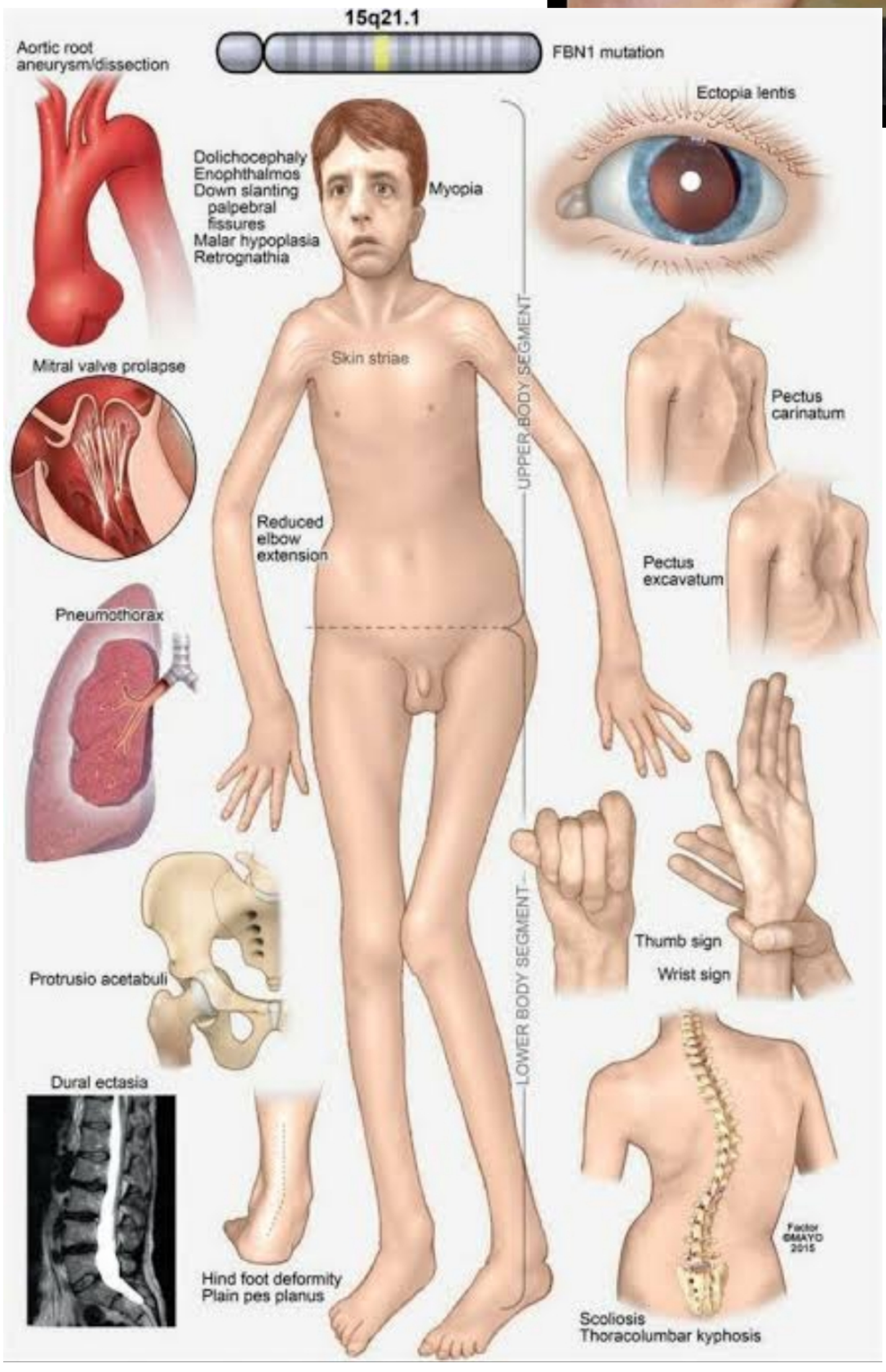
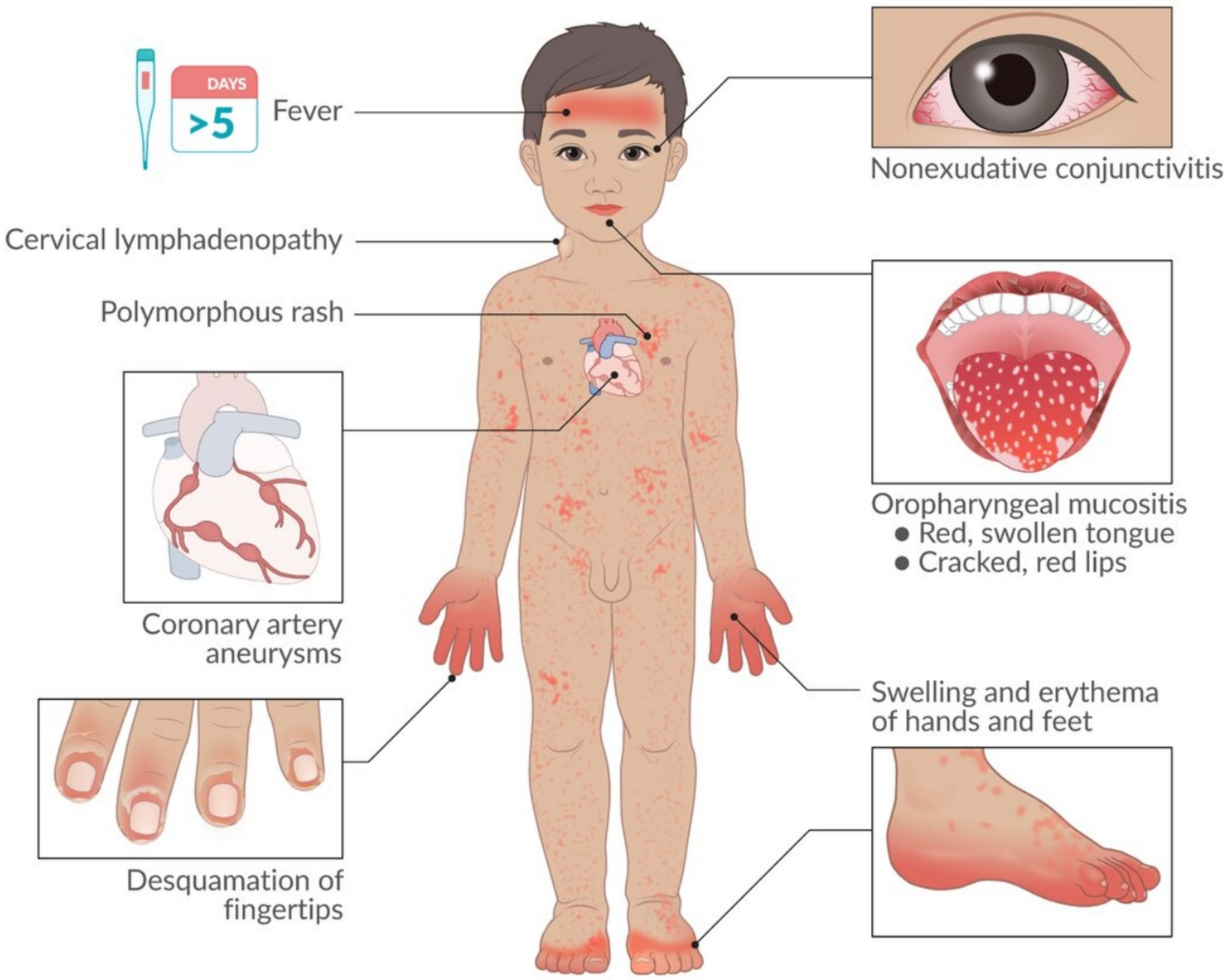
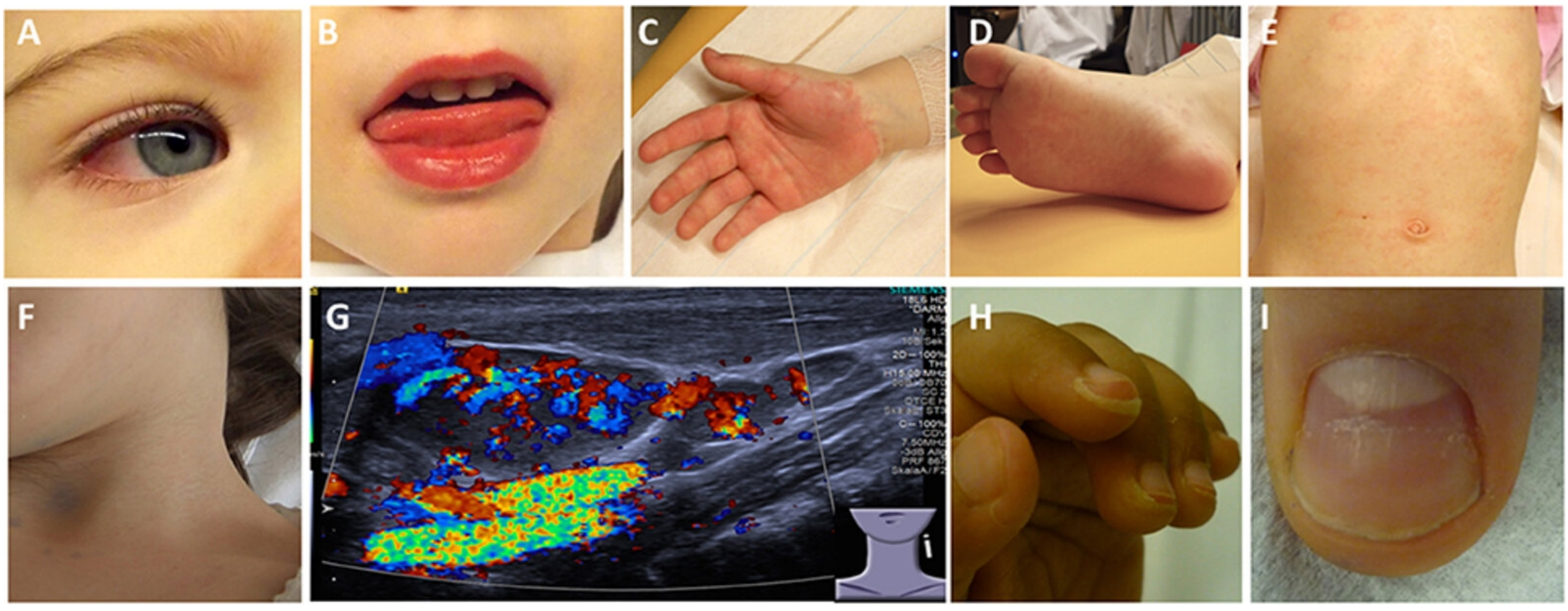
MARFAN SYNDROME



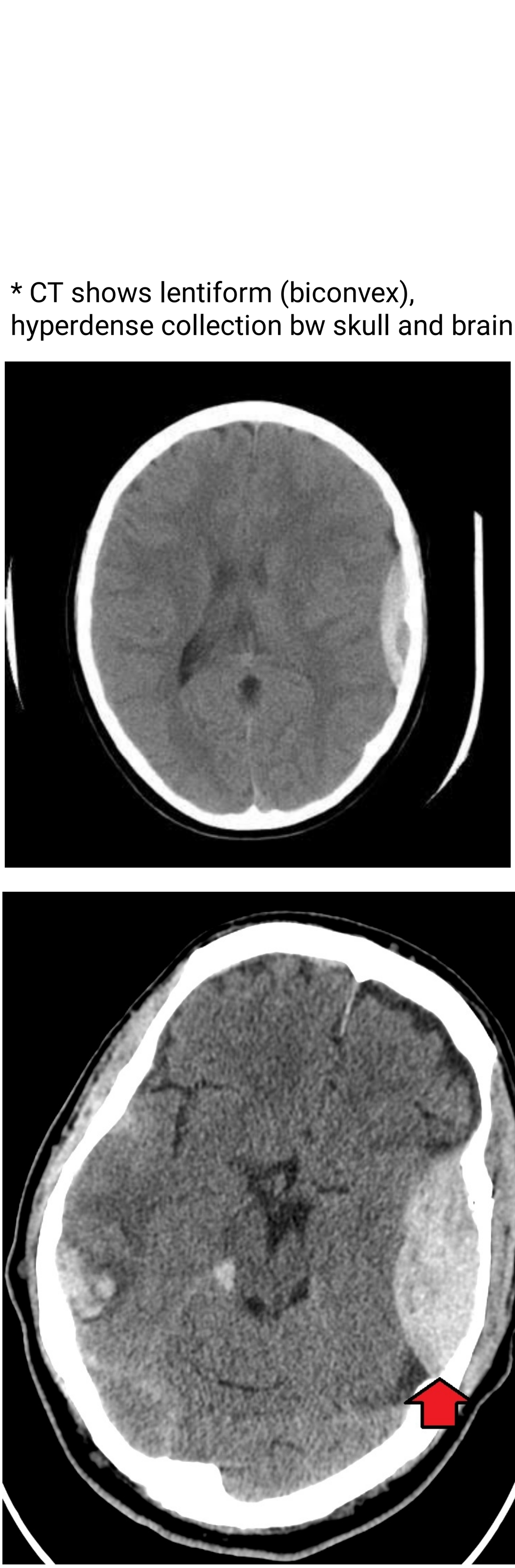
Kawasaki Disease

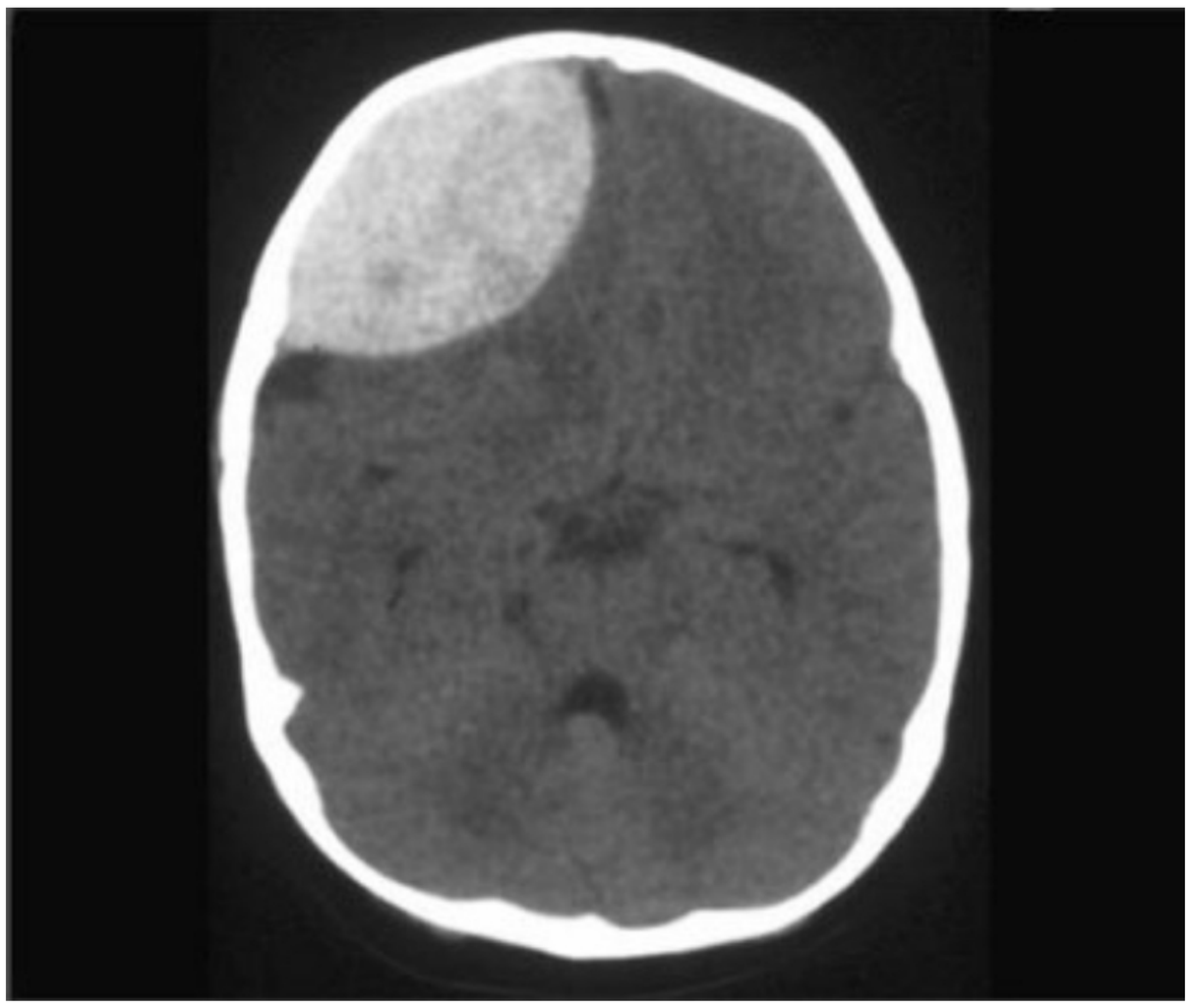




EPIDURAL HEMATOMA

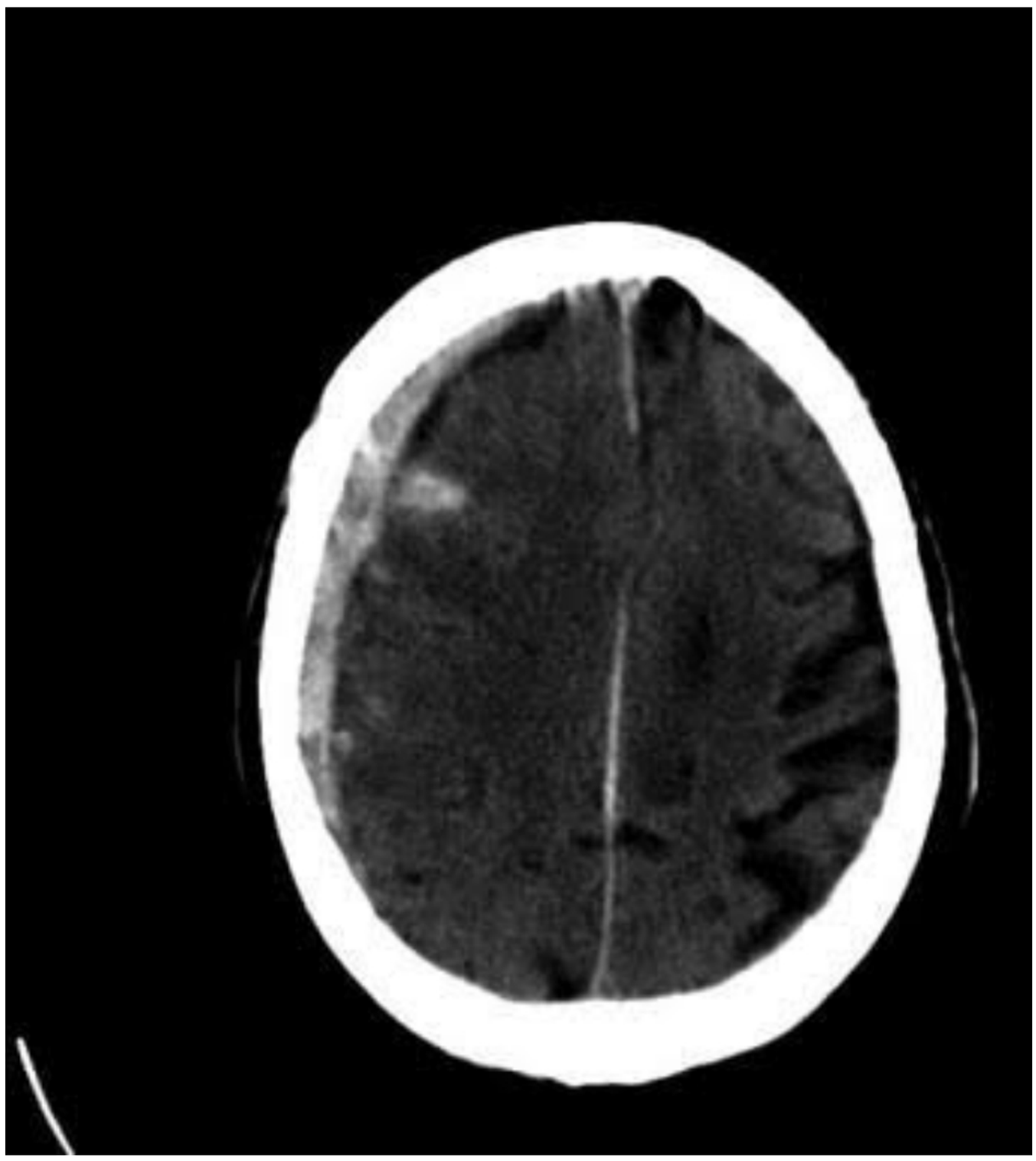
* CT shows lentiform (biconvex), hyperdense collection bw skull and brain

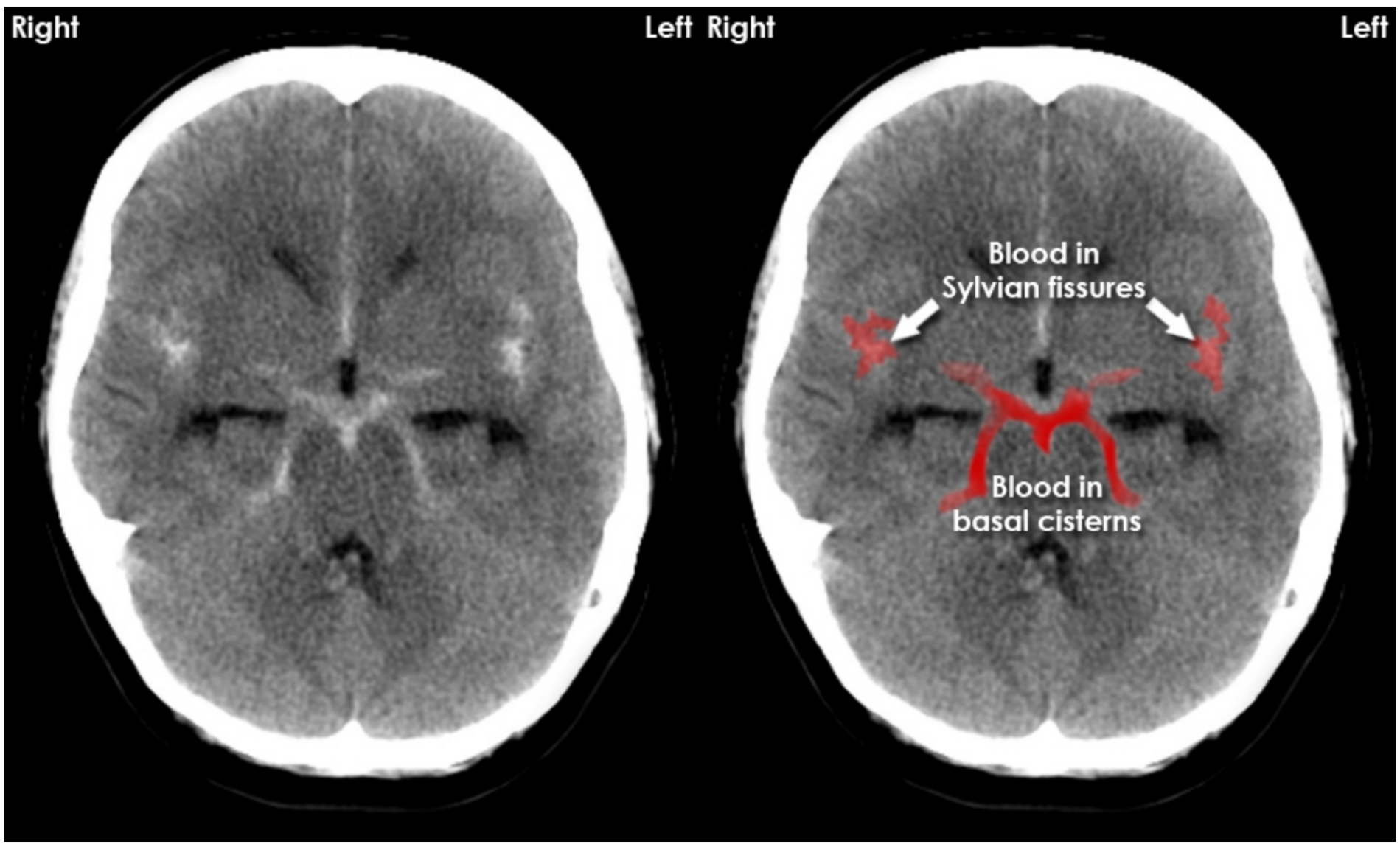




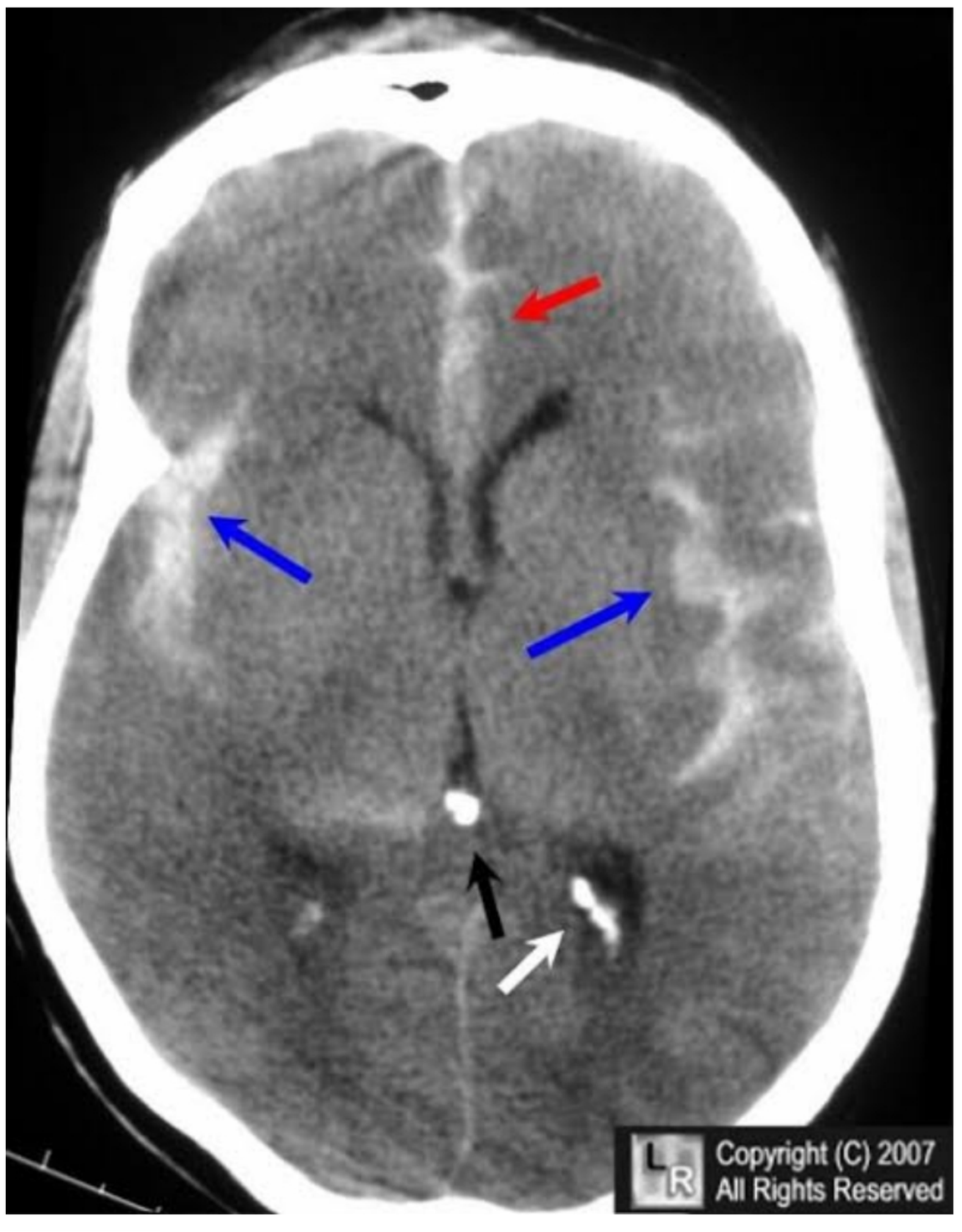
Subdural Hematoma

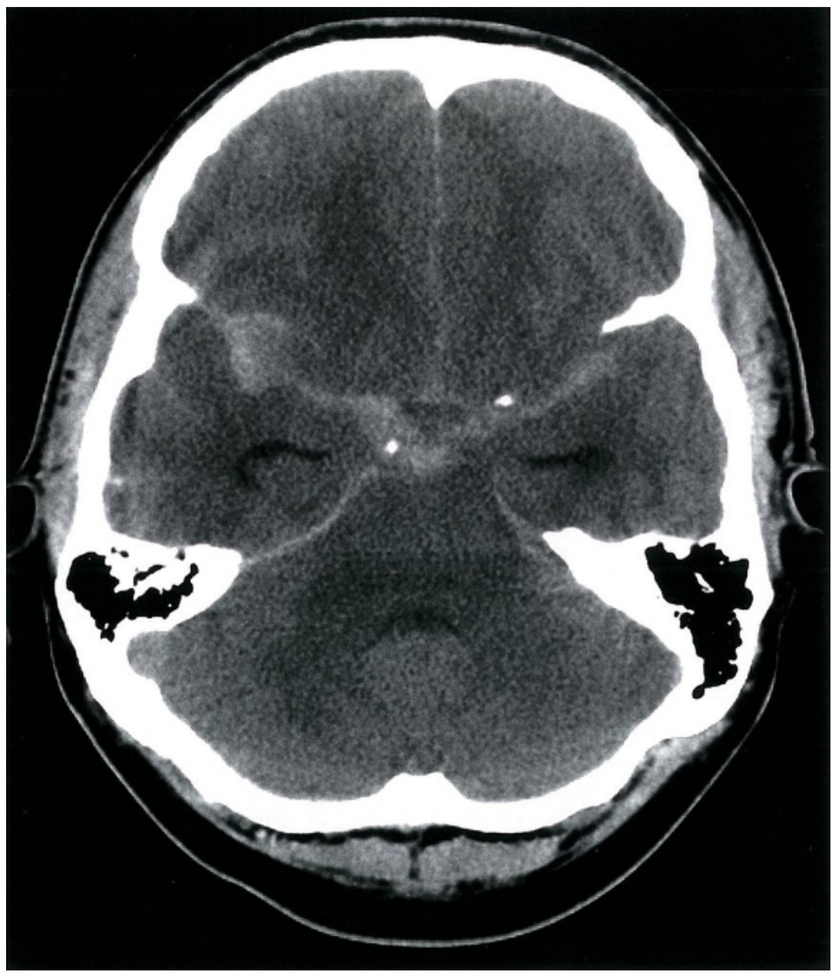
CT shows diffuse and concave
Crescent shaped hyperdense collection



