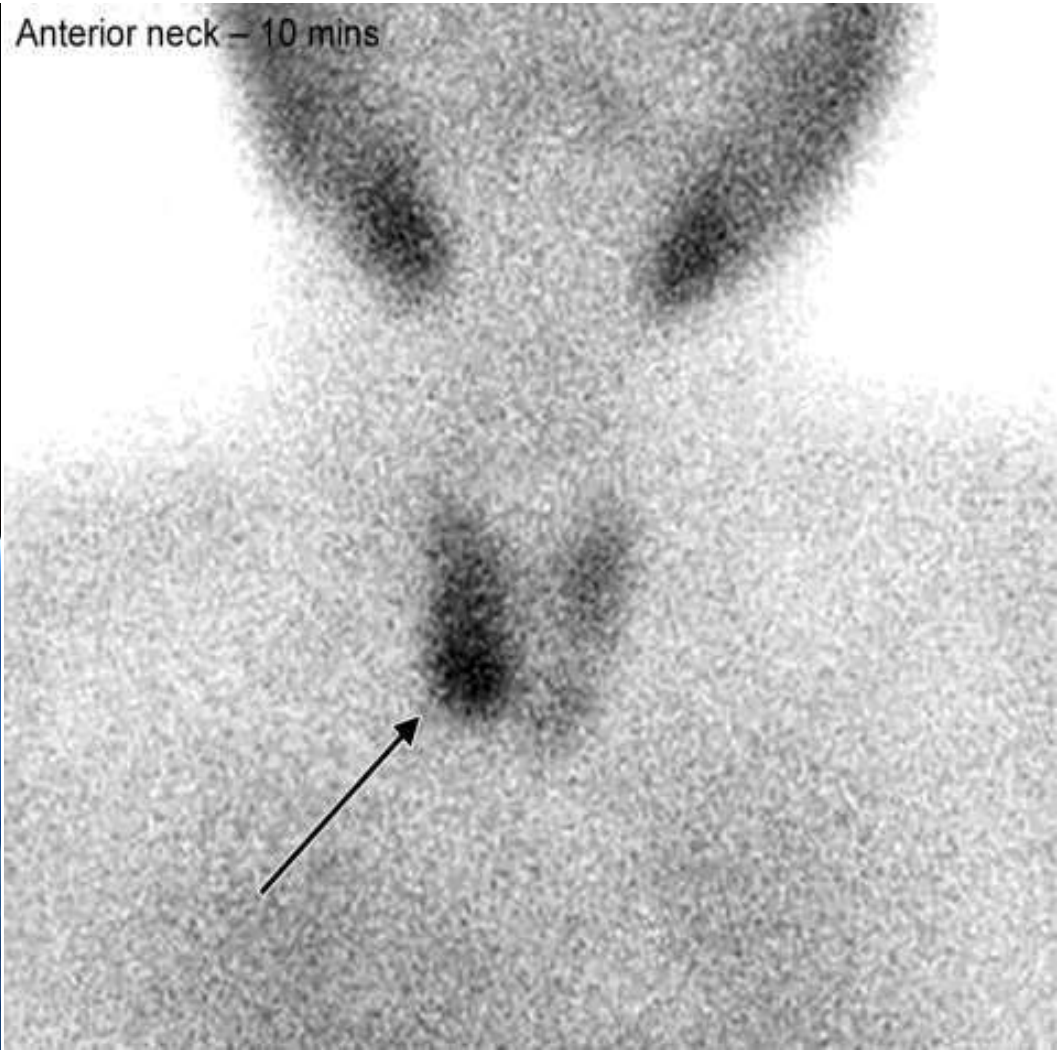
B > Calcification

Q: What shall you do in the following cases ?

A. Thyroid → repeat cytology

B. Parathyroid → removal (parathyroid adenoma)





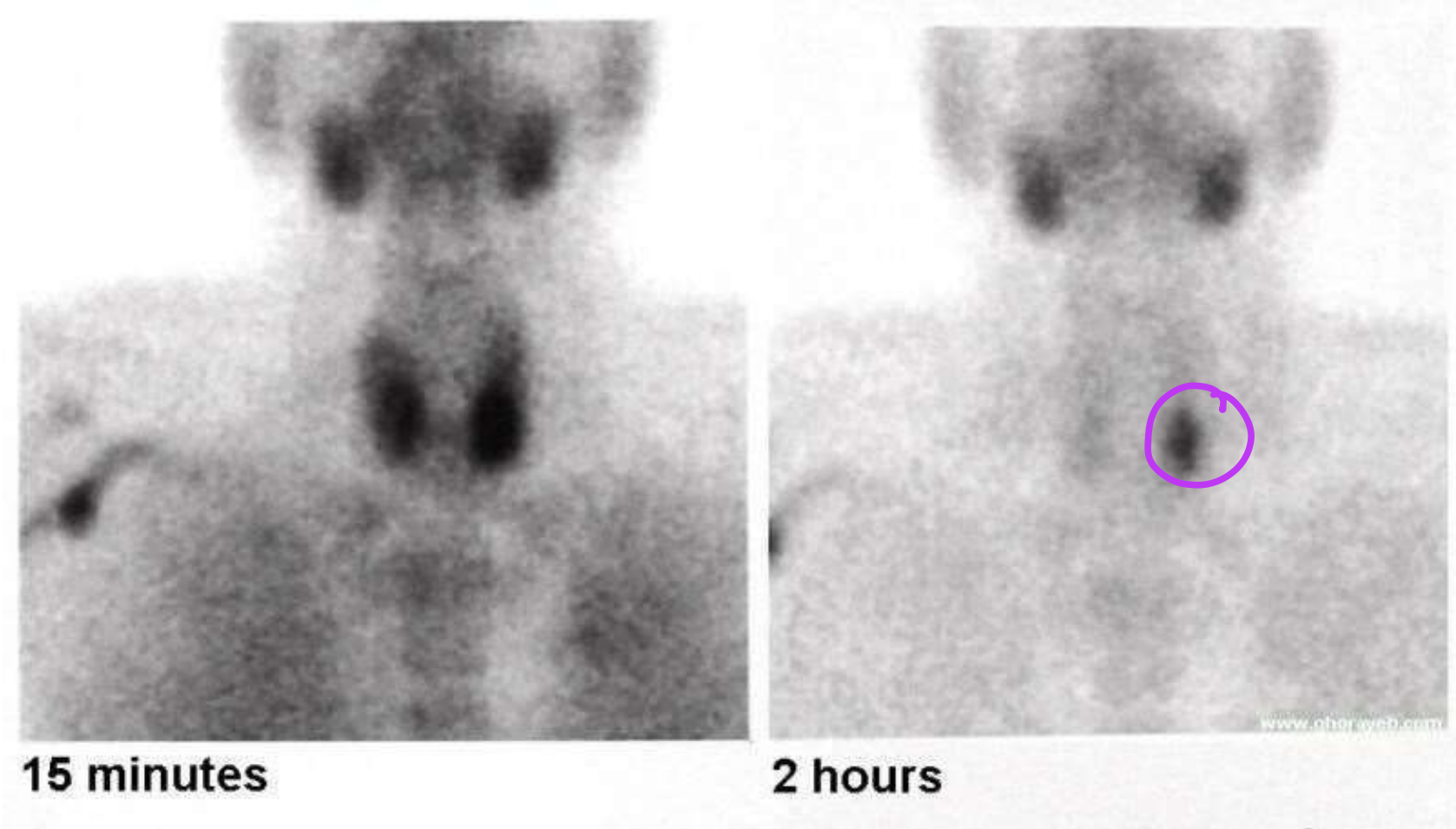
Q1: Name the study?

- Sestamibi scan of parathyroid ✓

Q2: What is the most common cause of the condition?

- Adenoma ✓ 90% in one gland

5-10% in 2



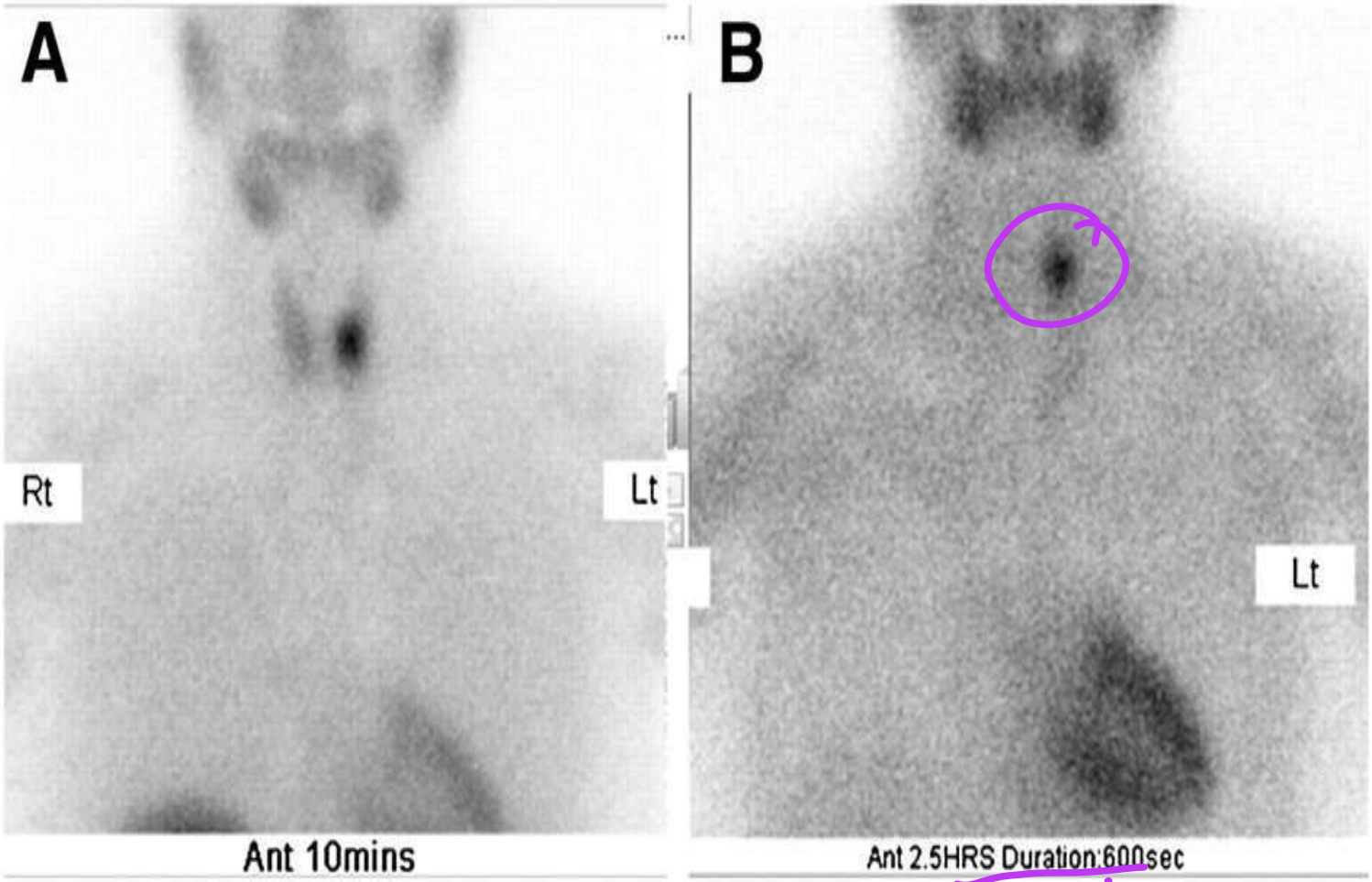
Q1: Name the study?

- Sestamibi scan

mc due to adenoma

Q2: What is the pathology you see?

- Hyperfunctioning parathyroid glands



Q1: Risk of disease to be from single nodule?

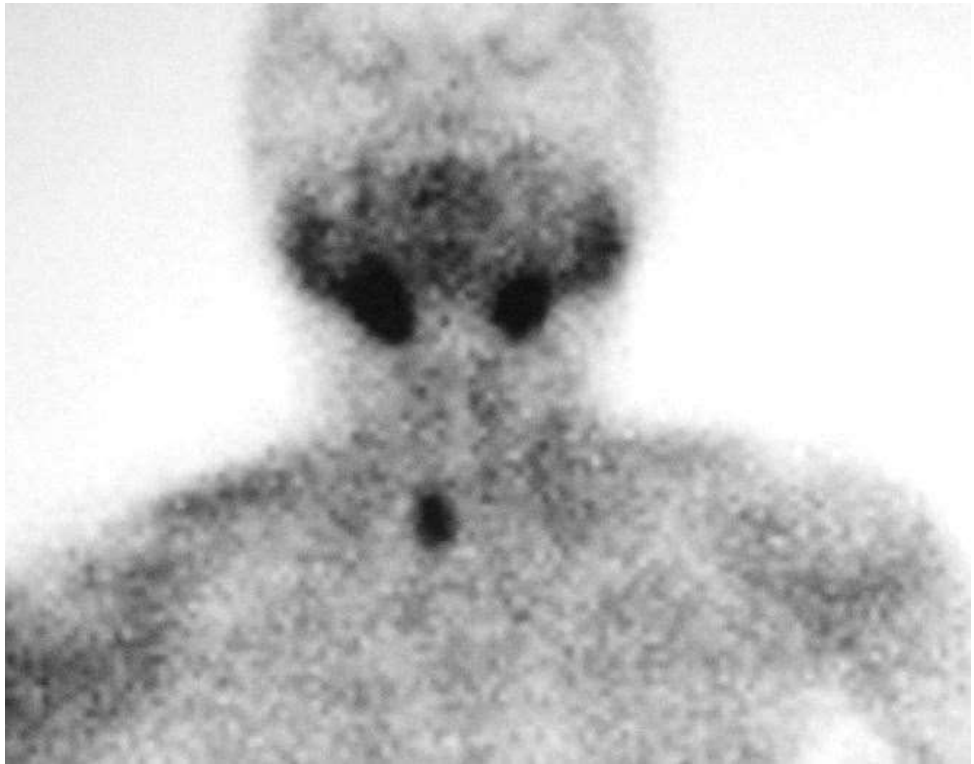
- 85-90% Adenoma

Q2: What is your Dx?

- Single parathyroid gland adenoma

Q3: What is your Mx?

- Removal



Q1: What is the Dx?

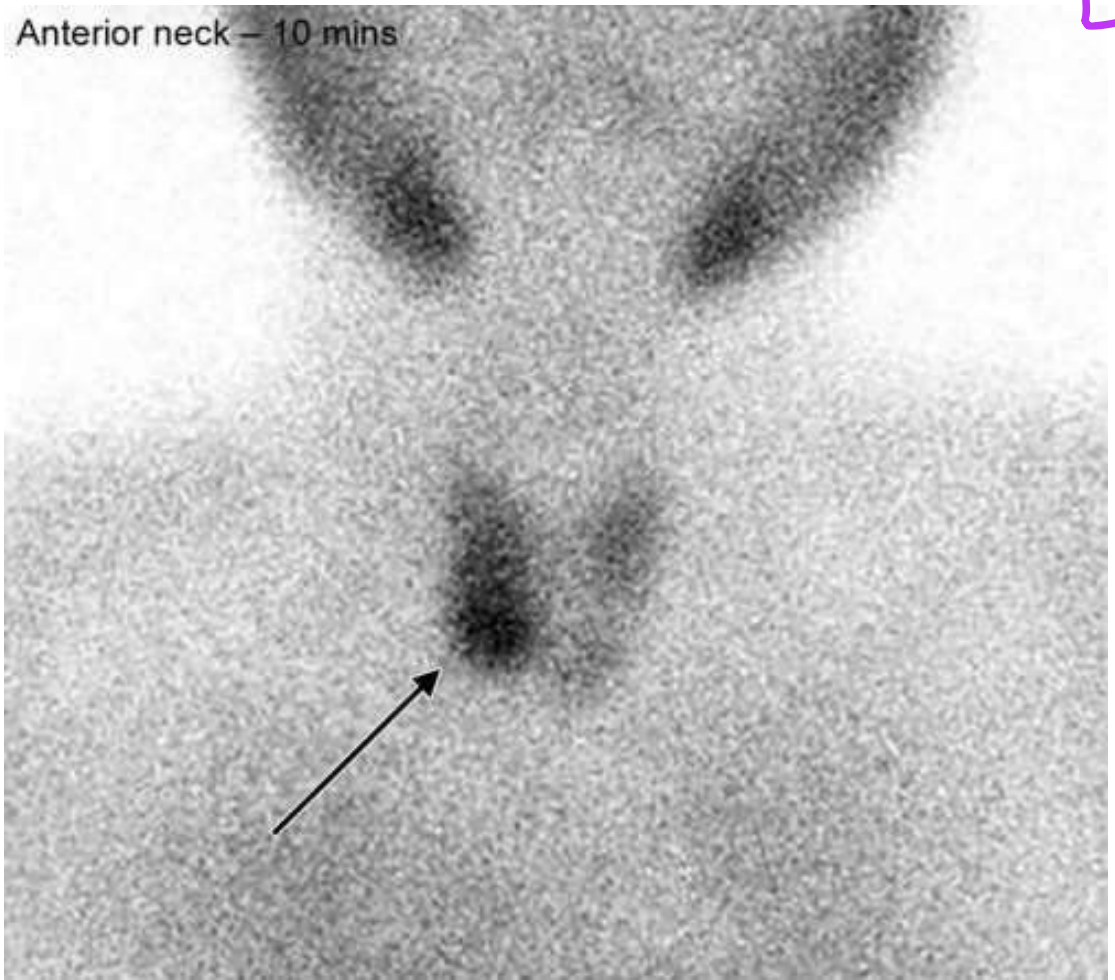
- Parathyroid adenoma (1ry hyperparathyroidism)

Q2: The 1st Sx to develop if the patient had high PTH & Calcium?

- Bone pain (Since it's Hyper)

if Hypo: Peri-oral numbness, carpal spasm

circumoral numbness



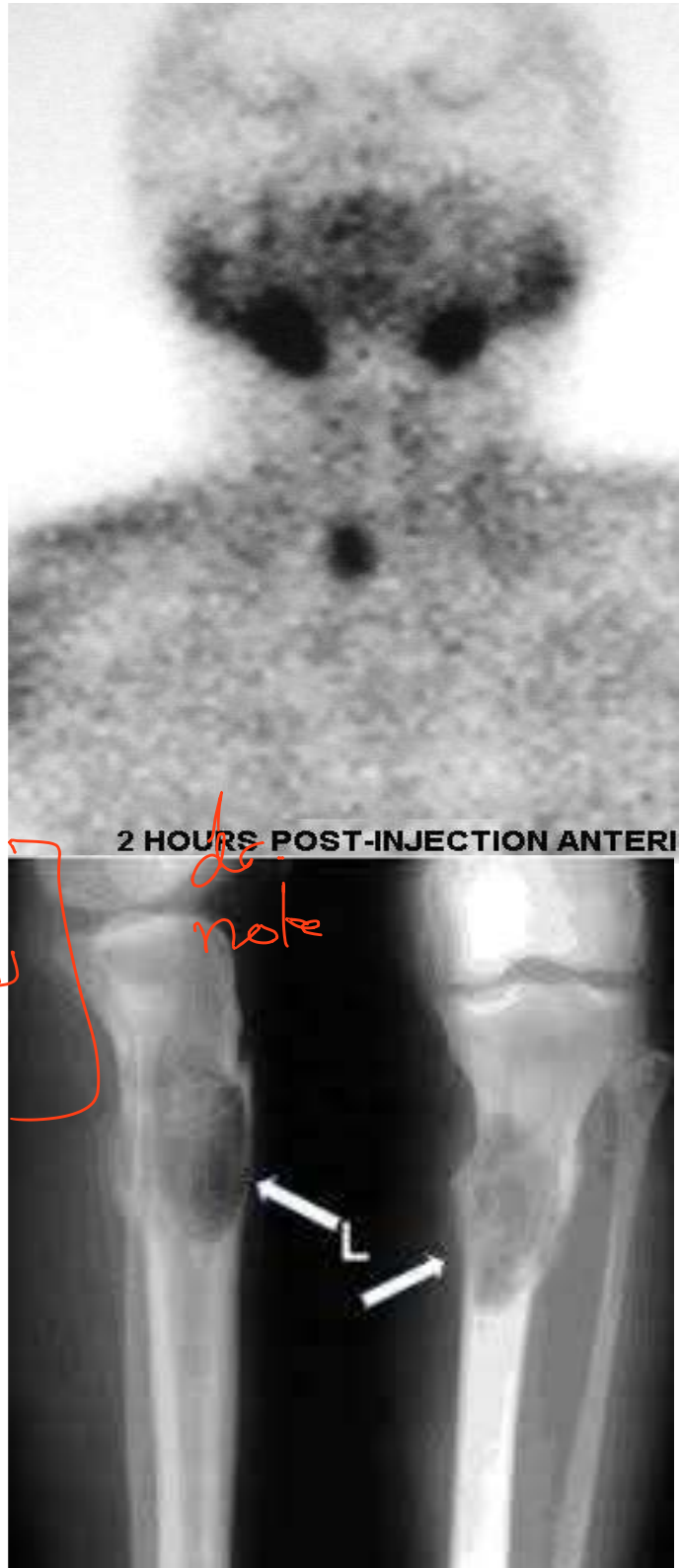
Q: A 60-years old female complains of pain in her bones. She presents with a palpable central neck lump below the cricoid cartilage that moves upward upon swallowing.

1. What does the lump mostly represent?

Parathyroid Carcinoma

2. What is the bone condition called?

Osteitis Fibrosia Cystica



Q1: Name the Dx?

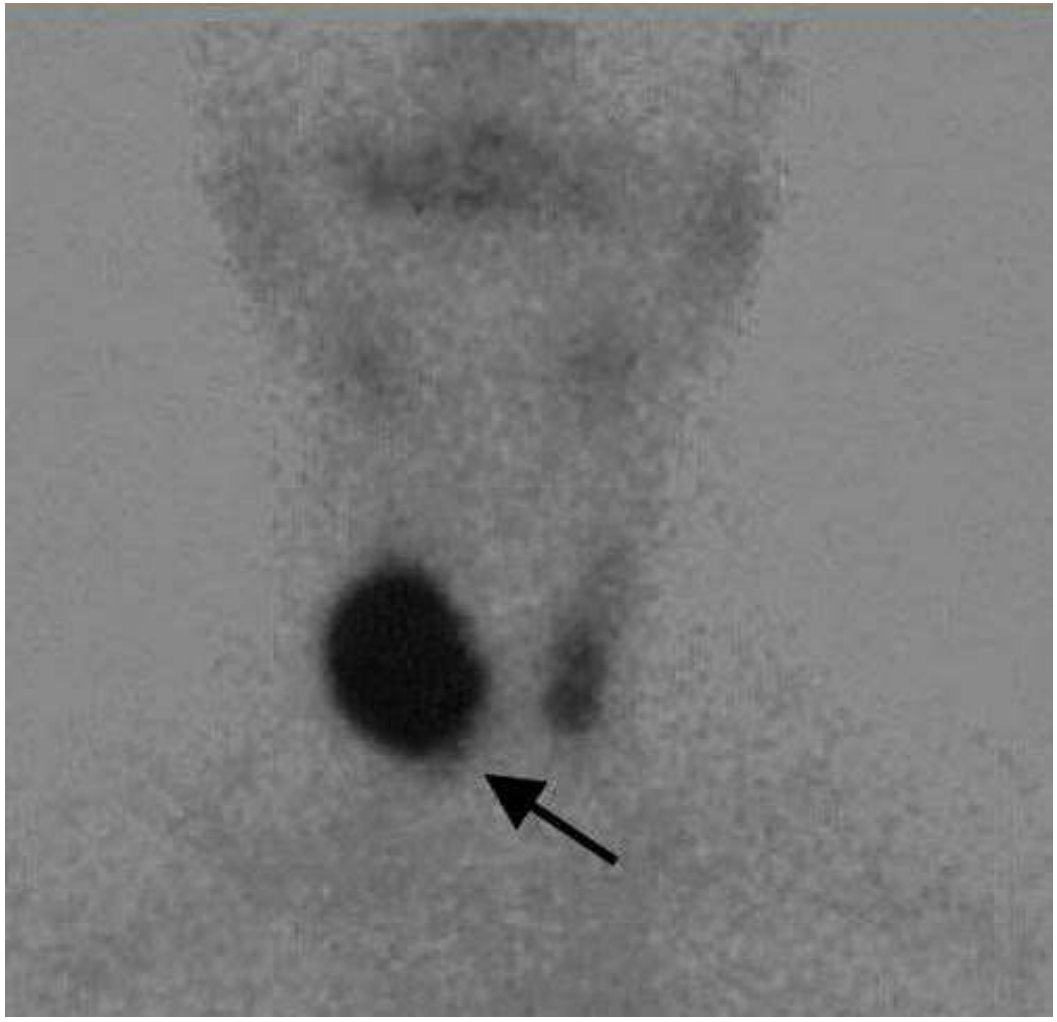
- Parathyroid hot nodule

Q2: Name the Rx?

- Surgery (Lobectomy)

Q3: Risk of malignancy?

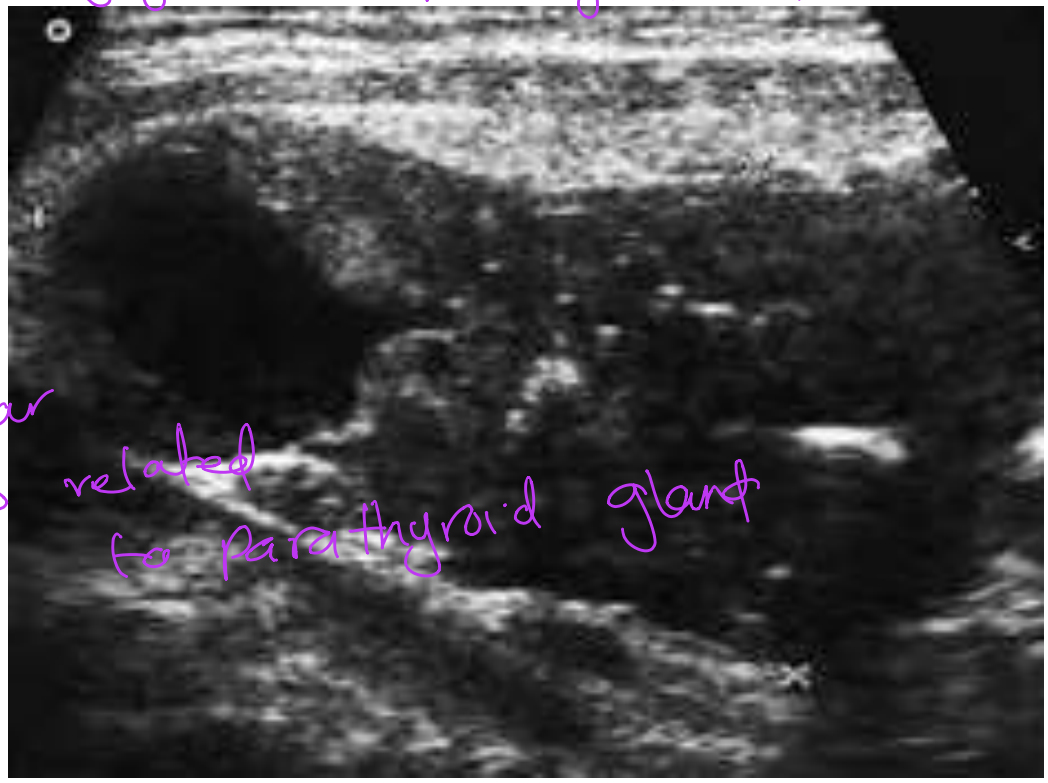
- Low risk (<3-5%)



① thyroid nodule ② LN ③ anneyrysm ④ parathyroid ca
⑤ tracheal sarcoma

Q: Hx of palpable neck mass, recurrent renal stone, high level of calcium and parathyroid hormone:

clear it's related to parathyroid gland



Q1: Name the Dx?

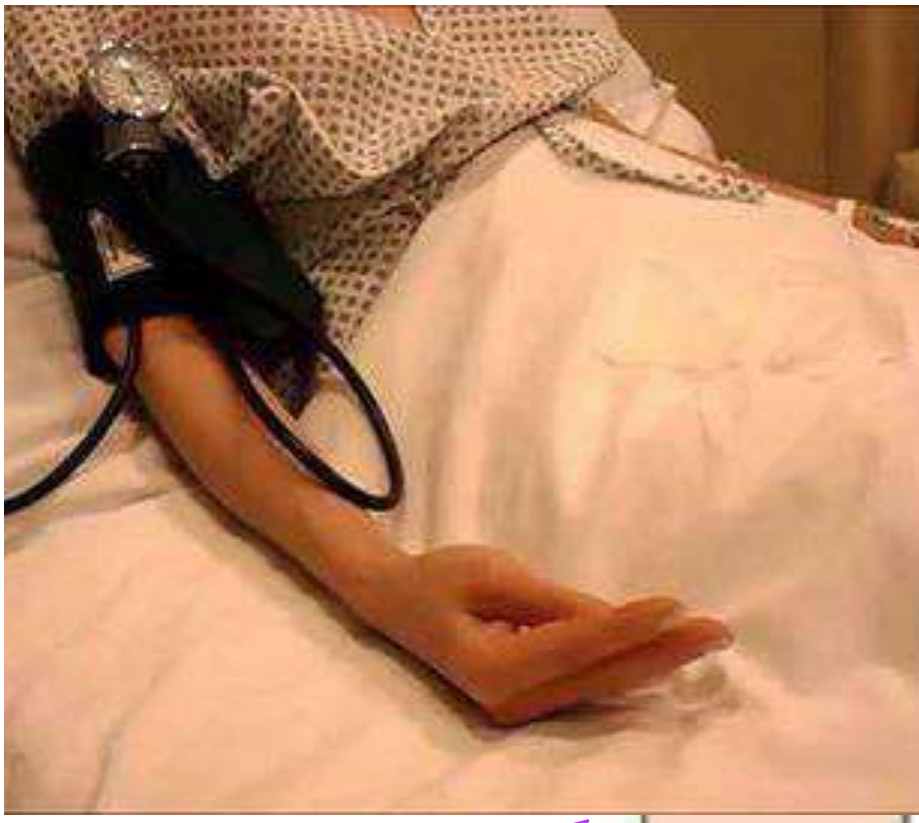
- Parathyroid carcinoma

Q2: What is the minimal Mx to be done?

- Parathyroidectomy or en-bloc resection of the parathyroid mass and any adjacent tissues that have been invaded by tumor . (from uptodate)

*** Note: En-bloc resection could include the ipsilateral thyroid lobe, paratracheal alveolar and lymphatic tissue, the thymus or some of the neck muscles, and in some instances, the recurrent laryngeal nerve

Q: The morning post-total thyroidectomy the patient developed the sign seen in this figure:



Q1: Name of he sign?

- Trousseau Sign

Q2: What is the cause?

- Hypocalcemia after removal of parathyroid glands

Trousseau's sign : Carpal spasm after occlusion of blood to the forearm with a BP cuff in pt with **hypocalcaemia.**

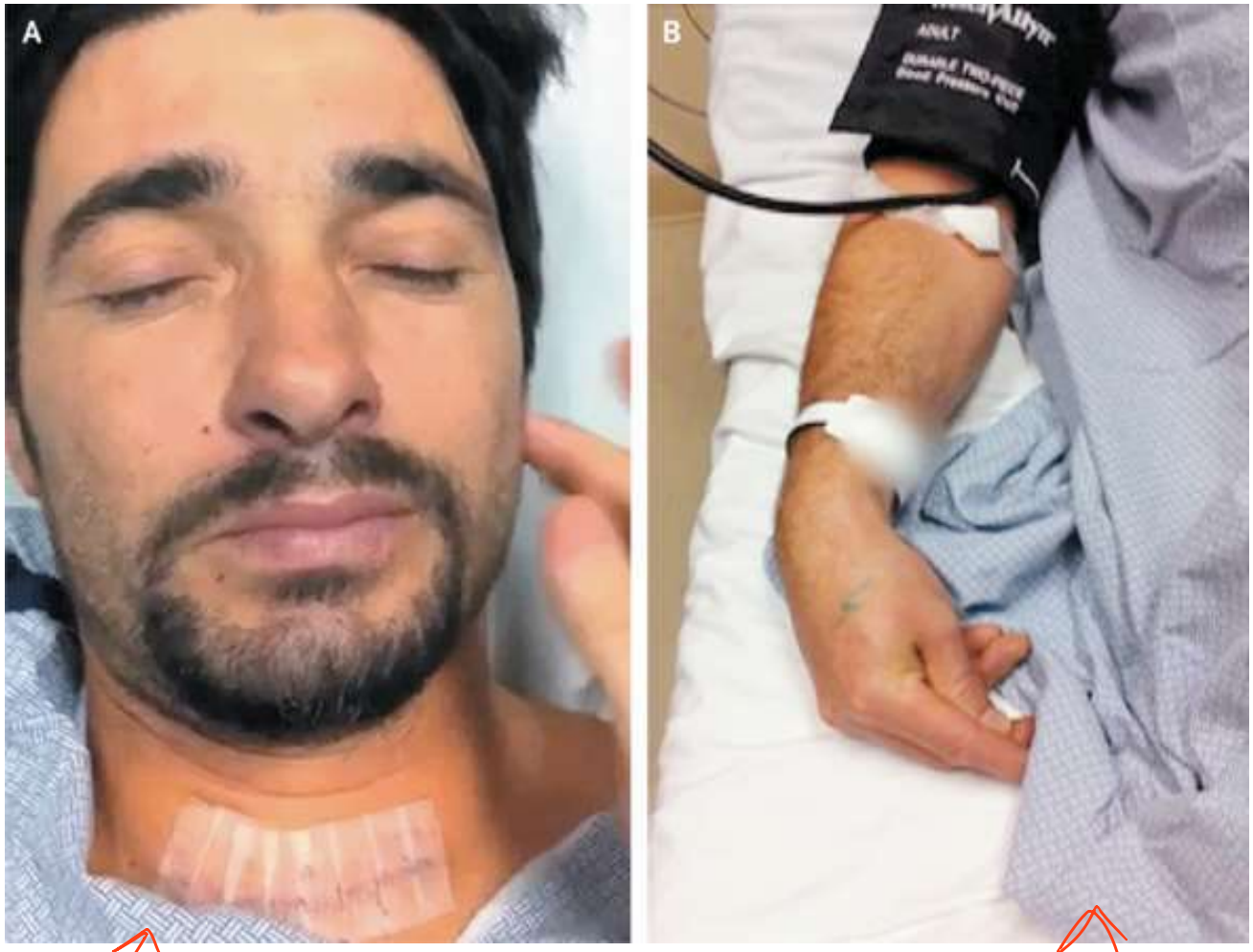
cut- off inferior thyroid A من نتيجة يكون in thyrodectomy

Q3: What is the most likely cause of hypoparathyroidism?

- Ischemic Injury

less common

or [trauma (thermal or mechanical)



Q1: What are the signs?

- Chvostek and Trousseau signs

Q2: What is the cation that influx and cause this sign?

- Na+ Sodium

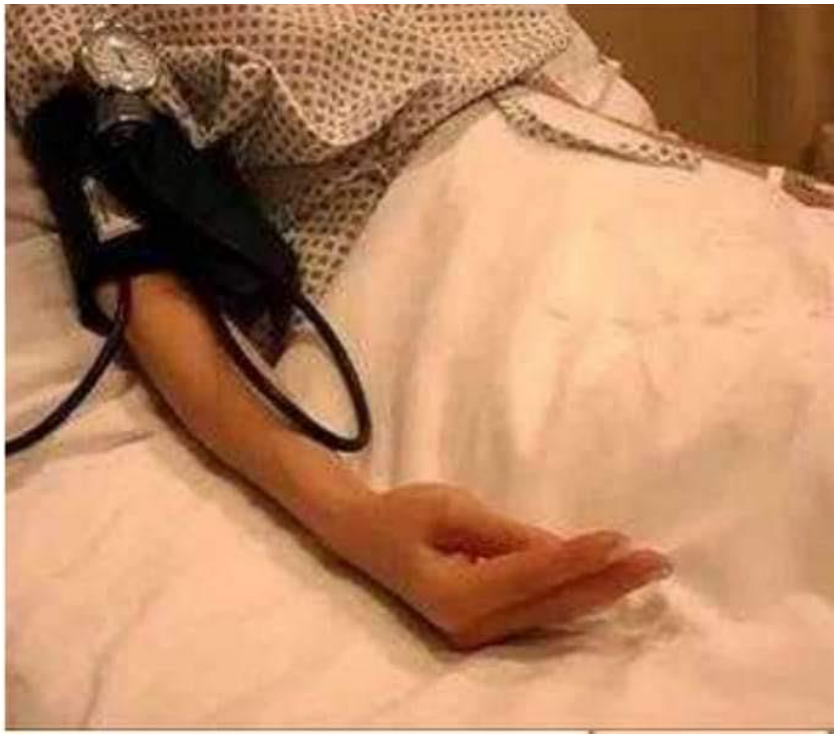
NECK, THYROID & SALIVARY GLANDS

Hashemite University
H · U · M
Medical School Committee

QUESTION

Yaqeen 2025

1. Name this sign.
2. First symptom to develop
3. What is the cause?



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Trousseau Sign

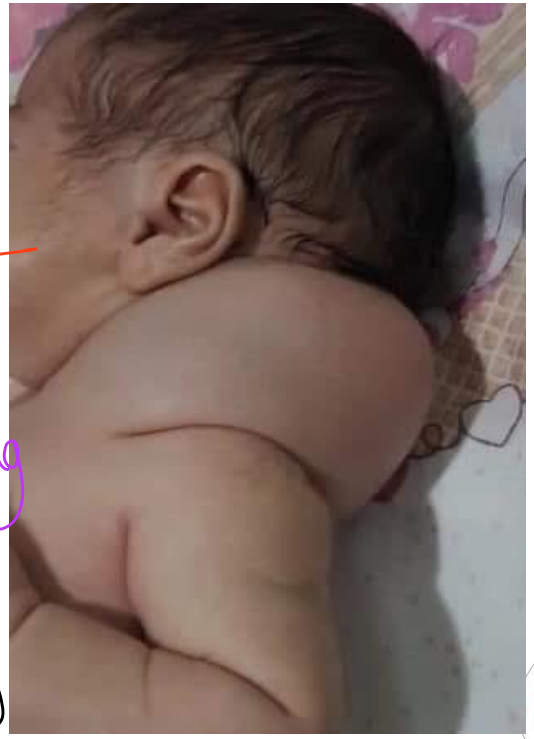
2. Ischemic injurie

3.Hypocalcemia after removal of parathyroid glands

QUESTION

Yaqeen 2025

1. What is the diagnosis?
2. What is the most common second location?



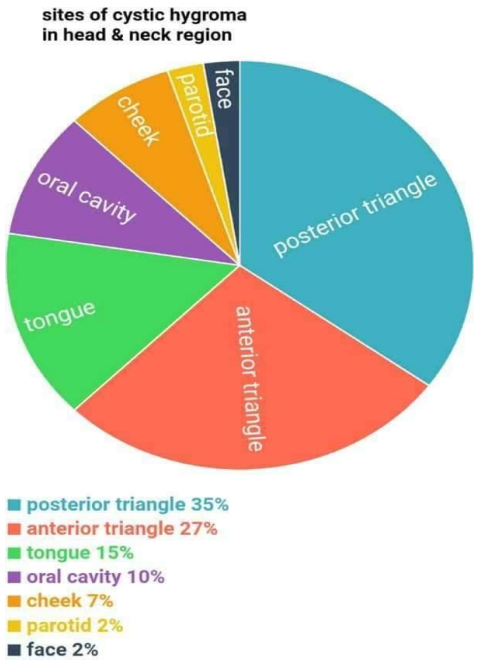
caused by environmental factors:

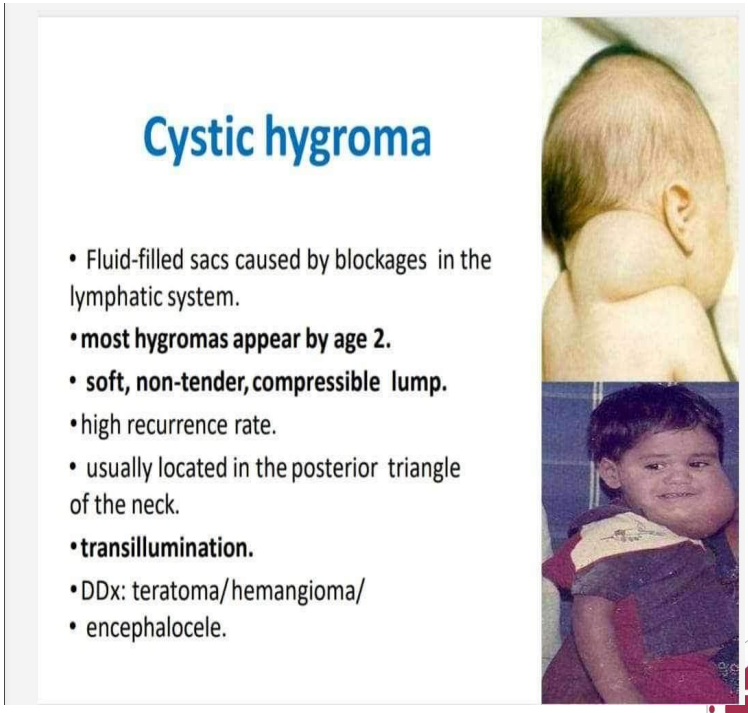
① smoking, alcohol during pregnancy

Most serious complication is Fetal hydrops

ANSWER

1. Cystic hygroma
2. Anterior triangle



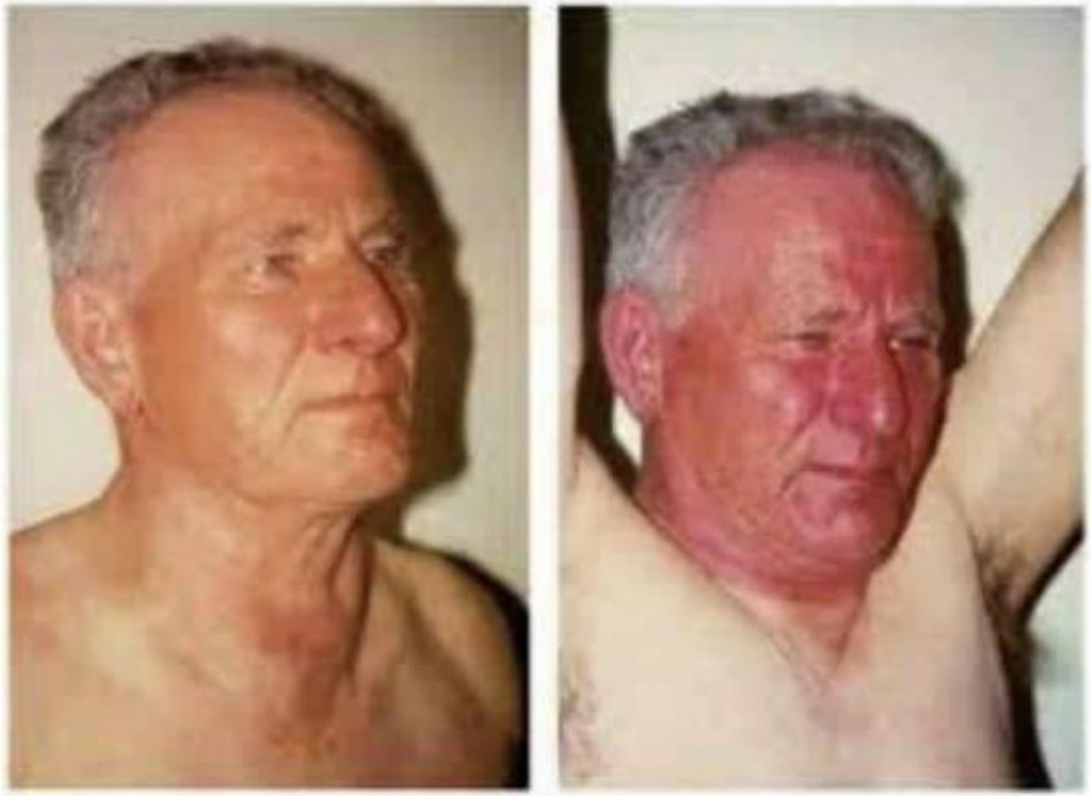


Hashemite University
H · U · M
Medical School Committee

• QUESTION

Yaqeen 2025

A. Name the sign.
B. Give the cause



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. pemberton sign
B. common manifestation of retrosternal goiter but may also occur with lung carcinoma, lymphoma, thymoma, or aortic aneurysms ,occurs when the thoracic inlet becomes obstructed during positional changes, resulting in compression of the jugular veins. (retrosternal goiter تكفي للاجابه)

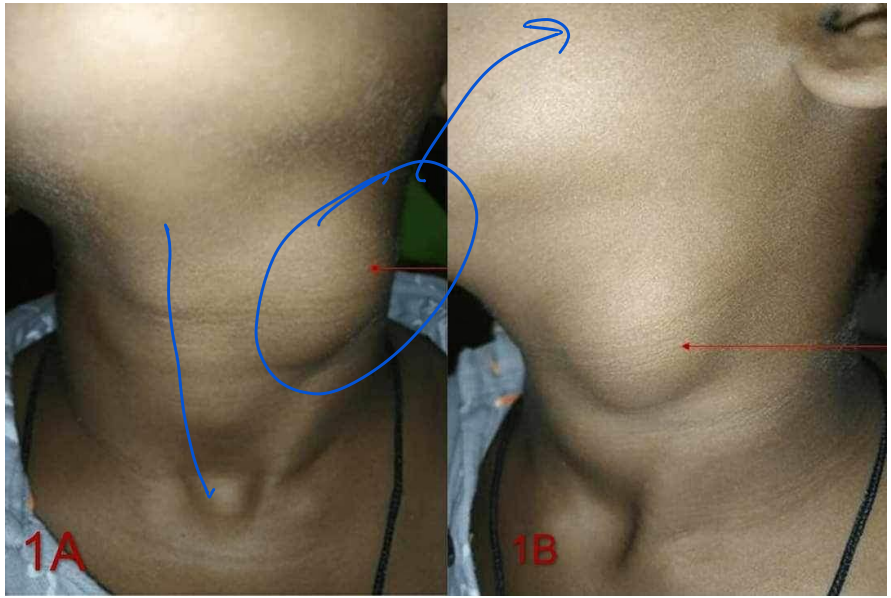
Hashemite University
H · U · M
Medical School Committee

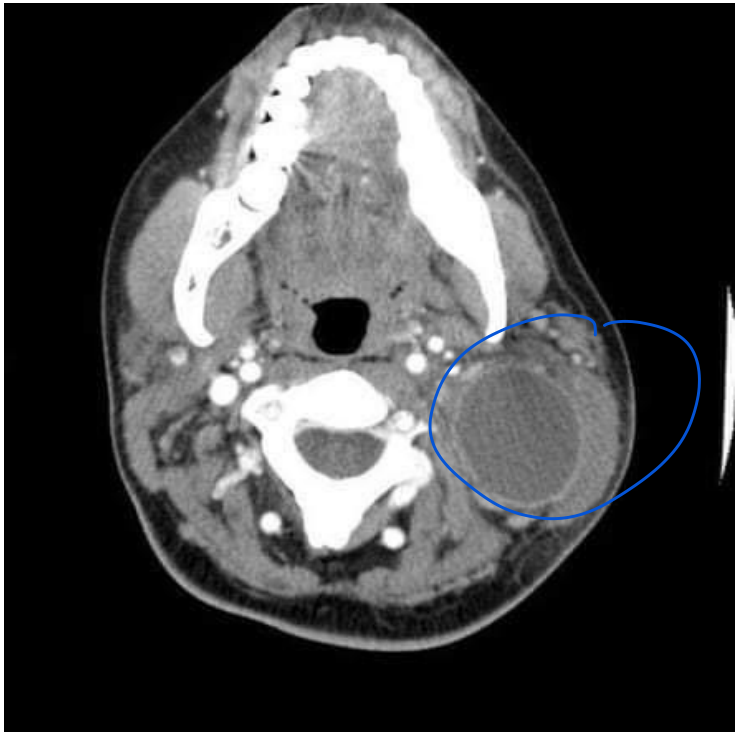
• QUESTION

Yaqeen 2025

1.Name the lesion :

2. It's origin:





ANSWER

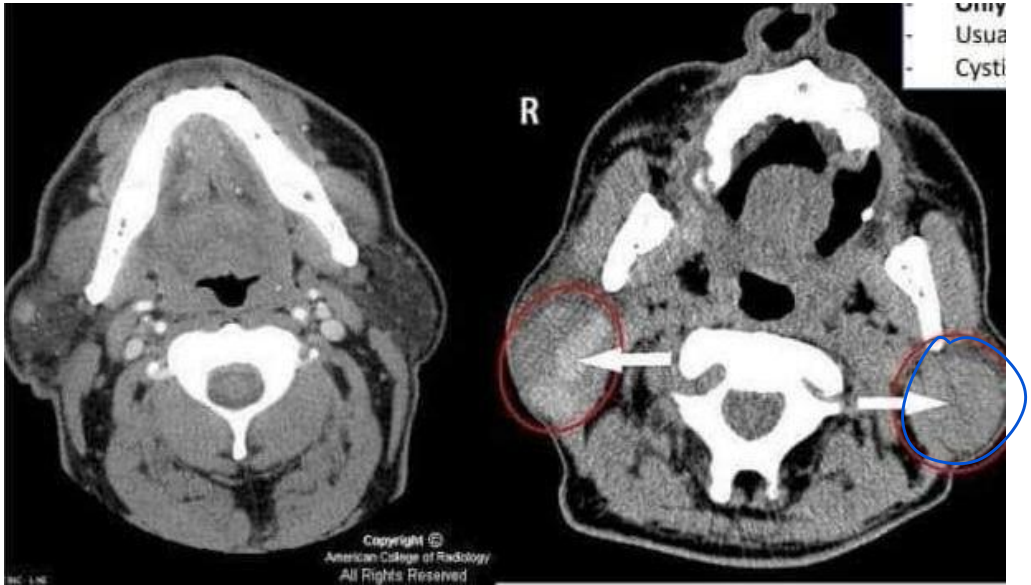
1.branchial cyst

2.originate from : 2nd pharyngeal pouch

• QUESTION

Yaqeen 2025

1. What is the diagnosis?
2. What is the most common site?
3. Describe the consistency of the mass :



Hashemite University
H · U · M
Medical School Committee

ANSWER

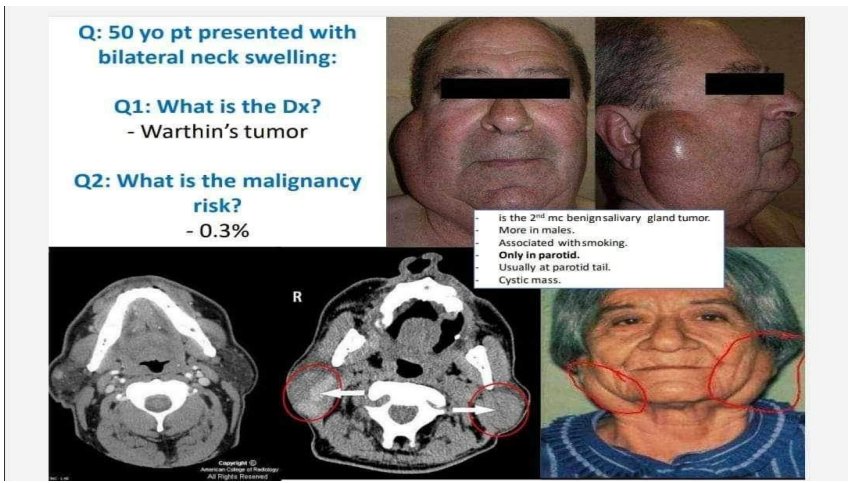
1. Warthin's tumor

1. Parotid tail (inferior pole of superficial lobe)

1. ~~Not sure~~

soft fluctuant painless mass

hard



Hashemite University
H · U · M
Medical School Committee

• QUESTION

Hope 2024

This lady underwent resection of a submandibular gland for a mass

1.What nerve injury resulted from her surgery?

2.What is the likelihood of malignancy in general for a submandibular gland mass?

Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.facial nerven(LMN) Left side

2. 50%

Salivary Gland	Malignancy Rate	Incidence of Tumor
Parotid	20%	80%
Submandibular	50%	15%
Sublingual & Minor	70%	5%

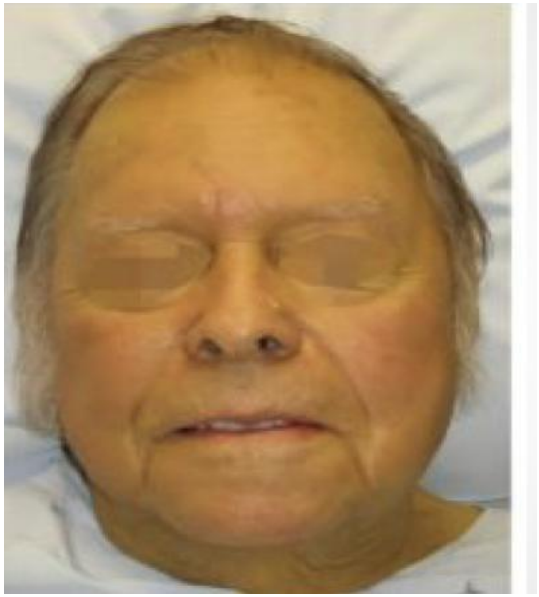
Hashemite University
H · U · M
Medical School Committee

• QUESTION

Hope 2024

A. What is the general diagnosis of this case?

B. Name the tumor marker for the thyroid lesion in this case ?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Jaundice mostly occurs with thyrotoxicosis

B. TSH

• QUESTION

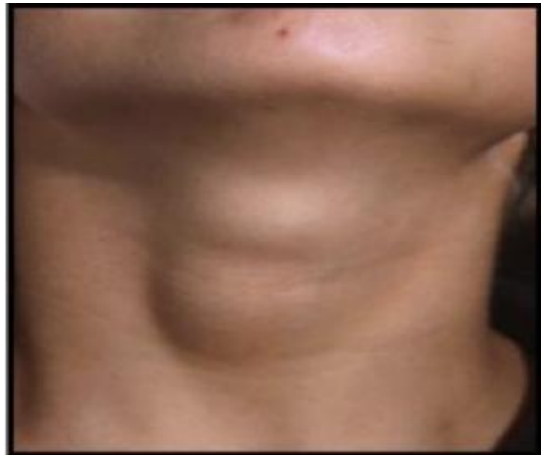
محمود ابراهيم

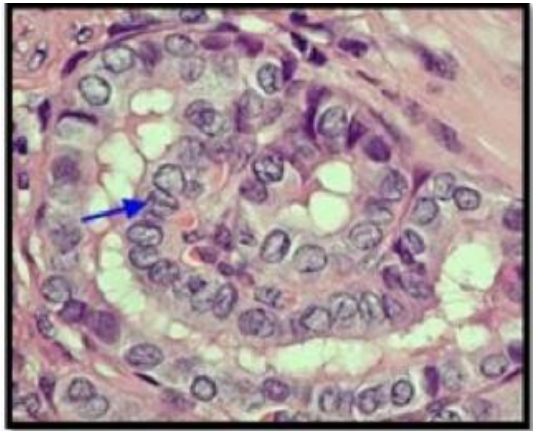
Wateen 2023

A 36-year-old female underwent FNAC for a thyroid lump. This was reported as Bethesda VI.

1. What is the risk of a false positive result ?

2. Name the nuclear feature pointed to by the blue arrow that supported the diagnosis





Hashemite University
H · U · M
Medical School Committee

ANSWER

A. 1-3%

B. Nuclear groove

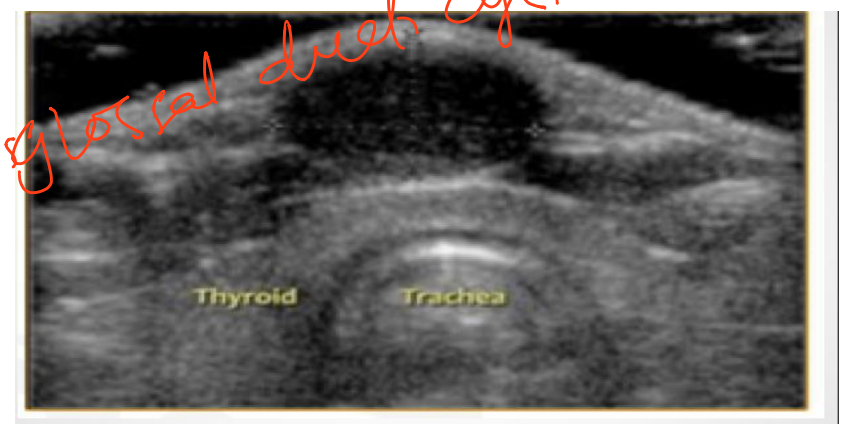
• QUESTION

Wateen 2023

A 20-year-old male presented with an anterior neck lump above the level of the thyroid gland. The figure represents the ultrasound findings of this Lesion

1. What is the characteristic physical examination finding for this lesion?

2. Following surgery the histopathology examination reported a malignant lesion; what is the most likely malignancy



Hashemite University
H · U · M
Medical School Committee

ANSWER

A. Cyst move deglutition

B. Papillary thyroid carcinoma

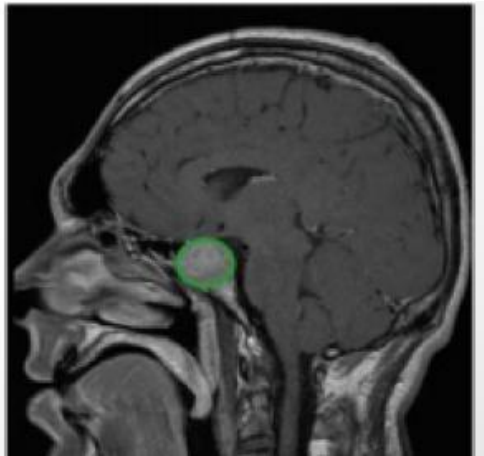
• QUESTION

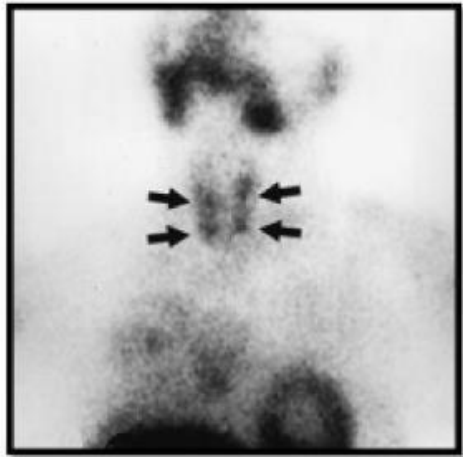
Wateen 2023

A 35-year-old female was found to biochemical primary hyperparathyroidism. A MIBI-scan and a pituitary MRI were performed

. A) What is the most likely clinical manifestation that lead to performing a pituitary MRI?

B) What additional imaging study would you perform for this patient ?





Hashemite University
H • U • M
Medical School Committee

• ANSWER

in Parathyroid tumor: ↑ expression of Prolactin Receptors → ↑ Prolactin

A. Hyperprolactinemia - Bone pain

B. Pancreatic CT scan - Bone x-ray

ممكن يكون عنده Pancreatitis او ↑↑ بالكالسيوم

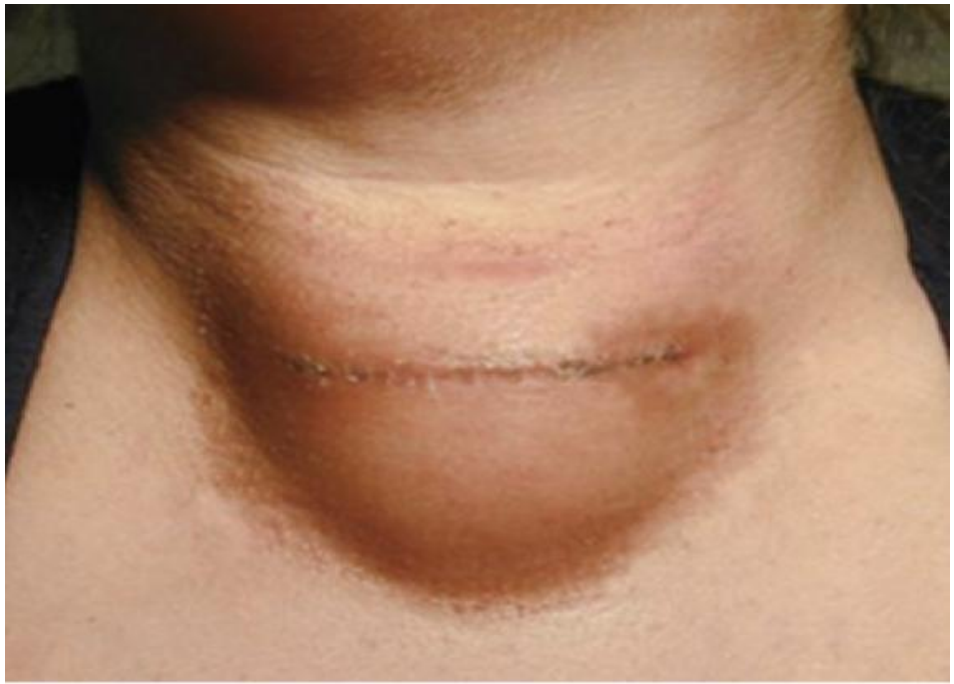
• QUESTION

Wateen 2023

2 hours following thyroidectomy, this patient developed neck swelling and shortness of breath.

1.What is your diagnosis

2.Next step in management



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Hematoma post operation

B. Intubation

• QUESTION

Harmony 2022

3. 30 year old presented with hyper functional diffuse enlargement of her thyroid gland ,What is the most sensitive serologic marker of this condition

a. T_3/T_4 Ratio

b. TSH LEVEL

c. Free T_3

d. Anti TSH Receptor antibody

Answer: D

Image not found

Graves

Hashemite University
H • U • M
Medical School Committee

• QUESTION

4. What is your diagnosis ?

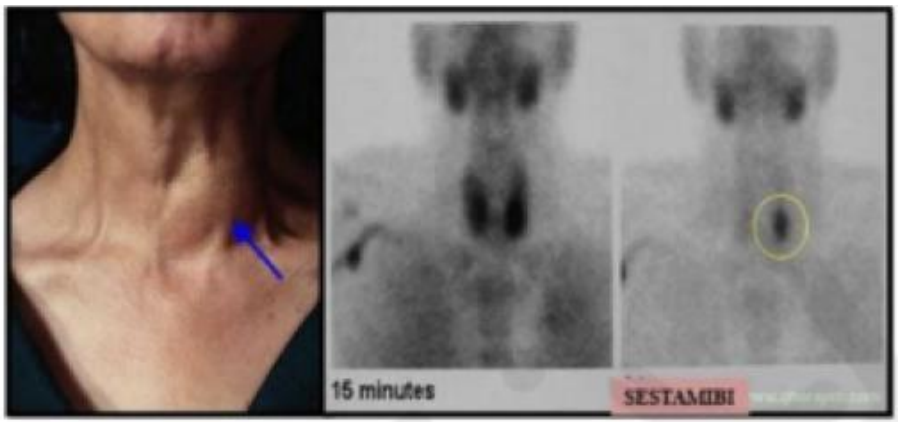
a. Parathyroid cancer

b. Parathyroid hyperplasia

c. Thyroid cancer

d. Reactionary Inflamed lymph node

Answer: A

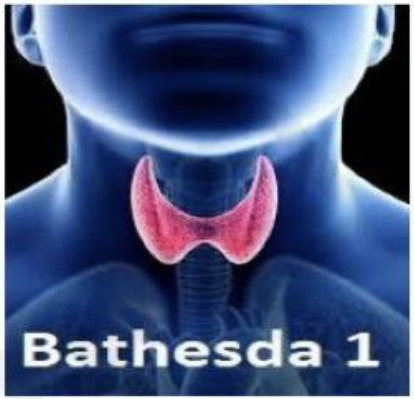


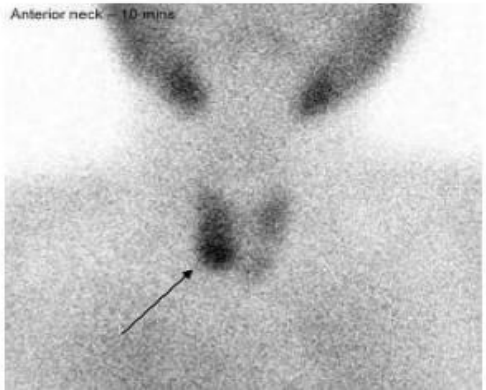
Hashemite University
H • U • M
Medical School Committee

• QUESTION

Harmony 2022

What shall you do in the following cases ?





Hashemite University
H • U • M
Medical School Committee

• ANSWER

Thyroid → repeat cytology

Parathyroid → remove

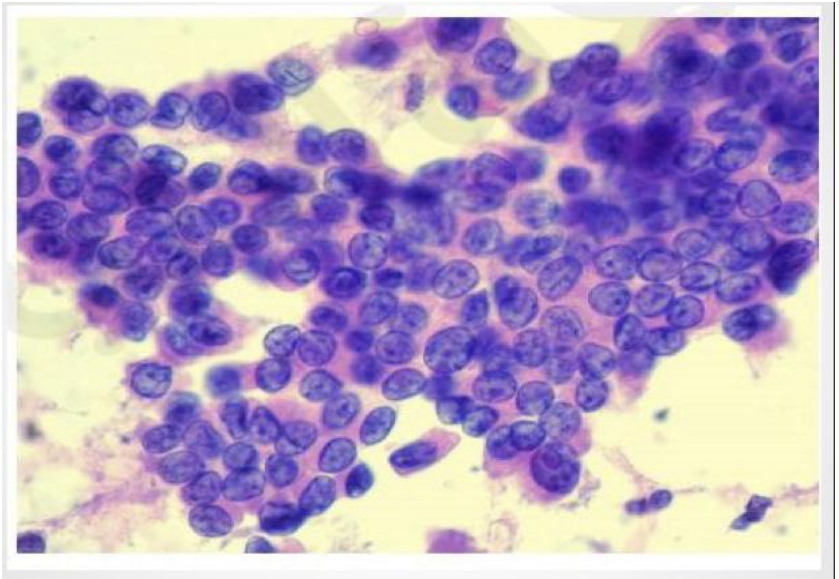
• QUESTION

Harmony 2022

1-What is the type of cancer seen in this histology ?

2. What is the rate of the malignancy?

3.Mention 2 features seen in the picture?



Hashemite University
H • U • M
Medical School Committee

ANSWER

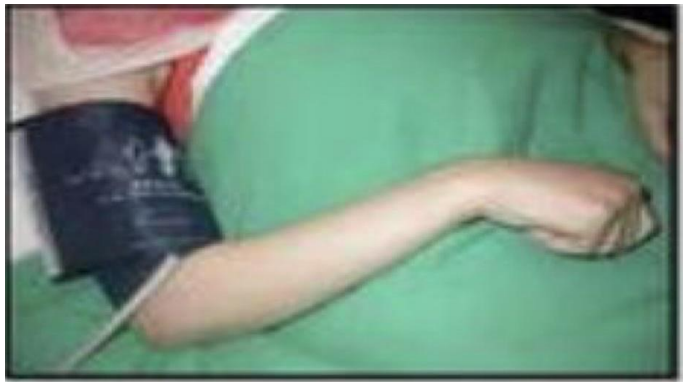
1. Papillary thyroid carcinoma
2. 97-99%
3. Nuclear Crowding ,Orphan Annie Nuclei

QUESTION

SOUL 2021

The morning following total thyroidectomy:

1. Name the sign you see?
2. Mention a Name of other sign can be seen in this pt ?



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Trousseau's sign

2 .Chvostek sign

INCOMPLETED QUESTIONS OR WITH NO PICTURE:

SOUL 2021

Q1.

A question about

1.most common site of thyroglossal duct cyst ?

2.Characteristic feature on physical exam :

Hashemite University
H · U · M
Medical School Committee

ANSWER

midline in or below hyoid bone

1.Infra hyoid bone

2.movement with toung protrusion

QUESTION

SOUL 2021

Case about Bathesda VI scoring:

1. Percentage of malignancy ?

2.Most common cancer in this patient ?

Hashemite University
H · U · M
Medical School Committee

ANSWER

1. 97-99%
2. Papillary thyroid carcinoma

QUESTION

SOUL 2021

question about warthin tumor: -

1.Describe the consistency of the lesion?

2.Most important Risk factor?

Hashemite University
H · U · M
Medical School Committee

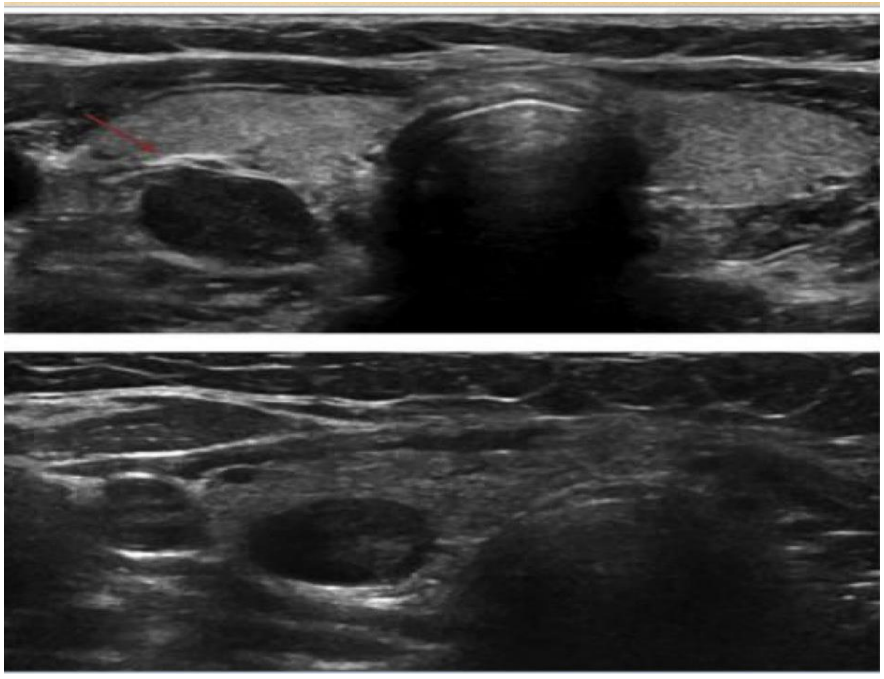
ANSWER

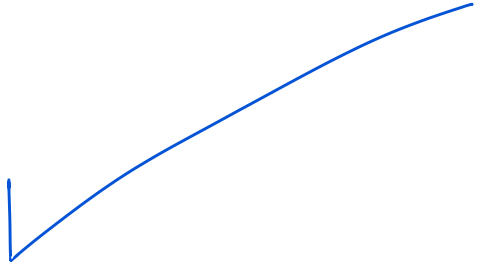
1. Soft , flfluctuate
2. Smoking

• QUESTION

SOUL 2021

Name 2 sonographic features that are suggestive of malignancy





Hashemite University
H • U • M
Medical School Committee

• ANSWER

Micro-calcification

Taller than wide shape

Irregular margins •

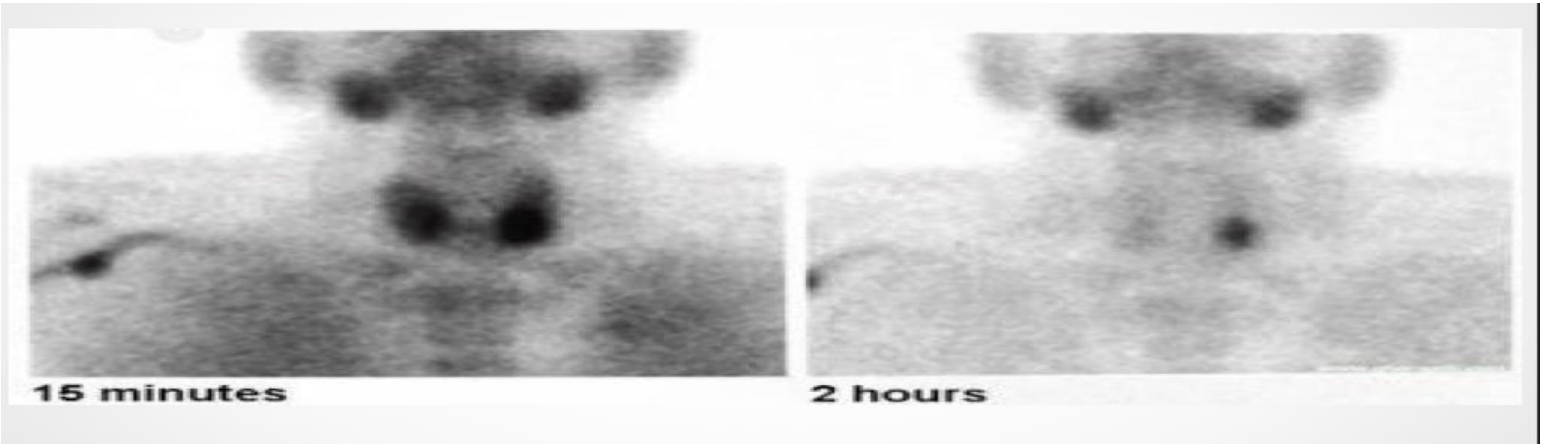
• QUESTION

SOUL 2021

This image was obtained from 54 yrs old female complaining of repeated attacks of renal colic ,

A) What does the study reveal?

B) What is the likelihood that the lesion detected is malignant?



Hashemite University
H • U • M
Medical School Committee

ANSWER

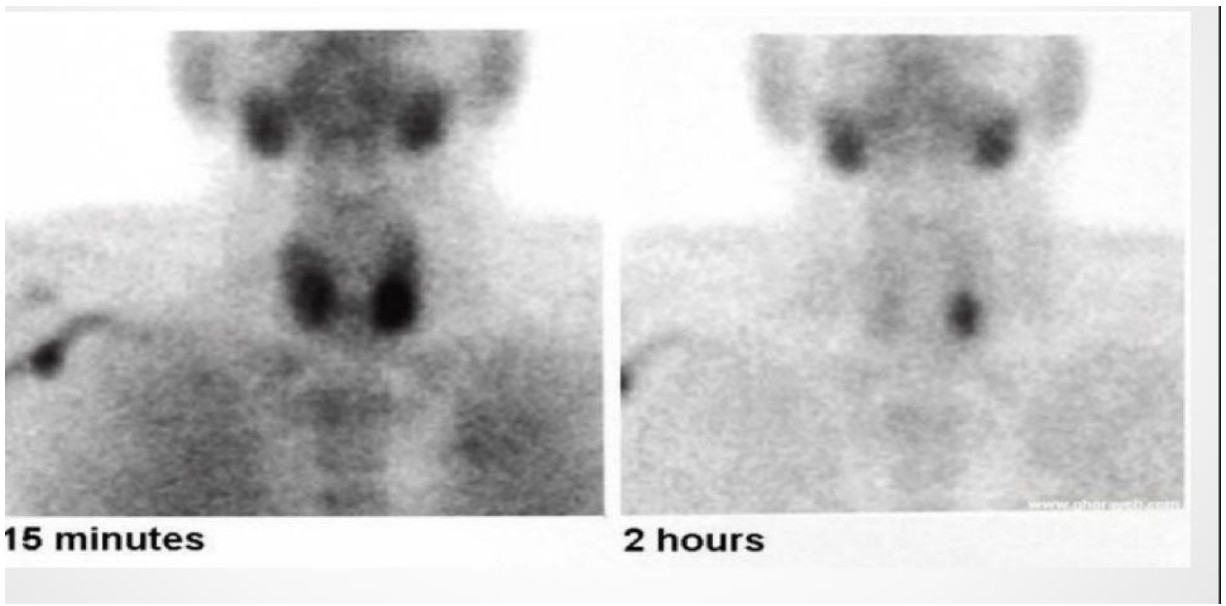
A. parathyroid adenoma

B. 1%

• QUESTION

SOUL 2021

Name the study and mention the most common cause of the condition?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Sestamibi scan of Parathyroid

2. Adenoma

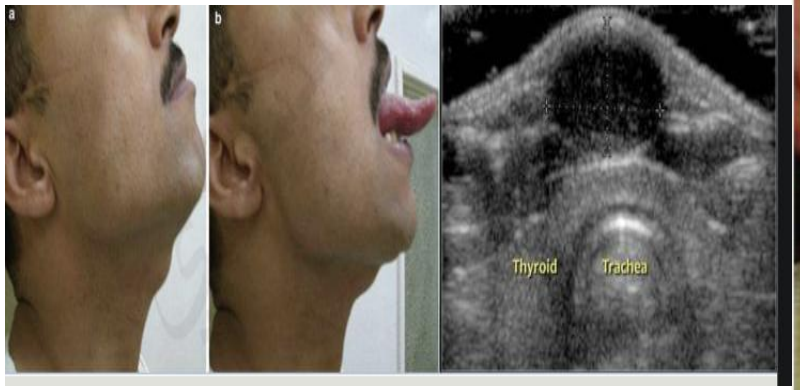
• QUESTION

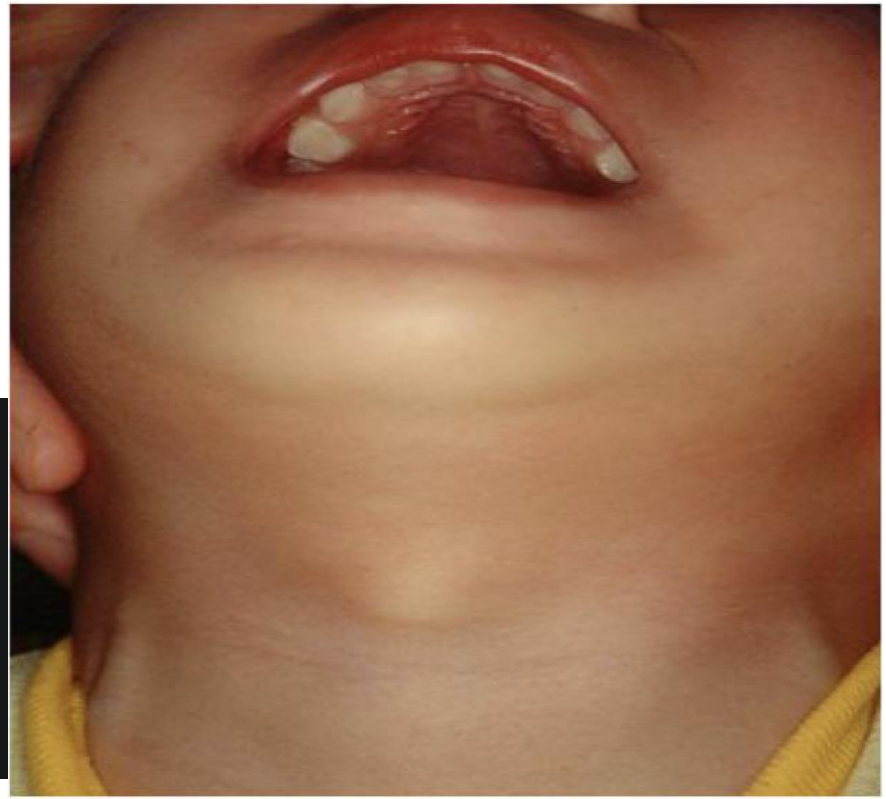
SOUL 2021

1. Diagnosis?

2.What is the structure on U/S?

3.What is the management?





Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Thyroglossal duct cyst

2. Hyoid bone

3.Sistrunk's procedure

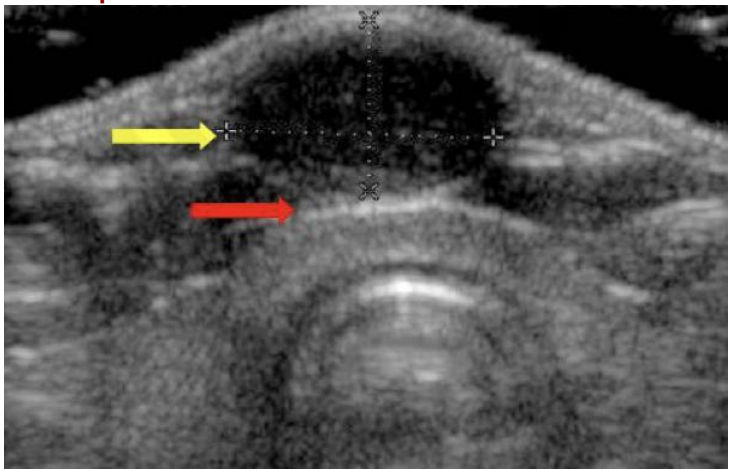
• QUESTION

IHSAN 2020

This patient underwent surgery for the pathology depicted by the yellow arrow. Histology reported a malignancy of non-thyroid origin.

1. What is the most likely malignancy?

2. What structure does the red arrow point to?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Squamous cell carcinoma

2.Hyoid bone

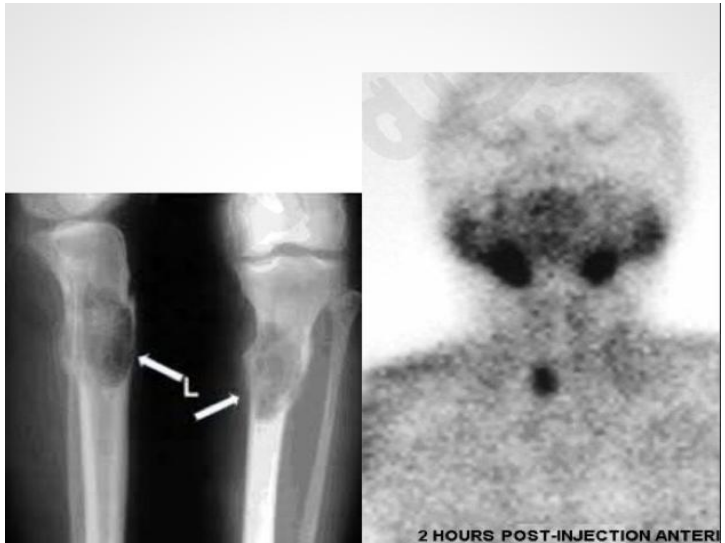
• QUESTION

IHSAN 2020

A 60-years old female complains of pain in her bones. She presents with a palpable central neck lump below the cricoid cartilage that moves upward upon swallowing.

1. What does the lump mostly represent

2. What is the bone .condition called



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Parathyroid carcinoma

2.Osteitis fibrosa cystica

• QUESTION

IHSAN 2020

I. what is the Dx

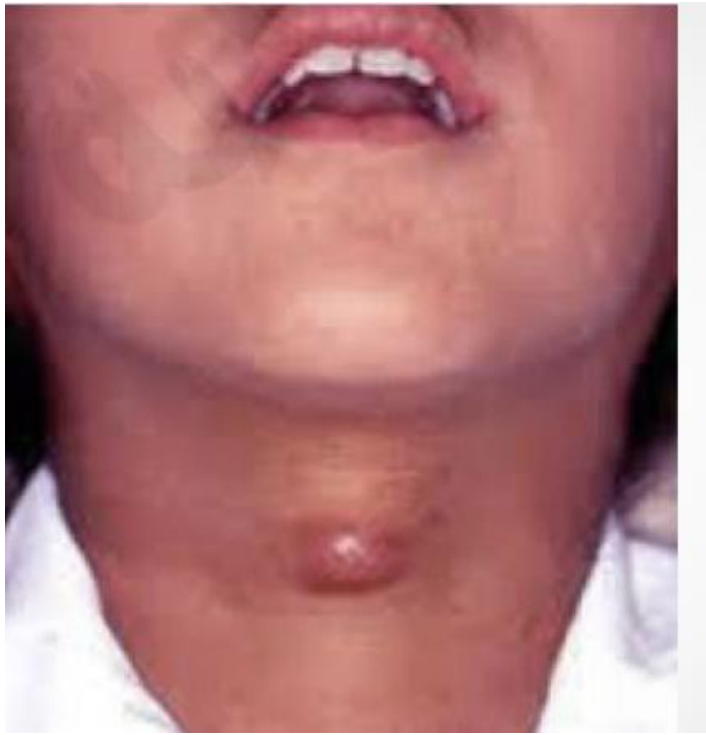
II. What is the definitive Mx?

III. What is the risk of recurrence ?

4.What is the malignancy risk?

5. Name the malignancy that does not occur here?

6.Complications?



Hashemite University
H • U • M
Medical School Committee

• ANSWER.

I. Thyroglossal duct cyst

II. Sistrunk procedure

III. Sistrunk procedure reduces the recurrence risk from

60% to < 10%

4.2%

5.Medullary Ca

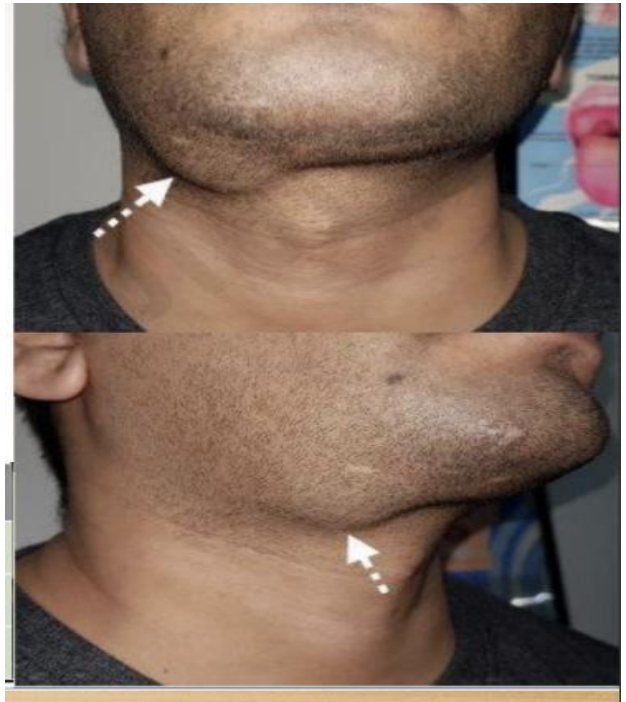
6. Infection, malignant risk

• QUESTION

IHSAN 2020

I: if a surgery was done what is the nerve at risk to be injured?

II: What is the risk of malignancy?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

I. Marginal Mandibular Nerve

II. -50%

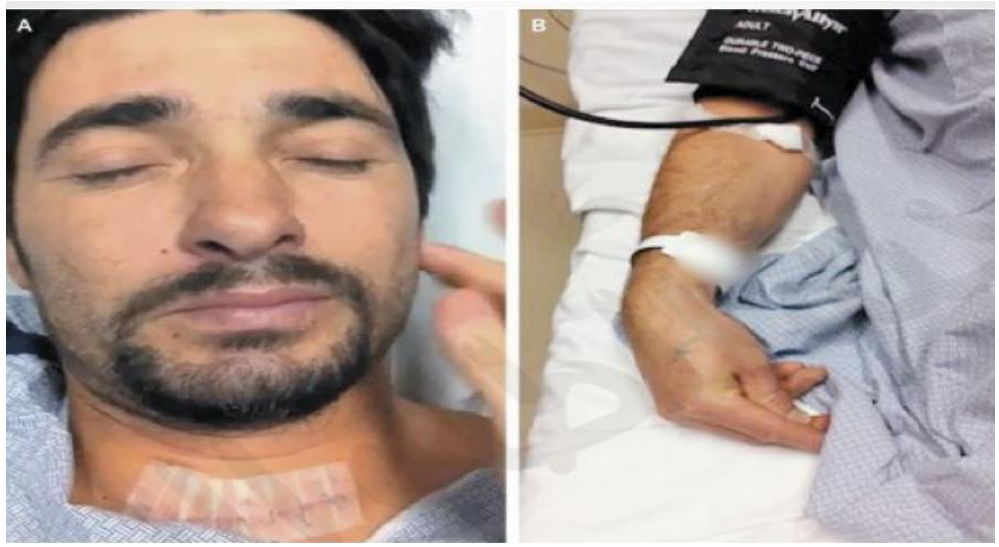
Salivary Gland	Malignancy Rate	Incidence of Tumor
Parotid	20%	80%
Submandibular	50%	15%
Sublingual & Minor	70%	5%

• QUESTION

IHSAN 2020

1: What are the signs?

2: What is the cation that influx and cause this sign?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

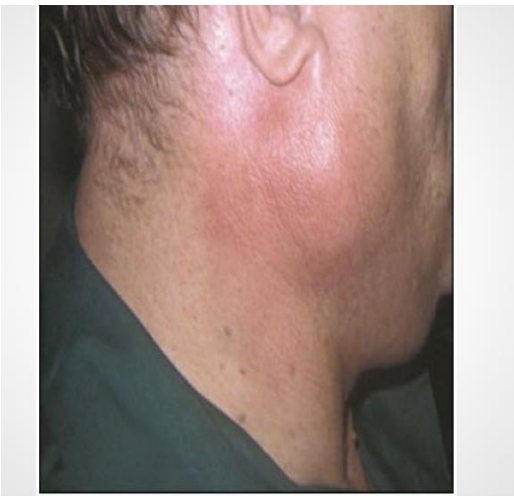
I. Chvostek and Trousseau signs

II. Na+ Sodium

• QUESTION

2019 – Before

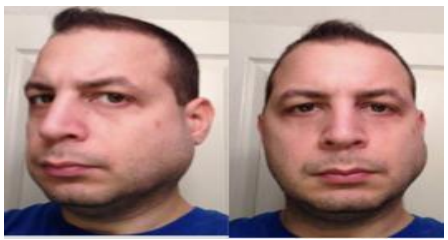
1.What is the most likely diagnosis?



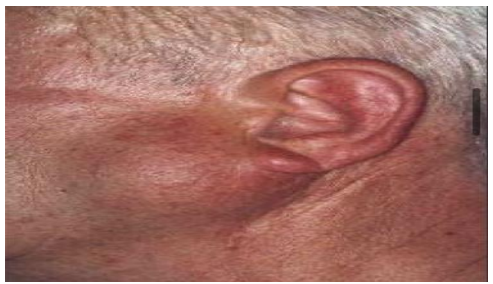
2• What is the most common subtype?

3•What is one sign that confirms your diagnosis?

4• How do we treat this ?patient



5.Histology?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Parotid Pleomorphic Adenoma

2. myxoid(I ~~am not sure~~)

3.Rubbery-hard, does not fluctuate and of limited mobility on physical examination

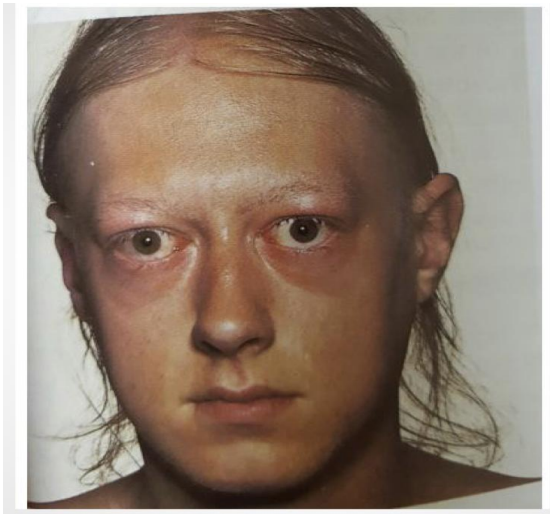
4. Superficial Parotidectomy ,some said total parotidectomy

5.Epithelialcells mixed with myxoid mucoid and condrial element and surrounded by fibrous capsule and has projections (Histology of pleomorphic adenoma: Mixture of epithelial, chondroid and pseudopoid projections)

Hashemite University
H • U • M
Medical School Committee

• QUESTION

2019 – Before



1.What is the most likely diagnosis?

2• Mention 2 signs that you can see?

3• What is the first symptom patient will develop if she develops opthalmoplegia?

4• What is a drug you can give this patient before getting into surgery ?

Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Graves disease

2.

1.exopthalamus 2.)Significant hair loss

3. Double vision or ptosis ~~(not sure)~~

4.PTU

• QUESTION

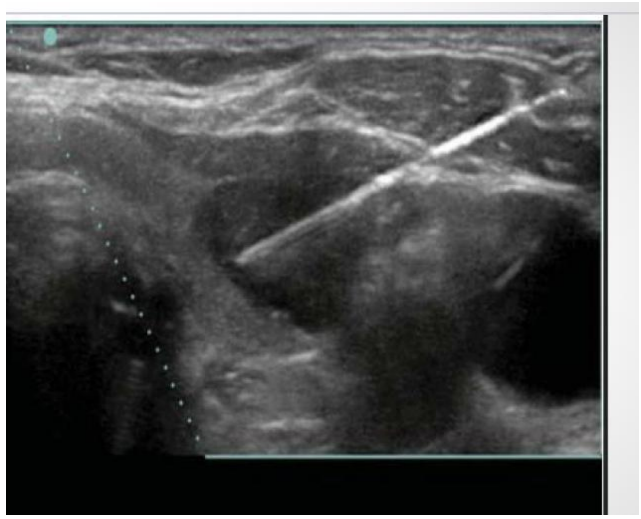
2019 – Before

A 45-year-old euthyroid patient presented underwent fine needle aspiration for a palpable left-sided thyroid nodule. This was reported as a follicular neoplasm.

1. Which Bethesda category does this represent?

2. What is the implied risk of malignancy?

3.What is the recommended treatment



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Bethesda 4(not sure)
2. 15-30
3. depend on FNA result , follow up or radiation therapy or thyrodectomy (not sure)

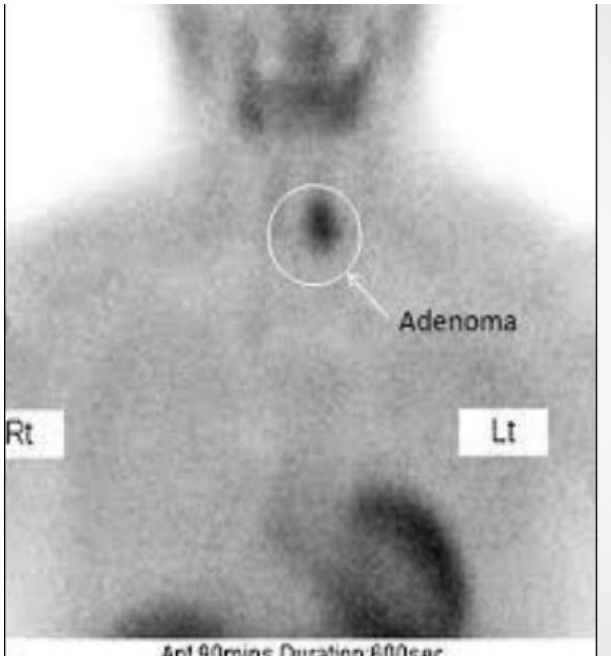
For IV → lobectomy is done

• QUESTION

2019 – Before

This 53-year-old female has a serum calcium level of 11.8 mg/dl and a PTH level of 209 pg/ml.

1. Name the imaging study used (localization) here:
2. What is the embryologic origin of the inferior parathyroid Gland
3. What is the likelihood that the patient's condition is due to single gland disease?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Sestamibi scan

2.endoderm of the third and fourth pharyngeal pouches.

3. ~~Not sure~~ 90% ..

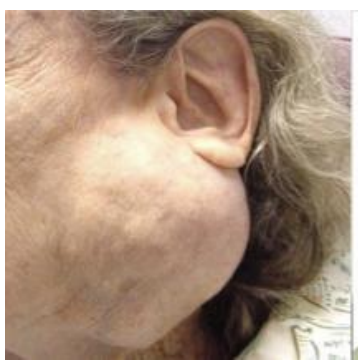
5-10% if 2

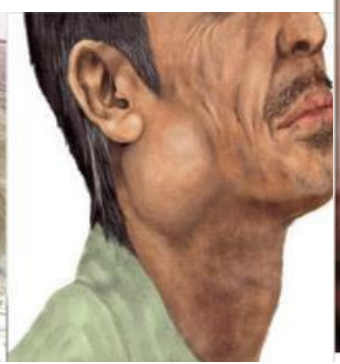
• QUESTION

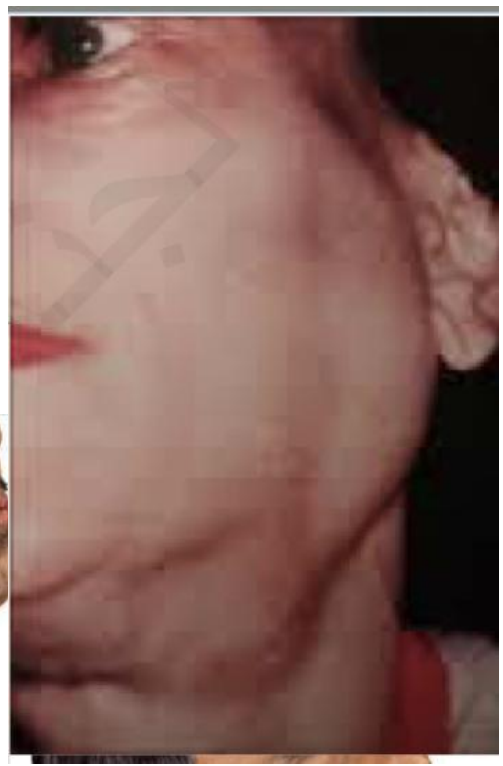
2019 – Before

1.Most affected organ?

2.Most common cause / most likely diagnosis?







ANSWER

1. Parotid gland

2.Pleomorphic adenoma

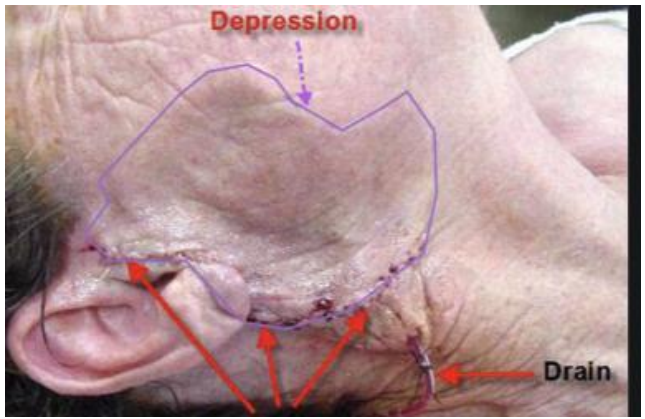
• QUESTION

2019 – Before

patient had a superficial parotidectomy:

1.What is the most likely indication?

2.What is the nerve in risk of being damaged?



Hashemite University
H • U • M
Medical School Committee

ANSWER

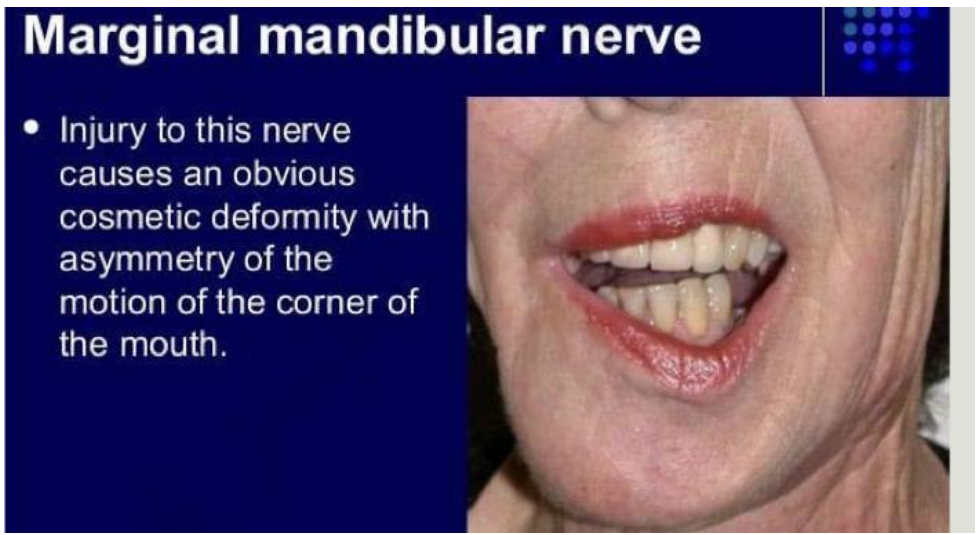
1.Parotid gland tumor (most likely pleomorphic adenoma)

2.Facial Nerve

• QUESTION 2019 – Before

1.What is the nerve affected?

2.What is the malignancy risk?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Marginal mandibular nerve

2.50%

• QUESTION

2019 – Before

history that suggests a thyroid nodule:

1.diagnosis

2. How to approach a patient with this diagnosis?

Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Multi nodular goiter (MNG)

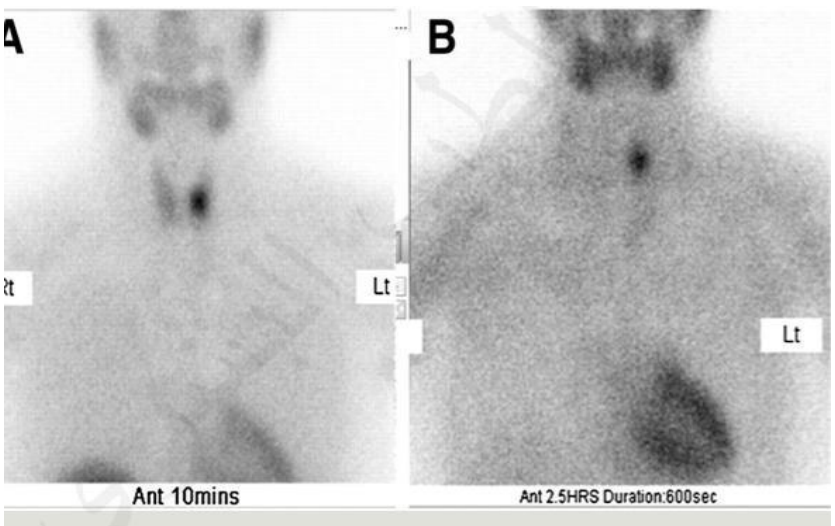
2.TFT Thyroid function test), initially; if hyperthyroidism we will do a thyroid scan, if hypothyroidism we will do an US

Hashemite University
H · U · M
Medical School Committee

• QUESTION

2019 – Before

1. What is the pathology you see?
2. Name the study?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

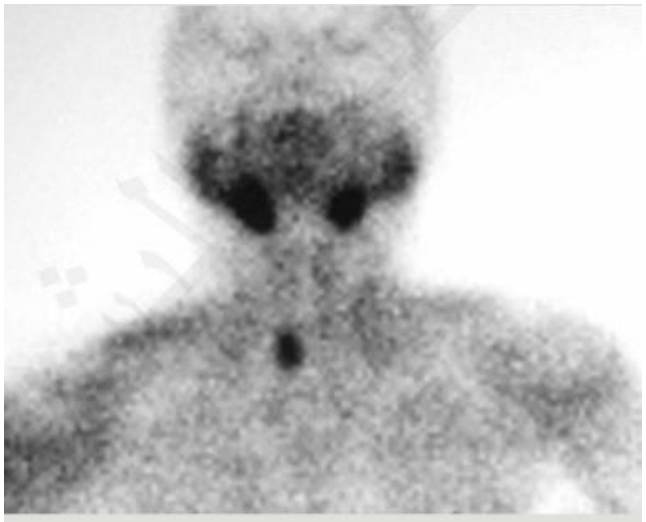
1.Hyperfunctioning parathyroid glands (adenoma)

2.Sestamibi scan

• QUESTION 2019 – Before

1.Risk of disease to be from single nodule?

2.What is your diagnosis?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. 85-90% Adenoma

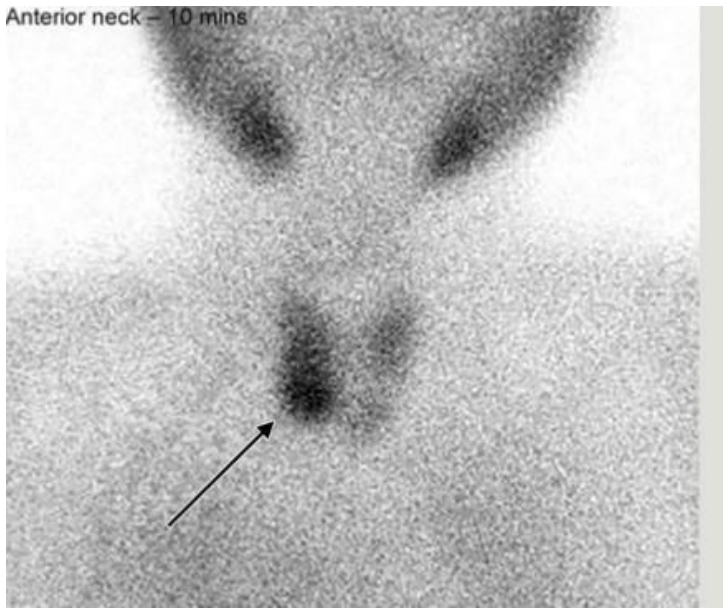
2.Single parathyroid gland adenoma

• QUESTION

23 سؤال

2019 – Before

1. What is the diagnosis?
2. The first symptom to develop if the patient had high PTH & Calcium?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1 Parathyroid adenoma (1ry hyperparathyroidism

2.Bone pain

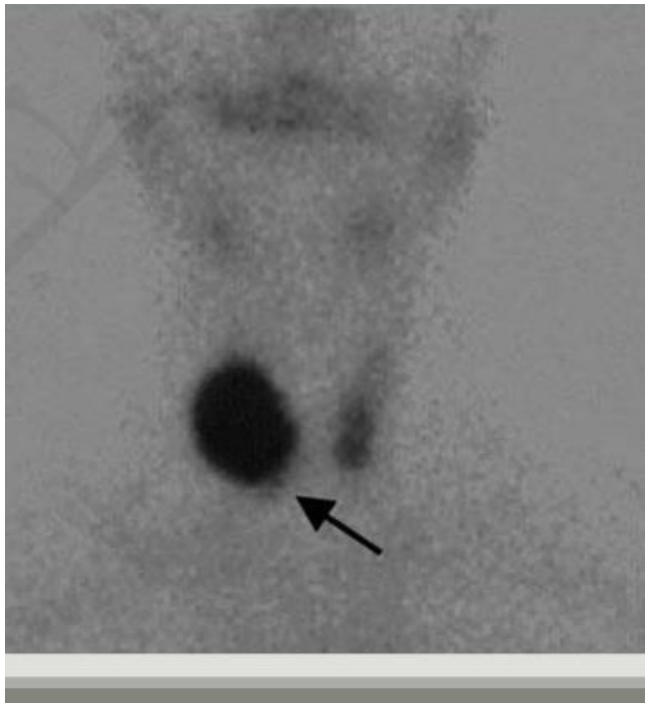
• QUESTION 24 مرة

2019 – Before

1. diagnosis

2.management

3.Risk of malignancy?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Thyroid hot nodule

2.Surgery (Lobectomy)

3.Low risk (<3-5%)

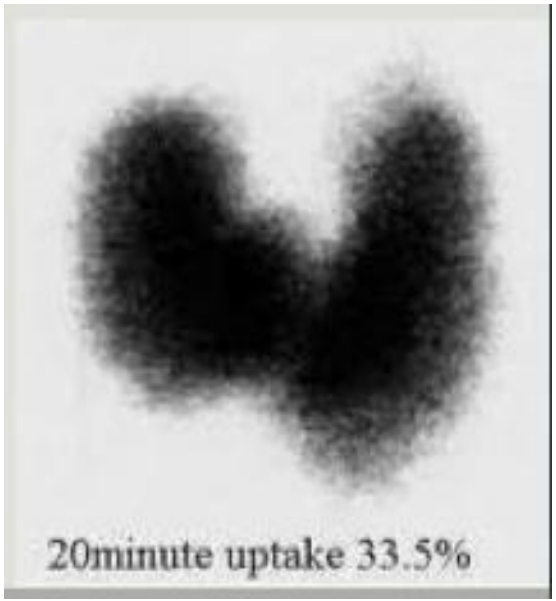
• QUESTION

2019 – Before

1.What is the diagnosis?

2.What is the serological marker?

3.Mention 3 lines of management.



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Graves Disease

2.TSI thyroid stimulating immunoglobulin

3.1)Antithyroid drugs (carbimazole) + β-blockers

2) Radio-iodine

3) Surgery ** All 3 are considered 1st line Mx

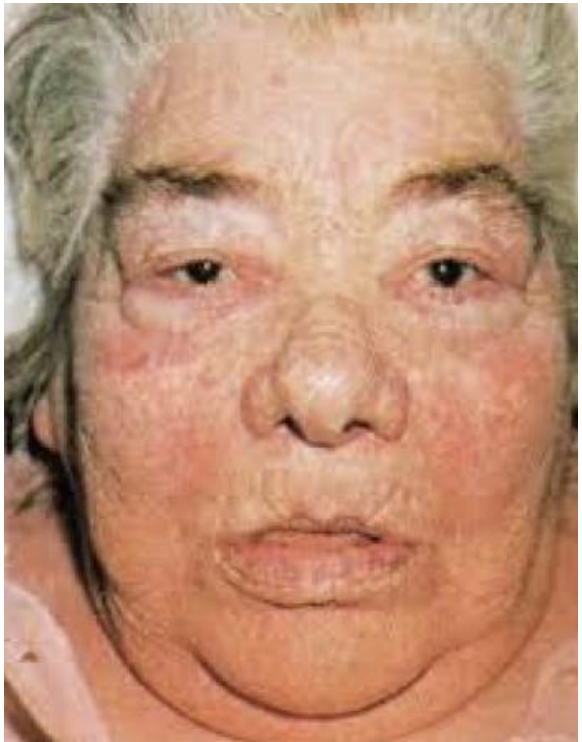
• QUESTION

2019 – Before

A 50-year-old female patient present with hypothermia:

1.What is the endocrine disorder?

2.Mention 3 signs on face?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Hypothyroidism

2.

1) Puffy face

2) Periorbital edema

3) Coarse hair

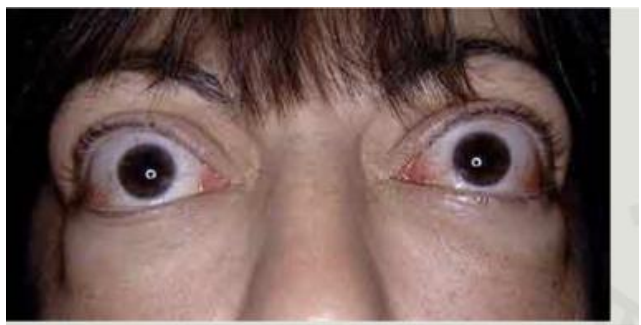
• QUESTION

26 Nov 2019 – Before

1. Name the diagnosis.

2.Mention 2 signs.

3.What is the treatment used for surgery preparation?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

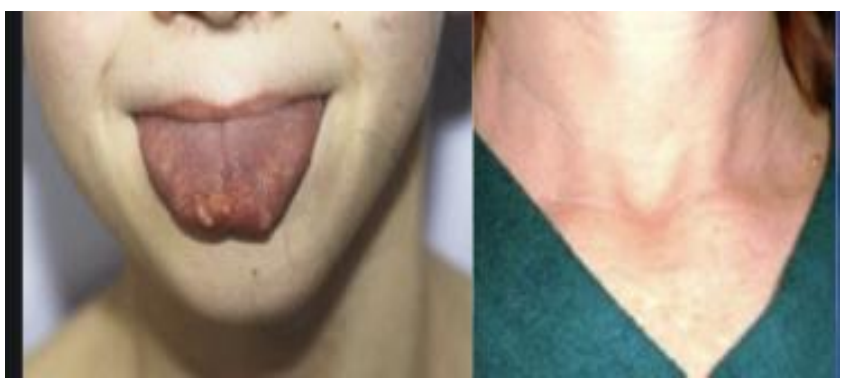
1.Gravis disease

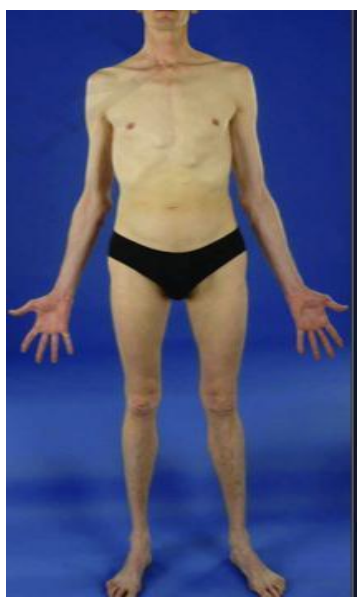
2.Exophthalmos, lid retraction

3.Propyl thiouracil, propranolol

• QUESTION 27 2019 – Before

1. What type of thyroid cancer do you expect to see in this patient?
2. What's the marker?





Hashemite University
H • U • M
Medical School Committee

• ANSWER

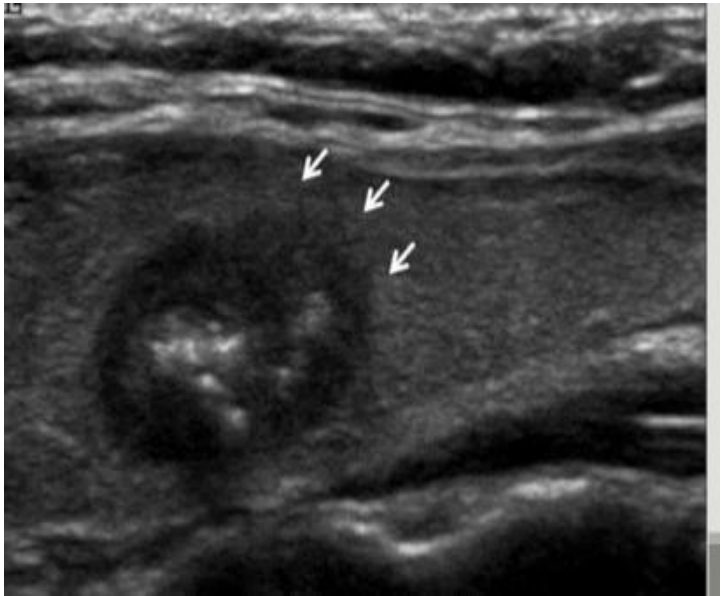
1.Medullary

2.Calcitonin

• QUESTION

2019 – Before

1. What type of thyroid cancer do you expect to see in this patient?
2. Before surgery, what type must you exclude?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Medullary cancer

2.MEN 2 (Pheochromocytoma)

• QUESTION

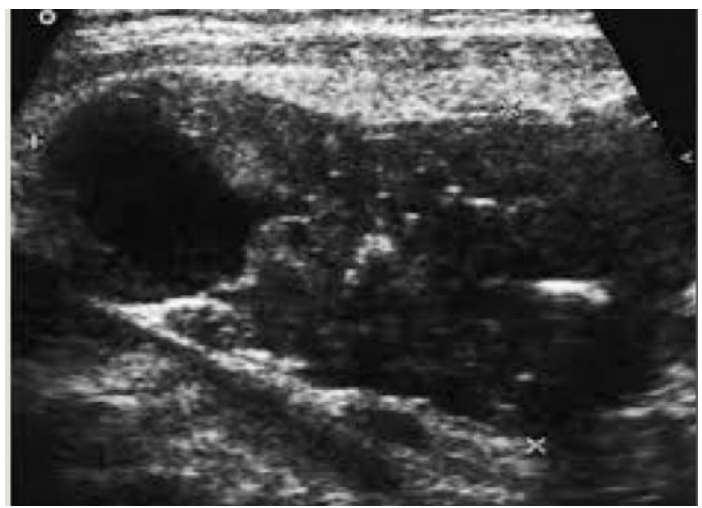
29 من 15

2019 – Before

History of palpable neck mass, recurrent renal stone, high level of calcium and parathyroid hormone.

1.Name the diagnosis.

2.What is the minimal management to be done?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Parathyroid carcinoma

2.Parathyroidectomy or en-bloc resection of the parathyroid mass and any adjacent tissues that have been invaded by tumor. (from UpToDate)

Note: En-bloc resection could include the ipsilateral thyroid lobe, paratracheal alveolar and lymphatic tissue, the thymus or some of the neck muscles, and in some instances, the recurrent laryngeal nerve.**

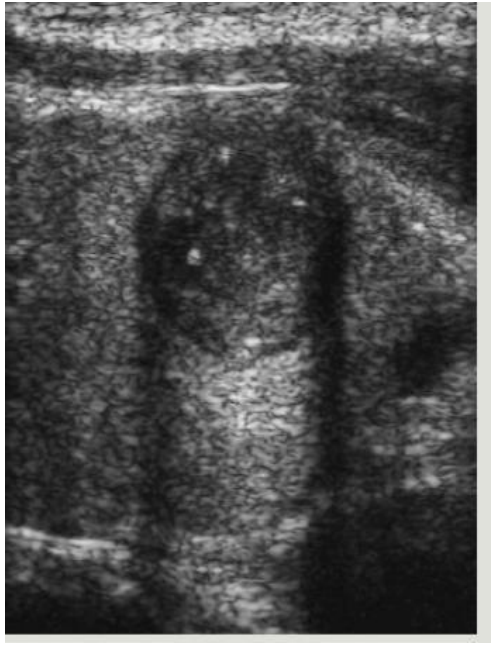
• QUESTION

2019 – Before

History of thyroid nodule, US shows micro-calcifications, investigation of blood vessels and reactive LN:

1.Bethesda Grade?

2.What is your Mx?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Bethesda 5

2.Total Thyroidectomy

• NOTE

Features like micro-calcifications, vascularization and reactive LNs are highly suspicious for malignancy, and warrant a fine needle aspiration to confirm the malignancy and determine the type.

Bethesda grade 5 is "highly suspicious for malignancy", which is the case here.

Bethesda grade 6 is "confirmed malignancy", which cannot be confirmed without histological proof (you can't have grade 6 without FNA).

The management is the same for grade 5 and 6. However, grade 6 needs cytology (عشان تقدر تحلف عليها)

لازم يكون عندك fna عشان تقدر تحكي إنها malignant بنسبة 100% وتحكي grade 6, غير هيك بتضلها suspicious إللي هي grade 5

- NOTE

FNAC (Breast)
C1: Unsatisfactory
C2: Benign
C3: Atypical cells
C4: Suspicious cells
C5: Malignant

• NOTE

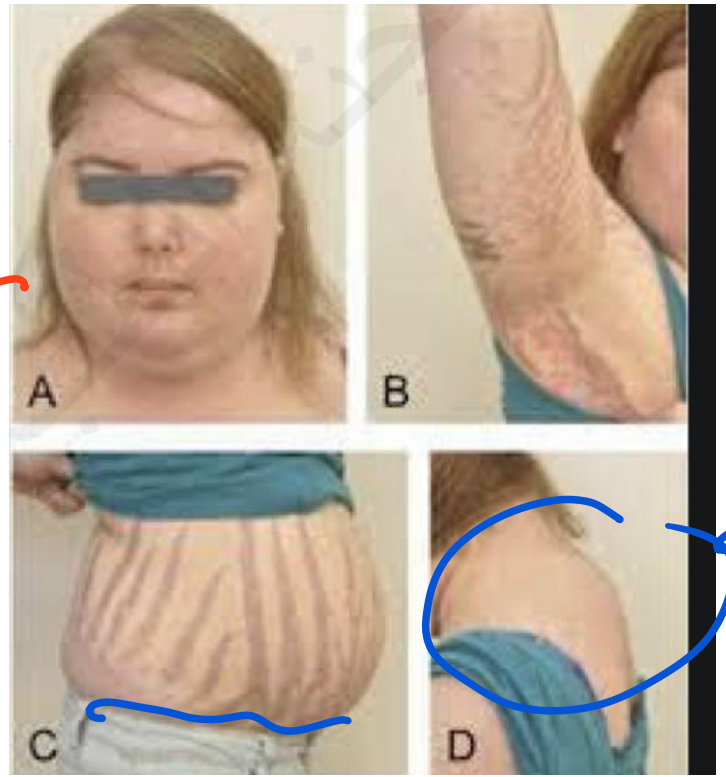
Bethesda diagnostic category		VERY COMMON QUESTION!	Risk of malignancy	Usual management
I	Nondiagnostic or unsatisfactory	Cyst fluid only Virtually acellular specimen Other (obscuring blood, clotting artifact, etc.)	1% to 4%	Repeat FNA with ultrasound guidance
II	Benign	Consistent with a benign follicular nodule (includes adenomatoid nodule, colloid nodule, etc.) Consistent with lymphocytic (Hashimoto) thyroiditis in the proper clinical context Consistent with granulomatous (subacute) thyroiditis Other	0% to 3%	Clinical follow-up
III	Atypia of undetermined significance or follicular lesion of undetermined significance		5% to 15%	Repeat FNA
IV	Follicular neoplasm or suspicious for a follicular neoplasm	Specify if Hurthle cell (oncocytic) type	15% to 30%	Surgical lobectomy
V	Suspicious for malignancy	Suspicious for papillary carcinoma Suspicious for medullary carcinoma Suspicious for metastatic carcinoma Suspicious for lymphoma Other	60% to 75%	Near-total thyroidectomy or surgical lobectomy
VI	Malignant	Papillary thyroid carcinoma Poorly differentiated carcinoma Medullary thyroid carcinoma Undifferentiated (anaplastic) carcinoma Squamous cell carcinoma Carcinoma with mixed features (specify) Metastatic carcinoma Non-Hodgkin lymphoma Other	97% to 99%	Near-total thyroidectomy

• QUESTION

2019 – Before

1. What is the diagnosis?

2.causes?



puffy face

fatty hump

Hashemite University
H · U · M
Medical School Committee

ANSWER

1. Cushing Syndrome

1. Iatrogenic cortisol administration) - Pituitary Adenoma

Note** Not to be confused with Cushing triad of increased ICP, which is: 1) Irregular, decreased respirations 2) Bradycardia 3) Systolic hypertension

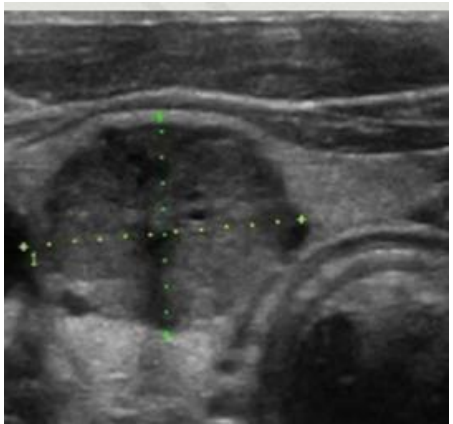
• QUESTION

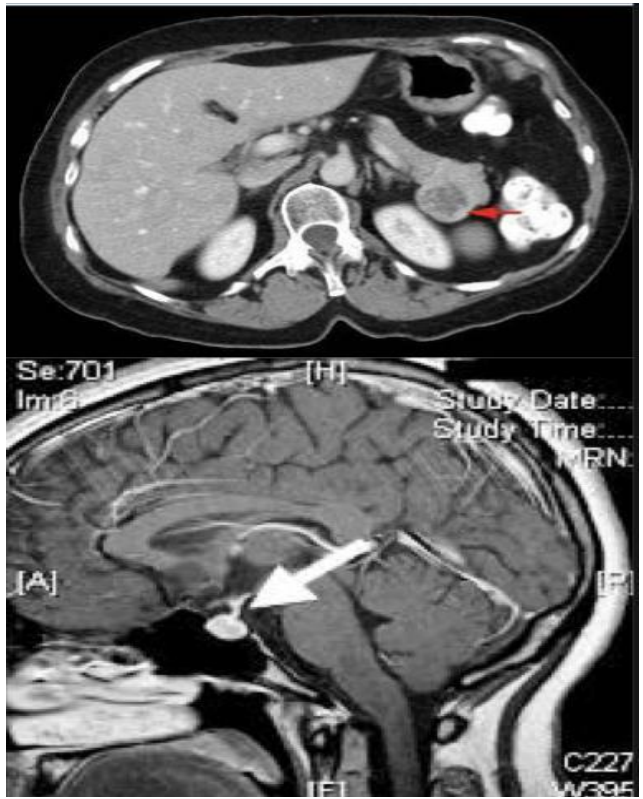
2019 – Before

1.White arrow?

2.Syndrome name?

3.The most important thing surgically to do for this patient?





Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Pituitary Adenoma
2. MEN
3. Pancreatic tumor "not sure"

pituitary adenoma is associated with MEN1 syndrome :-

- Parathyroid hyperplasia
- Pancreatic tumor

← cushing ال ممكن associated يكون

But IdK which one is the most important

• QUESTION

SOUL 2021

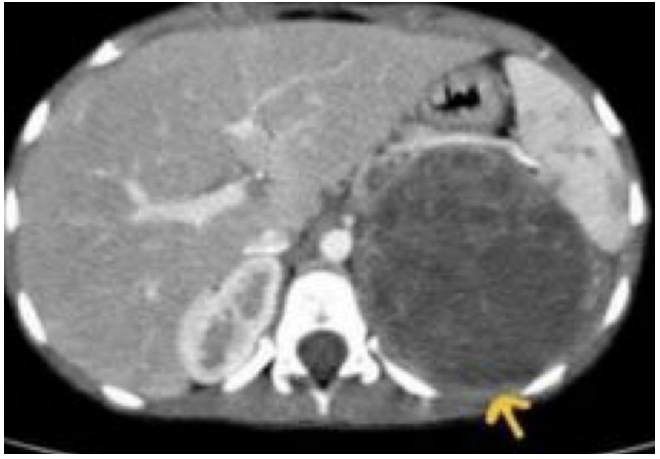
patient with thyroid medullary cancer & a CT was done:

Q1: What is your next step?

Q2: If the patient has no genetic abnormality and the lesion is not functioning what will you do next?

Q3: What disease you have to rule out?

Q4: cut off size to remove?



Hashemite University
H · U · M
Medical School Committee

ANSWER

1. (not sure what the dr. meant so here are the possibilities):

Assess the functionality of the adrenal tumor by hx, physical ex and ordering lab tests: KFT (Na, K, Creatinine, Urea) / Aldosterone levels/ cortisol/ metanephrine/normetanephrine/vanillylmandelic acid (VMA)// pheochromocytoma// 24h urine analvsis forcatecholamine metabolites

2. Because it is very large > surgery adrenalectomy, the dr said : If it was

more than 4 cm then you have to remove it immediately

3. Pheochromocytoma

4. more than 4 cm

Hashemite University
H · U · M
Medical School Committee

• QUESTION

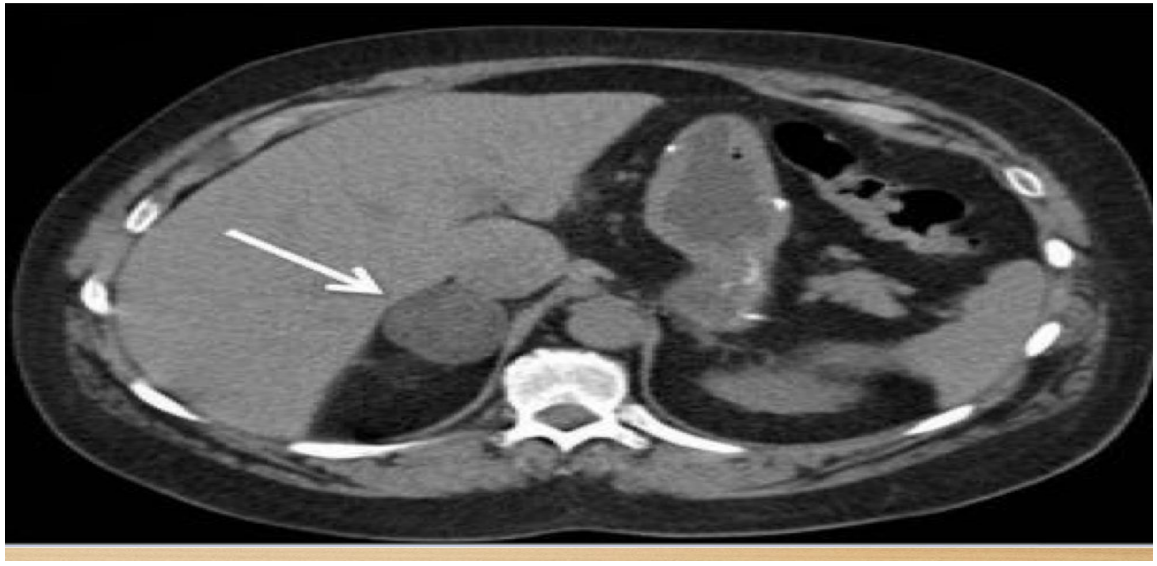
endo

SOUL 2021

ع ر
37

This is an MRI of 37 years old patient complains of uncontrolled hypertension,

A) List 2 possible causes



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. pheochromocytoma
2. Cushing's disease

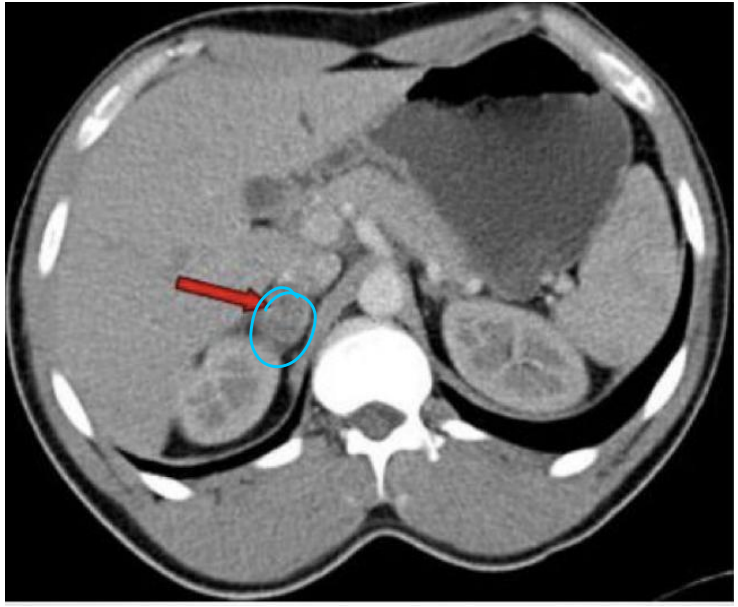
• QUESTION

2019 – Before

This lesion was detected incidentally on CT of the abdomen.

1. The next step in evaluating the patient is

2. Name 2 indications for surgery



Hashemite University
H • U • M
Medical School Committee

ANSWER

Not sure about the answer but I think it's adrenal mass so the answer would be

1.cortisol blood test

2.>4cm , functional,CT density>20 → 3 features of malignancy

① heterogenus

② necrosis

③ irregular margin

④ venous emboli

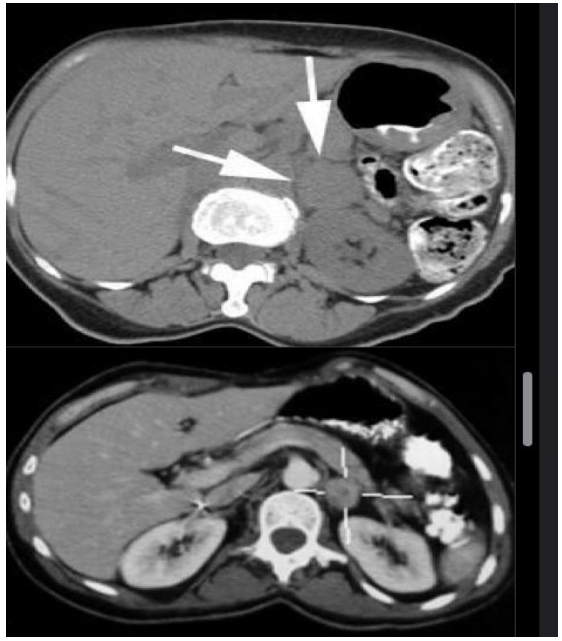
• QUESTION

endo

2019 – Before

Apatient presented with episodic sweating and hypertension:

1. What is the diagnosis?
2. What is the 1st thing to do?
3. What raise the possibility of malignancy?
4. What is the size that would be considered
5. an indication for surgery?



Hashemite University
H • U • M
Medical School Committee

- ANSWER

incidentaloma 76% هي

1. Incidentaloma (Dr. Sohail’s answer)

2. Check if functional or not by checking cortisol, renin, angiotensin and VMA,… etc.

3. >4 cm - Rapid growth

- Necrosis - Family history - Hemorrhage - Calcifications

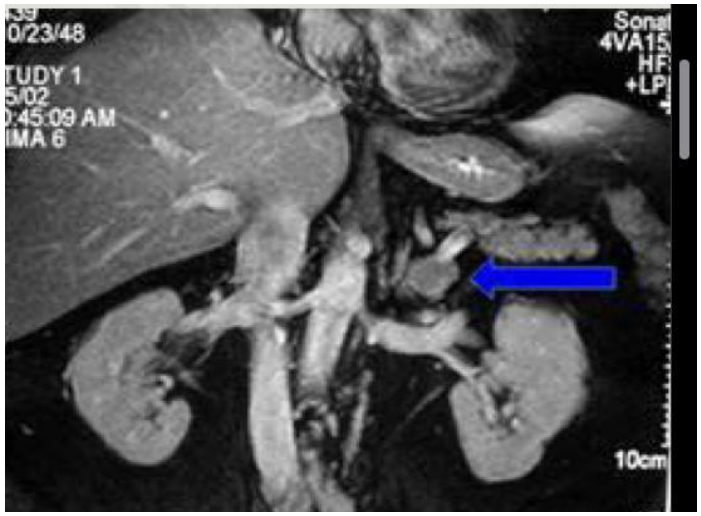
4. >=4cm

• QUESTION 2019 – Before

Lab investigations show high aldosterone level and high ratio of PAC to PRA

1.What is your Dx?

2.Mention a common presentation for this patient



• ANSWER

1.Conns disease

2.Hypertension

• NOTE

Functional adrenal tumors can cause several problems depending on the hormone released. These problems include:

1. Cushing's Syndrome:

This condition occurs when the tumor leads to excessive secretion of cortisol. While most cases of Cushing's Syndrome are caused by tumors in the pituitary gland in the brain, some happen because of adrenal tumors. Symptoms of this disorder include diabetes, high blood pressure, obesity and sexual dysfunction.

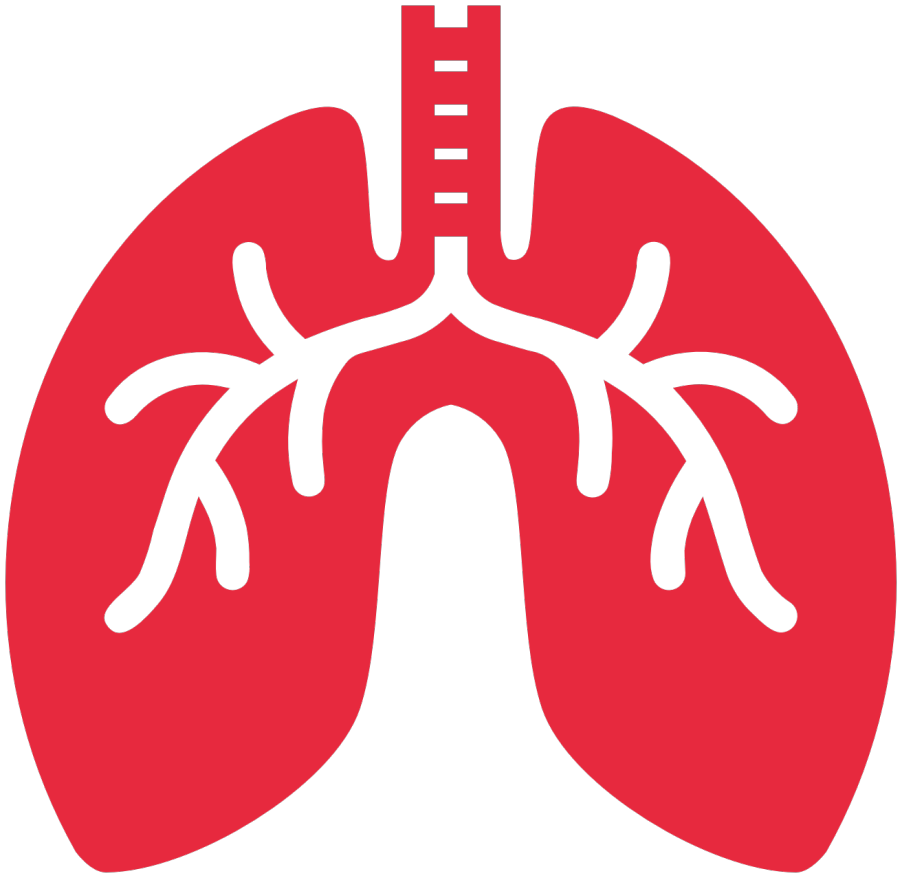
2. Conn's Disease:

This condition occurs when the tumor leads to excessive secretion of aldosterone. Symptoms include personality changes, excessive urination, high blood pressure, constipation and weakness.

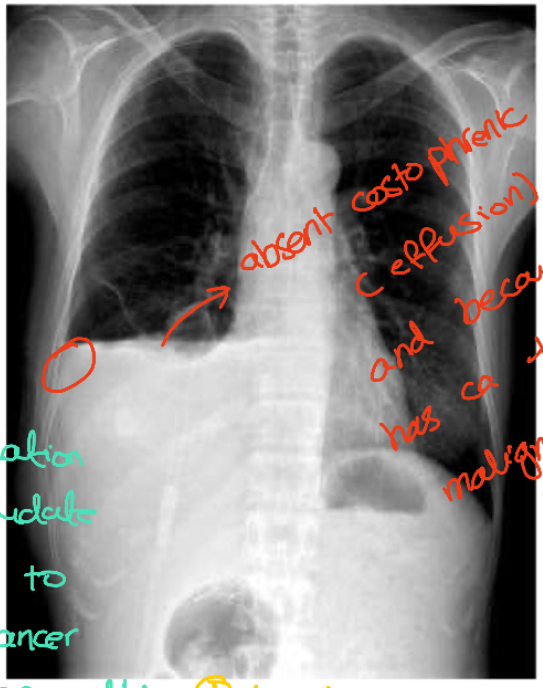
3. Pheochromocytoma:

This condition occurs when the tumor leads to excessive secretion of adrenaline and noradrenaline. Symptoms include sweating, high blood pressure, headache, anxiety, weakness and weight loss.

Respiratory “thoracic” surgery



Q: This is a chest X-Ray for a 35-years old female with a history of breast cancer 3 years ago, who presented to the clinic with progressive shortness of breath and cough.



the MC symptom is SOB

accumulation of exudate related to cancer especially
1. lymphoma
2. lung
3. Breast

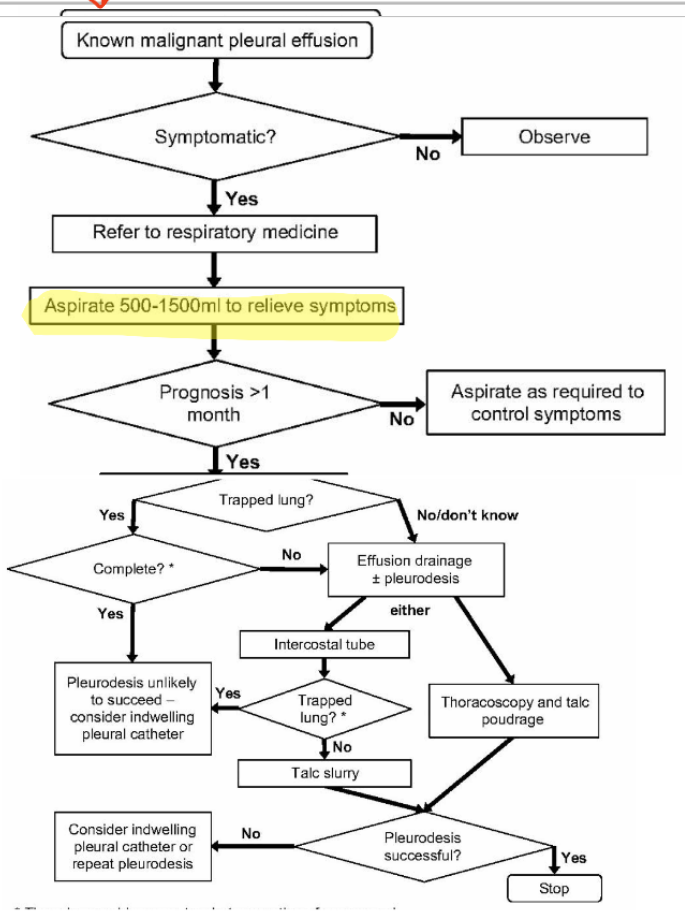
Q1: What is the Dx?

- Malignant Pleural Effusion

Q2: What is the next step in Mx?

- ~~Tube thoracostomy (Chest tube)~~

بلا * إبرة



Q1: What is the Dx?

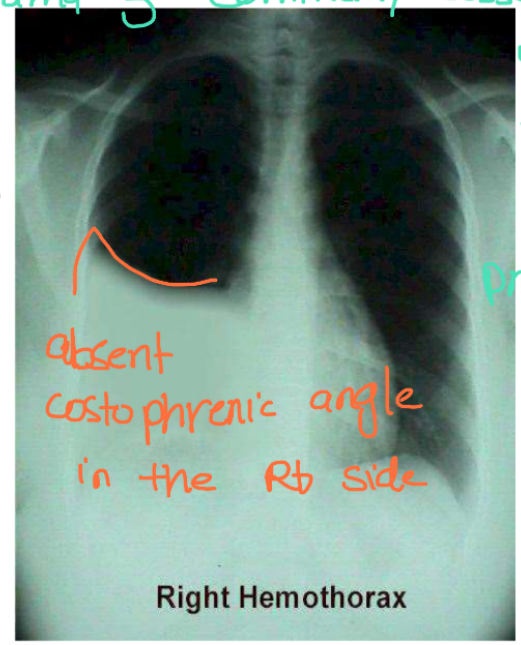
- Right sided hemothorax

following blunt or Penetrating trauma & commonly associated with Fractures & Pnemothorax

plus ↑↑↑ specification in the Rt side

Q2: Name 2 other findings?

1) Absence of diaphragmatic angle
2) Right side multiple rib fractures
3) Right side clavicle fractures



Q3: What are the indication of needle thoracotomy after chest tube insertion?

ttt by tube thoracostomy

- initial loss >1.5 L of blood
- Continuous blood loss of 200 ml per hour over 2-4 hour

Pneumonia سبب التهاب في الرئة

Q: Hx of motor vehicle accident (MVA):

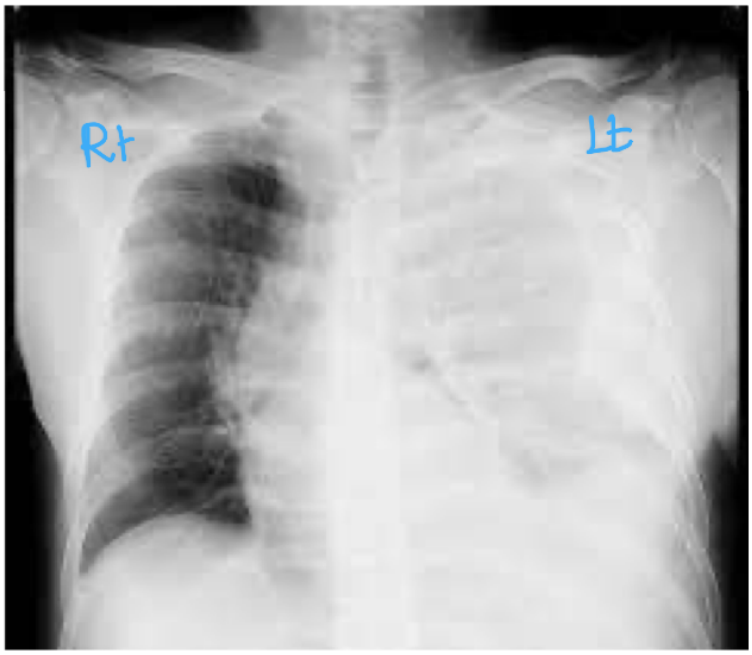
Q1: What is the Dx?

- Left sided hemothorax

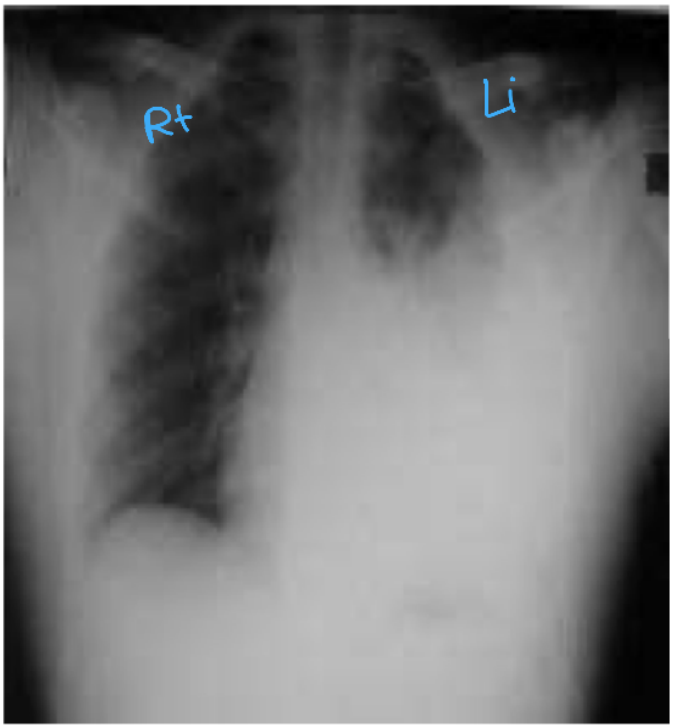
Q2: What is the Mx?

- Chest tube insertion

tube thoracostomy



Q: A patient after a motor vehicle accident?



Q1: What is the Dx?

- left sided hemothorax (obliterated costophrenic angle)

Q2: What is the rapid initial Mx?

- Needle decompression

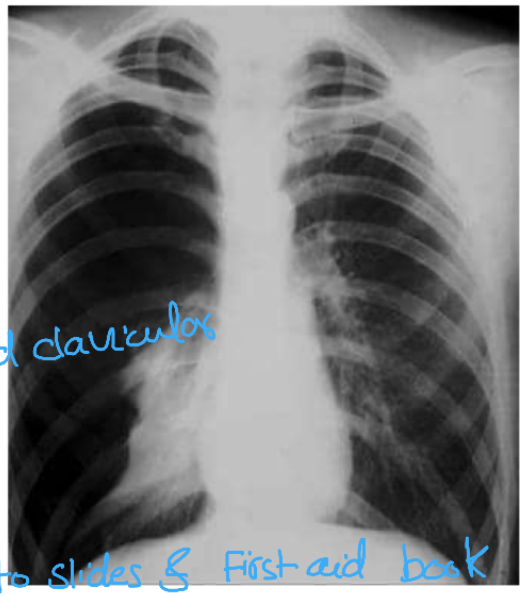
Q3: What is the definitive Mx?

- Chest tube

معوضين د ← pneumothorax

صاد في الـ X-ray لأنه عبارة عن air

Q: A scuba diver came to ER, his CXR shows the following:



Q1: What is the immediate MX?

- Needle thoracostomy

Q2: Where to insert the needle?

- 2nd intercostal space in mid clavicular

Q3: What is the procedure you want to do next?

- ~~Pleurodesis~~ according to slides & First aid book the answer is chest tube insertion

Q1: What is the Dx?

- Right sided tension pneumothorax

Q2: Mention 2 signs on CXR?

1) Tracheal deviation
2) Left lung compressed or collapsed

1) hypoxia
2) tracheal deviation

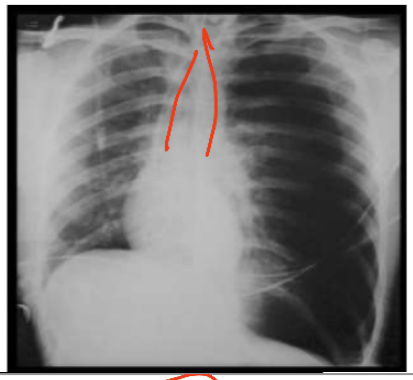
Q3: Mention 2 signs on PE?

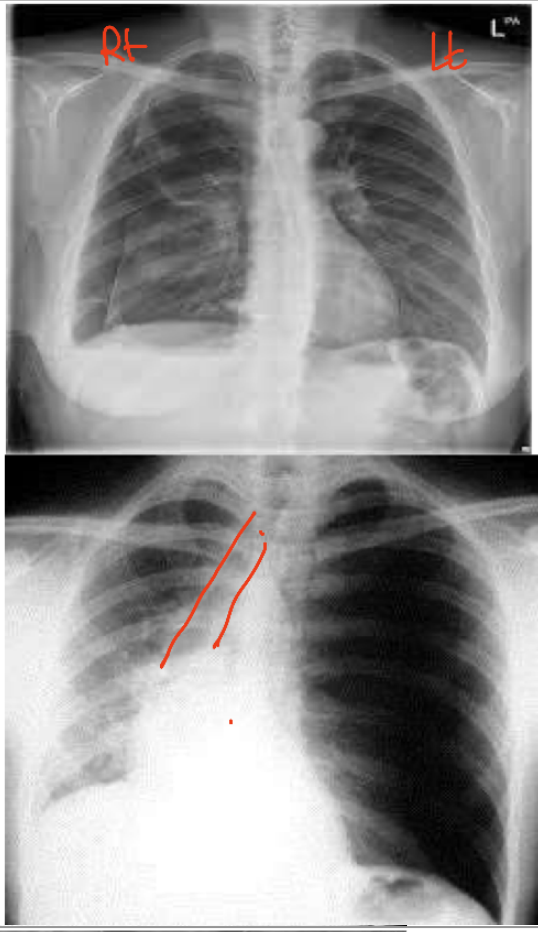
1) Absent breath sounds in affected side
2) Jugular venous distention

3) hemodynamic unstable
4) absent fremitus
5) hyperresonance

Q4: What is the Mx?

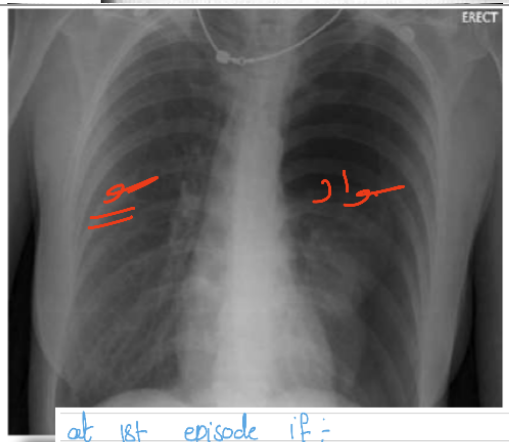
- Needle decompression
- Chest tube





Q: 18 year old male presented with sudden progressive shortness of breath and underwent this investigation:

NC symptom of pneumothorax



Q1: What is the Dx?

- Spontaneous Pneumothorax

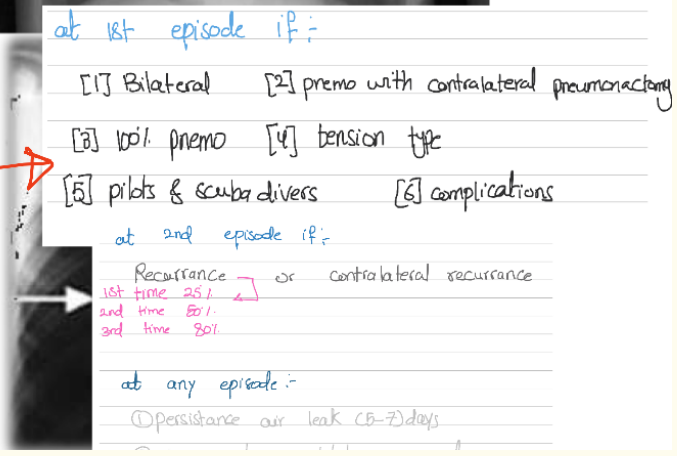
usually in thin tall young male

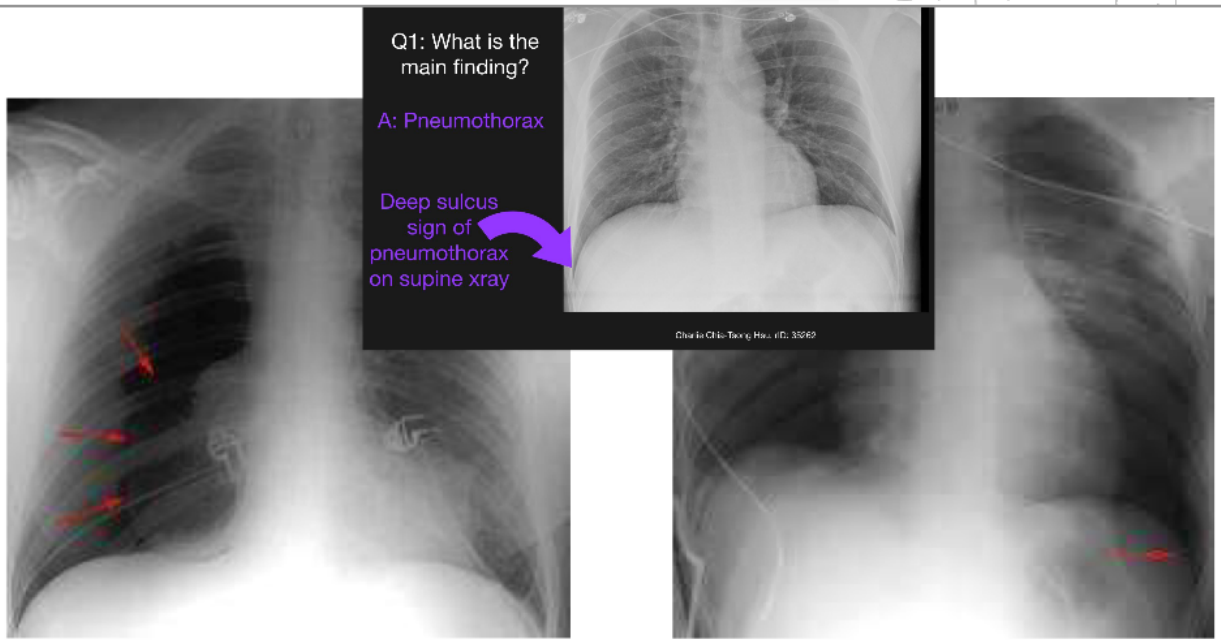
Q2: What is the Mx?

- Chest tube/needle

Q3: Give 2 indications to do surgery?

- Failure of decompression
- Hemo-pneumothorax





Tension Pneumothorax :
The most reliable sign of tension pneumothorax is **depression of a hemidiaphragm**.

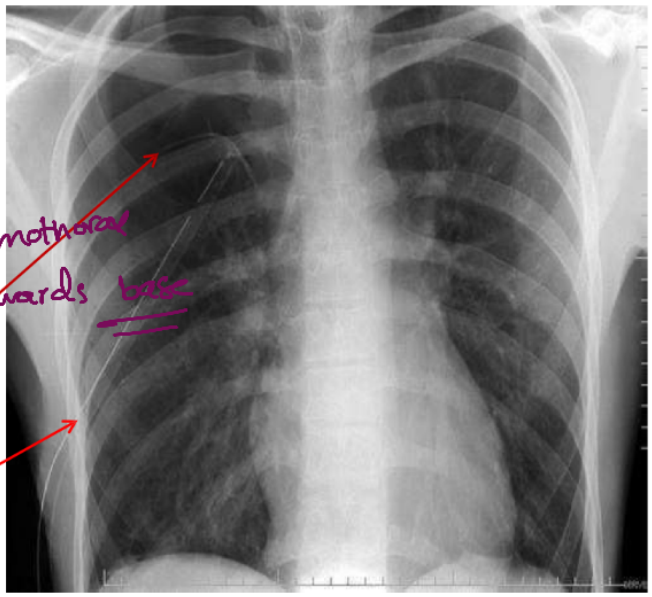
Pneumothorax in the Supine Patient . The ""**deep sulcus sign**"" is seen here (arrow) in the left lung base.

Slides

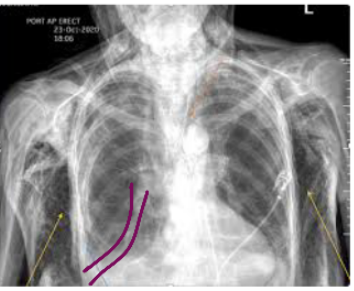
right-sided pneumothorax with a chest tube inserted.

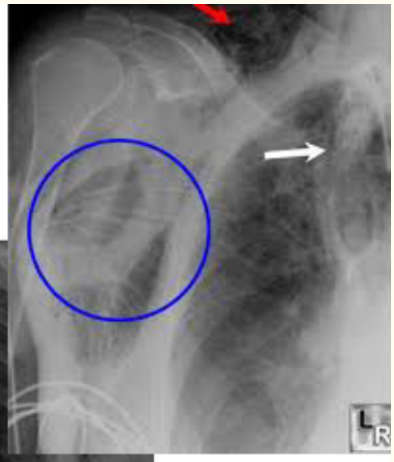
- pneumothorax localizes more towards the apex of the lung. in opposite to haemothorax towards base
- Notice that the markings are absent from the apex down to some degree.
- Notice the white visceral line.

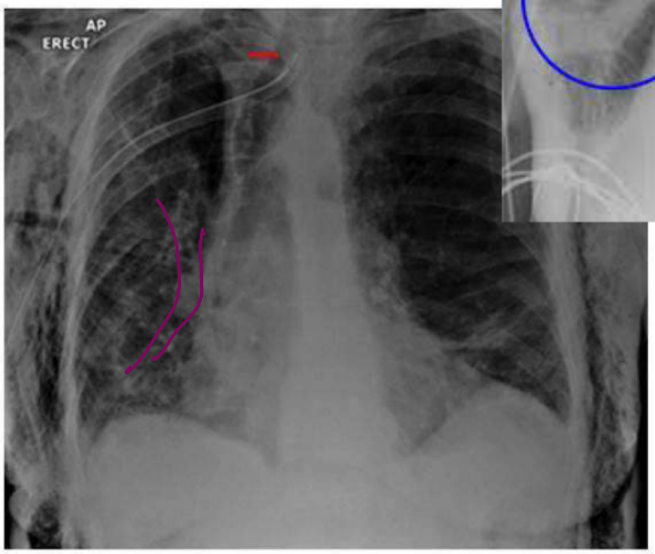
Chest tube



Surgical emphysema





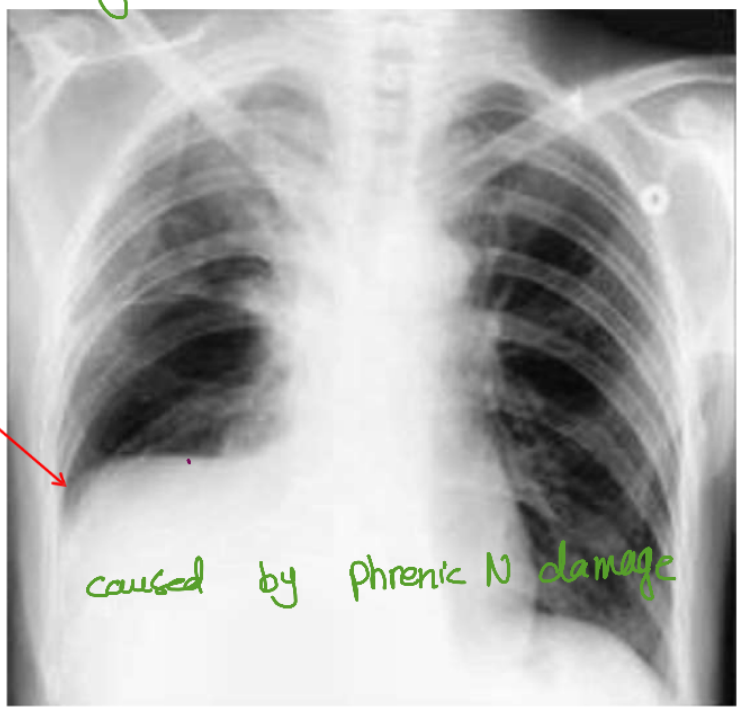


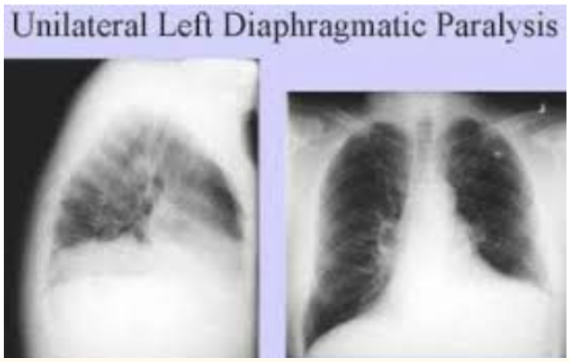
- Radiolucent striations outlining pectoralis major
- It is usually benign, and treatment is directed at reversing the underlying cause.

Pt comes with:
① SOB when lying Flat or with walking or with immersion in water

It is unilateral **diaphragmatic paralysis**.(right)

we can still see the costodiaphragmatic angle so it is not effusion or hemothorax.





THORACIC

Hashemite University
H · U · M
Medical School Committee

• QUESTION

Wateen 2023

A 24-year-old thin male presented to the emergency department complaining of acute left sided pleuritic pain of sudden onset and shortness of breath;

A. What is the initial step in management of this patient?

B. What is the most common cause for this presentation?

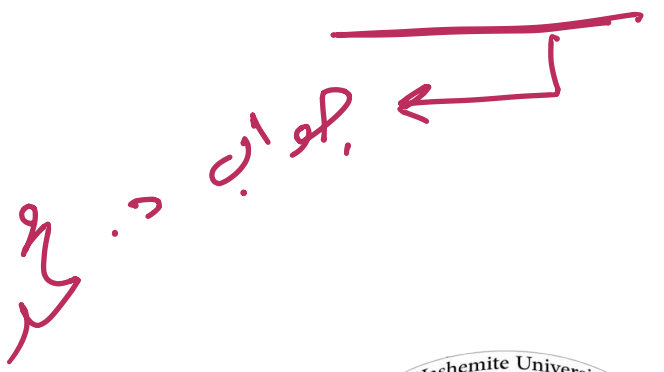
Hashemite University
H • U • M
Medical School Committee

ANSWER

A. ~~Left side chest tube~~ Needle decompression but the definitive ttt is the chest tube

B. Spontaneous pneumothorax :smoker -thin male

Or injury to the lung



• QUESTION

Wateen 2023

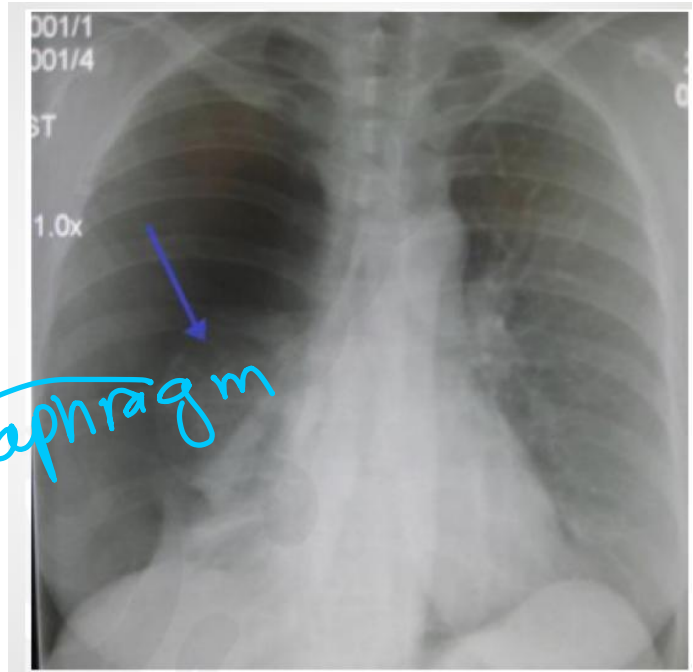
not haemo but it's

This is a chest X-ray who is a victim of Road traffic accident in the ER with tachypnea and tachycardia. During chest examination, What are expected clinically findings during:

tension pneumothorax

A. Percussion?

B. Auscultation?



depression of hemidiaphragm

Hashemite University
H · U · M
Medical School Committee

• ANSWER

A. Right side chest resonance

hyperresonance // if it's hyperamo then it's dullness

B. Right side absent breathing sound

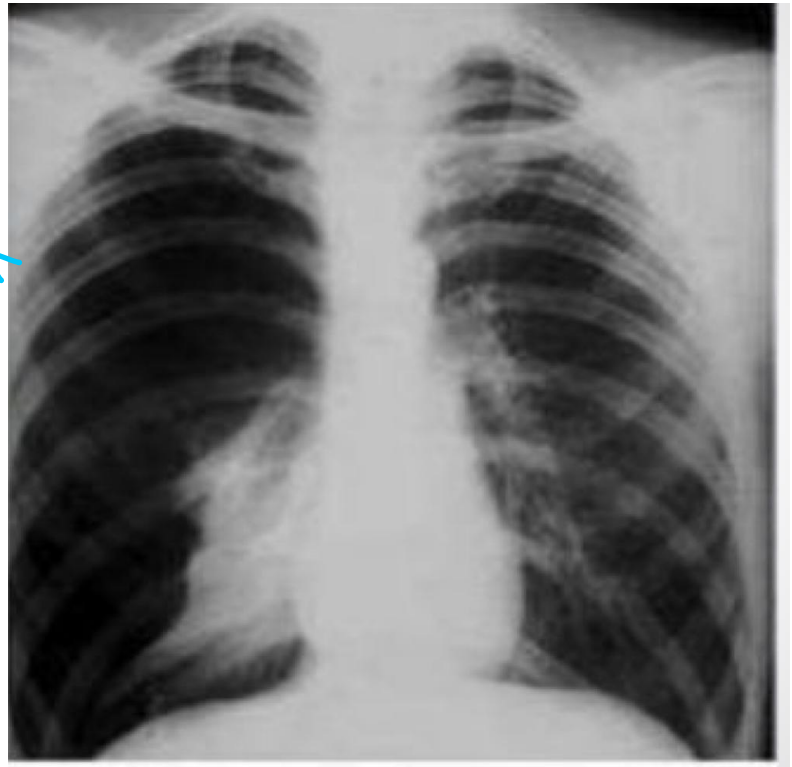
Hashemite University
H · U · M
Medical School Committee

QUESTION

SOUL 2021

A scuba diver came to ER, his CXR shows the following:

1.What is the immediate MX ?



Pneumothorax

Hashemite University
H · U · M
Medical School Committee

ANSWER :

1.Needle thoracostomy

• QUESTION

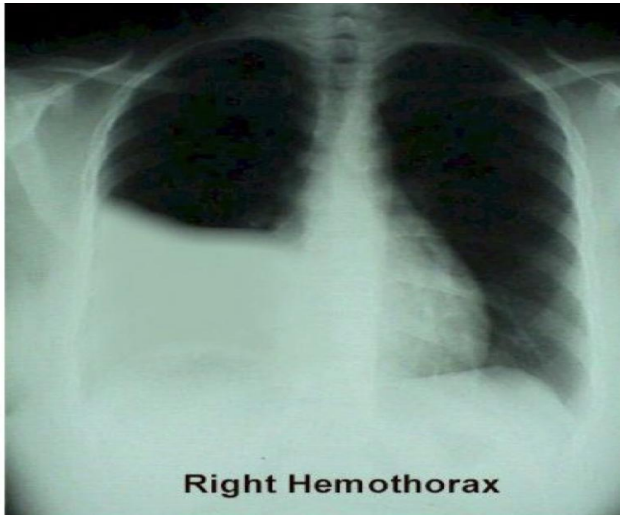
محمود يزن

SOUL 2021

Case of hemothorax:

A.Mention 2 other findings ?

B.What are the indication of needle thoracotomy after chest tube insertion?



Hashemite University
H • U • M
Medical School Committee

ANSWER

A.

1.Absence of diaphragmatic angle

2.Right side multiple rib fractures

3.Right side clavicle fractures

B.

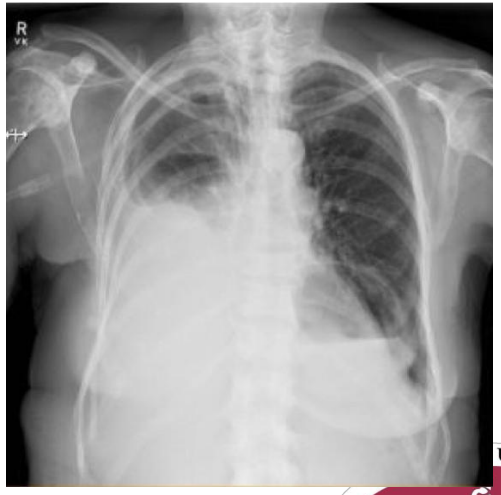
1.Initial loss < 1.5 L of blood

2.Continuous blood loss of 200 ml per hour over 2-4 hour

• QUESTION

محور يزن ٤ IHSAN 2020

This is a chest X-Ray for a 35-years old female with a history of breast cancer 3 years ago, who presented to the clinic with progressive shortness of .breath and cough



1.The most likely underlying cause for her :symptoms is

2. The most appropriate symptomatic treatment :for this patient is

University
H • U • M
Medical School Committee

ANSWER

1.Malignant Pleural Effusion

2.Tube thoracostomy (Chest tube)

• QUESTION

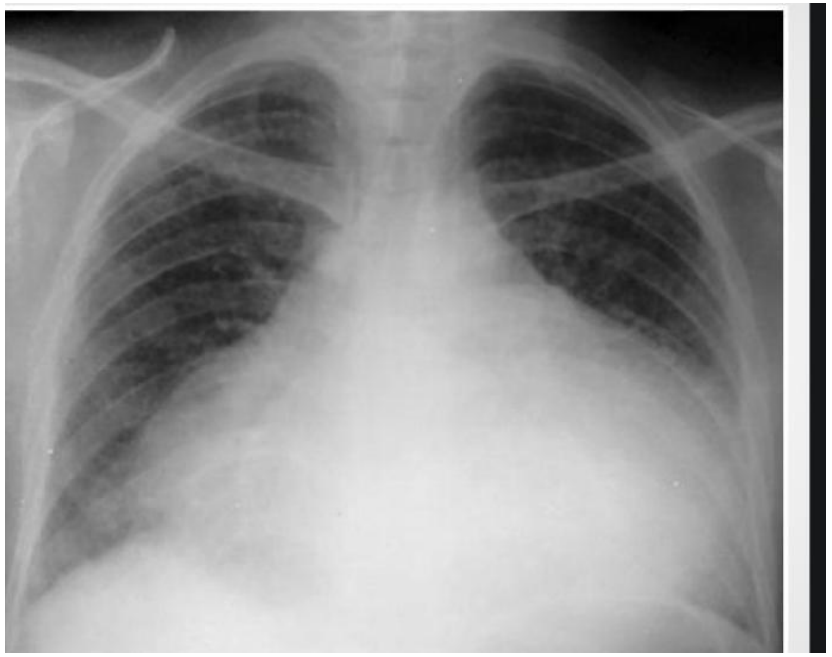
Internal medicine 2019 – Before

CXR for 40 yrs. Old patient post blunt central chest trauma, he was hypotensive, his neck veins were distended

1. What is the pathology shown?

2. How should you manage it

3. What is the consequence for this pathology?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Cardiac Tamponade

2. Pericardiocentesis

3.Beck's Triad

Hypotension,JuglarVenous Distension, Muffled Heart Sounds

Hashemite University
H • U • M
Medical School Committee

• QUESTION

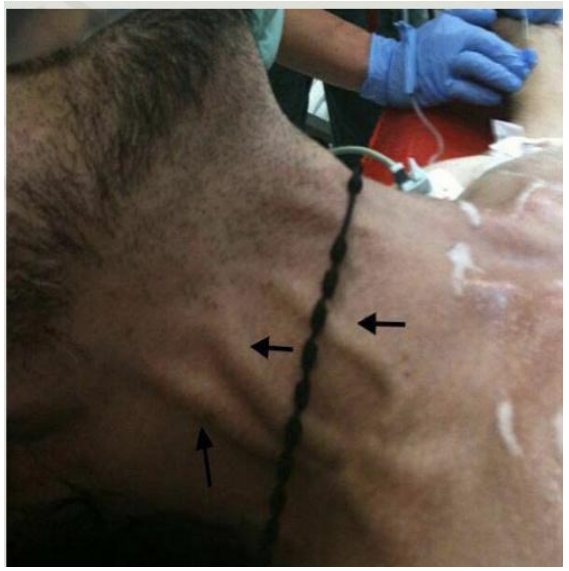
2019 – Before

After RTA, the patient present with distended neck veins.

Q1: Mention 2 possible causes?

Q2: What is your management?

-



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.

1)) ~~Pericardial effusion~~ Tension pneumothorax

2) Cardiac tamponade

2.Pericardiocentesis

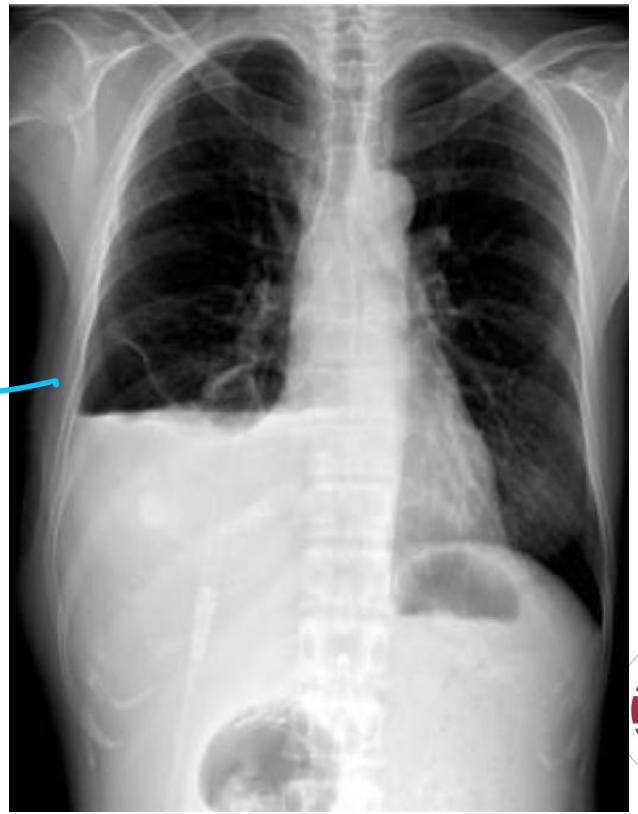
• QUESTION

2019 – Before

1. What is the diagnosis?

2.What is the next step in the management?

mostly it's pleural effusion



ANSWER

1..Right sided hemothorax, or - Pleural effusion

2.Chest tube insertion ,thoracocentesis

• QUESTION

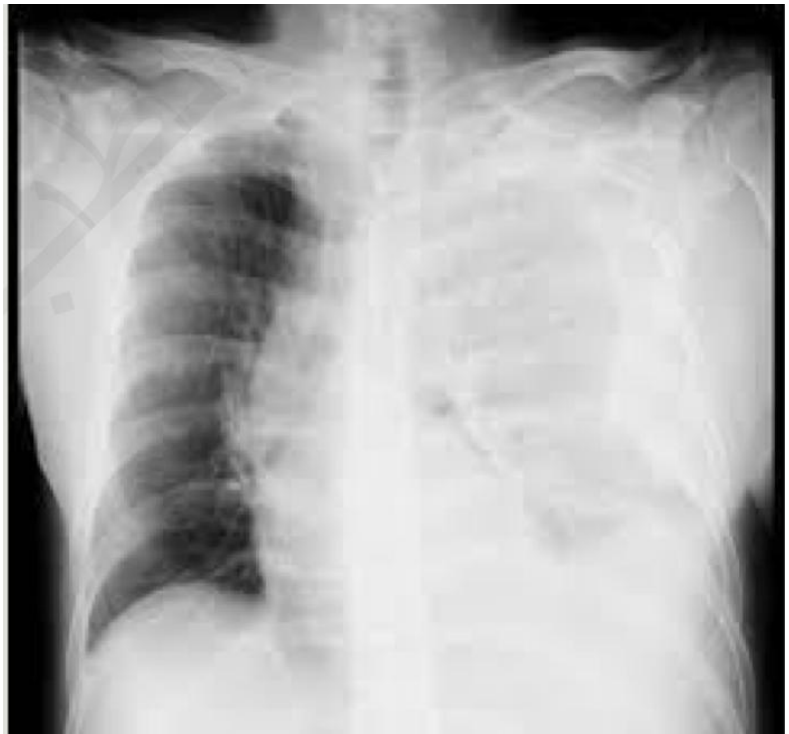
محمود يونس 5

2019 – Before

. history of a motor vehicle accident:

1.What is the Dx?

2.What is the Mx?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Left sided hemothorax

1. Chest tube insertion

• QUESTION

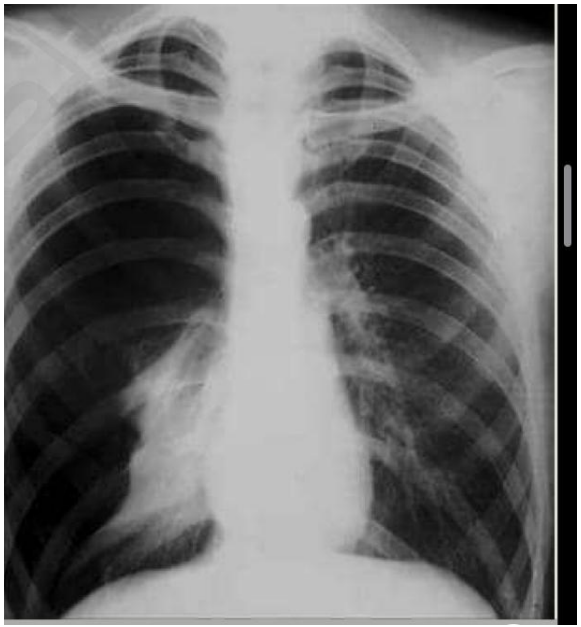
محمود يوسف

2019 – Before

A scuba diver came to ER, his CXR showed the following:

1.what is the immediate MX?

2.what is the procedure you want to do next?



pneumothorax

Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Needle thoracostomy

2.Pleurodesis

• QUESTION

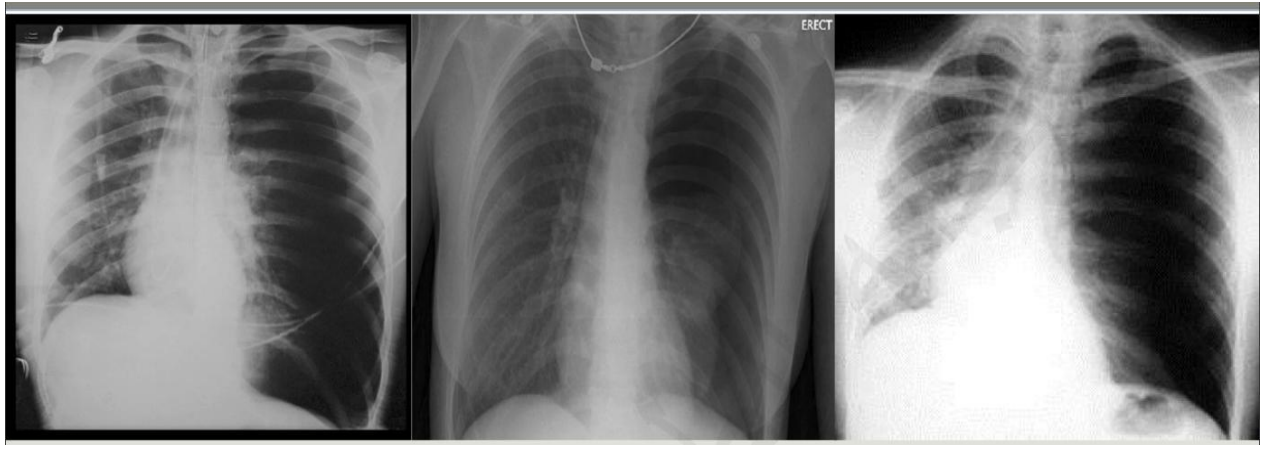
2019 – Before

1.What is the Dx?

2.Mention 2 signs on CXR?

3.Mention 2 signs on PE?

4.What is the Mx?



• ANSWER

1.=Right sided tension pneumothorax

2. 1) Tracheal deviation 2) Left lung compressed or collapsed

3.1) Absent breath sounds in affected side 2) Jugular venous distention

4.- Needle decompression - Chest tube

• QUESTION

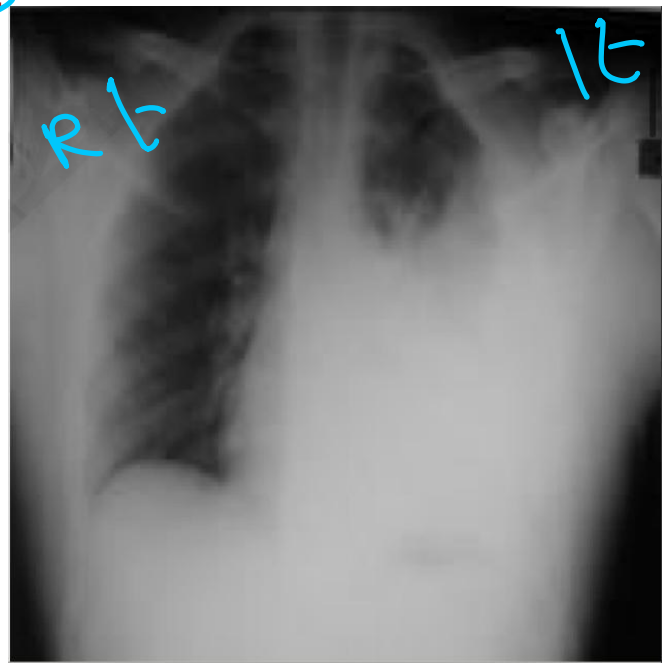
2019 – Before

A patient after a motor vehicle accident?

1. Diagnoses

2.rapid initial Mx?

3.definitive Mx?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.right sided pneumothorax and left sided hemothorax (obliterated costophrenic angle)

usually associated with pneumothorax

2.Needle decompression

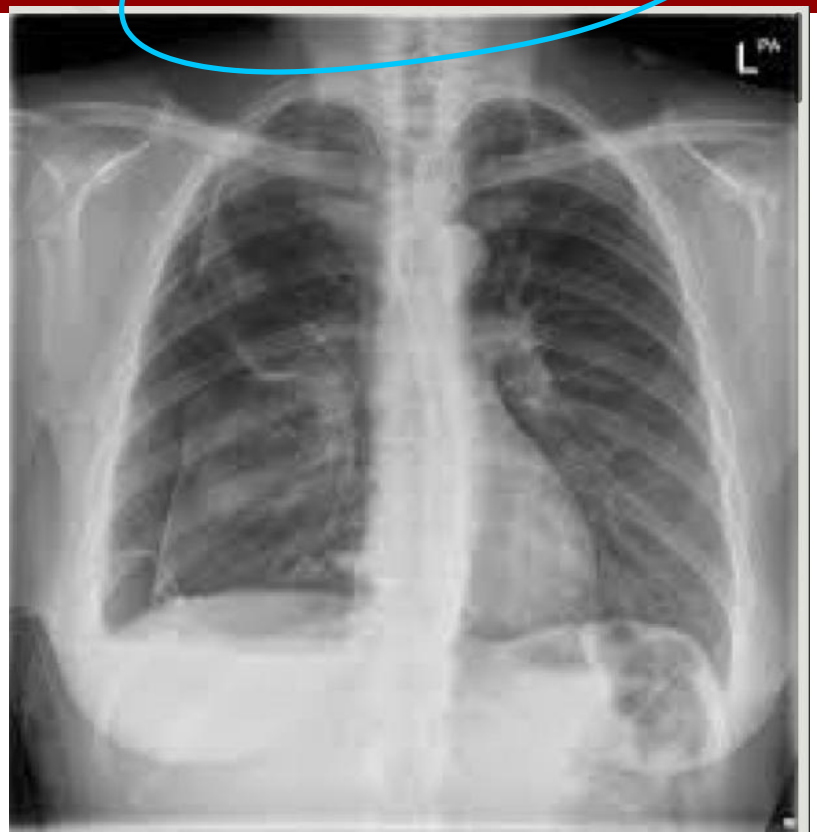
3.Chest tube

• QUESTION

2019 – Before

1. What is the Dx?

2.What is the Mx?

