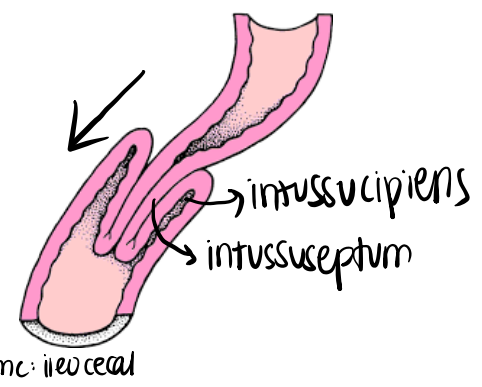


Intussusception 3mo-3yrs Acquired

*Sx: Surgery, mc: most common

mcc of bowel obstruction in infants & toddlers

- Triad
- bouts of Abdominal pain (knees towards abdomen)
 - palpable Abdominal mass
 - currant jelly stool (late)



- Bilious Vomiting
- Diarrhea → constipation
- Dehydration signs (late)
- Bowel sounds ↑ → ↓
- Dance sign (RLQ empty, RUQ full)
- sausage-shaped mass, RUQ
- Prolapse to anus (late)

- causes:
- mcc - Idiopathic (Adenovirus → lymphoid hyperplasia)
 - zony: leading pt. (meckels diverticulum/tumor)
- dx:
- X-ray (obstruction signs)
 - U/S (target/pseudo kidney sign) **diagnostic**
 - CT/MRI

EMERGENT (can cause ischemia & bowel wall necrosis)

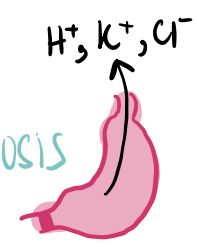
- tx: conservative +
- Hydrostatic/pneumatic reduction (mc ✓)
- failure of ^ / late / zony cause: sx reduction (pull intusseptum proximally) ± ischemic bowel resection w/ anastomosis

Hypertrophic pyloric stenosis (HPS) 2-8 wks Acquired

↳ in muscle

- Projectile non-bilious vomiting
- visible peristaltic waves
- dehydration
- Somnolence
- Olive sign epigastric region
- Hypokalemic hypochloremic metabolic Alkalosis
↳ paradoxical Acidosis / Apnea

↑: 1st born male



- dx:
- U/S: thickness > 4mm
 - length > 16mm
 - Xray w/ contrast: string / double track sign

- EMERGENT
- tx: - correct volume, electrolytes & Ph
 - Sx: pyloromyotomy (only M., x muosa)

↳ complications: muosal perforation, wound infection, incisional hernia, emesis, Duodenal injury

Congenital Diaphragmatic Hernia (CDH)

discontinuity of the diaphragm

Diaphragm

- Septum transversum: central tendon
- Esophageal Mesentery: medial Border
- lateral chest wall Ms: lateral Border
- Pleuroperitoneal folds: post. Border

(neonate)

- Pulmonary Hypoplasia
- persistent pulmonary HT
 - ↳ R→L shunting (PDA)
 - ↳ Hypoxemia → Acidosis
- cardio resp. Failure
- mortality (fetus/neonate)
- GI / resp manifestations (infants)
- Asymptomatic (infants)