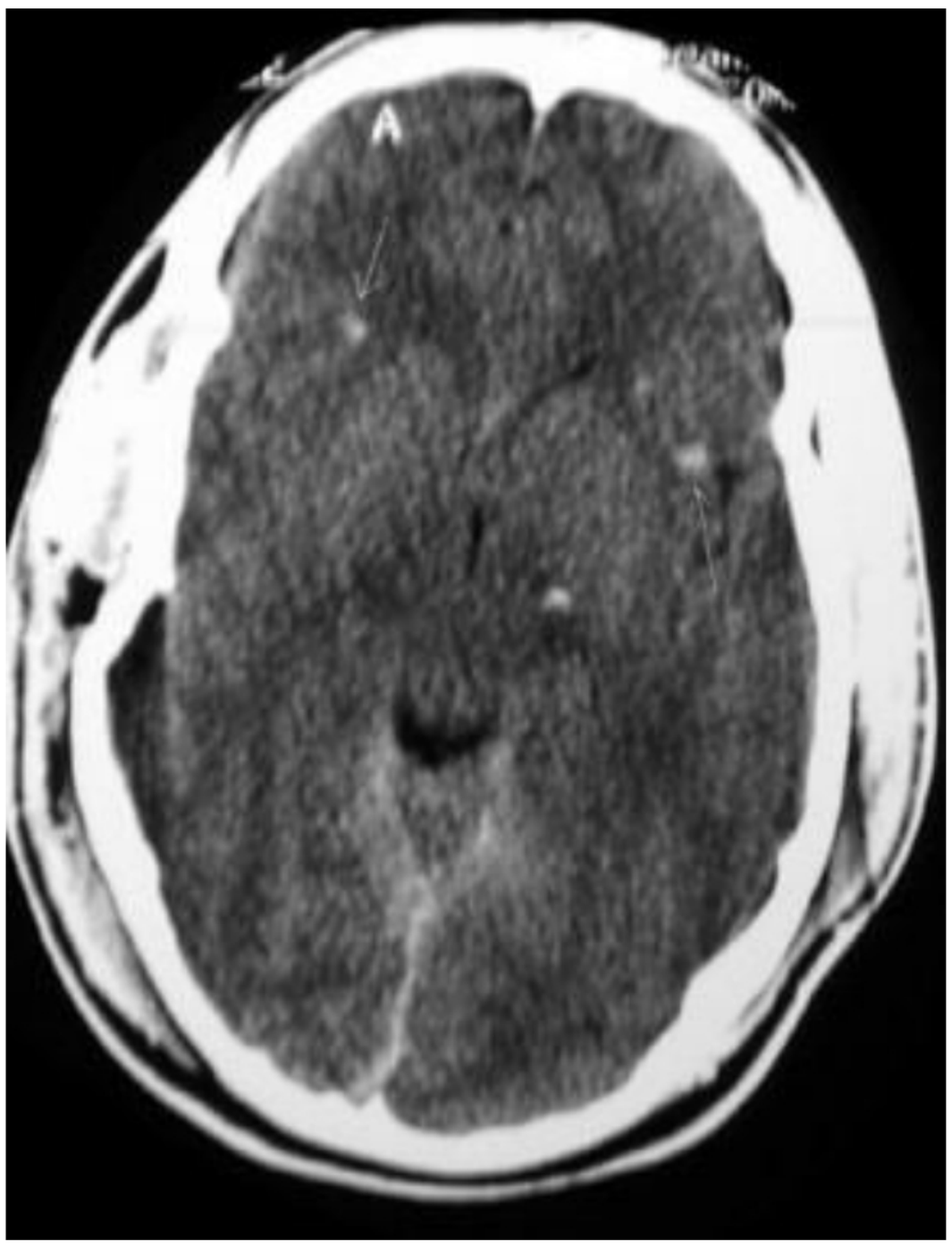


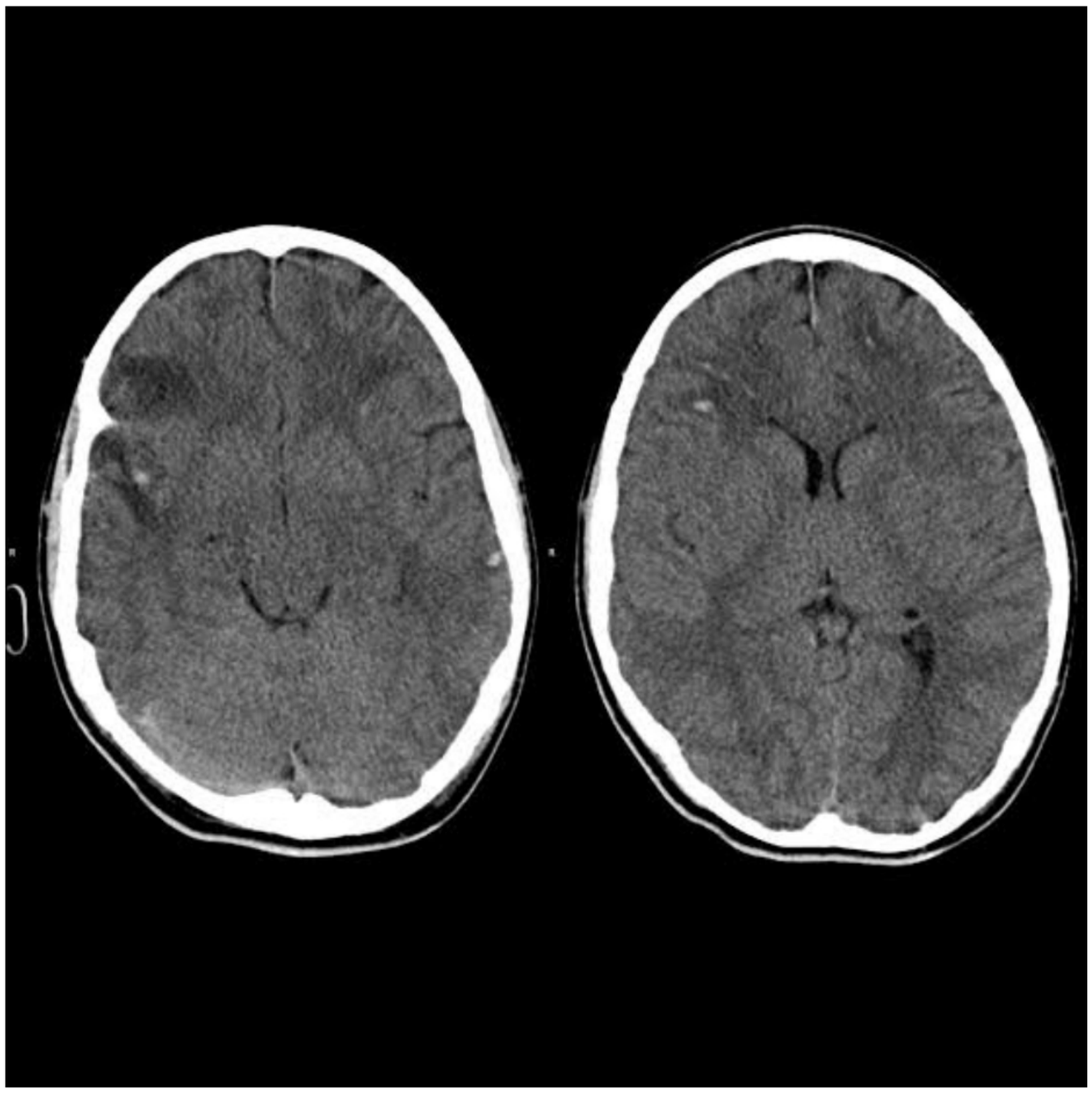
Subarachnoid Hemorrhage



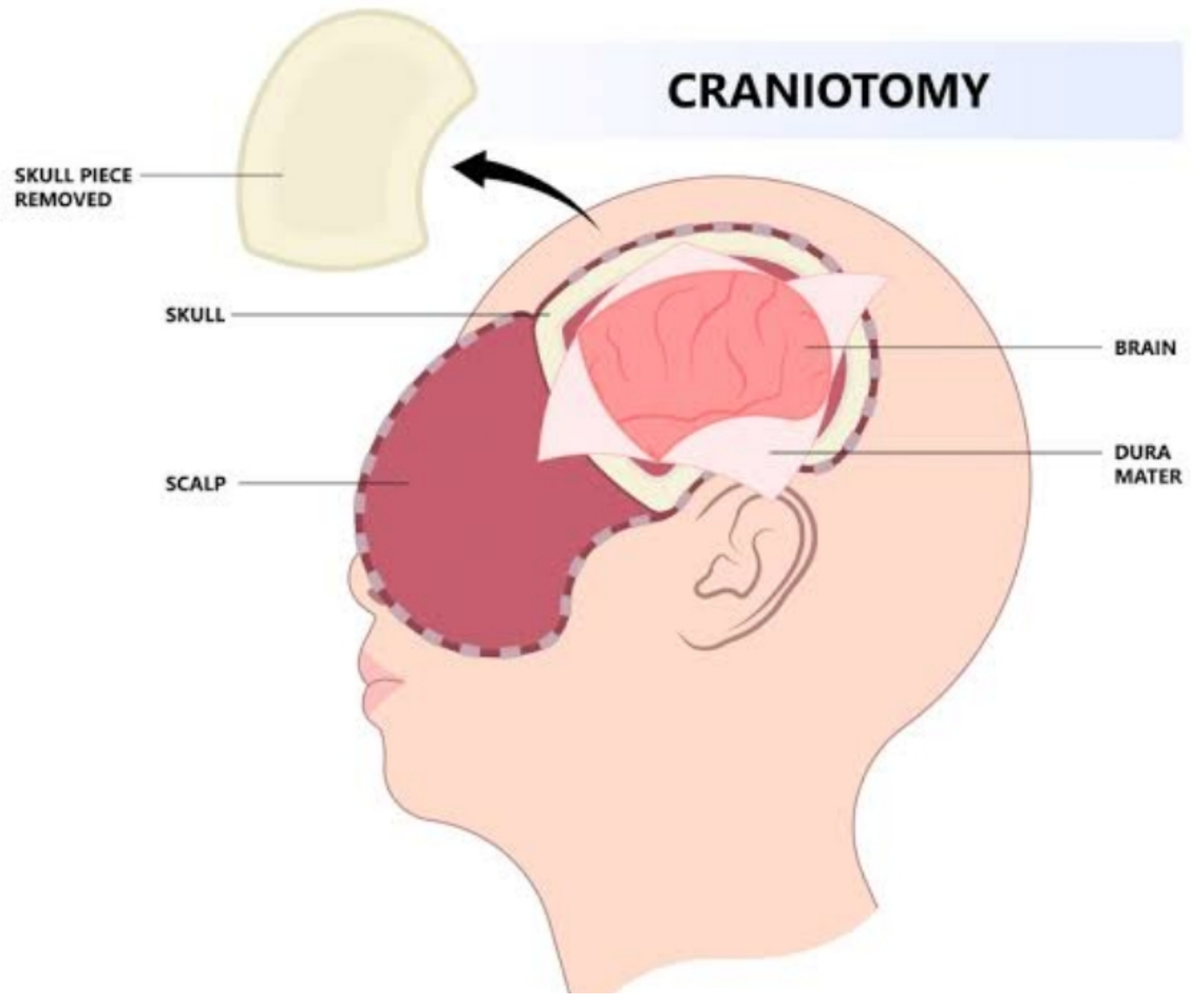


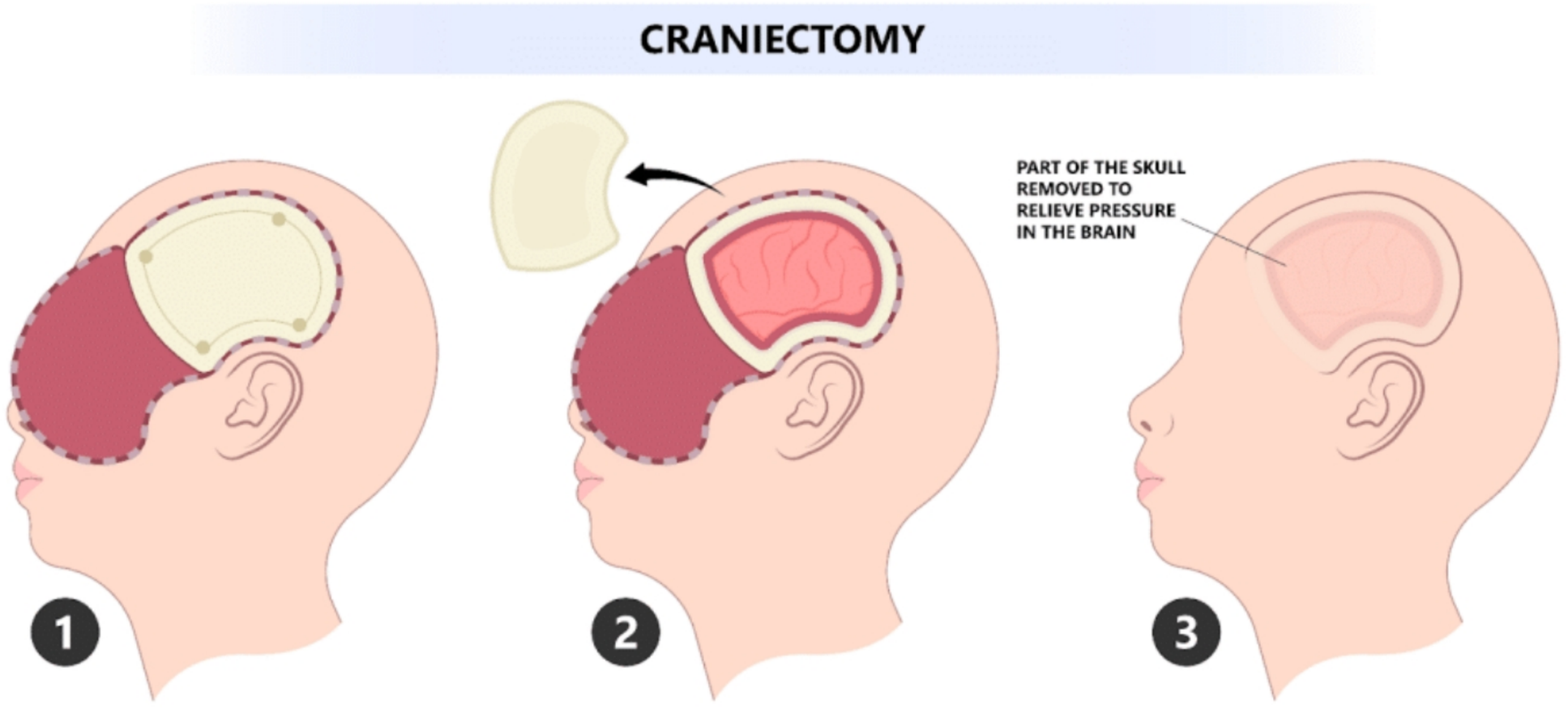
Diffuse Axonal Injury CT

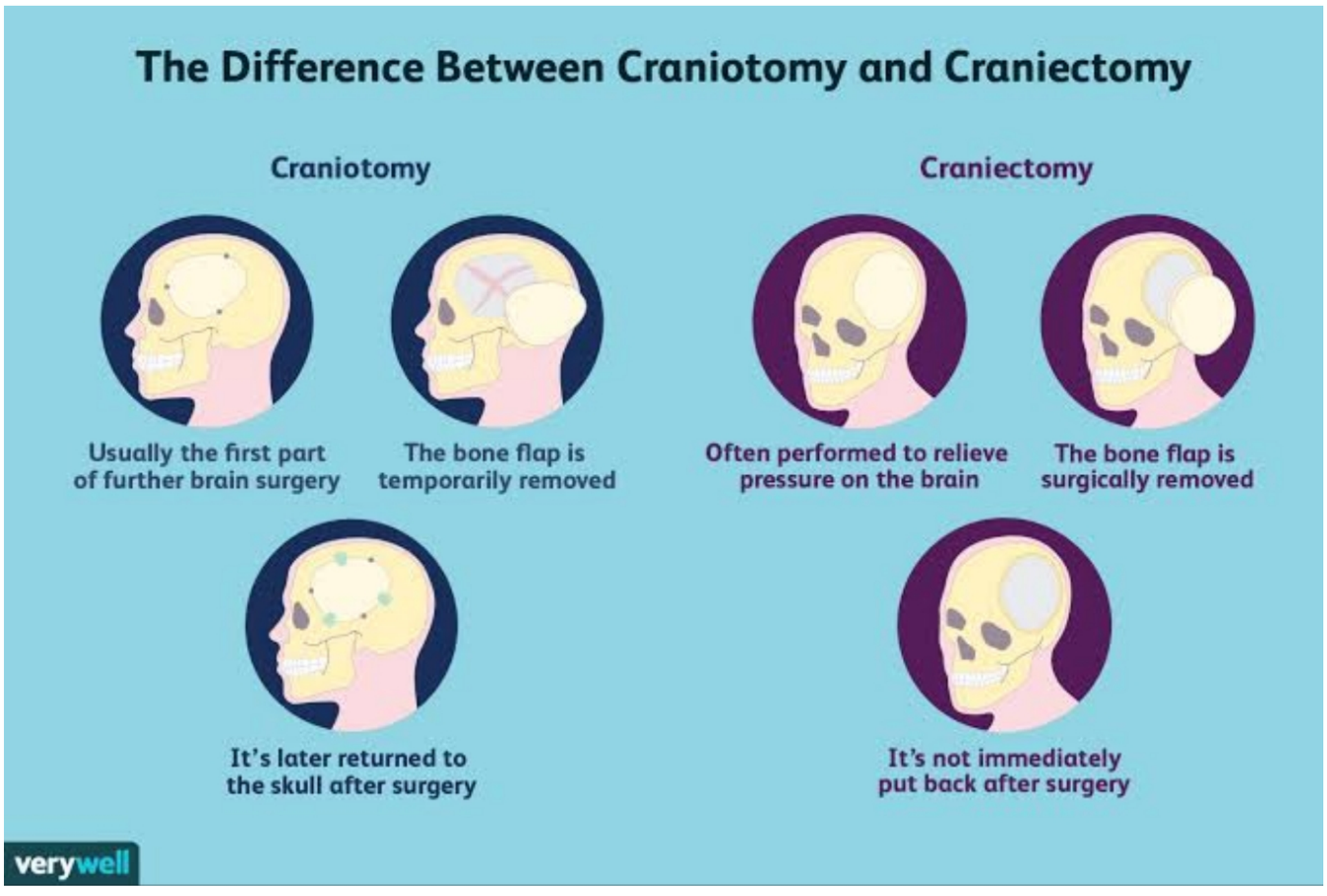


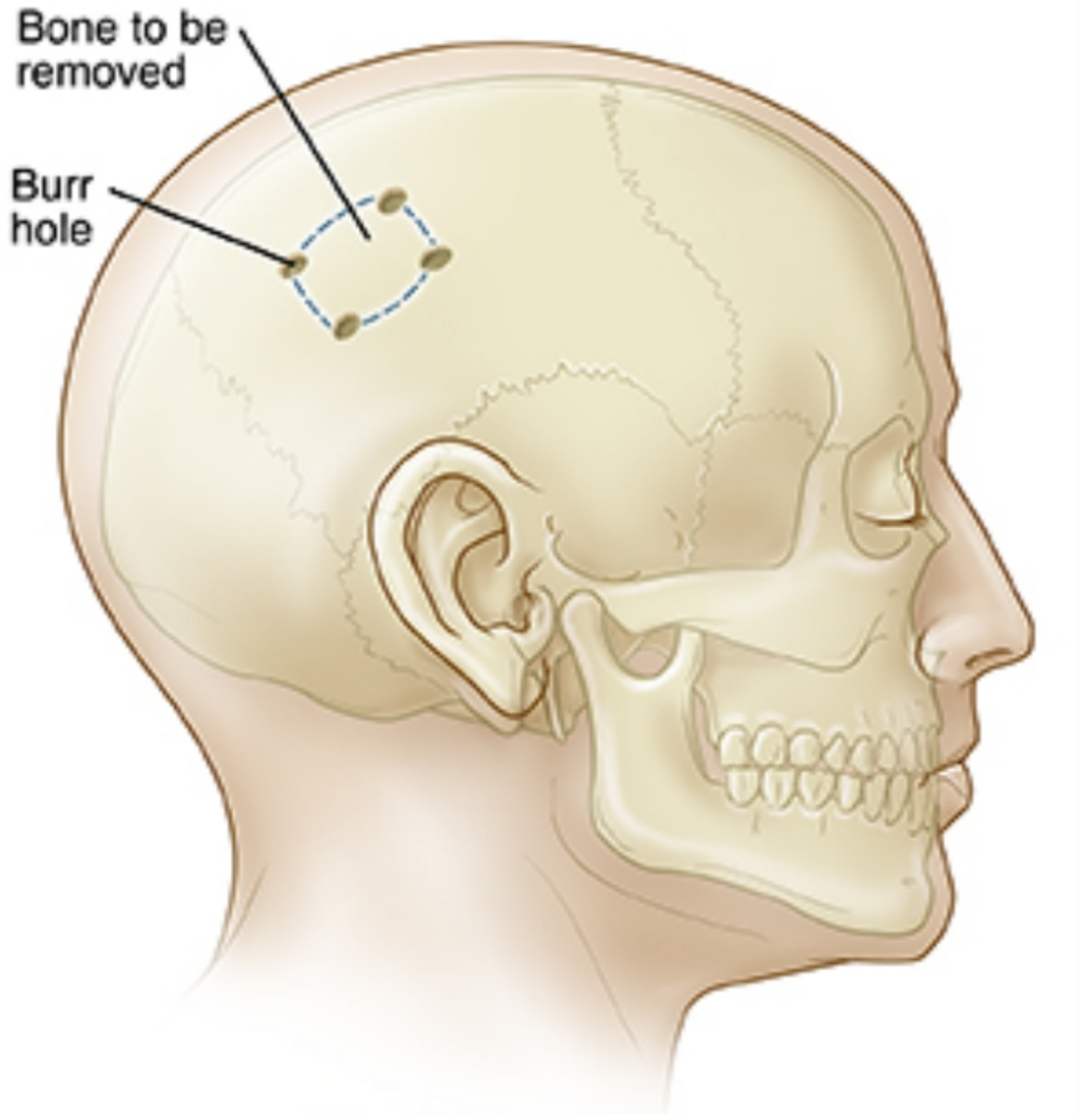


Punctate hemorrhage in corpus callosum and brainstem

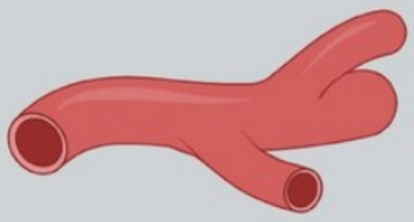
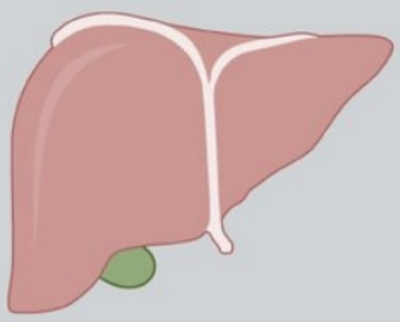
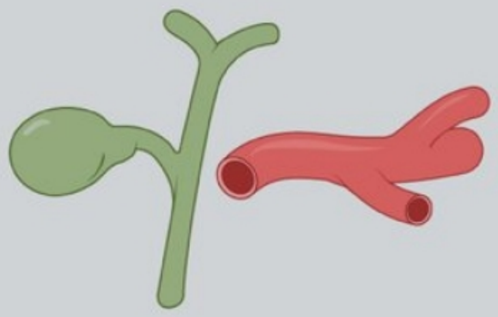

CRANIOTOMY
SKULL PIECE REMOVED
SKULL
SCALP
BRAIN
DURA MATER

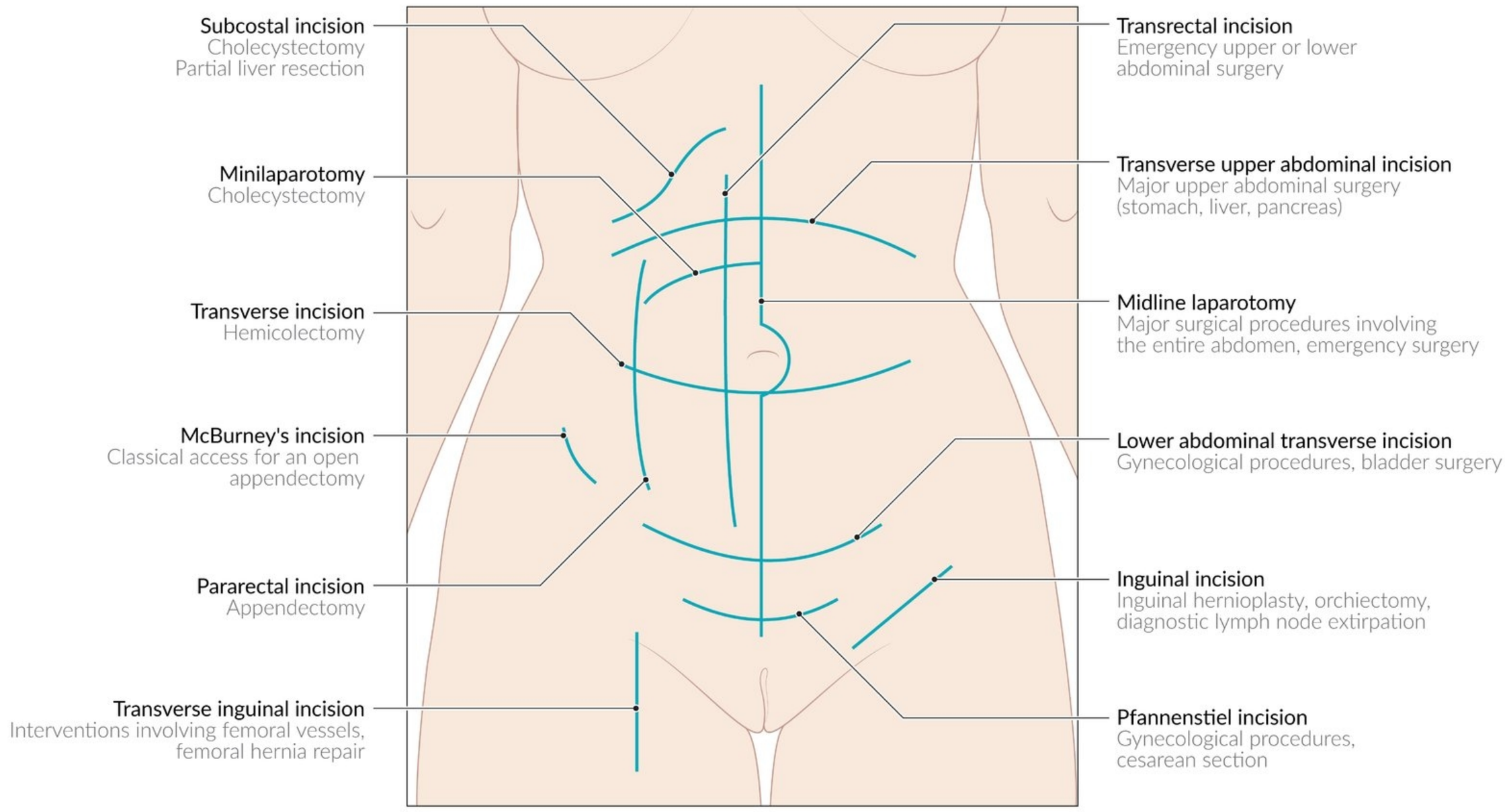

CRANIECTOMY
PART OF THE SKULL REMOVED TO RELIEVE PRESSURE IN THE BRAIN
1
2
3


The Difference Between Craniotomy and Craniectomy
Craniotomy
Craniectomy
Usually the first part of further brain surgery
The bone flap is temporarily removed
Often performed to relieve pressure on the brain
The bone flap is surgically removed
It's later returned to the skull after surgery
It's not immediately put back after surgery
verywell


Bone to be removed
Burr hole

Jaundice

Level	Etiology		
Prehepatic 	**Hemolysis** E.g., glucose-6-phosphate dehydrogenase deficiency, spherocytosis **Ineffective erythropoiesis** E.g., thalassemia, pernicious anemia (vitamin B12 deficiency)		
Intrahepatic 	**Nonobstructive biliary disease** E.g.: • Hepatitis • Cirrhosis of the liver • Congestive hepatopathy • Primary biliary cirrhosis (PBC) • Cystic fibrosis	**Mechanical biliary obstruction** E.g.: • Tumors of the liver • Intrahepatic gallstones • Congestive hepatopathy • Primary sclerosing cholangitis (PSC)	Jaundice
Posthepatic 		E.g.: • Choledocholithiasis • Inflammation (e.g., PSC) • Malformation of the biliary tract • Tumors (e.g., carcinoma of the pancreas) • Bile duct strictures	


Subcostal incision
Cholecystectomy
Partial liver resection
Minilaparotomy
Cholecystectomy
Transverse incision
Hemicolectomy
McBurney's incision
Classical access for an open appendectomy
Pararectal incision
Appendectomy
Transverse inguinal incision
Interventions involving femoral vessels, femoral hernia repair
Transrectal incision
Emergency upper or lower abdominal surgery
Transverse upper abdominal incision
Major upper abdominal surgery (stomach, liver, pancreas)
Midline laparotomy
Major surgical procedures involving the entire abdomen, emergency surgery
Lower abdominal transverse incision
Gynecological procedures, bladder surgery
Inguinal incision
Inguinal hernioplasty, orchiectomy, diagnostic lymph node extirpation
Pfannenstiel incision
Gynecological procedures, cesarean section