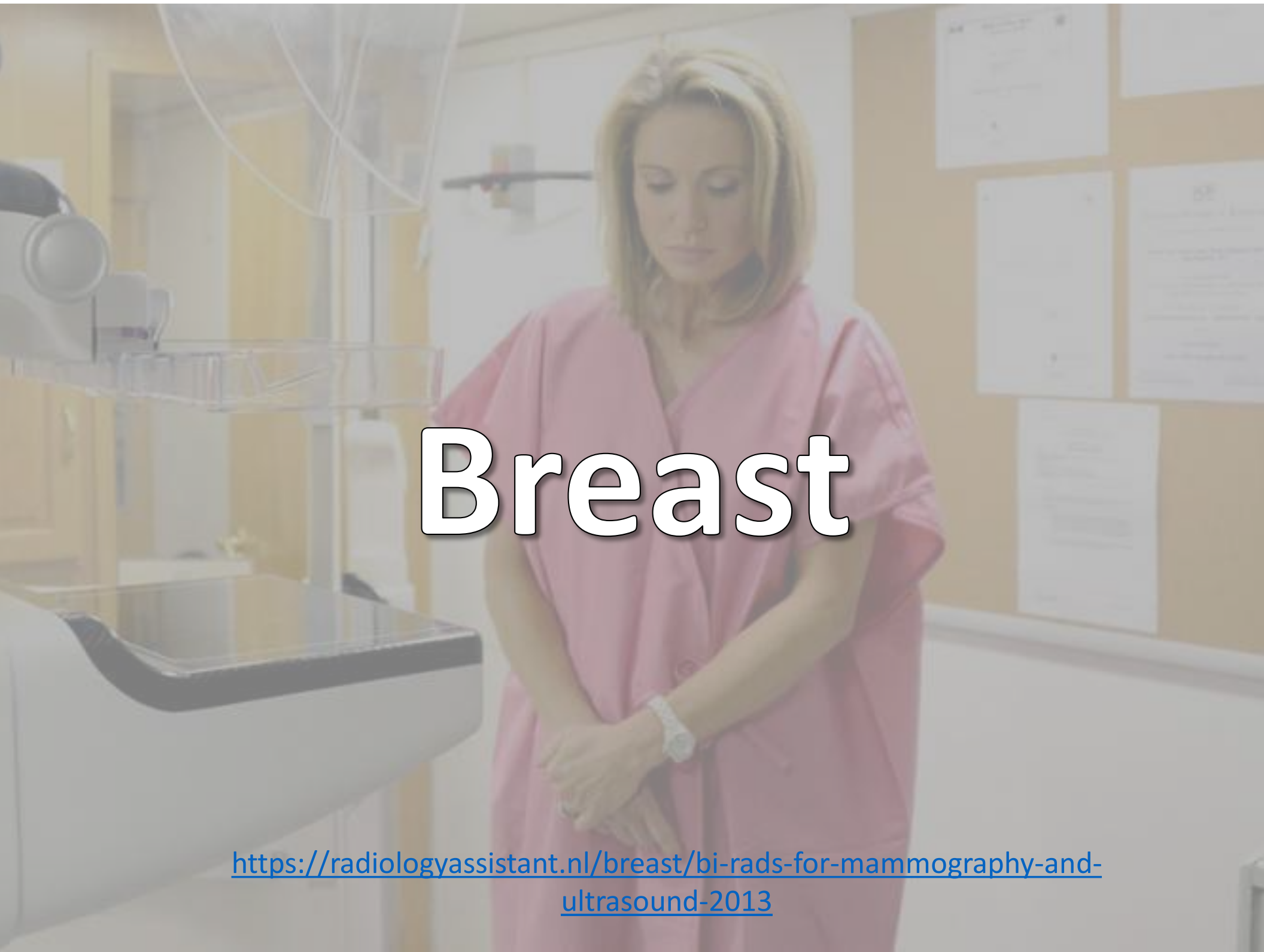


Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Pneumothorax

2.Chest tube/needle



Breast

https://radiologyassistant.nl/breast/bi-rads-for-mammography-and-ultrasound-2013

BI-RADS CATEGORIES

BI-RADS 0 (incomplete): Recommend additional imaging -- mammogram or targeted ultrasound

BI-RADS 1 (negative): Routine breast MR screening if cumulative lifetime risk ≥ 20%

BI-RADS 2 (benign): Routine breast MR screening if cumulative lifetime risk ≥ 20%

BI-RADS 3 (probably benign): Short-interval (6-month) follow-up

BI-RADS 4 (suspicious): Tissue diagnosis

BI-RADS 5 (highly suggestive of malignancy): Tissue diagnosis

BI-RADS 6 (known biopsy-proven malignancy): Surgical excision when clinically appropriate

Final Assessment Categories

Category		Management	Likelihood of cancer
0	Need additional imaging or prior examinations	Recall for additional imaging and/or await prior examinations	n/a
1	Negative	Routine screening	Essentially 0%
2	Benign	Routine screening	Essentially 0%
3	Probably Benign	Short interval-follow-up (6 month) or continued	>0 % but ≤ 2%
4	Suspicious	Tissue diagnosis	4a. low suspicion for malignancy (>2% to ≤ 10%) 4b. moderate suspicion for malignancy (>10% to ≤ 50%) 4c. high suspicion for malignancy (>50% to <95%)
5	Highly suggestive of malignancy	Tissue diagnosis	≥95%
6	Known biopsy-proven	Surgical excision when clinical appropriate	n/a

FNAC (Breast)

C1: Unsatisfactory

C2: Benign

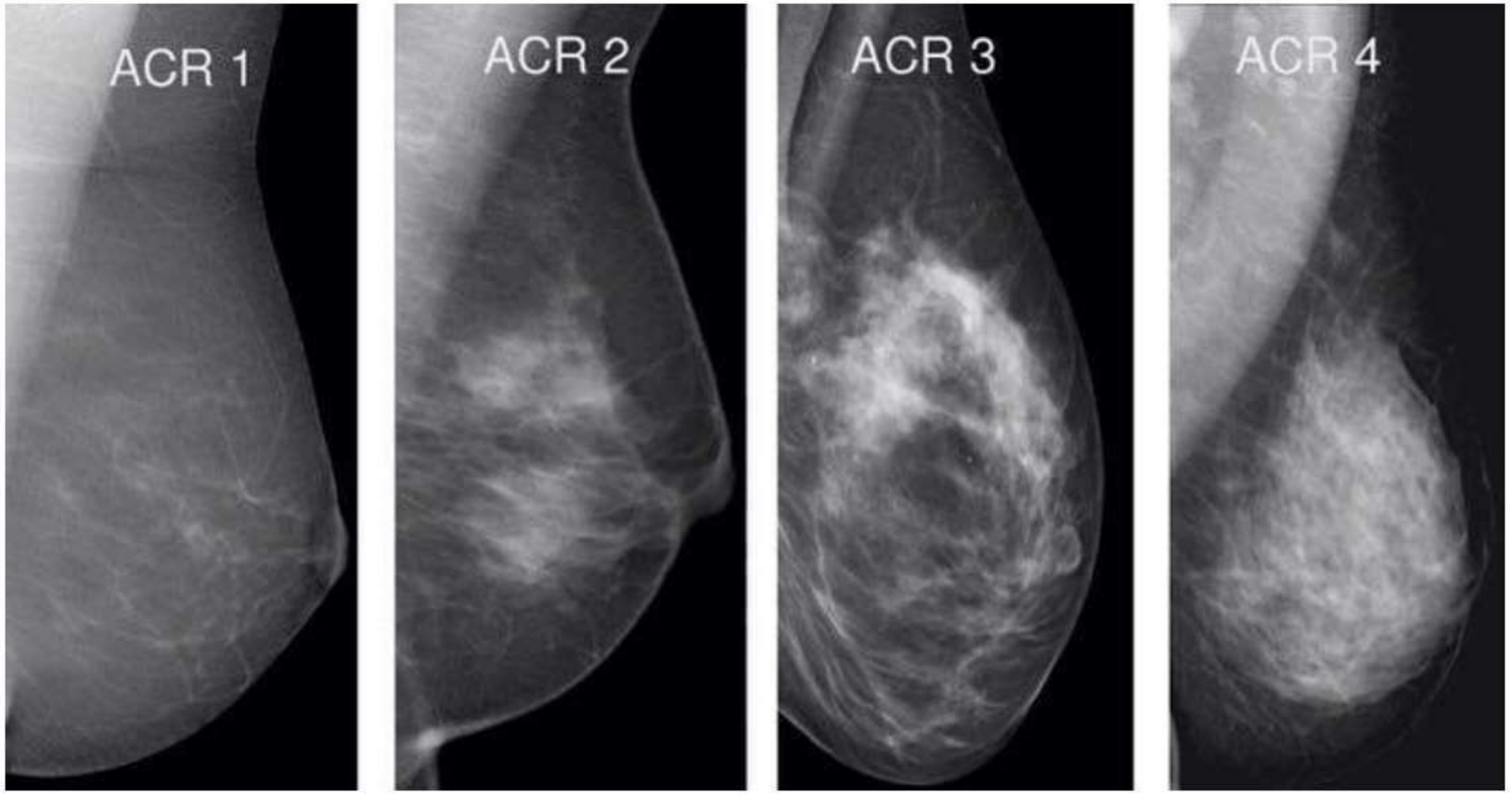
C3: Atypical cells

C4: Suspicious cells

C5: Malignant

ACR classification of breast density

ACR = American College of Radiology



old age → young age

There are four categories of mammographic density :

ACR 1 : almost entirely fatty. 0–25%

ACR 2 : scattered areas of fibroglandular density. 25–50%

ACR 3 : heterogeneously dense. 50–75%

ACR 4 : extremely dense. > 75%

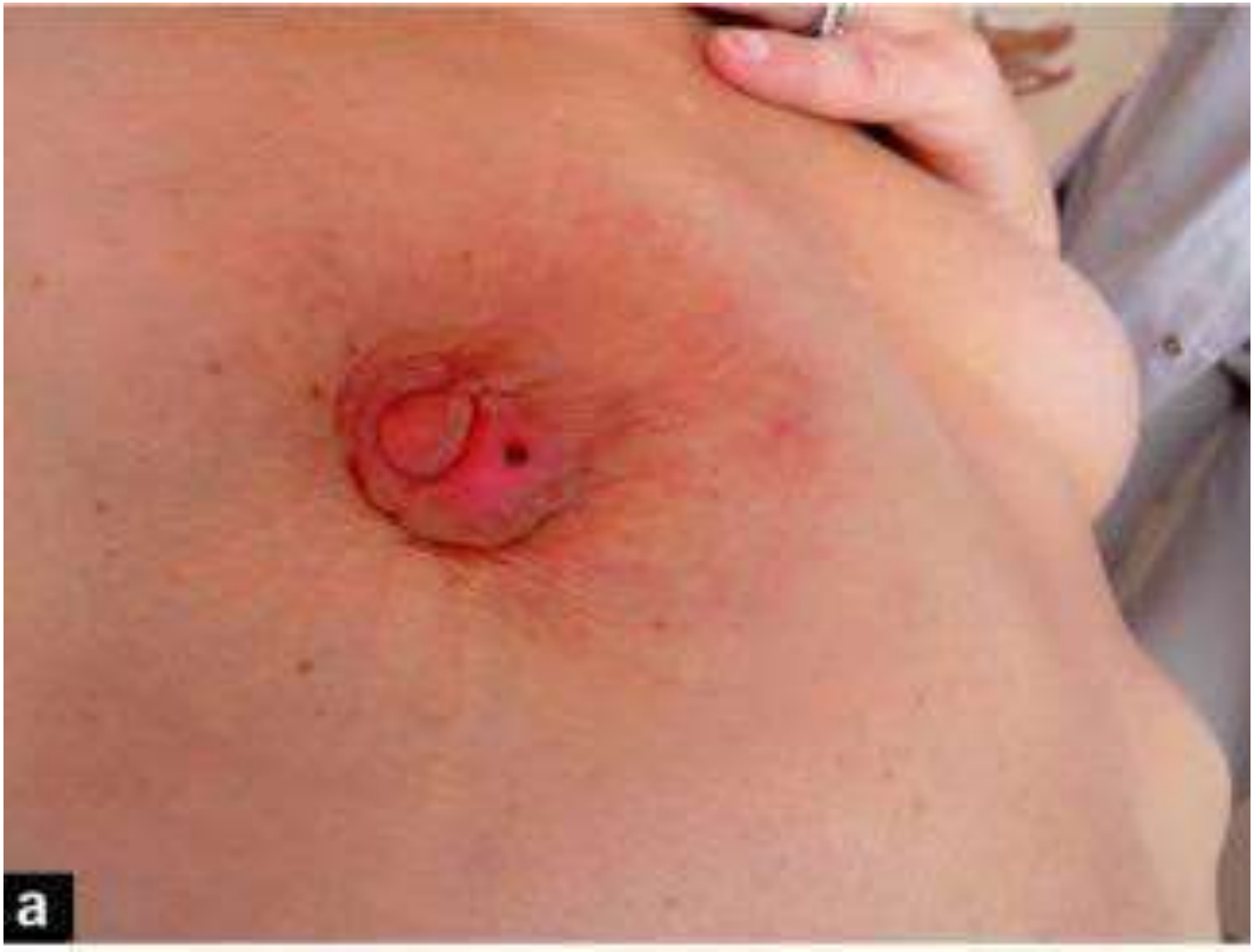
Metrics	Results	ACR type	Density percentage value (%)	Sensitivity (%)	Specificity (%)	Accuracy (%)
TP	97	1 (fatty breast)	<10	90.65	73.59	85.00
FP	14					
TN	39					
FN	10					
TP	66	2 (Fibro-glandular dense)	25-50	61.68	90.57	71.25
FP	5					
TN	48					
FN	41					
TP	22	3 (Heterogeneous dense)	50-75	20.56	96.23	45.63
FP	2					
TN	51					
FN	85					
TP	6	4 (Extremely dense)	75>	5.61	98.11	36.25
FP	1					
TN	52					
FN	101					

TNM Class	Criteria
T0	No evidence of primary tumor
T1a	Carcinoma in situ
T1	< or = 2 cm
T1m1c	microinvasion .1 cm or less
T1a	>.1 to .5 cm
T1b	>.5 to 1 cm
T1c	>1 to 2 cm
T2	>2 to 5 cm
T3	>5cm
T4	Any size tumor with direct extension to : a) Chest wall or b) skin
T4a	Chest wall, not including pectoralis muscle
T4b	Skin edema, ulceration, satellite skin nodule
T4c	4a and 4b
T4d	Inflammatory carcinoma

TNM Class	Criteria
Nx	Regional lymph nodes cannot be removed
N0	No regional lymph node metastasis
N1	❑ Metastasis to movable ipsilateral axillary lymph nodes ❑ 1–3 ALN
N2	❑ Metastases in ipsilateral axillary lymph nodes fixed of matted (N2a) or met. only in clinically apparent ipsilateral mammary nodes without clinically evident axillary lymph nodes. (N2b) ❑ 4–9 ALN
N3	❑ Metastases in ipsilateral axillary or infraclavicular lymph nodes (N3a) or clinically apparent ipsilateral internal mammary lymph nodes (N3b) or ipsilateral supraclavicular lymph nodes (N3c) ❑ 10 or more ALN
MX	Distant metastasis cannot be assessed
M0	No distant metastasis
M1	Distant metastasis

Q1: What is the finding? Male breast nipple changes

Q2: Most common gene mutation associated with male breast cancer? BRCA 2



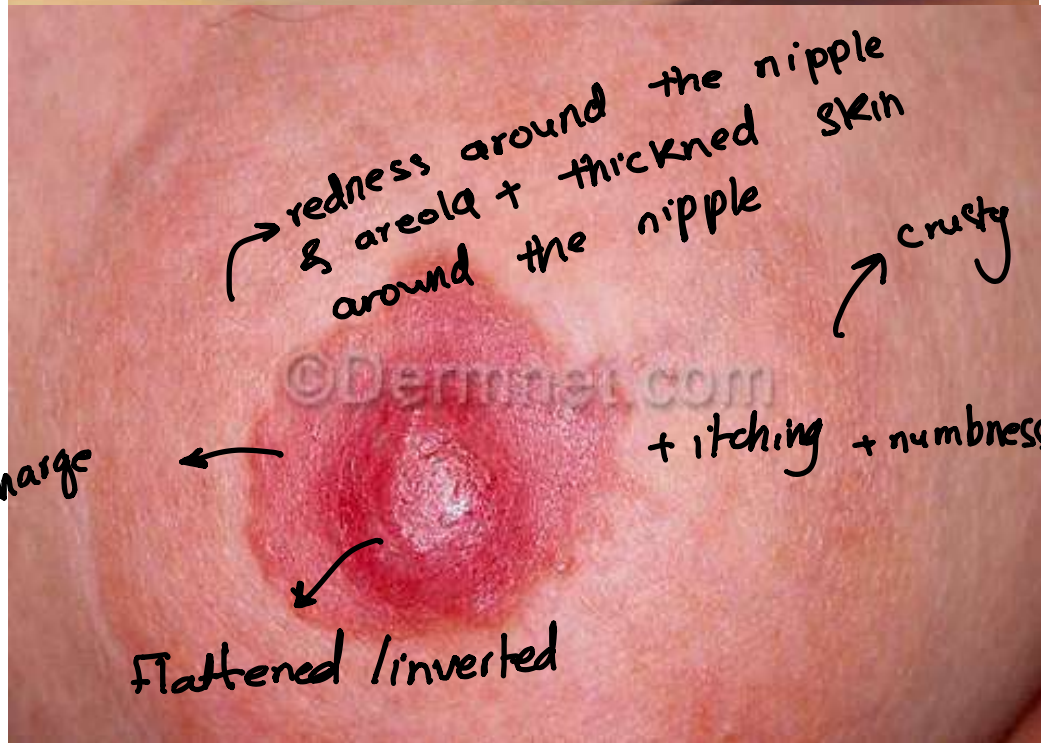
Q: A nipple biopsy for a female patient shows large cells with a clear cytoplasm, high grade nuclei and prominent nucleoli:

Q1: What is your Dx?

- Paget disease of the breast/nipple (PDB)

Q2: Mention 2 immuno-histochemical tests to differentiate it from melanoma?

1) CEA (pos. in PDB)
2) Protein S100 (neg. in PDB)



① acute masaitis → ① 1st 3 months postpartum from lactating
② improper nursing
③ stress & sleep deprivation

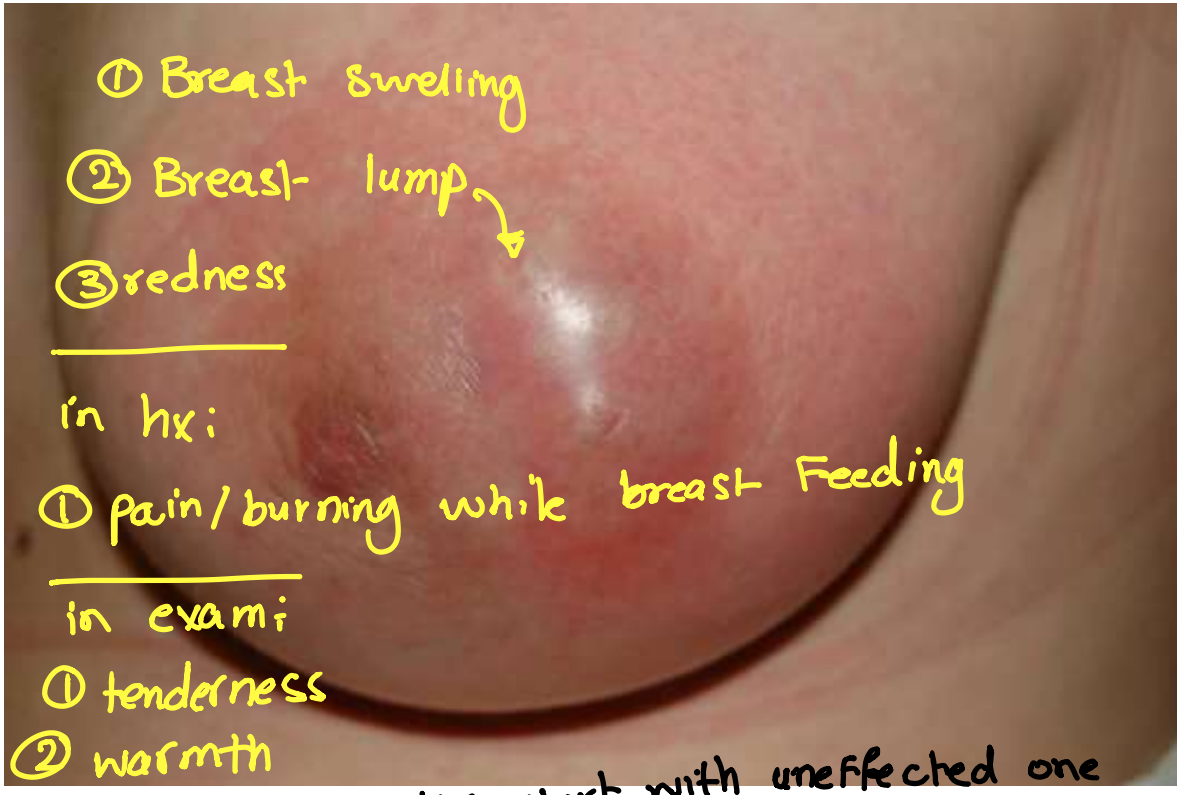
② granulomatous → ① idiopathic
② FB
③ wegner d2
④ sacrodoisis

③ FB

④ Recurring subareolar abscess (Zuska d2)

Q1: What is the Dx?

- Breast mastitis, Abscess



Q2: MCC? as organism

- S. Aureus

Q3: Mx?

- Abx
- Incision & Drainage

① continous breast Feeding, manual pump between Feeding, start with uneffected one then to affected + ↑ Frequency
② analgesic
③ ↑ Fluid & nutrition
④ warm breast compresseor

Q: 50 yo female has breast pain, breast only shows skin redness?

+ itching

Q1: What is the Dx?

- Inflammatory breast cancer

Q2: Diagnostic procedure?

- Tissue biopsy CNP

alone X

Q3: Mx? alone Y

- Mastectomy + Radiotherapy

لازم مع بعض

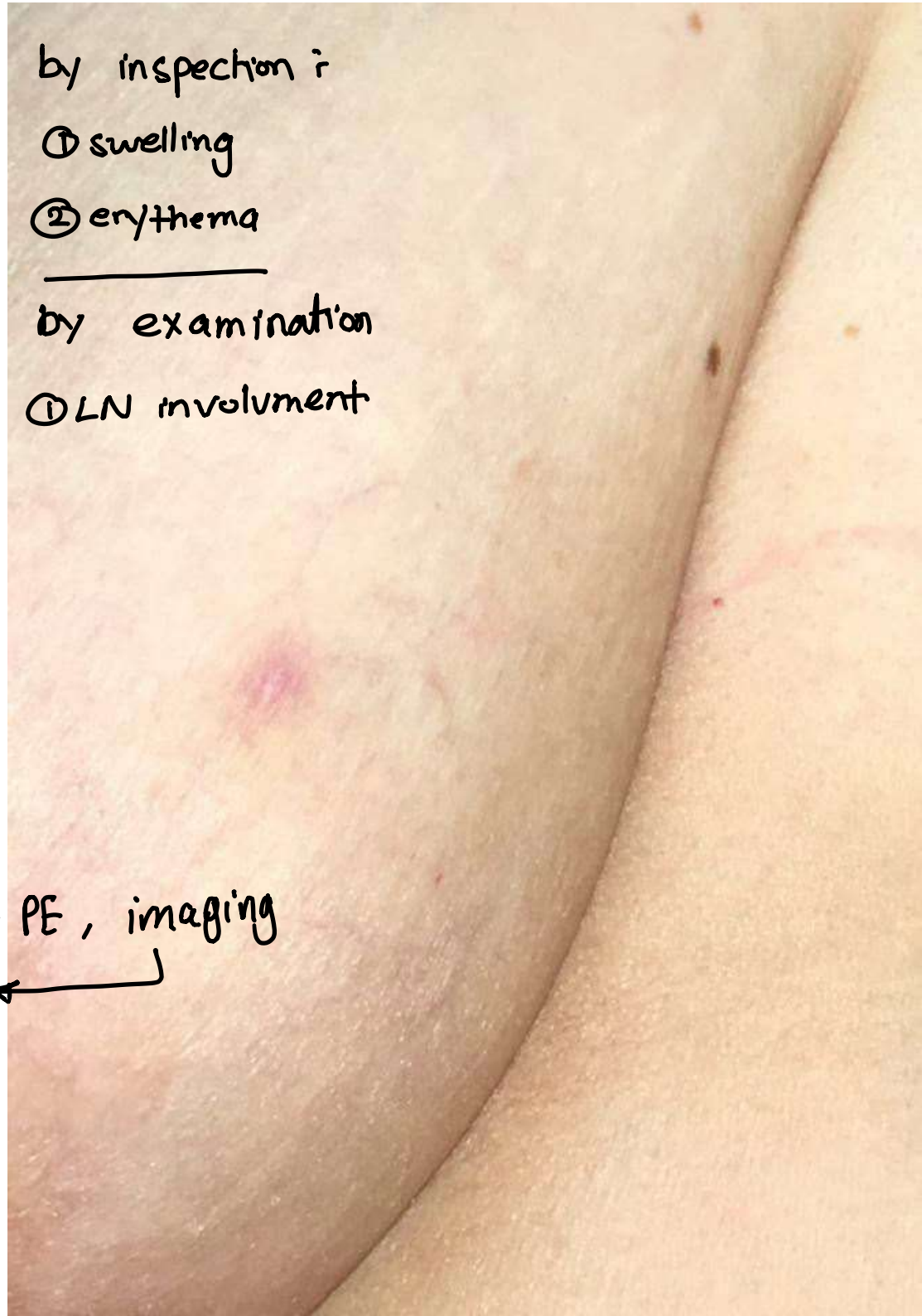
Q4: What is the modality of Dx?

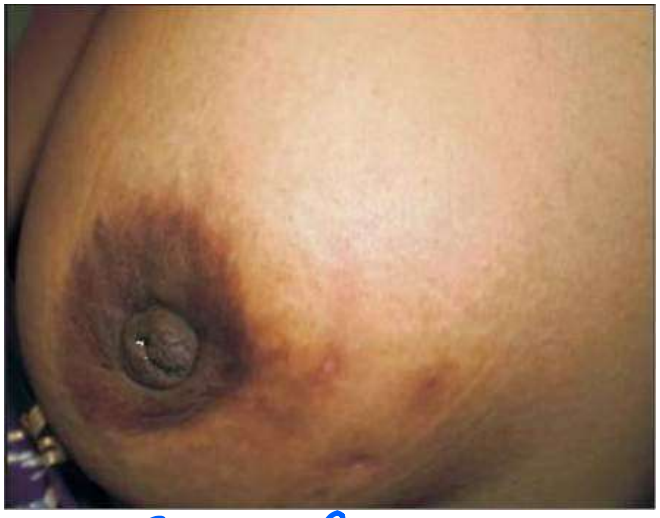
- Triple assessment → Hx, PE, imaging
- Mammogram + US

+ Biopsy

Q5: According to TNM stage system the T stage is?

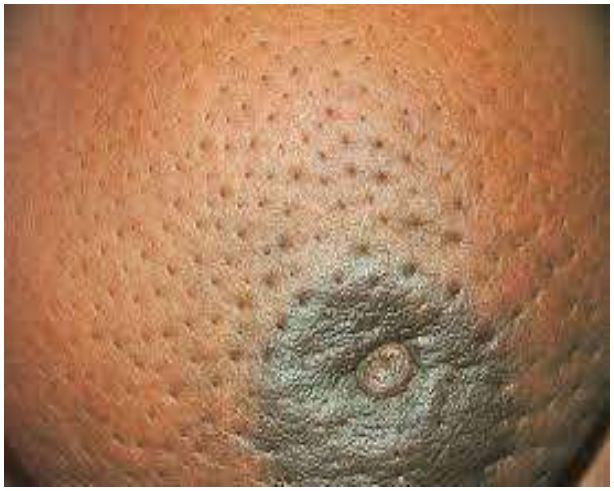
- T4d



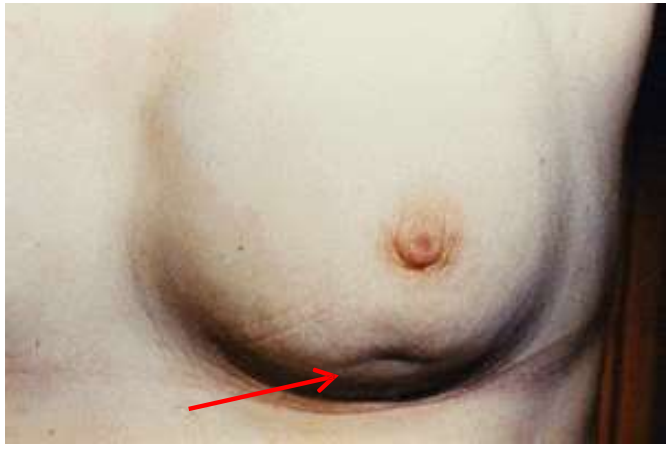


Sign of Ca

Nipple retraction (inversion).

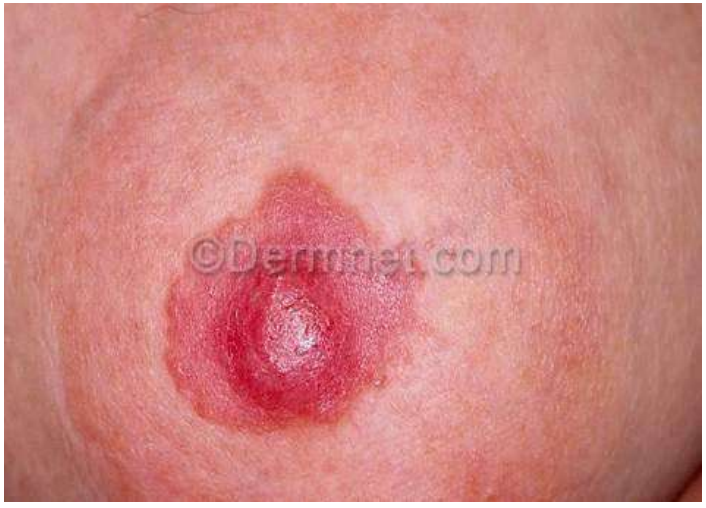


Peau d' orange (orange peel).



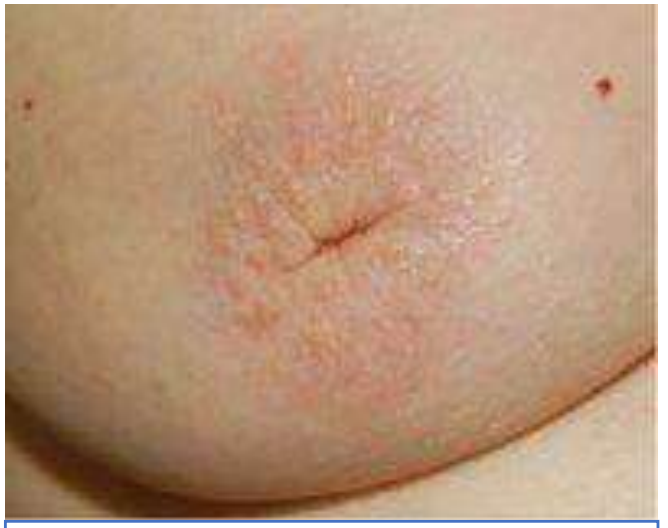
Sign of Ca

Skin dimpling



Paget disease of the nipple (eczema around the nipple)

Duct ectasia



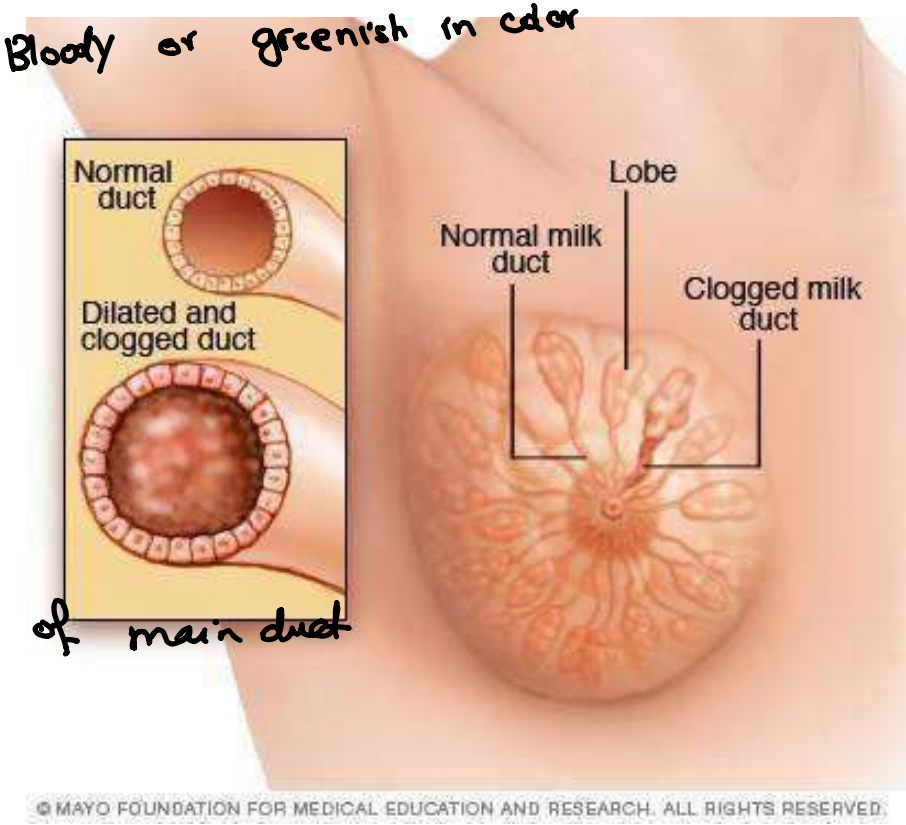
duct ectasia :bilateral inversion and displaying transverse slit pattern

-AKA Plasma cell mastitis. / periductal mastitis

-Condition Mimics cancer (nipple retraction, inversion, pain, Nipple discharge). + sub areolar palpable mass → Bloody or greenish in color

-disorder of peri- or post-menopausal age.

-Self-limiting condition. conservative or surgical excison of main duct



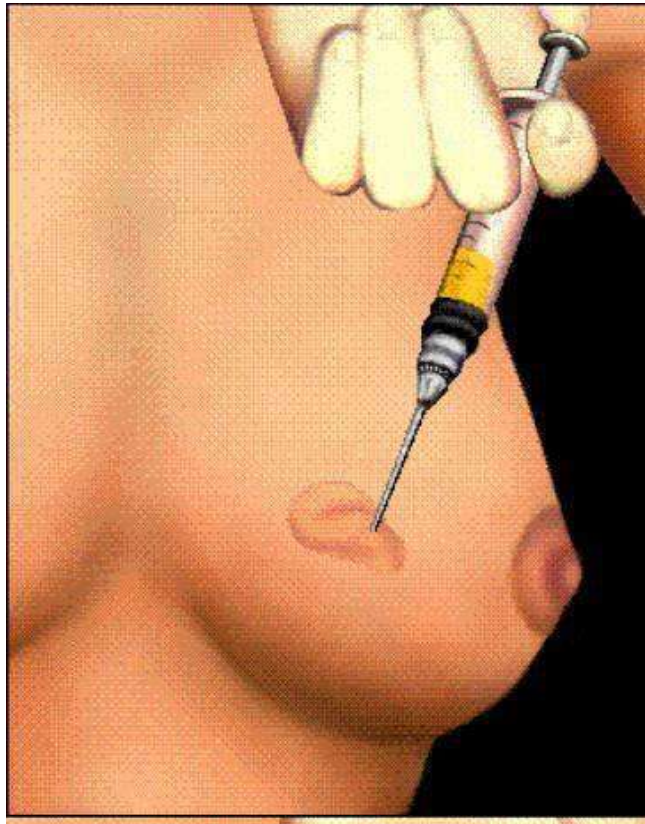
Fine needle aspiration (FNA)

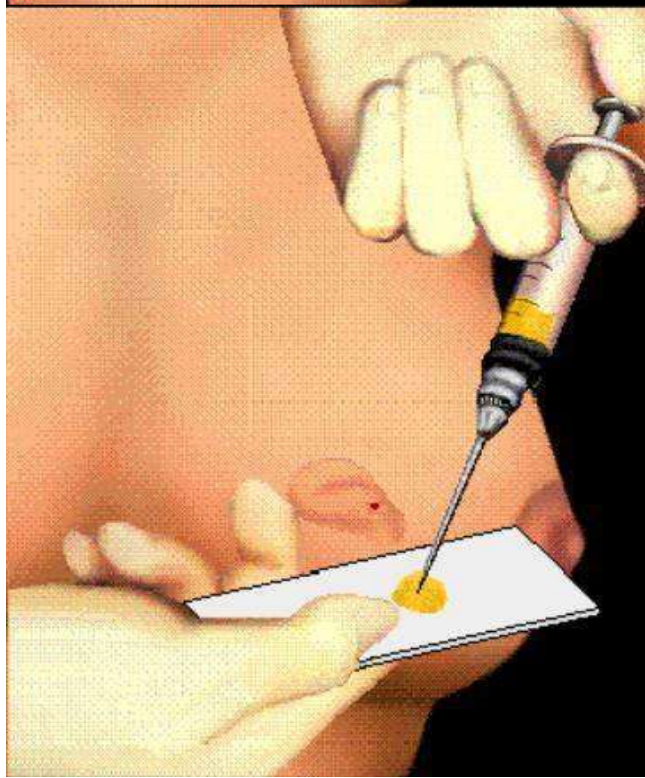
** **Advantages** :

- done in office
- minimal discomfort.

** **Disadvantage** :

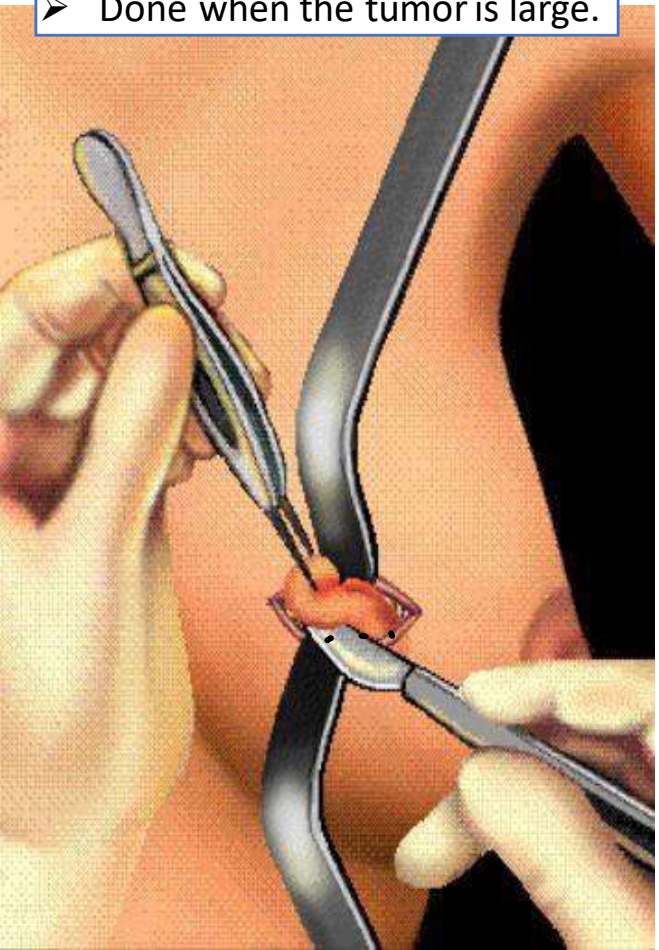
- may not always rule out cancer when it's negative.





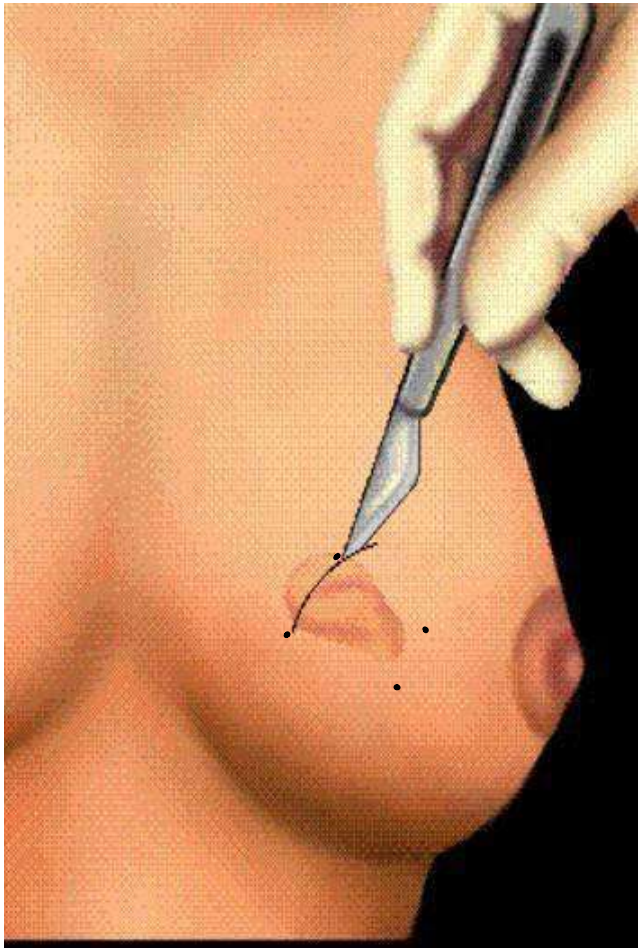
Incisional biopsy

- Local anesthesia, often with mild sedation.
- Only part of the tumor is removed for Dx.
- Outpatient procedure.
- Done when the tumor is large.



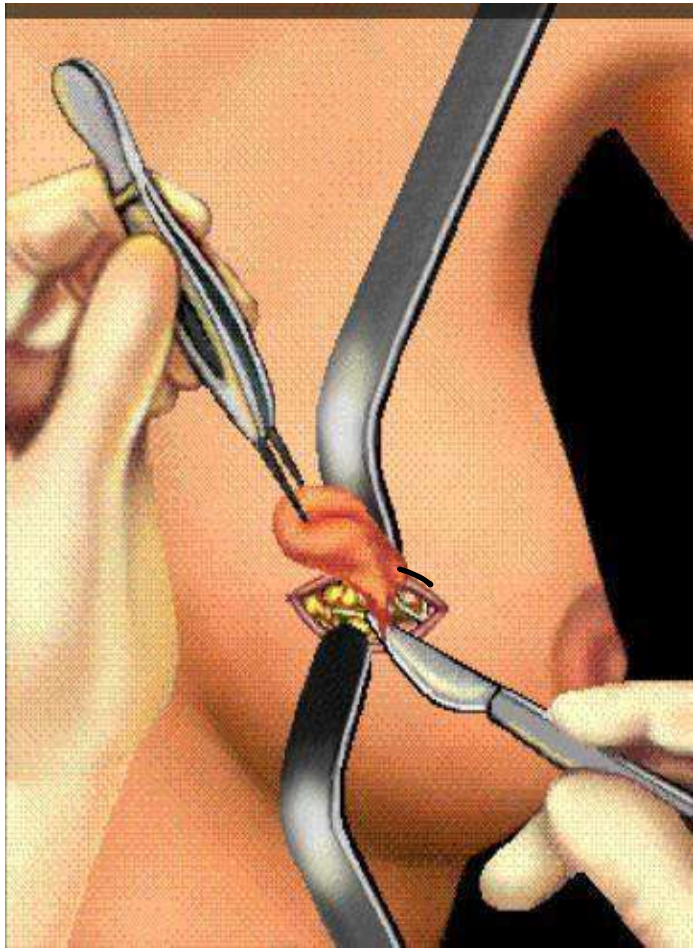
Excisional biopsy

- **The mc biopsy procedure**.
- Outpatient procedure.
- The entire lump is taken out using a small incision.



Lumpectomy

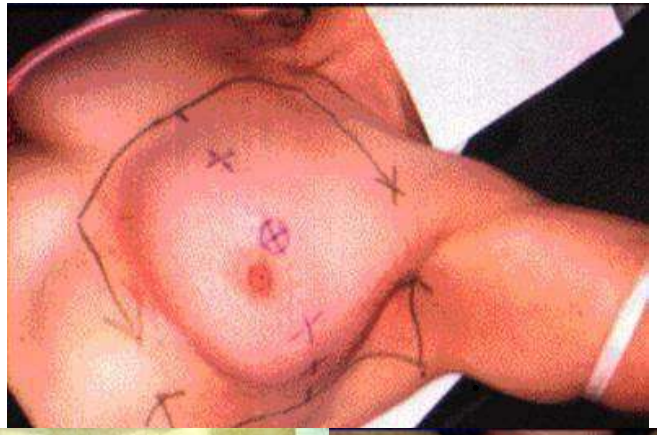
- Excisional biopsy may be sufficient for the lumpectomy, if the margins were negative.
- With radiation therapy, it is as effective as modified radical mastectomy.

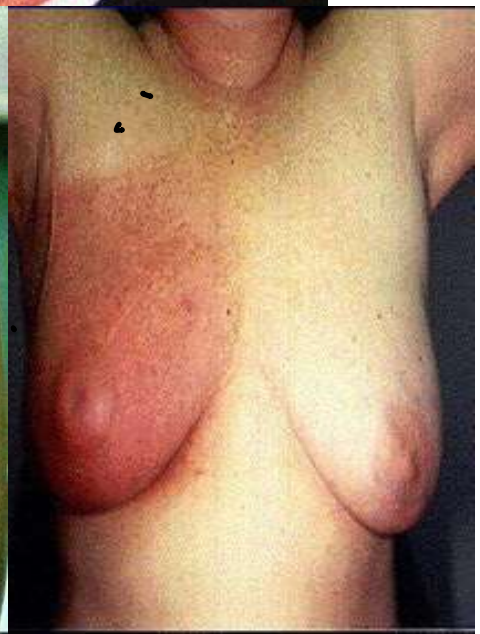


Radiotherapy

Side effects (self limited)

skin reddening & irritation/ darkening of the skin/ blistering/ minimal ↓ in blood counts/ mild fatigue/ lymphedema in the arm (arm sleeves are used to control the swelling).





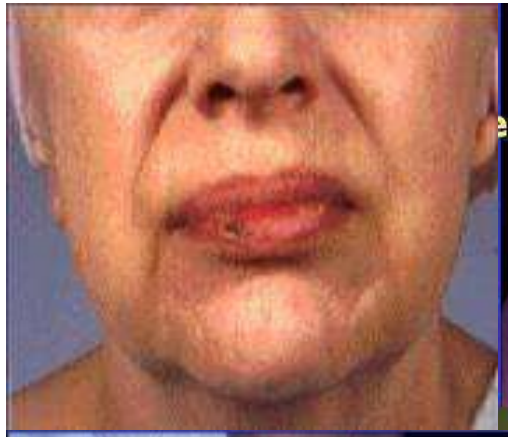
Chemotherapy

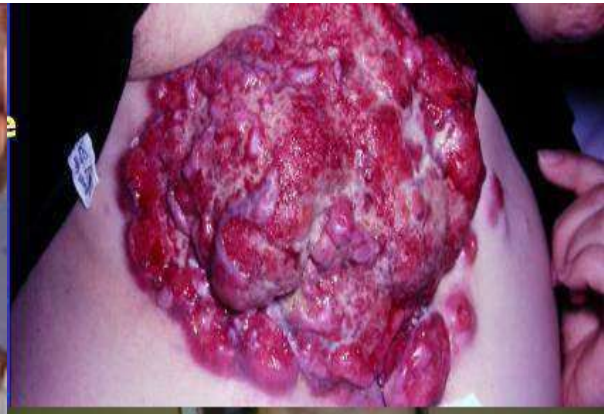
Common SE for any chemo

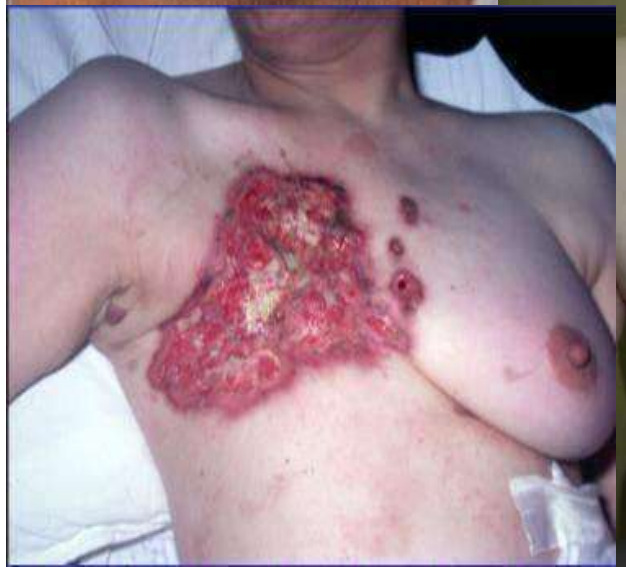
Side effects

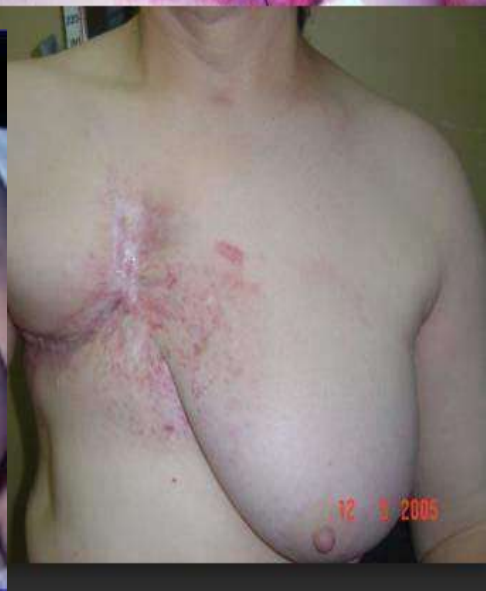
hair loss/ ↓ blood counts/ nausea & vomiting/ ↓ platelet count when high dose is used/ mouth sores/ diarrhea/ loss of appetite/ wt gain/ menopause.

↓ immunization







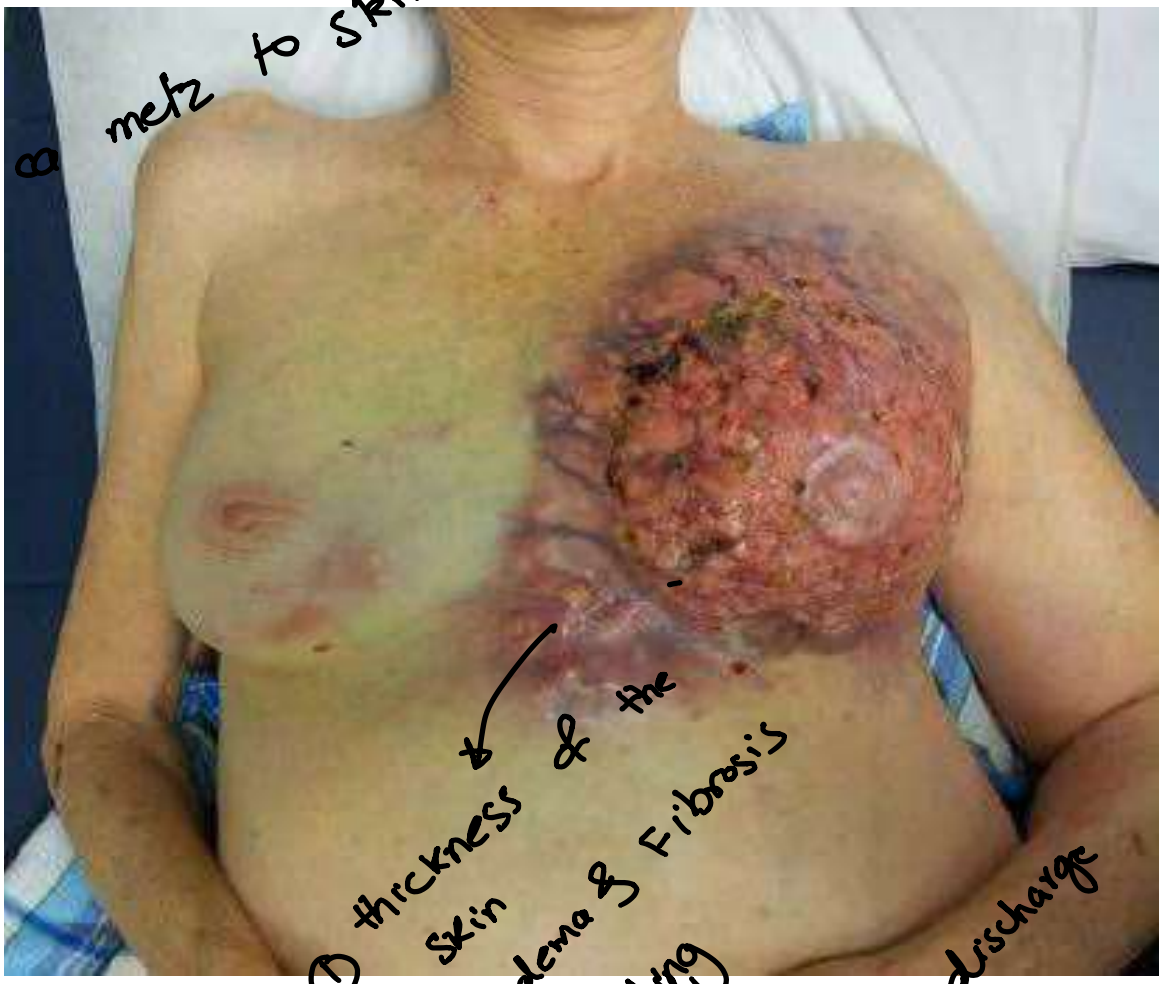


Q1: What is the pathology?

- Carcinoma en cuirasse

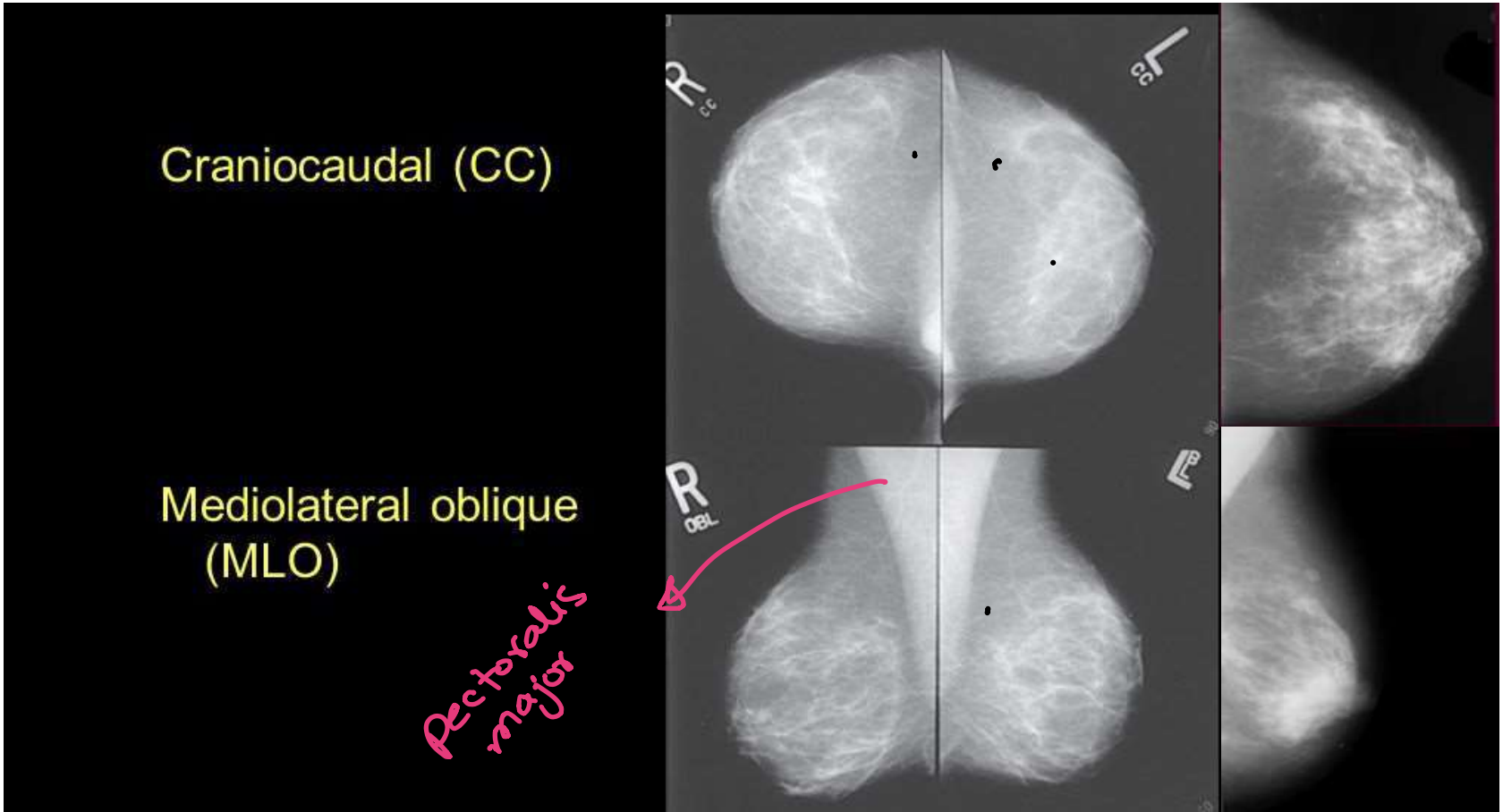
Q2: What is its TMN?

- Stage 4
  - 4A → chest wall
  - 4B → skin
  - 4C → A+B
  - 4D → inflammatory breast ca



Q: Name the following views for mammogram:

- Craniocaudal (CC)
- Mediolateral Oblique (MLO)



Q1: Name the study?

- Mammogram

Q2: Mention 2 abnormalities?

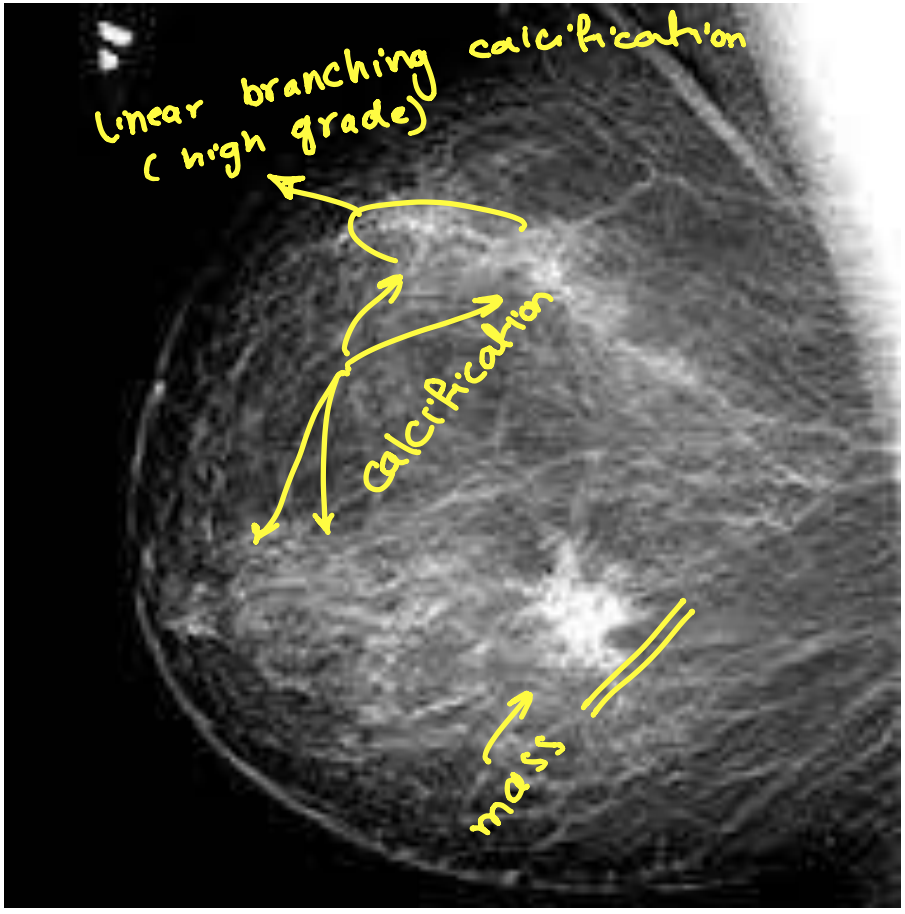
- Mass with irregular border and calcification

Q3: What is the Dx?

- Breast Ca

Q4: How to confirm your Dx?

- Biopsy



Q1: What is this view?

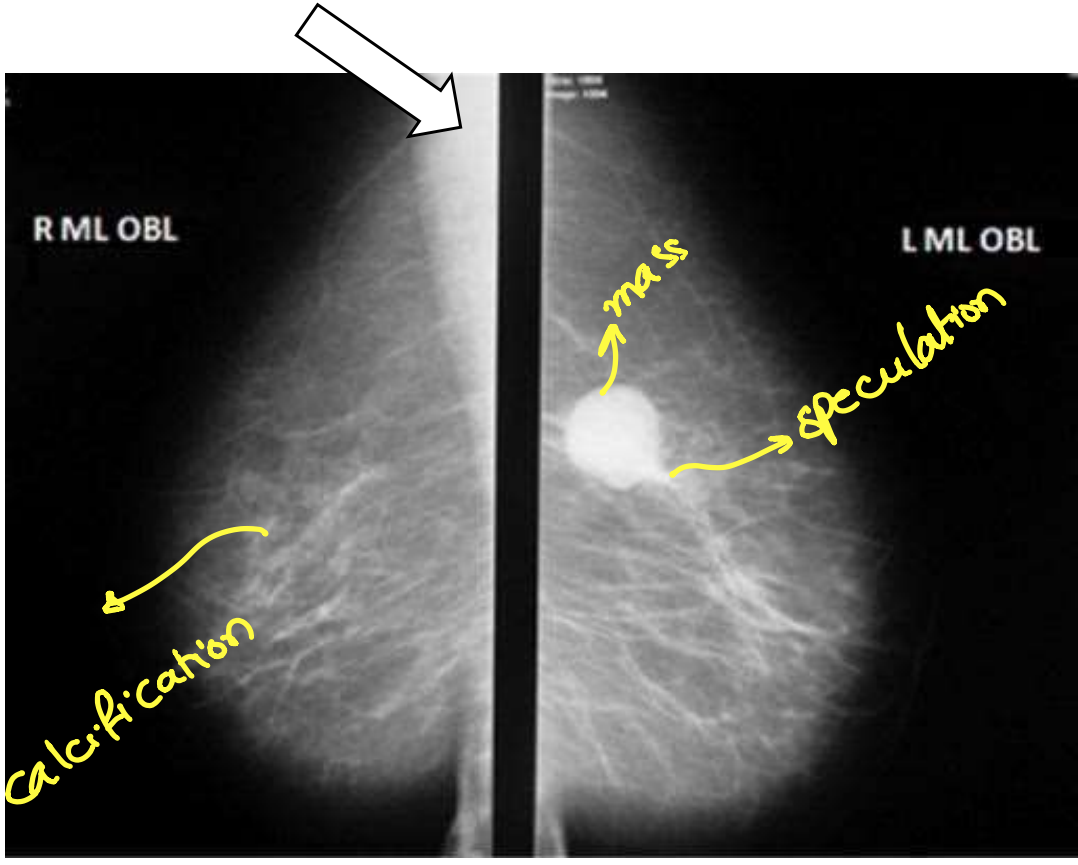
- Mediolateral oblique

Q2: What is this structure (arrow)?

- Pectolaris major muscle

Q3: What are the malignant changes seen on mammograms? Mention 3?

1) Calcifications
2) Speculations
3) Mass with greater density than normal tissue



Q: A 23-year-old single female presented to the clinic with rapidly growing (9cm) left breast mass over the last 6 months. The mass was irregular, hard and fixed at the time of examination: + painless

Q1: Your Dx?

- Phyllodes tumor

Q2: What is this structure (arrow)?

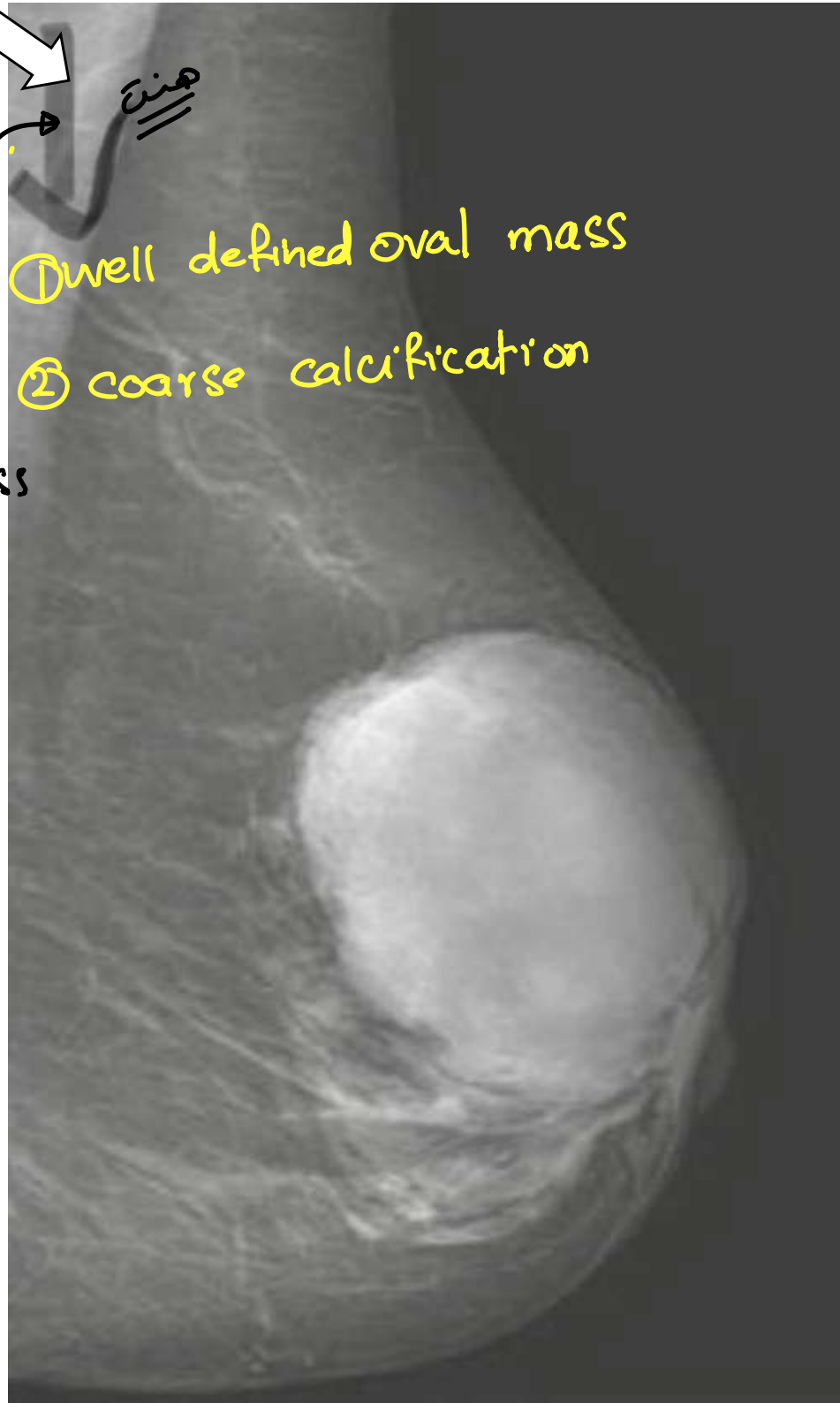
- Pectolaris major muscle

Q3: if it is malignant, what is the common route of METS?

- Hematogenous

Q4: The mc site of METS?

- Lungs



Q: Female with ACR of 4 and BIRAD 0:

Q1: What is the % of breast density?

- >75%

Q2: What to do next?

- Birads score: requires further investigations

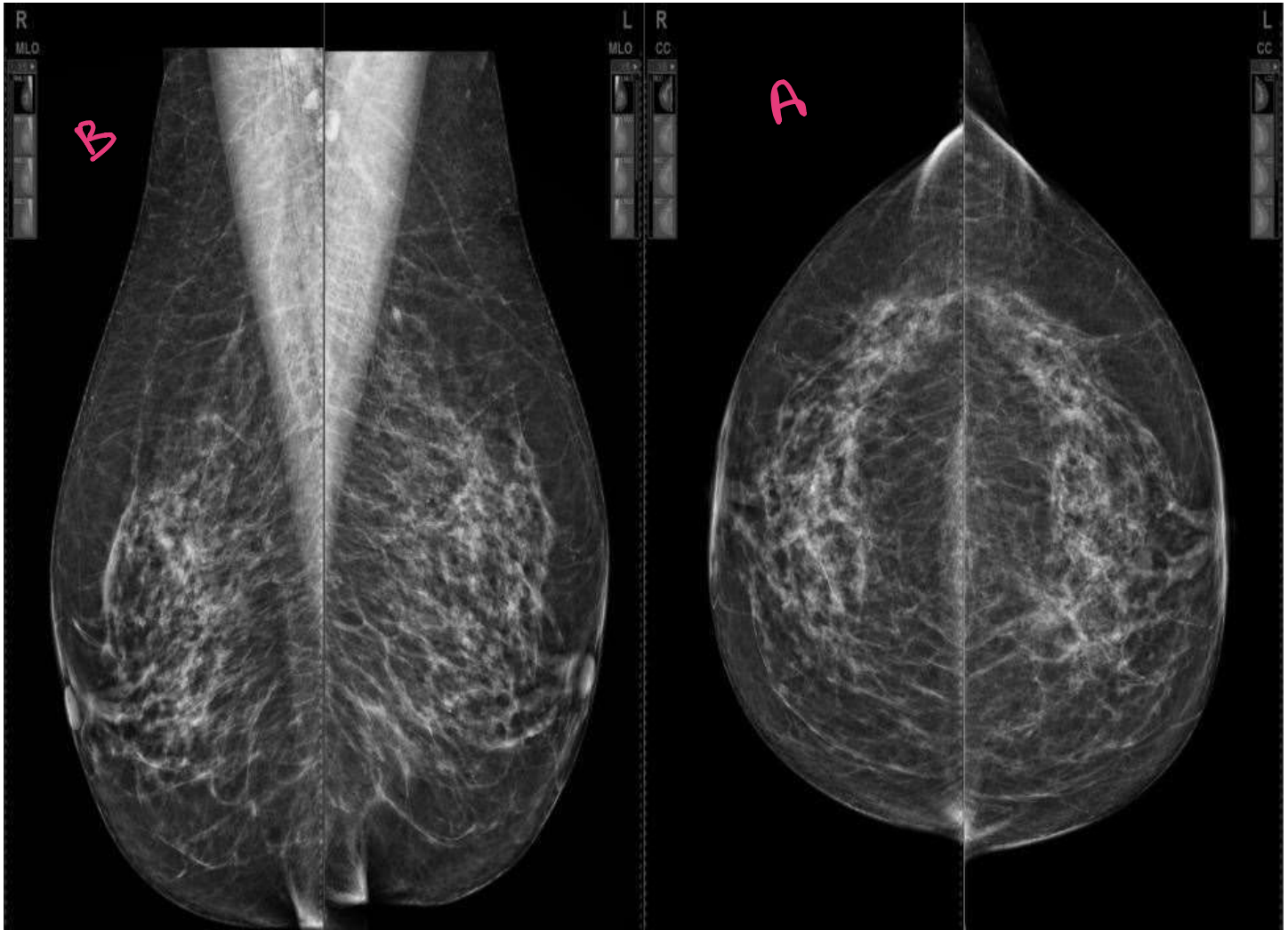
Q: Breast with Birad 2:

Q1: What is the next step in Mx?

- Routine screening

Q2: What is the view in B?

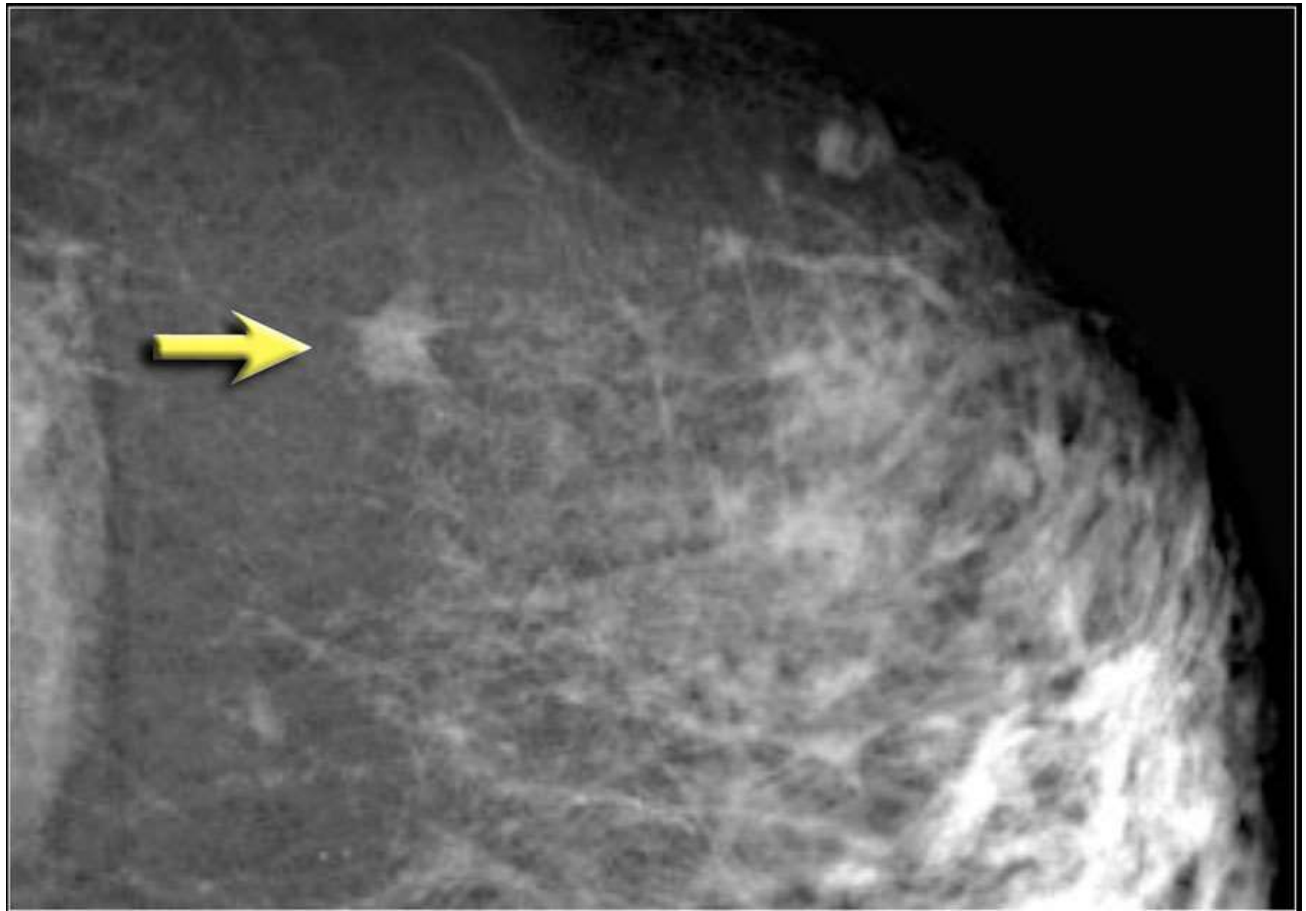
- Mediolateral oblique view



Q: A 37-year-old female presented with right breast pain for the last 3 months. A breast ultrasound showed these findings consistent with BIRAD 4c. >50 & <95%.

Q1: The likelihood of malignancy is: ~~50-90%~~

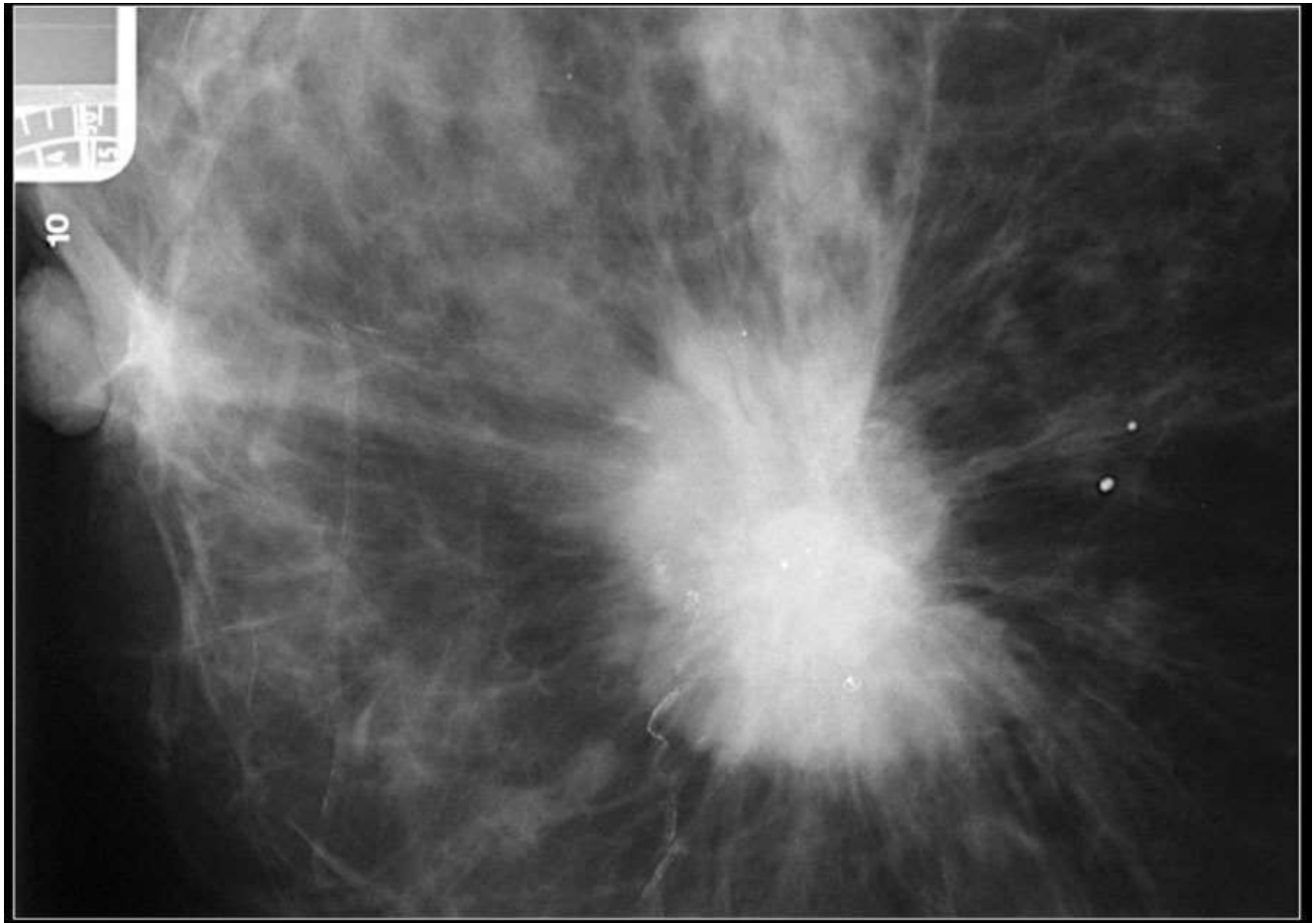
Q2: The clinical T stage "if a diagnosis of invasive carcinoma is proved" is: T4



Q: A 40-years old married female presented with a right breast mass for 1-year duration. The patient had a history of a right breast mass excision 3 years ago. Physical exam showed a 4cm hard right breast mass which is fixed to the chest wall & the skin. Mammogram and ultrasound were consistent with BIRADS 5.

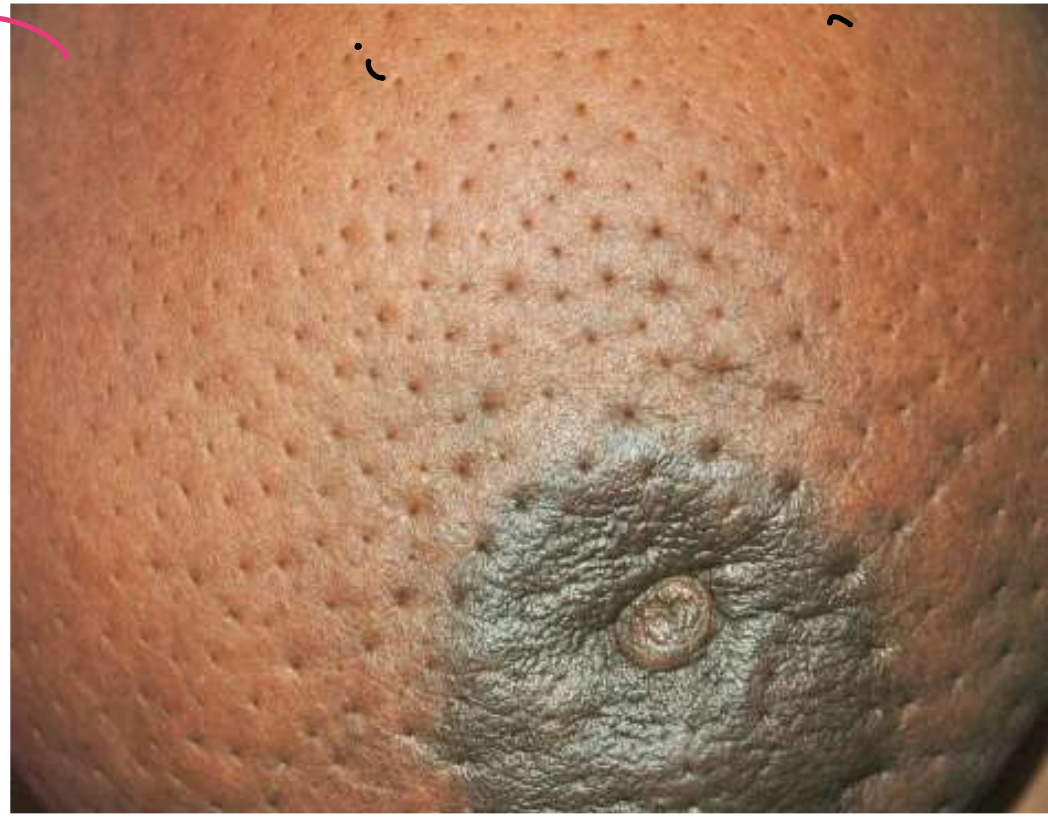
1. Based on the TNM, the clinical T stage for this patient is? T4c

2. The likelihood of malignancy based on imaging findings is? ≥95%



T4a : to chest wall only
T4b : to skin only
T4c : to both
T4d: Inflammatory breast cancer

if this picture is inflammatory breast ca then it's T4d



Q1: What is the pathology?

- Infiltrative ductal carcinoma

Q2: What is its TMN?

- Stage T3

Q3: What is the sign?

- Peau'd orange and nipple retraction, skin dimpling

Q4: Give 2 DDx?

1) Invasive ductal carcinoma
2) Inflammatory breast cancer

Q5: What is the cause of this?

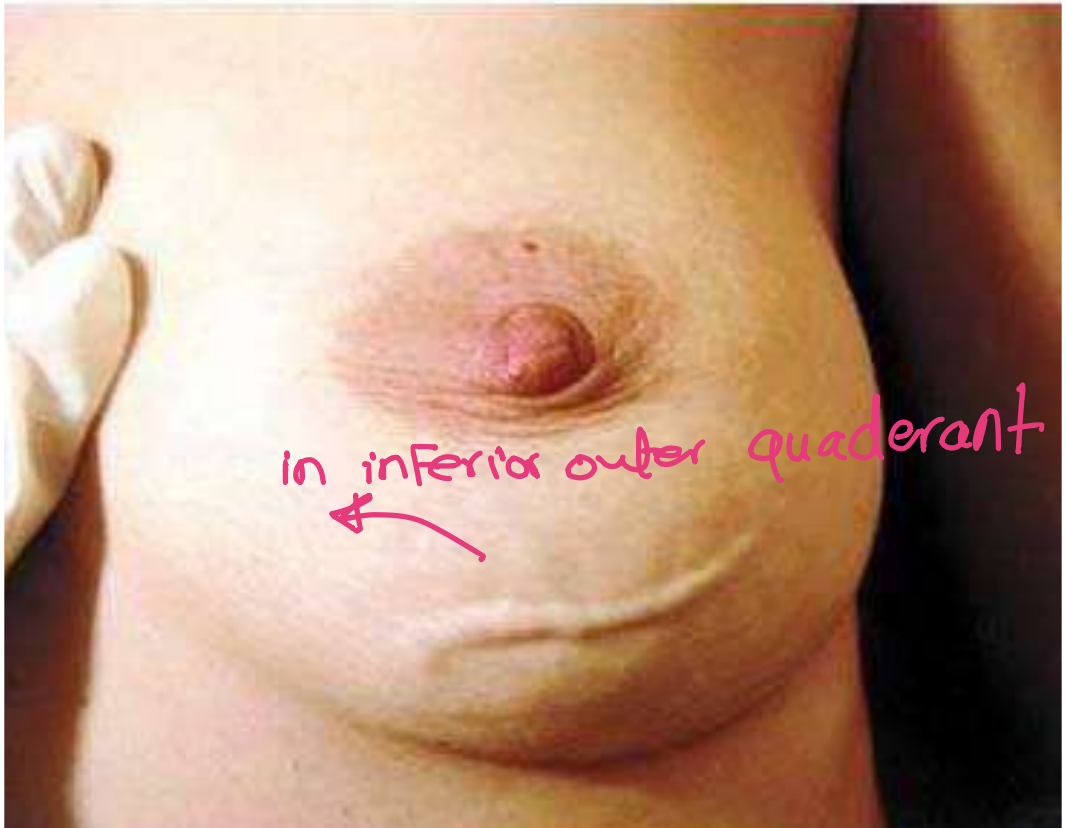
- Invasion of lymphatics, causing lymph nodes obstruction

Q: A pt came complaining of a tender cord like subcutaneous structure, pain, swelling and redness of the left breast:

Q1: Dx? Mondor's Disease (Superficial Thrombophlebitis)

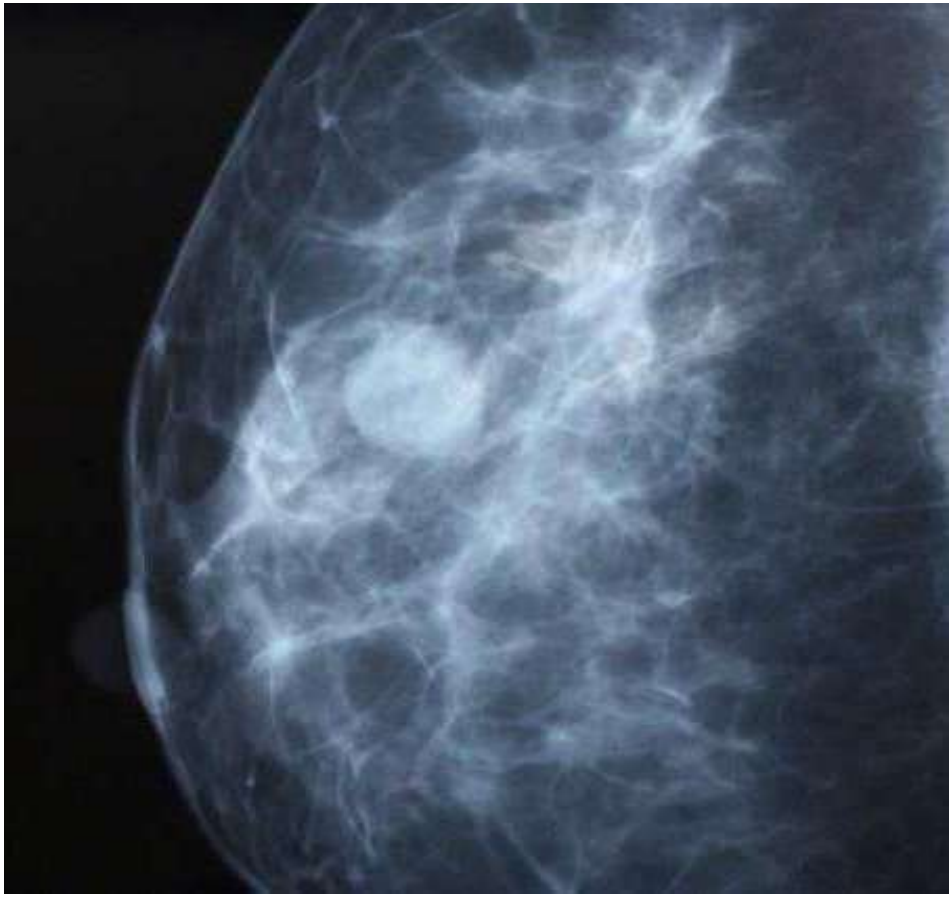
Q2: What is the Mx?

- NSAIDS
- Usually benign and self-limiting condition



Q1: What is the name of this study?

- Mammogram



Q2: Mention 2 signs you see.

1) Speculated mass
2) Microcalcifications

Q3: What is the Dx?

- Infiltrative Ductal Carcinoma

Q1: What is the pathology?

- Phyllodes tumor (Brodie's)

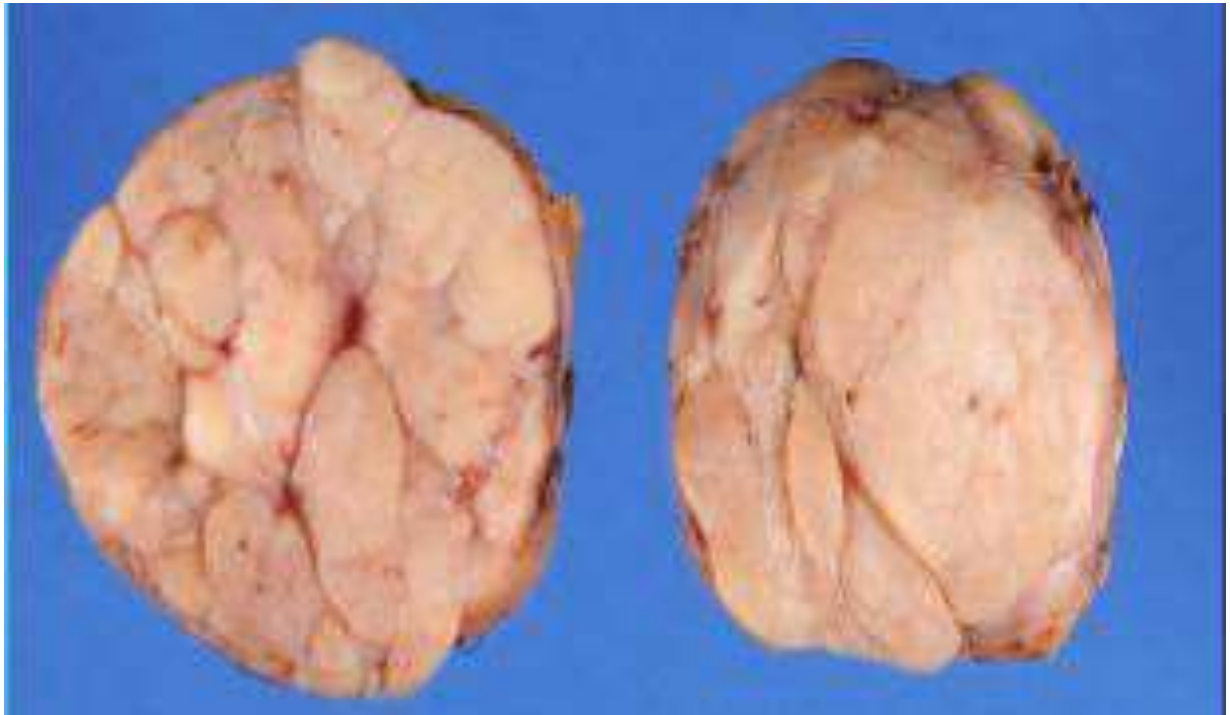
Q2: What is the Mx?

- Wide local excision ± Chemo or Radio

1cm Free margin

Q3: What is the like hood (%) of this tumor to be benign?

- 90% benign



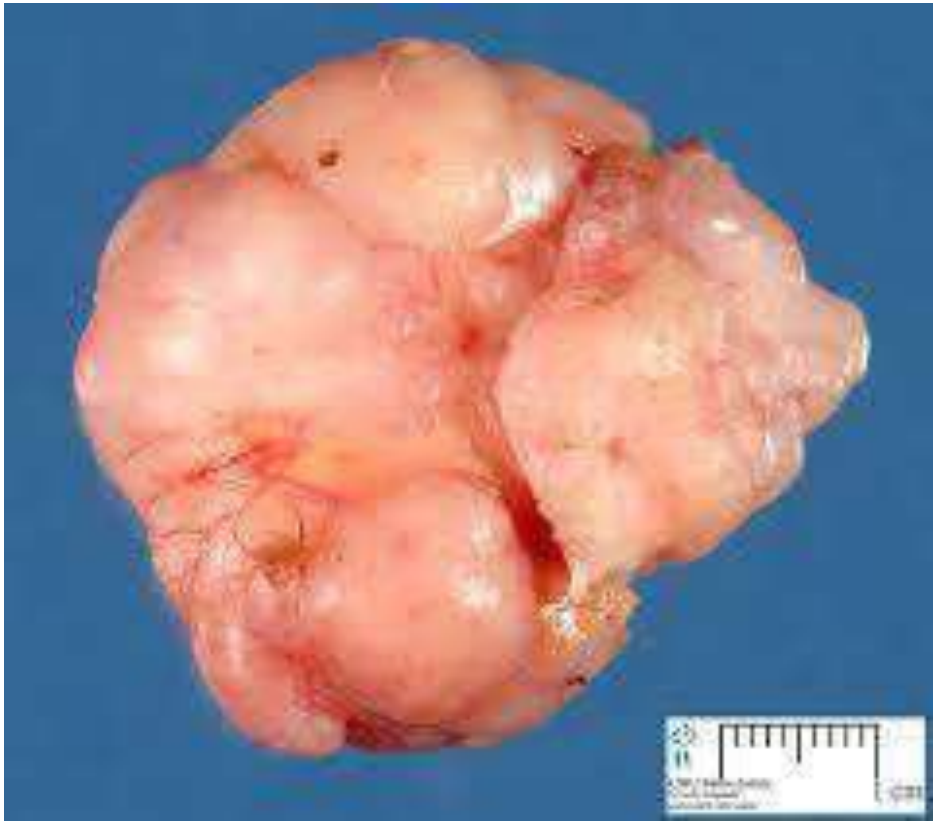
Q: Female with mobile, mouse like lump in one breast:

Q1: What is the Dx?

- Fibroadenoma

Q2: What is the stage according to FNA?

- C2



C1 = unsatisfactory.
C2 = cells present all benign; no suspicious features.
C3 = cells suspicious but probably benign.
C4 = cells suspicious but probably malignant.
C5 = Definitely malignant.

Q: a 35 yo female patient:

Q1: What is the Dx?

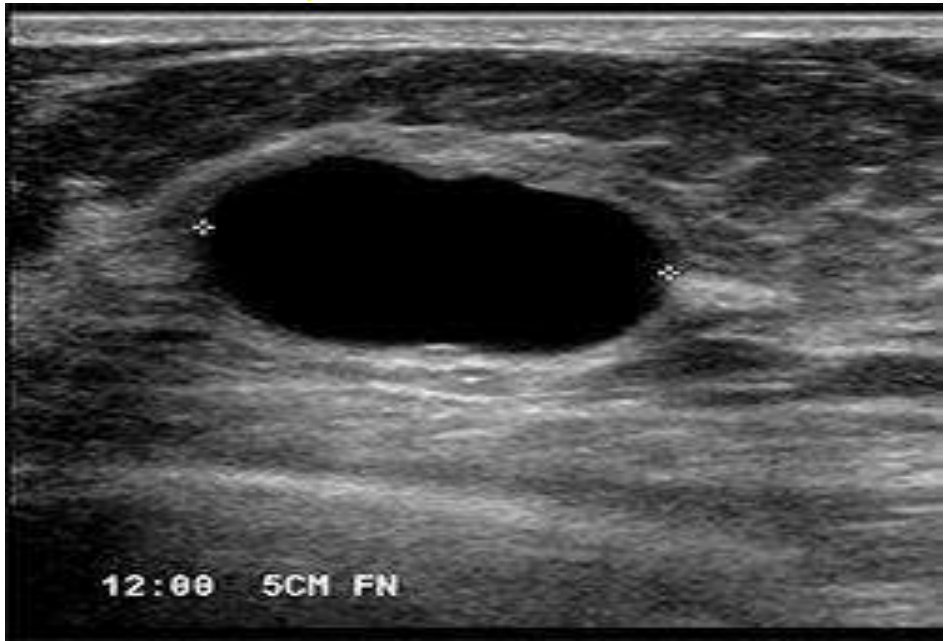
- Breast Cyst

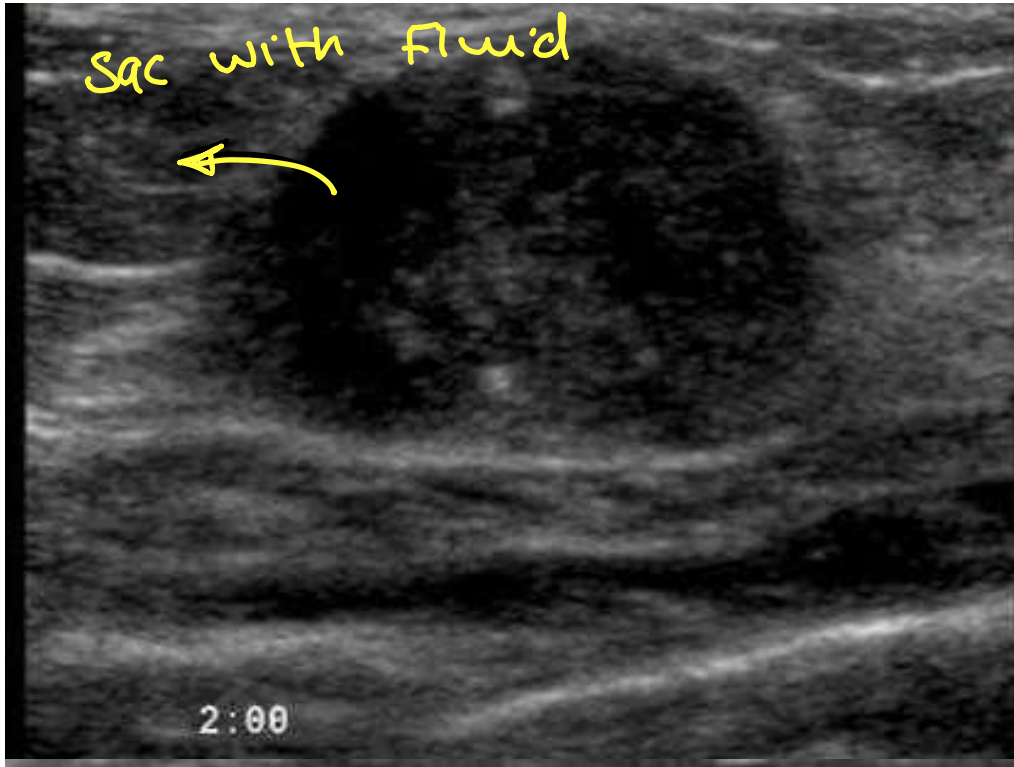
Q2: Name the sign (black arrow)?

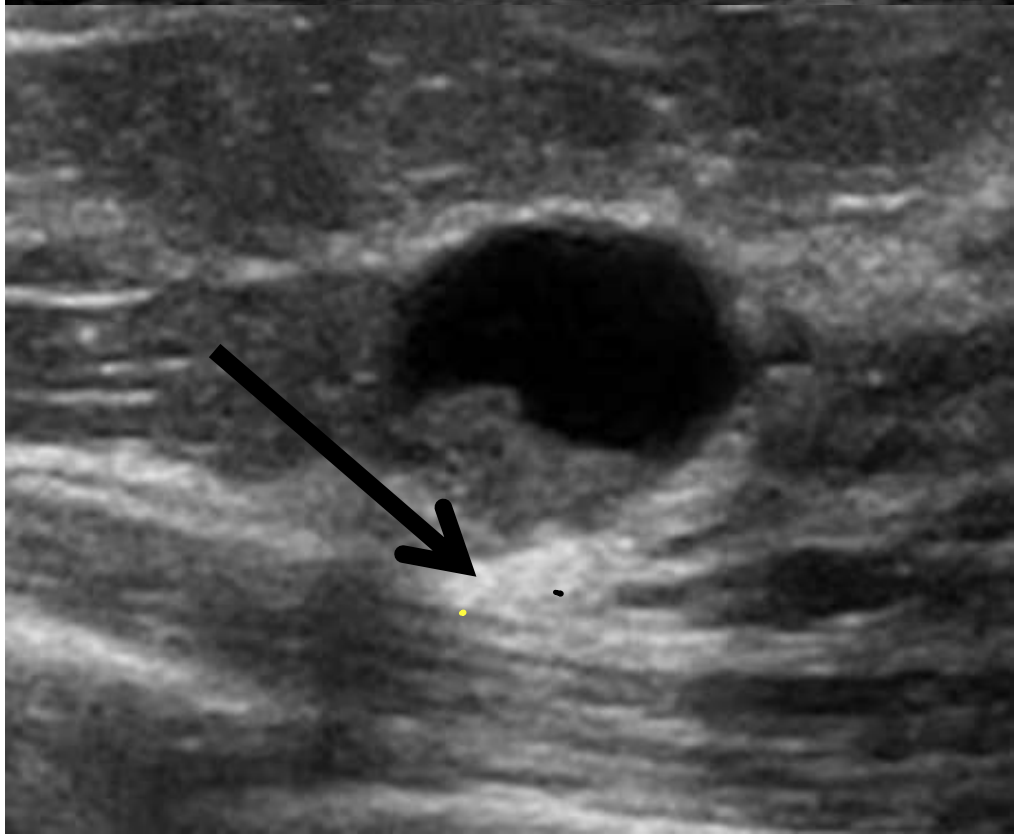
- Acoustic enhancement

Q3: What are the indications for a biopsy in this female?

1) Bloody aspiration
2) Failure to completely resolve
3) Recurrence after 2nd aspiration
4) Atypical cells







Q1: Describe the discharge?

- Uniductal Bloody Discharge

Q2: What is the pathology?

- Intraductal papilloma

Q3: Give a DDx?

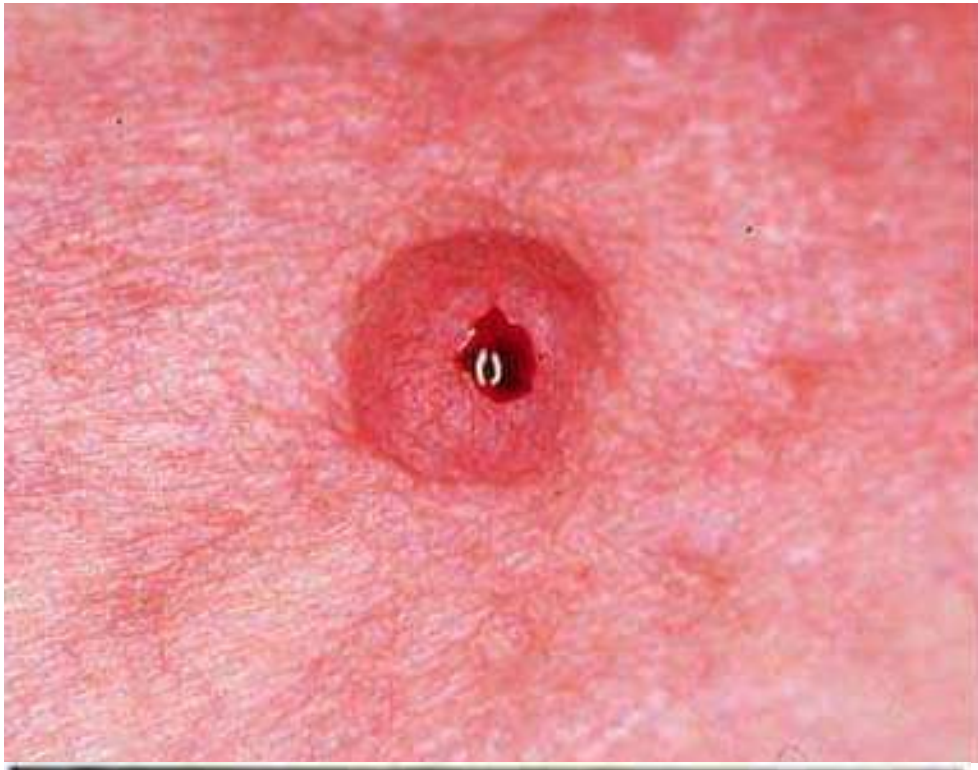
- Intraductal papilloma
- Duct Ectasia
- Ductal invasive carcinoma

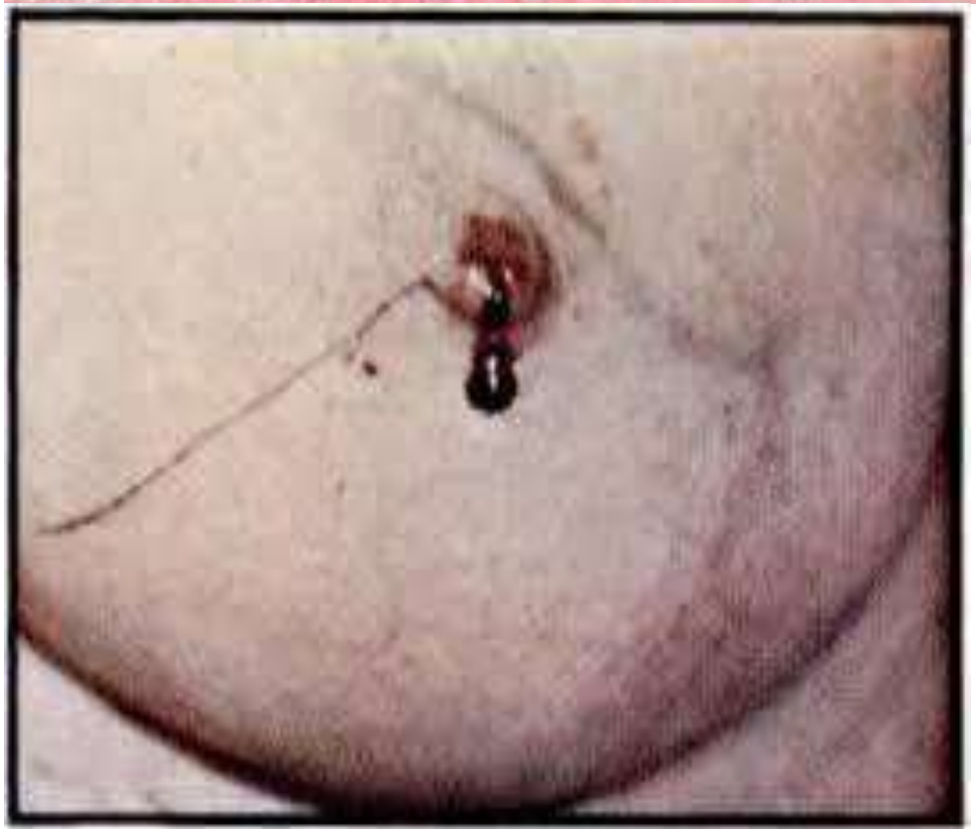
Q3: 2 imaging studies?

1) Ductogram, Ductoscope
2) Mammogram, US

Q4: What is the risk of malignancy of this lesion?

- 15%



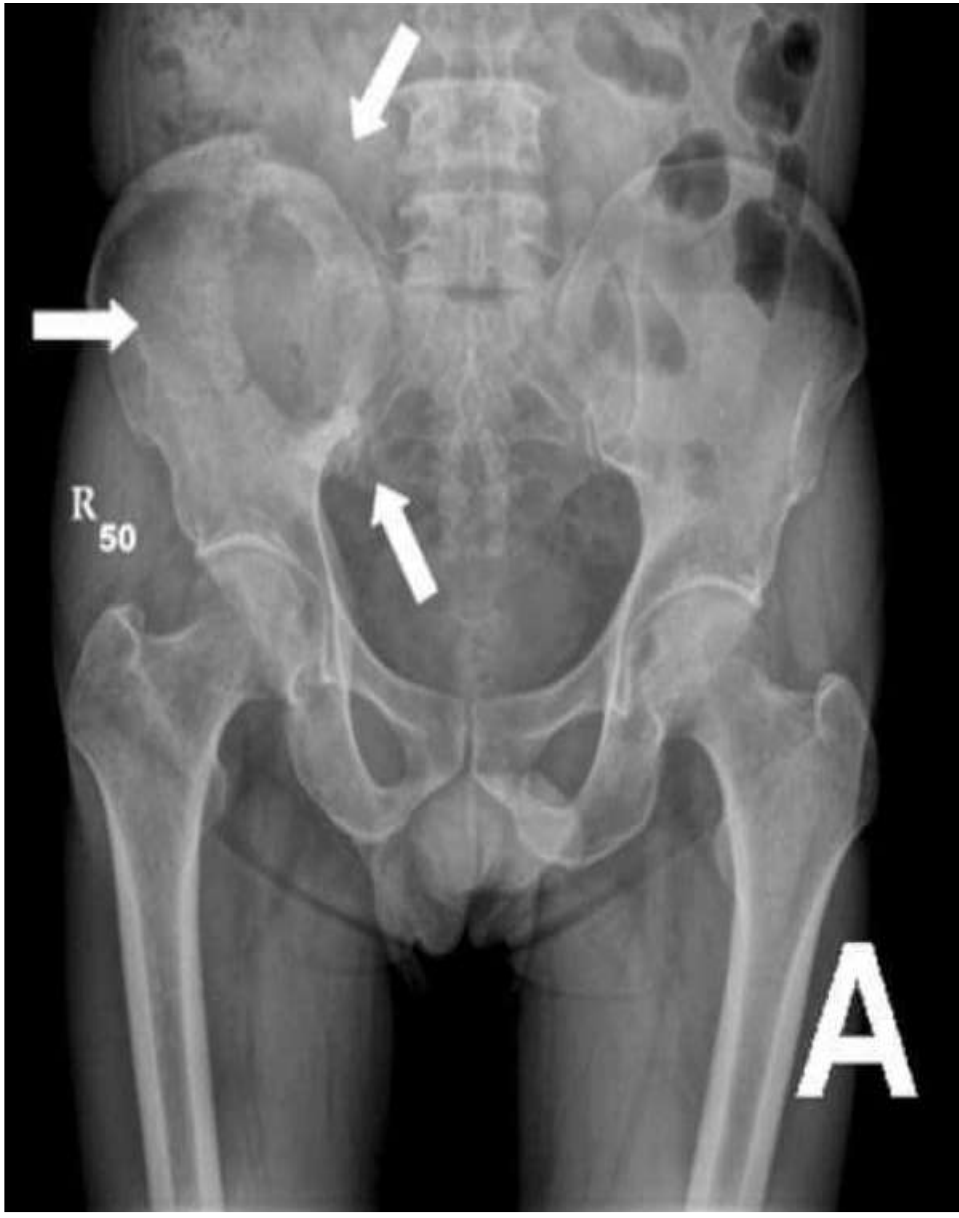


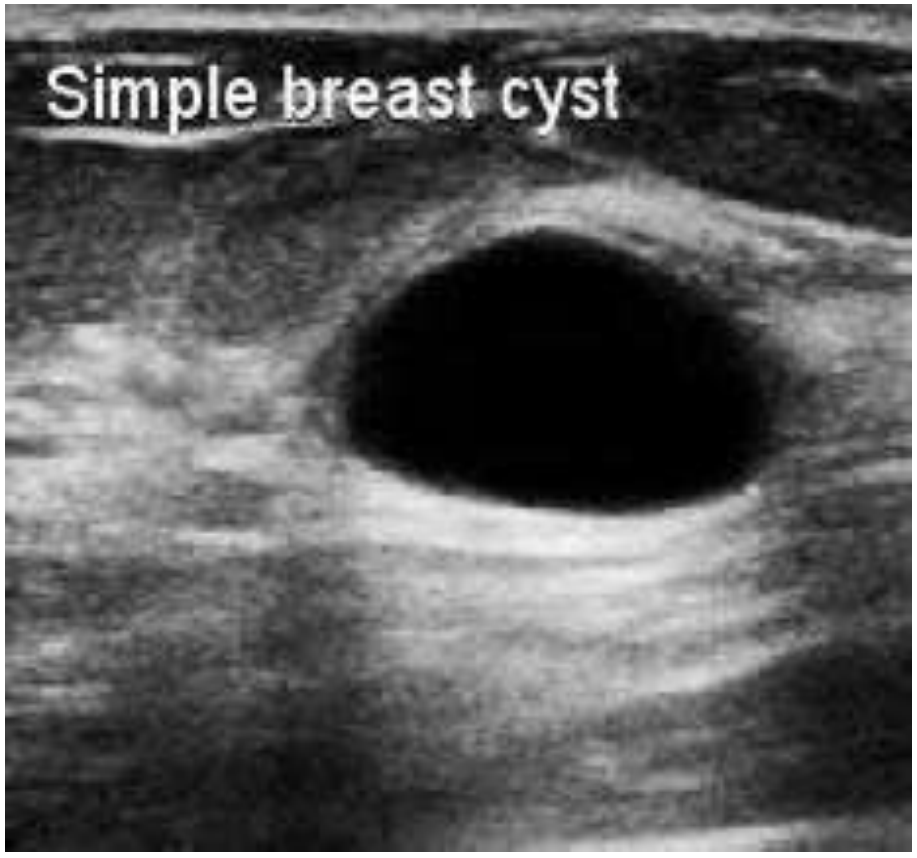
Q1: What is the mechanism that the breast cancer causes hypercalcemia?

- Parathyroid hormone - related protein

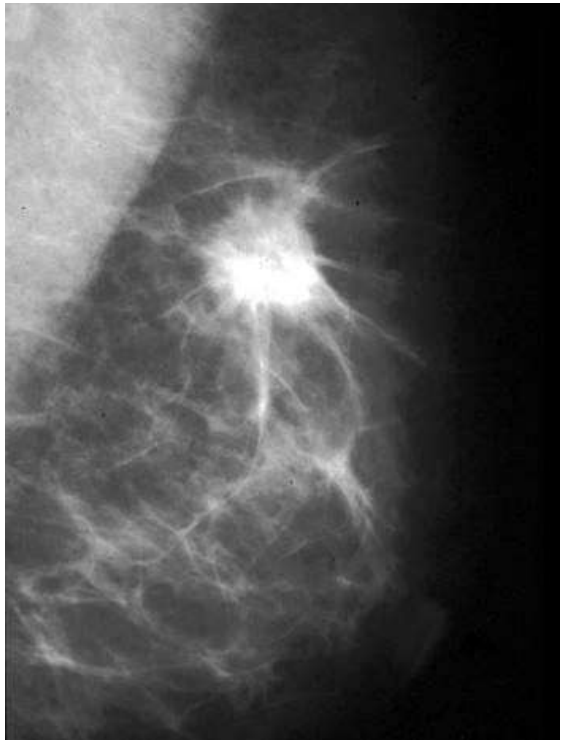
(not due to osteoclastic METS)

** Note: The main pathogenesis of hypercalcemia in malignancy is increased osteoclastic bone resorption, which can occur with or without bone metastases. The enhanced bone resorption is mainly secondary to PTH-related protein





Breast Cyst



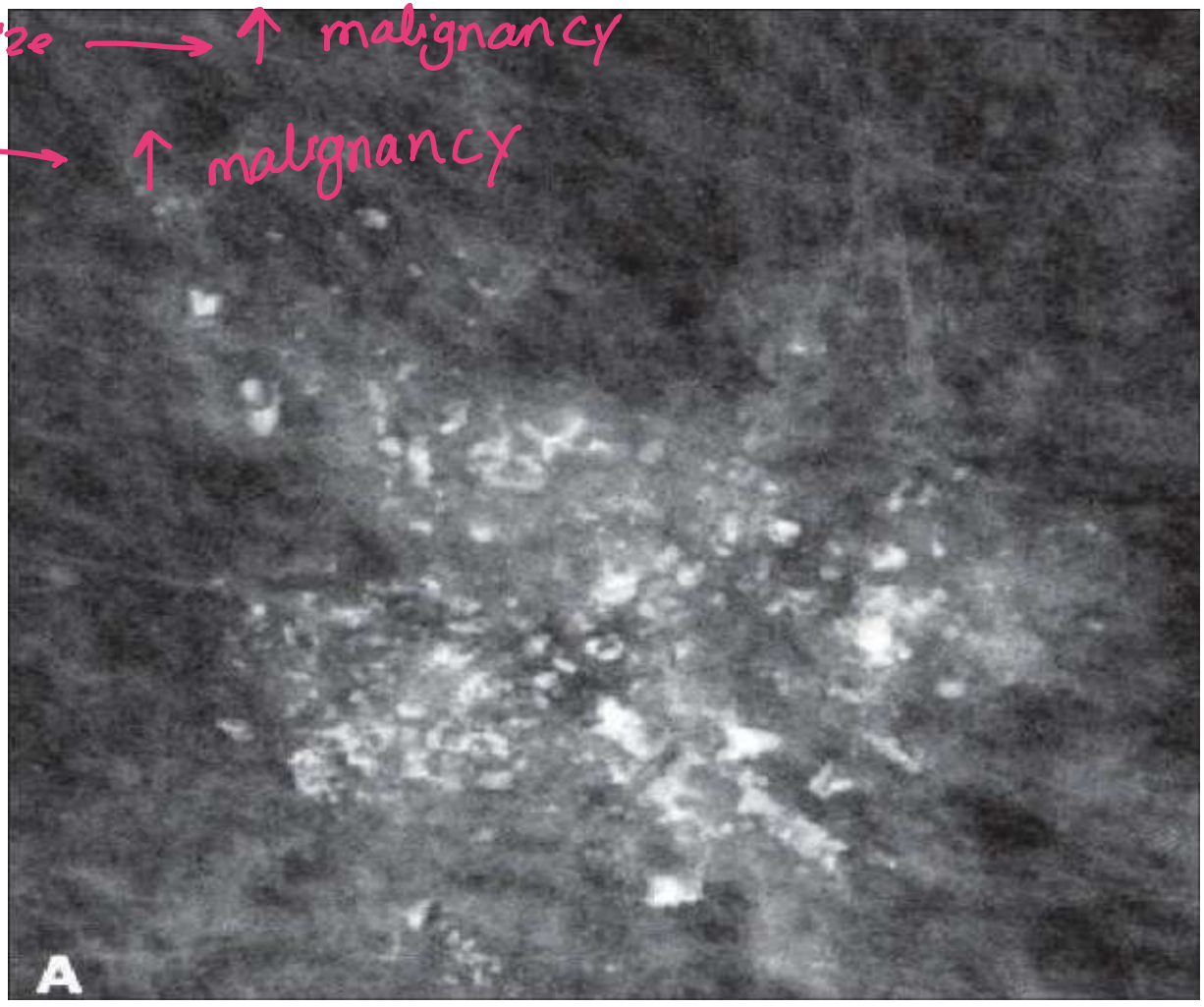
breast cancer:

dense mass with a spiculated margin.

clustered microcalcifications: five or more calcifications ,each measuring less 1mm in one cubic cm, the possibility of malignancy increases as a size of individual calcification decreases and the total number of calcification per limit area increases.

↓ calcification size → ↑ malignancy

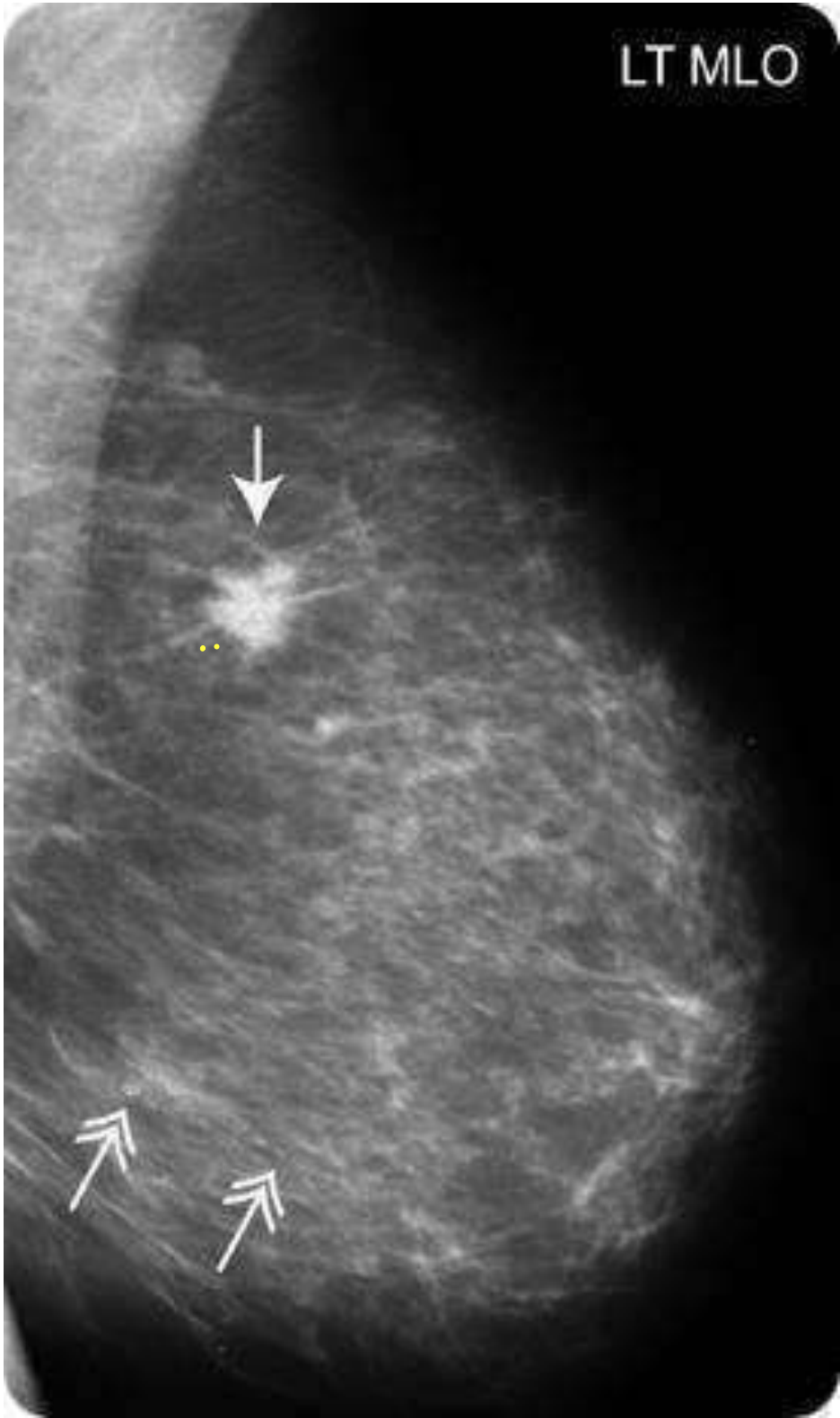
↑ numbers → ↑ malignancy



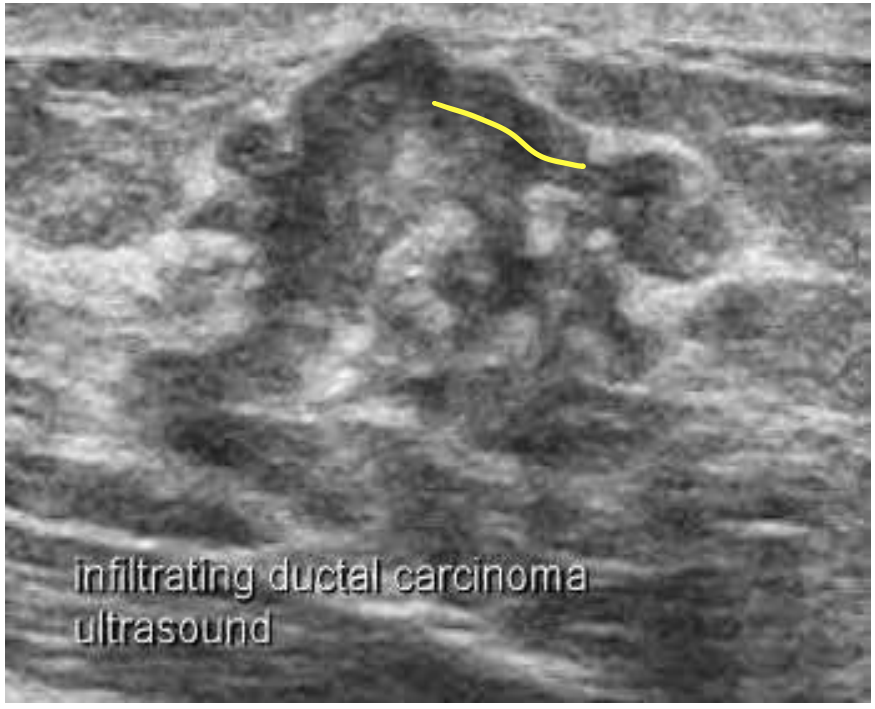
The 2 major signs of malignancy in mammography:

1. Mass with spiculated margins or stellate appearance (the single arrow).

2. Microcalcifications (the double arrows).

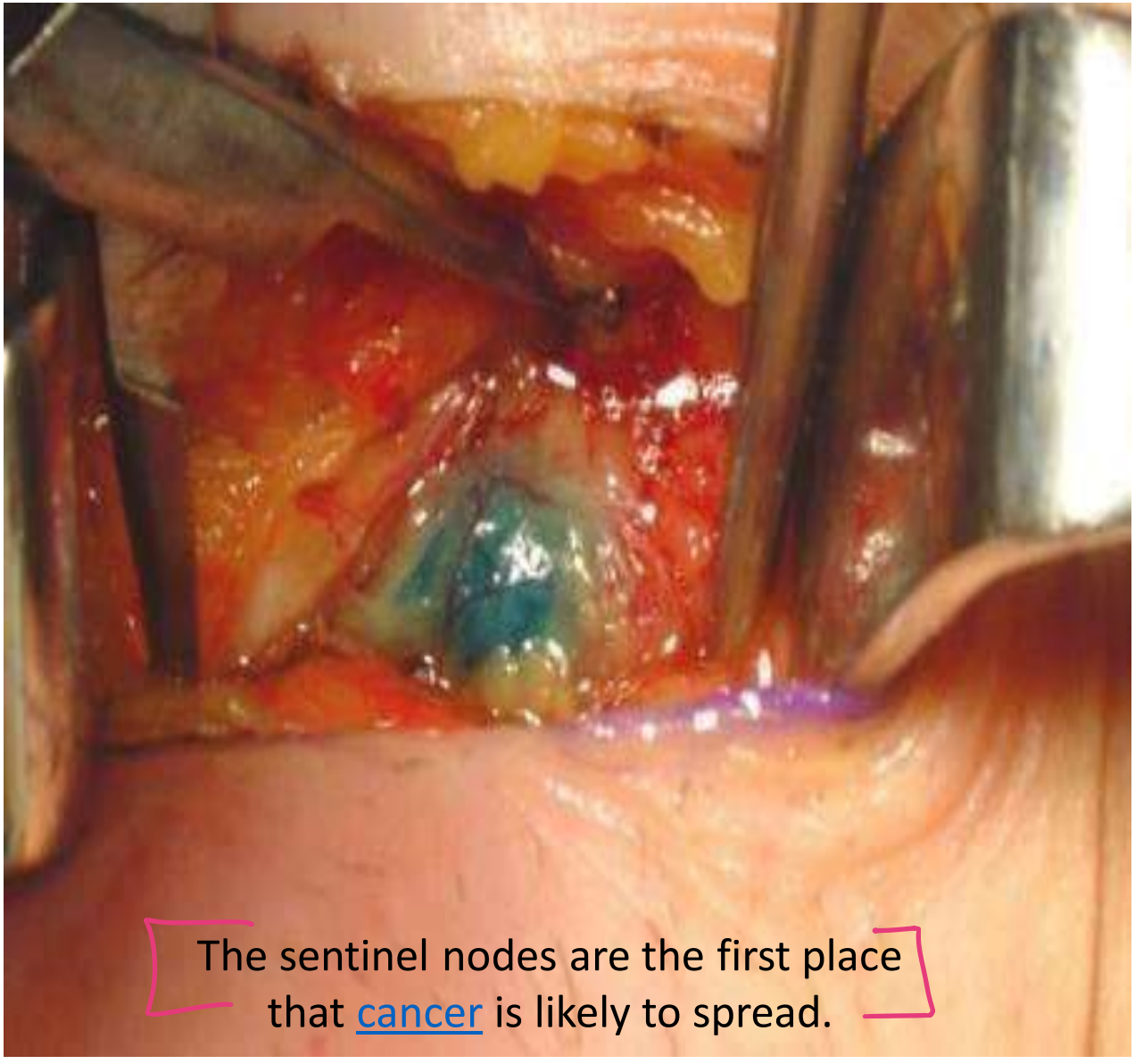


Breast Infiltrating ductal cancer ultrasound.



This shows an irregular ductal tumor with nodules infiltrating the area around it.

Sentinel Lymph Node



Q1: What are the skin changes indicative of breast cancer in this image?

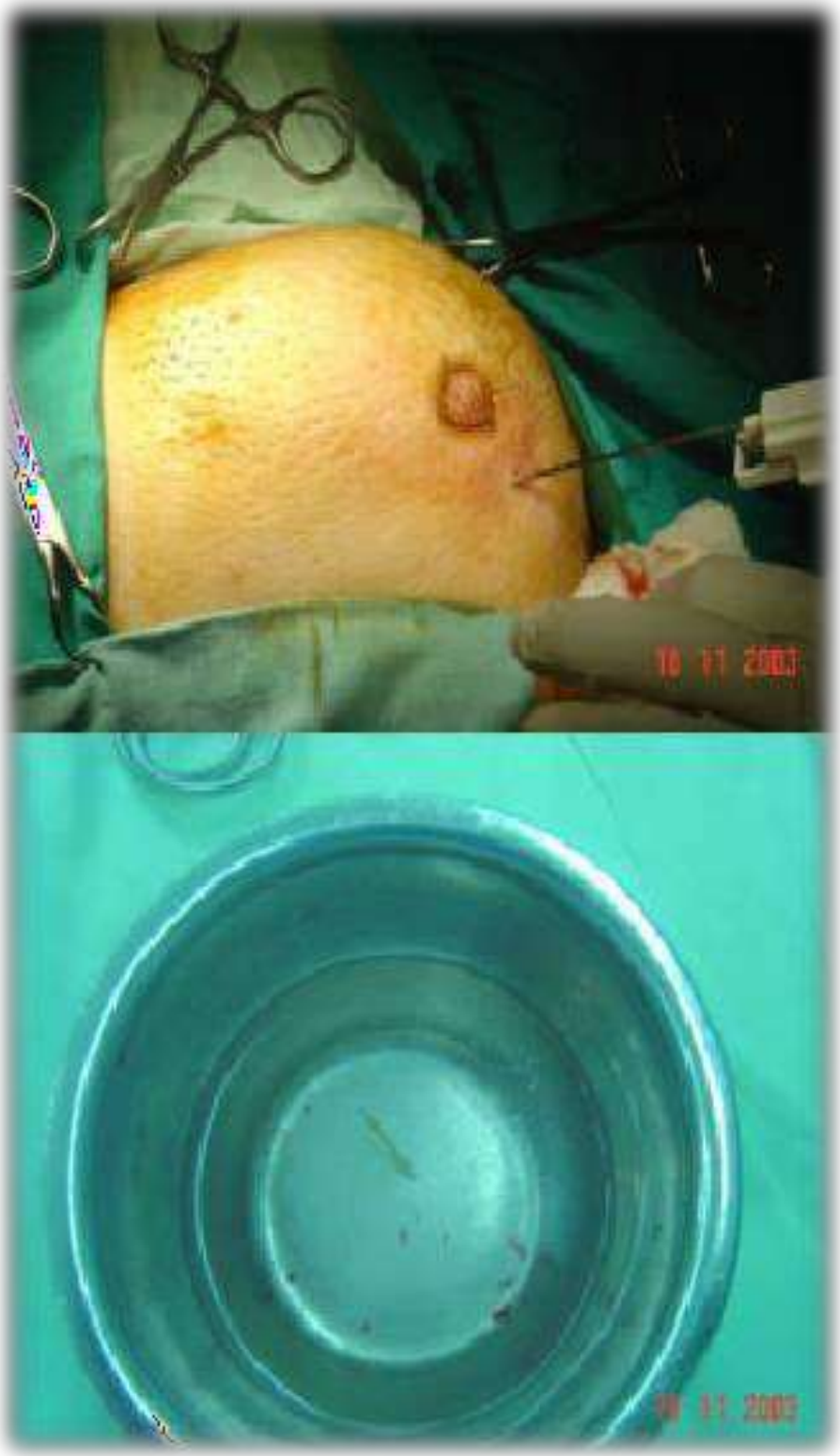
Nipple retraction

Peau dé orange

Q2: What is this procedure?

Core needle biopsy

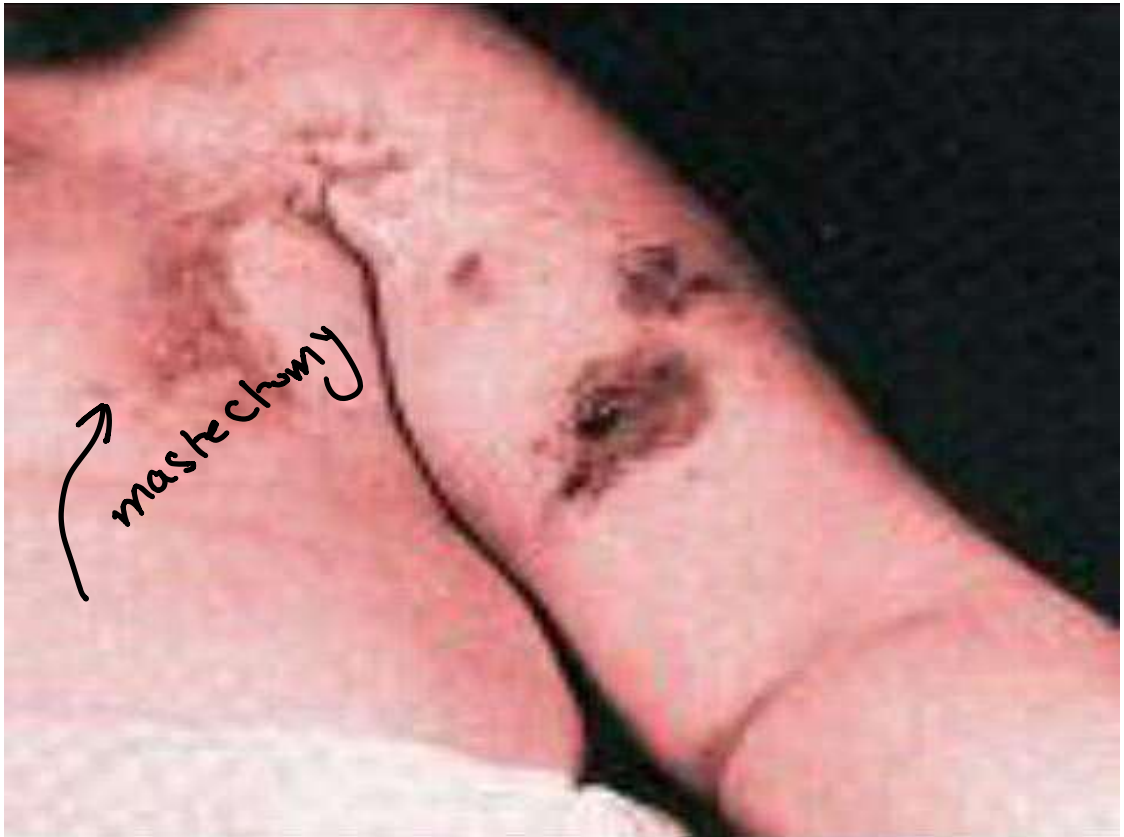
(true-cut biopsy)

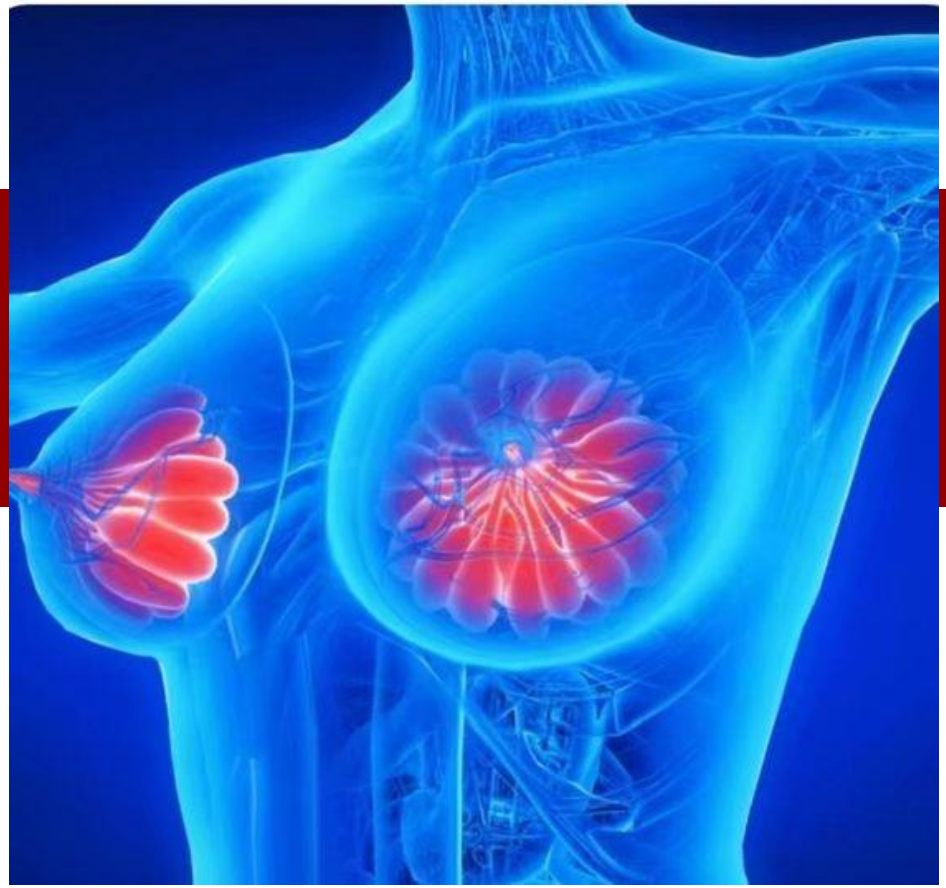


Lymphangiosarcoma

-As a complication of long- standing lymphedema , usually in the edematous arm of post radical mastectomy patient.

-to prevent it : use elastic compression stockings.





BREAST

Hashemite University
H · U · M
Medical School Committee

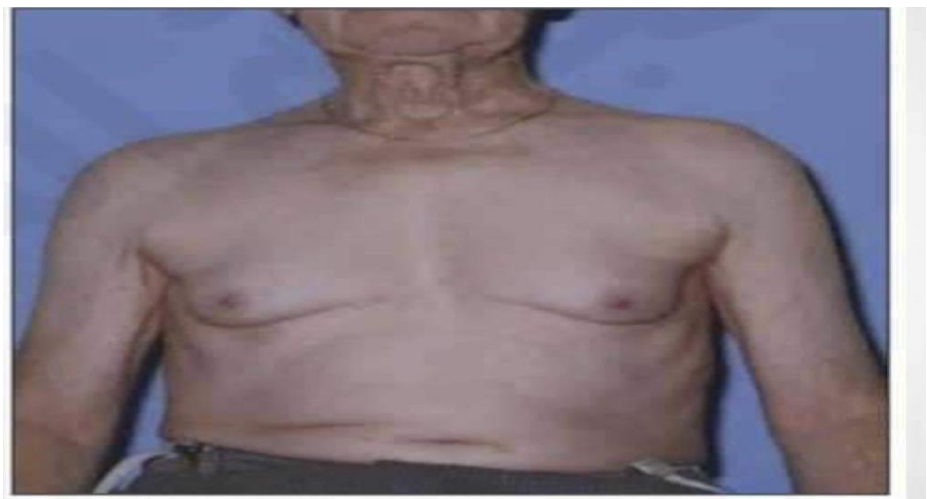
• QUESTION general مكرر يزن عند ال

Yaqeen 2025

A male patient with a heart disease:

A. what is the abnormality in the picture ?

B.what drugs our patient takes that can cause this finding ?



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Gynecomastia.

B. spironolactone ,digoxin

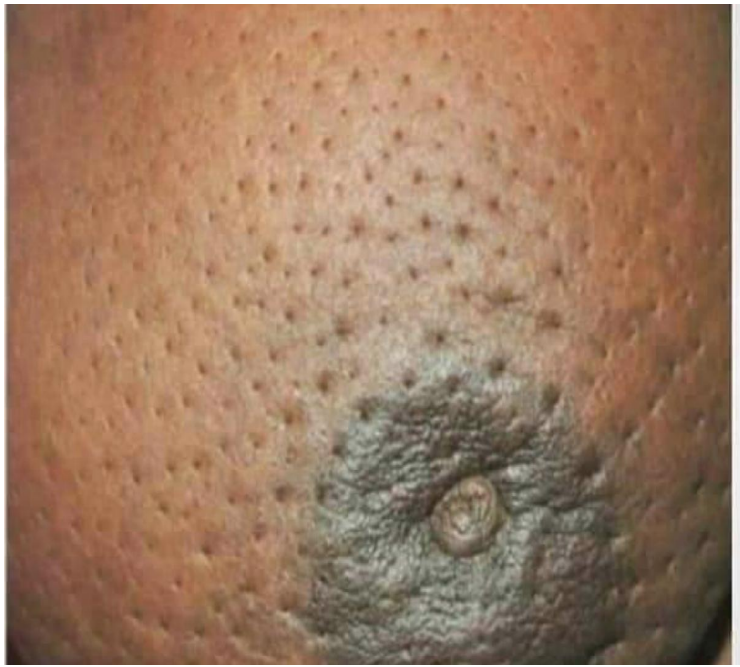
• QUESTION

مكرر

Yaqeen 2025

A female with a diagnosis of a breast cancer ,

1. what is the underlying cause for this skin pathology
2. What is the pathology?
3. What is its TMN?
4. What is the sign?
5. Give 2 differentials?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.skin pathology caused by Invasion of the malignant cells into the subdermal lymphatics

2.Infiltrative ductal carcinoma

3. Not sure T4

3.Peau'd orange and nipple retraction, skin dimpling

4.1)Invasive ductal carcinoma 2) Inflammatory breast cancer

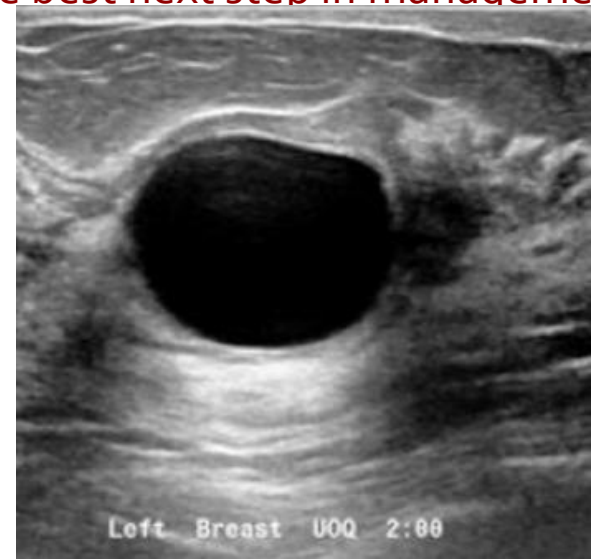
• QUESTION

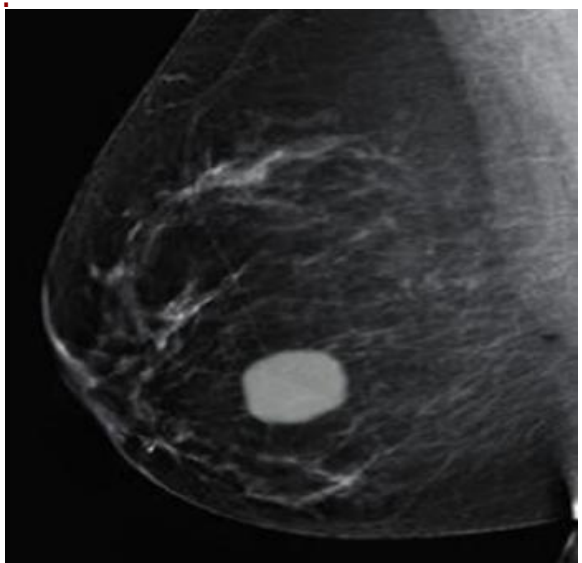
Wateen 2023

A 40 year old lady presented with 3 cm painful mass in the left breast for 6 weeks duration. Breast ultrasound and mammogram as in this figure?

A. What is the most likely diagnosis?

B. What is the best next step in management?





Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Breast cyst

B. Cyst aspiration - Follow up

• QUESTION

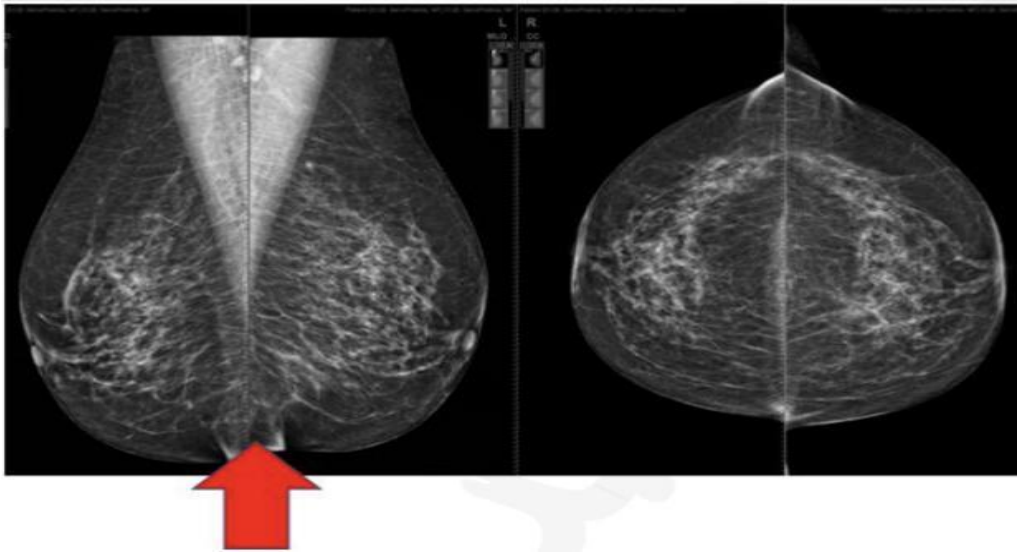
مكرر

Wateen 2023

Regarding this mammogram for A 45 year old.

A. Name the view labeled by the red arrow?

B.If the radiologist report labelled the result as BIRAD 0, the next step in management is?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

A. Medio-lateral oblique

B. Ultrasound + breast MRI

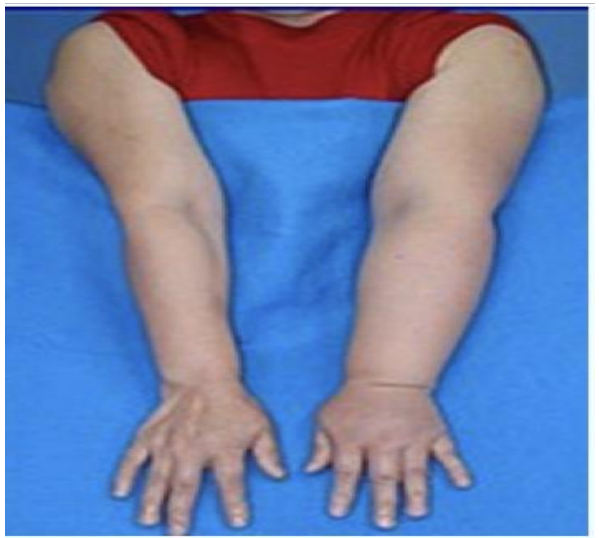
• QUESTION

Wateen 2023

3 years following treatment of breast cancer, this lady presented to the clinic for regular check up. During examination you identified these changes.

A. Name this complication?

B. What possible complication could this patient develop secondary to it?



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Lymphoedema

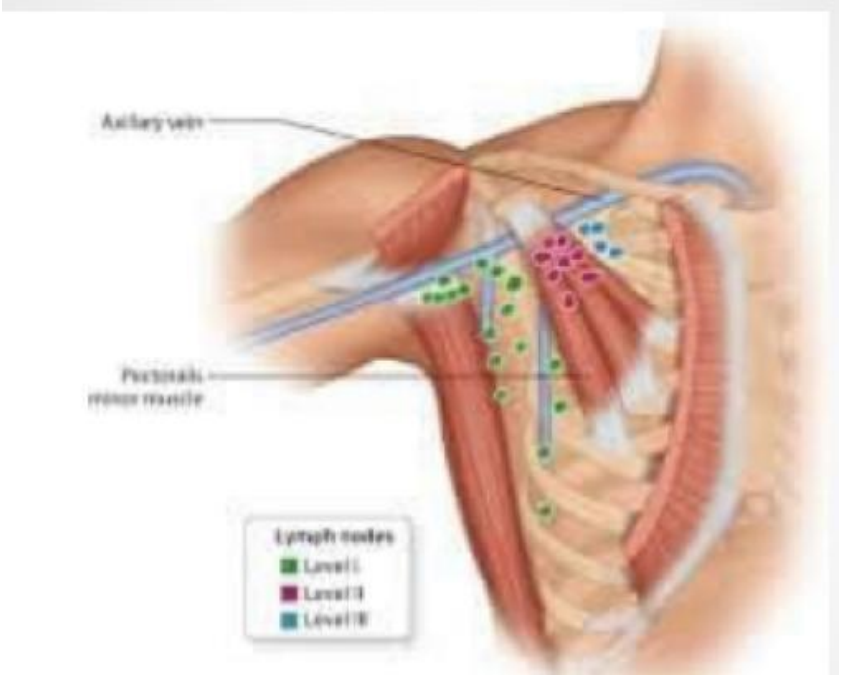
B. Axillary dissection

• QUESTION

Wateen 2023

a) Name the muscle

b) the green color zone number



Hashemite University
H • U • M
Medical School Committee

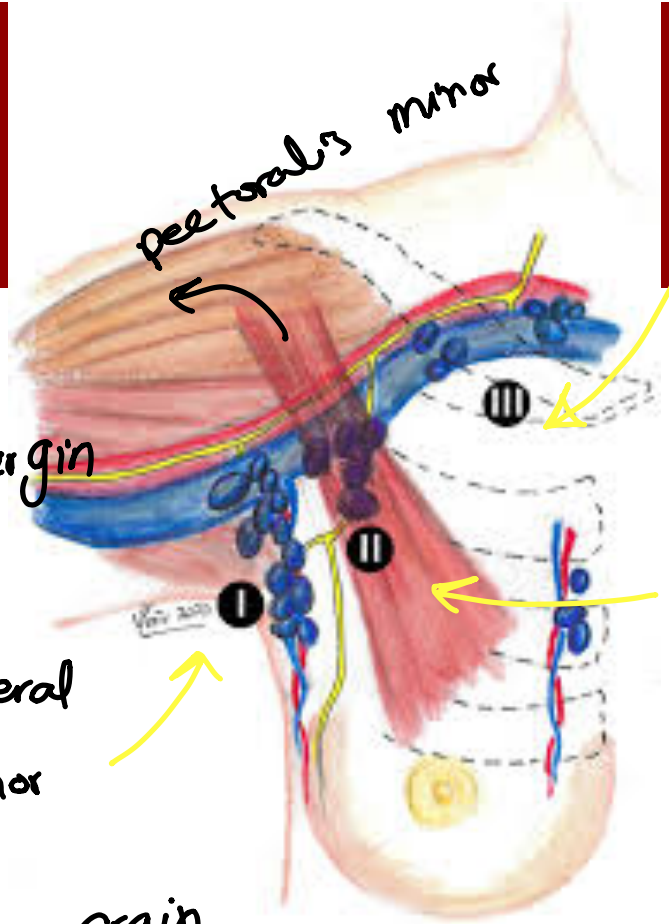
• ANSWER

a) Pectoralis Major

b) Zone 1 → LN lateral to lateral margin of pectoralis minor

2 → LN between medial & lateral margin of pectoralis minor

3 → LN medial to medial margin of pectoralis minor



Hashemite University
H · U · M
Medical School Committee

• QUESTION

Harmony 2022

18. 50 y old female , presented to breast clinic with breast pain and nipple thickening with eczema like appearance , breast US DONE ,What is the most likely tumor ?

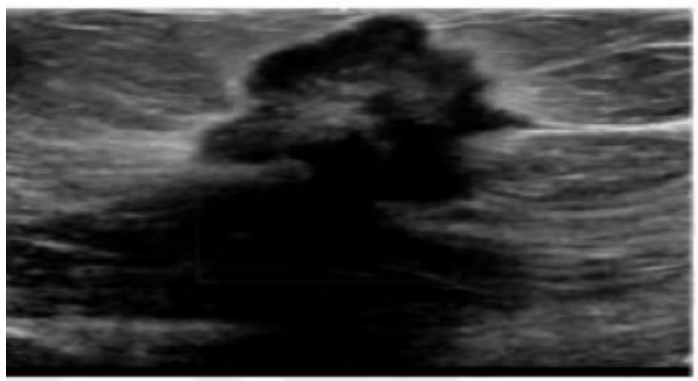
a. Invasive ductal carcinoma

b. LCIS

c. DCIS

d. Squamous cell carcinoma

Answer: C



Hashemite University
H • U • M
Medical School Committee

• QUESTION

Harmony 2022

22. This is a 43 year old lady mammogram, according to BIRAD classification what class breast density is this:

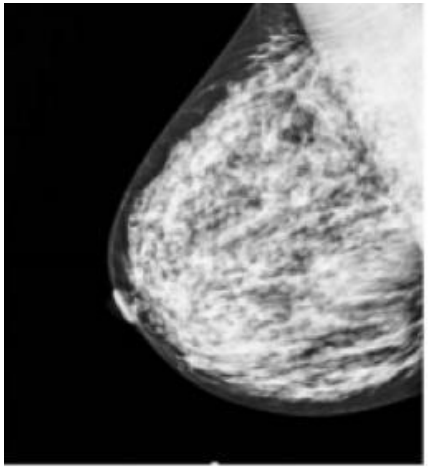
a. Class D

b. Class A

c. Class B

d. Class C

Answer: D



Hashemite University
H • U • M
Medical School Committee

• QUESTION

26. This a mammogram with BIRAD-3 , the next step in management is:

a. Breast MRI

b. Follow up in 6 months

c. Breast FNA

d. Core needle biopsy

Answer: B

Image not found

• QUESTION

Female with ACR of 4 and BIRAD 0 :

A. what is the percentage of breast density?

B.what to do next?

(No picture found)

• ANSWER

A. ~~>70%~~ >75%

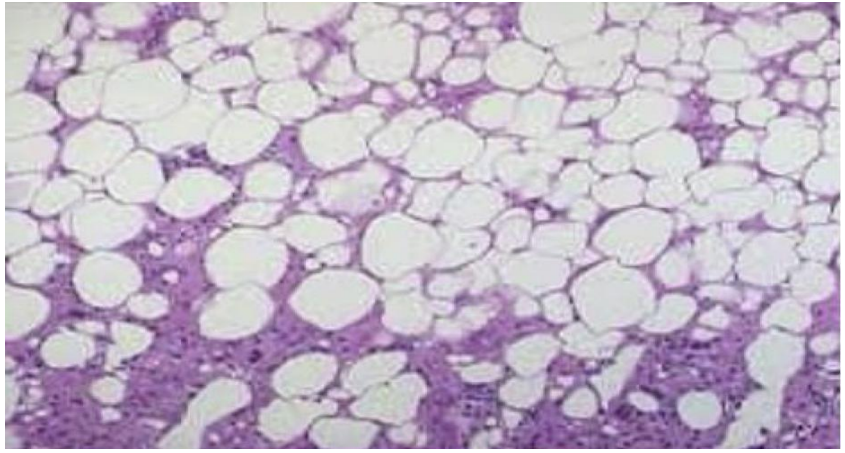
B. repeat cytology [Further investigations & images → MRI / mammo / US]

QUESTION

SOUL 2021

Female patient with a hard fixed painful mass for 3 weeks duration:

1. What your next step?
2. What's a benign condition?



Hashemite University
H · U · M
Medical School Committee

ANSWER

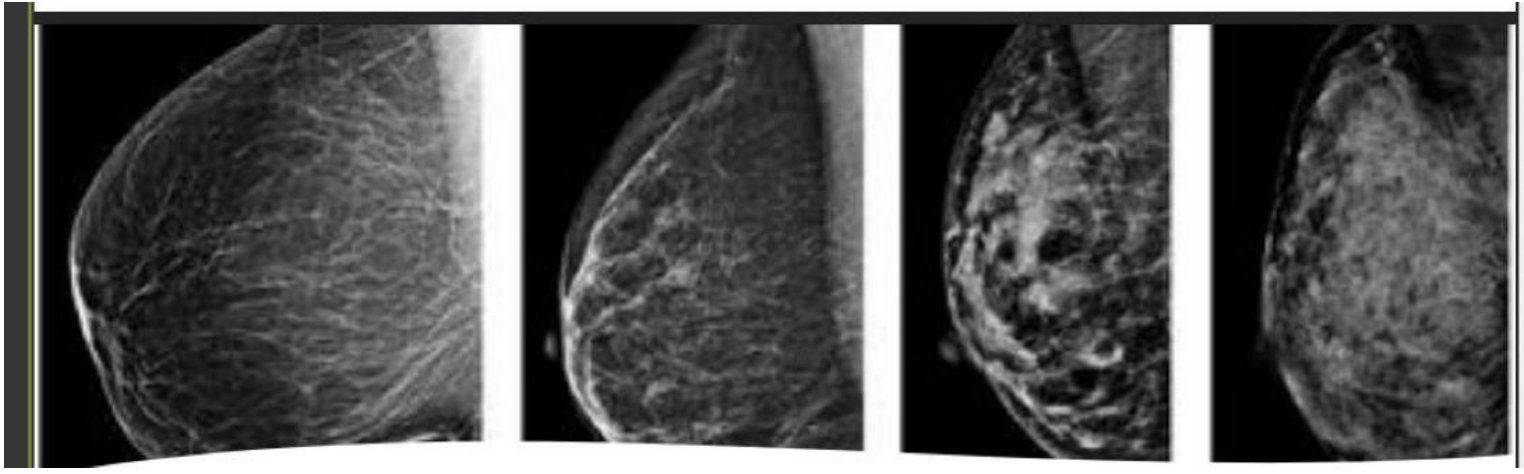
1. Mammogram or US (depends on the age "not sure ")
2. Fat necrosis

QUESTION

SOUL 2021

1. Which one is heterogeneously dense?
2. Which one is most likely to be malignant?

(not the same picture)



Hashemite University
H · U · M
Medical School Committee

ANSWER

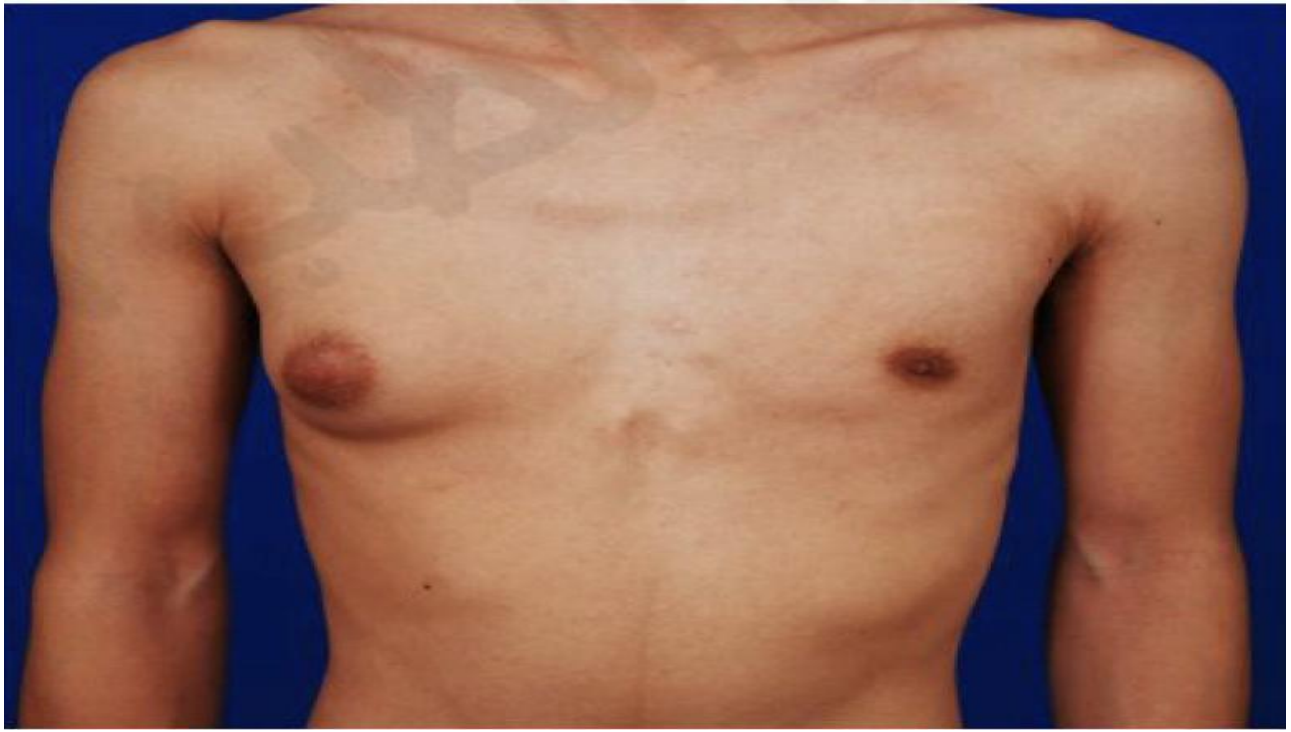
1. Picture C
2. Picture B
3. (Not sure)

mostly yes

• QUESTION

SOUL 2021

16 years old male , present with chronic beast mass ; Name the diagnosis



Hashemite University
H • U • M
Medical School Committee

ANSWER

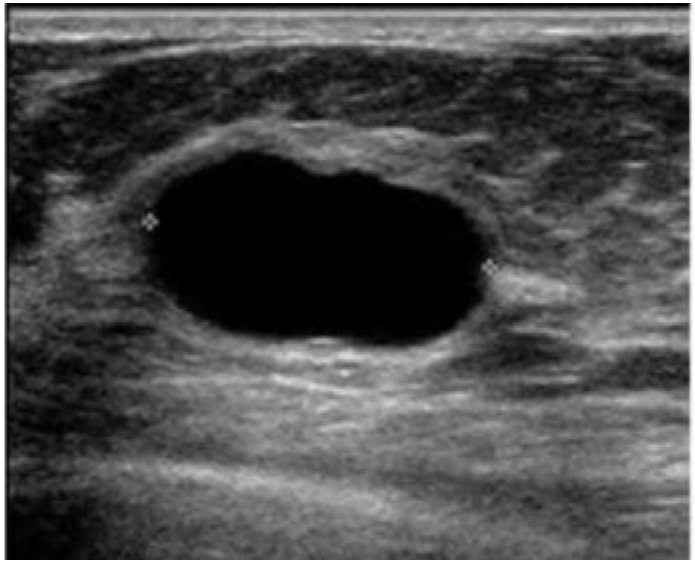
Gynecomastia

• QUESTION

SOUL 2021

A) What is your diagnosis:

B) What is your management



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Breast cyst

B. Aspiration

• QUESTION

SOUL 2021

A question about breast cancer, there were values of ER(+), PR(+), HER2 (-)

A) What is the luminal classification

(No picture found)

Hashemite University
H • U • M
Medical School Committee

- ANSWER

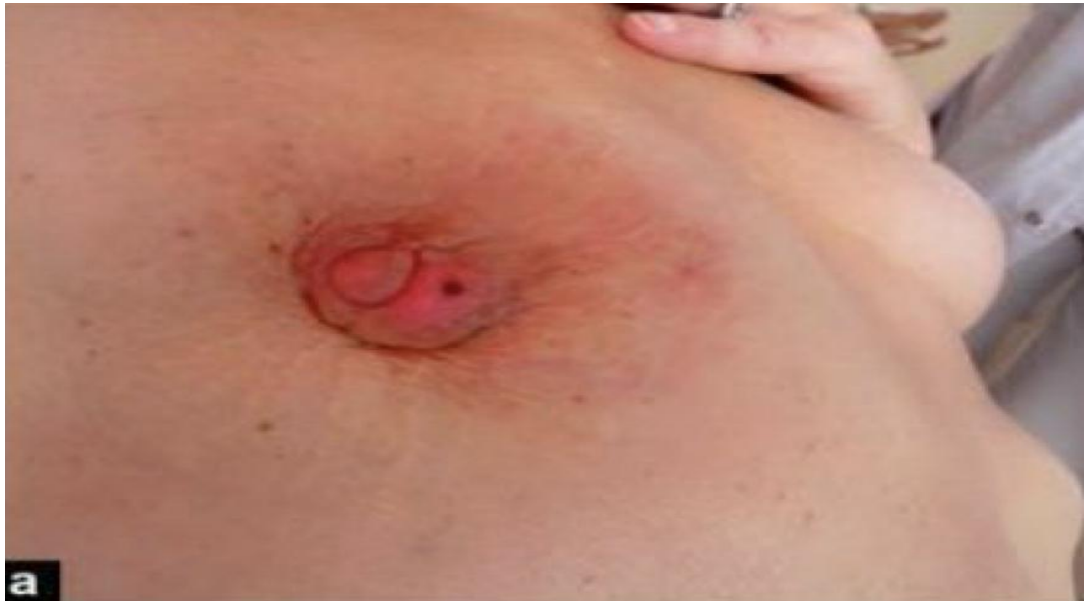
A. Luminal B , Her2 negative

• QUESTION

SOUL 2021

1. What is the finding ?

2. Most common Gene mutation associated with Male breast cancer ?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Male breast nipple changes.

2. BRCA 2

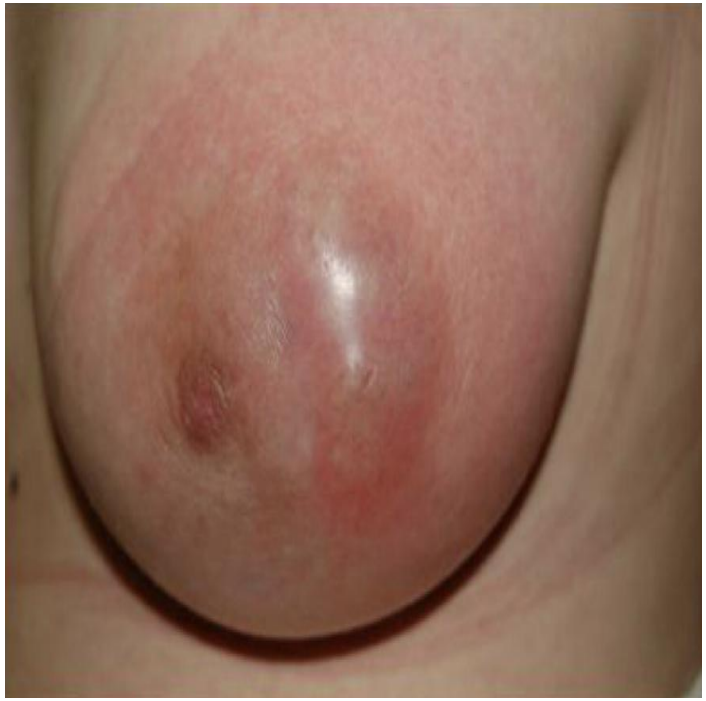
• QUESTION

SOUL 2021

1.Diagnosis?

2. Most common cause?

3.Next step in management?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Breast Mastitis/Abscess

2. S.Aureus.

.3. Abx

Incision and drainage

• QUESTION

IHSAN 2020

صخر

A 23-year-old single female presented to the clinic with rapidly growing (9cm) left breast mass over the last 6 months. The mass was atthe time of examination irregular, hard and fixed ;

A•What is the most likely

diagnosis?

B. The most common site of metastasis is:

Hashemite University
H • U • M
Medical School Committee

ANSWER

A.Phyllodes tumor

B.Lungs

• QUESTION

IHSAN 2020

A 37-year-old female presented with right breast pain for the last 3 months. A breast ultrasound showed these findings consistent with BIRAD 4c.

A. The likelihood of malignancy is:

B. The clinical T stage "if a diagnosis of invasive carcinoma is proved" is

Hashemite University
H • U • M
Medical School Committee

• ANSWER

A.50-90%

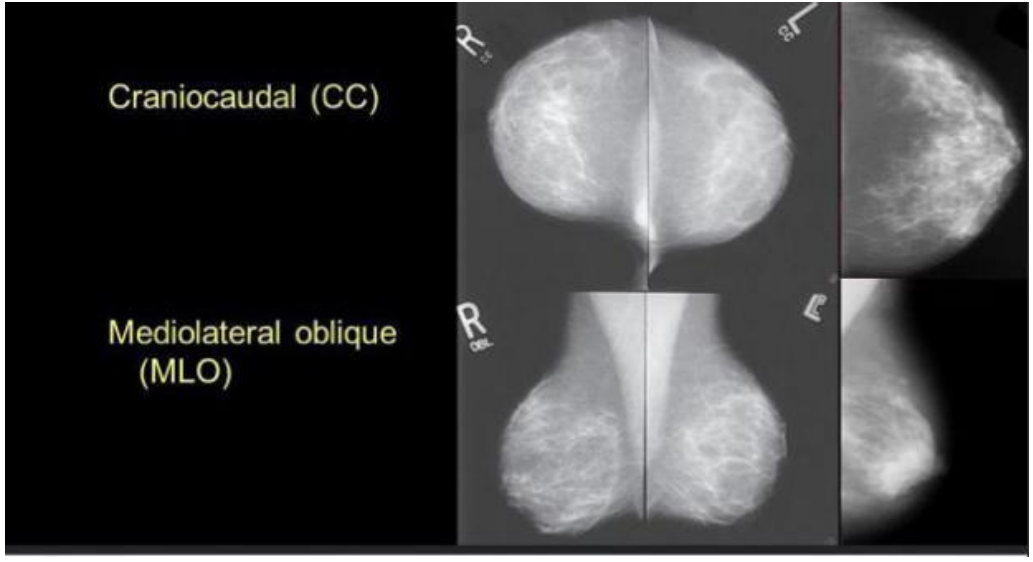
>50 & < 95

B.T4

• QUESTION

IHSAN 2020

Name the following views for mammogram



ANSWER

Craniocaudal (CC)

Mediolateral Oblique (MLO)

Hashemite University
H · U · M
Medical School Committee

• QUESTION

IHSAN 2020

What is your next step if the patient is a BIRAD 3

Hashemite University
H • U • M
Medical School Committee

• ANSWER

Follow up (6 month) and further investigations

Final Assessment Categories

	Category	Management	Likelihood of cancer
0	Need additional imaging or prior examinations	Recall for additional imaging and/or await prior examinations	n/a
1	Negative	Routine screening	Essentially 0%
2	Benign	Routine screening	Essentially 0%
3	Probably Benign	Short interval-follow-up (6 month) or continued	>0 % but ≤ 2%
4	Suspicious	Tissue diagnosis	4a. low suspicion for malignancy (>2% to ≤ 10%) 4b. moderate suspicion for malignancy (>10% to ≤ 50%) 4c. high suspicion for malignancy (>50% to <95%)
5	Highly suggestive of malignancy	Tissue diagnosis	≥95%
6	Known biopsy-proven	Surgical excision when clinical appropriate	n/a

Hashemite University
H • U • M
Medical School Committee

• QUESTION

محمود

IHSAN 2020

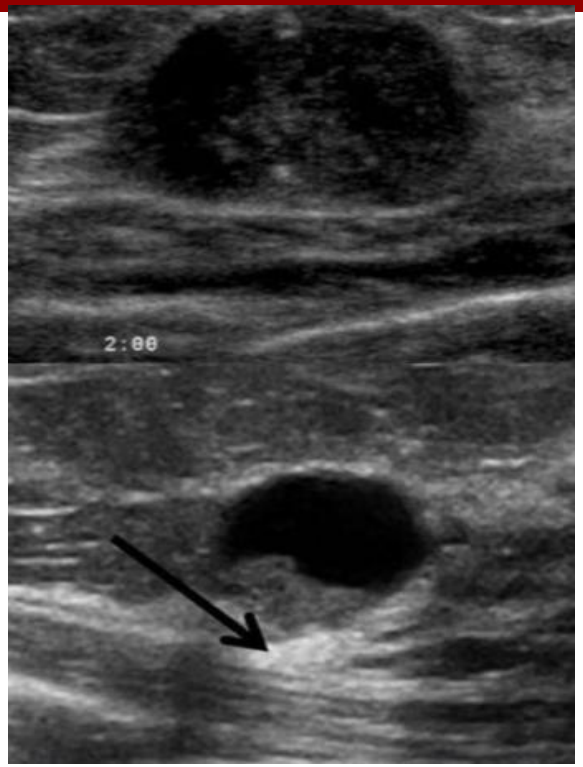
35 years-old female patient:

1.What is the Dx?

2.What does the arrow indicate to:

3.What are the indications for a biopsy in this female?

4. What will you do to manage this patient



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1. Breast Cyst

2.Acoustic Enhancement

3.1) Bloody aspiration 2) Failure to completely resolve 3) Recurrence after 2nd aspiration 4) Atypical cells

4. Aspiration

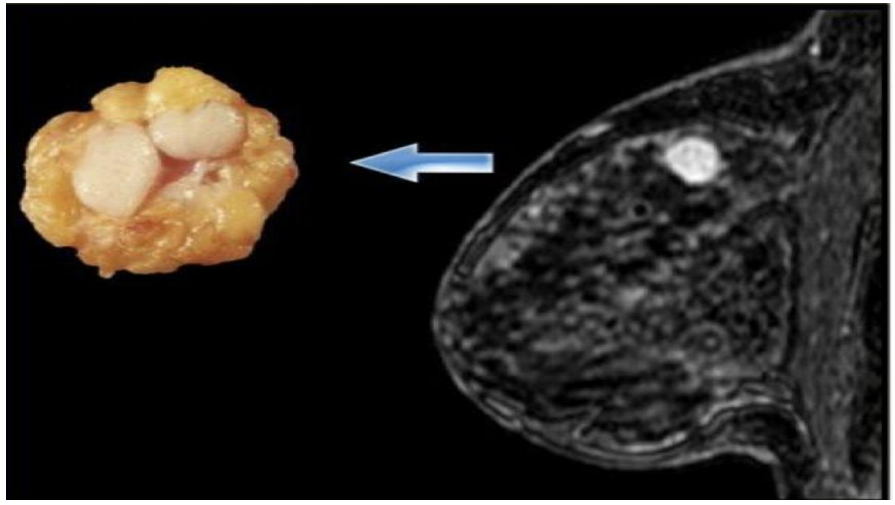
• QUESTION

2019 – Before

صحة

23-year-old female underwent triple assessment for an asymptomatic mobile breast lump

1. What is the most likely diagnosis?
2. What is the FNA category reported?
3. Give 2 indications for surgery:



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Fibroadenoma

2.clusters of branching papillary fronds of benign ductal epithelial cells, myoepithelial cells, and sparse stromal fragments in a fibromyxoid background

3.

1.masses that are symptomatic

2.increasing in size

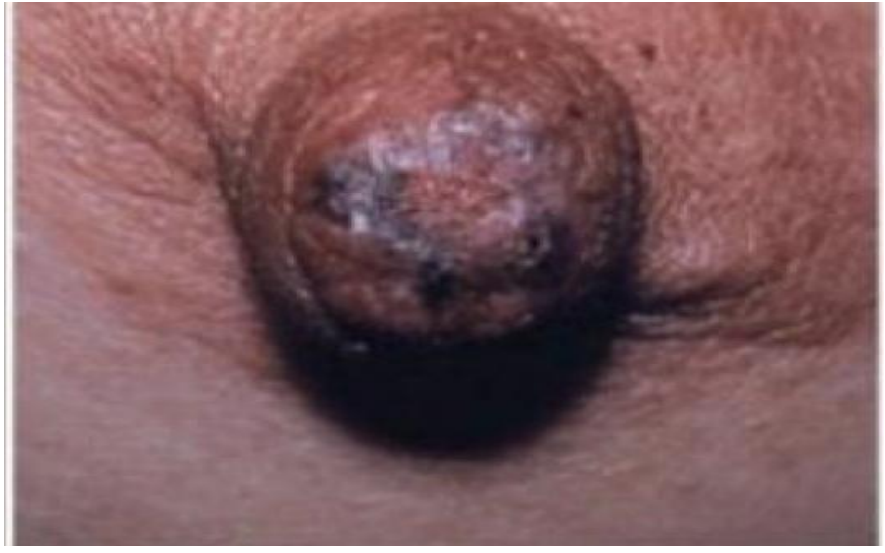
• QUESTION

2019 – Before

A punch biopsy was taken from the nipple that revealed large cells with a clear cytoplasm, high-grade nuclei andprominent nucleoli

1. What is the diagnosis?

2. Name two markers that can differentiate it from Melanoma on immune histochemistry :



Hashemite University
H • U • M
Medical School Committee

ANSWER

Not sure about the answers

2.Mammary Paget Disease

1. CK7+) and CD23

- CEA +ve
- S100 -ve

• QUESTION

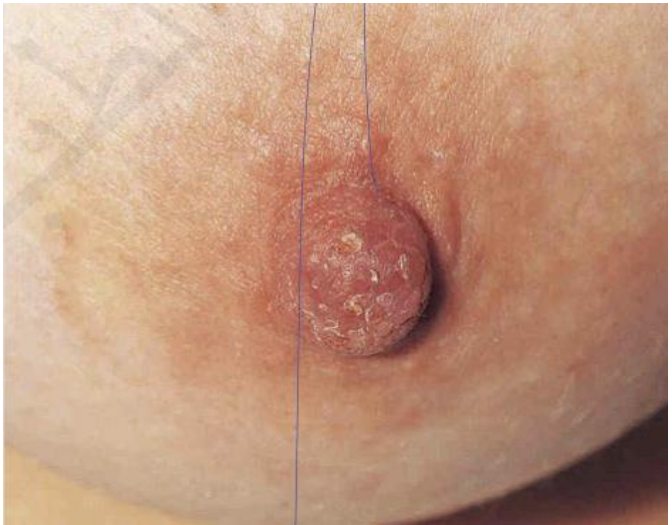
مكرر

2019 – Before

A nipple biopsy for a female patient shows large cells with a clear cytoplasm, high grade nuclei and prominent nucleoli

1.What is your Dx?

2.Mention 2 immuno- histochemical tests to differentiate it from melanoma?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Paget disease of the breast/nipple (PDB)

2.1)CEA (pos. in PDB) 2) Protein S100 (neg. in PDB)

• QUESTION

2019 – Before

A 50 years-old female has breast pain, breast only shows skin redness

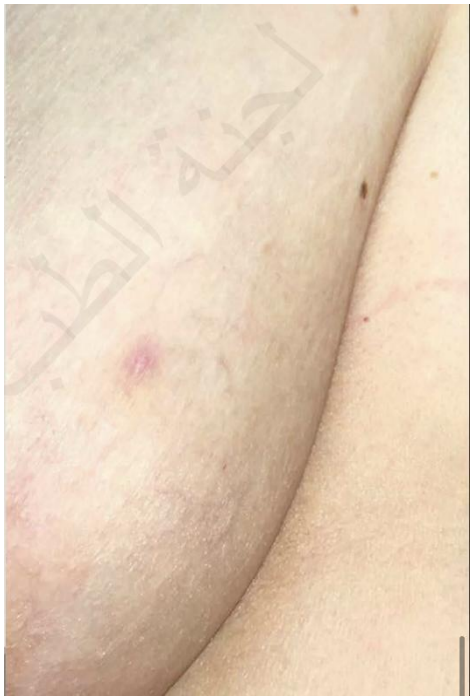
1.What is the diagnosis?

2.Diagnostic procedure?

2.Management

4.modality of diagnosis?

5.According to bTNM stage system the T stage is?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Inflammatory breast cancer

2.Mammogram

3.Mastectomy

4.Triple assessment

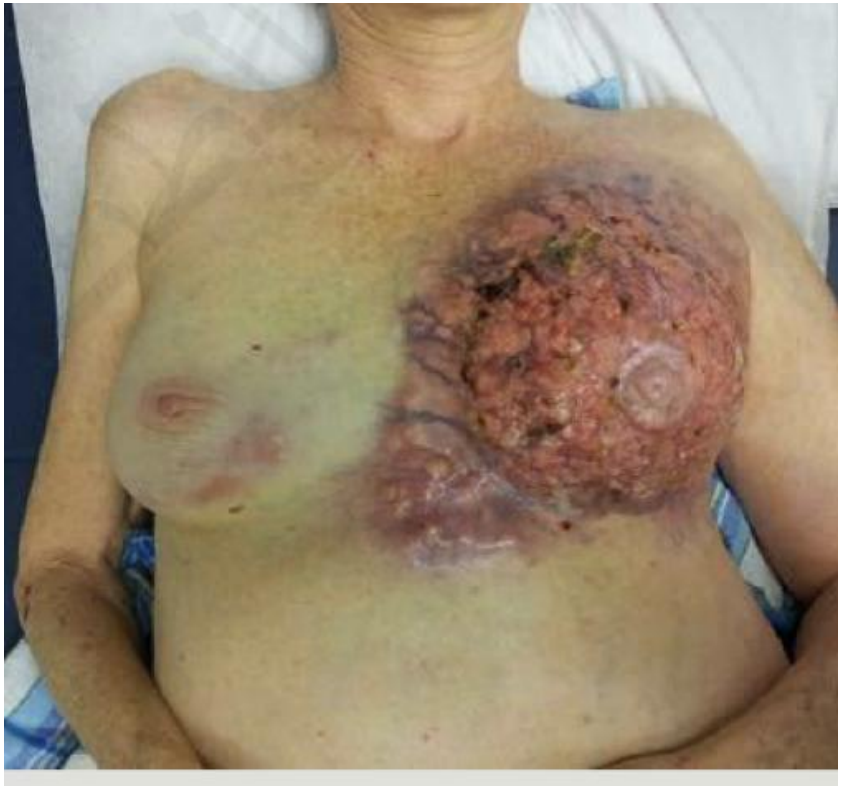
5.T4d

• QUESTION

2019 – Before

1.What is the pathology?

2.What is its TMN?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1. Carcinoma en cuirasse

2. Stage 3 (if there is METS – stage 4) → I think it's ٤ لانها عبارة عن metz From Breast → skin

Hashemite University
H · U · M
Medical School Committee

• QUESTION

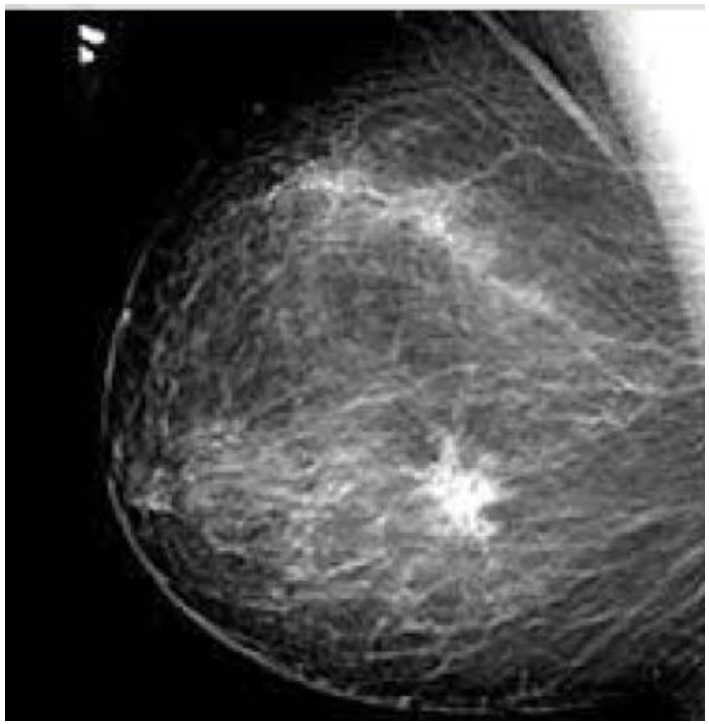
2019 – Before

1.Name the study?

2.Mention 2 abnormalities?

3.What is the diagnosis?

4.How to confirm your diagnosis?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Mammogram

2.Masswith irregular border and calcification

3.Breast Ca

4.Biopsy

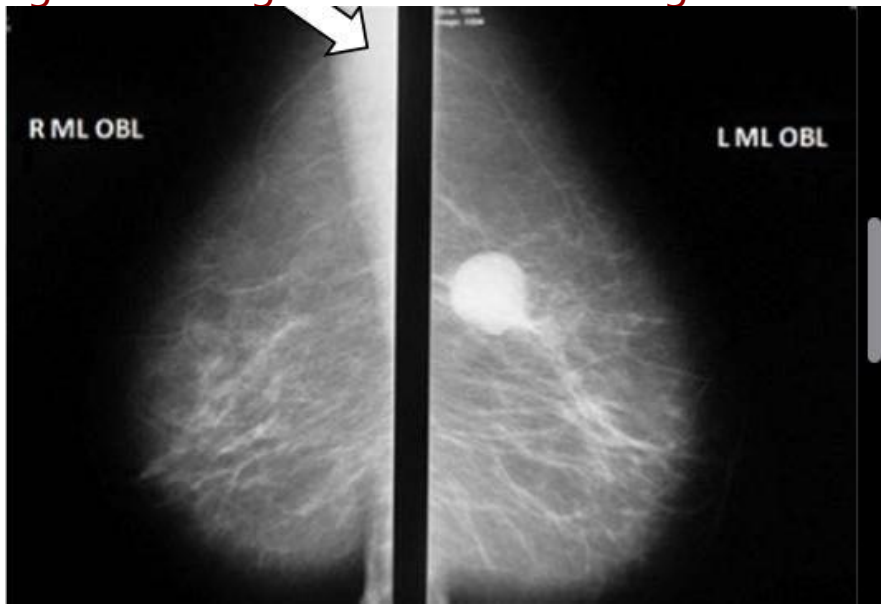
• QUESTION

2019 – Before

1.What is this view?

2.what is this structure (arrow)?

3.what are the malignant changes seen on mammograms? Mention 3?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Mediolateral=oblique

2.Pectolaris major muscle

3.1) Calcifications 2) Speculations 3) Mass with greater density than normal tissue

Hashemite University
H • U • M
Medical School Committee

• QUESTION

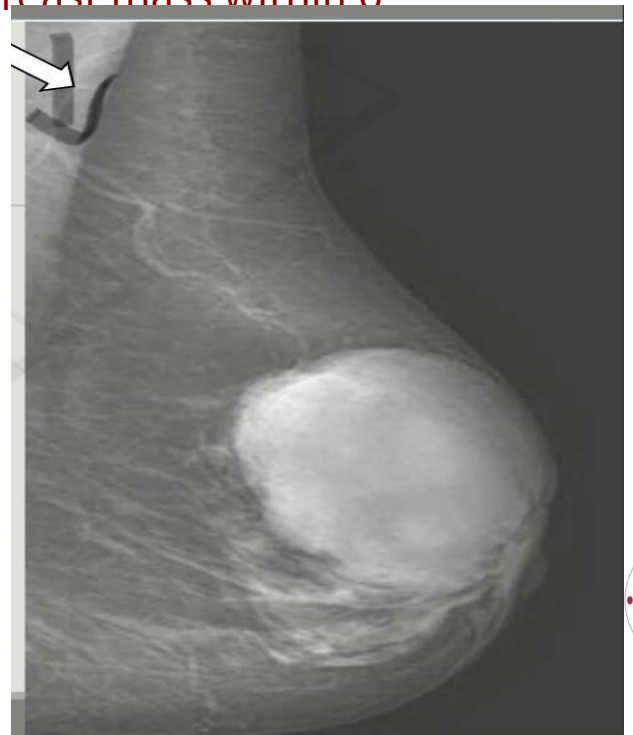
2019 – Before

37 years-old female patient is complaining of enlarging breast mass within 6 months:

1.Your diagnosis?

2.What is this structure (arrow)?

3.if it is malignant, what is the common route of METS?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Phyllodes tumor

2.Pectolaris major musc

3.Hematogenous

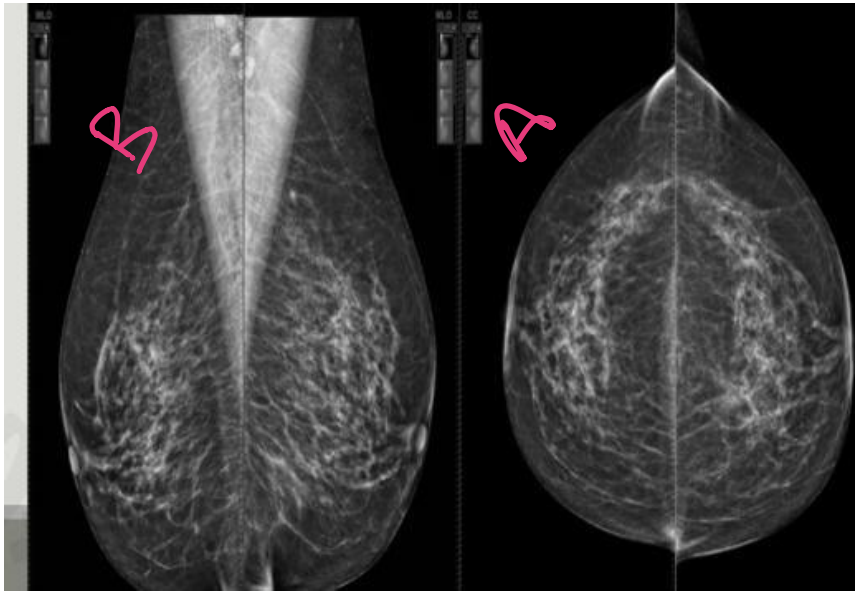
• QUESTION

2019 – Before

Breast with Birad 2:

1.What is the next step in the management?

2.What is the view in B?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Routine screening

2.Mediolateral oblique view

BI-RADS CATEGORIES
BI-RADS 0 (incomplete): Recommend additional imaging -- mammogram or targeted ultrasound
BI-RADS 1 (negative): Routine breast MR screening if cumulative lifetime risk ≥ 20%
BI-RADS 2 (benign): Routine breast MR screening if cumulative lifetime risk ≥ 20%
BI-RADS 3 (probably benign): Short-interval (6-month) follow-up
BI-RADS 4 (suspicious): Tissue diagnosis
BI-RADS 5 (highly suggestive of malignancy): Tissue diagnosis
BI-RADS 6 (known biopsy-proven malignancy): Surgical excision when clinically appropriate

Hashemite University
H • U • M
Medical School Committee

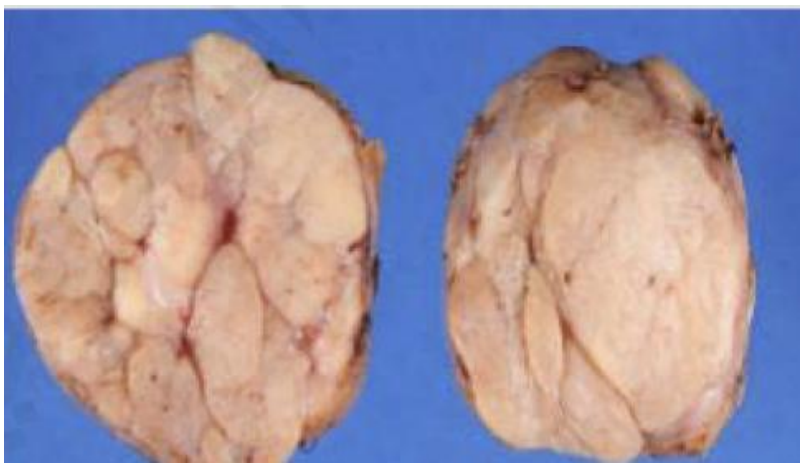
• QUESTION

2019 – Before

1.What is the pathology?

2.What is the management?

3.What is the like hood (%) of this tumor to be benign?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Phyllodes tumor (Brodie's)

2.Wide local excision

3.90% benign

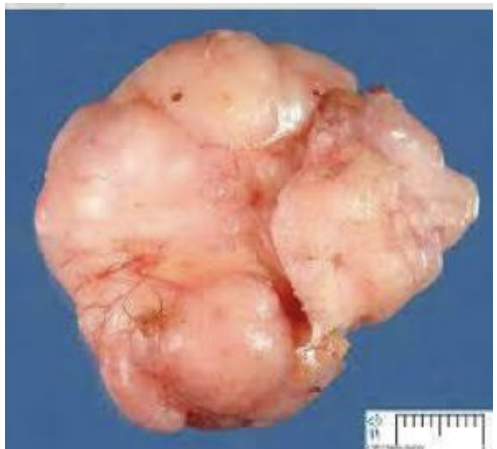
• QUESTION

2019 – Before

A female with mobile, mouse like lump in one breast:

1.What is the diagnosis?

2.What is the stage according to FNA?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Fibroadenoma

2.C2

Cl = unsatisfactory.
C2 = cells present all benign; no suspicious features.
C3 = cells suspicious but probably benign.
C4 = cells suspicious but probably malignant.
C5 = Definitely malignant.

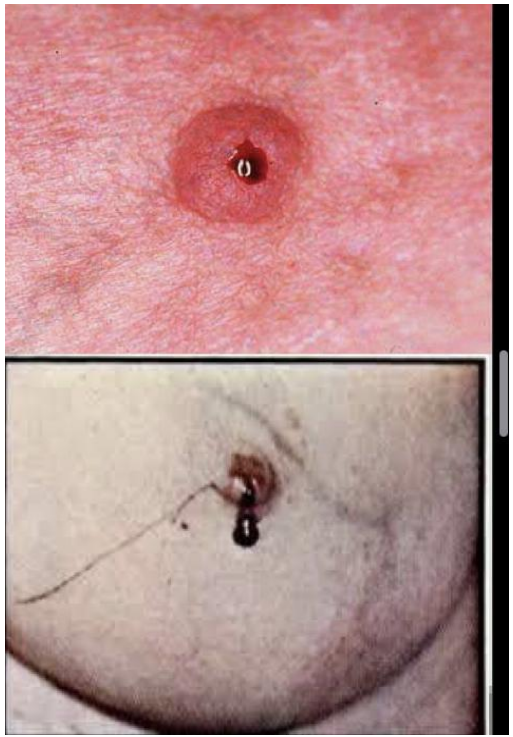
• QUESTION

2019 – Before

1.What is the pathology?

2.Mention 2 imaging studies?

3.What is the risk of malignancy of this lesion?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Intraductal papilloma

2.1) Ductogram, Ductoscope 2) Mammogram, US

3.15%

• QUESTION

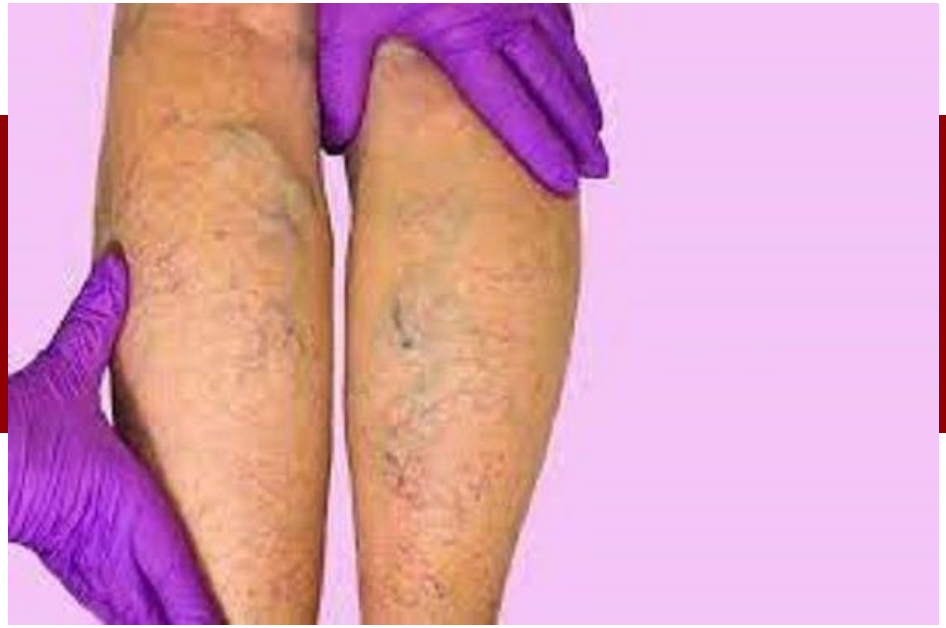
2019 – Before

By which mechanism does breast cancer cause hypercalcemia?