dx: - prenatal: US/MRI

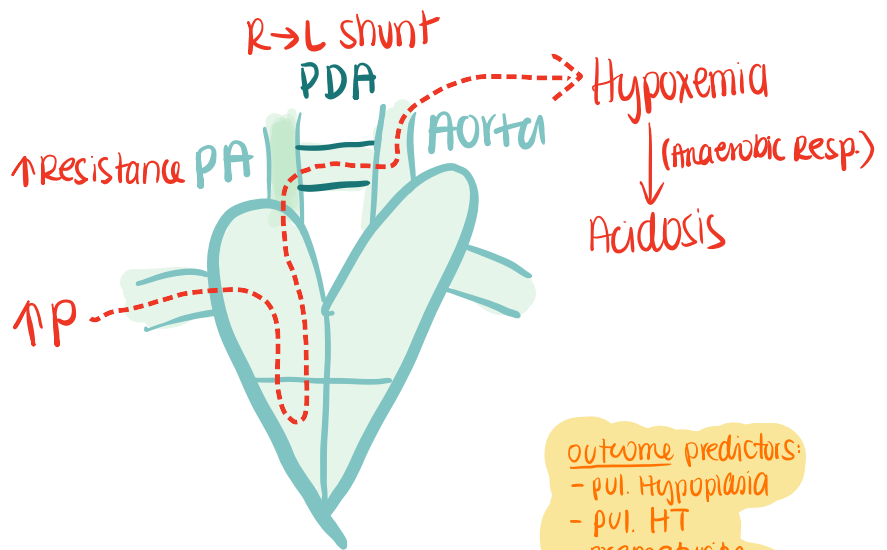
- postnatal: - clinical/PE:
 - Resp distress
 - scaphoid Abdomen (empty)
 - ↓ breath sounds
 - bowel sounds in thorax
- X ray ~~diagnostic~~
- Infant: - Resp/GI symptoms
- X ray

↓ Survival Rate:

- other malformations
- R. sided effects
 - ↳ Liver herniation
- < 30% lung vol
- ↓ Lung Area: Head Circumference

TYPES left

- Postero-lateral (Bochdalek) **mc**
- Ant. (Morgagni-Larrey)
- Central
- Diaphragm Agenesis
- Diaphragm Eventration (intact attachments but lax Ms/IVs.)



outcome predictors:

- pul. Hypoplasia
- pul. HT
- prematurity
- other anomalies

mx:

- prenatal**
 - screen other malformations
 - Fetal echo
 - genetic studies
 - In utero fetal therapy
 - Fam counseling
 - Delivery planning
- postnatal**
 - ↓ lung compression
 - ventilation
 - Cardiovascular support
 - correct pH
 - correct pulm HT
 - when stable: **sx**
 - ↳ open
 - ↳ thorascopic

↓
X EMERGENT

Esophageal Atresia (EA)

failure

4th - 7th gestation wk: foregut → dorsal: Esophageal
→ ventral: Resp. → Tracheoesophageal septum

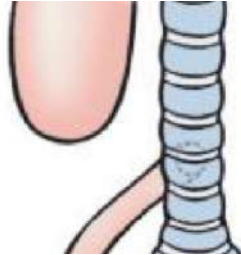
- polyhydramnios

→ Atresia: x gastric bubble

→ Fistula: ↑ gastric bubble

- ↑ salivation

- NG tube x pass



EA w/TEF (mc)

Associated: screen!

Vertebral

Anorectal

Cardiac

Tracheo

Esophageal

Renal

Limb abnormalities

dx: Xray

tx: - suctioning

↓
XEMERGENT

- Sx depend on gap b/w esophageal ends

→ < 2 vertebrae long anastomosis

→ 2-6 vertebrae gastrostomy + delayed anastomosis

→ > 6 vertebrae gastrostomy + esophagostomy + esophageal replacement later
(use other conduits)

Surgery complications:

↳ strictures

↳ leak

↳ rewire

↳ tracheomalacia

↳ GERD

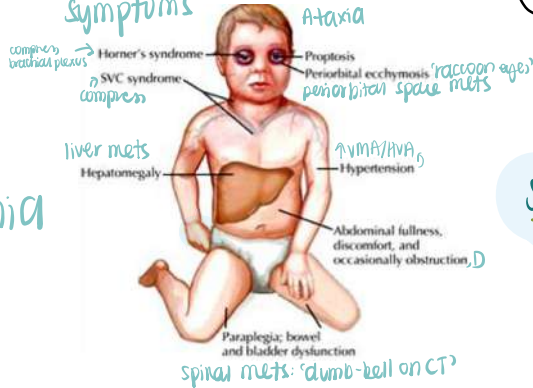
Peds Tumors

mc in traabdominal:
 #1 Neuroblastoma
 #2 Nephroblastoma (Wilms')