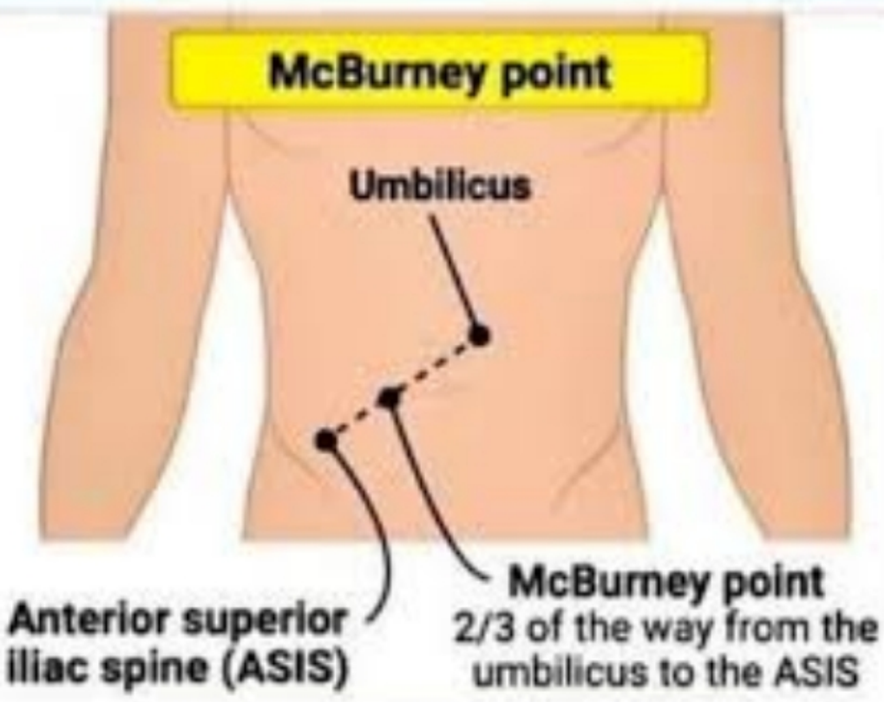
Acute Appendicitis

Epidemiology
- Most common in 10- to 19-year-old group
- More common in boys and men

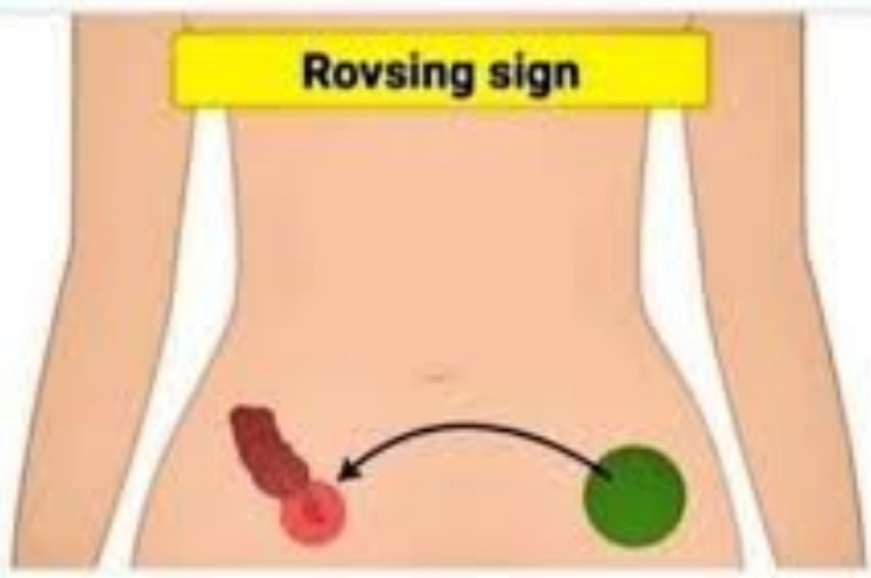
Clinical
- Right lower quadrant abdominal pain
- Anorexia
- Nausea and vomiting
- Periumbilical pain that migrates to RLQ
- Fever

Atypical features
- Dyspepsia
- Flatulence
- Bowel irregularity
- Diarrhea
- Generalized malaise

McBurney point

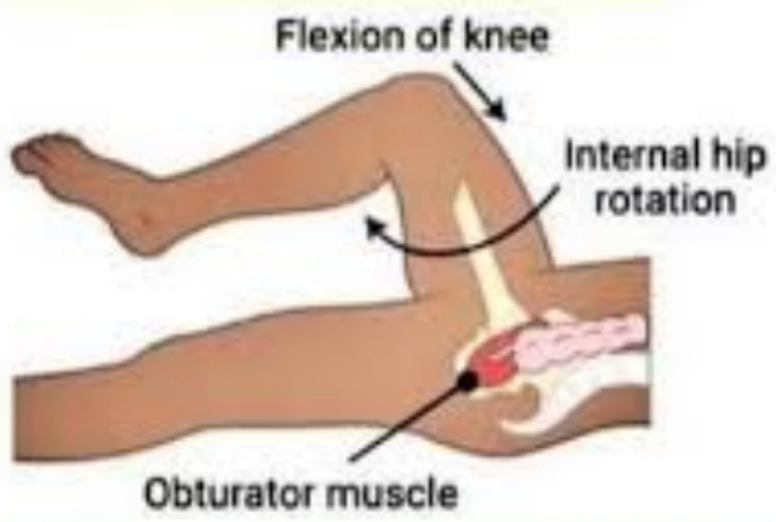


Rovsing sign



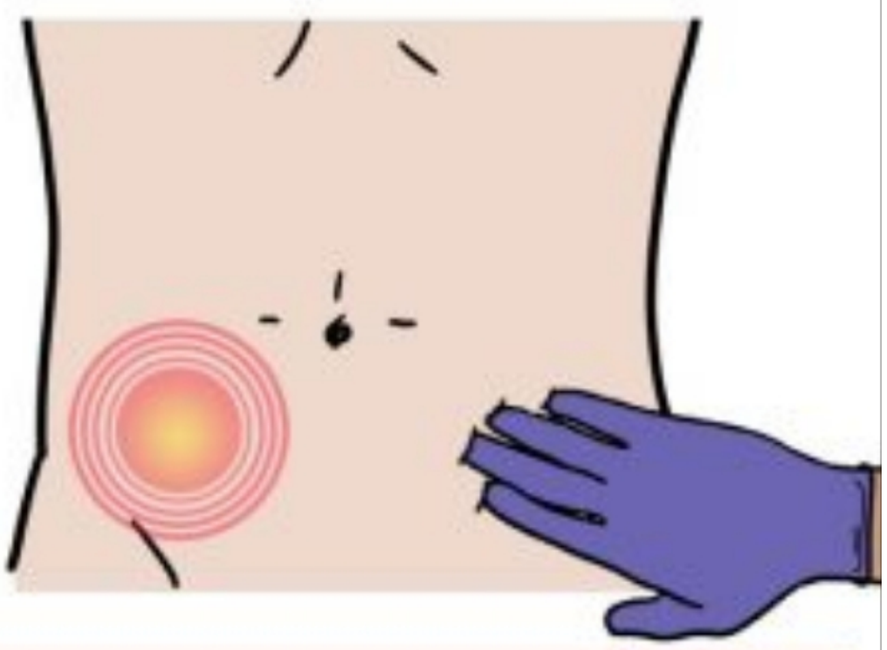
Psoas sign
(retrocecal appendicitis)

Obturator sign
(retrocecal or pelvic appendicitis)



Management
- Appendectomy
- Antibiotics only (reserved for cases of nonperforated, uncomplicated appendicitis)

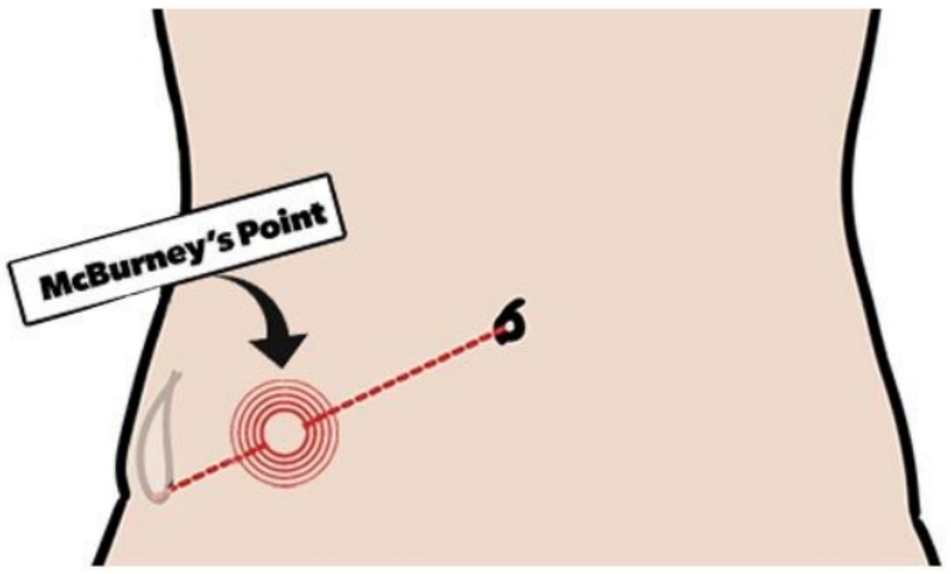
Rovsing's Sign



A positive Rovsing's sign is when there is tenderness in the RLQ **when palpating the LLQ**

This could also mean **appendicitis**

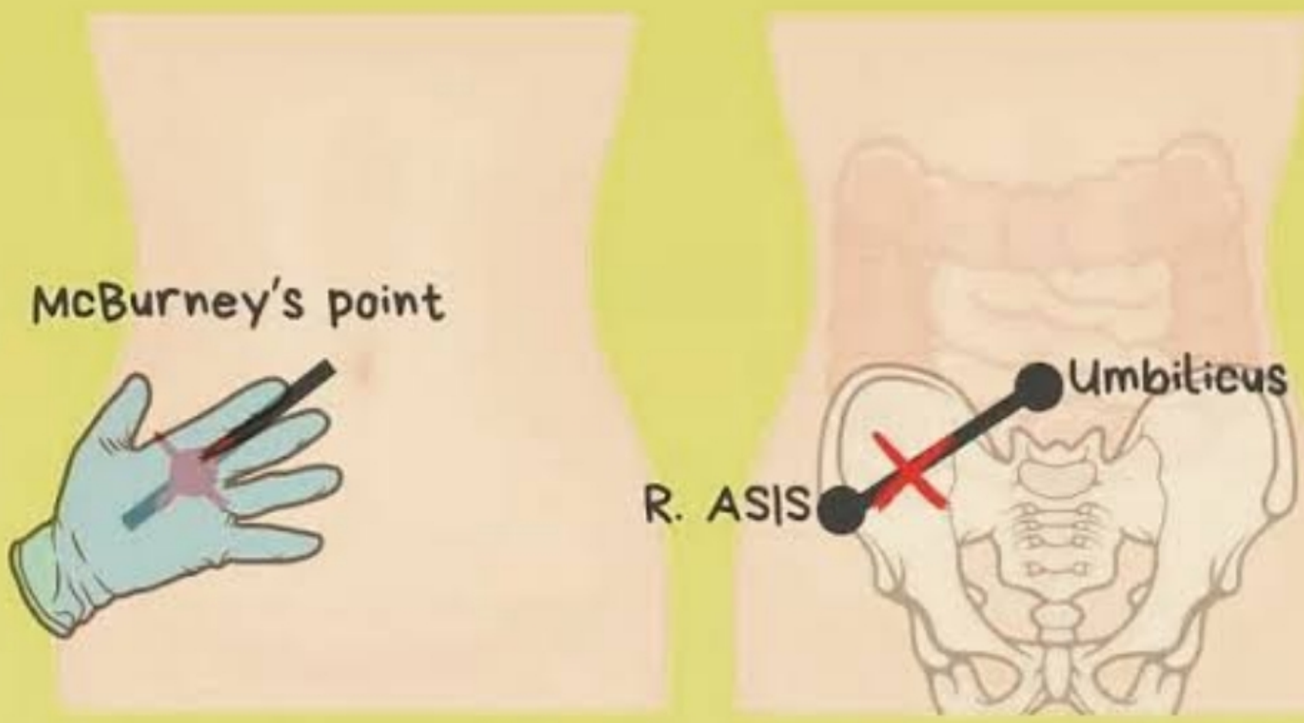
McBurney's Sign



A positive Mcburney's sign is when significant pain is elicited by **palpating this area in the RLQ.**

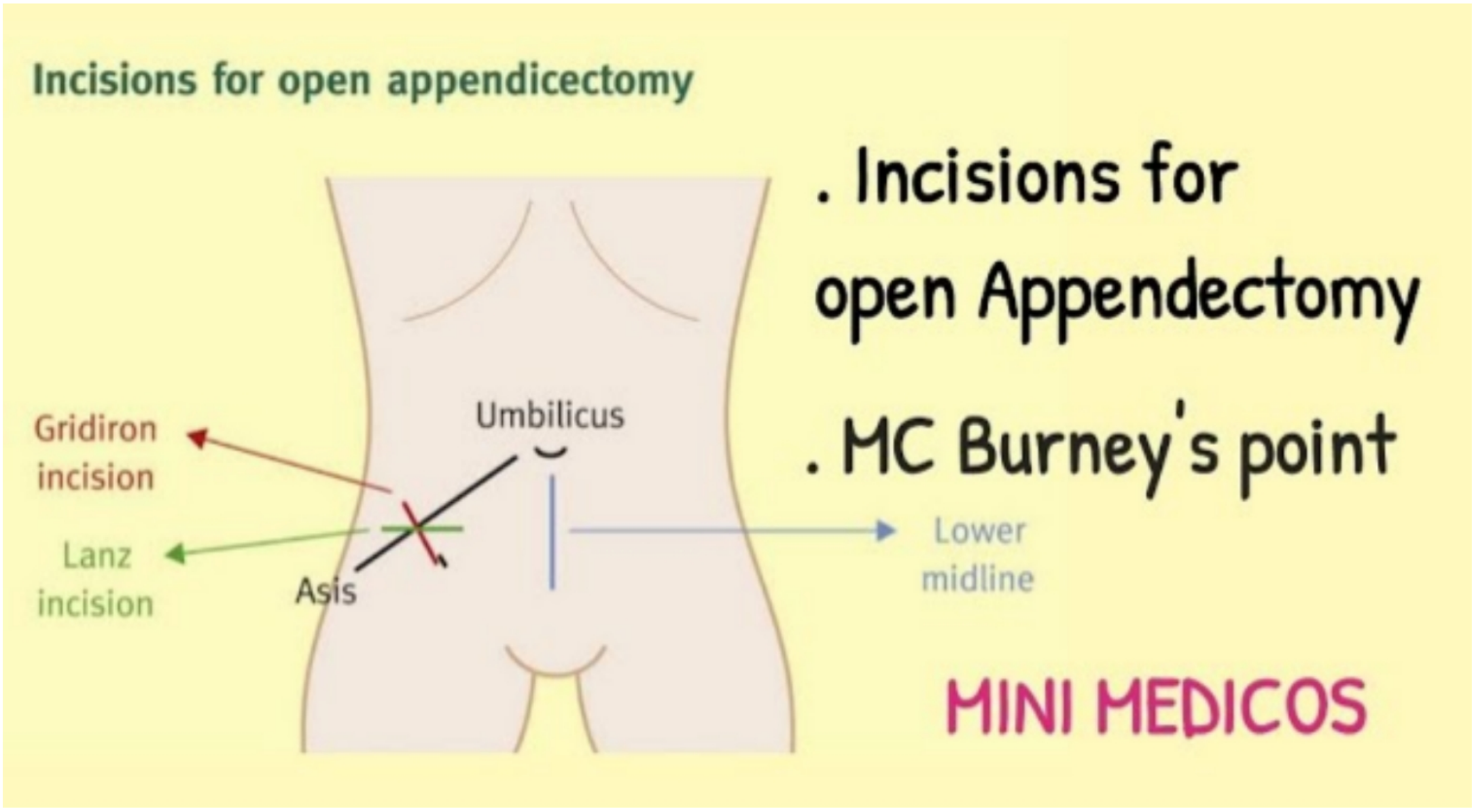
This could mean appendicitis.

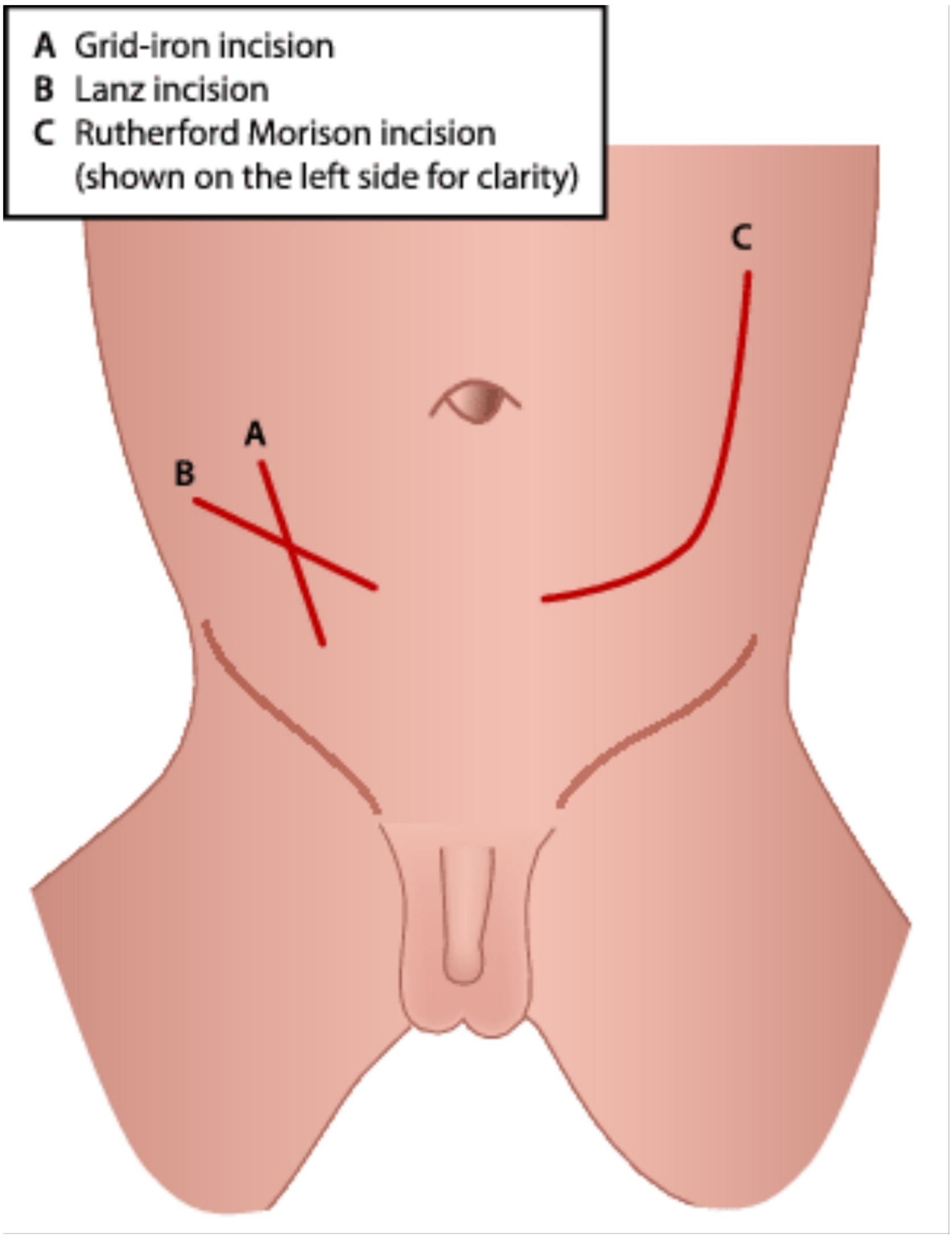
REBOUND TENDERNESS



Locate McBurney's point which is a point 3/4 away from the umbilicus to the R. ASIS in the lower right quadrant to locate the position of the appendix.

A positive finding is when rebound tenderness is felt when pressed upon this point and released quickly.

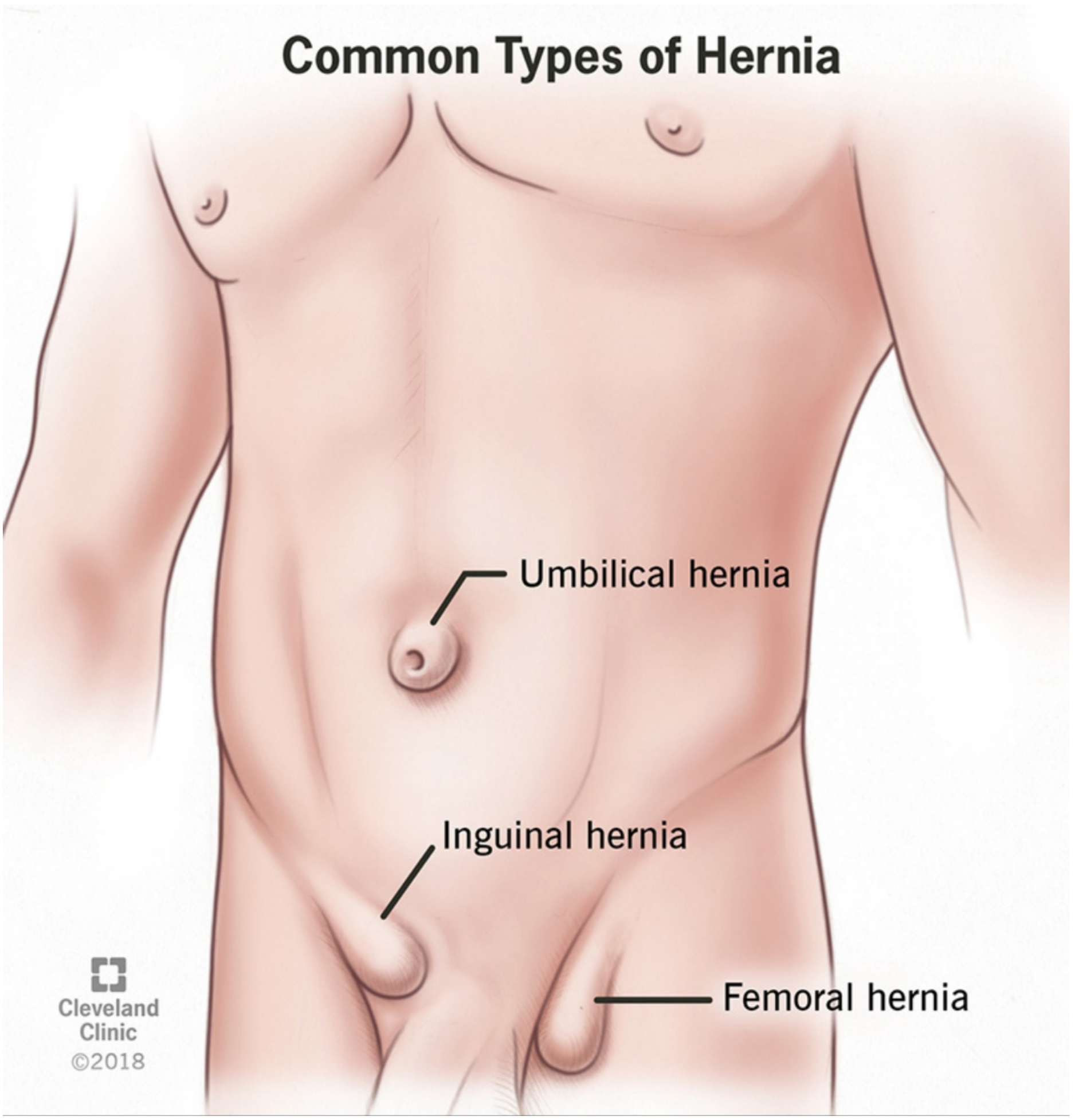

Incisions for open appendicectomy
Gridiron incision
Lanz incision
Umbilicus
Asis
Lower midline
. Incisions for open Appendectomy
. MC Burney's point
MINI MEDICOS


A Grid-iron incision
B Lanz incision
C Rutherford Morison incision
(shown on the left side for clarity)
C
A
B

Babcock Forceps

Babcock forceps are specialized, atraumatic surgical instruments used for grasping and manipulating delicate tissues and tubular structures, such as the intestines, without causing damage. They are widely used in general, gynecological, and urological surgeries.

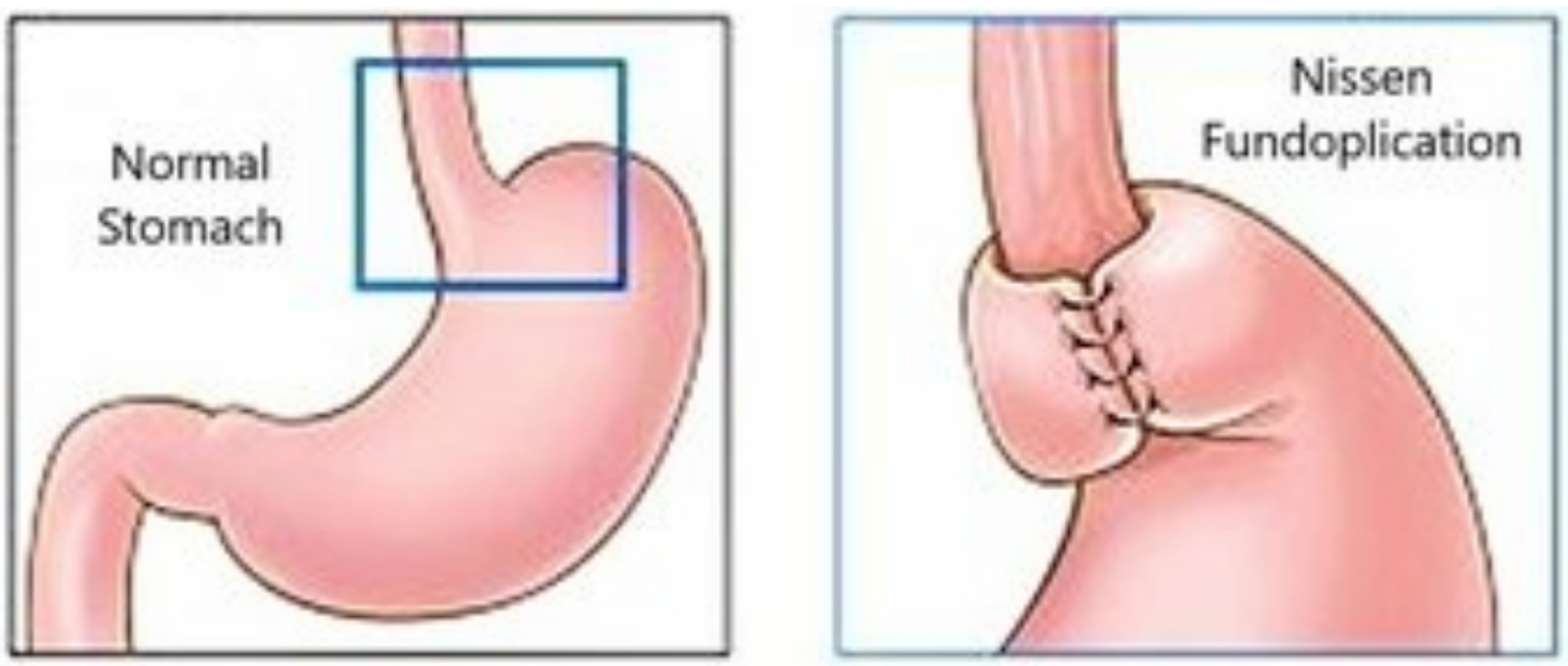
Common Types of Hernia

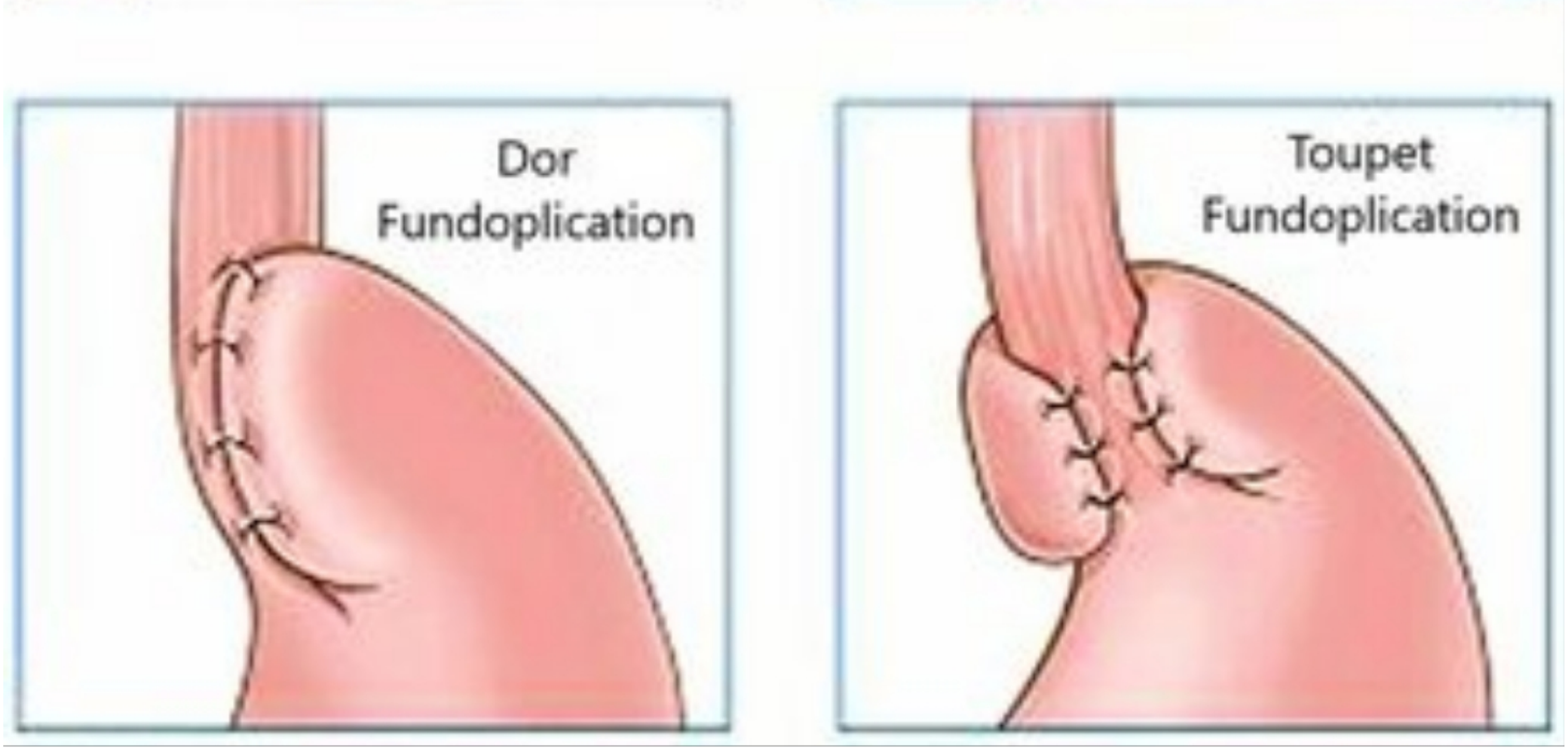


Fecal Peritonitis

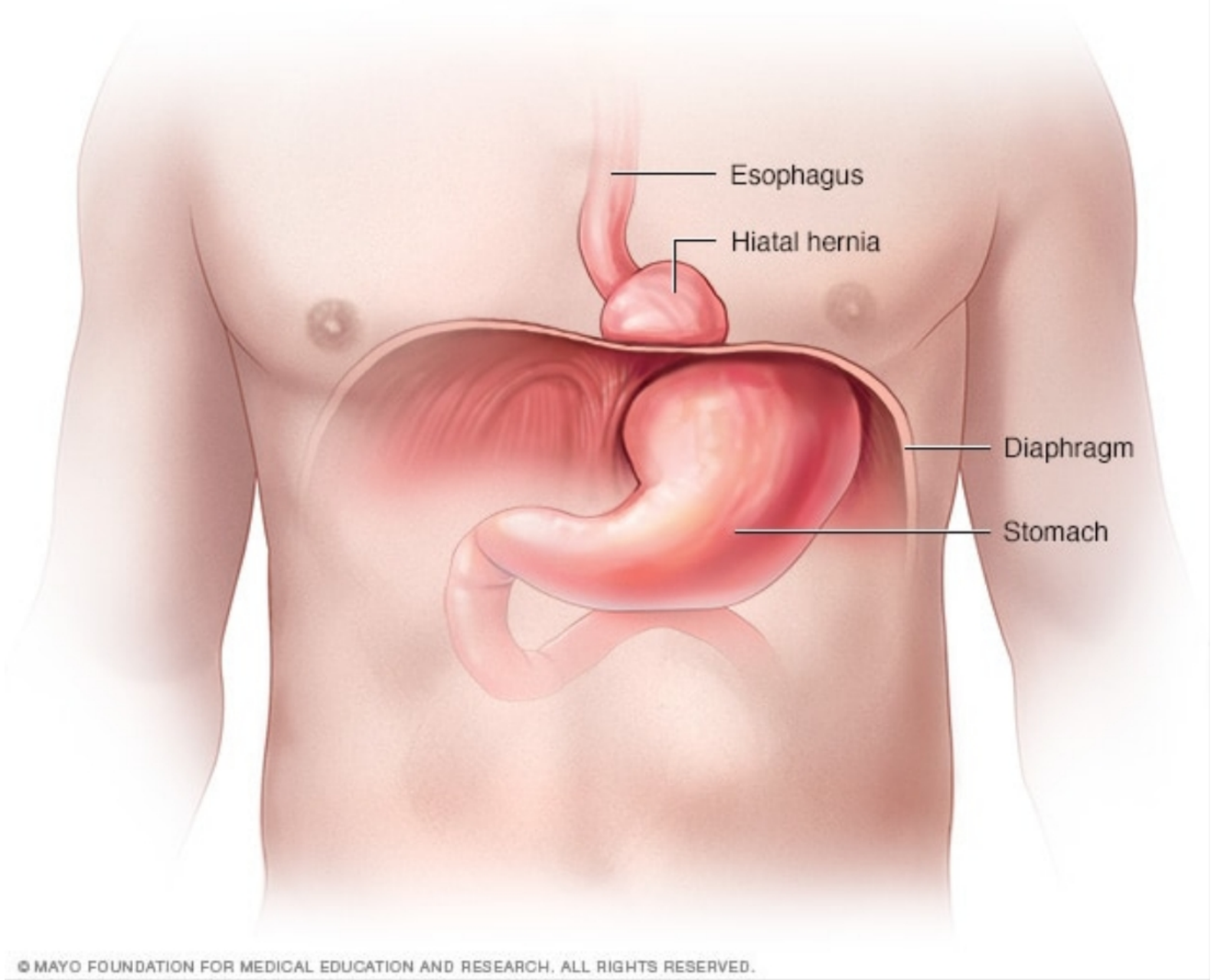
Soft tissue density material in paracolic gutters, medial to properitoneal fat planes, displacing bowel medially. Free gas is seen as 'football sign'.