• ANSWER

Parathyroid hormone - related protein (not due to osteoclastic METS)

Note: The main pathogenesis of hypercalcemia in malignancy is increased osteoclastic bone resorption, which can occur with or without bone metastases. The enhanced bone resorption is mainly secondary to PTH-related protein**



start From slide 64 then back to past papers

VASCULAR

Hashemite University
H · U · M
Medical School Committee

• QUESTION

محمد يزن ①

Wateen 2023

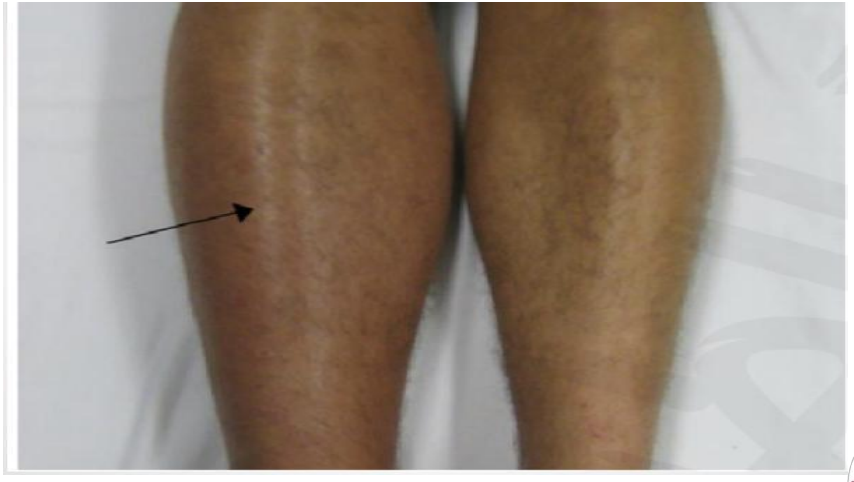
5 days after hip surgery patient complained of right leg pain ,with the picture attached.

1.What is the best imaging test to confirm your suspicion ?

2.What is your initial management ?

3.Mention 4 differentials?

4.What are the complications:



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Venography - DOPPLER ULTRA sound

2. LMWH

3.

1)DVT 2) Cellulitis 3) Lymphadenopathy, lymphatic obstruction 4) Chronic Deep Vein Insufficiency 5) Rupture of baker's cyst

4.

1)Pulmonary embolism 2) Ulcers 3) Ischemia

Note diagnosis is DVT

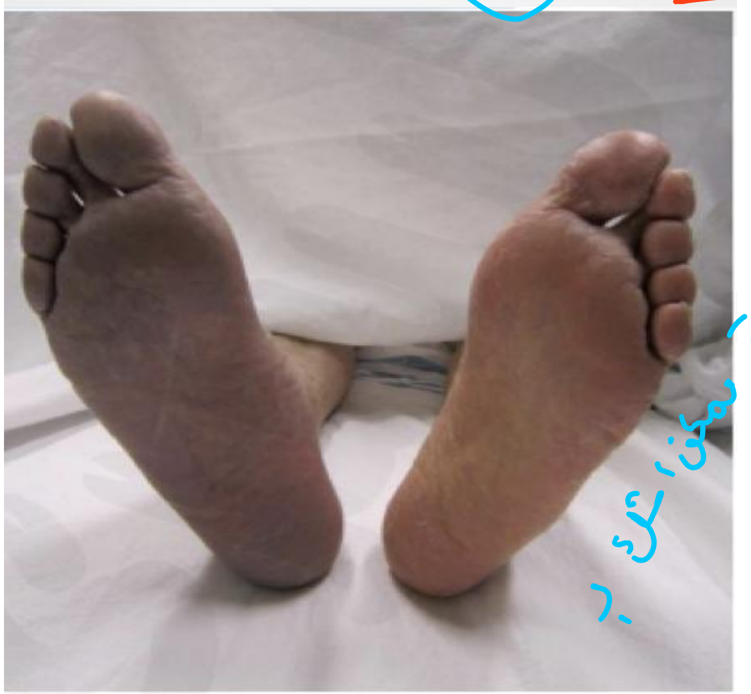
Hashemite University
H · U · M
Medical School Committee

. QUESTION

Wateen 2023

70 year old male with atrial fibrillation presented with acute right leg pain and numbness.

1. What's your diagnosis?



- ANSWER

mostly yes

DVT (~~not sure~~)

• QUESTION

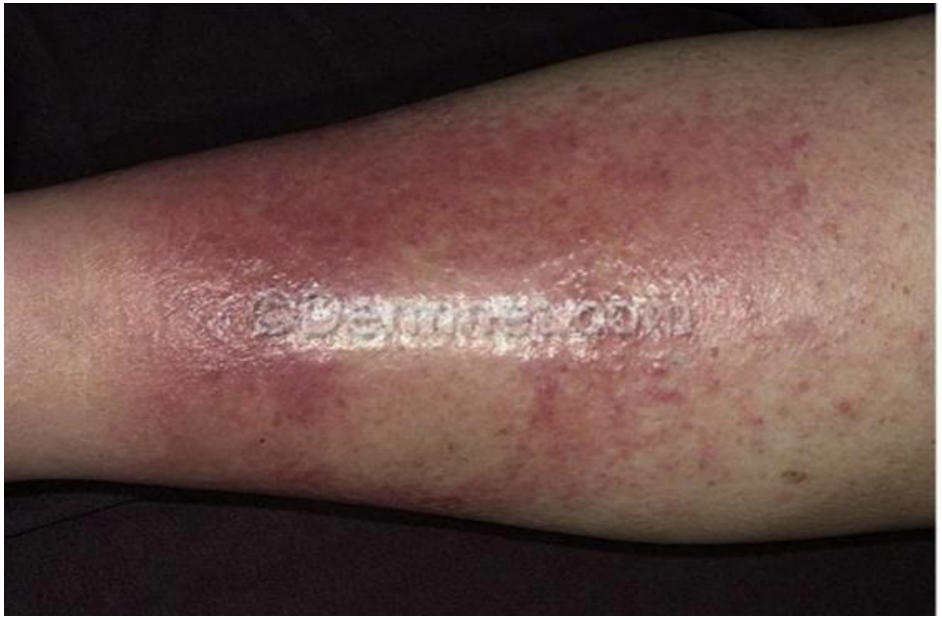
Wateen 2023

skin مكرر من ملف

Patient with history of fever and pain;

A- What is the diagnosis?

B- What are the most likely organisms to cause that?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Cellulitis

B. Staphylococcus and streptococcus bacteria

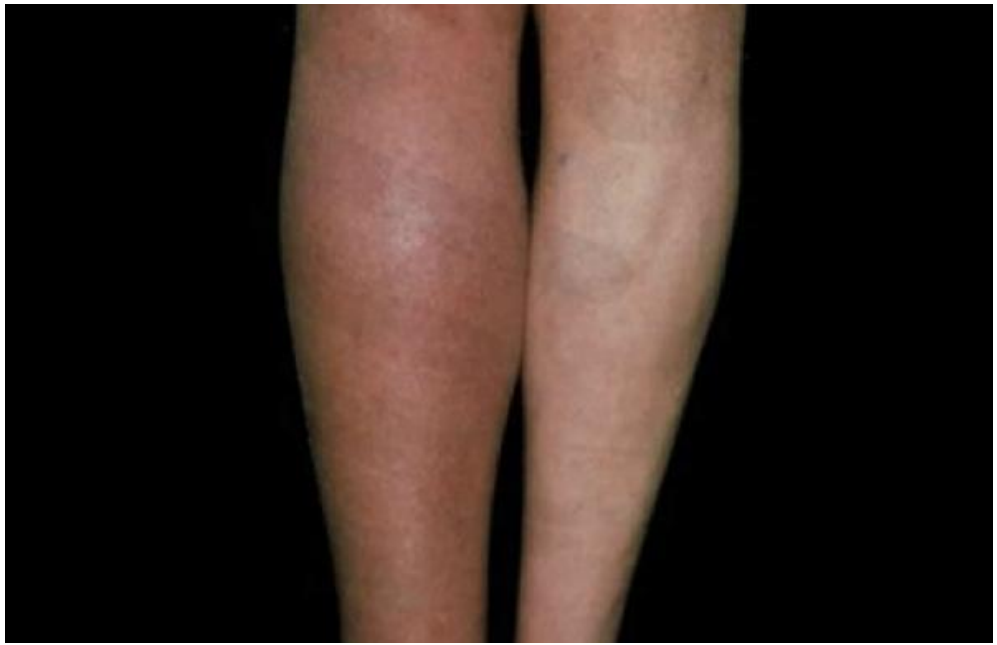
1st 2nd

• QUESTION

Patient had surgery 5 days ago and came with leg pain

a) The diagnosis:

b) Treatment



• ANSWER

a) DVT

b) LMWH /warfarin

• QUESTION

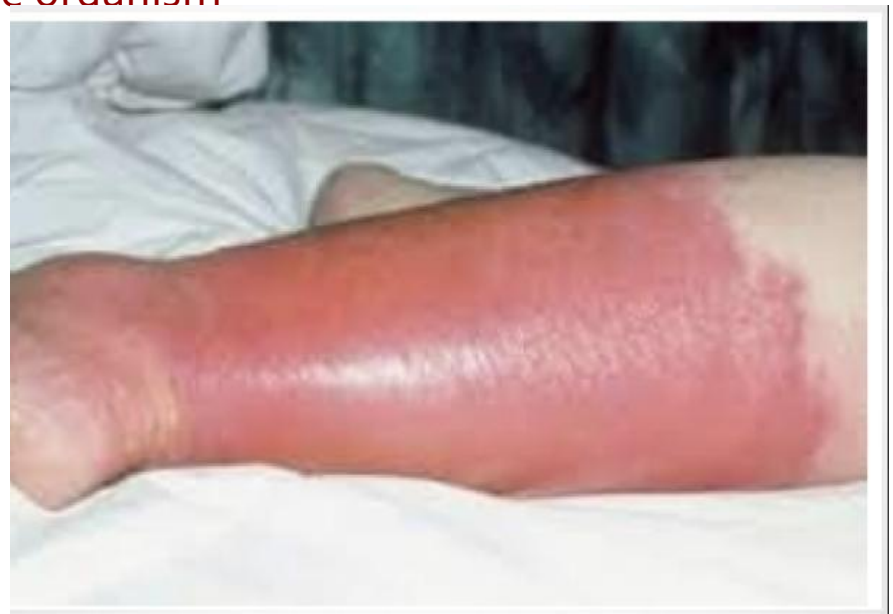
Wateen 2023

صكود يزن ٢

case for patient who had fever ;

a) Diagnosis

b) Most common causative organism



Hashemite University
H • U • M
Medical School Committee

ANSWER

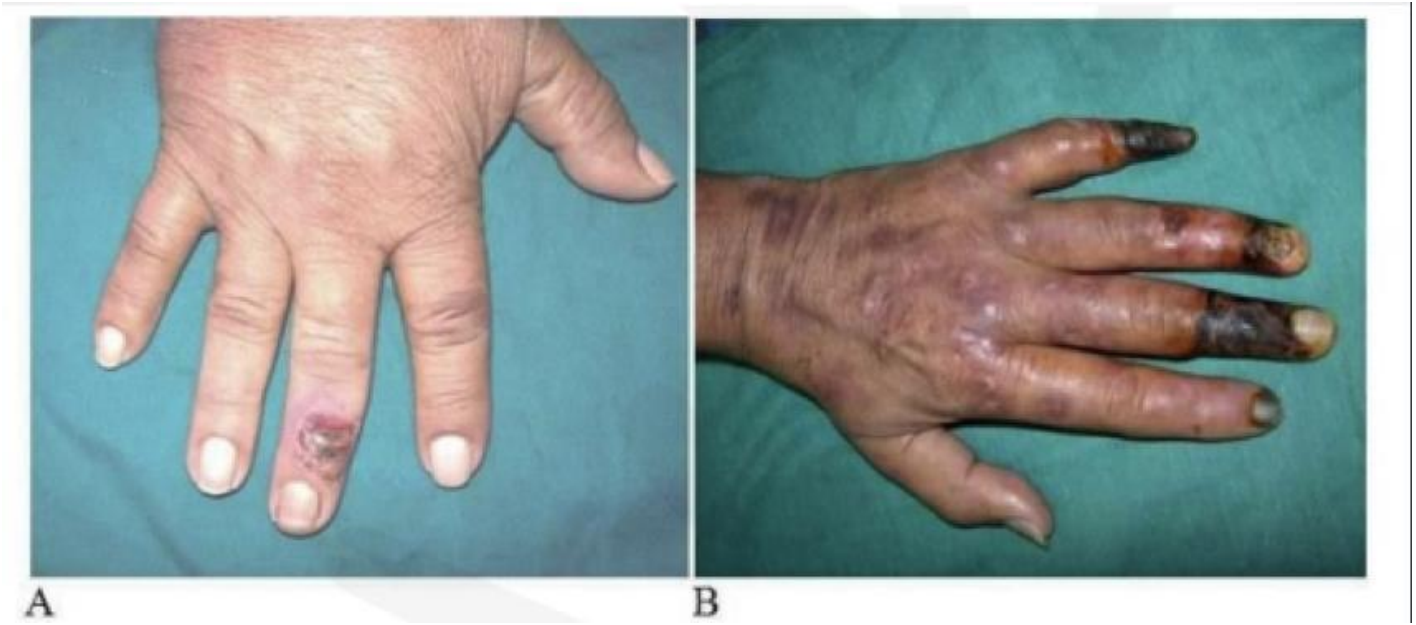
A) Cellulitis

B) Staphylococcus and streptococcus bacteria

- QUESTION

ضمن ال Hx ممكن نلاقي انه على dialysis

Name the syndrome



• ANSWER

Steal syndrome

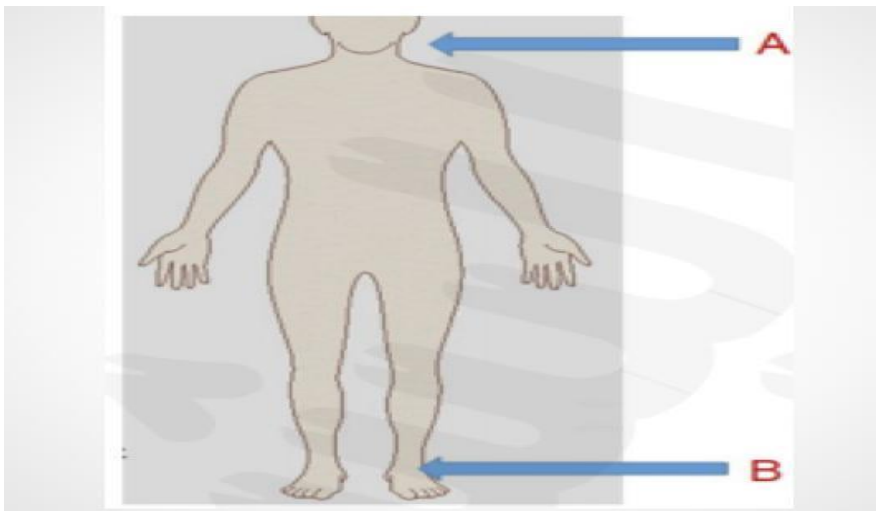
• QUESTION

Wateen 2023

How to quickly estimate blood pressure by pulse:

A) If you palpate a pulse at 'A', the number above which the systolic blood pressure will be is?

B) If you palpate a pulse at 'B', the number above which the systolic blood pressure will be is?



Hashemite University
H · U · M
Medical School Committee

ANSWER

A. 60 MMHG

B. 90 MMHG

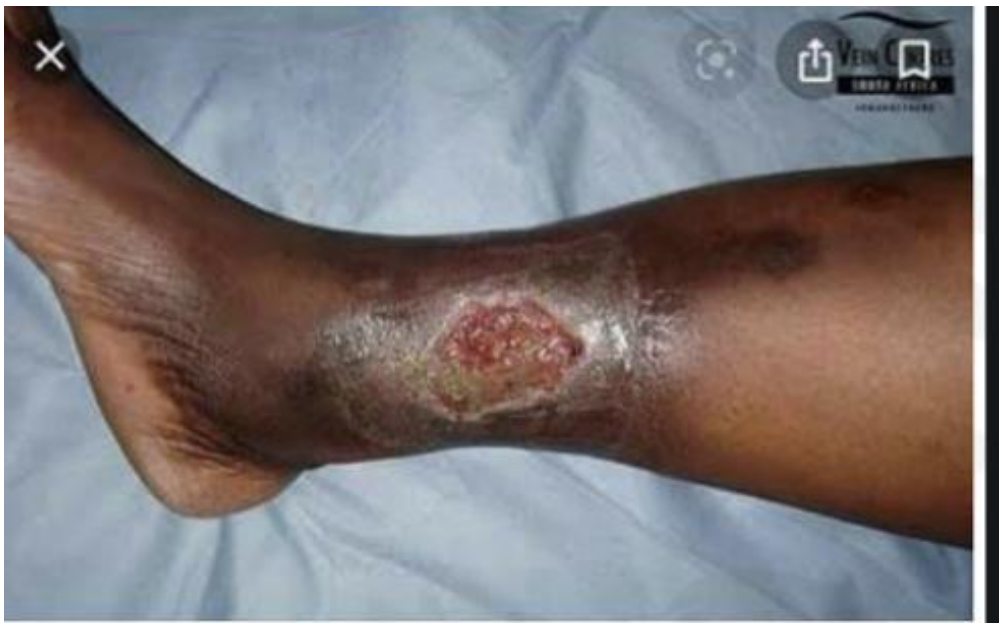
• QUESTION

محكر بدون ؟

Wateen 2023

a) Name the diagnosis

b) What is the cause



Hashemite University
H • U • M
Medical School Committee

• ANSWER

a) Venous ulcer

b) Venous valve insufficiency

• QUESTION

Harmony 2022

24. 50 year old lady, presented to clinic with generalized leg swelling that start from foot up to thigh level, what is your provisional diagnosis

a. Femoral vein DVT

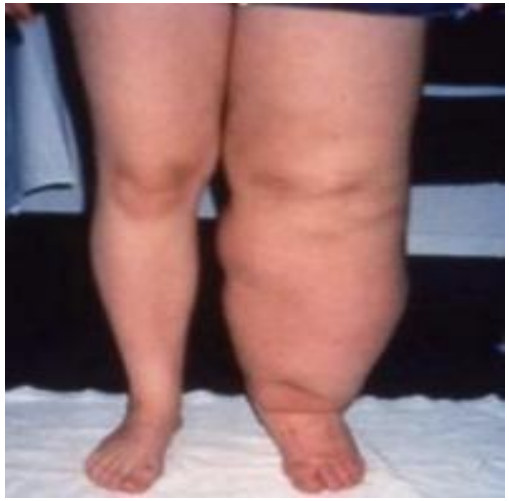
b. Lymphedema

c. Swelling is due to systemic disease

d. Maldistribution of fat (Lipedema)

e. Necrotizing fasciitis

Answer: B



Hashemite University
H • U • M
Medical School Committee

• QUESTION

Harmony 2022

35. What is your spot diagnosis?

a. Vessel arteritis

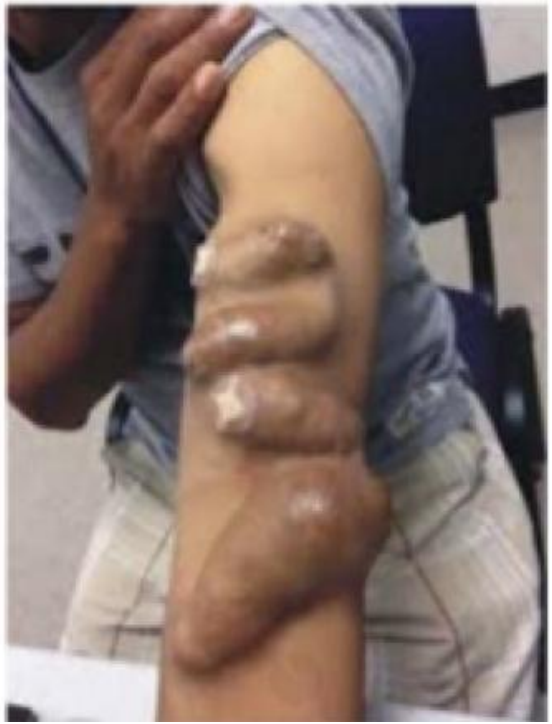
b. Ectatic Vessel

c. Mycotic Aneurysms

d. Pseudoaneurysm

e. True Aneurysm

Answer: D



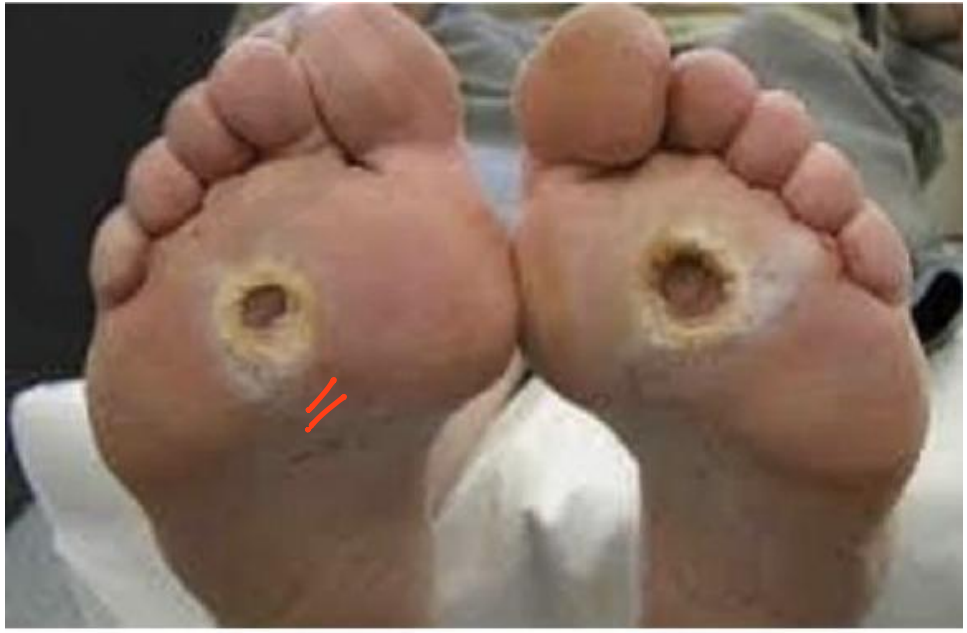
Hashemite University
H • U • M
Medical School Committee

• QUESTION

Harmony 2022

A. What is the diagnosis?

B. what is the cause?



Hashemite University
H • U • M
Medical School Committee

ANSWER

A.Pressure ulcer

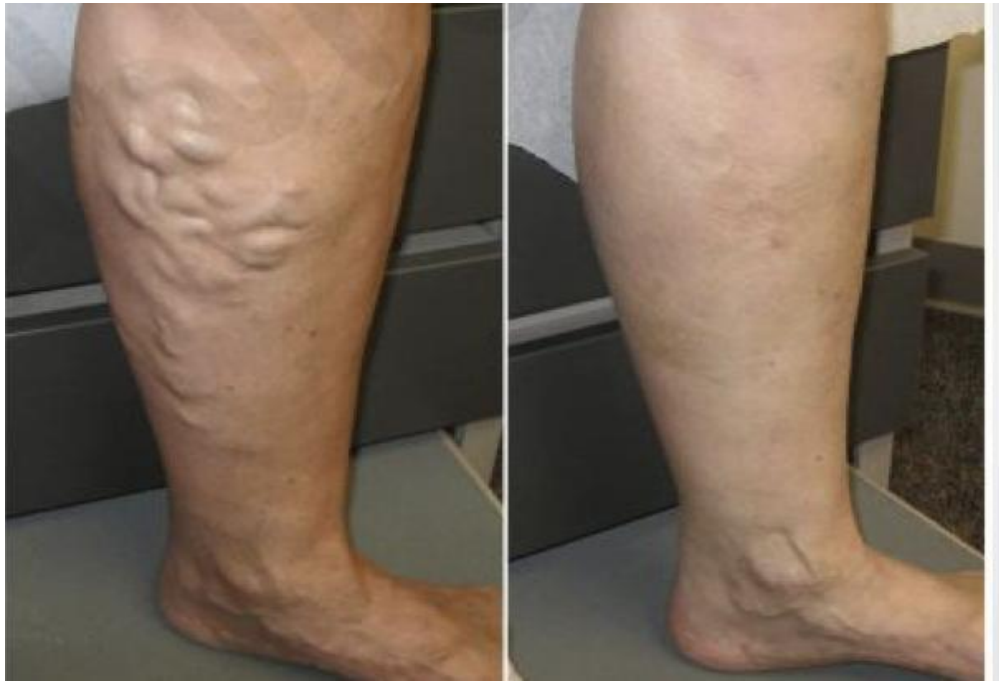
B. Uncontrolled DM andpressure

• QUESTION

Harmony 2022

A. How do you determine the level of defect in varicose veins?

B. give 2 surgical procedure to treat varicose veins?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. T~~runcate~~ test Trendelenberg (Tourniquet)

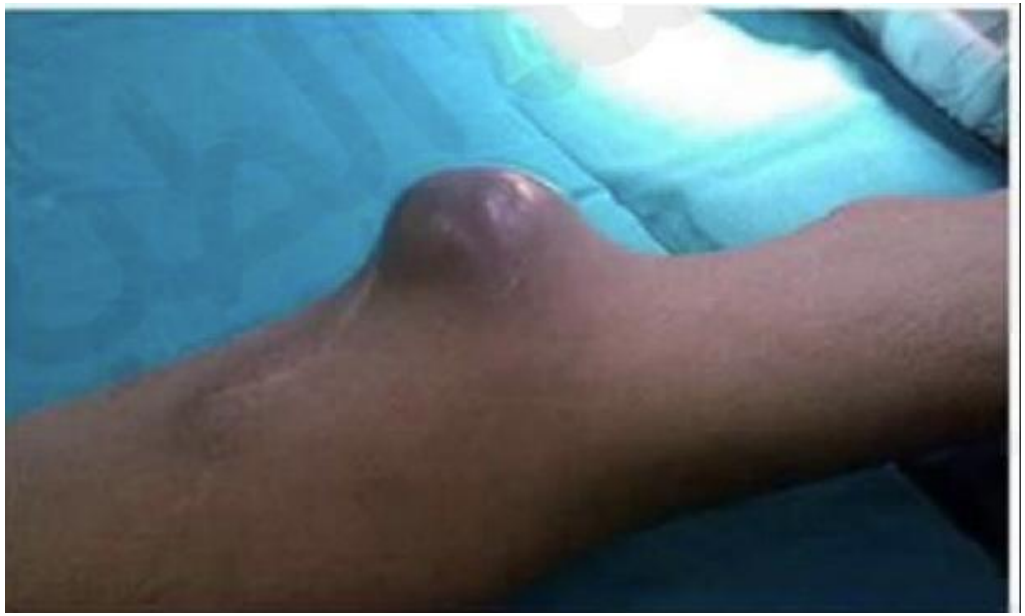
B. sclerotherapy + laser ablation ✓

• QUESTION

يزن محمد ٧

Harmony 2022

A. What is the following complication ,mention others?



Hashemite University
H • U • M
Medical School Committee

ANSWER

pseudoaneurysm

Other complication : thrombosis + steal syndrome + CHF

• QUESTION

SOUL 2021

55year old male, smoker, with hx of lower limb ischemia, complains of right lower limb rest pain and numbness :

1.Mention 5 signs present or absent to be looked at during inspection of lower limb for diagnosis:

(No picture)

Hashemite University
H • U • M
Medical School Committee

ANSWER:

1. Discoloration → black (dead tissue)
2. pallor
3. muscle wasting
4. ulcer → arterial ischemic ulcer
5. Abnormal hairdistribution → minimal or no
6. nail brittle
7. amputation

mostly the pt has those

in palpation, look for:

① Temp → cold in this pt

② pulse → pulselessness

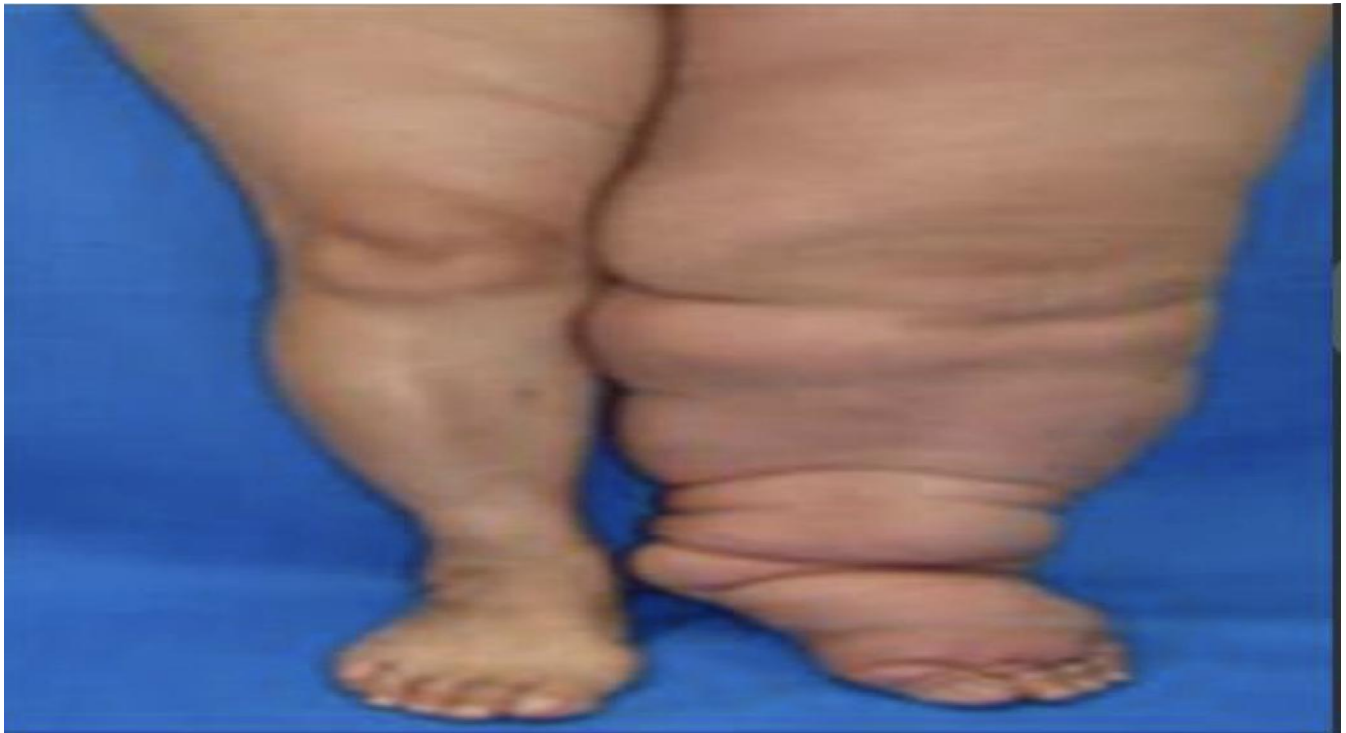
③ tenderness → painful so much

Hashemite University
H · U · M
Medical School Committee

• QUESTION

SOUL 2021

A case of a 10 years old girl with unilateral swelling give the Dx :



Hashemite University
H • U • M
Medical School Committee

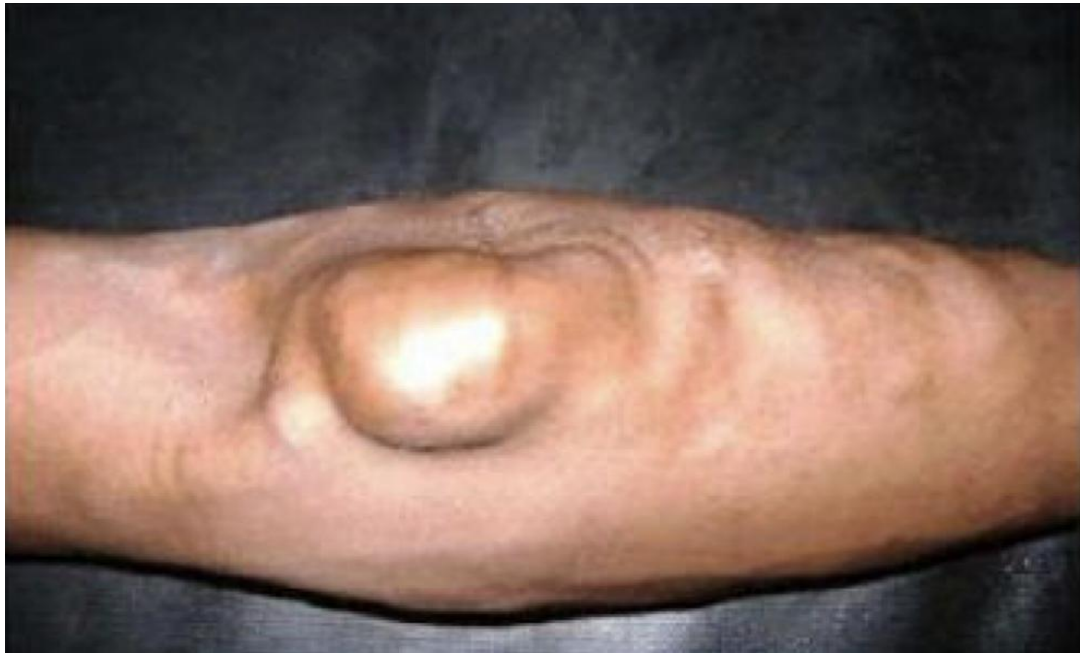
ANSWER

Lymphedema

• QUESTION

SOUL 2021

1. What is the Diagnosis?
2. What's the cause of this?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Pseudoaneurysm

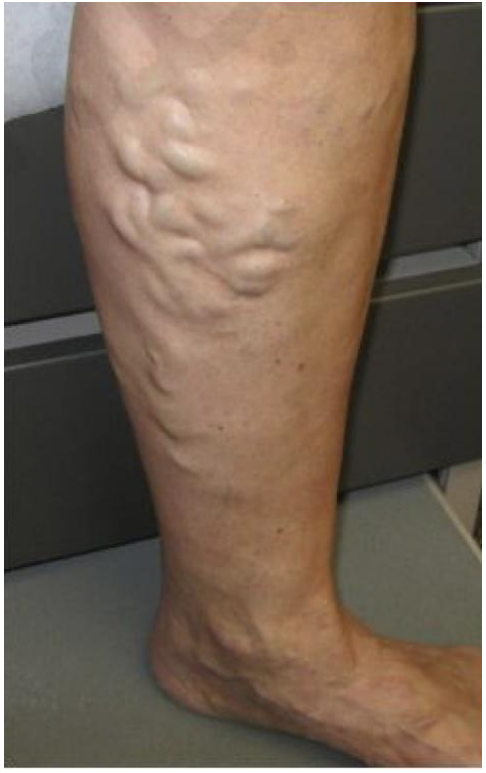
2. complication of AV shunt

• QUESTION

SOUL 2021

A) Name the condition:

B) What is the diagnostic method



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Varicose veins

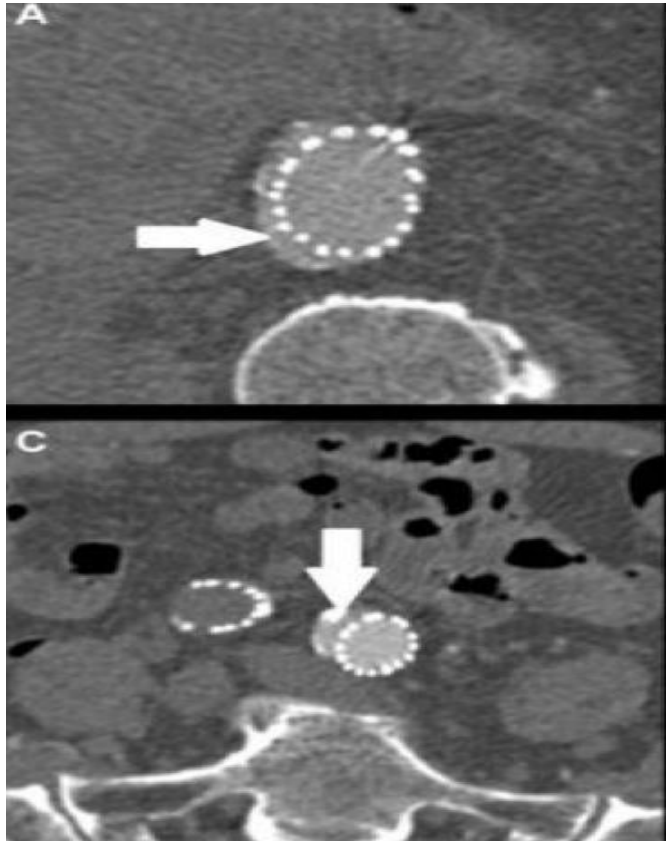
B. Venous duplex ultrasound

• QUESTION

SOUL 2021

A) What is the structure:

B) Name the procedure this patient had in the past



Hashemite University
H • U • M
Medical School Committee

ANSWER

1A. Abdominal aorta

B. Endovascular repair/stent

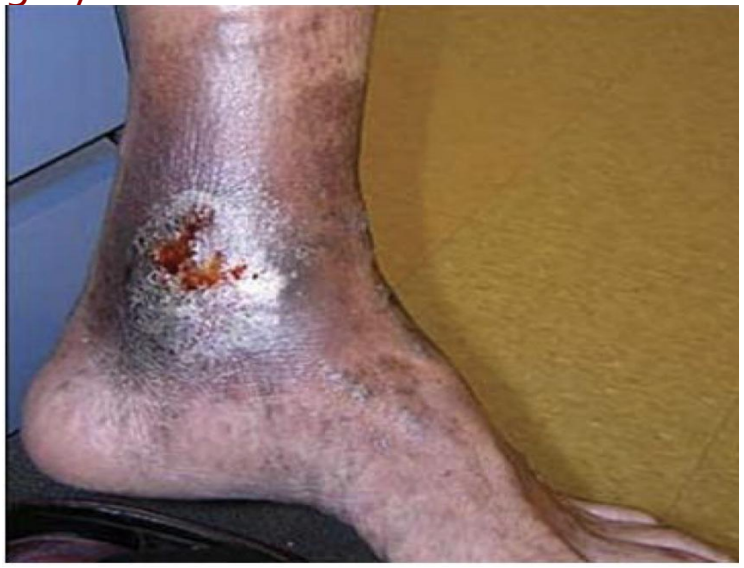
Hashemite University
H · U · M
Medical School Committee

• QUESTION

SOUL 2021

Venous ulcer developed after 5 days of Surgery:

1. Diagnosis?
2. Can Transform to ?
3. What is the pathophysiology?
4. : if this happened after 5 days of surgery what is the main cause you may think of?
5. Name 2 causes?
6. What is the sign?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1. Venous Ulcer

2. SCC

3. Blood stasis and increased Pressure inside the veins due to venous valves insufficiency

4.DVT

5.venous insufficiency and stasis (as DVT, varicose veins)

6. Lipodermatseclarosis

• QUESTION

IHSAN 2020

I. What is your spot diagnosis?

II. What is your management?

(CT Angiogram Of Renal Artery Stenosis)

• ANSWER

.1.Renal artery stenosis

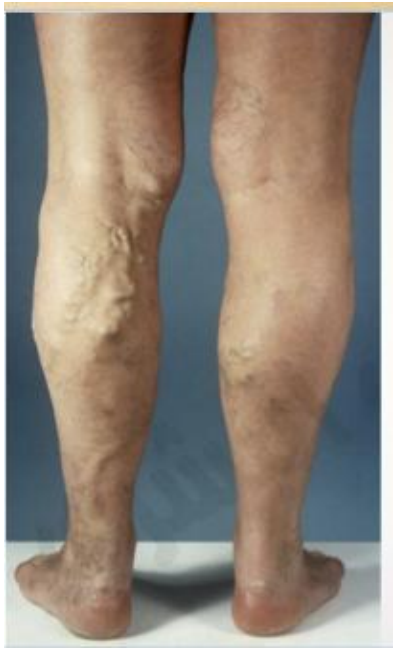
II. Renal angioplasty & stenting

• QUESTION

صحة دِ بون IHSAN 2020

1. Name the condition that this patient has :

2.What is the best imaging test for this patient ?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Varicose Veins

2.Doppler Ultrasound or Venogram

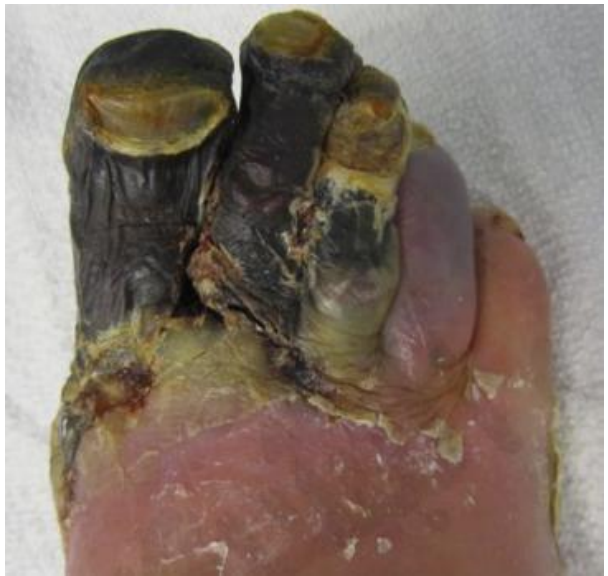
• QUESTION

صحكم ا يرن

IHSAN 2020

1. What is the most probable cause for this patient's condition?

2. What is the best imaging test to put a treatment plan?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Lower Limb Ischemia

2.CT Angio, Angiogram, Doppler US…etc were all accepted by the Dr

• QUESTION

صحراء بون -

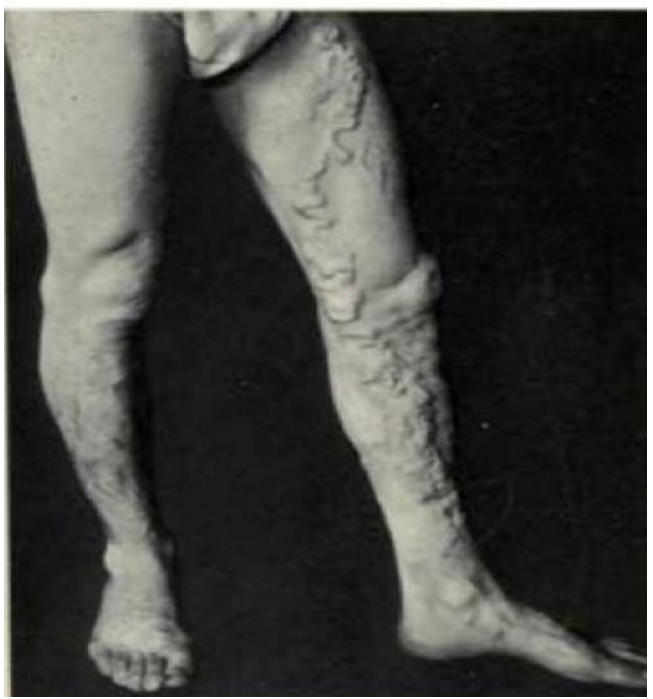
2019 – Before

1.What is the system involved in this system(name of the vessel)?

2.Name modalities of .treatment ?

3.What is the diagnosis?

4.Mention 2 complications?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Long Saphenous vein

2.a) high ligation and vein stripping

b) sclerotherapy

3. Varicose veins

4.

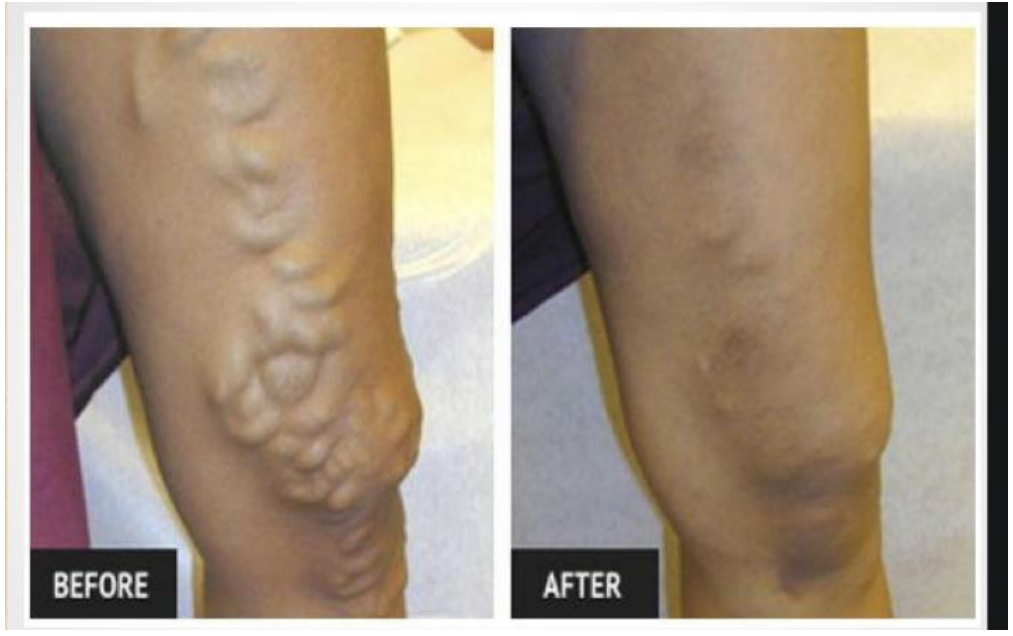
1)Bleeding 2)ulcer 3) Thrombophlebitis 4)discomfort and pain

Hashemite University
H • U • M
Medical School Committee

• QUESTION

2019 – Before

what minimal invasive vein procedure produced this result? Name two modalities



• ANSWER.

1)Sclerotherapy

2) Radiofrequency Ablation

3) Endovascular Laser Ablation

• QUESTION

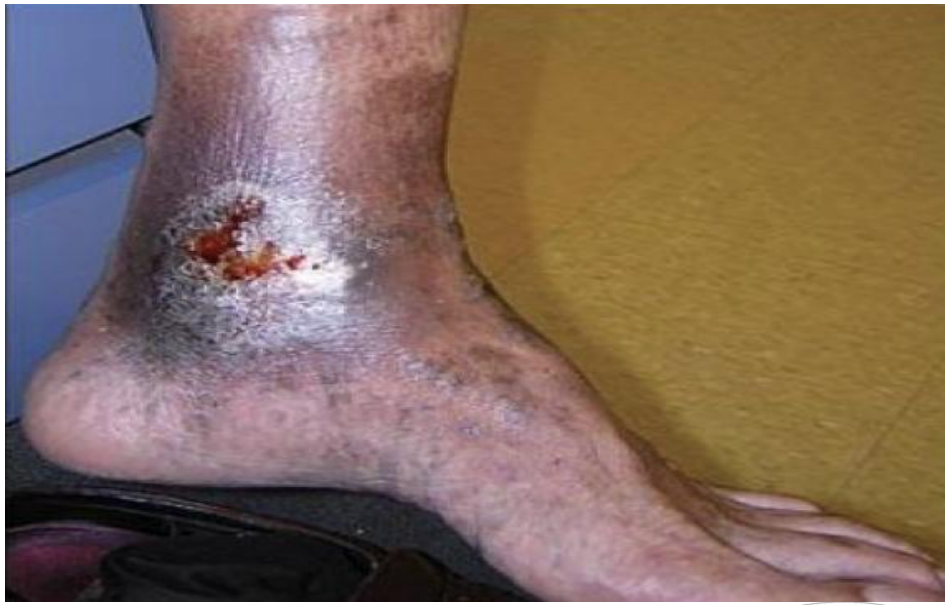
صحة بدي

2019 – Before

1.What would you call this ulcer?

2. Looking at the leg, What is the underlying disease?

3. What type of skin malignancy would this ulcer change to?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Venous Ulcer .

2. Chronic Venous Insufficiency

3. Squamous Cell Carcinoma (SCC)

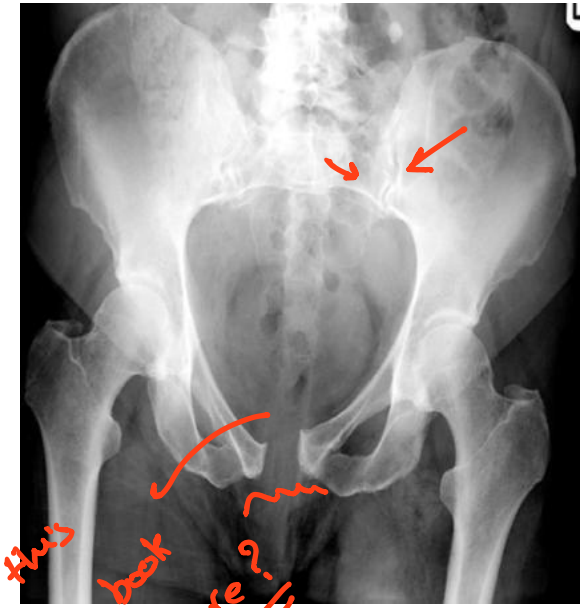
• QUESTION

2019 – Before

This is pelvic x-ray of a patient post RTA:

Q1: What is the pathology?

Q2: What is the most serious complication? -



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Pelvic fracture

2.Bleeding (Femoral artery)

• QUESTION

2019 – Before

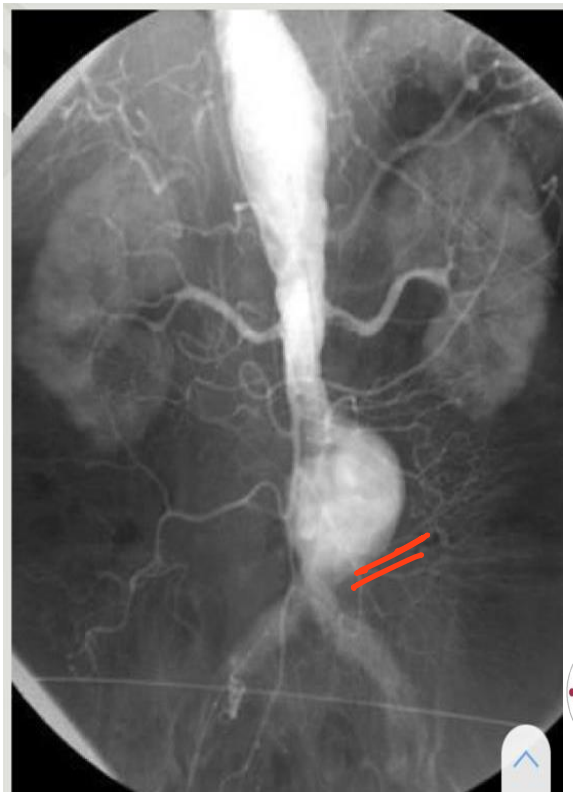
Patter Complained of abdominal pain and a pulsatile mass:

Q1: Name of this study?

Q2: What is this pathology and where is its location?

-

03: Mention 2 lines of management?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Angiogram

2.Abdominal aortic aneurysm) near the bifurcation

3.open surgical repair ,Endovascular surgery

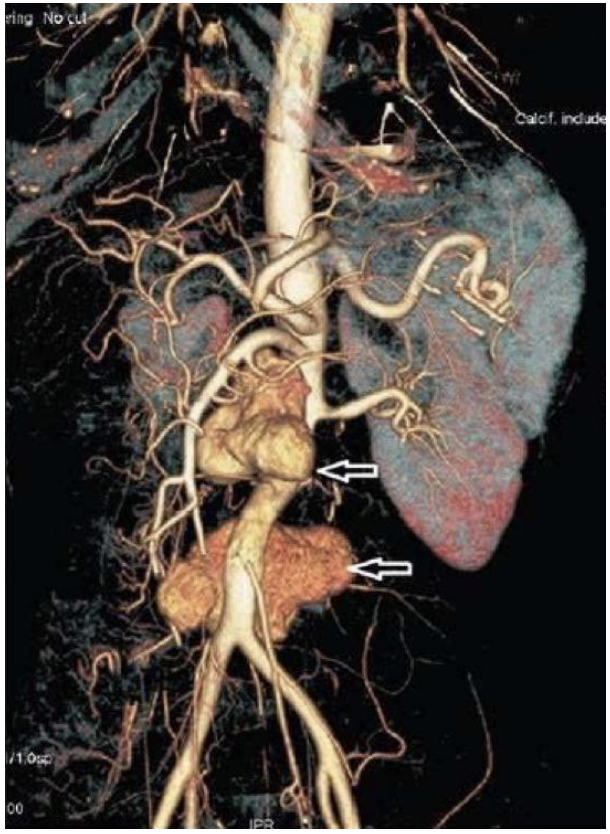
• QUESTION

صعب لا يمكن

2019 – Before

1.Name of this study?

What is your diagnosis?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.3D angiography

2.AAA

• QUESTION

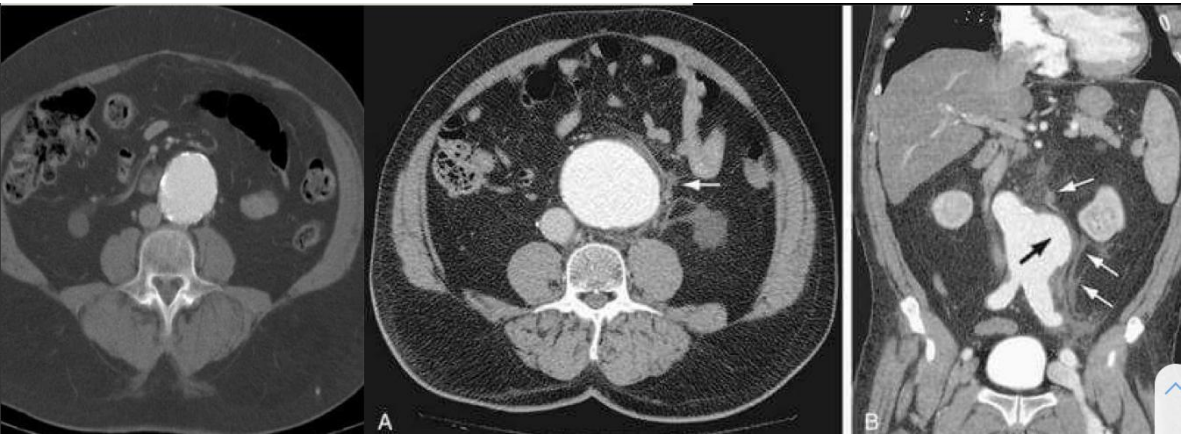
صحي رزن

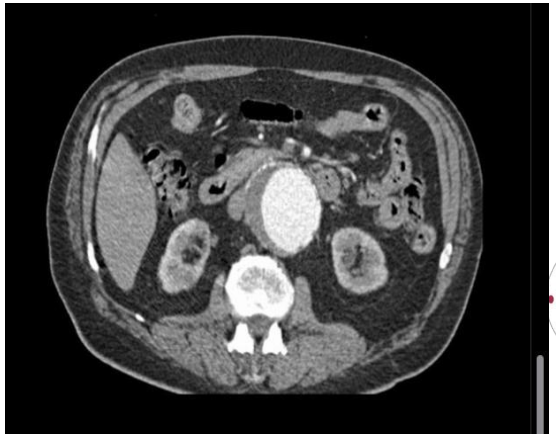
2019 – Before

A patient with a history of atrial fibrillation presented with a sudden severe abdominal pain:

Q1: Name of this study?

Q2: Dx? -





Hashemite University
H · U · M
Medical School Committee

• ANSWER

1. ~~Abdominal CT with IV contrast~~ mostly ct angio

2. AAA (Abdominal aortic aneurysm)

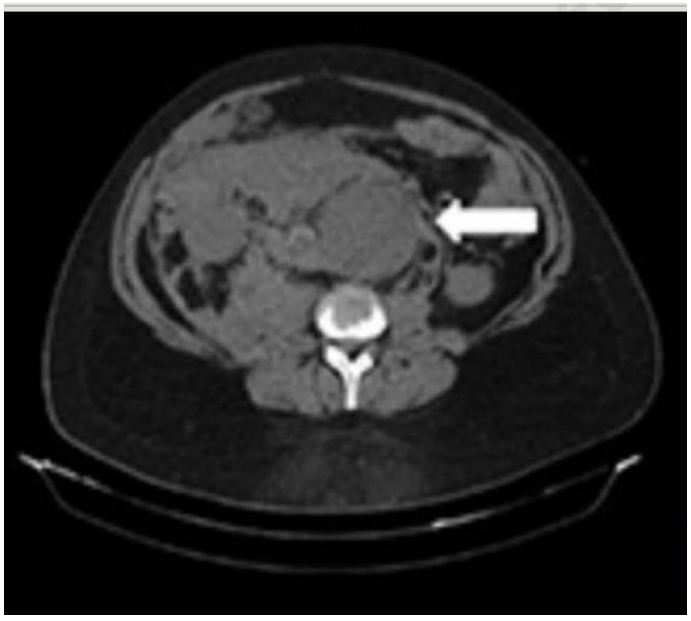
Hashemite University
H • U • M
Medical School Committee

• QUESTION

2019 – Before

1. What is the structure?

1. What's the past repair of this?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Abdominal Aorta

2.Stent

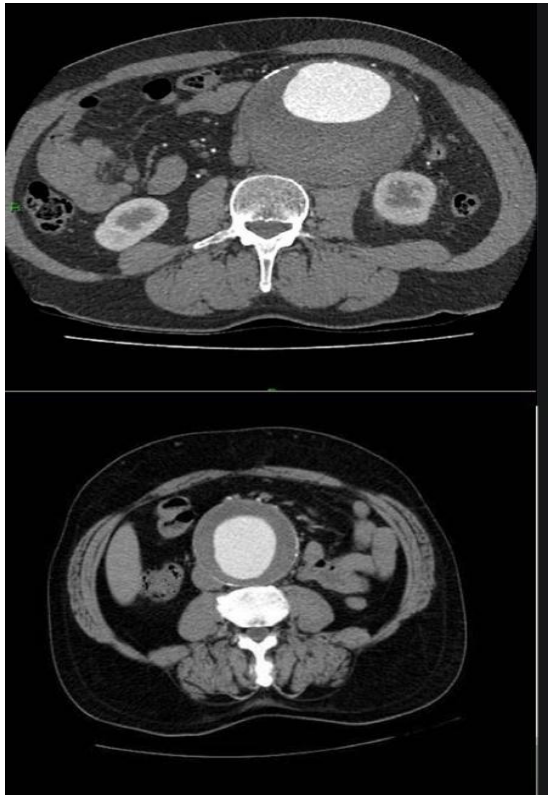
• QUESTION

صكرار يؤن

2019 – Before

Mention 2 modalities for management:

AAA



ANSWER

Medical or Surgical according to the size

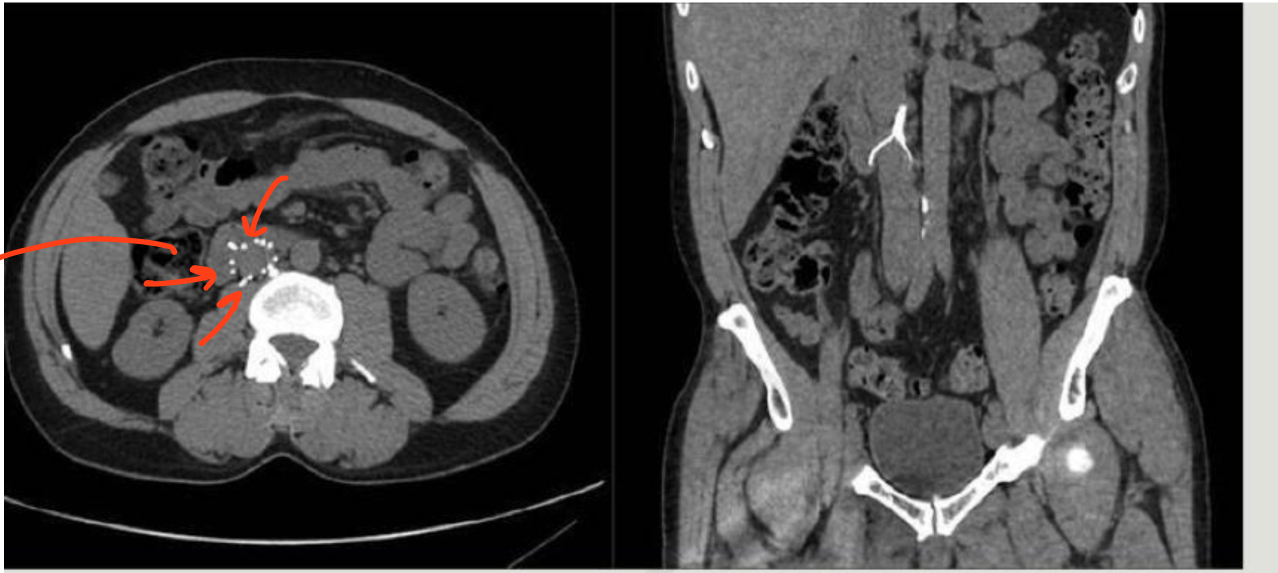
1) Endovascular repair 2) Open repair

. QUESTION

2019 – Before

1.name of device seen in the CT

2.give 1 indication for it?



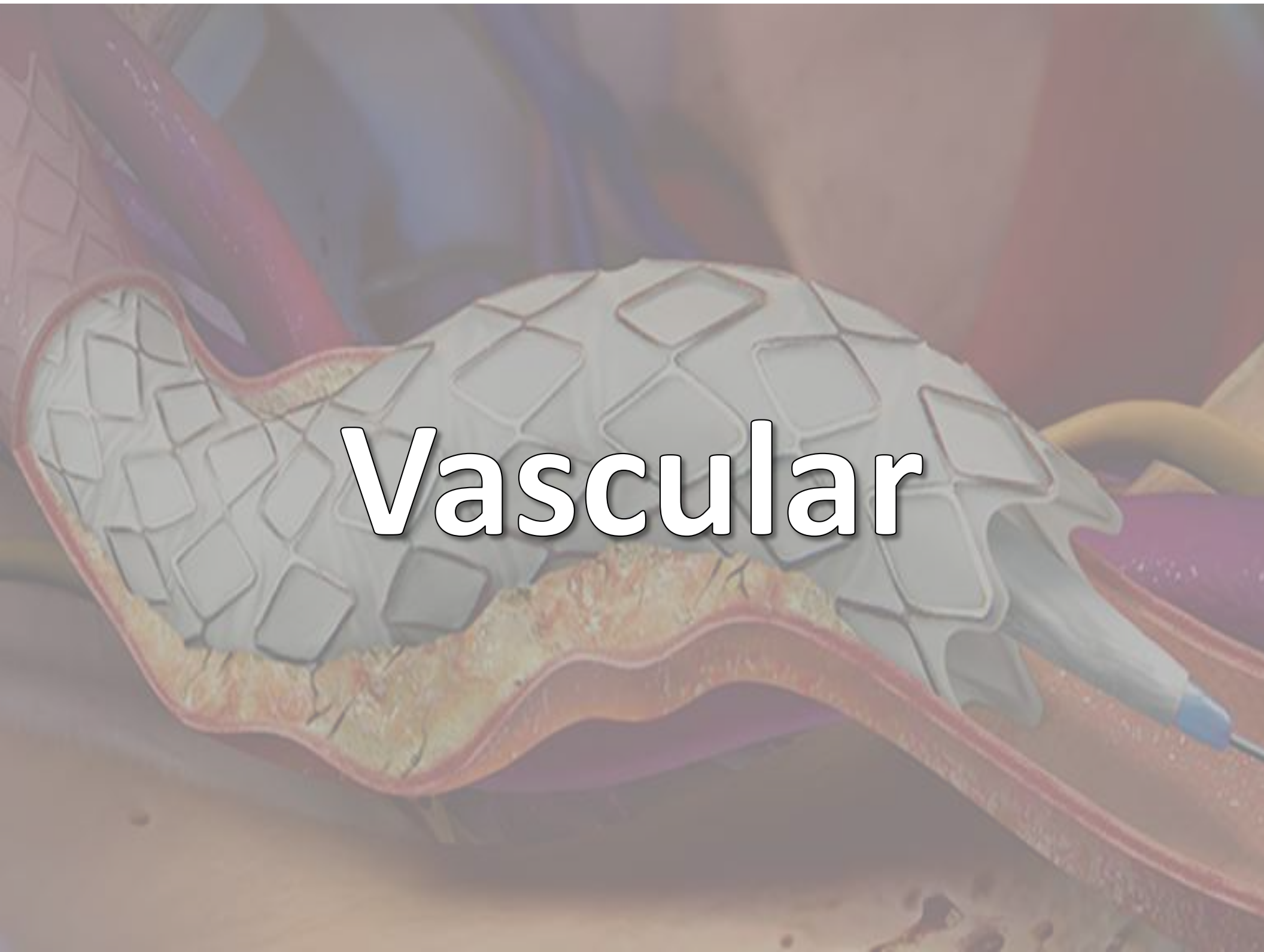
AAA

repair

• ANSWER

1.Inferior vena cava filter

2. When anticoagulant therapy is contraindicated, ineffective or unsafe - Recurrent PE despite proper anticoagulation

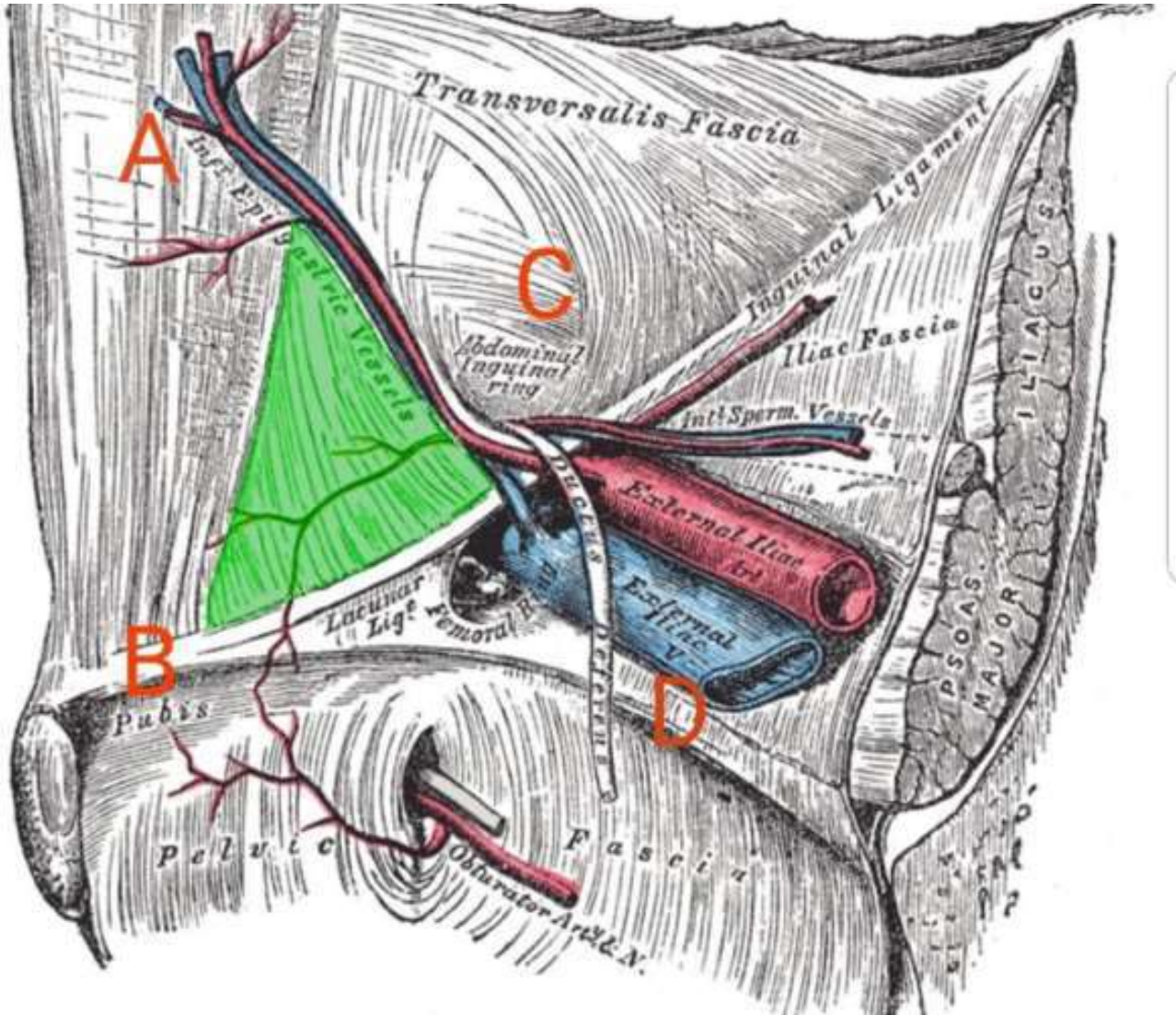

Vascular

What's A: inferior epigastric artery

What's B: direct inguinal hernia

What's C: indirect inguinal hernia

What's D: femoral hernia

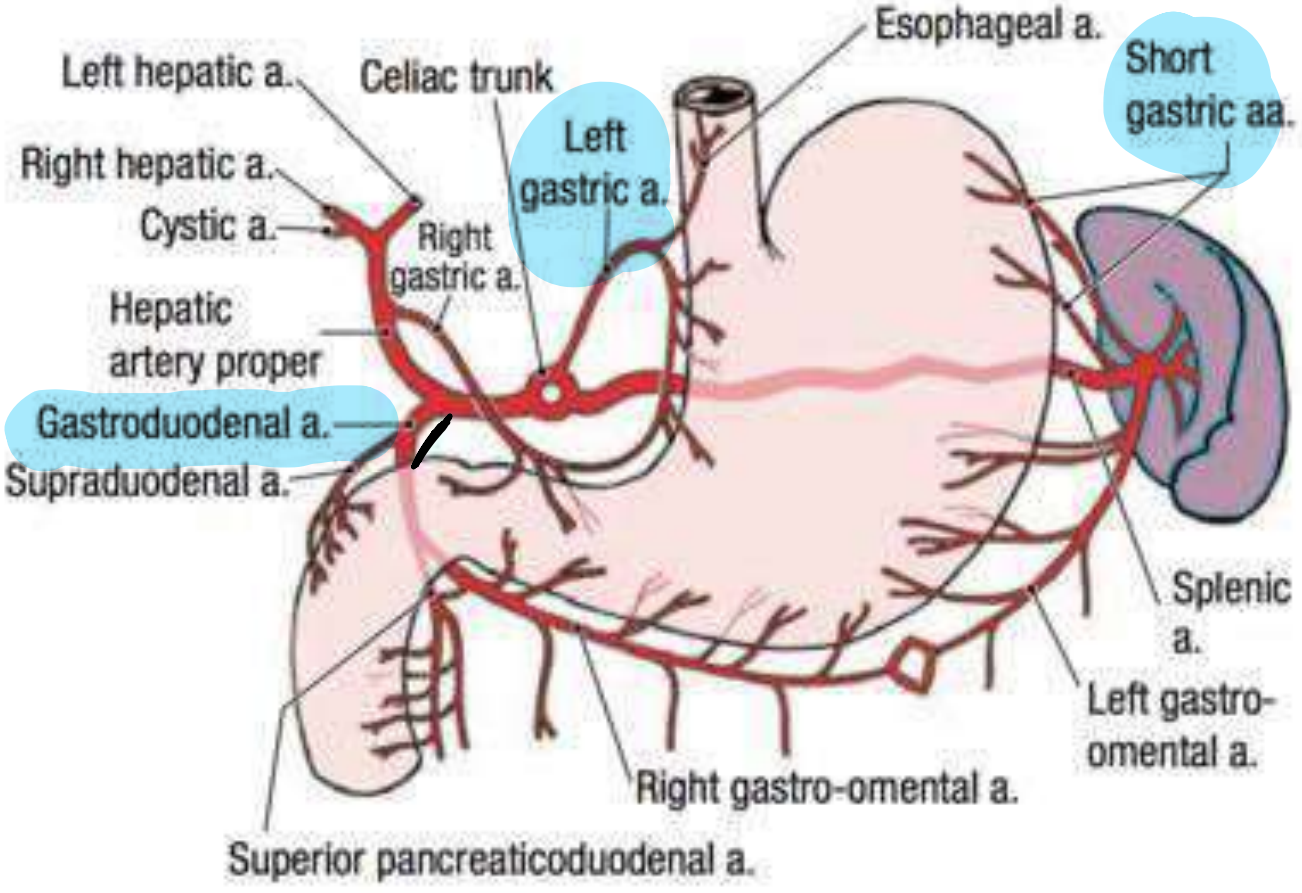


Q: A Question was asking about the following arteries?

1- Left gastroepiploic artery

2- Gastrodudenal artery

3- Short gastric arteries

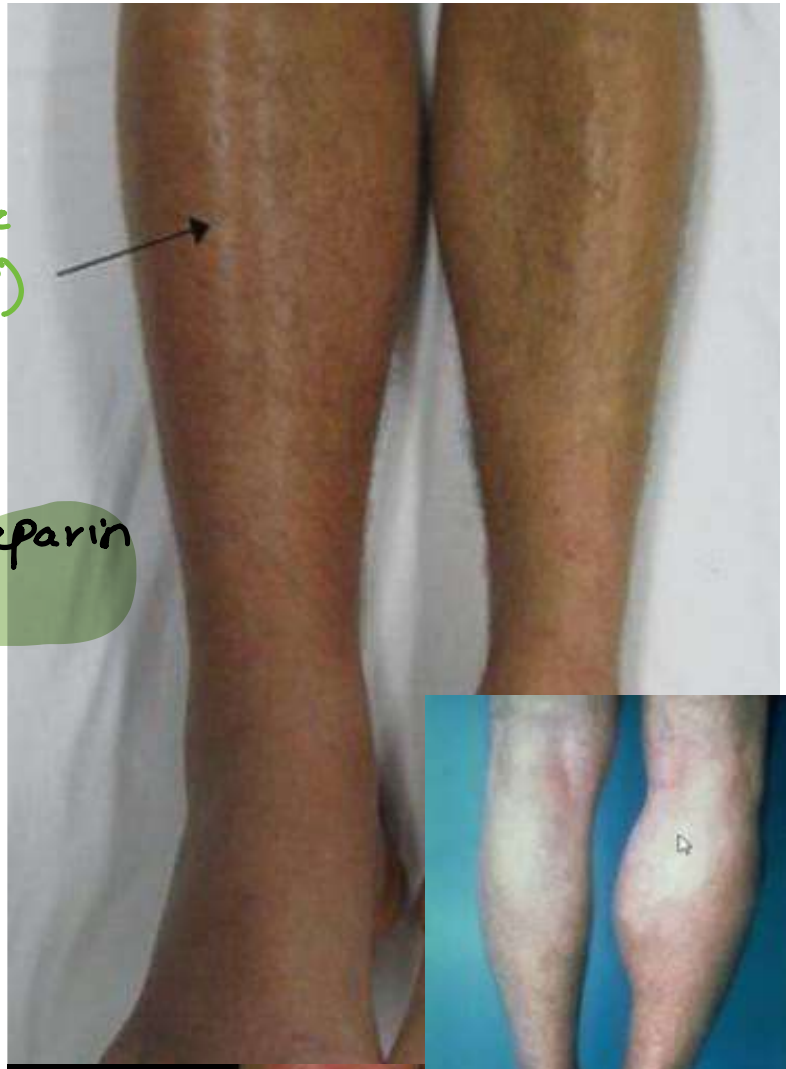


Q: Patient had hip replacement 5 days ago:

ddx of swelling: DVT, cellulitis, trauma

Q1: What is the Dx?

- DVT → the pt has the RF (major surgery)



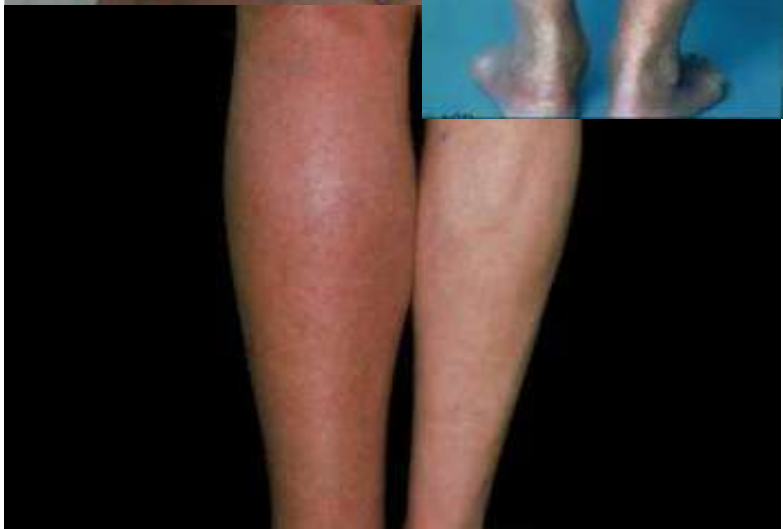
Q2: What is the Mx?

- LMWH & Warfarin on discharge

anticoagulant & SC LMWH or IV unfractionated heparin Followed by oral warfarin (total 3 months)

Q3: Mention 4 DDx?

1) DVT
2) Cellulitis
3) Lymphadenopathy, lymphatic obstruction
4) Chronic Deep Vein Insufficiency
5) Rupture of baker's cyst



Q4: What are the complications:

1) Pulmonary embolism
2) Ulcers (venous ulcer)
3) Ischemia

Q1: What is the Dx?

- Varicose veins

twisted enlarged veins caused by damage in the vein walls & valves

Q2: What is the system involved in this part (name the vessel)?

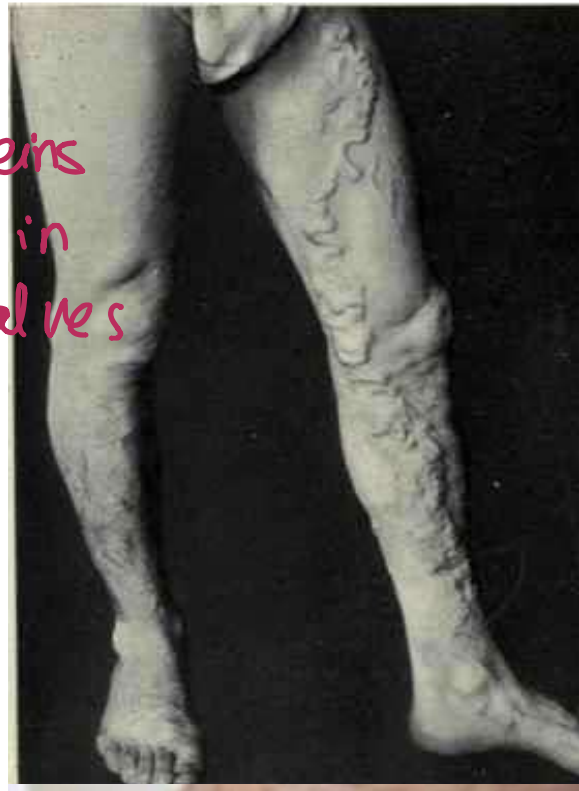
- Great (long) Saphenous vein (Superficial Venous System)

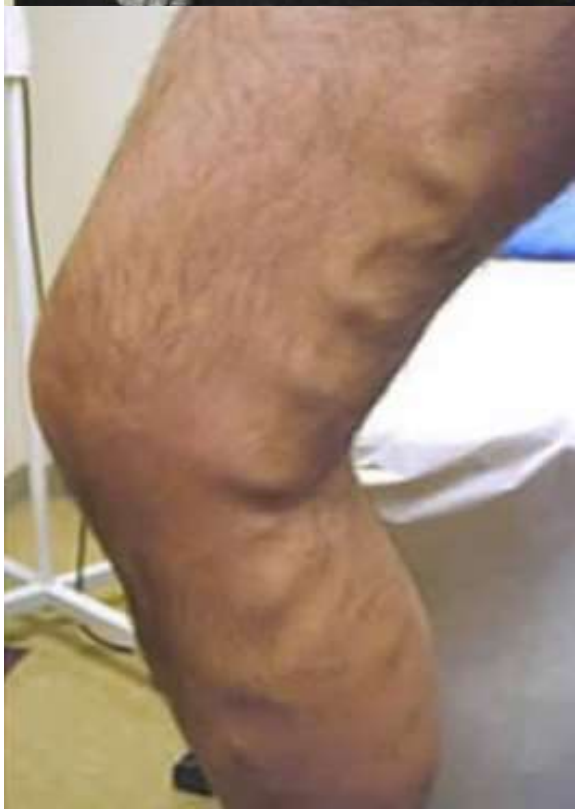
Q3: Name 2 modalities of Mx?

1) High ligation and vein stripping
2) Sclerotherapy
3) laser tt
4) radio Frequency ablation

Q4: Mention 2 complications?

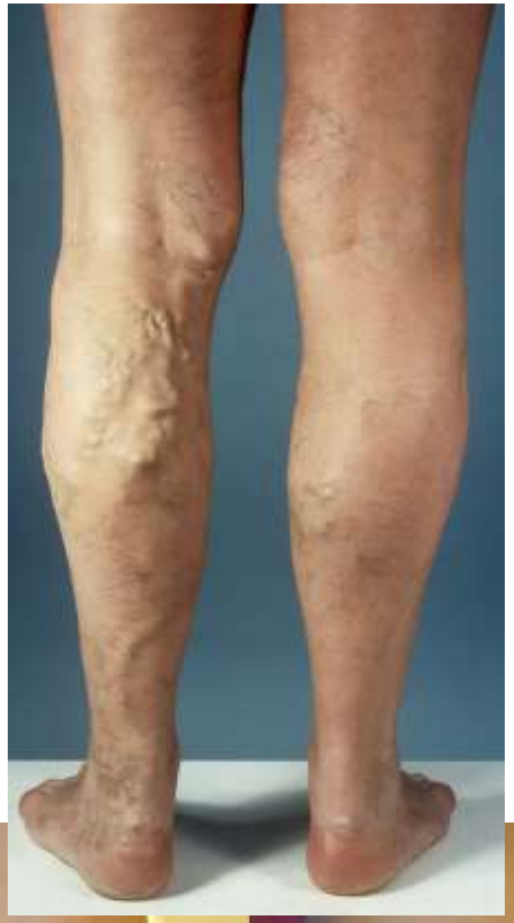
1) Ulcers
2) Bleeding
3) Thrombophlebitis
4) Discomfort, pain





Q5: Mention 2 minimally invasive procedures to do for this condition?

1) Sclerotherapy
2) Radiofrequency Ablation
3) Endovenous Laser Ablation

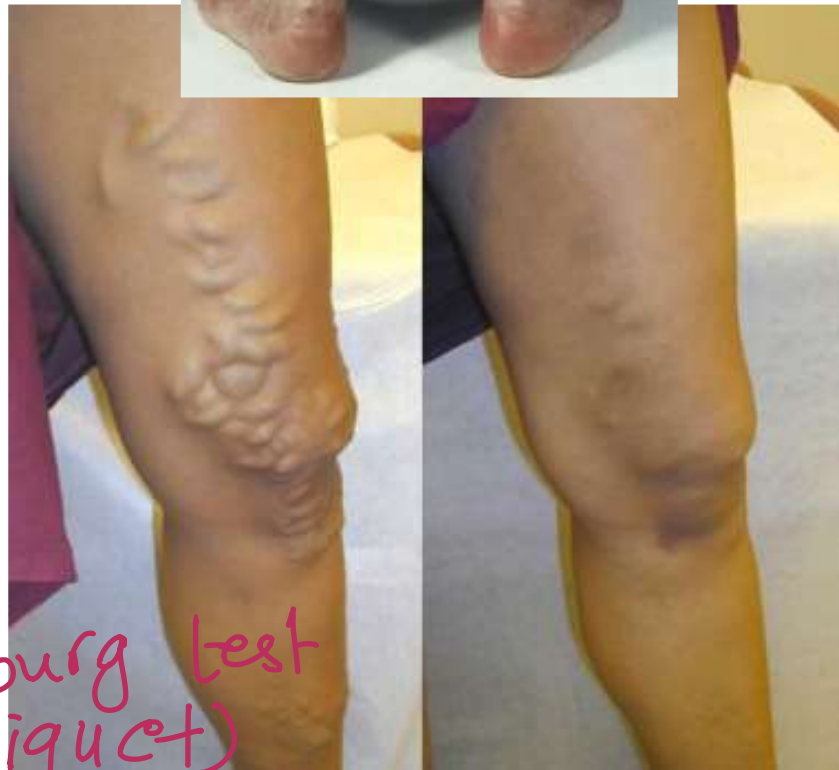


Q6: Best imaging test?

- Doppler US or Venogram

Q7: How to determine the level of defect in the varicose veins?

- Turncate test Trendelenburg test (Tourniquet)



Q1: What is this?

- AV shunt

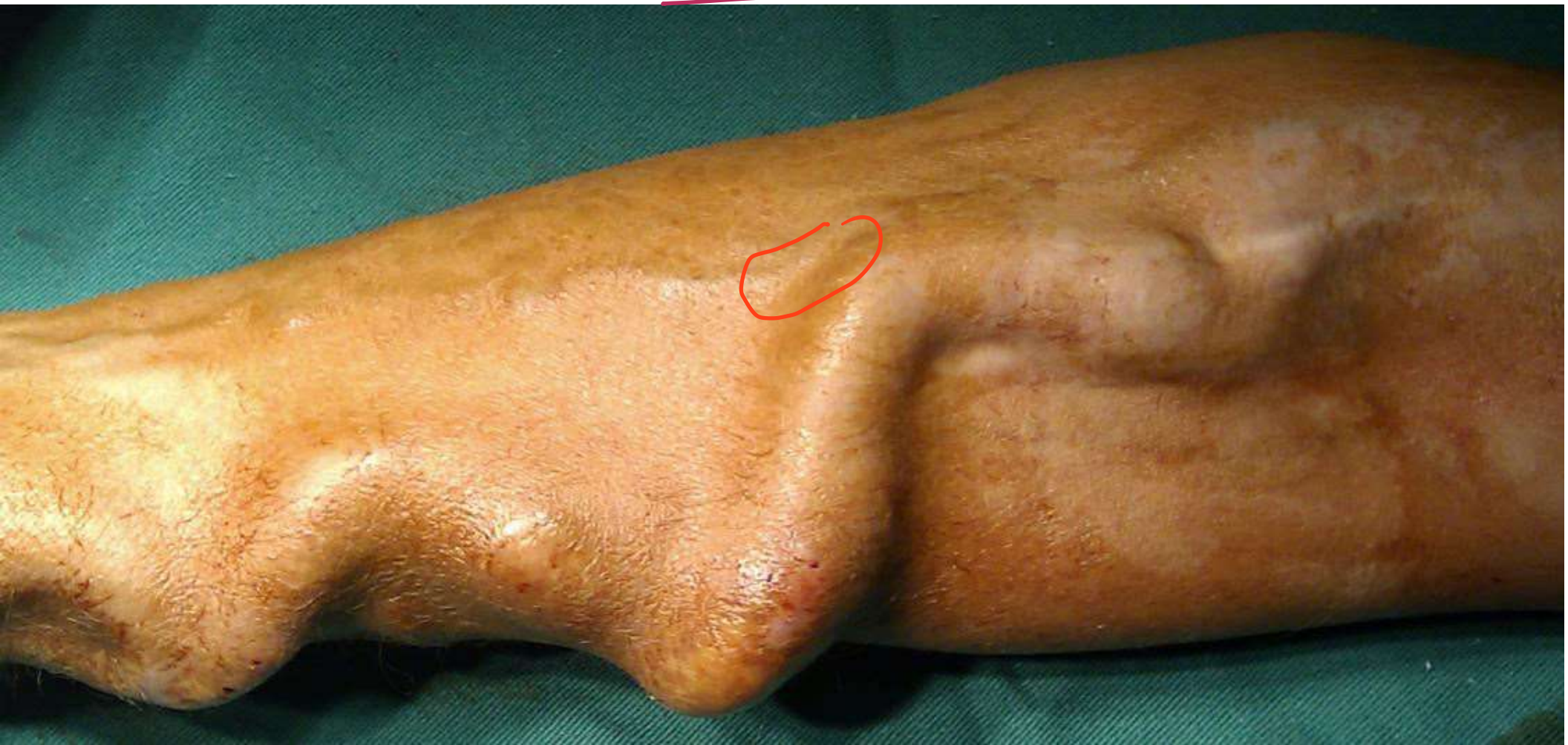
irregular connection between artery & vein

Q2: Done in patients that undergoes what?

- Hemodialysis

Q3: What is the complication seen in the picture?

- Aneurysm



Q: A 60 year old female with CKD on hemodialysis:

Q1: What is the following complication?

- Pseudoaneurysm

Q2: Mention other complications that may occur? (٩)

- Thrombosis, Steal syndrome, CHF, infection

syndrome occurs when the subclavian artery stenosed & occluded

pooling of blood caused by injury to BV caused usually by catheter

in this case pt on dialysis

Q: Patient complained of abdominal pain and a pulsatile mass:

Q1: Name of this study?

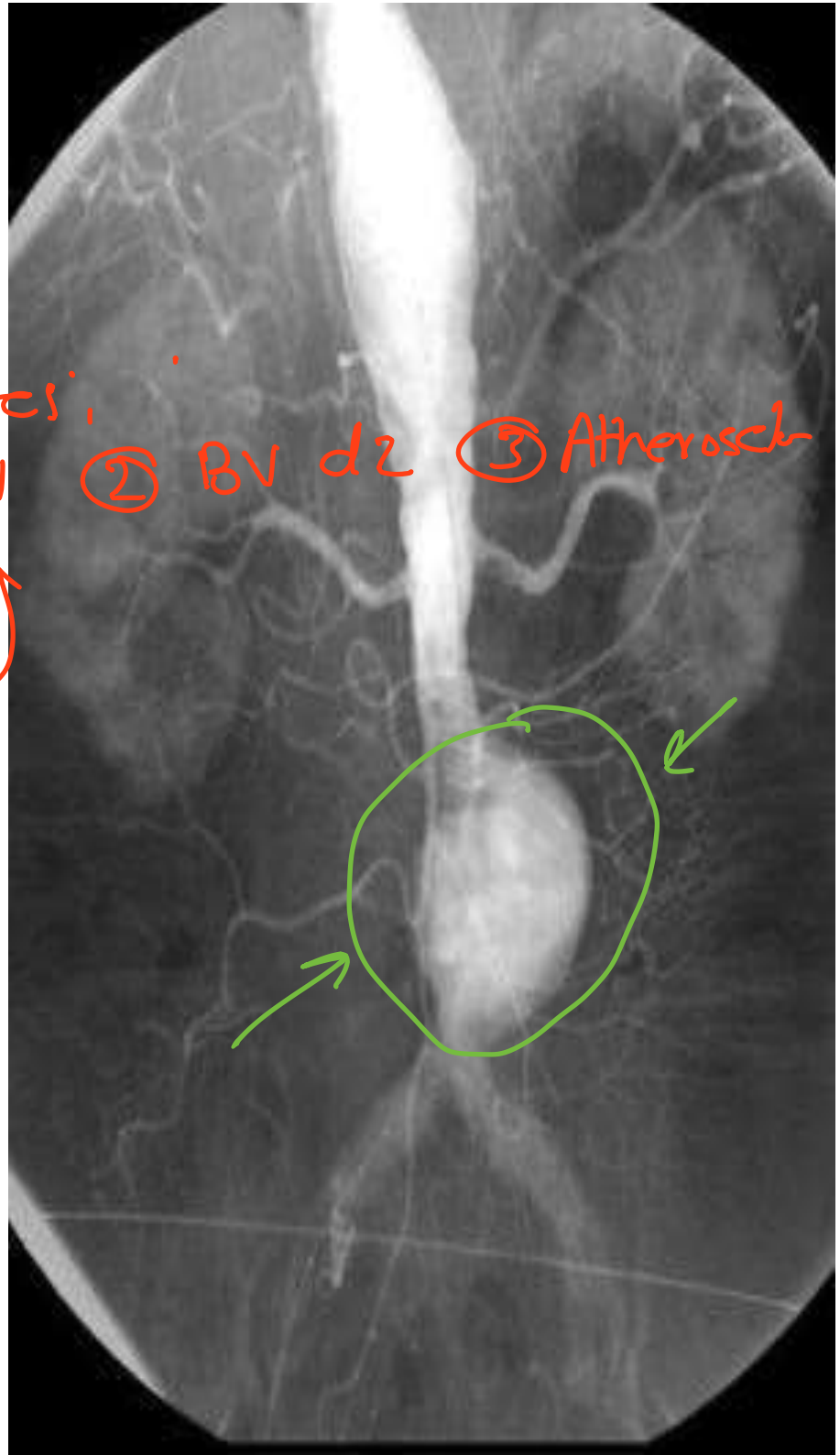
- Angiogram

Q2: What is this pathology and where is its location?

- AAA (Abdominal aortic aneurysm) near the bifurcation

Q3: Mention 2 lines of Mx?

1) Open surgical repair
2) Endovascular surgery



Q1: Name of this study?

- 3D angiography

Q2: What is your Dx?

- AAA

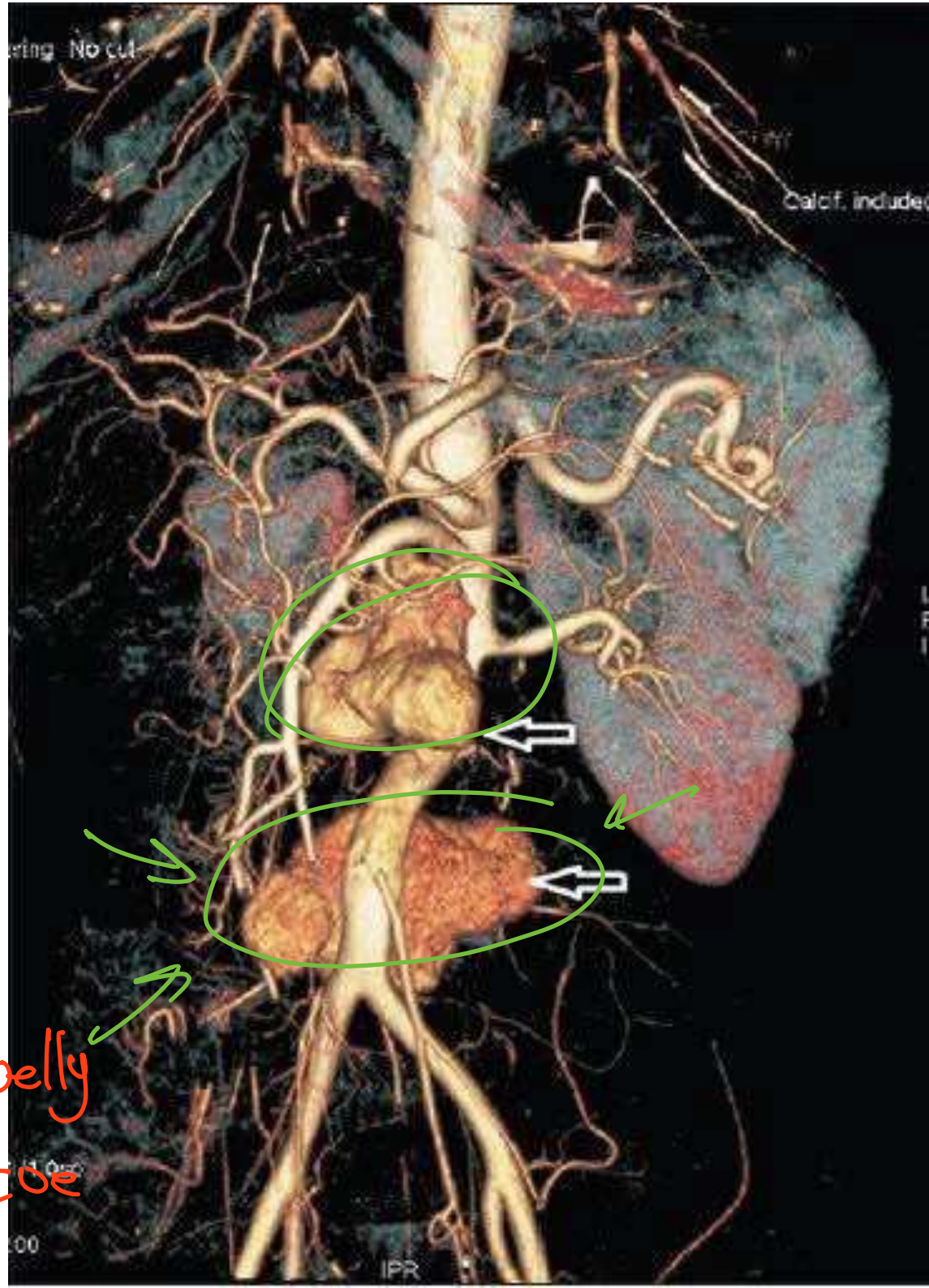
pt comes with:

① belly pain & chest pain

② pulsating feel in the belly

③ black /blue painful toe

④ dysphagia



Q: A patient with a hx of atrial fibrillation, presented with a sudden severe abdominal pain:

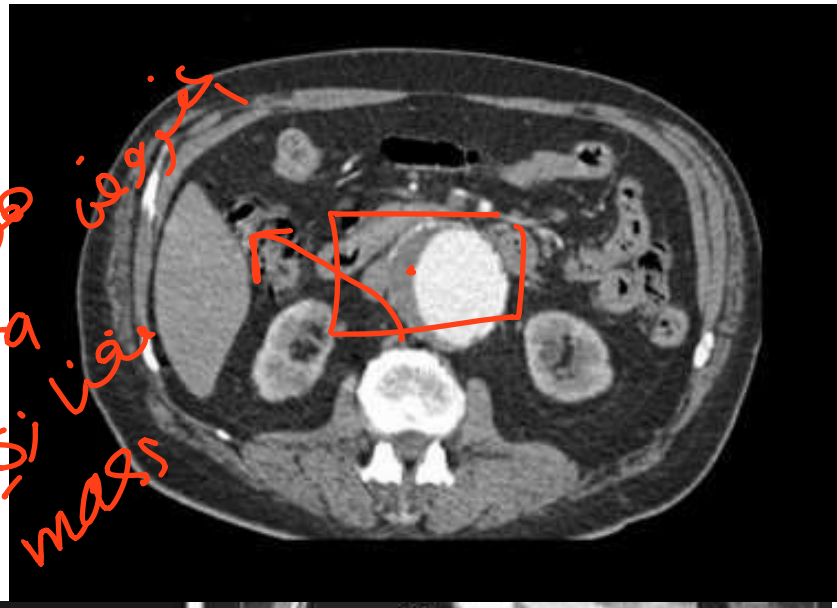
Q1: Name of this study?

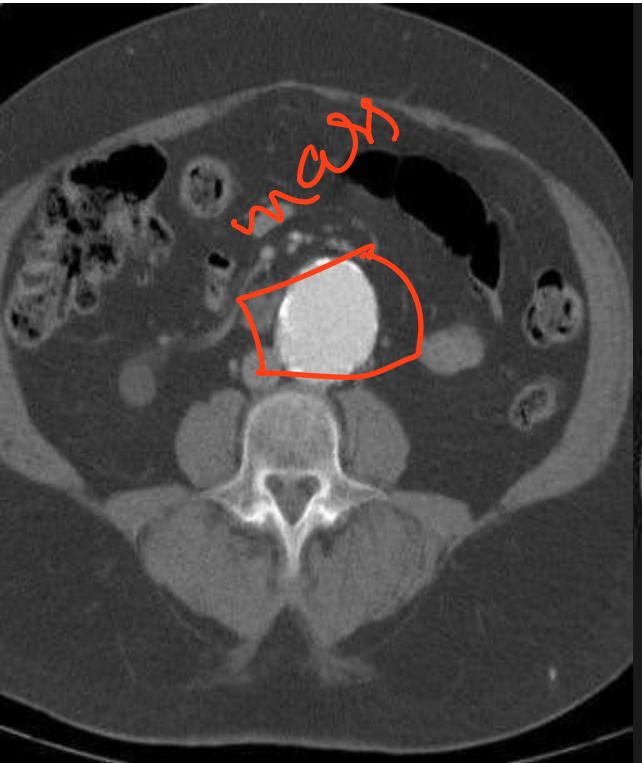
- CT Angiogram

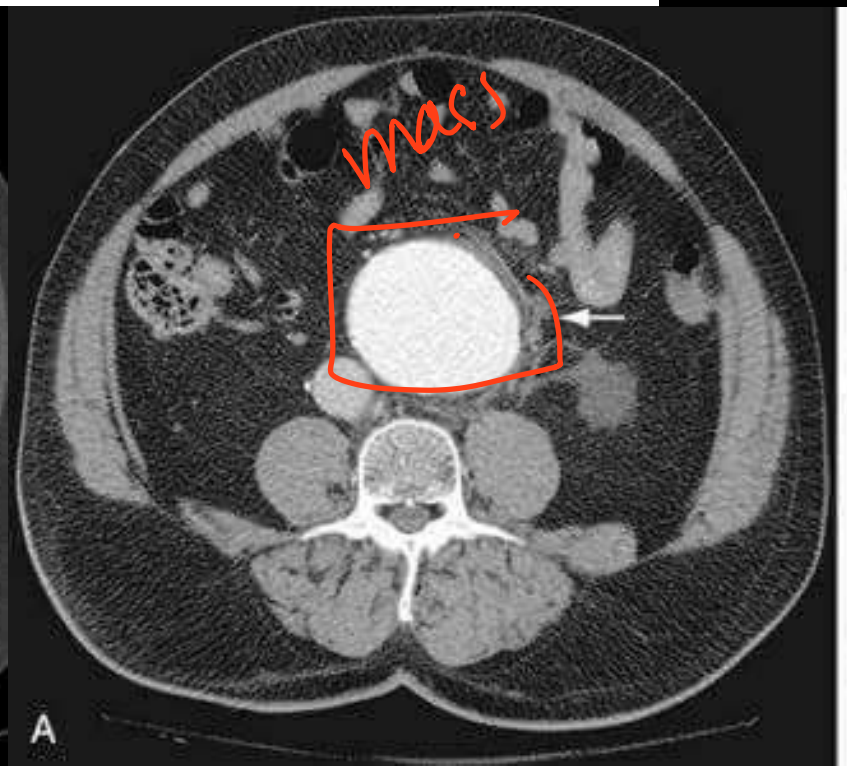
Q2: Dx?

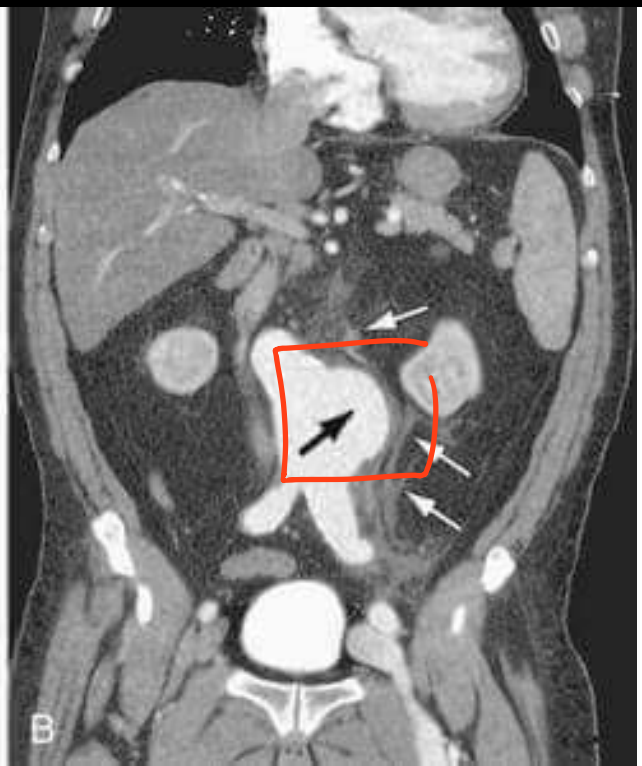
- AAA (Abdominal aortic aneurysm)

based on the Hx: Rupture AAA is more accurate







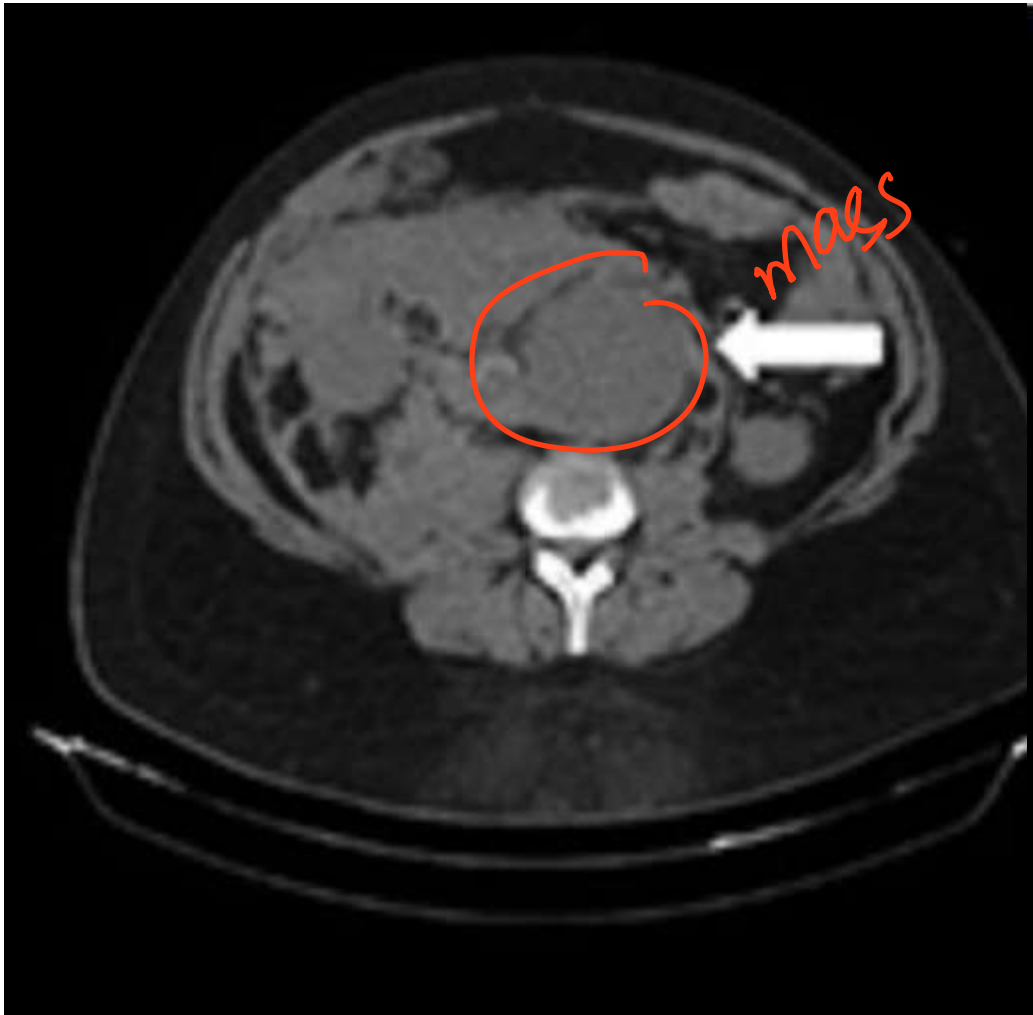


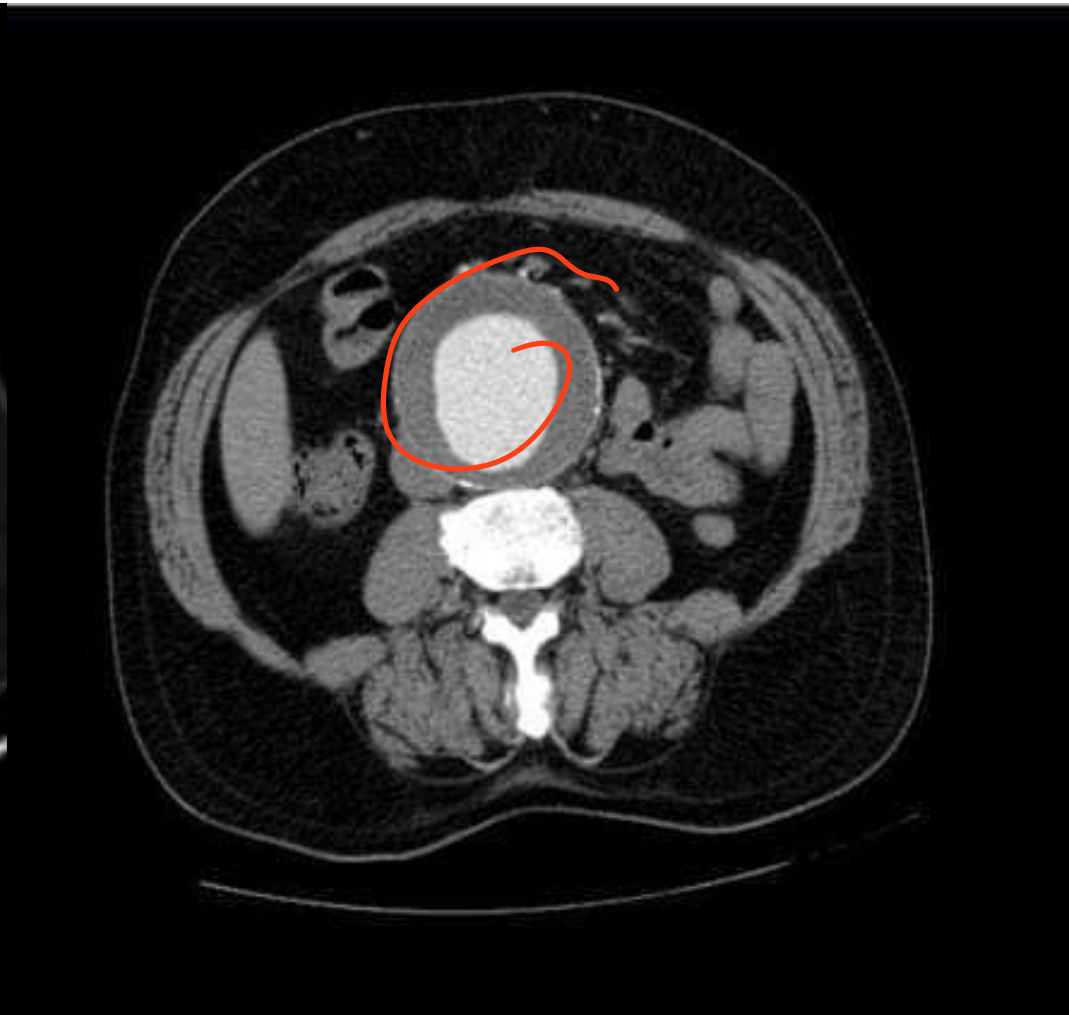
Q1: What is the structure?

- Abdominal Aorta

Q2: What's the best repair method for this?

- Stent



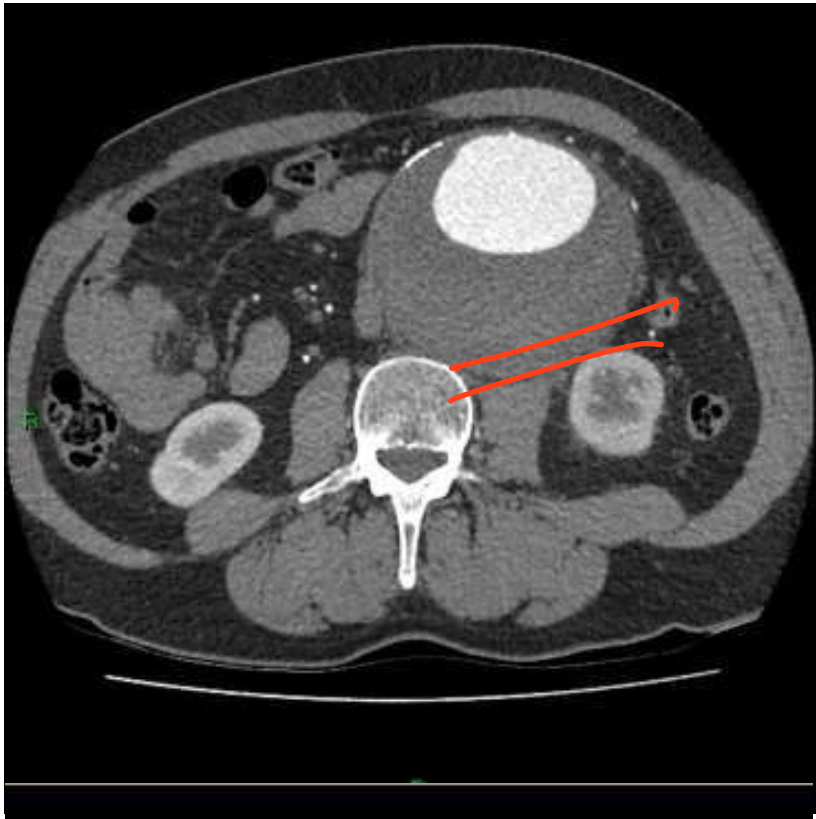


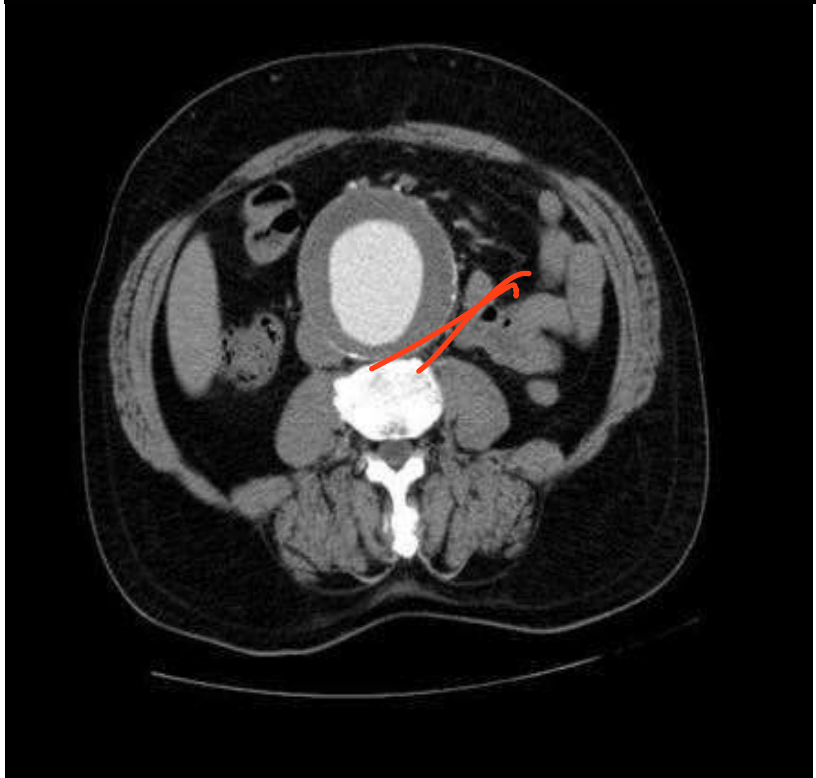
Q3: What is the Mx (2 Mx modalities)?

- Medical or Surgical according to the size

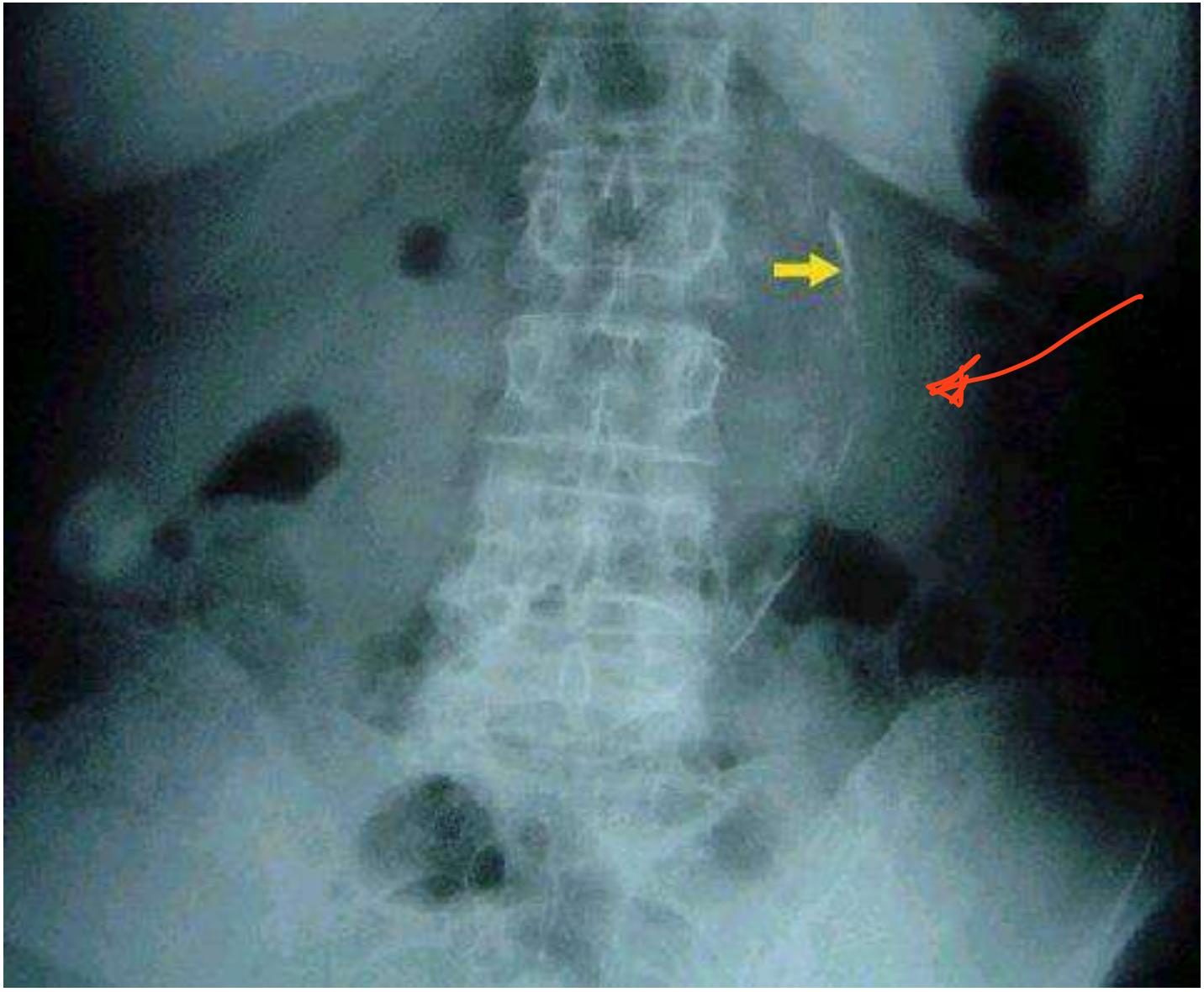
1) Endovascular repair

2) Open repair





Abdominal x-ray with evidence of the **calcified edge** of the **abdominal aortic aneurysm**.



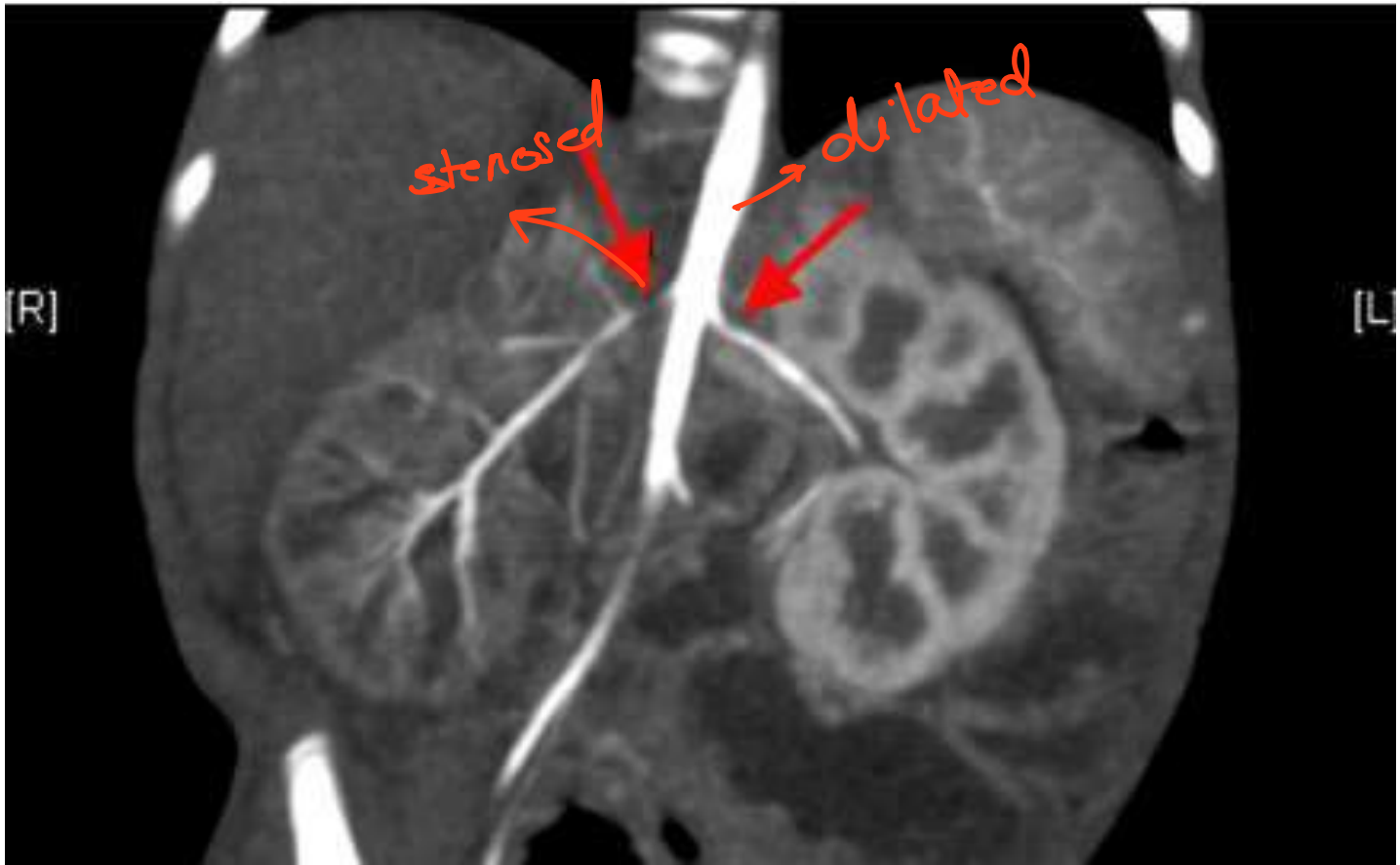
Q: This is a CT Angio for the renal arteries:

Q1: What is the Dx?

- Bilateral Renal Artery Stenosis

Q2: What is your Mx?

- Renal Angioplasty & Stenting



Kussmaul sign

Q: After RTA, the patient present with dilated veins?

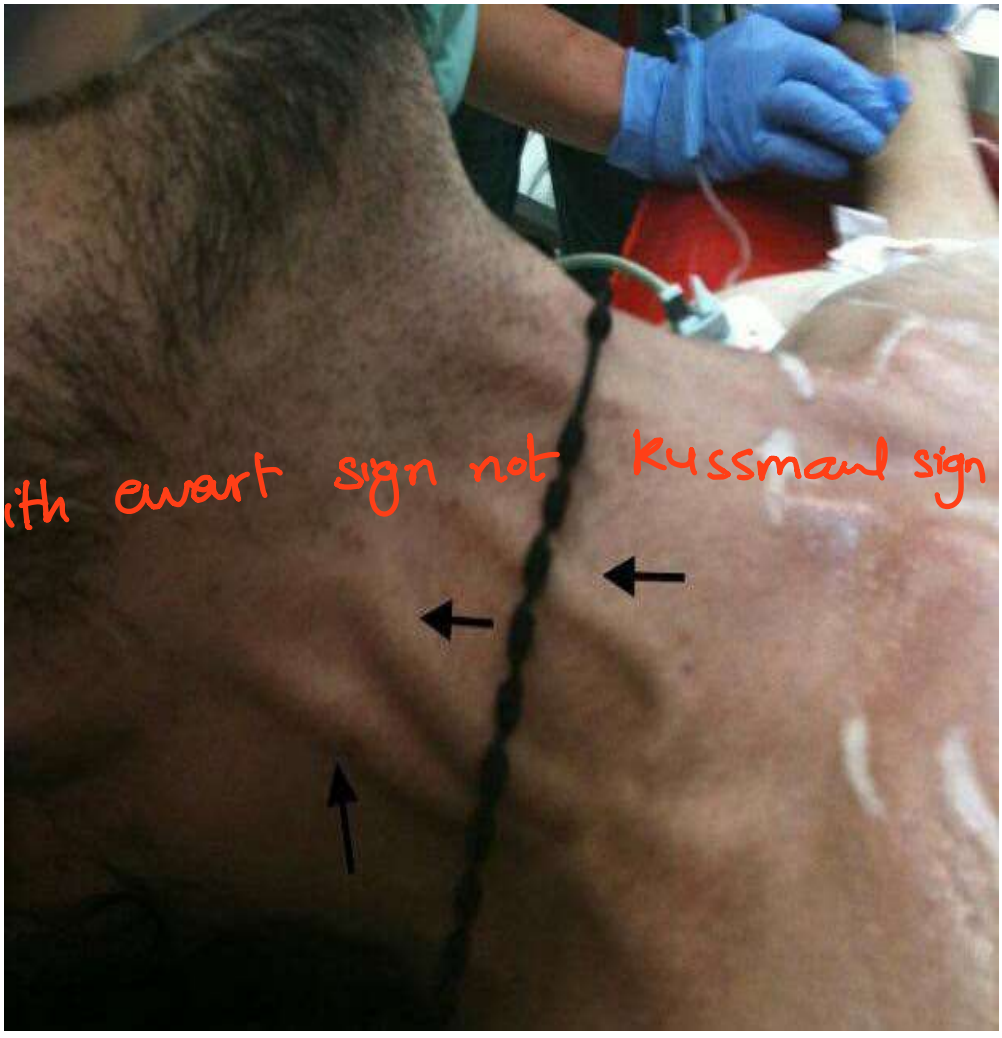
Q1: Mention 2 causes?

1) ~~Pericardial Effusion~~ seen with ewart sign not Kussmaul sign
2) Cardiac Tamponade

RTA حالات Tension Pneumothorax سبب

Q2: What is your Mx?

- Pericardiocentesis



Q1: What is the Dx?

Cardiac Tamponade

Q2: What is the C/P that the patient come with?

1) Beck's triad :

hypotension

increased JVP

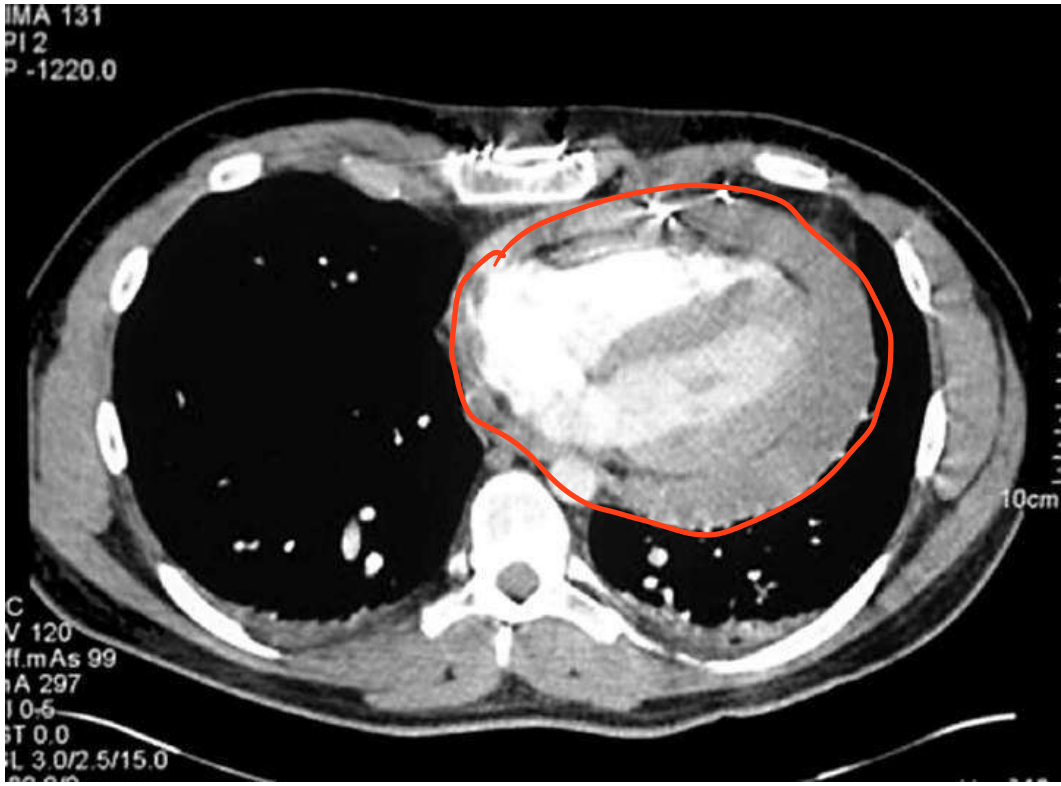
muffled heart sounds.

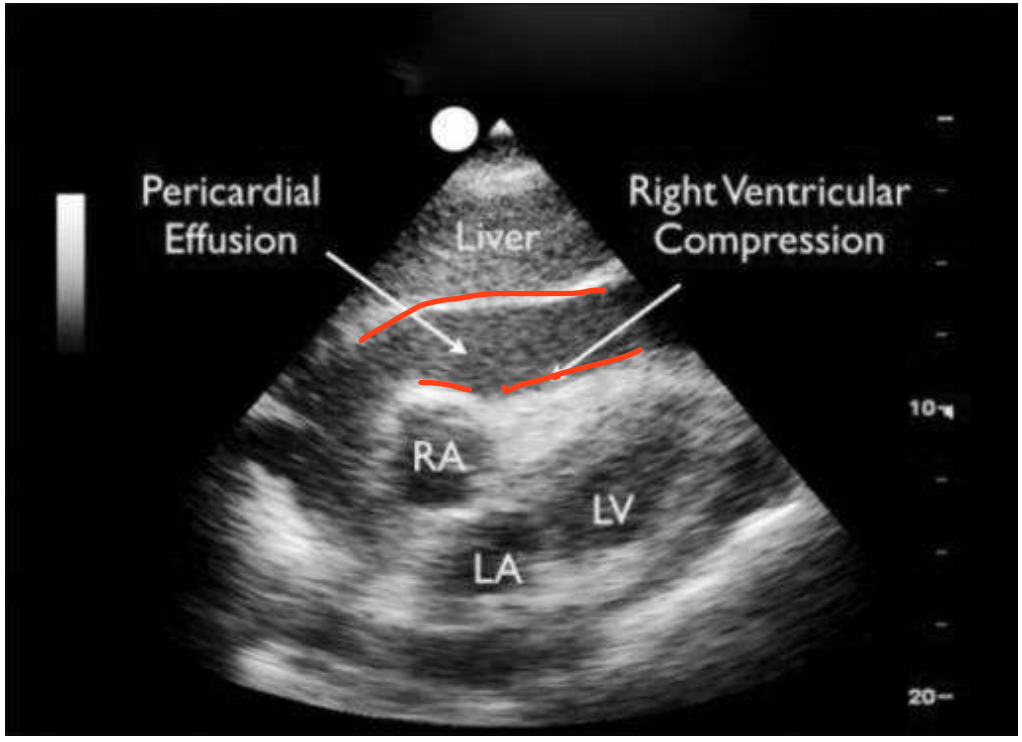
2) Pericardial effusion

3) Kussmaul's sign.

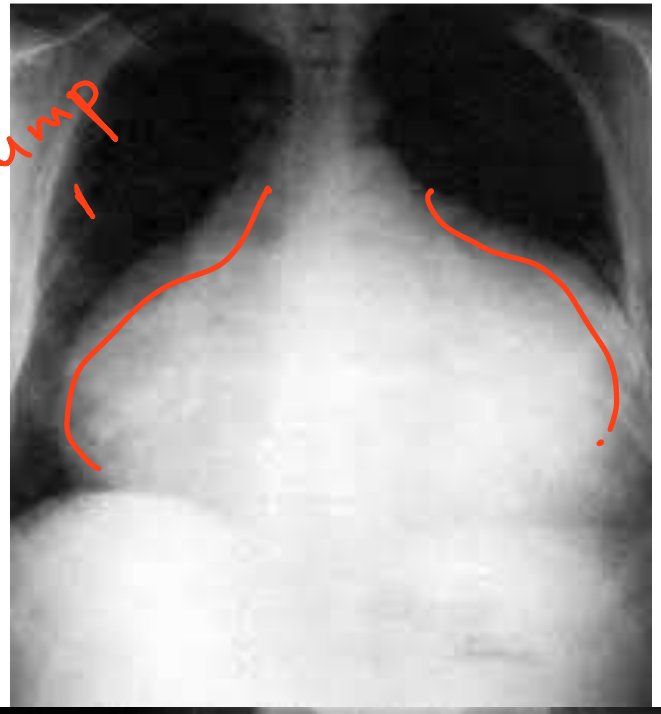
Q3: What is the Mx?

immediate decompression via needle pericardiocentesis.





Q: Post-RTA patient came to ER, he was hypotensive with SOB:



Q1: What is the pathology?

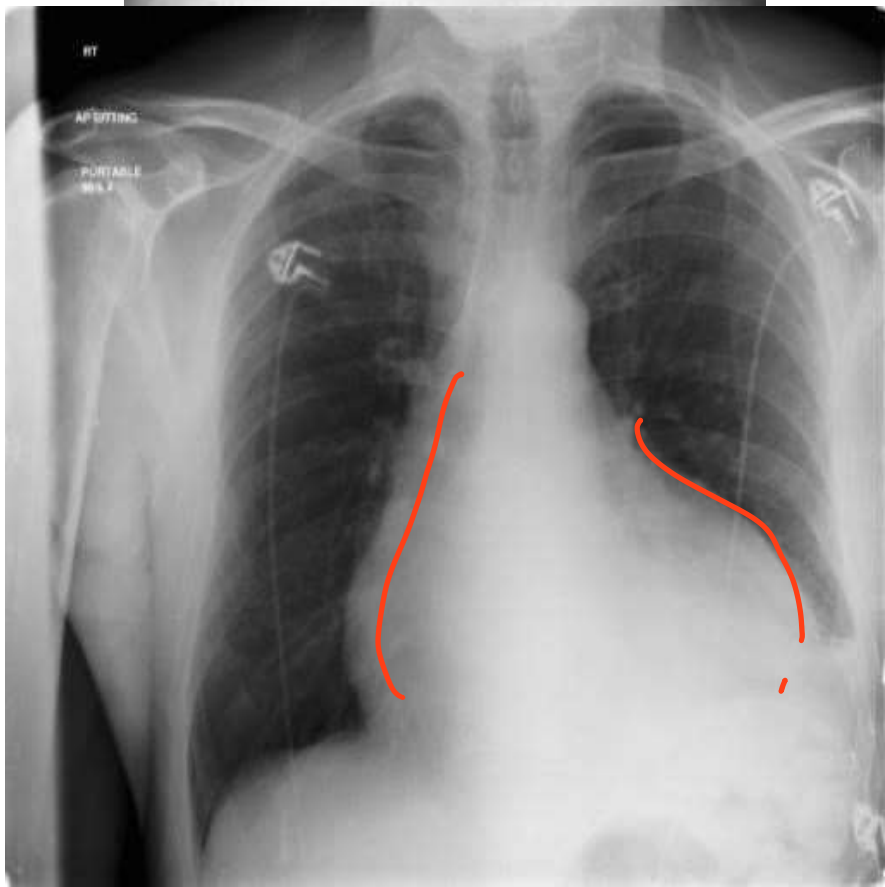
- Cardiac tamponade

Q2: What is the next step in Mx?

- Pericardiocentesis

Q3: What is the consequence for this pathology?

- Obstructive shock
- Pulmonary Edema
- Beck's Triad



*

Q: a Pt experienced sudden severe pain radiating to the back:

Q1: What is the X-Ray finding?

Widened Mediastinum

Q2: What is the Dx?

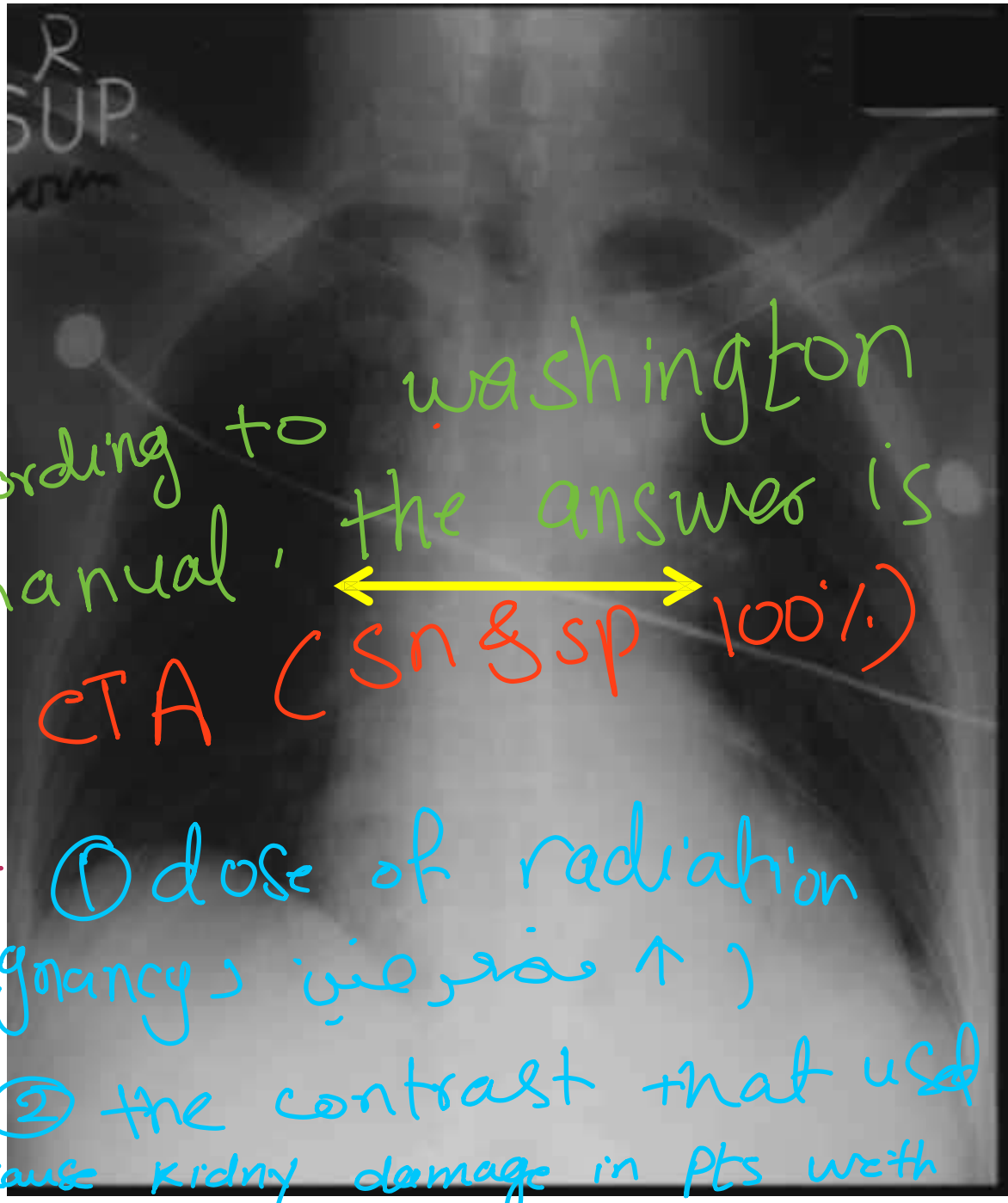
Aortic dissection

Q3: What is the gold standard for Dx? And what is the disadvantage for it?

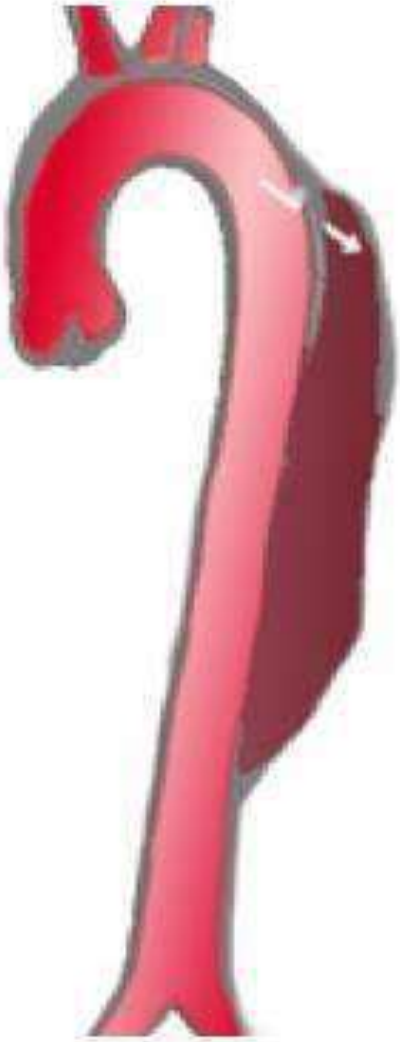
Aortography, time consuming

Q4: What is the Mx:

1) Standford A: Surgical
2) Standford B: Medical (control BP)



Classification of aortic dissection

			
Percentage	60%	10–15%	25–30%
Type	DeBakey I	DeBakey II	DeBakey III
	Stanford A (Proximal)		Stanford B (Distal)

Westermarck's sign: Decreased pulmonary vascular markings on CXR in a patient with pulmonary embolus

In Hx:-

① SoB

② chest pain

③ dizziness

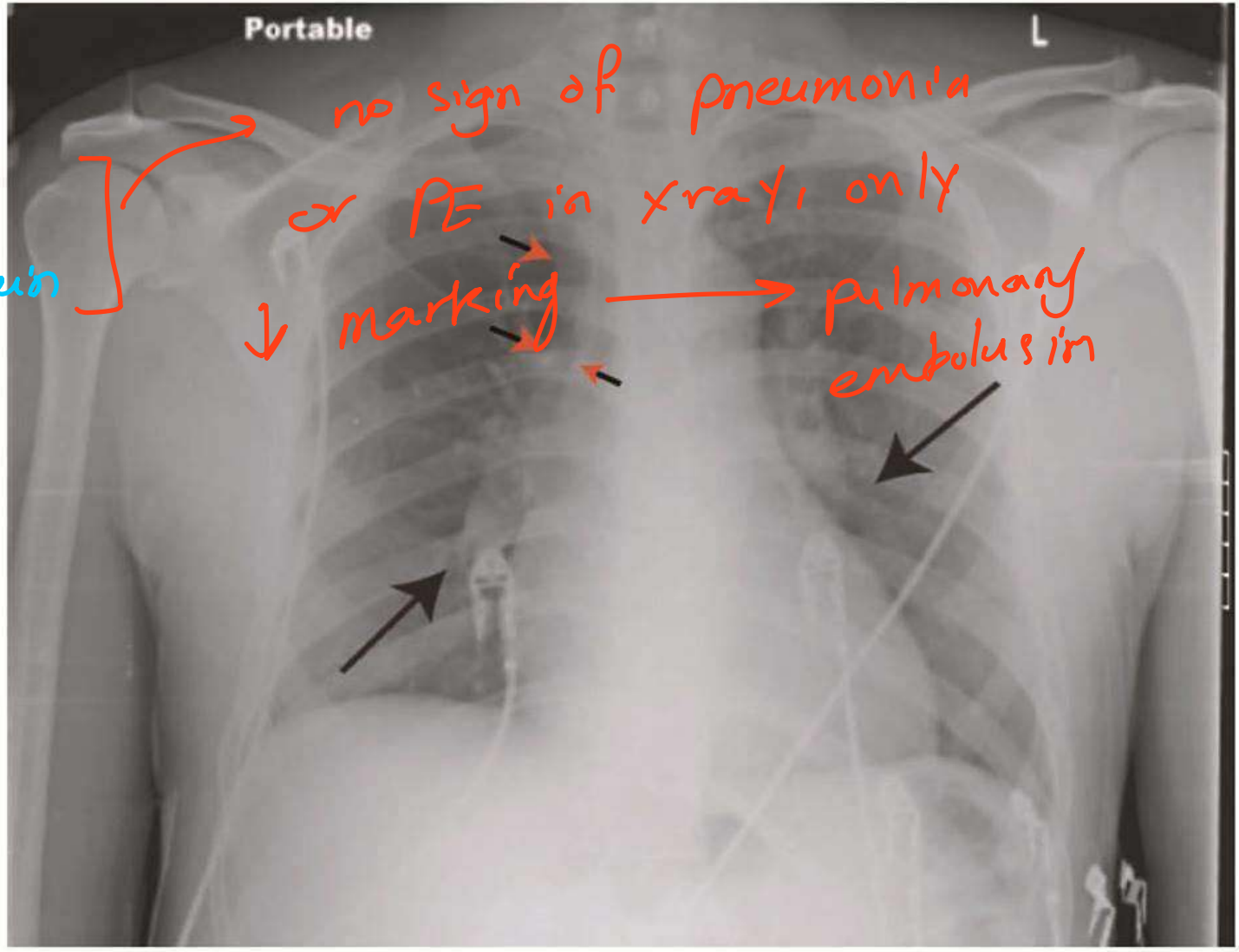
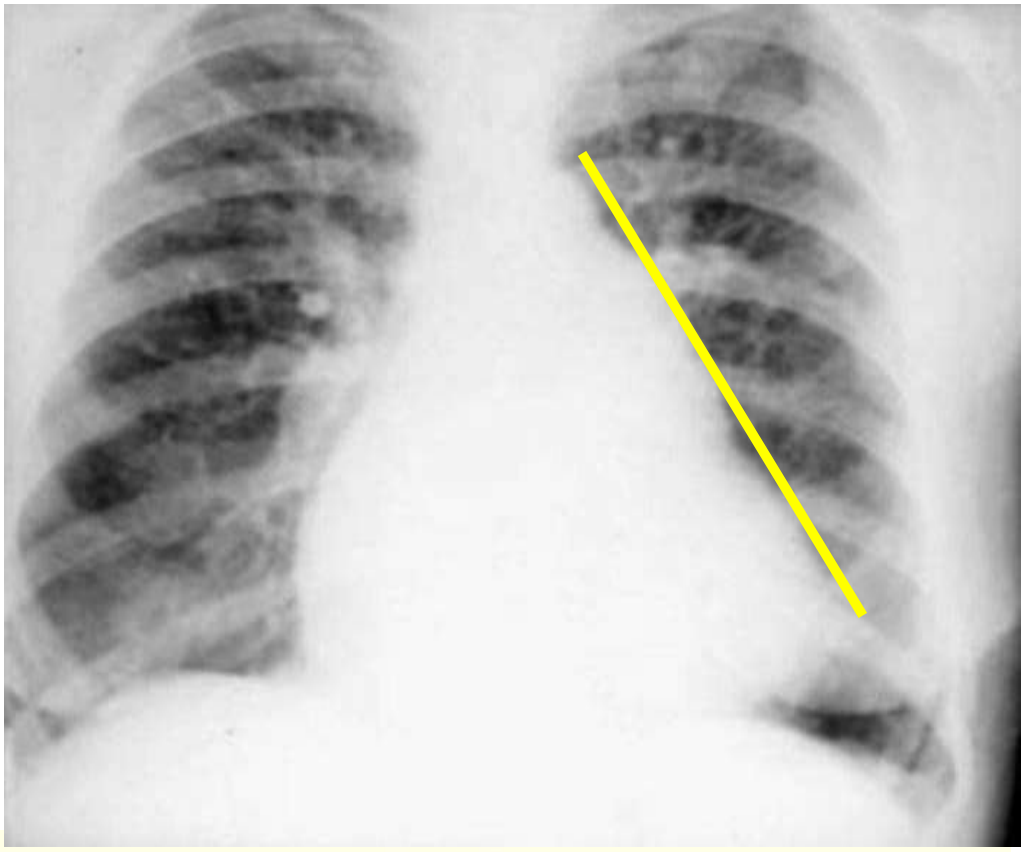


Figure 1. Chest radiograph demonstrating a prominent central pulmonary artery (early Fleishner's Sign, red arrows) and a cut-off of the pulmonary arteries bilaterally (Westermark sign, black arrows).

Mitral stenosis

X-ray findings :

- Enlarged left atrium.
- **Straight line sign.**



Diagnostic tests :

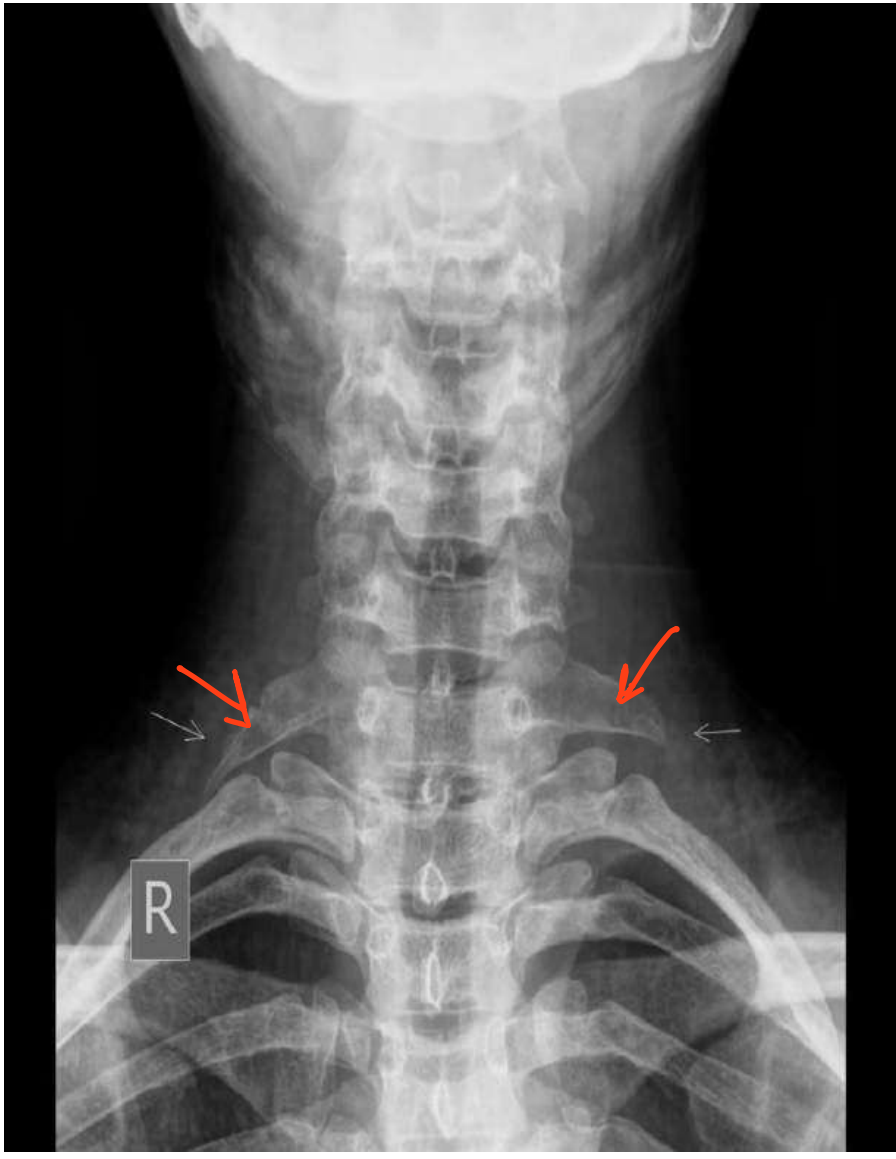
- Echocardiogram.
- Catheterization.

Mx:

- Open heart surgery.
- Balloon valvoplasty.
- Valve replacement.

Q1: What does the arrow indicate?

Cervical rib



Q2: What is your concern?

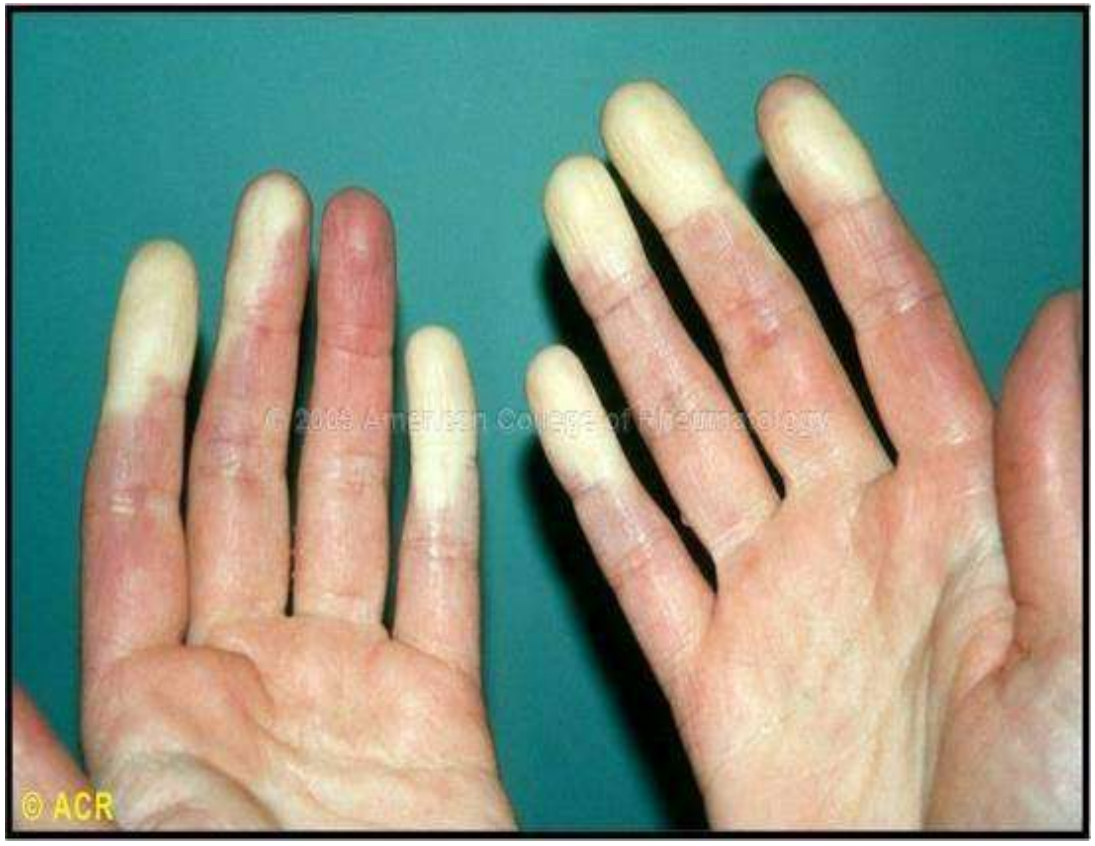
It can cause a form of thoracic outlet syndrome due to compression of the lower trunk of the brachial plexus or subclavian artery.

Q3: What might the pt complain of?

1) parasthesias & numbness in the upper part mainly usually in 90% of cases are in the ulnar distribution.

2) Weakness manifested by difficulty grasping or holding a pen , this is a result of arterial and or neural compression.

3) The hand is usually cold.



Q1: What is this sign?

Raynaud's phenomenon.

Q2: What is the most likely Dx?

Buerger Disease

Q1: What is the Dx? Venous Ulcer

Q2: What is the pathophysiology?

- Blood stasis and increased Pressure inside the veins due to *venous valves insufficiency*

Q3: if this happened after 5 days of surgery what is the main cause?

DVT

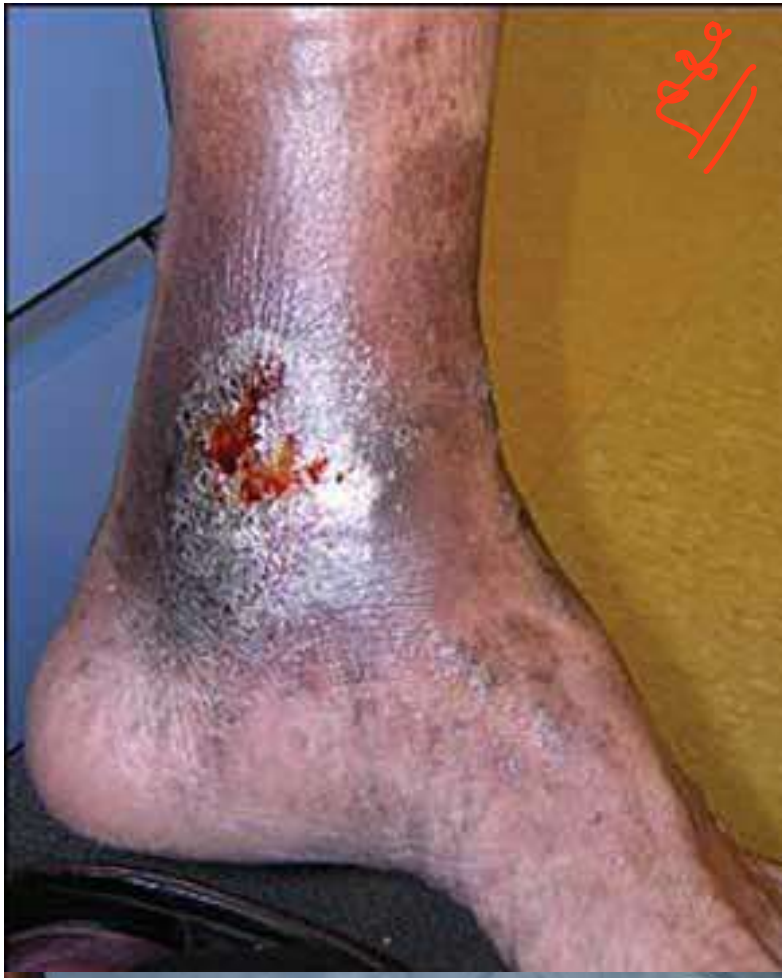
Q4: Risk of transformation to? SCC

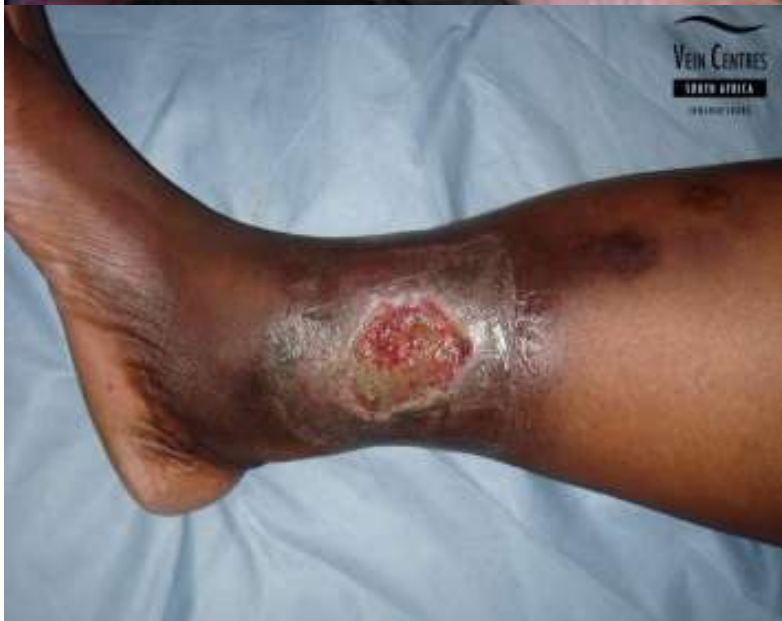
Q5: Name 2 causes?

- venous insufficiency and stasis (as DVT, varicose veins)

Q6: What is the sign?

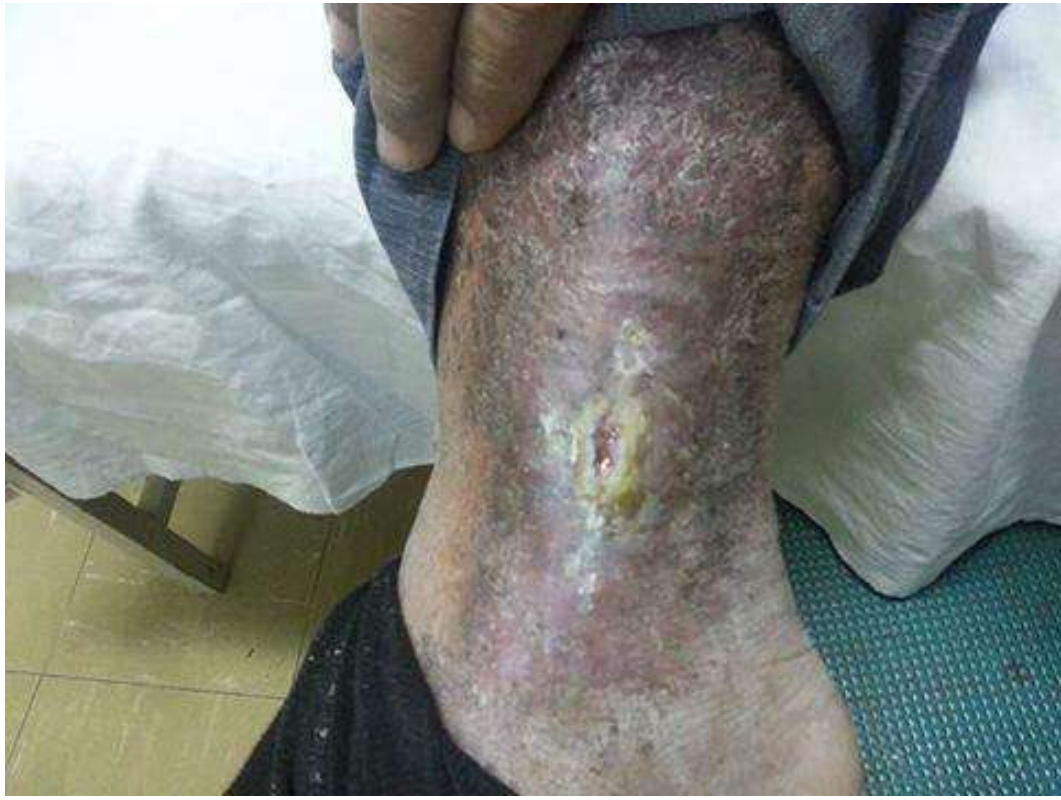
- Lipodermatseclarosis





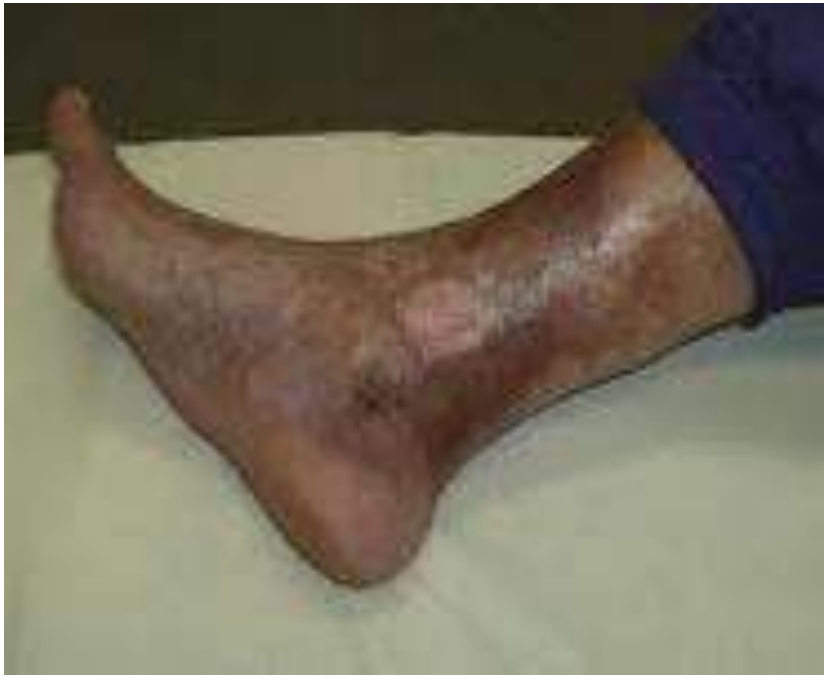
Q7: What is the most common site?

Most Common site is lower 1/3 of the leg just above the medial malleolus.



Q8: Name 2 points that goes with your Dx?

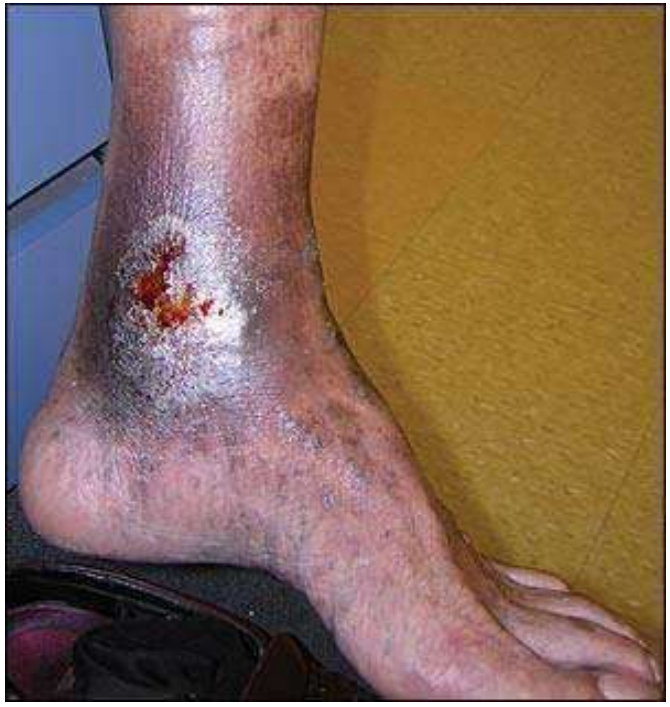
1) Location: lower medial aspect of the leg
2) Hyperpigmentation around the ulcer



Venous Ulcer Characteristics :

where ?

*Lower 1/3 of leg *gaiter area *anterior to medial malleolus.



cause?

Commonly a history of:

* (DVT) *Obesity *Calf muscle pump function deficits *Valve incompetence in superficial perforating veins.

description?

*Ulcer has uneven edges *Ruddy granulation tissue *No dead tissue.

*Reddish brown pigmentation (Hemosiderin) *Evidence of healed ulcers *Edema that may leak and cause maceration, varicose eczema, itchy skin and scale

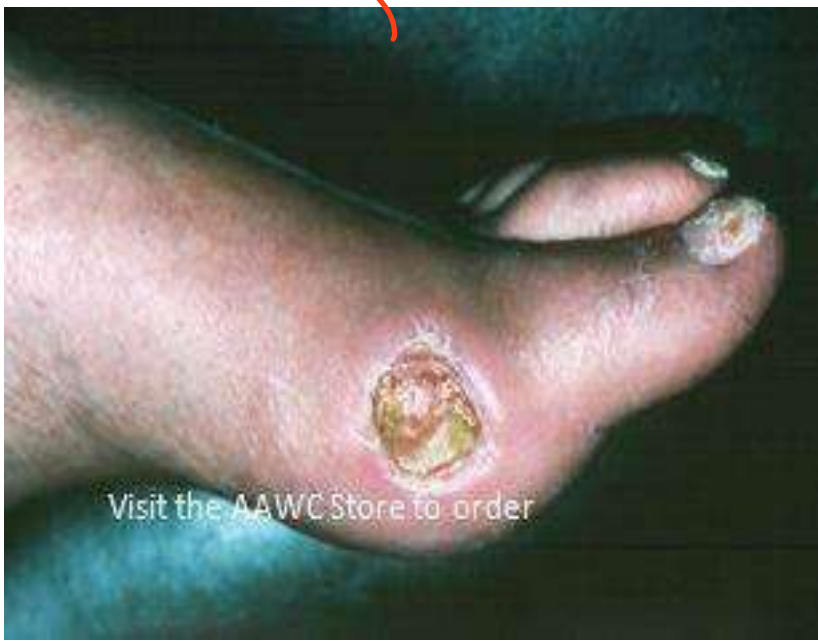
*Dilated and tortuous superficial veins *Leg may be warm *Hair on leg

*Normal leg and foot pulses.

pain?

*Moderate to no pain at all *Pain if present is eased by raising the leg

Q: A 75 year old male, heavy smoker, presented with this lesion.



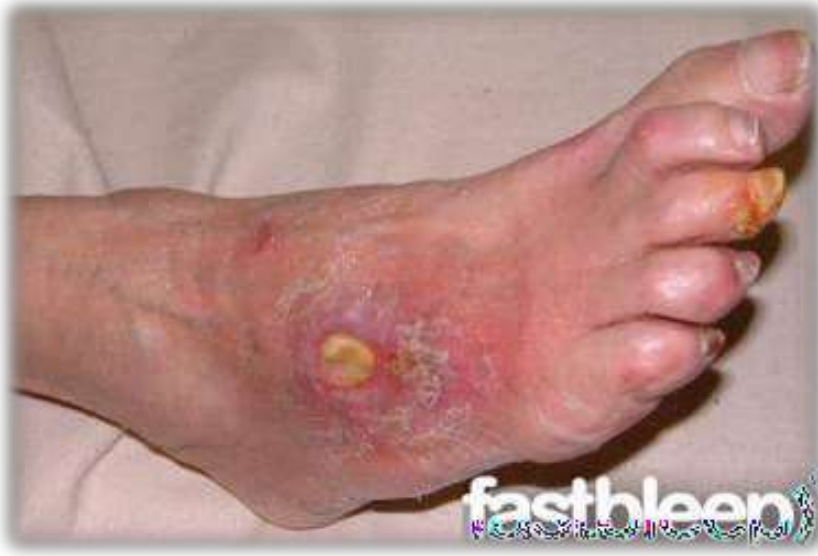
Q1: Identify the lesion:

ischemic arterial ulcer

Q2: Give two symptoms which might be associated with the condition:

1) claudication

2) rest pain

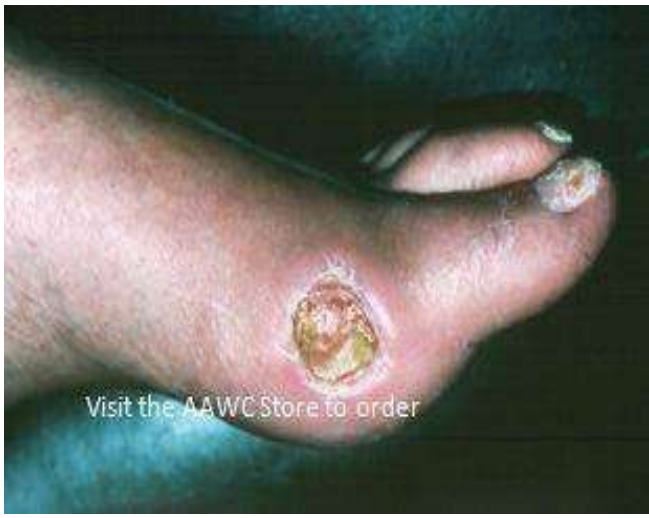


Arterial Leg Ulcer Characteristics

where?

*At tips of toes or between toes *Over phalangeal heads *Above lateral malleolus, over the metatarsal heads, on the side or sole of feet.

*** MC distal end of the limbs**



cause?

Commonly a history of:

*Aging *Diabetes *Arteriosclerosis * Smoking *Hypertension.

description?

*Deep pale base *Well defined edges *Black or necrotic tissue ***Minimal / no hair *Thin, dry and shiny skin** *Thickened toe nails *Leg may be cool *Leg becomes pale when elevated *May have neuropathy *Nil or diminished leg and foot pulses. *** Punched out-apperance**

Pain?

***Very Painful** *Pain is reduced by lowering the leg to a dependent position.

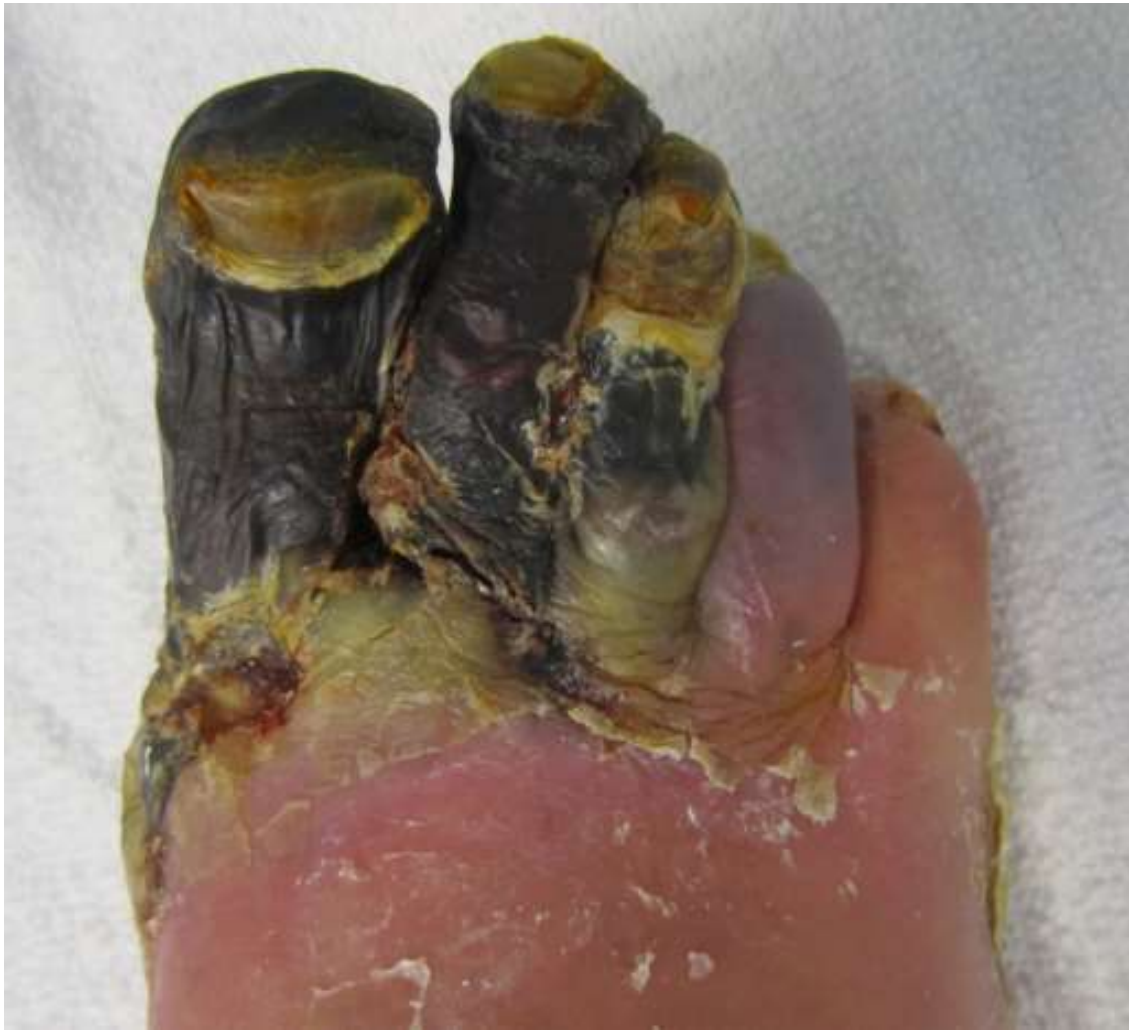
*** Not palpable pulses**

Q1: What is the most probable cause for this patient's condition?

Lower Limb Ischemia

Q2: What is the best imaging test to put a treatment plan?

CT Angio, Angiogram, Doppler US

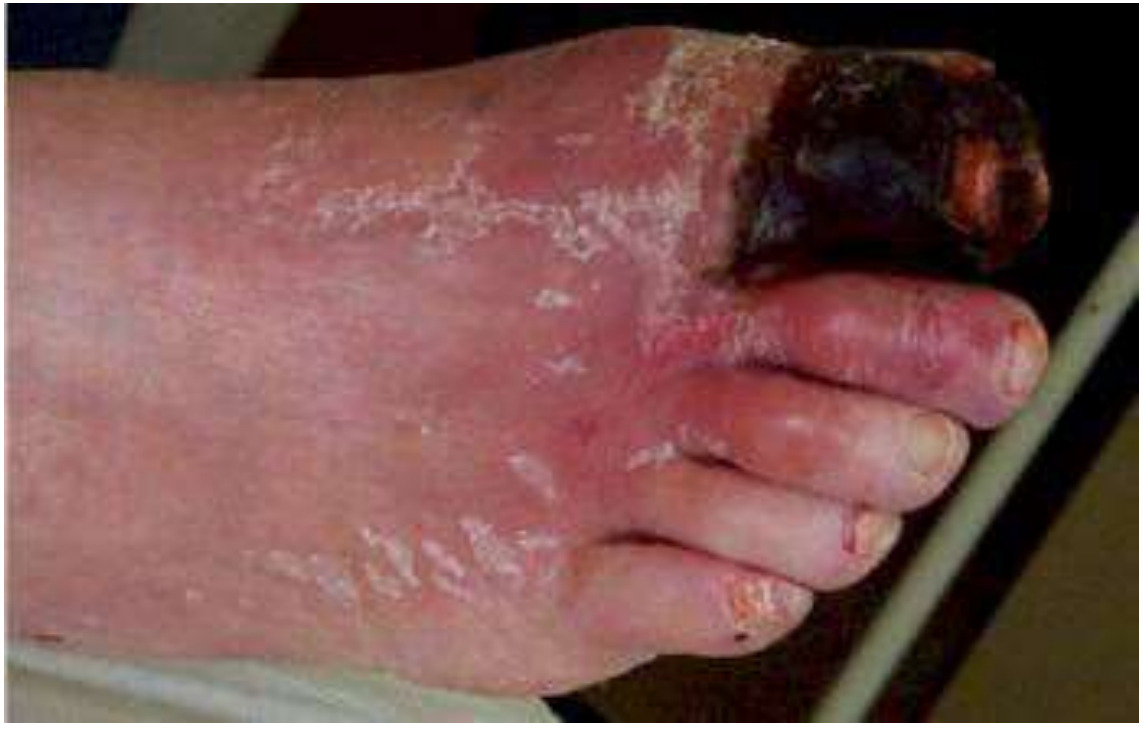


Q1: What is the pathology?

- Gangrenous necrosis of the big toe

Q2: Mention 4 signs of peripheral ischemic disease?

1) Pale
2) Hair loss
3) Cold
4) Pulselessness



Remember the 6 P's of peripheral vascular disease:

Pallor
Pain
Paresthesia
Paralysis
Pulselessness
Poikilothermia

may be the dx is related to ischaemic arterial ulcer / LL ischaemia

claudication

Q: A patient walks 400 meters before feeling pain and having to rest, his job requires him to walk for 1 kilometer everyday, what do you do for this patient?

a) Lifestyle modification

b) Medical therapy

c) Bypass

d) Angiogram **(correct answer)**


Pediatric Surgery

Q: This 1 year old baby had this lesion since birth:

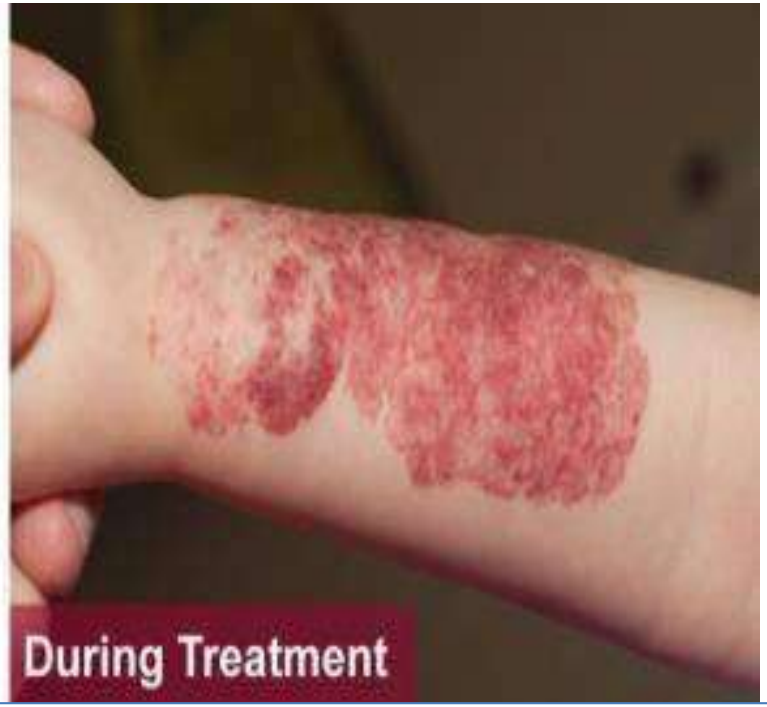
Q1: What is the most likely Dx?

Hemangioma

Q2: What is the best Mx?

Observation and reassurance

Vascular malformation



Sturge weber syndrome

port wine stain vascular malformation involving the ophthalmic division.

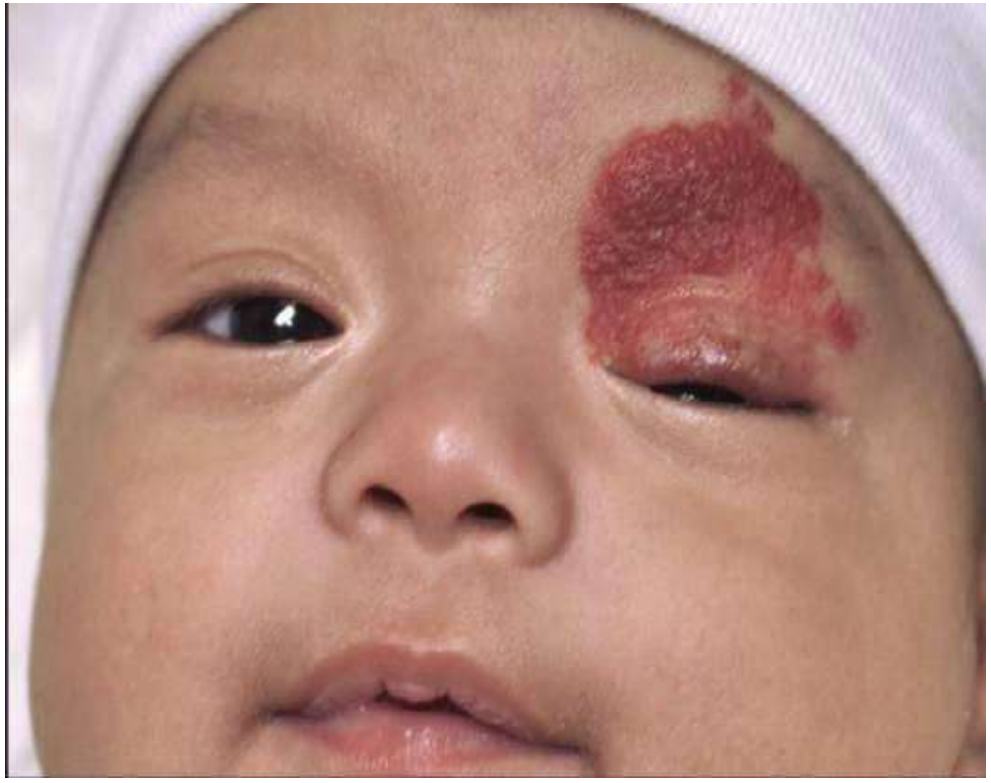
- Usually not evident at birth.

mnemonic :

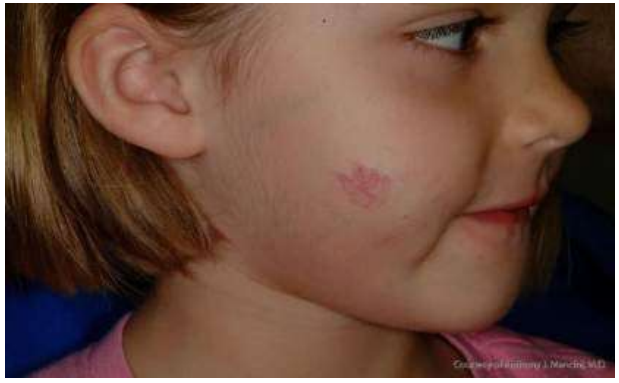
S : seizures / U: unilateral weakness

R: retardation (mental) / G: Glaucoma

E : other eye problems



Capillary hemangioma in the eyelid obstructing the eye , might lead to Amblyopia "lazy eye" .



The same patient at different ages (hemangioma)

hemangioma	Vascular malformation
Start as small lesions at the age of 3-4 months	seen at birth but may appear late
Grow to reach their maximum size at the age of 1 year then involution	Grow parallel to the child's growth
Female to male (3:1)	Female to male (1:1)
Rarely to cause any complications	High flow can lead to destructive changes
Spontaneous resolution unless complicated you should treat	Treatment : surgery/laser/ embolization

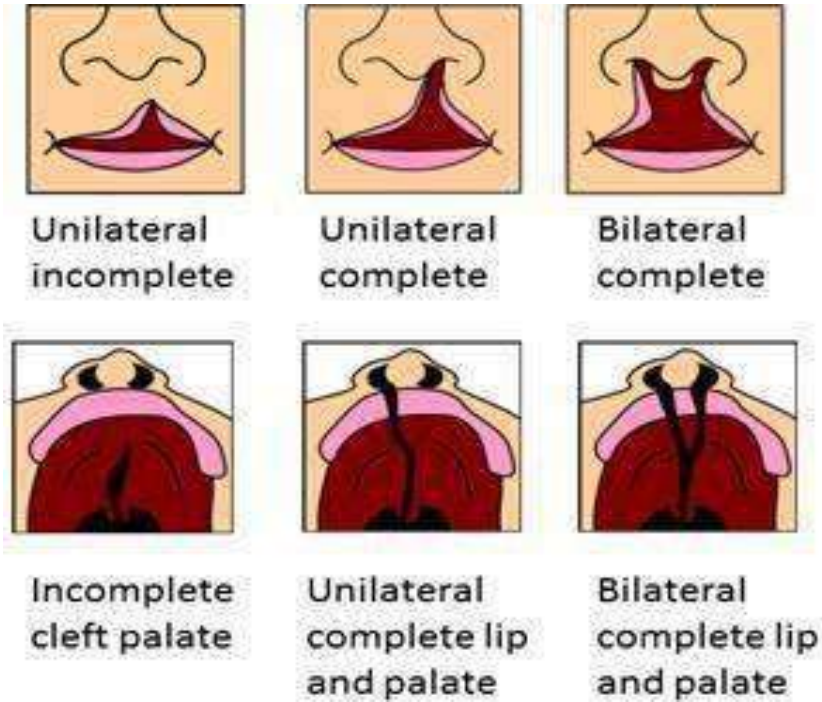
Bilateral cleft lip and palate

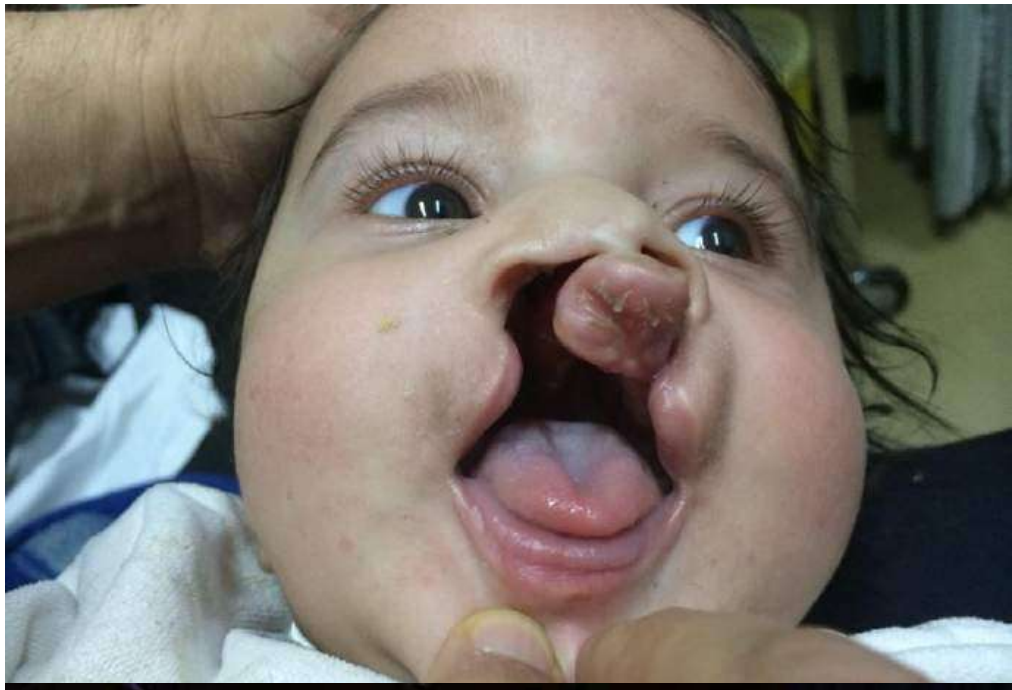
Cleft lip:

No functional deformity, only cosmetic deformity and **surgery is done at age of 3 months.**
Breast feeding is not contraindicated.