Neuroblastoma 1-4 yrs

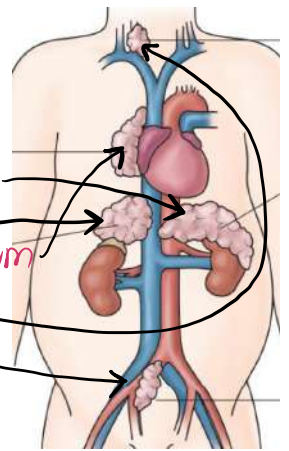
- unpredictable
- < age: better prognosis
- Abdominal mass *can cross midline, irregular*
- ↑ sick!
- Bone pain
- Weight loss
- fever, sweating, Anemia

xspecific symptoms

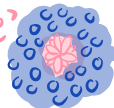


sites:

- 1 - Adrenal medulla
- 2 - SNS ganglia
- 3 - post. mediastinum
- 4 - pelvis/neck



- dx:
- VMA/HVA ↑ in urine
 - Xray (calcification)
 - US
 - CT/MRI: mets LN/bone/BM/skin/liver
 - biopsy: dark blue round cells 'rosette' around neurofibrillary core 'Homer Wright'



- tx: Sx: resection + chemo
- ↓ risk ↓ only
 - ↳ neoadjuvant: intermediate risk
 - ↳ reoadjuvant + adjuvant: ↑ risk

Shimada: favorable prognosis

- 1 - mitosis ↓
- 2 - Age ↓
- 3 - differentiation ↑
- 4 - Shoma rich

INSS:

- 1 → 4 worse
- 4S: infants w/ distant mets: skin/liver/BM
- spontaneous regression
 - sub-cutaneous nodules
 - hepato-spleno-megaly +ve
 - blueberry muffin spots

Wilms' Tumor 3.5 yrs

- better prognosis
- mc renal peds tumor
- < age: poor prognosis
- mc: unilateral, solitary
- mc: sporadic
- Asymptomatic (mc)
- Abdominal pain
- Hematuria
- Abdominal mass *smooth, unilateral*
- ↓: fever, VTI, HT, anemia, varicocele, rupture w/ hemorrhage

from metanephric blastema

- dx:
- US
 - CT/MRI (Renal v. → IVC)
 - Echo (Renal A)
 - Arteriography (preoperative embolization)
 - Xray (X calcification)
 - DMSA - bone/Brain scan (mets)

- tx: chemo & resection
- ↳ nephrectomy
 - ↳ if mets: venotomy/Hepatic or Lung metastectomy

prognostic Factors:

- stage ↑
- Histo ×
- Age ↓
- recurrence

INTESTINAL OBSTRUCTION

① Malrotation

mc: failure of 90° C caecum from RUL to RLQ

- duodenal obstruction → bilious vomit (bc volvulus/Ladd bands) 🤮
- Abdominal pain
- Diarrhea → constipation
- failure to thrive
- bloody stool 🩸

outcome:

- recurrence
- infarction
- obstruction (Adhesions)

dx: - Xray → mc: normal
 • small bowel: R & colon: L.
 • x distal bowel gas
 • whirled @
 • thick wall: chronic volvulus

- UGI contrast ✨

tx: - correct fluid, pH
 - if shock: ab, inotropics
 - if volvulus: urgent sx: Ladd's
 - xLadd's bands
 - widen mesenteric base
 - position bowel
 ± Appendectomy

② Intestinal Atresia

Duodenal w/ Down syndrome
 Jejunal ileocolic w/ gastroschisis
 colon w/ Hirschsprung disease

tx: D → duodeno-duodenostomy

(mc) IJ → resection + Anastomosis
 C → IJy Anastomosis (R-hemi colectomy + ileo-transverse Anastomosis)
 → defunctioning colostomy + staged Anastomosis (gradually)


dx:

- Antenatal: US (polyhydramnios, "double bubble" & xray → ^{duodenal})
- Postnatal: Bile vomit 🤮, meconium delay, distension
- Xray (meconium cyst: peritoneal calcification, dilated loop)
- contrast enema (microcolon)

outcome:

- other anomalies
- length of residual bowel

Type 1: membrane
 2: fibrous cord
 3: A: mesenteric defect
 B: "chrysmas tree"
 4: multiple Atresias



③ Necrotizing Enterocolitis (NEC) 7-10 days

- premature, formula fed, splanchnic hypoperfusion ↑
- mc site: terminal ileum, colon
- sepsis/ischemia signs
- bilious vomit 🤮
- GI bleeding 🩸
- peritonism
- Abdominal wall erythema
- Abdominal mass

outcome:

- recurrence
- short gut syndrome
- stricture

Sx indications:

- pneumoperitoneum (Bells III)
- failure to progress
- obstruction
- palpable mass
- fixed bowel
- ↑ erythema

Bells classification:


- I: initial mx
- II: conservative
- III: Sx

dx: Xray supine AP
 - PV gas
 - pneumatosis intestinalis 'soup bubble'
 - pneumoperitoneum football sign
 - ground glass appearance

mx: - NPO
 - restore: pH, temp, glucose, fluid, Hct
 - O₂ - Sx → resect
 ↳ stoma only
 - Abs ↳ clip & drop
 ↳ drain (PPD)
 - Analgesia

monitor: serial radiography

④ Meconium Ileus W/CF (90%)

- simple
- distension
 - bilious vomit 
 - x pass meconium
 - doughy palpable bowel loops

- complicated
- perforation (pseudocyst)
 - Atresia
 - volvulus

- dx: - xray (Newhauser's / 'soup bubble', calcification, xfluid levels)
- contrast enema (micro colon)
 - US (cyst)
 - CF: sweat Cl test / gene / immunoreactive trypsinogen >60

tx:

- ↑ - water sol contrast enema
- SX \rightarrow cath + stoma + Appendectomy
- \rightarrow resect + stoma / anastomosis
- N-acetylcysteine
- abs
- pancreatic enzyme
- CF tx

meconium plug syndrome } ddx:
 - meconium ileus
 - Hirschsprung's


↓ (W/CF)

dx: contrast enema
 tx: water sol \uparrow

⑤ Hirschsprung Disease RET gene mutation

W/Down syndrome

- failure of migration of neural crest
- loss of NCAM
- immunologic attack

- absence of ganglion cells
- x peristalsis
- enterocolitis
- distension
- Bilious vomiting 

short segment \rightarrow
 long segment \rightarrow

- tx: - decompress bowel (rectal washout / anal stimulation)
- if enterocolitis: \wedge , abs, stomas
 - sx: long pull through \neq colostomy
 - \rightarrow ganglionic loop to pelvis, anastomose w/anus
 - \rightarrow savers: best technique

outcome:

- leak / stricture
- enterocolitis
- obstruction (adhesions)
- perianal excoriation

- dx: - xray
- contrast enema (transitional zone)
 - submucosal rectal biopsy \rightarrow absence of ganglion cells suction \rightarrow ~~disagreement~~
 - DRE: squirt sign (expulsion of feces)
 - Anorectal manometry

normal: @ rectal distension \rightarrow recto-anal \ominus reflex
 Hirschsprung's: @ rectal distension \rightarrow x recto-anal \ominus reflex & over reactivity of sphincter

⑥ Anorectal malformations ♂>

terminal hindgut outside sphincter mechanism

w/ Down syndrome, cat-eye syndrome

most: connection b/w distal rectum & GUT

- mc ♂: recto-bulbar urethral fistula
- mc ♀: recto-vestibular fistula

- dx: - P/E!
- xray (lateral) - sacral ratio
 - U/S {r/o VACTERL}
 - echo
- mx: - NPO, NG tube
- fluids
 - abs