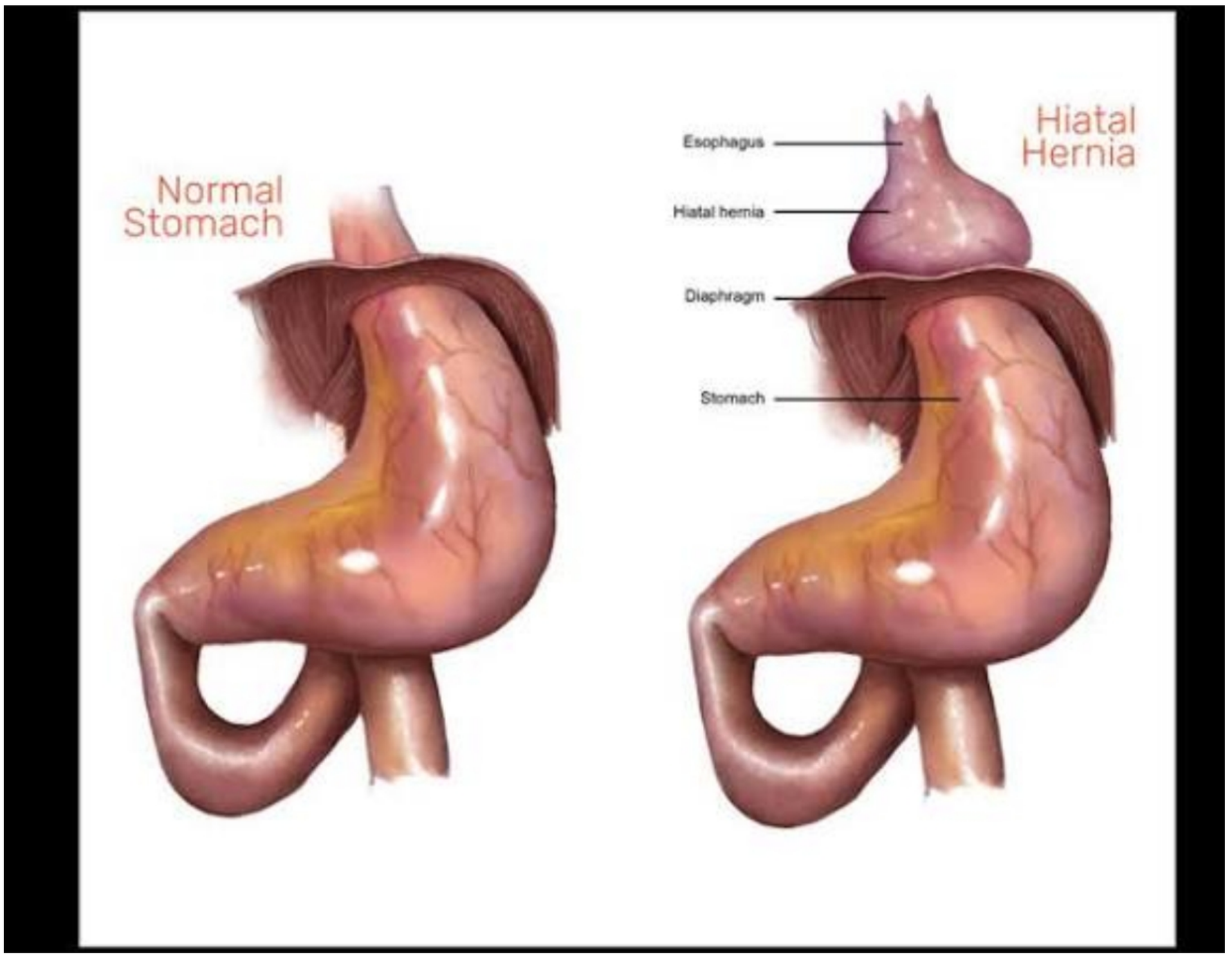
Fundoplication for GERD

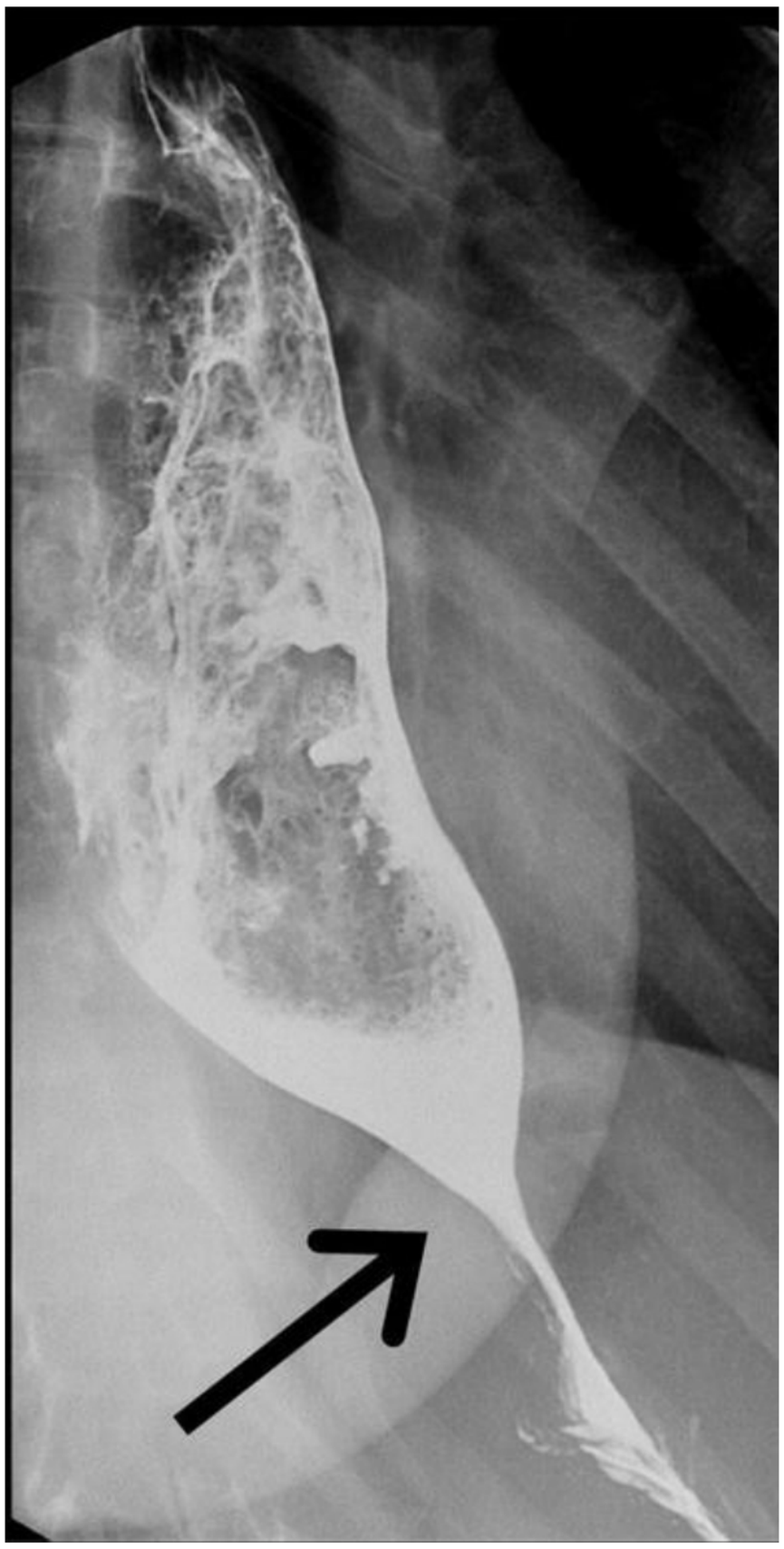




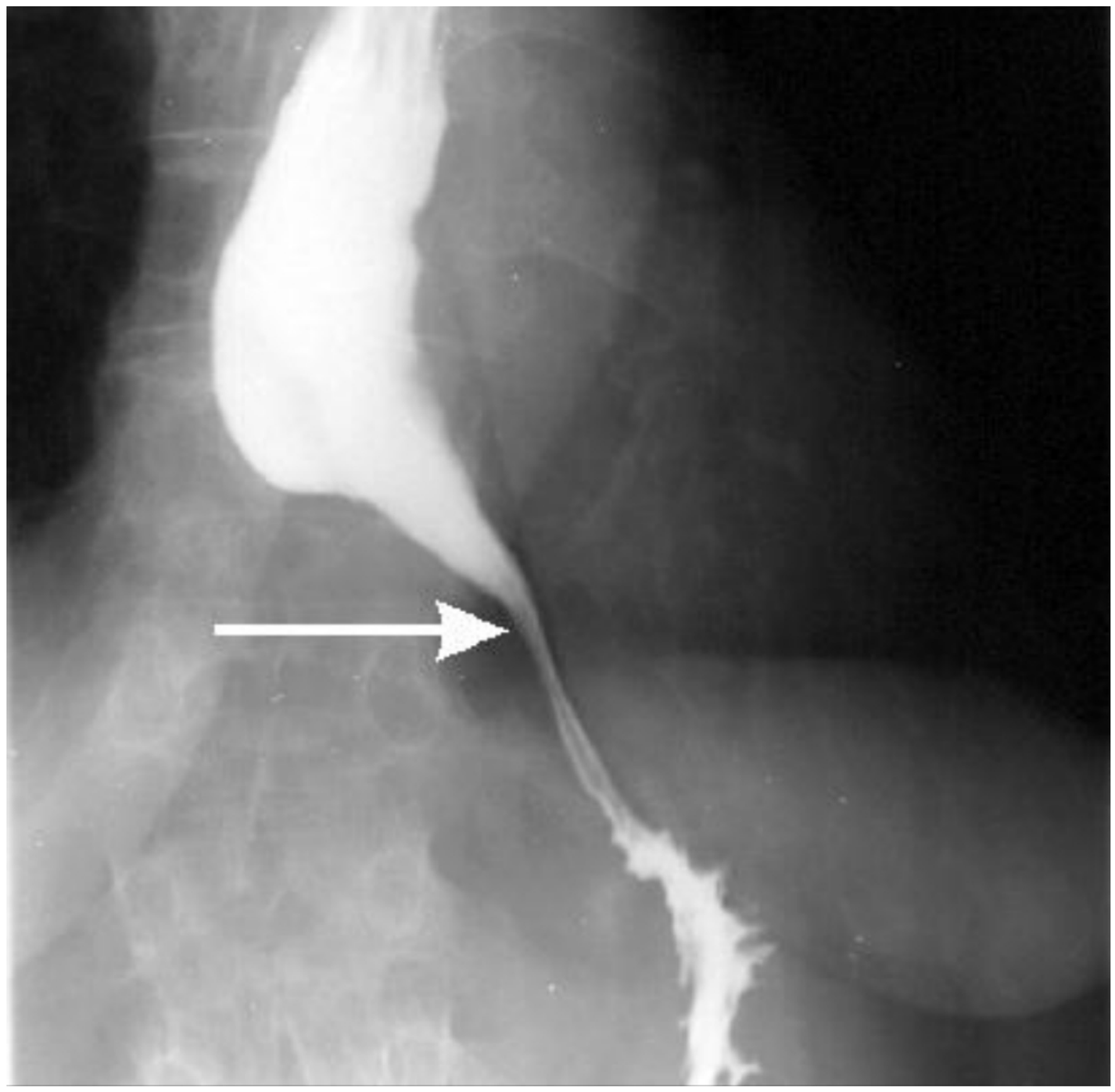
Hiatal Hernia

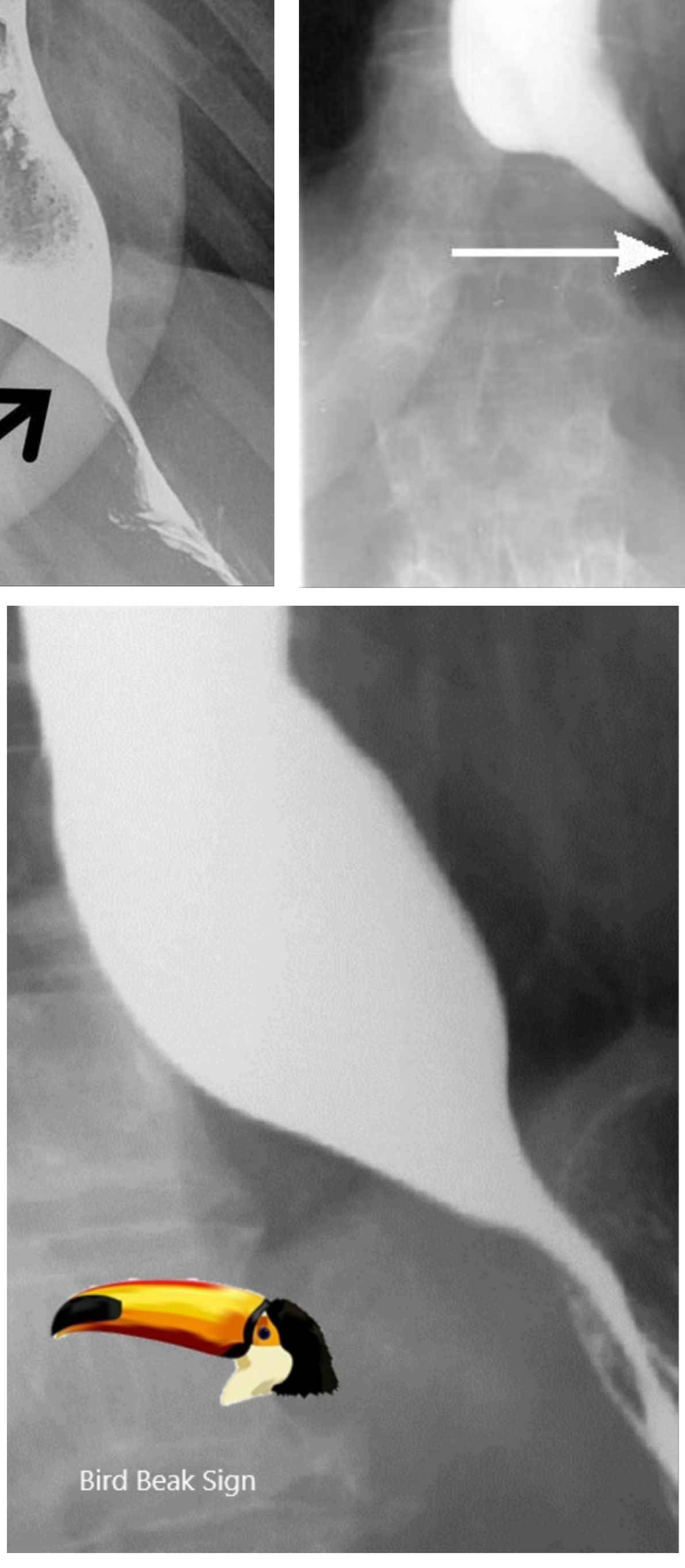




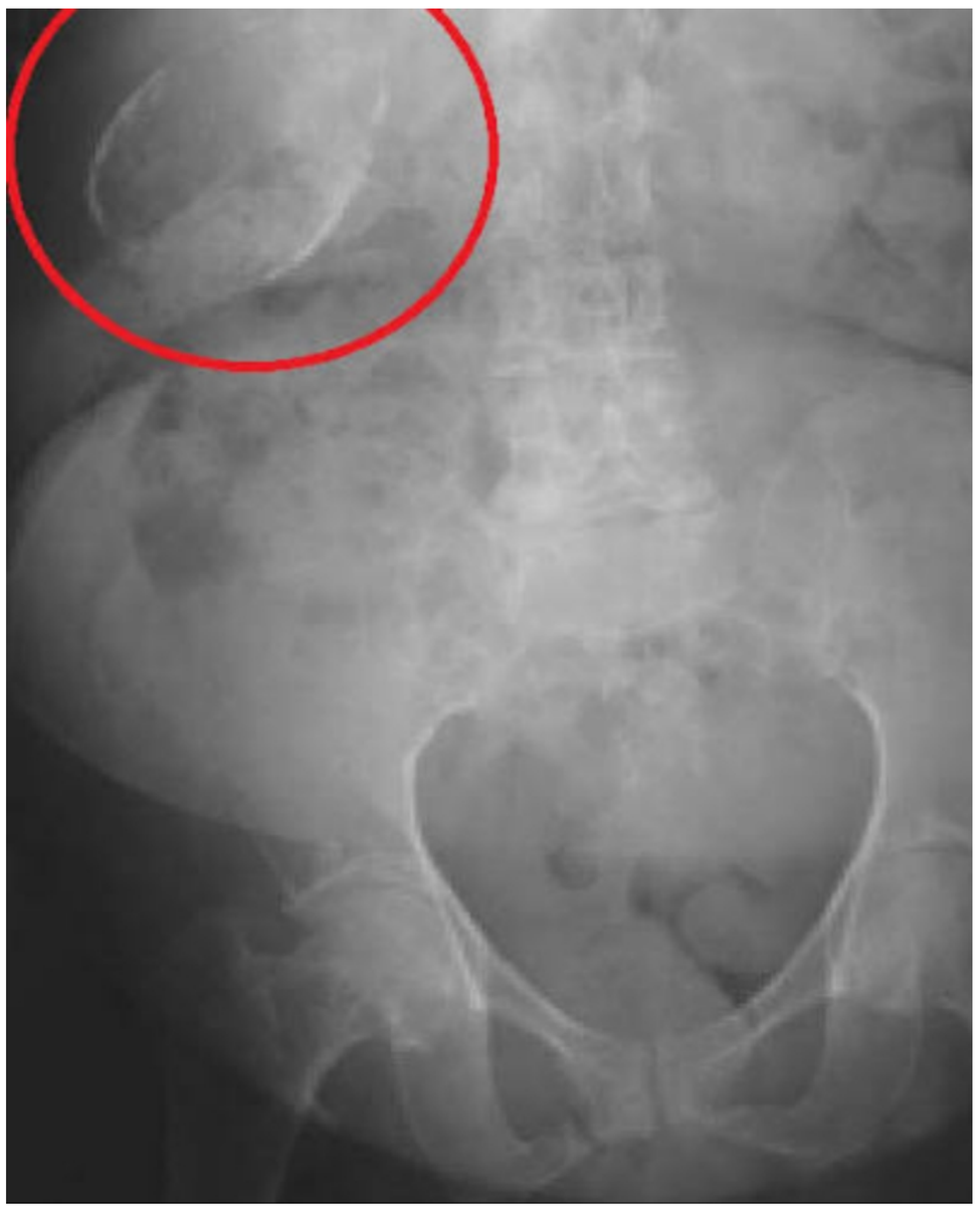


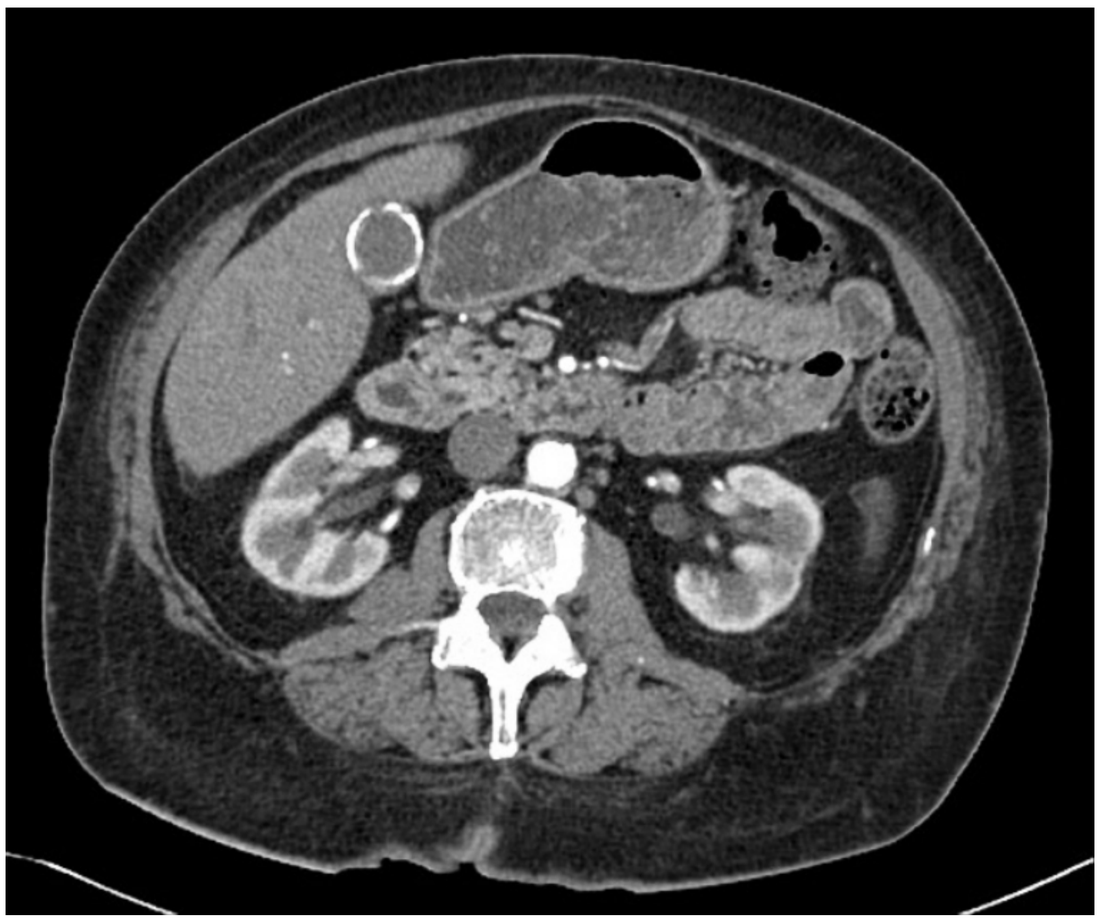
Bird beak sign seen in Achalsia

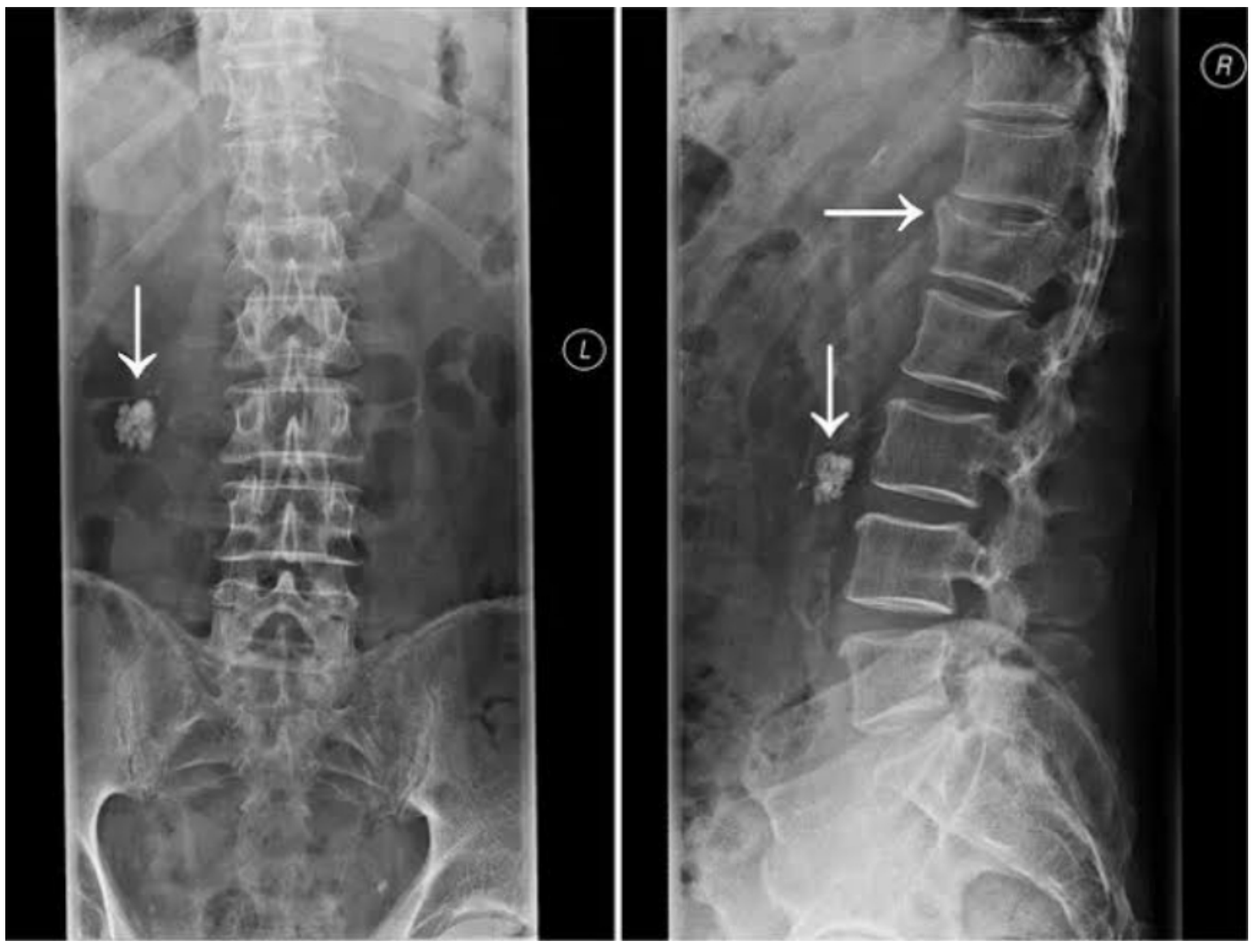




Porcelain Gallbladder

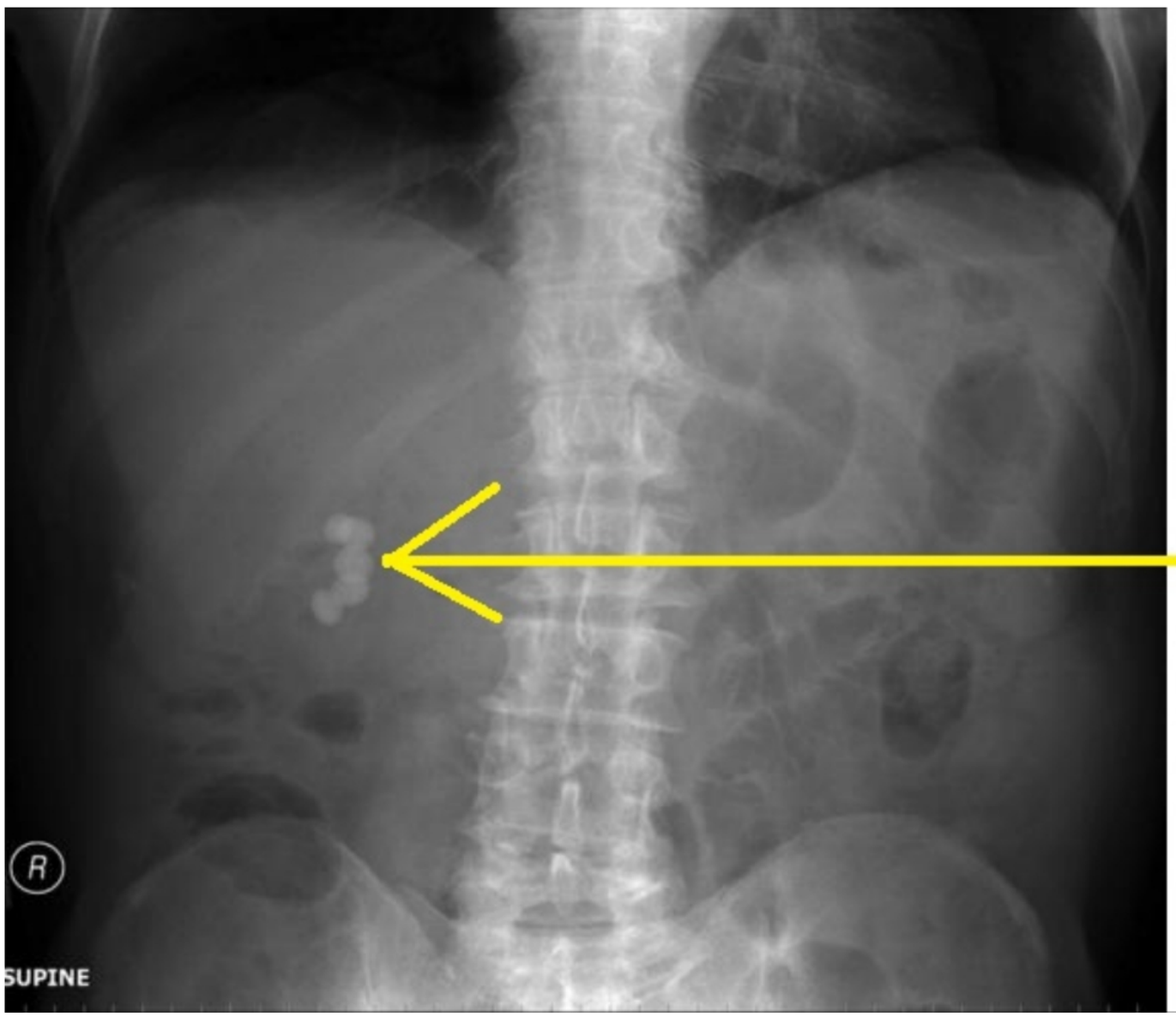




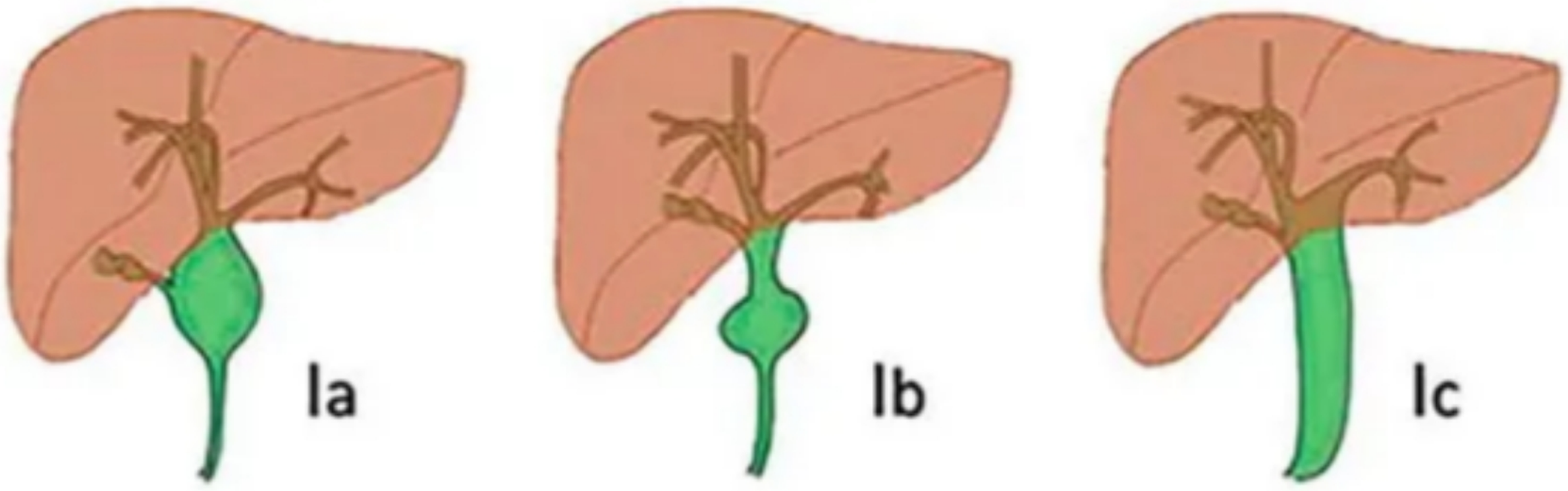


Gallstones

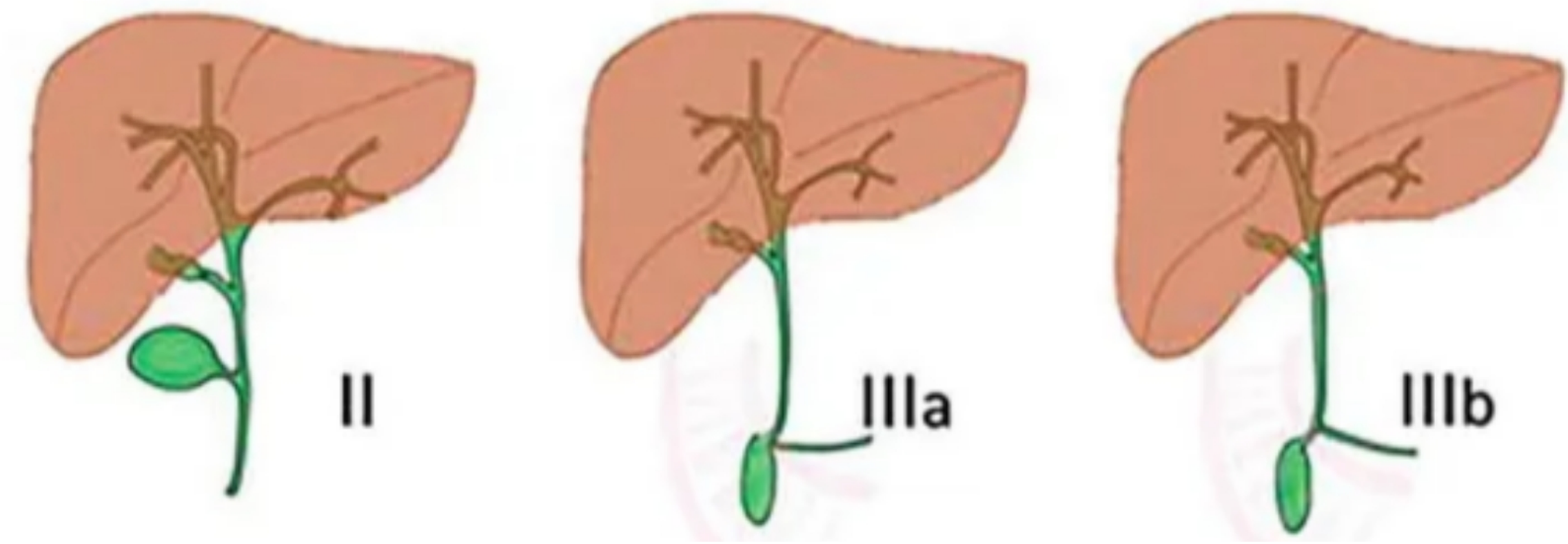

Right


Gallstones shown within the gallbladder cavity
SUPINE

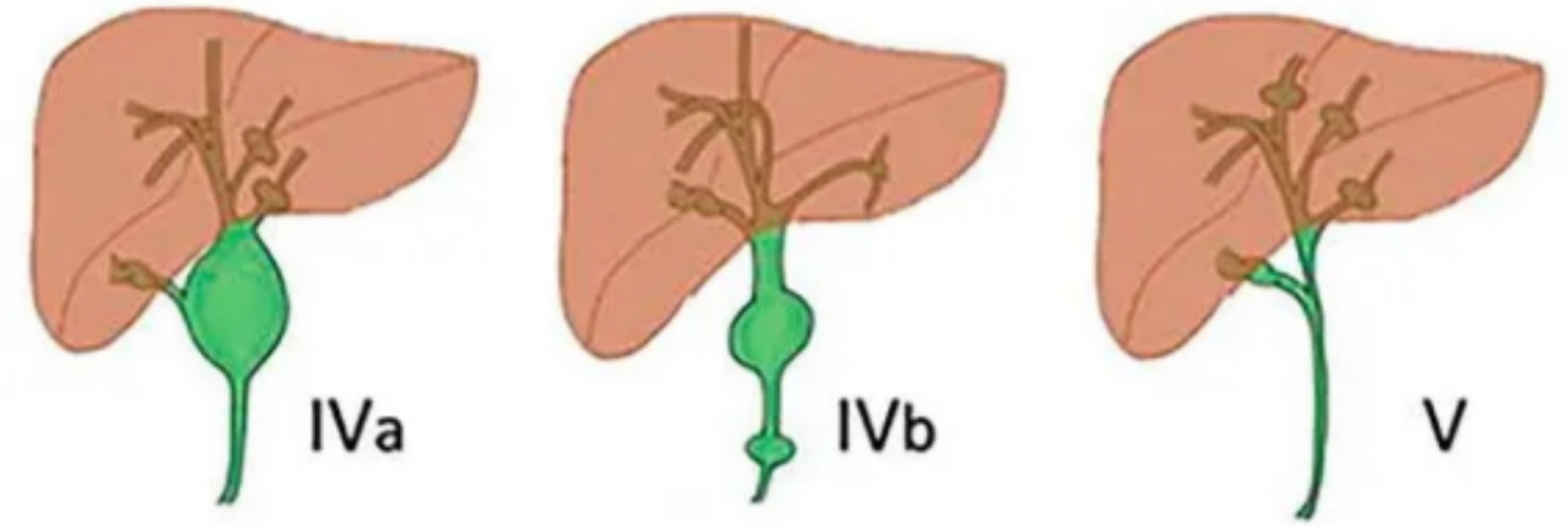
CHOLEDOCHAL CYST



Type I - cystic dilatation of entire extra hepatic bile ducts, normal Intrahepatic ducts
Ia - saccular and diffuse
Ib - saccular and segmental
Ic - fusiform and diffuse

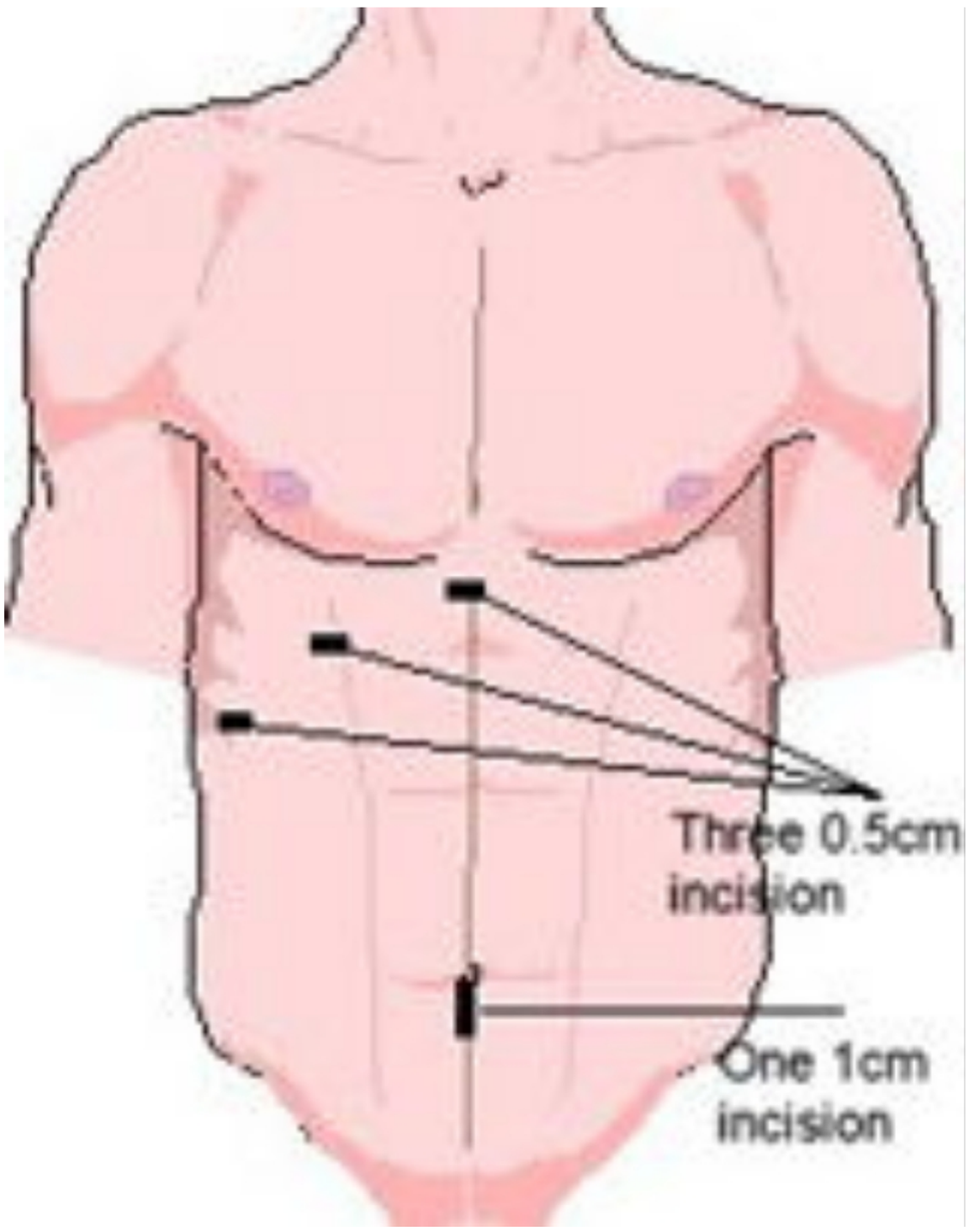


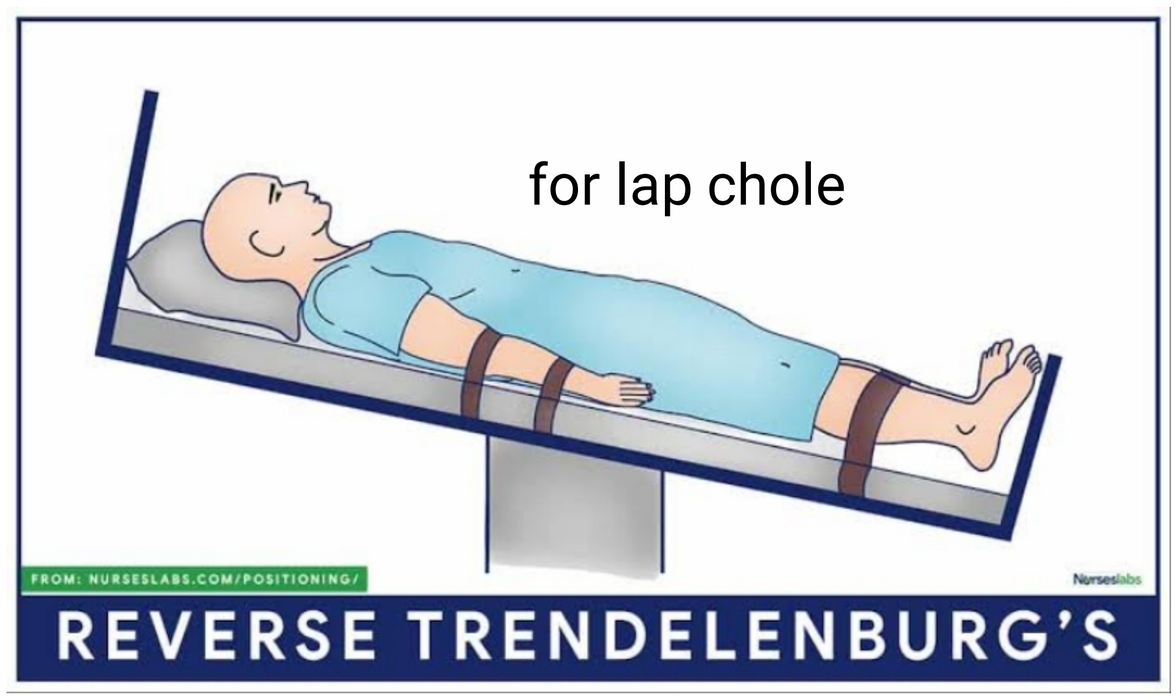