Cleft palate:

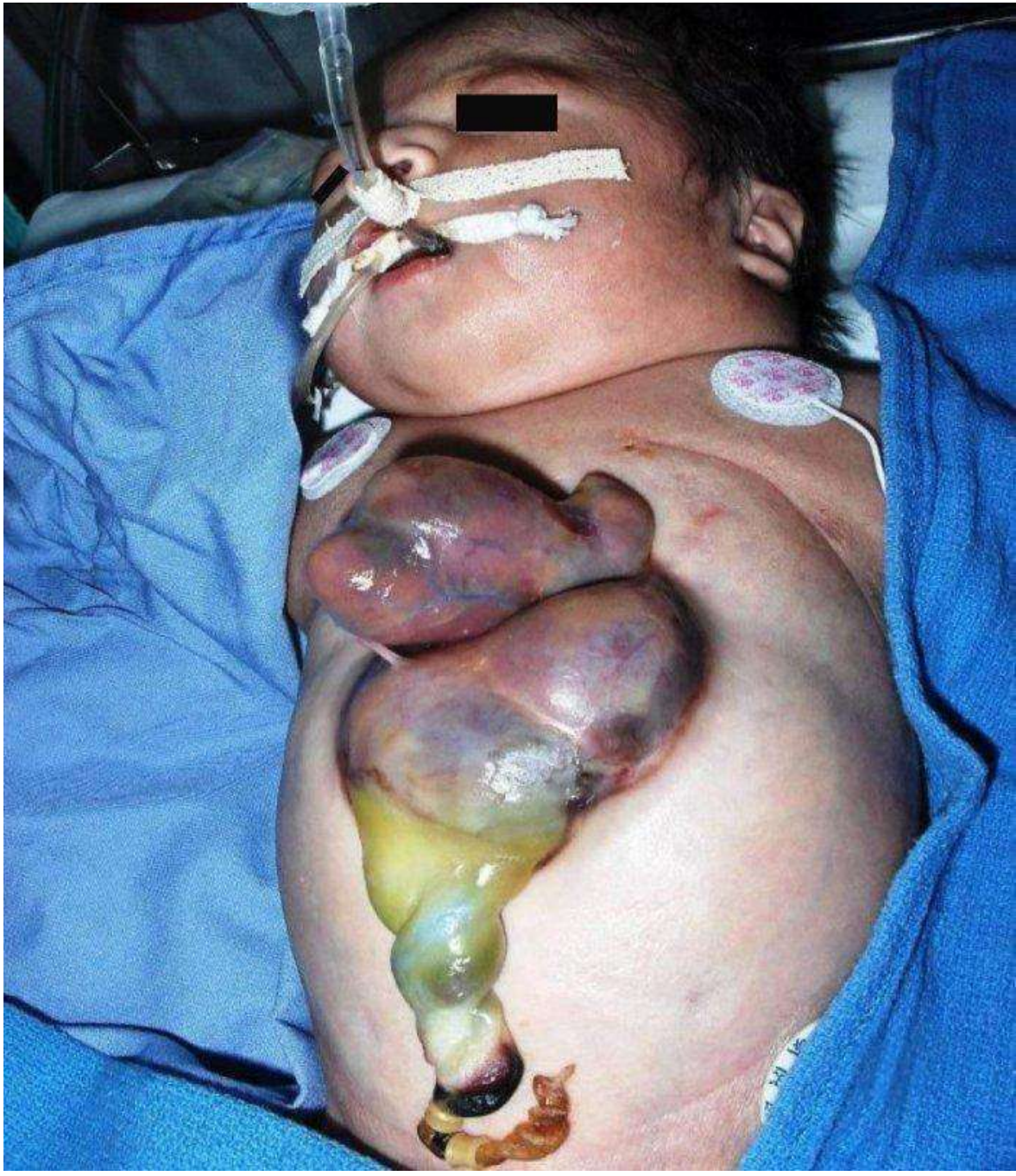
baby can't feed, cant speak and may lose his hearing by time (acquired).
surgery is done at age of 1 year as a compromise between not losing his speaking abilities and the normal growth of face.





Pentalogy of Cantrell

1. Omphalocele.
2. Anterior diaphragmatic hernia.
3. Sternal cleft.
4. Ectopia cordis.
5. Intracrdiac defect.

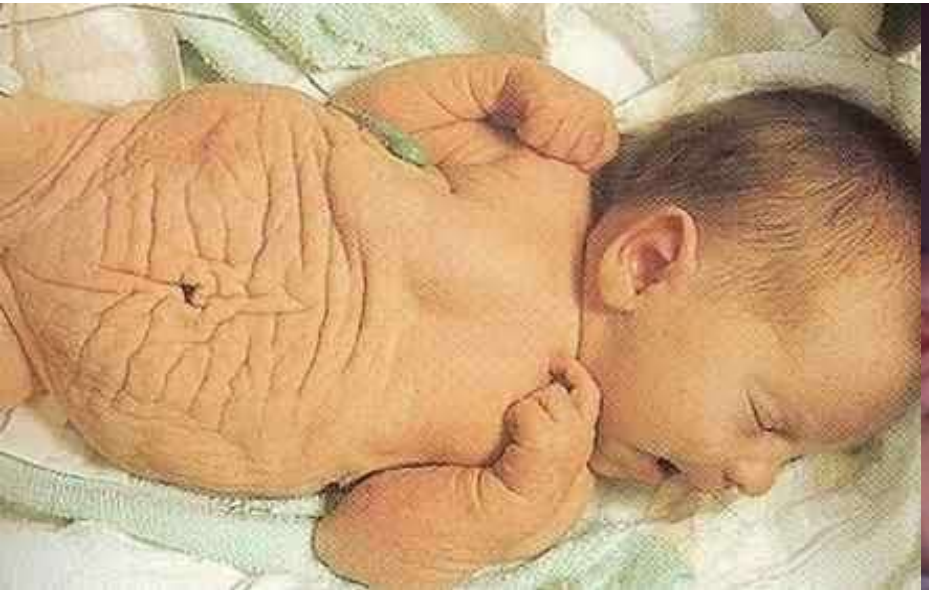
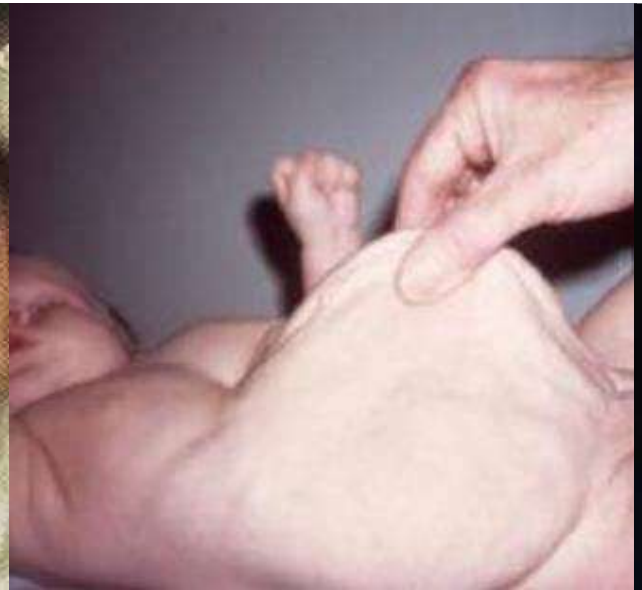
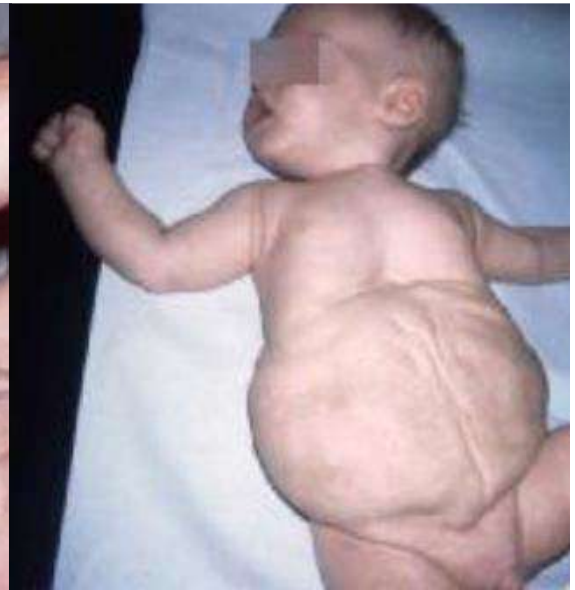


Q1: What is the Dx? Prune belly syndrome

Q2: Mention 2 associated anomalies?

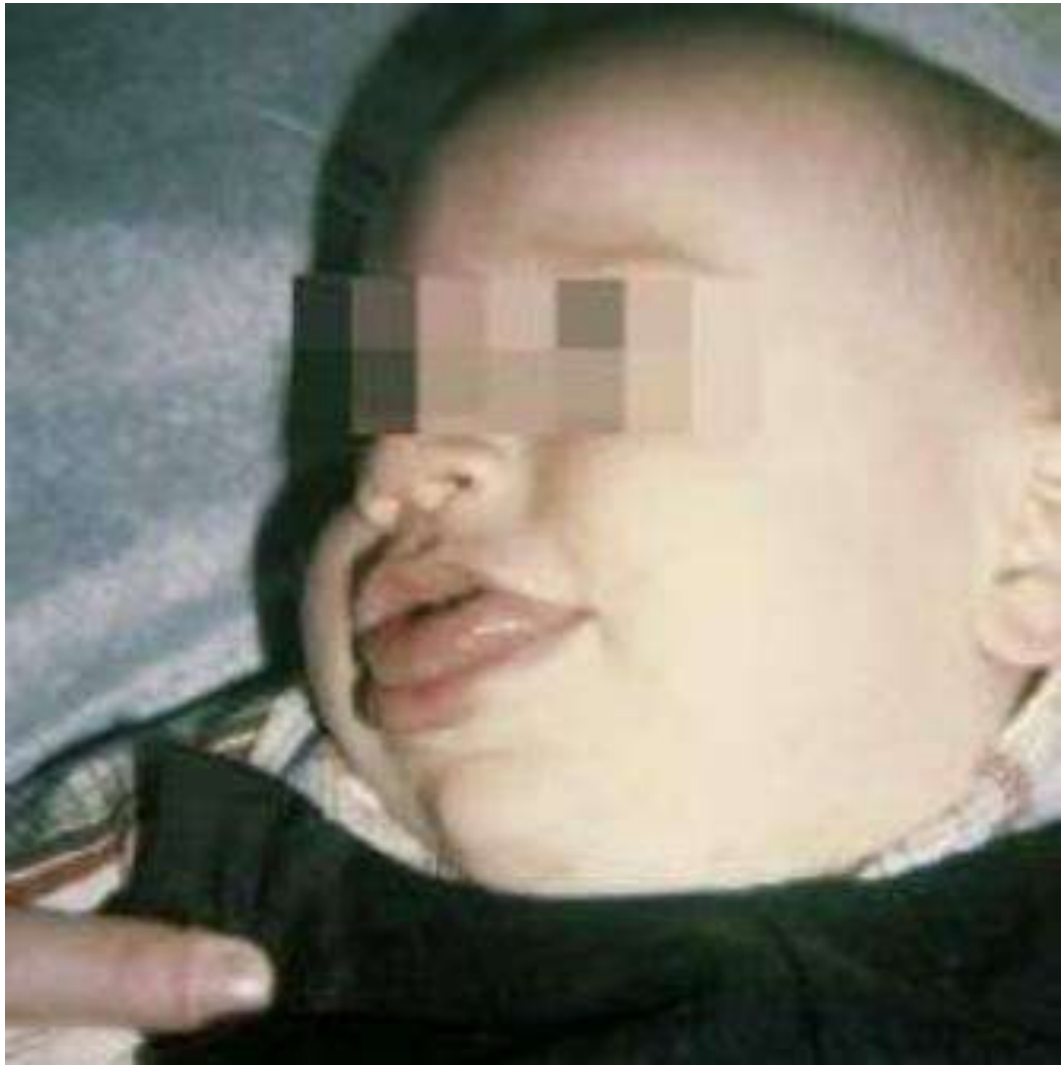
1) Undescended testicles
2) Urinary tract abnormality such as unusually large ureters, distended bladder, Vesicoureteral reflux, frequent UTI's
3) VSD
4) Malrotation of the gut
5) Club foot

- thin flaccid abdominal wall.
- AKA eagle Barrett syndrome.
- absent abdominal wall musculature.
- dilation of bladder, ureter and renal collecting system.
- **95% in Males**.

Bickwith-Wiedman syndrome

1. Macrosomaia.
2. Macroglossia.
3. Organomegaly.
4. Abdominal wall defects.
5. Embryonal tumors.



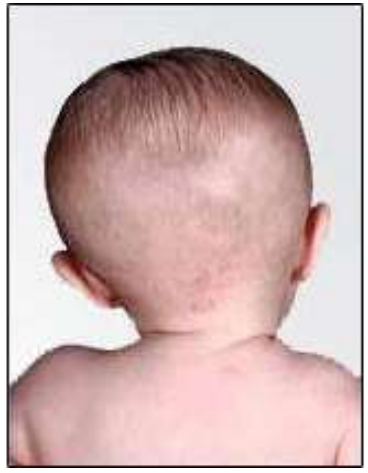
Torticollis

- Tilted neck.
- Causes:

1) congenital (due to abnormal position of the fetus in uterus which leads to fibrosis of sternocleidomastoid muscle >> shortness of this muscle)

2) **acquired** : due to trauma leads to muscle spasm on one side/ fibrosis of SCM due to any cause.

3) **infection: lymphadenitis**

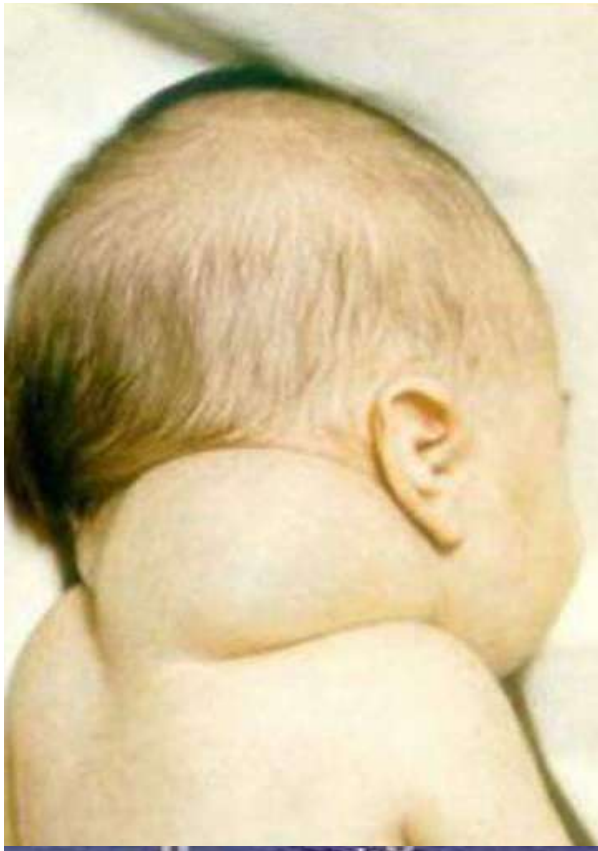



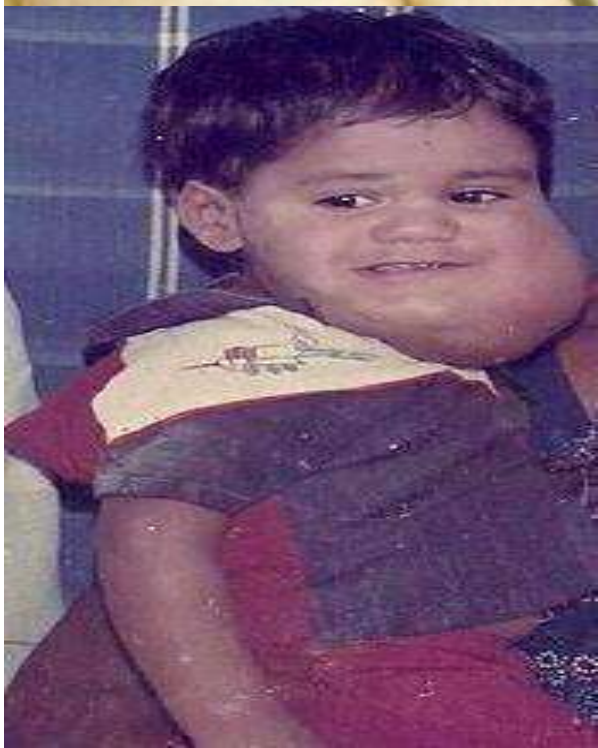

- Occurs at any age but most common in the 1st few months of life.
- Palpable hard mass in 1/3 of patients.
- The baby usually sleeps on the same side >> craniofacial deformity.

- Treatment : conservative using physiotherapy for 2-3 months.
- If no improvement, surgery is indicated (SCM myotomy).

Cystic hygroma

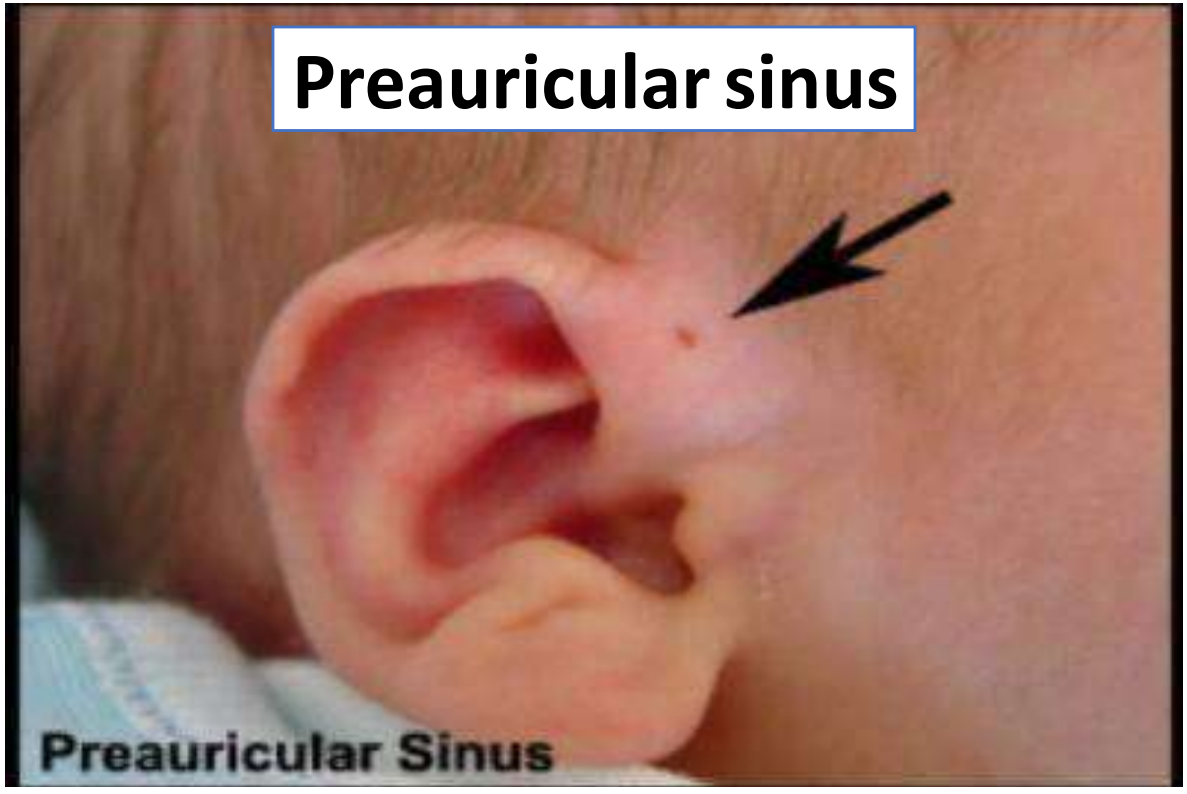
- Fluid-filled sacs caused by blockages in the lymphatic system.
- **most hygromas appear by age 2.**
- **soft, non-tender, compressible lump.**
- high recurrence rate.
- usually located in the posterior triangle of the neck.
- **transillumination.**
- DDx: teratoma/ hemangioma/
- encephalocele.



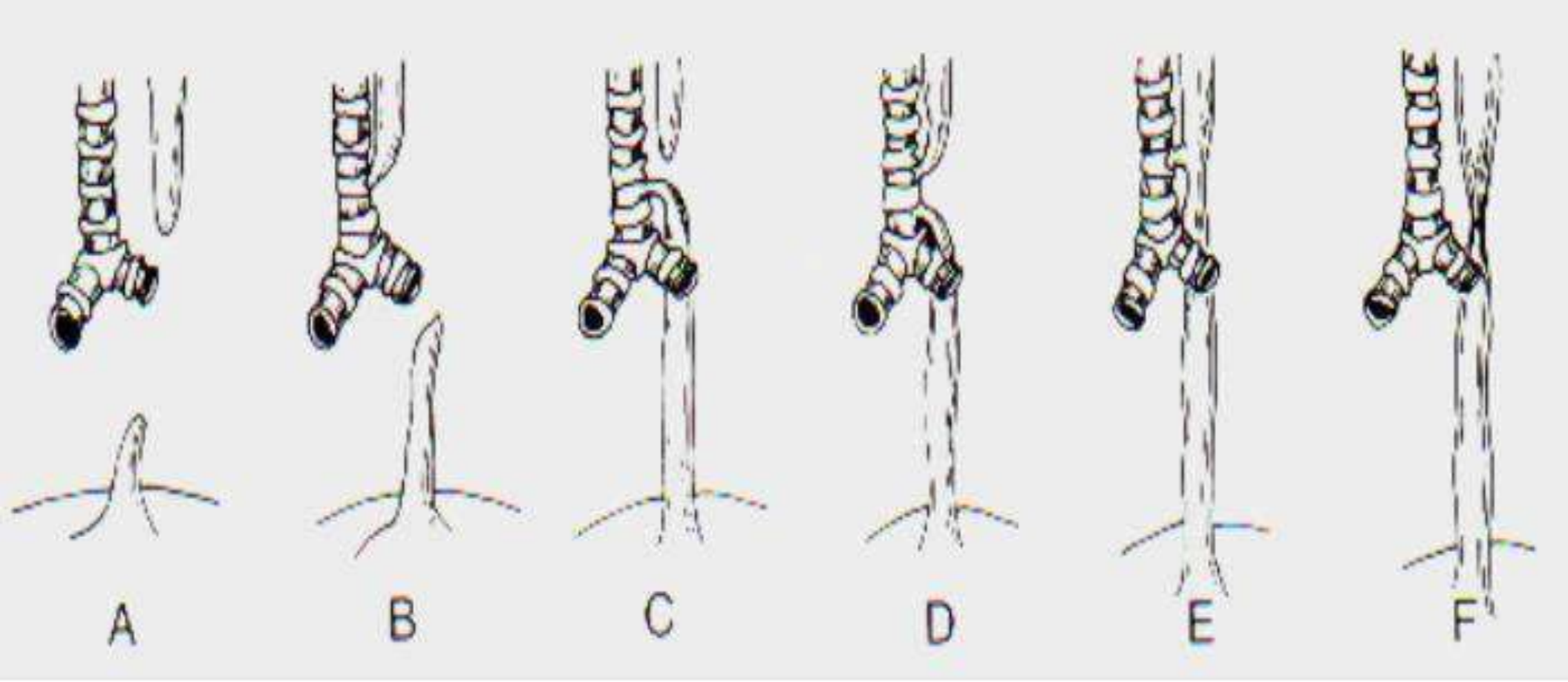


Congenital malformations

Think of Albort Syndrome



Esophageal atresia and tracheoesophageal fistula

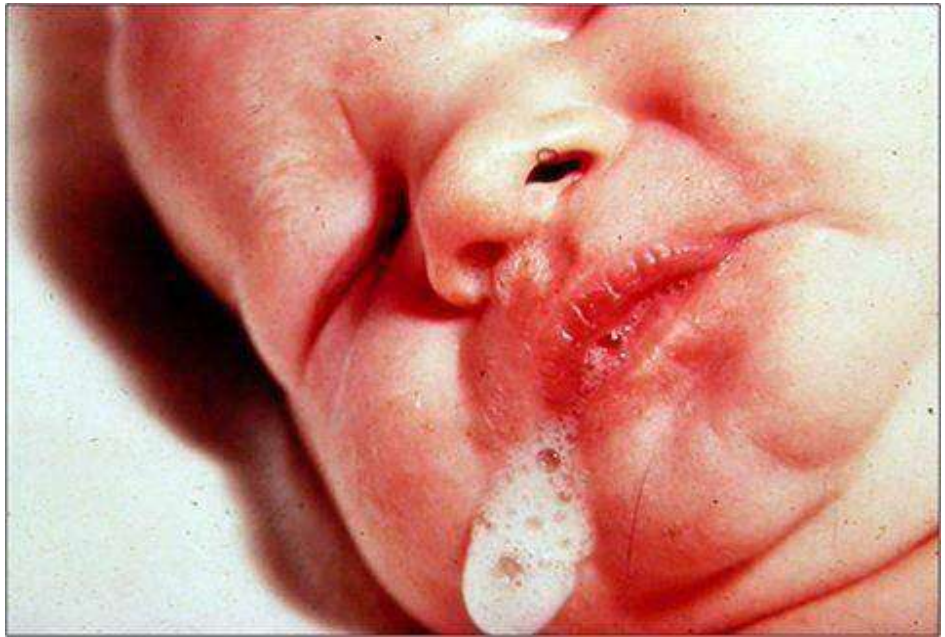


Manifestations of esophageal atresia:

1) **Upper part:** drooling of saliva/ bubbling of the saliva/ respiratory distress/ choking/ failure to pass nasogastric tube.

2) **Lower part:** accumulation of secretions which will lead to regurgitation and vomiting/ ischemia>> physiological death>> biological death (necrosis) >> rupture.

* The more distal the obstruction, the more the distention of the lumen and so the more the possibility of rupture.



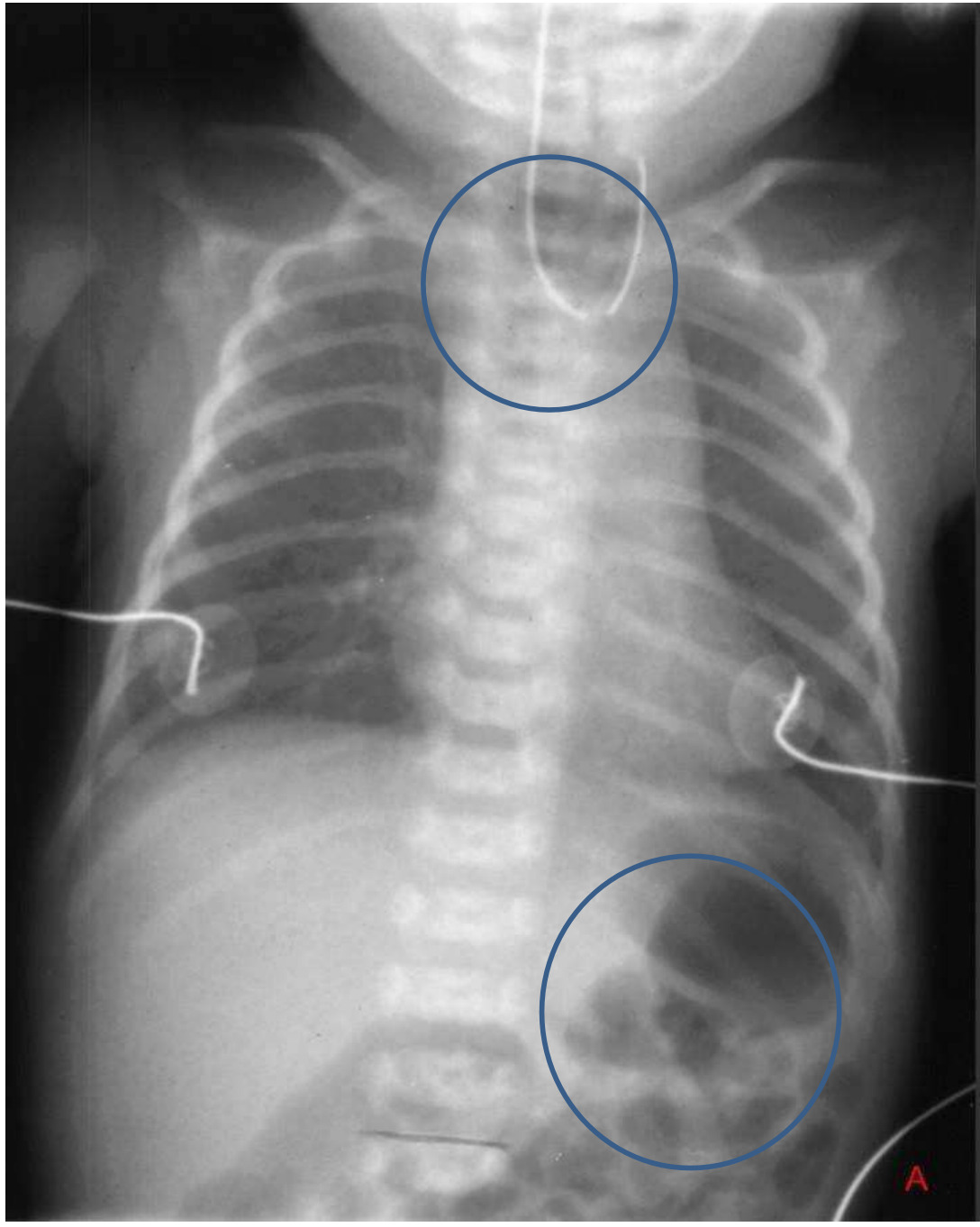
Neonates with esophageal atresia usually develop copious, fine white frothy bubbles of mucus in the mouth and nose. Secretions recur despite suctioning.

Esophageal atresia and tracheoesophageal fistula

- Atresia of the upper esophagus evidenced by **failure to pass a feeding tube.**

- **Gas in the abdomen**.

- These findings are likely due to a esophageal atresia with a distal tracheoesophageal fistula (Type C TEF).



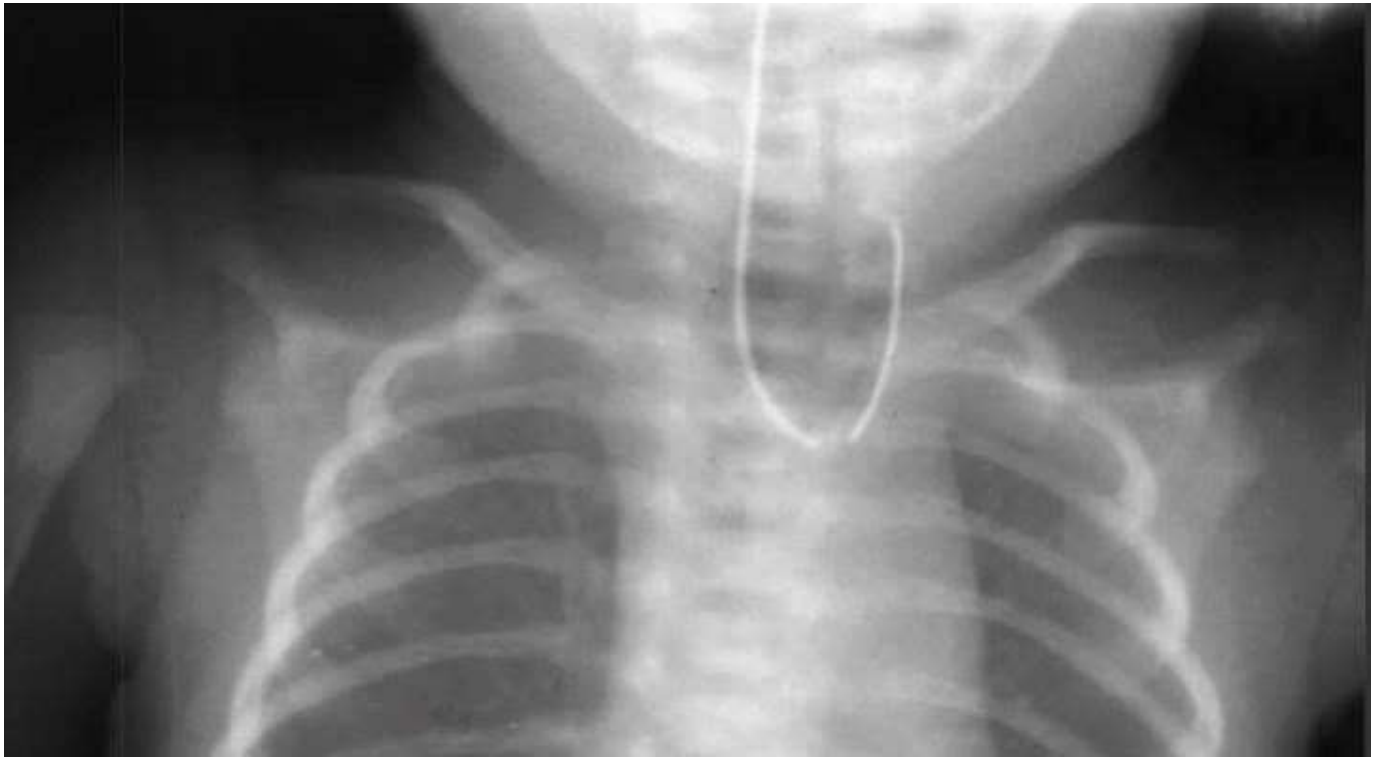
Q: New born x-ray, cyanosis and distressed:

Q1: What is your Dx?

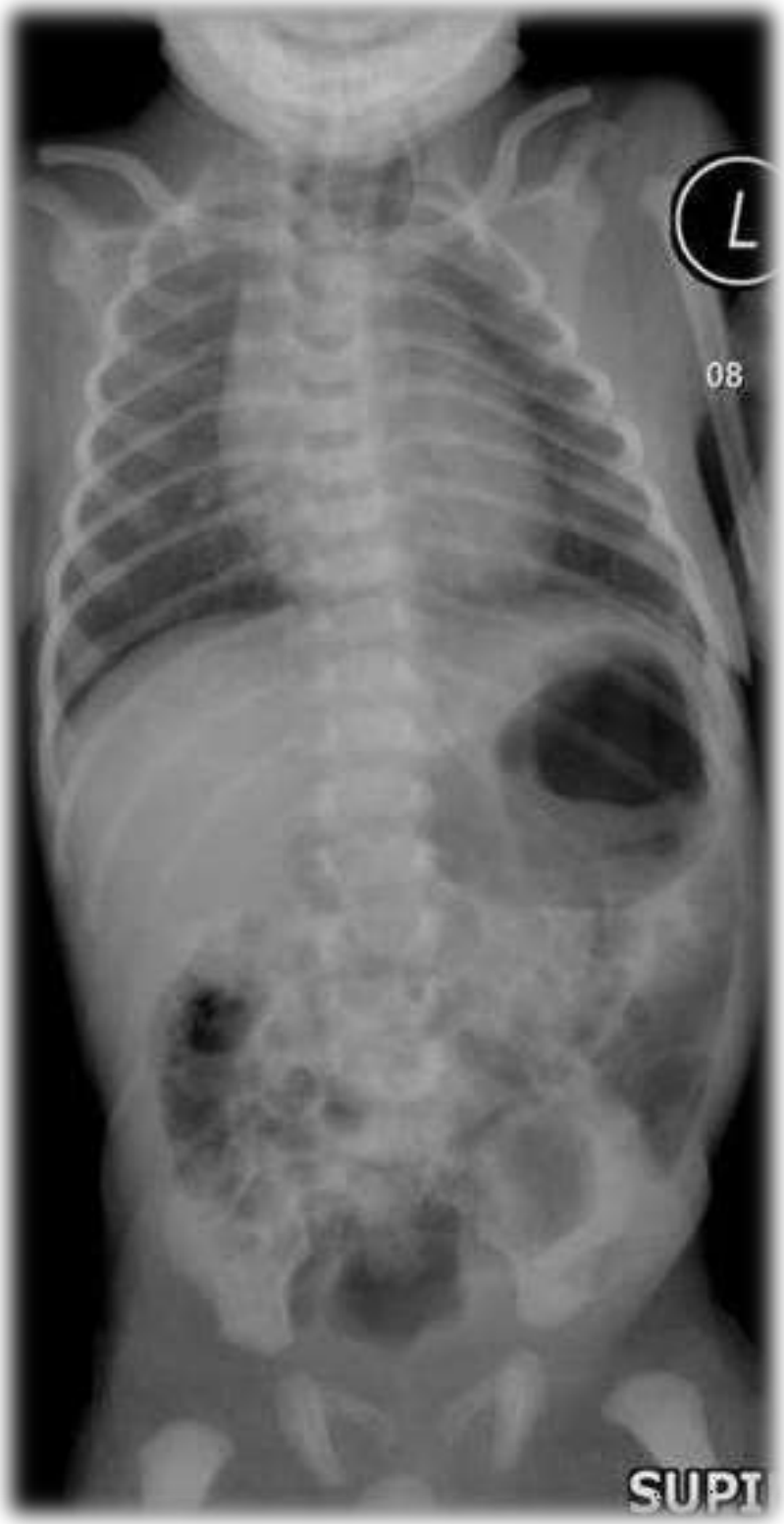
- Tracheoesophageal fistula (because of the cyanosis)

Q2: Characteristic sign?

- Failure to pass the nasogastric tube



Q: A new-born baby had inability to swallow milk and frothy mouth secretions, this is his x-ray.



Q1: Mention two radiological signs?

inability to pass nasogastric tube/ air in the stomach.

Q2: What is the diagnosis?

Esophageal atresia with tracheo-esophageal fistula.

ARDS

(bilateral diffuse pulmonary infiltrates)

Other DDx:

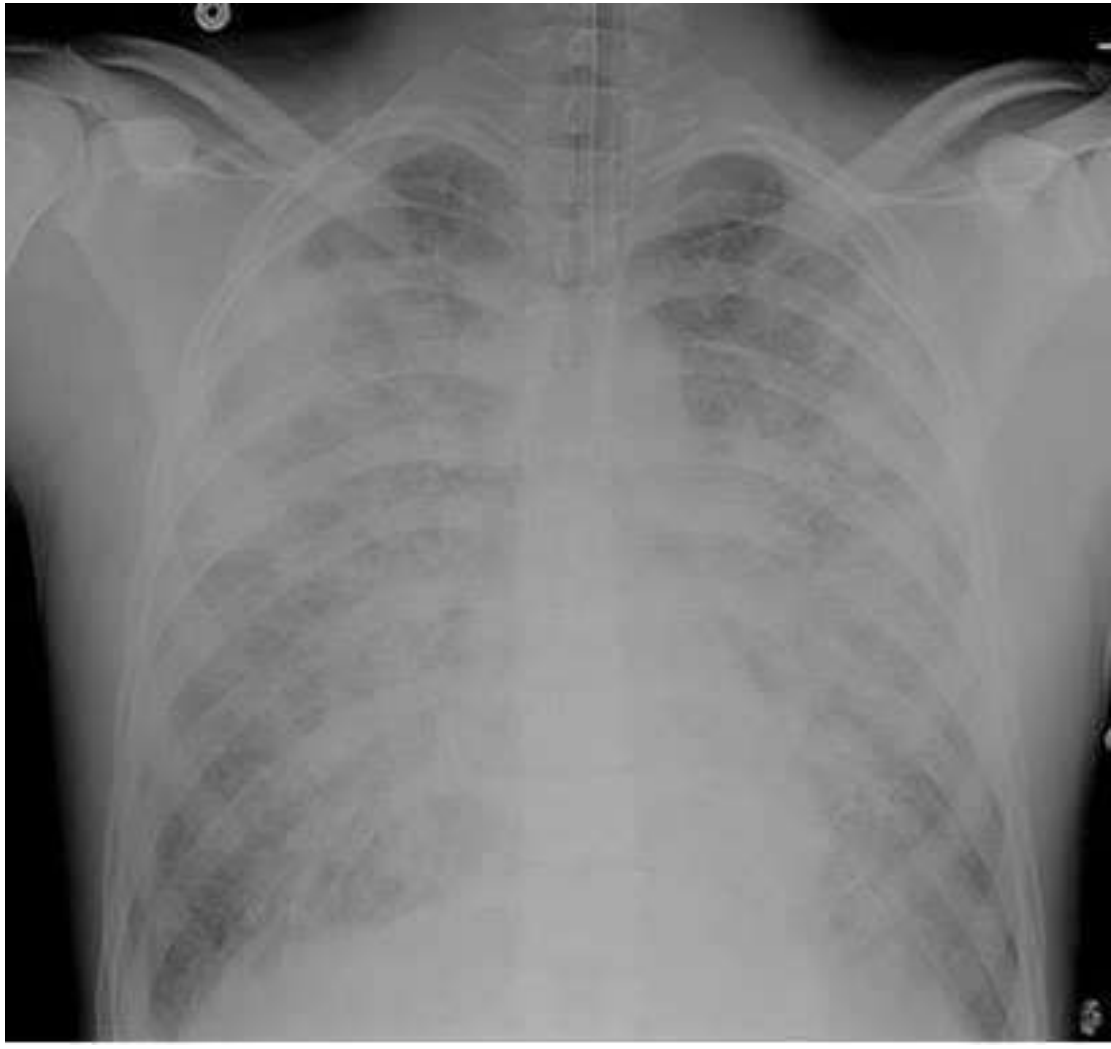
1-severe pulmonary edema.

2-pulmonary hemorrhage.

3-pulmonary fibrosis.

(history differentiates between these conditions)

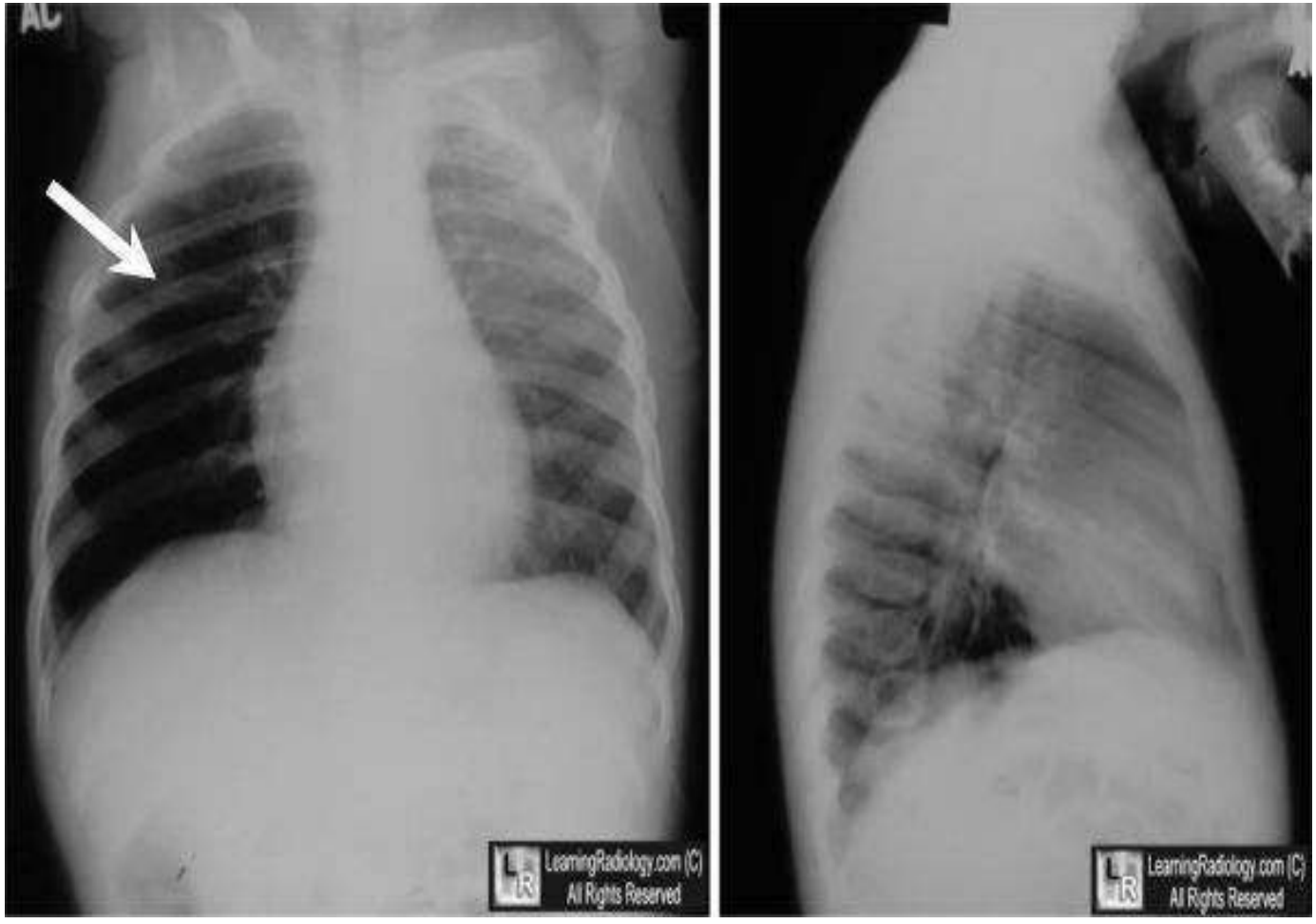
Ground Glass Appearance

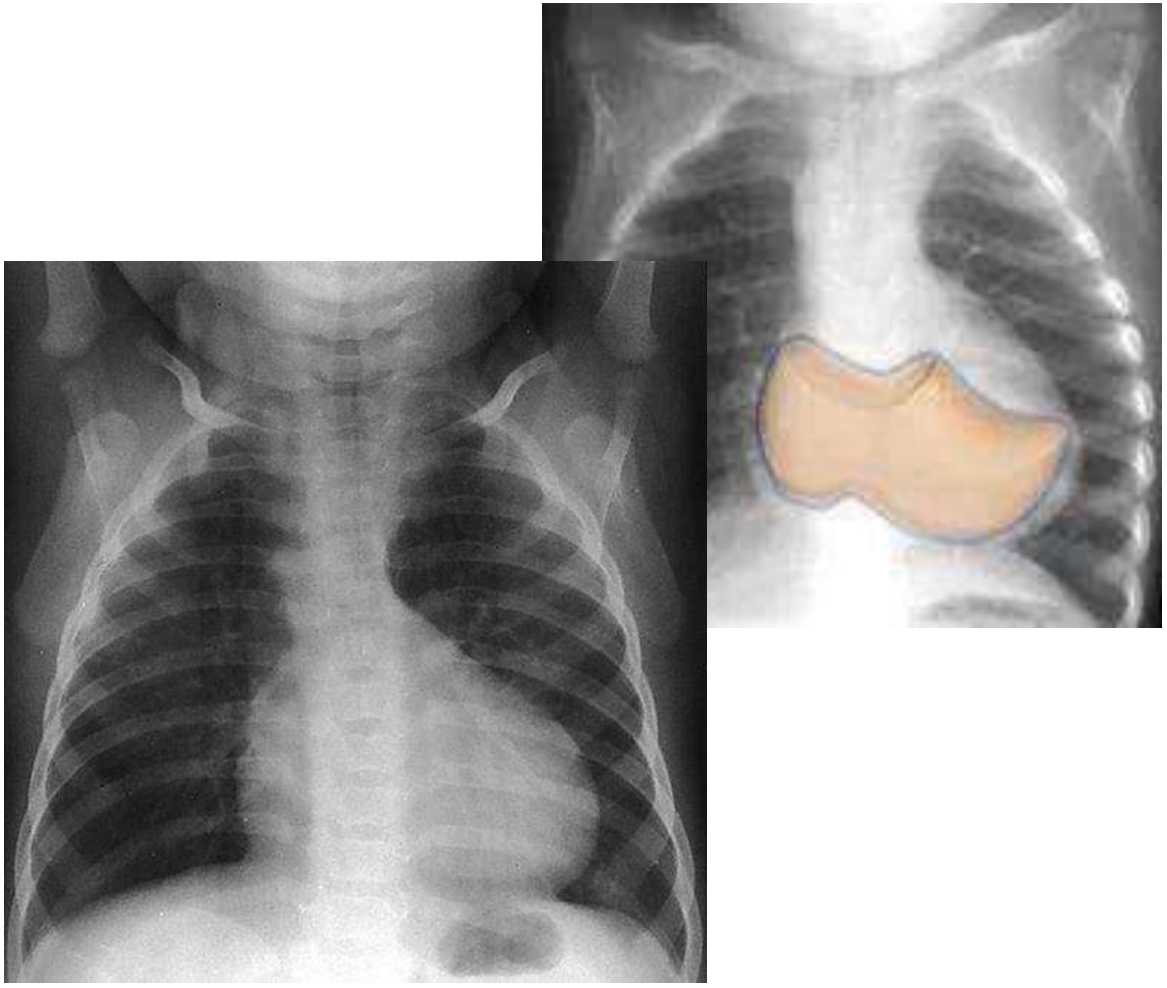


This chest X-ray shows **air trapping** indicating **foreign body aspiration.**

It is the most common radiological sign shown on the X-ray after F.B aspiration.

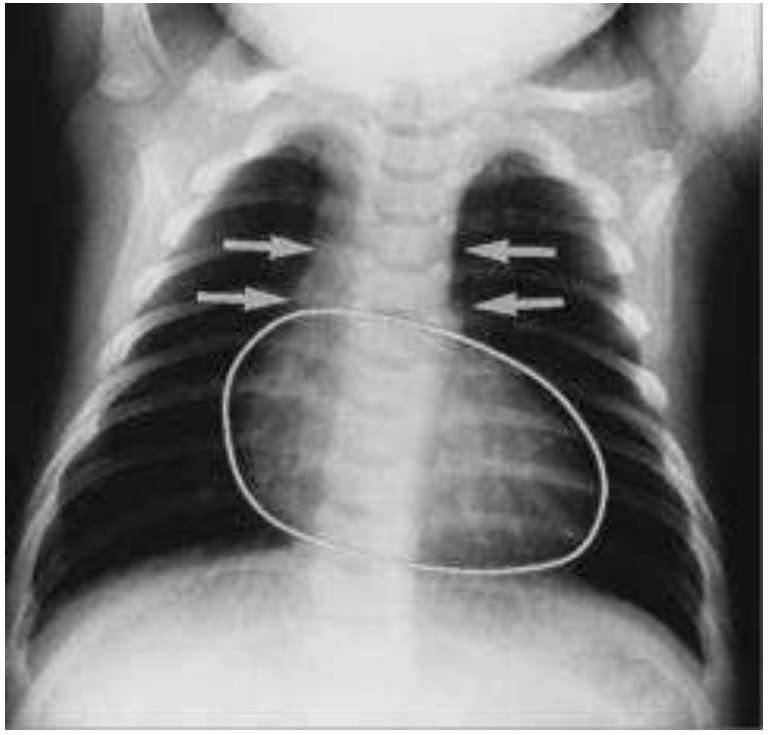
Whenever you suspect F.B aspiration you have to do **bronchoscopy.**





Tetralogy of Fallot

"boot" shaped heart on chest X-ray.



Transposition of great vessels

Egg shaped heart

Congenital diaphragmatic hernia

- X-ray of the abdomen and chest.
- features :

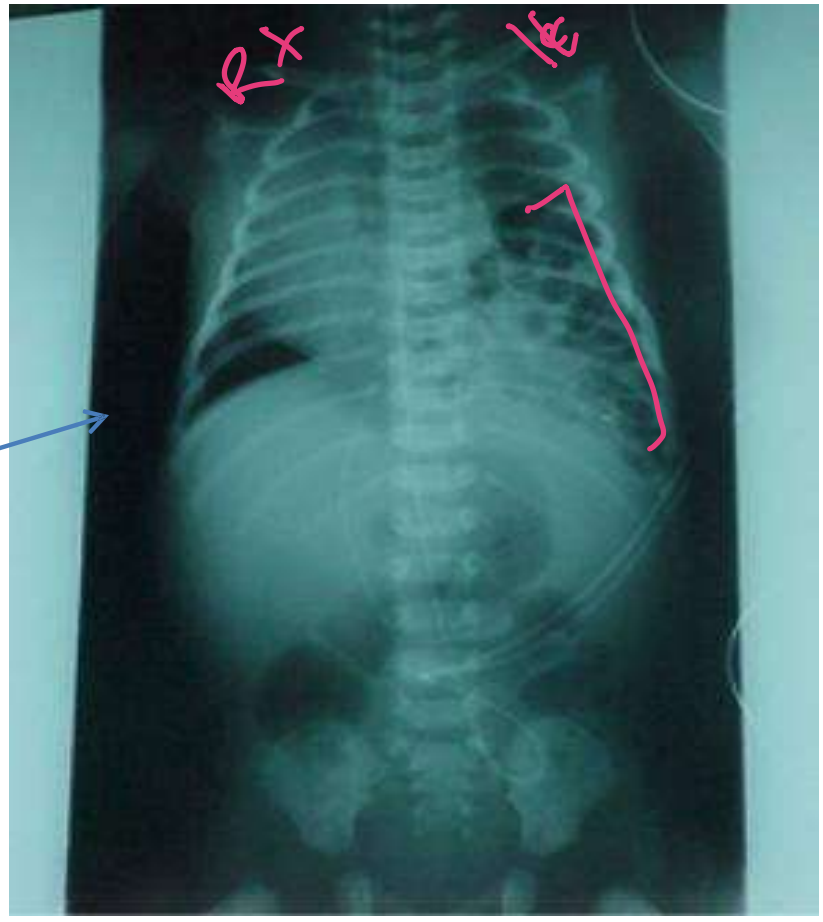
  - scaphoid abdomen.

- **bowel is located in the left side of the chest.**

- mediastinal shift towards the right.

- mortality is mostly due to **pulmonary hypoplasia.**

- Diagnosis: In prenatal period (ultrasonography)



• **Types** :

1) Bockdalek hernia

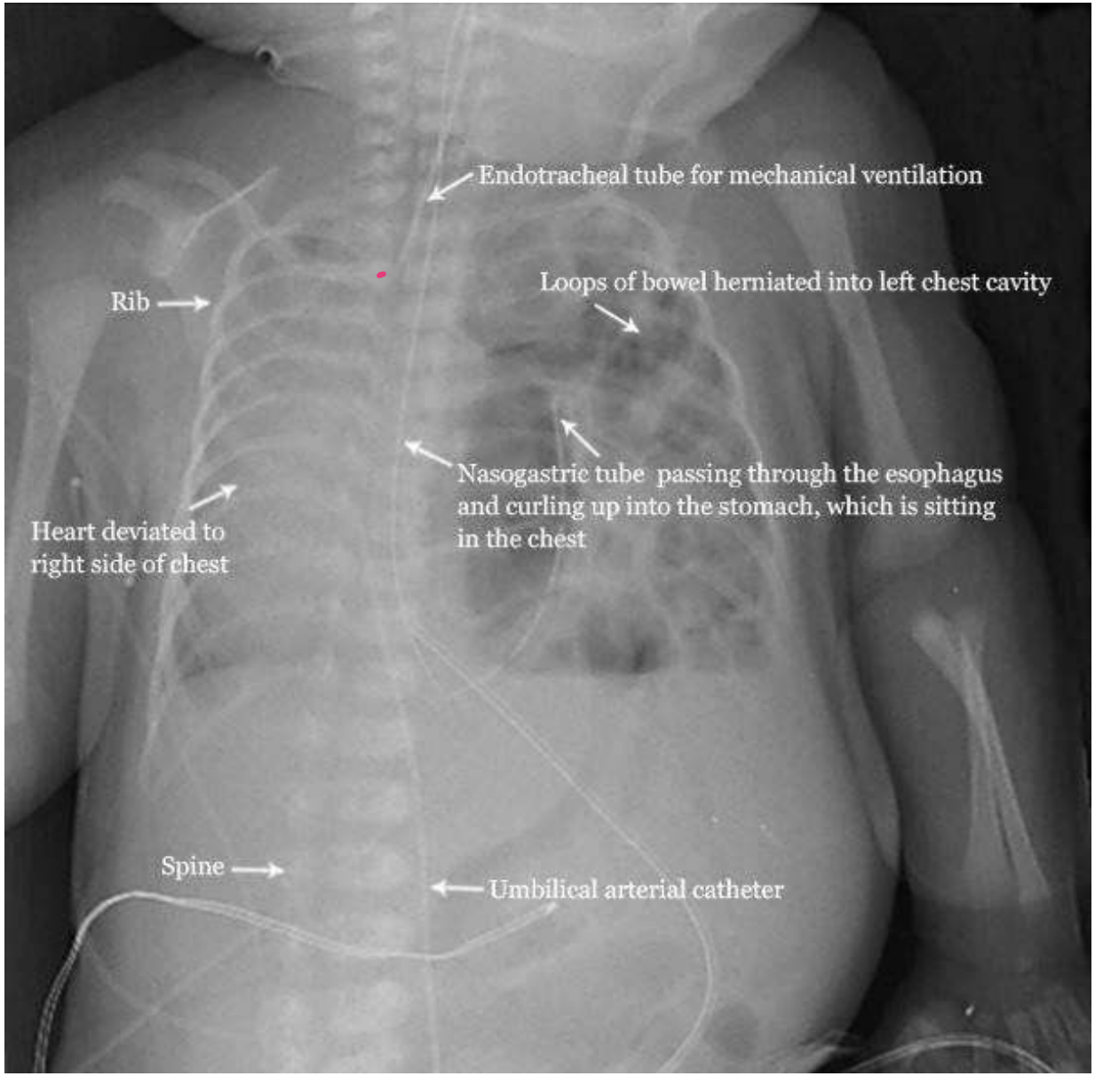
(mostly on left side): posterolateral, mc.

2) Morgangi hernia

(mostly on the right side) : retrosternal.

Hiatus hernia.

Neonate with a prenatally diagnosed left congenital diaphragmatic hernia pre surgery.



	Omphalocoele	Gastroschisis
Incidence	1:6,000-10,000	1:20,000-30,000
Delivery	Vaginal or CS ✓	CS
Covering Sac	Present	Absent
Size of Defect	Small or large	Small
Cord Location	Onto the sac	On abdominal wall
Bowel	Normal	Edematous, matted

	Omphalocoele	Gastroschisis
Other Organs	Liver often out	Rare
Prematurity	10-20%	50-60%
IUGR	Less common	Common
NEC	If sac is ruptured	18%
Associated Anomalies	>50%	10-15%
Treatment	Often primary	Often staged
Prognosis	20%-70%	70-90%

Q1: What is the Dx? Gastroschisis

Q2: Name the procedure? Silo

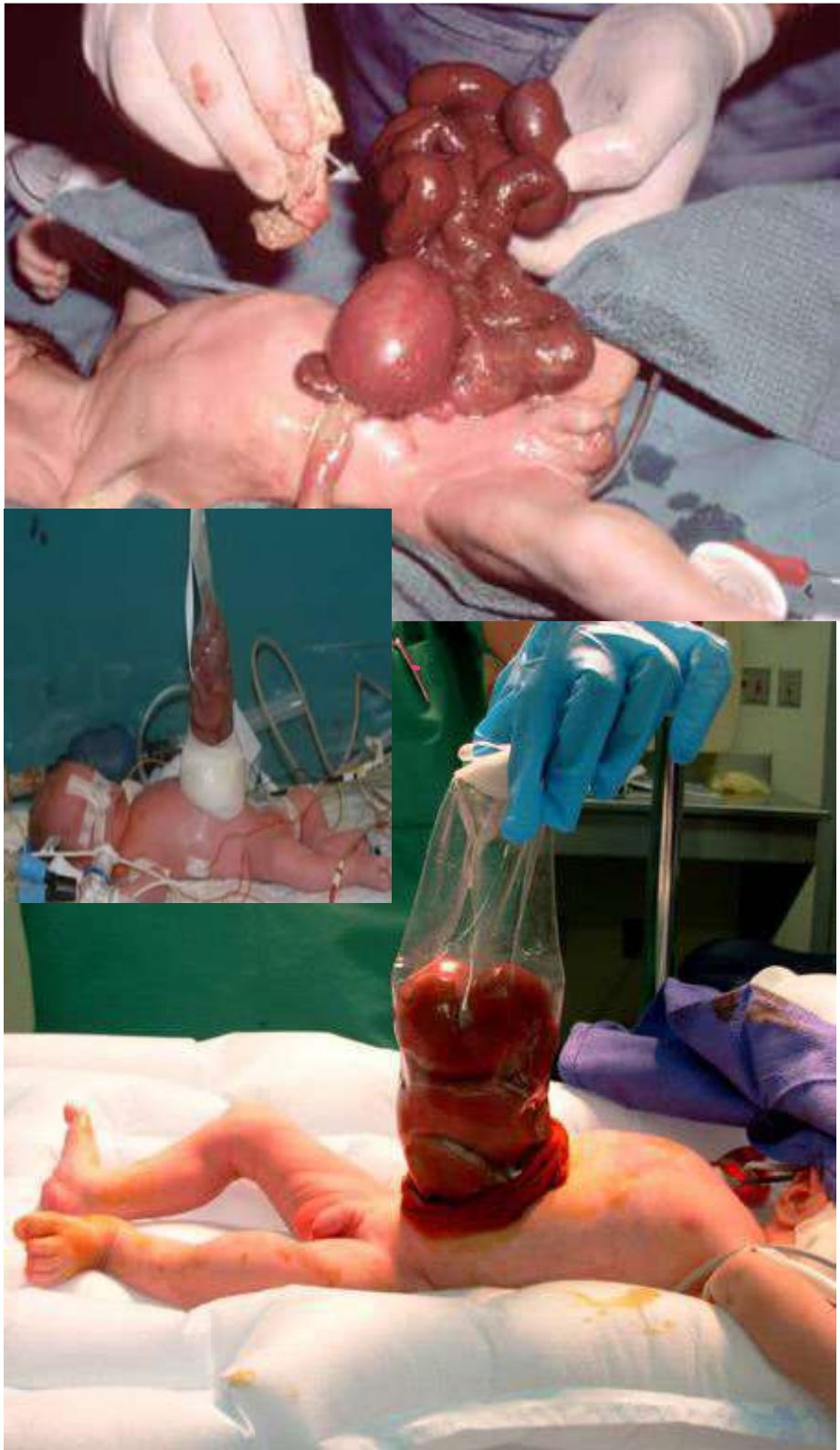
Q3: The prognosis depends on?

- Bowel status

Q4: The indication of this procedure?

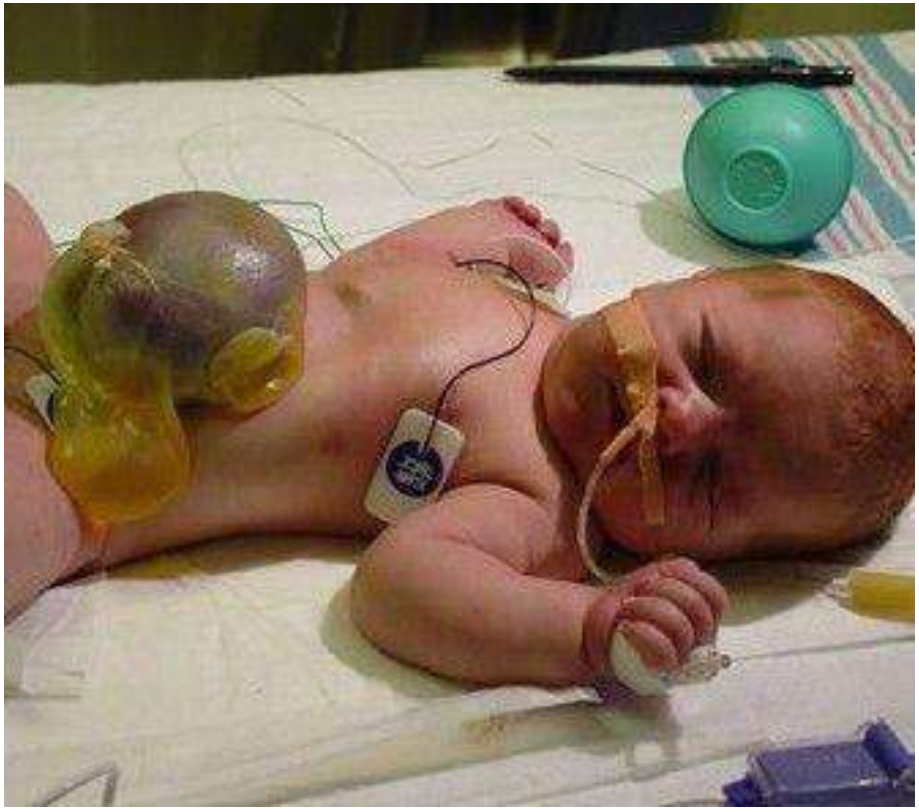
- if the bowel is inflamed and primary closure is not possible
- to prevent dehydration, hypothermia, contamination

- **location : lateral to the umbilicus (to the right).**
- defect size : 2-4 cm.
- no sac.
- cord is normally inserted into umbilicus.
- contents : only bowel (edematous and matted).
- GIT function : **prolonged ileus.**
- associated anomalies : infrequent.



Q1: What is the Dx?

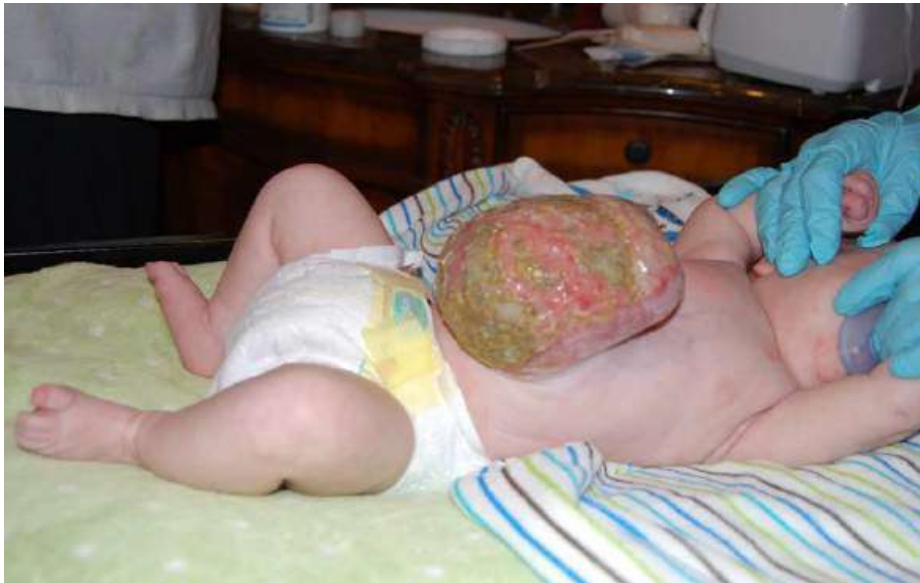
- Omphalocele



Q2: How is the GI function?

- Normal

- location : umbilical ring.
- The protrusion is covered by peritoneum.
- defect size : >10 cm.
- cord : inserted into the sac.
- GIT function is normal.
- contents : bowel +/- liver.
- malrotation : present.
- associated anomalies : common (30-70 %).



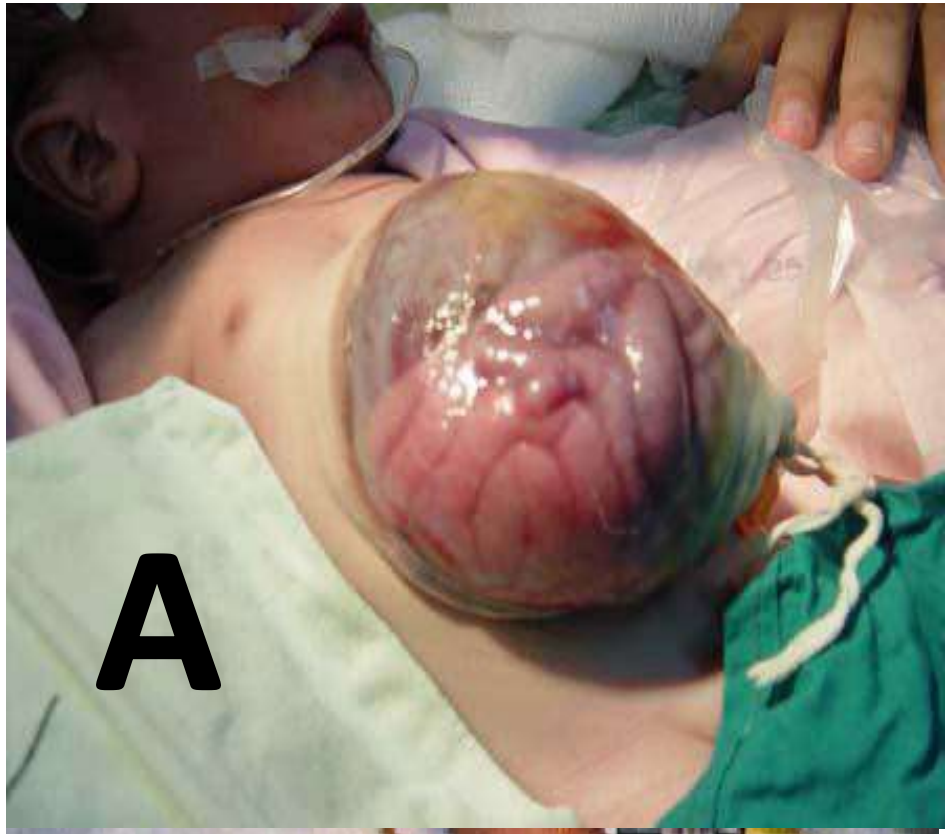
Q1: What is the diagnosis in A,B?

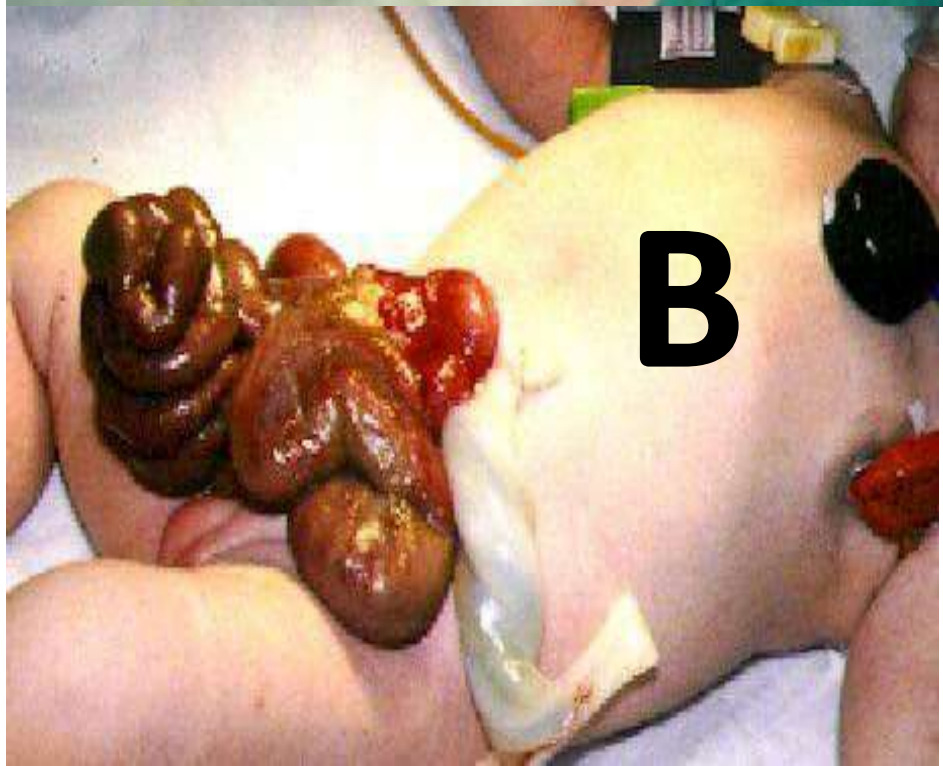
A > Omphalocele

B > Gastroschesis

Q2: Which of these are more associated with congenital anomalies?

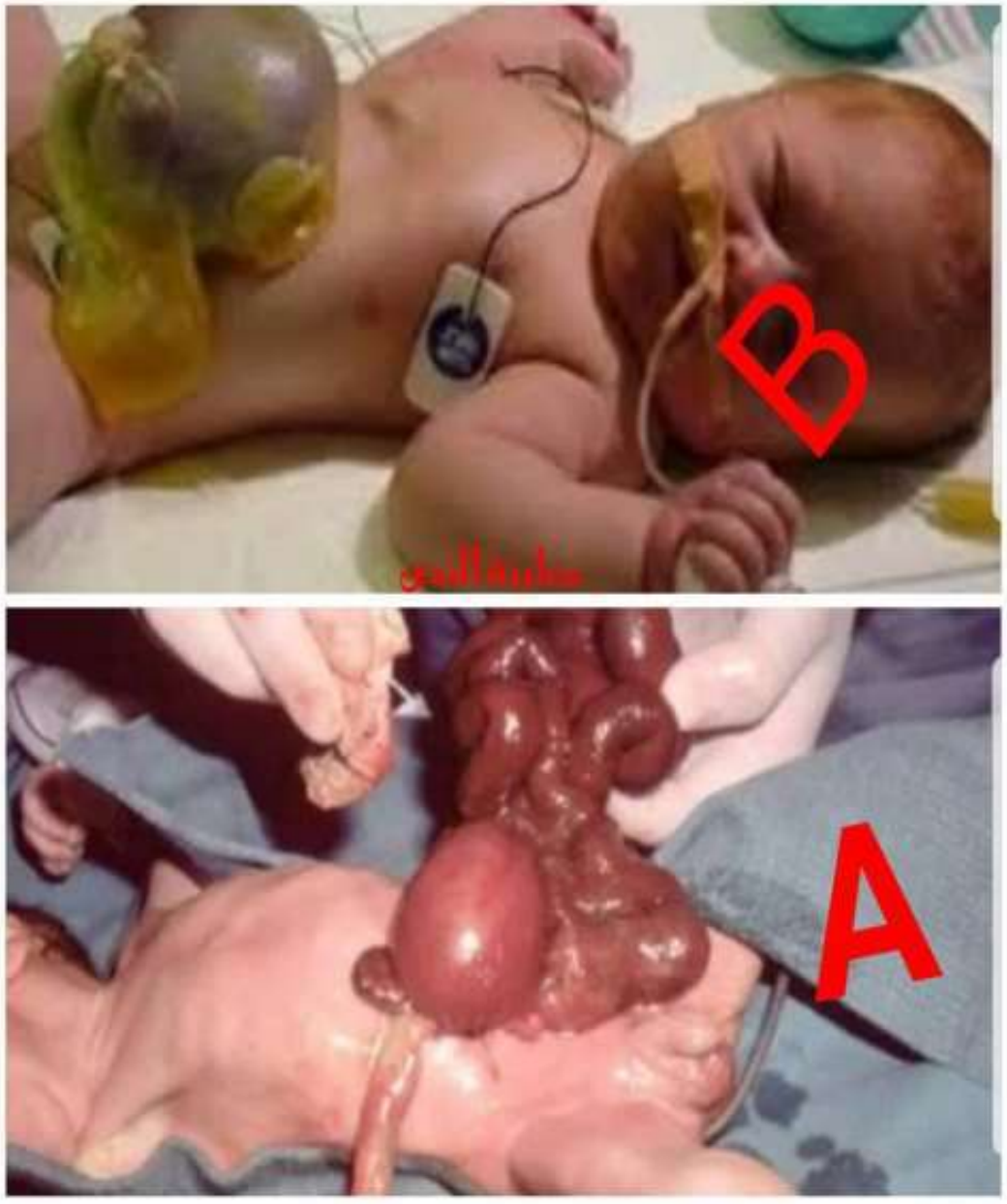
- Omphalocele





Q3: What is the 1st aid Mx for both?

- Carefully wrap in saline-soaked pads.
- Support without tension.
- NG tube.
- Abdominal ultrasound.



Q: Malrotation:

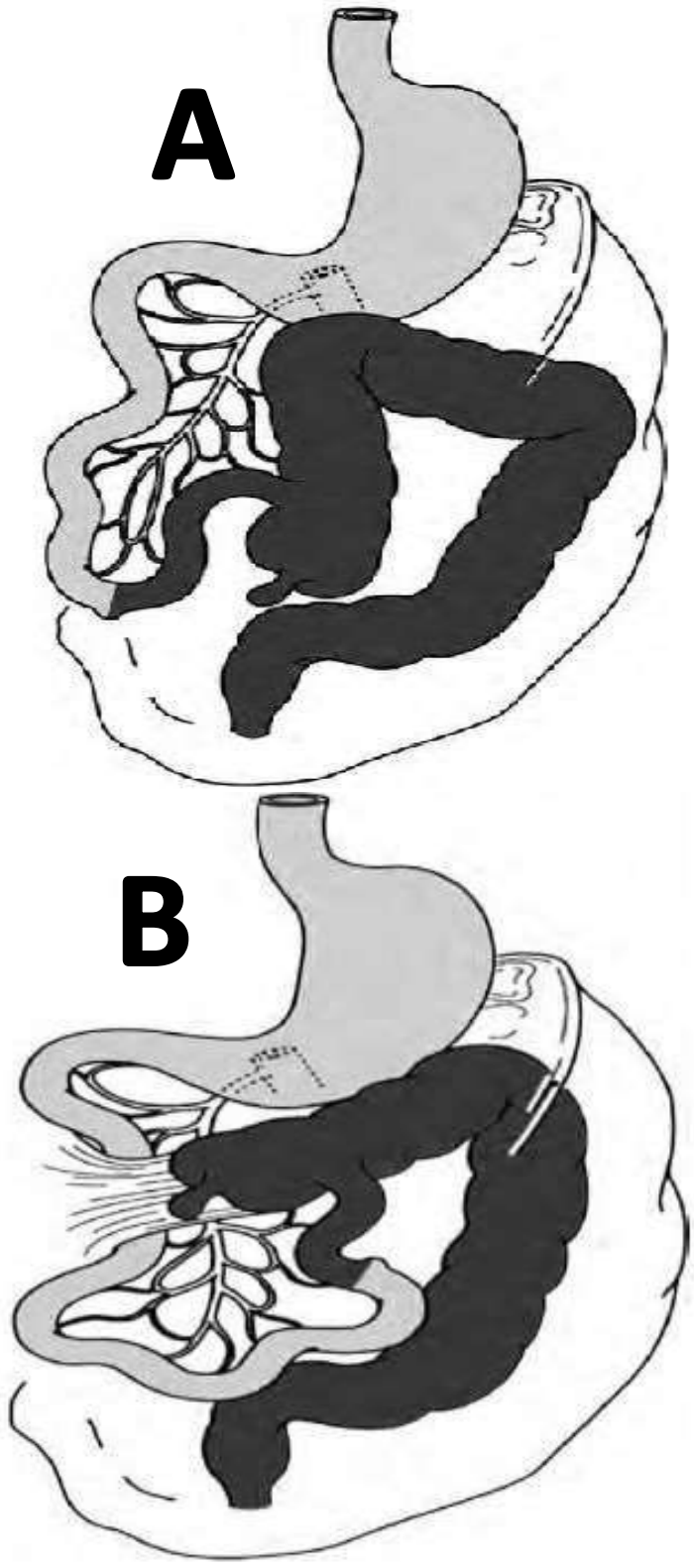
Q1: What's A and B?

A > Non-Rotation

B > Incomplete Rotation

Q2: Which one is the most commonly associated with volvulus?

- B



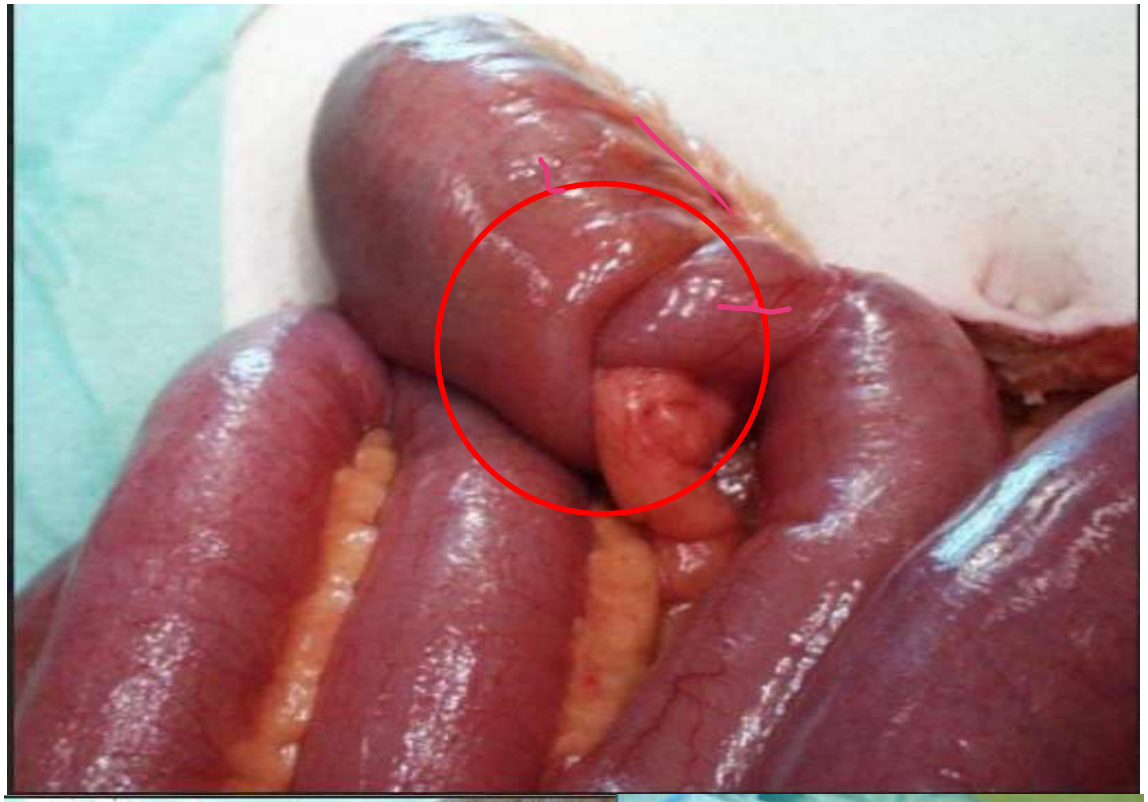
Q: What is the Dx according to:

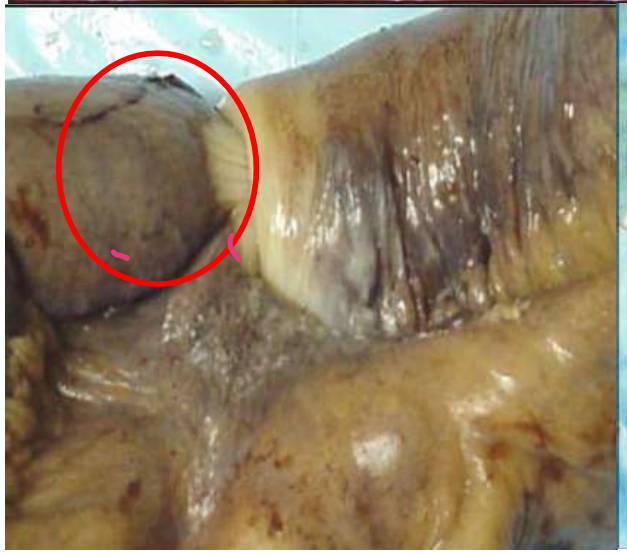
A: Preterm baby > Necrotizing enterocolitis (NEC)

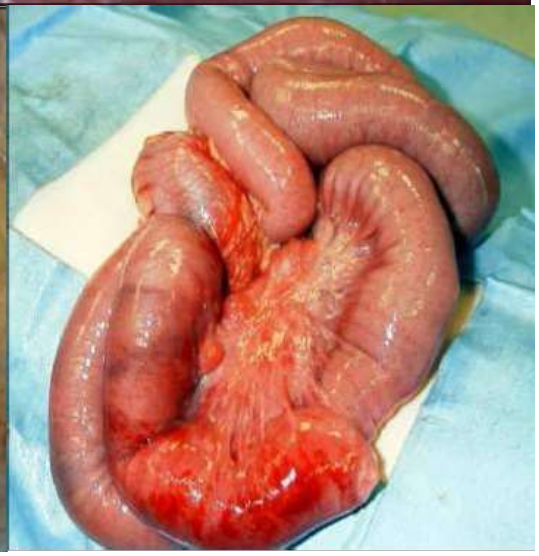
B: Full-term baby > Hirschsprung disease

Intussusception

- It is a cause of intestinal obstruction.
- M : F (3:2)
- In a previously healthy infant.
- (5 months - 3 yrs) idiopathic / (>3yrs) 2ry.
- m.c.c of I.O in the age of (5 months-3 yrs)
- Sudden onset, abdominal colic, vomiting.
- begins proximal to ileo-cecal junction.
- **Ba enema (diagnostic and therapeutic).**
- The part that prolapses into the other is called the intussusceptum, and the part that receives it is called the intussuscipient.







Q1: What is the investigation?

- Abdominal US

Q2: Name of the sign?

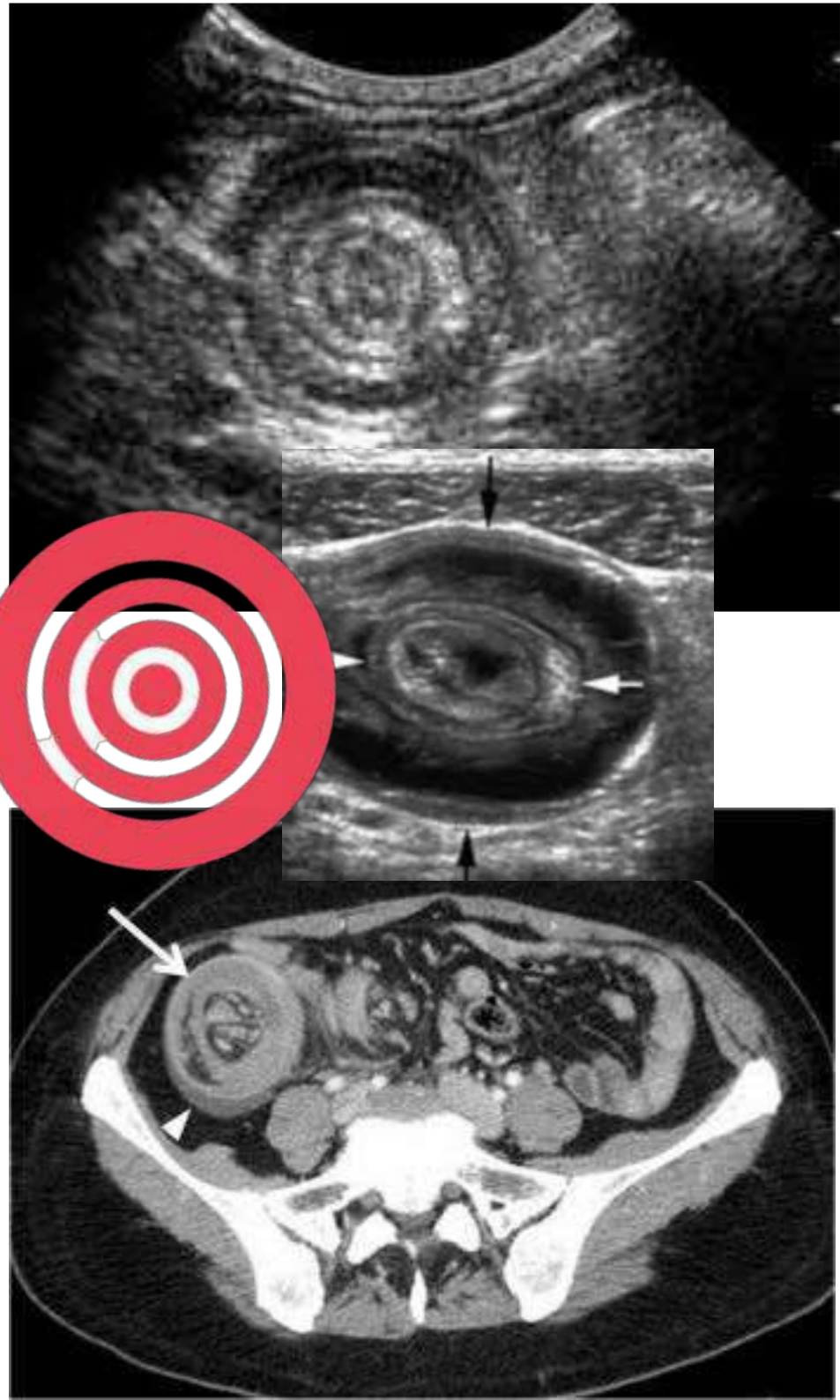
- Target sign

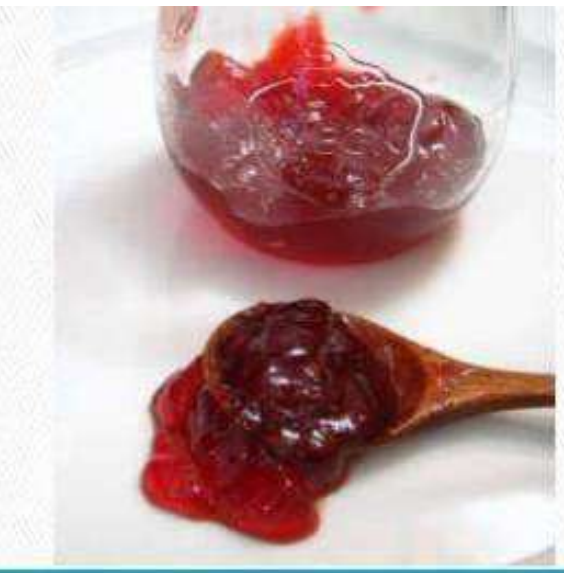
Q3: What is the pathology?

- Intussusception

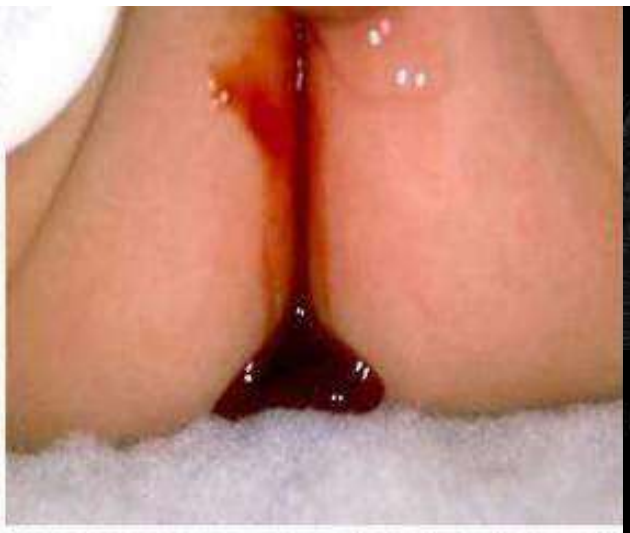
Q4: How do we treat those patients in uncomplicated cases (stable)?/1st line of Mx?

- Resuscitation, Hydrostatic (pressure) reduction using gas air or barium enema

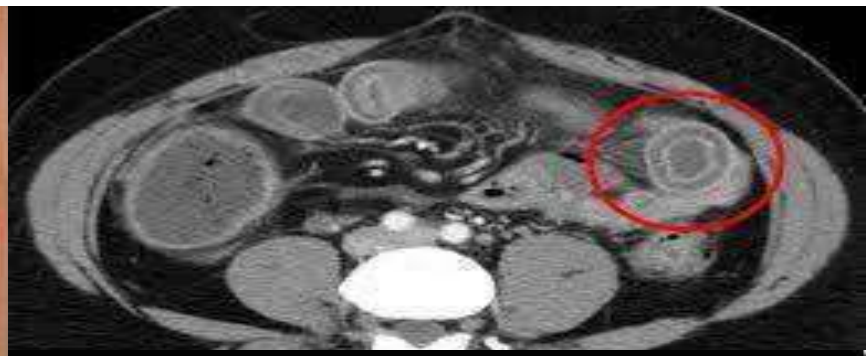


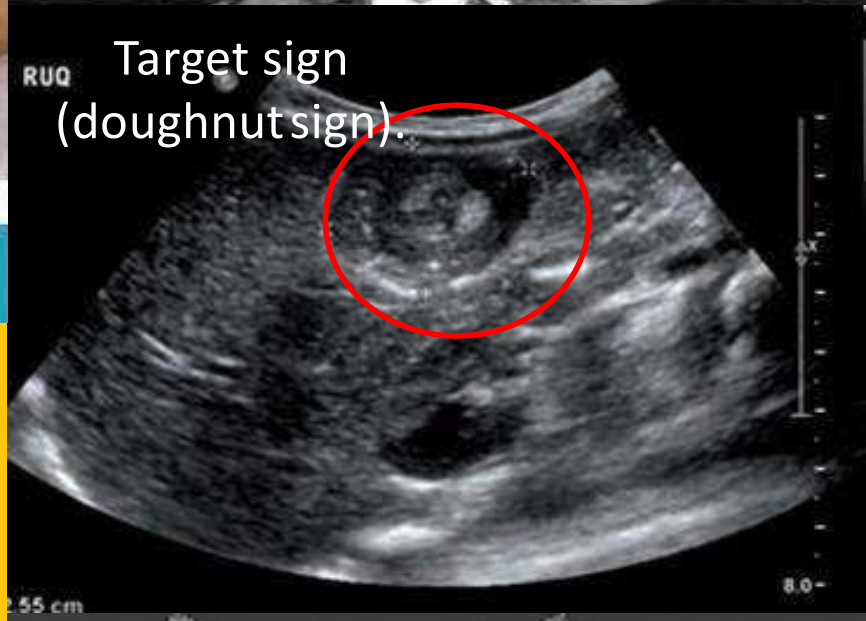


Red currant jelly

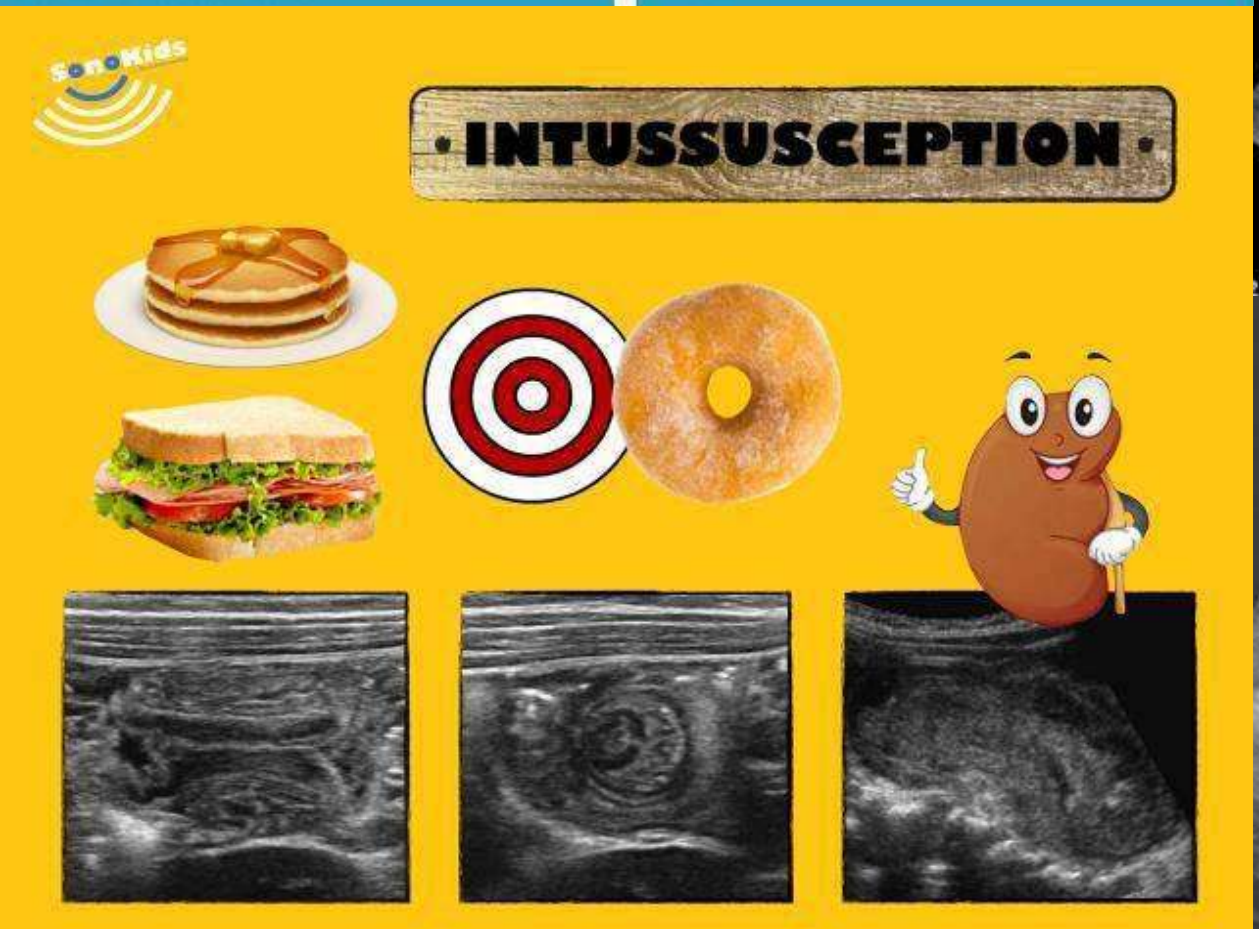


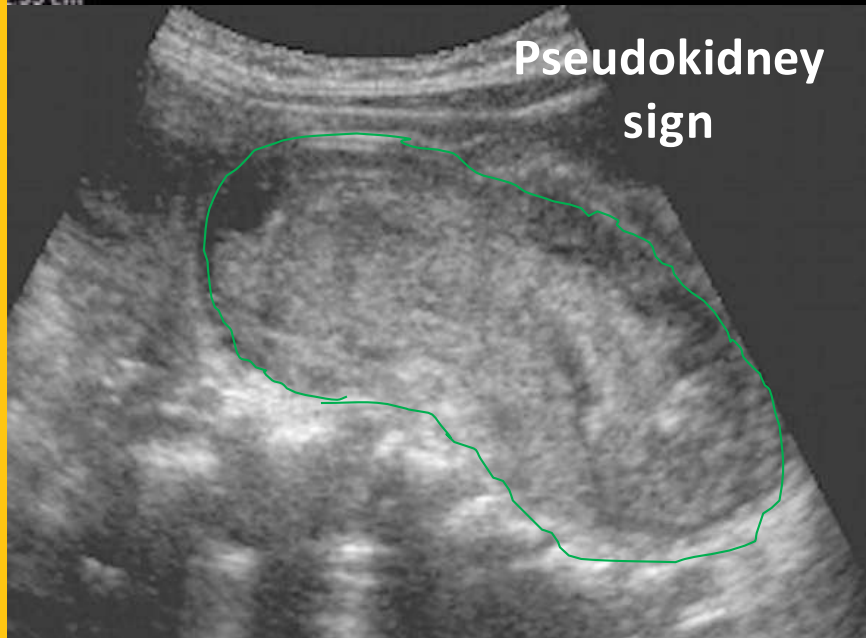
Stool





Target sign
(doughnut sign).

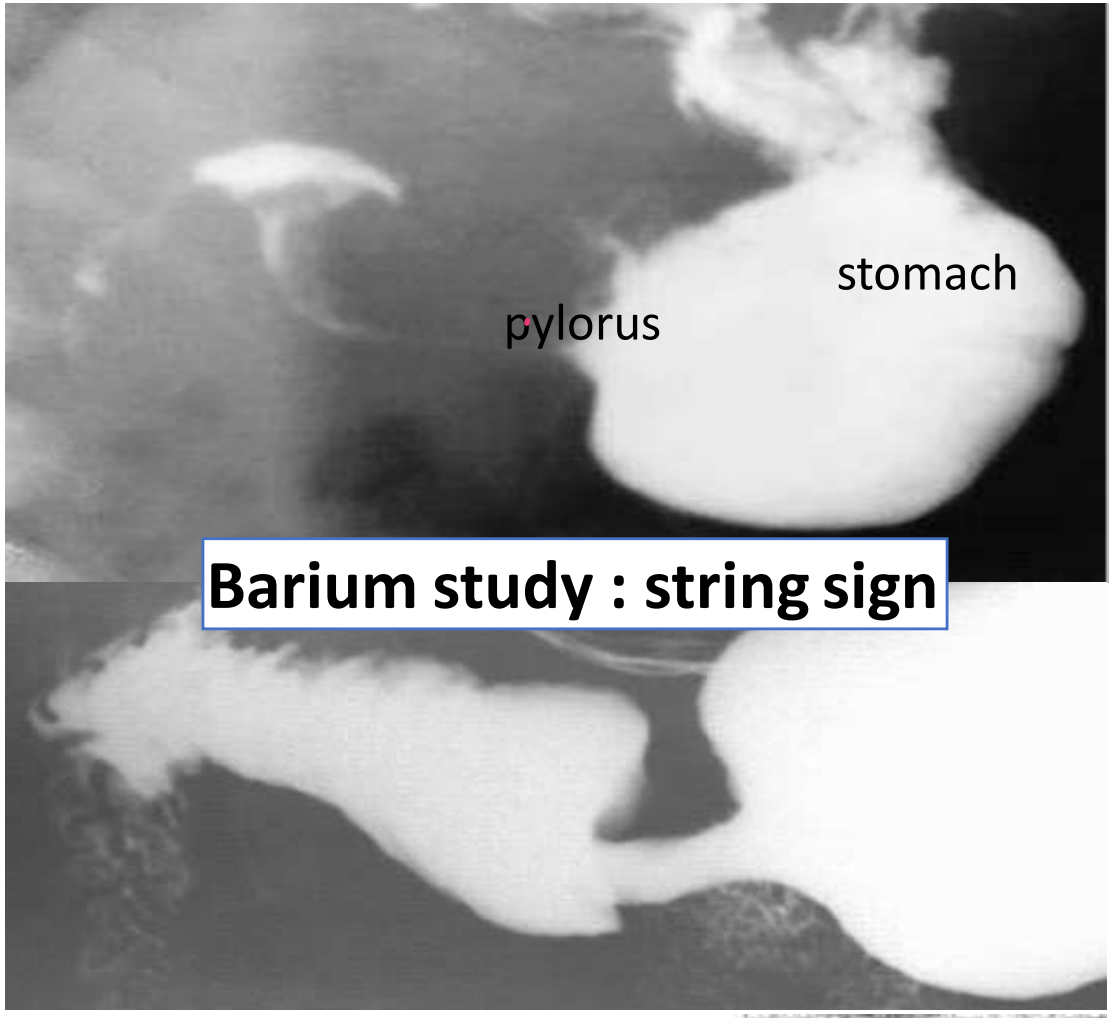


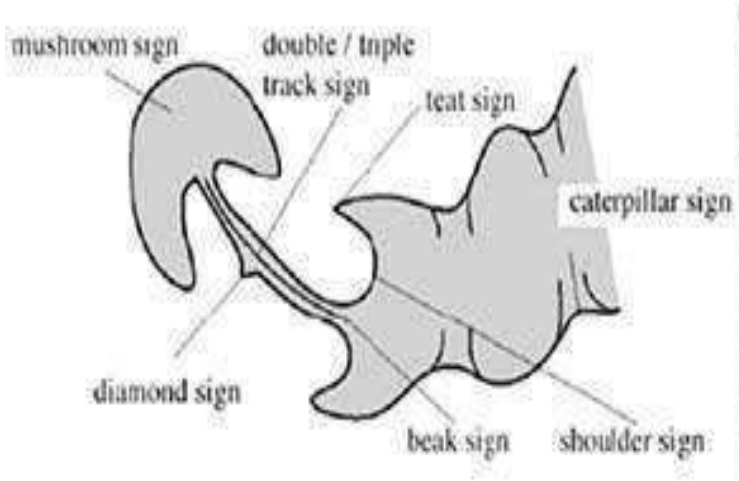


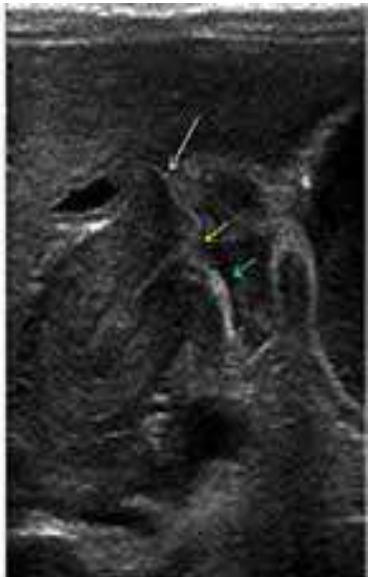
Pseudokidney sign

Pyloric stenosis

- M : F (4:1)
- Age (3-6 wks)
- Progressive, persistent, projectile, non-bilious vomiting.
- Succation splash.
- Olive sign (enlarged pylorus is palpable).
- Hypochloremic alkalosis.
- Dx by abdominal U/S
- Higher risk when mother is affected.
- Surgical ttt: Ramstad's pyloromyotomy.
- No recurrence after surgery.







Q1: What is this?

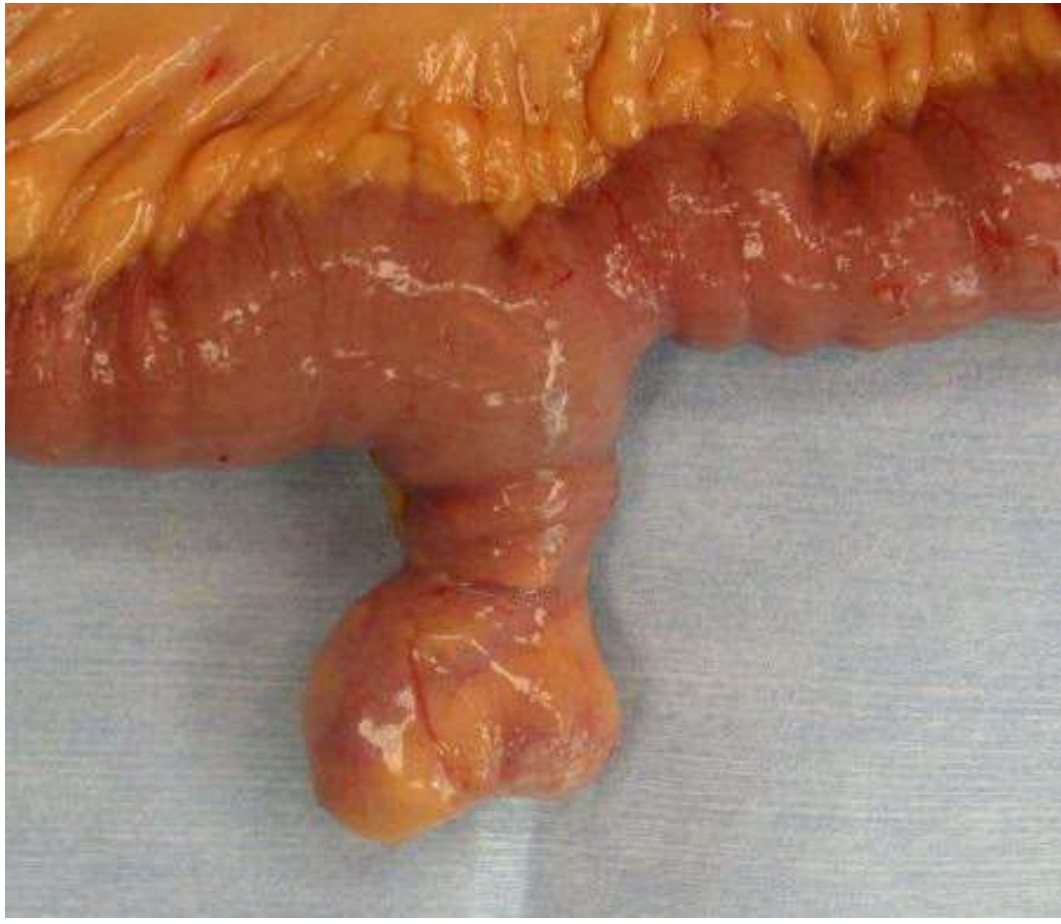
- Meckel's Diverticulum

Q2: Name 2 complications?

1) Intestinal hemorrhage
2) Intestinal obstruction
3) Diverticulitis

Q3: Mention one common ectopic tissue you can find?

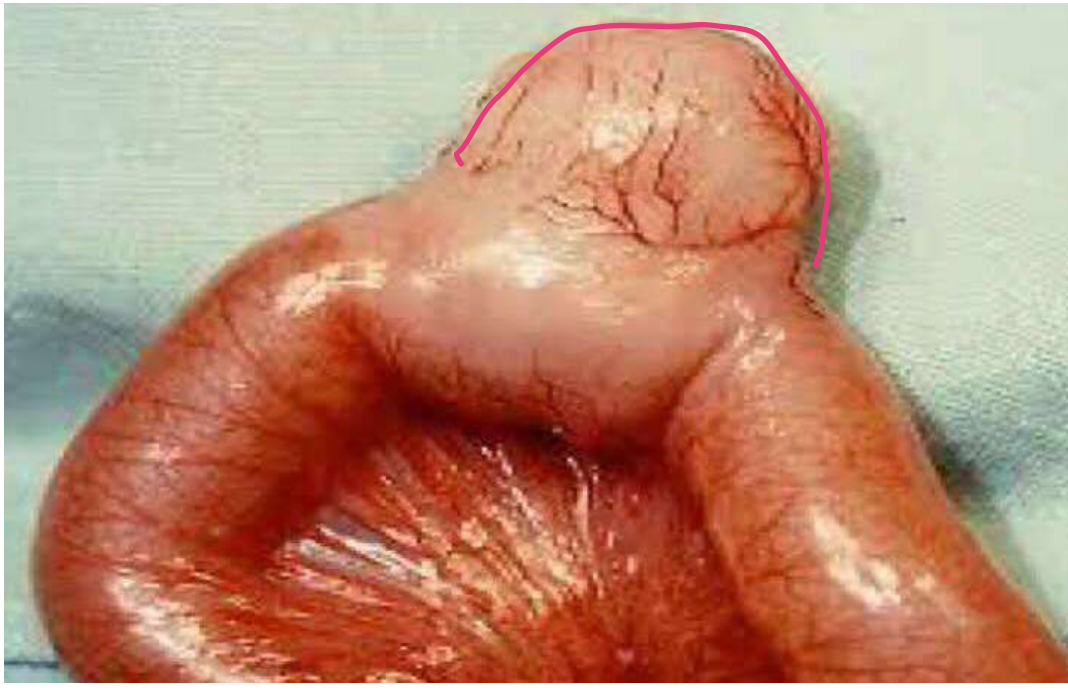
- Gastric and pancreatic tissues



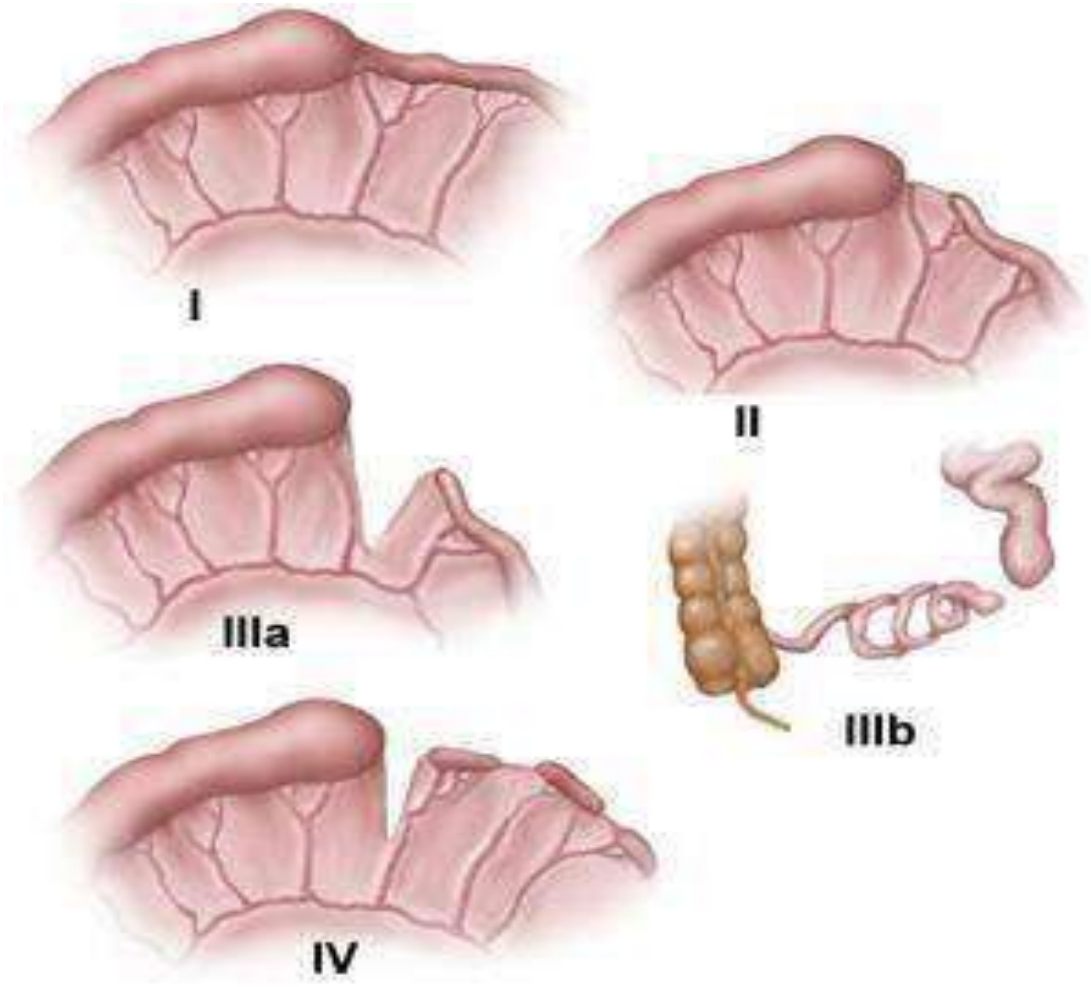
Q4: Is it a true or pseudo-diverticulum?

- True Congenital Diverticulum

-A memory aid is the rule of 2s:
2% (of the population).
2 feet (proximal to the ileocecal valve).
2 inches (in length).
2 types of common ectopic tissue (gastric and pancreatic)
2 years is the most common age at clinical presentation
2:1 male: female ratio



Types of intestinal atresia



Q1: What is the Dx?

Jejunal atresia.

Q2: Age of presentation?

Neonate (till one month)

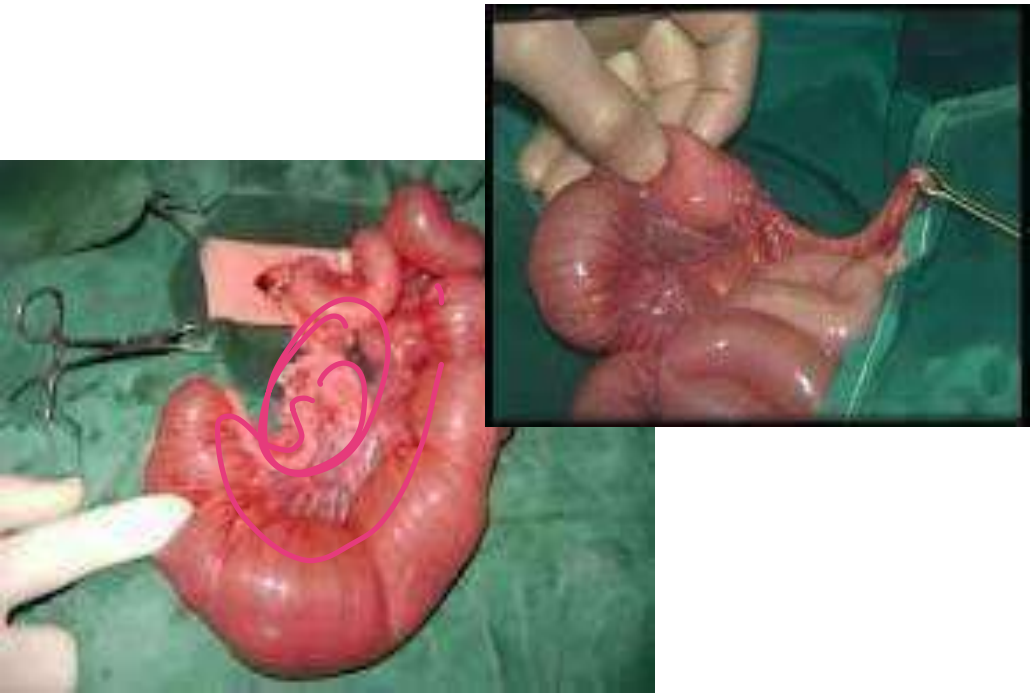
Q3: How would u manage?

Admit to NIC

fluid resuscitation

Antibiotic

NG suction and parental nutrition.



Q: Intra-op image of a baby with symptoms of obstruction.

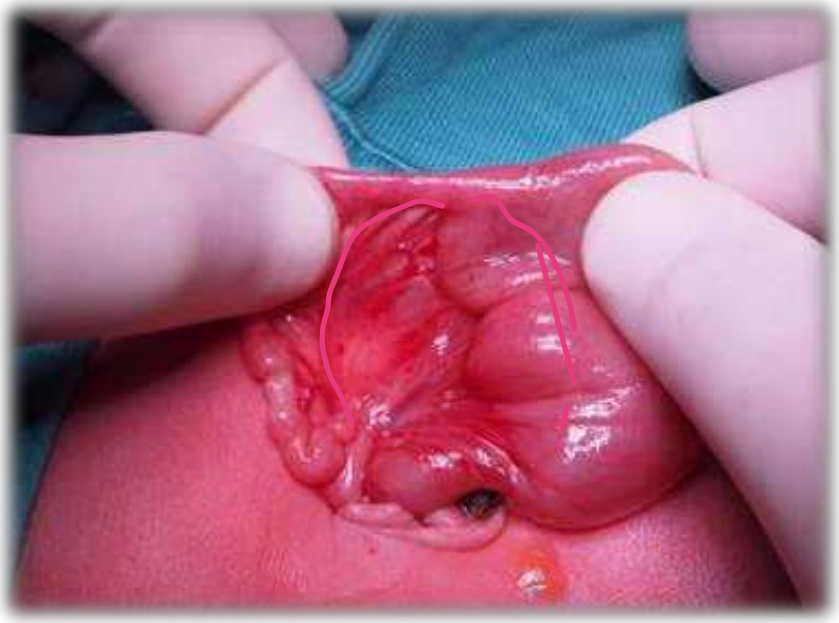
Q1: Give two findings:

Dilated proximal loop,

collapsed distal loop.

Q2: What is the diagnosis?

Type 1 intestinal atresia.

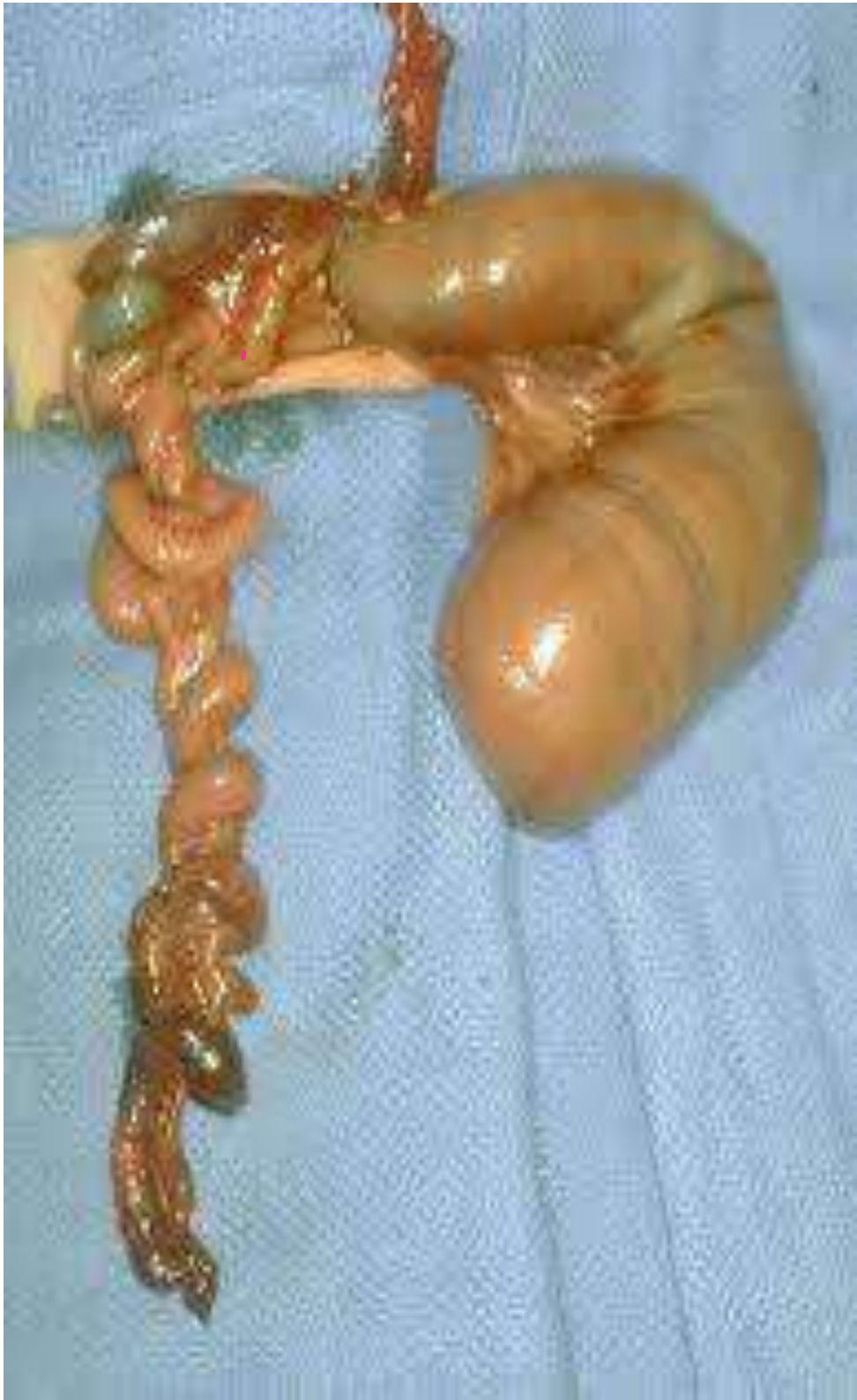


- **Apple peel intestinal atresia**

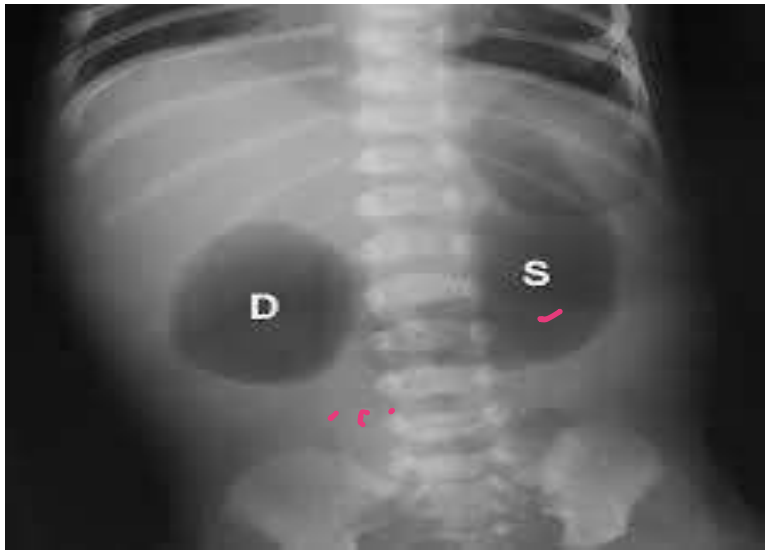
(also type IIIb or **Christmas tree atresia**).

- Due to vascular accident.

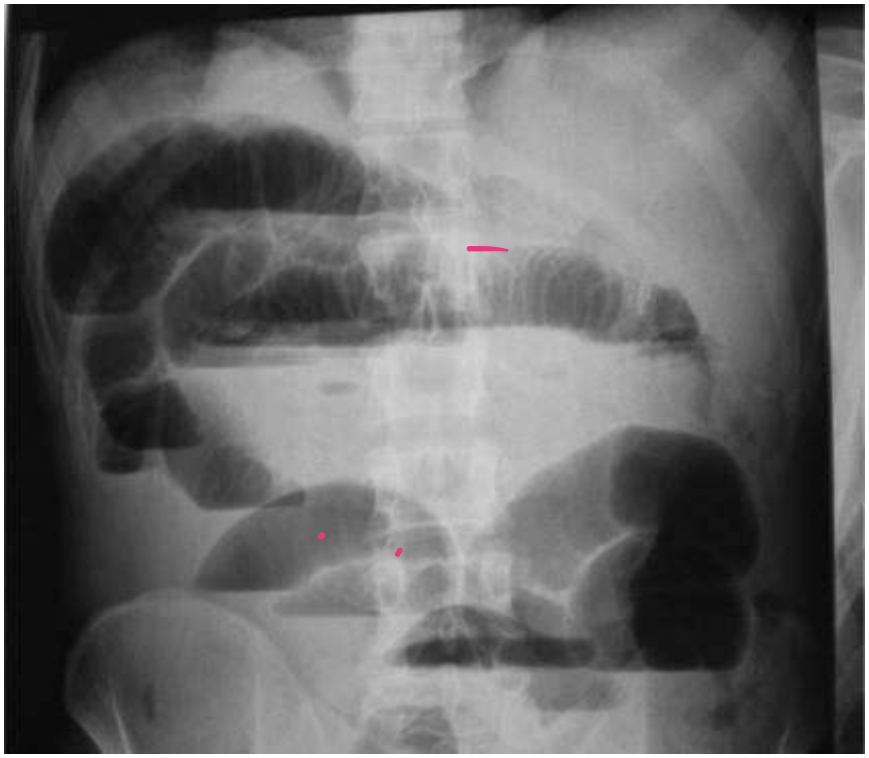
- All the intestine is atretic, and forms a loop around the superior mesenteric artery.



Intestinal obstruction



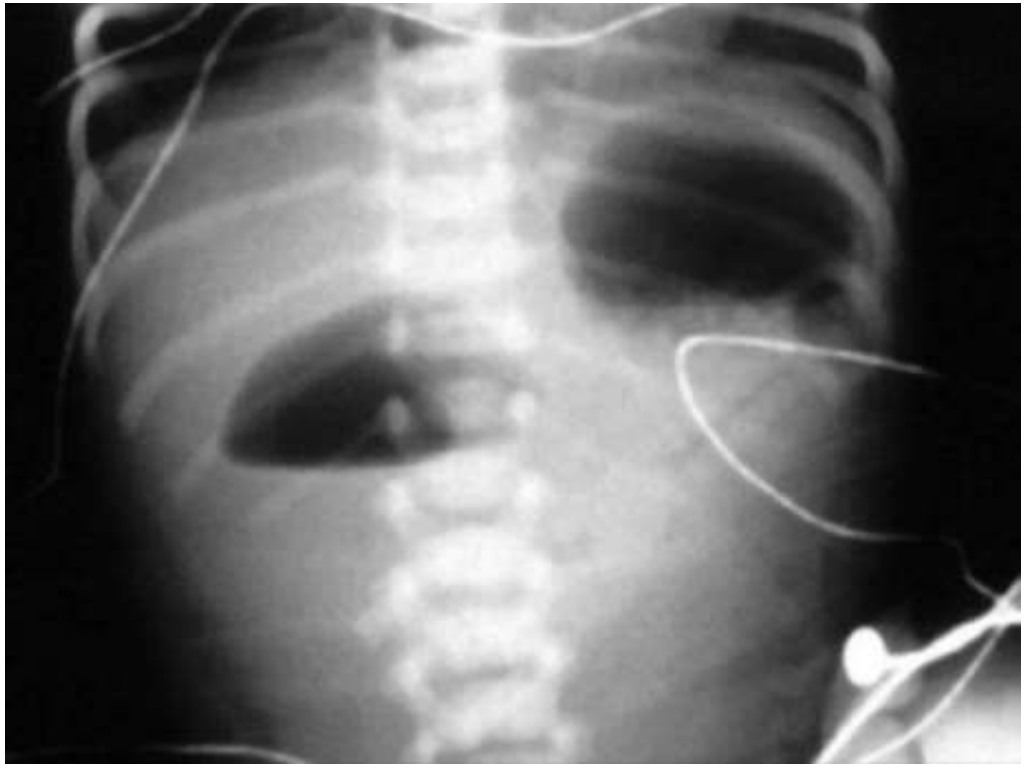
- Abdominal X-ray.
- Double bubble sign.
- represents dilation of the proximal duodenum & stomach.
- DDx : duodenal stenosis (mostly in the 2nd part of duodenum) / duodenal atresia.



Multiple air fluid levels seen in mechanical intestinal obstruction.

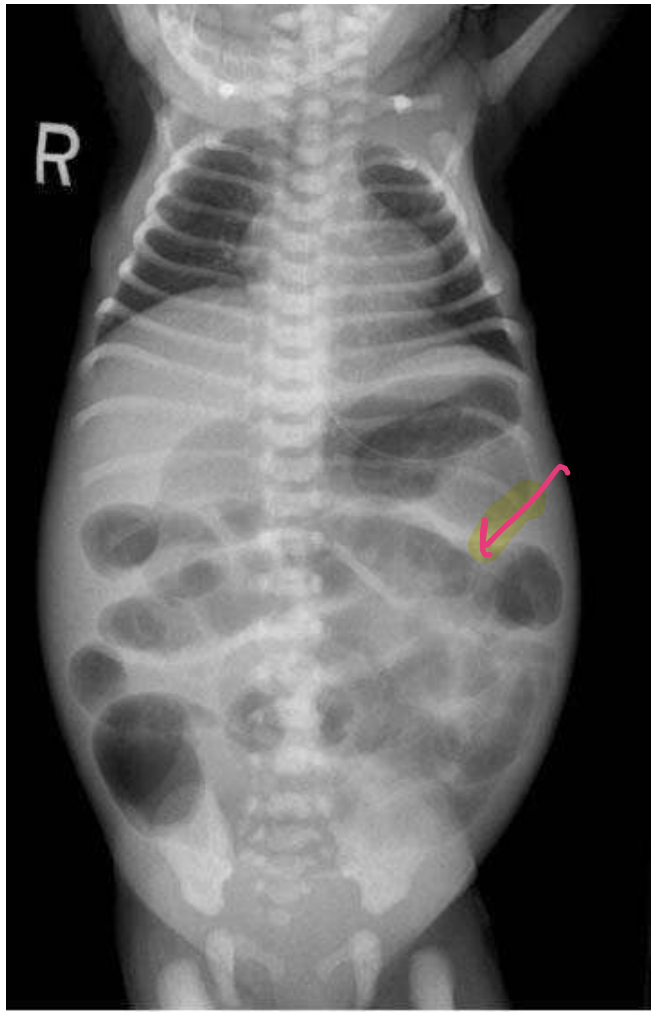
Meconium ileus

- Intestinal obstruction from solid meconium concretions.
- >95% have cystic fibrosis.
- Sx: bilious vomiting/ abdominal distention/ failure to pass meconium.

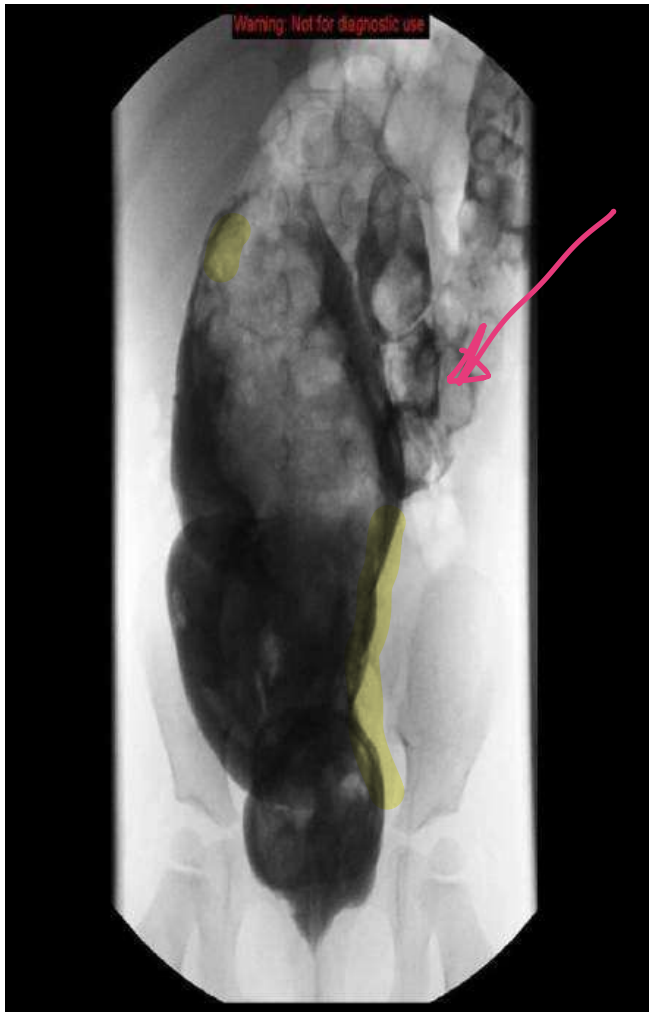


Hirschsprung's disease

- Congenital megacolon.
- It is an absence of ganglion cells distal in the bowel.
- Contracted non-peristaltic affected segment and a dilated hypertrophied proximal segment.
- M:F (4:1)
- Failure to pass meconium in the 1st 24-48 hrs of life.
- When compared to habitual constipation (no soiling/ no anal fissures).
- DDx : hypothyroidism/ sepsis.

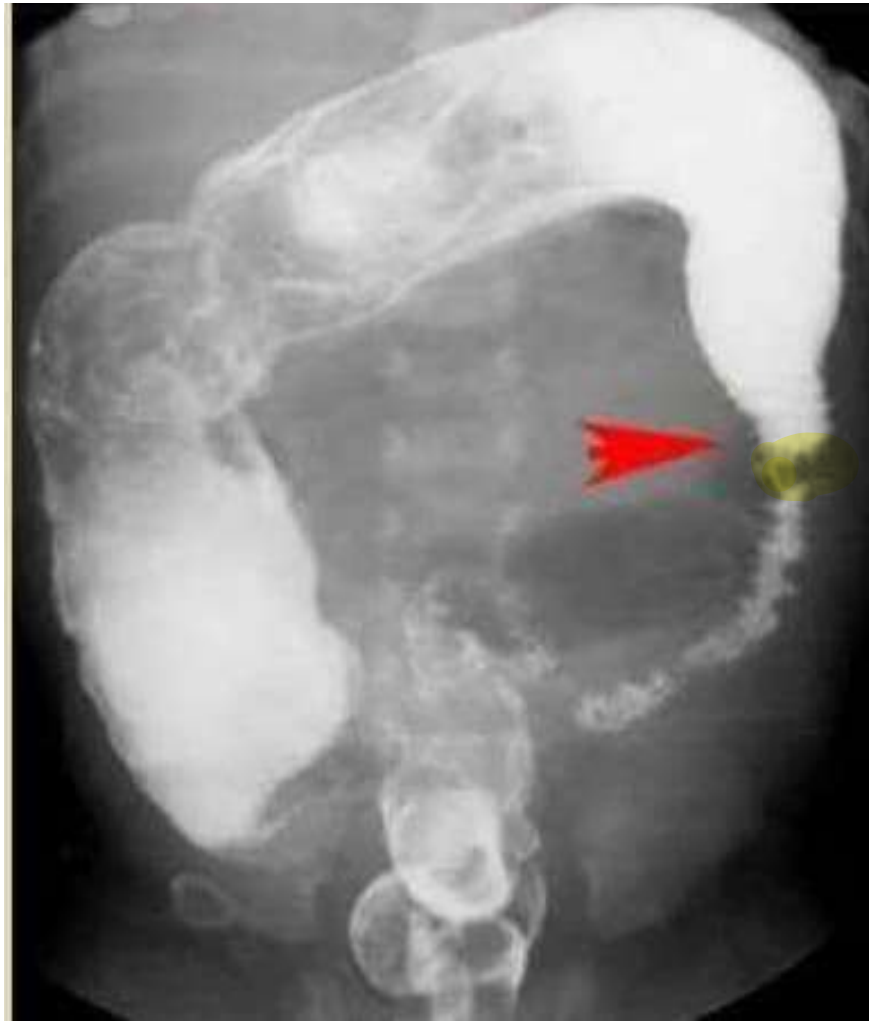


Plain abdominal X-ray : dilated loops of bowel/ air-fluid level.



Barium enema study: funnel shaped appearance of colon (megacolon – transitional zone- the affected narrowed segment).

Q: A neonate failed to pass meconium, so a barium enema was done and shows this:



Q1: What is the Dx?

- Hirschsprung disease

Q2: What does the arrow indicate?

- Transition zone

Q3: What is the diagnostic test?

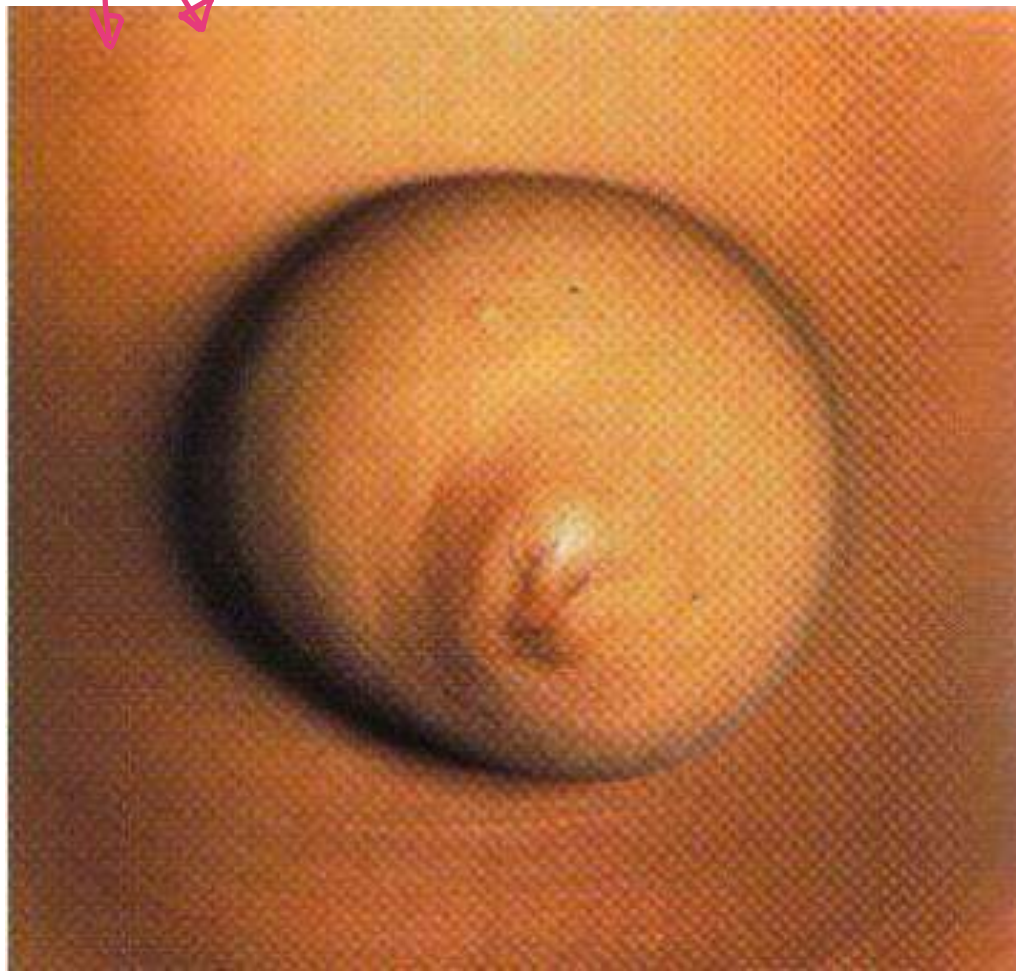
- Biopsy
- Full thickness or rectal suction

Q4: Name the radiology study?

- Barium enema

Umbilical Hernia

- more common in blacks.
- familial tendency.
- repair is carried out if closure does not occur by the end of 2nd year of life.
- repair performed after the age of 2 and before the age of 10.
- associated anomalies :
  - hypothyroidism.
  - hurler syndrome.
  - beckwith-wiedman syndrome.

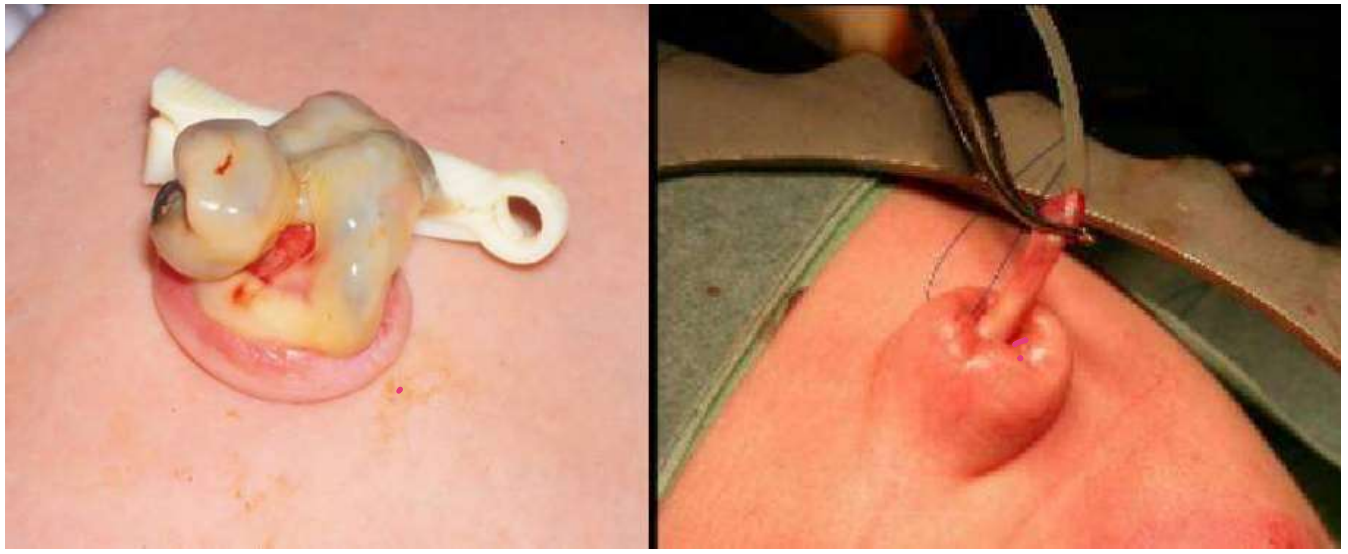


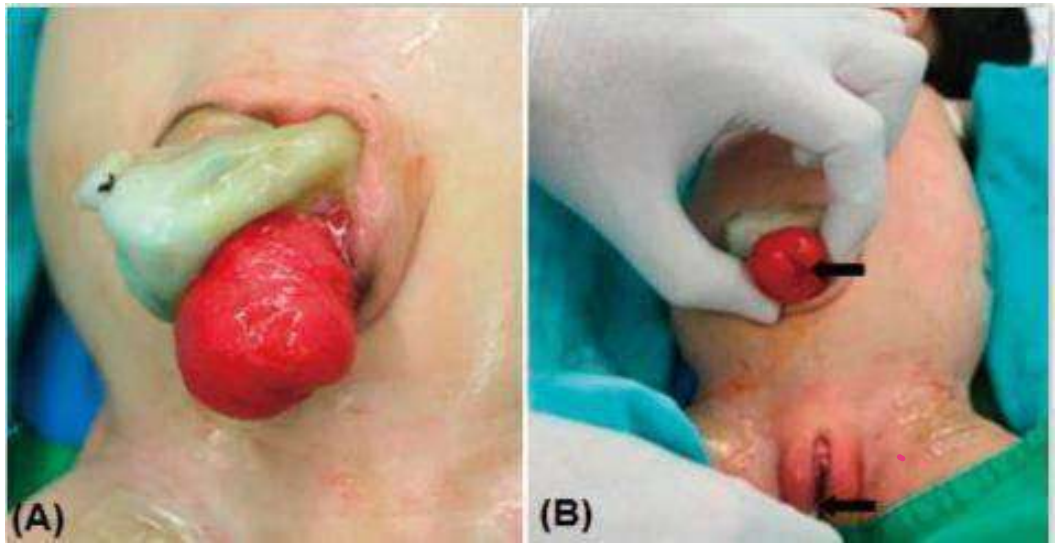
Patent urachus

•It is a remnant presents as fistula connecting the umbilicus & urinary bladder.

•Patients with prune belly syndrome have a patent urachus.

•Other forms : blind sinus/ cyst/ abscess.





(A) Prolapsed bladder was shown through the patent urachus. (B) Catheterization through the urethral orifice confirmed the communication between patent urachus and the bladder (black arrow: catheter tip).

Vesicointestinal fissure

The terminal ileum is herniating through the cecum forming the so called elephant trunk deformity.

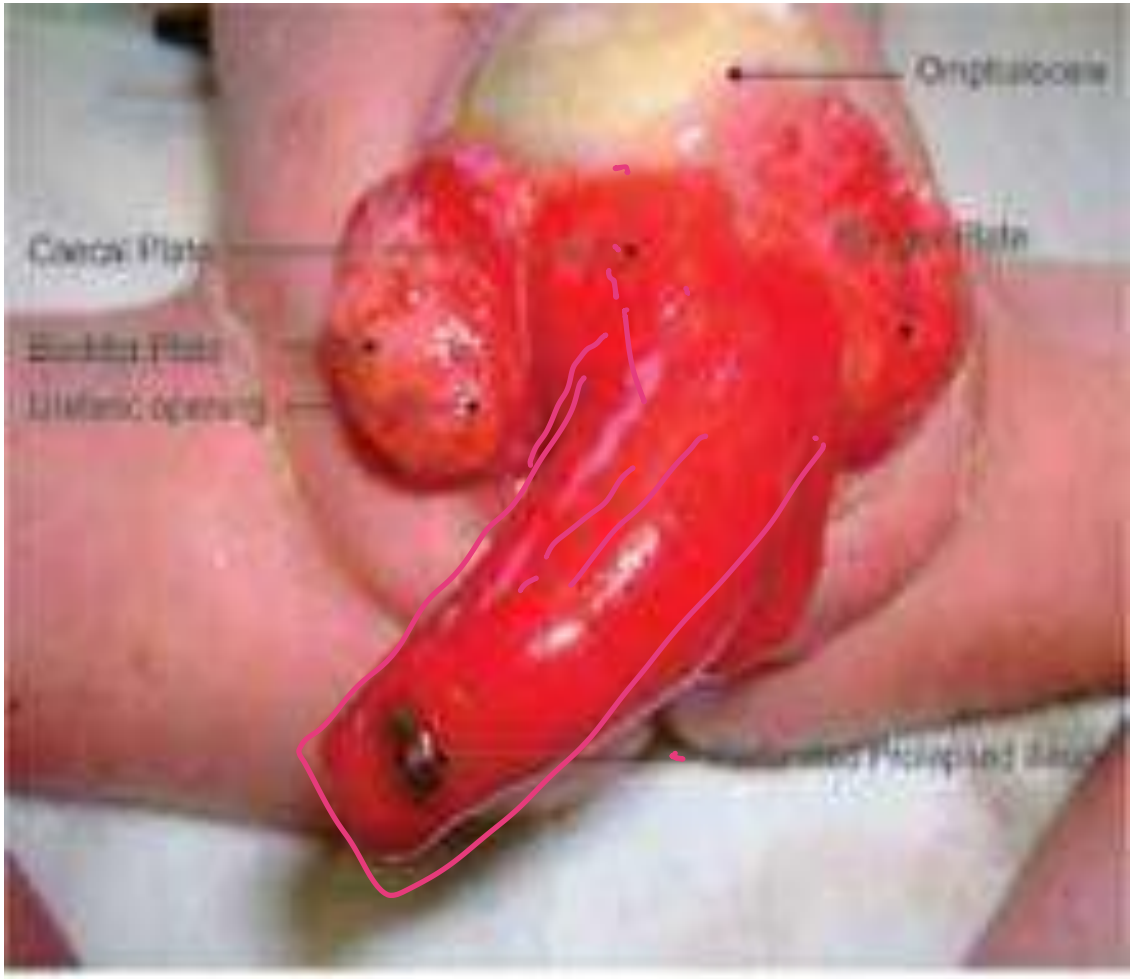
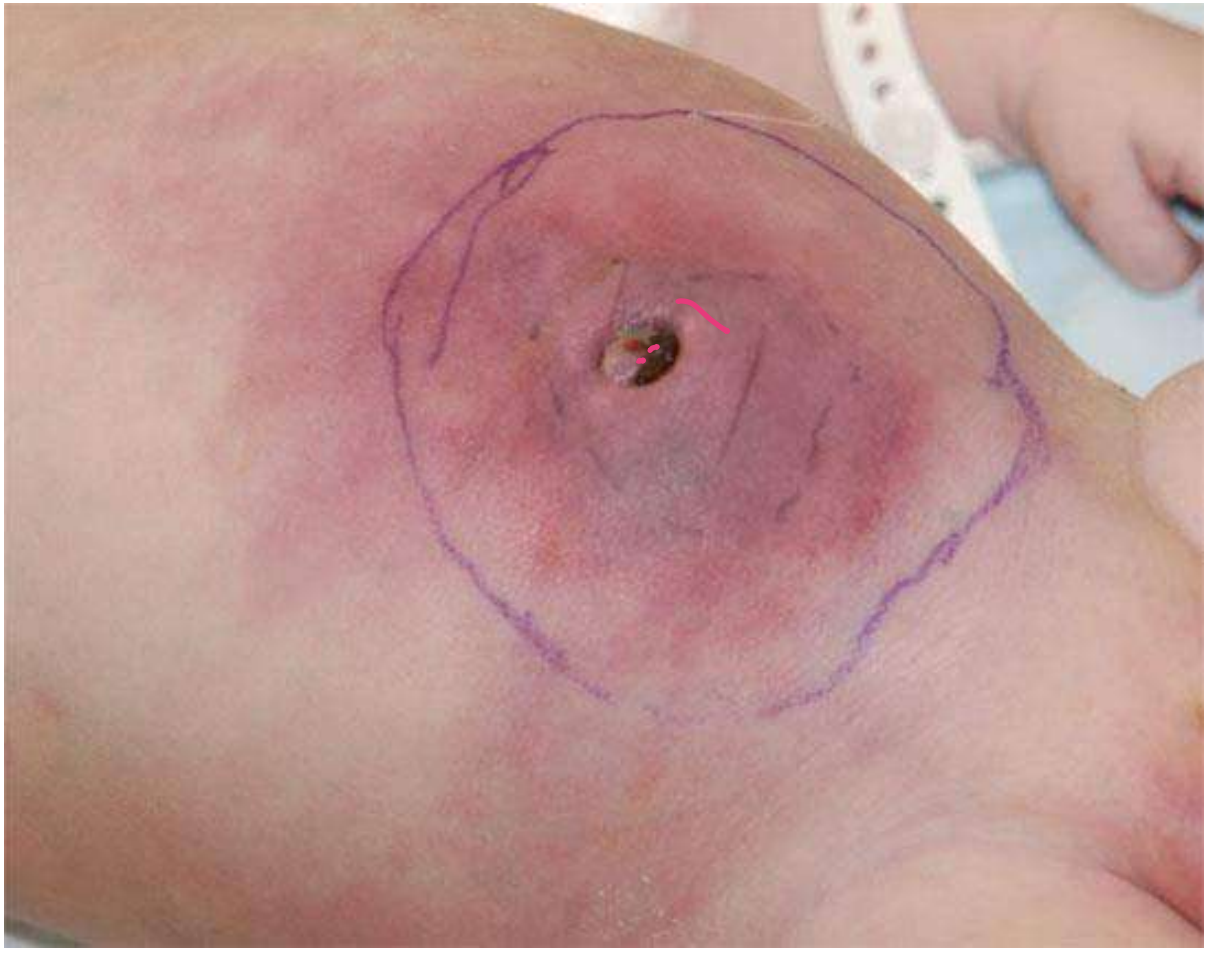


Fig. 1: Showing omphalocele, lateral bladder plate, caecal plate and prolapsed ileum.

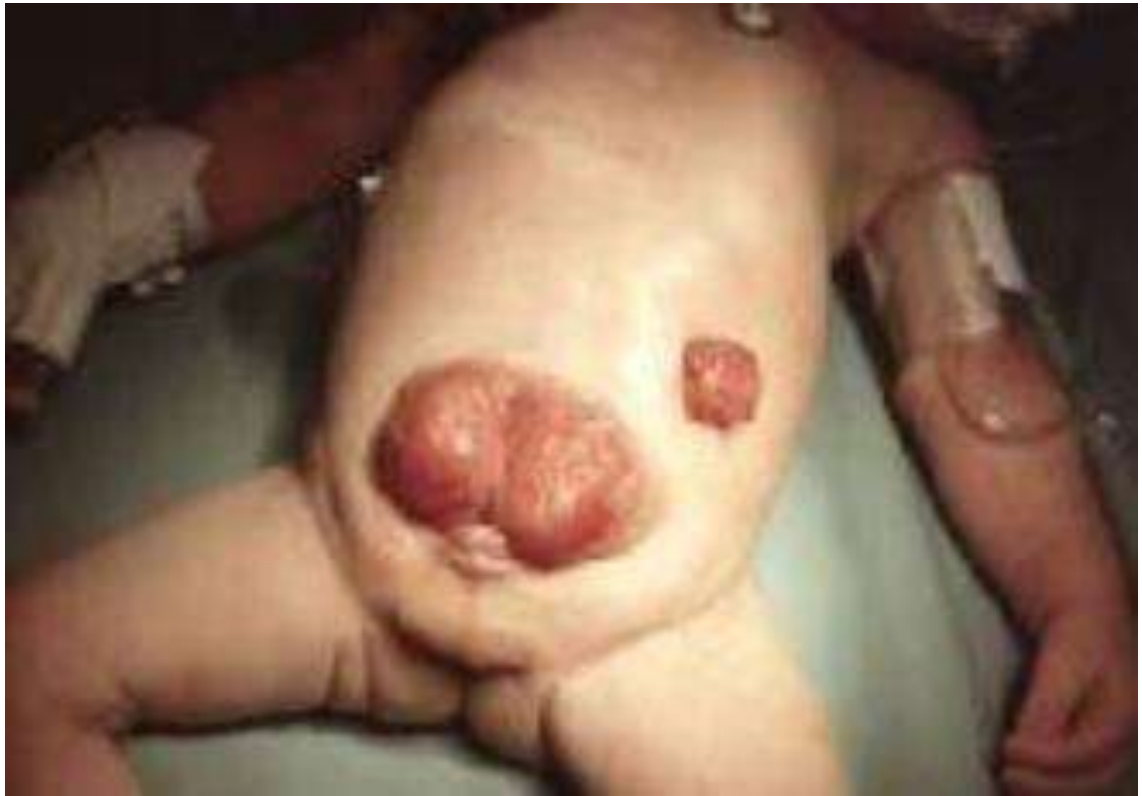
Omphalitis

- Inflammation of the umbilicus.
- Occurs only in newborns.
- Can be fatal because of portal vein thrombosis.
- Infection can spread to the abdominal wall.
- Antibiotics and intensive care.



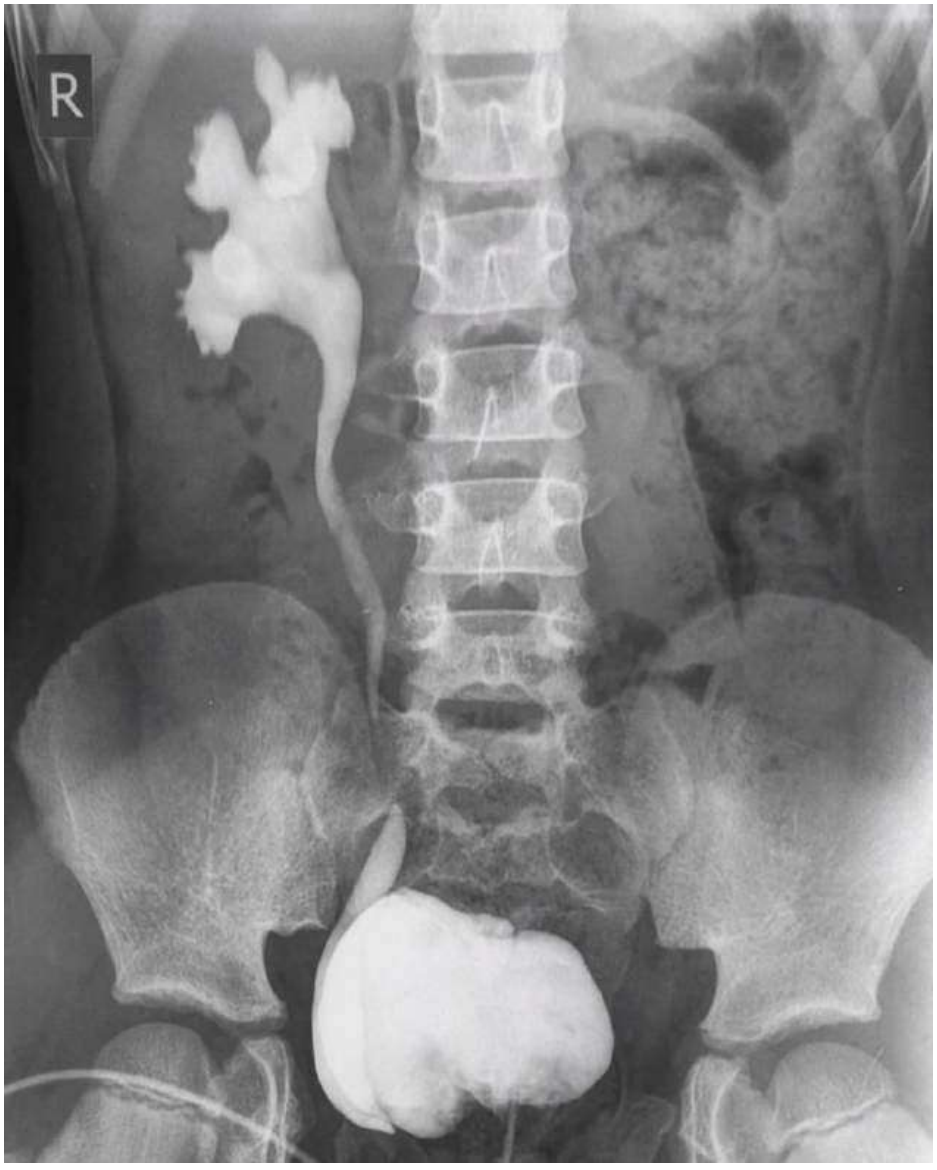
Bladder Extrophy

- Defective enfolding of caudal folds.
- Associated with prolapsed vagina or rectum / epispadias / bifid clitoris or penis.



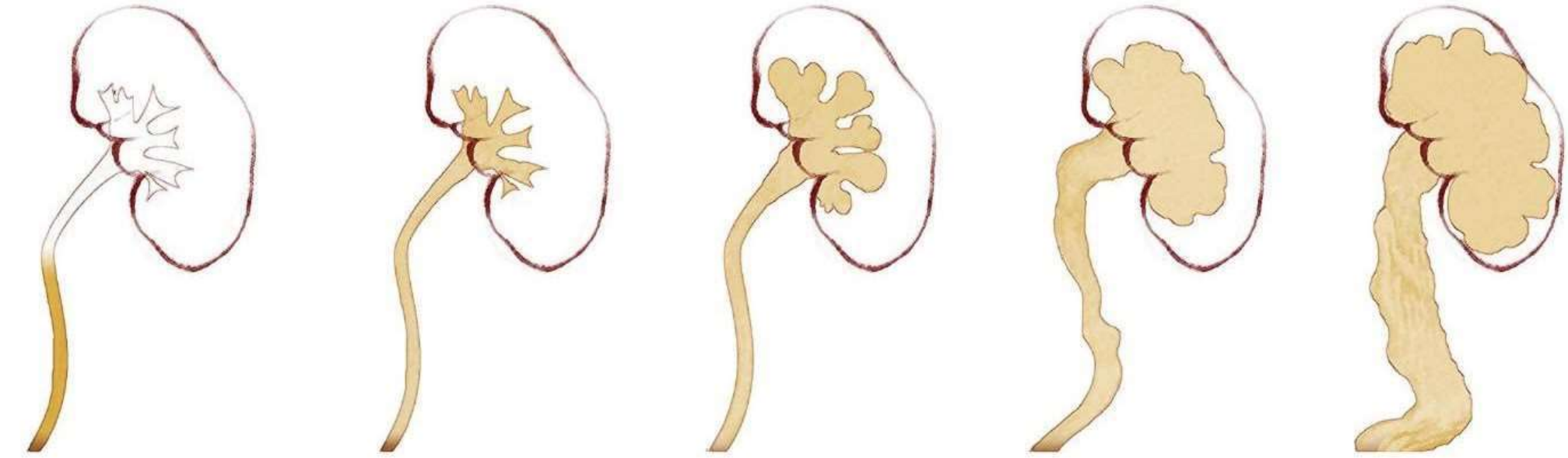
Vesicoureteral reflux

- **Presentation : either antenatal hydronephrosis or clinical UTI.**
- Diagnosis : urine culture/ ultrasound/ **voiding cystourethrogram.**
- Nuclear cystogram for screening.
- DMSA scan to detect kidney scarring.
- Urodynamic study for lower urinary tract abnormalities (neurogenic bladder).



Spot film taken during VCUG shows unilateral grade 4 vesicoureteral reflux

UVR grades



Treatment：

- Spontaneous resolution is common in young children (only antibiotics).
- Indications for surgery: grade 4 and 5/ poor compliance with medications/ breakthrough febrile UTI despite adequate antibiotic prophylaxis/ poor renal growth/ kidney scars/ mild or moderate reflux in females that persist during puberty despite several yrs of observation.

Q1: What is the pathology?

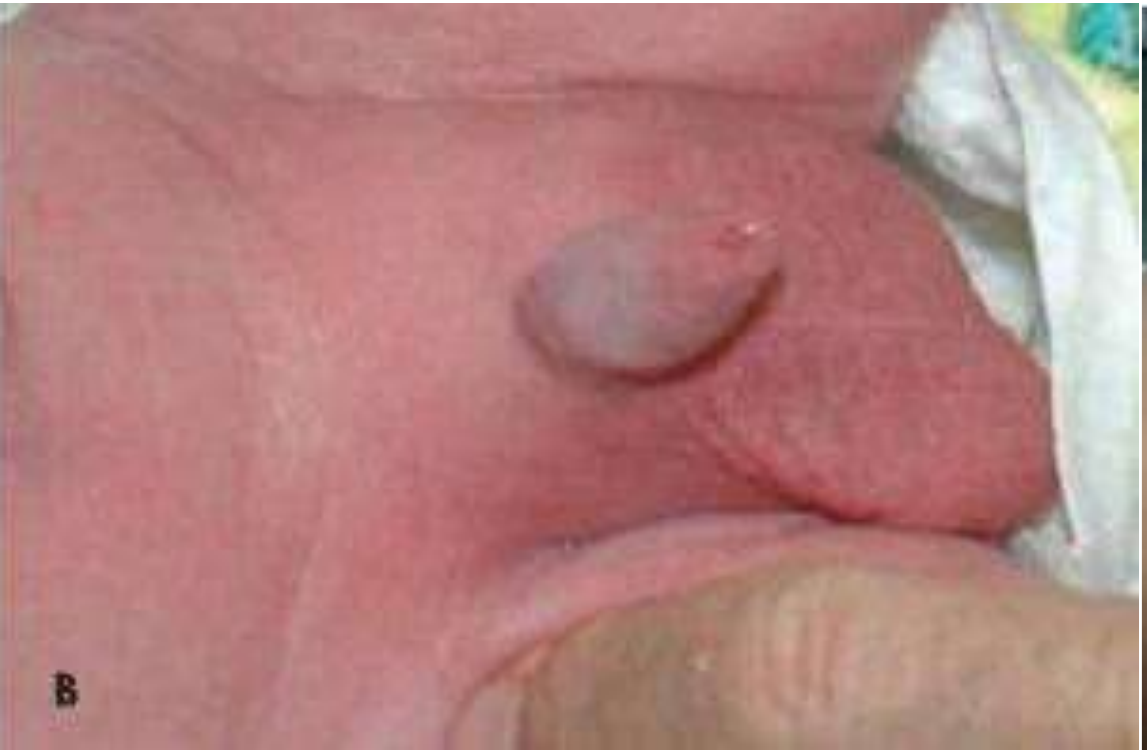
- Right scrotal swelling (Hemi-scrotal swelling)

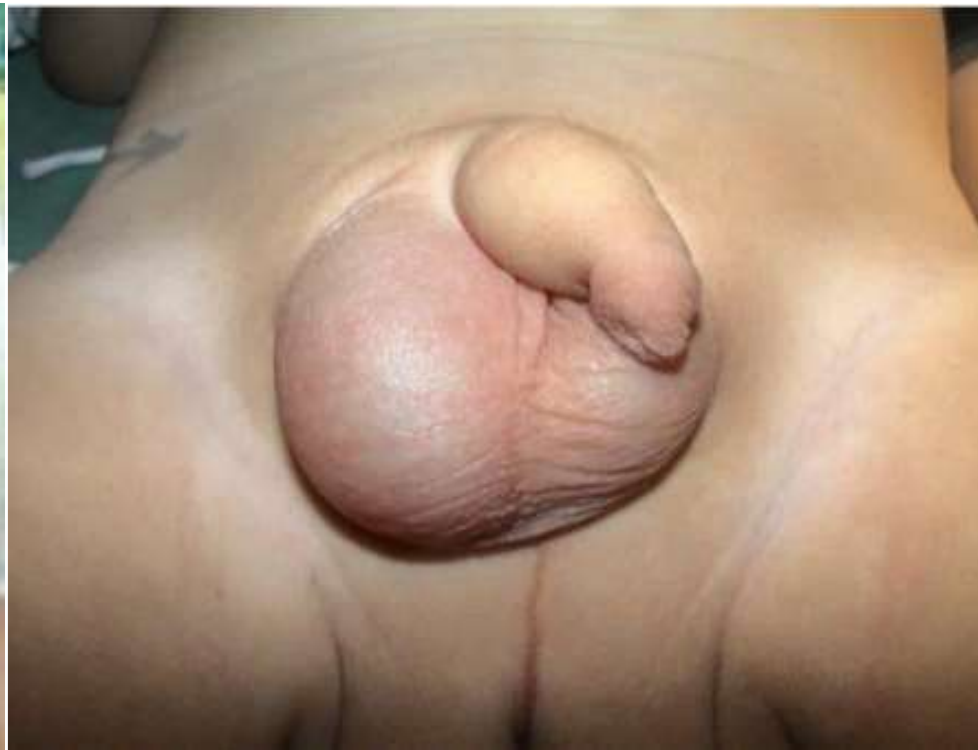
Q2: Give two benign DDx?

- Inguinal hernia, hydrocele

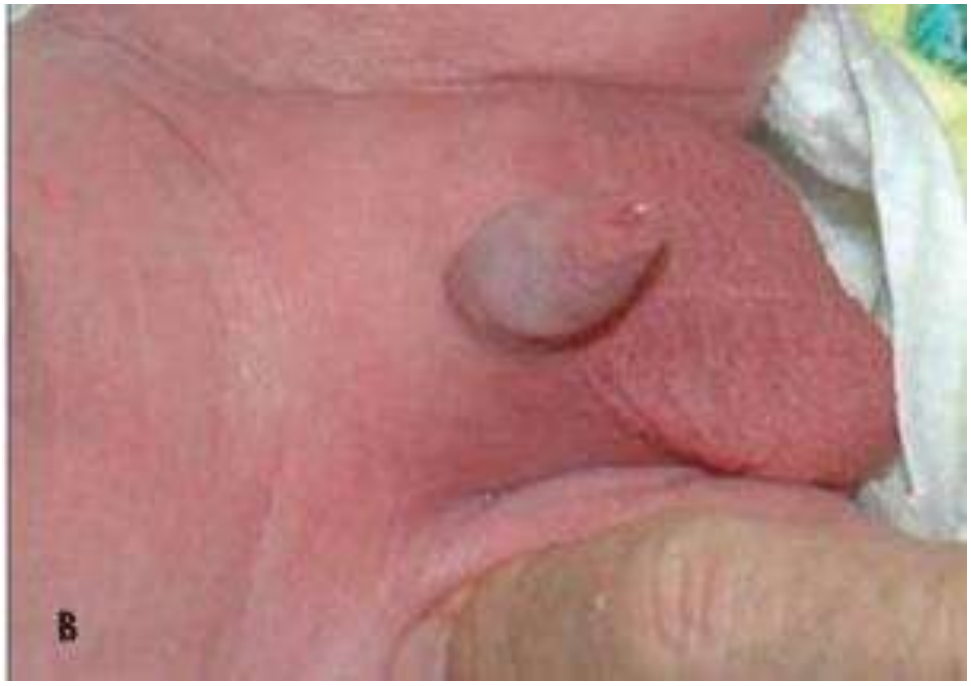
Q3: What is the name of peritoneal part remain patent?

- Patent processus vaginalis





Inguinal hernia



- Due to patent processus vaginalis.
- More common at the right side.
- Bilateral hernias occur in 5-15% of children with hernia.
- **Uncomplicated hernia** will bulge when the baby cry and reduces when the baby is relaxed , sleeping. Etc.
- Uncomplicated hernia must be operated (herniotomy).
- Herniotomy must be performed ASAP.
- 10-15% of children with on the other side. hernia on one side will develop a hernia

- **Complicated hernia** presents in the ER with pain/ management : resuscitation, reduce hernia, then repair within 24-48 hrs. (as we fear strangulation and testicular atrophy).

Q1: What is the Dx?

- Epispidias and Hypospadias

Q2: Mention 2 associated anomalies?

1) Bladder extrophy
2) Bifid penis
3) Rectum prolapse

Q3: Name 2 commonly associated features with this pathology other than the abnormally located urethral meatus:

1) Chordee
(downward bending of the penis)
2) Hooded appearance of the penis

Q1: What is the Dx?

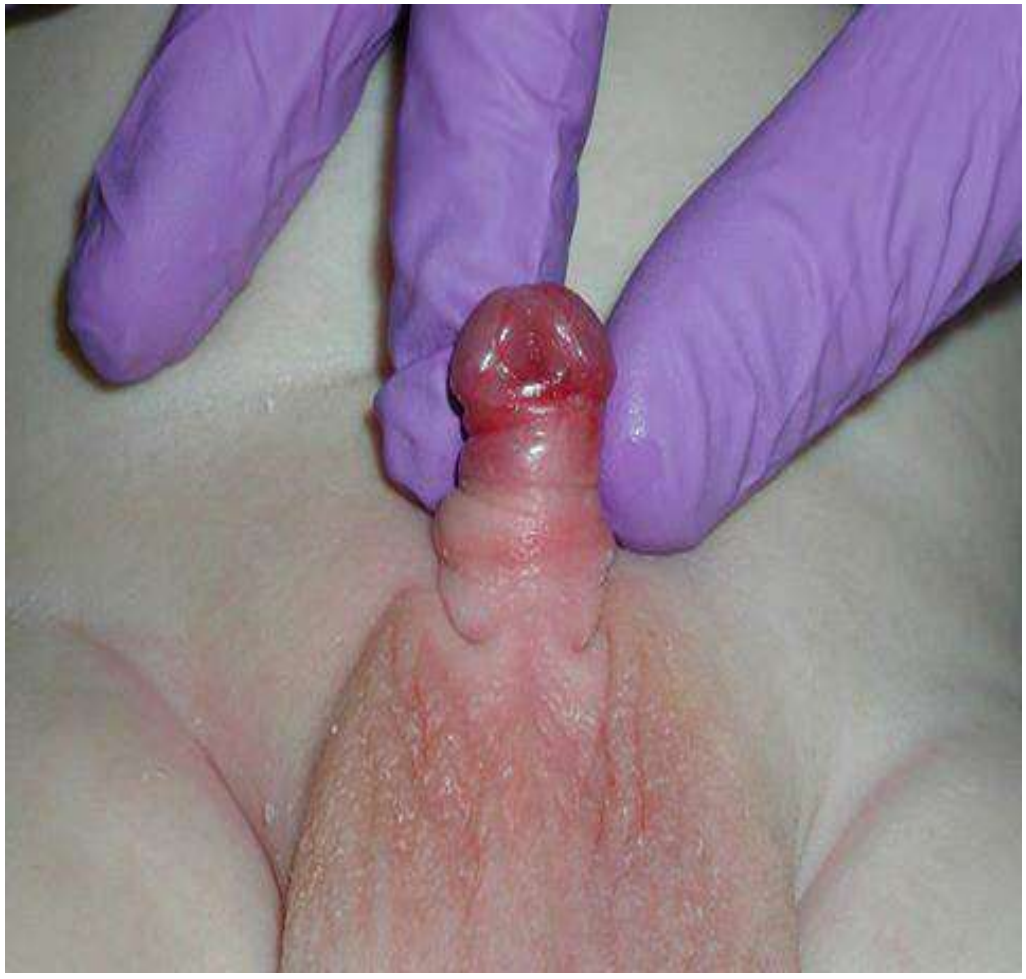
- Hypospadias

Q2: What is the classification?

1) Anterior (50%)
2) Bifid Middle (30%)
3) Posterior (20%)

Q3: When is the surgery performed?

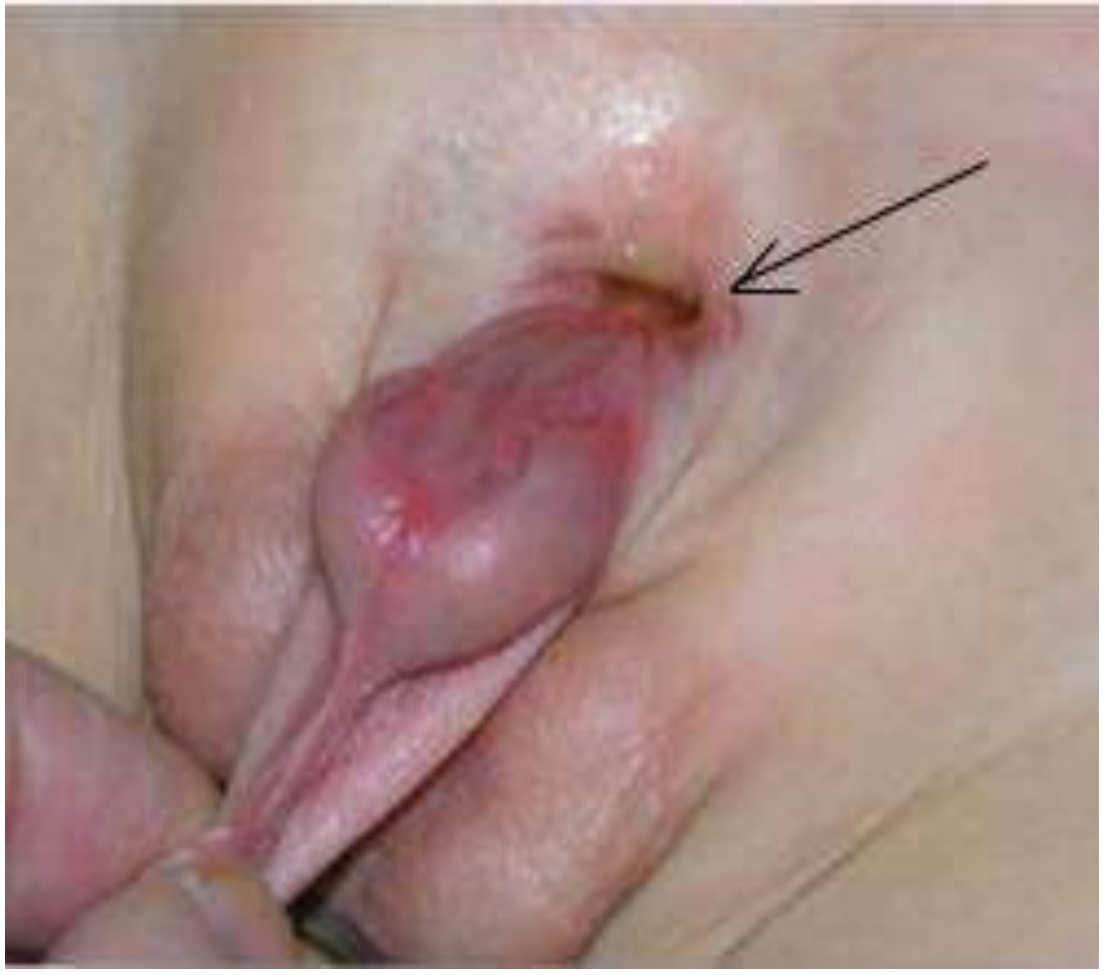
6 – 18 months of age

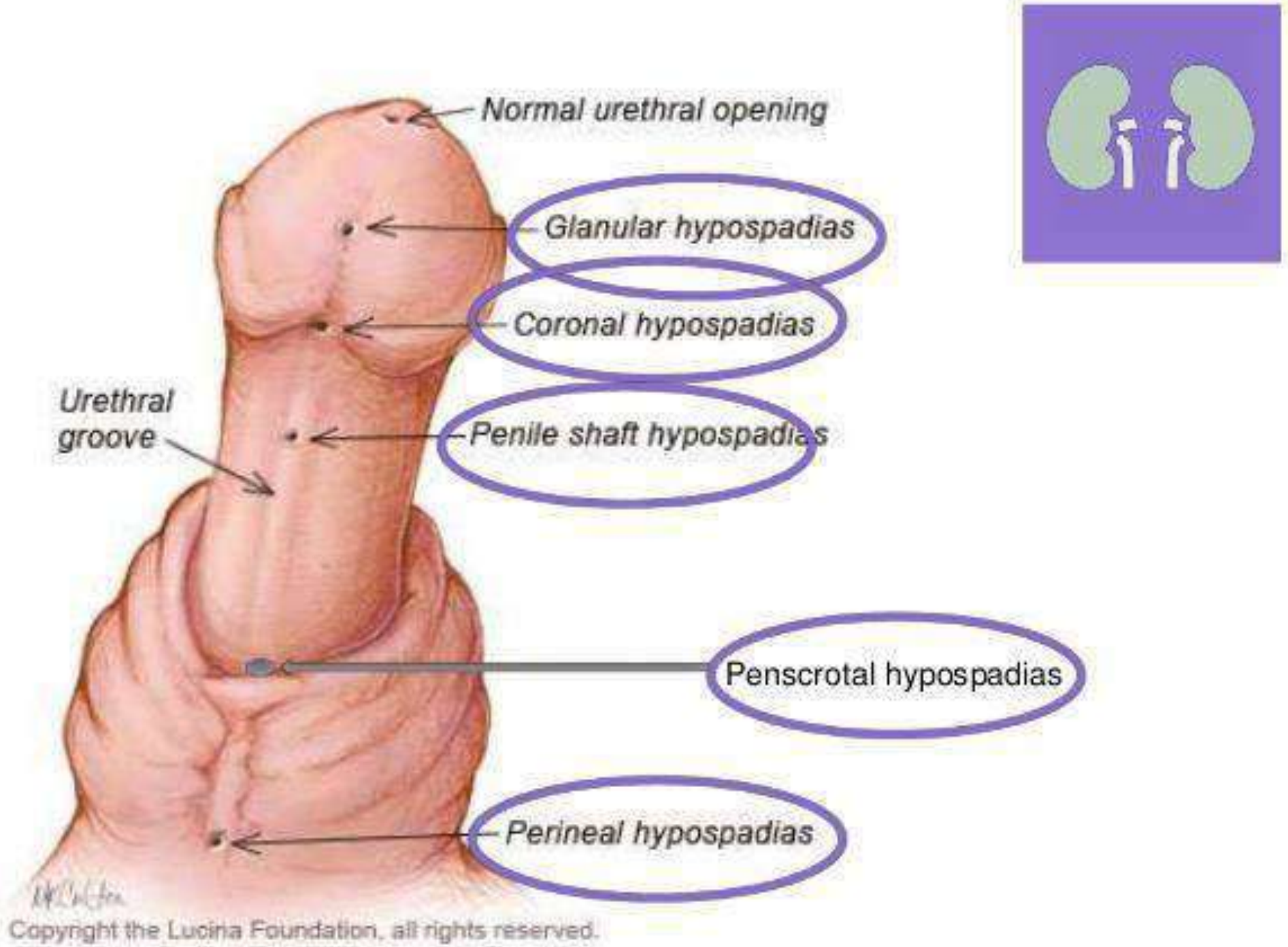


- Glanular (opening on the glans) is the most common.

Epispadius: urethral opening is on the dorsal surface with abnormal penis. It is usually a part of a syndrome includes extrophy of the urinary bladder.

- Extremely rare.





Q: This is a 5 yo boy.

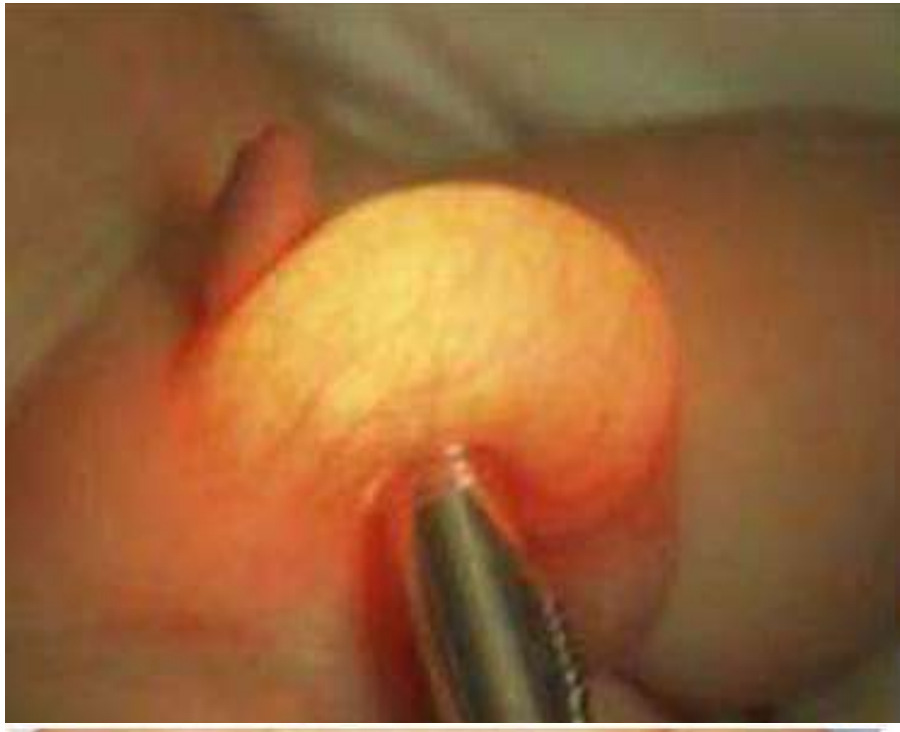
Q1: Give two clinical findings:

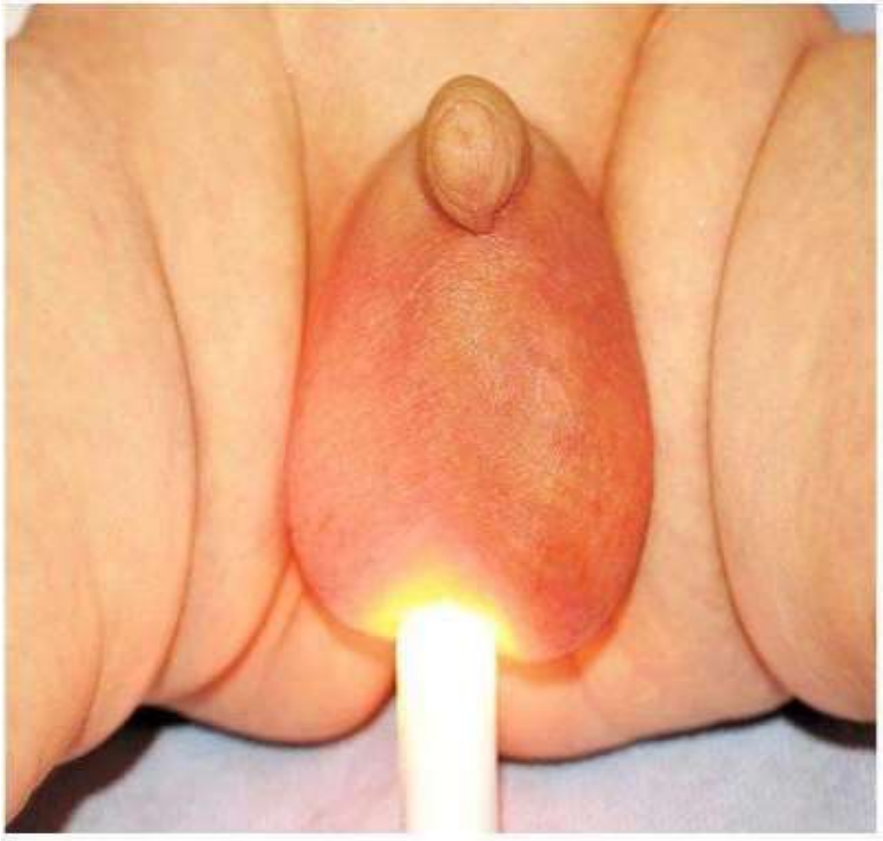
scrotal swelling

transillumination

Q2: What is the Dx?

hydrocele

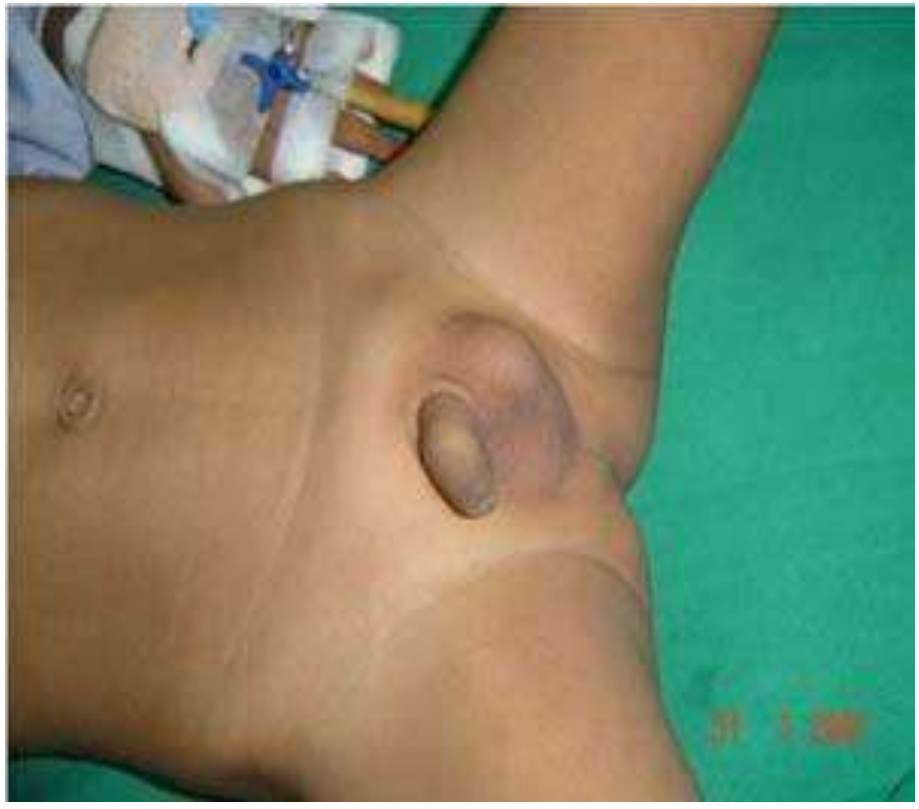




- Fluid filled sac (fluid in a patent processus vaginalis or in the tunica vaginalis around the testicle).
- Communicating with the peritoneal cavity VS non communicating.
- **In most infants it will resolve in the 1st year.**
- If there is increase in size >> operation
- Any hydrocele appearing after a 1st year must be operated as it will not resolve.

Undescended testicle

- Significant risks: infertility/ trauma/ torsion/ hernia/ cancer.
- Treatment : **orchidopexy** bythe age of one year (6-12 months).
- After 2 years the testicle is abnormal and wouldn’t be functioning.



Q1: What is the Dx?

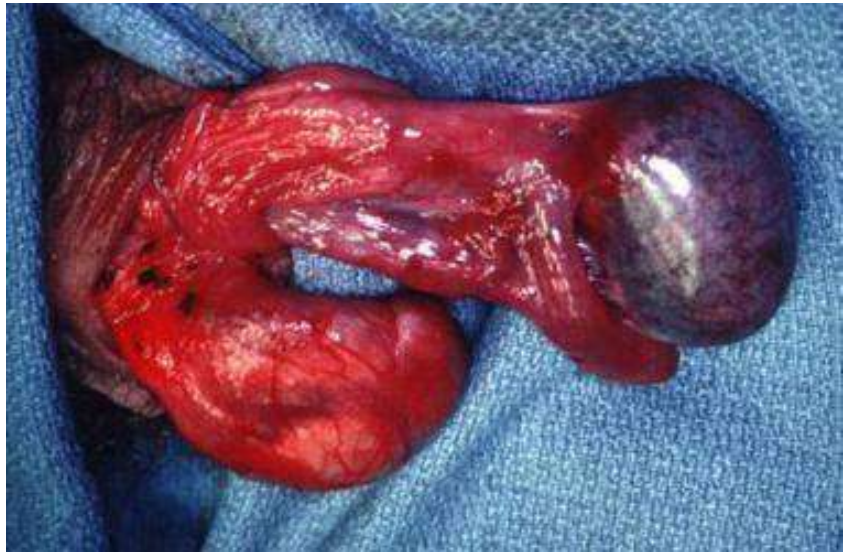
- Testicular torsion

Q2: What is your Mx?

- Orchidectomy

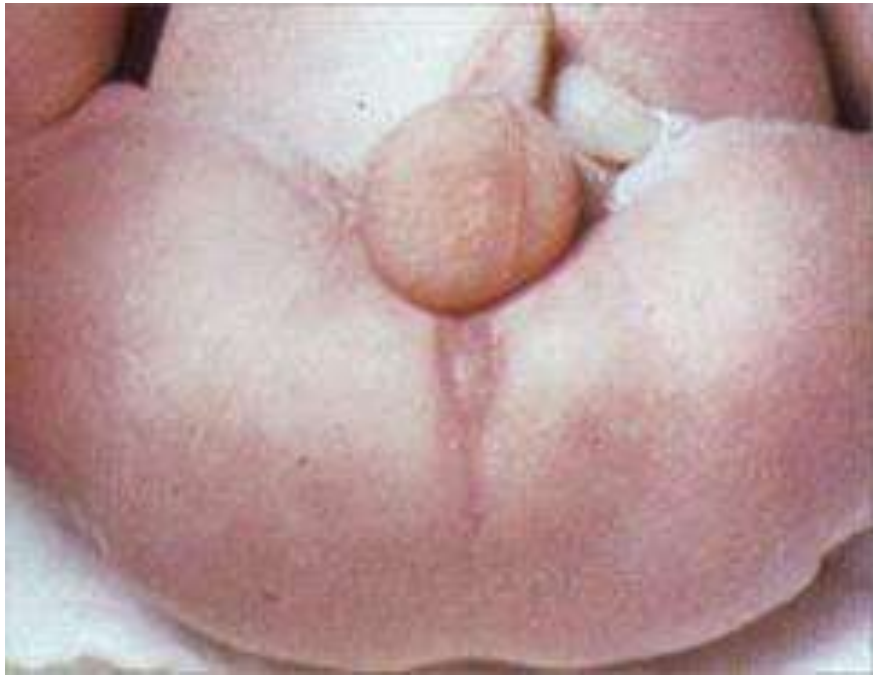
DDx for Acute scrotum:

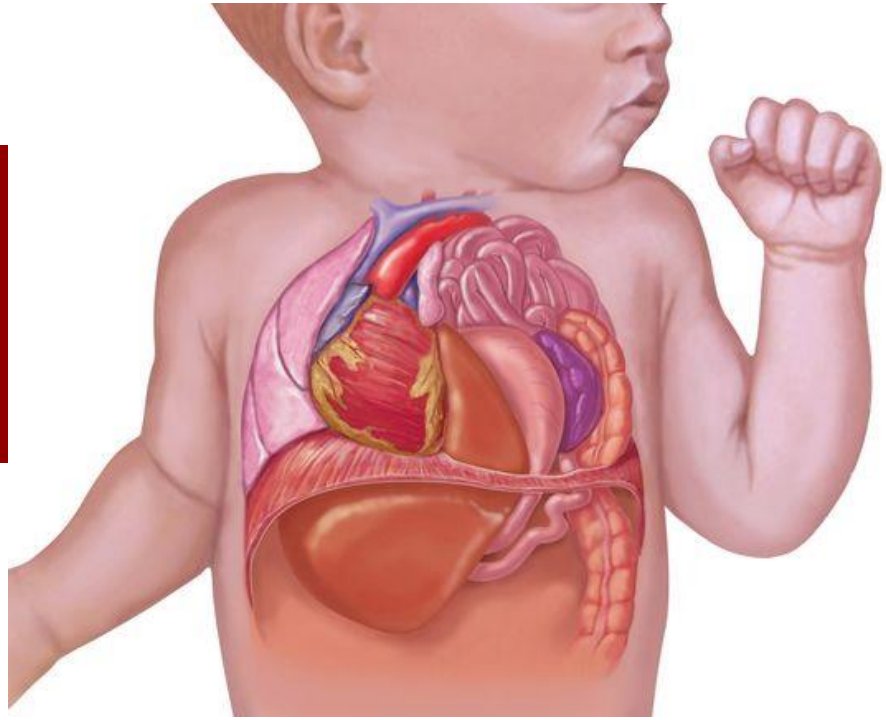
1. Testicular torsion.
2. Torsion of testicular appendages.
3. Epididymorchitis.
4. Scrotal edema.
5. Complicated hernia.



Imperforate anus

- Males > females.
- High lesion vs. low lesion.
- Meconium or air per urethra or vagina.
- One of the common findings that the anal opening anteriorly located.
- Treatment : resuscitation/ the low types managed by a one stage procedure in the neonatal period **(anoplasty).**
- Other types treated by colostomy in the neonatal period followed by a definitive procedure called **pull-through (posterior sagittal anorectoplasty).**





PEDIATRIC

Hashemite University
H · U · M
Medical School Committee

• QUESTION

Wateen 2023

A 1 month old male baby presented with projectile vomiting . With no previous medical or surgical history

. A. What is the diagnostic modality of choice?

B. What is the initial management of uncomplicated cases ?

(No picture founded)

Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Ultrasound

Ramstedts Pylorus myotomy

B. Fluid and electrolytes and PH correction - pylorotomy

• QUESTION

Wateen 2023

Regarding pediatric hernias and hydroceles;

A. Name one way of differentiating them other than trans illumination test:

B. Name the common congenital anomaly in both.

(No picture found)

Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Fingers can fit at the neck of mass

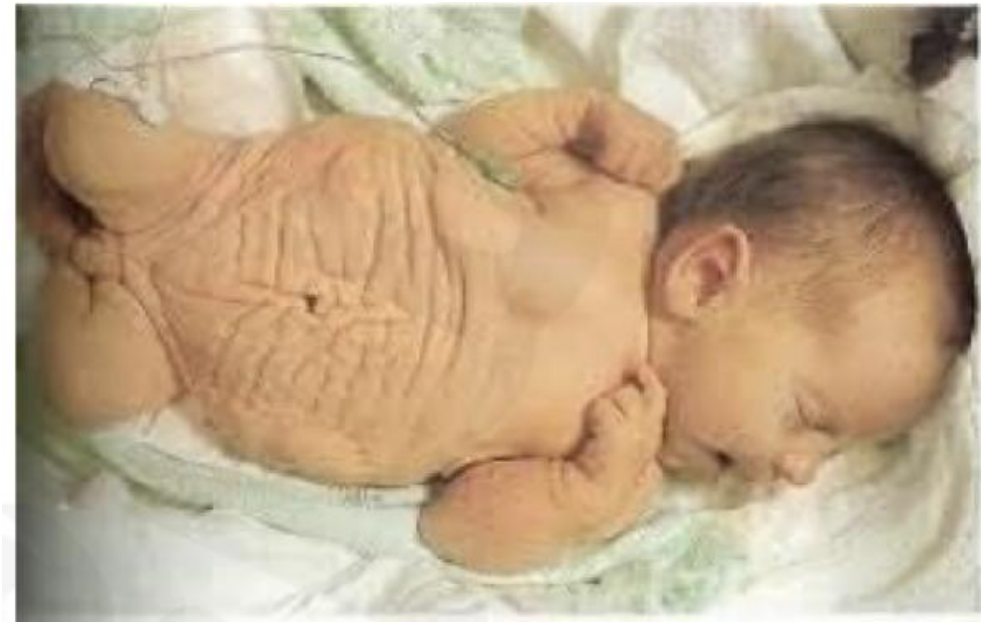
B. Epispadius

• QUESTION

Wateen 2023

A) name this disorder :

B) what anomalies can be seen in this pt .



Hashemite University
H • U • M
Medical School Committee

ANSWER

A) Prune belly syndrome

B)

1)Undescended testes

2) Urinary tract abnormality such as unusually large ureters, distended bladder, Vesicoureteral reflux, frequent UTI's

3) VSD

4) Malrotation of the gut

5)club foot

• QUESTION

10. What is your diagnosis?

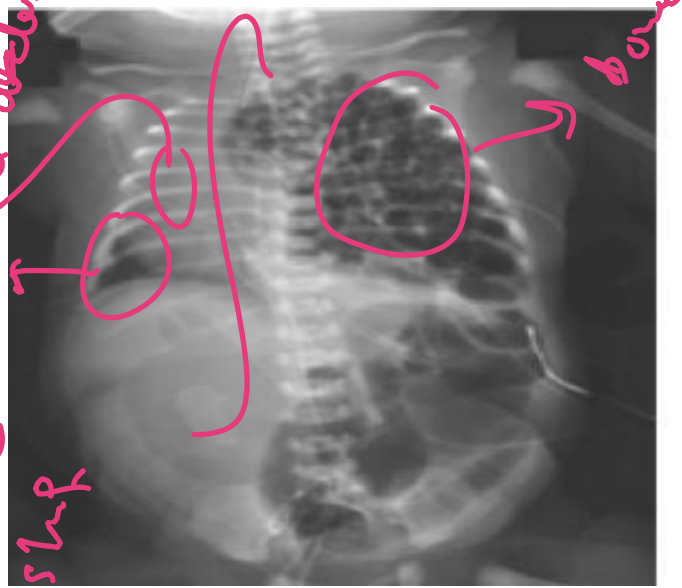
a. Bochdalek Hernia

b. Severe intestinal obstruction

c. Small Bowel perforation

d. Morgagni Hernia

Answer: A



• QUESTION

28. The blue arrow points to

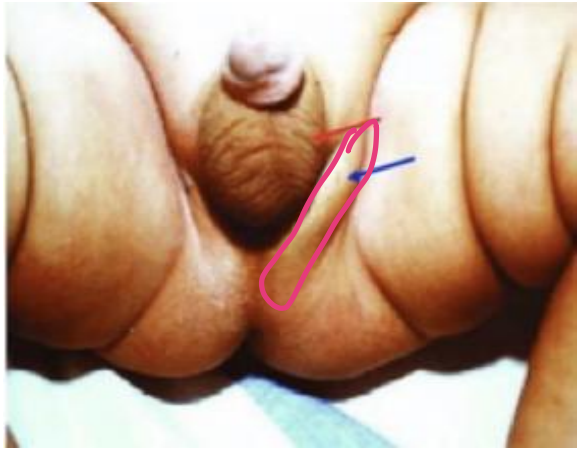
: a. Ectopic testes

b. Polyorchidism

c. Inguinal hernia

D. Femoral hernia

Answer: A



• QUESTION

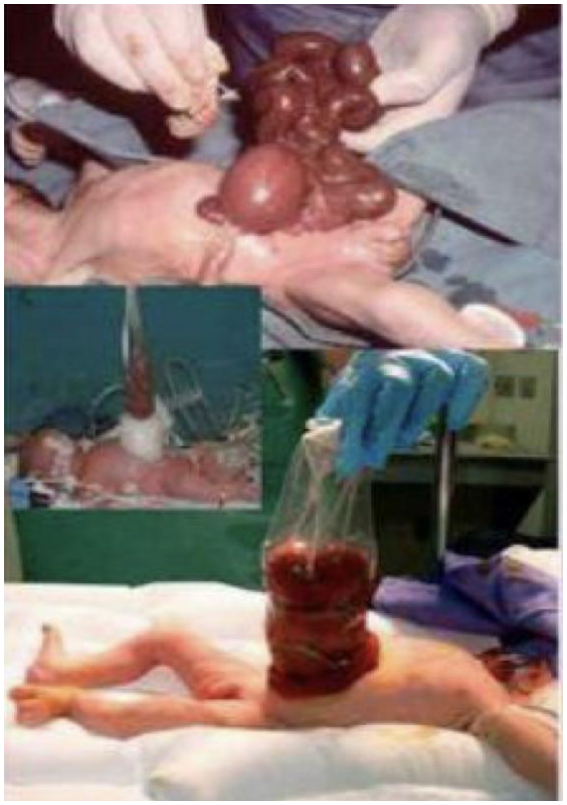
SOUL 2021

1.What is the Dx?

2. Name the procedure?

3.The prognosis depends on?

4. Theindication of this procedure is?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Gastroschisis
2. Silo
3. Bowel status
4. To prevent dehydration, hypothermia, contamination

if the bowel get inflammed & IV closure can be done

• QUESTION

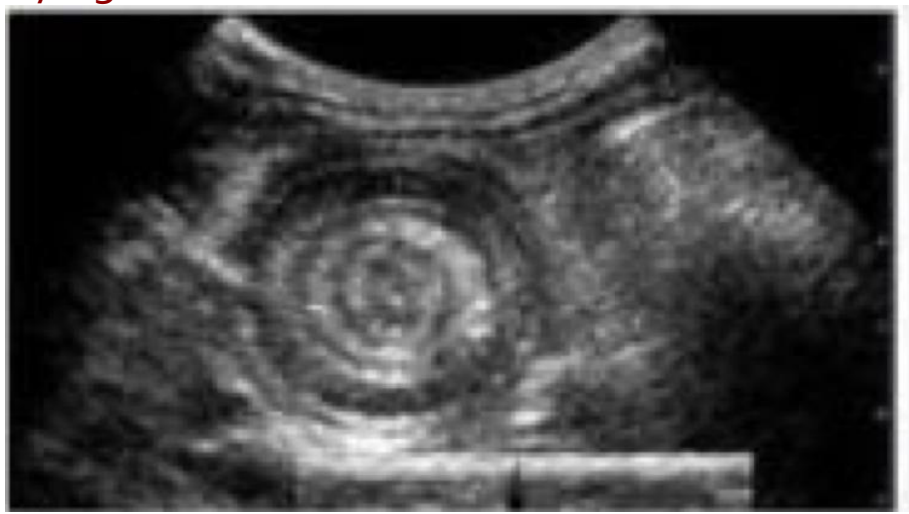
SOUL 2021

1 year old male, presents with inconsolable crying:

A) Name the radiological study:

B) Name the sign:

C) What is the first line management:



Hashemite University
H • U • M
Medical School Committee

ANSWER

A) Ultrasound

B) Donut / target sign

C) Resuscitate then barium enema , hydrostatic reduction.

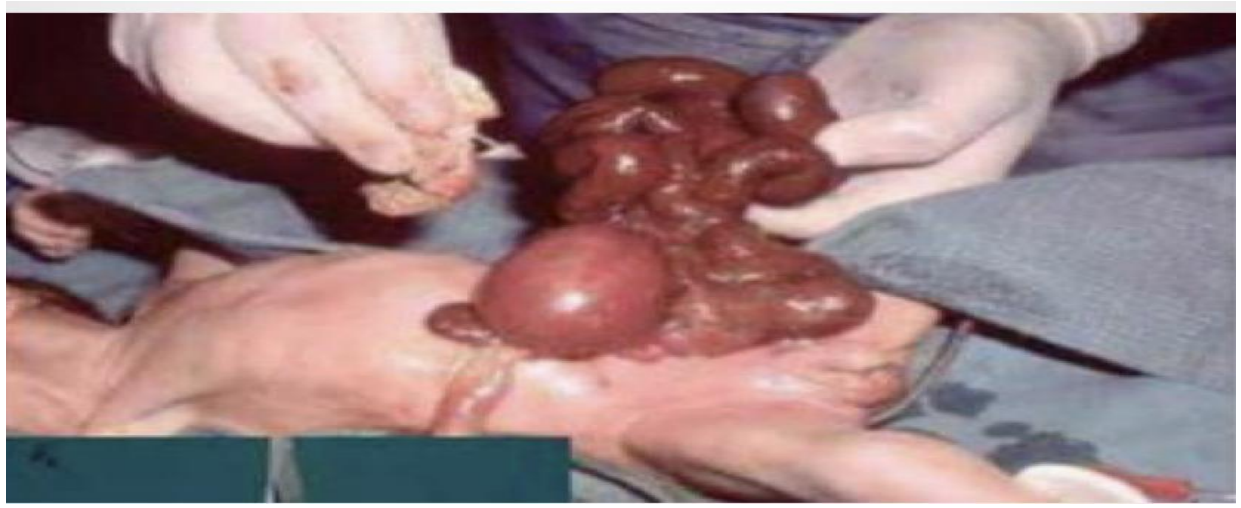
Note: diagnosis is (intassusception)

• QUESTION

SOUL 2021

A) What is the pathology:

B) The treatment used :



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Gastroschisis

B. Silo pouch

• QUESTION

SOUL 2021

1 month old presented to the ER, with an acute onset of , vomiting

A) Mention 2 questions that would help you diagnose :

B) Name a study that can help you reach the diagnosis:

(No picture)

Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Bilious or not , projectile or not, change in weight

diarrheal , constipation

B. U/S ,upper/ lower GI contrast

• QUESTION

IHSAN 2020

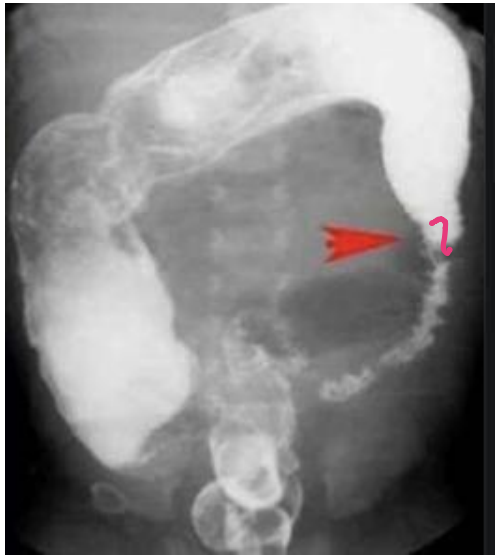
A 6-month old with chronic constipation since Birth

1. Name the radiology study in the image

2. Name the most likely surgical condition

3.What does the arrow indicate?

4. What Is the diagnostic tes?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Barium enema

2.Hirschsprung Disease

3.Transition zone

4.Biobsy

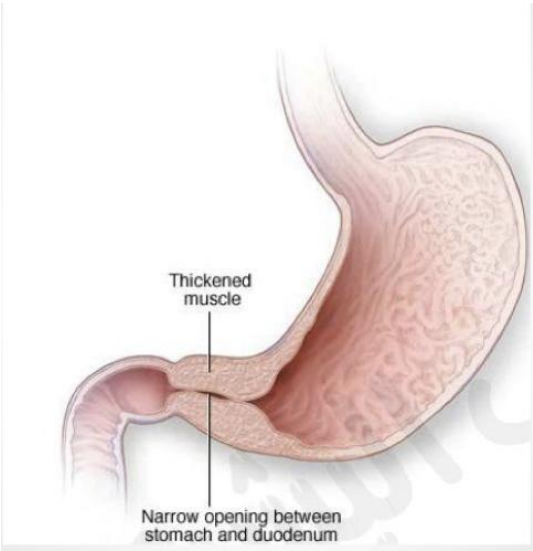
• QUESTION

IHSAN 2020

1-month old with recurrent vomiting. Name the :

1 metabolic and electrolyte derangement associated with this condition

2. Name it's effect on ventilation



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Hypochloremic Hypokalemic Metabolic Alkalosis

2.Hypoventilation

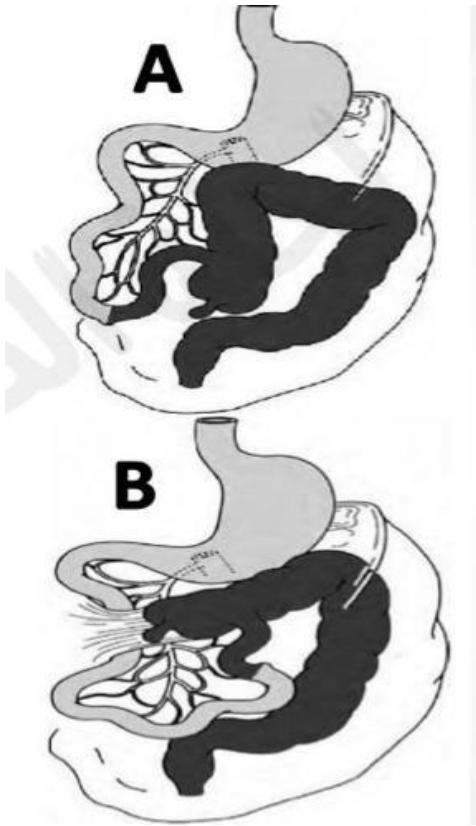
• QUESTION

IHSAN 2020

Malrotation:

I. What's A and B?

II. Which one is the most commonly associated with volvulus



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. A >: Non-Rotation B >: Incomplete Rotation

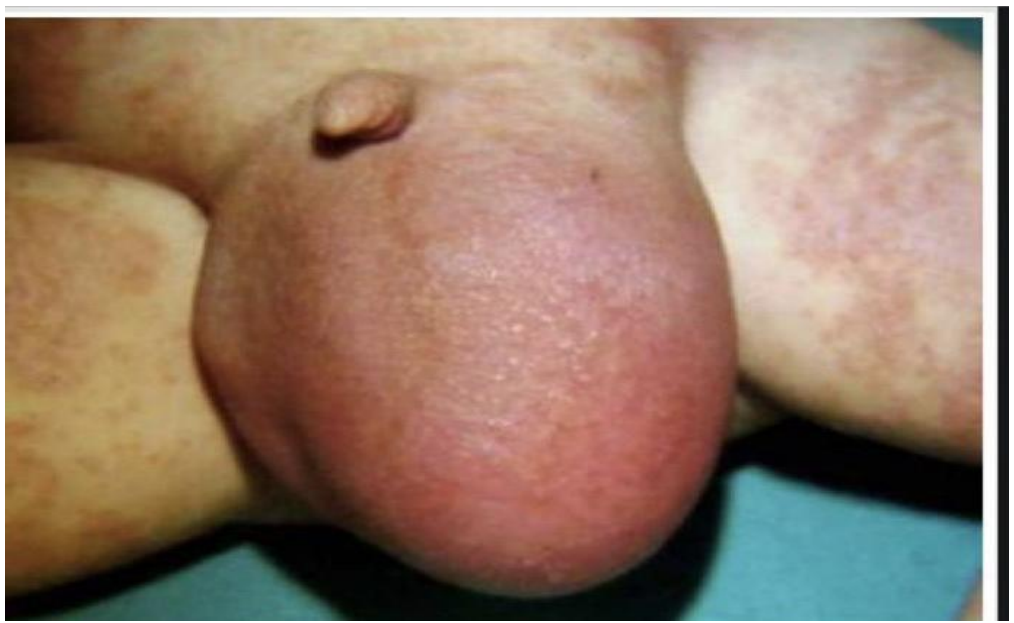
2. B

Hashemite University
H · U · M
Medical School Committee

• QUESTION

2019 – Before

Name 4 differential diagnoses for this condition .



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. inguinal hernia

B. hydrocele

C. testicular tumor

D. testicular torsion

E.Idiopathic scrotal edema

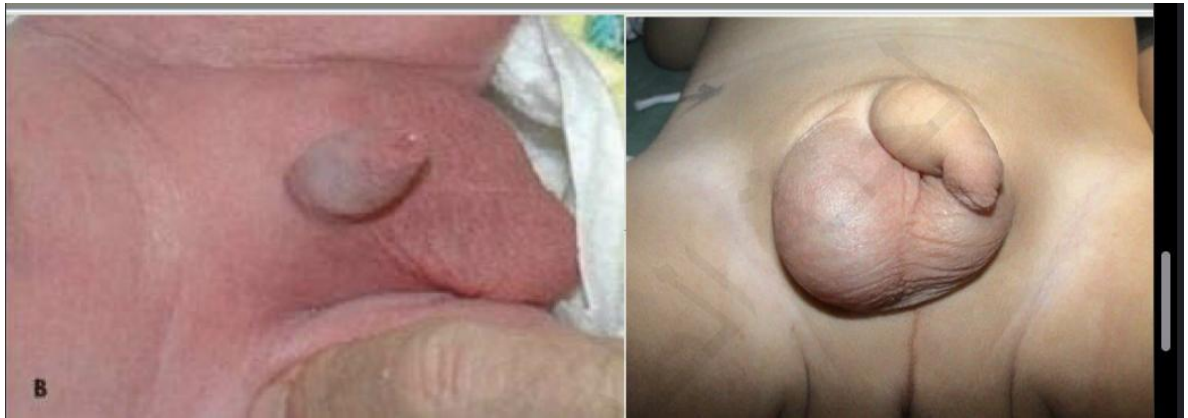
QUESTION

2019 – Before

1.What is the pathology?

2.Give two benign differential diagnosis?

3.what is the name of peritoneal part that remains patent?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Right scrotal swelling

2.Inguinal hernia, hydrocele

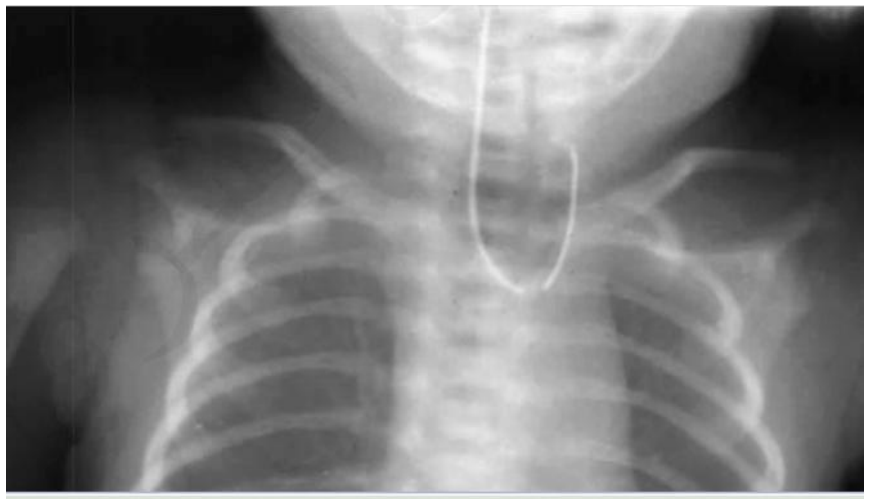
3.Patent processus vaginalis

• QUESTION

2019 – Before

Newborn x-ray, cyanosis and distressed:

1. What is your Dx?
2. Characteristic sign?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1. Tracheoesophageal fistula (because of the cyanosis)

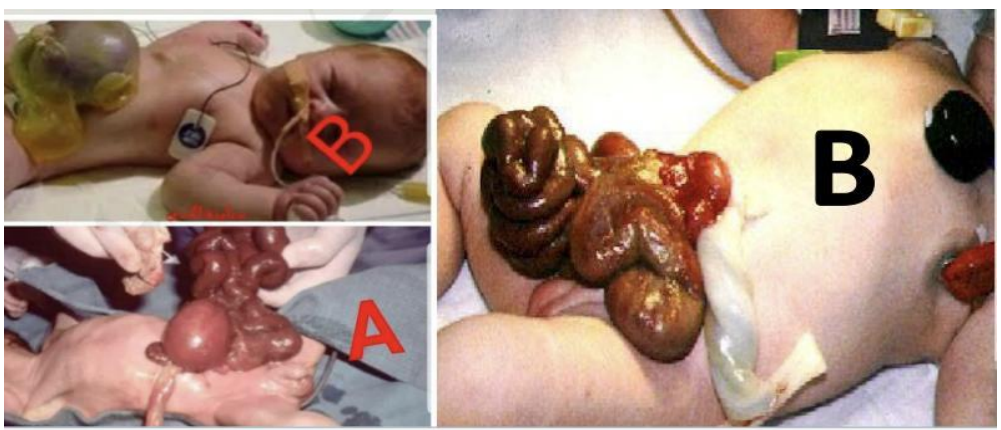
2.Failure to pass the nasogastric tube

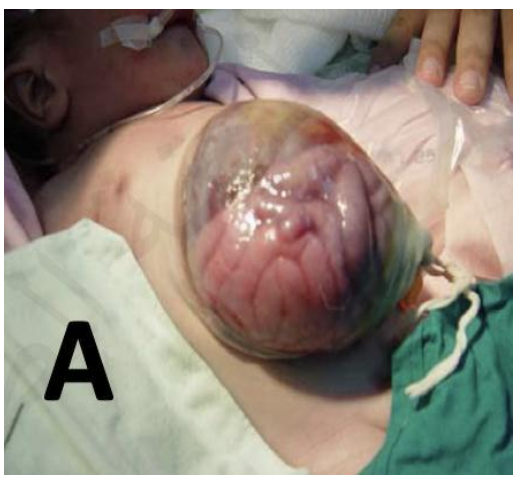
• QUESTION

2019 – Before

1.diagnosis in A,B?

2.Which of these are more associated with congenital anomalies?





Hashemite University
H • U • M
Medical School Committee

ANSWER

1.A.Omphalocele

B > Gastroschisis

2.Omphalocele

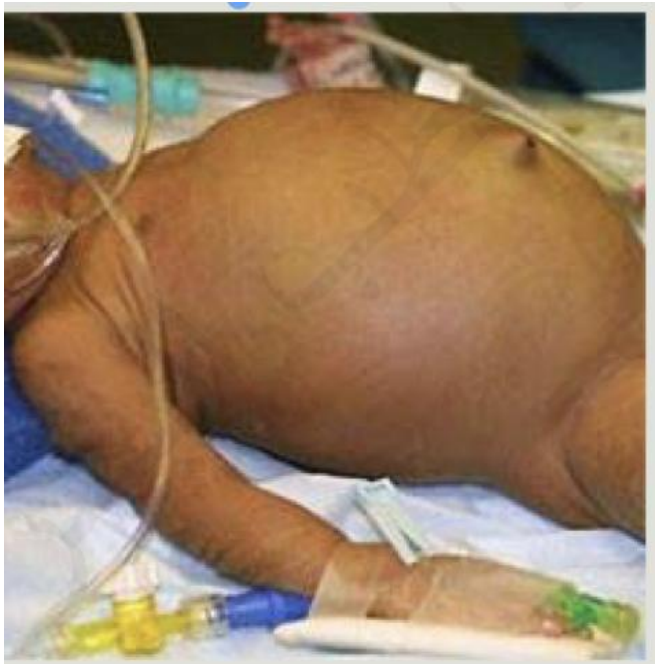
• QUESTION

2019 – Before

What is the diagnosis according to:

A.Preterm baby

B.Full-term baby



Hashemite University
H • U • M
Medical School Committee

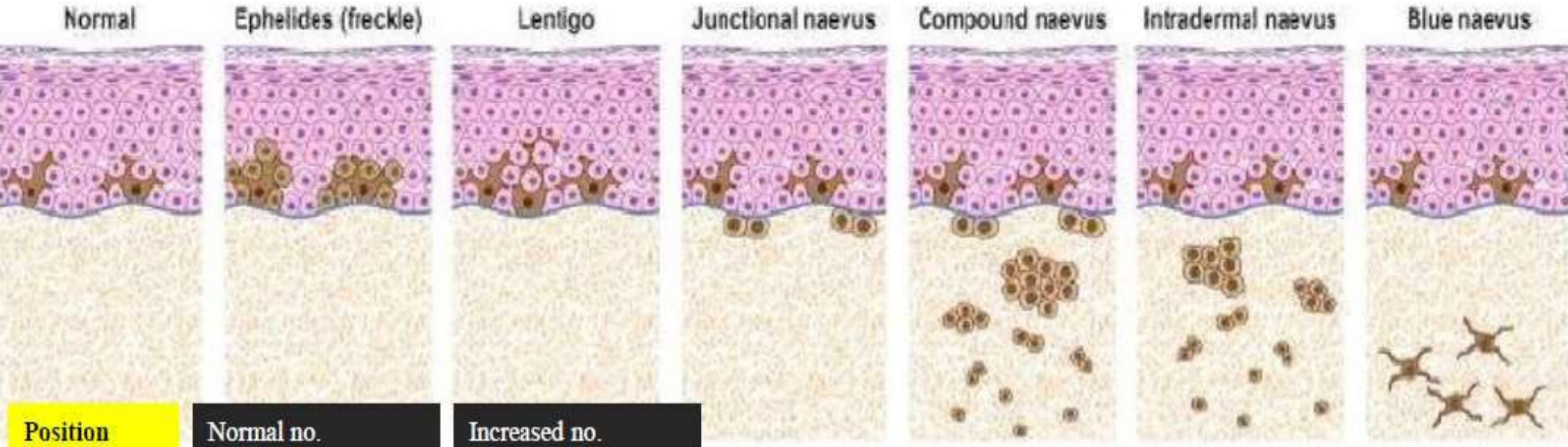
ANSWER

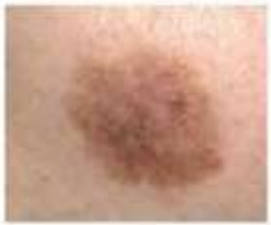
A.Necrotizing enterocolitis (NEC)

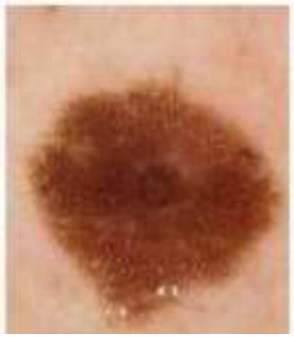
B.Hirschsprung disease

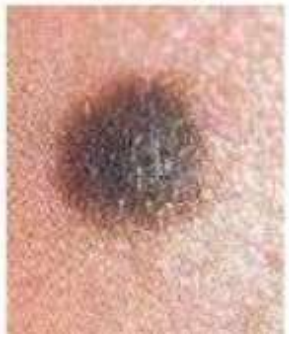

Skin

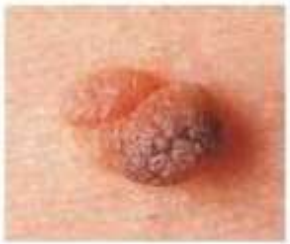
Mole (Melanocytic nevus): increased no., abnormal clusters, normal or increased production





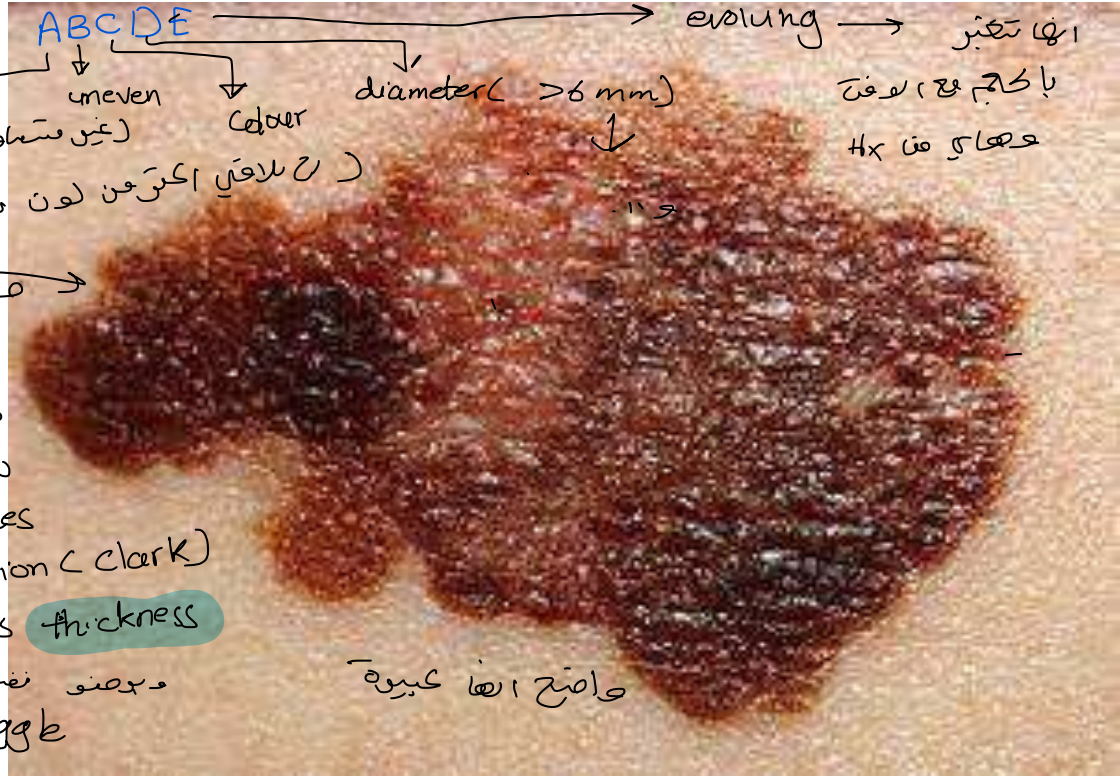






Q1: Name the Dx?

- Melanoma



Q2: What is the most accurate prognostic factor?

- ~~The Depth~~ thickness

according to slides, Breslow thickness replaces the level of invasion (Clark)
so, the answer is thickness

Q3: Increased melanin production with normal number of cells is known to cause?

- Freckles

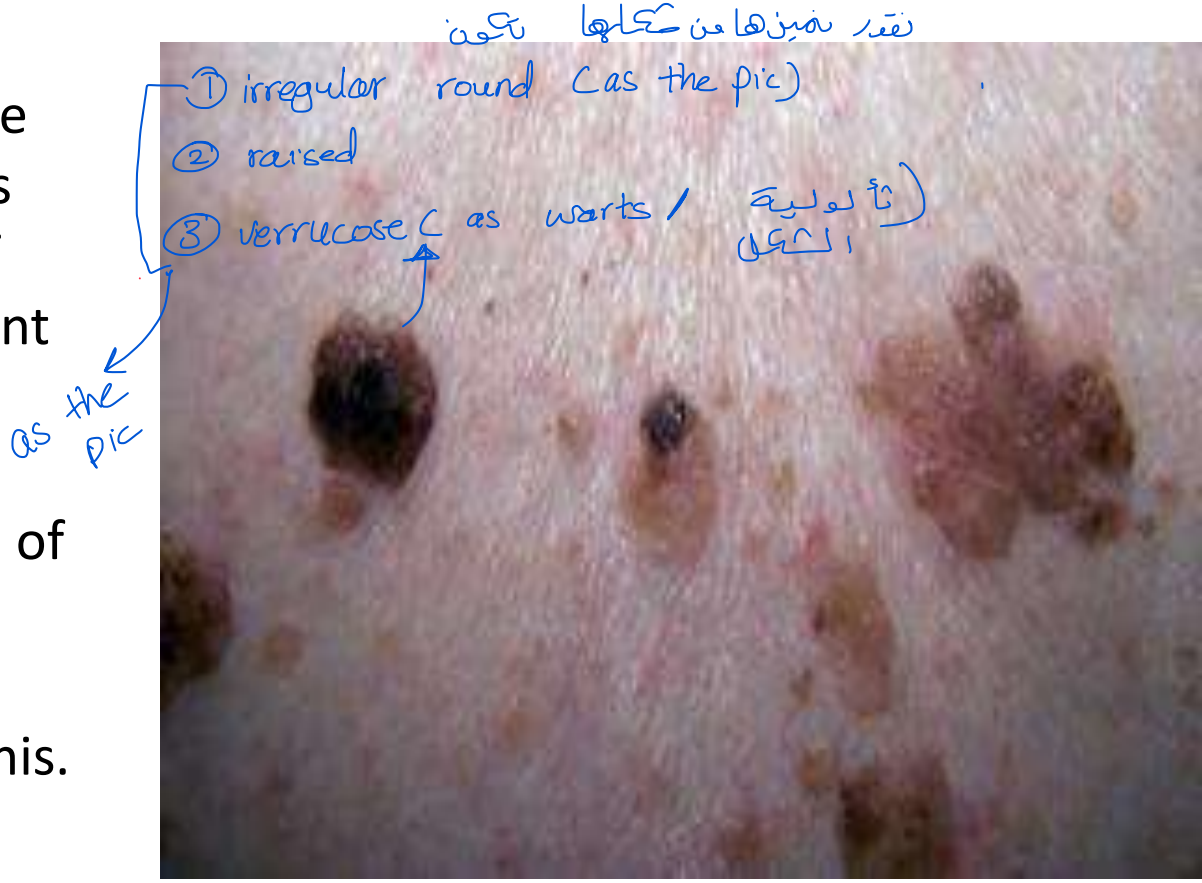
Q4: Mention 2 staging systems?

1) Clark's level
2) Breslaw's thickness (the most accurate)

seborrhoeic keratosis

-in the elderly " aka senile warts ".

-special diagnostic feature : because they are patches of thick squamous epithelium they can be picked off if you try to pick the edges with a blunt forceps.



-when it peals off , it leaves a patch of pale-pink skin with slight bleeding.

-no other skin lesion behaves like this.

- doesn't need surgery. Completely benign.

- If a nevus undergoes changes in the pigmentation or in the shape or ulceration it indicates a melanoma.

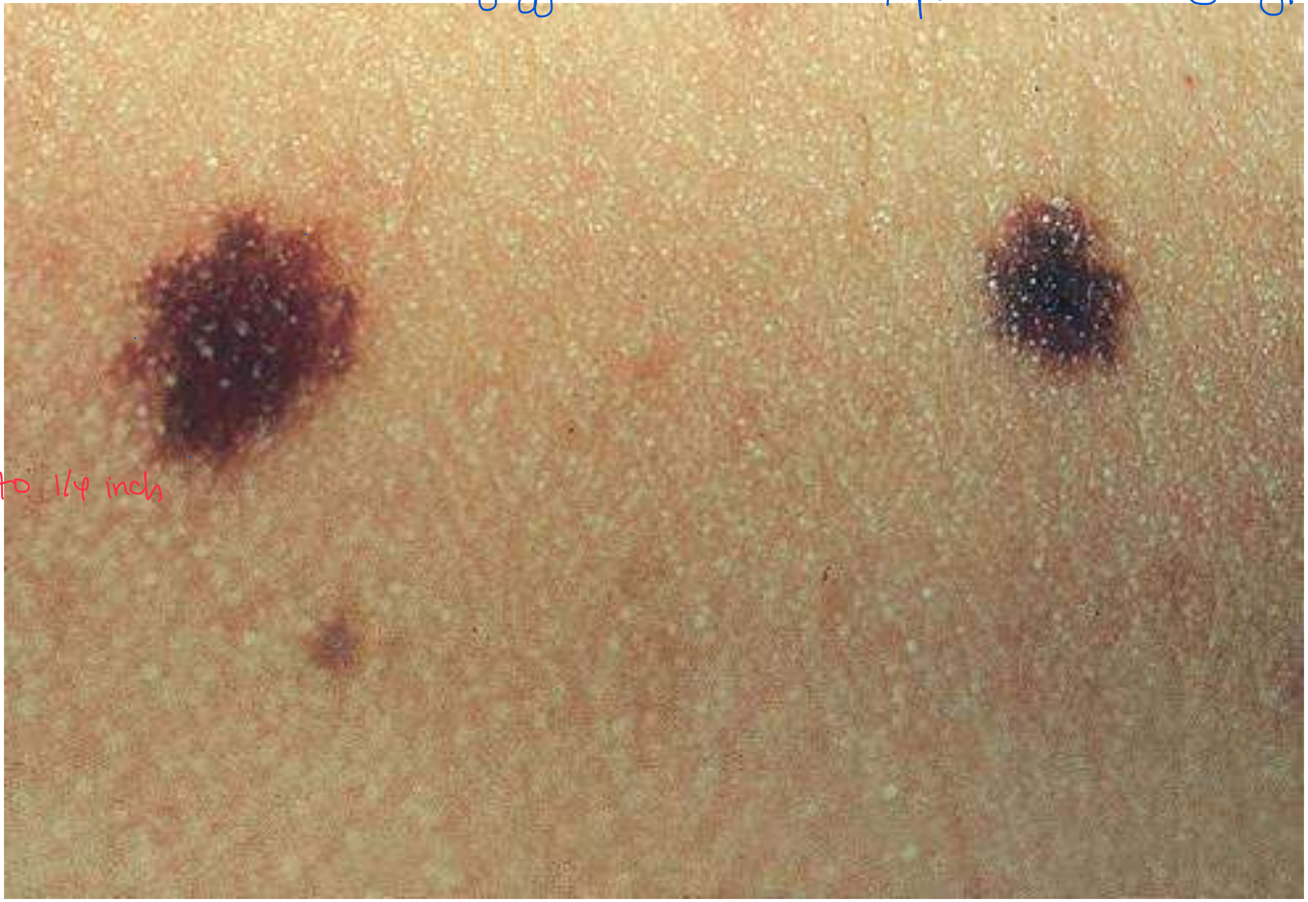
or the size → evolving → Featurs of melanoma

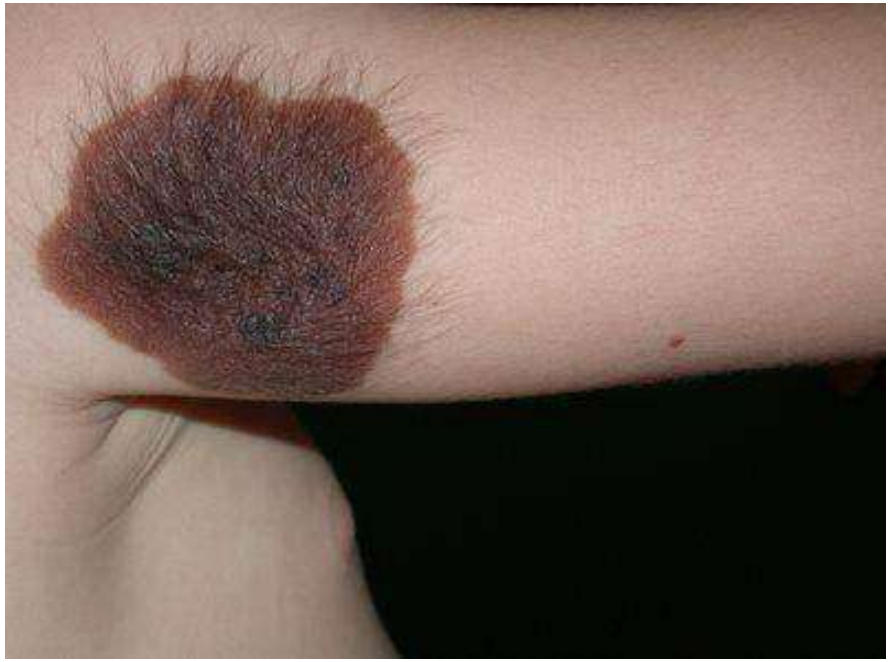
- We differentiate the nevus from the vascular anomaly by its color.

مش موجود هيك احمر بالسلايداه

this pic is from goggle → it's dysplastic nevi (atypical mole)

تبع نميز بينها وبين ال melanoma ؟
حسب ال ABCDE
الاثنين المهم نفس
الخصائص باستثناء
ال diameter
atypical mole up to 1/4 inch
larger than normal mole but smaller than melanoma > 1/2 inch

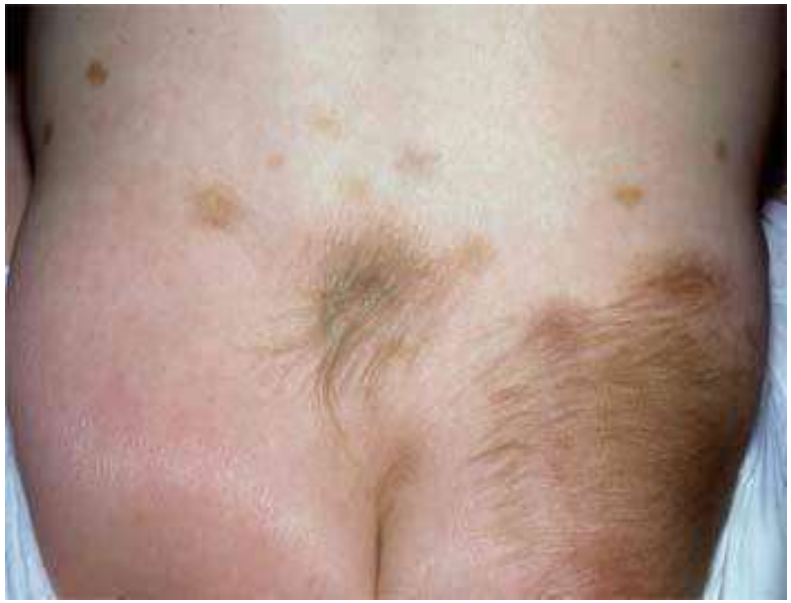




- In general, hair tuft or lipoma or hairy nevus located at the lower end of the back, it is associated with spina bifida.

Hairy nevus

- It's premalignant and must be surgically removed.
- Congenital.
- Black or brown pigmented area with excess hair growth.



DDx of unilateral swelling:

[1] DVT → RF of DVT + redness & Hotness & tenderness

[2] cellulitis → Fever & chills & tenderness

[3] trauma

[4] RA → morning stiffness & joint pain

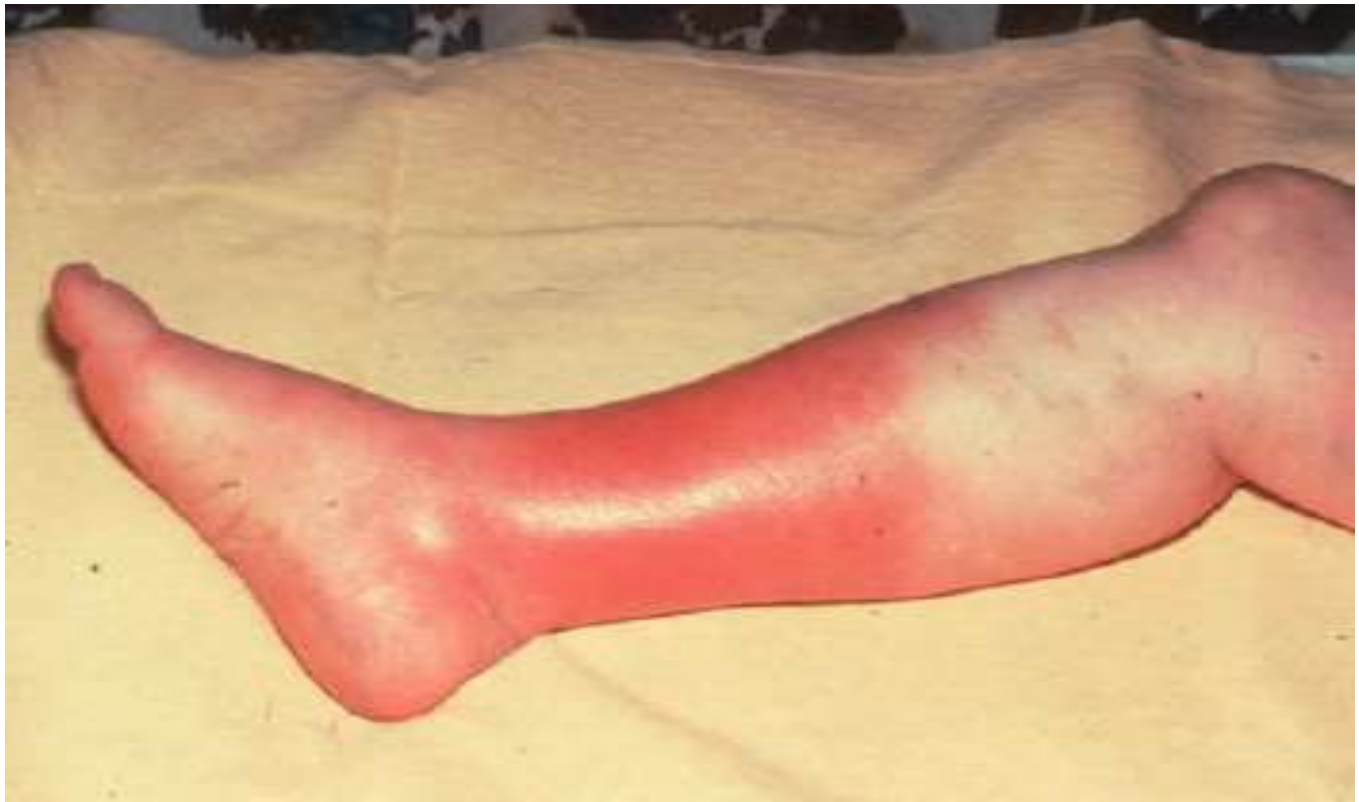
Q: a patient with pain and fever:

Q1: What is the Dx?

- Cellulitis

Q2: What is the micro-organism causing this?

- Group A streptococci (GAS – mc!), Staph. Aureus



Erysipelas

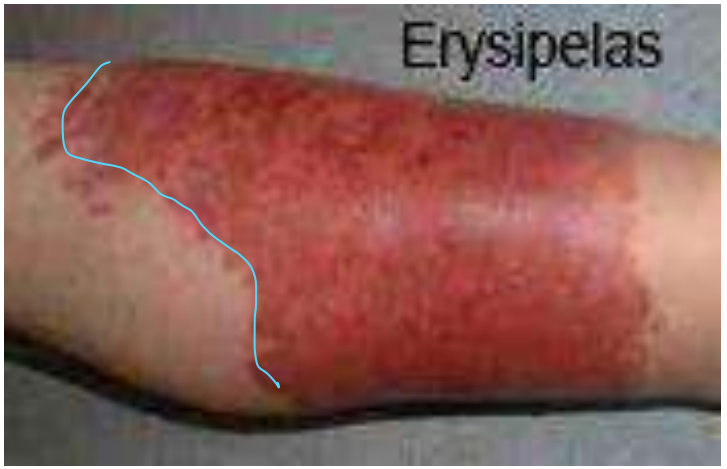
1. usually caused by streptococcus bacteria (beta hemolytic group A).

2. Erysipelas is more superficial than cellulitis.

3.It's typically more RAISED and DEMARCATED.

4. The infection may occur on any part of the skin including the face, arms, fingers, legs and toes, BUT IT TENDS TO FAVOR THE EXTREMITIES.

5. Fat tissue is most susceptible to infection, and facial areas typically around the eyes, ears, and cheeks.



Q: a patient post-splenectomy due to RTA:

Q1: What is the micro-organism causing this?

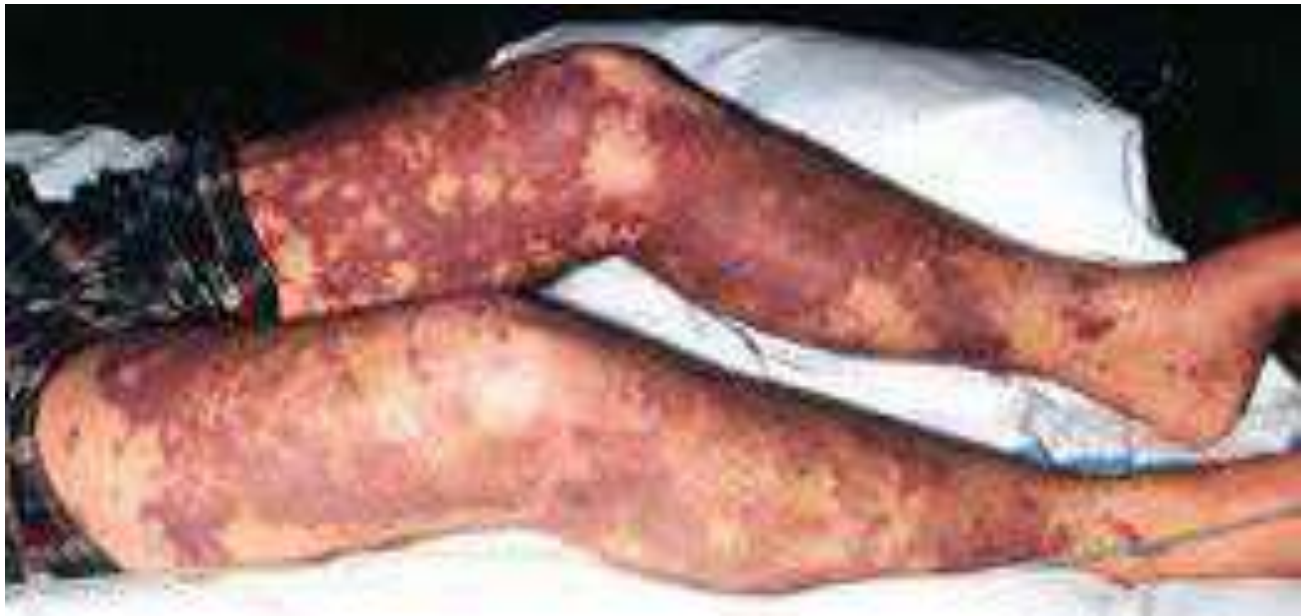
- Meningococcus

Q2: How can you prevent it?

MCV Vaccine

Vaccine should be 14 days BEFORE surgery , and in case of emergency surgery like this case it should be as soon as possible after surgery not 14 days after, others said in elective surgeries, it should be given 14 days before the operation But in emergent surgeries, it should be given at least 14 days post operatively.

Post-Splenectomy:
We Give MCV, PCV, HiB



Post Splenectomy Vaccination

- **Non-elective**
  - Non-elective splenectomy patients should be vaccinated on or after postoperative day 14.
  - Asplenic patients should be revaccinated at the appropriate time interval for each vaccine.
- **Elective**
  - Elective splenectomy patients should be vaccinated at least 14 days prior to the operation.
  - Asplenic or immunocompromised patients (with an intact, but nonfunctional spleen) should be vaccinated as soon as the diagnosis is made.
  - Pediatric vaccination should be performed according to the recommended pediatric dosage and vaccine types with special consideration made for children less than 2 years of age.
  - When adult vaccination is indicated, the following vaccinations should be administered:
    - ***Streptococcus pneumoniae***
      - Polyvalent pneumococcal vaccine (Pneumovax 23)
    - ***Haemophilus influenzae* type B**
      - *Haemophilus influenzae* b vaccine (HibTITER)
    - ***Neisseria meningitidis***
      - Age 16-55: Meningococcal (groups A, C, Y, W-135) polysaccharide diphtheria toxoid conjugate vaccine (Menactra)
      - Age >55: Meningococcal polysaccharide vaccine (Menomune-A/C/Y/W-135)

Vaccine	Dose	Route	Revaccination
Polyvalent pneumococcal	0.5 mL	SC*	Every 6 years
Quadravalent meningococcal/diphtheria conjugate	0.5 mL	IM upper deltoid	Every 3-5 years†
Quadravalent meningococcal polysaccharide	0.5 mL	SC*	Every 3-5 years
Haemophilus b conjugate	0.5 mL	IM*	None

*Administered in the deltoid or lateral thigh region.
†Contact the manufacturer for the latest recommendations prior to revaccination.

Non melanoma skin cancer

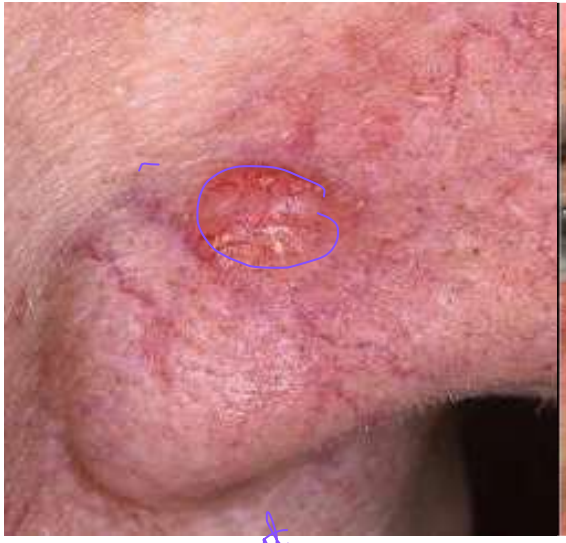
- The most common type of cancer.
- Its mortality is low.
- 75% BCC and 25% SCC.
- BCC is slow growing, locally destructive and rarely metastasize.
- 80% are on head and neck.
- Melanin is a protective against tumor so blacks are less to have skin tumors.

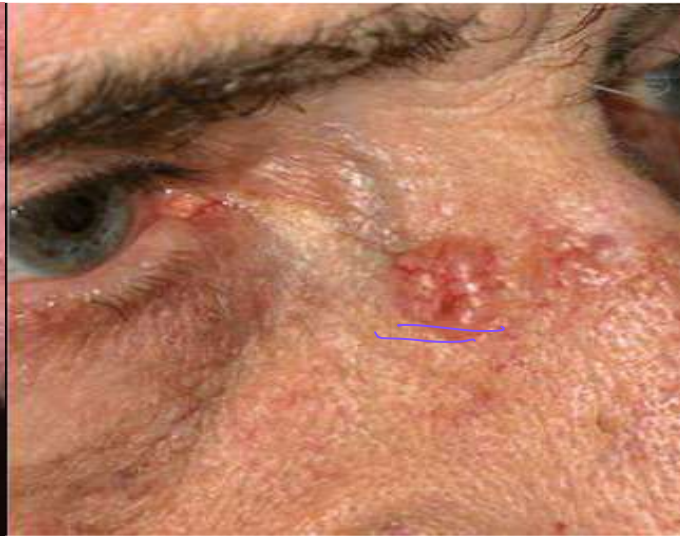
Q: Lesion on the face <1cm:

Q1: What is the Dx?

- Basal cell carcinoma (BCC)

as the mc site is nose





Q2: What is the MCC?

- Long exposure to sunlight

Q3: Mention 2 ways of Mx?

+ medical treatment
① imiquimod
② 5-Flurouracil

A) Non surgical:

(topical immunotherapy, intralesional interferon INJ, photodynamic)

B) Surgical (Excisional or destructive):

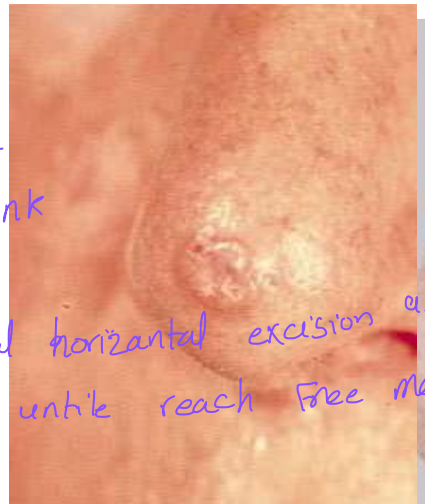
- Destructive: cautery, curettage, cryotherapy, CO laser ablation
- Excisional: Moh's micrographic surgery (MMS), Wide local excision

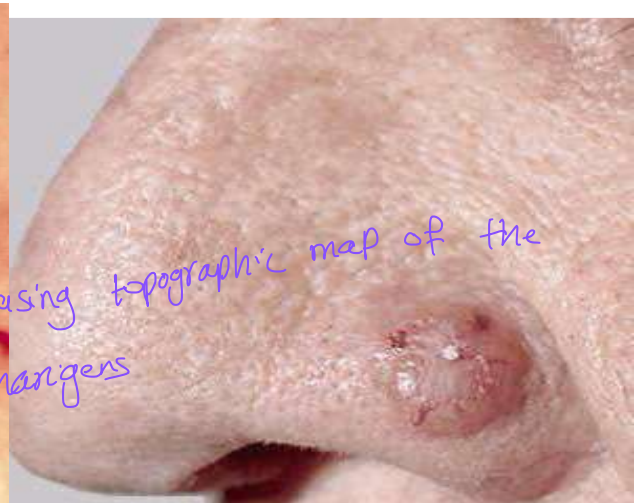
Q4: What is the safety margin?

- 4-10mm

4 → multiple small low risk Bcc in Face

10 → multiple large high risk Bcc in trunk or extermalitis





sequantial horizantal excision using topographic map of the lesion until reach free margens

Q5: Write an alternative Mx?

- Moh's micrographic surgery (MMS)

Q6: Name 2 complications?

- METS, Ulceration (Rodent ulcer)

Q7: Potential METS rate:

- ~~<0.55 (from google)~~ <0.1

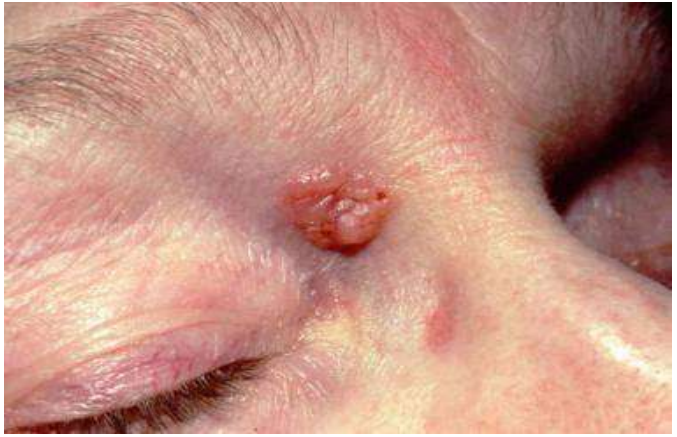
Q8: Do you expect to find enlarged LN?

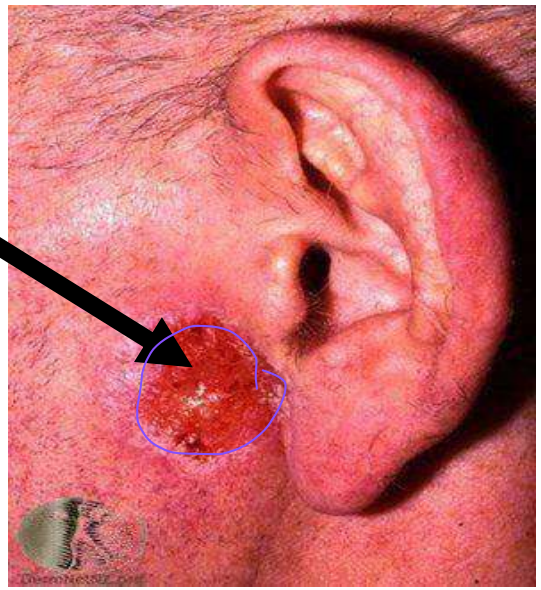
- No (local disease)

rarely mets to LN

Q9: What does the arrow indicate?

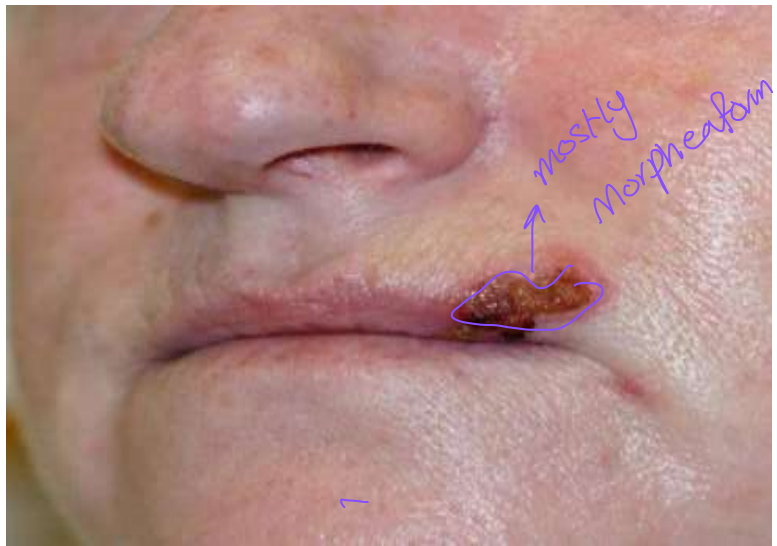
Rodent ulcer (complication of BCC)





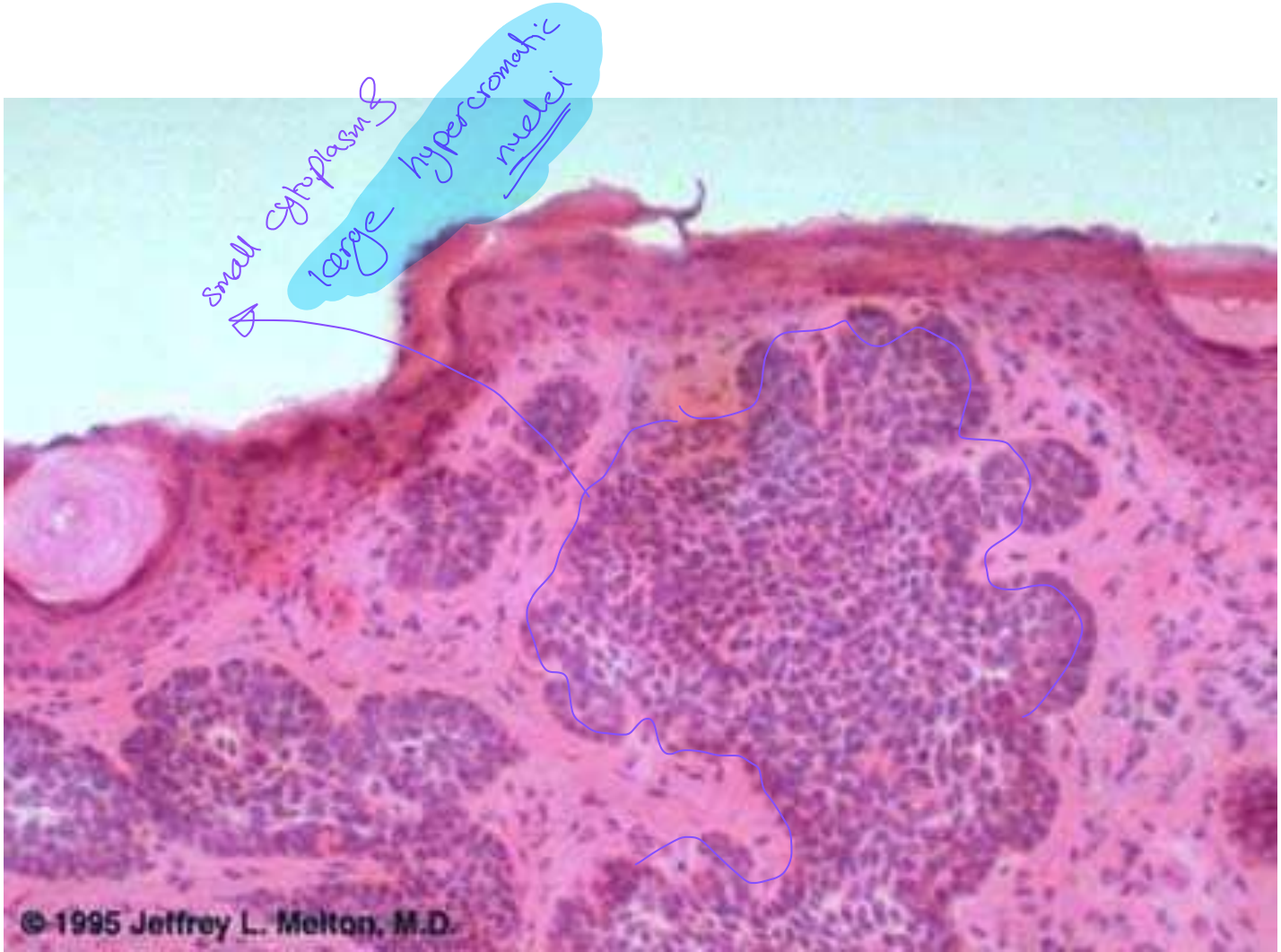
- Arising in the germinating basal cell layer of epithelial cells.
- **Nodular** (ulceration, telangiectasia, pearls).
- **Morphea** (many sites at the same time/ more aggressive than the nodular type).
- Slow growing.
- Local (rare risk of metastasis).

other types:
① superficial invasion (2nd MC)
② infiltrative
③ micronodular
④ pigmented



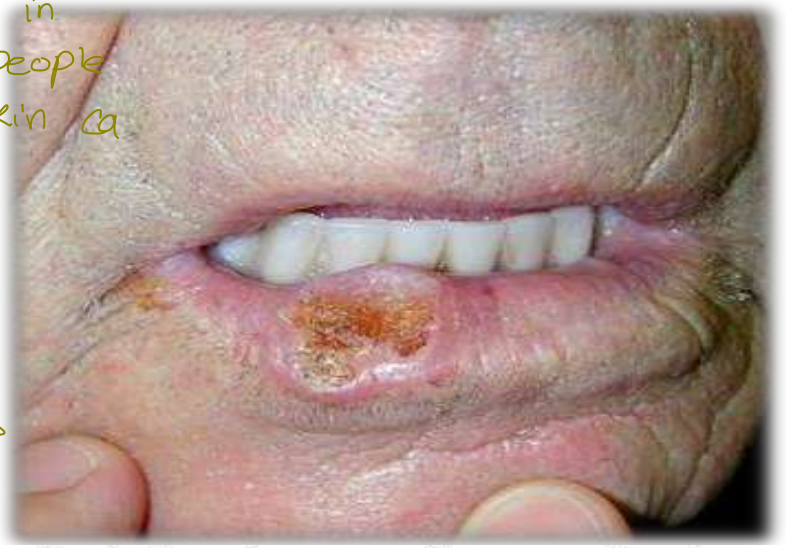
Q: What is the type of cancer seen in this histology (biopsy taken from the nose tip):

- Basal Cell Carcinoma



advanced age → ↑ sun exposure in their life → MC cancer in those people is skin ca

Q: A 75 year old male farmer, heavy smoker presented with this lesion.



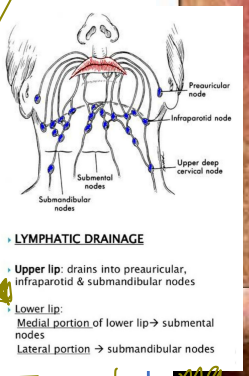
وهيك يعني عندي خيارين اما SCC او BCC فشو اختار؟ اول اشي بحكي SCC مرتبط ل RF وهاد smoker حسب ال Hx واللي هو انه خارجي وقاعد بالصيدلية

Q1: What is the most probable Dx?

Squamous cell carcinoma.

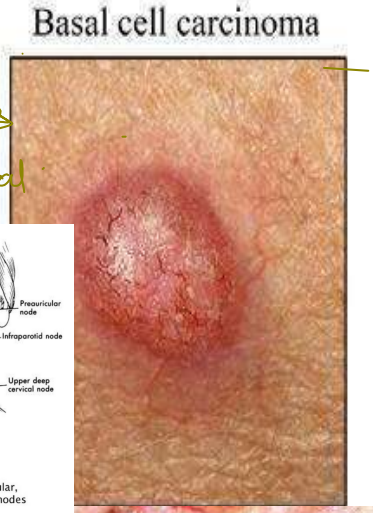
Q2: What is the LN of this area?

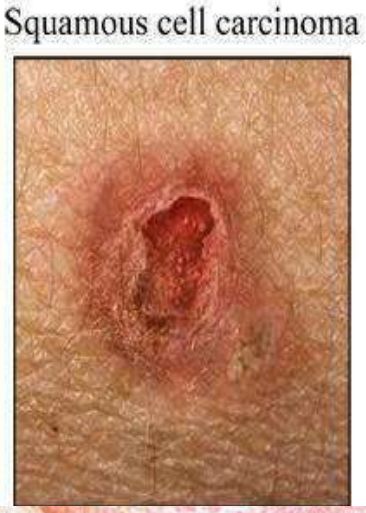
Submental and submandibular?? mostly submental



Q3: What will you do to confirm Dx?

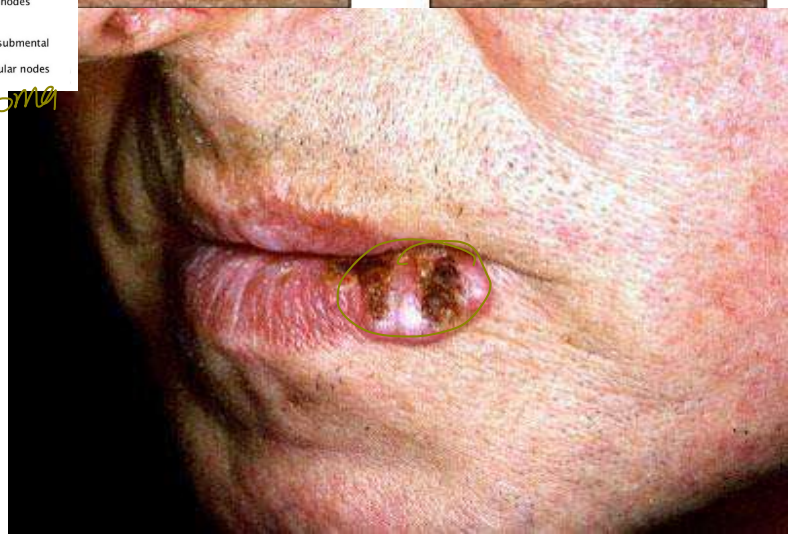
Biopsy for histopathology.





basal layer/ malpighian

- Arising from epidermal cells. skin type I & II
- Risk factors: sun exposure/ pale skin/ arsenic/ ~~xeroderma~~ pigmentosum/ immunosuppression. → RF for melanoma
- **Actinic keratosis : the precursor skin lesion.** in 20%.
- Raised, slightly pigmented skin lesion/ ulceration/ exudate/ itching.
- Dx: excisional biopsy for small lesion/ incisional biopsy for large lesions.
- Most common sites : head, neck and hand. / Face, hand, Forearm
- **Involves the lower lip and BCC involves the upper lip or above this level.**

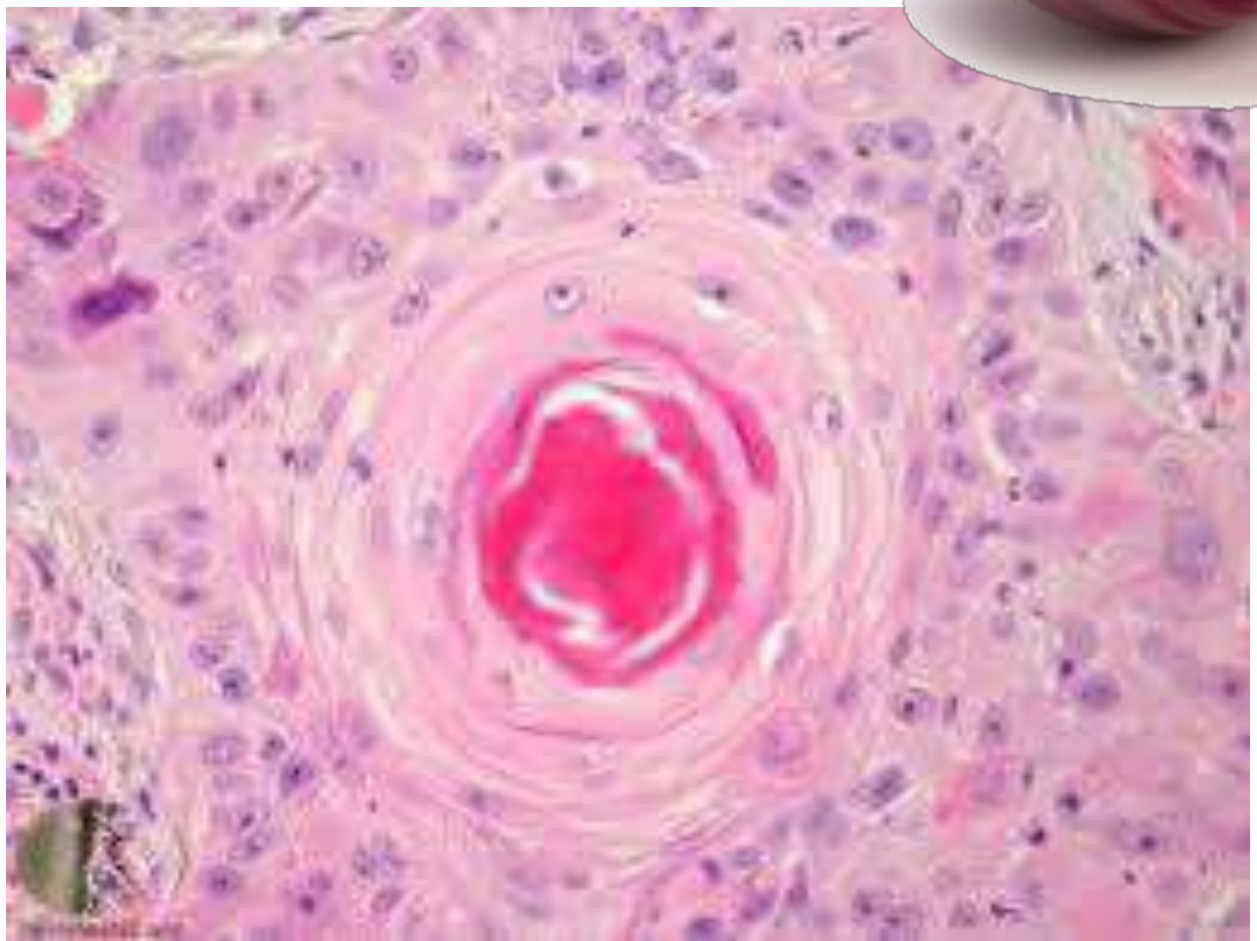


Q1: Name the lesion?

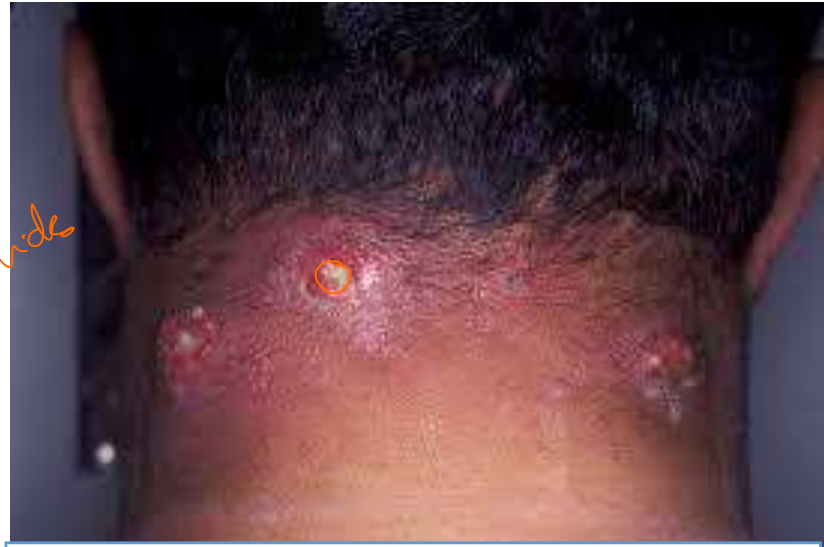
- Onion cluster cells

Q2: Mention the Dx?

- SCC (Squamous cell carcinoma)



Q: Two patients came to ER complaining of neck swelling:



next in slide

Q1: What is the pathology?

- Carbuncle

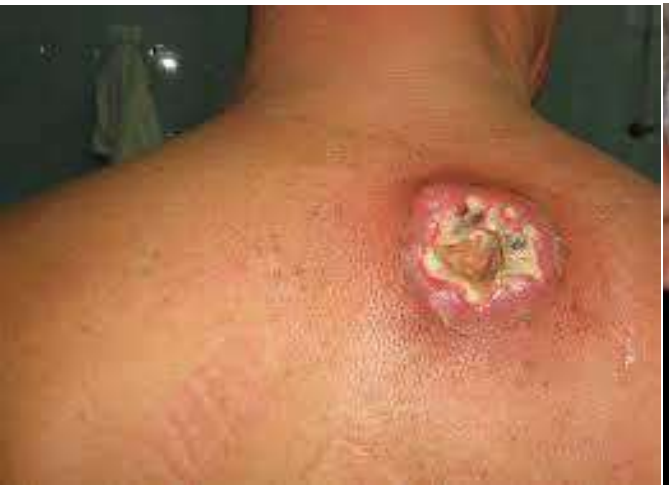
Carbuncle is an abscess larger than furuncle, usually with one or more openings draining pus onto the skin

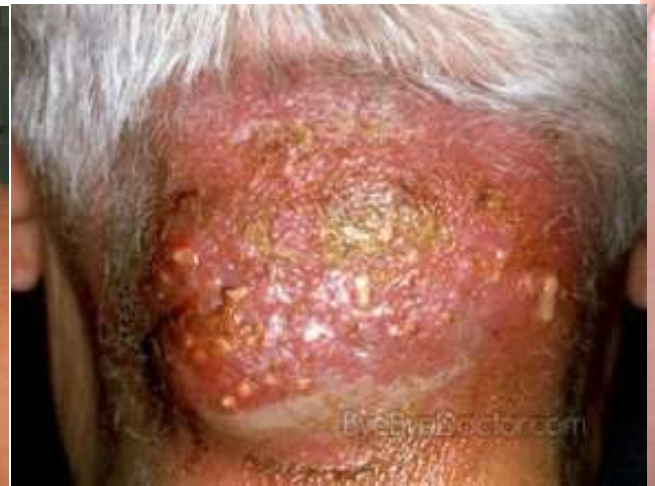
Q2: MCC?

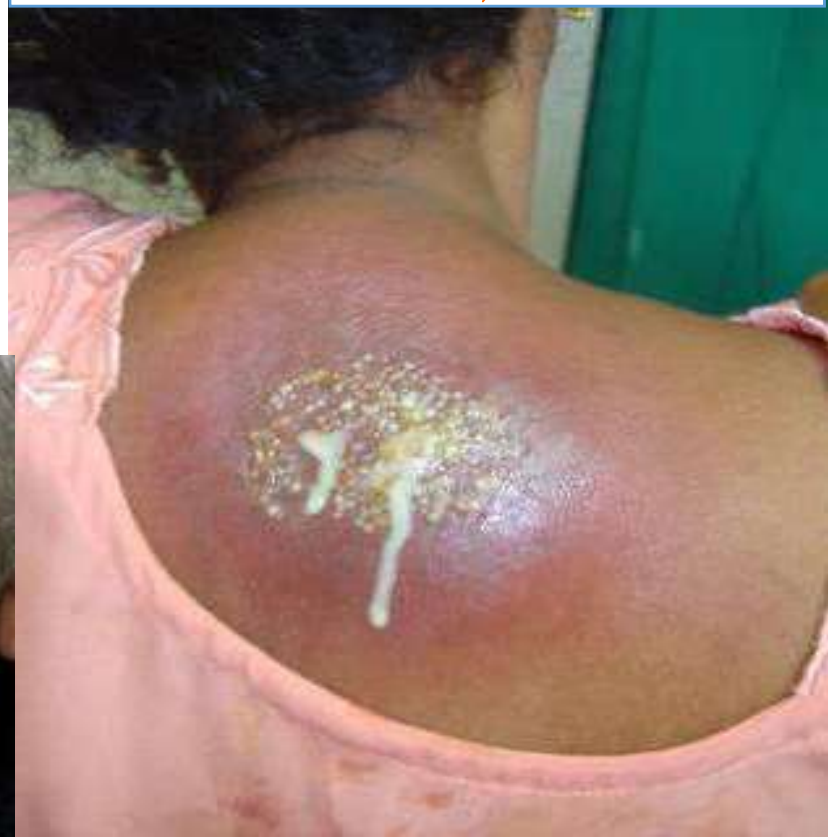
- Staphylococcus Aureus

Q3: Mx?

- Incision, drainage and antibiotics





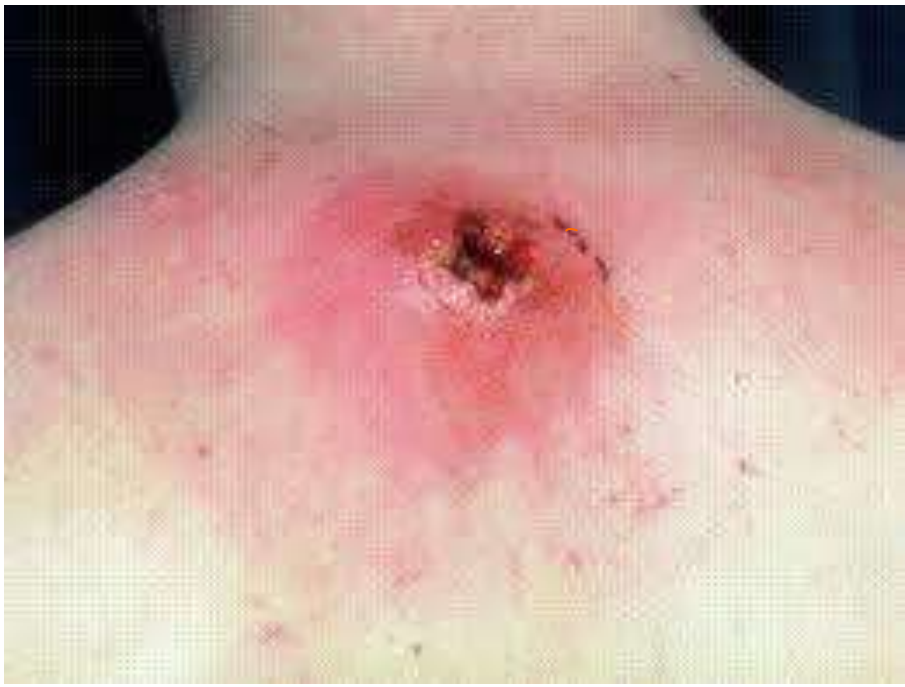


not in slides

Q1: Identify this picture:

Furuncle → size غير ال

تقدر تميزها انه redness ال واضح عكس حولين الاصابه



Q2: Mention one risk factor?

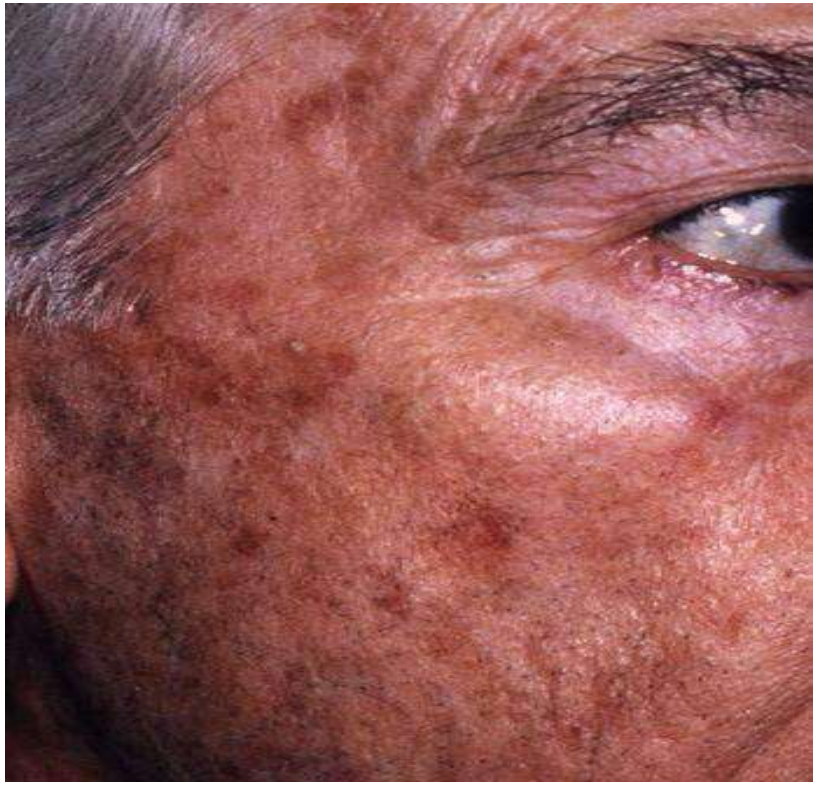
DM

Q3: it is more common in?

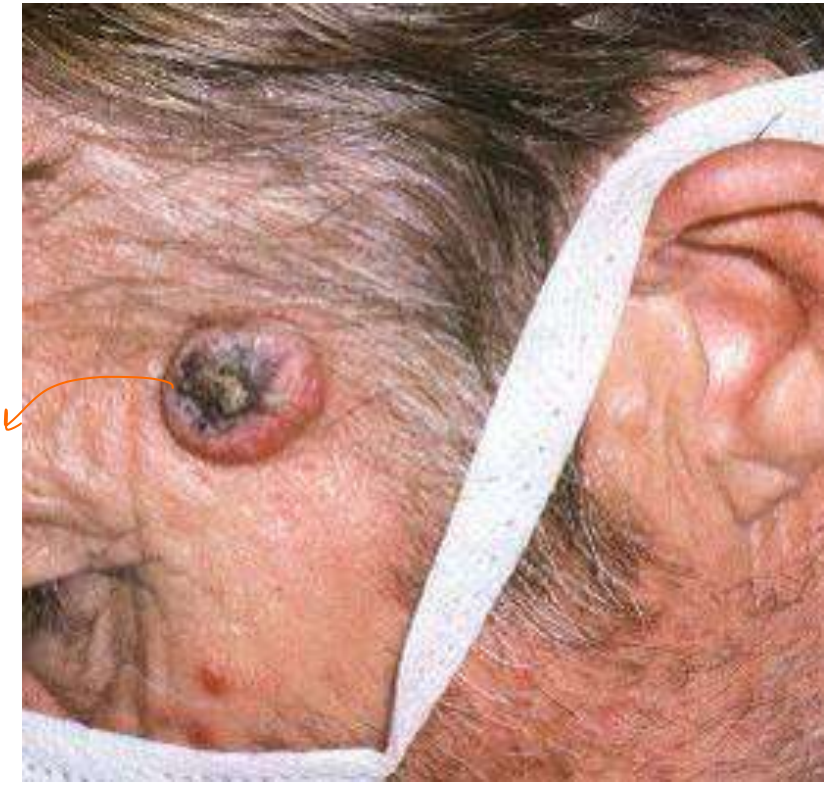
In the back of the neck

Q4: Name 1 treatment?

Incision and drainage plus antibiotics



actinic keratosis



Keratoacanthoma

self limiting growth and subsequent regression of hair follicle cells

Q1: Dx of picture (1)? Keratoacanthoma

Q2: Dx of picture (2)? Actinic Keratosis

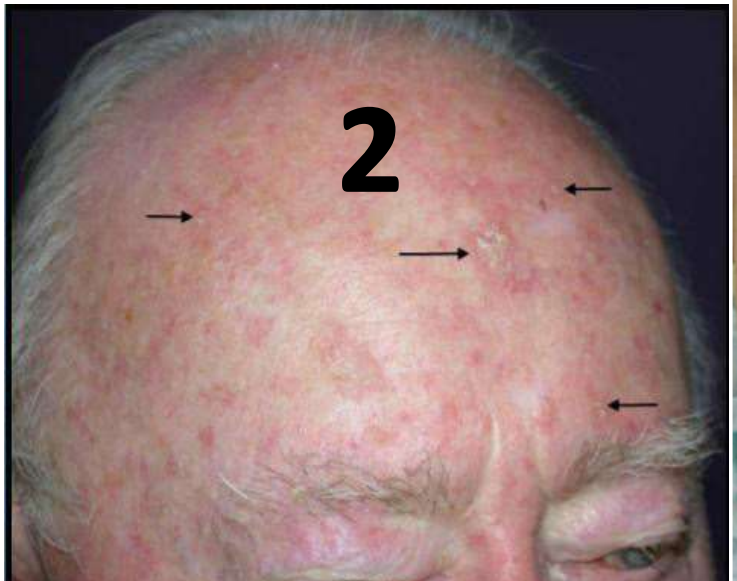
Q3: Dx of picture (3)? Sebborhoeic Keratosis

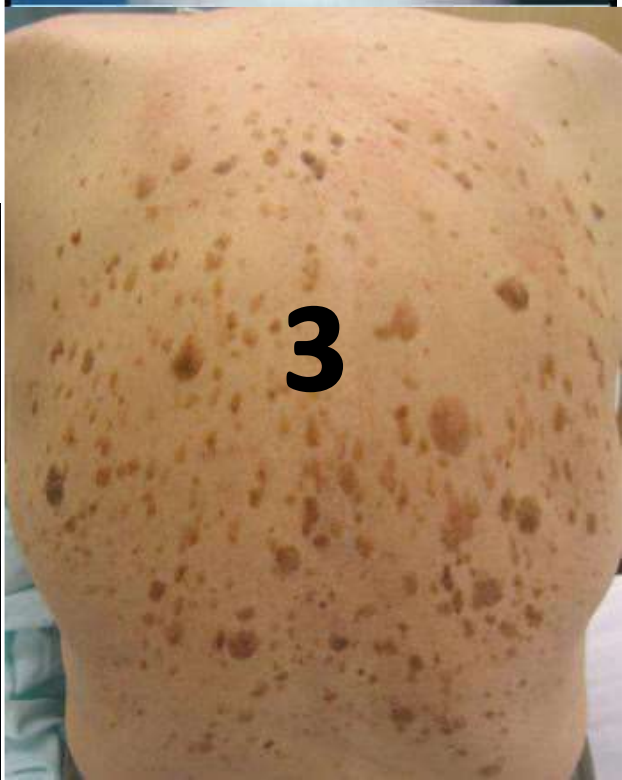
Q4: Dx of picture (4)? Necrobiosis Lipodica

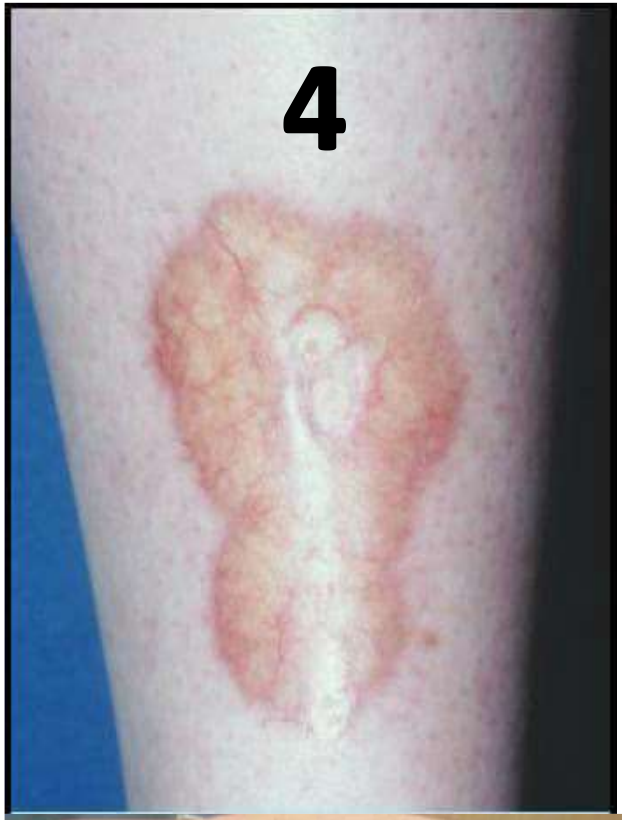
Q5: Which doesn't have pre-malignant potency?

3

Q6: Picture 2 can convert to? SCC





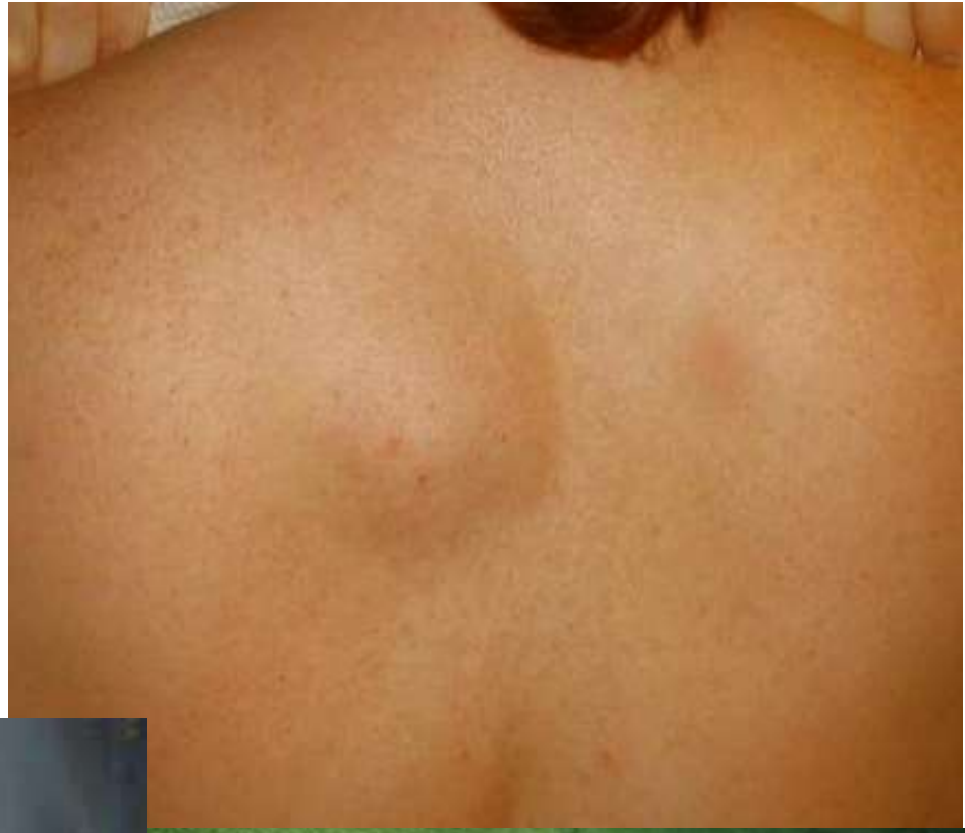


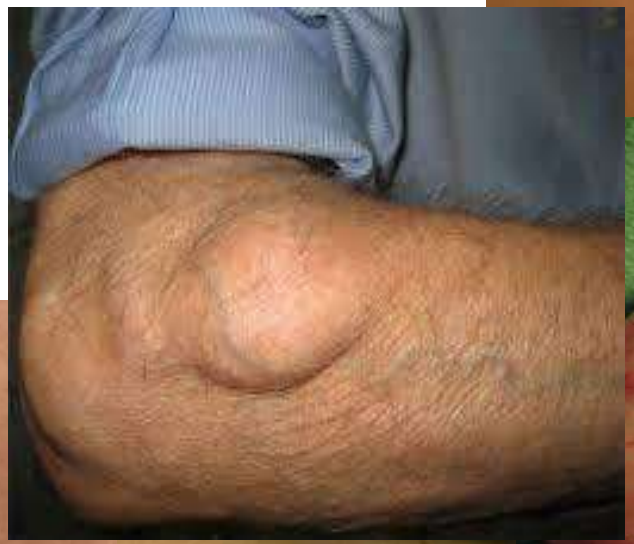
Q1: What is this?

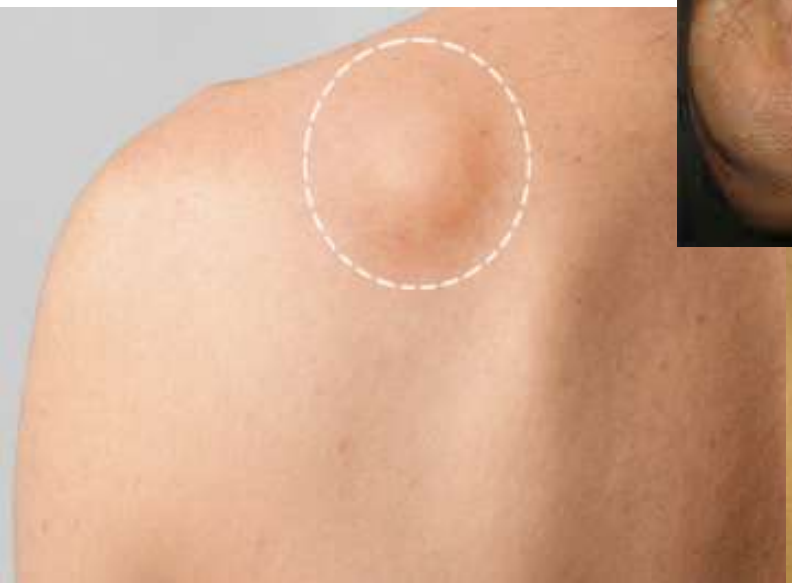
- Lipoma

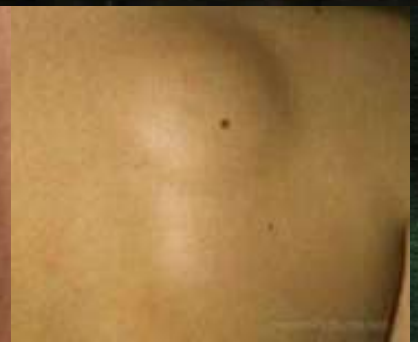
Q2: What is the risk of wound infection after removal (% of wound infection)?

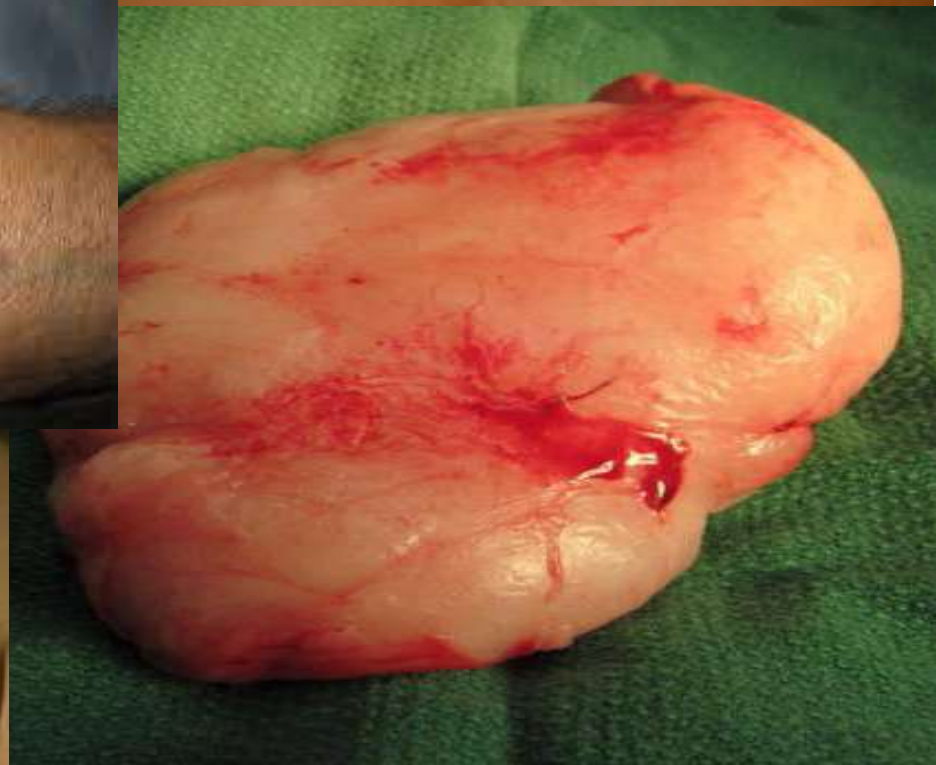
- 1-3% (clean wound)







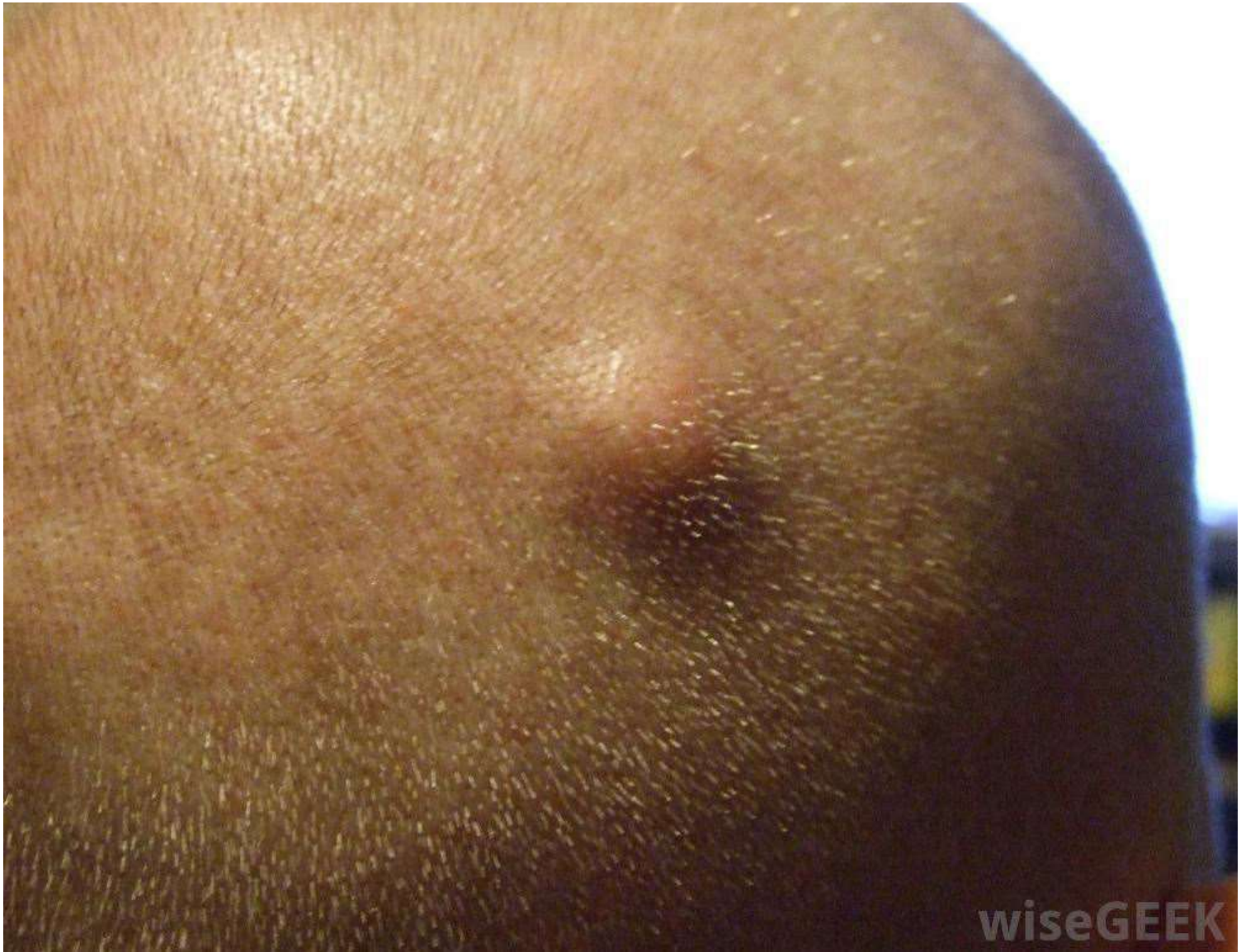




Q: Give 2 DDx of a scalp lump?

1) Sebaceous cyst

2) Epidermoid cyst



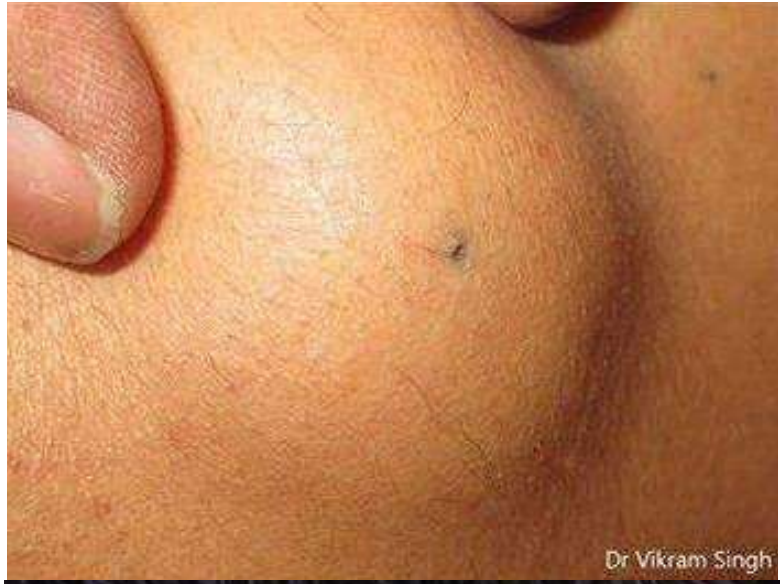
Sebaceous cyst

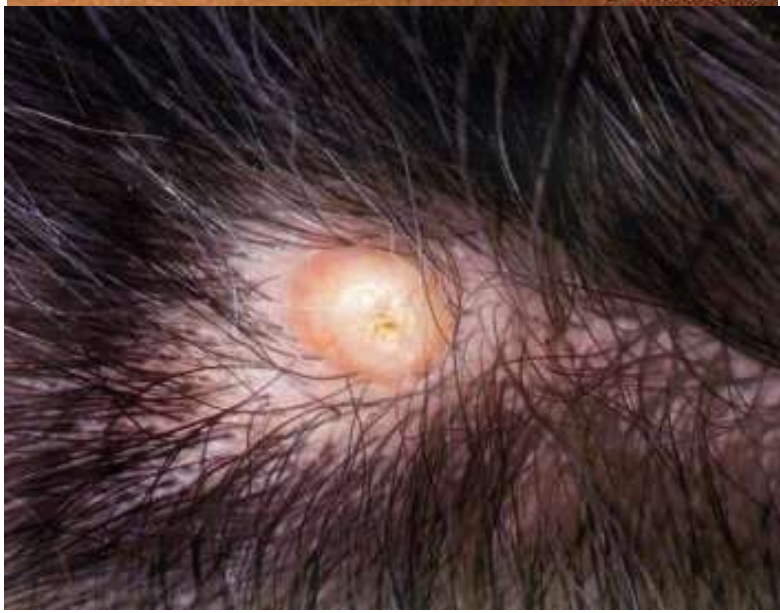
-Benign subcutaneous cyst filled with sebum.

- found in hairy areas
(scalp, scrotum ,neck ,..).

- Most small cysts do not require treatment. Large or painful cysts may be removed surgically or by liposuction.

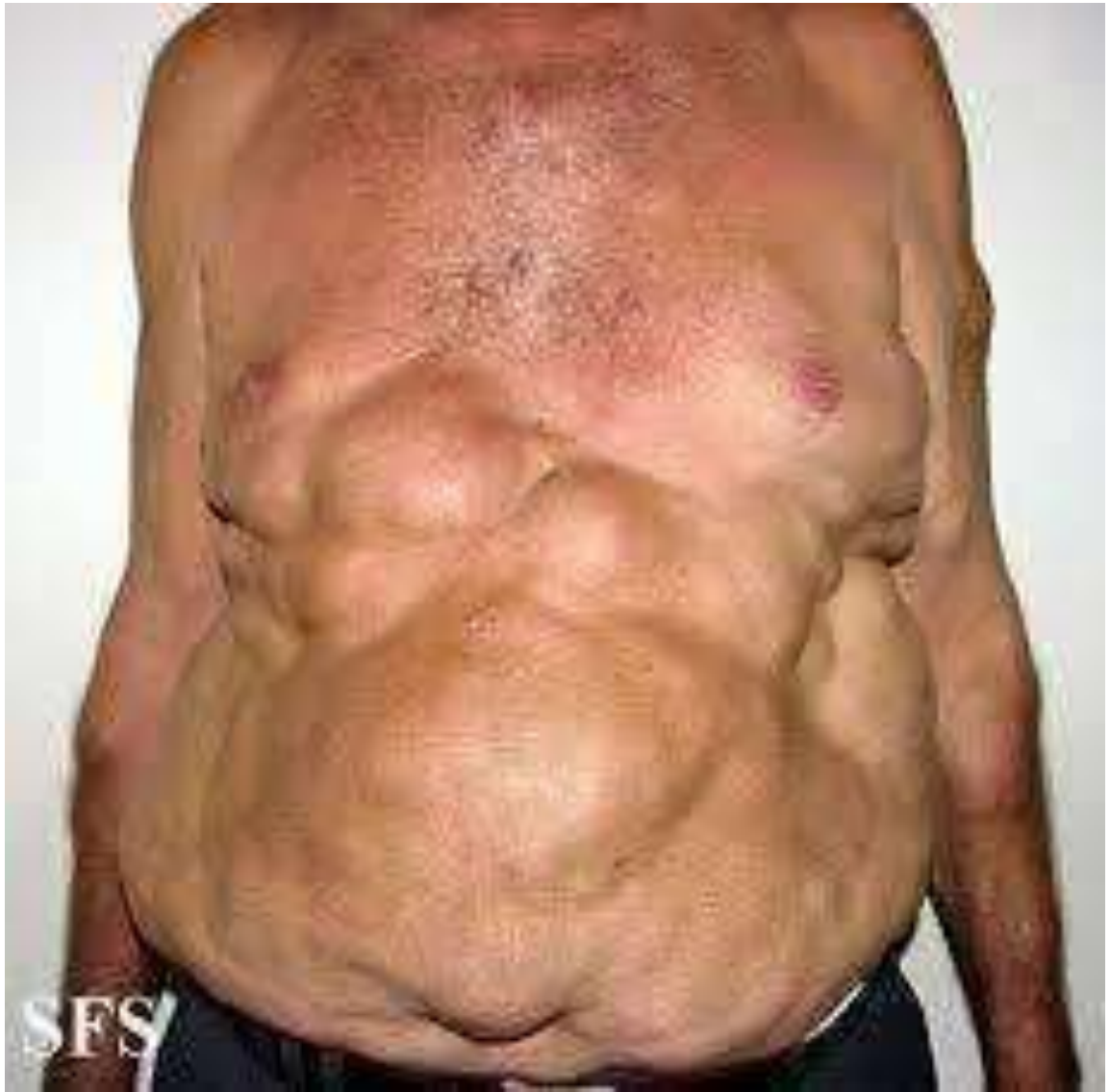
Important note: if there is a scalp lesion like this it's impossible to be lipoma as a differential diagnosis since lipoma emerges from fat under the skin and scalp area is devoid from fat.





Lipomatosis

AD condition in which multiple lipomas are present on the body.



Q1: Describe what you see?

1) Café au lait macules

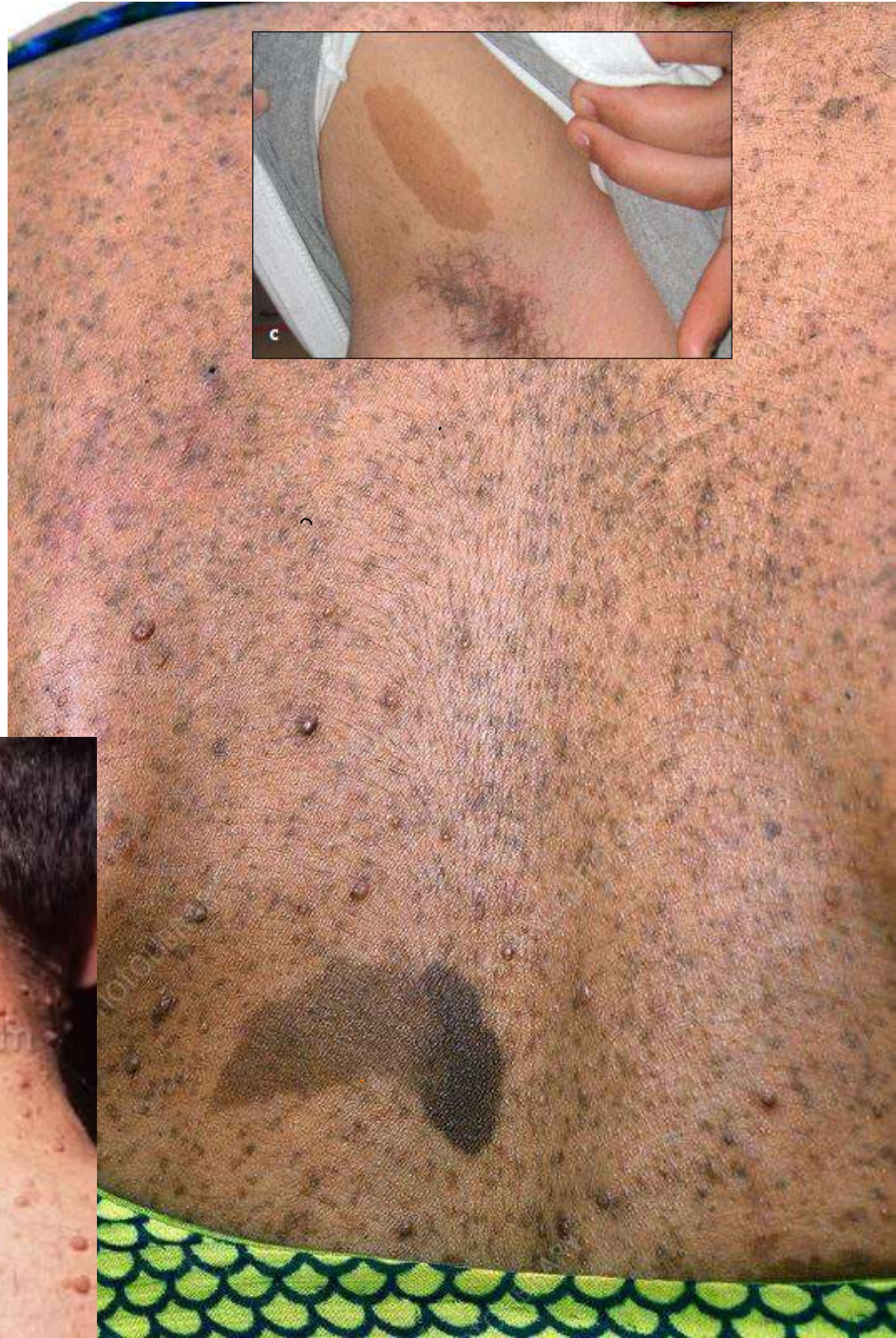
2) Neurofibromas

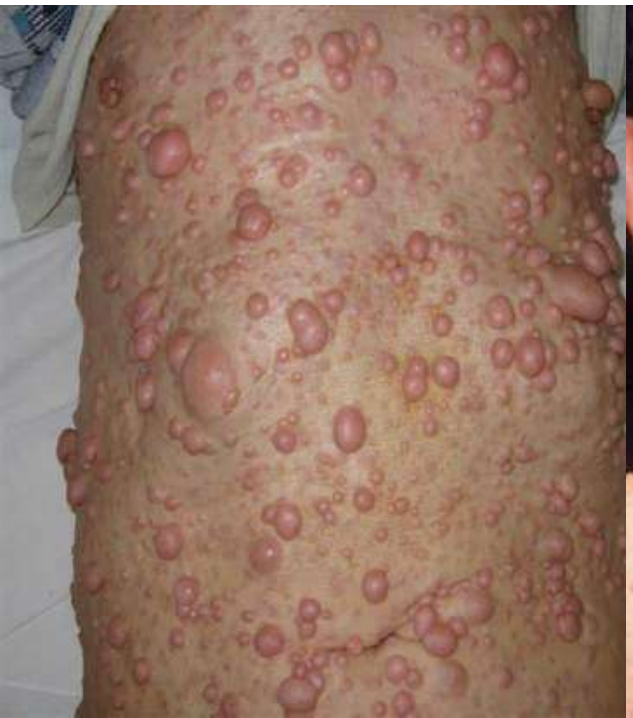
Q2: What is your Dx?

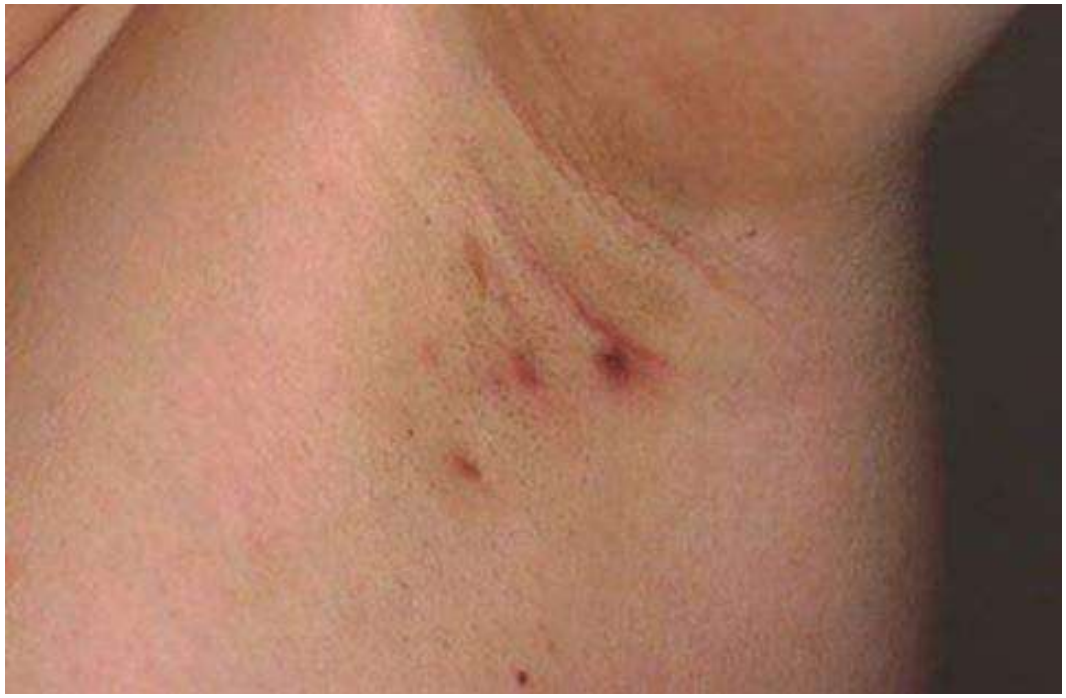
- Neurofibromatosis

Q3: Mention type of inheritance?

- Autosomal Dominant







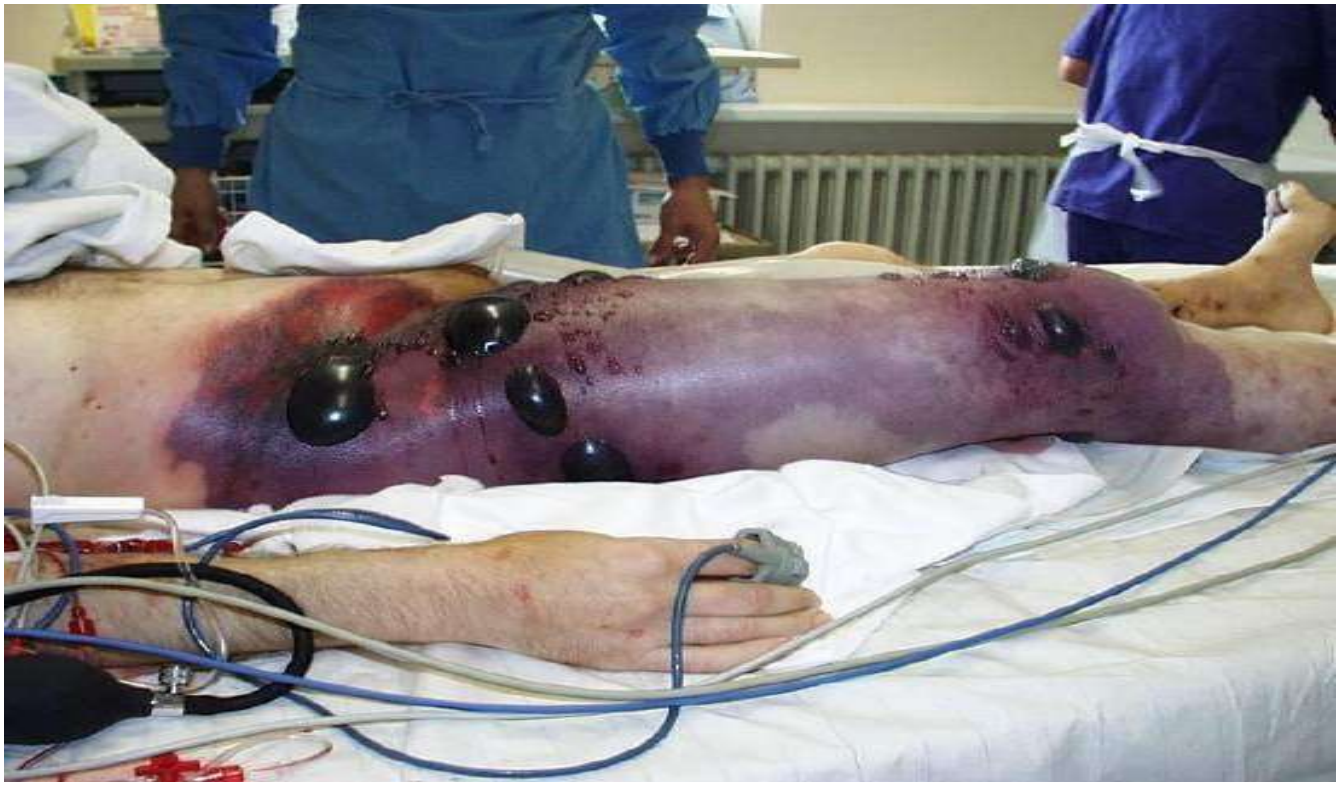
Q: what is this and where do we find it??

A: **Suppurative Hydradinitis** in axilla Found in sites of apocrine glands: axilla ,buttocks and perineum etc.

- caused by staph. Aureus.
- Treatment : antibiotics/ excision of skin with glands for chronic infection.

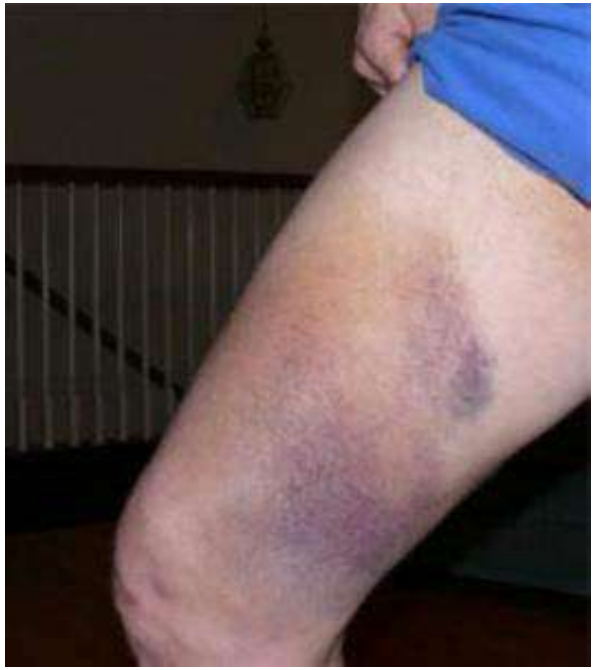
Gas Gangrene

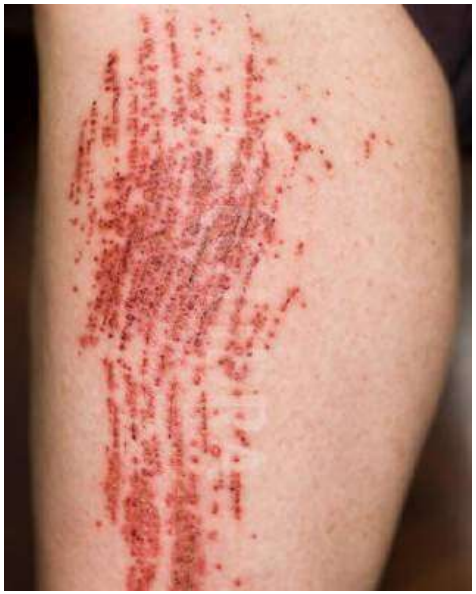
- Caused by Clostridium perfringens.
- Surgical emergency.



Contusion

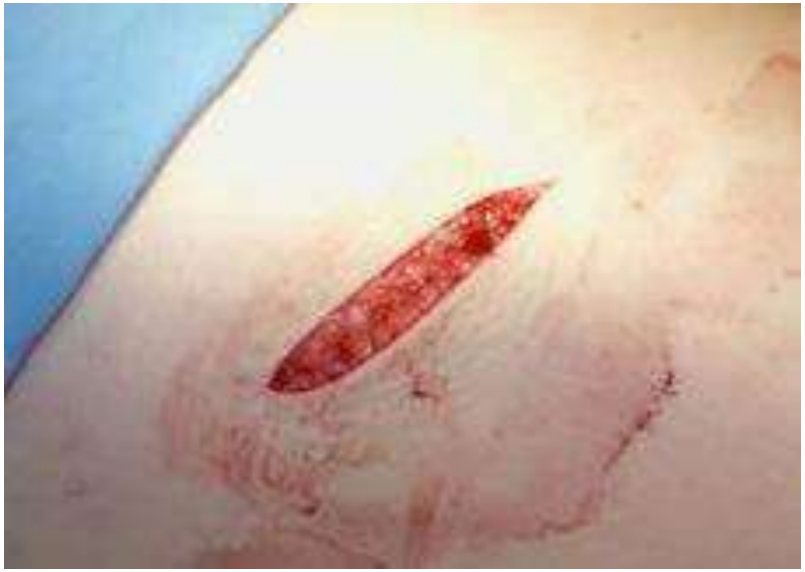
- Bruising injury caused by blunt trauma.
- Small hematoma is resorbed by itself (except on the face; need to be opened and evacuated)
- Large hematomas : if <24 hrs managed by aspiration, if > 24 hrs by incision and drainage.





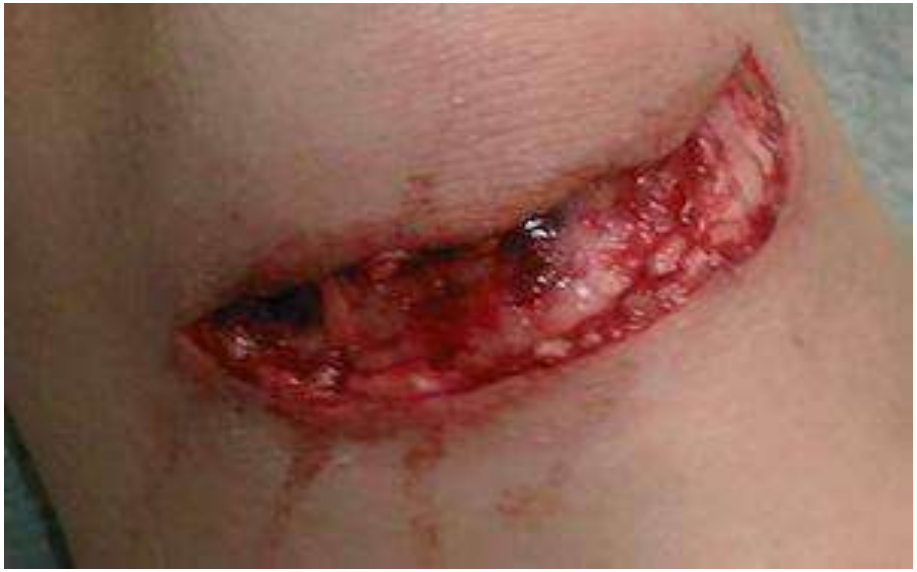
Abrasion

Managed by dressing to prevent 2ry bacterial infection.



What is the type of this wound ? How is it treated?

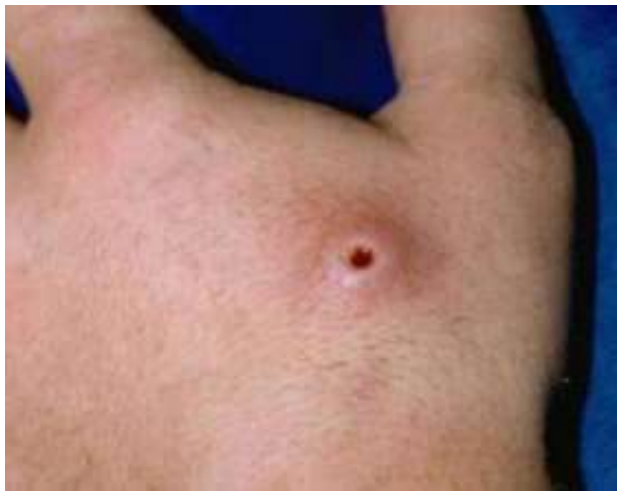
It's an **incised wound**.
Within the first 6 hours (or the first 24 hours in the face) it's treated by primary closure if the edges can be approximated without tension.



Lacerated wound usually caused by blunt objects.
First, we clean the edges (wound excision) to transform it to incised wound, then if within first 6 hours without contamination we close it by closure if the edges can be approximated without tension.

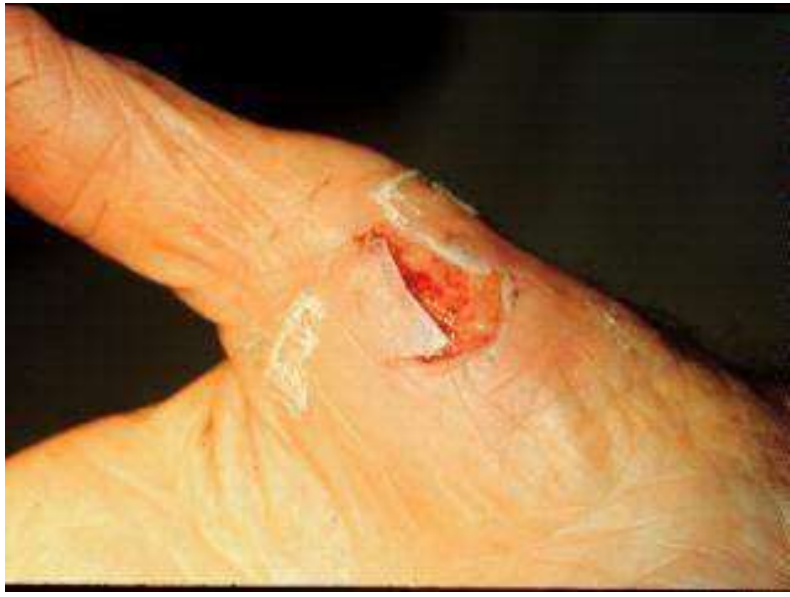
Puncture wound

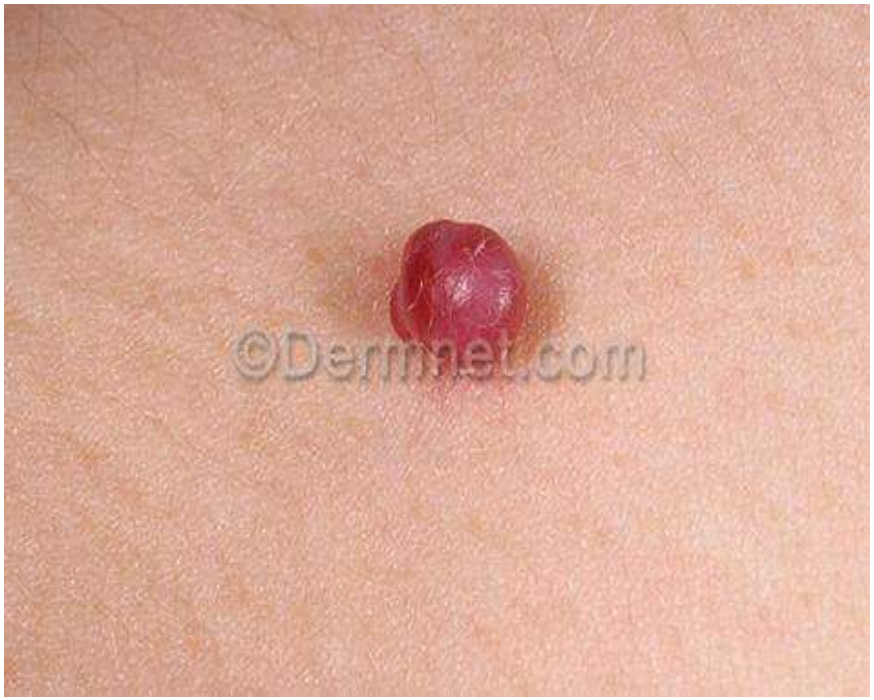
- Caused by pointed objects.
- Management: tetanus vaccine/ excision/ removal of foreign bodies.

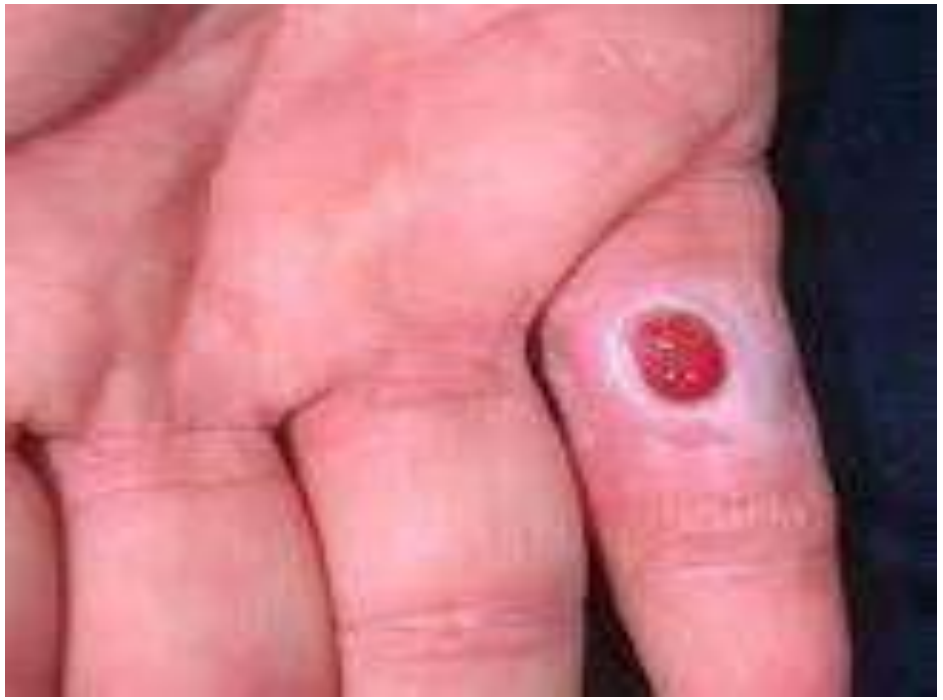


Avulsion flap

- Undermined laceration in the dermis and subcutaneous tissue.
- Management: debridement of edges/ excision of small avulsion flaps to prevent **trap-door effect**/ suturing.



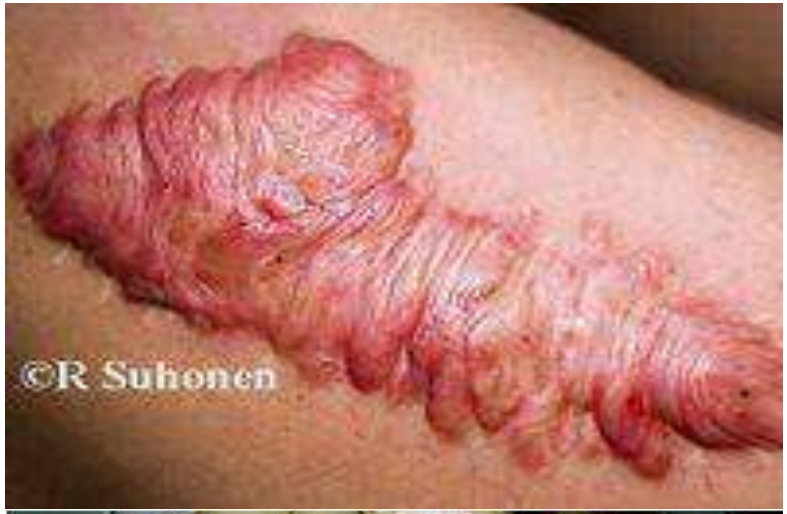


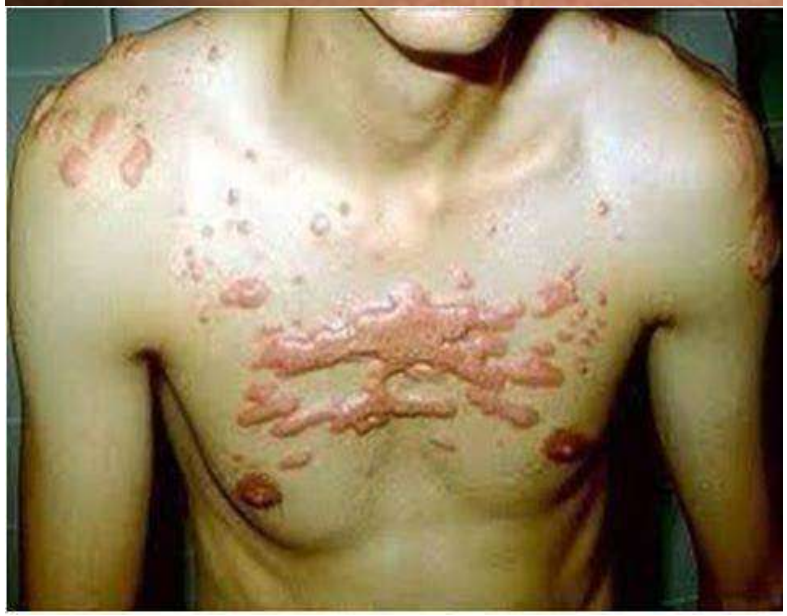


pyogenic granuloma

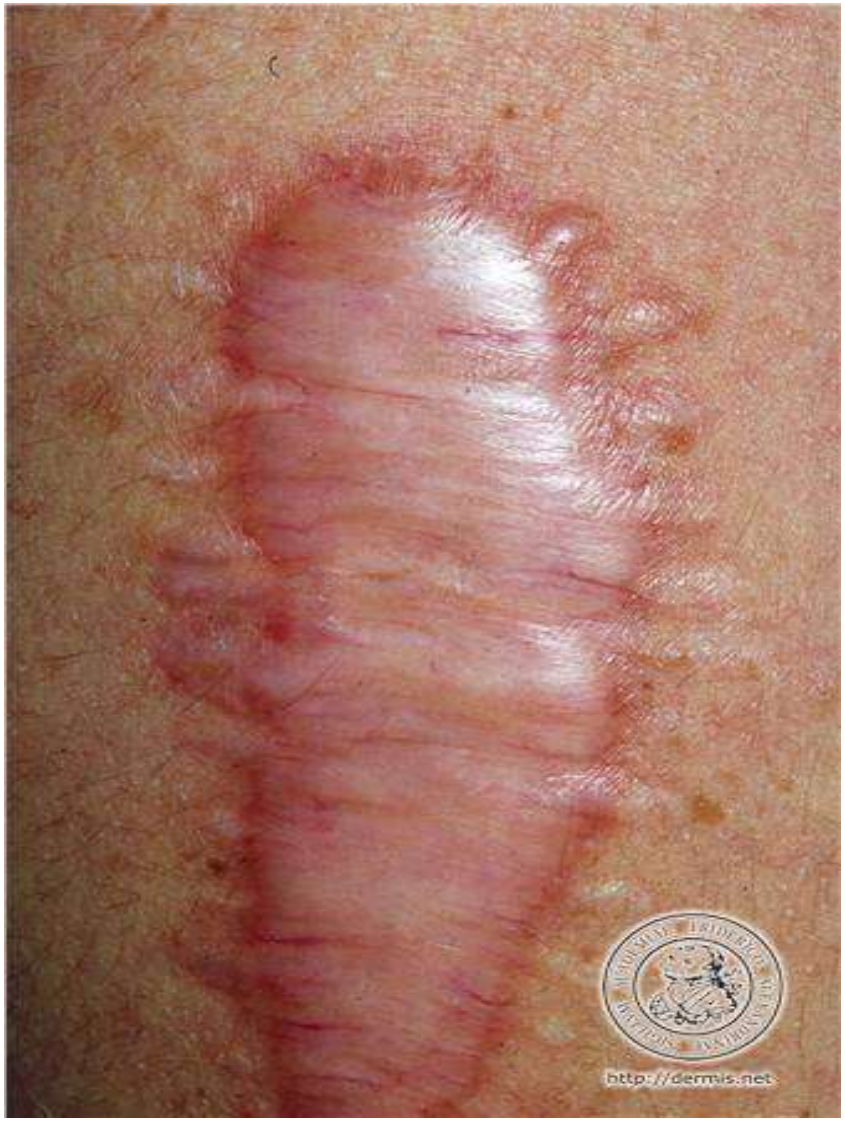
- During wound healing if the capillaries grow too vigorously they may form a mass covered with epithelium.
- Look for a history of trauma
- Very rapid growth

Keloid Scar





Hypertrophic Scar



Hypertrophic scar	Keloid scar
Improves with time (2 years)	No improvement with time
No genetic predisposition	Genetic predisposition
Less collagen	More collagen
Less cytokines	More cytokines
fibers parallel to the dermis	Fibers random in orientation
Remains within the borders of the original scar	Extends beyond the original scar margins
Regress spontaneously or by medication	

Treatment :

- Surgery (Z- plasty, W- plasty) / artificial skin/ steroids/ pressure therapy/ topical silicon/ low dose radiation/ laser (CO2 and argon)/ calcium channel blockers/ interferon.

Q1: Name the Dx?

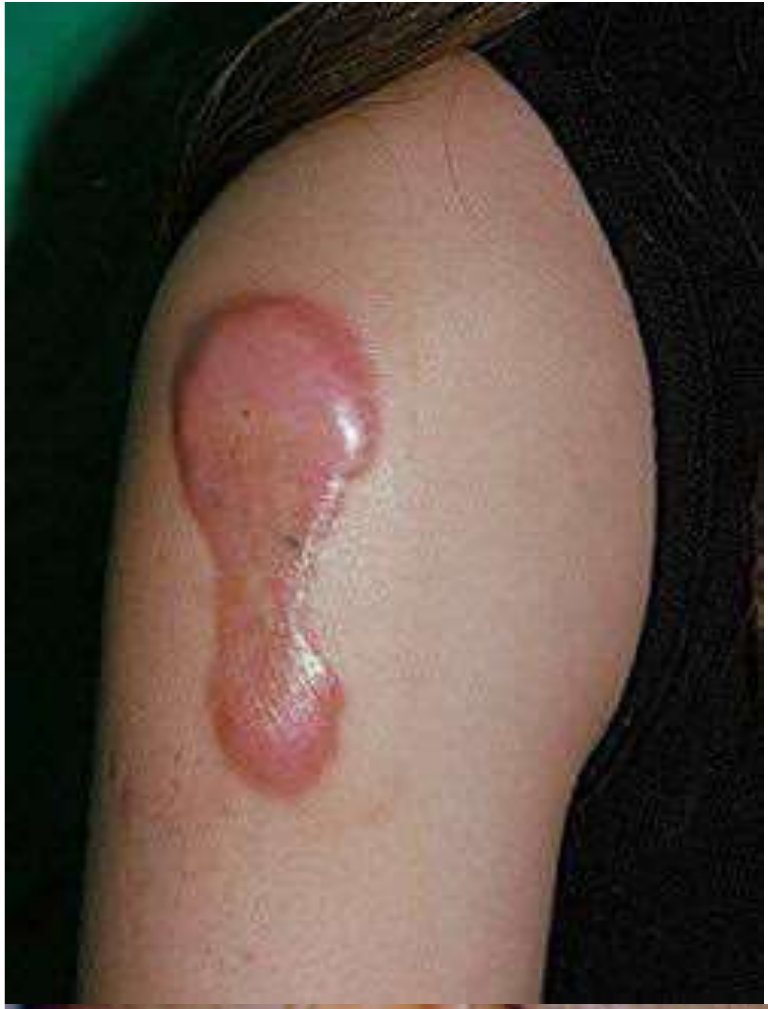
- Keloid

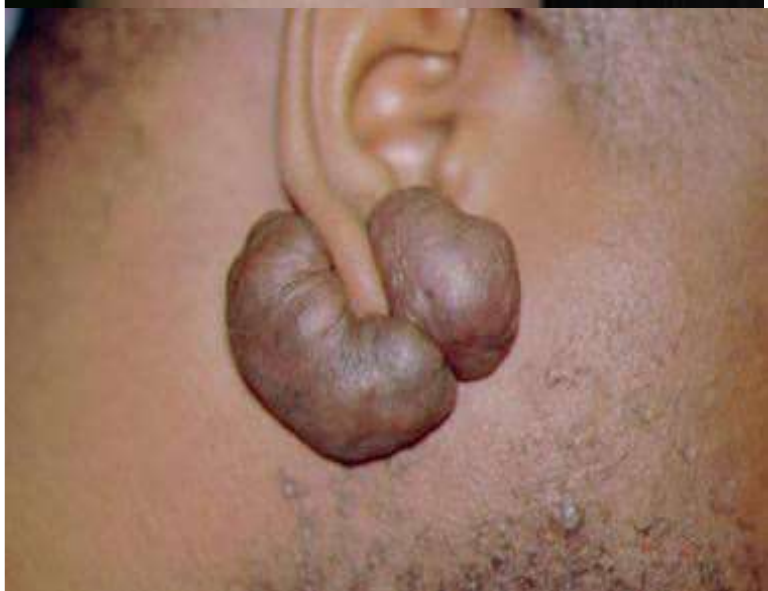
Q2: Name 2 RF?

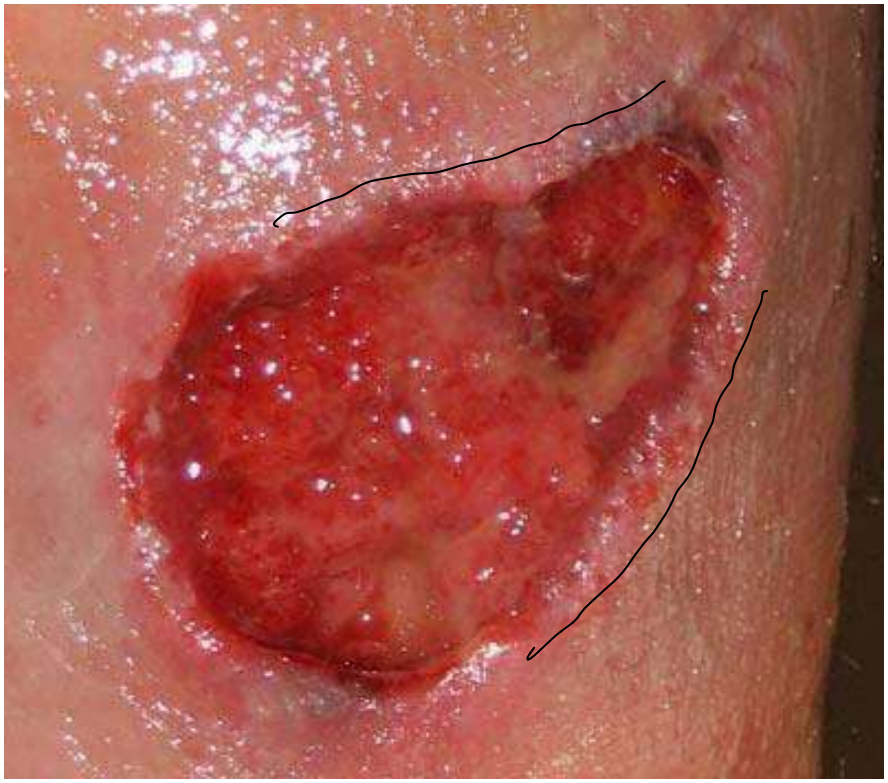
1) Dark skin
2) FHx

Q3: Name two characteristics?

1) Extend beyond borders of original wound
2) More common in darker skin
3) Require years to develop
4) Thick collagen







Granulation tissue

(sign of healing ulcer)

Inspection.....

- Edge: five types:-
  - *Sloping edge* e.g. healing ulcer
  - *Punched out edge* e.g. Gummatous ulcer, deep trophic ulcer
  - *Undermined edge* e.g. tuberculous ulcer-destroy subcutaneous faster the skin
  - *Raised edge* e.g. Rodent ulcer
  - *Rolled out (everted)*- e.g. Squamous Cell Carcinoma

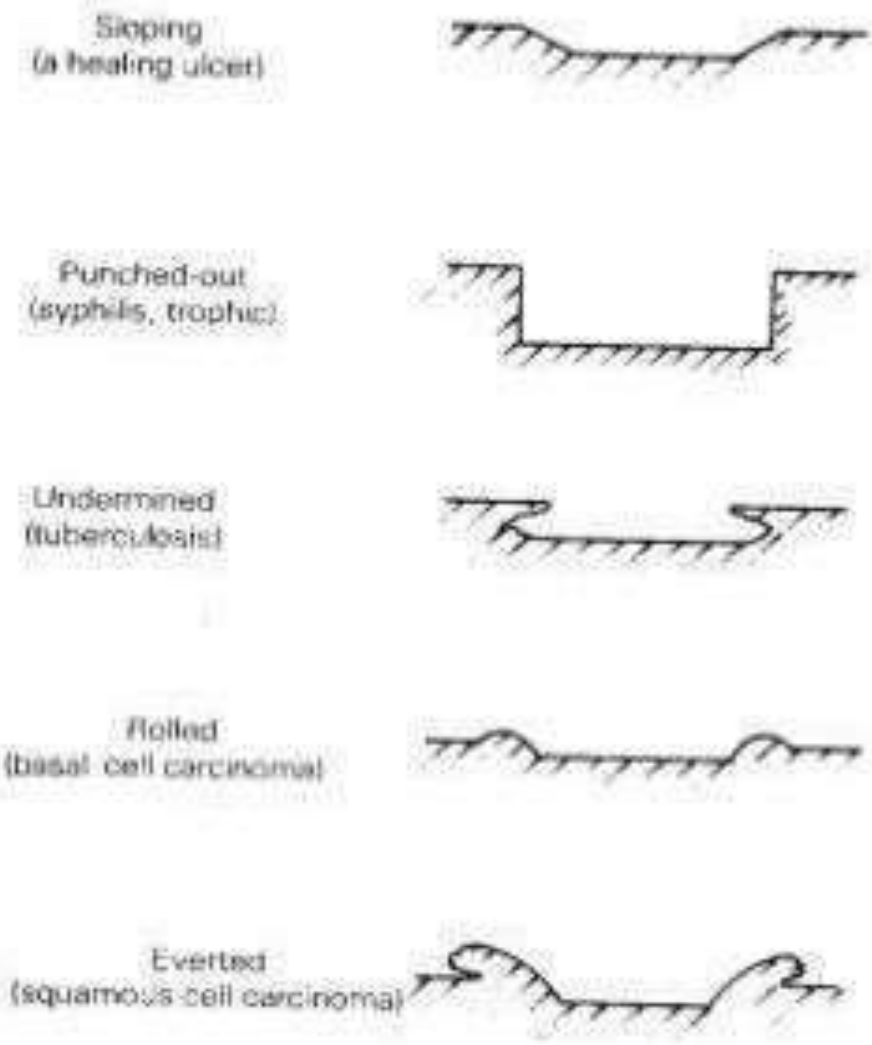
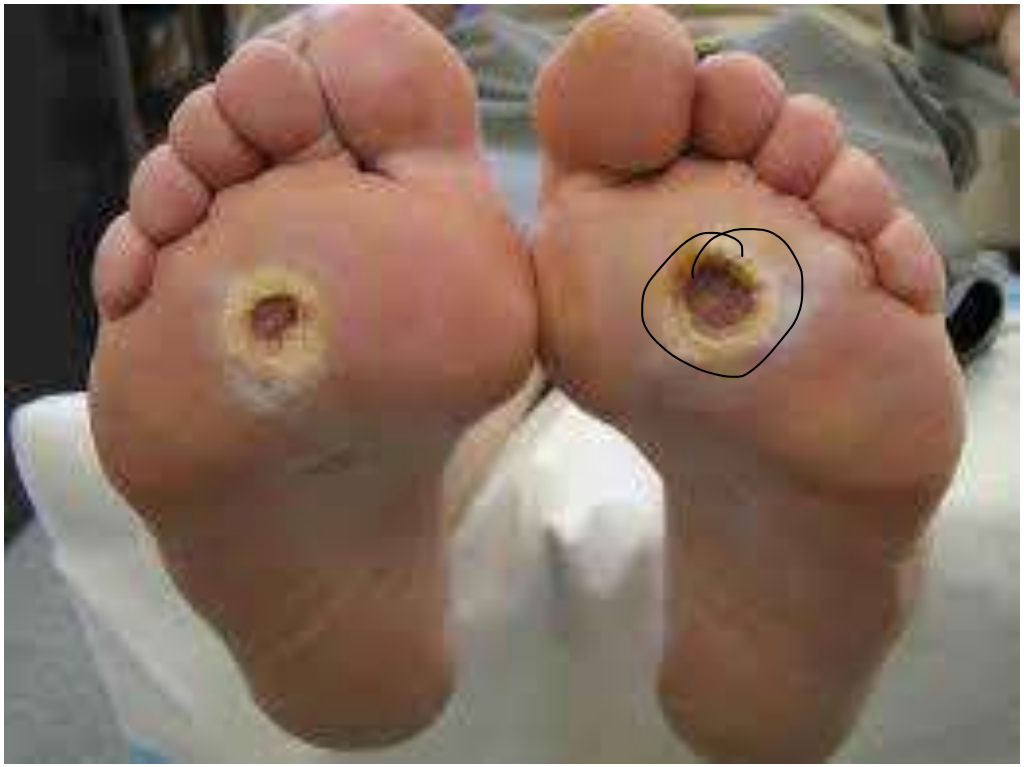
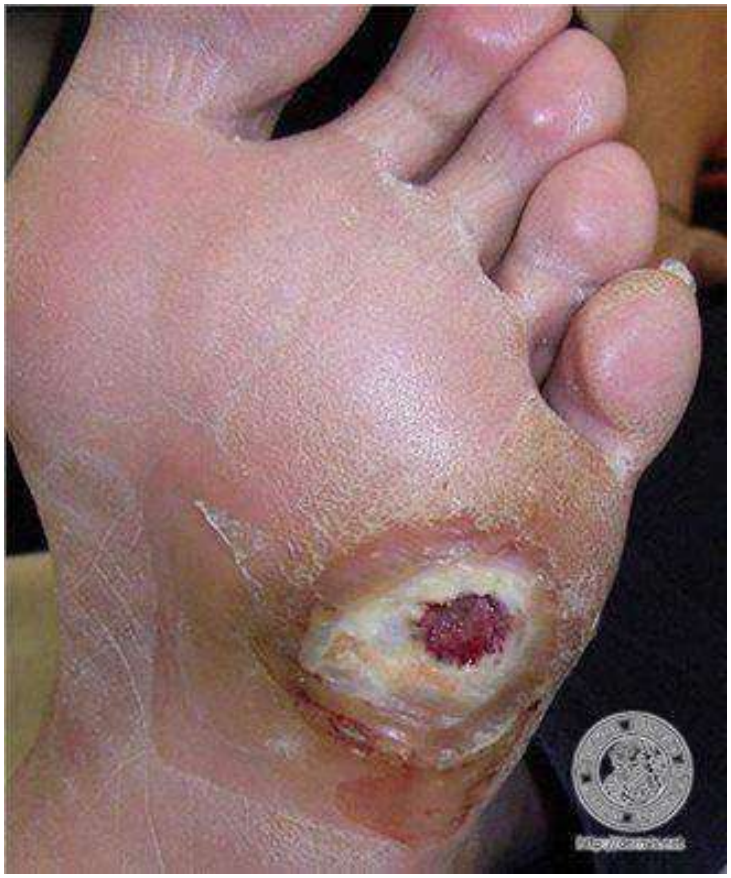


Figure 1.15 The varieties of ulcer edge.





Q1: Name the Dx?

- DM/Peripheral arterial disease

Q2: Causes?

- Prolonged pressure
- Uncontrolled long standing DM

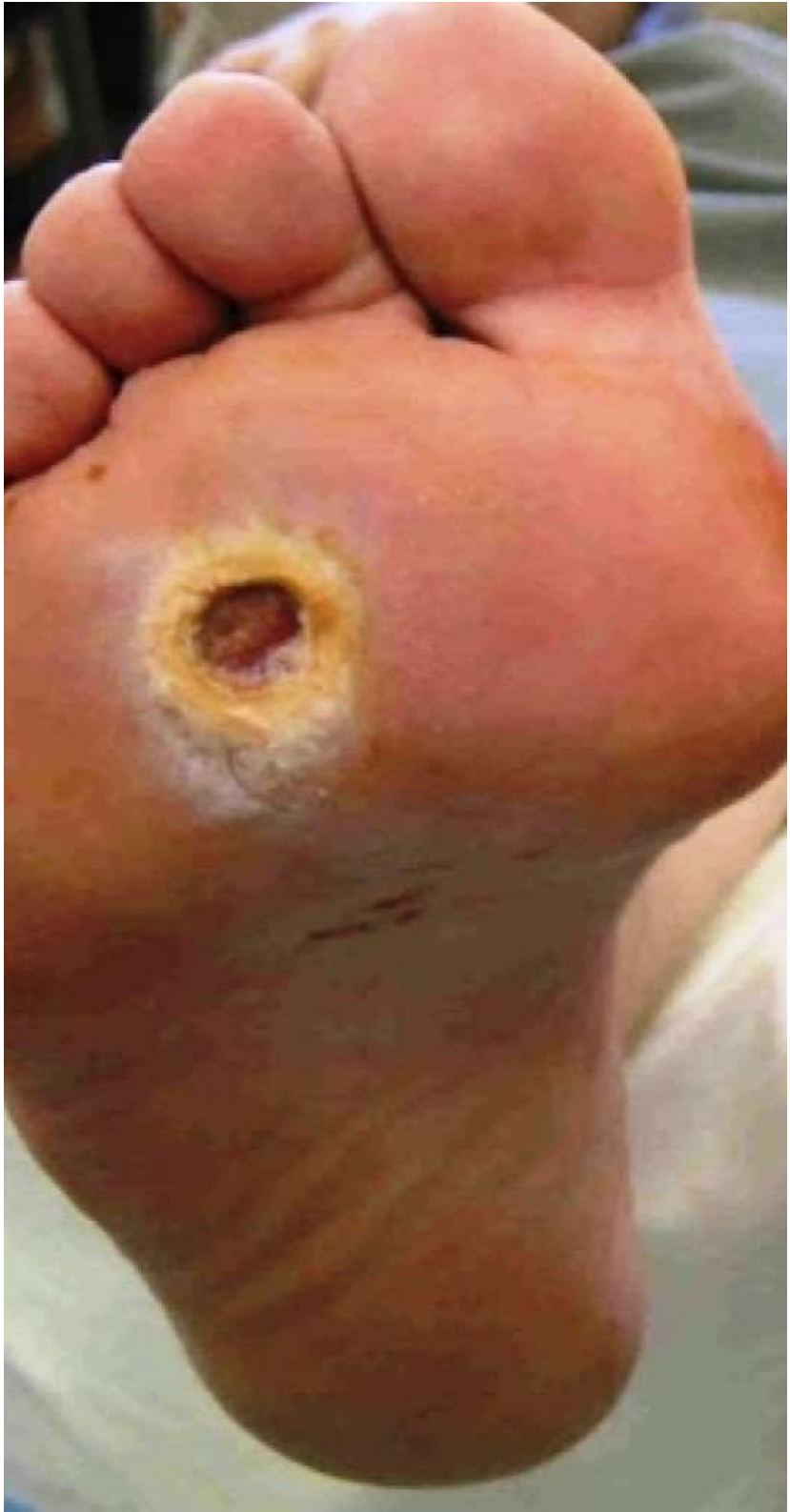
Neurotrophic Ulcers:
punched-out appearance
painless.
Muscle atrophy may be noted.

Q1: What is the most common etiology of this ulcer.

- Neuropathic Diabetic Ulcer

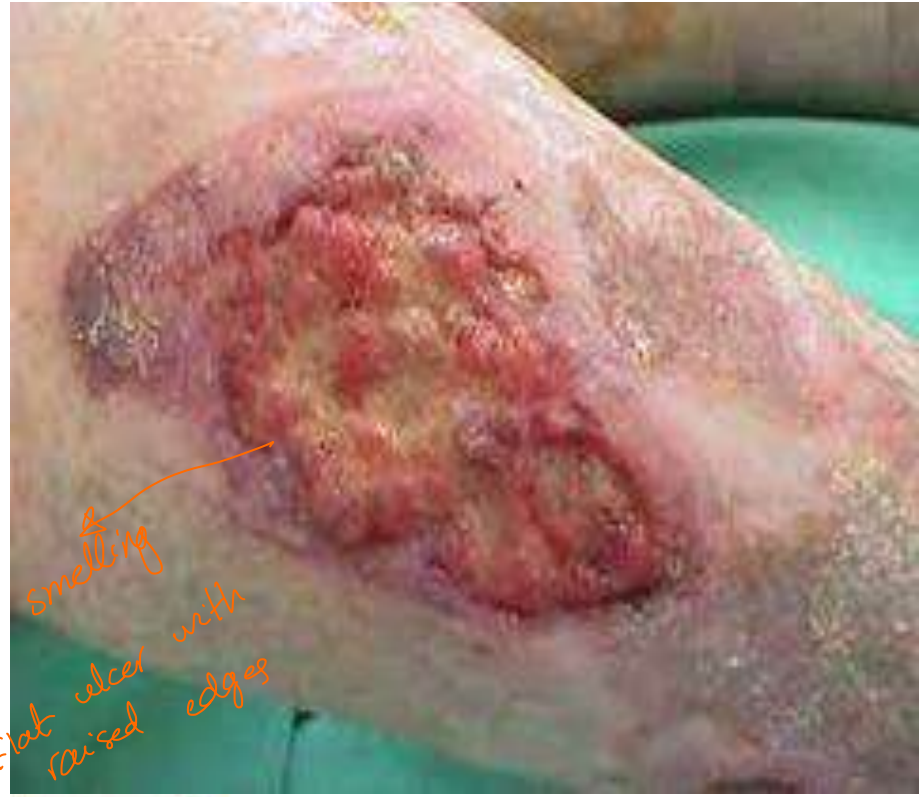
Q2: What is the most important step to accelerate healing?

- Diabetic control, Decrease pressure at the area, Try to prevent infection and increase perfusion to the area



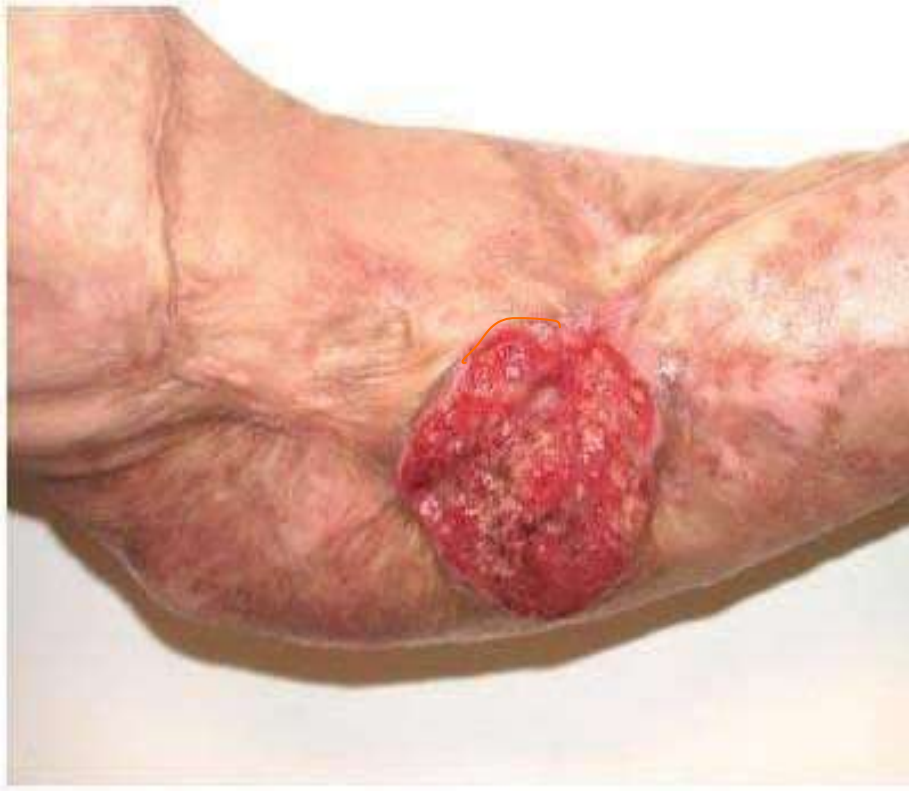
type of SCC, occurs in Fistula & thermal burn

Marjolin ulcer (malignant ulcer)



- SCC arises in a long standing benign ulcer or scar (long standing venous ulcer or scar of old burn).

- Need 20-30 years to develop.



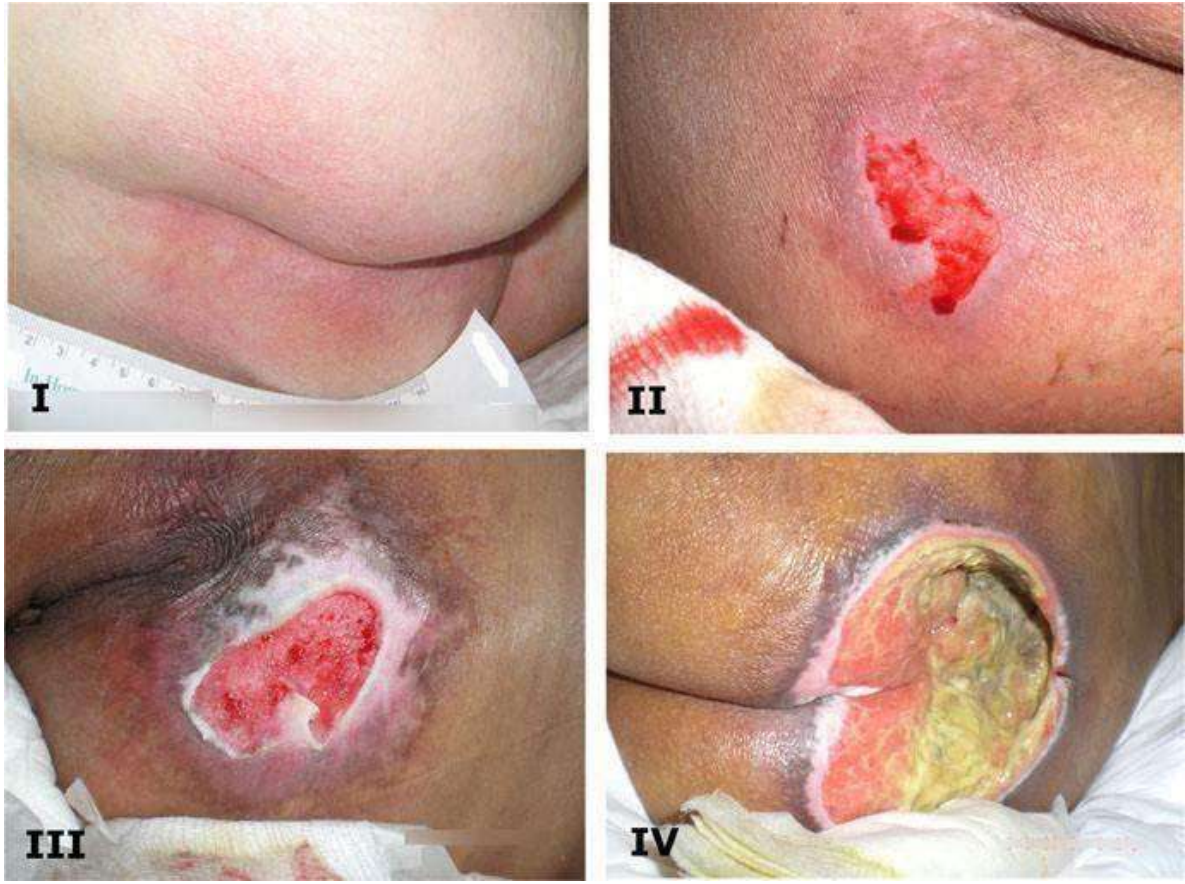
Pressure sores grades

1) Erythema for >1 hour after relief of pressure (Hyperemia).

2) Blisters with break in dermis, erythema requires 36 hr to disappear when relieved. (Ischemia, pressure 2-6h).

3) SC tissue and muscle involvement, skin is blue and thick (Necrosis, pressure > 6 h).

4) Bone and tendon involvement, frank ulcer develops.

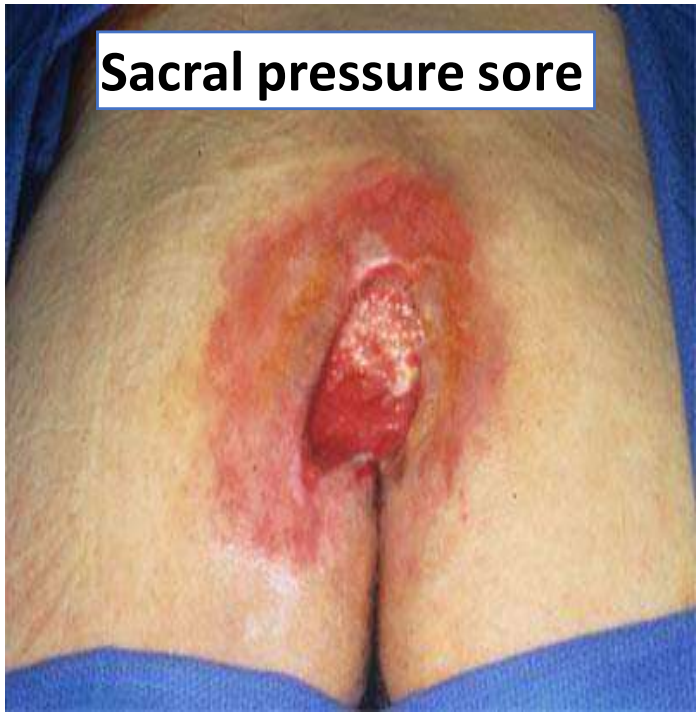


Surgical treatment of pressure sores

1 excisional debridement.
2 partial or complete ostectomy.
3 closure of the wound with healthy, durable tissue. Closure can be either :
- direct closure (in very small pressure sores).
- skin grafts.
- flaps.

Flaps :
- Local tissue flaps.
- Myocutaneous flaps.
- Fasciocutaneous flaps.

Contributing factors : 1- pressure. 2- immobility. 3- shear (tangential pressure). 4- moisture. 5- malnutrition.



Q: An 80 year old, bedridden male had this lesion in the buttock and lower back area.

Q1: What is this lesion?

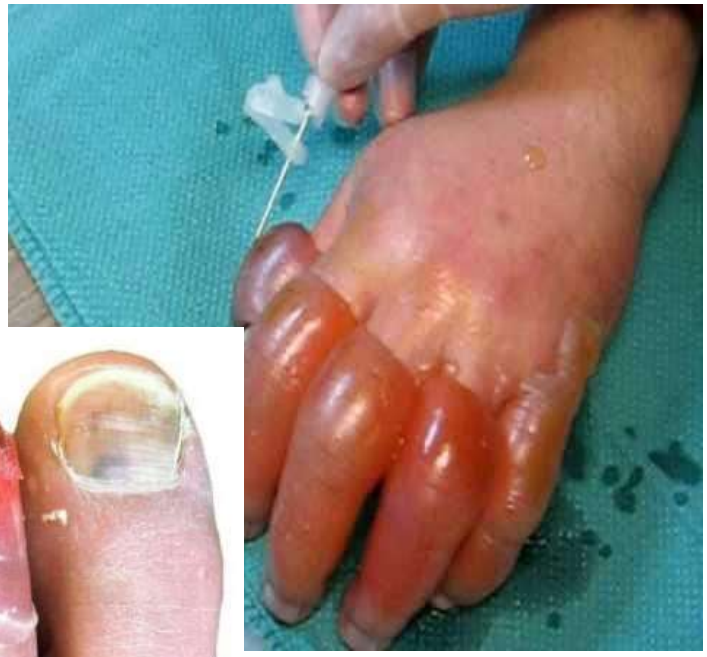
Pressure ulcer (bed sore)

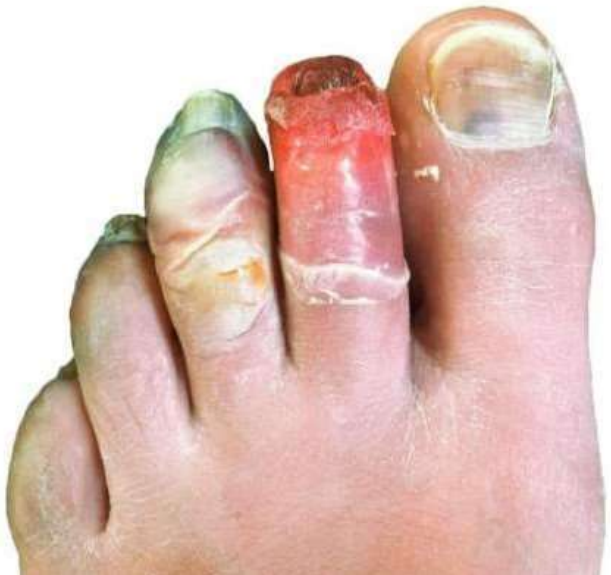
Q2: What is the most common cause?

Pressure? From hard surface, in this case (bed)

Frost bite

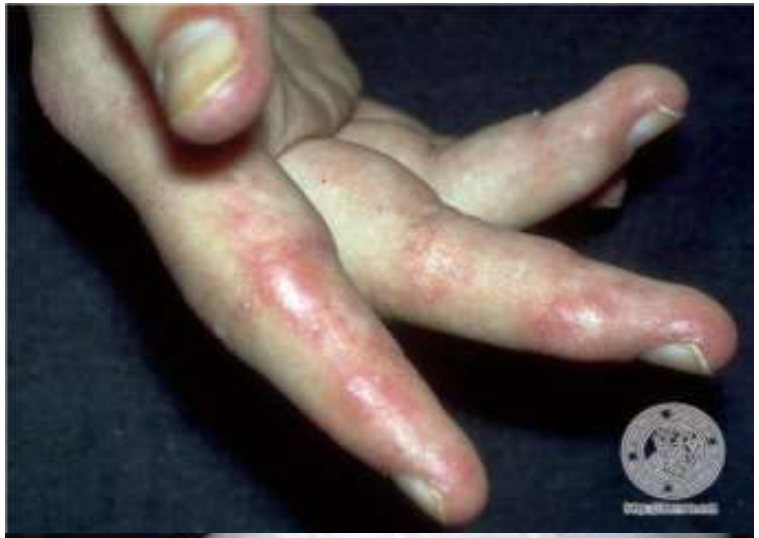
- **Tissue freezing injury.**
- Mc type of cold injury.
- **At temperature (-2c).**
- **Treatment**: rapid warming (40-42 C)/ debridement of clear blisters whereas hemorrhagic are left intact and aspirated if infected / elevation/ topical thromboxane inhibitor/ NSAID.
- Massage is contraindicated.

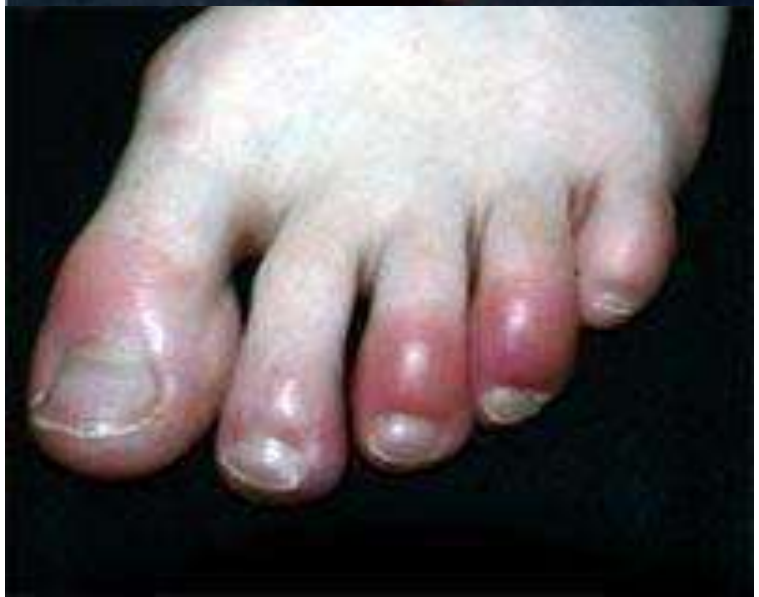




Chilblains

- a type of **non-freezing tissue injury**.
- caused by chronic high humidity and low Temp with normal core Temp.
- seen commonly in mountain climbers.





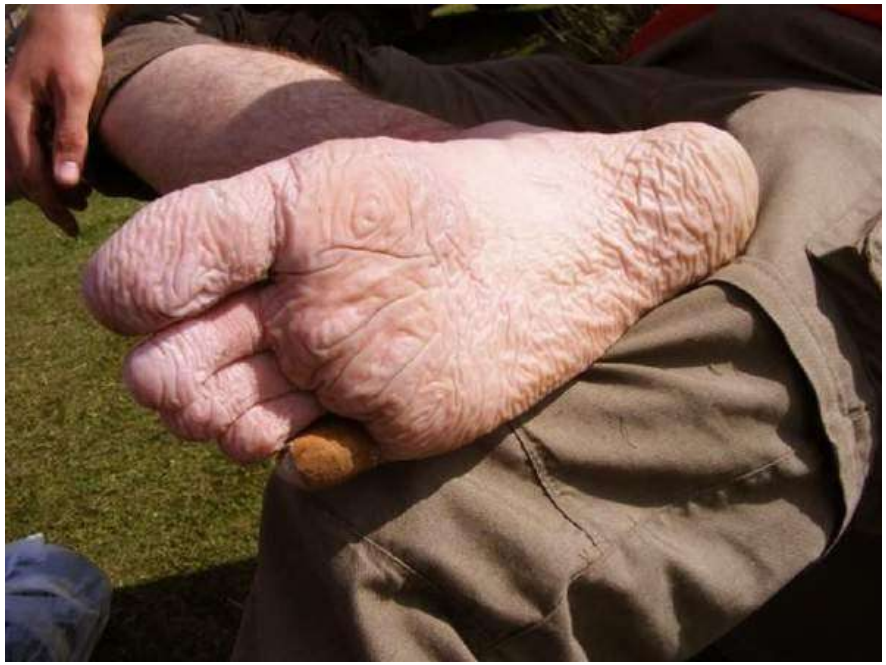
Trench foot

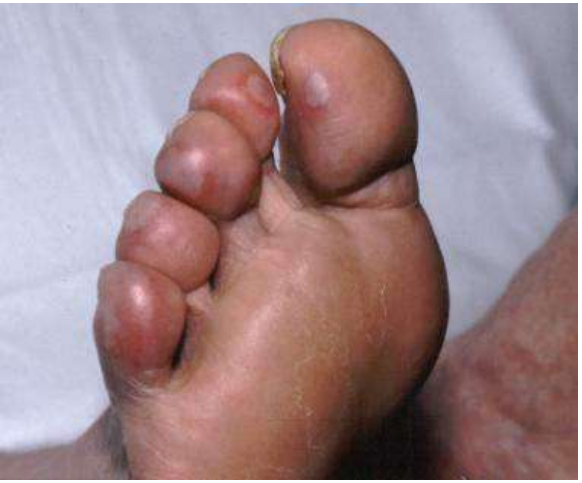
- The extremities are exposed to damp environment over long periods at temperatures (1- 10 C).

- Numbness/ tingling/ pain/ itching.

- The skin initially red and edematous then gradually turns to gray-blue discoloration.

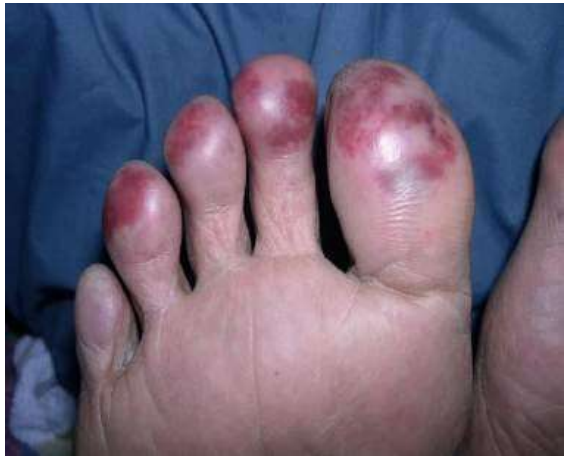
- **Non- tissue freezing injury.**

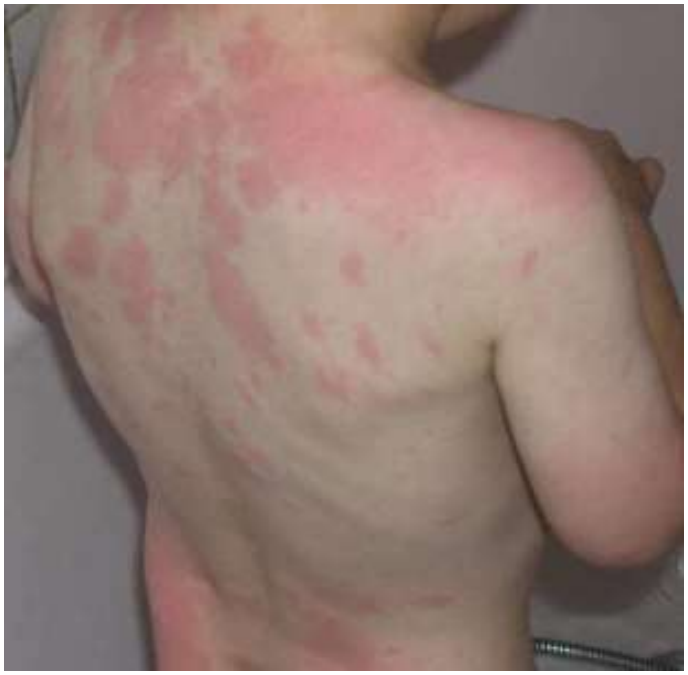




Pernio is an inflammatory skin condition presenting after exposure to cold as pruritic and/or painful erythematous-to- violaceous acral lesions. Pernio may be idiopathic or secondary to an underlying disease.

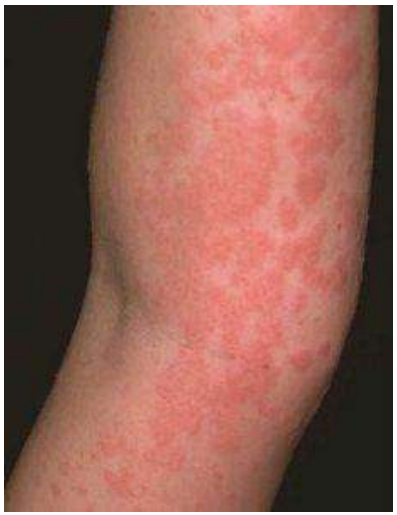
- **Non tissue freezing injury.**





Cold urticaria

- Familial and acquired.
- History of cold stimulation.



Fight bite

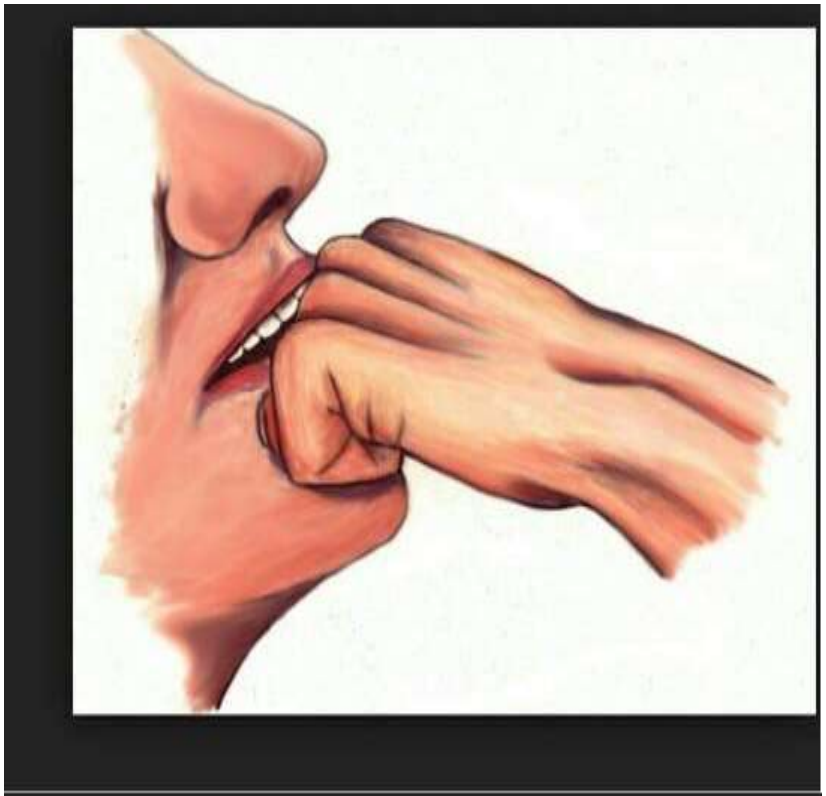
* over the dorsal metacarpophalangeal (MCP).

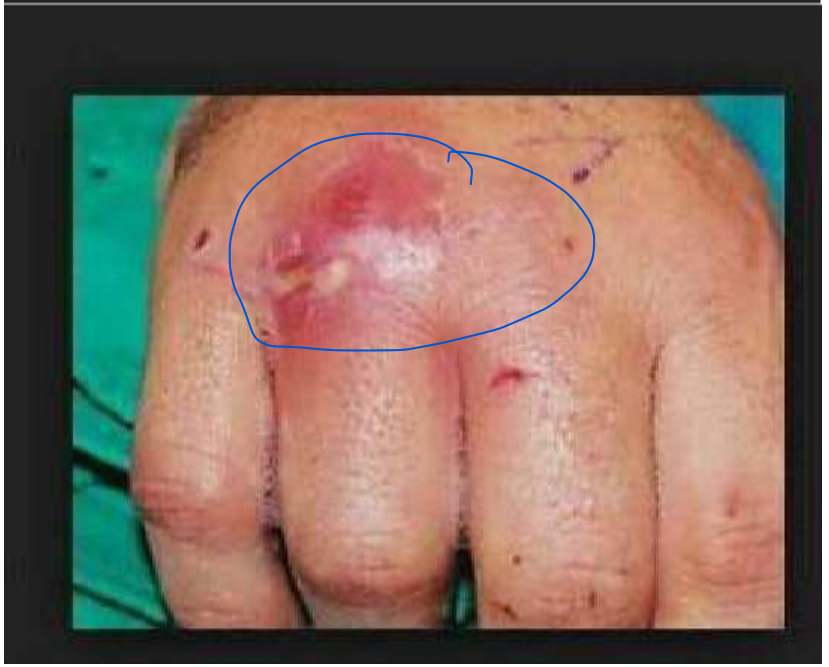
* **organism :** Eikenella corrodens (specific to human mouth).