Type II - cystic dilatation of Dicerticulum of CBD
Type III - Choledochocele - cystic dilatation of intra duodenal portion of CBD

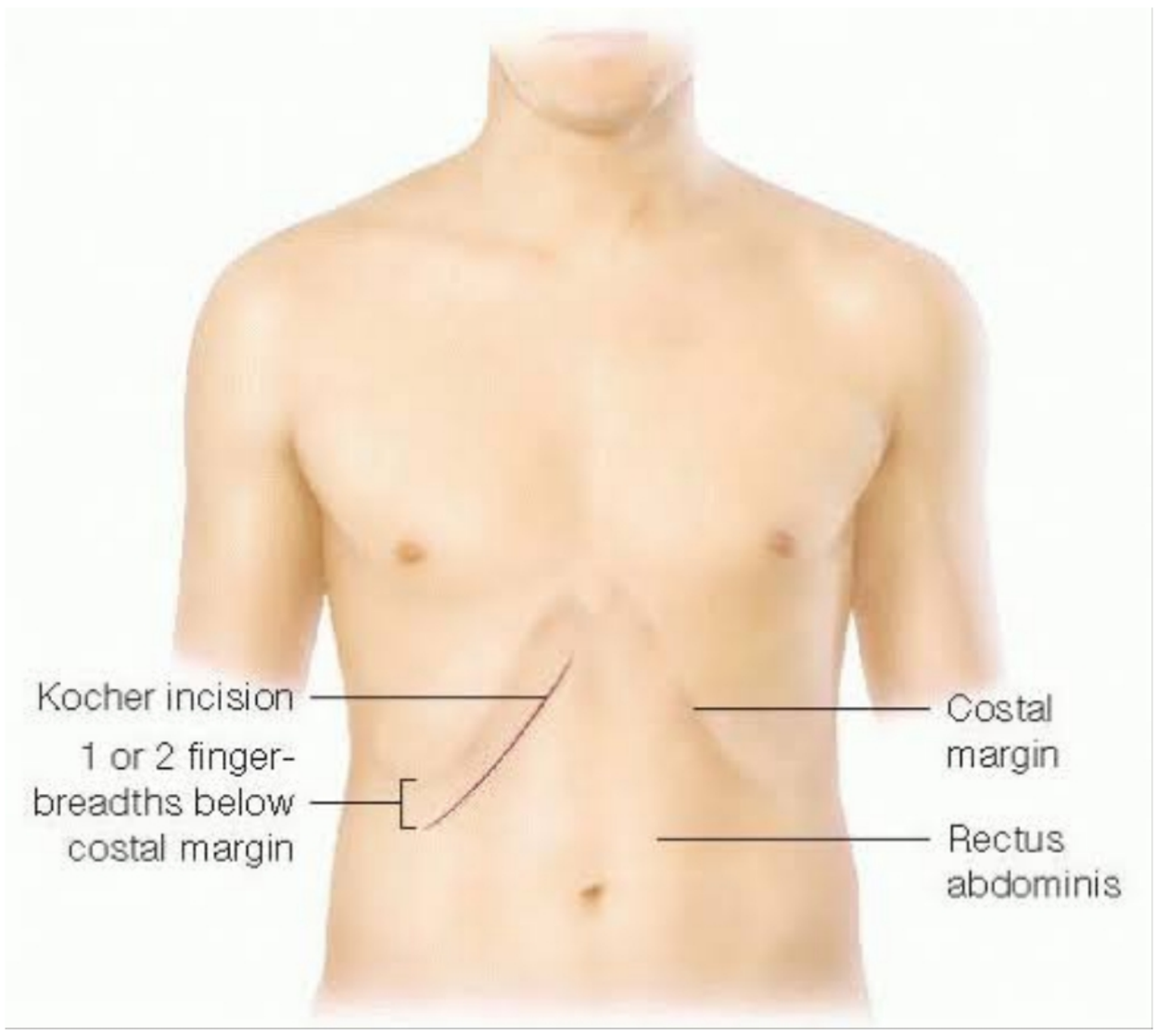


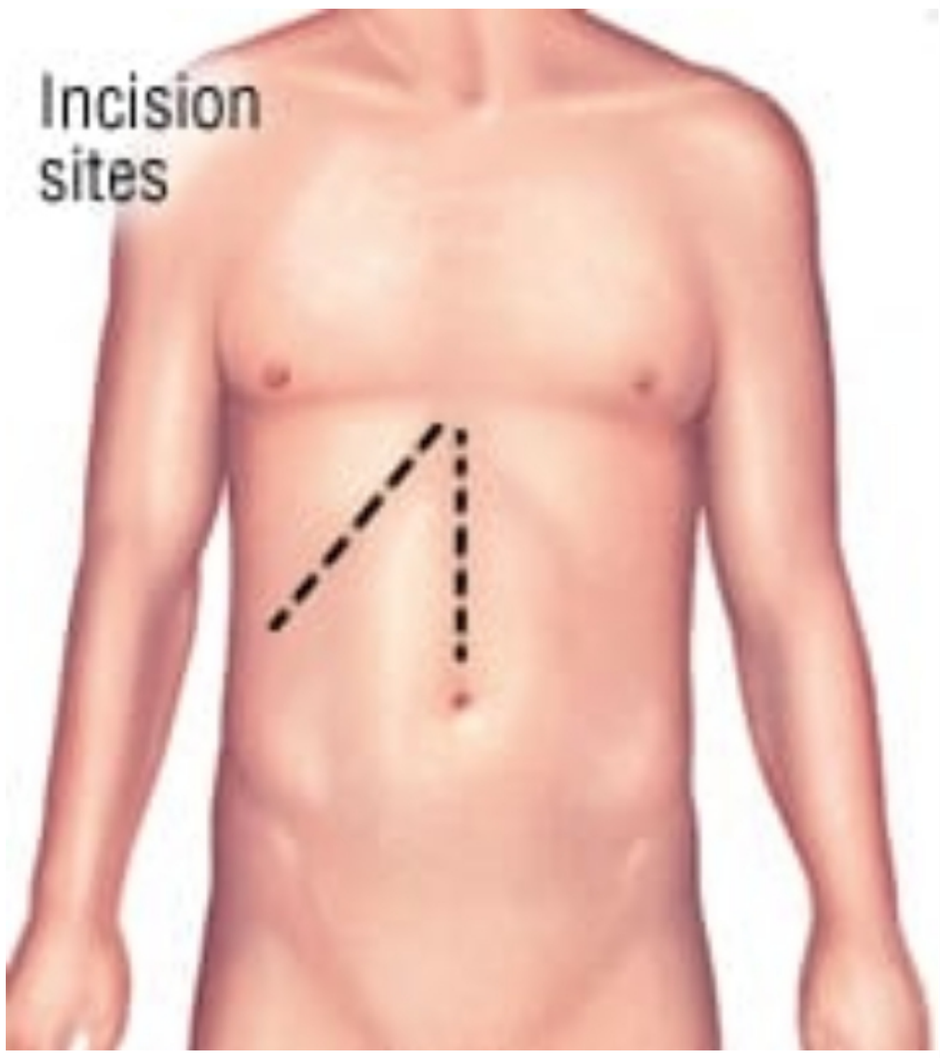
Type IV a - Multiple cystic dilatation of extra hepatic and Intrahepatic bile ducts
Type IV b - Multiple cystic dilatations of extra hepatic bile ducts only
Type V - Caroli's disease - multipe cystic dilatation of Intrahepatic bile ducts only

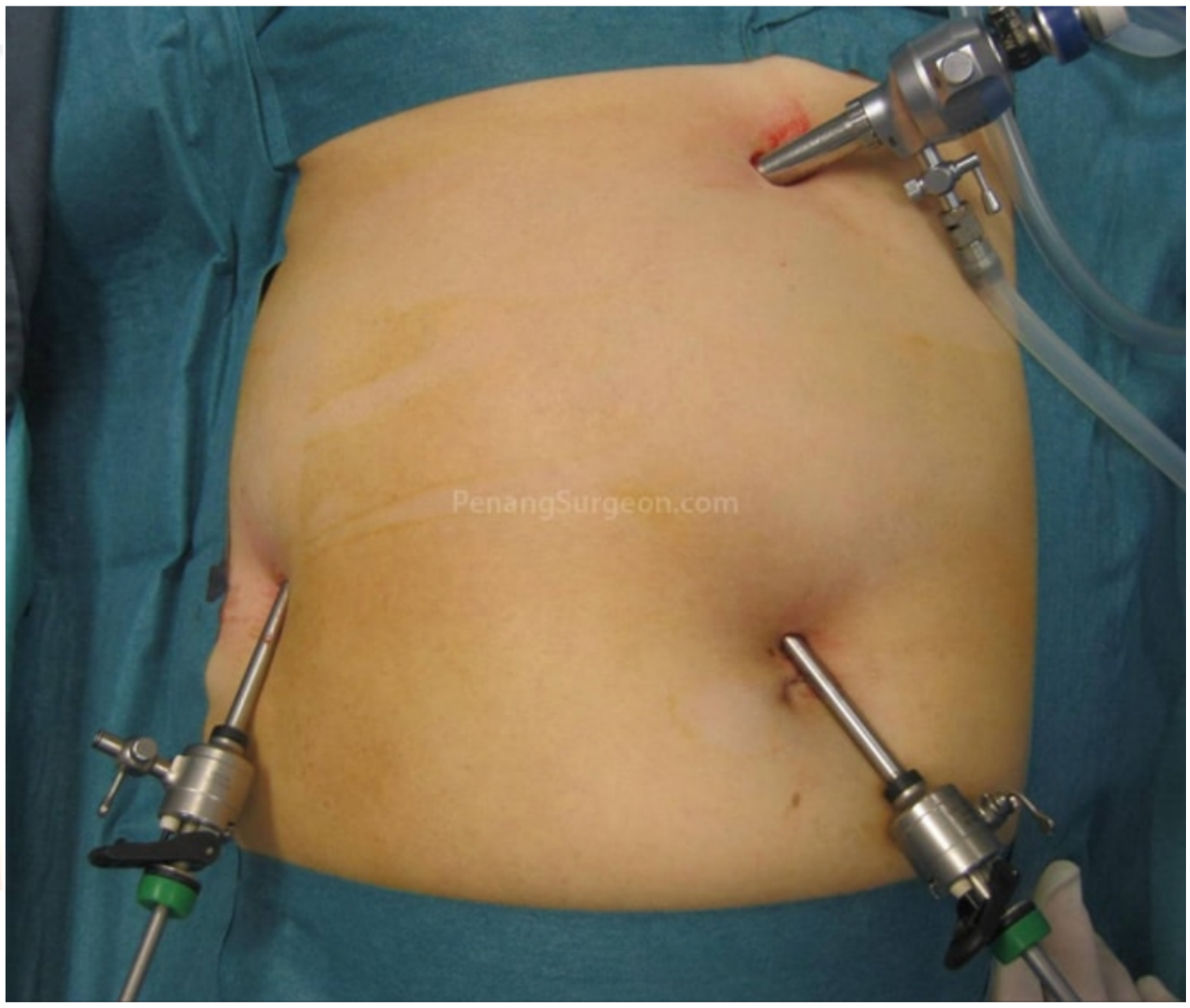
Cholecystectomy



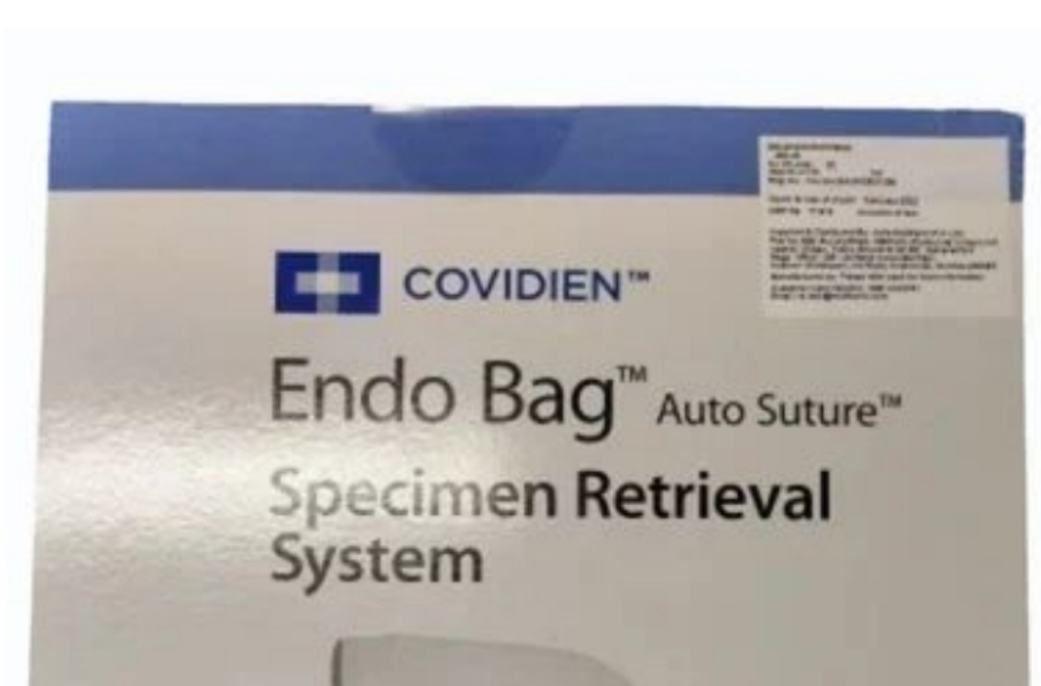


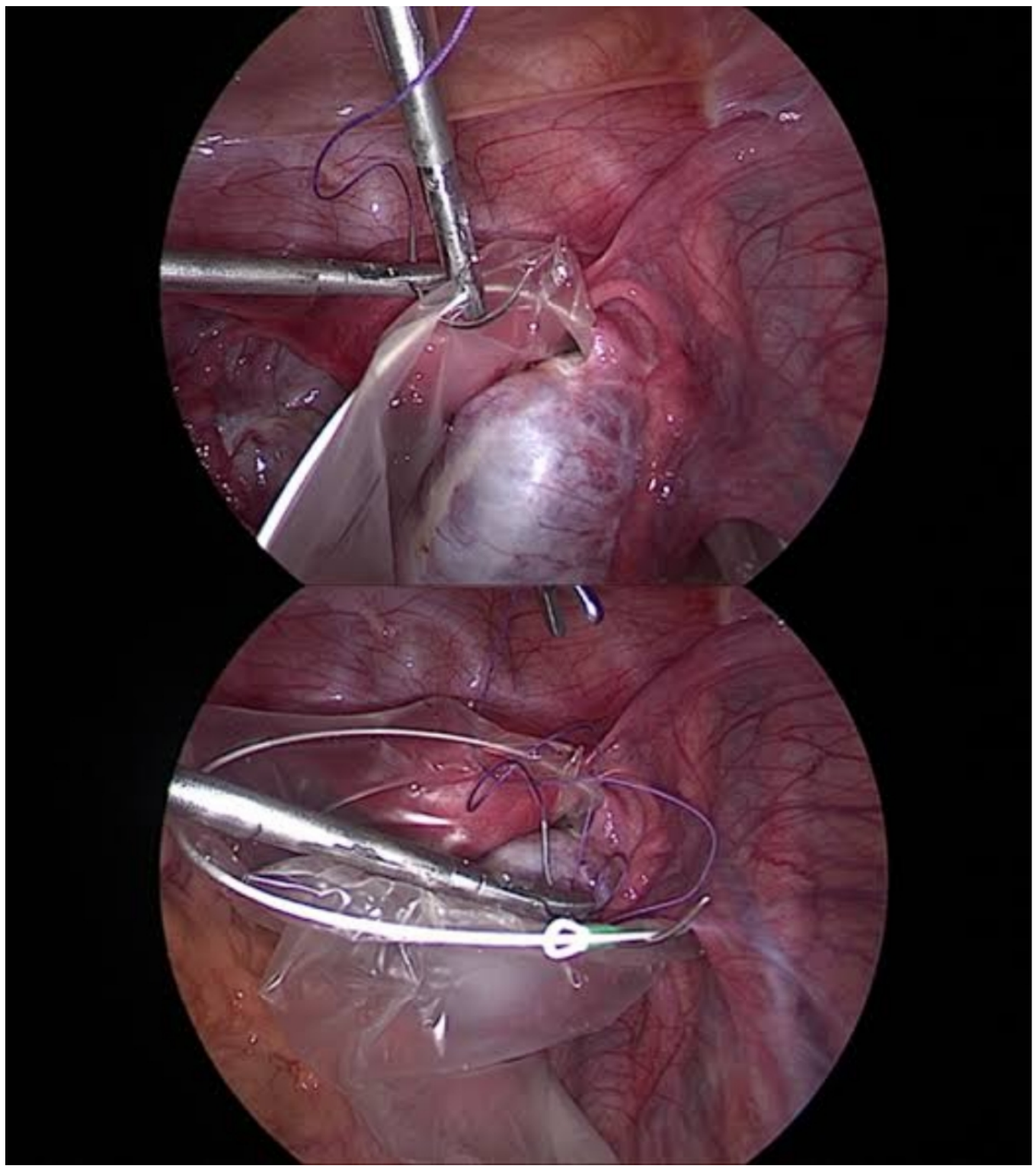






An endobag (or specimen retrieval bag) is a sterile, single-use pouch used in minimally invasive (laparoscopic/endoscopic) surgery to collect and safely remove tissues, organs, or foreign objects from the body, preventing contamination of the abdominal cavity, especially with cancerous or infected samples like gallbladders, appendices, or tumors.