***Complications:** cellulitis; extensor tenosynovitis; septic arthritis .

***Management:**

1) exploration (foreign body +extent)
2) local anesthesia
3) debridement
4) admission : drainage + (IV) antibiotics (amoxicillin +clavulanic acid)



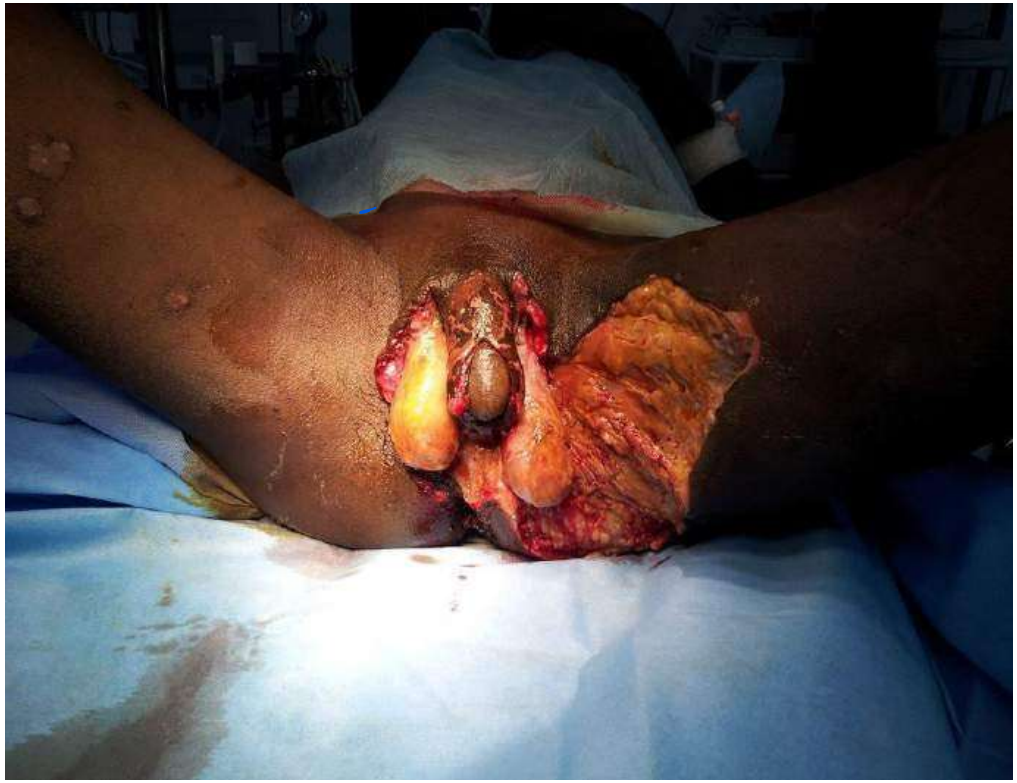


Fournier Gangrene

necrotizing fasciitis in the perineum.

most commonly caused by c.perfringes.

Treat with tissue debridement and antibiotics.



Kaposi sarcoma

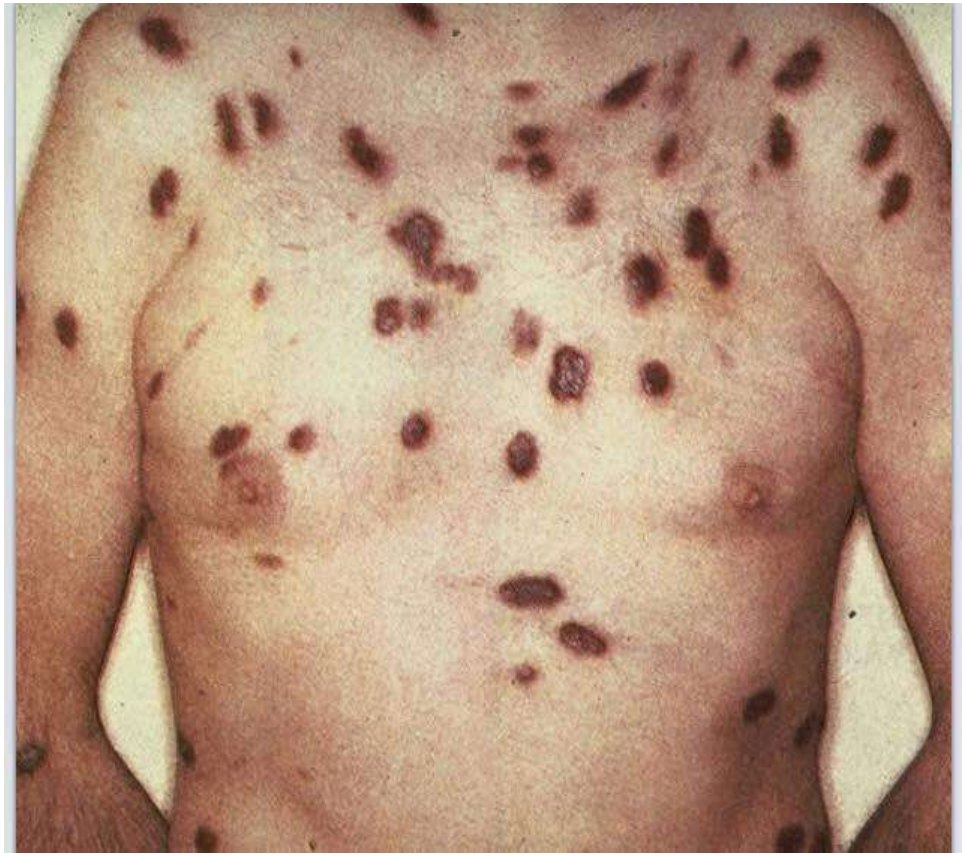
- malignant proliferation
- associated with **HHV-8**.

- Classically seen in three groups:

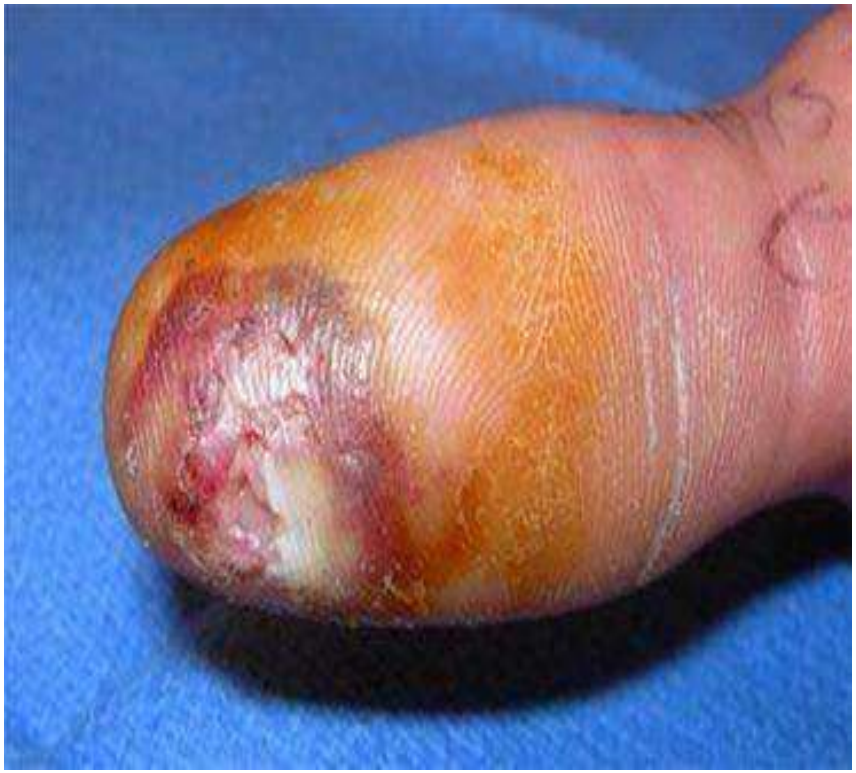
1) Transplant recipient, early spread, Rx decrease immunosuppression.

2) older eastern European males, remain localized, Rx surgical removal.

3) AIDS(Aids defining disease) - tumor spreads early, Rx increase antiretroviral therapy.



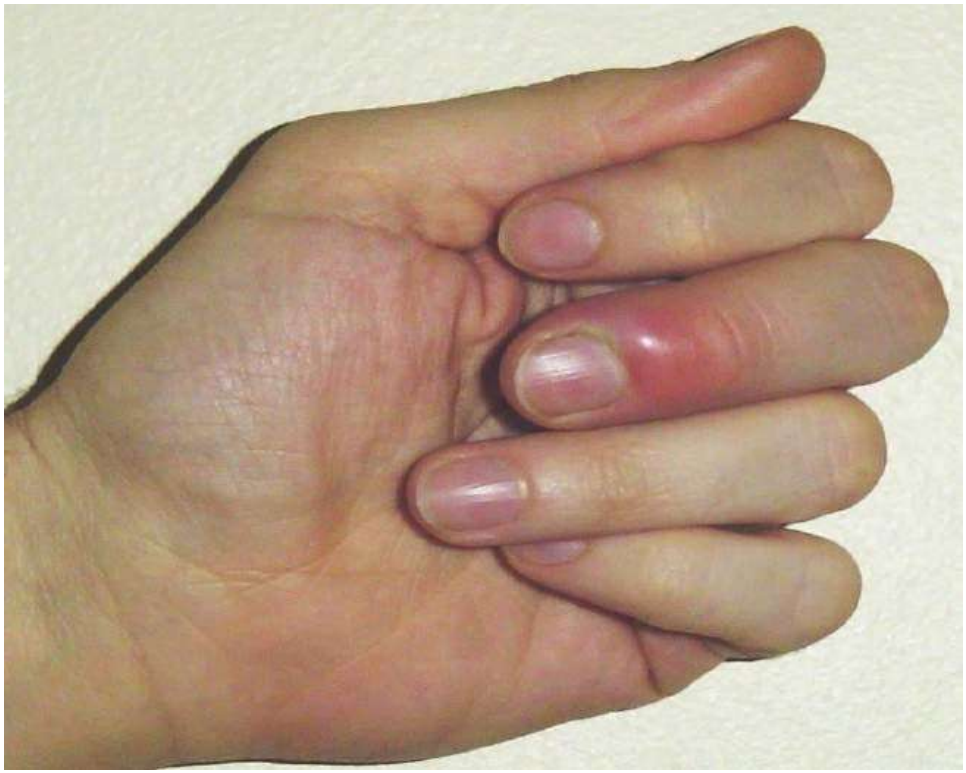
(cutaneous sarcoma appears as red hemispherical nodules or plaques)
- is it painful ? no it is painless
- usually associated with what ? HIV infection & AIDS



felon (whitlow):

distal pulp space infection , if not treated results in osteomyelitis.

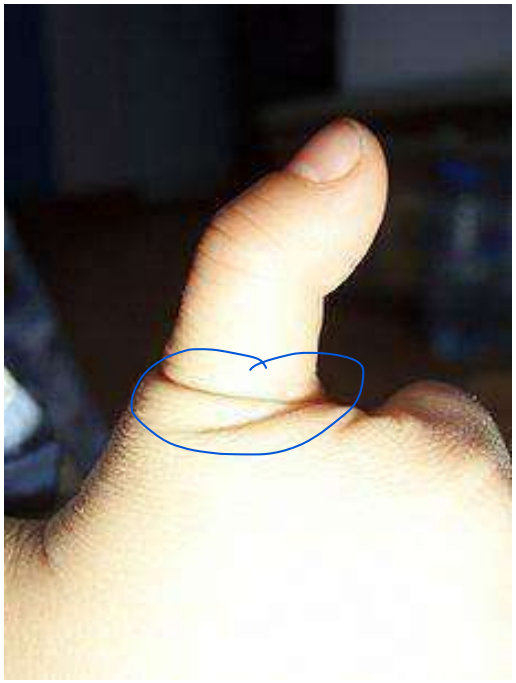
cause : pricking.



Paronychia:

infection of the nail fold , happens due to bad manicure or bad maneuvering of hangnails.

Most common hand infection.



Tenosynovitis

- Infection of the synovial sheath surrounding tendon.

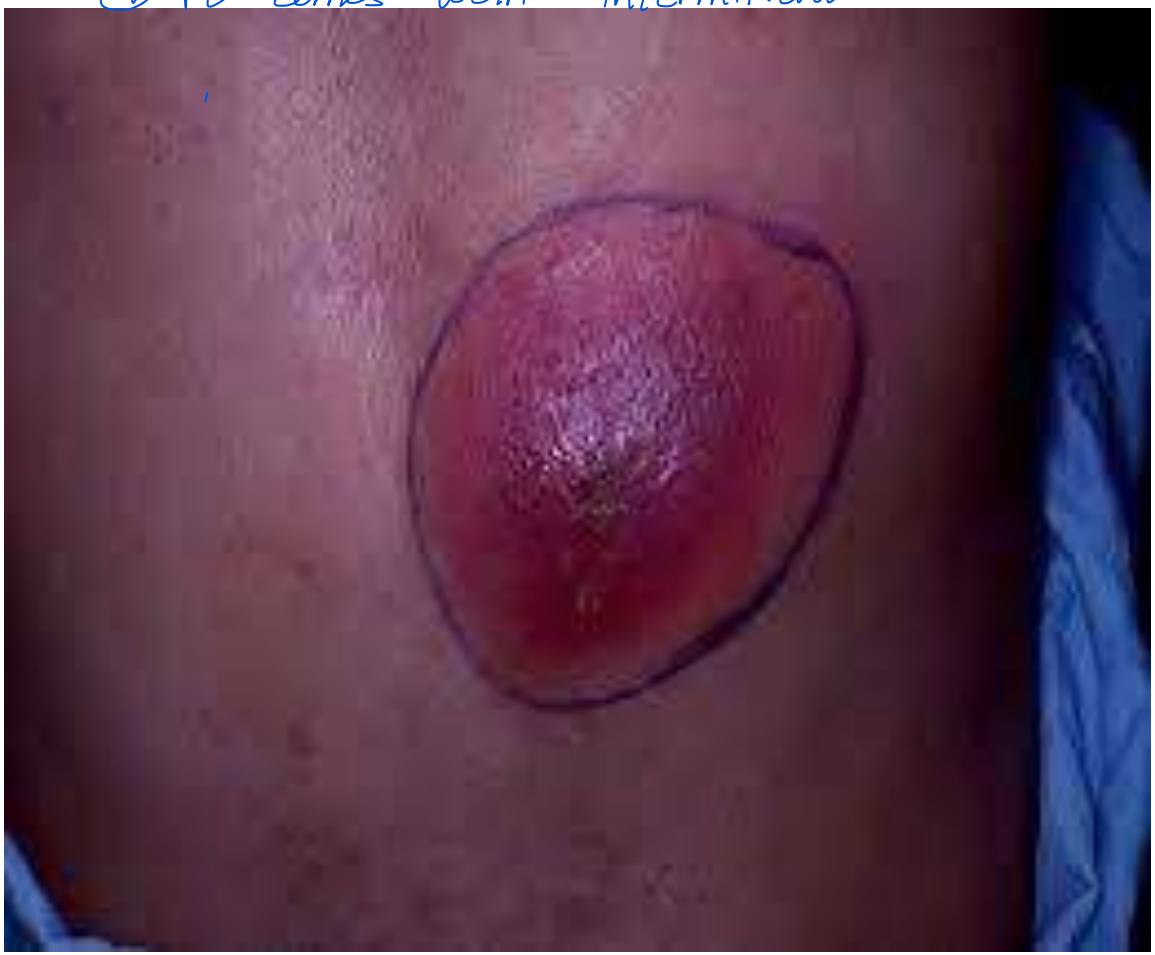
- The most causative organism of hand infection (tenosynovitis, felon, paronychia) is staph. Aureus.
- The 2nd is streptococcus.
- Initial treatment : oxacillin/ ampicillin.
- Then we do culture and give antibiotics of choice.
- If abscess formed, incision and drainage.
- Elevation to decrease the edema.
- Resting the organ to decrease the pain.

Antibioma

Hard, edematous swelling containing **sterile pus** following the treatment of an abscess with long term antibiotics rather than incision and drainage.

Treatment: exploration & drainage if it is indistinguishable from a carcinoma, otherwise spontaneous resolution takes place over several weeks.

① Pt comes with intermittent fever



Bowen's disease

→ 5% transform into SCC

→ found in eldrly & immunocompri

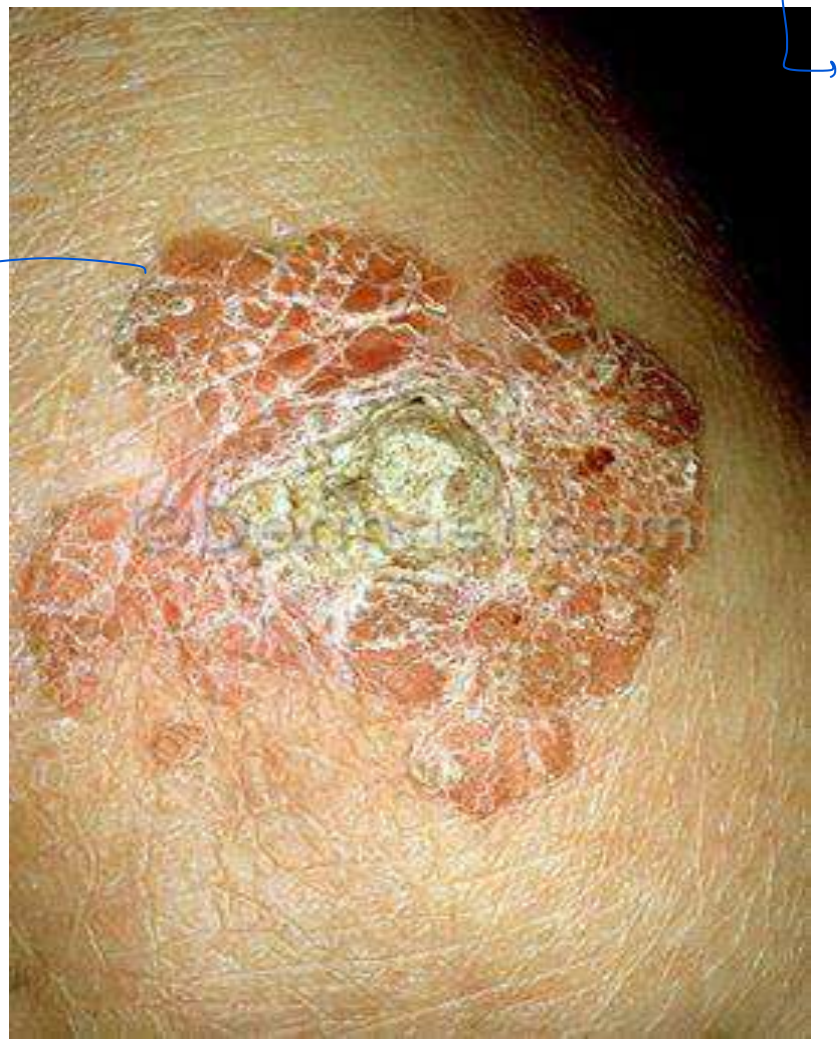
→ ttt → ① surgical exision

② medically (5FU / imiquimod)

③ cryotherapy

④ Photodynamic therapy

red scaly lesion

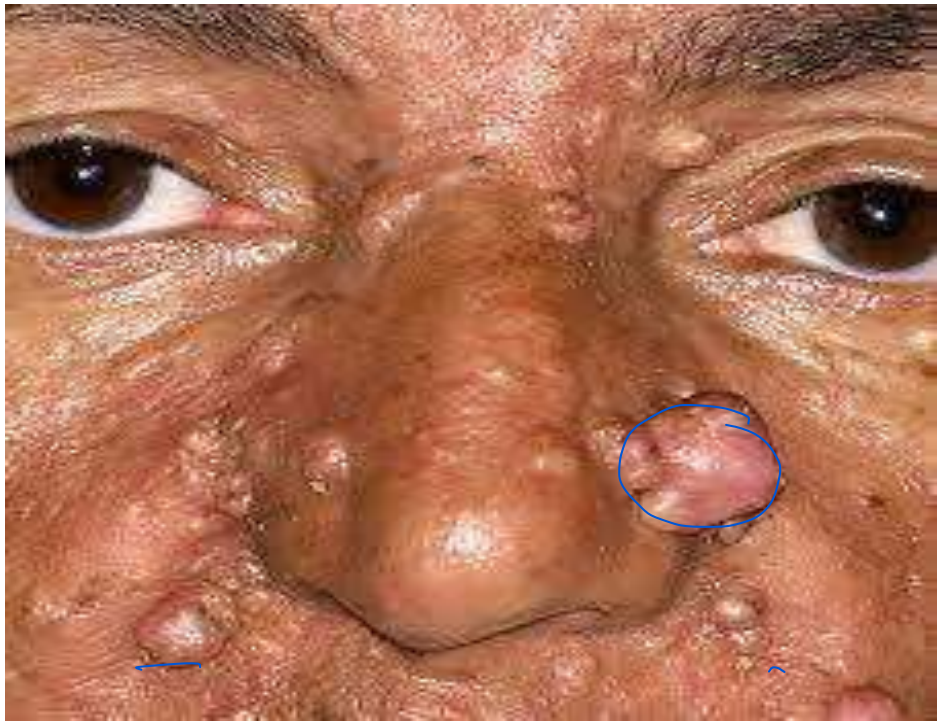


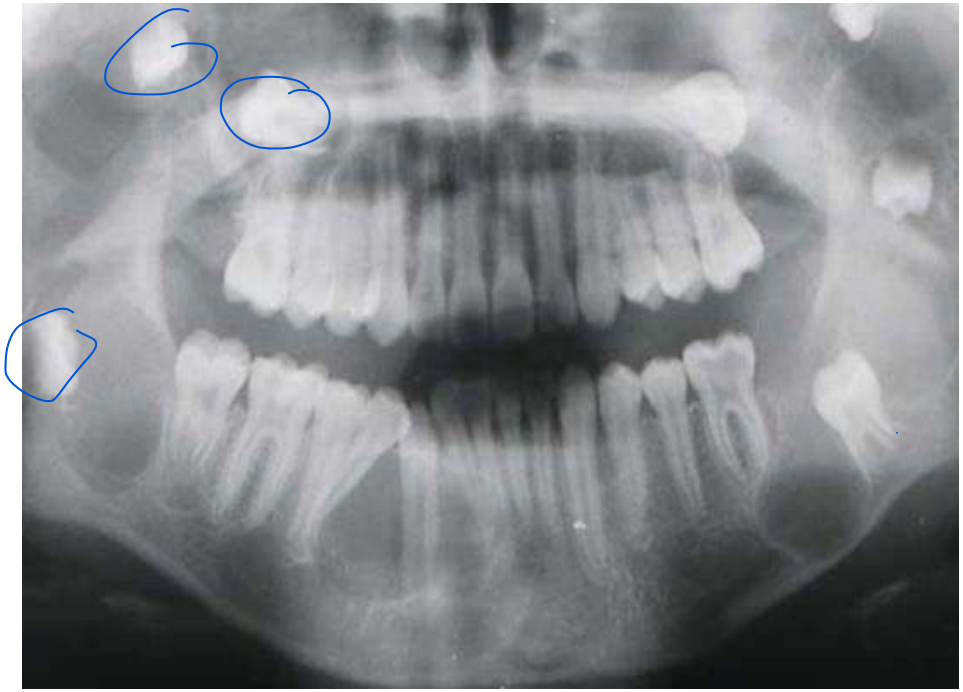
Nevoid Basal Cell Syndrome

(AD)

Presentation :

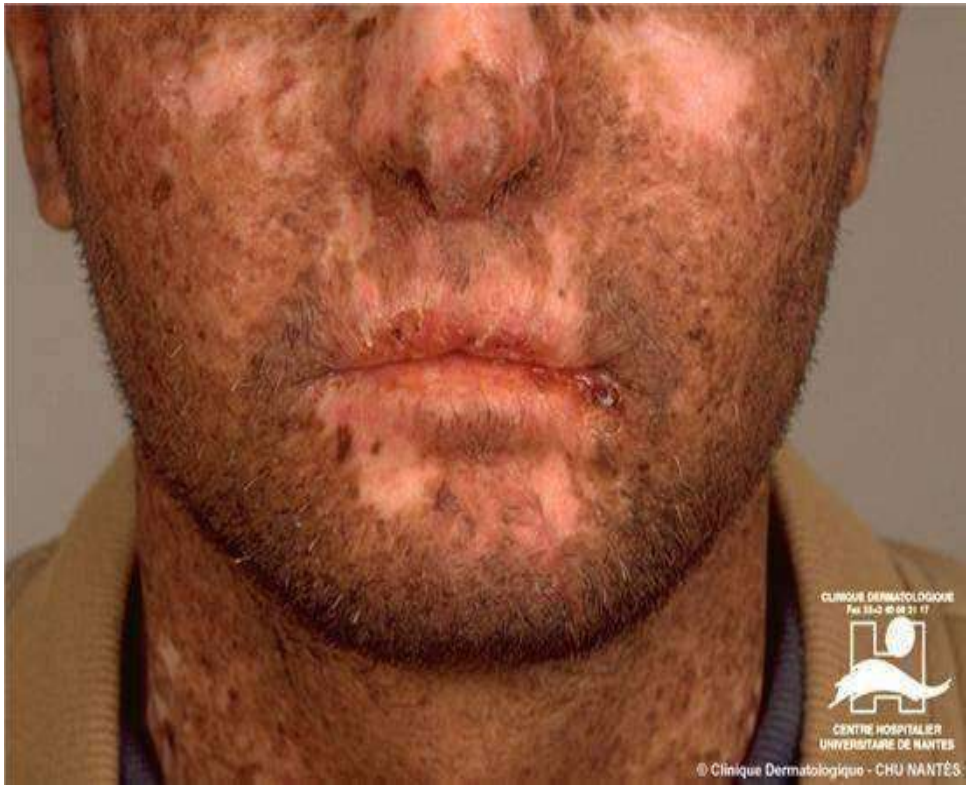
1) multiple BCC mostly on the face
2) Cysts in the jaw.
3) Intracranial calcifications.
4) Rib abnormality (mostly bifid ribs).





Xeroderma pigmentosa

- It might predispose to SCC.
- an inherited premalignant condition associated with increase risk of all types of skin tumors.
- defect in the DNA repair genes
- AR



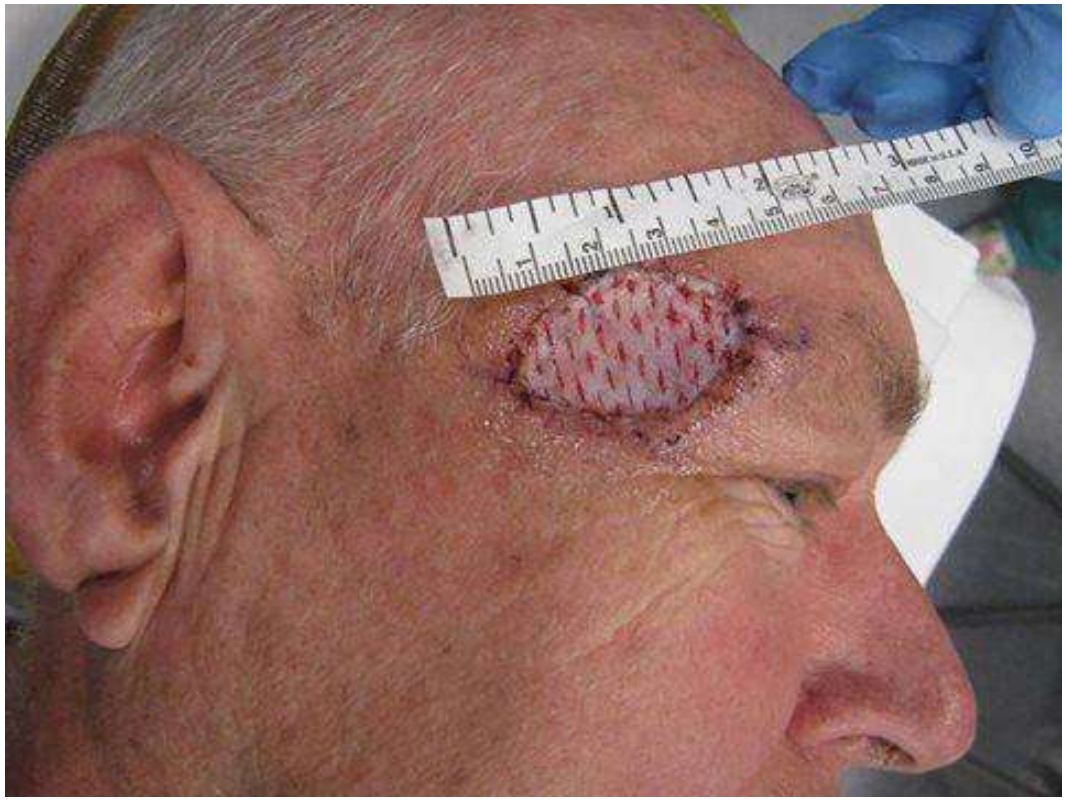
Skin graft

Q: What are the signs of graft take?

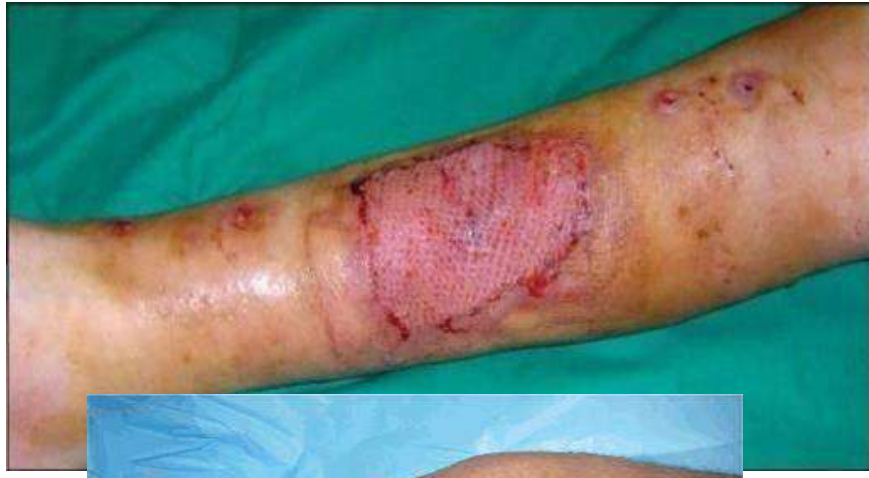
1.The graft is adherent to the recipient site.

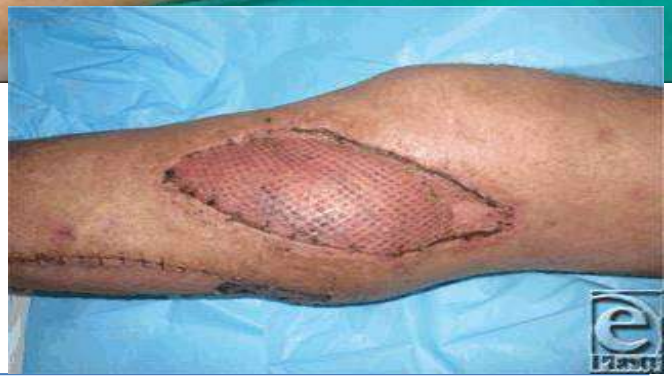
2. Pink color.

3.The graft blanches with pressure (denotes vascularity).



Skin grafts



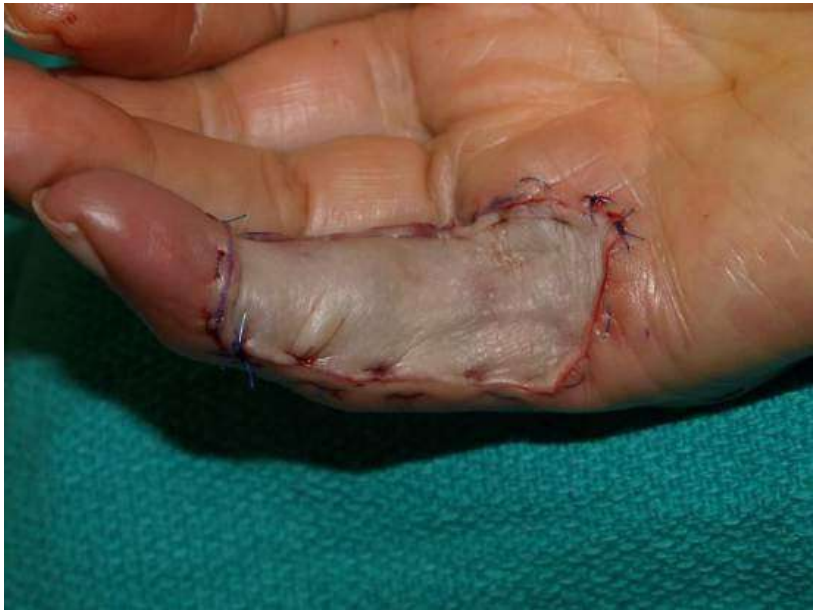


1- split thickness skin grafts :

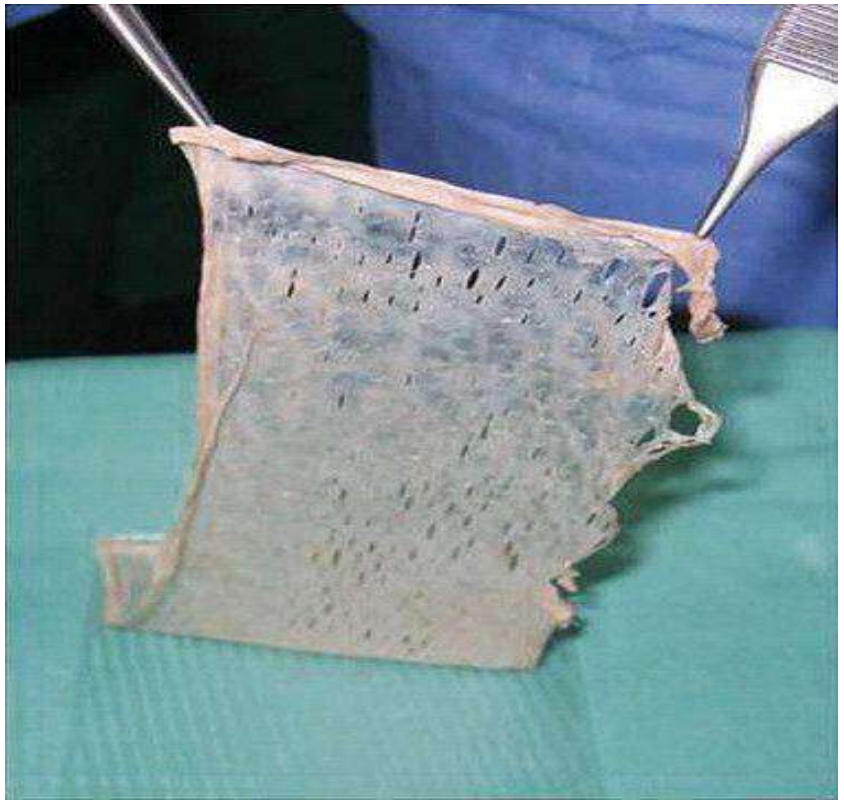
- Epidermis and thin part of dermis.
- The donor site heals by epithelialization within 2 weeks.
- Used for large areas.

2- full thickness skin grafts:

- Taken from areas of loose skin as the donor area is closed by approximation of the edges (direct closure).
- Used for small areas.



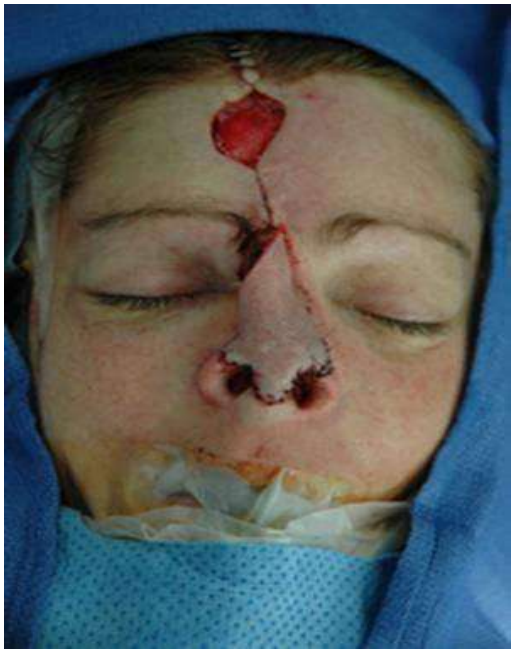
- This is dermatome.
- It's used for taking a split thickness skin graft.

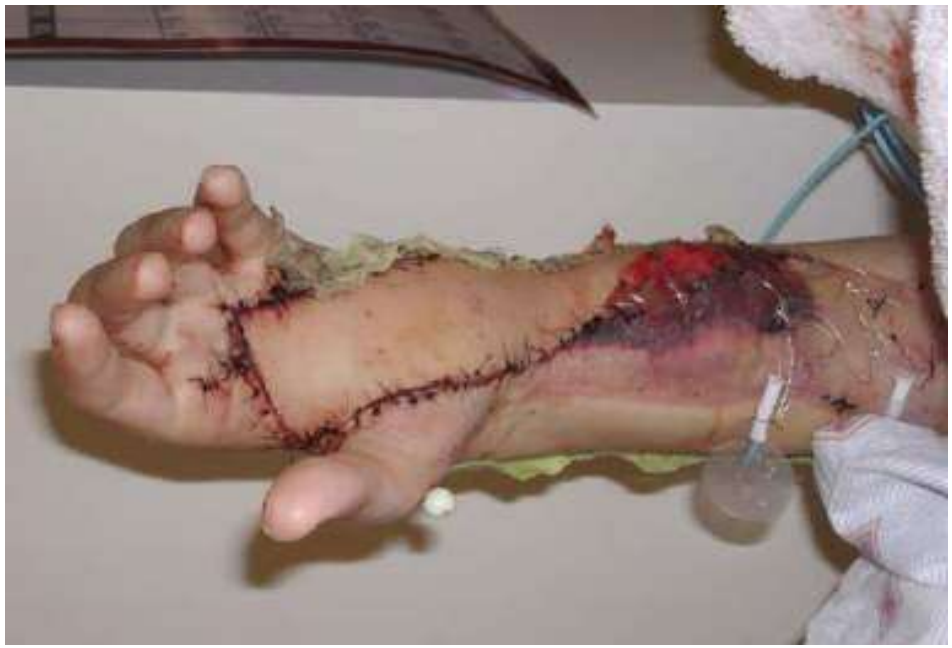


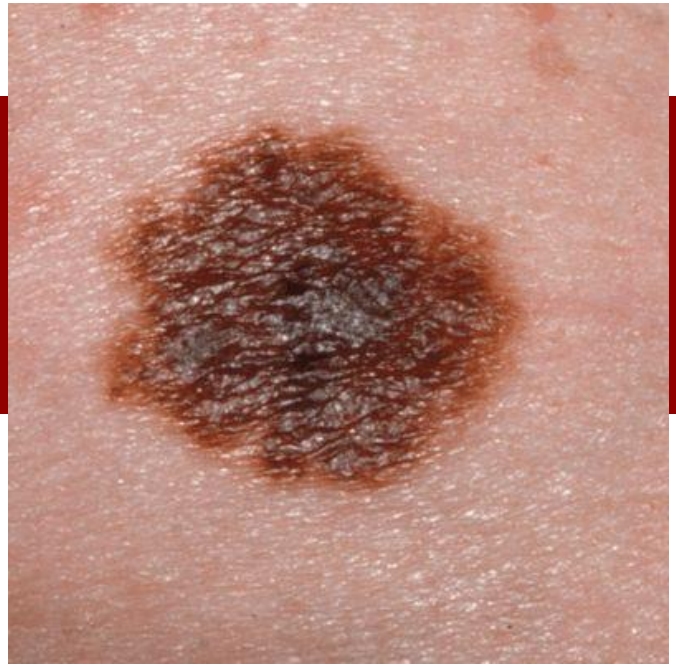
Split thickness skin graft after it has been meshed, showing the small perforations that allow the graft to be expanded and cover a greater area and also allows any blood/serum to drain away.

Flaps

- A flap is a piece of tissue carries its own blood supplies that is moved from its original site, to cover a defect.
- Skin flaps/ muscle flaps/ myocutaneous flaps/ fasciocutaneous flaps/ osseofasciocutaneous flaps.
- Flaps are used when grafts are insufficient to cover the defect, or they wouldn't be taken.
- **To cover an avascular area.**
- When we need a more bulky tissue to deal with the defect and skin is not enough.
- **The donor area is managed by approximation if it was loose or by skin graft.**







SKIN

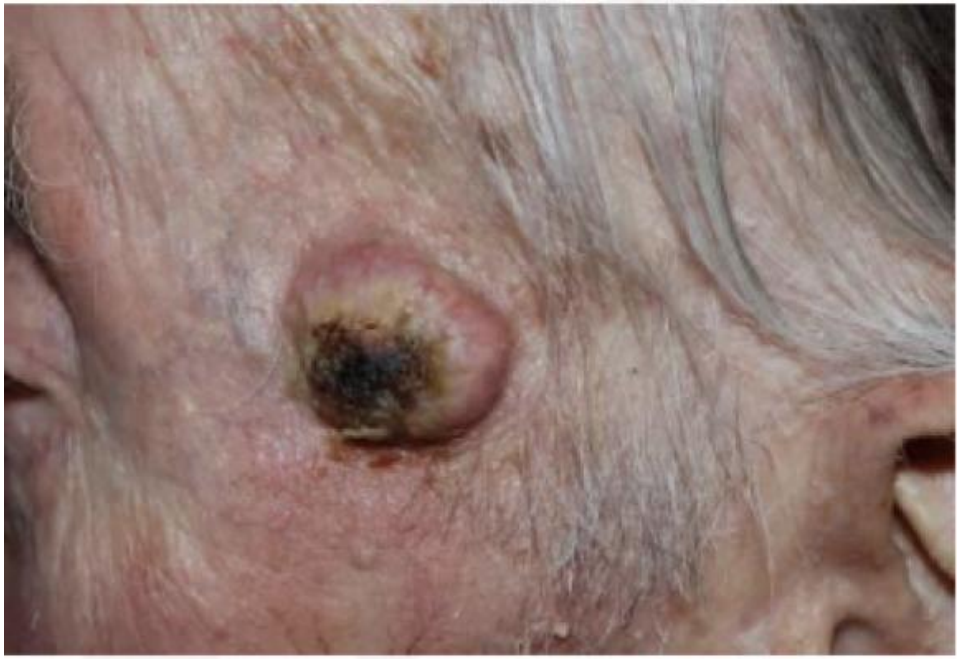
Hashemite University
H · U · M
Medical School Committee

• QUESTION

Wateen 2023

عكرد يزن ١

Name the finding



Hashemite University
H • U • M
Medical School Committee

• ANSWER

Keratoacanthoma

• QUESTION

Harmony 2022

29. How would you expect this wound to heal?

a. Delayed primary intention

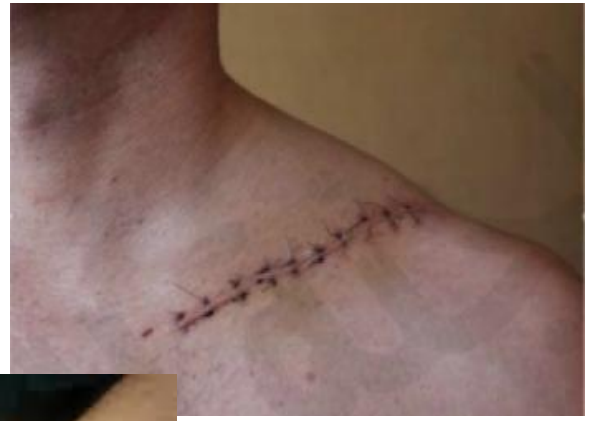
b. Primary intention

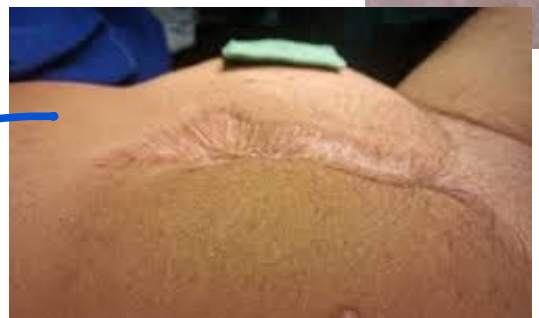
c. Secondary intention

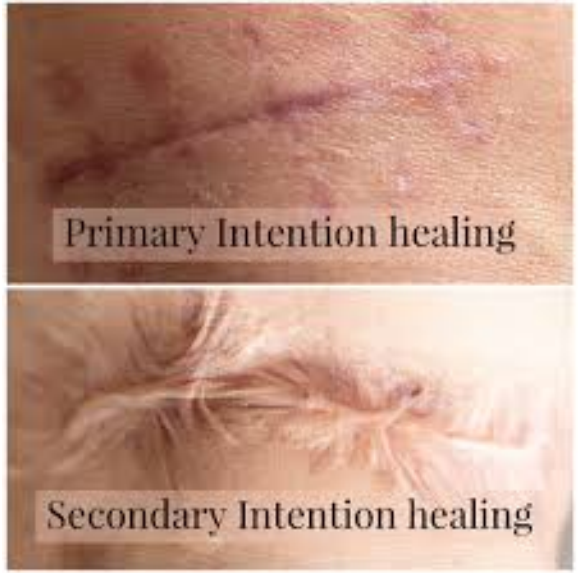
d. Will form keloid scar

e. Tertiary intention

Answer: B







Hashemite University
H • U • M
Medical School Committee

• QUESTION

Harmony 2022

32. All of these conditions are at risk of malignant transformation except

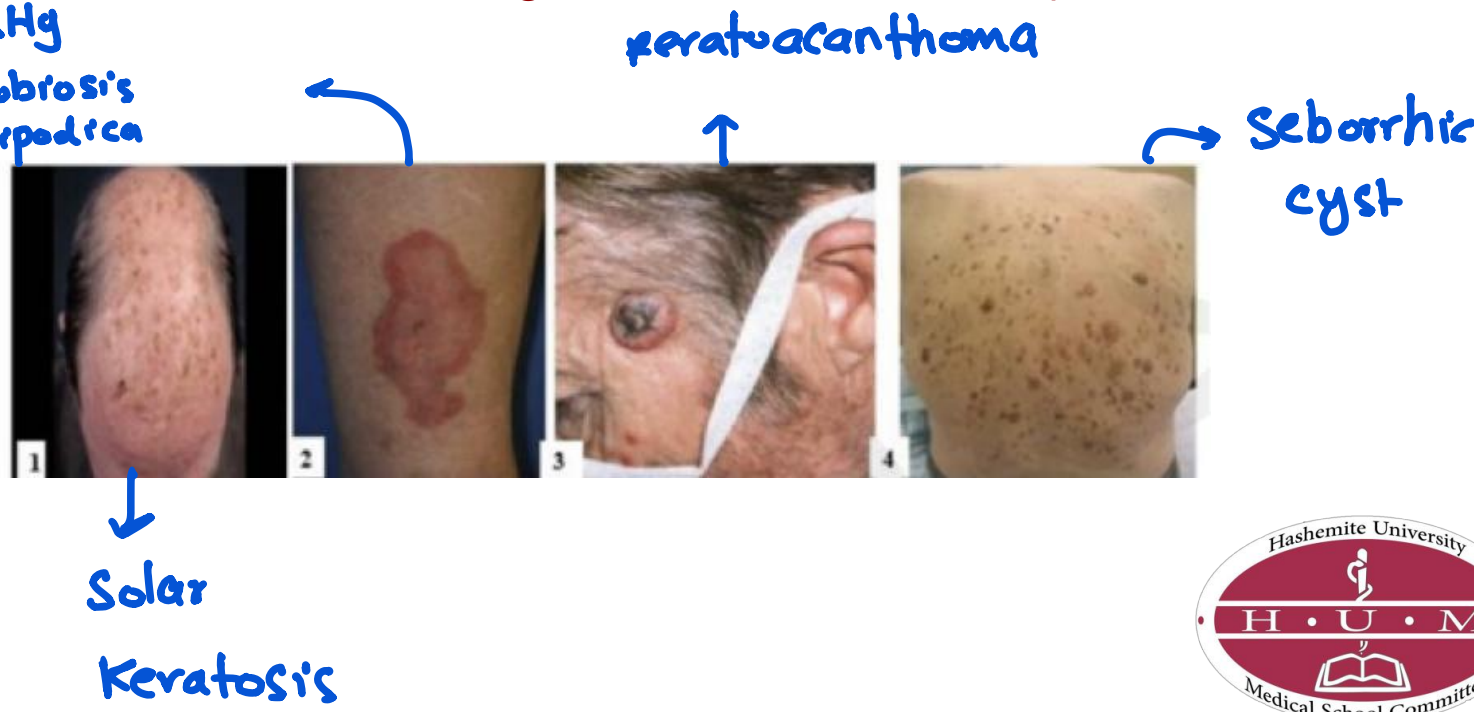
a. 4

b. 2

c. 1

d. 3

Answer: A

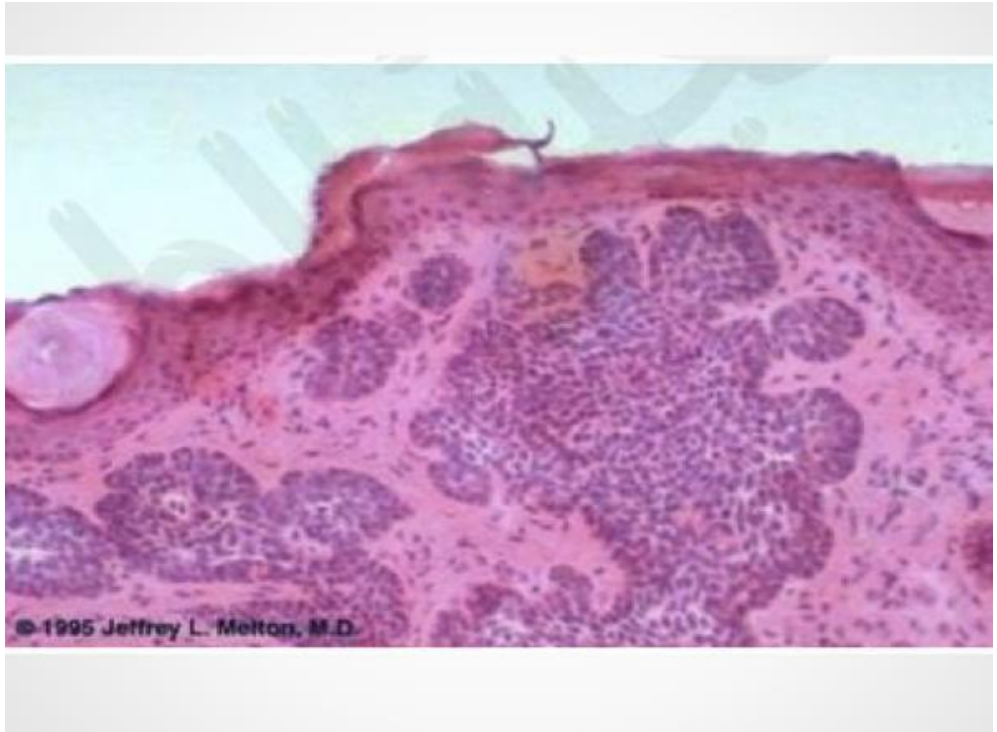


• QUESTION

عكرد يوند ؟

Harmony 2022

What is the type of cancer seen in this histology (biopsy taken from the nose tip):



Hashemite University
H • U • M
Medical School Committee

• ANSWER

BCCa

QUESTION

وعكود يزن

SOUL 2021

1.Dx of picture (1)?

2.Dx of picture (2)?

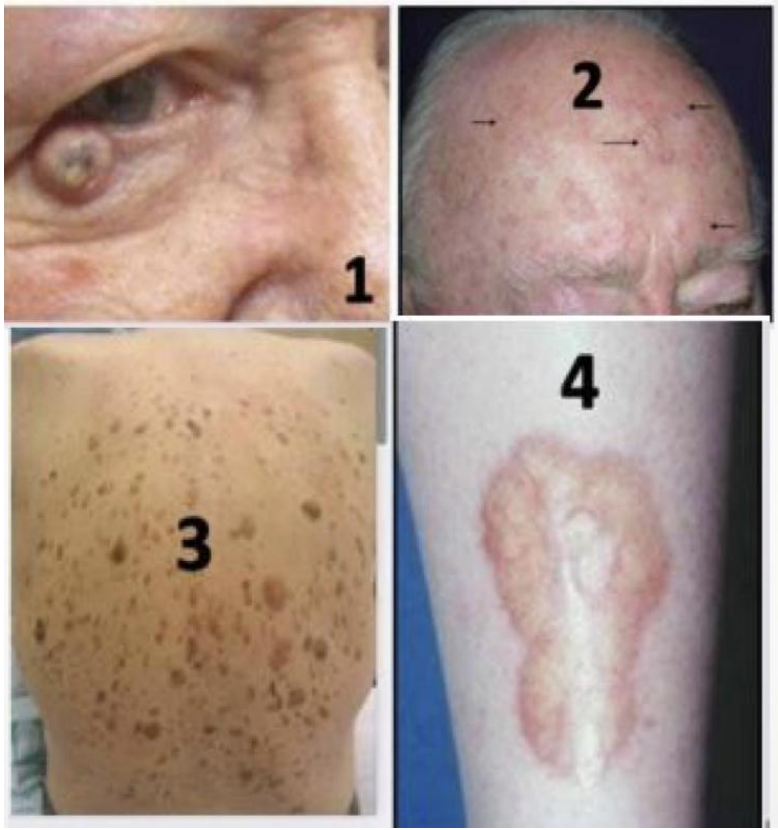
3. Dx of picture (3)?

4.Dx of picture (4)?

5.Which doesn't have pre-malignant potency?

6. Picture 2 can convert to?

7.Most common pre-malignant condition?



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Keratoacanthoma

2 .Actinic Keratosis

3. Sebborhoeic Keratosis

4. Necrobiosis Lipodica

5. Picture 3 or picture 4 not sure

6. SCC

7.picture 2=Actinic Keratosis

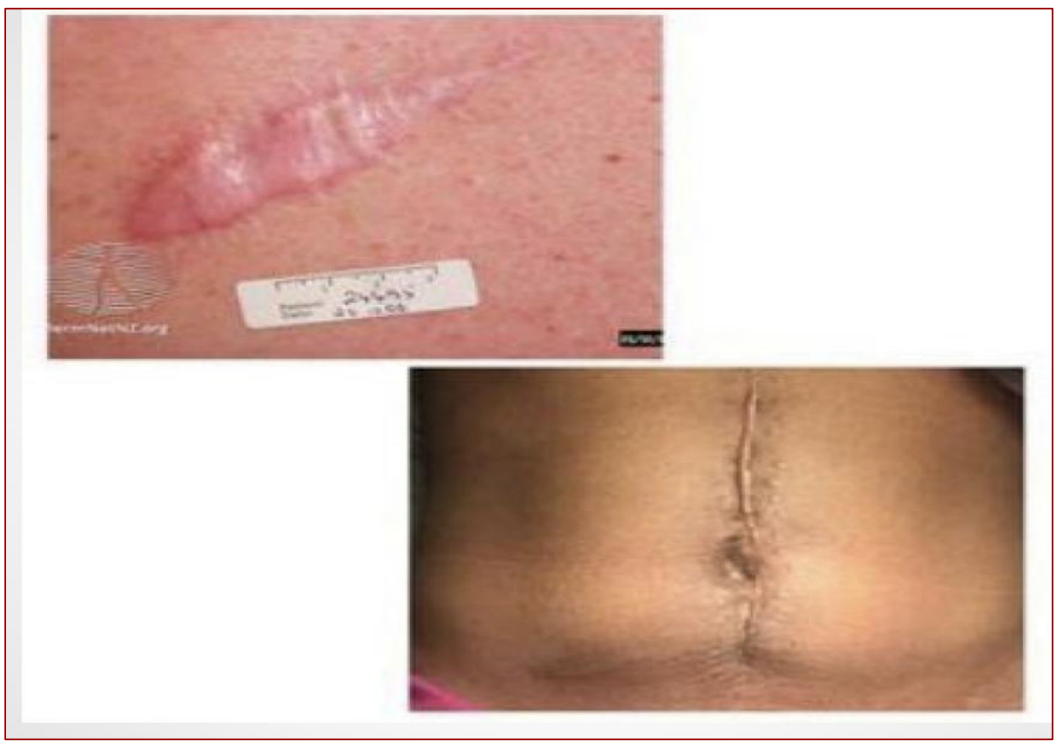
٪ ٢٥ لاتهف

• QUESTION

SOUL 2021

Give the diagnosis of the pictures(Similar pictures to those in the exam)

A)



ANSWER

A . Hypertrophic scar → تظل مقتصرة على مكان الاصابة و regress مع الوقت

B . Keloid scar → extend beyond the injury (larger & irregular)

Hashemite University
H · U · M
Medical School Committee

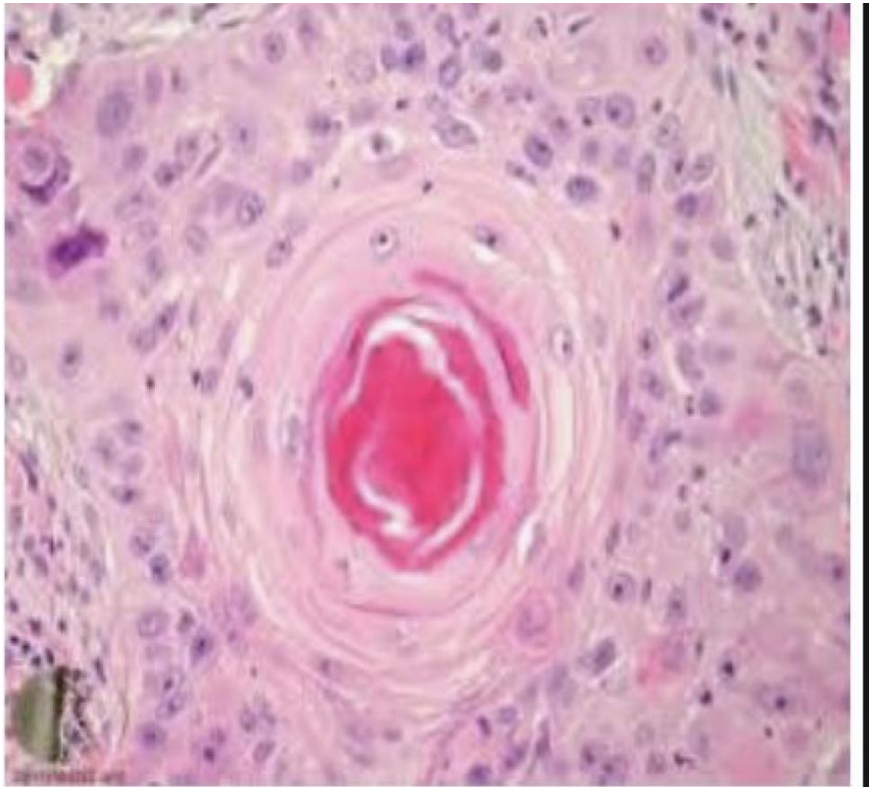
• QUESTION

SOUL 2021

name the:

1.Sign?

2.Diagnosis ?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Onion cluster cells

2. SCC

• QUESTION

SOUL 2021

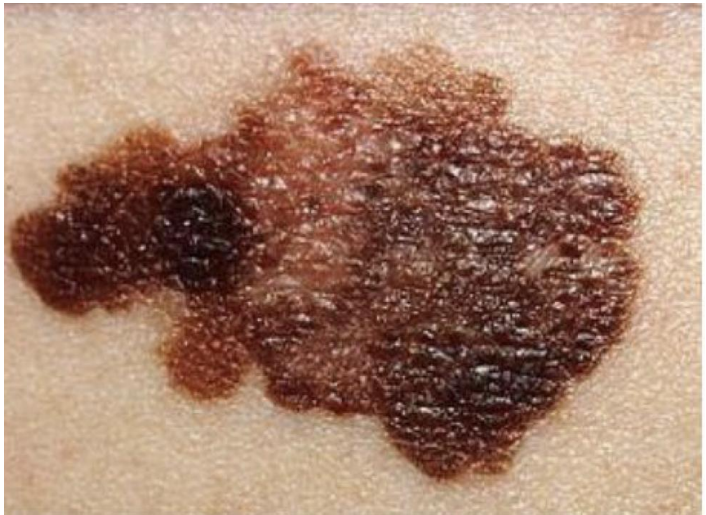
محمود يزن 5

1.Diagnosis

2. What is the Most accurate prognostic factor?

3.Increased melanin production with normal number of cells is known to cause?

4.Mention 2 staging systems?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Melanoma

2. ~~The Depth~~ thickness

3. Freckles

4. 1)Clark's level 2) Breslow's thickness

• QUESTION

مكرر يونيو

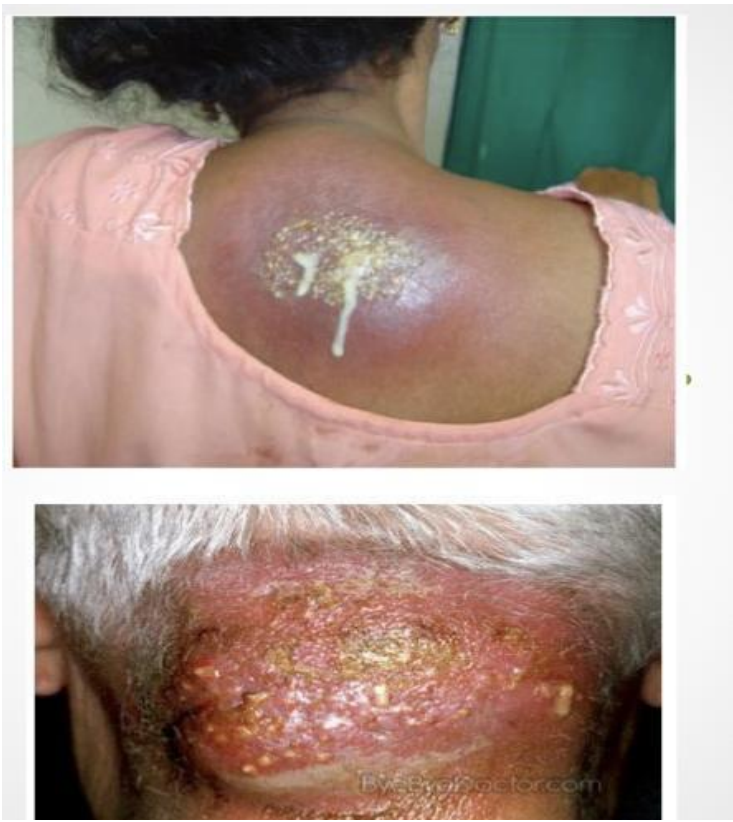
2019 – Before

Two patients came to the ER complaining of neck swelling:

1.What is the pathology?

2. Most common organism?

3. Management?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.carbuncle

2.Staphylococcus Aureas

3. drainage and give antibiotics

• QUESTION

2019 – Before فكر بدن يا

1.What is the likely diagnosis

2. What is the most common cause

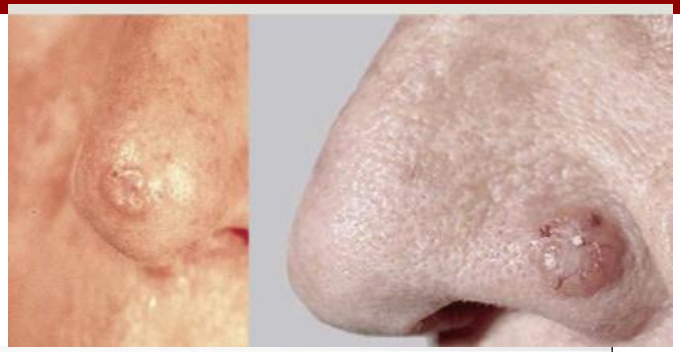
3. What are 2 ways of treating for this ?patient

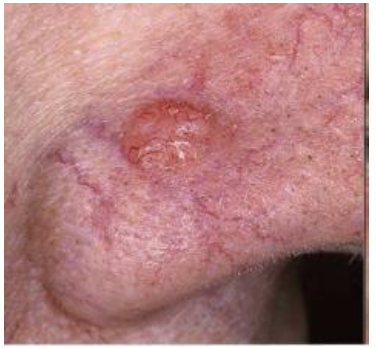
4. What is the safety margin?

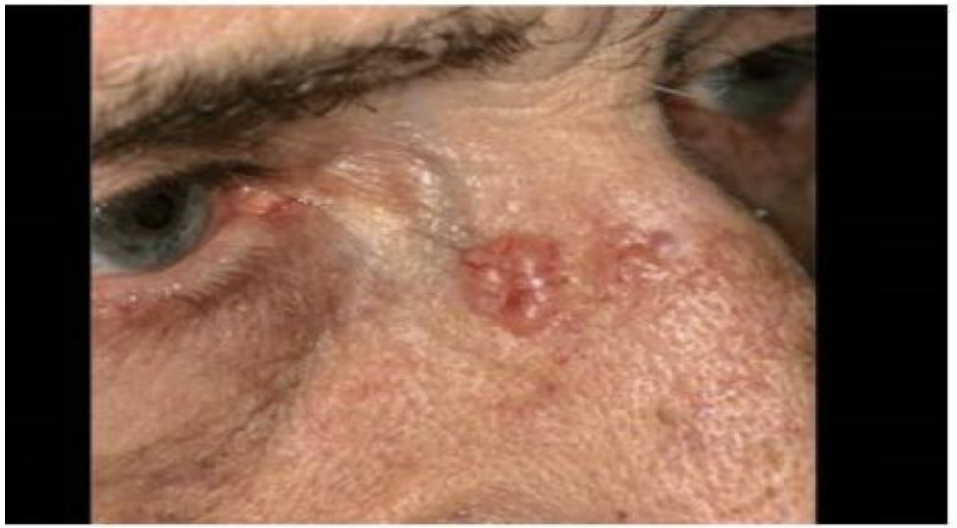
5.write an alternative Mx?

6. Name 2 complications?

7. Potential METS rat?







Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Basal Cell Carcinoma (BCC)

2.long exposures to sunlight

3.a)nonsurgical: (topical immunotherapy, intralesional interferon INJ, photodynamic)

B) Surgical (Excisional or destructive): - Destructive: cautery, curettage, cryotherapy, CO laser ablation - Excisional: Moh's micrographic surgery (MMS), Wide local excision

4. (4-10)mm

5.Moh's micrographic surgery (MMS)

6.METS,Ulceration

7. ~~0.0028-0.55 (from google)~~ 0,1 %

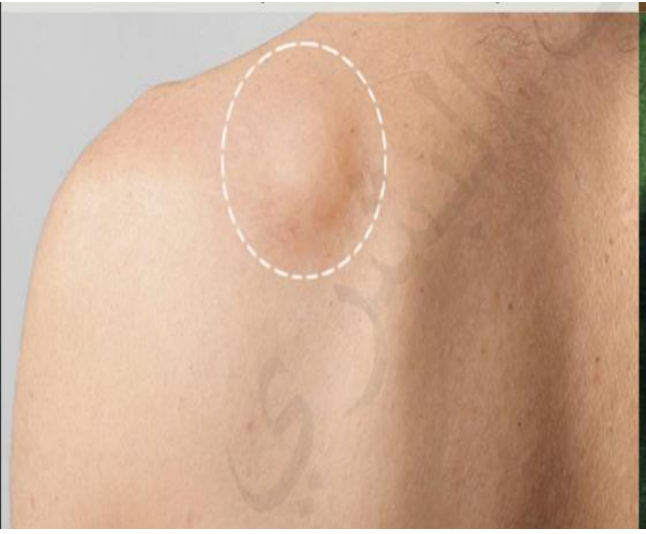
• QUESTION

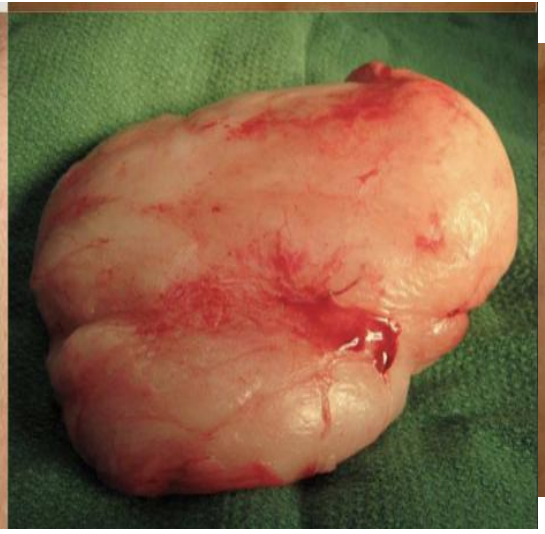
2019 – Before

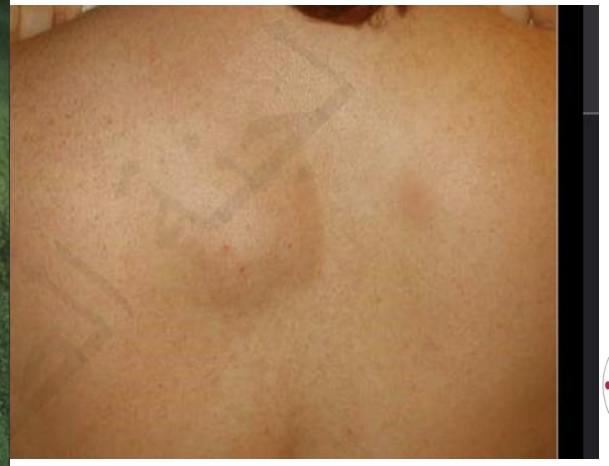
محمود برنة

Q1: What is this? -

Q2: What is the risk of wound infection after removal (% of wound Infection)?)







Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Lipoma

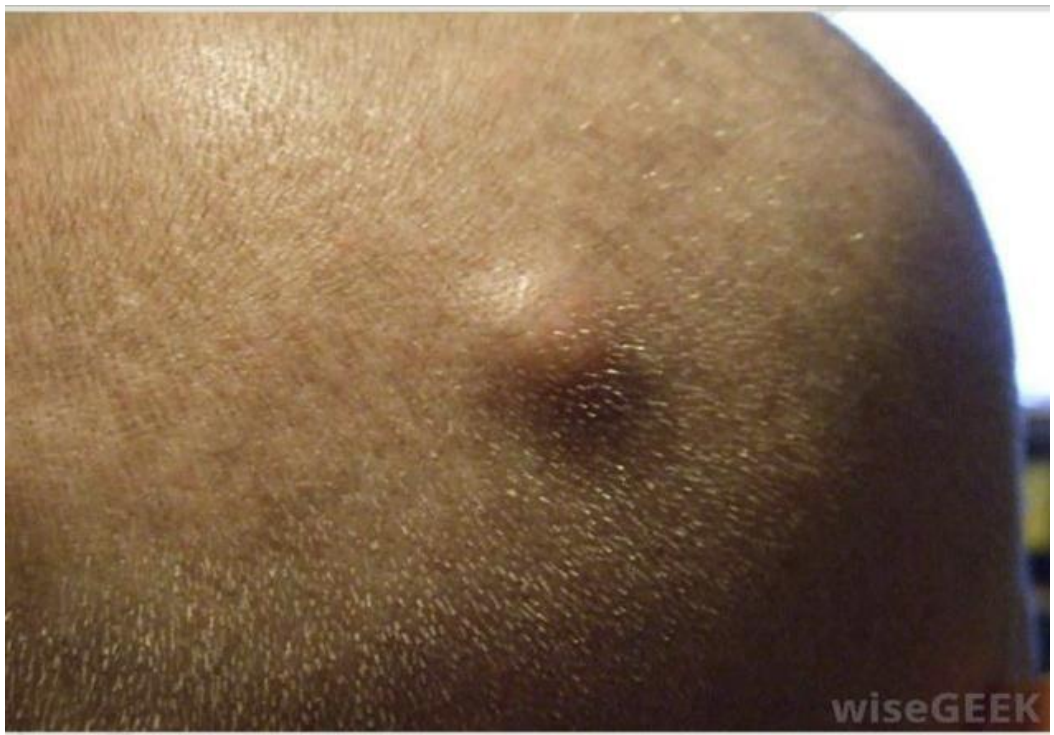
2.1-3(clean wound)

• QUESTION

معكد يزن

2019 – Before

Give 2 differentials of this scalp lump?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1)Sebaceous cyst

2) Epidermoid cyst

• QUESTION

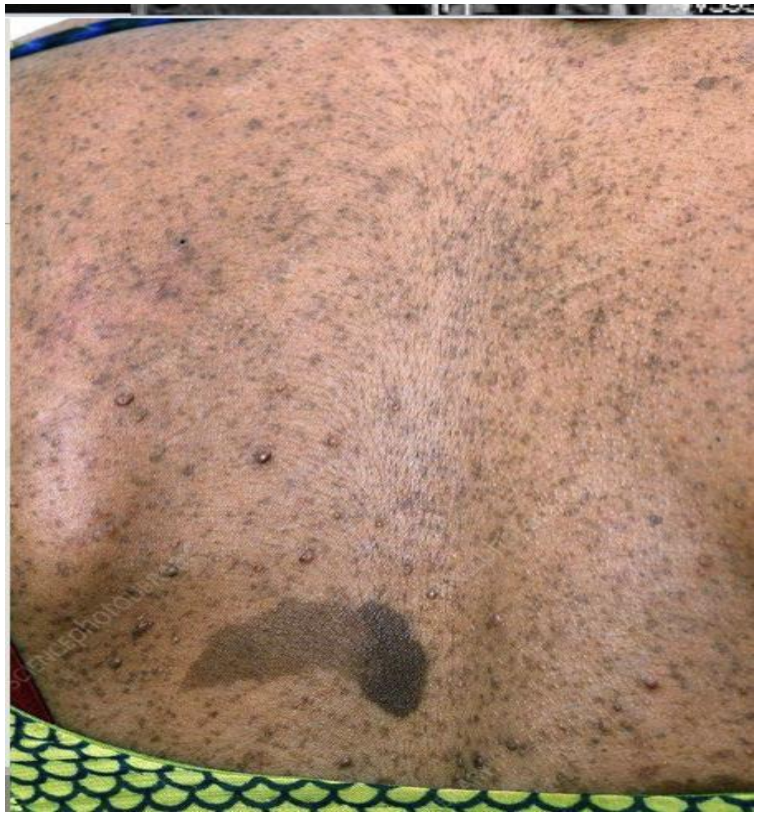
عكور يزن ٩

2019 – Before

1.Describe what you see?

2.diagnosis

3.Mention type of inheritance?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1. 1)Café au lait macules (irregularly shaped, evenly pigmented, brown macules)
   2) Neurofibromas

2.Neurofibromatosis

3.Autosomal Dominant

• QUESTION

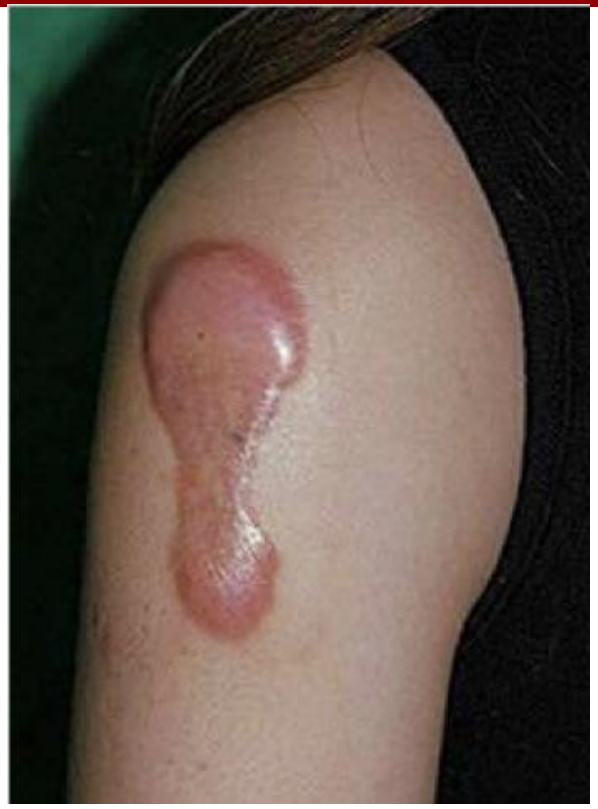
صفحة ١٥

2019 – Before

1.Name the diagnosis.

2.: Name 2 risk factors?

3.Name two characteristics?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Keloid

2.1)Dark skin 2) Family histor

3.1)Extend beyond borders of original wound

2) More common in darker skin

3) Require years to develop

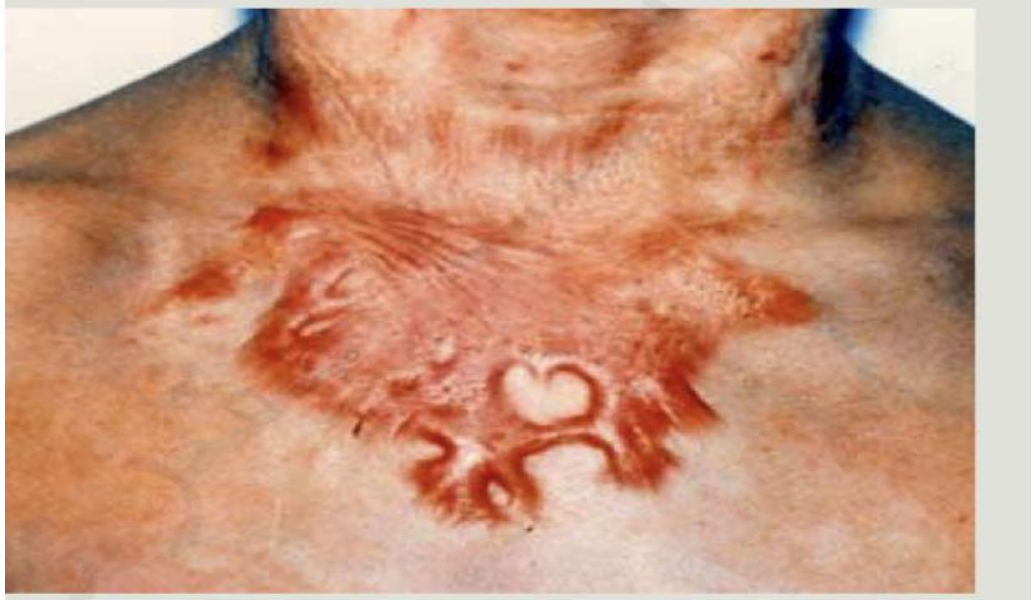
4) thick collagen

• QUESTION

2019 – Before

محمود يزن ١١

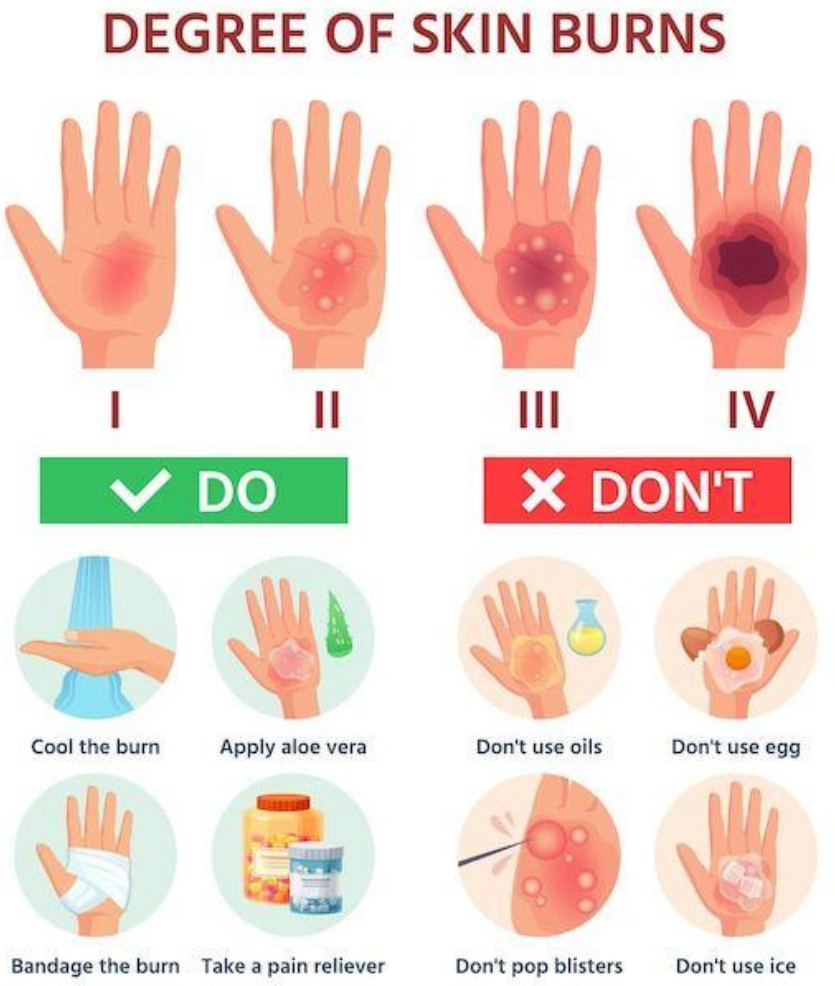
Serious complication that you fear from?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

Transformation into SCC



BURNS

Hashemite University
H · U · M
Medical School Committee

• QUESTION

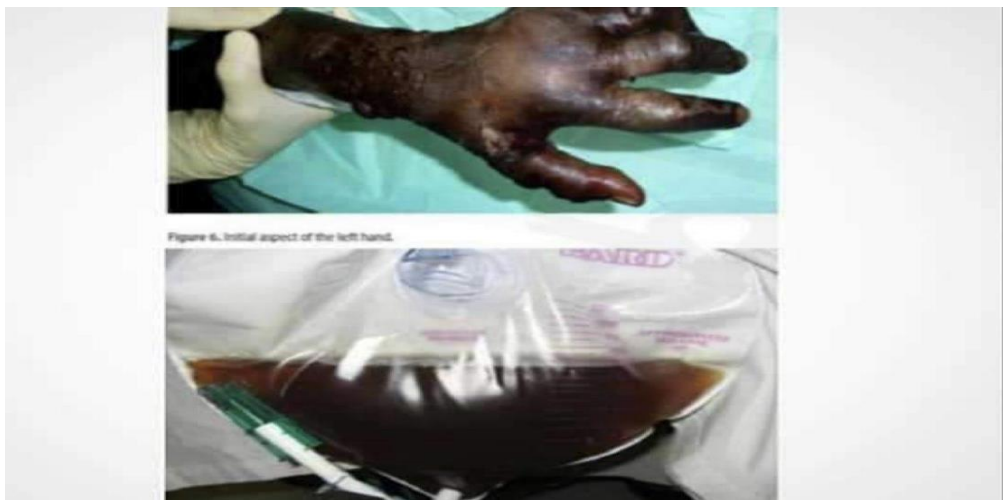
Yaqeen 2025

عكور بزن ↓

This is a picture for a patient who was involved in an electrical burn with a high voltage,:

1.what causes the urine color in this case

2.what measures should be taken to prevent renal impairment in this patient?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Color is a due to rhabdomyolysis. (Myoglobin in urine)

1. Fluid intake and alkalization of urine

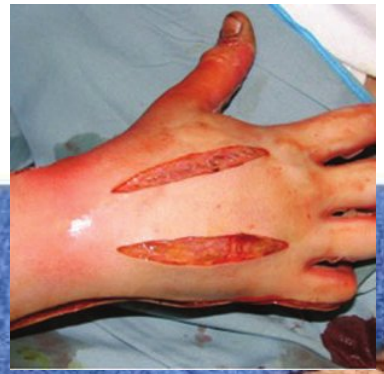
Hashemite University
H • U • M
Medical School Committee

• QUESTION

Yaqeen 2025

Case of circumstantial burn with futures of neurovascular compromise :

1. What is the name of this condition?
2. What is the management?

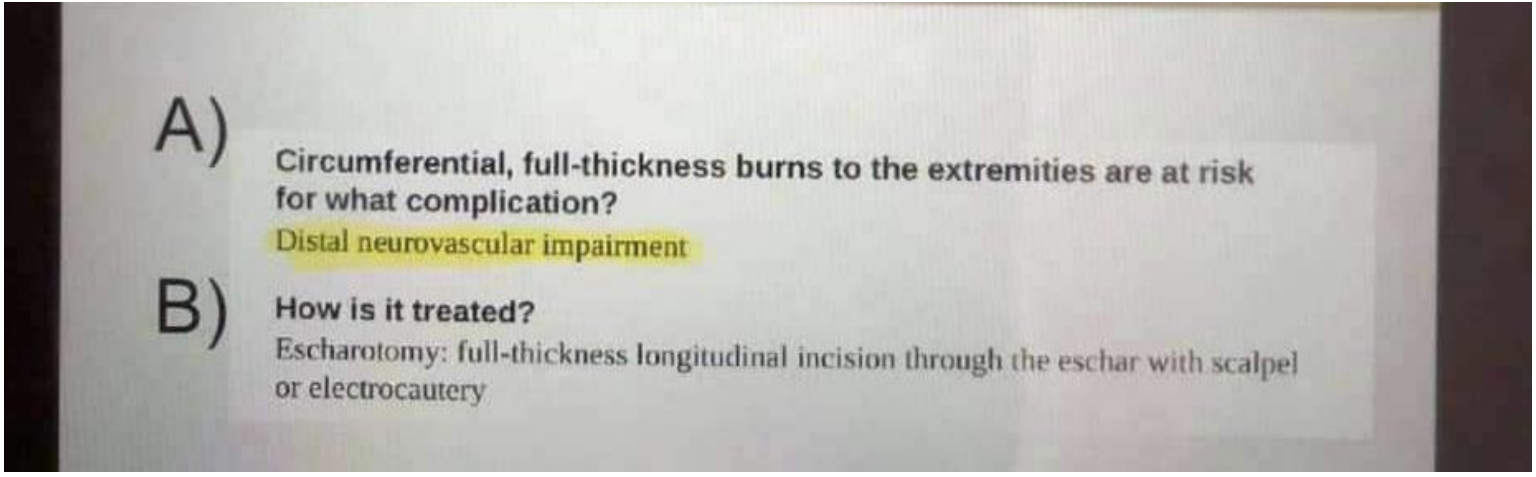


(c)

Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Distal neurovascular impairment.
2. Escharotomy



Hashemite University
H · U · M
Medical School Committee

• QUESTION

Wateen 2023

9 year old child presented with 2nd degree burn all over his upper limb bilaterally.

A. What is the estimated percent of burn this child has?

B. Mention one major complication this patient is likely to have?

(No picture found)

Hashemite University
H • U • M
Medical School Committee

28% ← lower limb لو حكانا

- ANSWER

not calculated ← 1st degree لو حكانا

✓ A. 18 %

✓ B. Contracture

Hashemite University
H · U · M
Medical School Committee

• QUESTION

SOUL 2021

one of the criteria of unite admition

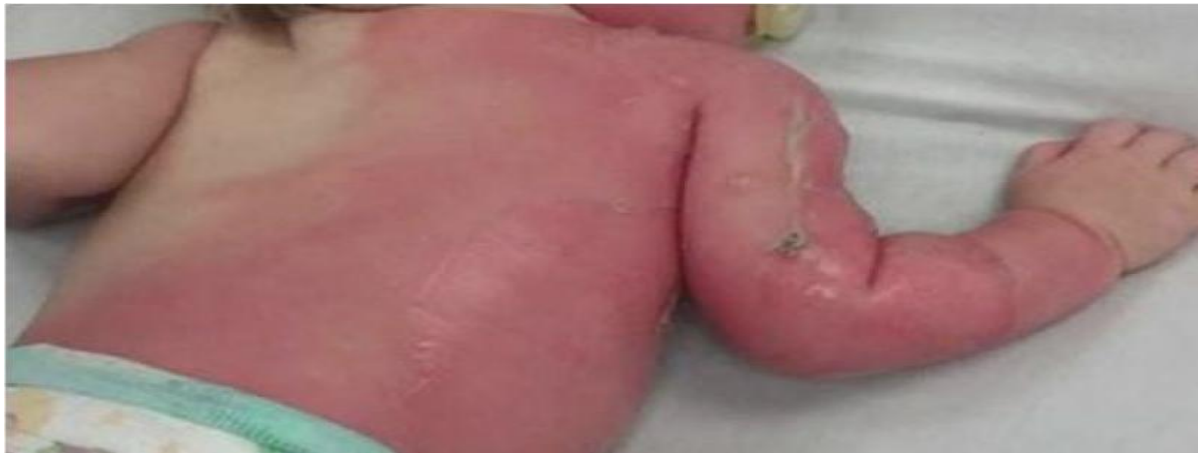
Baby presented with burn to the ER, the surface area was described (I think both arms with lower back and neck)

18

18

A) What is the management:

B) What is the percentage:



Hashemite University
H · U · M
Medical School Committee

ANSWER

ABCDEF +

A. Admit and pain management + Ab + if there is blisters, remove it

B. 30% (any number from 25-30 is accepted)

26%

• QUESTION

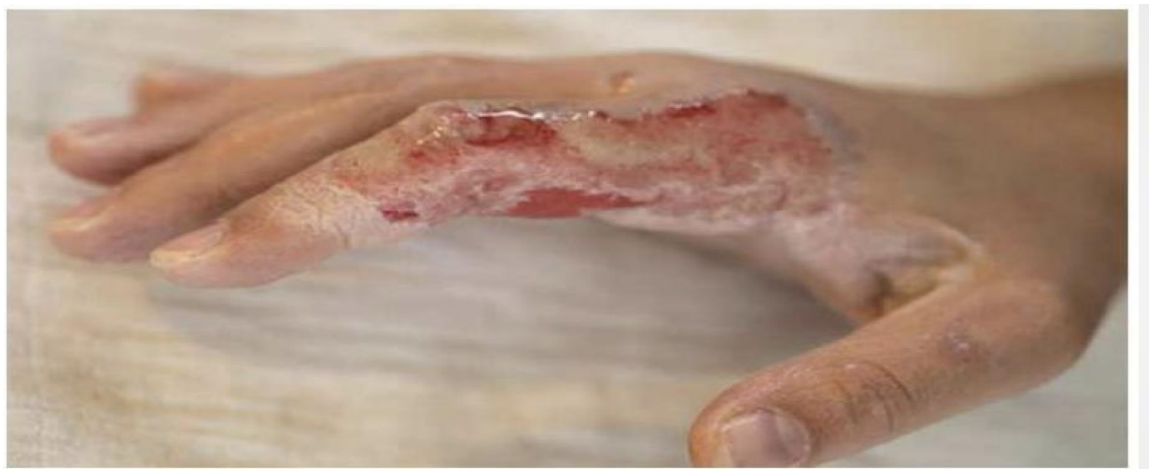
محكور يزن

SOUL 2021

1.What is the Diagnosis?

2.Question about the rule of 9 for upper limb?

9% in ~~Both~~ adults & children



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Type 2 burn

• QUESTION

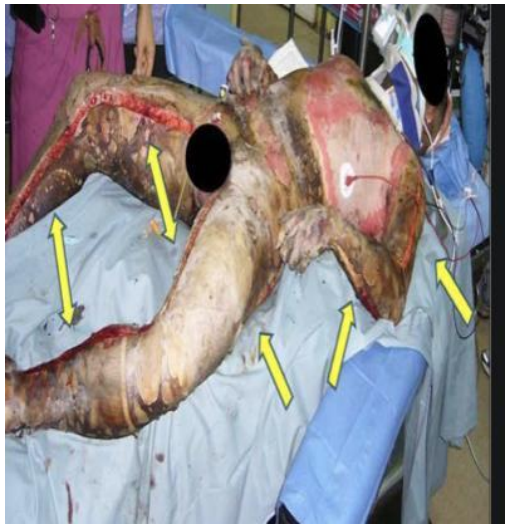
2019 – Before

Q1: What is the degree of burn in this image?

Q2: What is the name of the scar? eschar

Q3: if the burn was circumferential and the patient weight was 100 kg, calculate:

1. TBSA% 2. Fluid needed in the 1st 8 hours



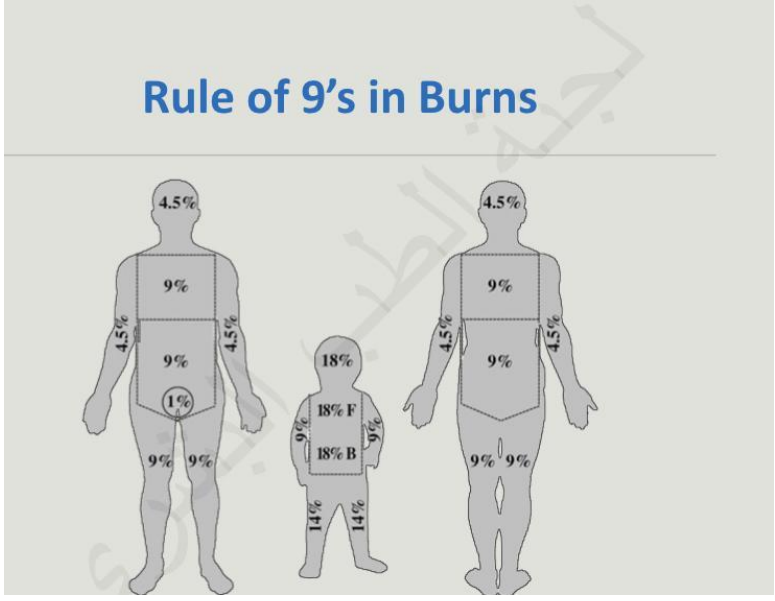
Hashemite University
H • U • M
Medical School Committee

ANSWER

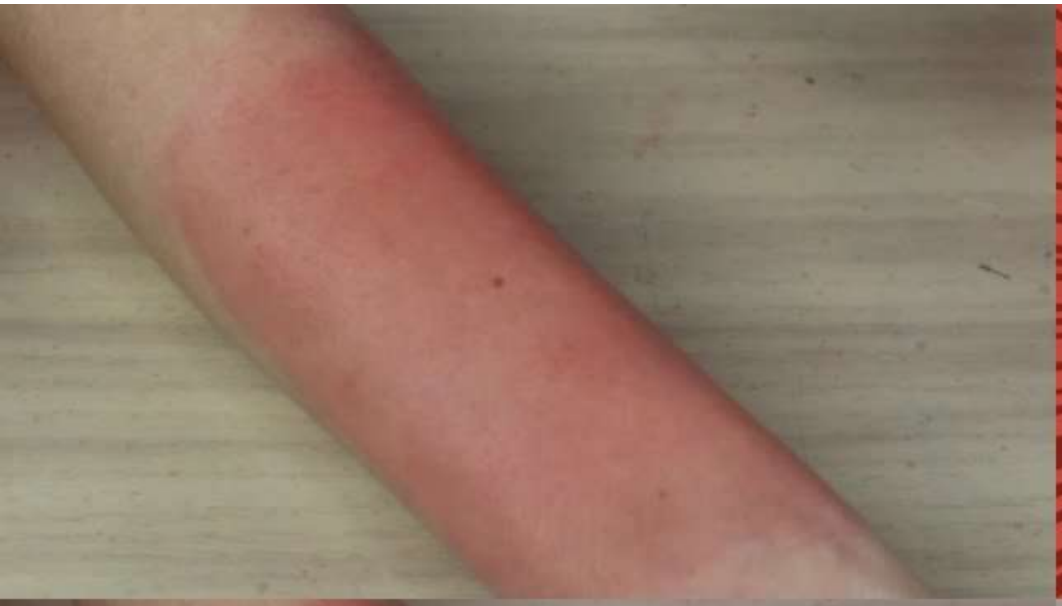
1.3rd Degree

2.Escharatomy

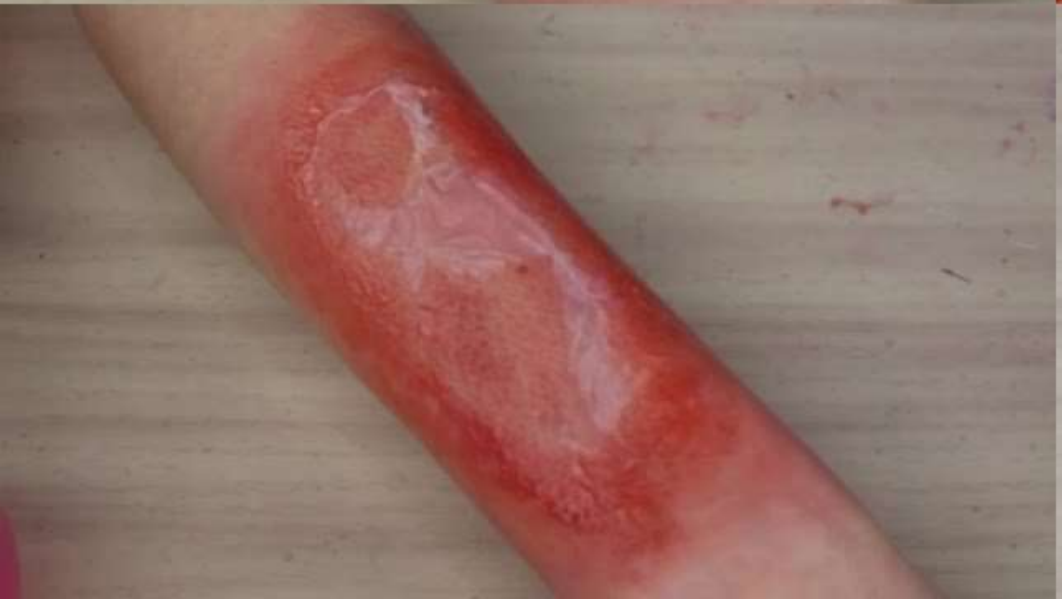
3.

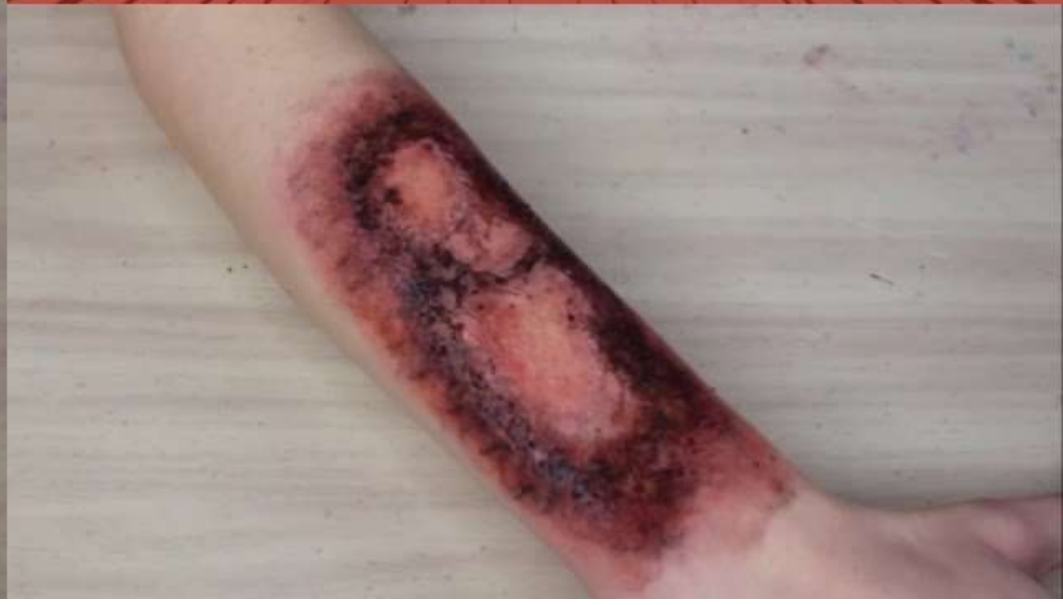


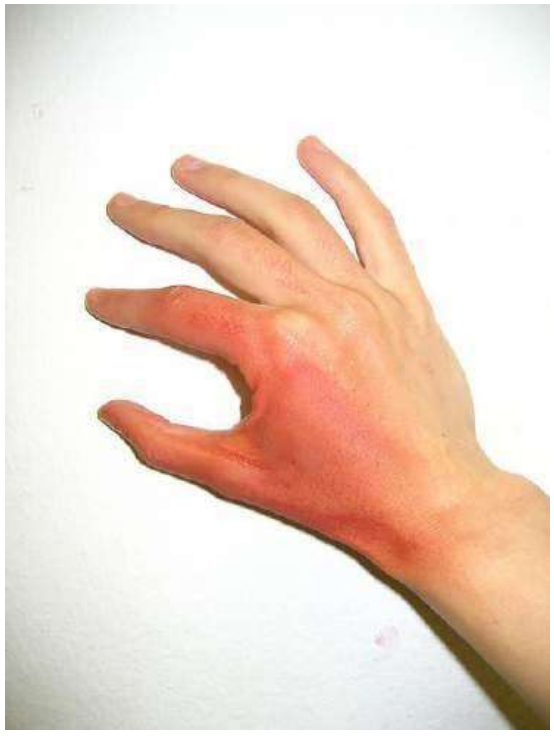

Burns

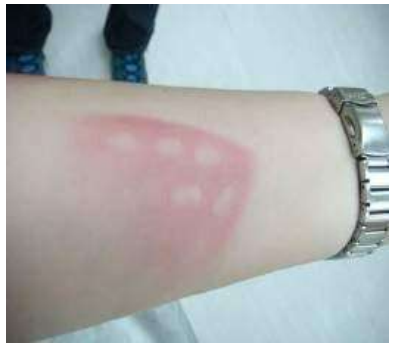


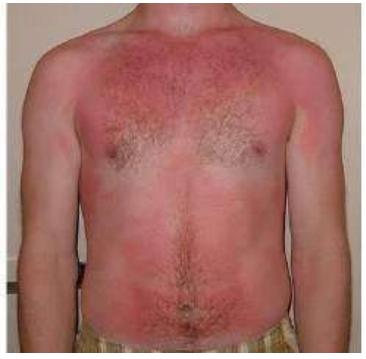
1st, 2nd, and 3rd Degree Burns





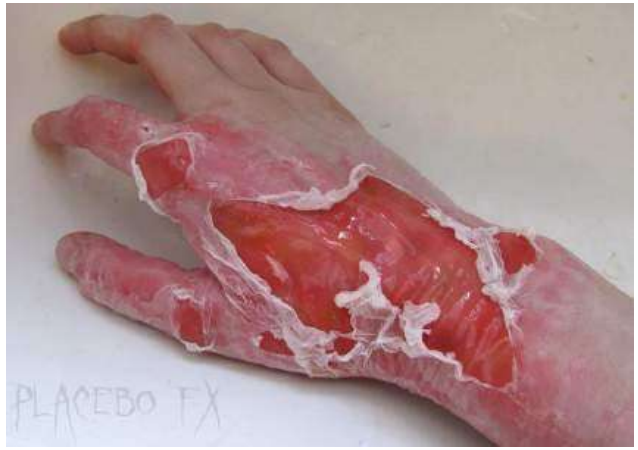


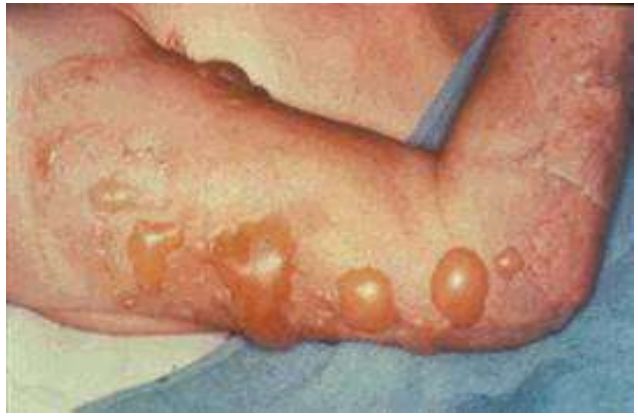




1st degree burn

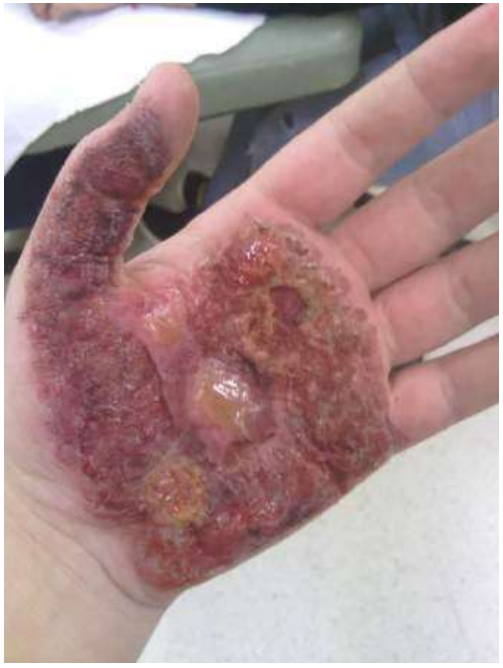
1- Pain and erythema.
2- Limited to the dermis.
3- No contracture.
- (1-6) days , heals by regeneration.
- Applies only to thermal burns.





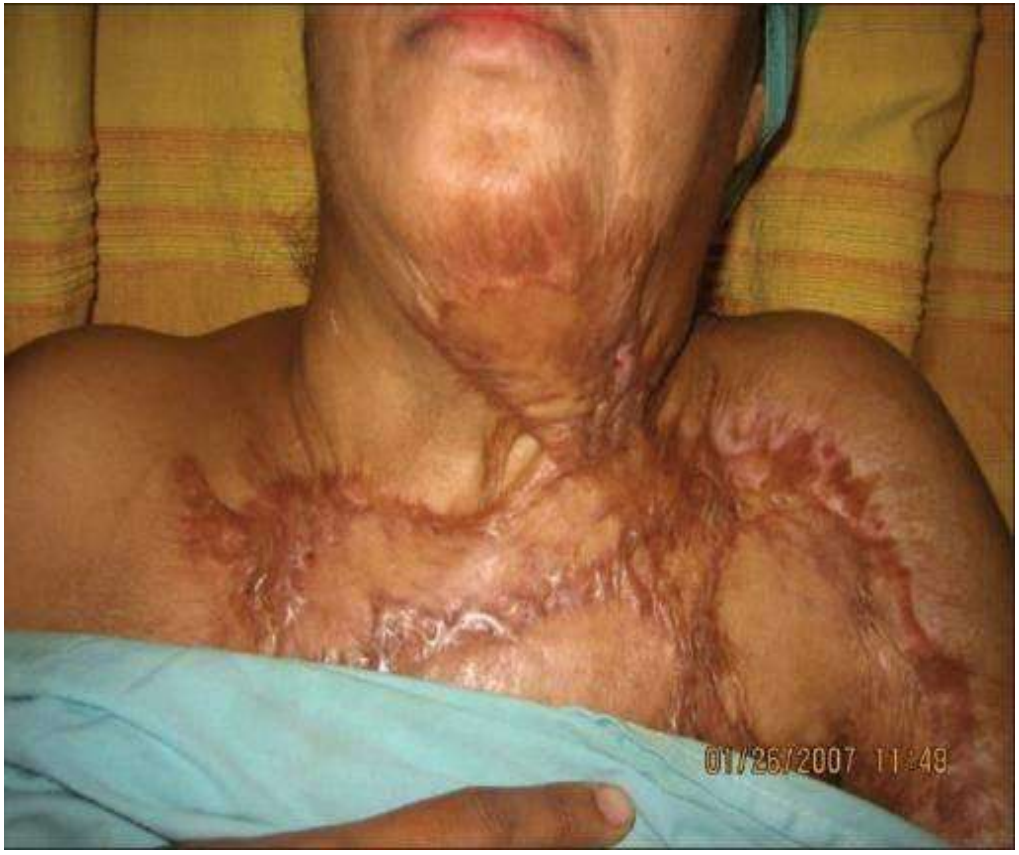
2nd degree burn

1- Necrosis of the epidermis and varying depth of the dermis (superficial/ intermediate/ deep).
2- Pain, erythema, blisters, blanching, burned area is wet with exudate.
- Applies only to thermal burns.



3rd degree burn

- Full thickness.
- Eschar (dead tissue, insensitive, lethargy, inelastic, hard).
- Applies only to thermal burns.



- **Post burn contracture.**
- a complication of 3rd degree burns.
- they should have put skin graft for the patient to prevent this complication.

Fasciotomy Jari

Table 1. Classification of Burns by Depth

Burn Thickness	Deepest Skin Structure Involved	Appearance	Pain	Prognosis (Without Surgical Intervention)
Superficial (first-degree)	Epidermis	Dry, blanching erythema	Painful	Heals without scarring, 5-10 days
Superficial partial-thickness (second-degree)	Upper dermis	Blisters; wet, blanching erythema	Painful	Heals without scarring, < 3 weeks
Deep partial-thickness (second-degree)	Lower dermis	Yellow or white, dry, nonblanching	Decreased sensation	Heals in 3-8 weeks; likely to scar if healing > 3 weeks
Full-thickness (third-degree)	Subcutaneous structures	White or black/brown, nonblanching	Decreased sensation	Heals by contracture > 8 weeks; will scar

First degree

Partial thickness burns.

- Characterized by erythema (localized redness).
- Appear sunburn-like.
- Are not included when calculating burn size.
- Usually heal by themselves.

Second degree

Partial thickness burns.

- Part of skin has been damaged or destroyed.
- Have blisters containing clear fluid.
- Pink underlying tissue.
- Often heal by themselves.

Third degree

Full thickness burns.

- Full skin has been destroyed.
- Deep red tissue underlying blister.
- Presence of bloody blister fluid.
- Muscle and bone may be destroyed.
- Require professional treatment.

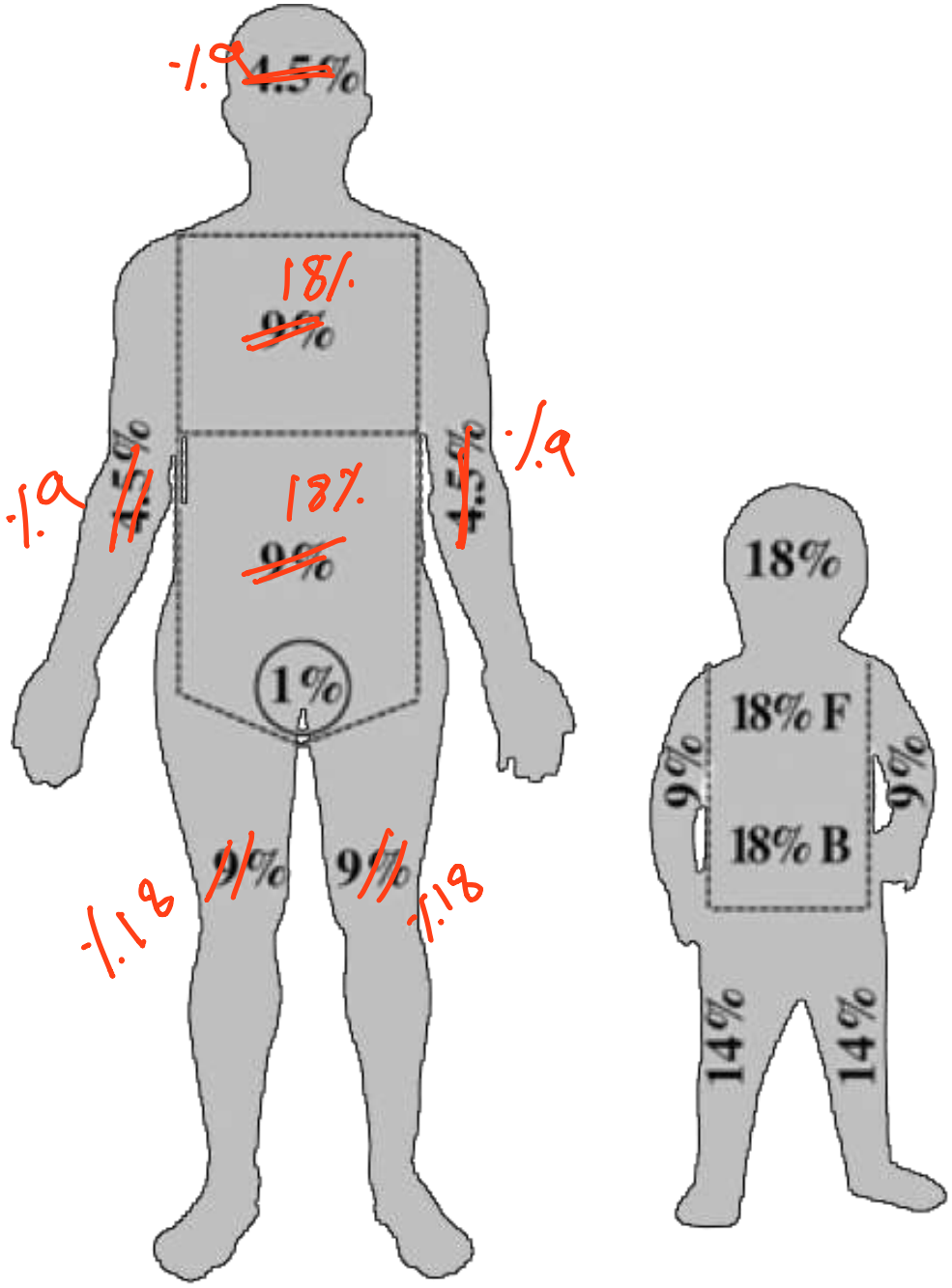
Fourth degree

Full thickness burns.

- Penetrate deep tissue to fat, muscle, bone.
- Require immediate professional treatment.

Role of 9's in Burns

not used in children



Parkland Formula

Volume of Lactated Ringers solution:

$$4ml \times BSA(\%) \times weight(kg)$$

Give half of the solution for the first 8 hours

Give the other half of the solution for the next 16 hours

Q: What is the Dx?

- 2nd degree burn

Q1: What is the degree of burn in this image?

- 3rd Degree clear

Q2: What is the name of the scar? eschar

- Escharatomy → the procedure in which we remove the eschar (dead tissue)

Q3: if the burn was circumferential and the patient weight was 100 kg, calculate:

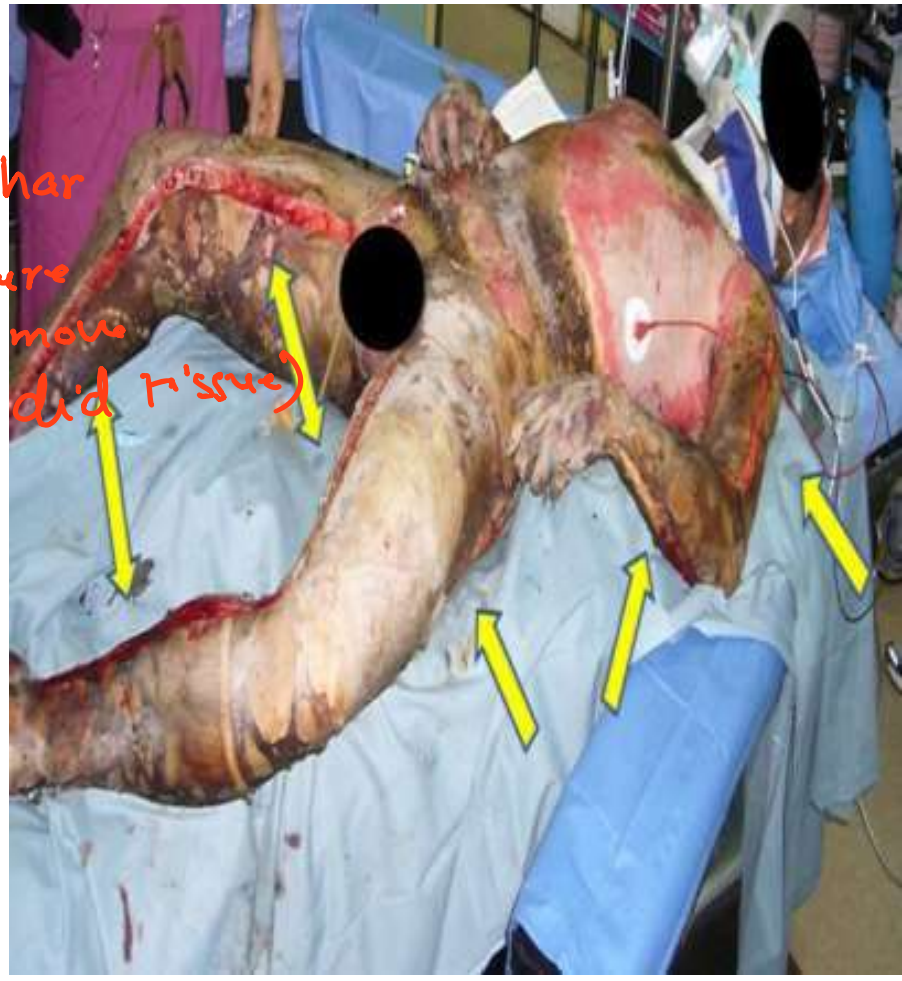
1. TBSA%:

- 100% (all the areas affected!)

2. Fluid that needed in the 1st 8 hours if the TBSA is 40%:

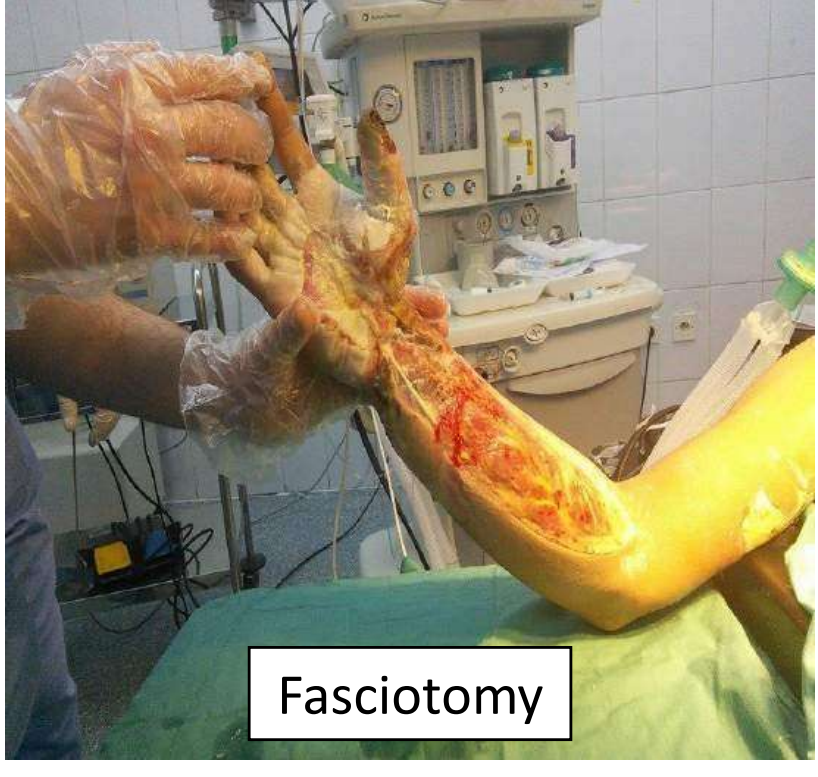
- 8 L

(4 x 40 x 100 = 16K ml/1000 = 16 L, in the 1st 8 hr we give ½ (so 8))



Escharotomy VS fasciotomy

- fasciotomy is done in Mx of compartment syndrome after electrical burn. or when escharotomy fail
- Escharatomy is done to decompress tissues in 3rd degree burns. → impending Respiratory or vascular compromise in 3rd
- Beneath escharotomy you will see granulation tissue, beneath fasciotomy you will see muscles.
- If ischemia is suspected, escharotomy is indicated.



Electrical burn

Rhabdomyolesis و تحلل عضلات leading to AKI

wound > burnt site لان في electrical

- The severity depends on the voltage.
- Nerves, muscles and blood vessels have low resistance, so they are affected most.
- Skin, bone and tendons have high resistance, hence, they are less burned.

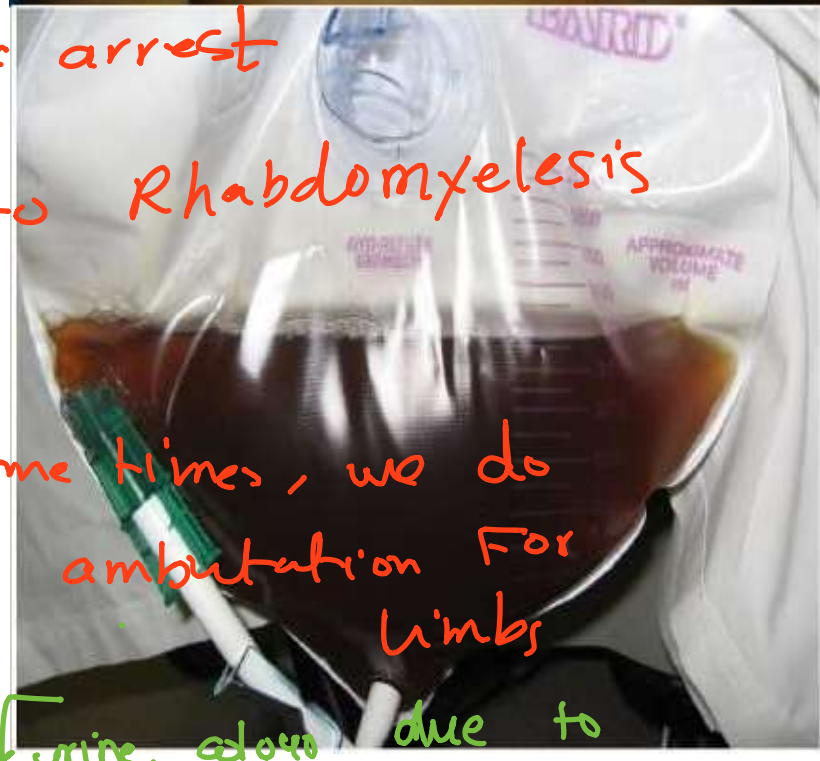
- **Management:**

✓Pt should be monitored for cardiac arrhythmias. as they exposed to cardiac arrest

✓Good hydration & alkalization of urine to prevent renal impairment. as they exposed to Rhabdomyelesis

✓ Fluid management couldn't be based on calculated formula.

✓Observation of limb vascularity & fasciotomy. Some times, we do amputation for limbs



What is the Dx? Electrical burn

What to do? Fasciotomy.

What is the cause of urine color ? Myoglobin.

(electrical burn causes myoglobinuria)

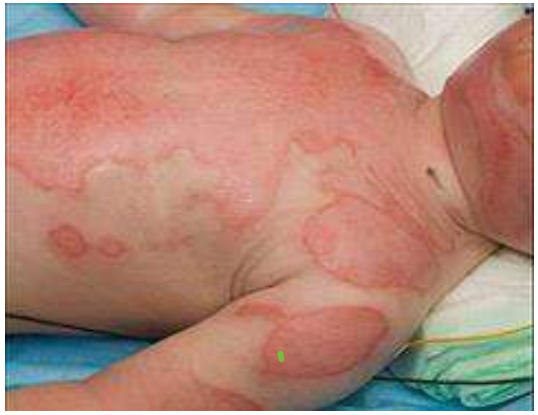
urine color due to Rhabdomyelesis that results in

Thermal Burn

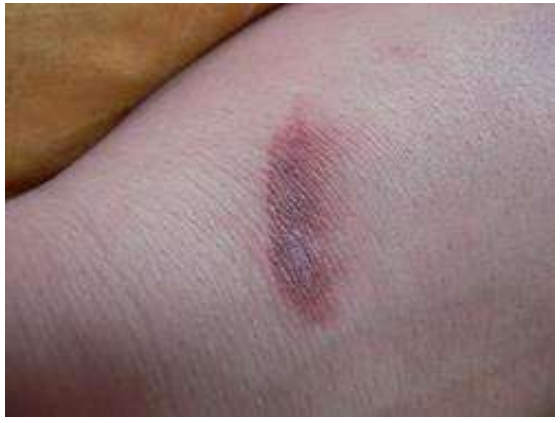
- Temperature > 45 degrees.

- Duration of exposure is more important than degree of temp.

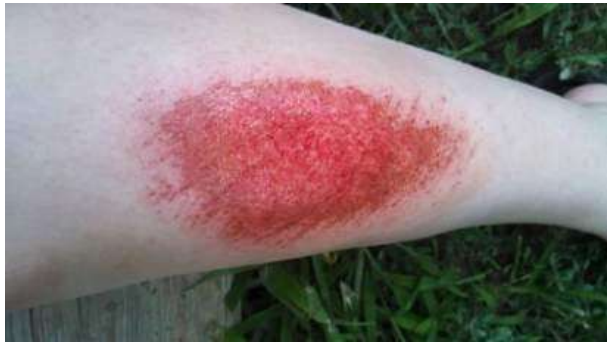
- Classification:
  1) direct flame burn
  2) scald burn (with hot liquids).
  3) contact burn with hot metals.
  4) friction burn.



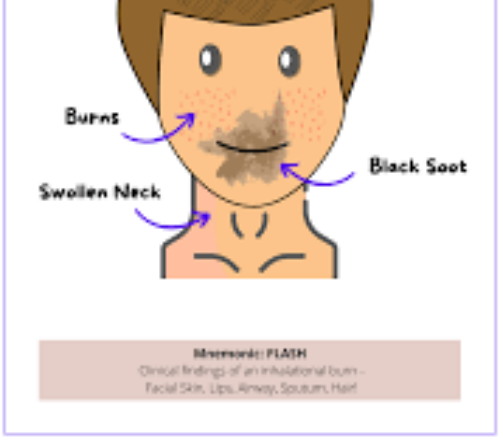
Scald burn



Contact burn



Friction burn



Q1: What category of burn does this patient have?

-~~It's a facial flame burn (facial edema~~).

inhalation burn

Q2: What is the main risk of this burn?

-the patient will have upper airway obstruction and risk of CO poisoning.

Q3: What should you do?

-The patient should be intubated before reaching to complete obstruction and give 100% oxygen if CO poisoning is suspected.

Q: This lady had a flame burn 2 years ago.

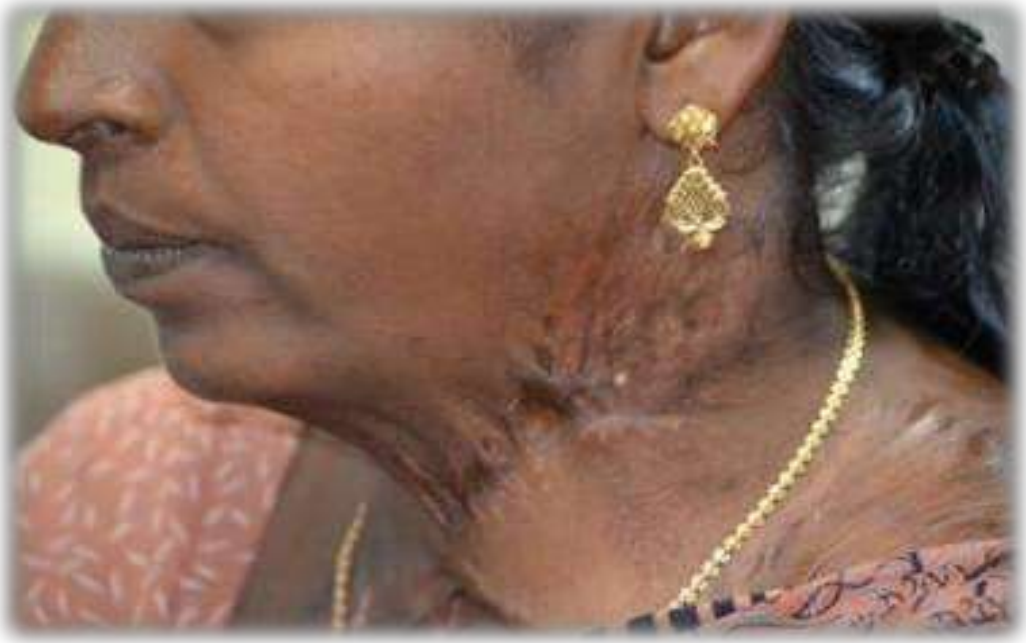
Q1: What does the image show? Post-burn fibrosis and contracture.

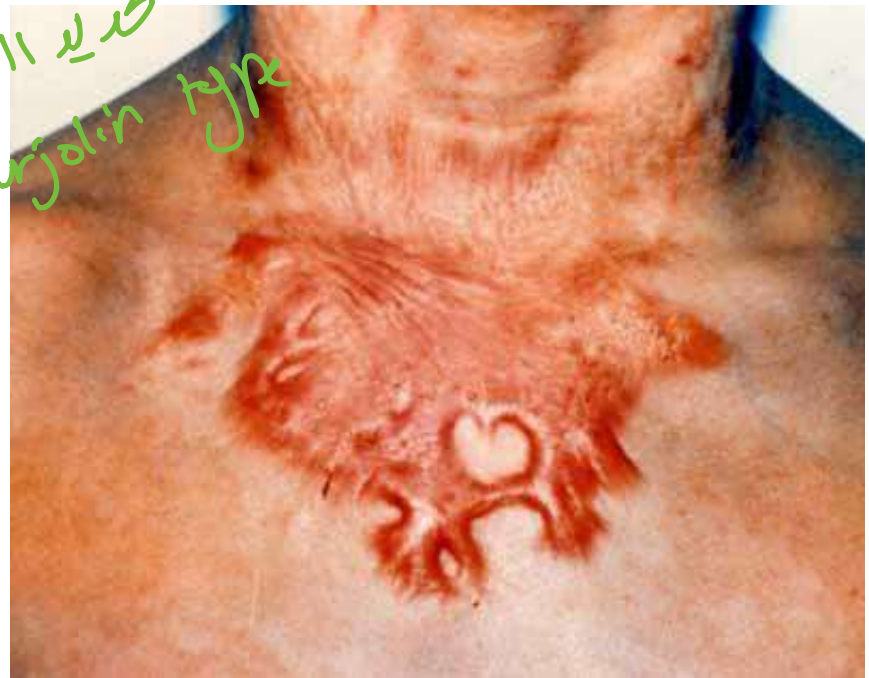
Q2: What was the degree of her burn? 3rd degree.

Q3: Name the most suitable type of skin graft to use in reconstruction?

Full thickness

Q: Serious complication that you fear from? Transformation into SCC





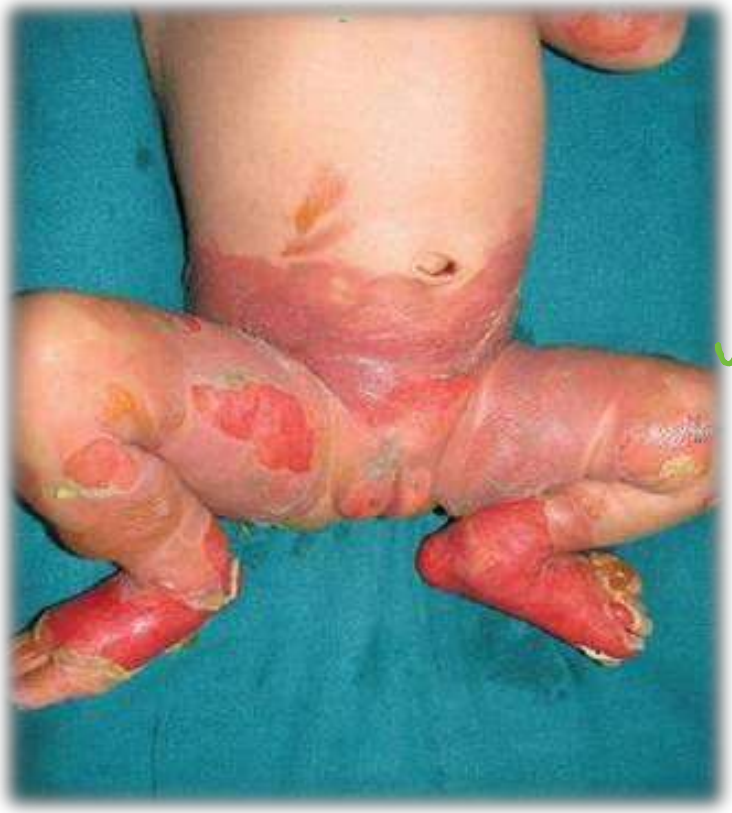
Q: This baby presented to the ER with scald burn.

Q1: What is the degree of burn? 2nd degree.

Q2: Mention three lines of acute Mx of the burn:

Fluid resuscitation/ pain control/ dressing. + Ab

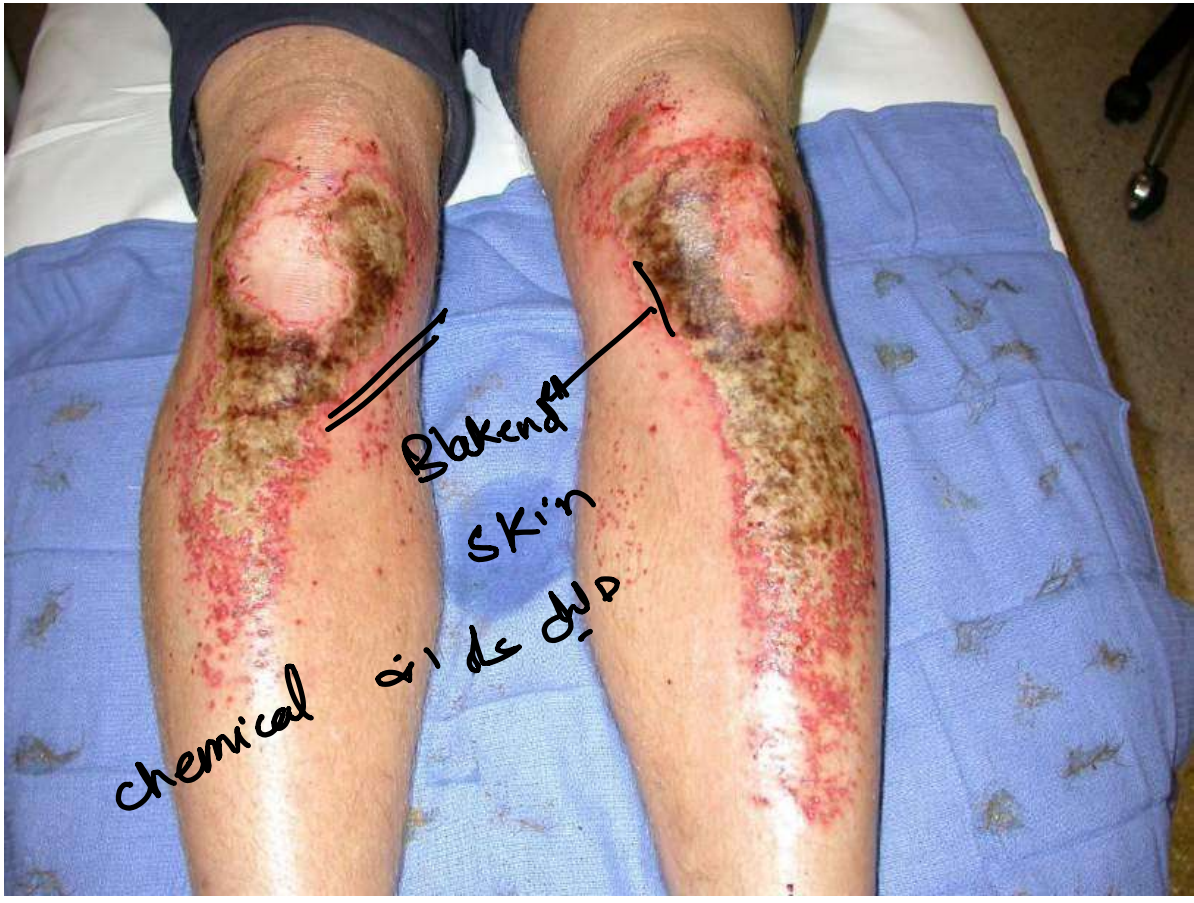
skin graft لو احتاج



wet exudate not only erythema or reach to the bone

Chemical burns

- Caused by acids or alkali.
- **Acids** produce **less** damage and **less** penetration.
- **Acids** produce **coagulative** necrosis.
- **Alkali** produce **liquifactive** necrosis.
- Management : dilution by water for 2-4 hrs in alkaline burn, and 30 minutes for burns caused by acids.



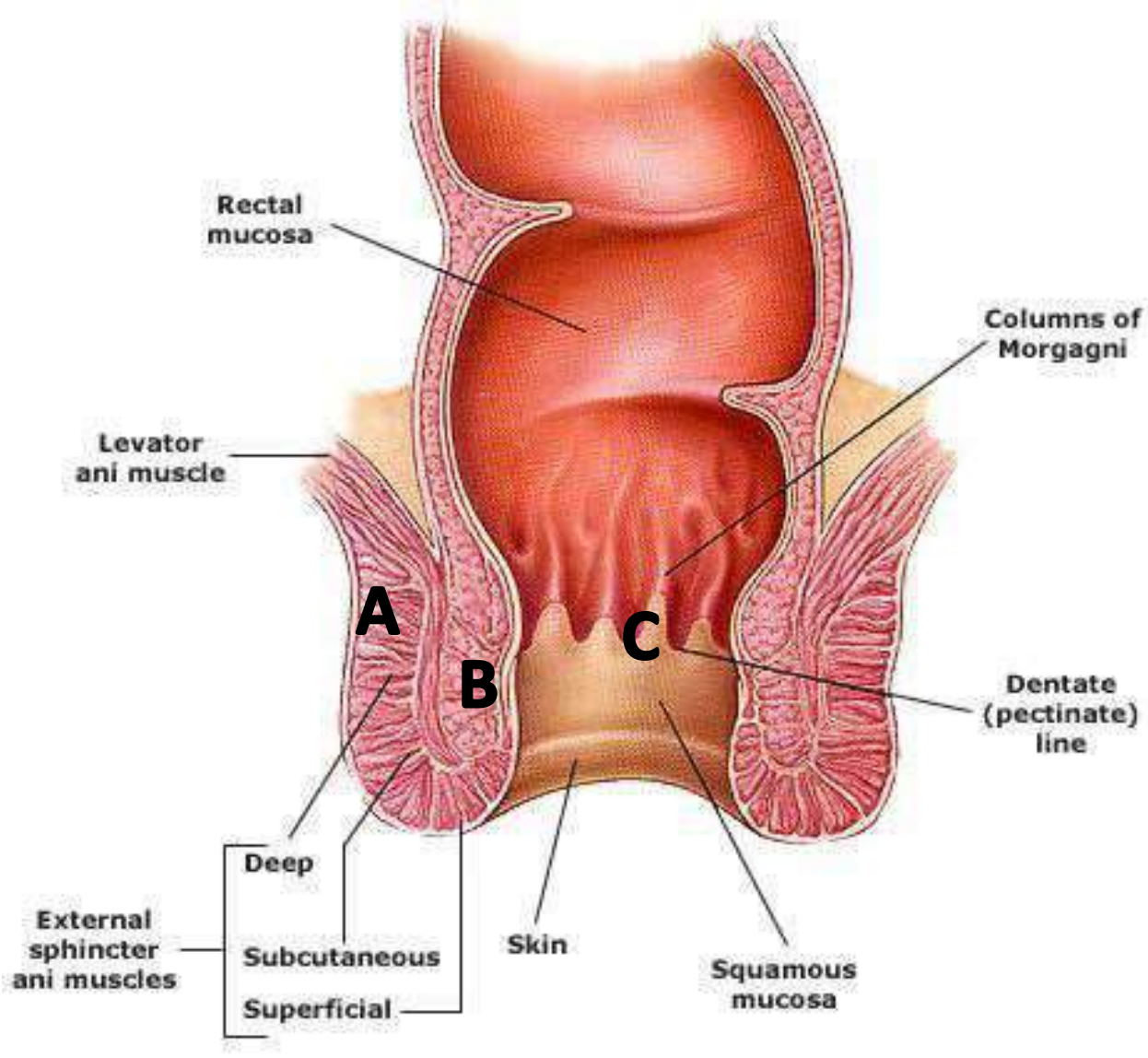

Anorectal

Q: About the anatomy of anal canal:

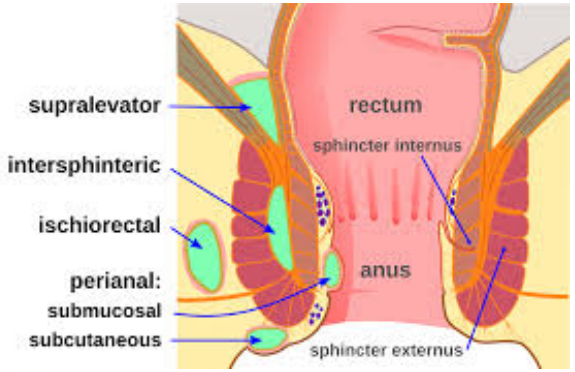
A: External anal sphincter

B: Internal anal sphincter

C: Dentate line

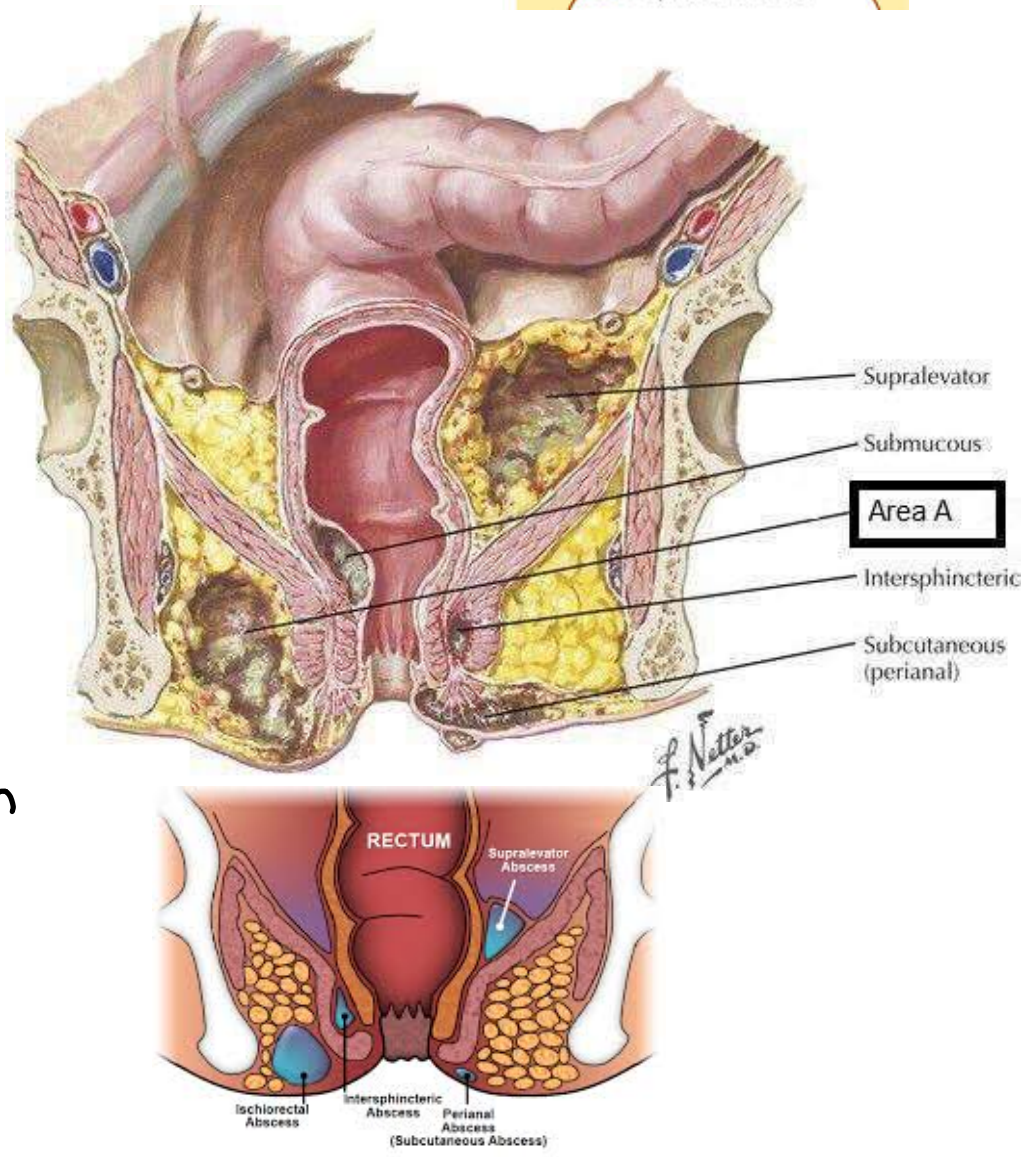


Q: Patient has anal pain and itching:



Q1: What type of anal condition in this area (Area A)?

- Ischiorectal abscess



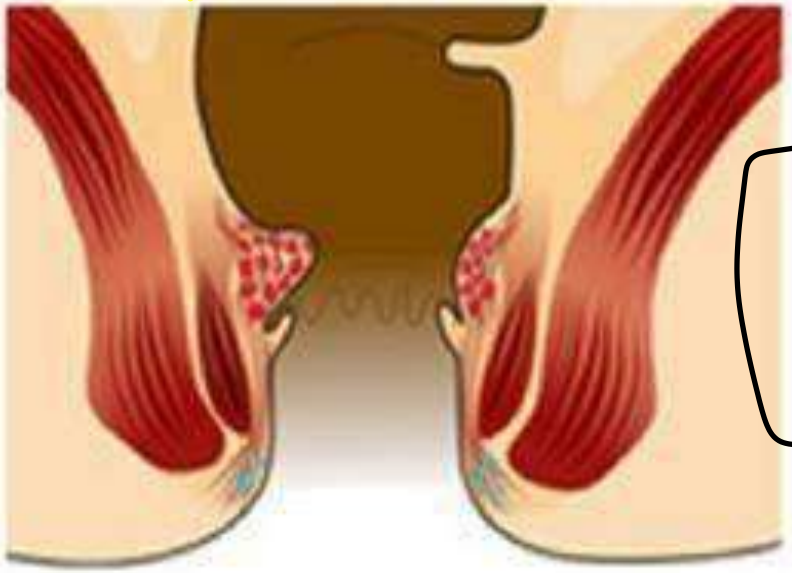
Q2: What is the Mx?

- Cruciate incision with drainage with drainage of pus (without antibiotic)

dx :- Digital Rectal examination

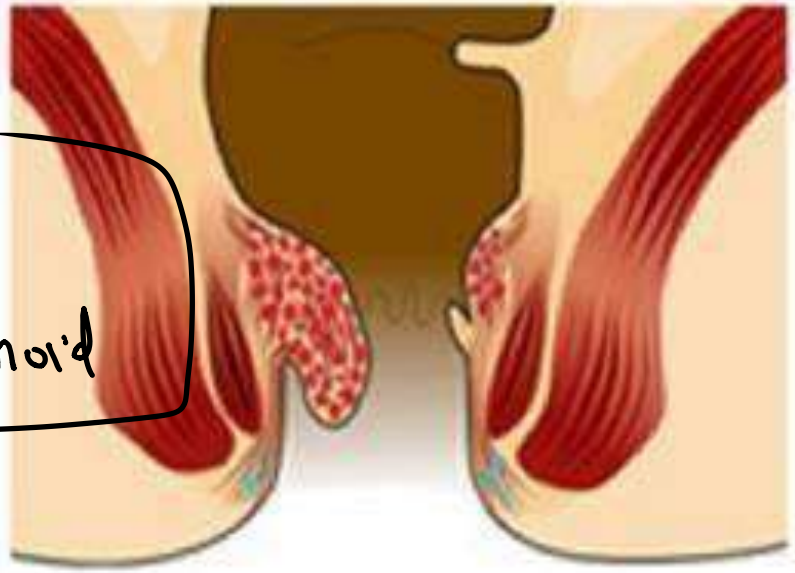
- Extra: we use antibiotic in: systemic inflammatory response or sepsis extensive cellulitis, diabetes, immunosuppression

1st Degree: No Prolapse
Just prominent vessels

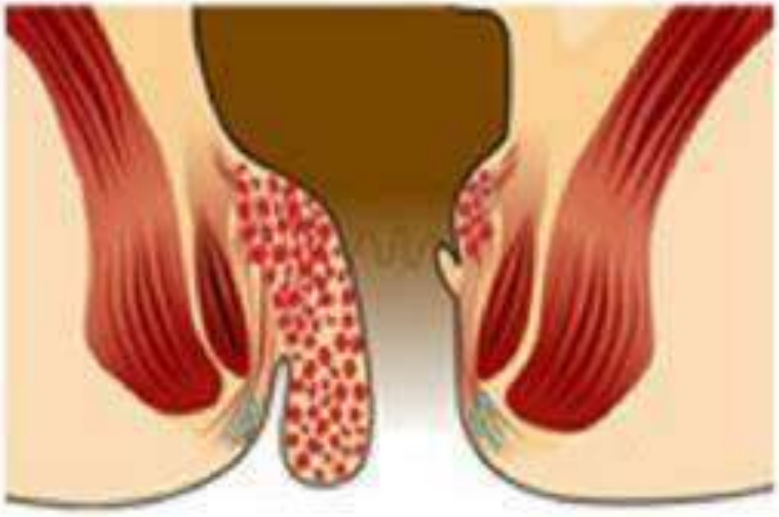


degrees of hemorrhoid

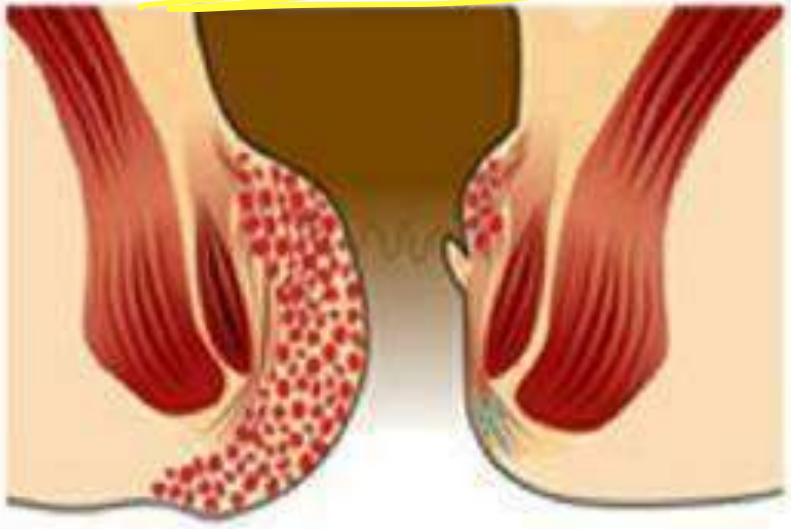
2nd Degree: Prolapse (come out) with strain but spontaneously reduce (go back in)

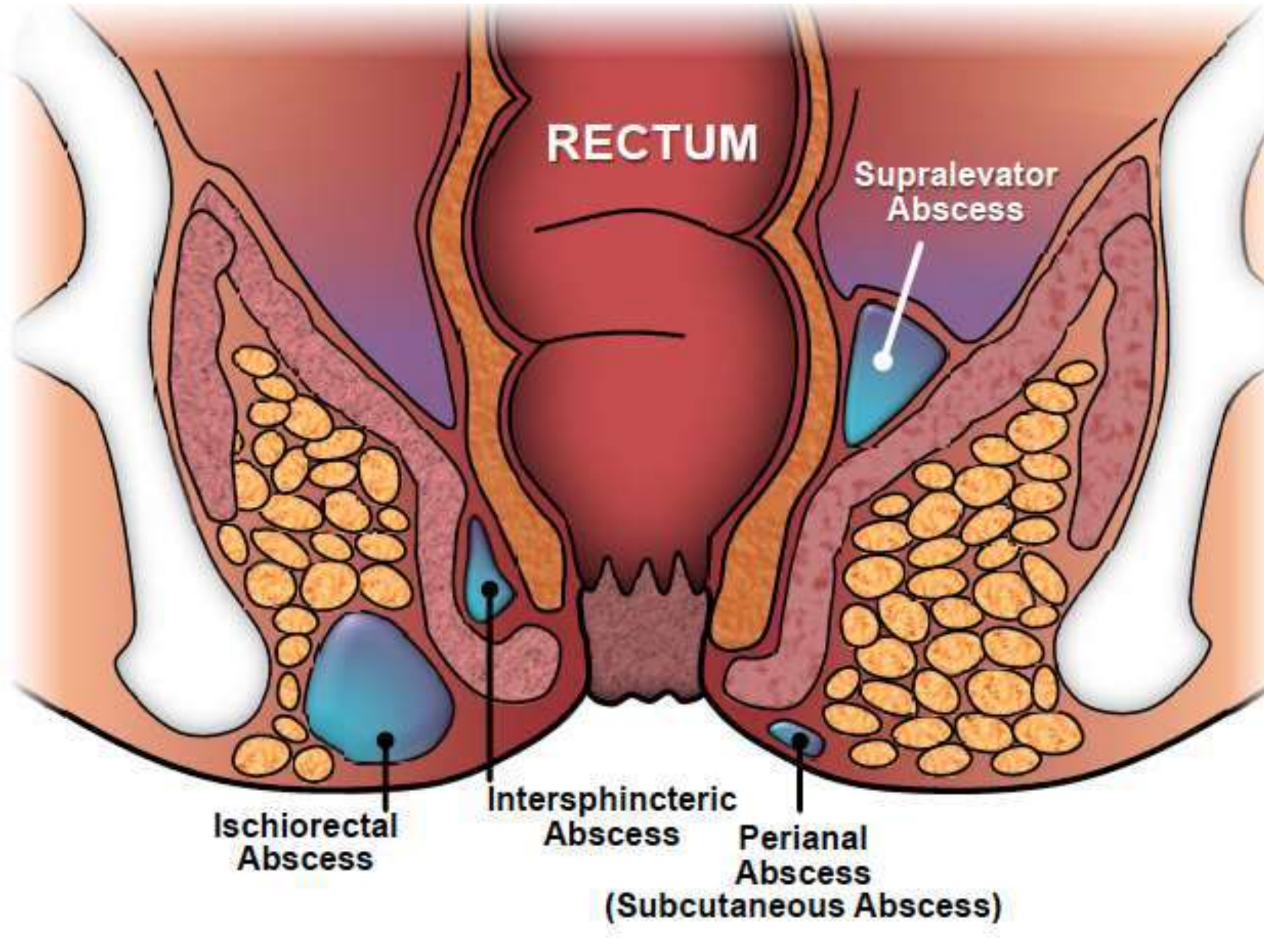


3nd Degree: Prolapse with strain and have to be pushed back in

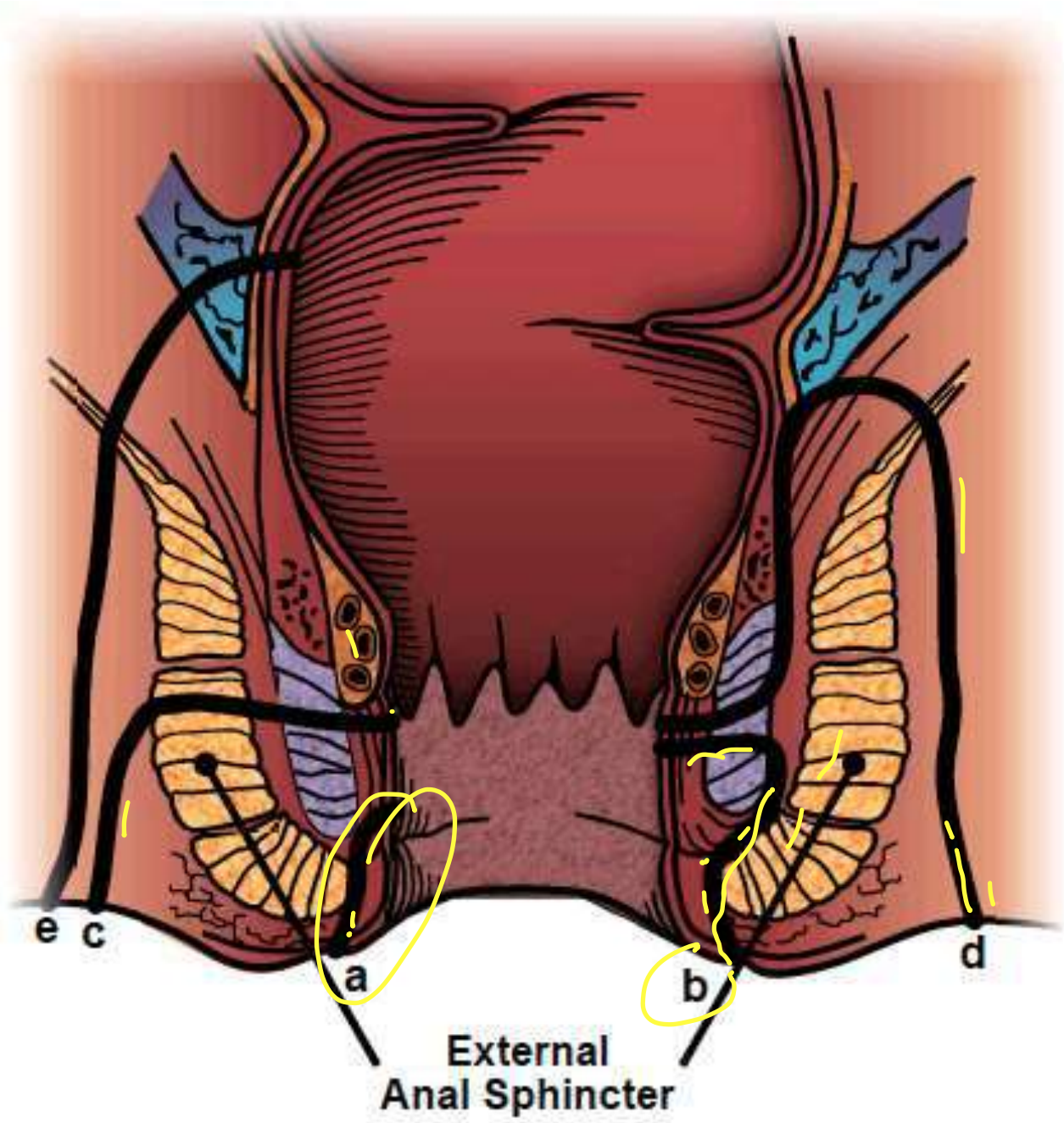


4nd Degree: Prolapsed out and cannot be reduced or pushed back in




RECTUM
Supralevator Abscess
Ischiorectal Abscess
Intersphincteric Abscess
Perianal Abscess (Subcutaneous Abscess)

a: superficial fistula
b: intersphincteric fistula
c: transsphincteric fistula
d: supraspincteric fistula
e: extrasphincteric fistula



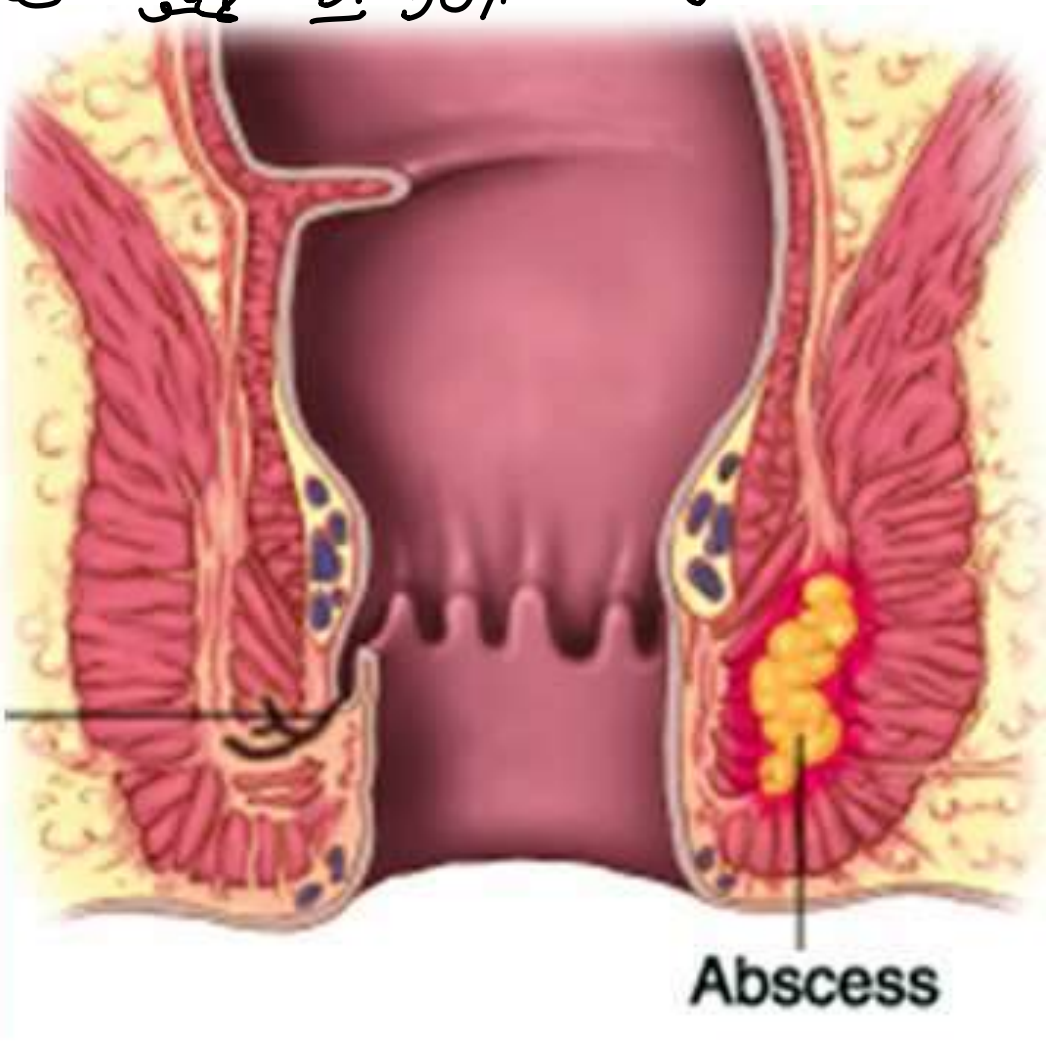
Q: This is a 35-years-old patient c/o severe anal area pain

1. What is the diagnosis? Perianal Abscess

2. What is the treatment? Drainage & Antibiotics Cover

3. What is the possible sequel for this condition? Fistula

Fistula تصير معه 50٪ لـ



Q: A 25 year old male presented with anal pain and fresh blood PR the peri-anal area is shown:

+ itching

Q1: What is the Dx? Bleeding Hemorrhoids

Q2: What do you recommend?

1) Bath sitz 2) Laxatives 3) High-fiber diet

Q3: Beside bleeding, name 2 more complications?

1) thrombosis 2) Infection 3) Ulcers

Remember UTI as mnemonic

Classification: Internal (above dentate line) external (below dentate line). → more painful

Risk factors: constipation (1)/ straining (2)/ pregnancy (3)/ ascites (4)/ portal HTN. (5)

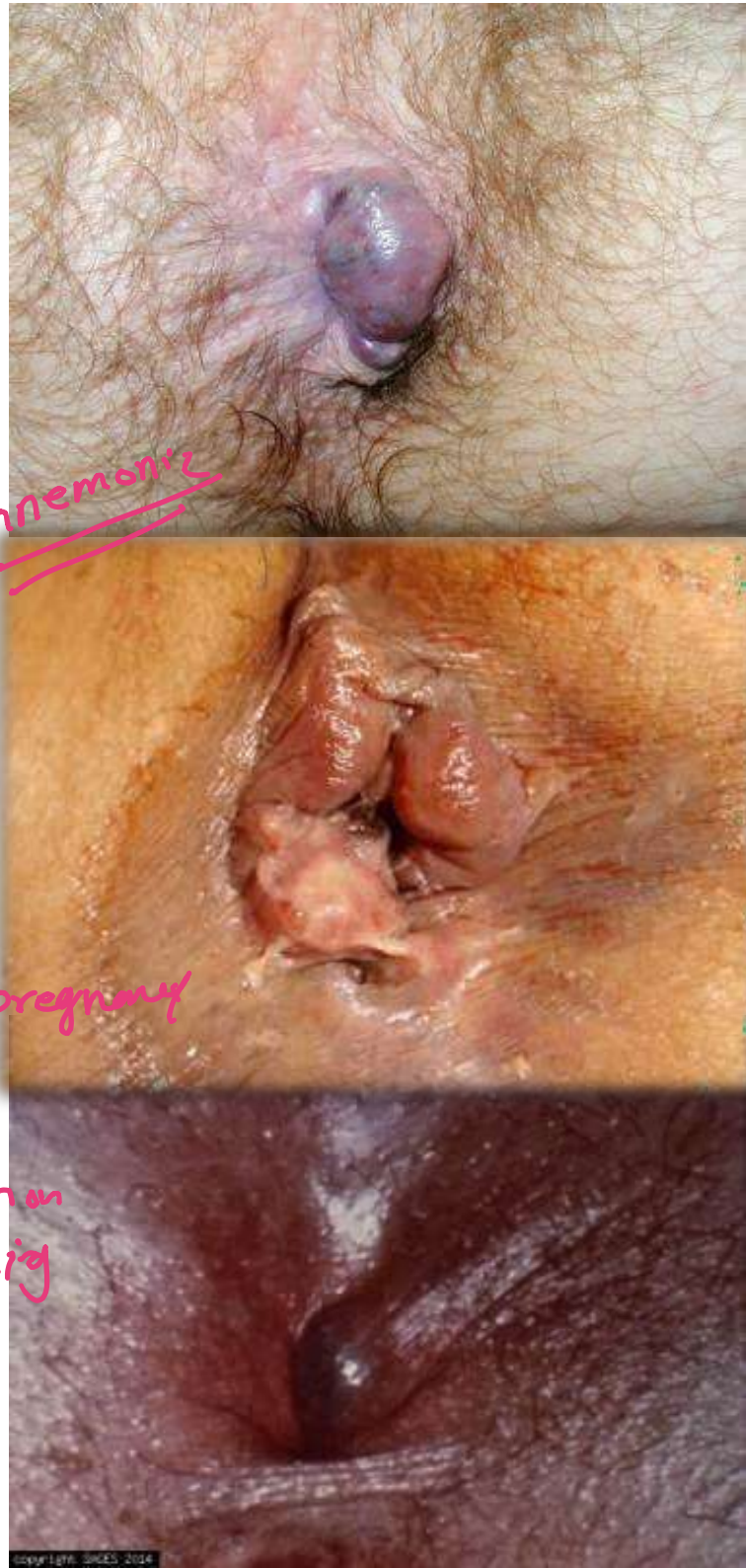
APC → portal / pregnancy, ascitis, constipation straining

Hemorrhoidectomy:

* contraindicated in chron's.
* complications: pelvic infection/ anal stricture/ incontinence.

اذا جا اعرفين معنه LGI bleeding

و عكينا انهم hemo.. لازم يرضو نشيك على colon لتستبعد انه عنا في colon

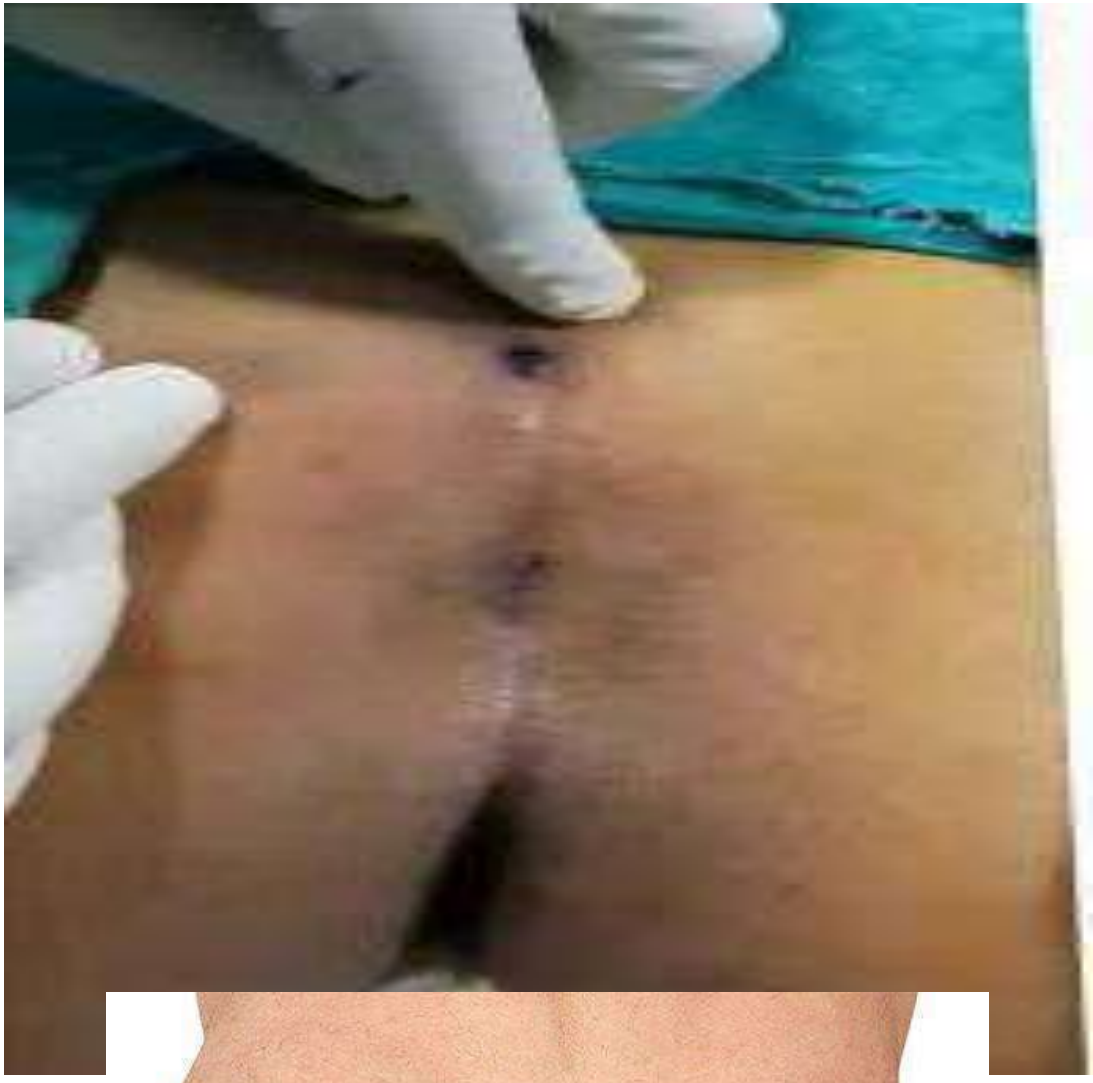


Q1: Name the Dx?

- Pilonidal Sinus (PNS)

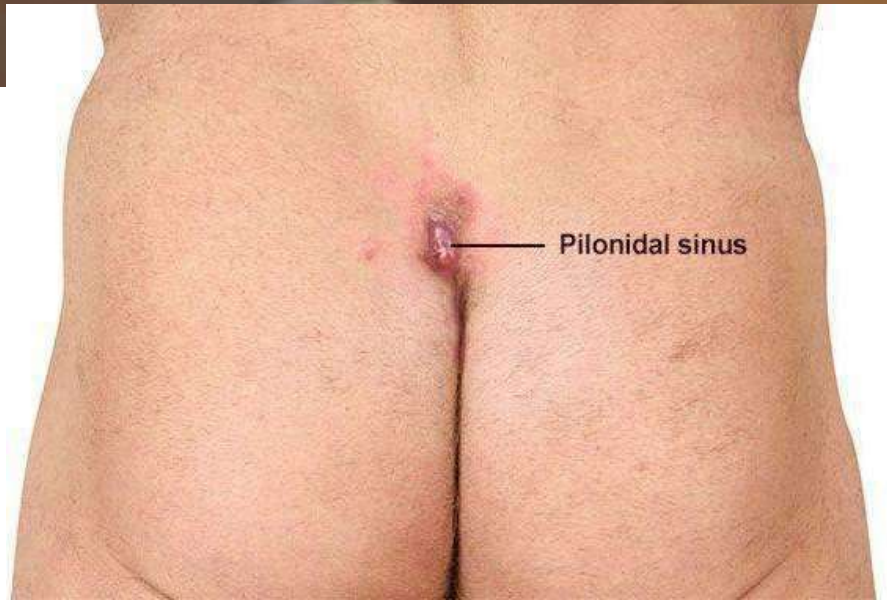
Q2: Name 4 sites for it?

1) Inter-digital space
2) Natal cleft
3) Between breast
4) Axilla



Treatment If your PNS does get infected, surgery will most likely be recommended and may include the following:

1) Incision and Drainage
2) Wide Excision (reduce your chances of a reinfection. However; Your wound may take a long time to heal)
3) Excision and Primary Closure (reinfection chances are higher)



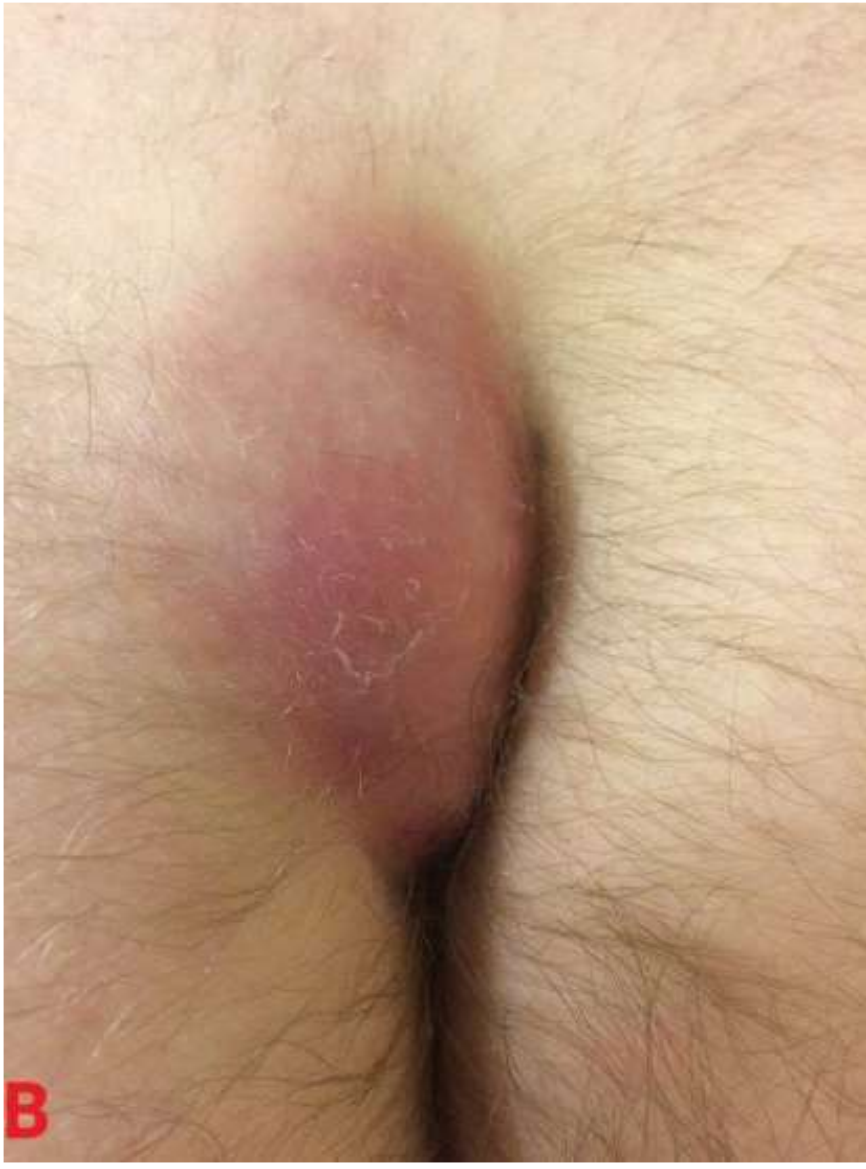
Q: A 22-years old male patient presented with upper natal cleft area increasing in pain for the last 3 days.

1. What is your diagnosis?

Gluteal Cleft Abscess of a Pilonidal Sinus

2. What is the treatment?

Incision & Drainage



Fistula –in- ano

anal Fistula

- From rectum to anal skin.

- Causes:

① anal crypt infection

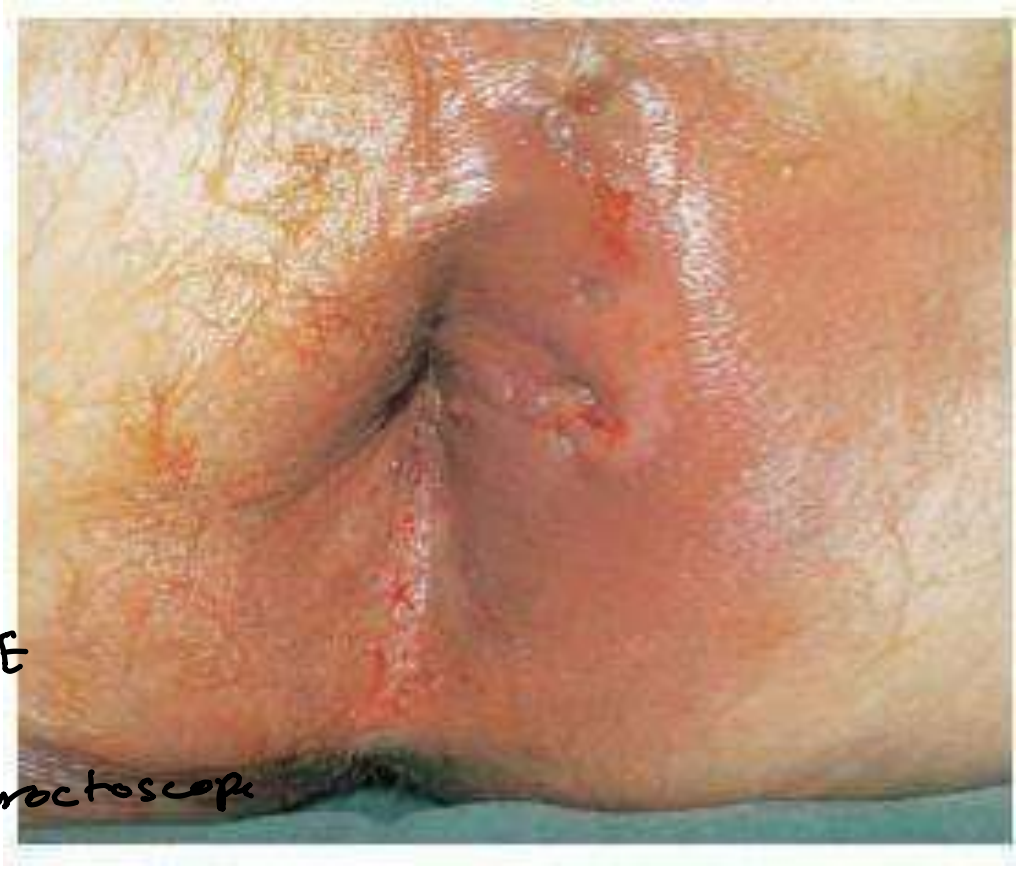
② perianal abscess.

- Sx :

perianal drainage

itching

diaper rash.



dx : DRE + proctoscope

ttt

① marsupialization of Fistula tract

② wound care

③ seton placement if Fistula is through sphincter muscle

anal Fissure triade For chronicity

Q: This pt has painful defecation:

1. Name the findings on examination of the anal area.

① Fissure
② sentineal pile
③ hypertrophoid anal papilla

A > Anal Fissure

B > Sentinel Pile

mostly caused by constipation and seen in crohn dz

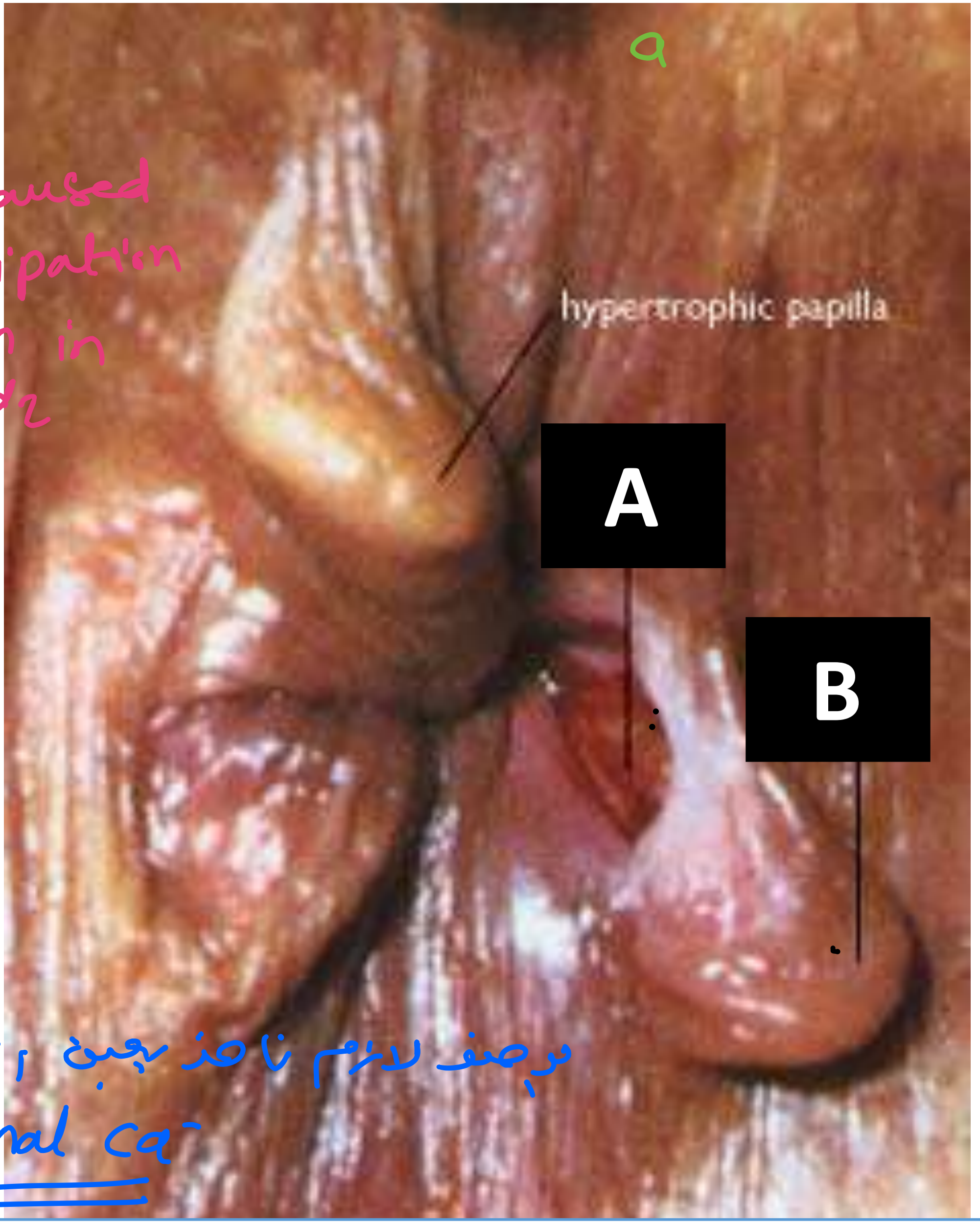
2. Mention 2 treatment options.

-**Lifestyle modification** with high fiber diet and increase fluid intake

-**Medical Management** (Laxatives, stool softeners, local anesthetic creams, botulinum toxin injection, sitzbath…etc)

-**Surgical Management** (Sphincter dilatation, Lateral internal sphincterotomy, Fissurectomy)

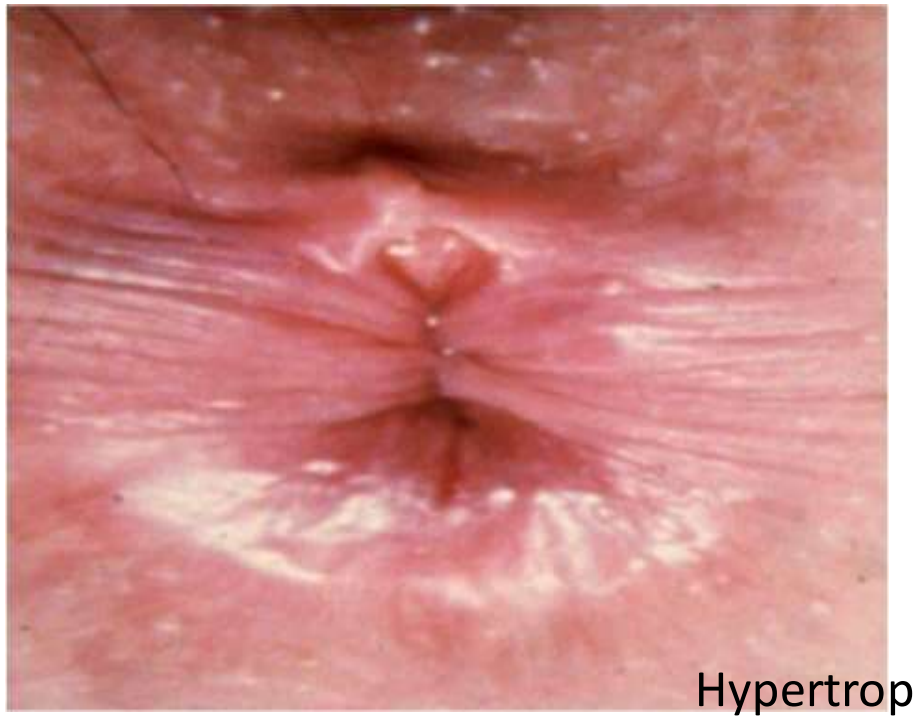
مرضى لازم ناخذ بعين الاعتبار anal ca



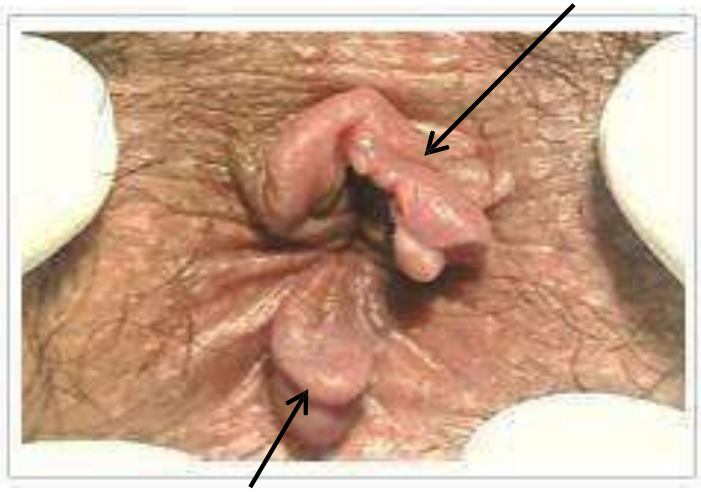
This is a chronic fissure with hypertrophic papilla & pile formation, the guidelines state that for chronic fissures medical management with botulinum toxin, stool softeners and anesthetic creams is indicated first. If the fissure is refractory to medical management then surgical intervention with lateral internal sphincterotomy is highly indicated, but sphincter dilatation could also be used.

Anal fissure

- **Hypertonic internal sphincter.**
- Chron's disease may cause it.
- Very painful.
- Posterior fissures more common than anterior ones.
- Signs : **sentinel tag/ hypertrophied papilla**/ blood on toilet paper.
- Surgery indication: chronic fissure / refractory to conservative treatment.
- Surgery: lateral internal sphincterectomy.
- Triad of chronic fissure: sentinel pile/ hypertrophied papilla/hypertonic sphincter.



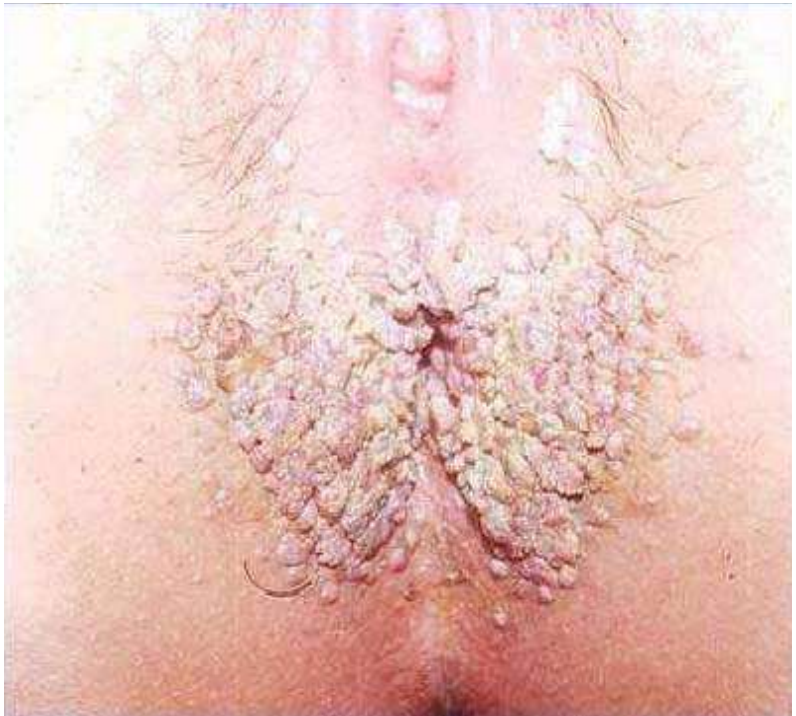
Hypertrophic papilla

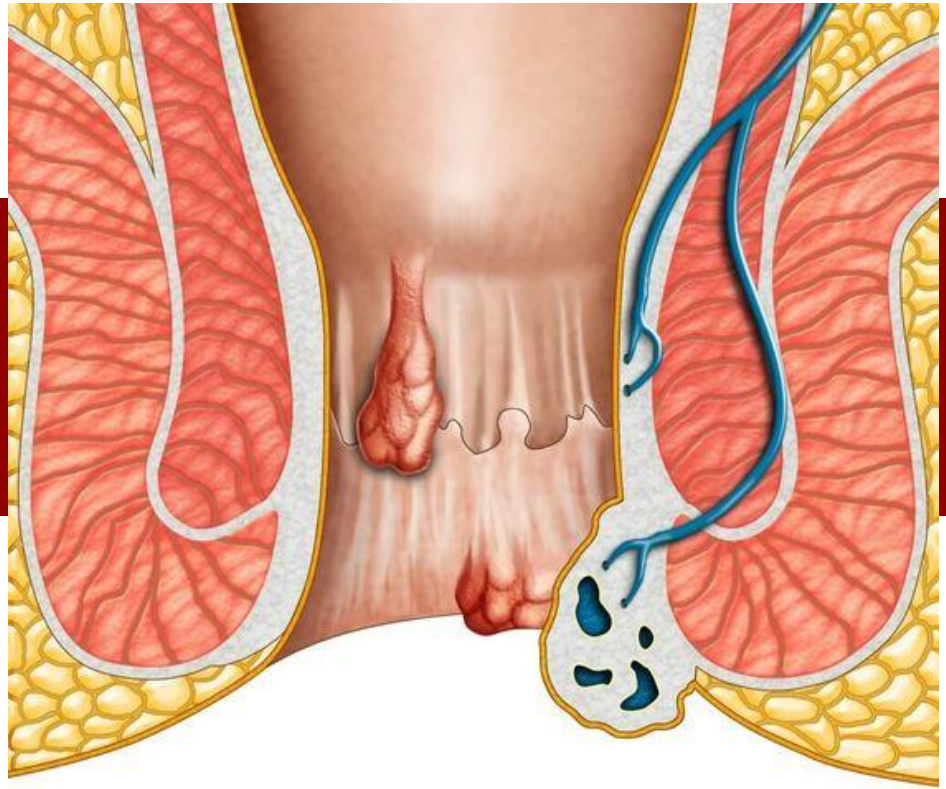


Sentinel pile

Perianal warts

- Cause : condylomata acuminate (HPV).
- The major risk is SCC.
- Treatment : if small, topical **podophyllin**/ if large, surgical resection or laser ablation.