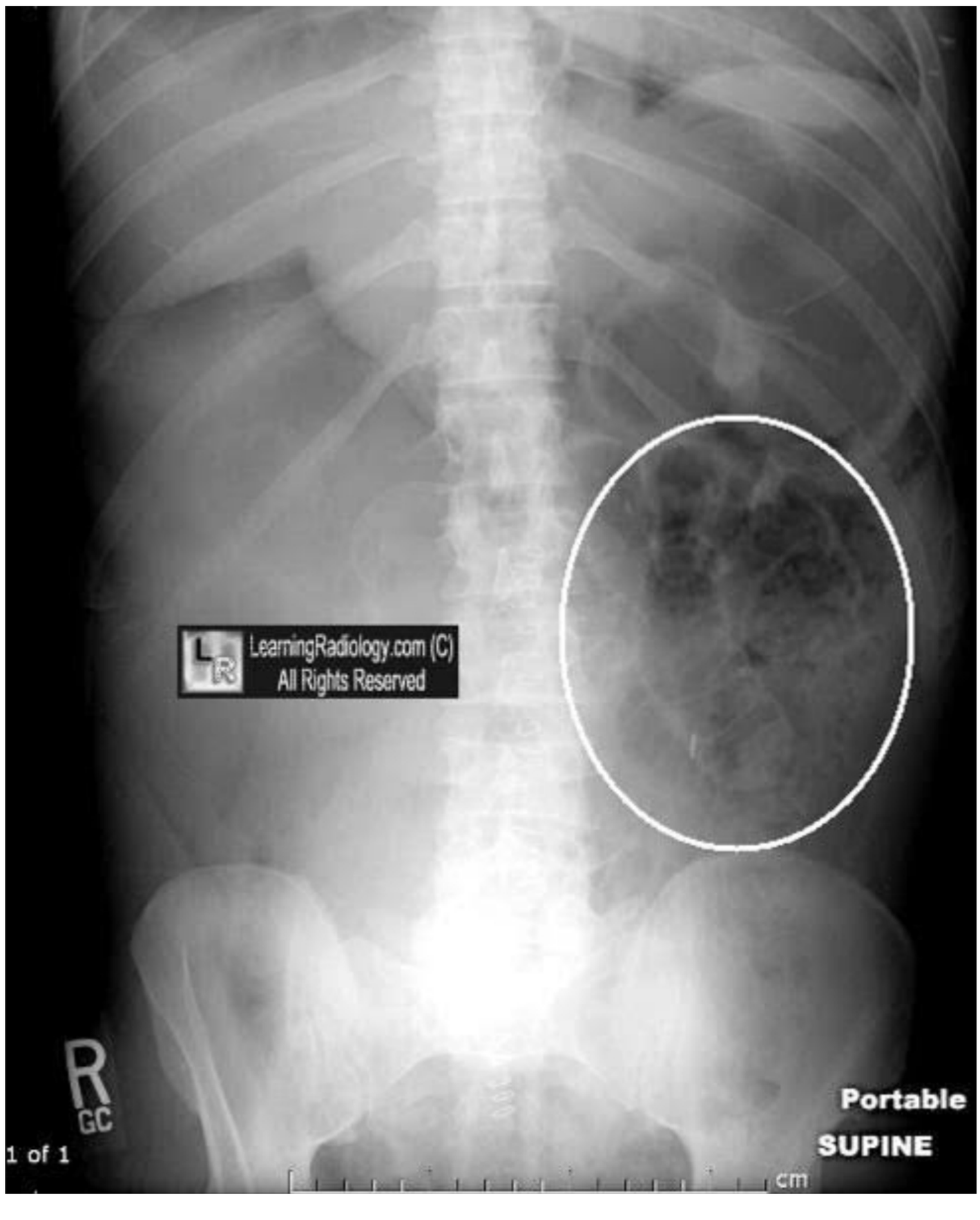


Sentinal Loop Sign

A **sentinel loop** is a short segment of [adynamic ileus](#) close to an intra-abdominal inflammatory process. The sentinel loop sign may aid in localizing the source of inflammation. For example, a sentinel loop in the upper abdomen may indicate [pancreatitis](#), while one in the right lower quadrant may be due to [appendicitis](#).

Colon cutoff sign - classically seen in pancreatitis

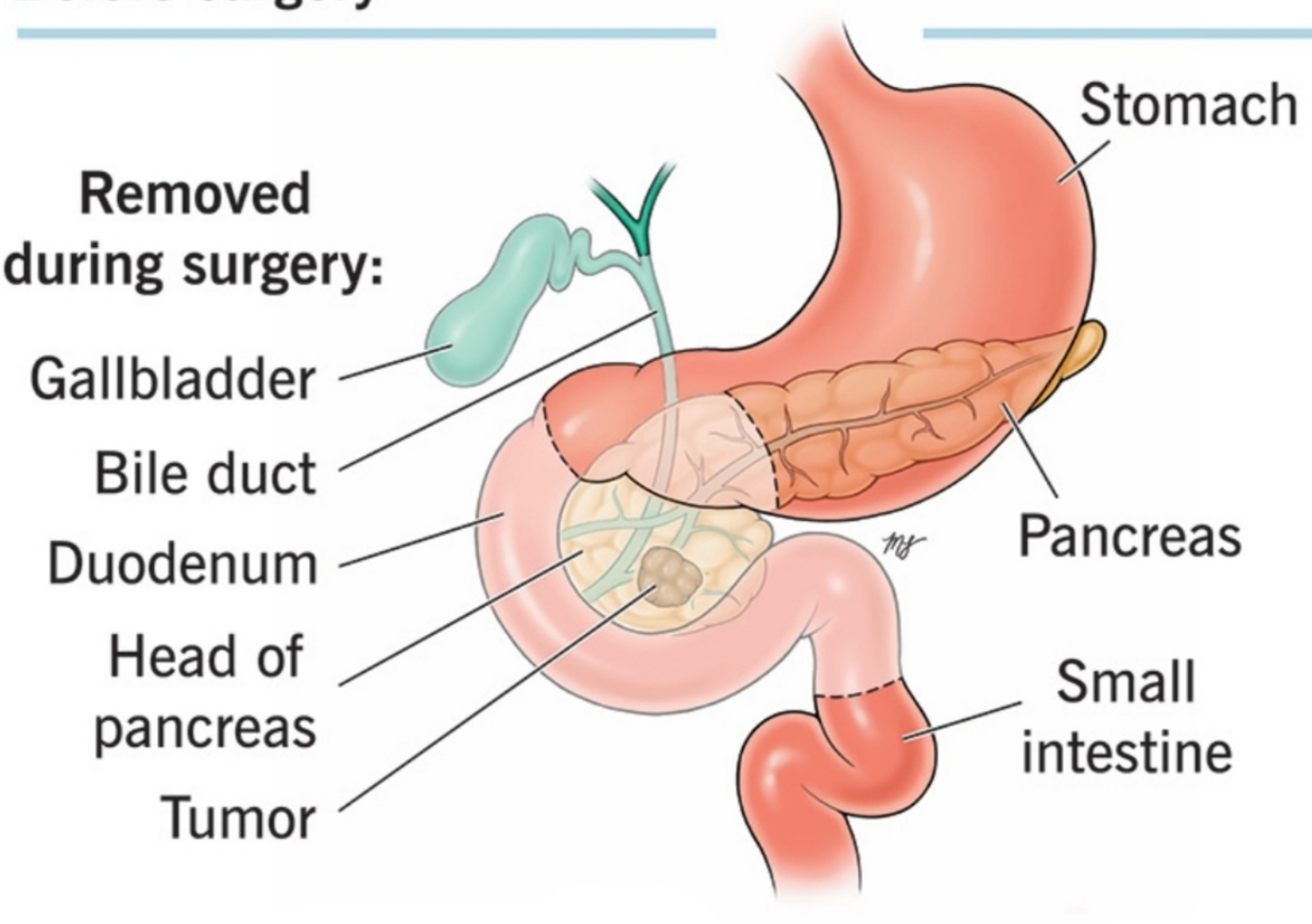
Renal halo sign seen in pancreatitis



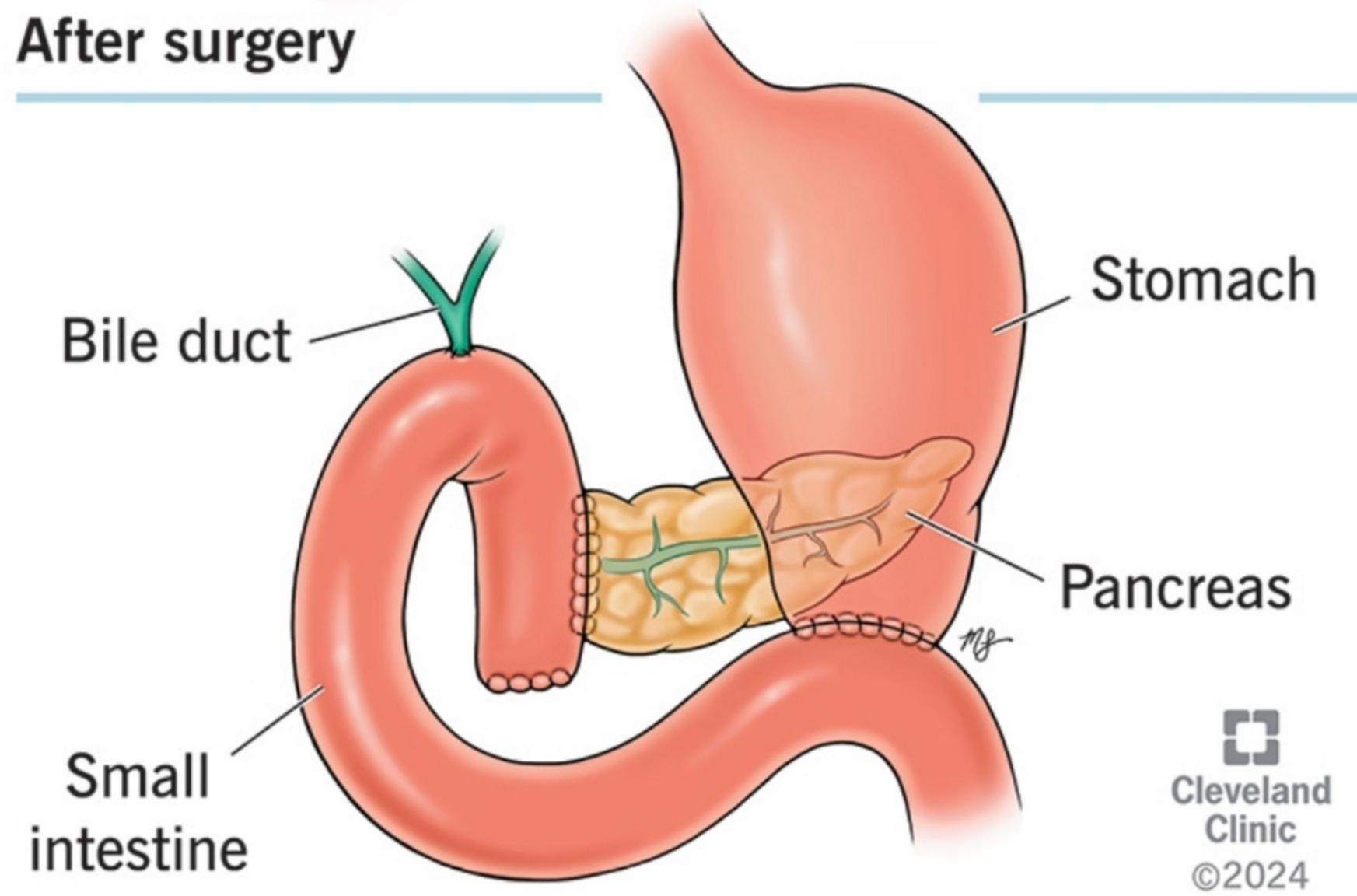
Whipple procedure

Before surgery

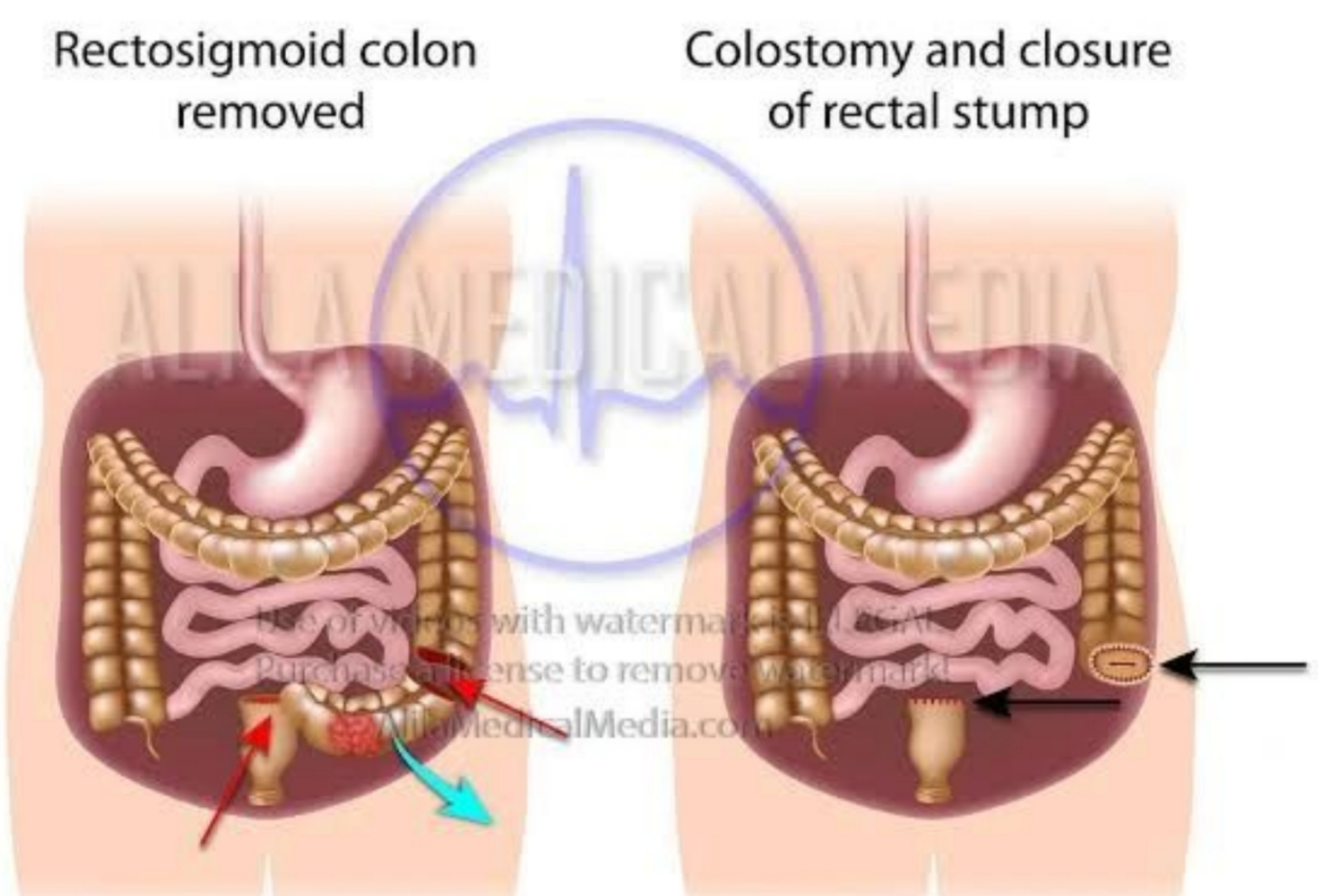
Removed during surgery:

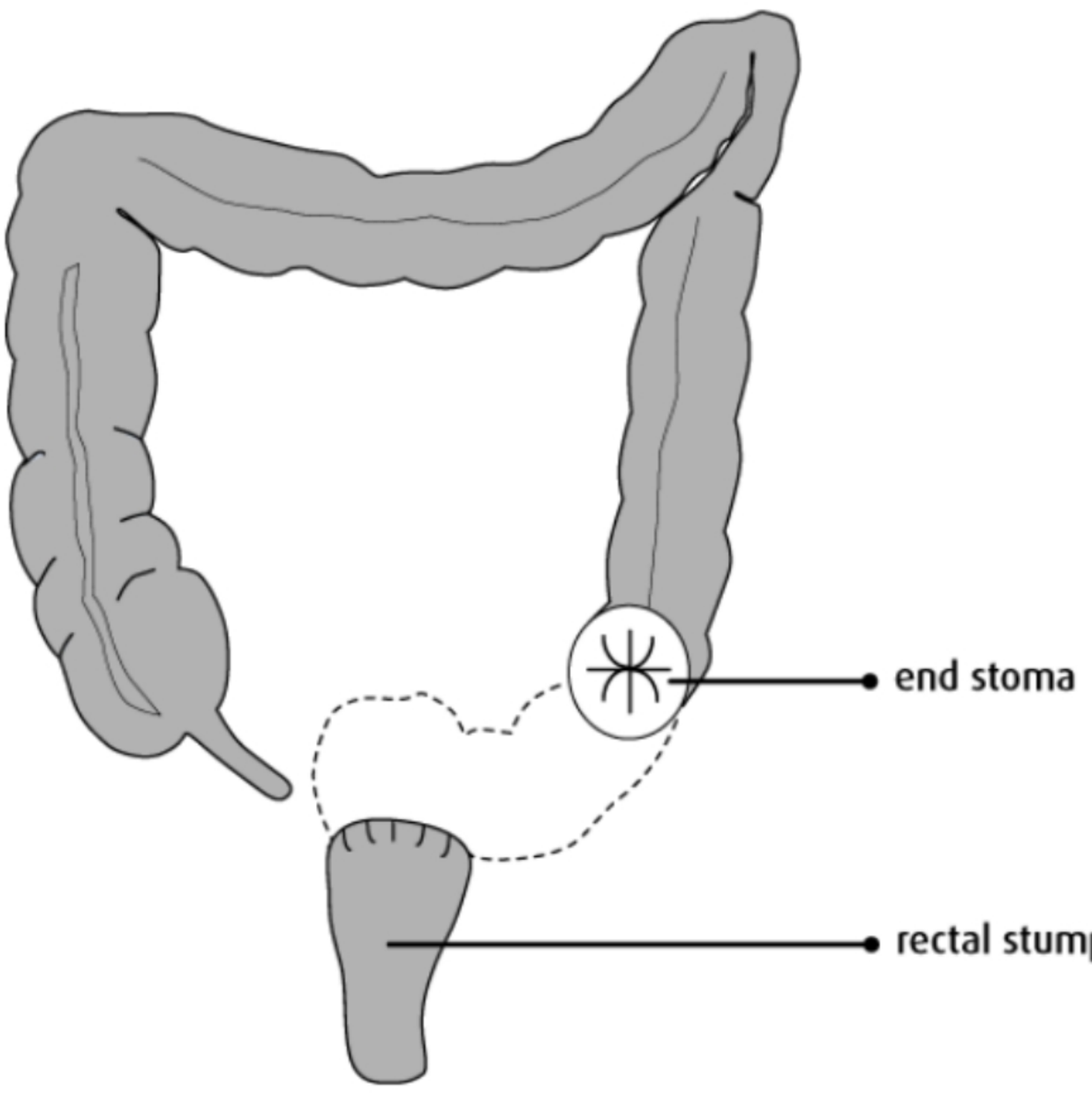


After surgery

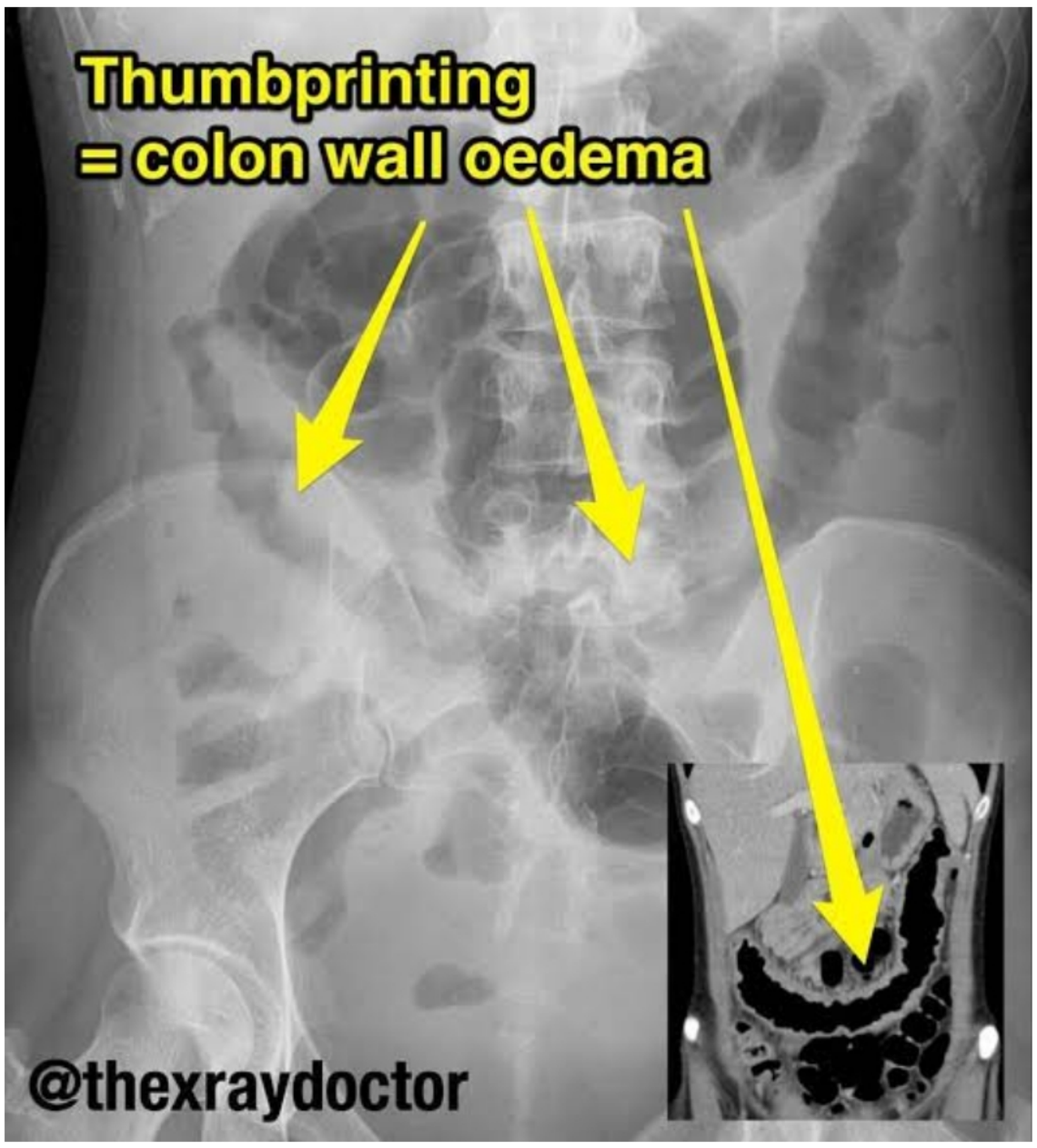


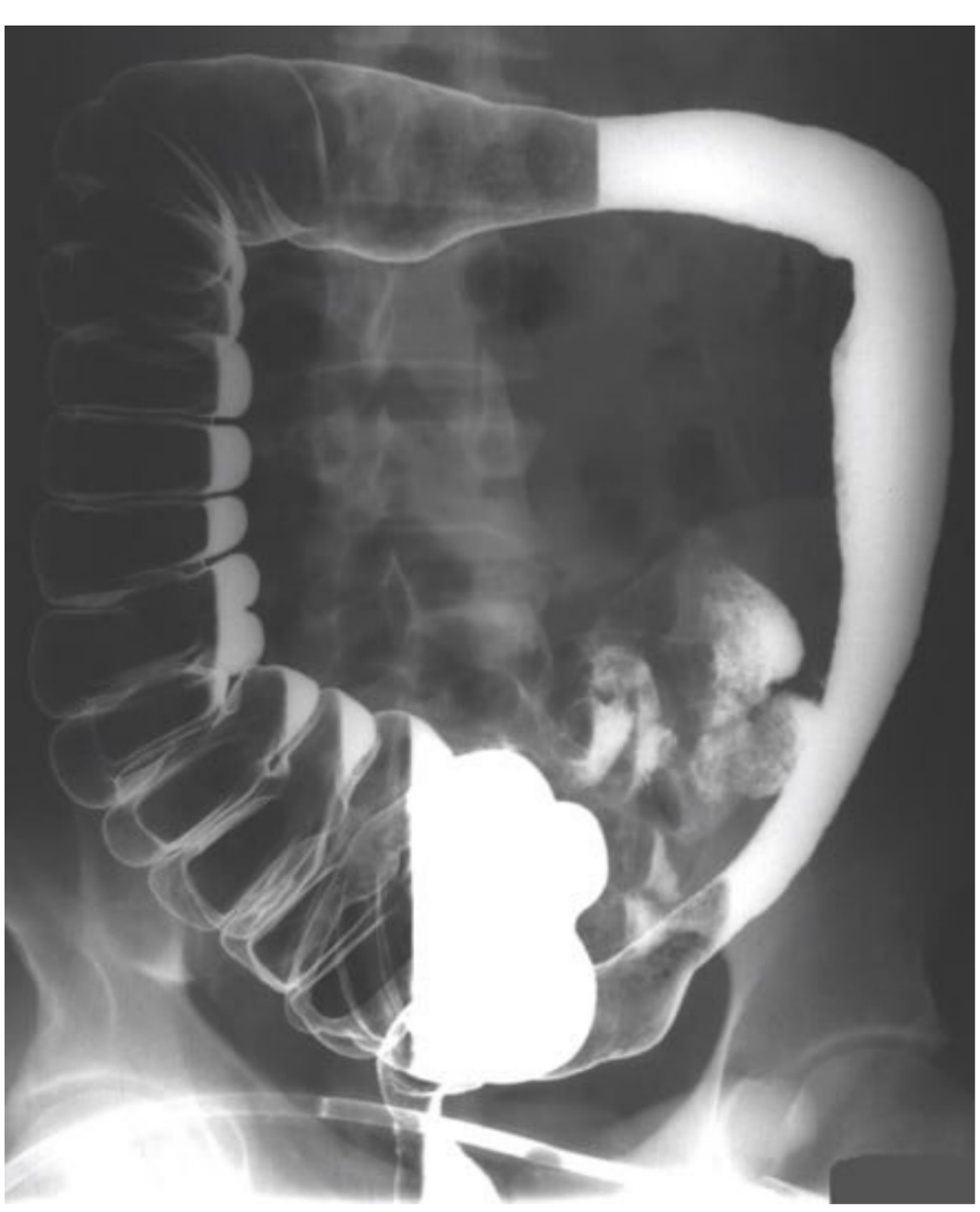
Hartmann's Procedure





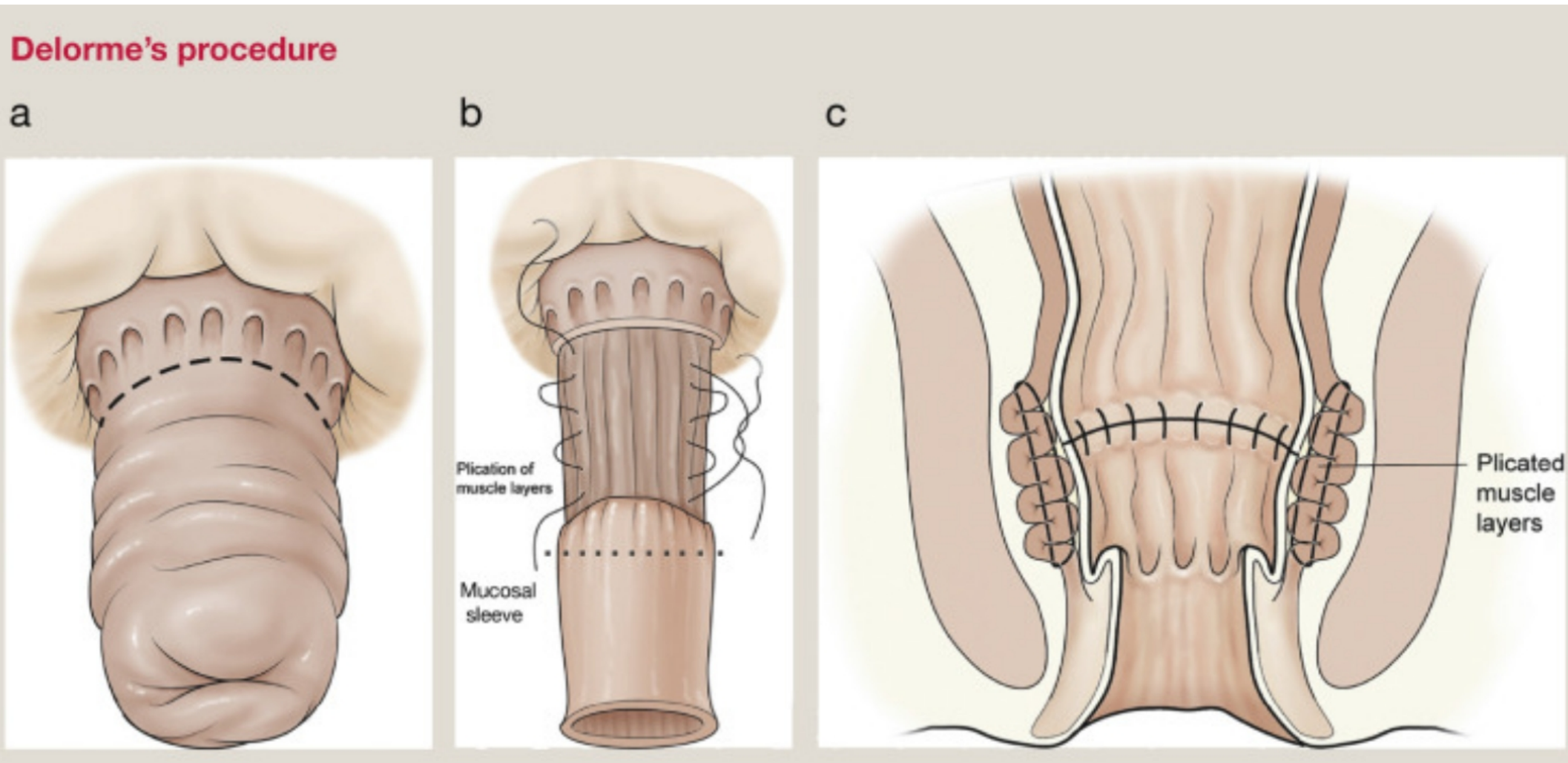
Ulcerative colitis





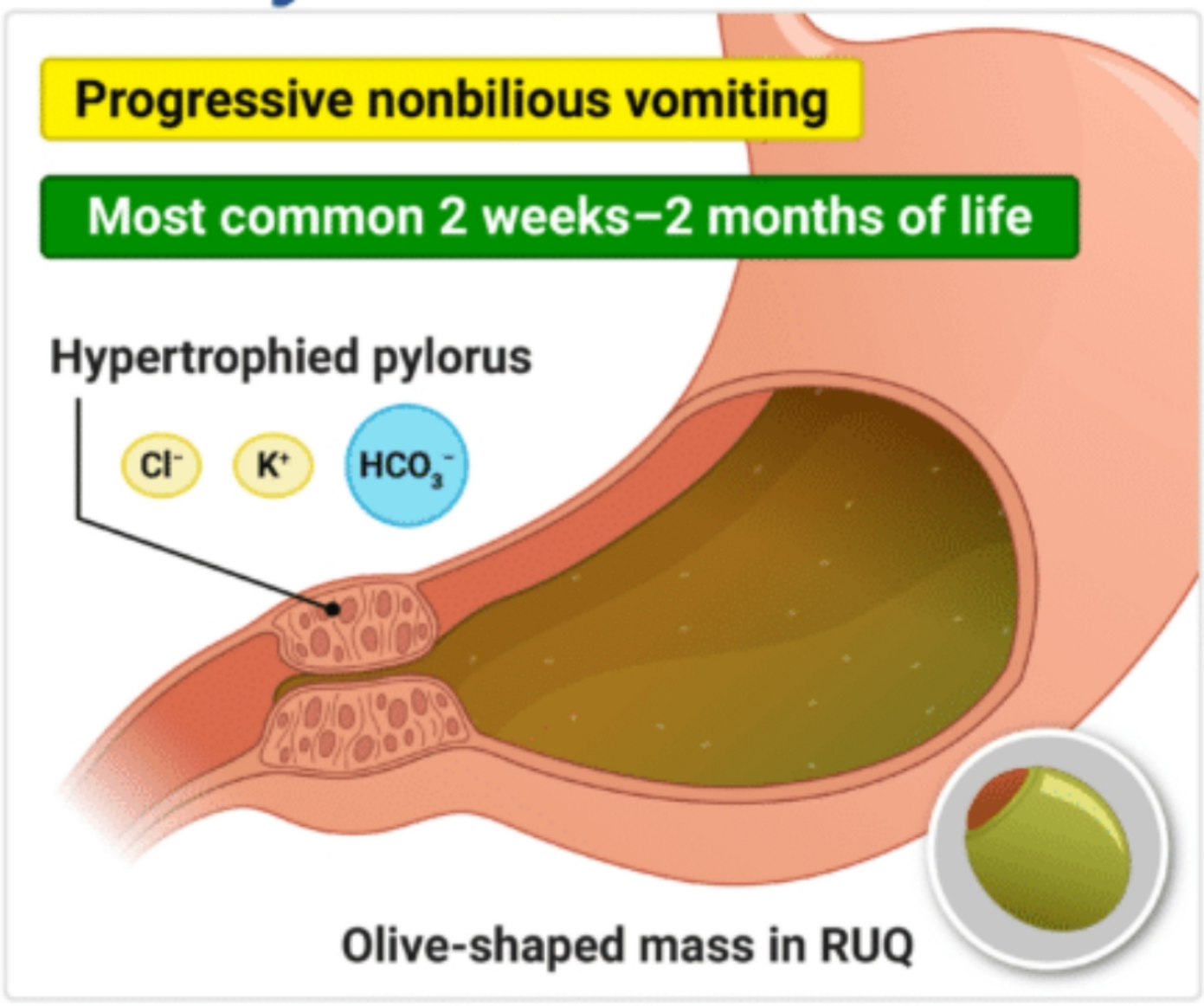
Procedures for Rectal Prolapse

Delorme's procedure



Altemeier's procedure

Pyloric Stenosis



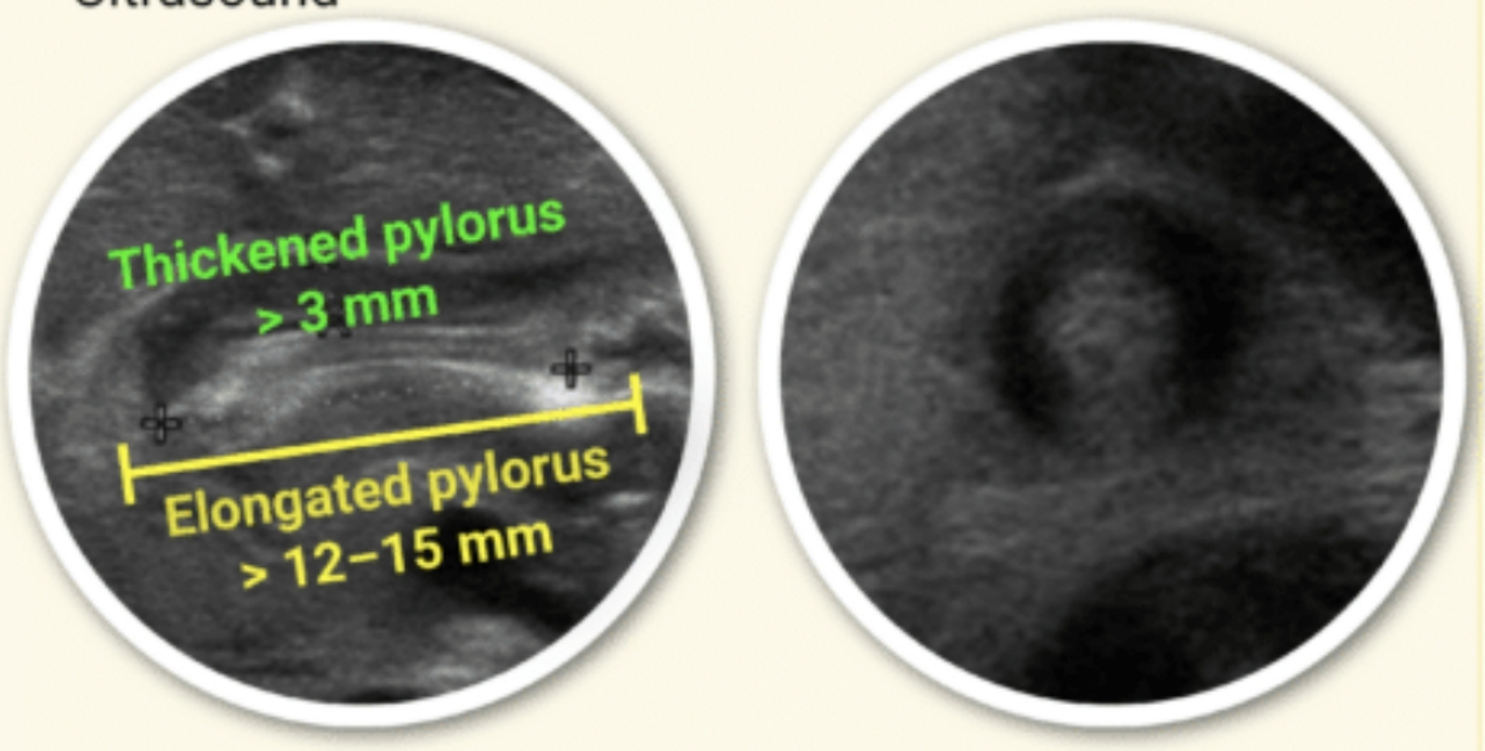
Hypochloremic hypokalemic metabolic alkalosis

Clinical

- Projectile, nonbilious vomiting
- Immediate postprandial vomiting
- Infant is hungry between feedings (hungry vomiter)

Diagnosis

- Ultrasound

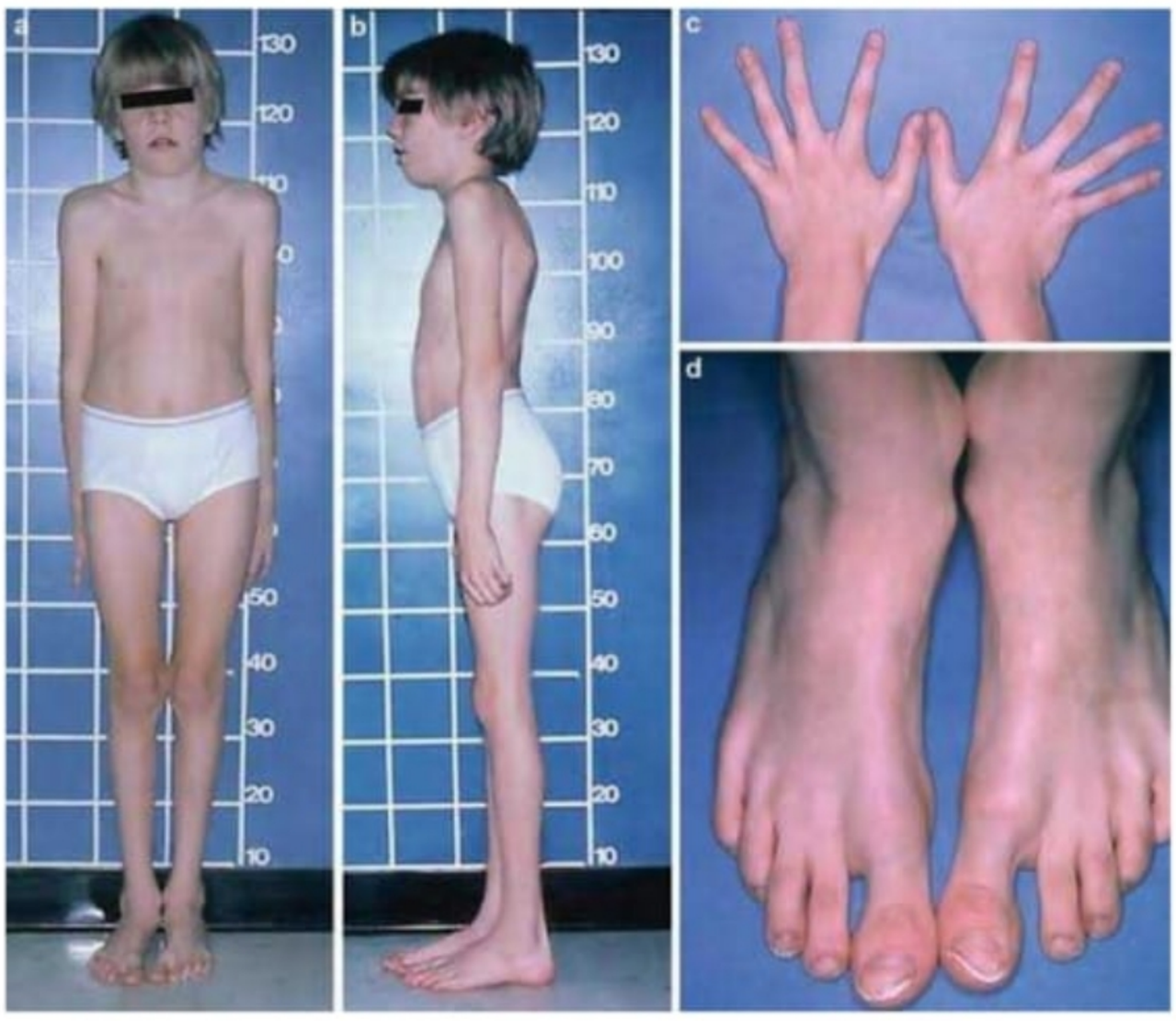


Management

- Supportive, treat electrolyte imbalances
- Pyloromyotomy

Image adapted from Gaillard F. Pyloric stenosis. Radiopaedia website.

Marfan Syndrome

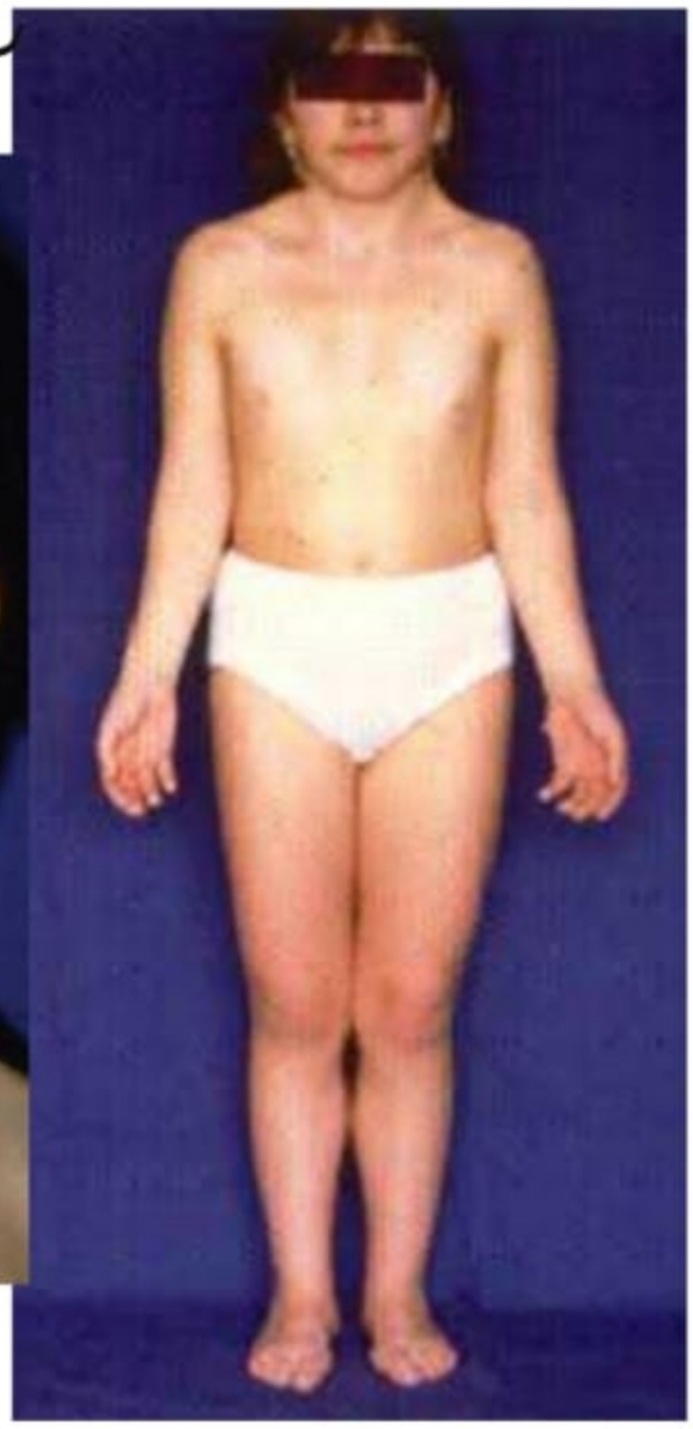


- Tall Stature
- High arched palate
- Lens dislocation
- Mitral valve prolapse
- Aortic dilatation
- Aortic Dissection

Down's Syndrome

- Microgenia
  - Macroglossia
  - Epicanthic folds
    - Single transverse palmar crease
      - Complete AV septal defects

Turner's Syndrome



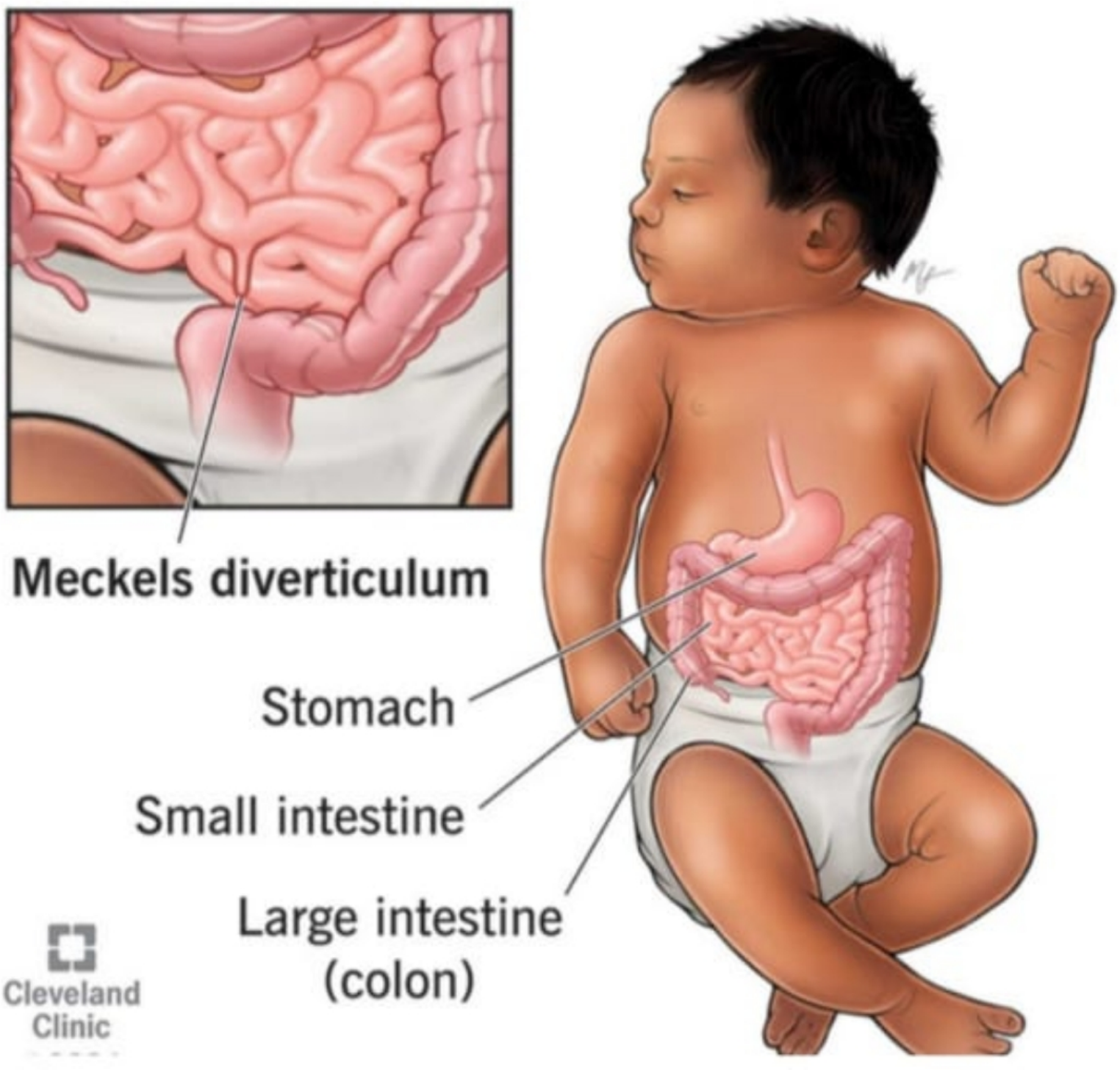
- Short Stature
- Broad Chest
- Webbed Neck
- Bicuspid Aortic valve
- Coarctation of aorta

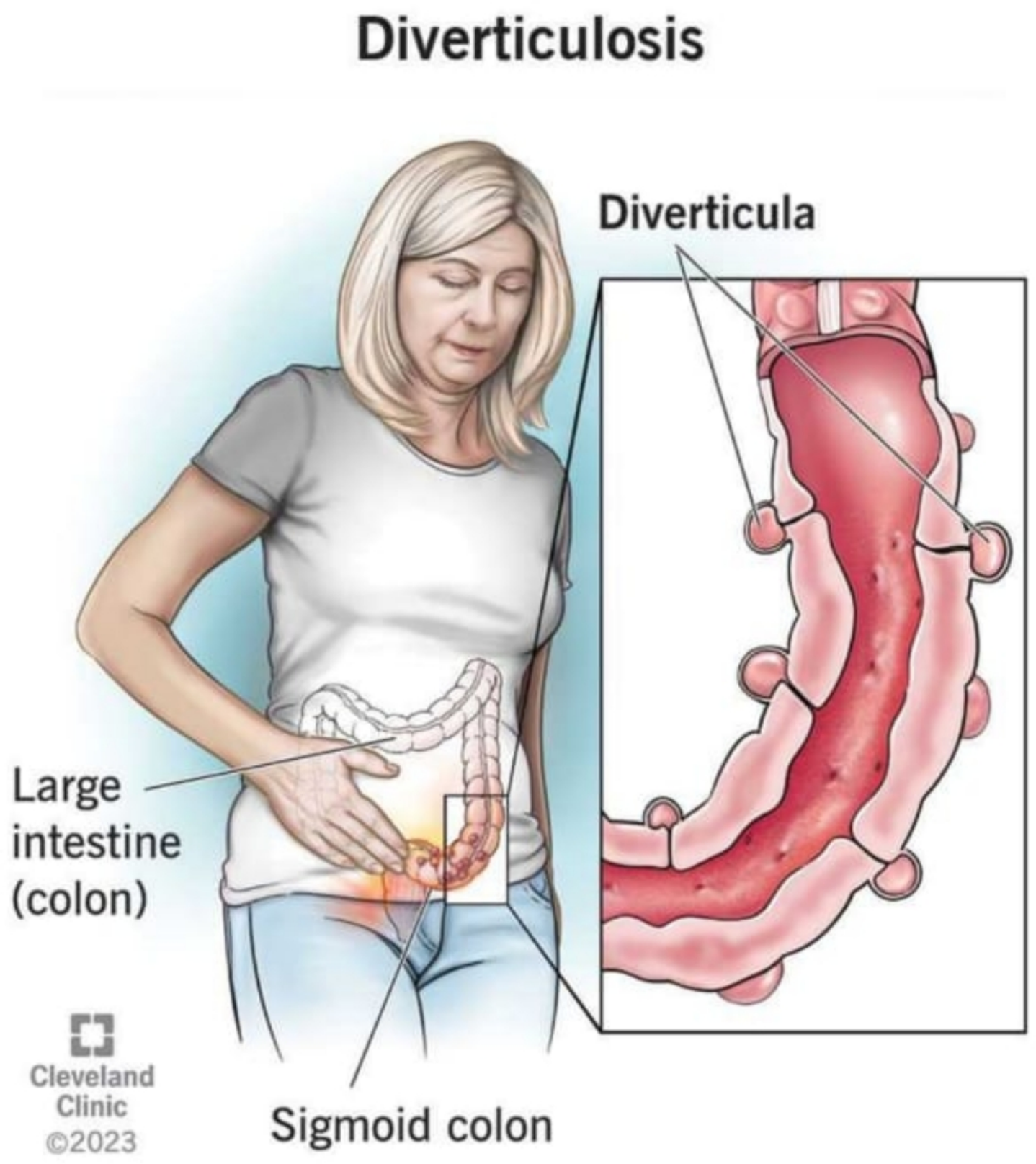
Ehlers - Danlos Syndrome

- Easy bruising
- Joint hypermobility
- Mitral valve prolapse
- Aortic Aneurysms

- Elastic Skin

Meckel's diverticulum





Diverticulitis is inflammation of irregular bulging pouches in the wall of the large intestine. Typically, the wall of the large intestine, also called the colon, is smooth. An irregular, bulging pouch in the colon wall is called a diverticulum. Multiple pouches are called diverticula.

Day:_____ Date:_____

Station 3:

The Bird beak appearance on a barium swallow, is pathognomonic radiological sign of Achalasia.

Diagnosis:

① Barium swallow (initial imaging).
initial investigation

② Upper GI endoscopy:

③ Esophageal manometry (Gold standard).

Management:

① Laparoscopic Heller myotomy.
surgical cutting of LES muscle fibers.

② Pneumatic dilation.

Facial nerve examination
Ramsay hunt syndrome
What happens to hearing in VII nerve palsy
UMN VS LMN. Difference
Causes of UMN (most common is stroke)
Cause of LMN (most common idiopathic)

Facial Nerve (CN VII) Examination

1️⃣ Inspection

Facial symmetry
Loss of nasolabial fold
Drooping of angle of mouth
Inability to close eye
Forehead wrinkles present or absent?

2️⃣ Motor Testing (Ask patient to:)

Raise eyebrows (forehead)
Close eyes tightly (try to open them)
Show teeth / smile
Puff out cheeks
Whistle

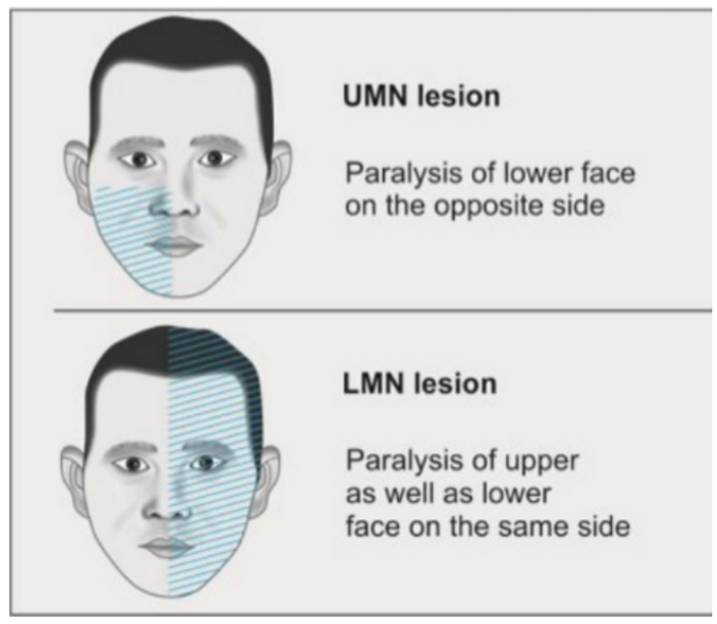
3️⃣ Sensory

Taste over anterior 2/3 of tongue

4️⃣ Other Functions

Hyperacusis (stapedius muscle)
Lacrimation & salivation

Feature	UMN Lesion	LMN Lesion
Forehead	Spared	Affected
Eye closure	Normal	Cannot close
Mouth	Weak	Weak
Side affected	Contralateral lower face	Ipsilateral whole face
Cause	Brain lesion	Nerve lesion



📌 Ramsay Hunt syndrome

Reactivation of Varicella-zoster virus in geniculate ganglion
LMN facial palsy + painful vesicular rash in ear
May have:
Severe ear pain
Vertigo
Hearing loss
Treatment:
Acyclovir + Steroids

📌 What Happens to Hearing in VII Nerve Palsy?