ANORECTAL

Hashemite University
H · U · M
Medical School Committee

• QUESTION

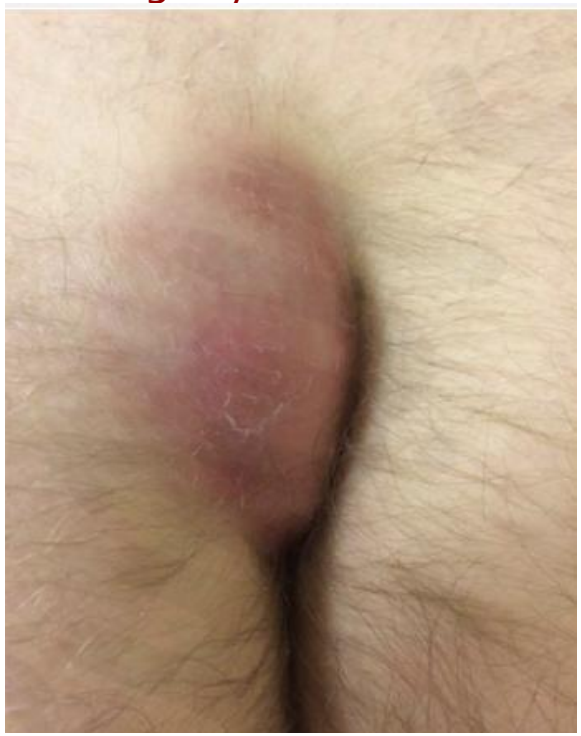
Wateen 2023

فكرد

40 year old male with acute lower back pain since 3 days.

A) What is your diagnosis?

B) Next step in management



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Gluteal Cleft Abscess of a Pilonidal Sinus(PNS Abcess)

B. Incision and drainage

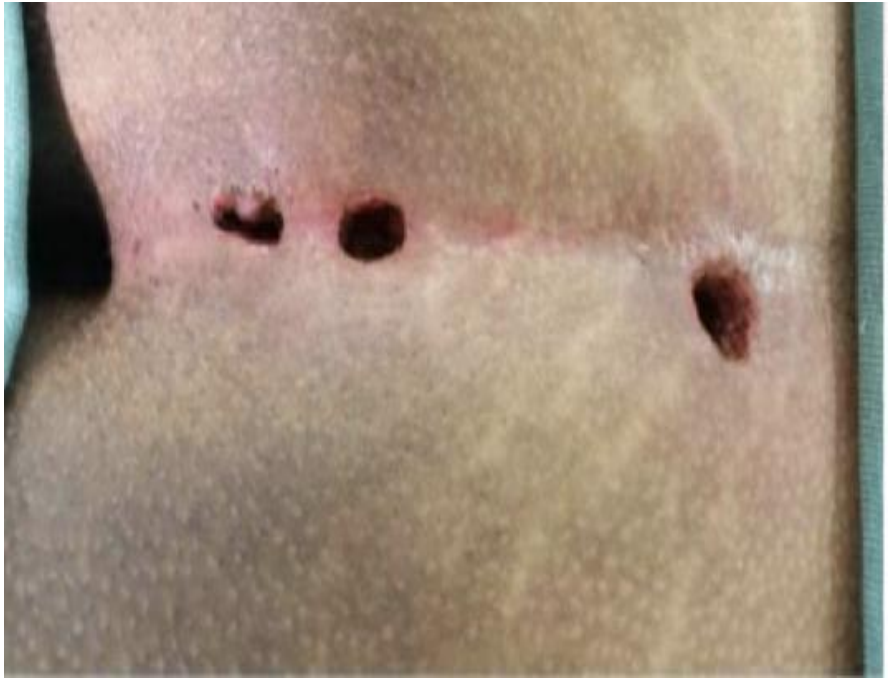
• QUESTION

محكود

Wateen 2023

a) Diagnosis

b) other common sites



Hashemite University
H • U • M
Medical School Committee

• ANSWER

a) Pilonidal sinus

b) Axilla/ natal cleft /between breasts /intradigital space

• QUESTION

Wateen 2023

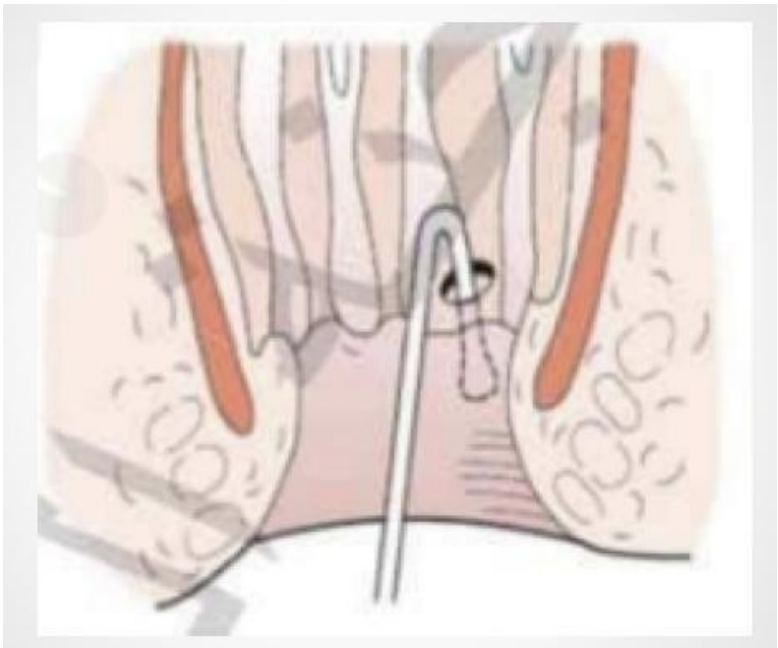
What is your Diagnosis ?

a. Perianal Abscess

b. Perianal sinus

c. Ischiorectal Abscess

d. Fistula in Ano



Hashemite University
H • U • M
Medical School Committee

ANSWER

d. Fistula in Ano

• QUESTION

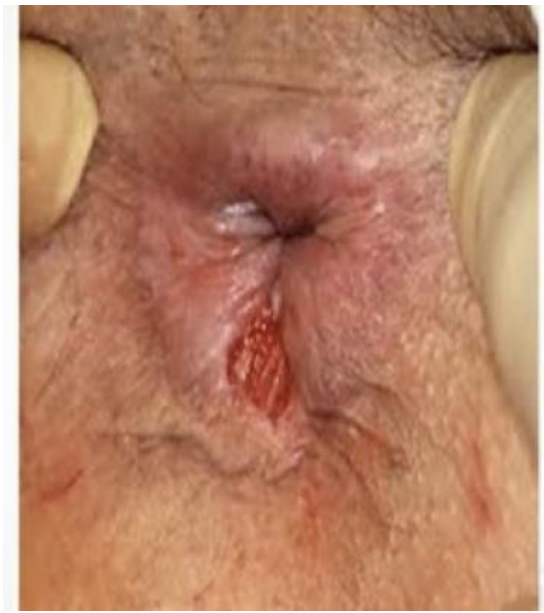
Wateen 2023

A 35 year old female with chronic constipation presented with acute anal pain and fresh blood with defecation. Her examination as in image.

A. Your spot diagnosis?

B. the 1st line treatment of this lady is?

Clear Hx



Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. anal fissure

B. Laxatives and topical pain killer

• QUESTION

Wateen 2023

Patient with rectal bleeding how to know the source of the bleeding

Hashemite University
H • U • M
Medical School Committee

- ANSWER

① Anal Fissure
② hemorrhoids
③ diverticulosis
④ UC
⑤ Colon Ca
⑥ Constipation

The blood may be bright red. The term "hematochezia" is used to describe this finding.This usually means that the source of bleeding is the lower GI tract (colon and rectum)

occult blood or dark black stool or stool mixed with blood usually means upper Gi bleeding

① gastritis
② PU
③ esophageal varices
④ mallory weiss
⑤ esophagitis

Hashemite University
H · U · M
Medical School Committee

• QUESTION

صحكر

Harmony 2022

20. What is your diagnosis?

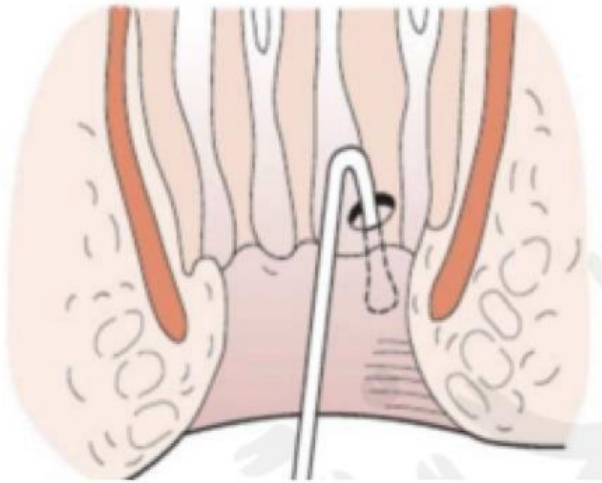
a. Perianal Abscess

b. Perianal Sinus

c. Ischiorectal Abscess

d. Fistula in Ano

Answer: D



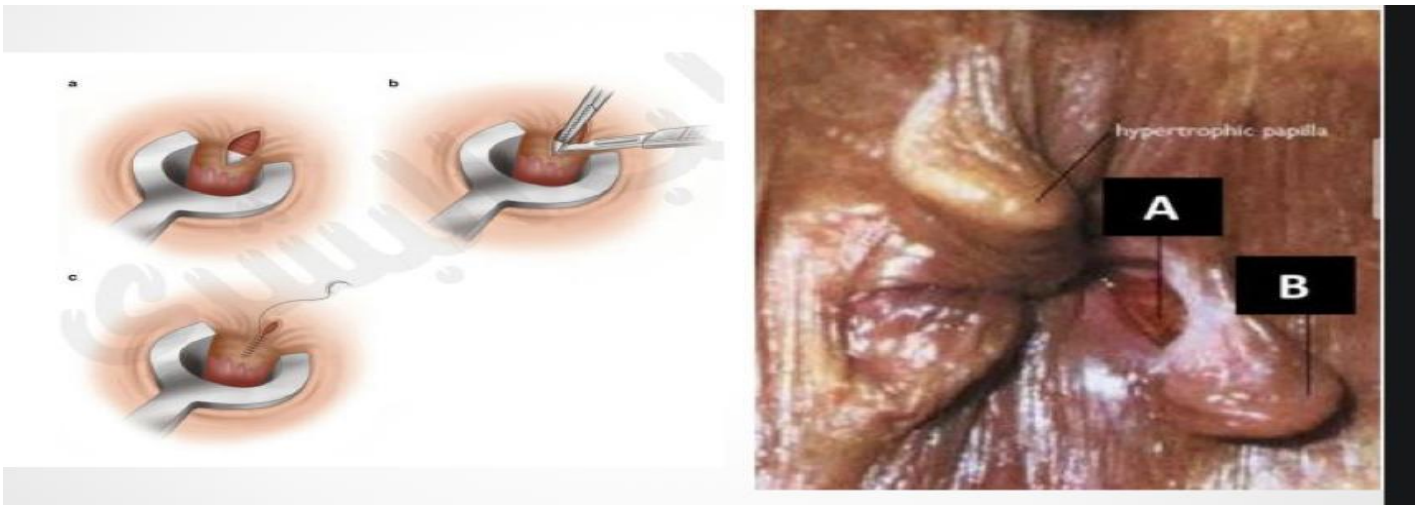
Hashemite University
H • U • M
Medical School Committee

• QUESTION

SOUL 2021

A) What is the diagnosis:

B) Name a surgical management

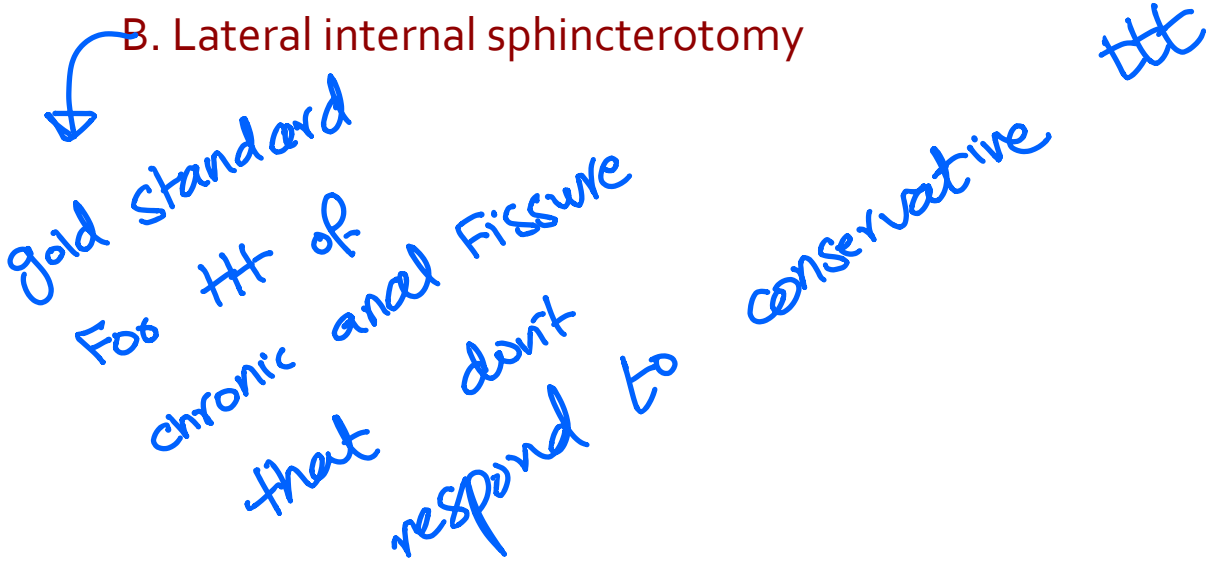


Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Anal fissure

B. Lateral internal sphincterotomy



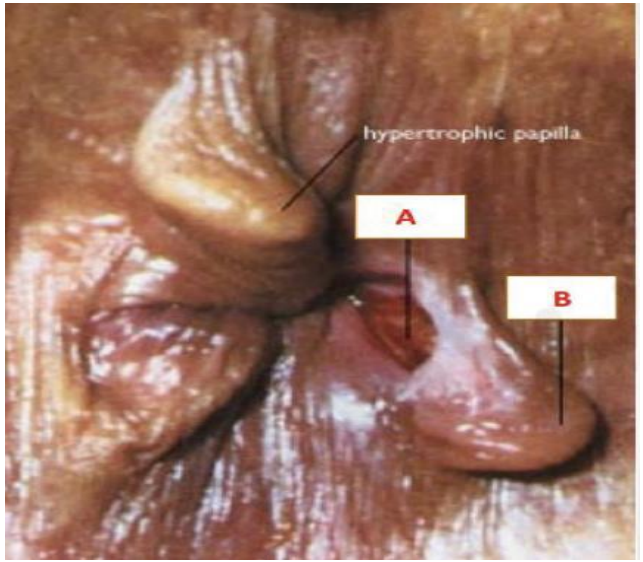
• QUESTION

IHSAN 2020

This patient has painful Defecation

1. Name the findings on examination of the anal area

2. Mention 2 .treatment options



Hashemite University
H • U • M
Medical School Committee

• ANSWER.

1.Anal Fissure (B) Sentinel Pile (A)

2.Management

Lifestyle modification with high fiber diet and increase fluid intake - - Medical Management (Laxatives, stool softeners, local anesthetic creams, botulinum toxin injection, sitz bath…etc) Surgical Management (Sphincter dilatation, Lateral internal sphincterotomy, Fissurectomy) -

• QUESTION

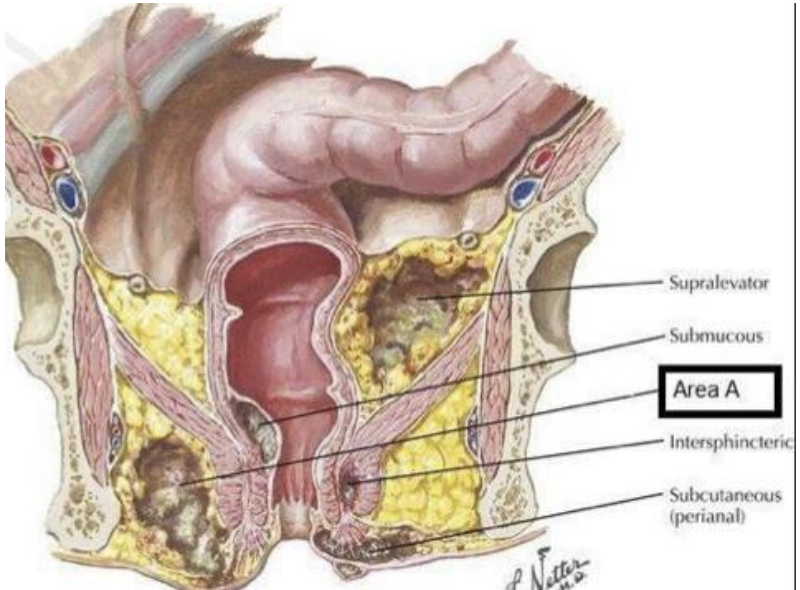
محرر

2019 – Before

A patient has anal pain and itching:

1.What type of anal condition in this area (Area A)?

2.What is the Mx?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

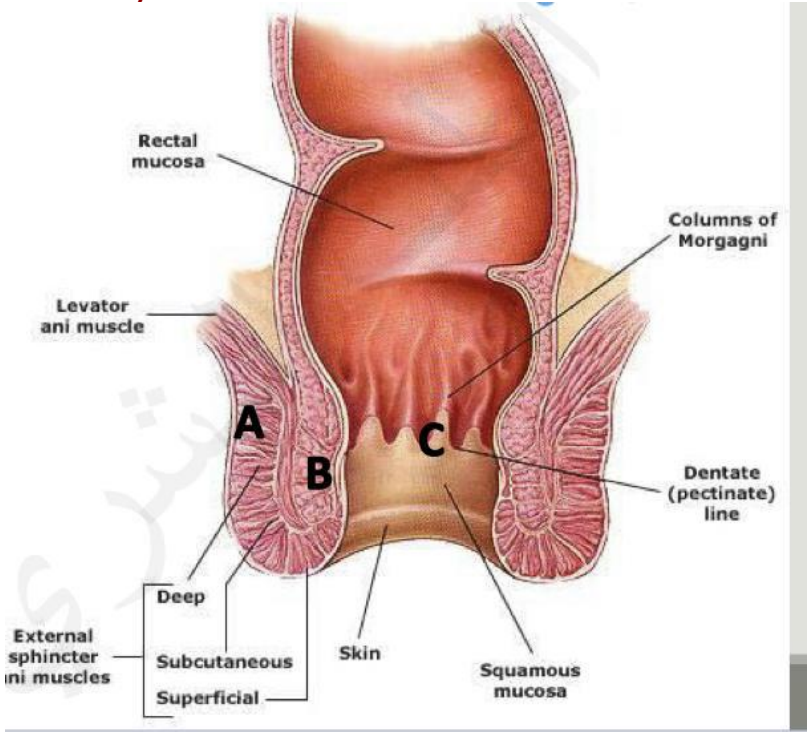
1.Ischiorectal abscess

2.Cruciate incision with drainage of pus (without antibiotic)

• QUESTION

2019 – Before

1. About the anatomy of anal canal:

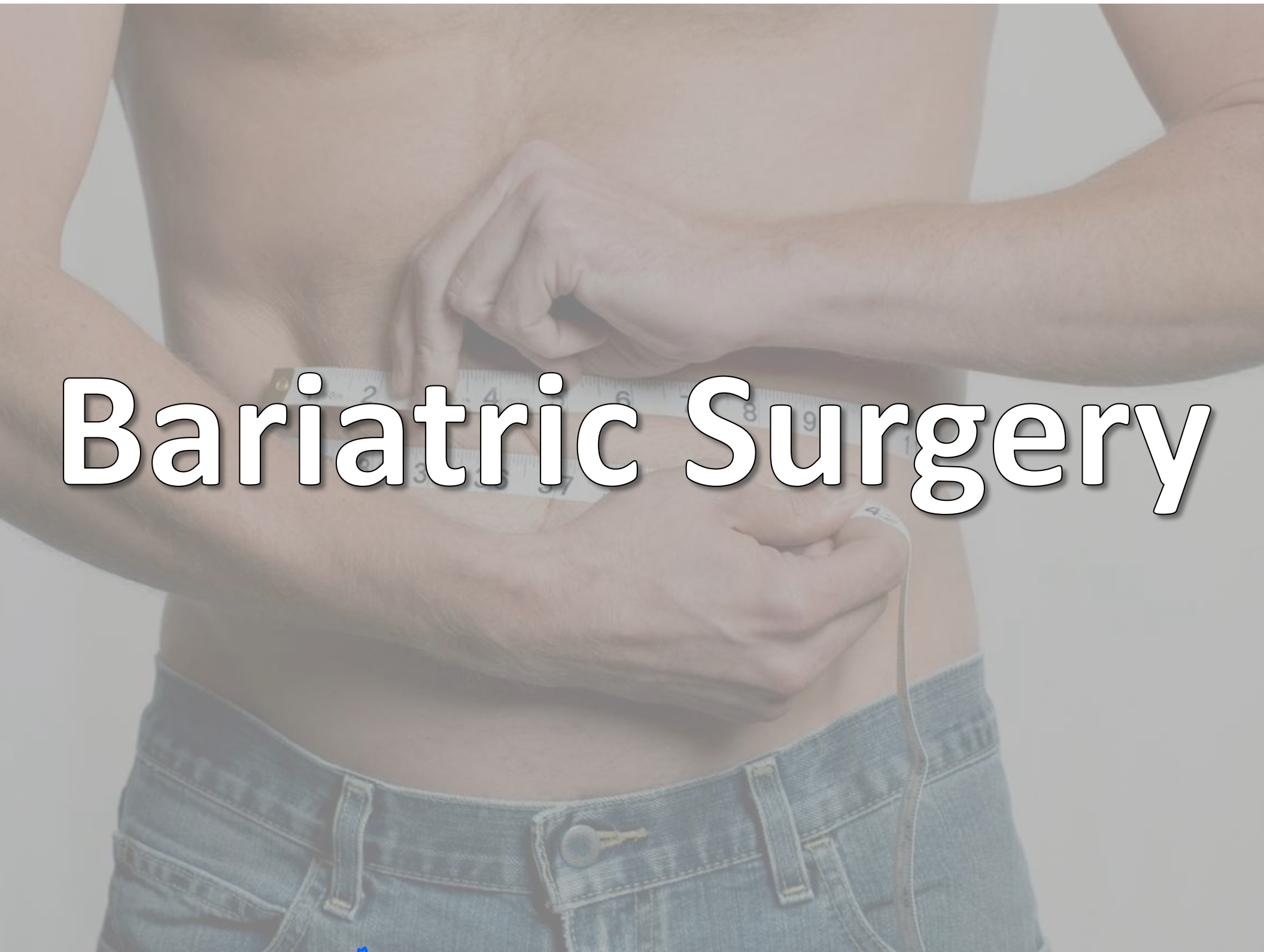


• ANSWER

A: External anal sphincter

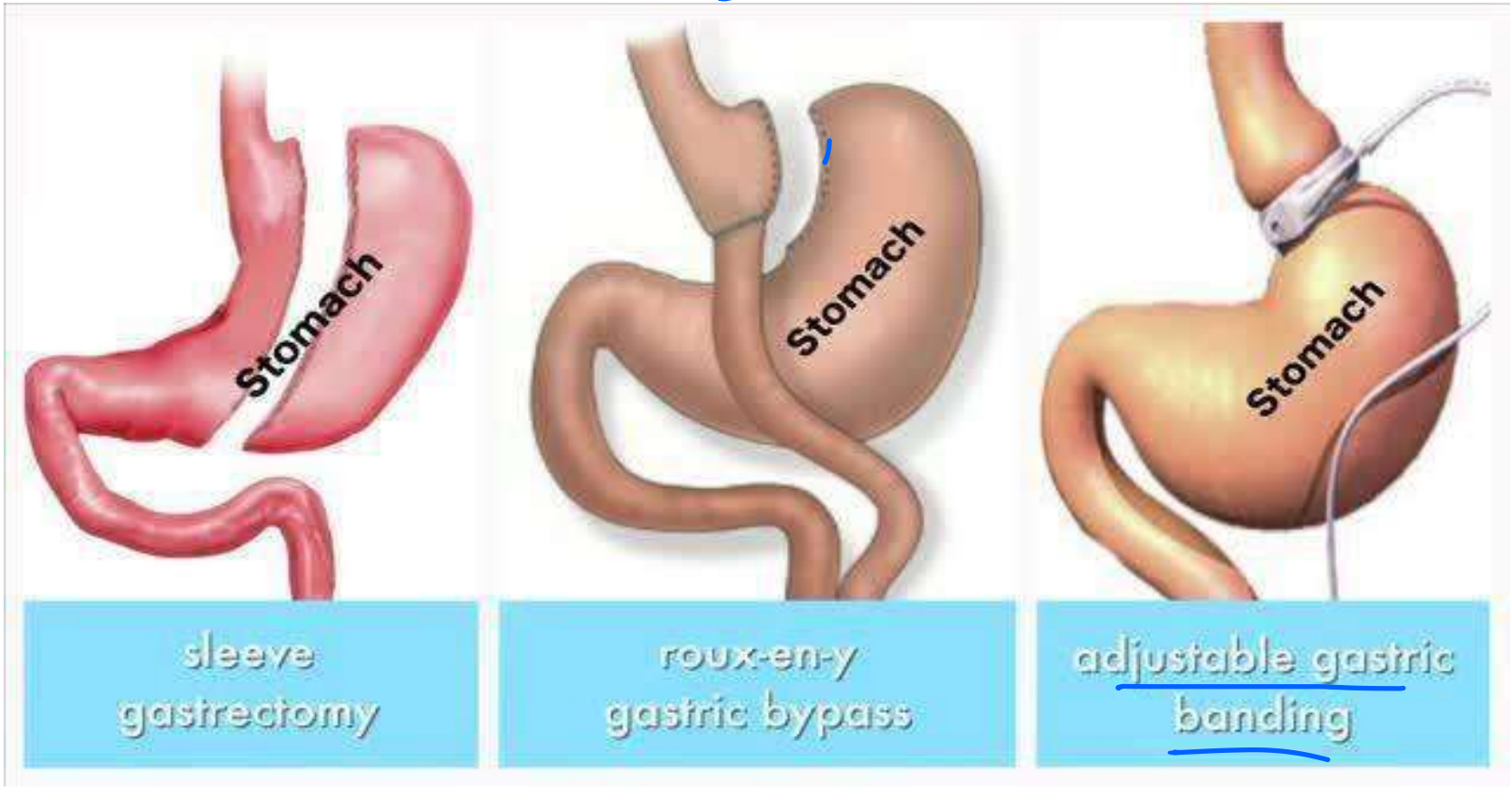
B: Internal anal sphincter

C: Dentate line


Bariatric Surgery

> 35-40 without metabolic problem
> 30 with metabolic problem

- Weight reduction surgery for the morbidly obese.
- Morbid obesity : BMI > 40 or BMI> 35 with a medical problem related to morbid obesity (sleep apnea/ CAD/ DM/ HTN/ pulmonary disease/ breast cancer/ colon cancer/ arthritis/ sex hormone abnormalities/ venous stasis ulcers.



Q1: Name this surgery?

- Gastric bypass

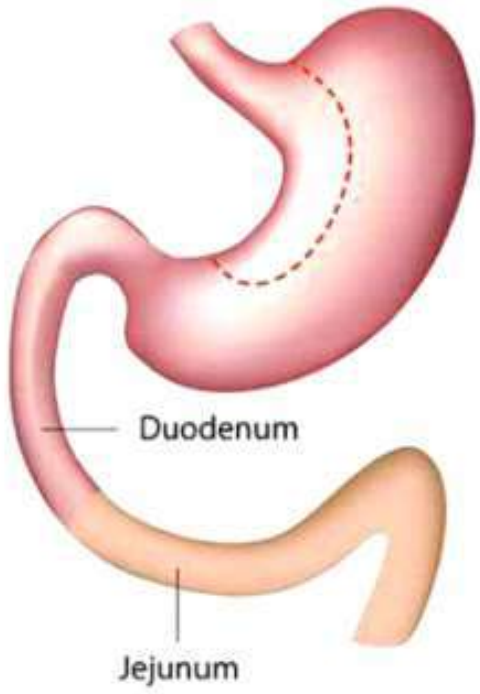
(Single Anastomosis Gastric Bypass)

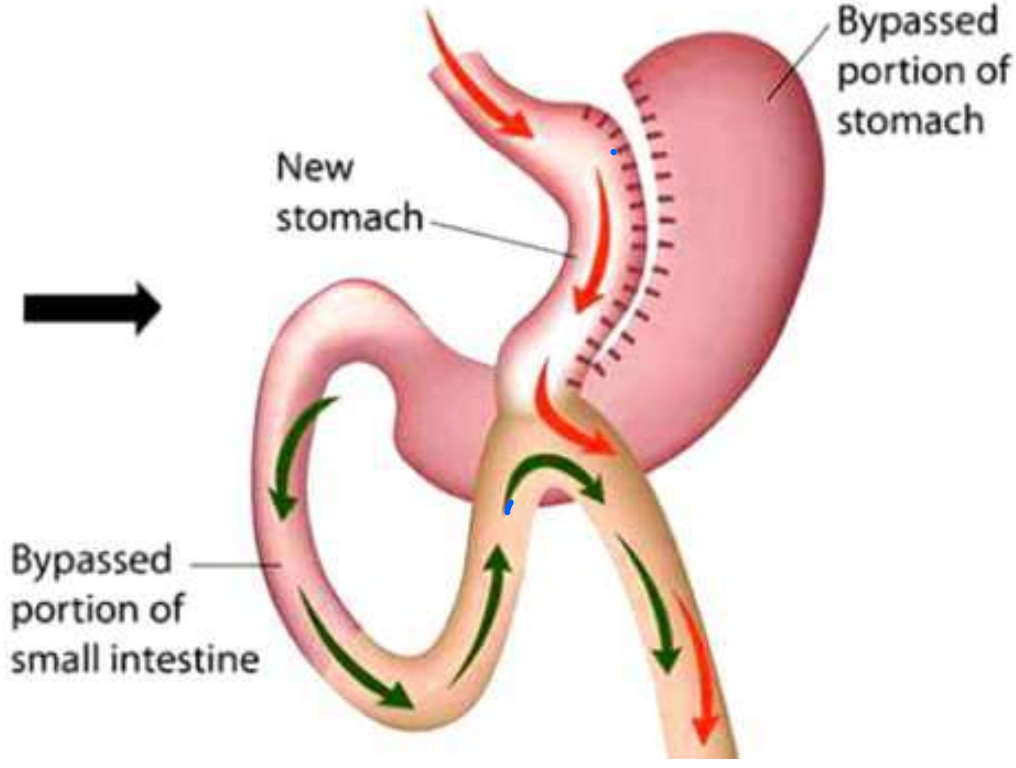
Q2: Mention 2 types?

1) Gastrojejunostomy
2) Duadenoileostomy

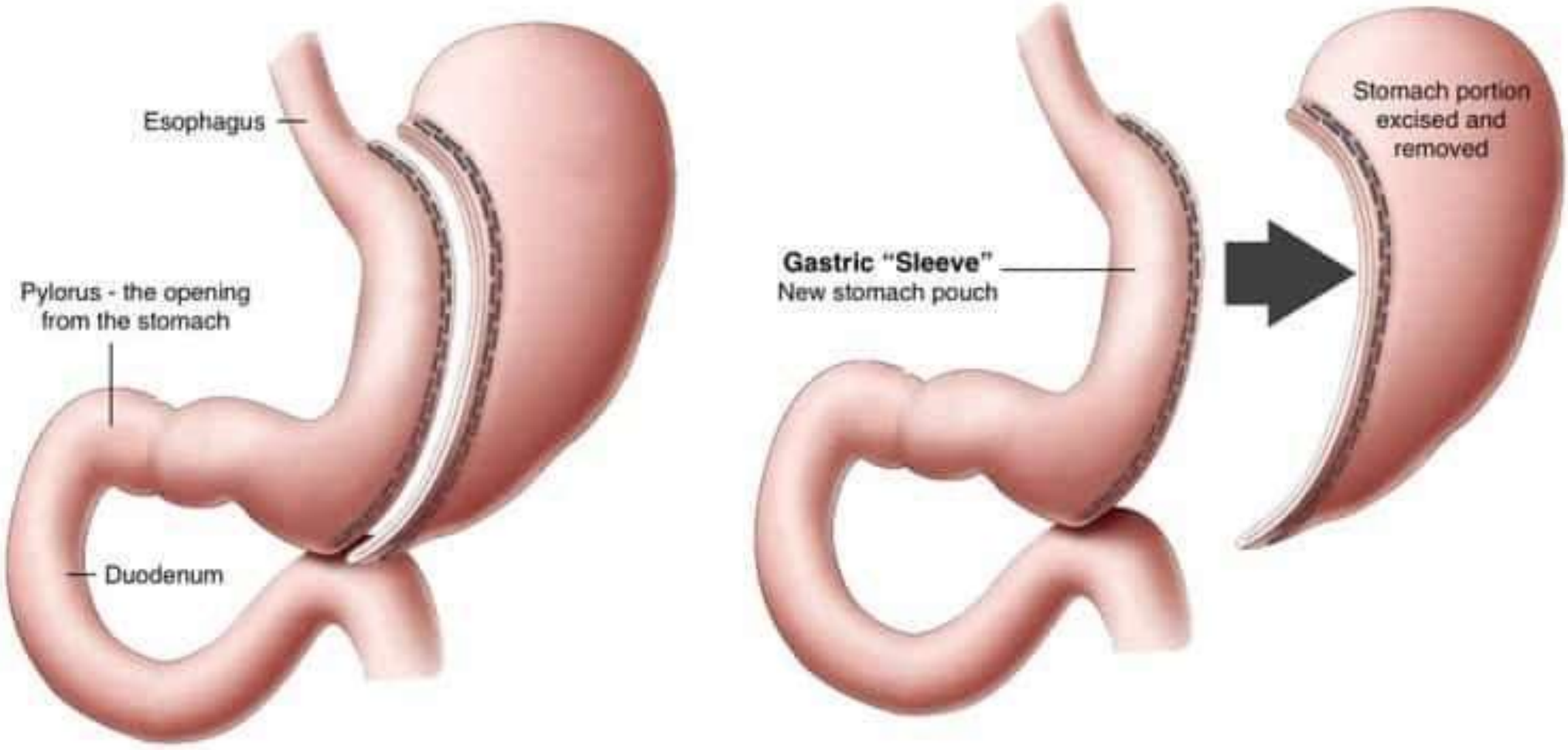
Q3: What BMI is an indication for a surgery in a DM patient?

- >35





Lap Sleeve Gastrectomies (LSG)



Q: A Patient that needed to reduce weight ASAP, and this surgery was done:

Q1: Which procedure is this?

- Gastric Sleeve

Q2: 2 Complications for it?

1) Blood clots.
2) Gallstones
3) Hernia.
4) Internal bleeding
5) Leakage.
6) Perforation
7) Stricture

The most important ones

Q1: Name this surgery?

- Roux-en-y gastric bypass (RYGB)

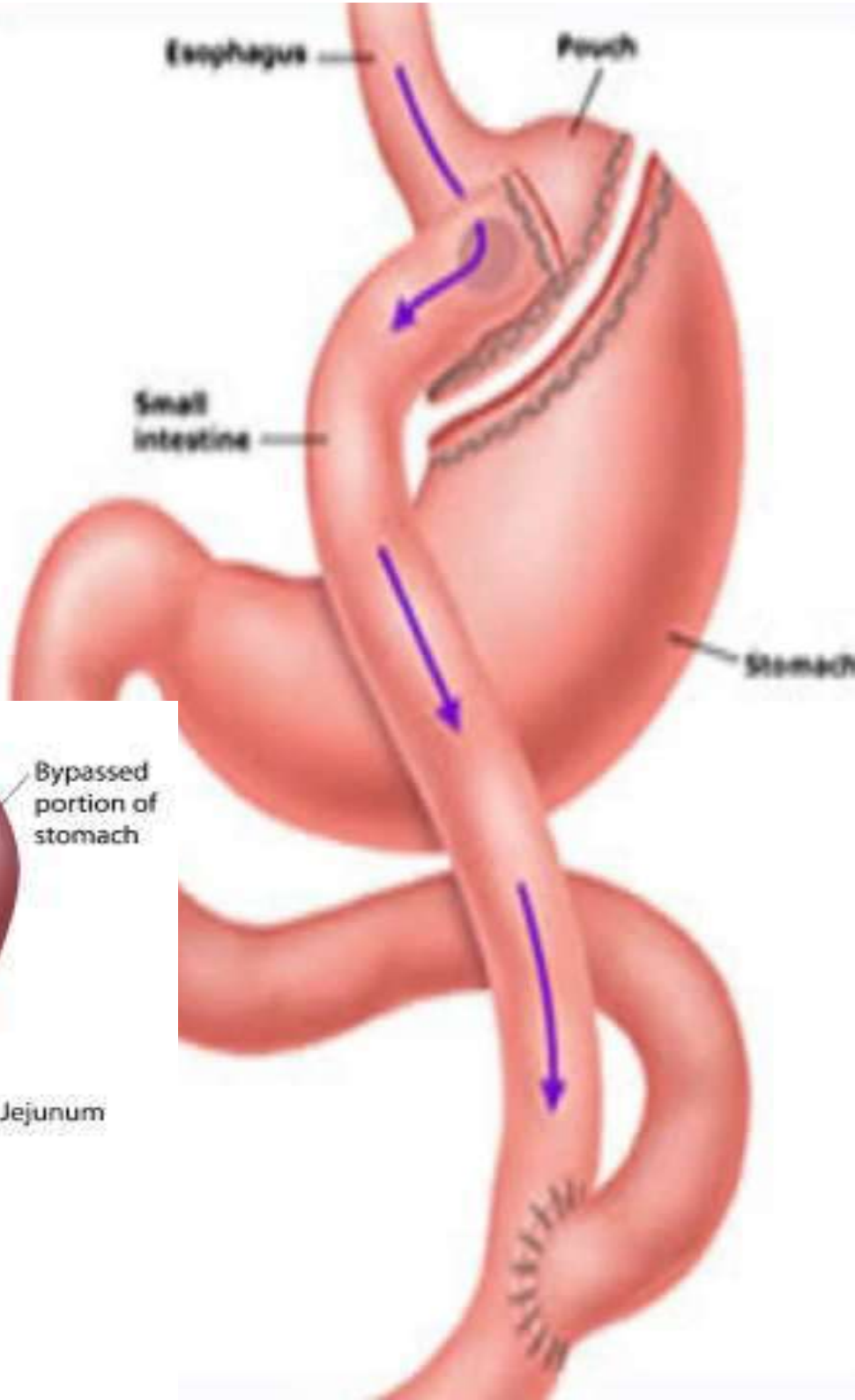
Q2: Mention 2 mechanisms?

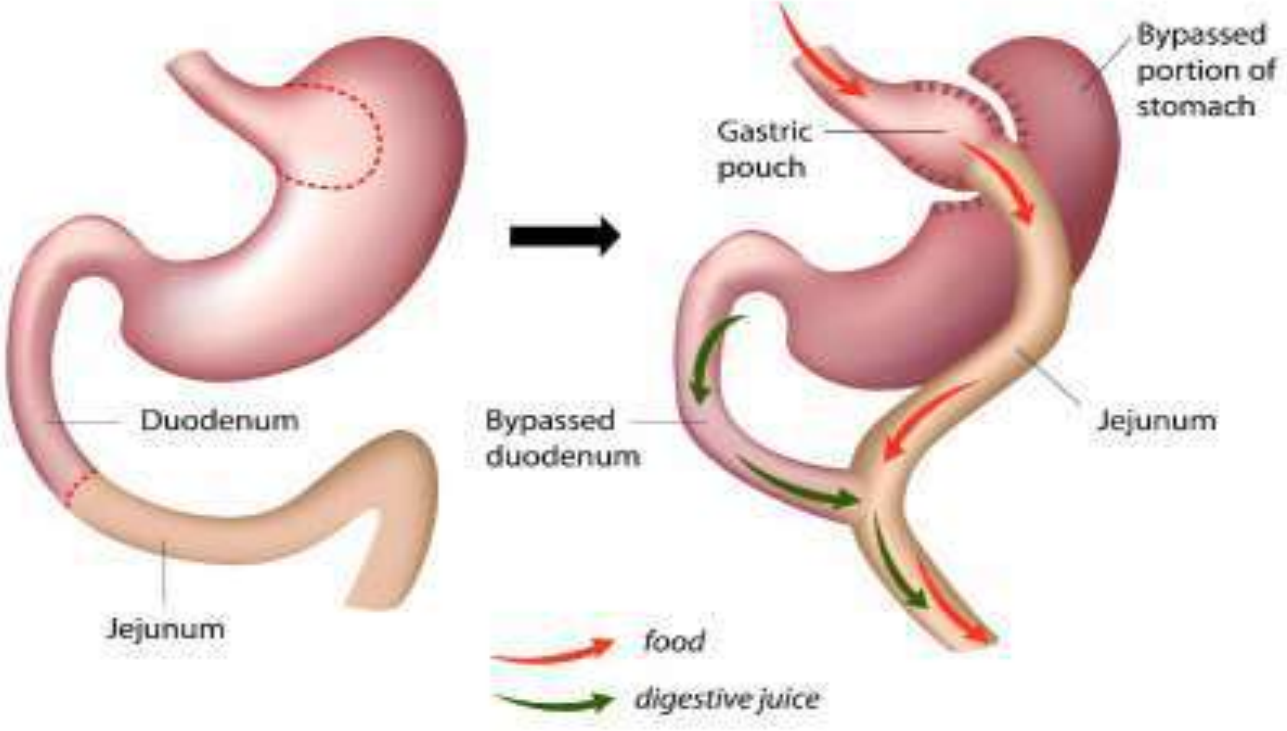
1) Malabsorption

(Decrease gastric absorption)

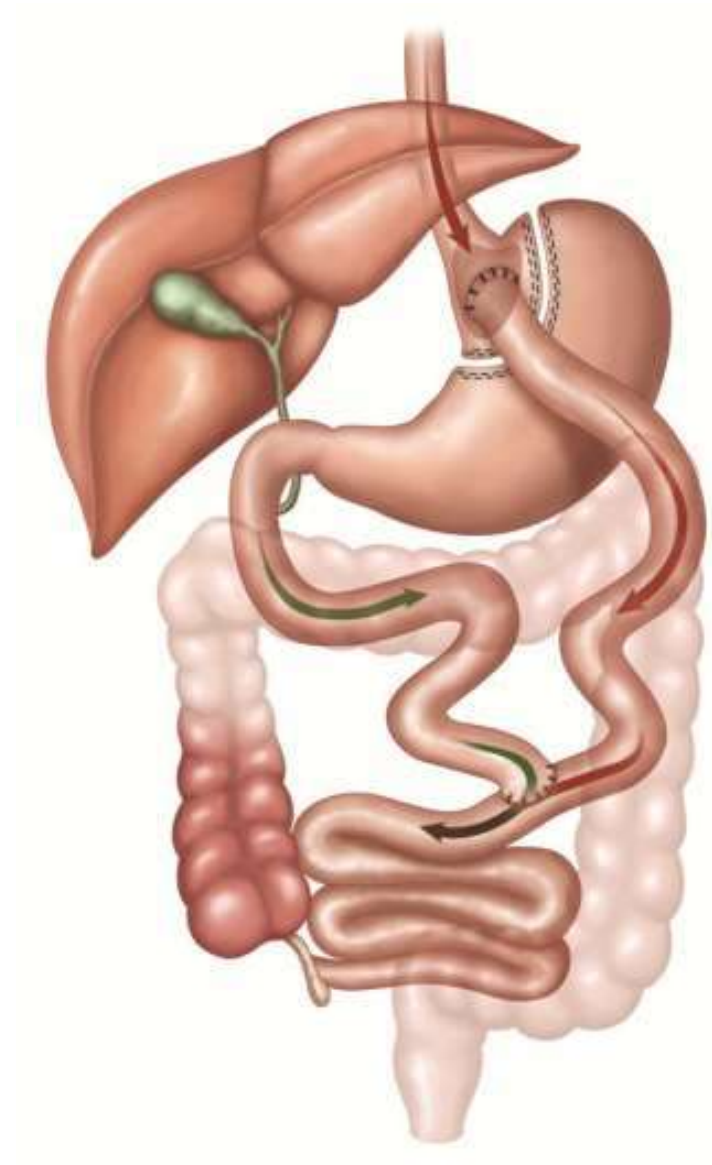
2) Less space for food

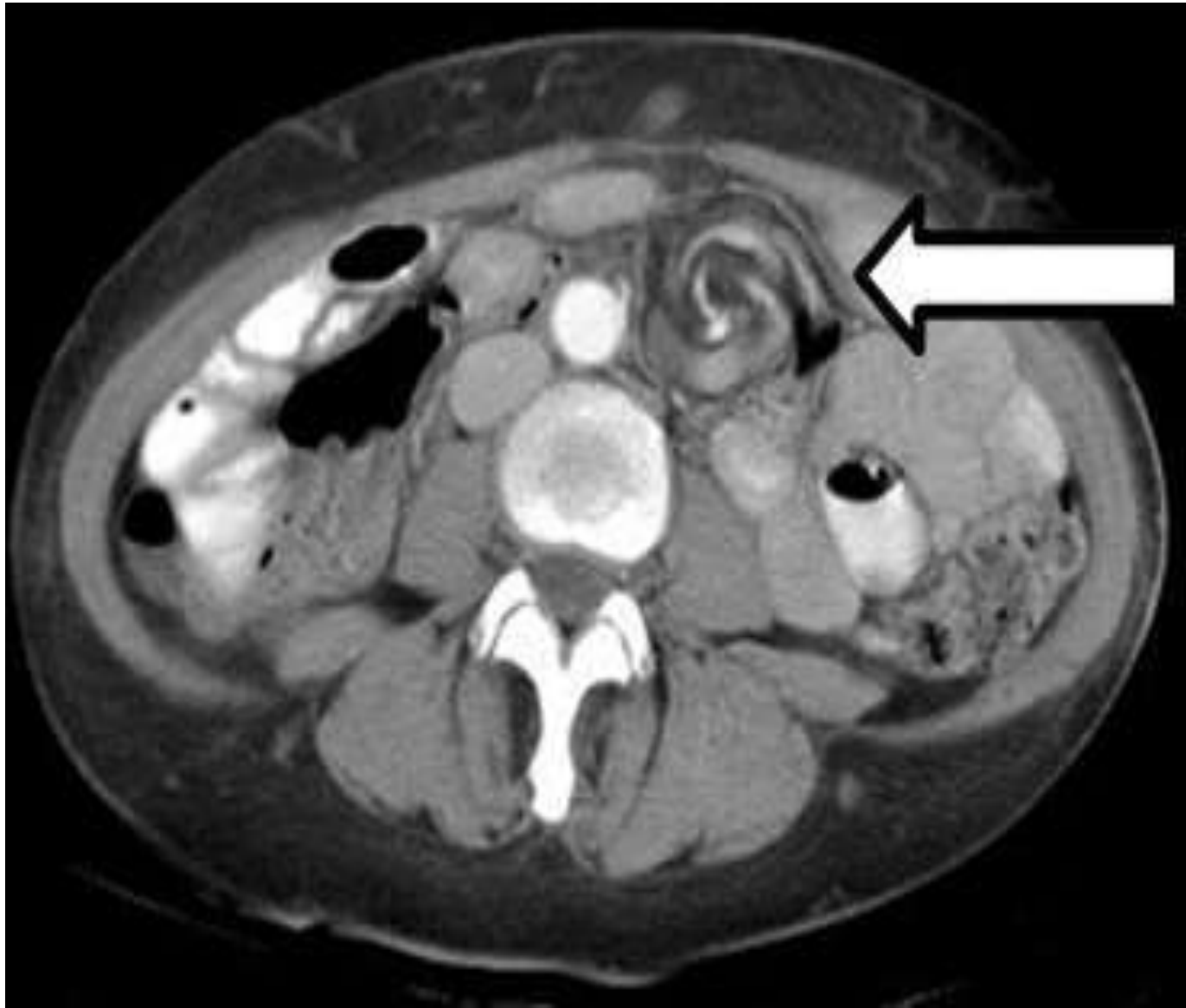
(early satiety)

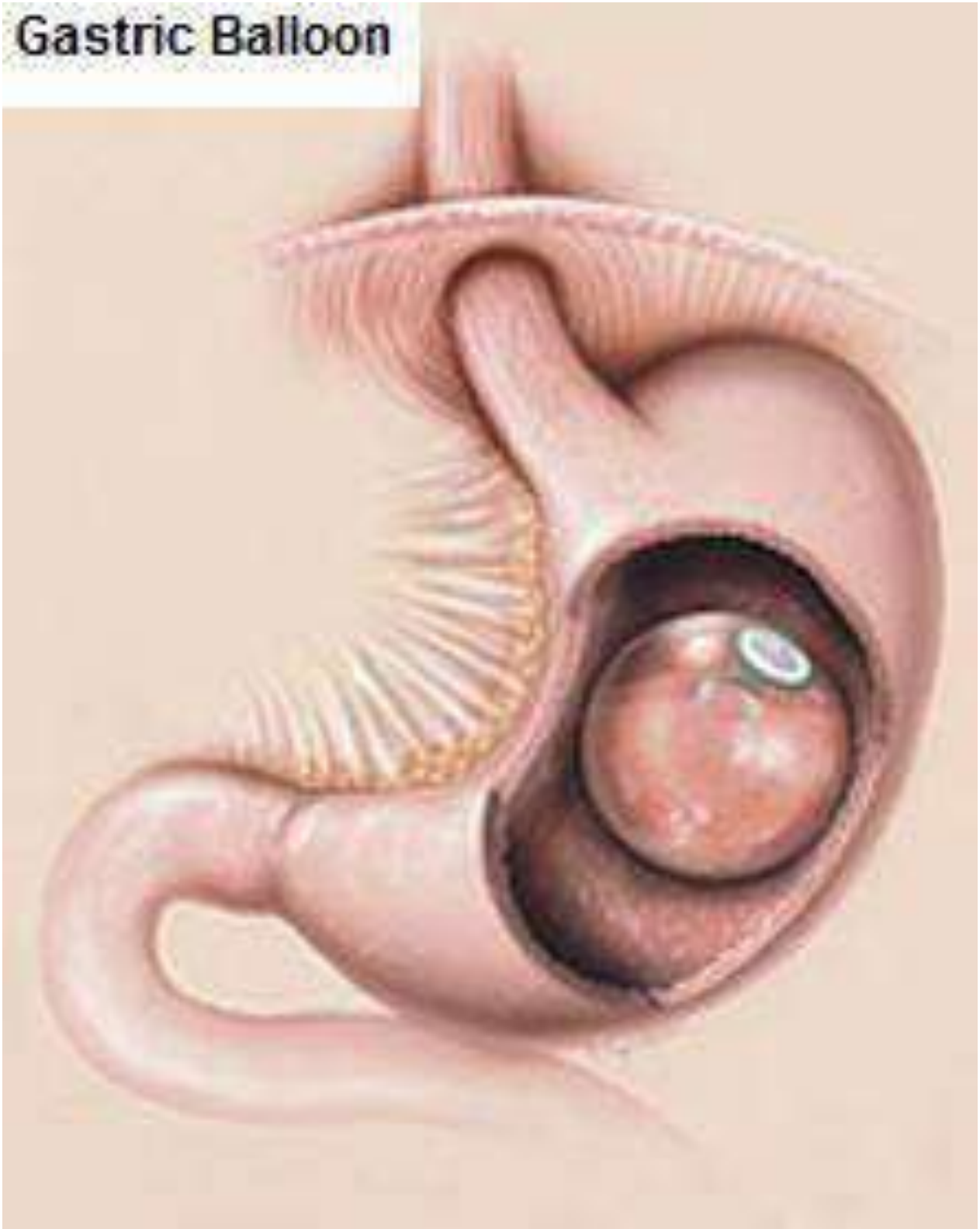




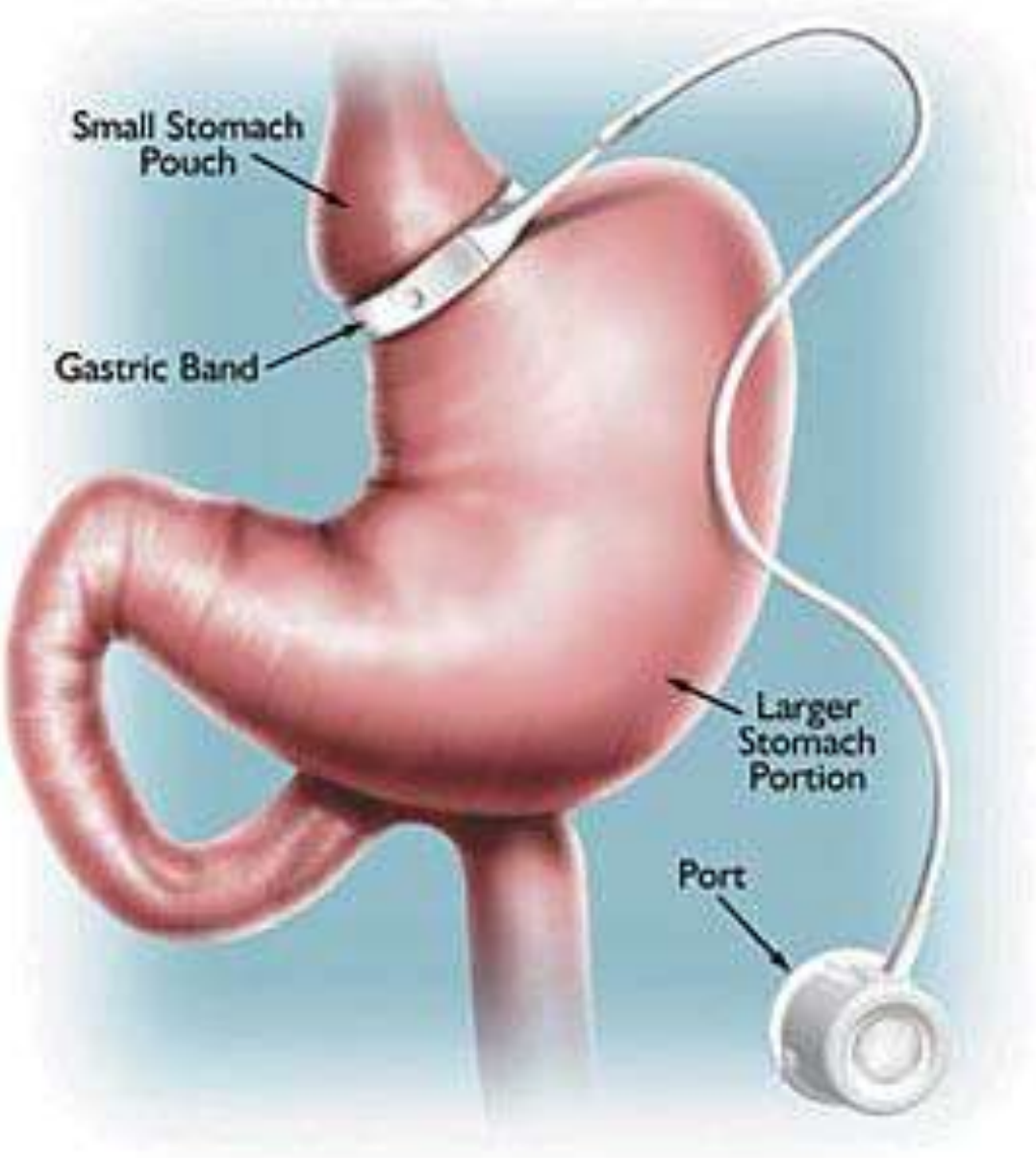
Roux-en-Y gastric bypasses (RYGB)





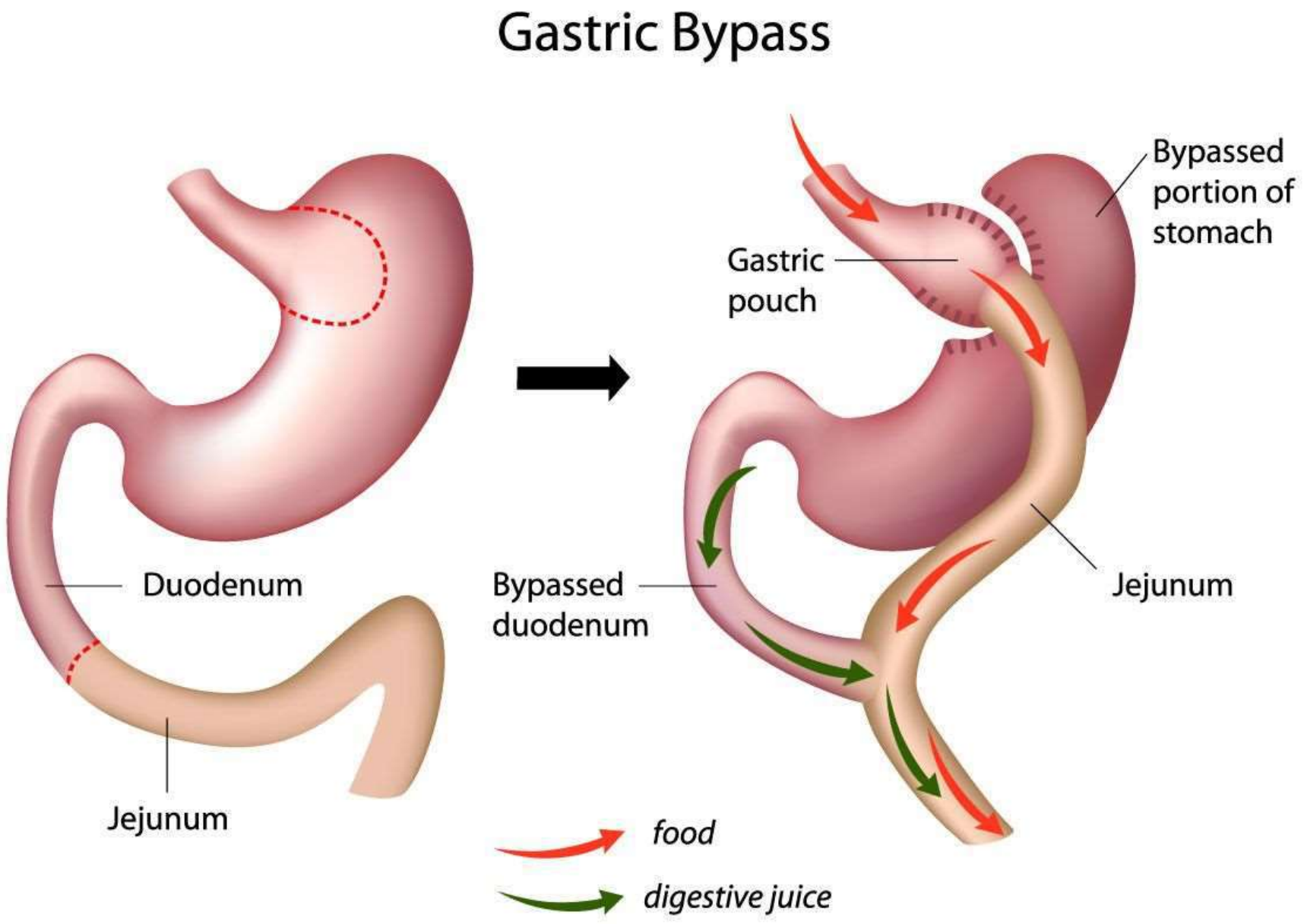

Gastric Balloon

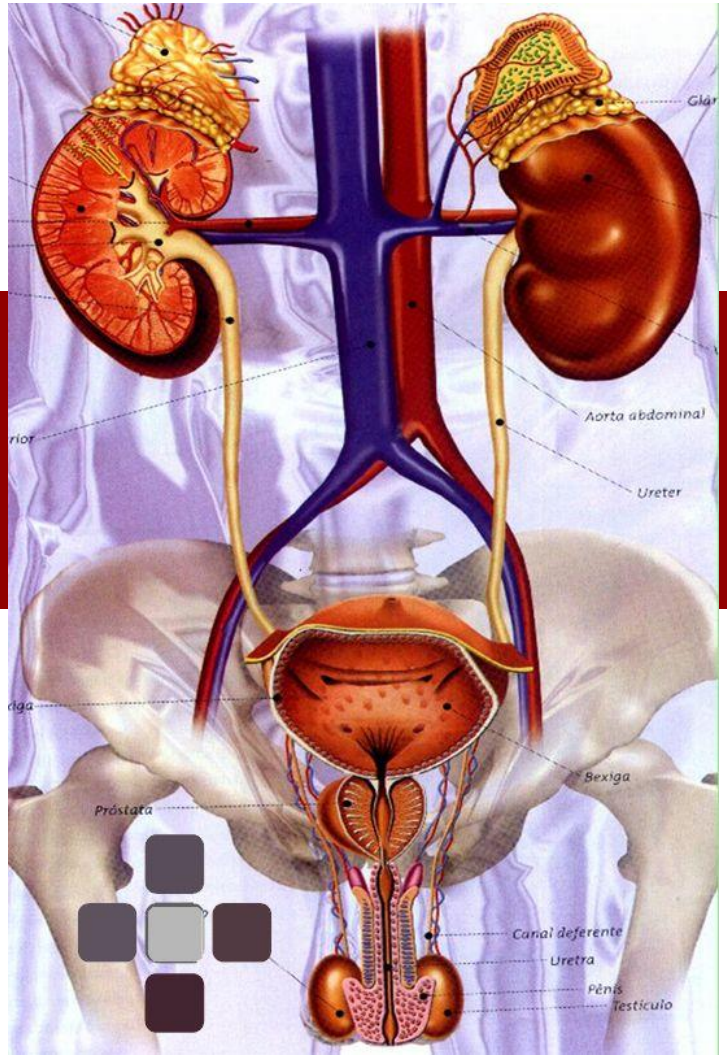
Gastric Band (LABG)



Restrictive & malabsorptive

Mini Gastric Bypass





start from slide 20

GENITOURINARY

then back to pp

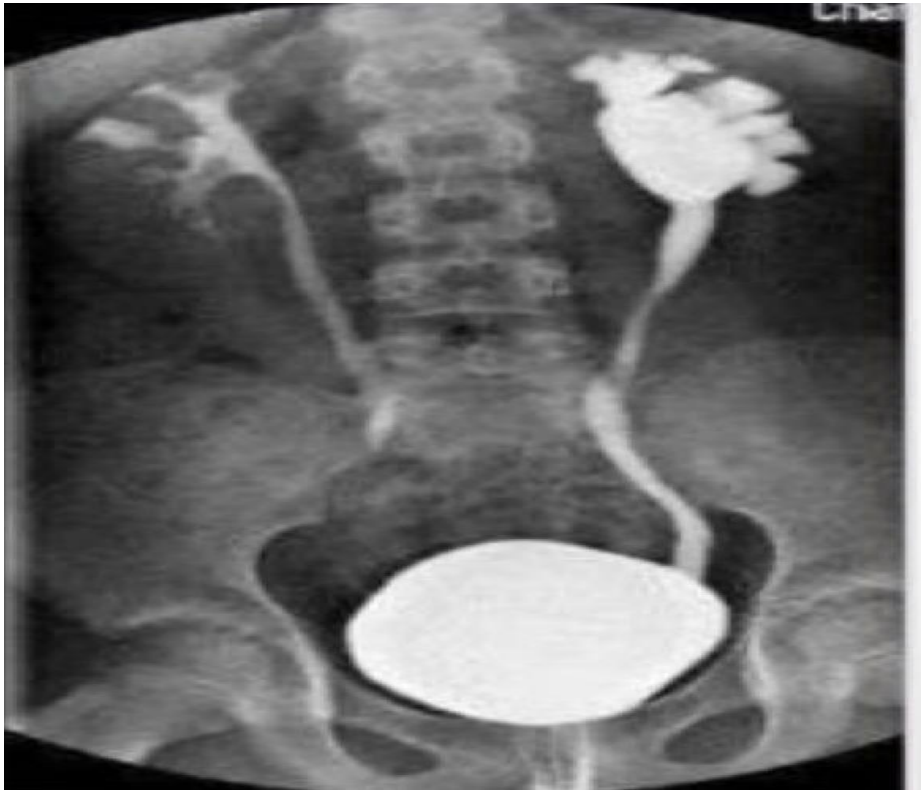
Hashemite University
H · U · M
Medical School Committee

QUESTION

مكرر

SOUL 2021

What is the name of this study ?



Hashemite University
H · U · M
Medical School Committee

ANSWER:

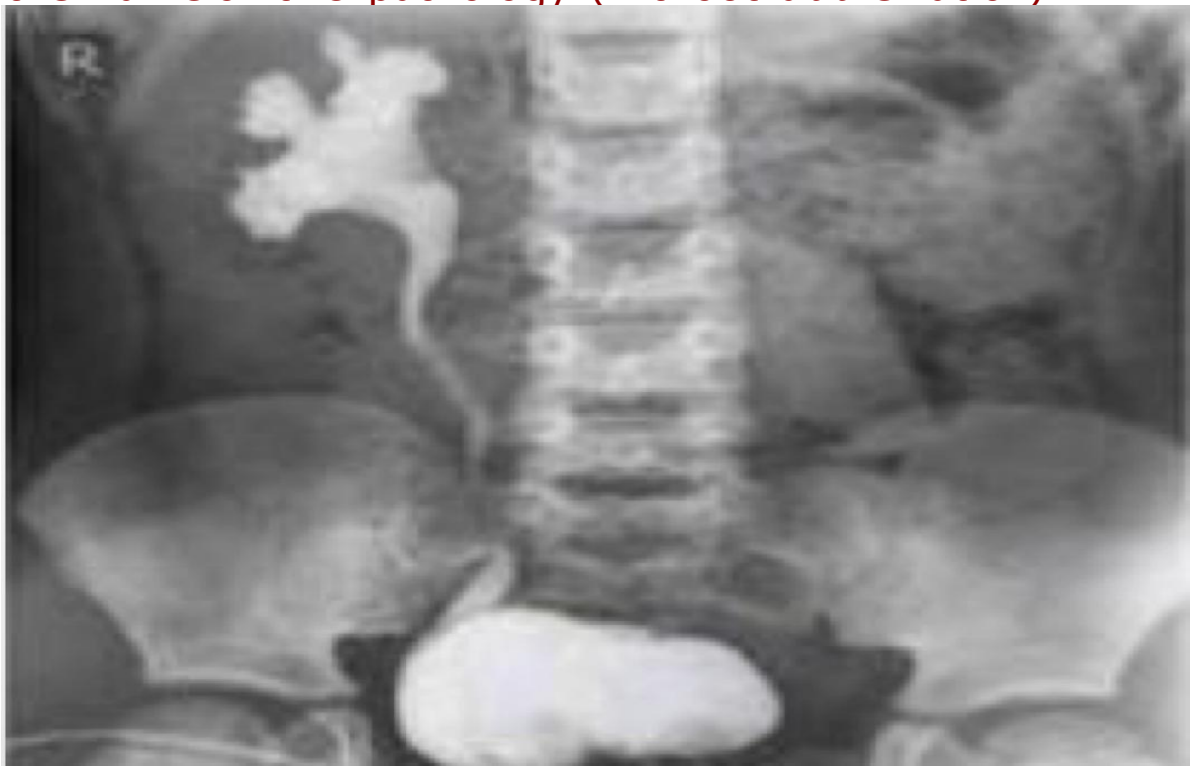
1. Micturating Cystourethrogram(MCUG)

• QUESTION

صور

SOUL 2021

What is the name of this pathology (without abbreviation) ?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

Vesicoureteral reflux (VUR)

QUESTION

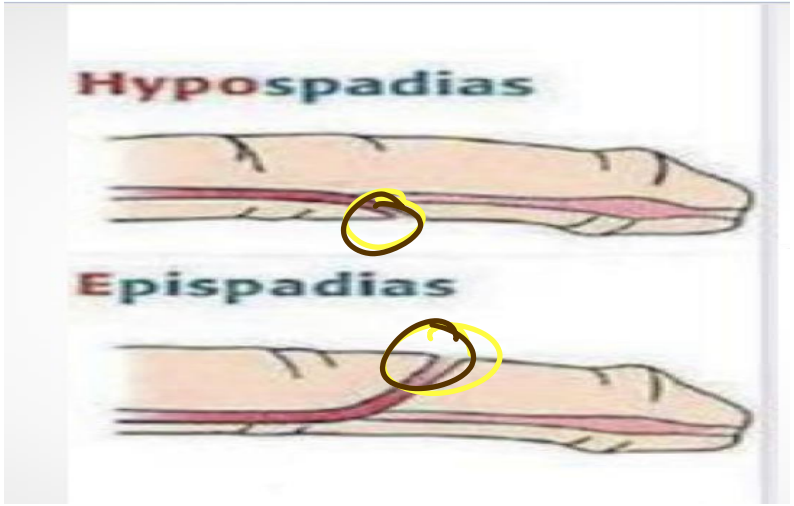
in Pedi'

SOUL 2021

1.What is the Dx?

2. Mention 2 associated anomalies?

3. Name 2 commonly associated features with this pathology other than the abnormally located urethral meatus?



Hashemite University
H · U · M
Medical School Committee

ANSWER

1.Hypospadias and Epispadias

2. Bladder extrophy , Bifid penis , Rectum prolapse

3.Chordee (downward bending of the penis) ,Hooded appearance of the penis

• QUESTION

pedi

IHSAN 2020

Name 2 commonly associated features with this pathology other than the abnormally located urethral meatus :

(Image Of Hypospadias)

Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Chordee (downward bending of the penis)
2. Hooded appearance of the penis

Hashemite University
H • U • M
Medical School Committee

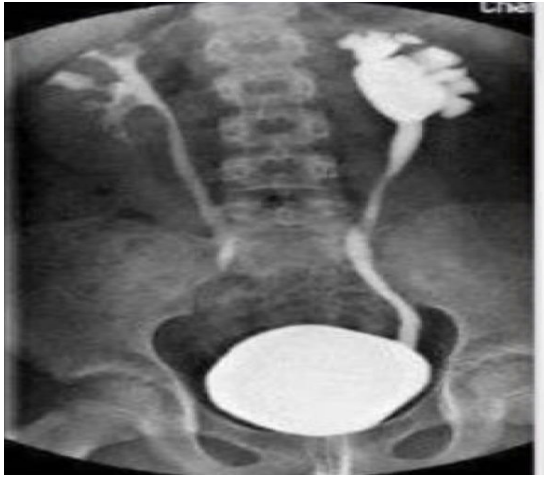
• QUESTION

عدد

2019 – Before

1.What is the name of this study?

2• What is the name of this pathology? (with no abbreviation)



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.MCUG

2.vesicouretral reflux

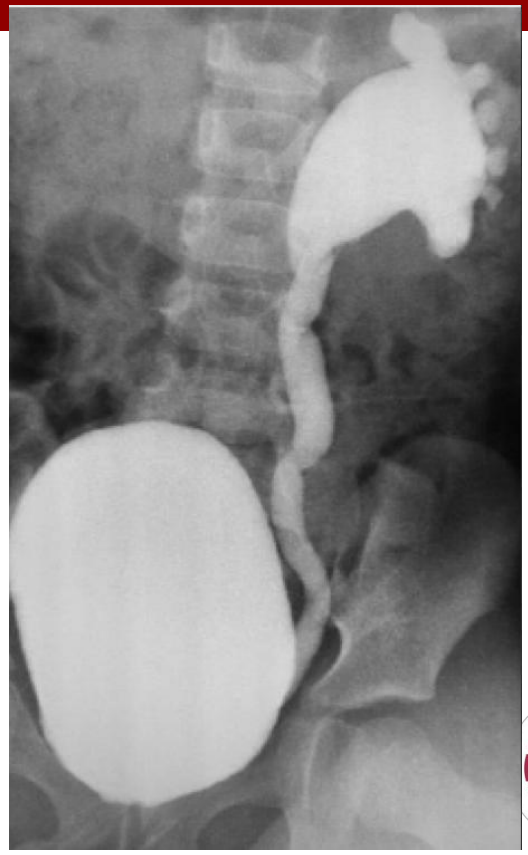
• QUESTION

2019 – Before

1.What is the pathology?

2. What is the cause behind this?

3.what are the 2 complications that might occur?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Left dilated tortuous ureter and hydronephrosis
2. Posterior urethral valve - Congenital
3. Recurrent UTIs ,Kidney scarrin

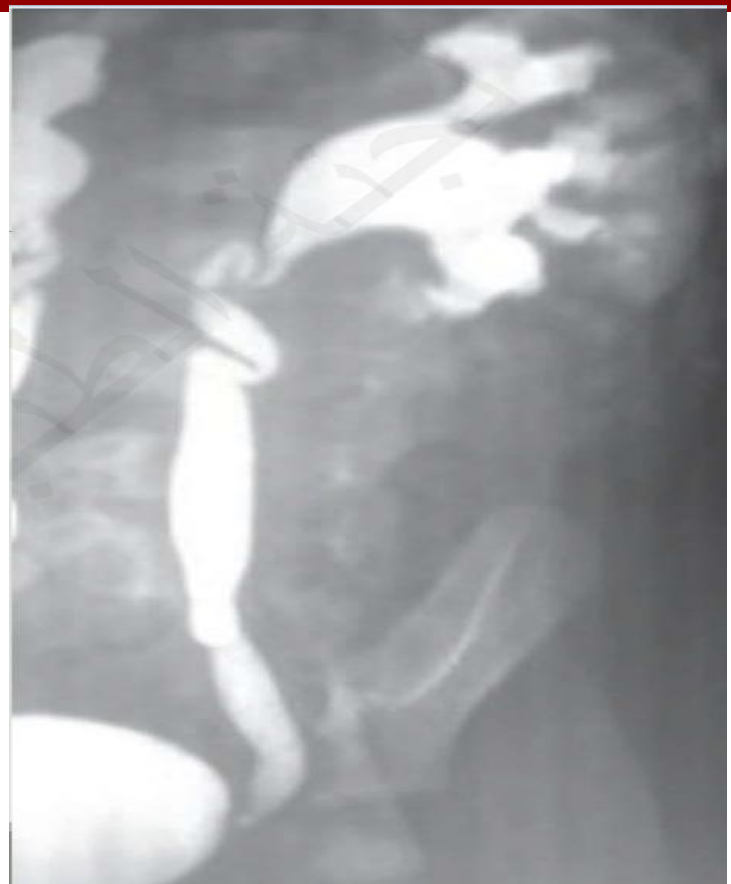
Hashemite University
H · U · M
Medical School Committee

• QUESTION

2019 – Before

1.What is the imaging?

2. What is the the management?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.MCUG

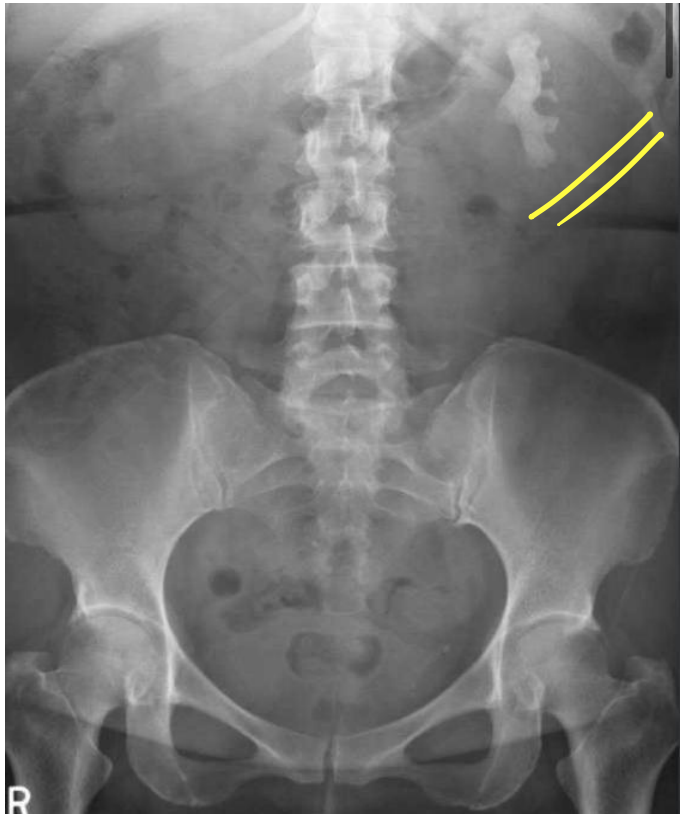
2.Antibiotic for UTI - Endoscopic injection - Surgery

• QUESTION

2019 – Before

1. Name The findings

2.what is the Etiology?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Staghorn stone or Struvite stone

2.Urease Producing bacteria (proteus, klebsiella, pseudomonas)

• QUESTION

2019 – Before

1. What is the diagnosis?

2.What is your management?

Hashemite University
H • U • M
Medical School Committee

ANSWER

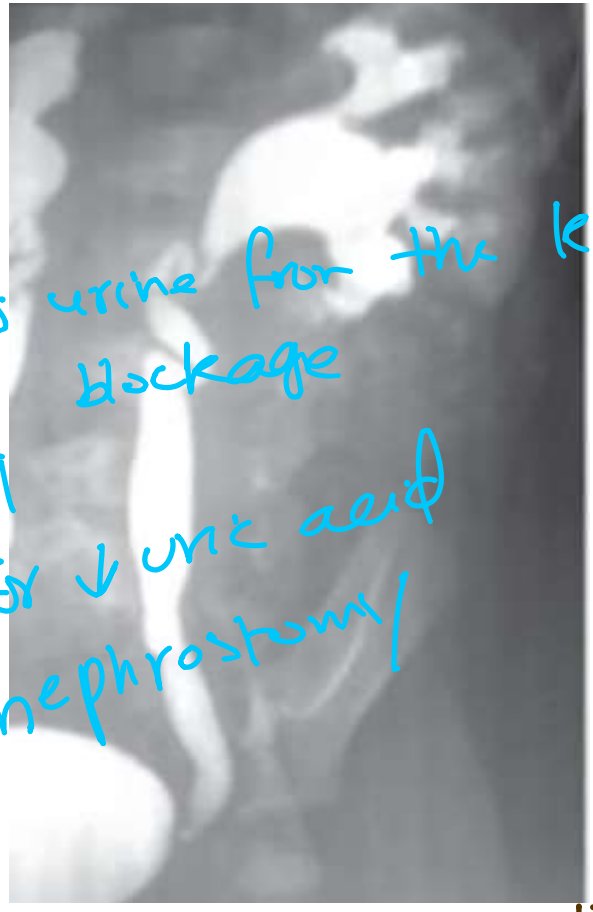
1.Testicular torsion

2.Orchiectomy


Genitourinary Tract

Q1: What is the imaging?

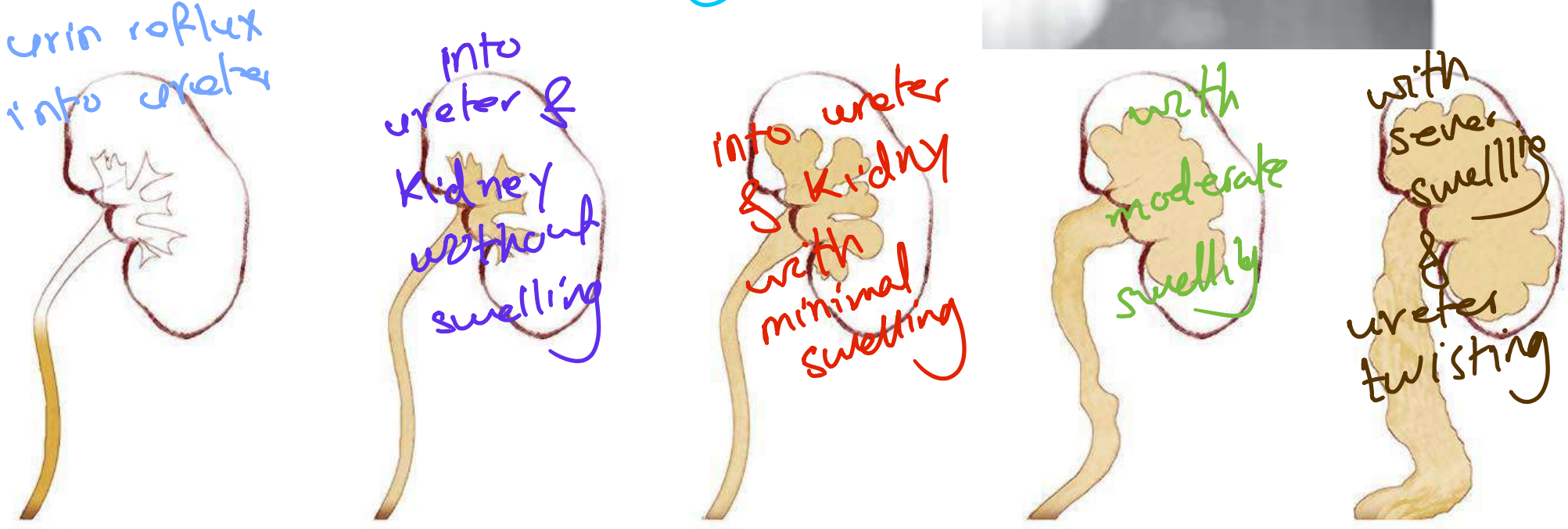
- MCUG



① draining excess urine from the kidney
② removing the blockage
③ Ab for UTI
④ drugs for ↓ uric acid
⑤ may be nephrostomy

Q2: Mx?

- Antibiotic for UTI
- Endoscopic injection
- Surgery

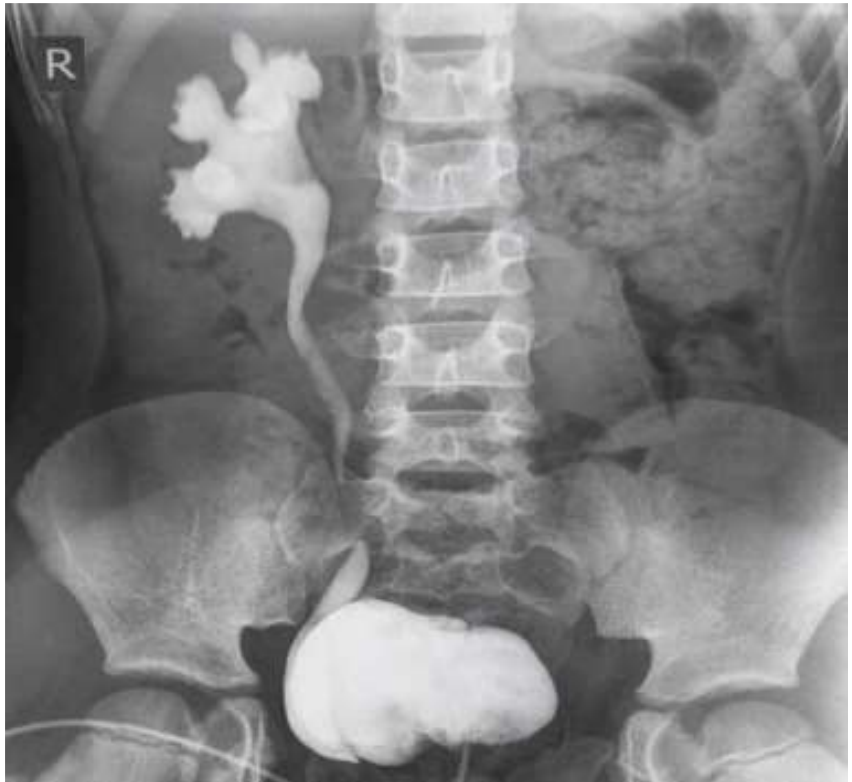


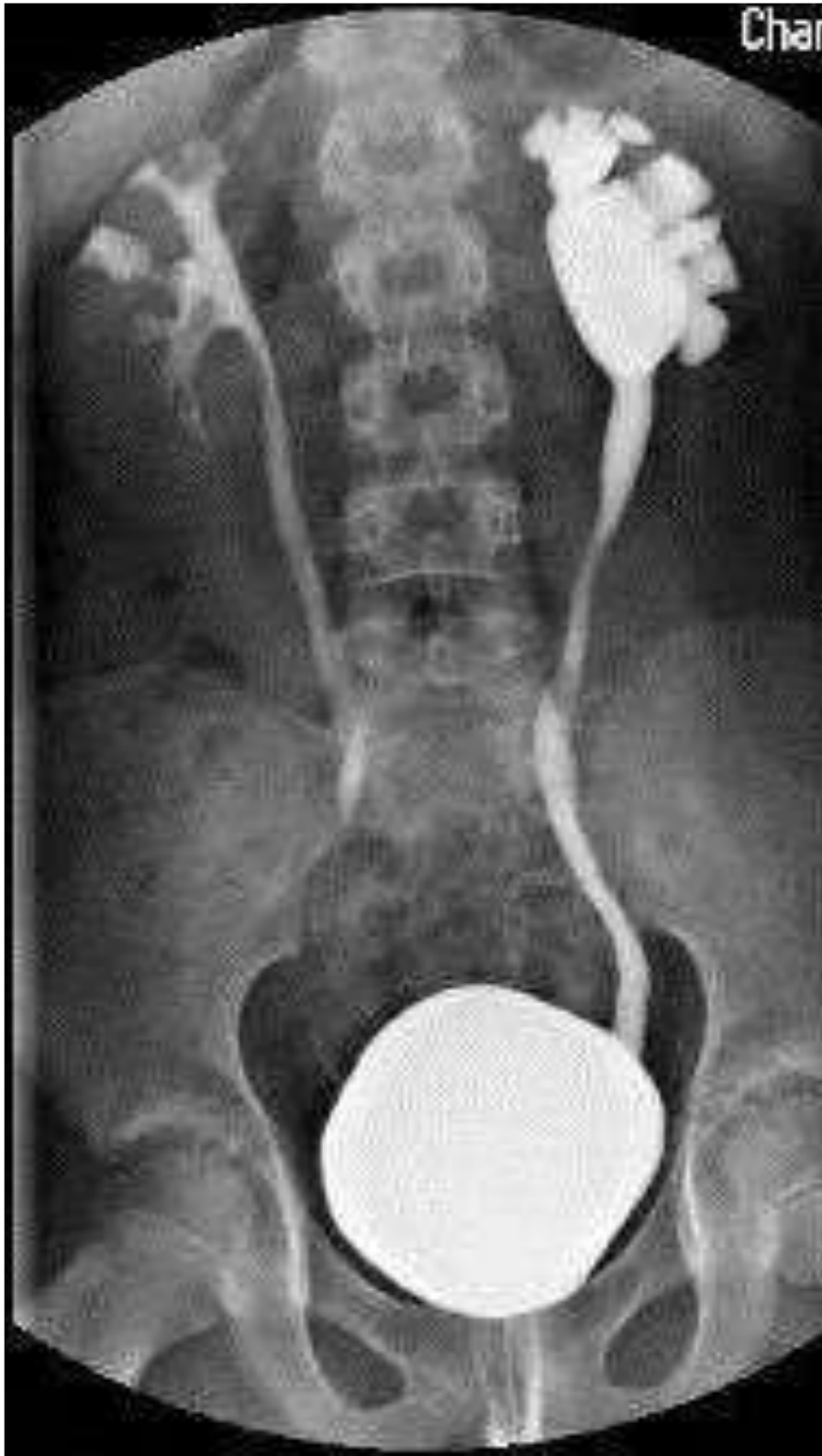
Q1: What is the name of this study?

- MCUG

Q2: What is the name of this pathology (without abbreviation)?

- Vesicouretral reflux (VUR)





Q1: What is the pathology?

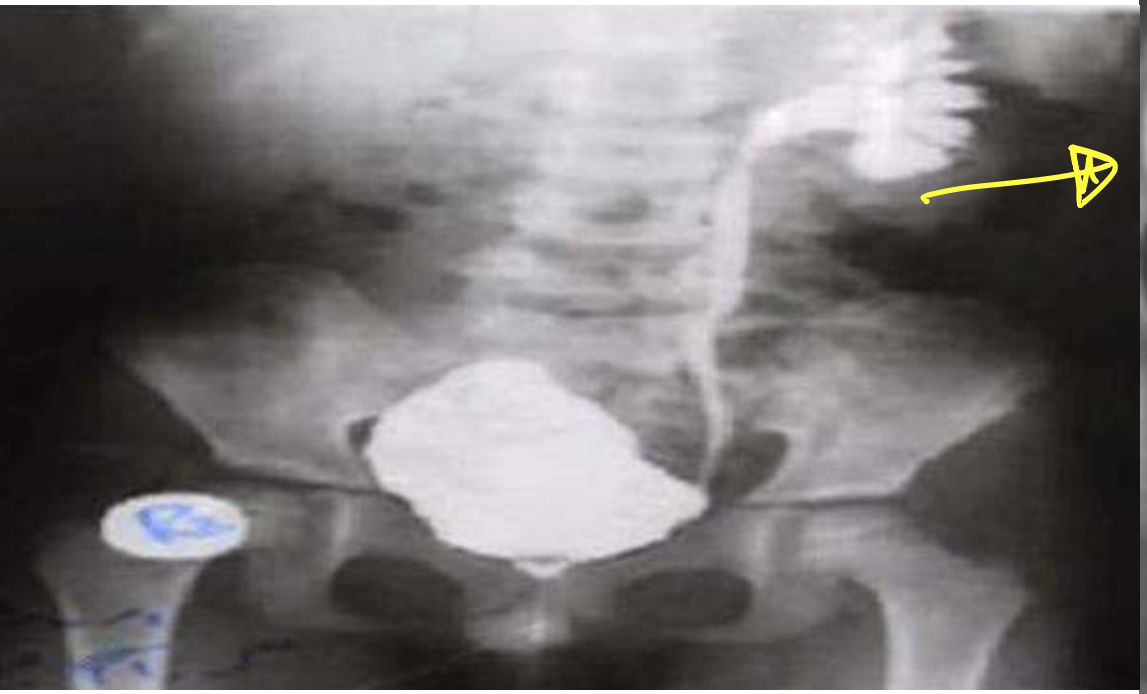
- Left dilated tortuous ureter and hydronephrosis (right pic)

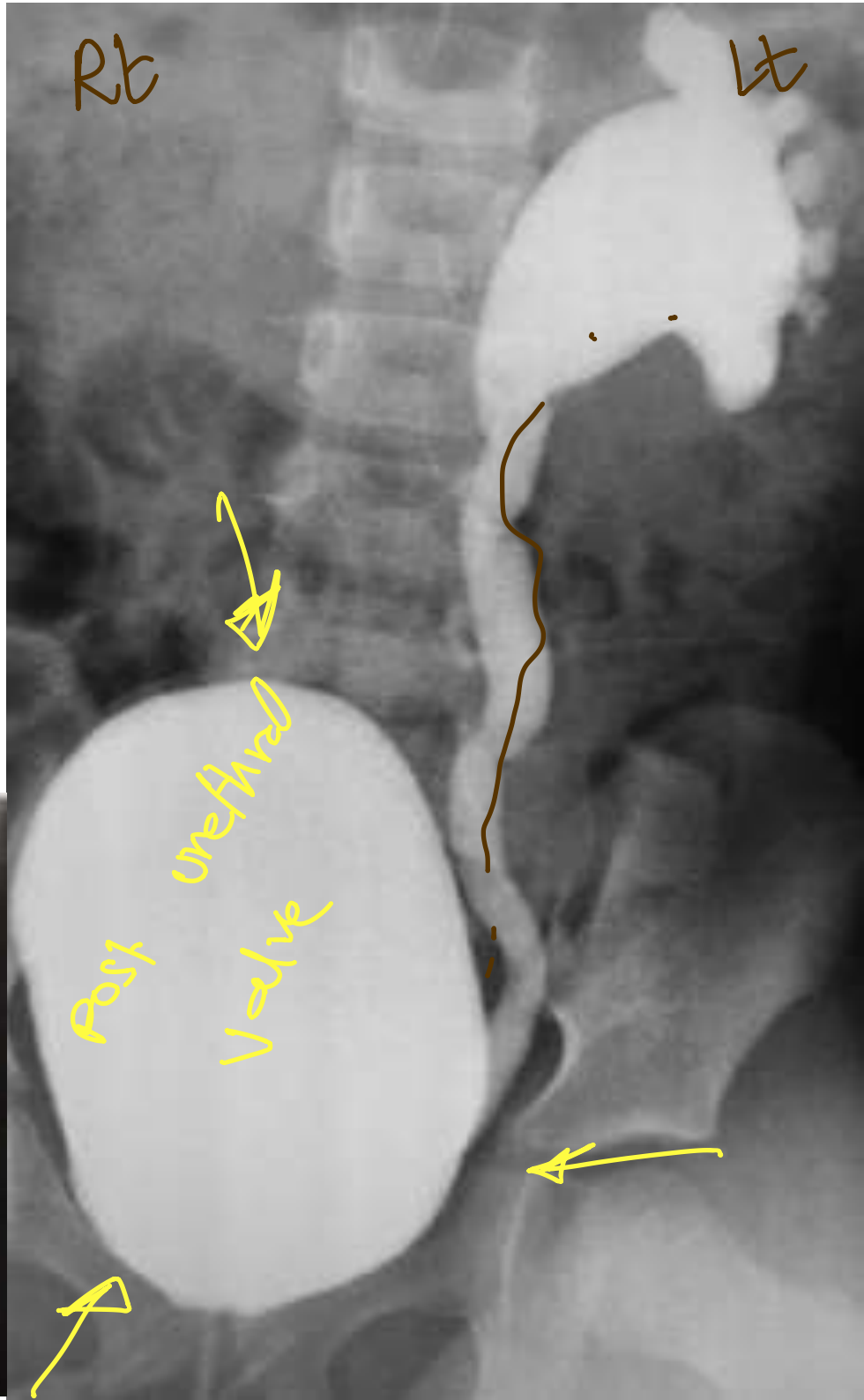
Q2: What is the cause behind this?

- Posterior urethral valve
- Congenital

Q3: What are the 2 complications that might occur?

1) Recurrent UTIs
2) Kidney scarring



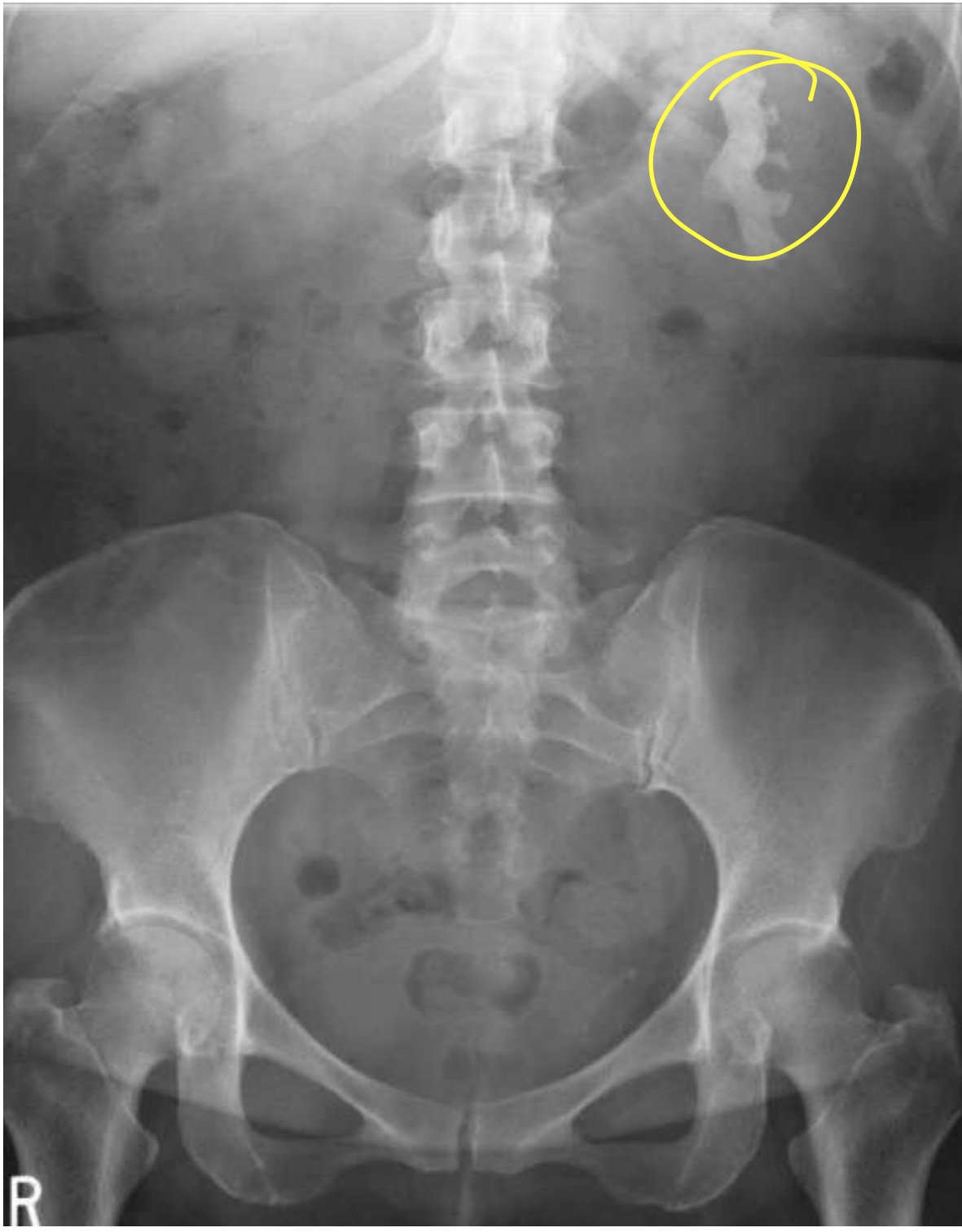


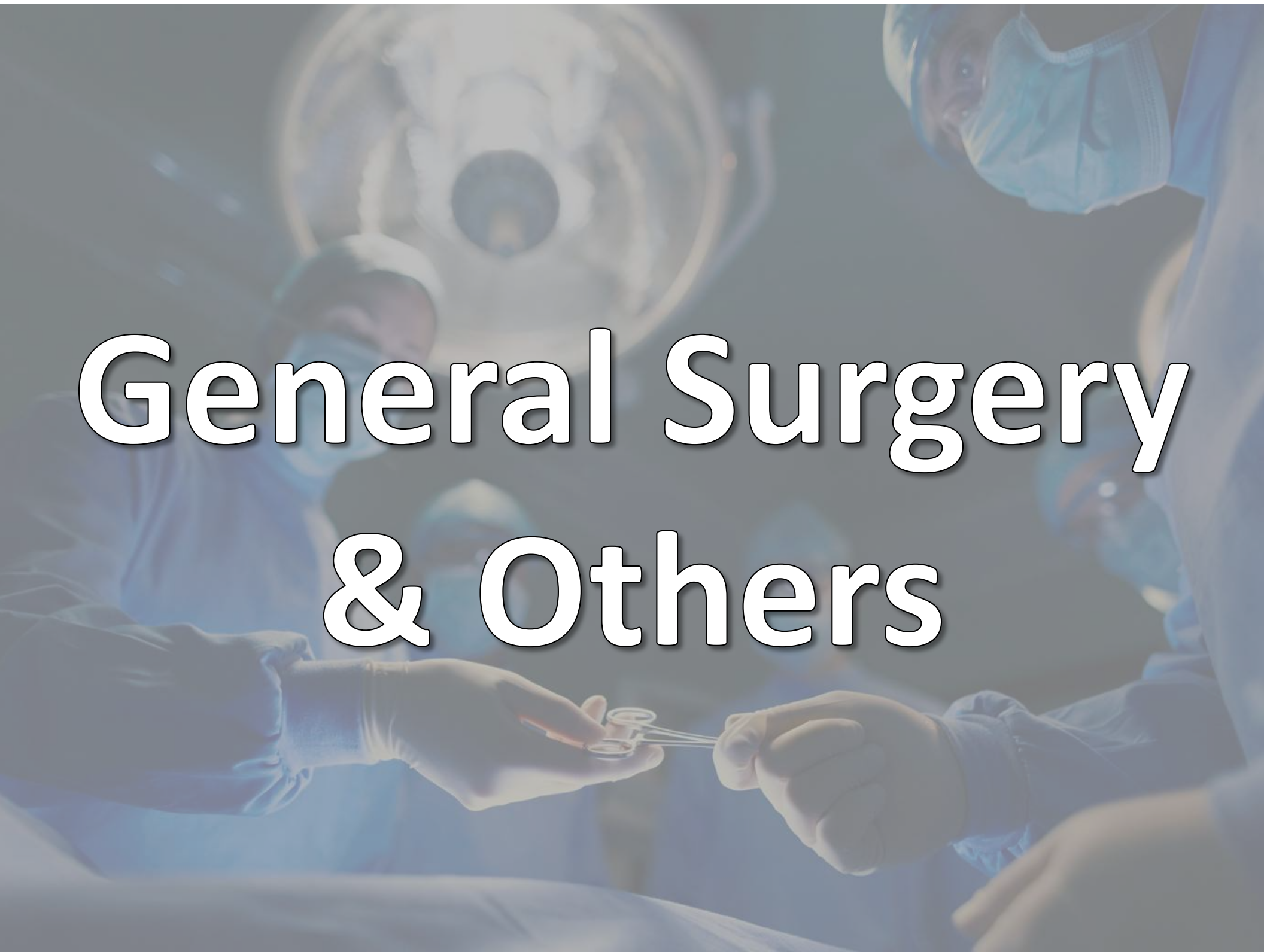
Q1: Name the finding?

- Staghorn stone or Struvite stone

Q2: What is the Etiology?

- Urease producing bacteria (proteus, klebsiella, pseudomonas)




General Surgery
& Others

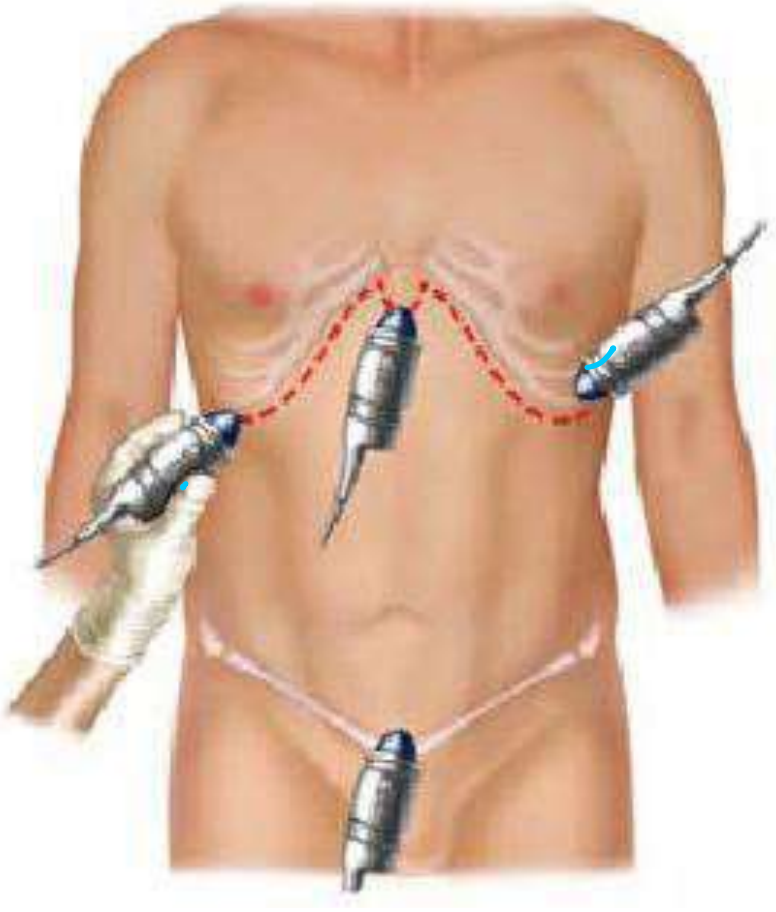
Q: A trauma pt presented to the ER and was assisted with FAST:

Q1: What does FAST stand for?

- **F**ocused **A**ssessment with **S**onography for **T**rauma

Q2: What are the 4 sites that we look at in FAST?

1) RUQ (Morison's pouch – Perihepatic)
2) LUQ (Perisplenic area)
3) Subcostal (Pericardiac)
4) Pelvic space



Q: A patient presented to the ER after RTA:

Q1: What's your 1st priority?

- ~~ABC~~

(some said only airway)

all sites in goggle saved

Q2: What's your 2nd priority?

- ~~Stop bleeding~~

(some said only breathing)

mostly

But if the Q ask about 1ry & 2ry assessement

ABCs

stop bleeding

Bleeding Classes

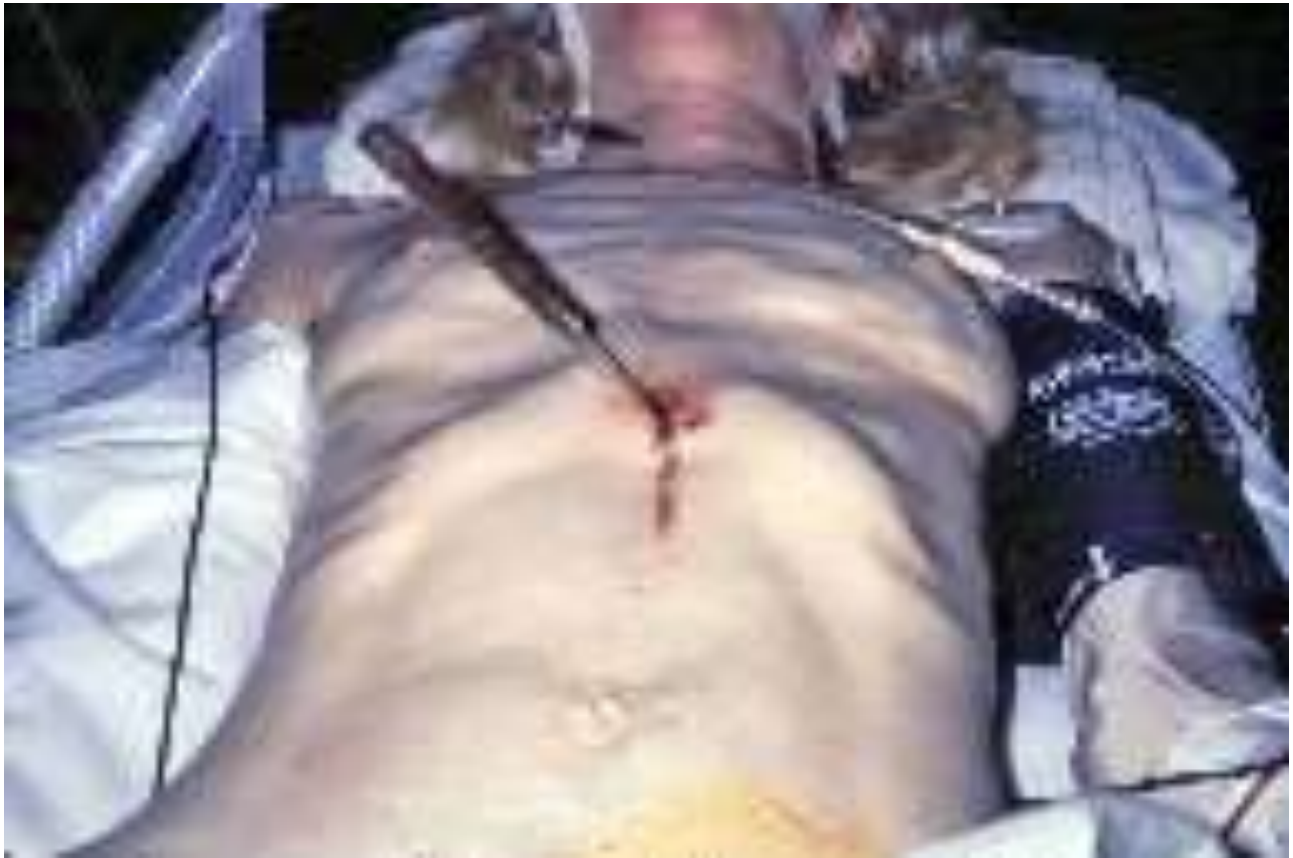
Parameter	Class I	Class II	Class III	Class IV
Blood loss (ml)	<750	750-1500	1500-2000	>2000
Blood loss (%)	<15	15-30	30-40	>40
Pulse rate (beats/min)	<100	100-120	>120	>140
BP	Normal	Decreased	Decreased	Decreased
Respiratory rate	14-20	20-30	30-40	>40
Urine output (ml/h)	>30	20-30	5-15	Negligible
CNS symptoms	Normal	Anxious	Confused	Lethargic

CNS: Central nervous system, BP: Blood pressure

Q: This patient arrived to your ER after being stabbed as shown 15 minutes ago. He was anxious and his vital signs were BP: 95/55 mm Hg, pulse 105 BPM, and RR 25 Per minute.

1. What is his class of hemorrhage? Stage 2

2. How much blood has he lost? 750-1500 ml



Q: A patient fell and broke her leg, then the doctor who saw her put a cast on the leg, afterwards she complained from pain, swelling, redness and numbness in the same limb:

Q1: What is the Dx?

- Compartment Syndrome

Q2: Next step in Mx?

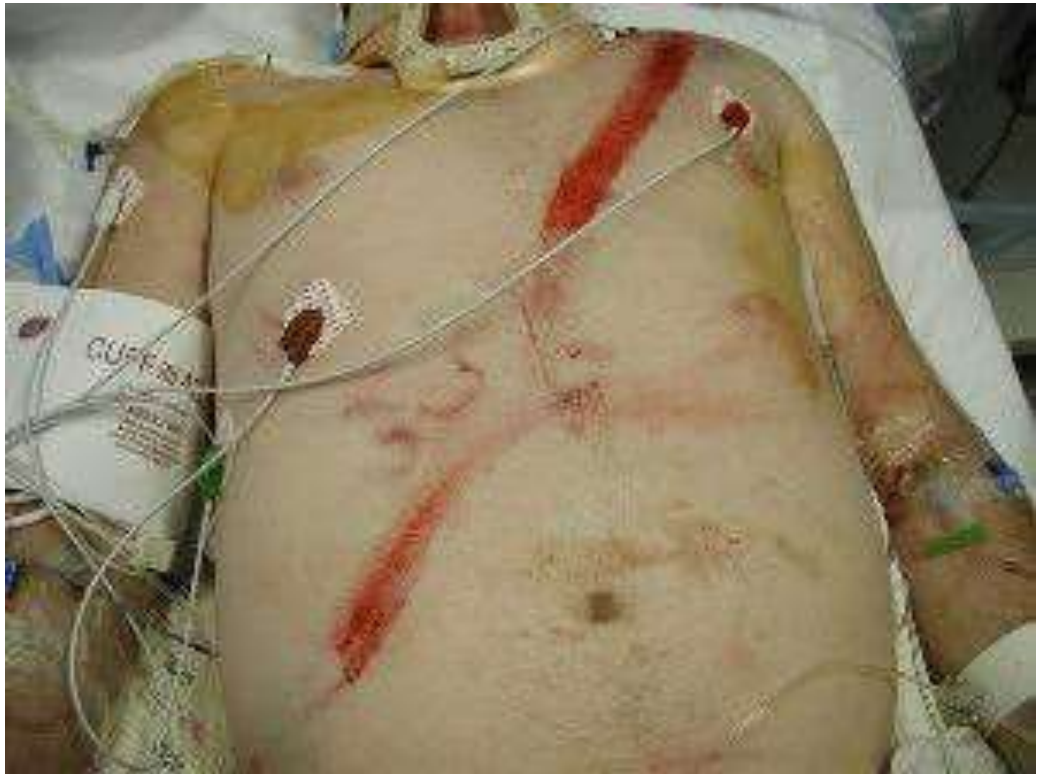
- Decompression
- Remove the cast
- Fasciotomy

Q1: Name this sign?

- Seat belt sign

Q2: Name 4 associated injuries?

1) Flail chest
2) Small bowel injury
3) Cervical spine injury
4) Fracture of the sternum, rips, clavicle & the vertebral bodies



Q1: In penetrating trauma most affected organ?

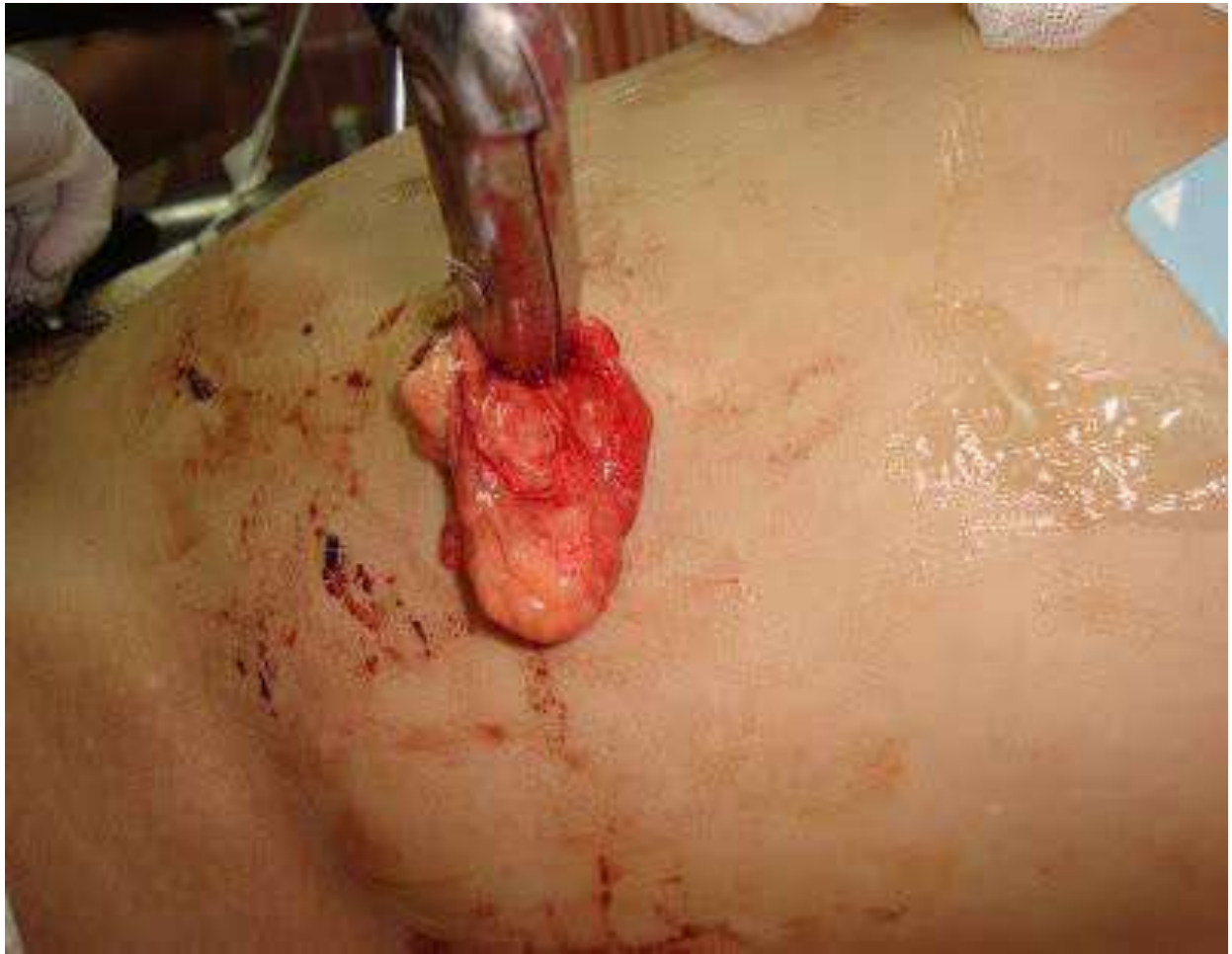
- Liver

Q2: What type of injury more severe (blunt or penetrating)?

- Blunt

Q3: In a penetrating wound, what should you do?

- Exploration Surgery



according to the pic, it's stab wound, so the MC affected organ related to this pic is liver but if the Q ask in general whatever it's stab wound or gunshot then the A is small intestine

Blunt Vs Penetrating abd. Trauma...

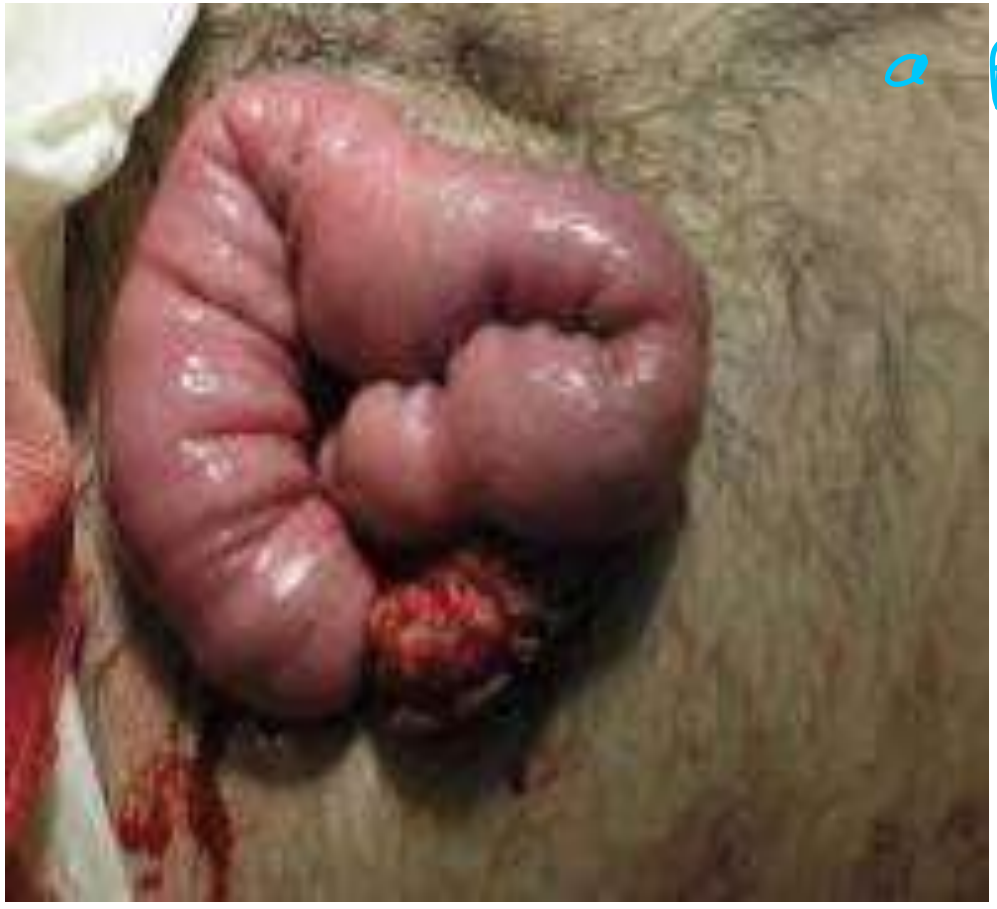
- Blunt trauma
  - spleen (45%)
  - liver (40%)
  - *Small bowel (10%)*

حسب كتاب ال First aid فالترتيب هون

- Penetrating injuries
  - Stab wounds:-
    - the liver (40%),
    - small bowel (30%),
    - diaphragm (20%),
    - colon (15%);
  - gunshot wounds
    - small bowel (50%),
    - colon (40%),
    - liver (30%), and
    - vessels (25%).

Abdominal injury- Evisceration

occurs when organ protrude out of a penetrating wound



Q: picture of multiple abdominal bruises, he asked about the zones of retroperitoneal bleeding and types of hemorrhage and where is the least likely place to check and when to go for surgery:

- Traumatic retroperitoneal hematomas divided into 3 zones:

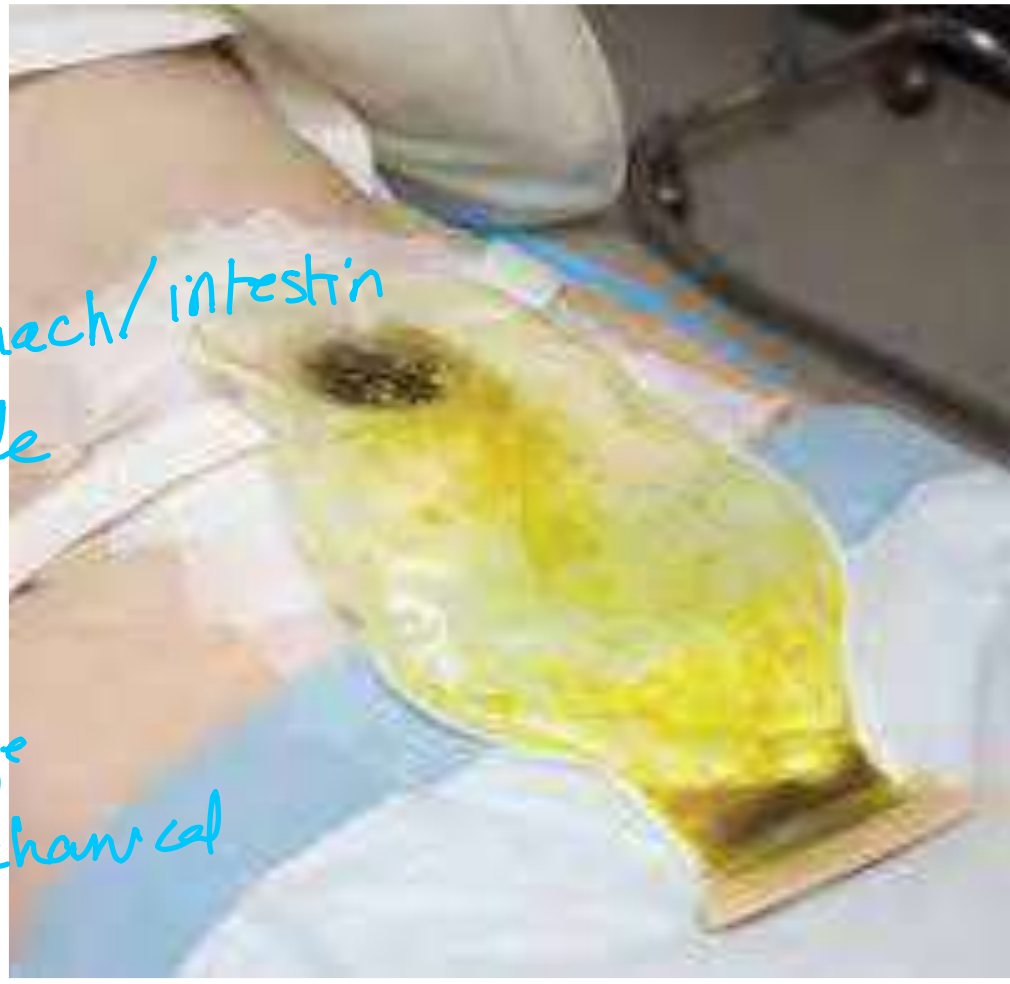
Zone 1: Centrally located, associated with pancreaticoduodenal injuries or major abdominal vascular injury

Zone 2: Flank or perinephric regions, associated with injuries to the genitourinary system or colon

Zone 3: Pelvic location, frequently associated with pelvic fractures or ileal-femoral vascular injury

- **Indication for exploration in retroperitoneal hematomas** : mandatory exploration should be performed in retroperitoneal hematomas resulted from penetrating injury, but the selection of treatment mode in blunt injury depend on the anatomical position of hematoma, visceral injury and the hemodynamic status of patients.

Q: Hx of surgery for diverticulitis before 10, the amount collected over 24 hr is 1500 cc:



Q1: What is the pathology?

- Enterocutaneous fistula (high output)

Q2: What is the complication?

1) Electrolyte disturbance
2) Skin excoriation
3) Sepsis

Q3: What is the prognosis?

- In most patients it closes spontaneously

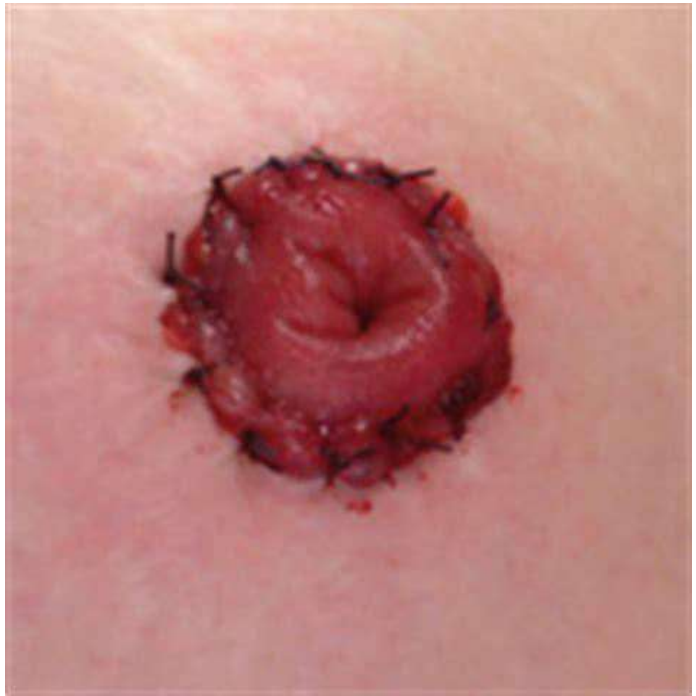
Q1: Type of stoma?

- End Colostomy

as end of the colon brought into abdomen

Q2: Mention 2 indications?

- IBD
- Rectal Tumors

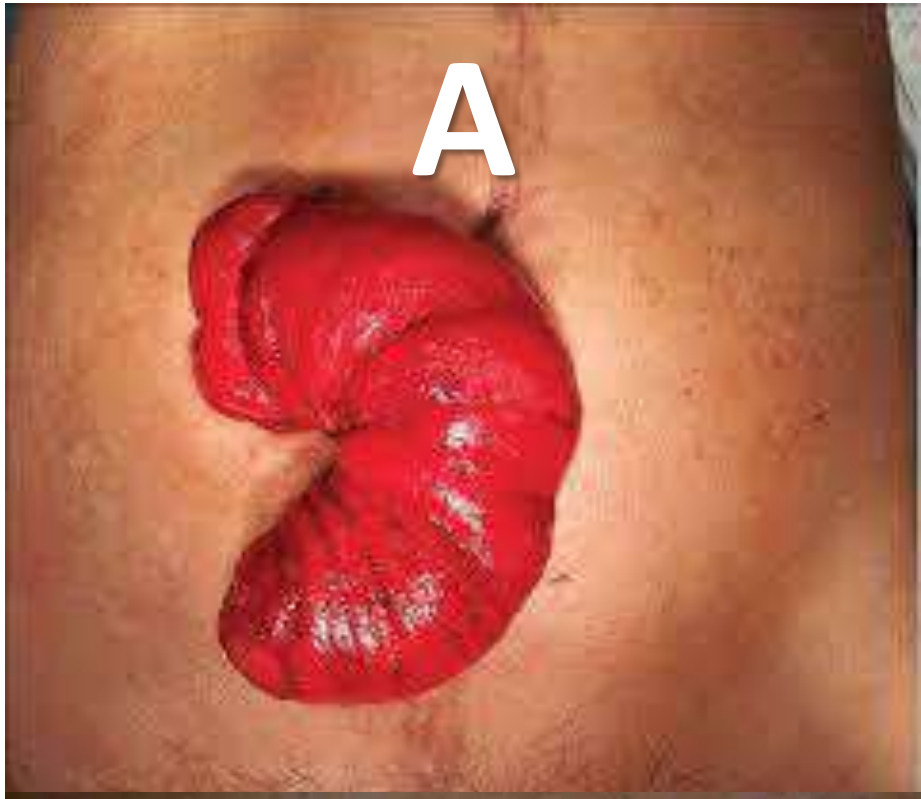


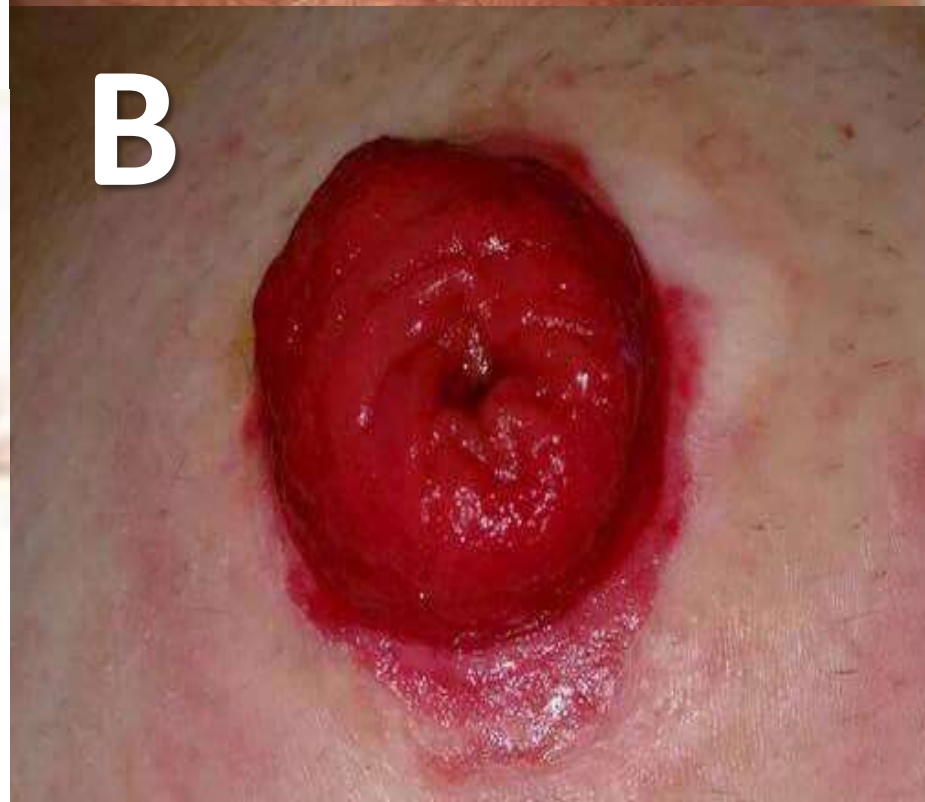
Q: What is the complications in A, B, C?

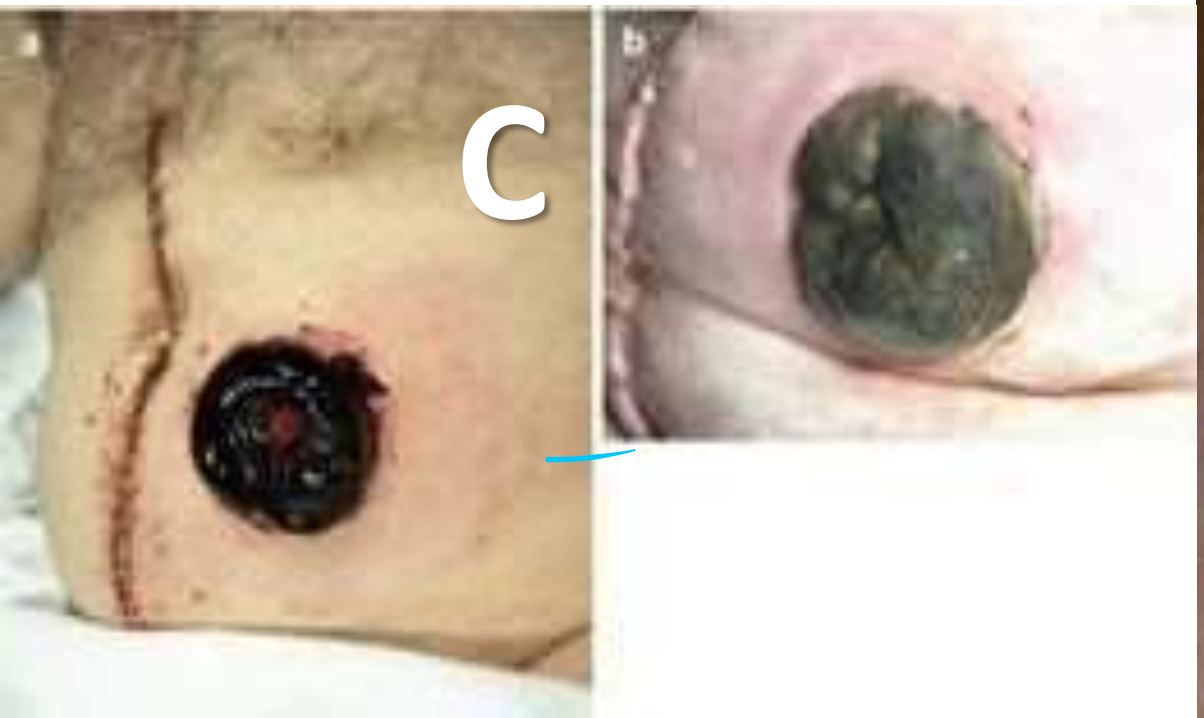
A) Prolapsed Stoma

B) Infected Stoma

C) Stoma Necrosis







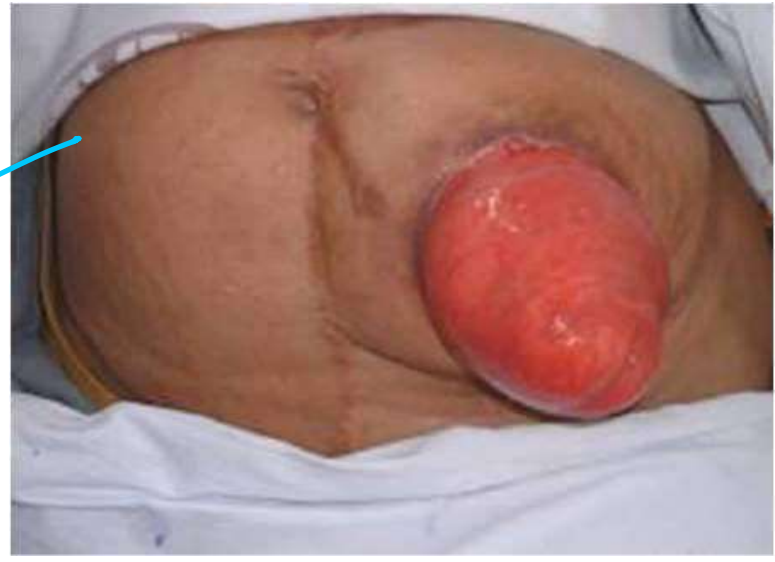
Q: A 65 year old man underwent abdomino-perineal resection 2 years ago after diagnosis of rectal ca.

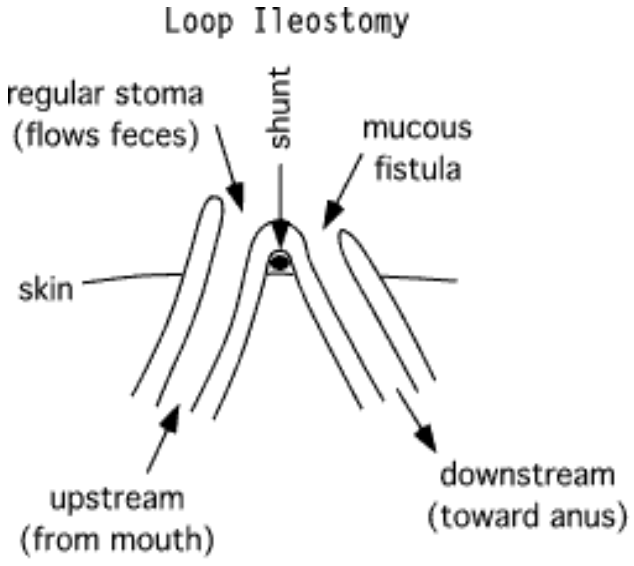
Q1: What is the type of his stoma?

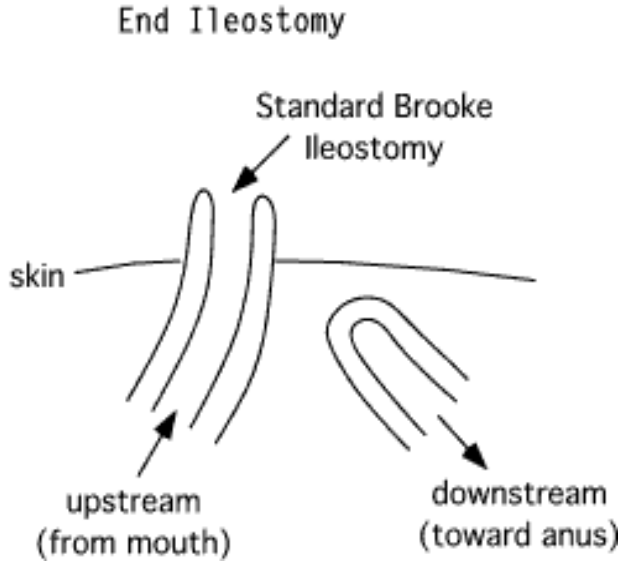
End colostomy.

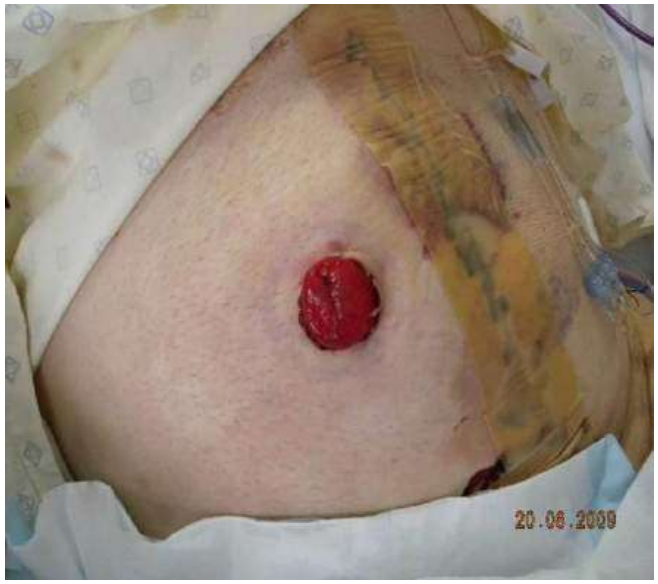
Q2: What is the complication shown?

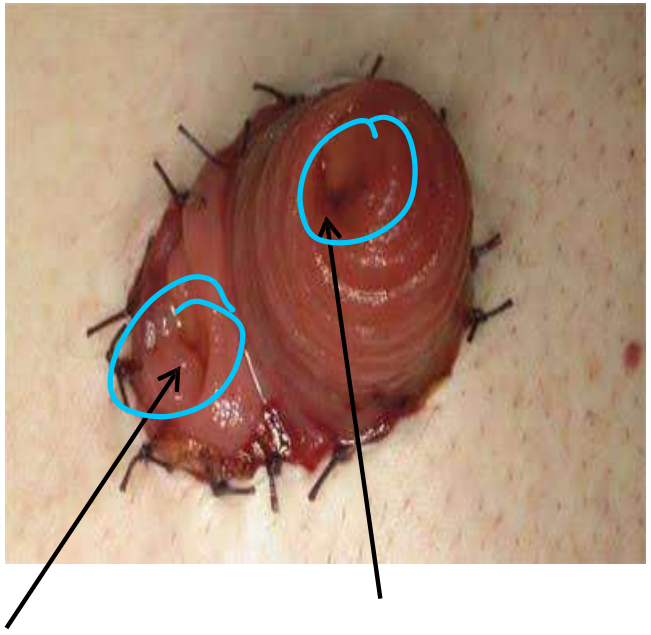
Prolapse.





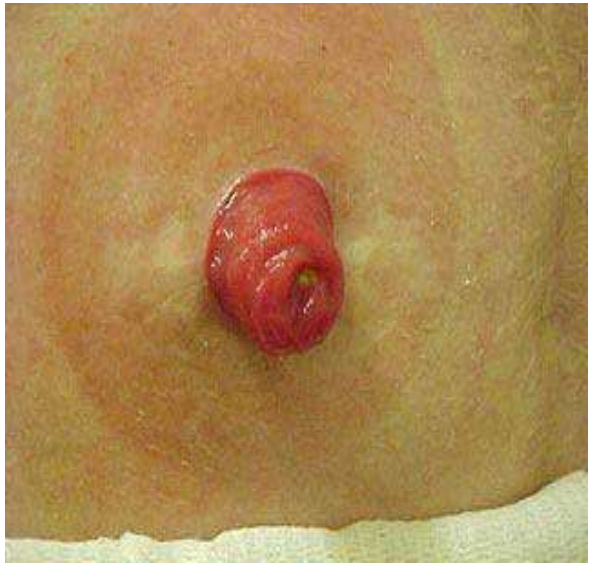






Loop ileostomy

2 openings



End ileostomy

- Usually at the RLQ.
- Bag contents : watery stool.
- Offensive smell.
- Surrounding skin is usually inflamed (irritated from acid).
- Median or paramedian scar is usually seen.

End Ileostomy

- Edges are spouted.
- Site: right iliac fossa.

Q1: What is this?

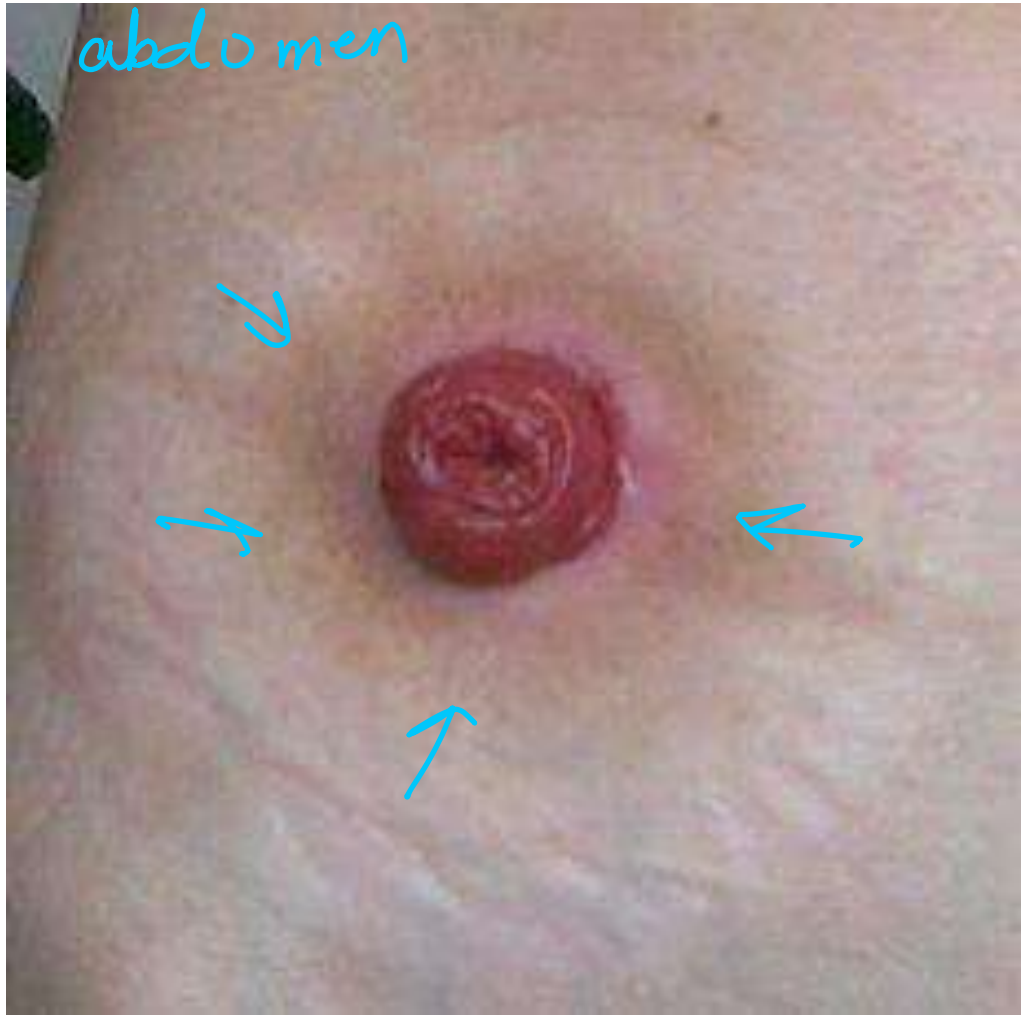
Ileostomy. → ilium is brought out through abdomen

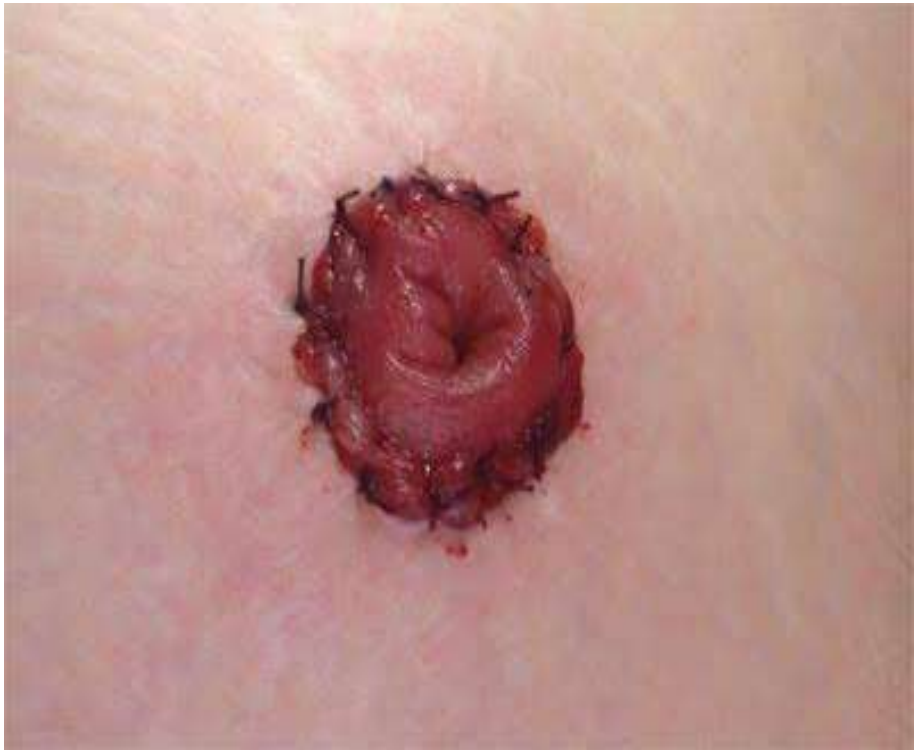
Q2: How can you confirm?

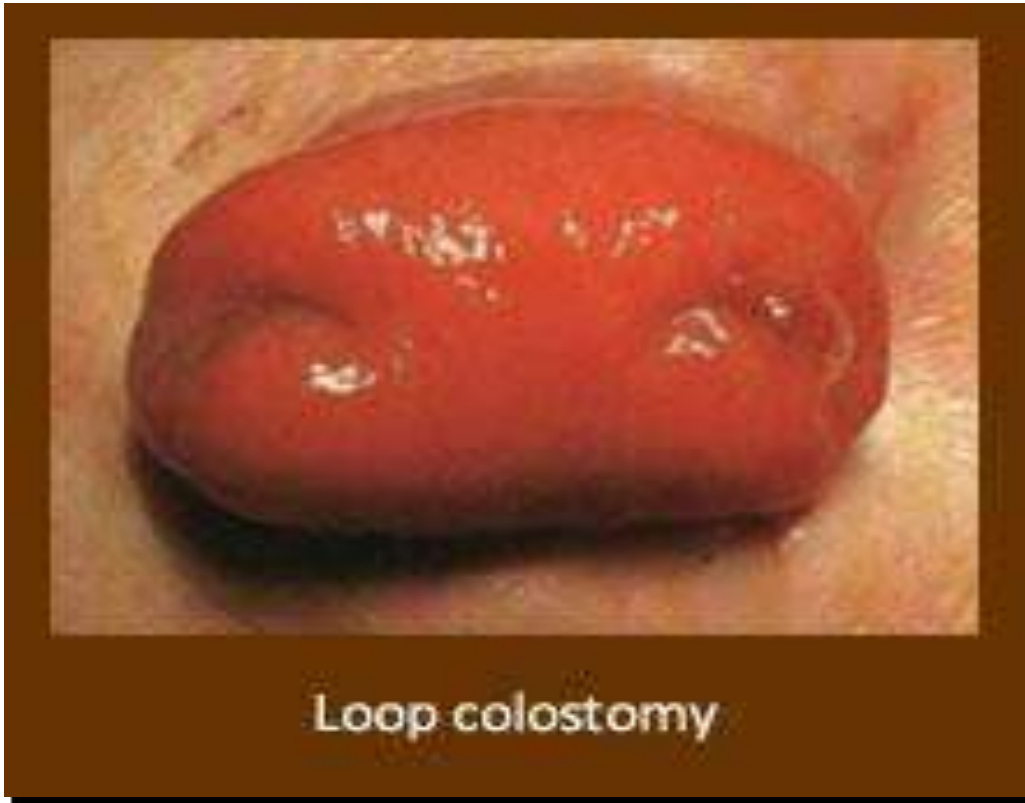
By its site and skin irritation around the stoma.

Q3: What is the disease that probably was treated by this?

Chron's disease.





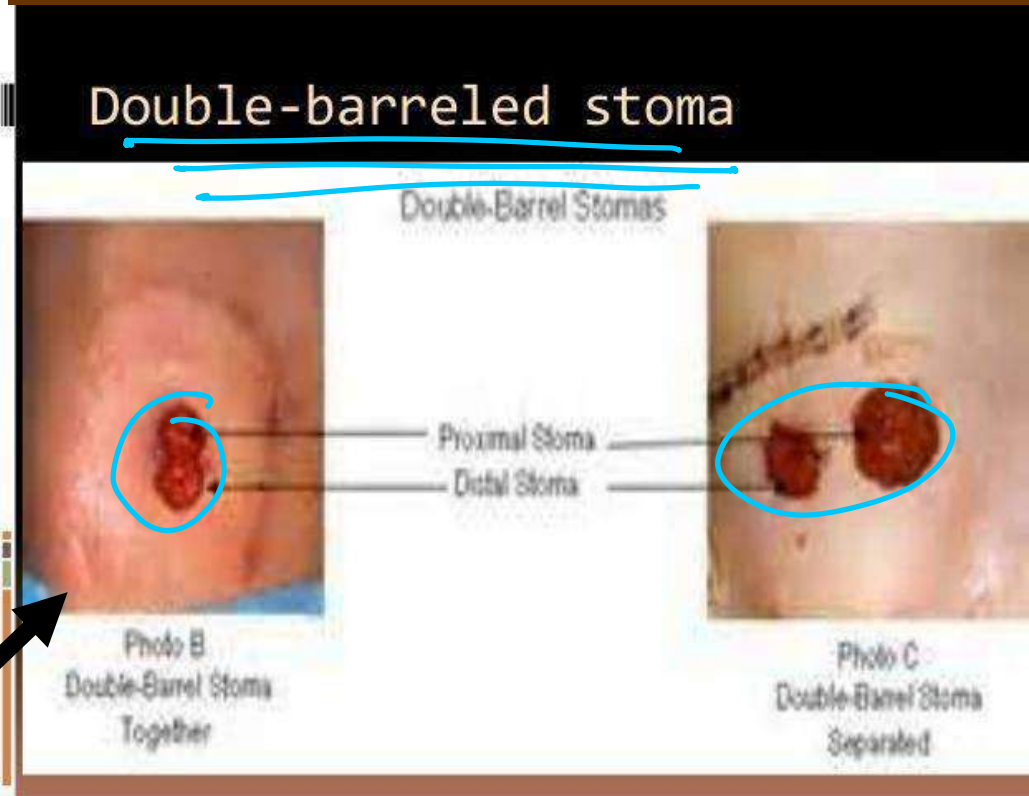


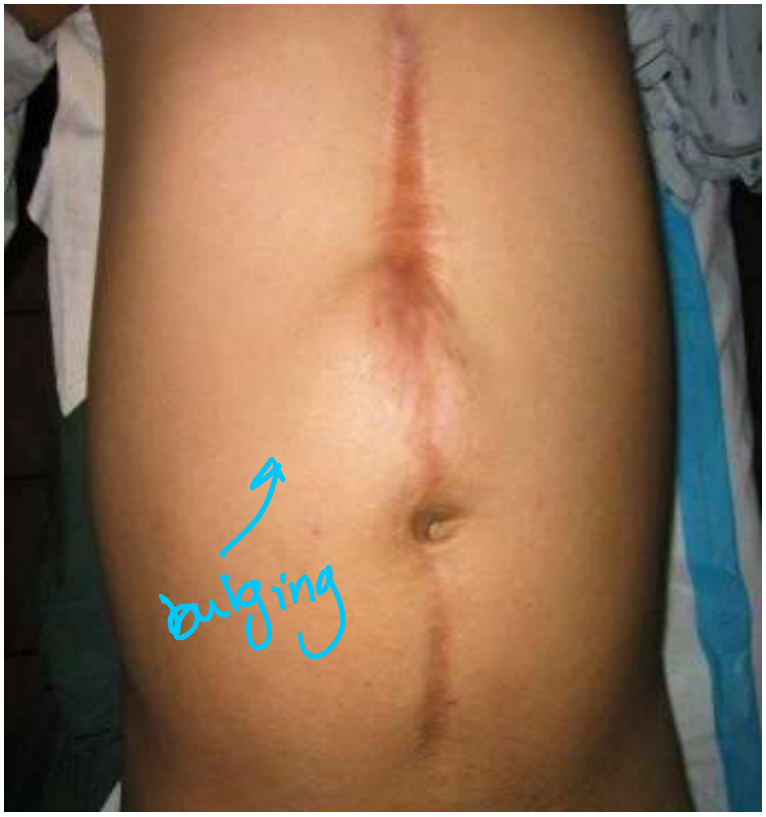
End colostomy

- Sites : LLQ (sigmoid colon)/ RUQ (transverse colon) / RLQ (cecostomy)
- Formed stool in bag.
- No skin changes.
- Sigmoid colostomy expels stool 1/day.

while ilium contains gastric juice or bile

Double barrel colostomy : together on left picture and separated on right picture.

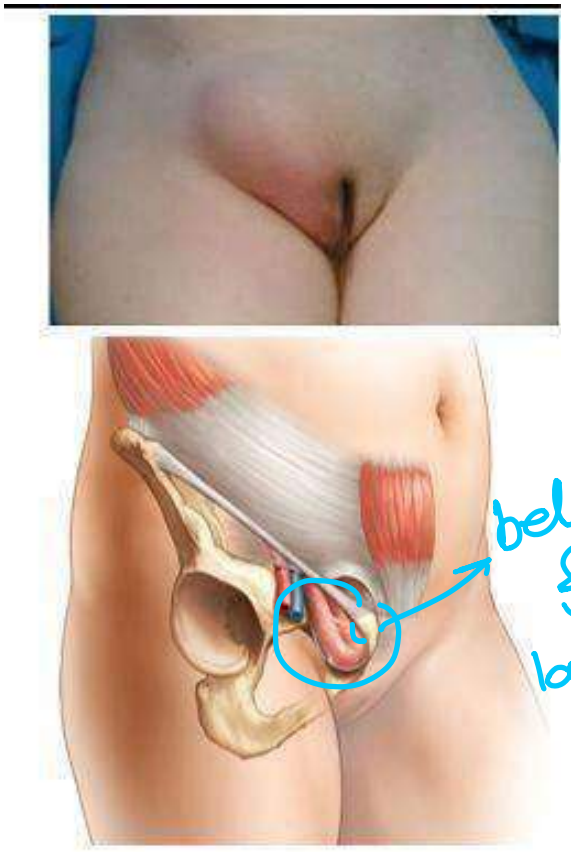




incisional hernia

(notice the surgical scar)

m.c.c is wound infection



Femoral hernia

-most common hernia in females.

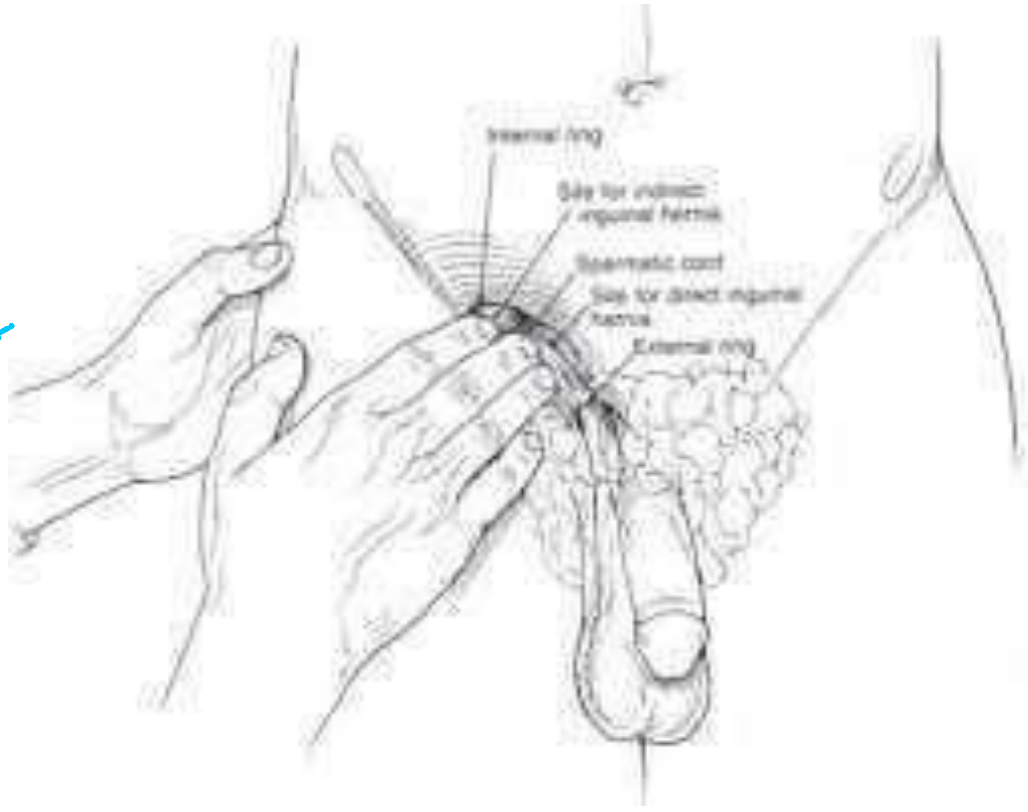
- Medial to femoral vessels.

Q1: Name of the test?

- Ring occlusion test

Q2: If you ask the patient to cough while you maintain pressure and you notice a bulge, what is your Dx?

- Direct inguinal hernia



** Note: Ring occlusion test differs from 3 fingers test, You Ask the patient to cough> Impulse felt on the index finger> Indirect hernia So; Zieman's Test (3 Finger Test) is used to differentiate type of hernia.

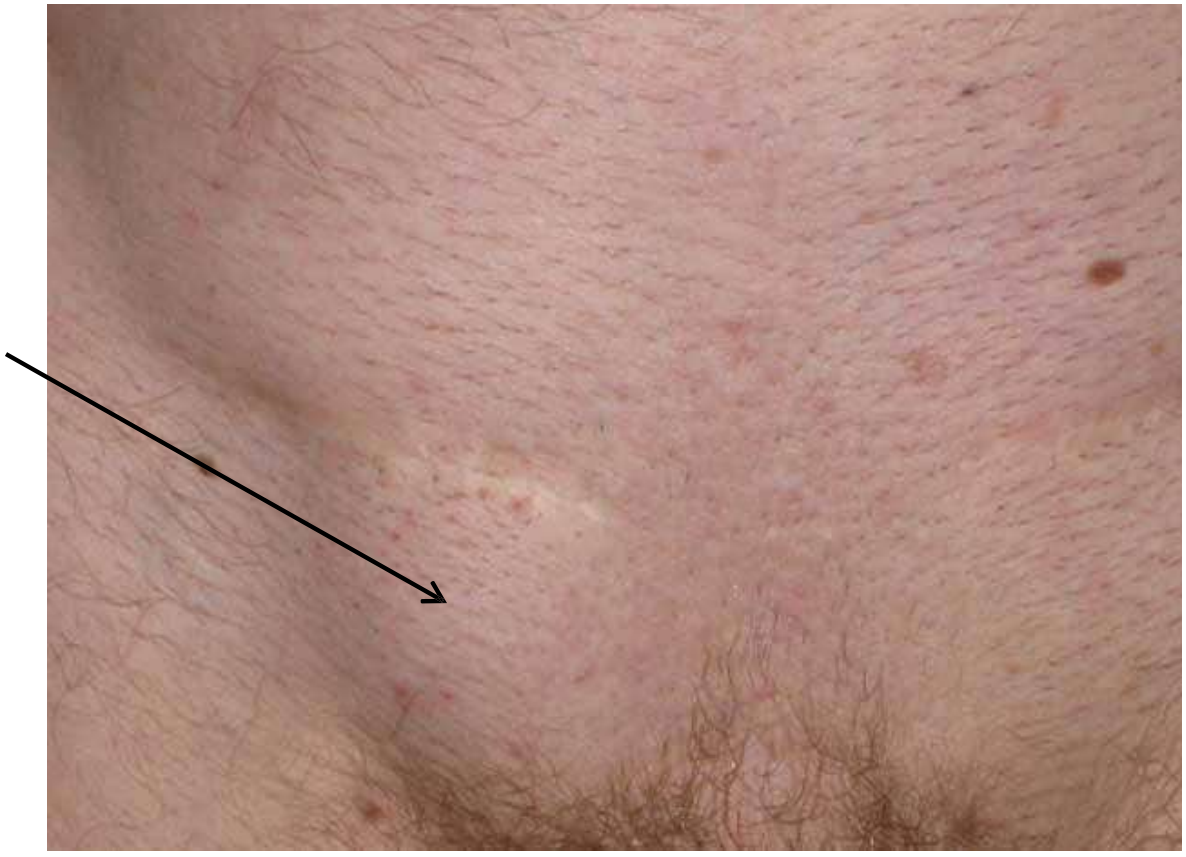
- Index: deep inguinal hernia (indirect)
- Middle: superficial inguinal (direct)
- Ring: Saphenous opening (femoral hernia)

Indirect Inguinal Hernia	Direct Inguinal Hernia
Pass through inguinal canal.	Bulge from the posterior wall of the inguinal canal
Can descend into the scrotum.	Cannot descent into the scrotum.
Lateral to inferior epigastric vessels.	Medial to inferior epigastric vessels.
Reduced: upward, then laterally and backward.	Reduced: upward, then straight backward.
Controlled: after reduction by pressure over the internal (deep) inguinal ring.	Not controlled: after reduction by pressure over the internal (deep) inguinal ring.
The defect is not palpable (it is behind the fibers of the external oblique muscle).	The defect may be felt in the abdominal wall above the pubic tubercle.
After reduction: the bulge appears in the middle of inguinal region and then flows medially before turning down to the scrotum.	After reduction: the bulge reappears exactly where it was before.
Common in children and young adults.	Common in old age.

Inguinal hernia

DDx of inguinal hernia :

Hydrocele/ saphena varix/ testicular torsion/ psoas abscess .. Etc.

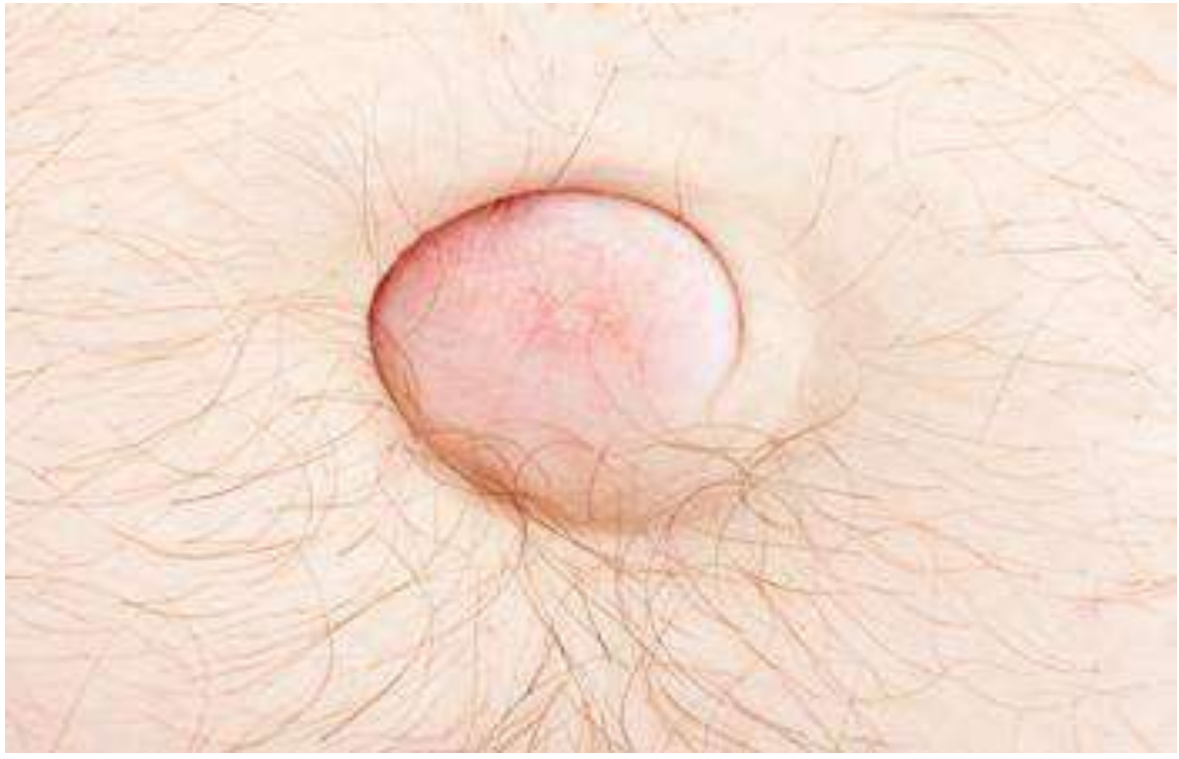


- **Indirect** : most common type in both males and females.
- **Indirect** : lateral to the inferior epigastric artery.
- **Direct** : medial within hesselbach's triangle.

Herniotomy : only in peds patients.
Herniorrhaphy : tension due to approximation/ high recurrence.
Hernioplasty : using a mesh/tension free/ open or laparoscopic.

Para umbilical hernias

crescent-shaped bulge develops in the navel.



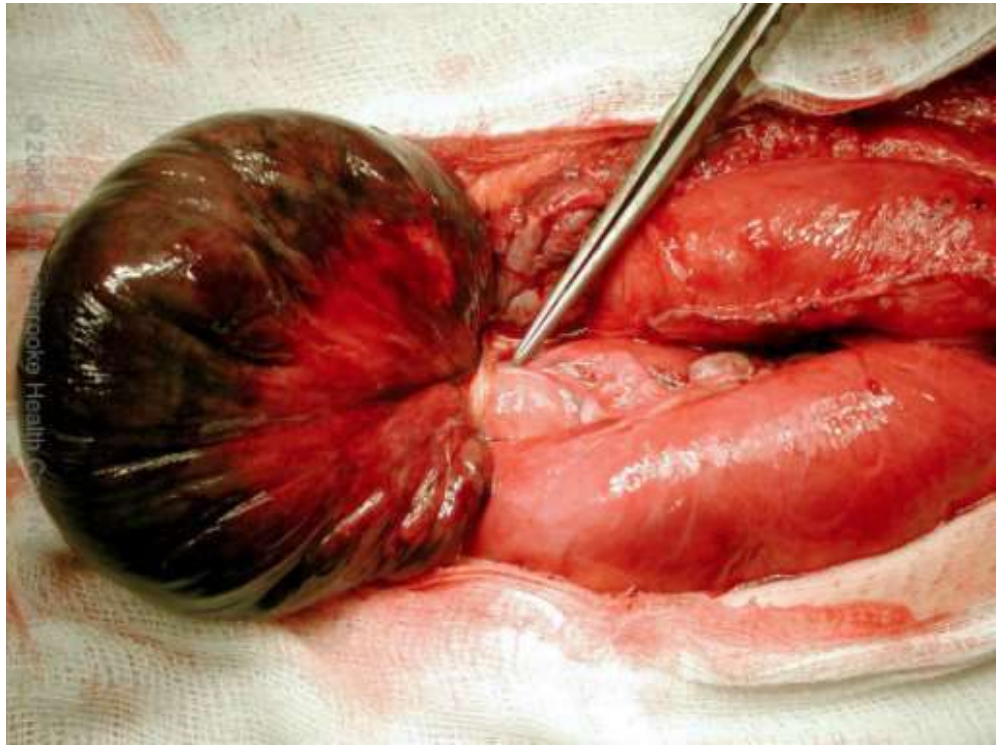
Q: Patient presented with painful lump in his belly button:

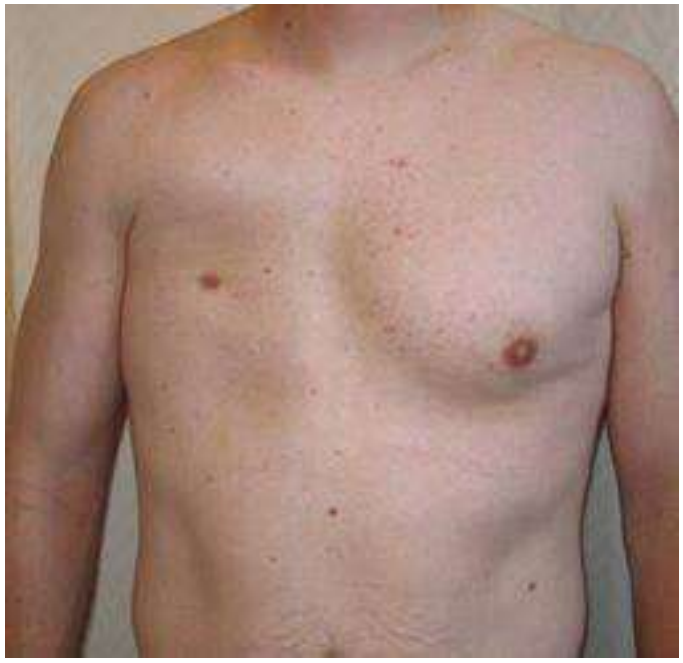
Q1: What is the Dx?

- Strangulated Hernia

Q2: If the bowel still the same despite of all measures, what's your next step?

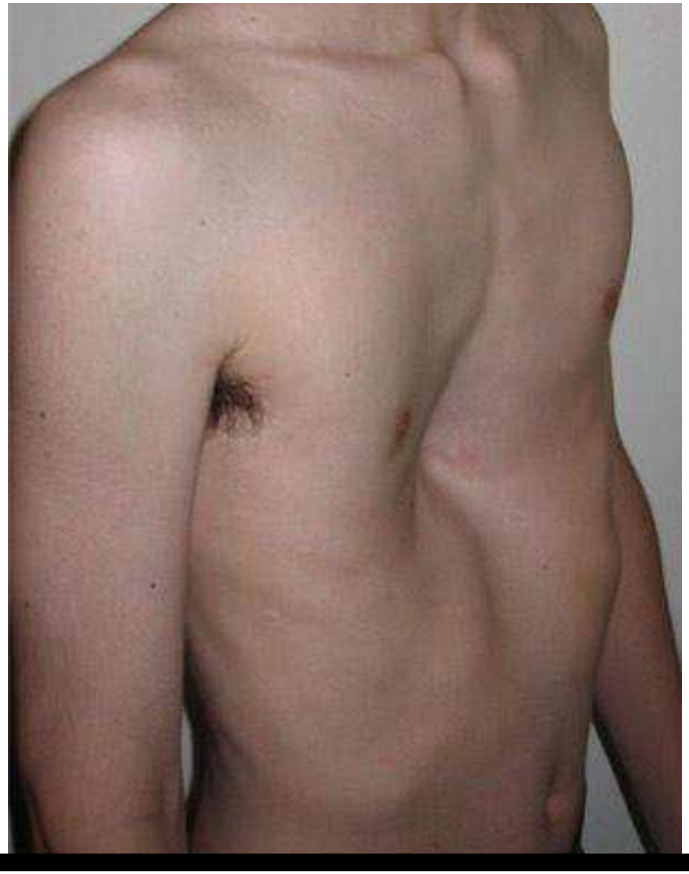
- Resection and Anastomosis





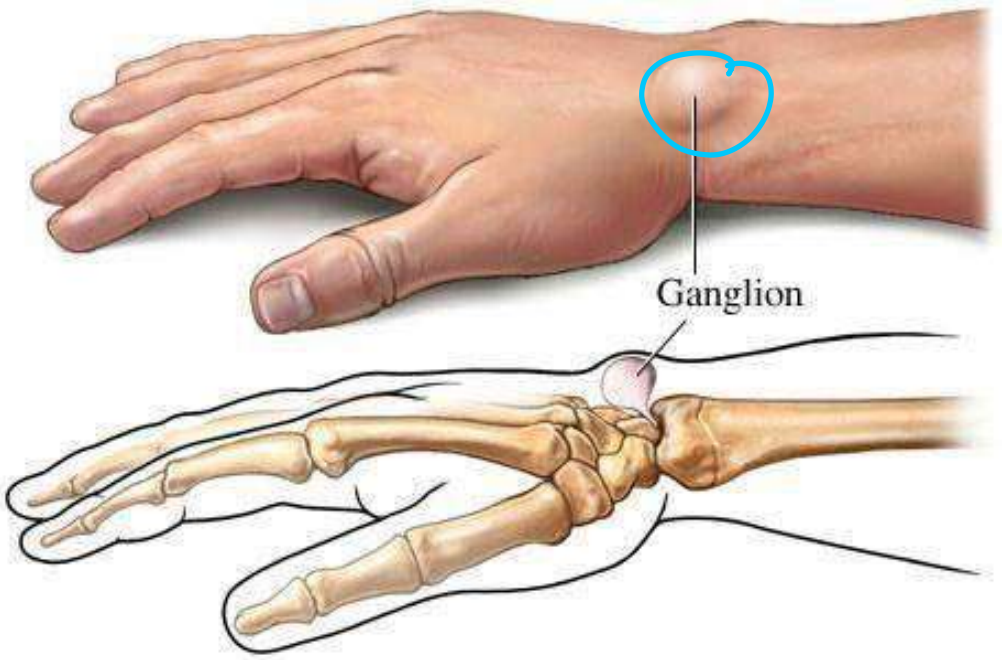
Poland syndrome

Pectus excavatum
(funnel chest)



Ganglion cyst

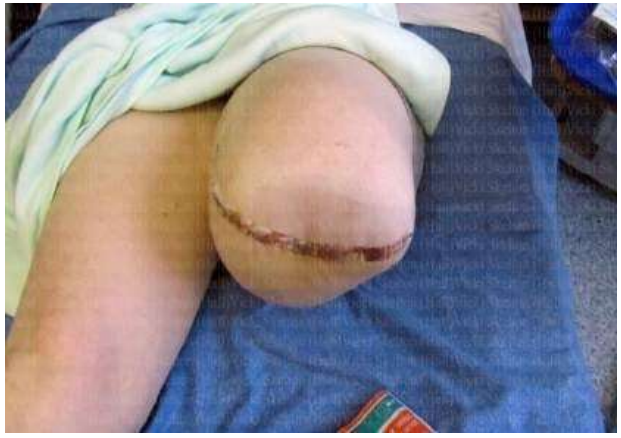
- is a non-neoplastic soft tissue lump.
- It's **painful.**
- recurrence may occur after surgery.



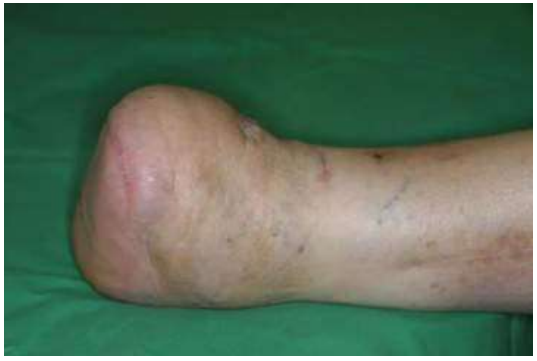
Lower extremity amputations

Indications : irreversible tissue ischemia & necrotic tissue/ severe infection / severe pain with no bypassable vessels, or if pt is not interested in a bypass procedure.

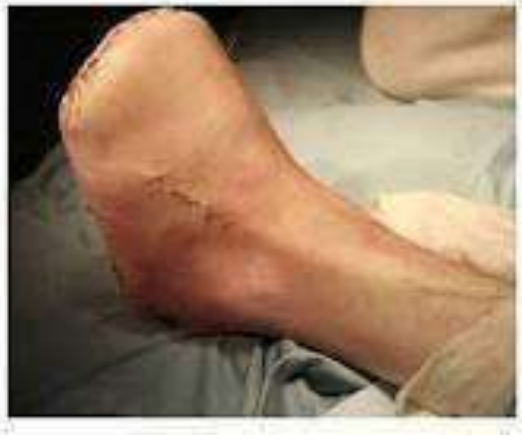
Bellow knee amputation



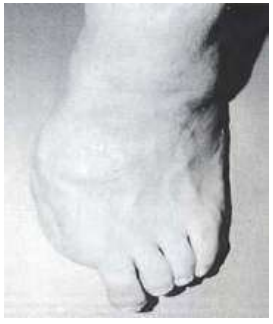
Above knee amputation



Syme's amputation
Through the articulation of the ankle with removalof the malleoli.



Transmetatarsal amputation



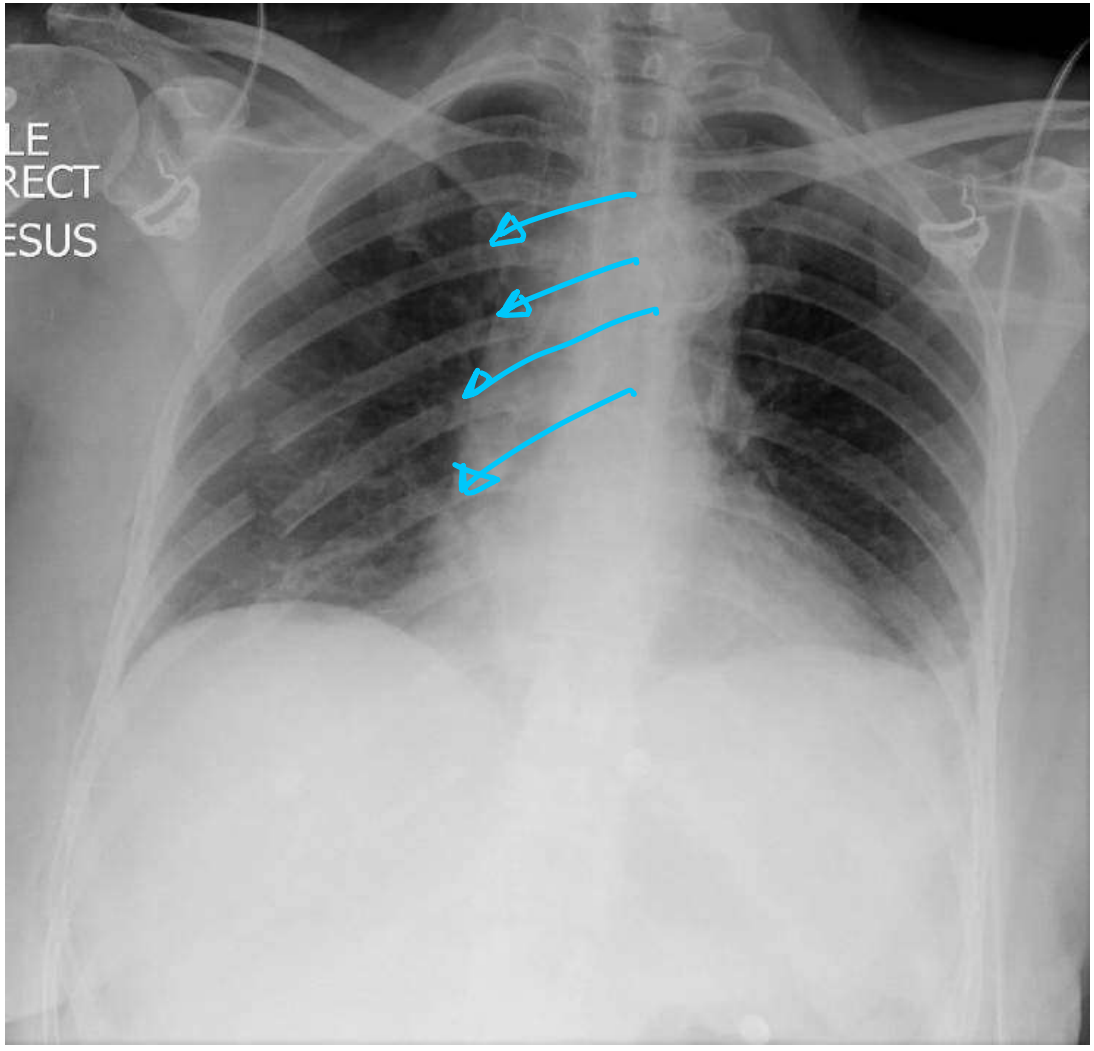
Ray amputation
Removal of toe & head of Metatarsal.

Flail chest

Segment occurs when three or more contiguous ribs are fractured in two or more places.

It typically occurs after high impact **trauma.**

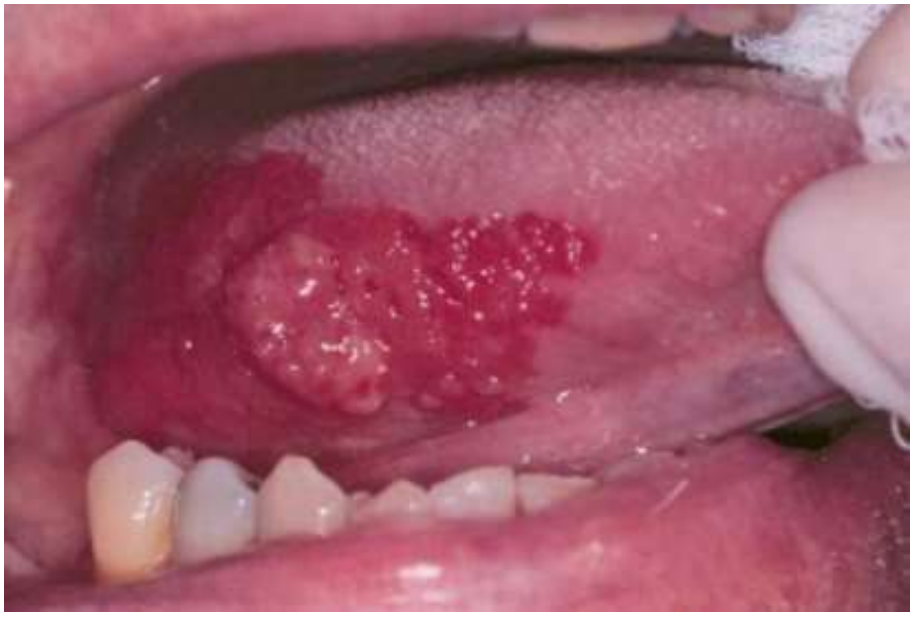
Flail segment of chest wall that moves paradoxically (opposite to the rest of chest wall)



DOG BITE

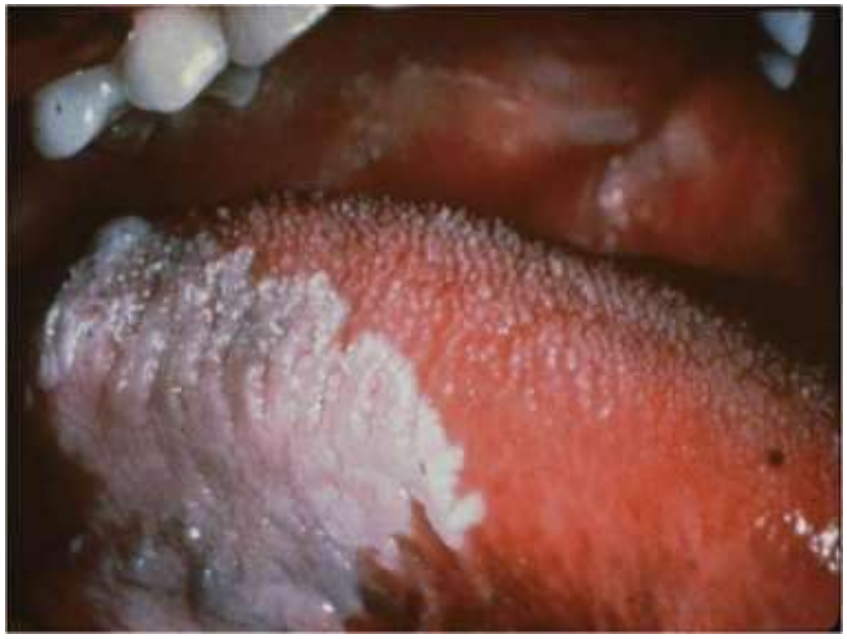
*Management :

1) exploration
2) analgesia
3) IV antibiotics
(clindamycin + penicillin)
4) elevation
5) tetanus toxoid
6) rabies vaccine



Erythroplakia

- Reddish patch that appears on the oral mucosa.
- It has 17 X more risk of malignancy than leukoplakia.



Leukoplakia

- White patch that appears on the oral or genital mucosa.
- Risk factors : smoking/ تفلا
- Premalignant (transform to SCC).

Q1: What is the Dx?

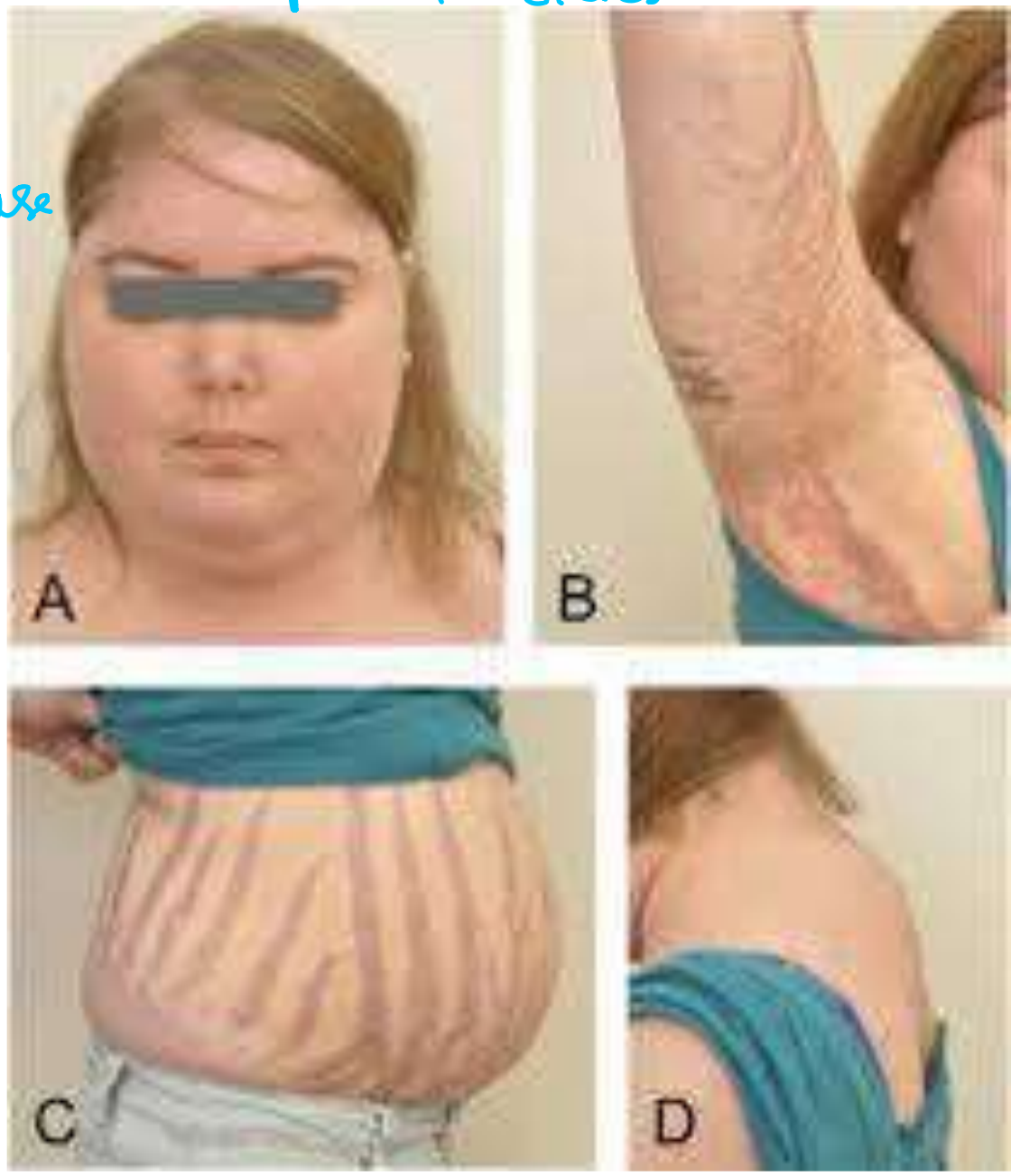
- Cushing Syndrome

Q2: Causes?

- Iatrogenic (cortisol administration)
- Pituitary Adenoma

** Note: Cushing triad:
1) Irregular, decreased respirations
2) Bradycardia
3) Systolic hypertension

Same pic in slides



Q1: White arrow?

- Pituitary Adenoma

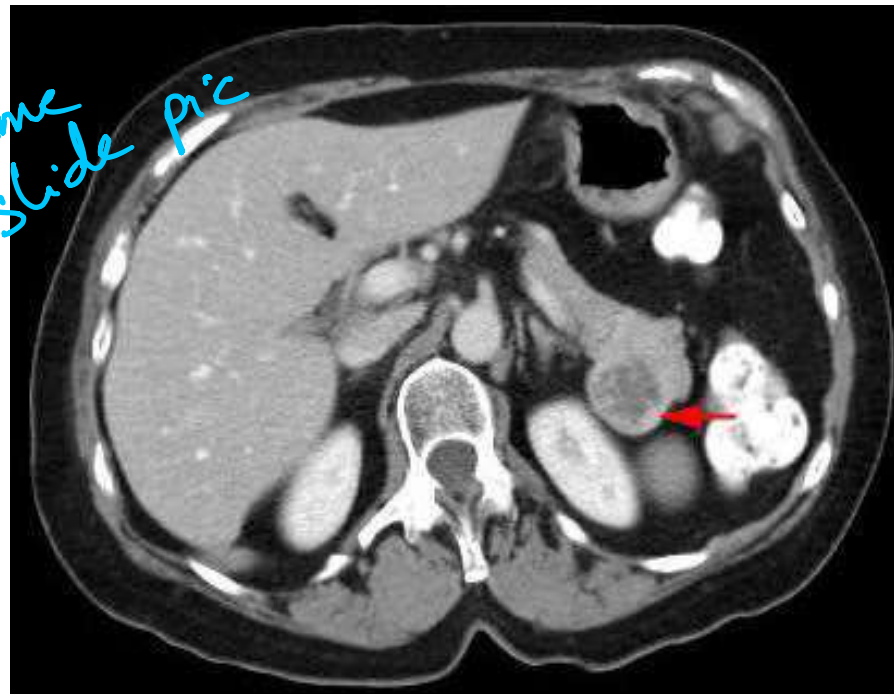
Q2: Syndrome name?

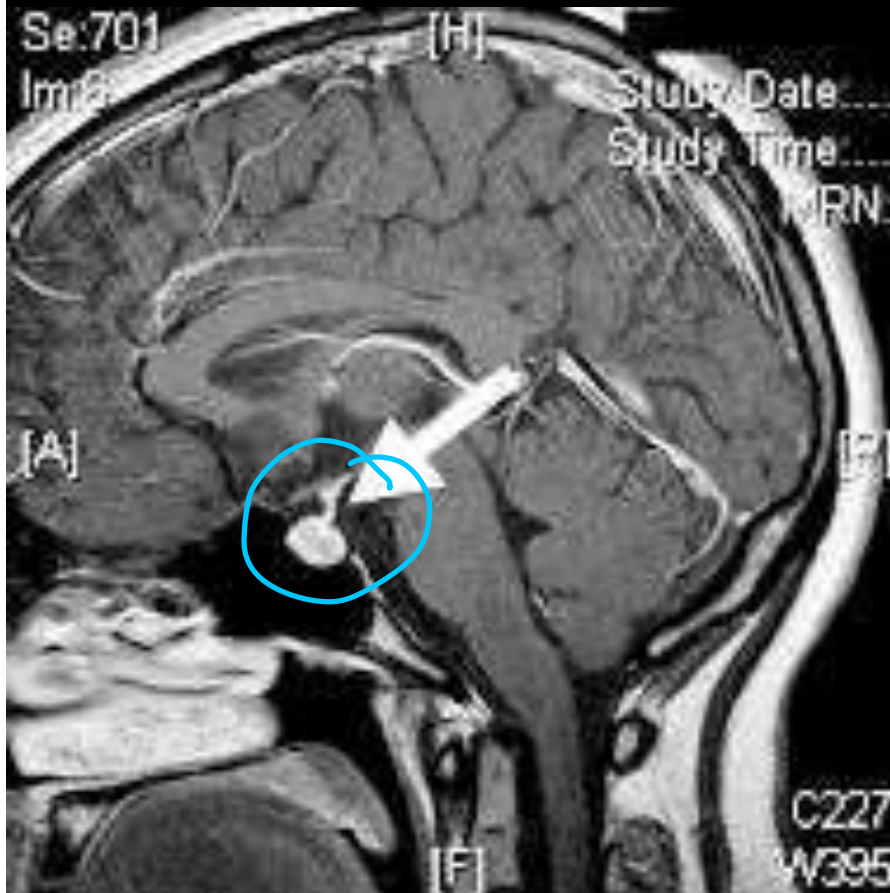
- MEN

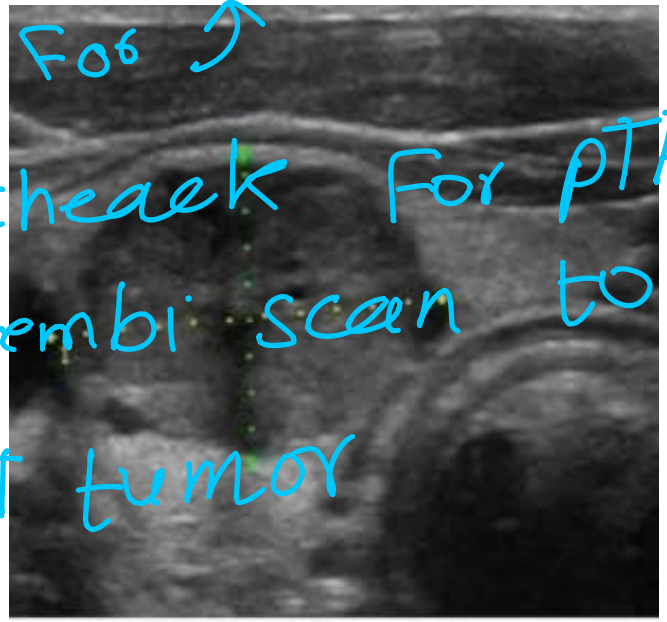
Q3: The most important thing surgically to do for this patient?

- Pancreatic tumor "~~not sure~~"

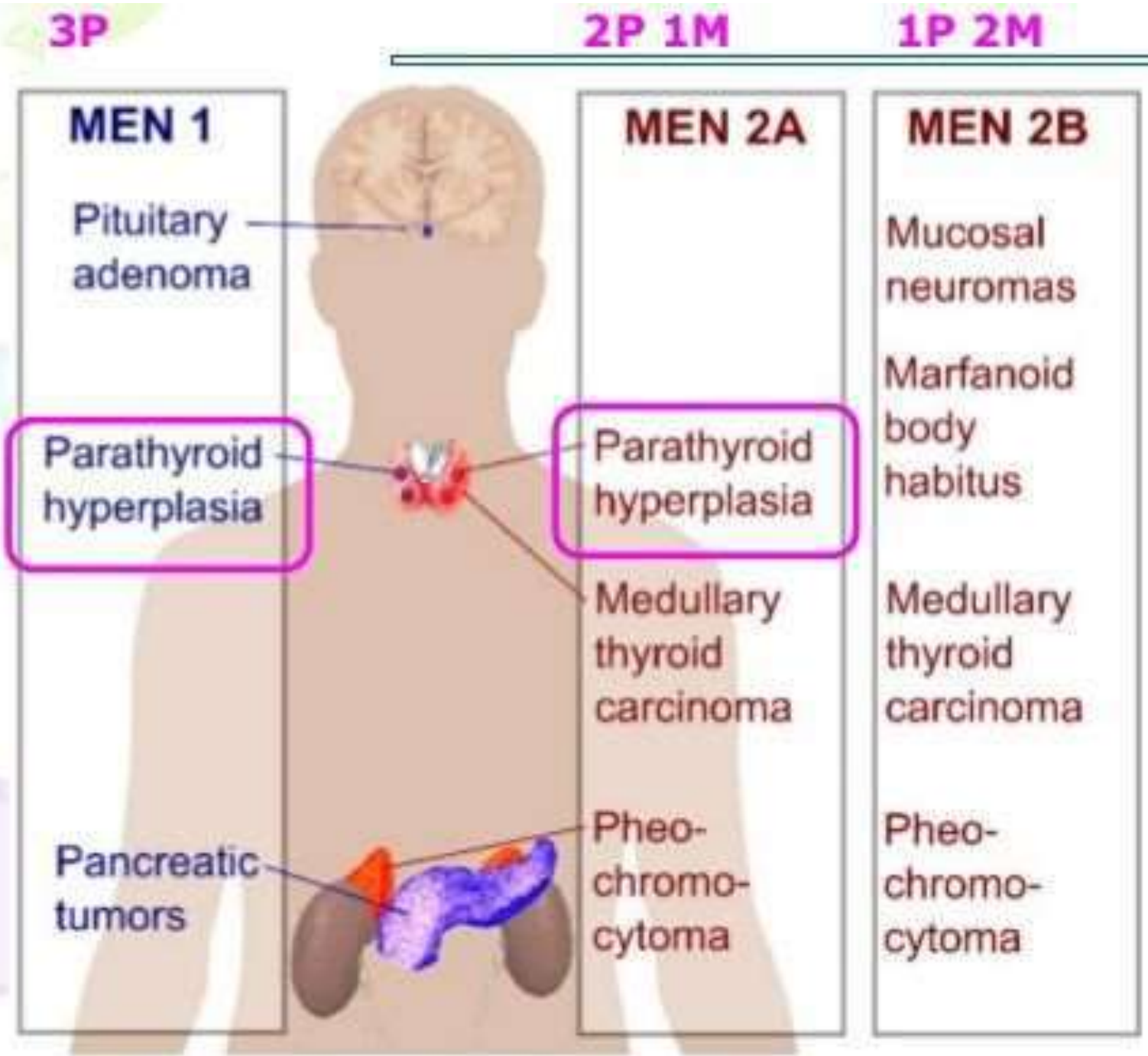
same slide pic







cheak For ↑ then cheaek For pTH & sestembi scean to look For pT tumor



- **MEN I (3 Ps)**
  -Pituitary,
  -Parathyroid,
  -Pancreatic
- **MEN 2A (1M,2Ps)**
  -MTC
  -Pheochromocytoma
  -Parathyroid
- **MEN 2B (2Ms,1P)**
  -MTC,
  -Marfanoid habitus/Mucosal neuroma
  -Pheochromocytoma

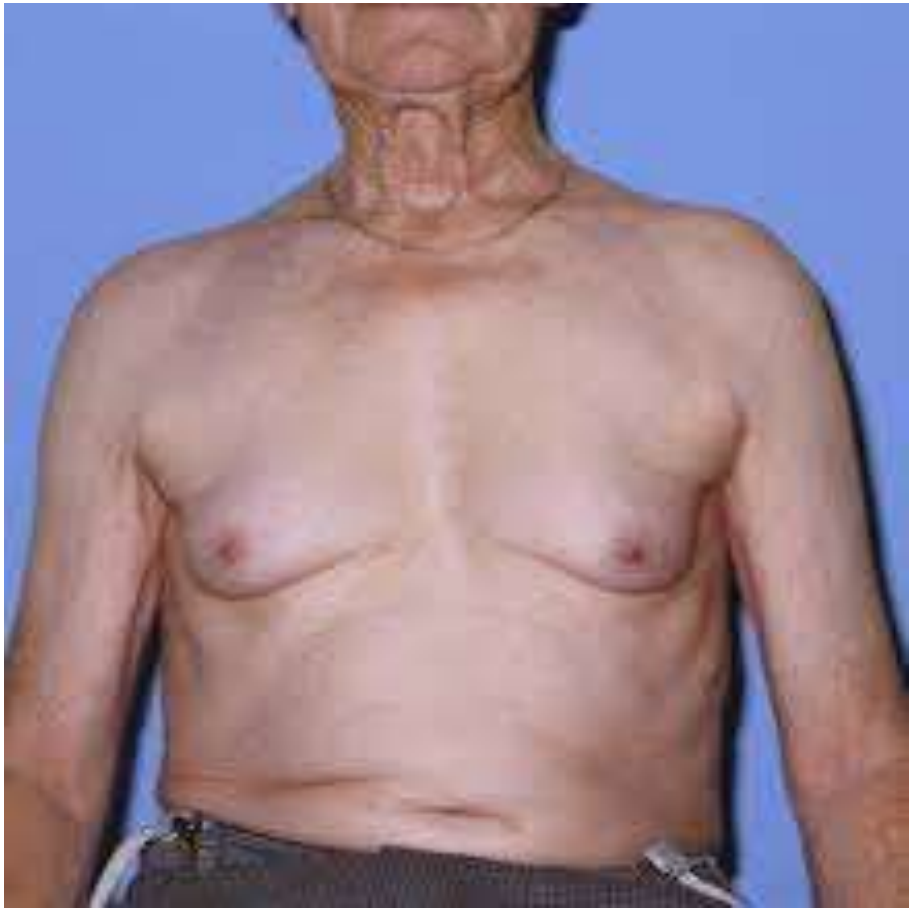
Q: Male with heart disease:

Q1: what is the abnormality in the picture?

- Gynecomastia

Q2: What drugs is the patient taking that might cause this?

- Spironolactone
- Digoxin

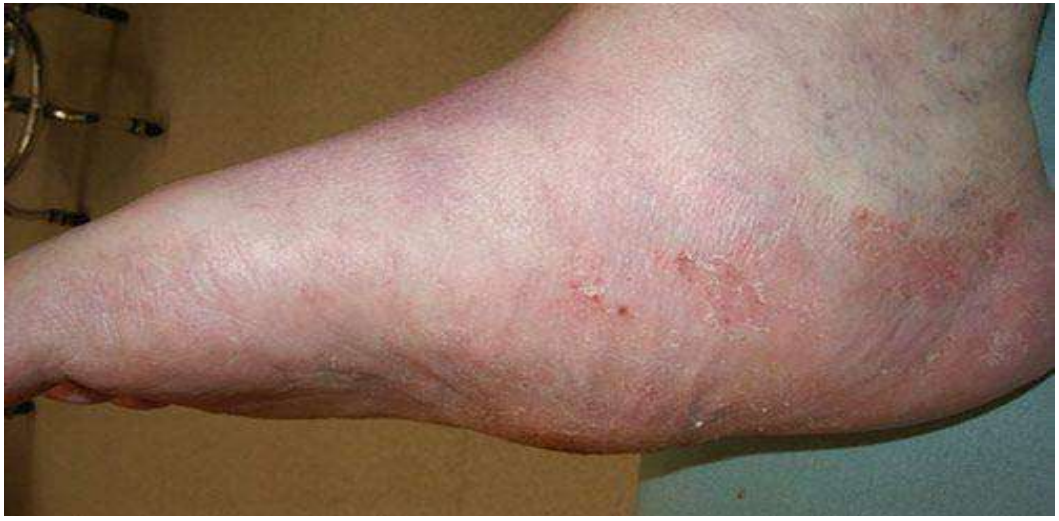


DRUGS CAUSING GYNECOMASTIA

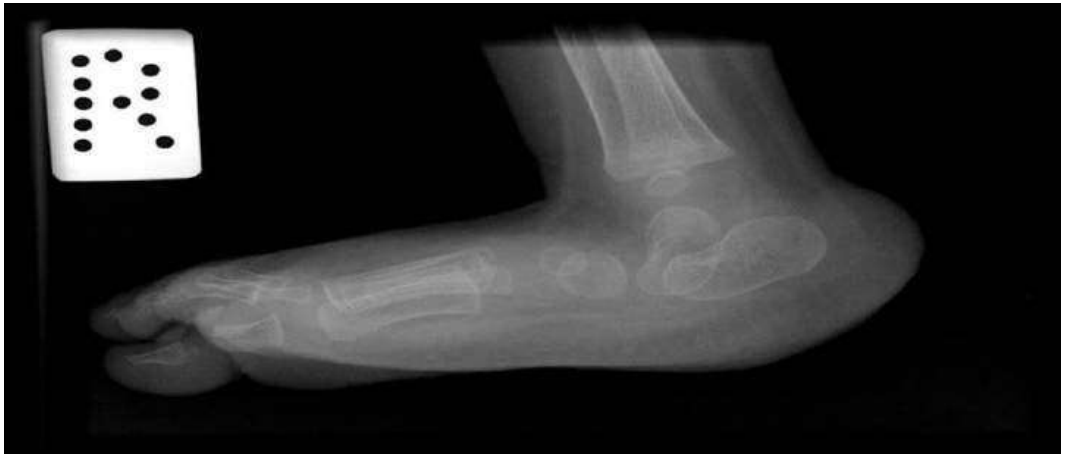
Mnemonic: '**DISCKO**'

- Digoxin
- Isoniazid
- Spironolactone
- Cimetidine
- Ketoconazole
- Oestrogen

Charcot foot

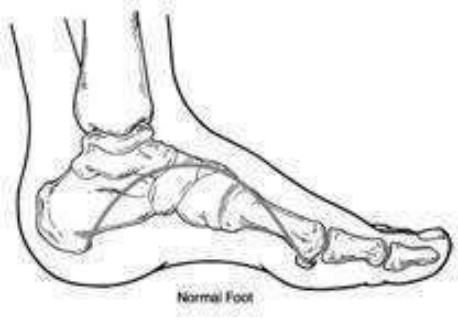


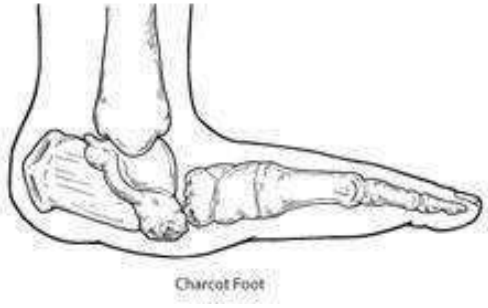
•Rocker-bottom appearance.



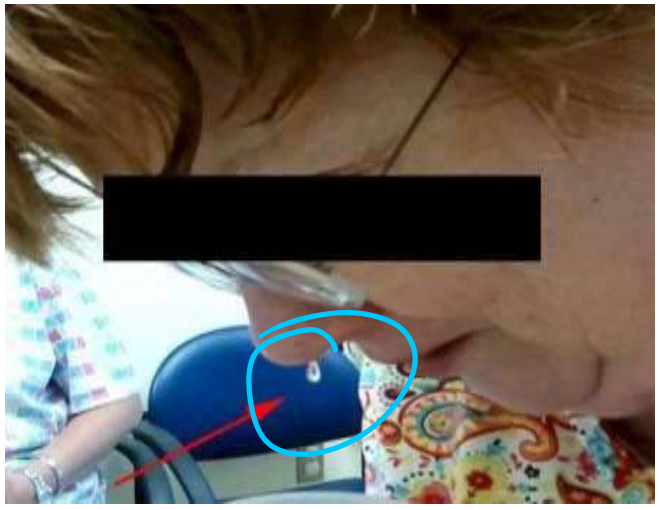
•Develops as a result of <u>neuropathy</u> such as in diabetic pts.

• <u>ttt :</u> immobilization/ custom shoes & bracing.

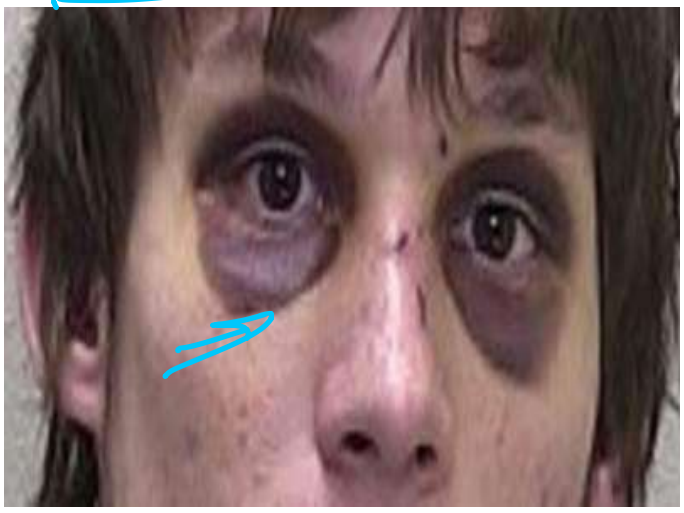




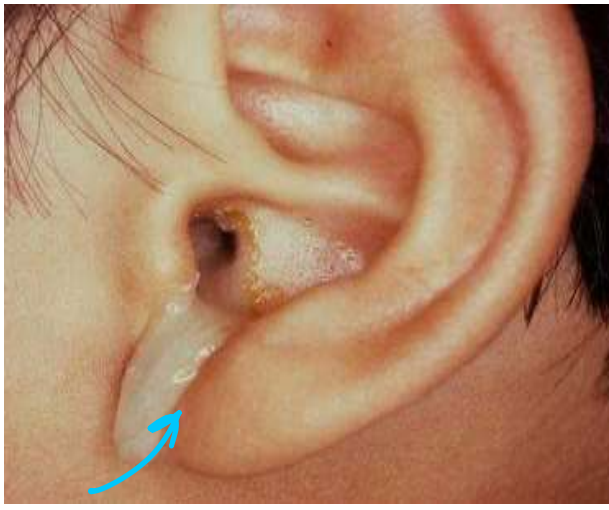
signs of basilar skull fracture



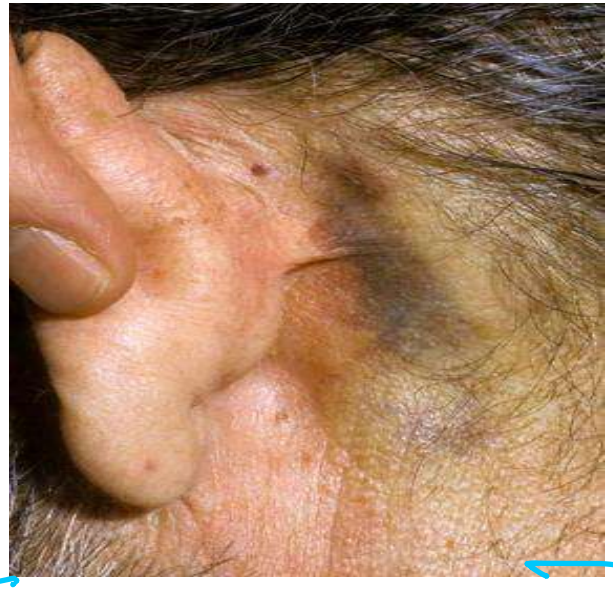
Clear rhinorrhea



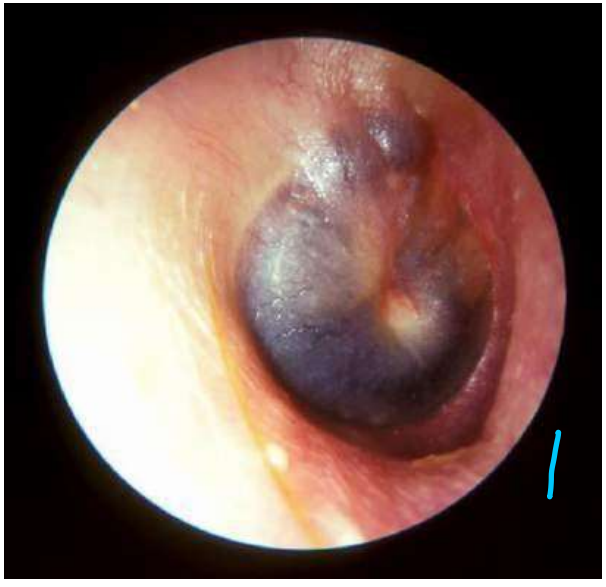
raccoon eyes



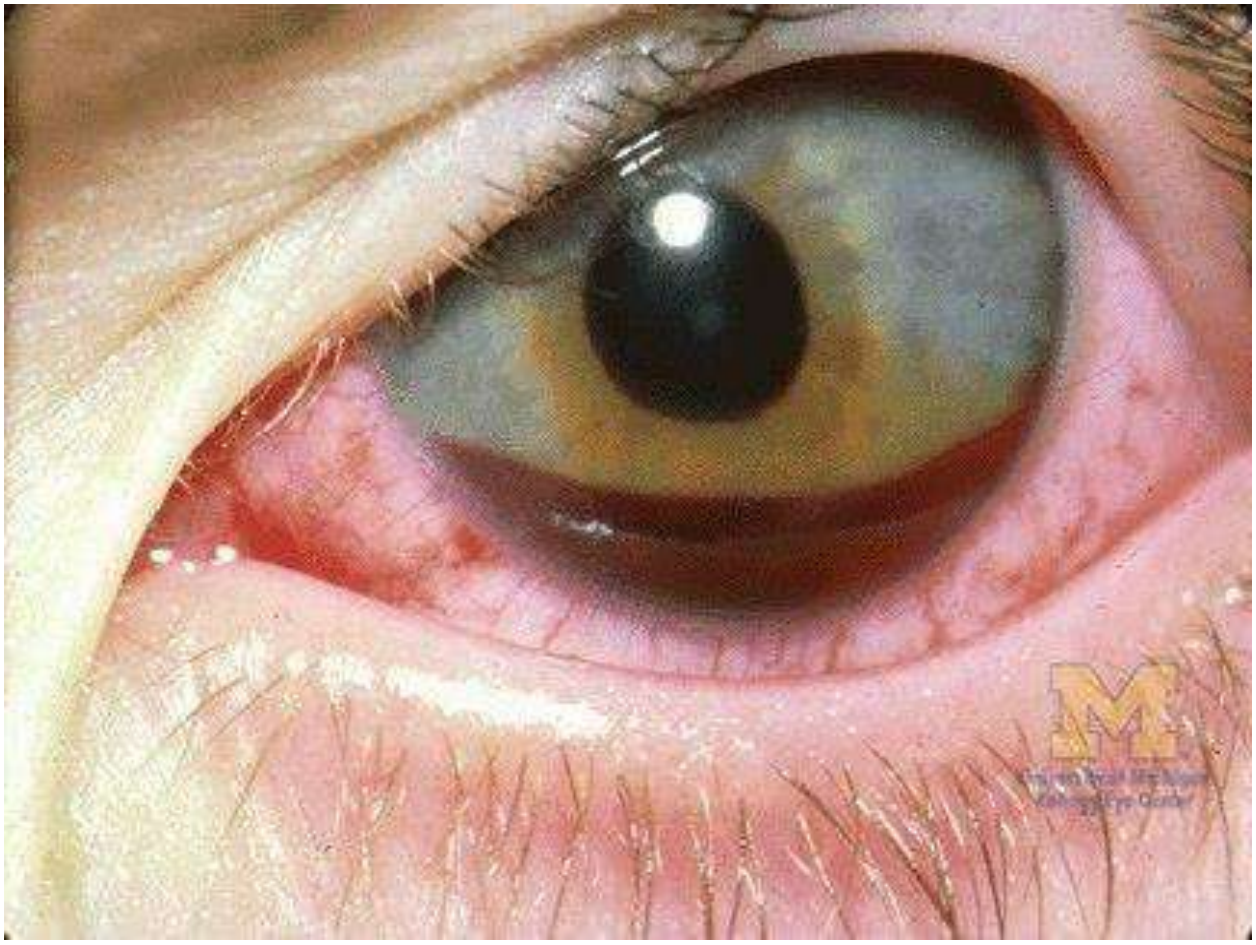
otorrhea



battle's sign (ecchymosis behind the ear)



hemotympanum



Hyphema: blood in the anterior chamber of the eye

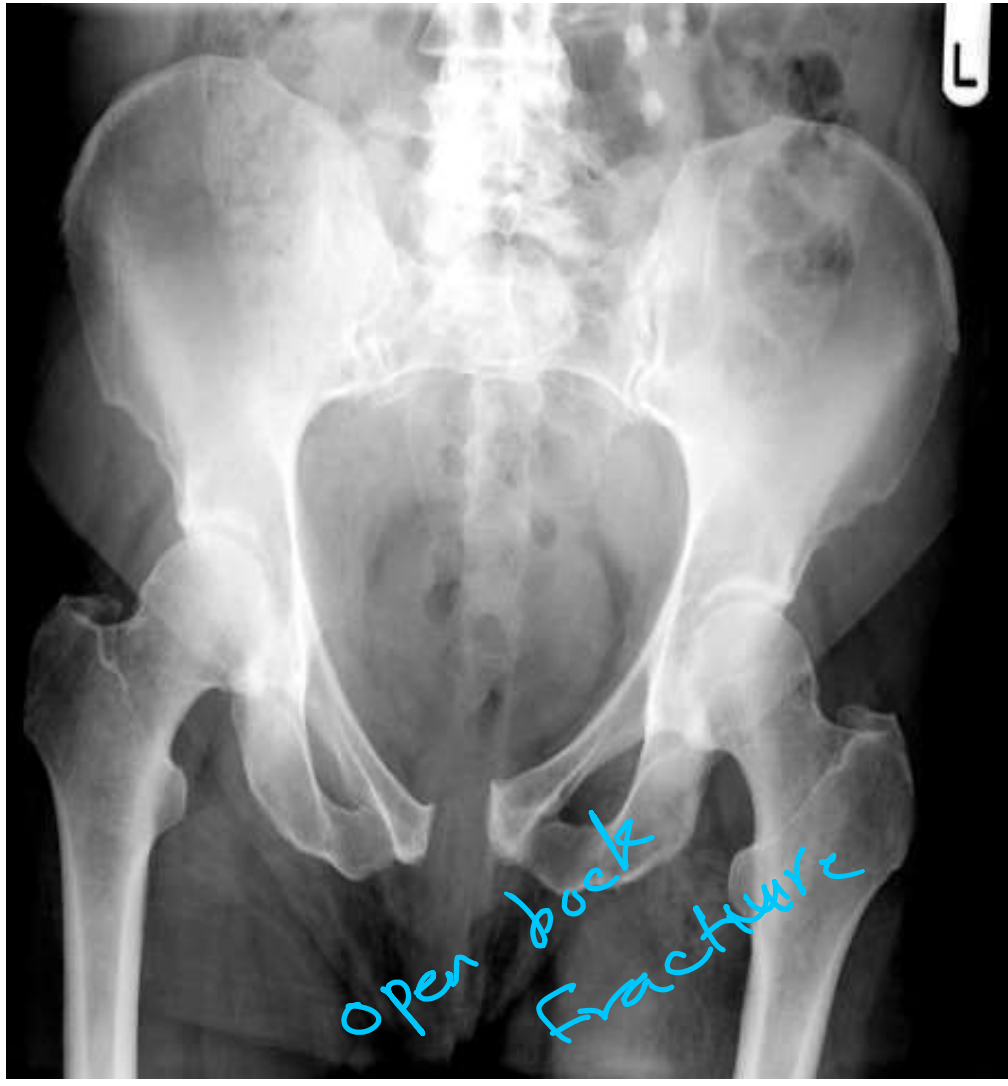
Q: This is pelvic x-ray of a patient post RTA:

Q1: What is the pathology?

- Pelvic fracture

Q2: What is the most serious complication?

- Bleeding (Femoral artery)



Question: about post-operative fever:

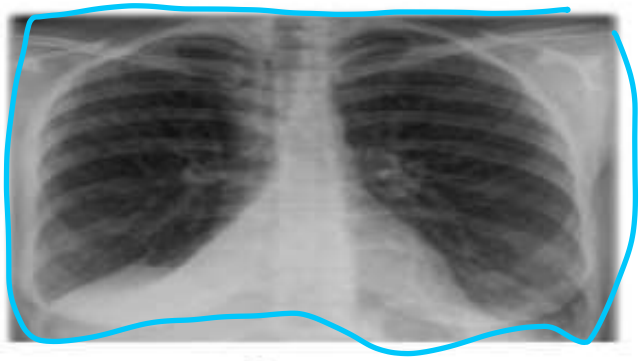
1. Lung Atelectasis
2. ECG change MI
3. UTI
4. wound surgical site infection
5. drugs

Question A: which of the following picture are consider as a source of fever after 1-3 days?

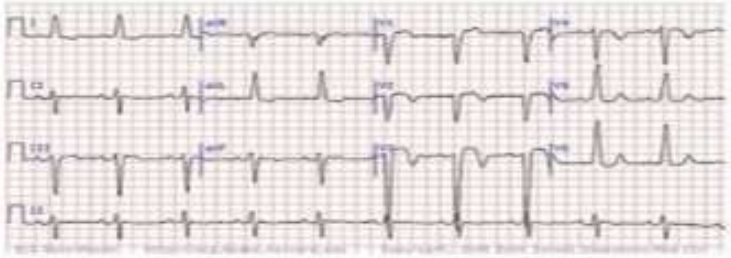
-Atelectasis (1)

Question B: which of the following picture are consider as a source of fever after 5-7 days?

-Wound infection (4)

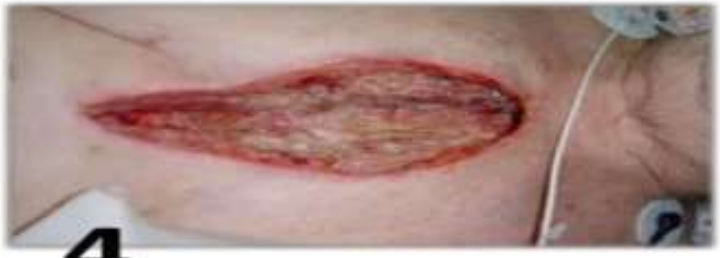


1



2

3



4

5

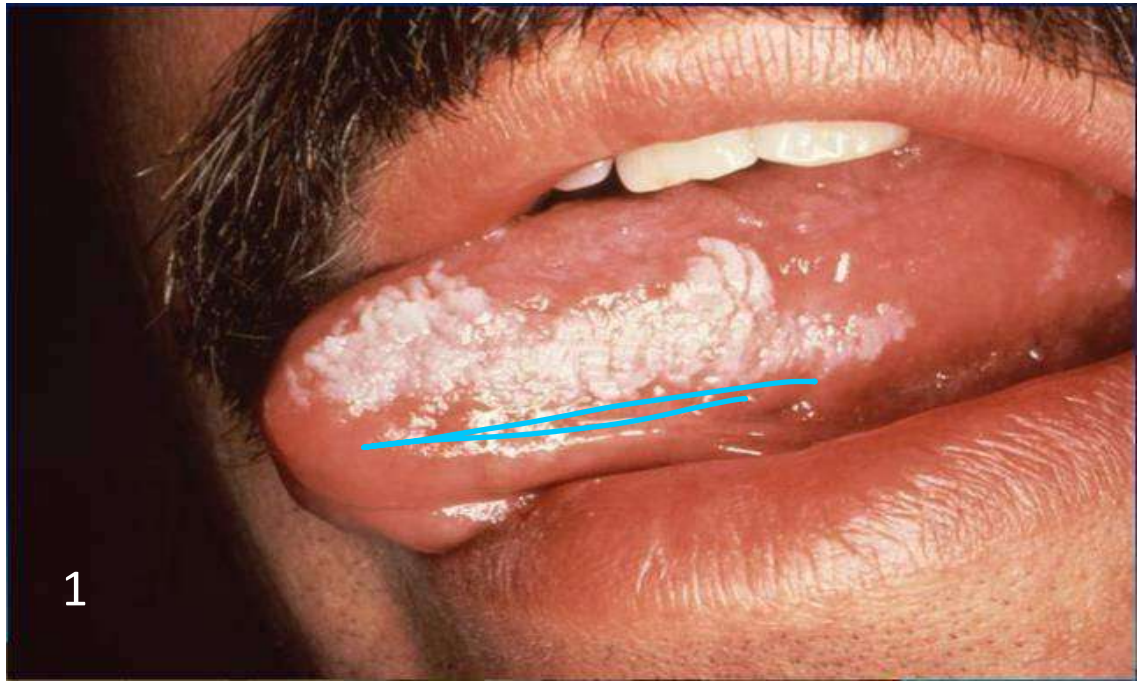
مهم جداً حكاية وخلاص

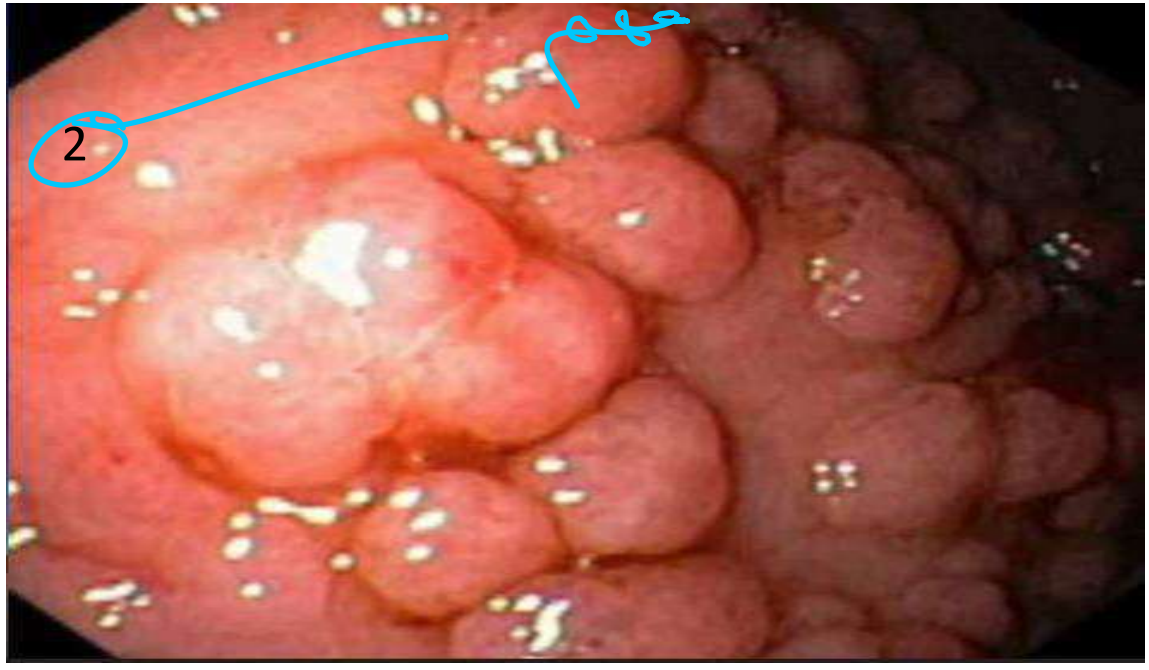
Category	Day	Description
Wind	POD 1-2	the lungs, i.e. pneumonia, aspiration, and pulmonary embolism; atelectasis has been commonly cited as a cause of post-operative fever, but supporting evidence is lacking[2][3]
Water	POD 3-5	urinary tract infection, possibly catheter-associated (if a urinary catheter was inserted during surgery or remains in place currently i.e. Foley catheter)
Wound	POD 5-7	infection of the surgical incision(s), either superficial or deep[4]
(W)abscess	POD 5-7	infection of an organ or space[5]
Walking (or VEINS pronounced like "Weins")	POD 5+ (risk may persist for months post-operatively)	deep vein thrombosis or pulmonary embolism
Wonder drugs or "What did we do?"	Anytime	drug fever or reaction to blood products, either a febrile non-hemolytic transfusion reaction or transfusion-related acute lung injury
Wing/Waterway	Anytime	bloodstream infection, phlebitis, or cellulitis related to intravenous lines, either central or peripheral

Pre-cancerous lesions

1. Leukoplakia of the tongue (15 % malignant transformation to SCC / DDx: Oral candidiasis, how to differentiate? Candidiasis scrapes off).
2. Colon in FAP.
3. Colon in HNPCC.
4. Thyroid gland in MENS II.
5. Breast in BRCA mutations.

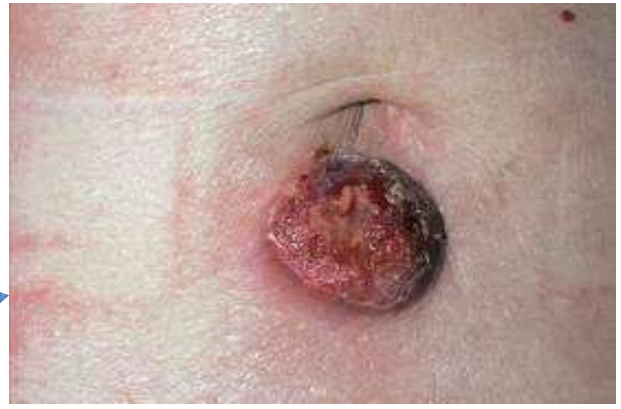
- Surgery has a role in 1ry cancer prevention.



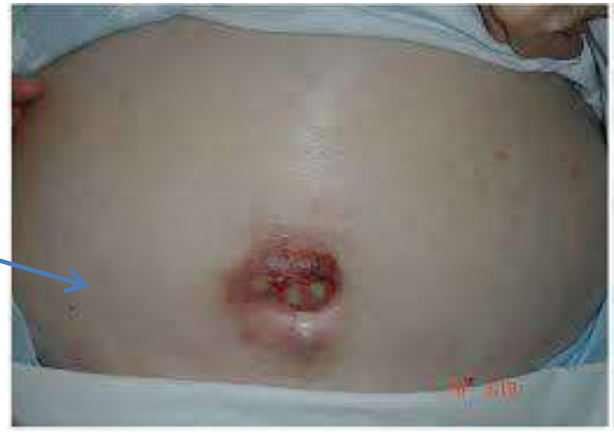


Classic physical findings that represent METS & incurable disease :

1) Virchows node enlargement (left supraclavicular nodes).



2) sister merry josephs nodules : infiltration of the umbilicus.



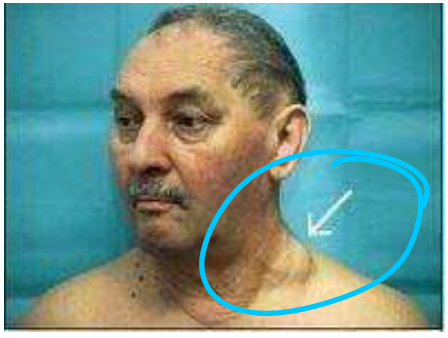
3) blumers shelf :fullness in the pelvic ,cul-de-sac(solid peritoneal deposit anterior to the rectum forming a shelf palpated on PR).

4) krukenburgs tumor :enlarged ovaries on pelvic examination (Metz to ovaries).

5) hepatosplenomegaly with ascites and jaundice.

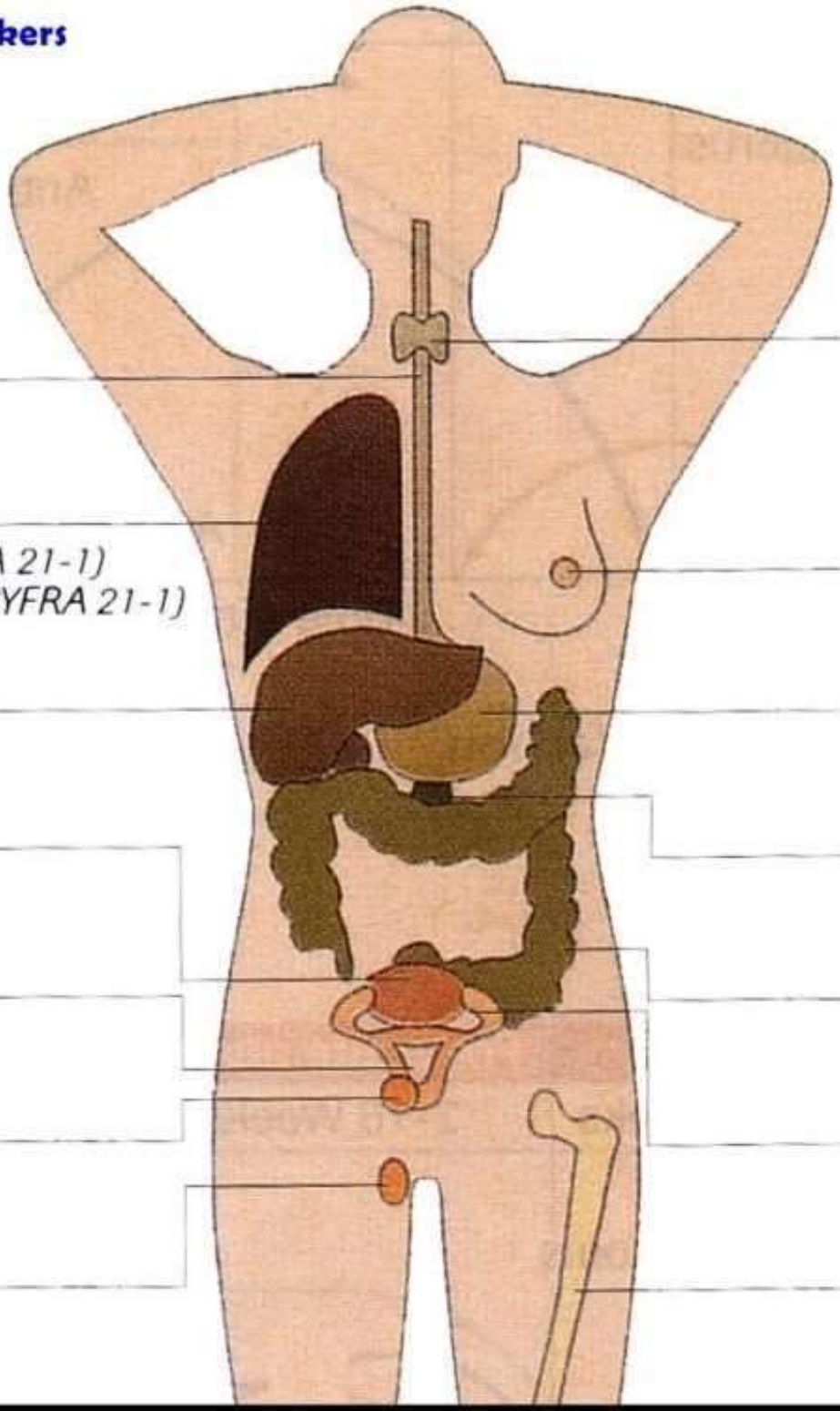
6) cachexia.

7) irishs node :left axillary adenopathy.



Virchow's node enlargement

Diagram of Tumour Markers



Oesophagus

(CEA, SCC)

Lung

parvicellular: NSE (CYFRA 21-1)
non-parvicellular: (CEA, CYFRA 21-1)

Liver/Biliary ducts

AFP, CA 19-9

Bladder

(CYFRA 21-1)

Uterus

SCC (CEA)

Prostate gland

PSA

Testes

AFP, HCG

Thyroid gland

Thyroglobulin, Calcitonin (C-cell, CEA)

Mamma

CA 15-3, CEA

Stomach

CA 72-4 (CEA)

Pancreas

CA 19-9 (CEA)

Colorectal

CEA (CA 19-9)

Ovaries

CA 125 (CA 72-4)

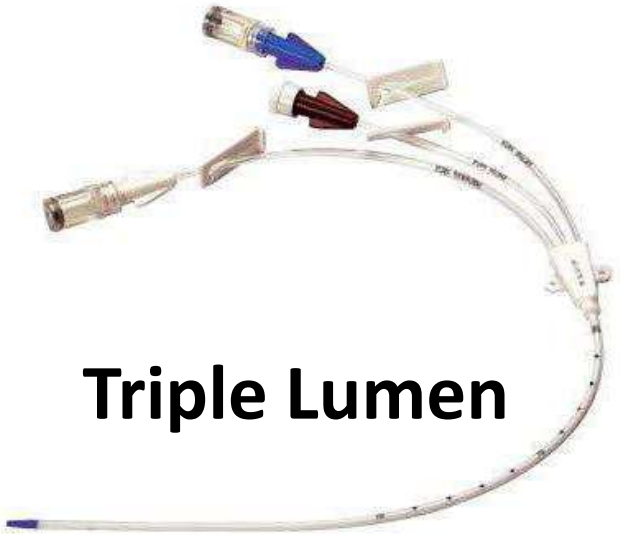
Multiple Myeloma

β_2-Microglobulin


Tools &
Instruments

Q1: What are the names of those tools?

- Central line and cannula



Triple Lumen

Q2: What is better to insert in a trauma patient & for fluid administration, why?

- Cannula, because it is easier to use, require less experience and time, it also deliver the largest volume of fluid

Double Lumen

Q3: The smallest cannula in diameter is?

- Purple

(Cannula's in the picture – Blue)

Q4: Cannula for large amount of fluid?

- Orange

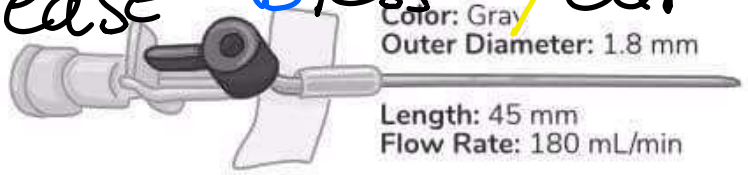
(cannula's in the picture - Green)

IV NEEDLE GAUGES SIZE CHART

14 GAUGE

Color: Orange
Outer Diameter: 2.1 mm
Length: 45 mm
Flow Rate: 240 mL/min

oh Great God, Please bless Your Prophet



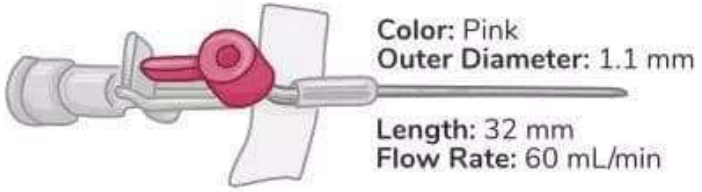
16 GAUGE

Color: Gray
Outer Diameter: 1.8 mm
Length: 45 mm
Flow Rate: 180 mL/min

large → small

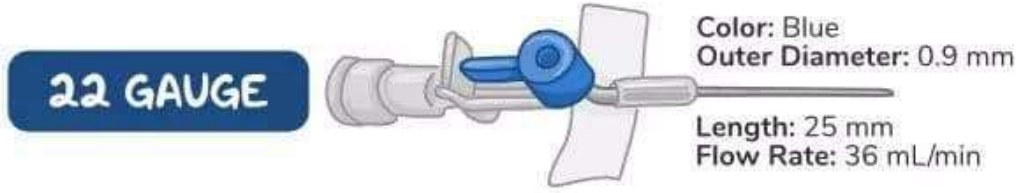
18 GAUGE

Color: Green
Outer Diameter: 1.3 mm
Length: 32 / 45 mm
Flow Rate: 90 mL/min



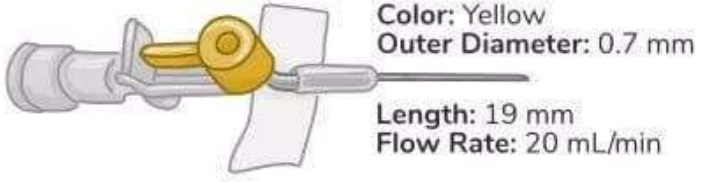
20 GAUGE

Color: Pink
Outer Diameter: 1.1 mm
Length: 32 mm
Flow Rate: 60 mL/min



22 GAUGE

Color: Blue
Outer Diameter: 0.9 mm
Length: 25 mm
Flow Rate: 36 mL/min



24 GAUGE

Color: Yellow
Outer Diameter: 0.7 mm
Length: 19 mm
Flow Rate: 20 mL/min

26 GAUGE

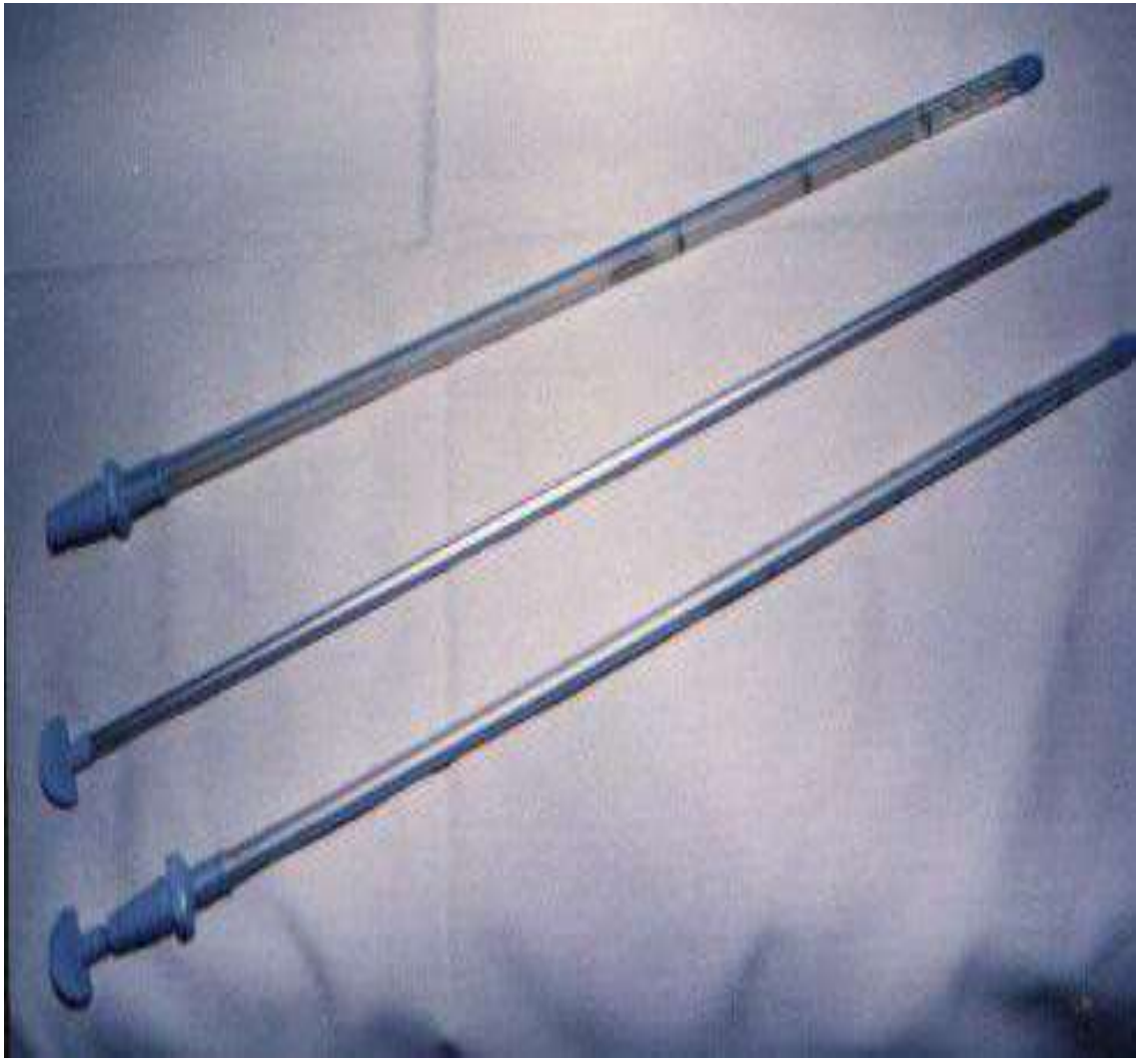
Color: Purple
Outer Diameter: 0.6 mm
Length: 19 mm
Flow Rate: 13 mL/min

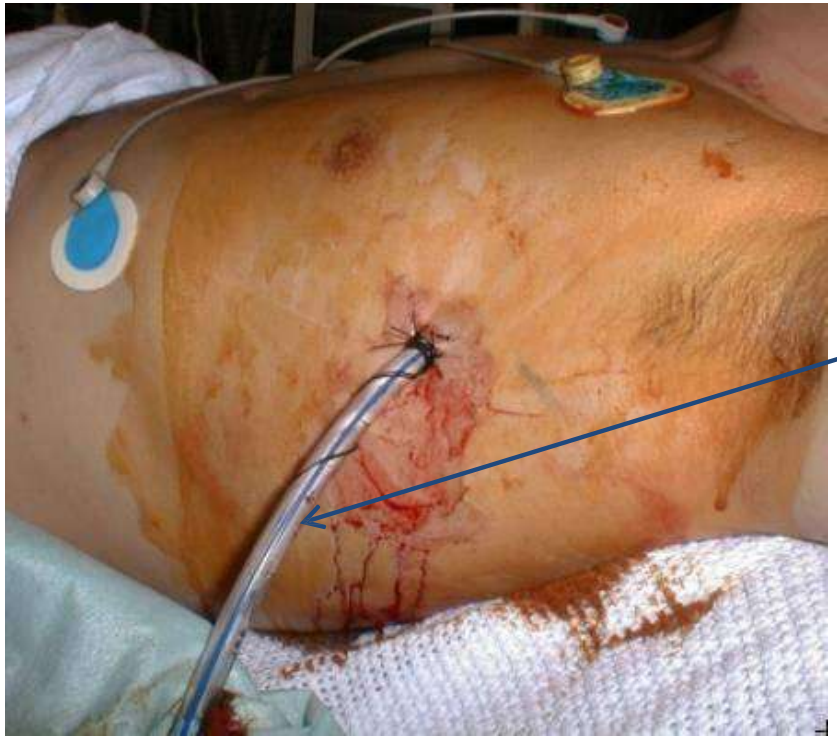
Q1: Name this tube?

- Chest tube

Q2: Give 4 indications?

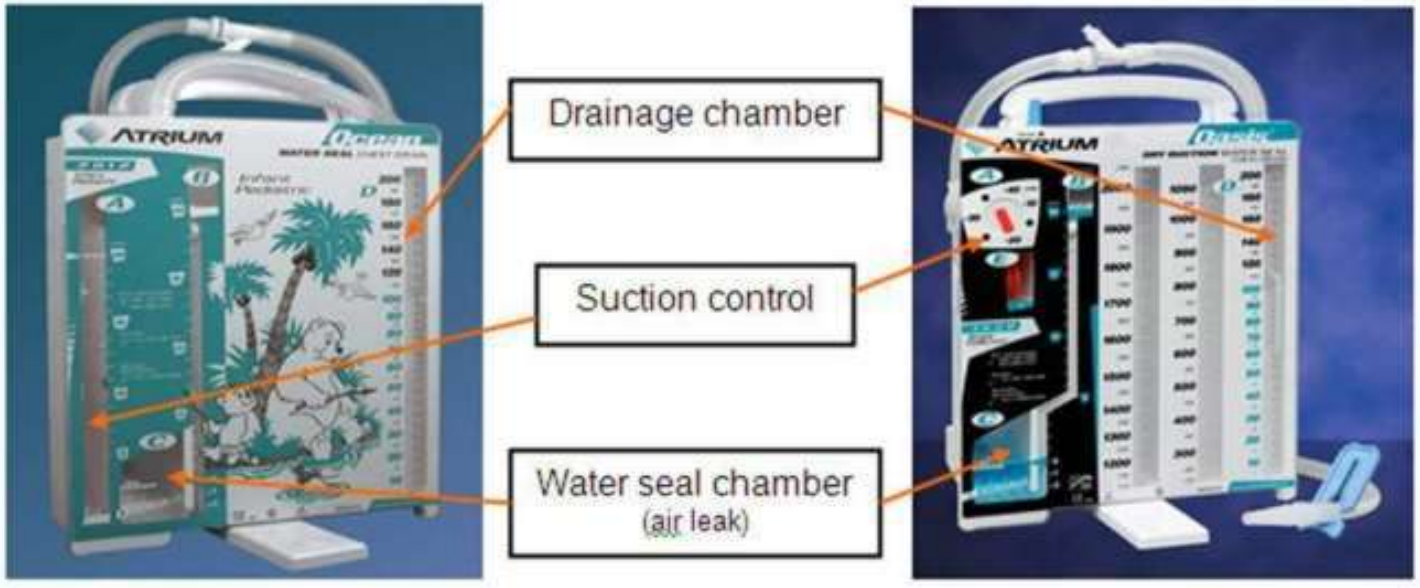
1) Hemothorax
2) Pneumothorax
3) Chylothorax
4) Empyma
5) Hydrothorax
6) Pleural Effusion
7) Post-op





Chest tube drain

Chest drain system



Q1: What is this device?

- Nasogastric tube

Q2: Give 3 indications?

1) Feeding
2) Decompression
3) Administration of medication
4) Bowel irrigation

Q3: The tip of it should reach?

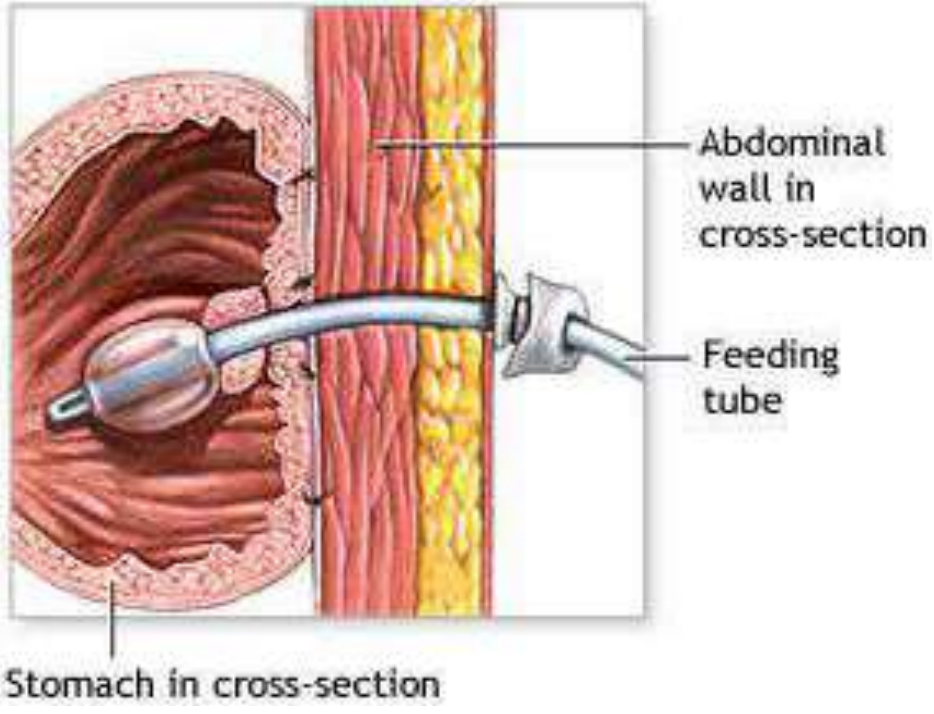
- Stomach body

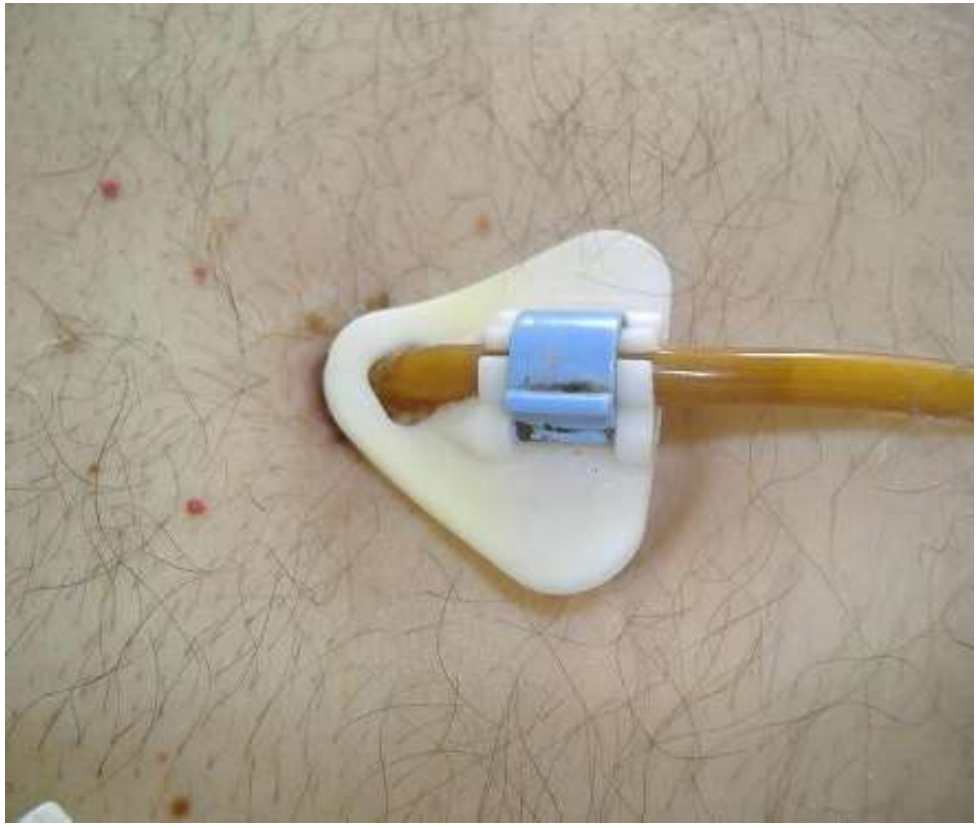
Q1: What is this?

- Gastric tube/G-tube/PEG tube/ Gastrestomy

Q2: What is the main indication for it?

- Feeding





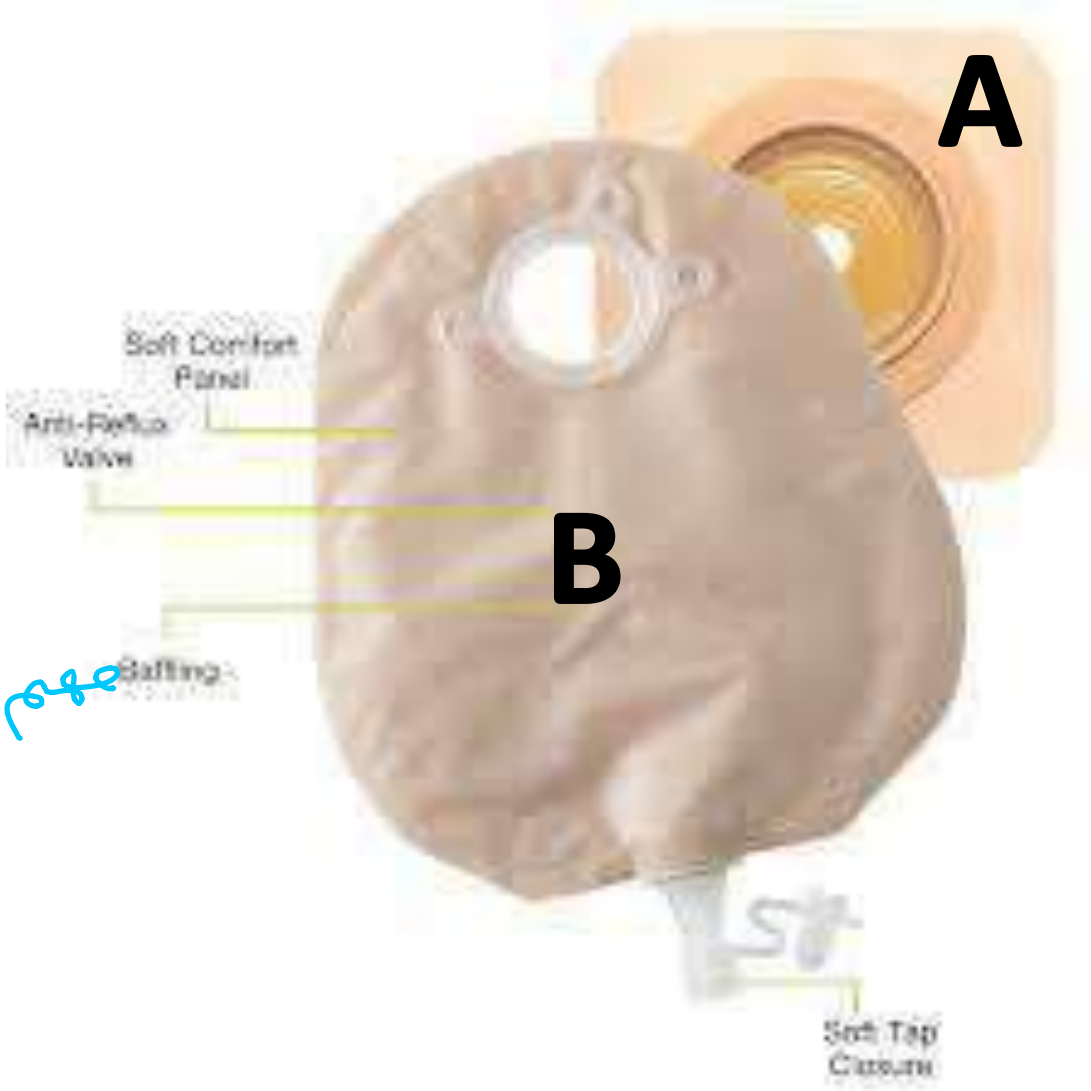
Q1: What is A,B?

A > Stroma base (Flange)

B > Stoma bag

Q2: Mention 3 indications?

- After proctocolectomy
- Imperforated anus
- Secondary healing
- Some said (colestomy, ileostomy, double barrel)



Q1: What is this?

- Tracheostomy

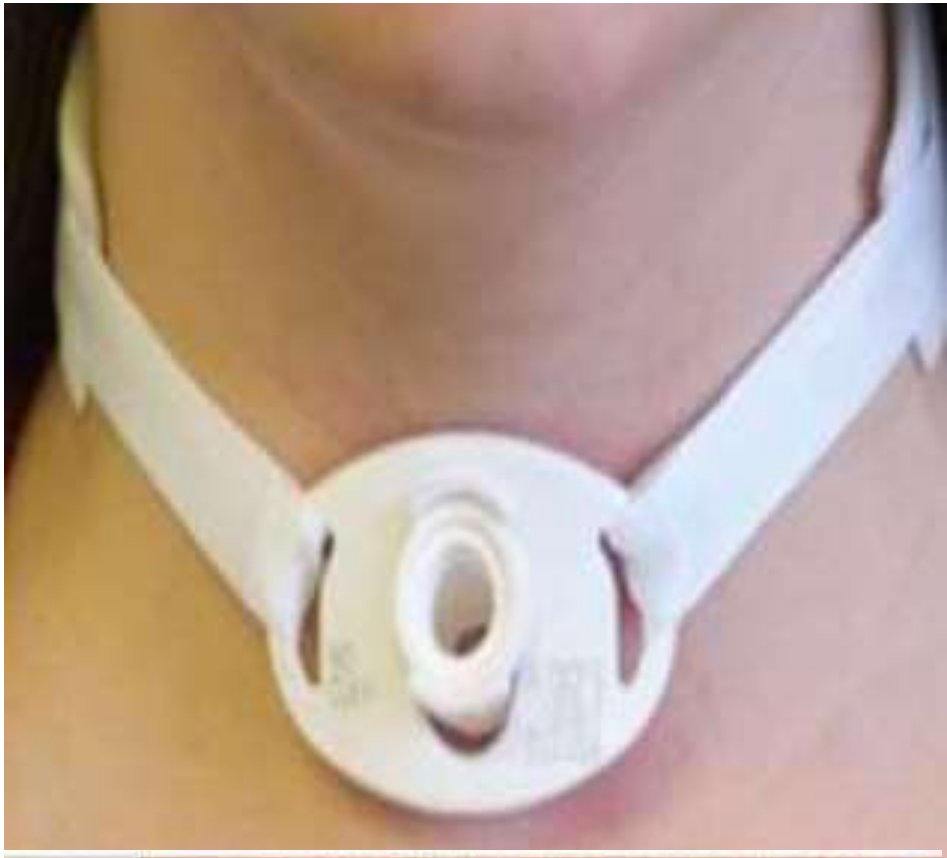
Q2: Mention 2 complications?

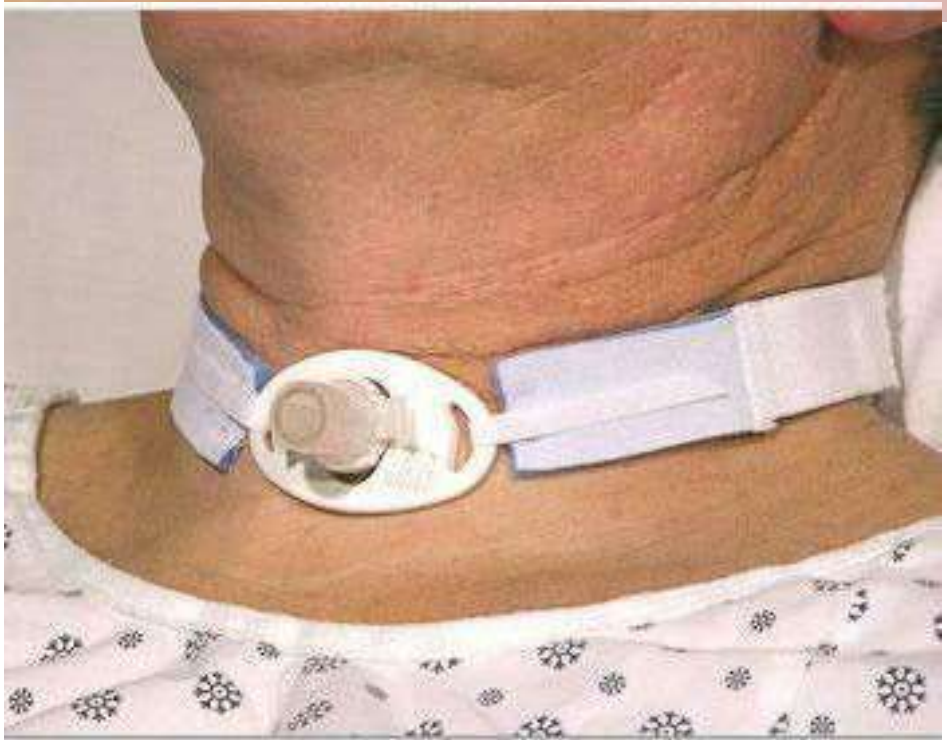
2BIP

1) Infection
2) Blockage (Obstruction)
3) Bleeding
4) Pneumothorax

Q3: Mention 2 indications?

1) Upper airway obstruction
2) Obtaining an airway in severe facial or neck trauma
3) Upper airway edema and copious secretions
4) Failure to wean from mechanical ventilation
5) Acute respiratory failure with need for prolonged mechanical ventilation (mc indication, 2/3 of all cases)



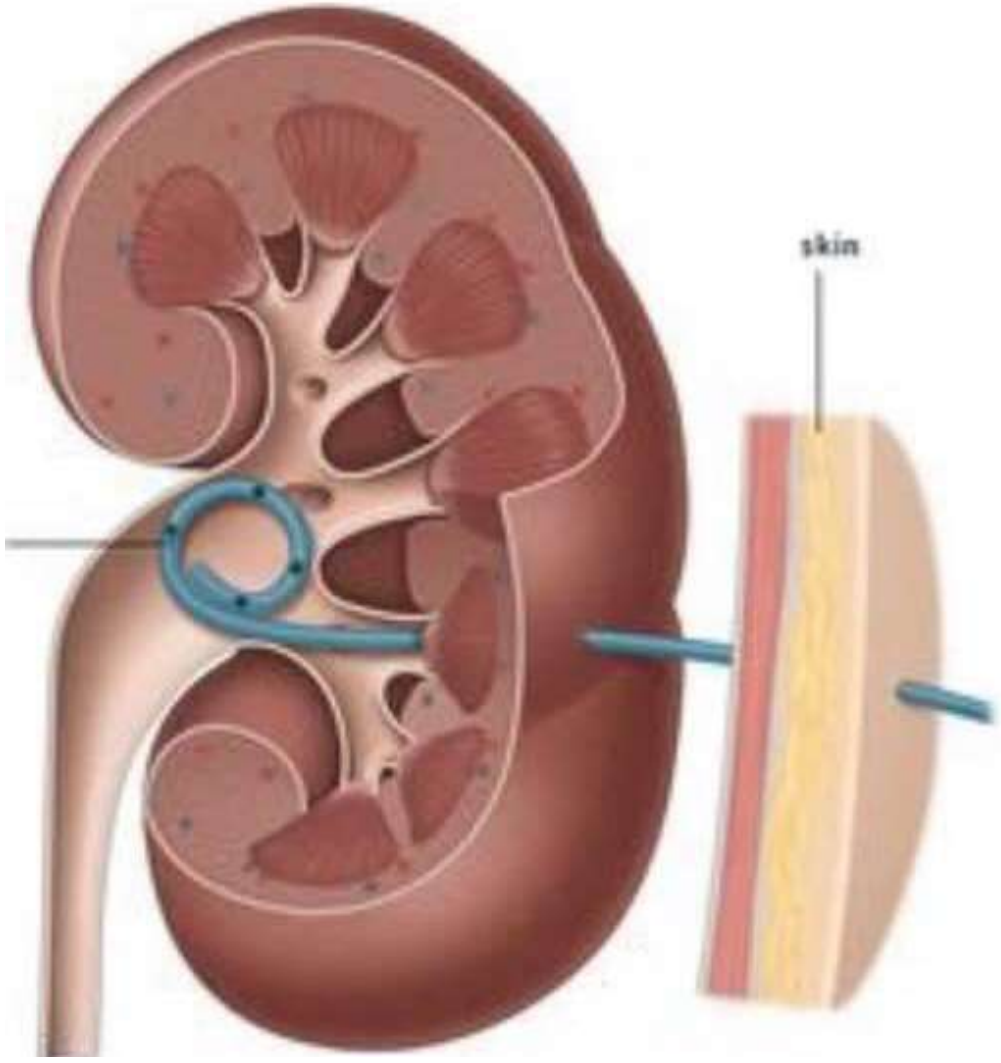


Q1: Name the tube?

- Nephrostomy tube

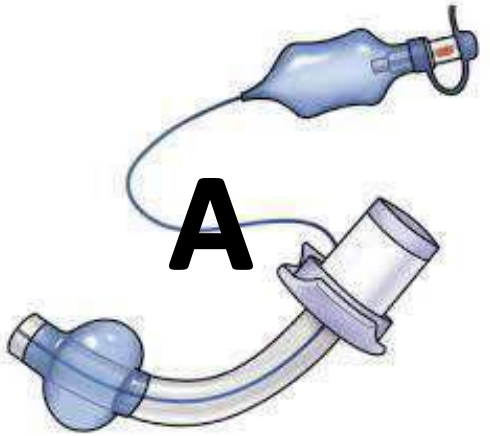
Q2: Write 2 indications?

1) Urinary obstruction secondary to calculi
2) Hemorrhagic cystitis



Q1: Which one is not used in primary survey?

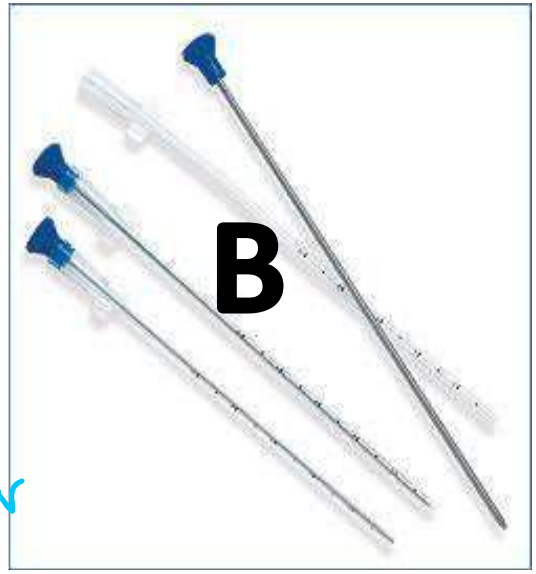
- C (Foley's Catheter)

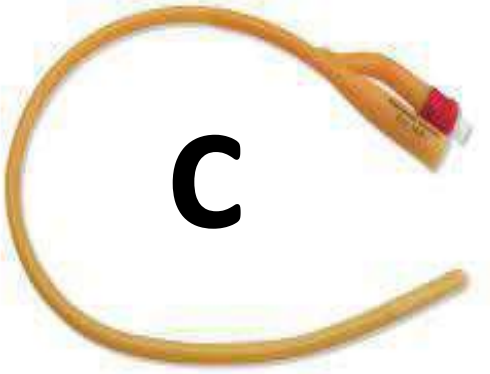


Q2: Which one is your 1st priority?

- D (Neck collar), some said (B)

the most important thing is keeping Airway open then the answer is A





Q1: What is the name of device?

- Foley's Catheter

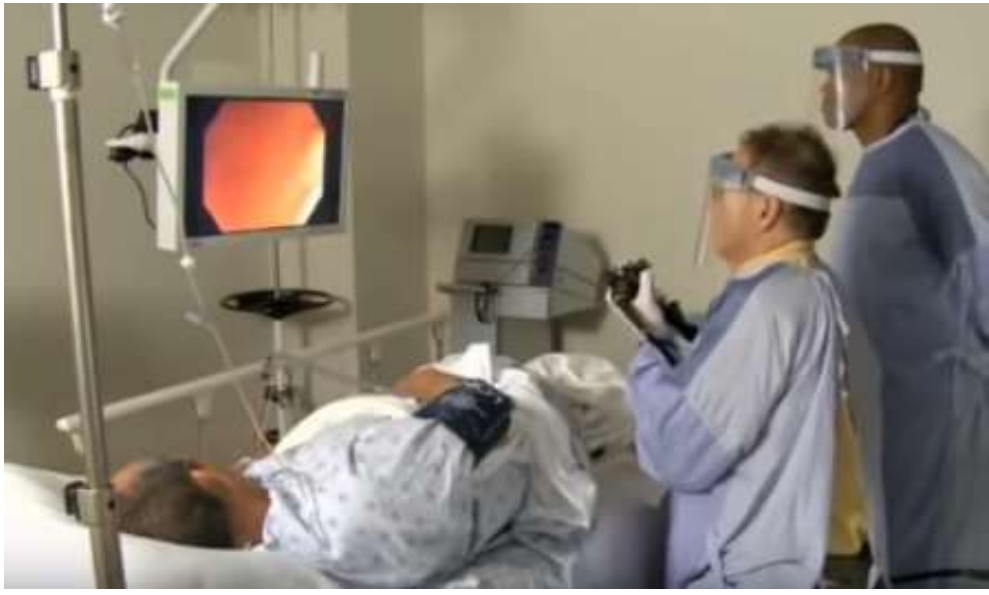
Q2: What is the unit used in measurement??

- French

Q1: What is this? Colonoscopy

Q2: Name 2 pathologic finding?

1) Angiodysplasia
2) Diverticulosis
3) Colon tumor
4) Polyps, masses



Q3: Name 2 therapeutic procedures done with it?

1) Laser Ablation
2) Polyps Resection

Q1: What is this device?

- Pulse Oxymeter

Q2: What does it calculate?

- O2 Saturation
- Pulse Rate (HR)

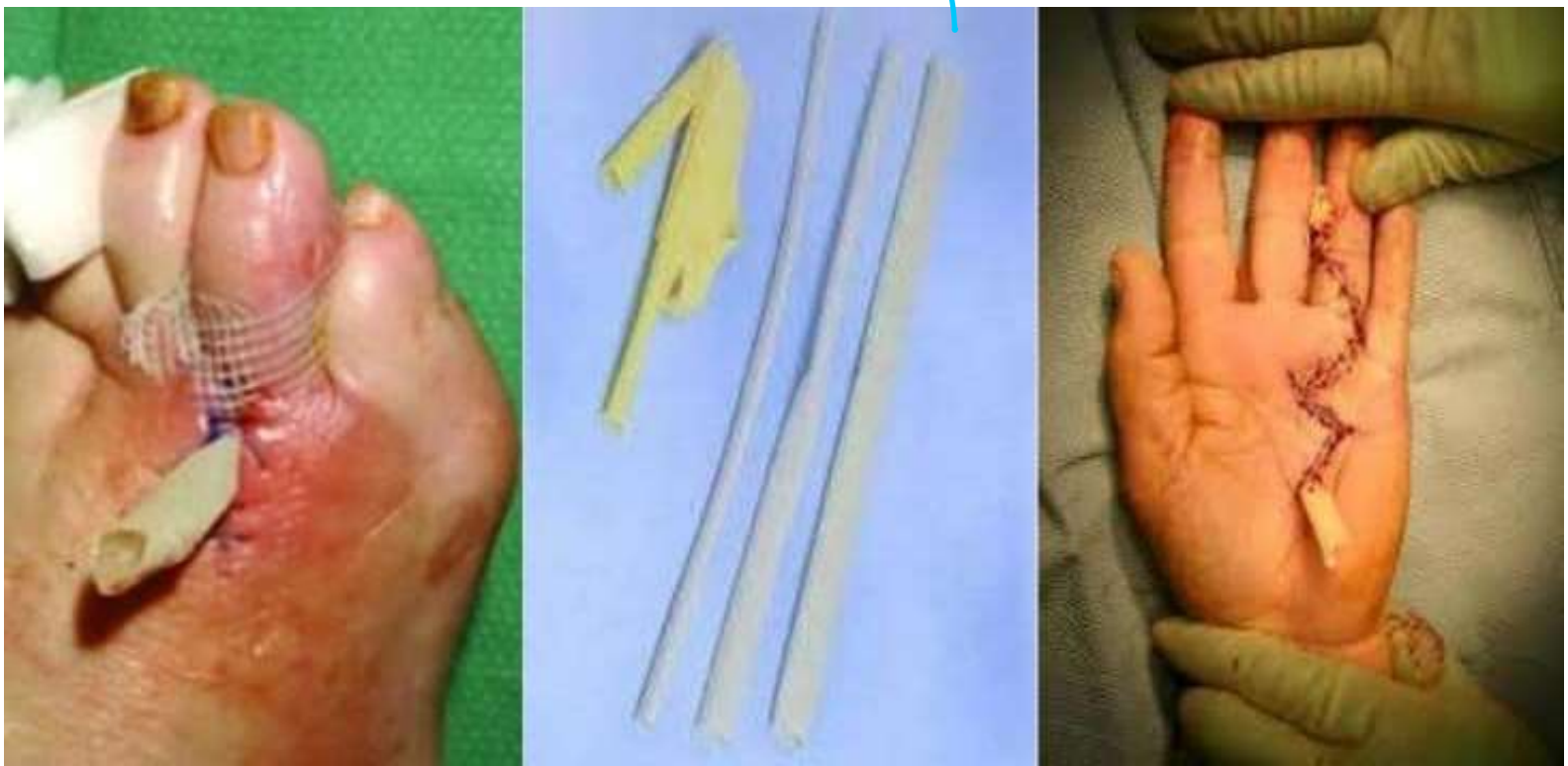
Q1: What is the name of the drain?

- Penrose

Q2: Type of the drain?

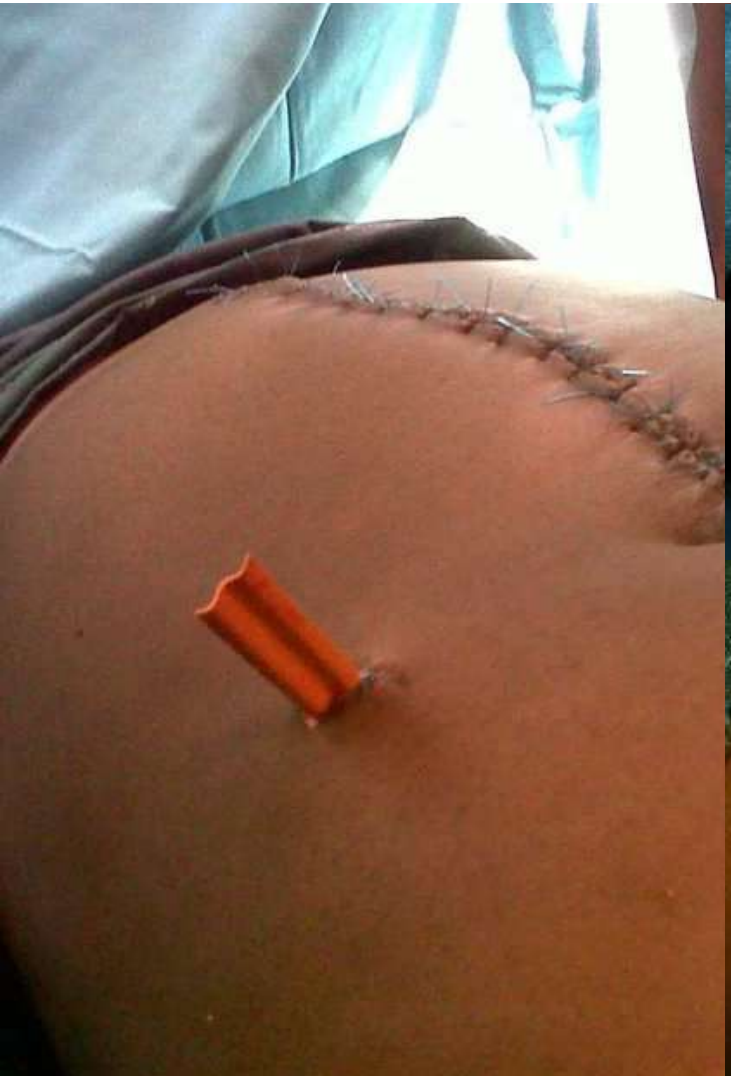
- Open drain

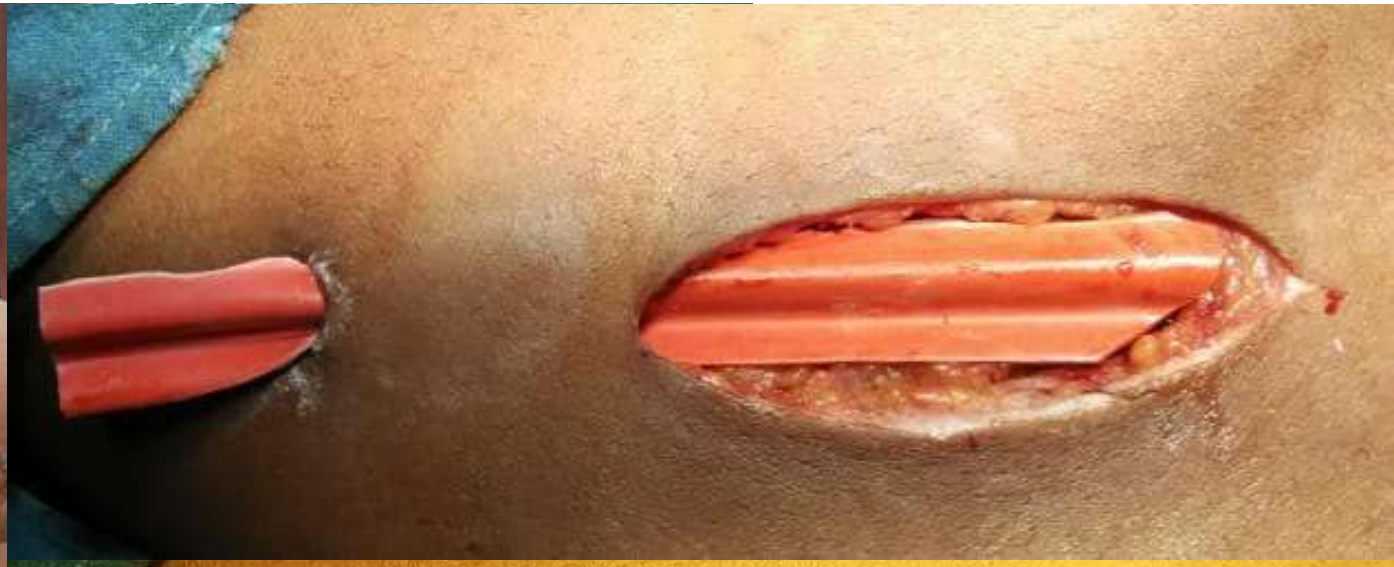
as pasta



Q: Name of the drain?

- Corrugated Drain





T-tube

used for post operative drainage of common bile duct.

Redivac drain

Drains can be:

Open or closed

Active or passive:

Q1: What is this device?

Intermittent pneumatic compression technique (Inflatable leg sleeves).

Q2: Uses?

To prevent DVT.

Q1: what is this?

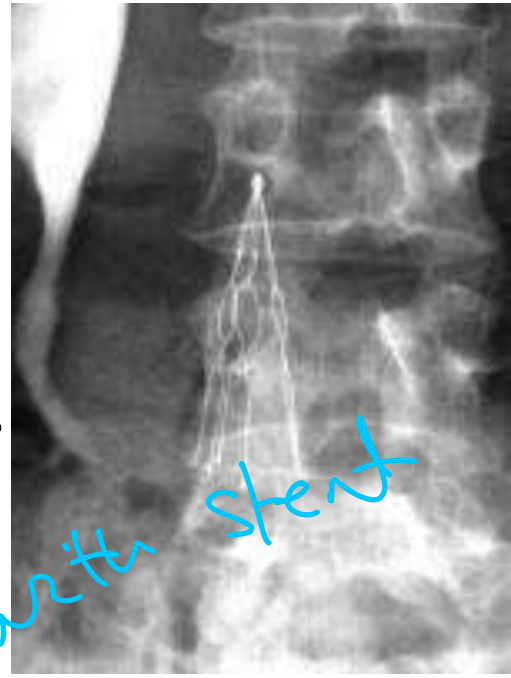
incentive spirometer

Q2: Why do we use it?

used after surgery to prevent atelectasis .
(used while inspiration not expiration).

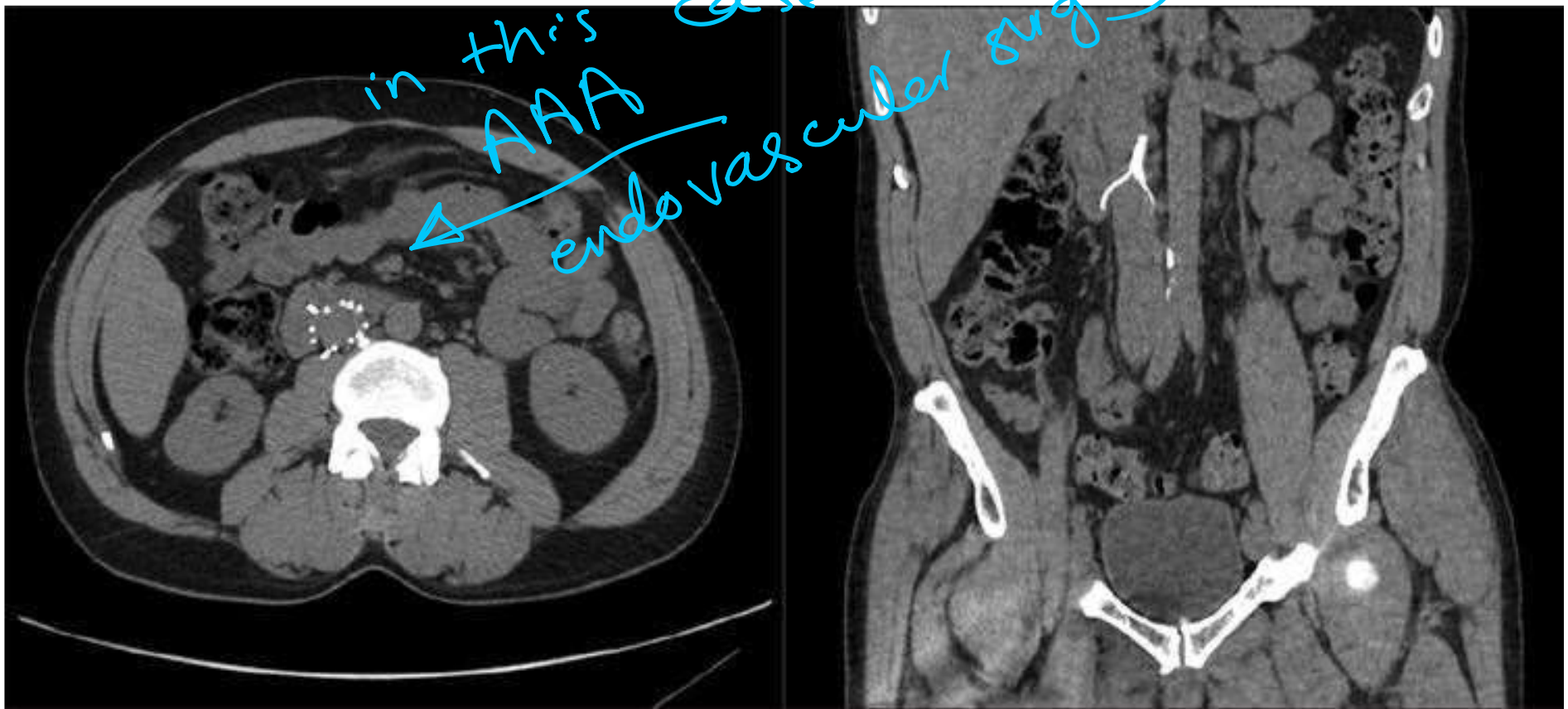
Q1: Name of device seen in the CT?

- Inferior vena cava filter



Q2: Give 1 indication for it?

1) Proven VTE with contraindication for anticoagulation.
2) Proven VTE with complications of anticoagulation.
3) Recurrent VTE despite adequate anticoagulation.



Q1: Name of device?

- Central venous catheter (CVC)

Q2: Where do you insert it?

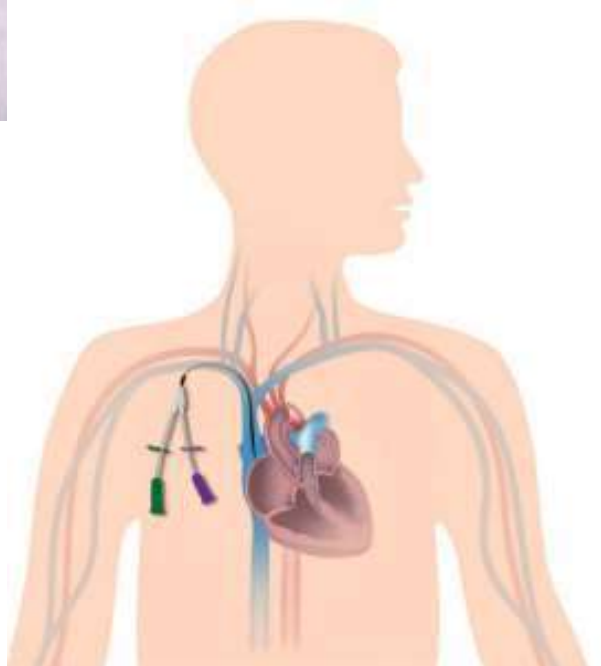
- Subclavian vein
- Internal jugular vein

Q3: Mention 2 indications?

1) Total parenteral nutrition (TPN)
2) Hemodialysis
3) Chemotherapy

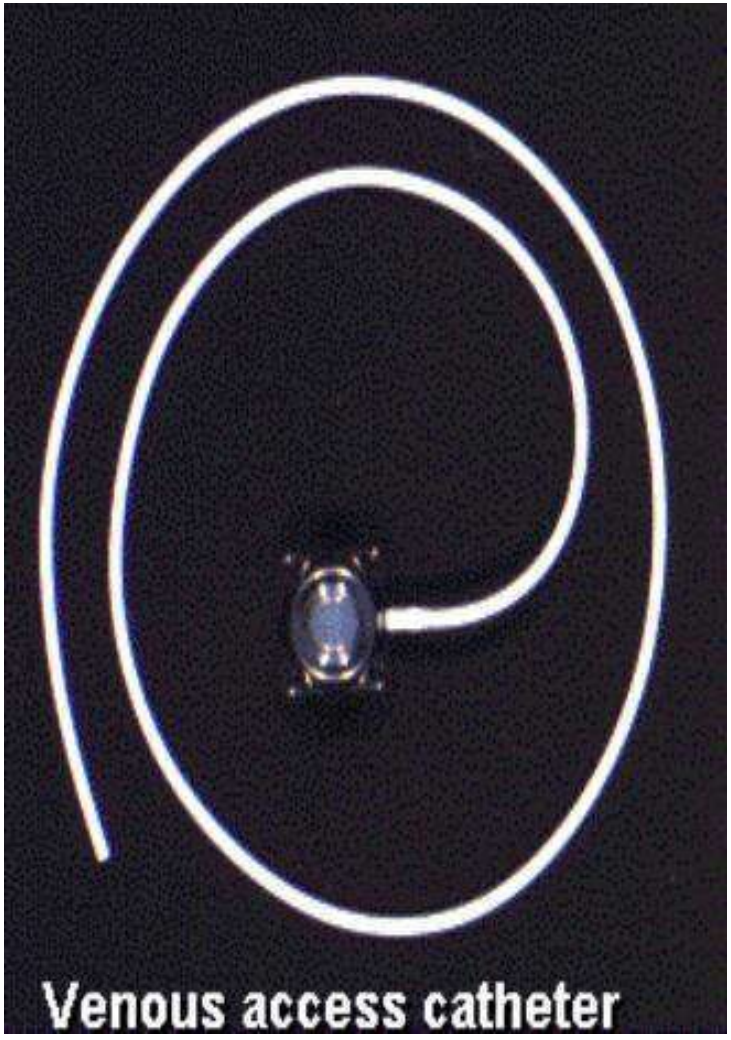
Q4: Mention 2 complications?

Pneumothorax, Hemothorax, Recurrent laryngeal nerve injury, Arterial or Venous injury, Arterial access instead of venous, Hematoma, Infection, Thrombosis and occlusion of the line…etc



Venous access catheter

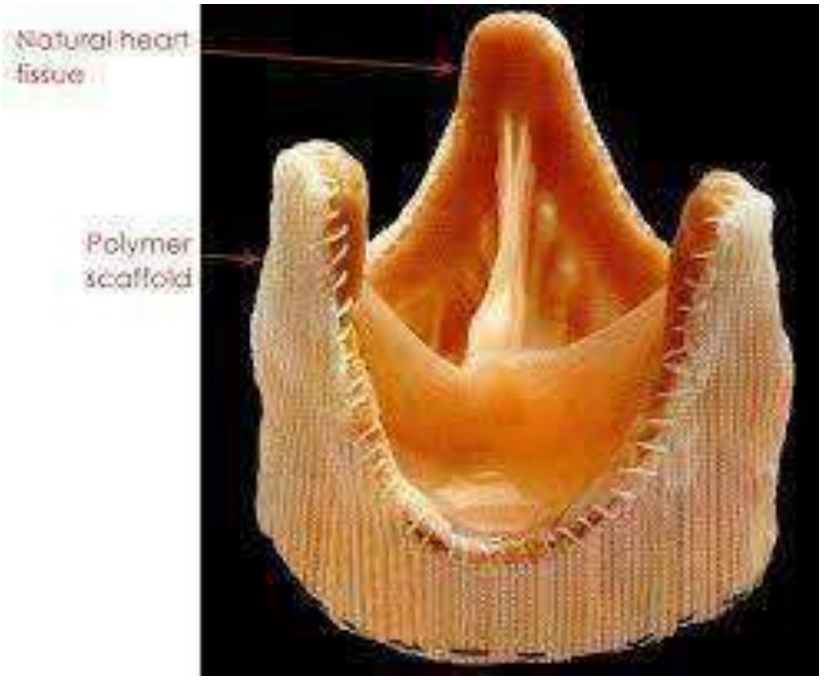
- Small, flexible hollow tube.
- Surgically placed into a large vein.
- Can be left for several months.
- Used for repeated infusions of chemotherapy drugs.



Biological heart valves

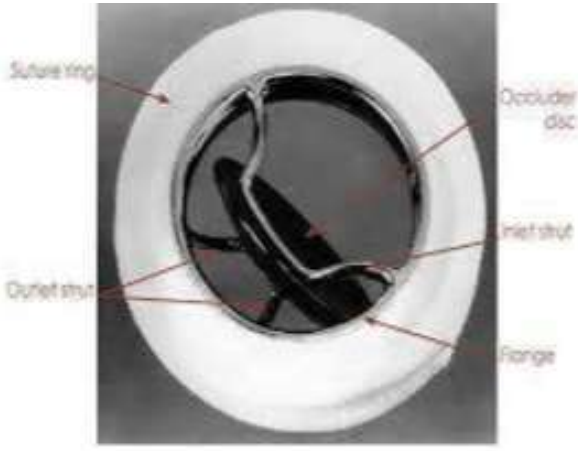
Used in the following cases:

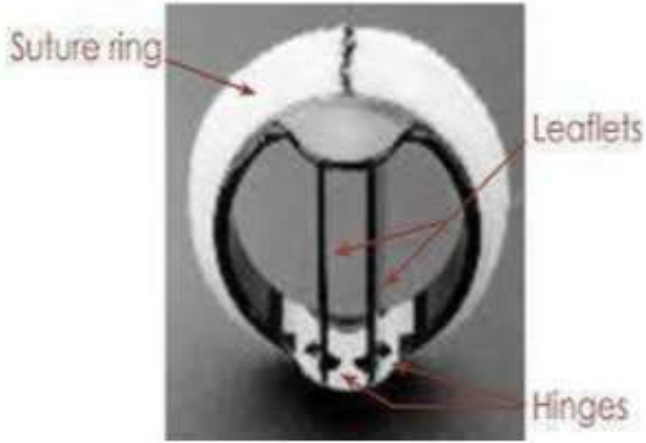
- Age > 60
- Previous thrombosed mechanical valve.
- Limited life expectancy.
- If Coagulation is contraindicated.
- Young women wishing to get pregnant.



Mechanical prosthetic valves

Used if the age is < 60 + long life expectancy.

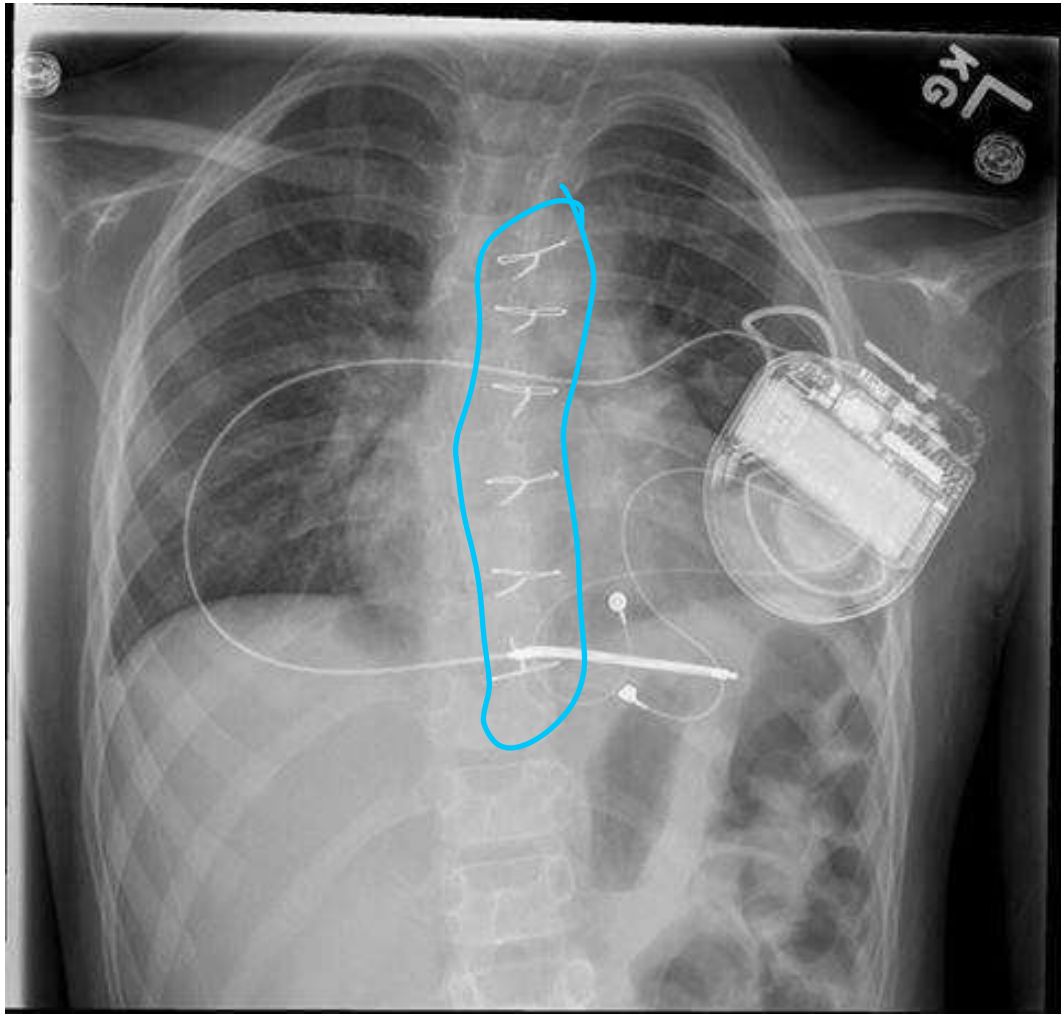




Q: what can you see in this chest X-Ray ?

sternal wires in the midline (indicate that patient U/W sternotomy).

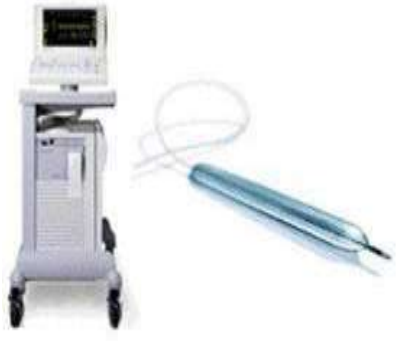
pacemaker.

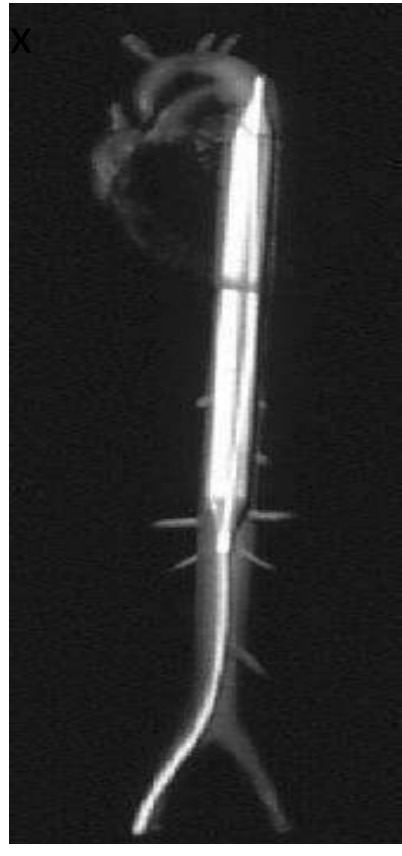


Intra-aortic balloon pump (IABP) is a mechanical device that increases myocardial oxygen perfusion and increasing CO. These actions combine to decrease myocardial oxygen demand and increase myocardial oxygen supply.

Notes :

- the polyethylene balloon has a radiopaque tip.
- the balloon inflates during diastole and deflates during systole .
- indications :Cardiogenic shock post-MI , (CABG) ,post cardiothoracic surgery, unstable angina .
- most important complication is lower limb ischemia, we have to check the pulse and perfusion .
- most important contraindication: aortic valve insufficiency (AR) ,aneurysm .





GENERAL SURGERY & OTHERS

Hashemite University
H · U · M
Medical School Committee

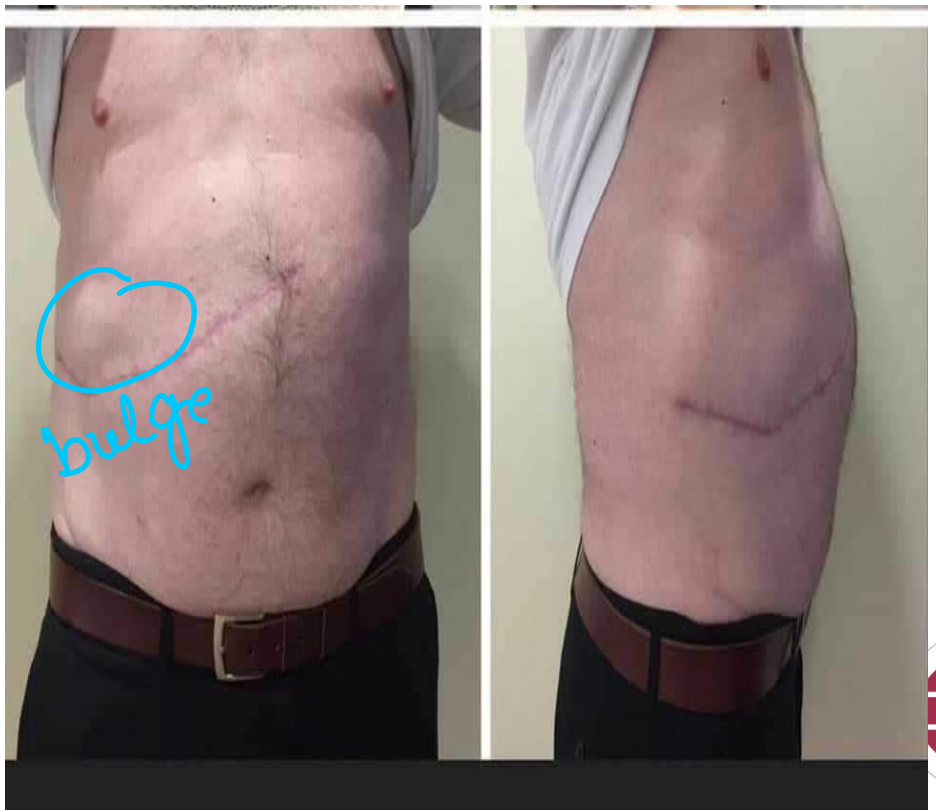
• QUESTION

Yaqeen 2025

Patient has punching in his abdomen and a history of laparotomy:

1.What is the diagnosis?

2.What can it contain?



Hashemite University
H • U • M
Medical School Committee

ANSWER.

1. incisional hernia (notice the surgical scar)
2. content of herina may be : bowel , sac , omentum , ovary

• QUESTION

Yaqeen 2025

محمود يونس ٢

A. Name this finding:

B. Mention one complication.

Hashemite University
H • U • M
Medical School Committee

• ANSWER

A. Ileostomy end colostomy [LLQ + no skin discoloration]

B. Prolapse - infection

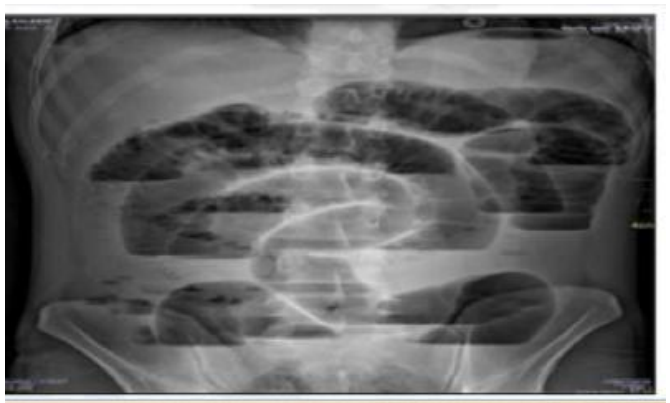
• QUESTION

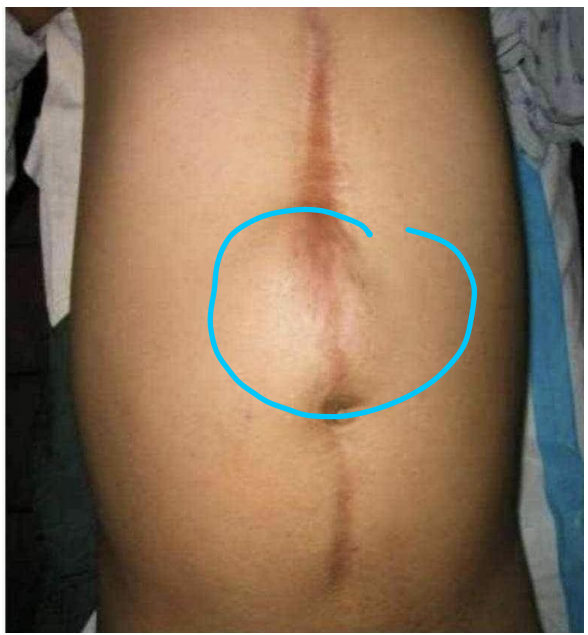
Wateen 2023

A 60 years female , previous history of laparotomy for complicated peptic ulcer . She is complaining of abdominal bulge and frequent vomiting as shown in the picture

A.What is the diagnosis ?

B. what is best next step in management?





Hashemite University
H · U · M
Medical School Committee

• ANSWER;

A. Incisional hernia

B. Fluid resuscitation then operation Hernioplasty(Hernia Repair Surgery.)

Hashemite University
H • U • M
Medical School Committee

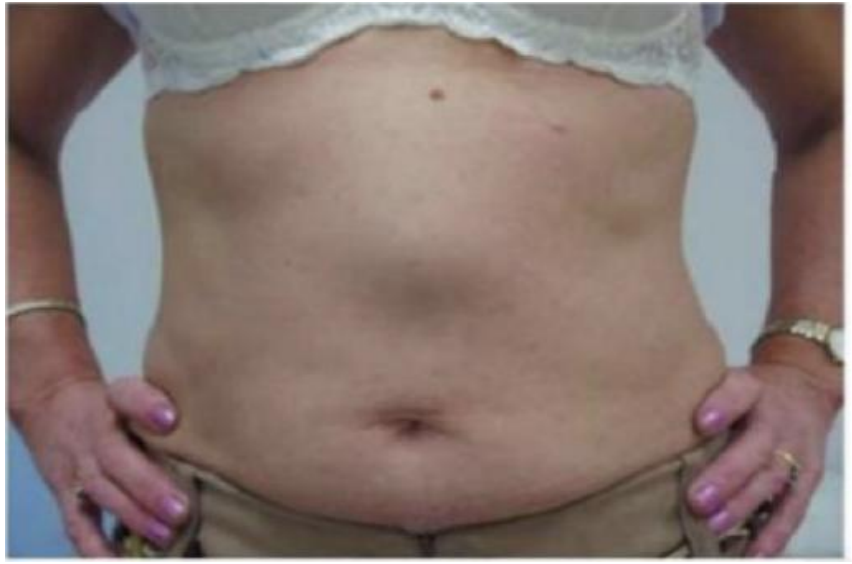
• QUESTION

Wateen 2023

This patient presented with a non reducible painless epigastric mass

A) What is your diagnosis?

B) Mention other differential diagnosis ?



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. incarcrated Epigastric hernia

B. Lipoma - lymphadenopathy

Hashemite University
H · U · M
Medical School Committee

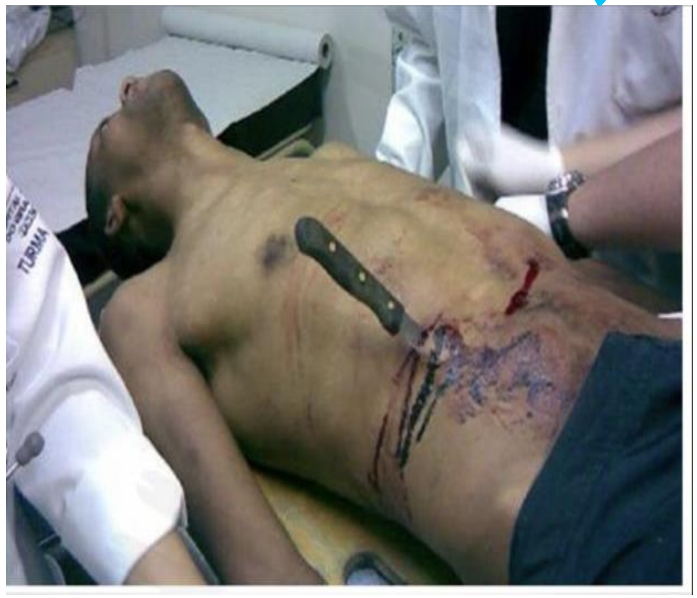
• QUESTION

Wateen 2023

This patient arrived to your emergency department after being stabbed as shown 15 minutes ago. He was anxious and his vital signs were: BP 80/60 mm Hg, pulse 130 PPM, and RR 25 BPM:

What is his class of hemorrhage?

How much blood has he lost?



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. stage 3

B. 1500-2000

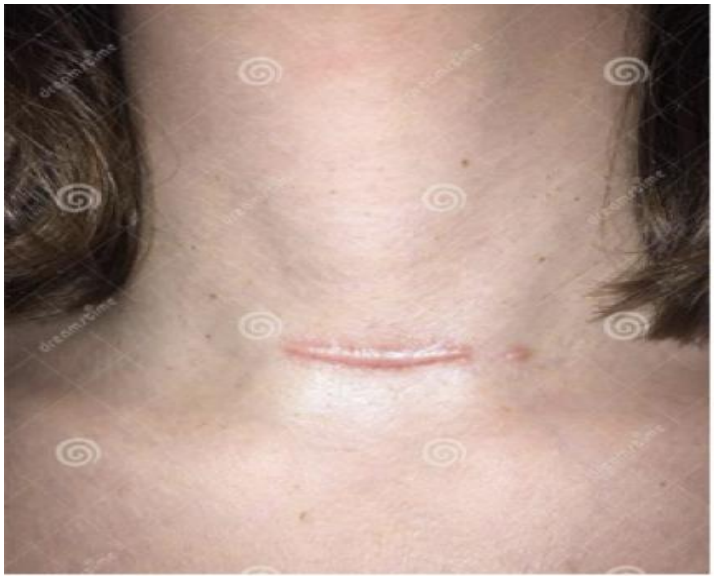
• QUESTION

Wateen 2023

This patient had thyroidectomy few months ago;

A. Name wound abnormality presented in the picture

B. The likely percentage of wound infection after thyroidectomy is?



Hashemite University
H • U • M
Medical School Committee

- ANSWER

injury الى حدود معينة بس بتزيد

ما بتجاوزها

A. Hypertrophic scar

B. 1-2%

• QUESTION

Wateen 2023

When examining a young male patient for lower abdominal pain;

. A. What part of the examination other than the abdominal exam is vital to rule a possible surgical emergency?

B. And what other than abdominal pathology would you put on the top of your differential diagnoses?

(no picture found)

Hashemite University
H • U • M
Medical School Committee

ANSWER

A. rectum , back and genitalia

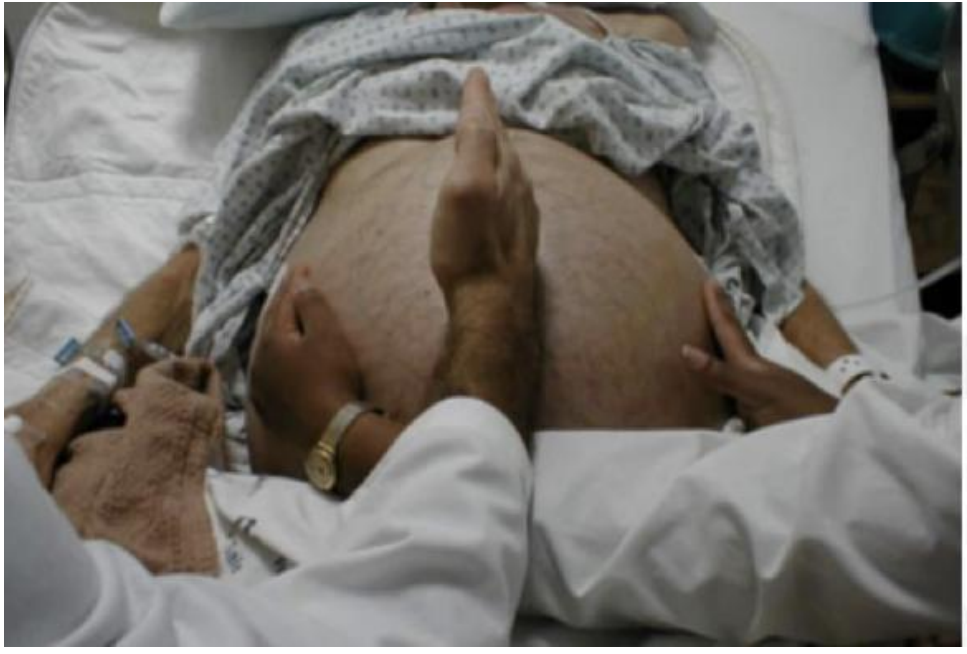
B. testicular torsion

Hashemite University
H · U · M
Medical School Committee

• QUESTION

Wateen 2023

Name the maneuver



Hashemite University
H • U • M
Medical School Committee

• ANSWER

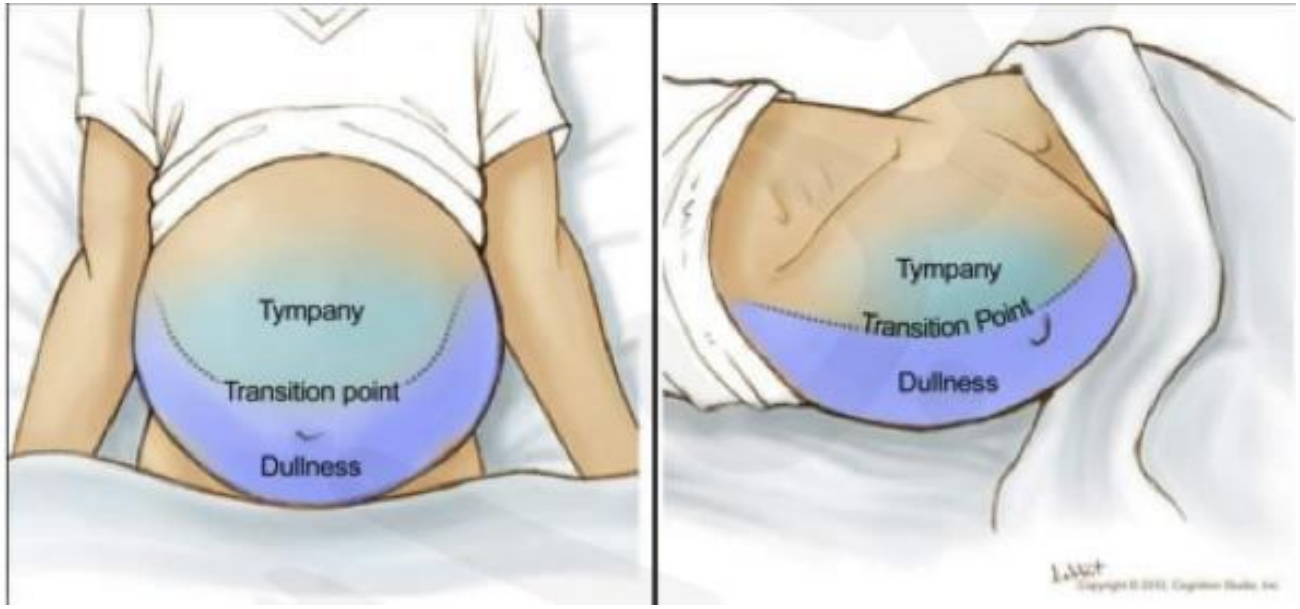
Shifted thrills [transmitted thrill]

Hashemite University
H • U • M
Medical School Committee

• QUESTION

Wateen 2023

Name the maneuver



Hashemite University
H • U • M
Medical School Committee

• ANSWER

Shifted dullness

• QUESTION

Harmony 2022

9. What type is this stoma

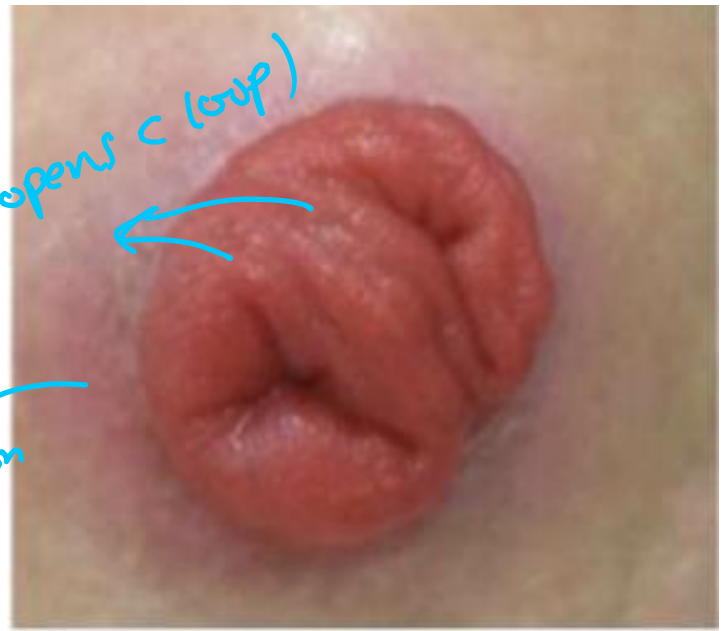
a. Double barrel colostomy

b. End colostomy with mucous fistula

c. Loop ileostomy

d. End ileostomy

Answer: C



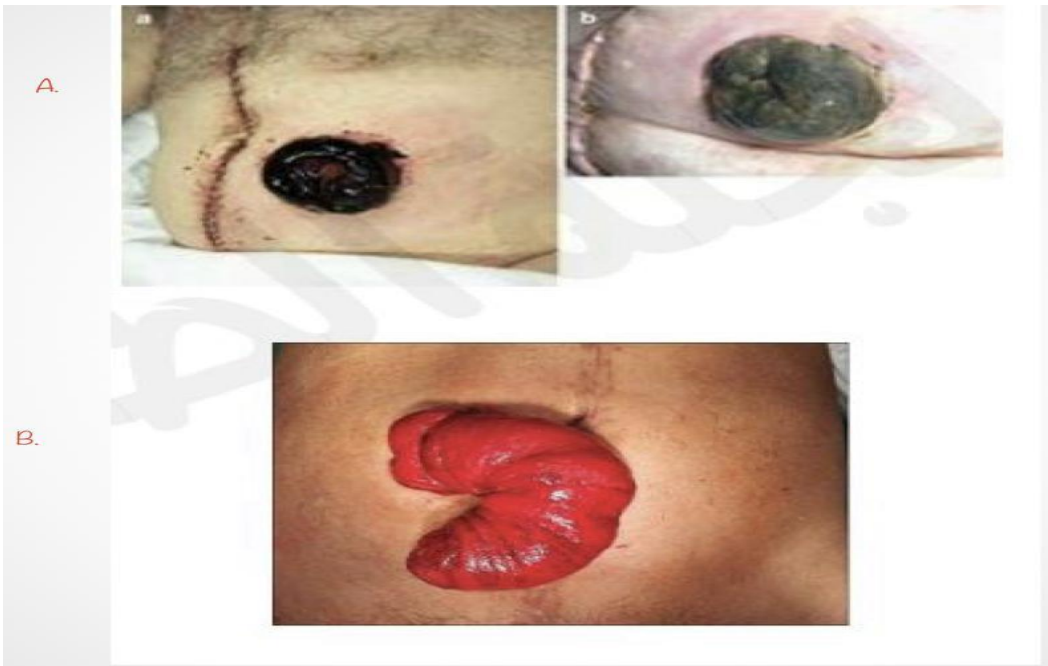
Hashemite University
H • U • M
Medical School Committee

• QUESTION

محكرز بوز

Harmony 2022

Complications seen in the picture A,b:



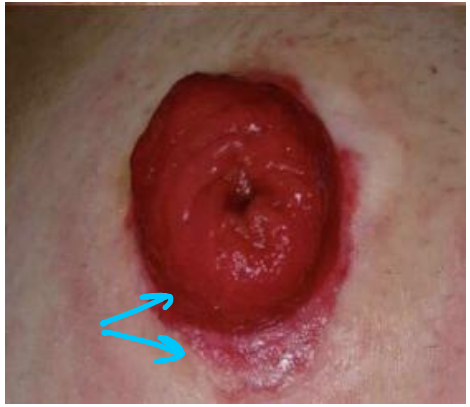
ANSWER

A.Stoma necrosis

B.Stoma prolapse -

Note :

It would be Infected irritated stoma if this picture shown



Hashemite University
H · U · M
Medical School Committee

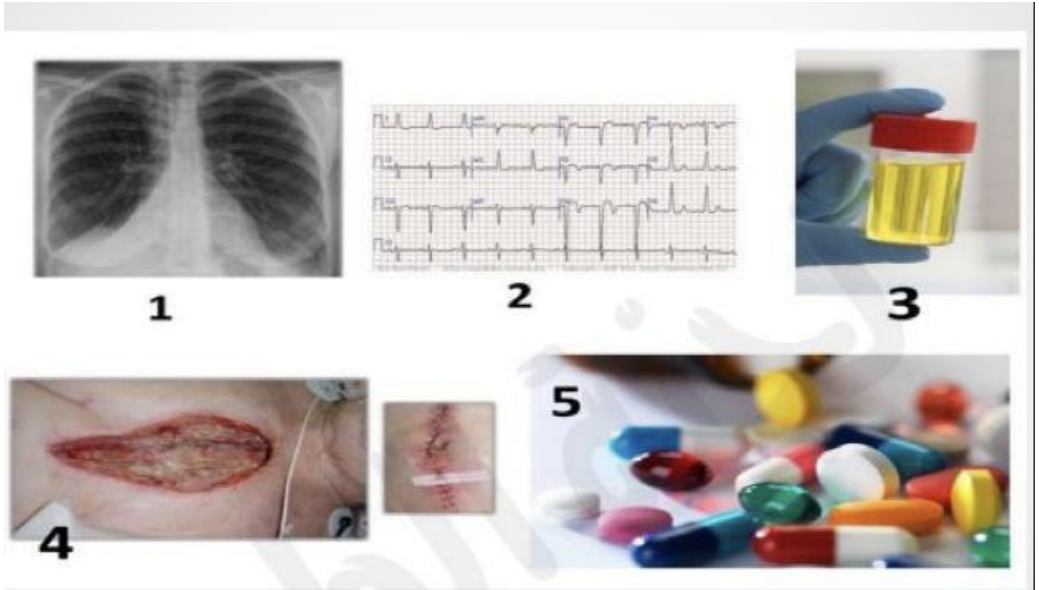
• QUESTION

Harmony 2022

a postoperative fever:

A. which of the following picture is considered as a source of fever after days1-3?

B. which of the following picture is considered as a source of fever after days 5-7?



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Atelectasis (1)

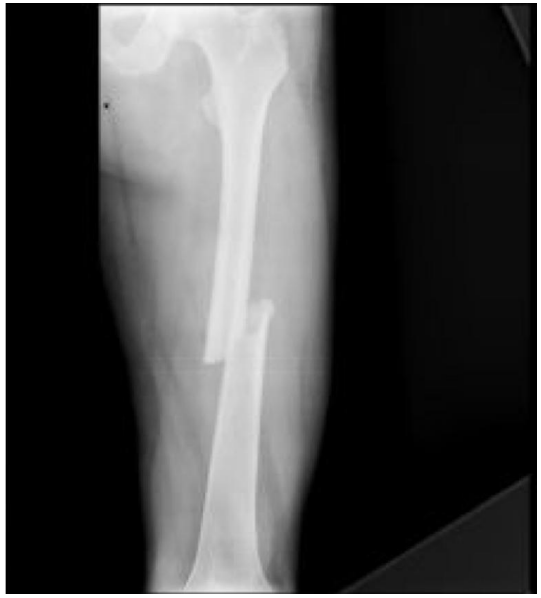
B. Wound infection (4)

• QUESTION

SOUL 2021

Hypotensive patient with shaft of femur fracture, his blood type is O neg ;

1. Estimated blood loss:
2. Blood type to be given to the patient :



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.(1000-1500)ml

2.O negative only

• QUESTION

SOUL 2021

58 yr old female has acute chest pain and dyspnoea postoperatively, pulmonary and cardiac examination was non specific:

A) Mention 2 possible DDX:

B) Possible investigations:

(No picture)

Hashemite University
H • U • M
Medical School Committee

ANSWER

A. MI or PE or Pmeumonia (the said atelectasis won't cause dyspnoea)

B.ECG, chest x-ray , CBC, ABG, d-dimer, ct angio

• QUESTION

صكر

SOUL 2021

58 yr old female has acute chest pain and dyspnoea postoperatively , pulmonary and cardiac examinations were non-specific

A) Mention 2 possible DDX:

.B) Possible investigations:

(No picture)

Hashemite University
H • U • M
Medical School Committee

ANSWER

A.MI // PE (the dr said atelectasis wont cause dyspnoea)

B.ECG, chest x-ray , CBC, ABG , d-dimer , ct angio

• QUESTION

SOUL 2021

57 year old male, presented to ER complaining of vomiting blood

A) Mention 5 questions that would help you determine the amount

(No picture)

Hashemite University
H • U • M
Medical School Committee

• ANSWER

1. Amount

2.bleeding from other place (Haematochezia)

3.type(Coffee ground or fresh blood Clots)

4.how many times

5.other symptoms (Palpitation Postural dizziness fatigability)

• QUESTION

محمود

IHSAN 2020

This patient arrived to your emergency department after being stabbed as shown 15 minutes ago. He was anxious and his vital signs were BP: 95/55 mm Hg, pulse 105 BPM, and .RR 25 Per minute

A. What is his class of hemorrhage ?

B. How much blood has he lost?

Hashemite University
H • U • M
Medical School Committee

• ANSWER

A.Stage 2

B. ml 750-1500

• QUESTION

2019 – Before

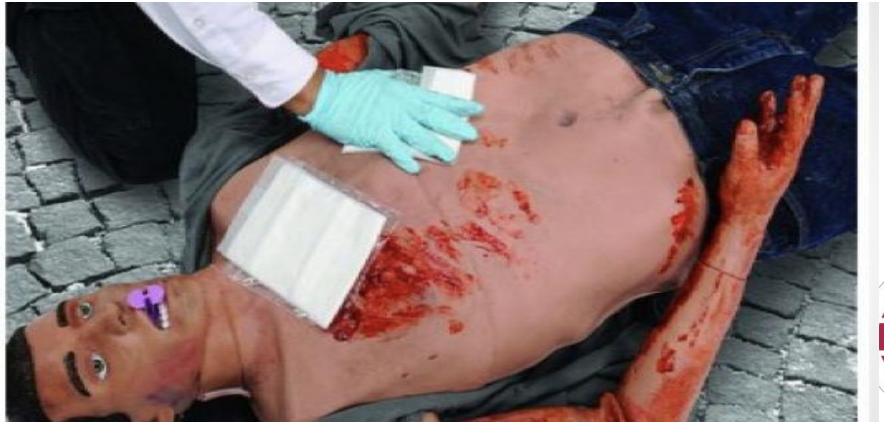
A trauma patient presented to the emergency department and was assisted with .FAST

1.What does FAST stand for ?

2.What are the 4 sites that we look at in FAST ?

3.What's your 1st priority?

4.What's your2nd priority?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

1.Focused Assessment with Sonography for Trauma

2.

1.RUQ (Morison's pouch)

2.LUQ (perisplenic area)

3.Subcostal (pericardium)

4. Peripelvic space

3.ABC (some said only airway)

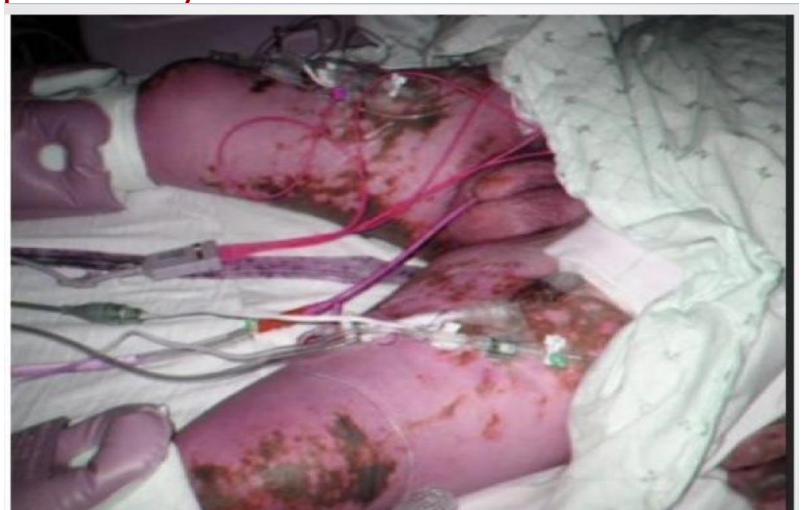
4.stop bleeding (some said only breathing)

• QUESTION

2019 – Before

This patient has this severe infection after having splenectomy post abdominal trauma.

1. This severe infection is most likely due to what organism?
2. How to reduce the possibility of this infection?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.encapsulated Strep. Pneuminiae

2. (giving vaccination for encapsulated organisms

• QUESTION

2019 – Before

You are the on call medical student over the weekend. The surgical ward nurse told you that they have a 65-year-old patient who had laparotomy, anterior resection and primary anastomosis 5 days ago. The patient is now complaining from increasing abdominal pain and abdominal distention for the last 10 hours. His vital signs are as follows: BP 80/40 mm Hg, PR 115 BPM, RR 24, Temp 39.9, O_2 sat 88.

A. What is your diagnosis?

B. What is the most appropriate next step?

Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Septic Shock

B. ABCDE

• QUESTION

صحر

2019 – Before

A patient fell and broke her leg, the doctor who saw her put a cast on the leg, afterwards she complained from pain, swelling, redness and numbness in the same limb

: Q1: What is the diagnosis?

Q2: Next step in the management?

Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Compartment Syndrome

2.Decompression - Remove the cast - Fasciotomy

• QUESTION

2019 – Before

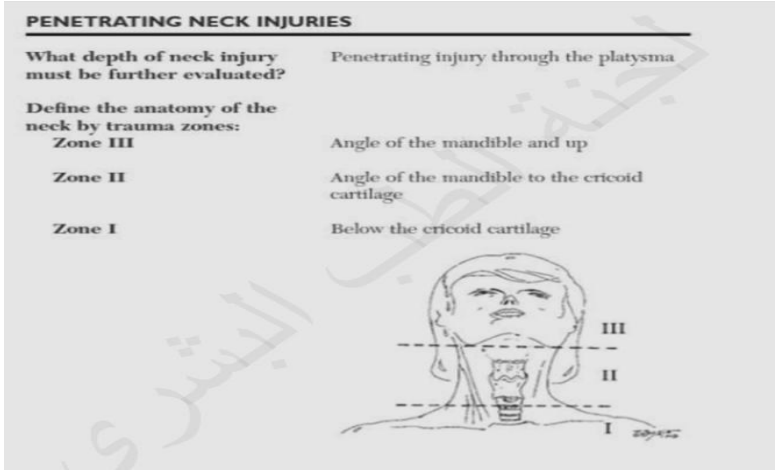
صحكر من الهدف

1. What is the diagnosis?
2. What zone?
3. Name the border or it?
4. When to intubate the patient?

Hashemite University
H • U • M
Medical School Committee

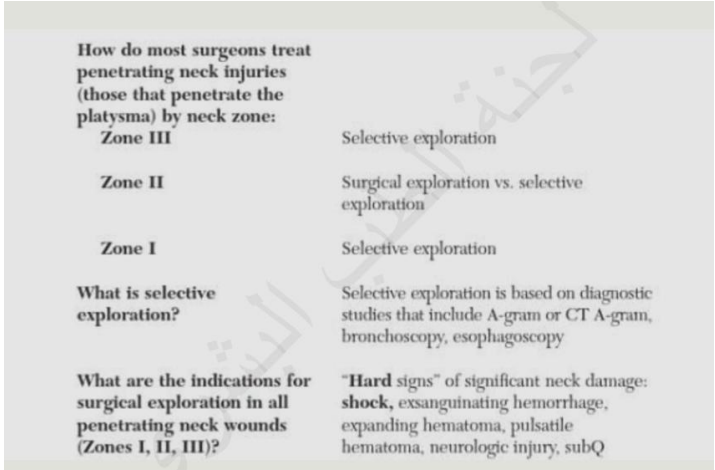
ANSWER

1. Lacerated neck wound
2. Zone.2
3. From the angle of the mandible to the cricoid cartilage
4. 1)Expanding.hematoma 2) Obstructive complication 3) Cervical vertebrae injury



PENETRATING NECK INJURIES

What depth of neck injury must be further evaluated?	Penetrating injury through the platysma
Define the anatomy of the neck by trauma zones:	
Zone III	Angle of the mandible and up
Zone II	Angle of the mandible to the cricoid cartilage
Zone I	Below the cricoid cartilage



How do most surgeons treat penetrating neck injuries (those that penetrate the platysma) by neck zone:	
Zone III	Selective exploration
Zone II	Surgical exploration vs. selective exploration
Zone I	Selective exploration
What is selective exploration?	Selective exploration is based on diagnostic studies that include A-gram or CT A-gram, bronchoscopy, esophagoscopy
What are the indications for surgical exploration in all penetrating neck wounds (Zones I, II, III)?	"**Hard** signs" of significant neck damage: **shock,** exsanguinating hemorrhage, expanding hematoma, pulsatile hematoma, neurologic injury, subQ

Hashemite University
H · U · M
Medical School Committee

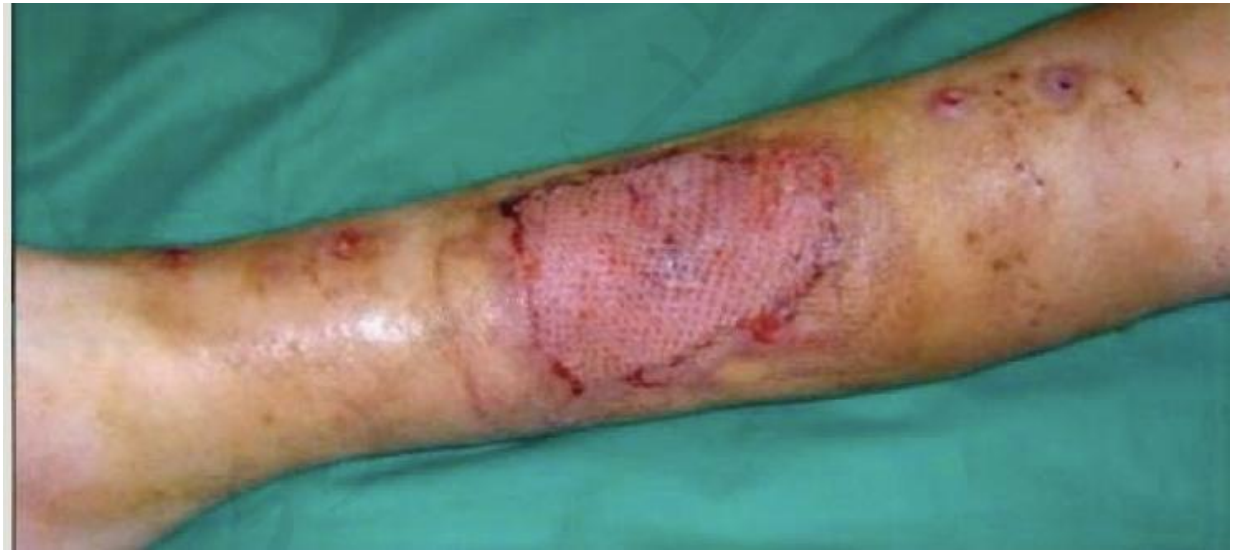
• QUESTION

2019 – Before

متكرر من ال الشكل

Q: What is the name of the management done for this patient?

-



Hashemite University
H • U • M
Medical School Committee

• ANSWER

Split thickness skin graft

• QUESTION

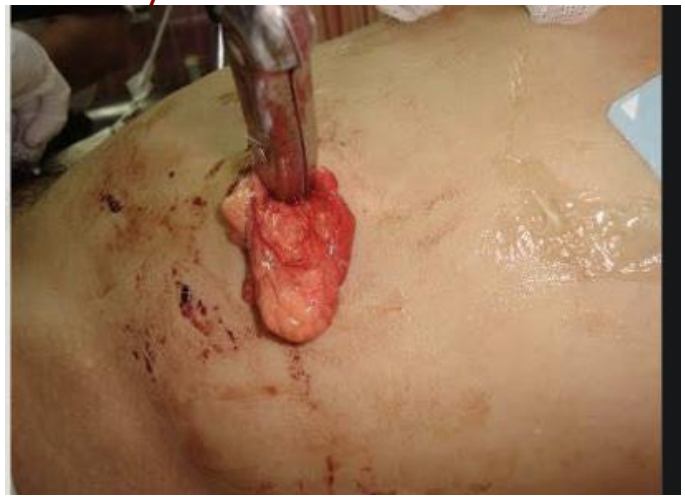
2019 – Before

-

Q1: In penetrating trauma, what is the most commonly affected organ?

Q2: What type of injury more severe (blunt or penetrating)?

Q3: In a penetrating wound, what should you do?



Hashemite University
H · U · M
Medical School Committee

• ANSWER.

1. Liver

2.Blunt

3.exploration surgery

• QUESTION

2019 – Before

حكم

A picture of multiple abdominal bruises, he asked about the zones of retroperitoneal bleeding and types of hemorrhage and where is the least likely place to check and when to go for surgery:

Hashemite University
H • U • M
Medical School Committee

• ANSWER

Traumatic retroperitoneal hematomas divided into 3 zones: Zone 1: Centrally located, associated with pancreaticoduodenal injuries or major abdominal vascular injury Zone 2: Flank or perinephric regions, associated with injuries to the genitourinary system or colon Zone 3: Pelvic location, frequently associated with pelvic fractures or iliofemoral vascular injury - Indication for exploration in retroperitoneal hematomas : mandatory exploration should be performed in retroperitoneal hematomas resulted from penetrating injury, but the selection of treatment mode in blunt injury depend on the anatomical position of hematoma, visceral injury and the hemodynamic status of patients.

• QUESTION

مكرر

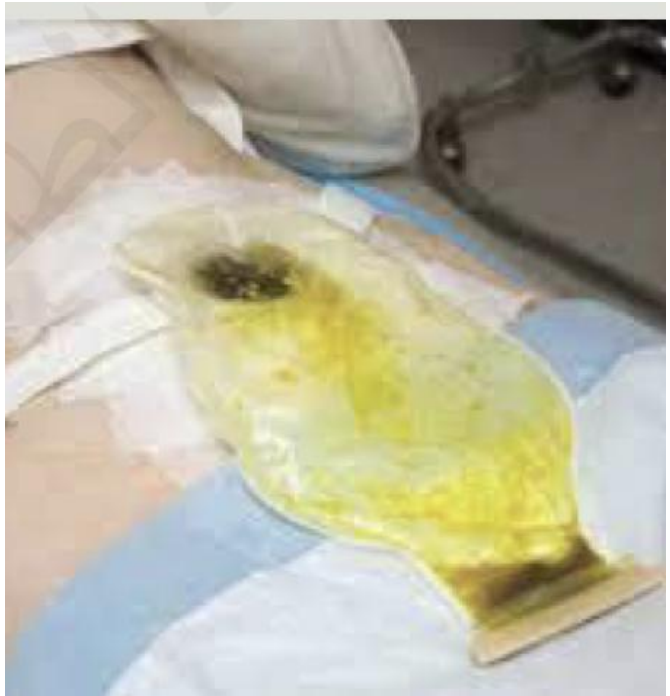
2019 – Before

History of surgery for diverticulitis before 10, the amount collected over 24 hours is 1500 cc:

1. what is is the pathology?

1. What t is the complication

3.what is the prognosis?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Enterocutaneous fistula (high output)

2.electrolyte disturbance 2) Skin excoriation 3) Sepsis

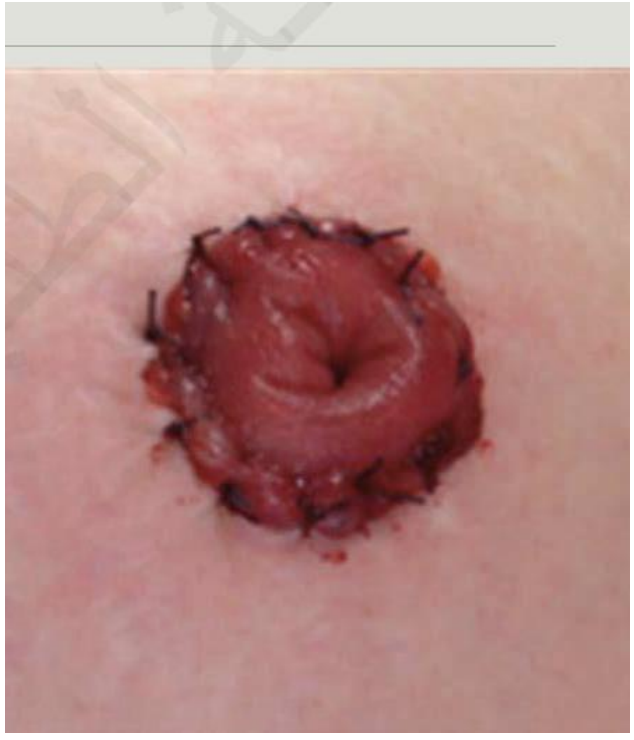
3. In most patients it closes spontaneously

• QUESTION

2019 – Before

1.Type of stoma?

2.Write 2 indications?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.End colostomy

2. IBD, Rectal cancer

• QUESTION 2019 – Before

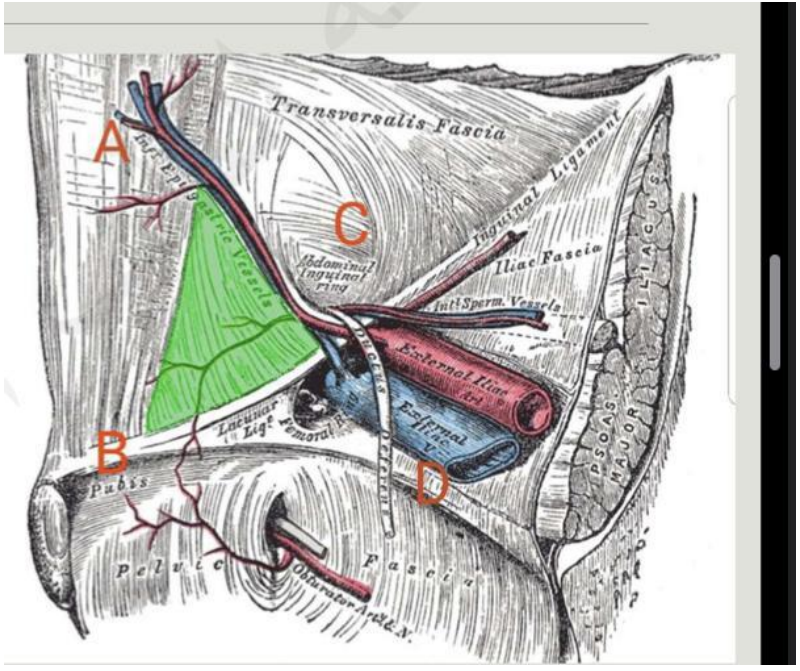
صح من الفاينوكلاب

What's A: inferior epigastric artery

What's B: direct inguinal hernia

What's C: indirect inguinal hernia

What's D: femoral hernia



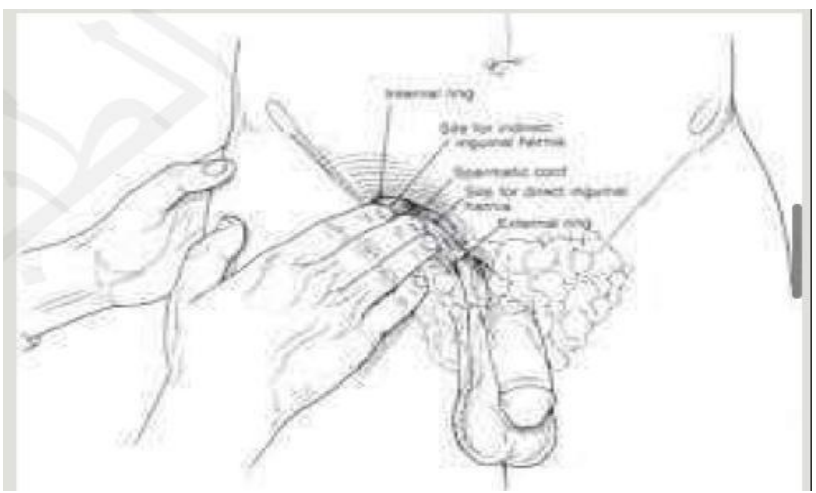
Hashemite University
H · U · M
Medical School Committee

• QUESTION

2019 – Before

1.Name of the test?

2. If you ask the patient to cough while you maintain pressure and you notice a bulge, what is your Dx?



• ANSWER

1.Ring occlusion test

2.Direct inguinal hernia

Note:

Ring occlusion test differs from 3 fingers test, You Ask the patient to cough> Impulse felt on the index finger> Indirect hernia So; Zieman's Test (3 Finger Test) is used to differentiate type of hernia. - Index: deep inguinal hernia (indirect) - Middle: superficial inguinal (direct) - Ring: Saphenous opening (femoral hernia)

- NOTE

مهم

Indirect Inguinal Hernia	Direct Inguinal Hernia
Pass through inguinal canal.	Bulge from the posterior wall of the inguinal canal
Can descend into the scrotum.	Cannot descent into the scrotum.
Lateral to inferior epigastric vessels.	Medial to inferior epigastric vessels.
Reduced: upward, then laterally and backward.	Reduced: upward, then straight backward.
Controlled: after reduction by pressure over the internal (deep) inguinal ring.	Not controlled: after reduction by pressure over the internal (deep) inguinal ring.
The defect is not palpable (it is behind the fibers of the external oblique muscle).	The defect may be felt in the abdominal wall above the pubic tubercle.
After reduction: the bulge appears in the middle of inguinal region and then flows medially before turning down to the scrotum.	After reduction: the bulge reappears exactly where it was before.
Common in children and young adults.	Common in old age.

• QUESTION

2019 – Before

RTA Patient ,HR = 130, he was hypotensive, a CT was done and shows the following?

Q1: How much blood did he loss?

Q2: What does the CT show?

Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Stage 3 hypovolemic shock – 30-40% - 1500-2000 ml

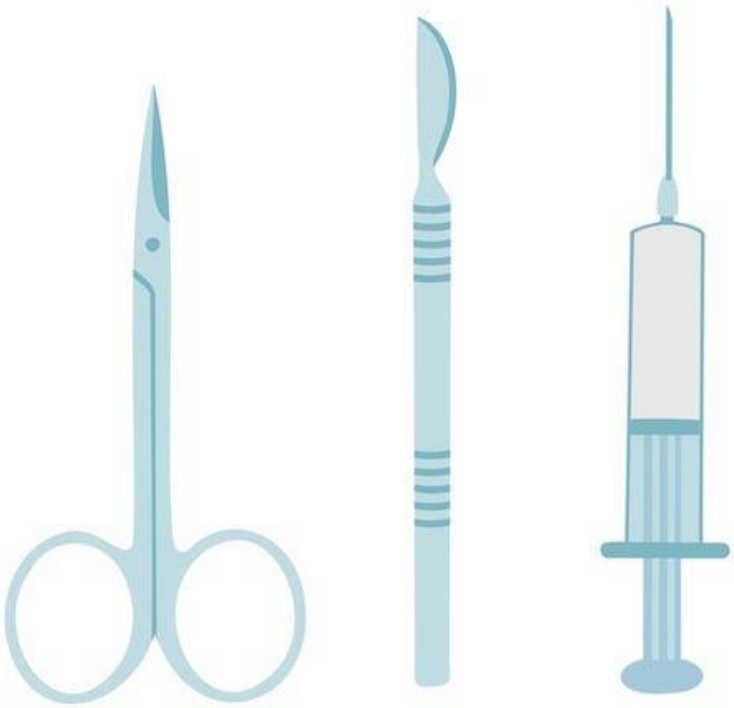
2.Splenic Rupture

- NOTE

Table 7-4 Signs and Symptoms of Advancing Stages of Hemorrhagic Shock

	Class I	Class II	Class III	Class IV
Blood loss (mL)	Up to 750	750–1500	1500–2000	>2000
Blood loss (%BV)	Up to 15%	15–30%	30–40%	>40%
Pulse rate	<100	>100	>120	>140
Blood pressure	Normal	Normal	Decreased	Decreased
Pulse pressure (mmHg)	Normal or increased	Decreased	Decreased	Decreased
Respiratory rate	14–20	20–30	30–40	>35
Urine output (mL/h)	>30	20–30	5–15	Negligible
CNS/mental status	Slightly anxious	Mildly anxious	Anxious and confused	Confused and lethargic

BV = blood volume; CNS = central nervous system.



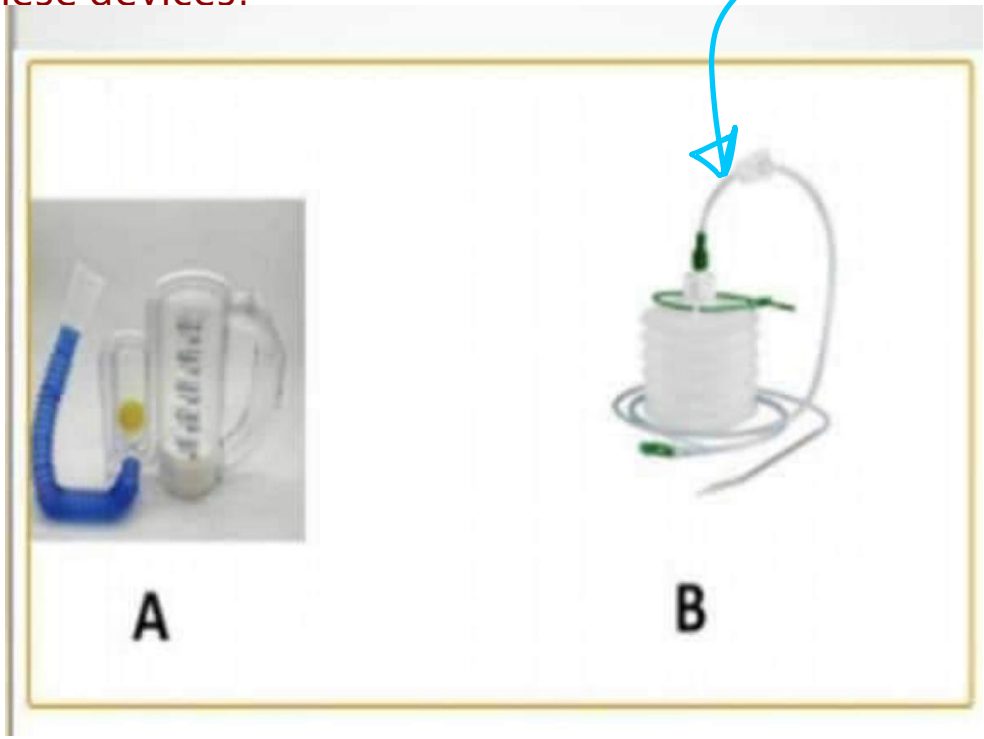
TOOLS & INSTRUMENTS

Hashemite University
H · U · M
Medical School Committee

• QUESTION

Yaqeen 2025

What is the name of these devices?



• ANSWER

A. Incentive spirometry

B. Radiopaque drain

• QUESTION

Yaqeen 2025

What is the type of this fluid and its component?

Hashemite University
H • U • M
Medical School Committee

• ANSWER

Normal saline ,contain 0.9NaCl and water

Hashemite University
H • U • M
Medical School Committee

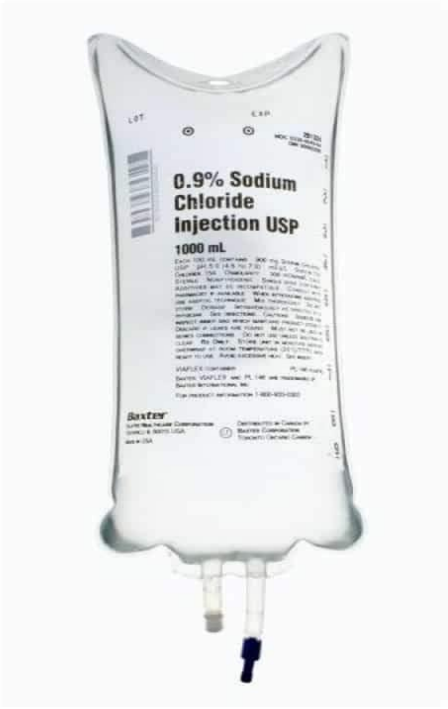
QUESTION

Yaqeen 2025

A.What is the type of this fluid and its content?

B.Calculate the amount of calories

is in this fluid if it is1000cc:



Hashemite University
H · U · M
Medical School Committee

ANSWER

A.Normal saline 0.9 NaCl and water

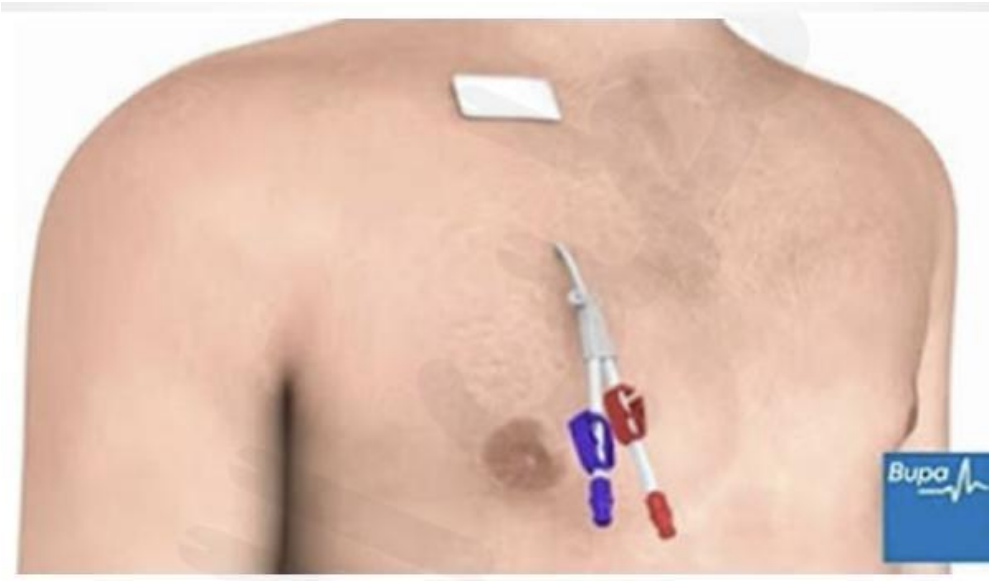
B. Zero calori

• QUESTION

Wateen 2023

A) Name the structure in the image knowing that it is used for Dialysis?

B) What's this Device Used for ?



Hashemite University
H • U • M
Medical School Committee

ANSWER

A. Perm-cath

B. hemodialysis

• QUESTION

Wateen 2023

A) Name the device

B) Name one complication

Hashemite University
H • U • M
Medical School Committee

ANSWER

A) NG(naso gastric) tube

B) Infection

• QUESTION

Harmony 2022

12. Name the line in picture

a. Hemodialysis line permcath

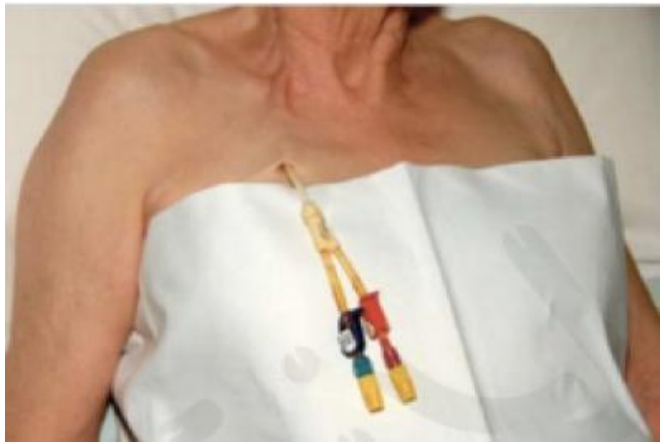
b. Peripherally inserted central line

c. Hickman line

d. Temporary central line

e. Pig tube

Answer: D



Hashemite University
H • U • M
Medical School Committee

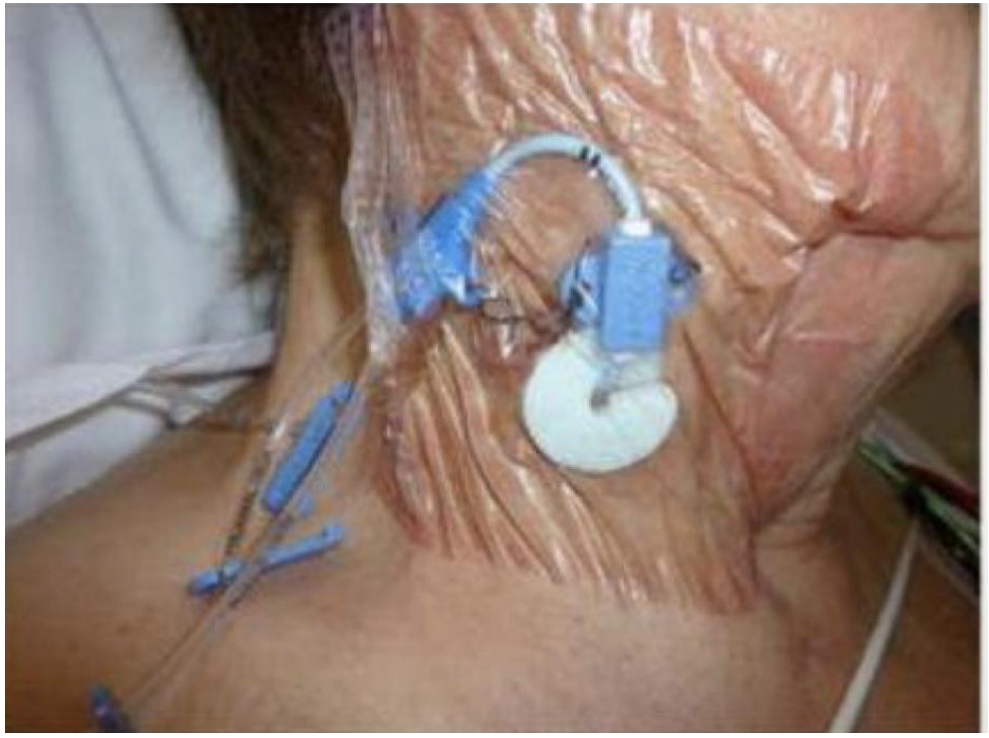
• QUESTION

SOUL 2021

صور

1 .Name the device?

2. Name complications?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1. Central Venous Line

2 . Thrombosis/ Infection/ Pneumothorax

• QUESTION

صور

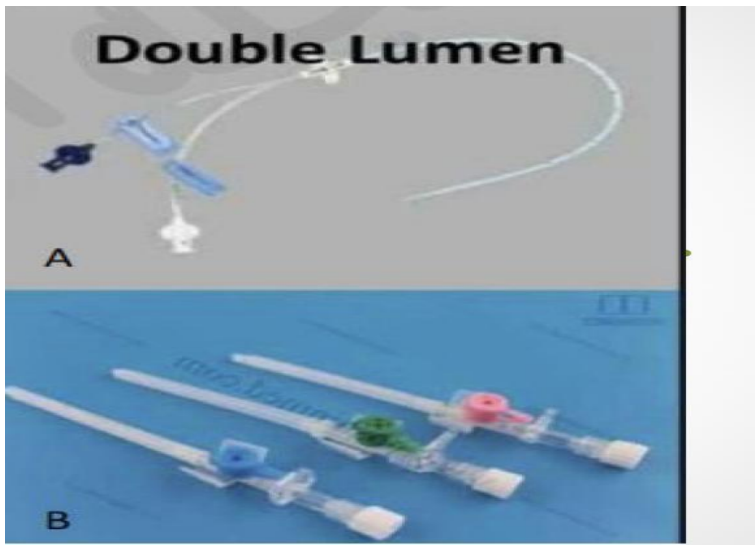
SOUL 2021

A) Name the device in picture A:

B) Which is better used for emergency venous access:

C)smallest cannula in diameter is?

D) Cannula for large amount of fluid?



Hashemite University
H · U · M
Medical School Committee

• ANSWER

A. Central venous line

B. Cannula ,because it is easier to use, require less experience and time, it also deliver the largest volume of fluid

C) ~~Yellow~~ violet

D) ~~Green~~ orange

Cannula's

Colour Code	Gauge	Catheter Ext. DiaxLength (mm)	Water flow-rate (ml/min)
Orange	14G	2.20 x 45	310
Grey	16G	1.70 x 45	200
White	17G	1.50 x 45	140
Green	18G	1.20 x 38 1.20 x 45	105 100
Pink	20G	1.00 x 32	64
Blue	22G	0.80 x 25	38
Yellow	24G	0.70 x 19	16/22
Violet (without Injection Port)	26G	0.60 x 19	12/15

Hashemite University
H • U • M
Medical School Committee

• QUESTION

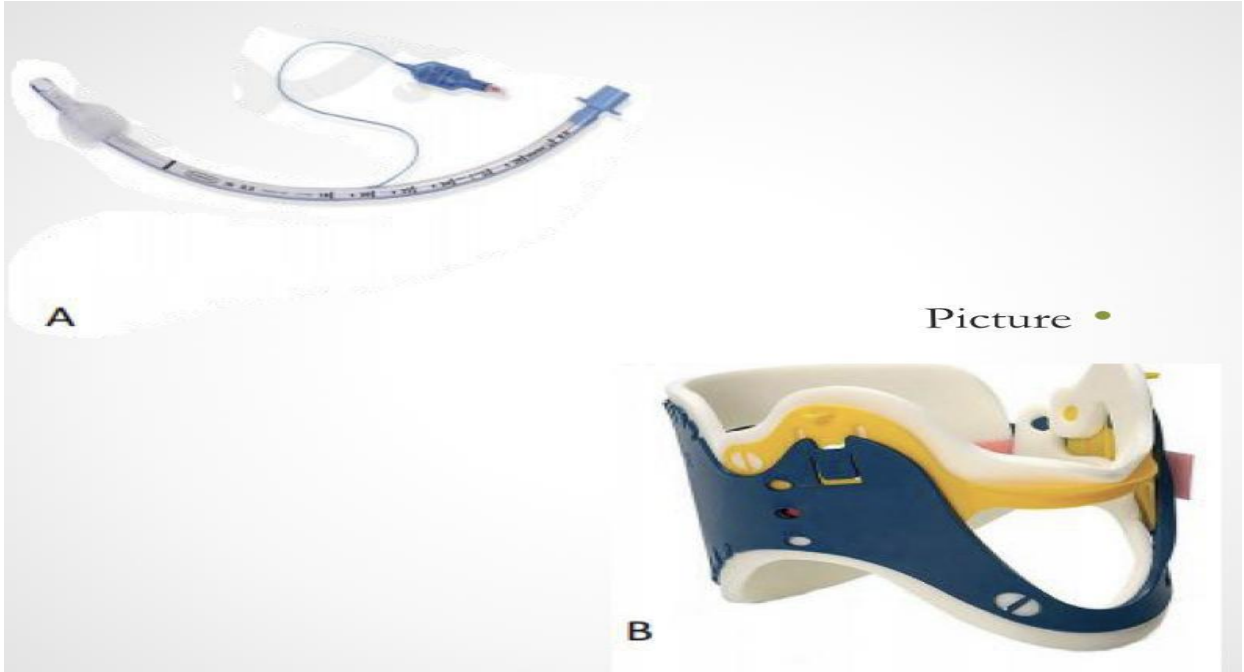
SOUL 2021

مكرر

The followings are used in emergency:

A) Name A:

:B) Name B



Hashemite University
H • U • M
Medical School Committee

ANSWER

A: Endotracheal tube

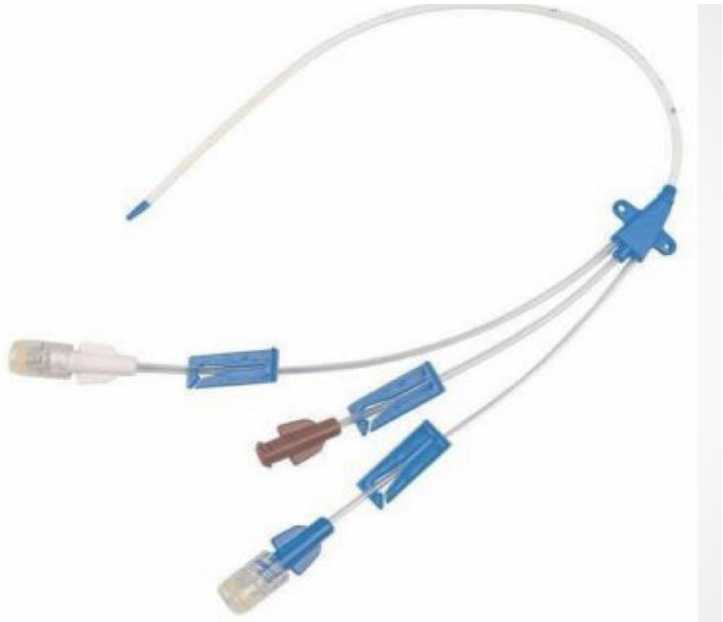
B: Hard neck collar

• QUESTION

SOUL 2021

1. What is the name of this procedure?

2.What's the smallest cannula in diameter?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1. Central line triple Lumen

2. ~~Yellow~~ violet

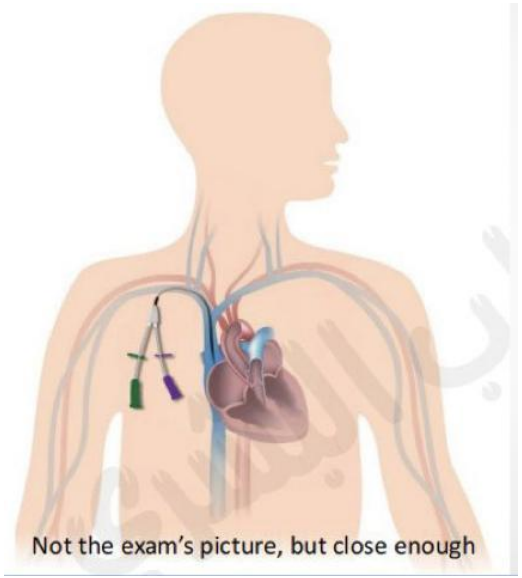
• QUESTION

IHSAN 2020

Central Venous Line

1. Name the line inserted in the patient

2.Name 2 complications that result from this line's insertion



Hashemite University
H • U • M
Medical School Committee

ANSWER.

1.Central venous line

2. Pneumothorax, Hemothorax, Recurrent laryngeal nerve .2 injury, Arterial or Venous injury, Arterial access instead of venous, Hematoma, Infection, Thrombosis and occlusion of the line…etc

• QUESTION

IHSAN 2020

1: What is this device?

2: What does it calculate?

Hashemite University
H • U • M
Medical School Committee

• ANSWER

I. Pulse Oximeter

II. - O2 Saturation ,Pulse Rate (HR) -

• QUESTION

IHSAN 2020

1: What is this device?

2: Give 2 indications ?

3. The tip of it should reach?

Hashemite University
H • U • M
Medical School Committee

• ANSWER

I. Nasogastric tube

II. 1) Feeding

2) Decompression

3) Administration of medication

4)Bowel irrigation

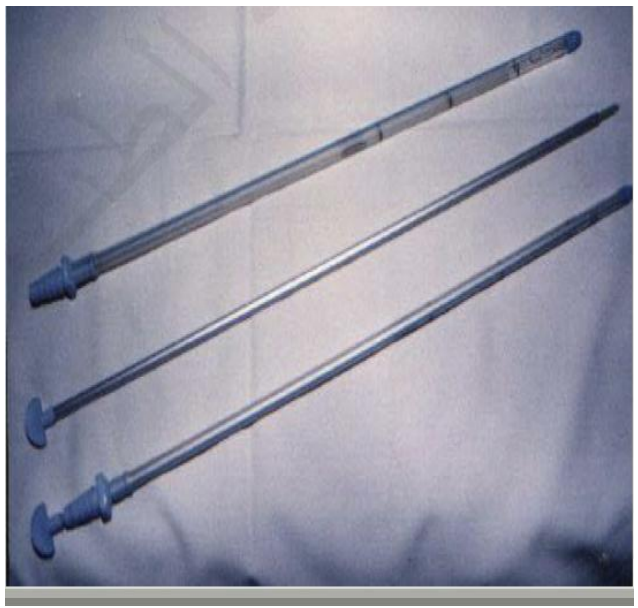
3.Stomach body

• QUESTION

2019 – Before

1.Name this tube?

2.Give 4 indications?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Chest tube

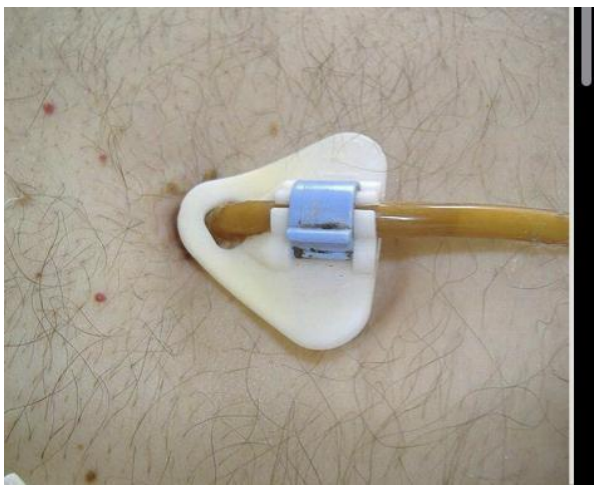
2.1) Hemothorax 2) Pneumothorax 3) Chylothorax 4) Empyema

• QUESTION

2019 – Before

1.What is this?

2.What is the main indication for it?



• ANSWER

1.Gastrictube/G-tube/PEG tube/ Gastrostomy

2.Feeding

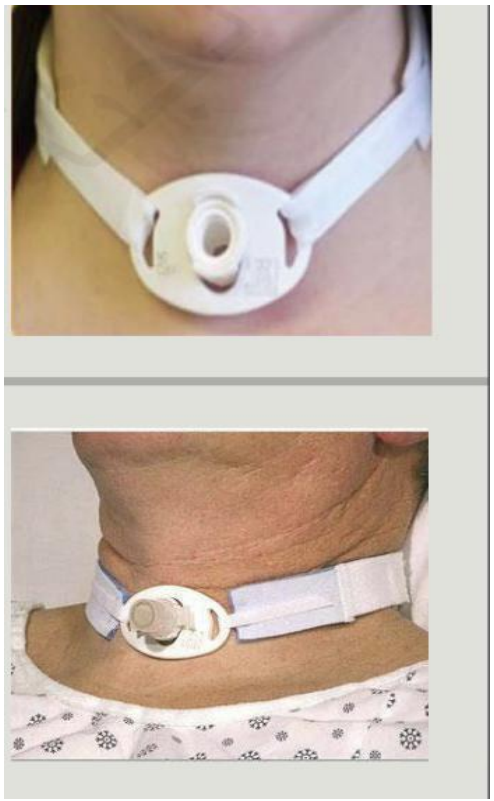
• QUESTION

2019 – Before

1. What is this?

2.Mention 2 complications?

3.Mention 2 Indications



ANSWER

1.Tracheostomy

2.Infection.Blocka...Bleeding.Pneumothorax

3.1)Upper airway obstruction

2) Obtaining an airway in severe facial or neck trauma

3) Upper airway edema and copious secretions

4) failure to wean from mechanical ventilation

5) acute respiratory failure with need for prolonged mechanical ventilation (most common indication, 2/3 of all cases

• QUESTION

مكرر

2019 – Before

1.Name of device?

2.Where do you insert it?

3.Mention 2 indications?

4.Mention 2 complications?

Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.Central venous catheter (CVC)

2.Subclavian vein - Internal jugular vein

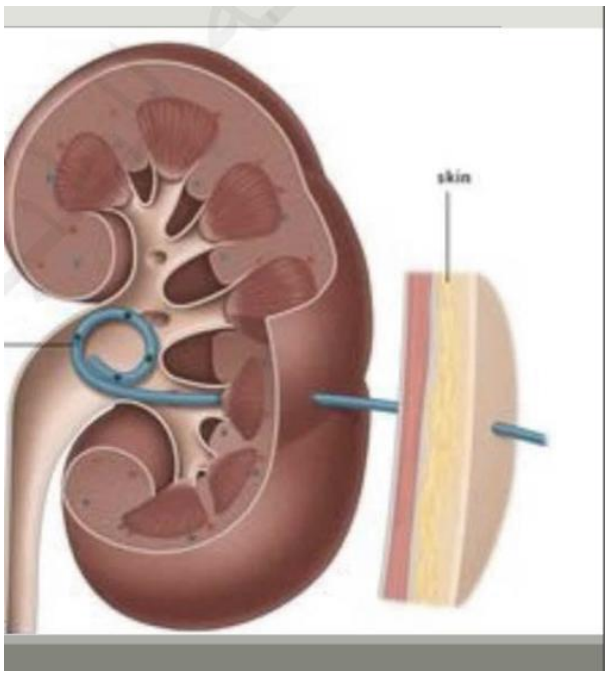
3.(1)Total parenteral nutrition (TPN) 2) Hemodialysis 3) Chemotherapy

4.Infection ,pneumothorax

• QUESTION

2019 – Before

1. Name The tube ?
2. Write 2 indications



• ANSWER

1.Nephrostomy tube

2.1) Urinary obstruction secondary to calculi

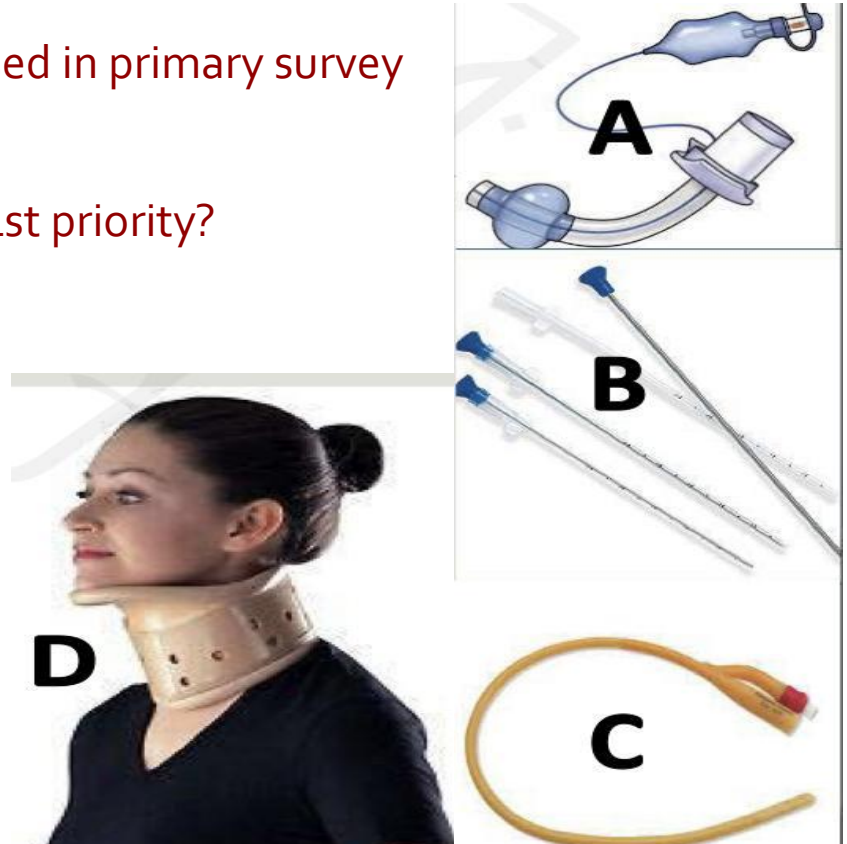
2)Hemorrhagic cystitis

• QUESTION

2019 – Before

1.Which one is not used in primary survey

2.Which one is your 1st priority?



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.C Foley's Catheter)

2.D Neck collar), some said (B)

mostly A

• QUESTION

2019 – Before

1.What is the name of device?

2.What is the unit used in measurement??

• ANSWER

1.Foley's Catheter

2.French

• QUESTION

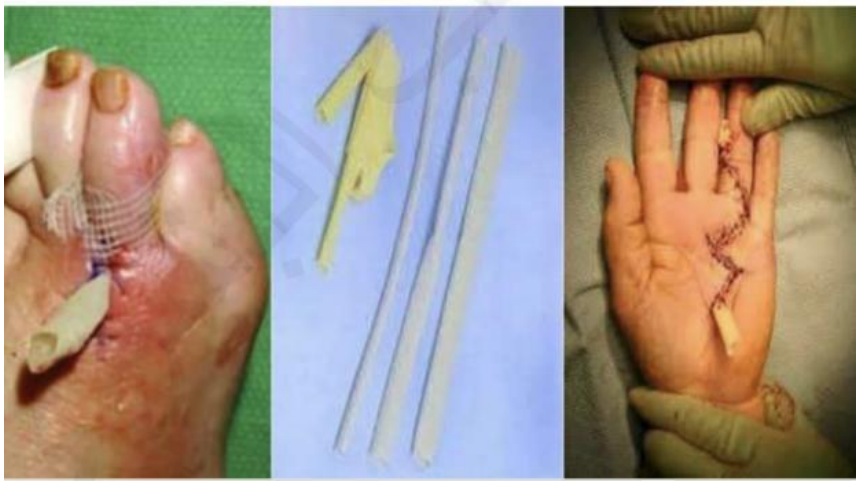
2019 – Before

1.What is the name of the drain?

2.What is the name of the drain?

5-1-2-Penrose drain

Latex rubber, silicone



Hashemite University
H • U • M
Medical School Committee

ANSWER

1.Penrose

2.Open drain

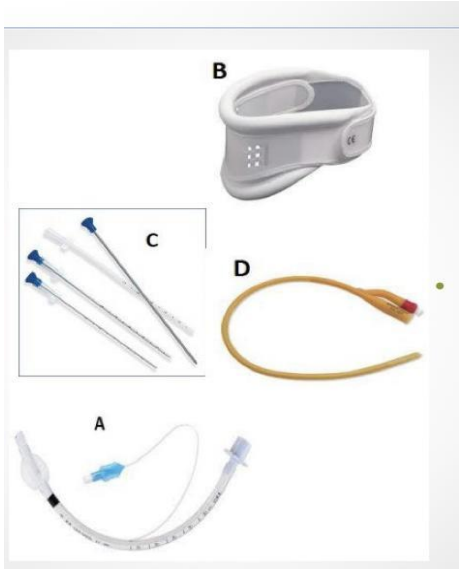
• QUESTION

2019 – Before

Of the instruments shown,

1.what is the least likely to be used in primary survey?

2. If needed, which of those has the highest priority to be used?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.(D)

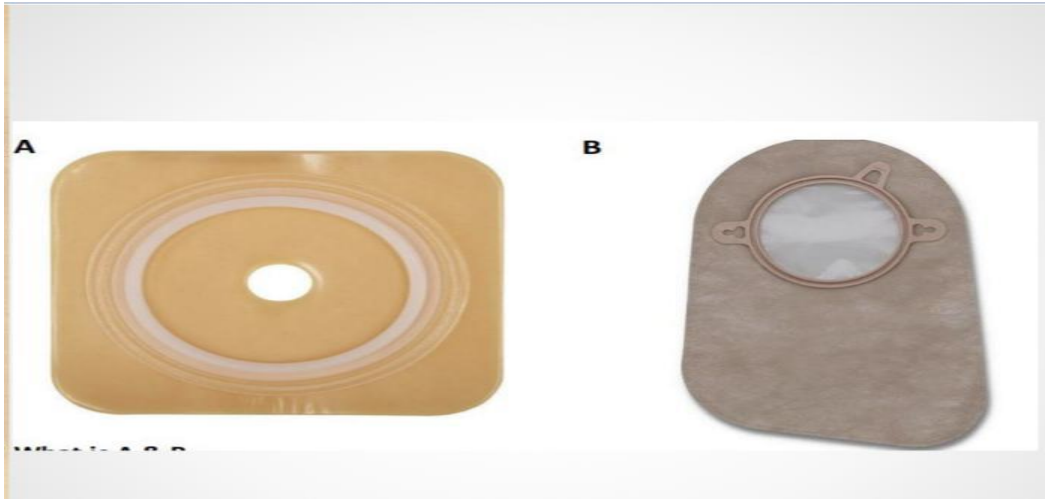
2. (A or A+B)

• QUESTION

2019 – Before

1.What is A & B?

2. Mention three indications for the medical condition that (A & B) are used for



ANSWER

1.A Colostomy Base // B Colostomy bag

2. (1) Protect distal anastomosis (2)Diversion (3)Defunctioning

Some said (colostomy, ileostomy, double barrel)

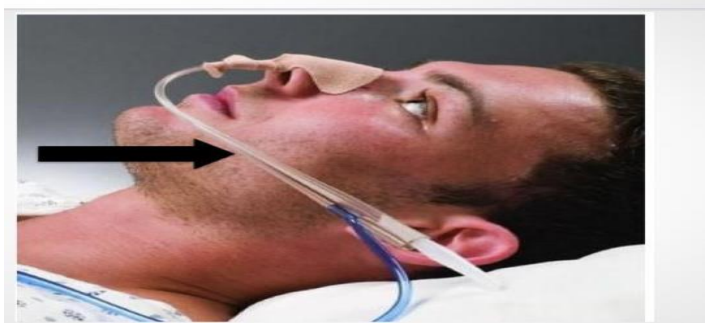
• QUESTION

2019 – Before

What's the name of this device?

2. Mention three indications for its use?

3. What's the anatomical location of its tip end in the patient?



Hashemite University
H • U • M
Medical School Committee

• ANSWER

1.NGT

2. GI Obstruction, Feeding, GI Bleeding, Lavage (e.g poisons), decompression (e.g. over an anastomosis), decrease risk of aspiration.

3. Stomach

Thank you and good luck 💖