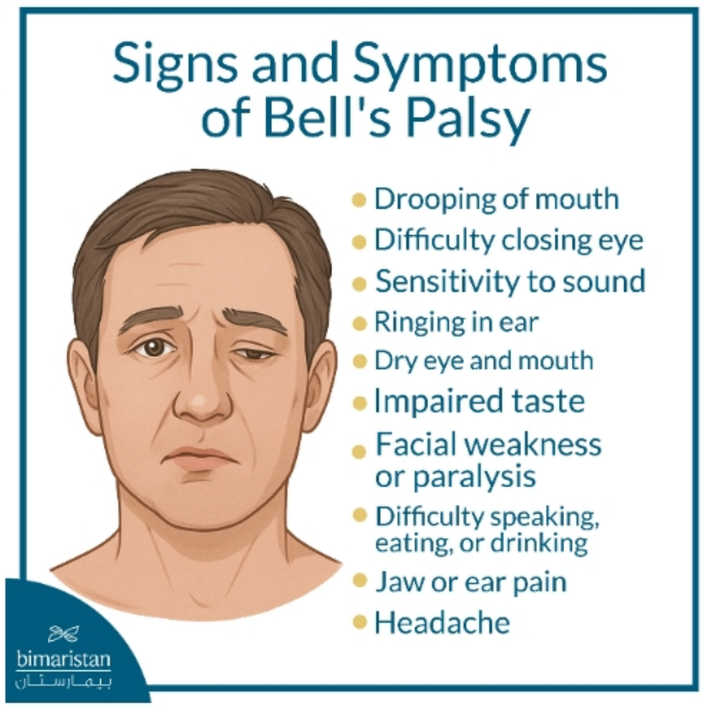
Can cause hyperacusis
(due to paralysis of stapedius muscle → sound perceived as louder)
In Ramsay Hunt → may also cause sensorineural hearing loss

Causes of UMN Facial Palsy

(Most common: Stroke)
Stroke
Brain tumor
Multiple sclerosis
Trauma

📌 Causes of LMN Facial Palsy

(Most common: Idiopathic)
Bell's palsy (most common)
Ramsay Hunt syndrome
Parotid tumor
Otitis media
Temporal bone fracture
Diabetes

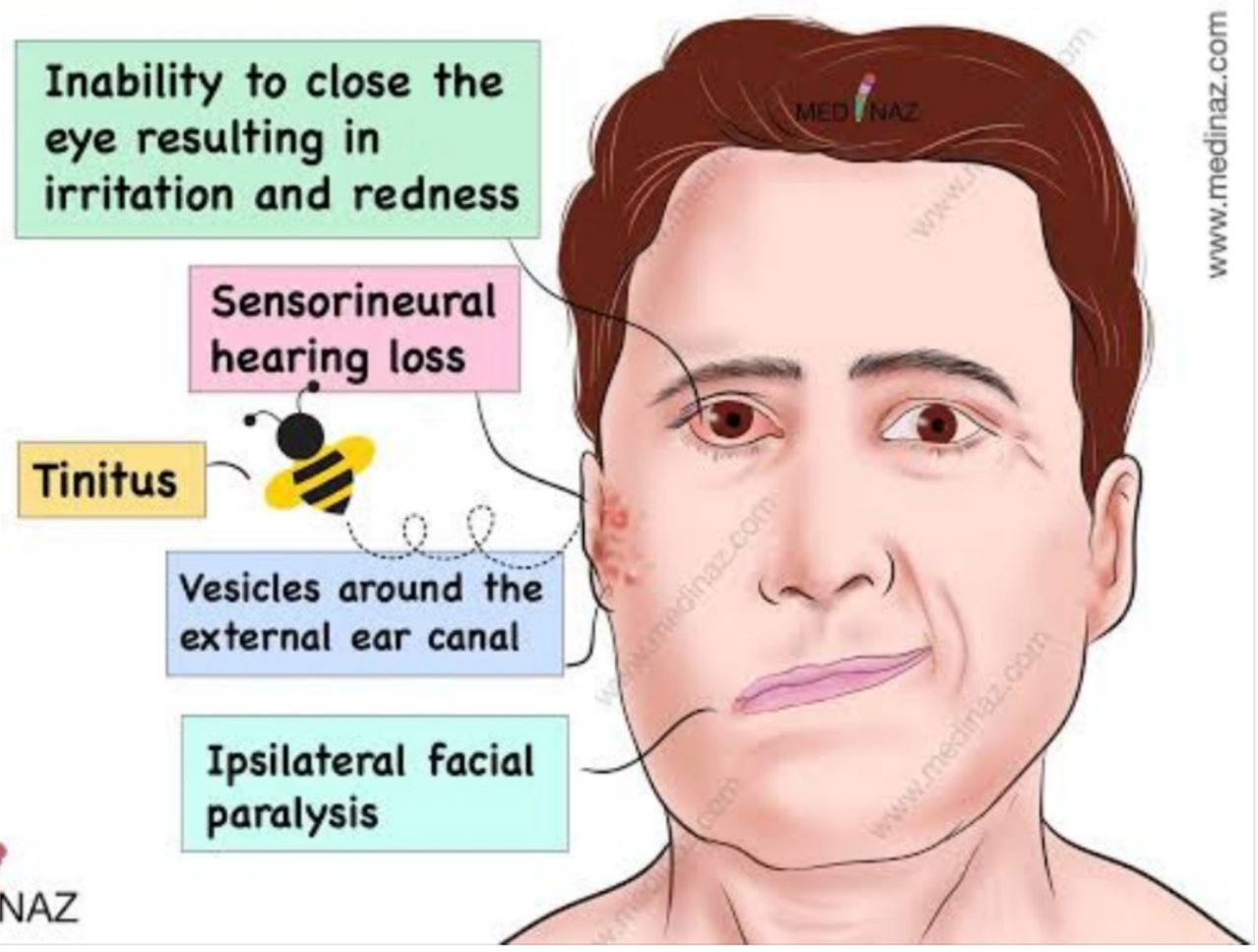


Ramsay Hunt Syndrome (Herpes Zoster Oticus)

Reactivation of dormant herpes zoster in the geniculate ganglion of facial nerve and spiral and vestibular ganglion of VIII th nerve

Treatment: Acyclovir 800mg 5 times/day

Loss of taste sensation on anterior 2/3rd of tongue

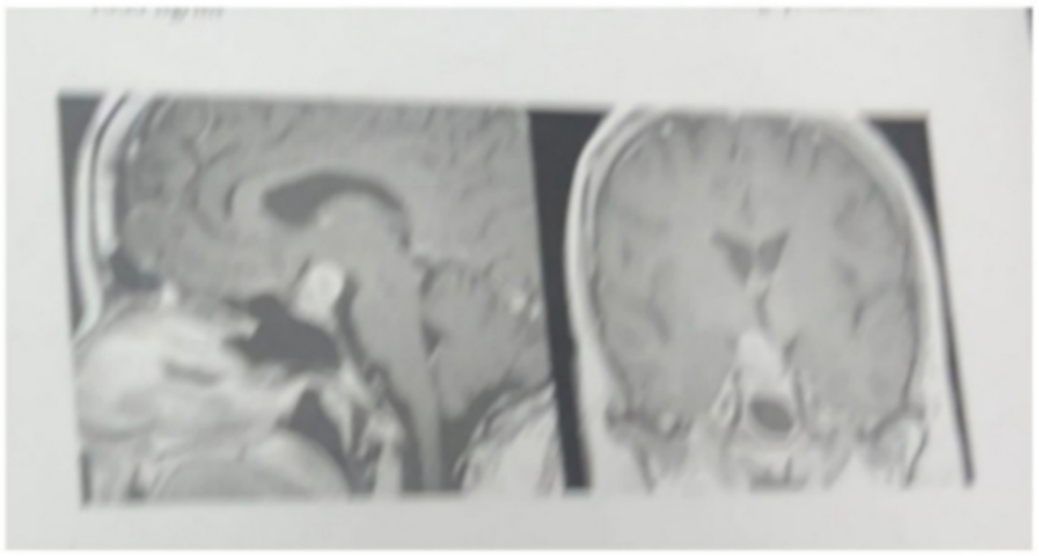


12 A 45 year old lady presented with h/o amenorhea, galactorhea, infertility, impairment of visual equity and headache, on examination she has bitemporal hemianopia. Endocrine testing prolactin 1000mg/dl

1- what is the diagnosis

2- enumerate features of prolactinoma

3- what is the most appropriate investigation of choice?

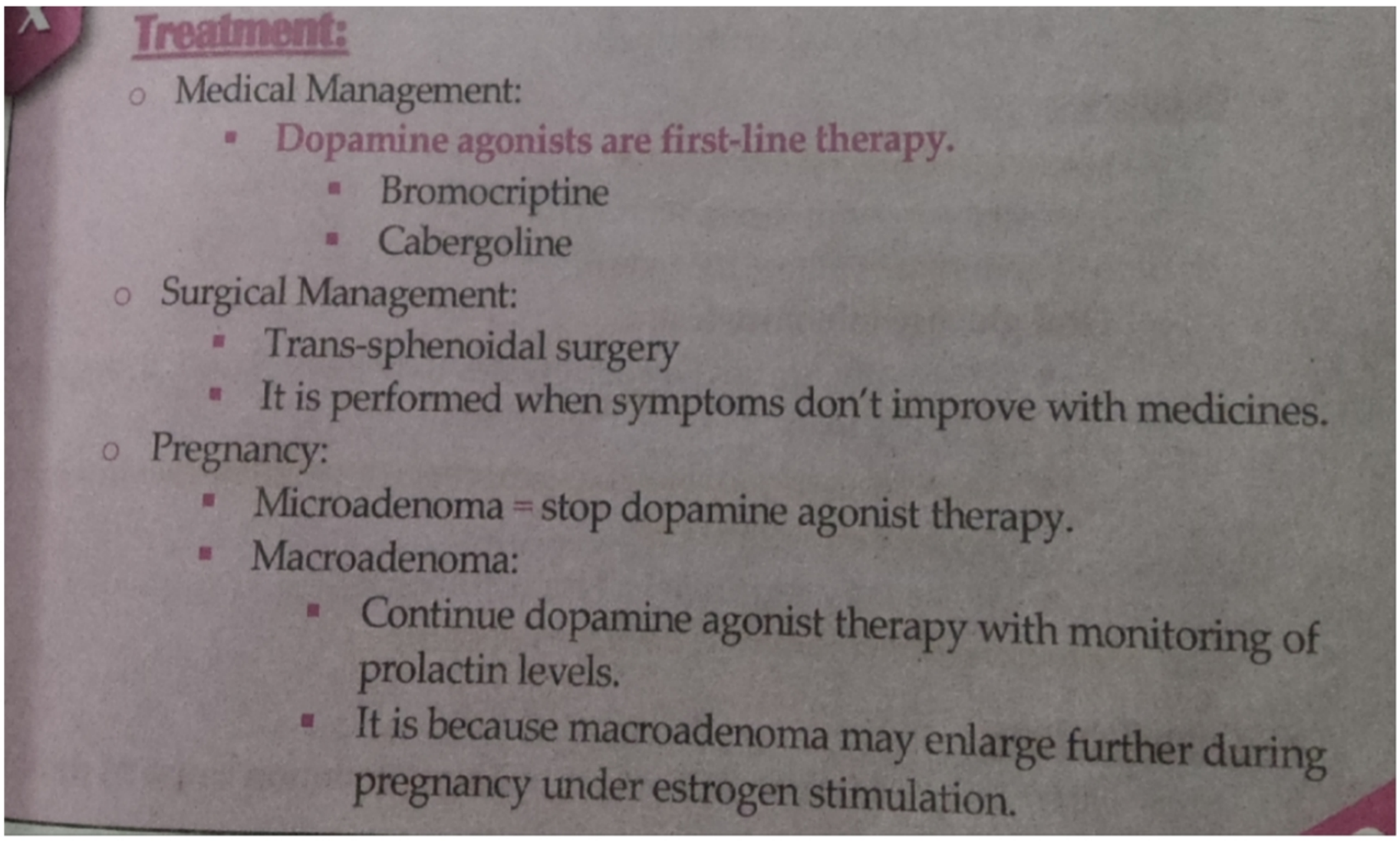


Prolactinoma

Clinical Findings
Secondary amenorrhea
Infertility
Galactorrhea
Prolactinoma can compress the optic chiasm and result in bitemporal hemianopia

📌 3️⃣ Most Appropriate Investigation of Choice
✅ MRI of brain with pituitary protocol (contrast-enhanced)
→ Best to visualize pituitary adenoma and optic chiasm compression.

Investigations
Serum prolactin levels
MRI of Pituitary gland
Visual field testing if MRI shows compression of optic chiasm



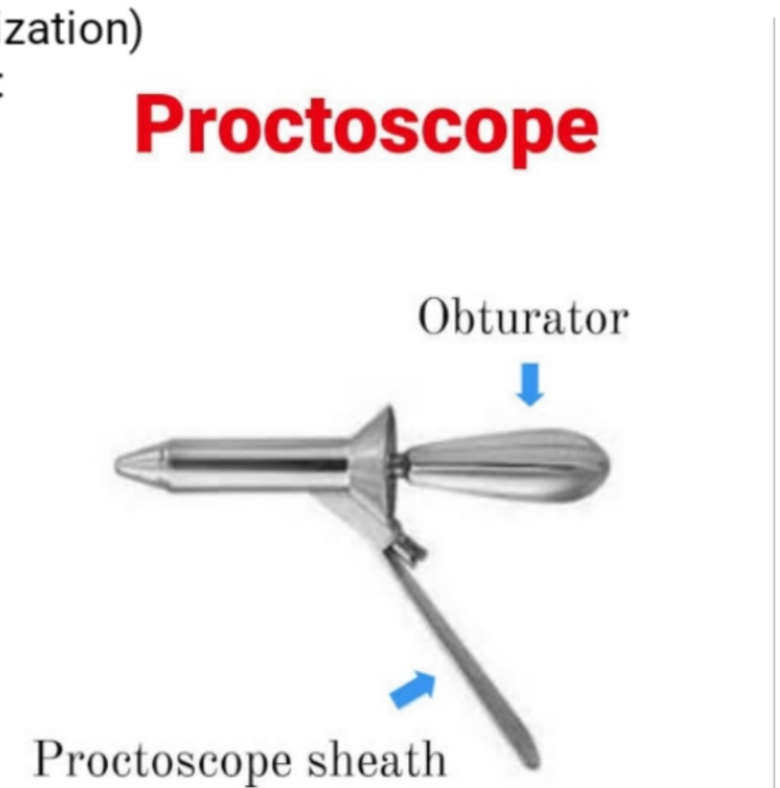
Treatment:

- Medical Management:
  - Dopamine agonists are first-line therapy.
    - Bromocriptine
    - Cabergoline
- Surgical Management:
  - Trans-sphenoidal surgery
  - It is performed when symptoms don't improve with medicines.
- Pregnancy:
  - Microadenoma = stop dopamine agonist therapy.
  - Macroadenoma:
    - Continue dopamine agonist therapy with monitoring of prolactin levels.
    - It is because macroadenoma may enlarge further during pregnancy under estrogen stimulation.

13 Instrument:
Proctoscope

Name it and parts.
Method of sterilization
Diagnostic indications
Therapeutic indications

Instrument Identification
Proctoscope
Used for visual examination of the anal canal and rectum.
✅ Parts of Proctoscope
1️⃣ Outer hollow metal tube
2️⃣ Obturator (blunt inner introducer)
3️⃣ Handle
4️⃣ Light source attachment (fiber-optic / external light cable)
5️⃣ Sometimes side window for procedures
✅ Method of Sterilization
If metal reusable type → Autoclaving (steam sterilization)
If fiber-optic/lighted → According to manufacturer:
High-level disinfection (e.g., glutaraldehyde)
Disposable plastic types → Single use only
✅ Diagnostic Indications
Hemorrhoids
Fissure in ano
Fistula opening
Rectal bleeding
Proctitis
Rectal polyp
Biopsy of suspicious lesion
✅ Therapeutic Indications
Injection sclerotherapy for hemorrhoids
Rubber band ligation
Polypectomy (small polyps)
Removal of rectal foreign body (low)
Control of bleeding



14 Picture of gut loop outside abdomen from colostomy site with the loose hanging end stapled and necrosed with ulcer also note laparotomy scar
Describe (stoma prolapse)
What procedure is this colostomy /ileostomy
Complication of this procedure
And complication of the condition itself (prolapse complications)
Management? Ileostomy refashioning (put the loop back in)

Patient with stoma prolapse: gut loop protruding excessively from colostomy site
Stapled, necrosed, ulcerated distal part
Laparotomy scar visible → prior abdominal surgery
Gut appears edematous and ischemic in places
Key point: This is a stoma prolapse with local ischemia/ulceration.

✅ Type of Procedure

Colostomy or Loop Ileostomy
Based on location: If large intestine, colostomy; if small intestine, ileostomy
Typically loop type: stoma with two openings (proximal and distal)

✅ Complications of the Procedure (Stoma Creation)

Stomal prolapse (as in picture)
Stomal retraction
Peristomal skin irritation
Parastomal hernia
Necrosis / ischemia of stoma
Stomal stenosis

✅ Complications of the Condition Itself (Prolapsed Stoma)

Ischemia / necrosis
Ulceration
Bleeding
Infection
Obstruction

✅ Management

1️⃣ Initial / Conservative

Reduce edema with manual reduction
Apply osmotic or sugar dressings to reduce swelling
Supportive stoma appliance
Monitor perfusion

2️⃣ Surgical (Definitive)

Stoma refashioning / revision
Laparotomy if needed
Reduce prolapsed loop into abdominal cavity
Recreate stoma with healthy bowel
Ensure good blood supply and fixation

3️⃣ Emergency Indication

Necrotic / ischemic stoma → urgent revision

A somewhat similar pic of dupuytren's contracture was given.
Scenario: a person presented with abdominal distension and hemetemesis.
Identify.
2 causes.
2 investigations.

1. Identify

The hand condition is **Dupuytren's Contracture**.
In this specific clinical context, it is a peripheral sign of **Chronic Liver Disease (Cirrhosis)**.
The hematemesis (vomiting blood) suggests esophageal varices, and the abdominal distension suggests ascites, both of which are complications of portal hypertension.

---

2. Two Causes

While Dupuytren's can be idiopathic or hereditary, in the context of liver disease and the symptoms described, the primary causes/associations are:

- **Chronic Alcohol Use:** This is the most common association between Dupuytren's and liver pathology.
- **Cirrhosis:** Leading to metabolic changes that trigger fibroblast proliferation and collagen deposition in the palmar fascia.

---

3. Two Investigations

To work up the underlying cause of the hematemesis and distension (the liver disease), you would perform:

- **Upper GI Endoscopy:** To identify and potentially treat the source of bleeding (e.g., banding esophageal varices).
- **Abdominal Ultrasound (with Doppler):** To confirm the presence of ascites, evaluate liver morphology (cirrhosis), and check for portal vein patency/hypertension.

LFTs

Ulnar Nerve Damage

1. Causes of Ulnar Nerve Damage

A. Trauma / Compression

- Fracture of medial epicondyle of humerus (elbow)
- Elbow dislocation
- Prolonged pressure over elbow (leaning on hard surfaces)
- Repetitive strain (cubital tunnel syndrome)
- Compression at wrist (Guyon's canal, e.g., cyclists)

B. Iatrogenic / Surgical

- Post-surgical injury (elbow, wrist, or hand surgery)
- IV line / catheter placement injury

C. Systemic / Neuropathic

- Diabetes mellitus (peripheral neuropathy)
- Rheumatoid arthritis (joint deformity compressing nerve)
- Tumors (ganglion cysts at wrist, elbow mass)

D. Idiopathic

- Rare spontaneous neuropathy

2. Clinical Picture

A. Motor Symptoms

- Weakness of hand and forearm muscles supplied by ulnar nerve:
  - **Flexor carpi ulnaris** → weak wrist flexion & ulnar deviation
  - **Flexor digitorum profundus (4th & 5th fingers)** → weak finger flexion
  - **Intrinsic hand muscles** → weakness of finger abduction/adduction, thumb adduction
- **Claw hand deformity** (MCP hyperextension, IP flexion of 4th & 5th fingers)
- Difficulty performing fine motor tasks (typing, writing, buttoning)

B. Sensory Symptoms

- Numbness, tingling, or burning in:
  - Medial 1½ fingers (little finger + ulnar half of ring finger)
  - Palmar and dorsal hand

C. Special Signs

- **Froment's sign** – thumb IP flexion when pinching paper
- **Wartenberg's sign** – 5th finger abducted at rest
- Muscle wasting: hypothenar eminence, interossei, adductor pollicis

D. Site-Specific Differences

Site	Motor	Sensory
Elbow (cubital tunnel)	FCU + FDP + hand muscles	Medial 1½ fingers
Wrist (Guyon's canal)	Hand muscles only	Variable

Developmental Milestones: Birth to 5 years

See https://www.med-u.org/the-library/developmental-milestones for an interactive version of this table.

AGE	GROSS MOTOR	FINE MOTOR	COMMUNICATION/SOCIAL	COGNITIVE/ADAPTIVE
2 mos.	Lifts head/chest when prone	Eyes track past the midline	• Alerts to sound • Social (reciprocal) smile	Recognizes parent
4 mos.	Rolls front to back	Grasps a rattle	• Laughs • Soothed by parent's voice	Orients head to direction of a voice
6 mos.	Sits with little or no support	• Reaches with one hand • Transfers objects	• Babbles • Developing stranger anxiety	Feeds self
9 mos.	Pulls to stand	• Developing immature pincer grasp • Bangs two objects together	• Says "mama/dada" indiscriminately • Waves bye-bye	Plays gesture games (e.g., pat-a-cake)
12 mos.	Stands/walks alone	Fine pincer grasp	• One word other than "mama"/"dada" • Follows one-step commands with a gesture	Points to desired object
15 mos.	Stoops and recovers	Scribbles in imitation	Uses 3–5 words	• Uses spoon and cup • Turns pages in a book
18 mos.	Runs well	Builds a tower of 3 cubes	Points to 1–3 body parts	"Helps" in the house
24 mos.	• Throws ball overhand • Kicks a ball	Copies drawing a line with crayon	• Speaks in 2-word combinations • ≥ 50-word vocabulary • Parallel play	Removes an article of clothing
36 mos.	Pedals a tricycle	Copies a circle	• Speaks in 3-word sentences • 75% of language is intelligible to a stranger	Brushes teeth with help
48 mos.	Hops	Copies a square or cross	• 100% of language is intelligible to a stranger • Plays cooperatively with a group	Knows 4 colors
60 mos.	Skips	Copies a triangle	• Defines simple words • Uses 5-word sentences	Dresses self

S. NO	DUE AGE	VACCINATION	AGAINST DISEASE
1	At birth	1. BCG 2. Hep-B 3. OPV 0	TB Hepatitis B Polio
2	At 6 weeks (1.5 months) PORP	1. Pentavalent-I 2. OPV-I 3. ROTA-I 4. PCV-I	Diphtheria, Pertussis, Hepatitis B, tetanus and Hib. Polio Rota virus (diarrhea) Pneumococcal disease
3	At 10 weeks (2.5 months) PORP	1. Pentavalent-II 2. OPV-II 3. ROTA-II 4. PCV-II	Diphtheria, Pertussis, Hepatitis B, tetanus and Hib. Polio Rota virus (diarrhea) Pneumococcal disease
4	At 14 weeks (3.5 months) POIP	1. Pentavalent-III 2. OPV-III 3. IPV-I 4. PCV-III	Diphtheria, Pertussis, Hepatitis B, tetanus and Hib. Polio Polio Pneumococcal disease
5	At 9 months MI	1. Measles rubella-I (MMR) 2. IPV-II	Measles mumps and rubella Polio
6	At 15 months	1. Measles rubella-II (MMR)	Measles mumps and rubella

Surgical instruments (langan bag retractor, babcoks forecps, scalpel)

Babcock Forceps

These are specialized, non-perforating forceps used to grasp delicate structures without crushing them. You can recognize them by their flared, rounded, and fenestrated (open) tips.

Langenbeck Retractor

Often called a "Right-Angle Retractor," this is a handheld tool used to hold back the edges of an incision.

Scalpel

The scalpel is the primary instrument for cutting and dissecting tissue. It consists of a reusable handle (often a #3 or #4) and a disposable blade.

Herpetiformis dermatitis

Dermatitis herpetiformis is a chronic, intensely itchy autoimmune blistering skin disorder strongly associated with Celiac disease.

🔥 **Key Feature: INTENSE PRURITUS (very itchy)**

📍 **Distribution (Symmetrical)**

- Elbows
- Knees
- Buttocks
- Back
- Scalp

🩹 **Lesions**

- Small grouped vesicles (like herpes — hence "herpetiformis")
- Papules
- Excoriations (because patient scratches)
- Often you don't see vesicles because they rupture due to scratching

Treatment

First-line drug:Dapsone
Lifelong Gluten-Free Diet

🧪 Investigations

1️⃣ Skin biopsy (gold standard)

- Subepidermal blister
- Neutrophils at dermal papillae

2️⃣ Direct immunofluorescence (MOST important test)

- Granular **IgA deposits** at dermal papillae

3️⃣ Celiac screening

- Anti-tTG antibodies
- Endomysial antibodies

1️⃣ Spinal Needle
Definition:
A hollow needle used to inject local anesthetic into the subarachnoid space for spinal anesthesia or diagnostic lumbar puncture.
2️⃣ Drug Given Through Spinal Needle
Local anesthetic: Bupivacaine (most commonly used)
Can be combined with opioids like fentanyl for longer analgesia
3️⃣ Anatomy & Site of Procedure
Spinal Cord Termination
In adults: L1–L2 vertebral level
In infants: slightly lower (L2–L3)
Needle Insertion Site
Lumbar puncture / spinal anesthesia → below spinal cord termination to avoid injury
Typical levels: L3–L4 or L4–L5 interspace
Landmarks:
Iliac crests → line across gives L4 vertebral level
4️⃣ Clinical Tips / Viva Pearls
Patient position: Lateral decubitus or sitting
Needle direction: bevel parallel to dural fibers (to reduce headache)
CSF flow: confirms correct placement
Indications: spinal anesthesia, diagnostic lumbar puncture, intrathecal drug delivery

Rose spots image ..
Dx.. typhoid fever

In which week rose spots appear:2nd week
Investigations to confirm the dx
Management of typhoid fever
Antibiotics names..

What is MDR..
What to give if it's MDR

when salmonella is resistent any of the the three major antibiotic groups like ampicillin, chloramphenicol and tmp-smx. then give ceftriaxone, azithromycin if extensive resistence, so carbepenems meropenims

ROSE SPOTS

🌹 Rose Spots

Rose spots are:

- Small (2–4 mm)
- Pink, blanching maculopapular rash
- Usually on **abdomen and chest**
- Faint and transient (disappear in 2–5 days)

They are classically seen in **Typhoid fever**

📅 When do they appear?

👉 **2nd week of illness**

🦠 Diagnosis: Typhoid Fever

Caused by:

- **Salmonella enterica serotype Typhi**

Transmission:

- Feco-oral route (contaminated food/water)

🧪 Investigations to Confirm Diagnosis

1️⃣ Blood Culture (Gold Standard – especially 1st week)

- Best confirmatory test

2️⃣ Stool Culture

- More positive in later weeks

3️⃣ Bone Marrow Culture

- Most sensitive (even after antibiotics)

4️⃣ Widal Test

- Detects O & H antibodies
- Less specific (used where culture not available)

Appendicitis

Differential Diagnoses (DDs) of Right Iliac Fossa (RIF) Pain

Acute appendicitis
Meckel's diverticulitis
Crohn's disease
Ileitis
Caecal carcinoma
Ectopic pregnancy
Ovarian torsion
Ruptured ovarian cyst
Pelvic inflammatory disease
Ureteric stone
Urinary tract infection
Pyelonephritis

Post Op Complications of Appendicitis

* Wound infection
* Adhesive intestinal obstruction
* Ileus
* Respiratory complications
* Fecal fistula
* Portal pyemia

Clinical Presentation

* Periumbilical pain, which is referred Visceral pain
* Pain shifts to RIF - due to parietal peritoneal irritation
* Anorexia
* Nausea
* Vomiting

Investigations

* CBC
* Urinalysis
* Abdominal ultrasound

- **Alvarado Score (mnemonic: (MANTRELS):**

Feature	Score
Migratory RIF pain	1
Anorexia	1
Nausea and vomiting	1
Tenderness in RIF	2
Rebound tenderness	1
Elevated temperature (>37°C)	1
Leukocytosis	2
Shift to left (↑ in segmented neutrophils)	1
Total score if ≤ 4 diagnosis unlikely, 5 – 6 = observe, ≥ 7 = operation required	

Hydrocephalus

By Mr Usher

Hydrocephalus is a condition where excess cerebrospinal fluid (CSF) builds up inside the brain's ventricles, causing increased pressure on the brain.

Common Causes

- Congenital (present at birth)
- Brain infections (like meningitis)
- Brain tumors
- Head injury
- Brain bleeding (especially in newborns or elderly)
- Blockage of CSF flow

Symptoms in Infants

- Enlarged head size
- Bulging soft spot (fontanelle)
- Vomiting
- Seizures
- Poor feeding
- Irritability
- Sun-setting eyes (downward gaze)

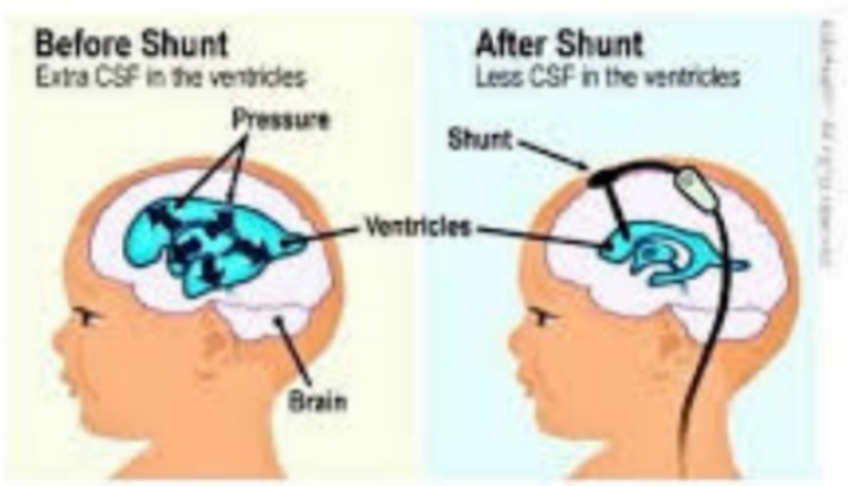
Diagnosis

- CT scan or MRI of the brain
- Measurement of CSF pressure
- Neurological examination

Treatment

The main treatment is surgery:

- VP Shunt (Ventriculoperitoneal Shunt) – drains excess fluid to the abdomen
- Endoscopic Third Ventriculostomy (ETV) – creates a new drainage pathway



There is no permanent medication cure, but symptoms can dramatically improve after surgery.

1. Types

- **Communicating:** CSF flows freely between ventricles, but the "drain" (arachnoid villi) is clogged, preventing absorption into the blood.
- **Non-Communicating (Obstructive):** A physical "dam" (tumor, narrowing) blocks fluid flow within the narrow passages of the brain.
- **Normal Pressure (NPH):** Ventricles enlarge but pressure stays near normal; primarily affects older adults.
- **Hydrocephalus ex-vacuo:** Not "true" hydrocephalus; the brain shrinks (due to stroke or Alzheimer's) and CSF fills the empty space.

IMNCI DIARRHEA CLASSIFICATION

Two of the following signs: • Lethargic or unconscious • Sunken eyes • Not able to drink or drinking poorly • Skin pinch goes back very slowly	**SEVERE DEHYDRATION**
Two of the following signs: • Restless, irritable • Sunken eyes • Drinks eagerly, thirsty • Skin pinch goes back slowly.	**SOME DEHYDRATION**
• Not enough signs to classify as some or severe dehydration	**NO DEHYDRATION**

Bared on Duration:

Acute diarrhea : lasts < 14 days.
Persistant Diarrhea : lasts ≥ 14 days.
Dysentry : Bloody diarrhea → Shigella.