↑ & ↓ puborectalis sling

High ARM	Low ARM
<ul style="list-style-type: none"> - flat perineum (bc probs ↑ in pelvis) - rectourethral fistula (passage of meconium from urethra) - short sacrum - ↓ sphincter m. contraction - bifid scrotum/ sphincter close to scrotum 	<ul style="list-style-type: none"> - bucket handle ☹ - opening in perineum - Ant. displaced anus - penneal fistula
↳ ↓ continence	↳ ↑ constipation

tx:

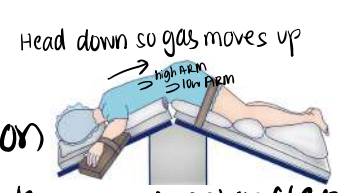
(3 step) high: ^{open, close} ² ¹ ³ ⁴ ⁵ ⁶ ⁷ ⁸ ⁹ ¹⁰ ¹¹ ¹² ¹³ ¹⁴ ¹⁵ ¹⁶ ¹⁷ ¹⁸ ¹⁹ ²⁰ ²¹ ²² ²³ ²⁴ ²⁵ ²⁶ ²⁷ ²⁸ ²⁹ ³⁰ ³¹ ³² ³³ ³⁴ ³⁵ ³⁶ ³⁷ ³⁸ ³⁹ ⁴⁰ ⁴¹ ⁴² ⁴³ ⁴⁴ ⁴⁵ ⁴⁶ ⁴⁷ ⁴⁸ ⁴⁹ ⁵⁰ ⁵¹ ⁵² ⁵³ ⁵⁴ ⁵⁵ ⁵⁶ ⁵⁷ ⁵⁸ ⁵⁹ ⁶⁰ ⁶¹ ⁶² ⁶³ ⁶⁴ ⁶⁵ ⁶⁶ ⁶⁷ ⁶⁸ ⁶⁹ ⁷⁰ ⁷¹ ⁷² ⁷³ ⁷⁴ ⁷⁵ ⁷⁶ ⁷⁷ ⁷⁸ ⁷⁹ ⁸⁰ ⁸¹ ⁸² ⁸³ ⁸⁴ ⁸⁵ ⁸⁶ ⁸⁷ ⁸⁸ ⁸⁹ ⁹⁰ ⁹¹ ⁹² ⁹³ ⁹⁴ ⁹⁵ ⁹⁶ ⁹⁷ ⁹⁸ ⁹⁹ ¹⁰⁰ ¹⁰¹ ¹⁰² ¹⁰³ ¹⁰⁴ ¹⁰⁵ ¹⁰⁶ ¹⁰⁷ ¹⁰⁸ ¹⁰⁹ ¹¹⁰ ¹¹¹ ¹¹² ¹¹³ ¹¹⁴ ¹¹⁵ ¹¹⁶ ¹¹⁷ ¹¹⁸ ¹¹⁹ ¹²⁰ ¹²¹ ¹²² ¹²³ ¹²⁴ ¹²⁵ ¹²⁶ ¹²⁷ ¹²⁸ ¹²⁹ ¹³⁰ ¹³¹ ¹³² ¹³³ ¹³⁴ ¹³⁵ ¹³⁶ ¹³⁷ ¹³⁸ ¹³⁹ ¹⁴⁰ ¹⁴¹ ¹⁴² ¹⁴³ ¹⁴⁴ ¹⁴⁵ ¹⁴⁶ ¹⁴⁷ ¹⁴⁸ ¹⁴⁹ ¹⁵⁰ ¹⁵¹ ¹⁵² ¹⁵³ ¹⁵⁴ ¹⁵⁵ ¹⁵⁶ ¹⁵⁷ ¹⁵⁸ ¹⁵⁹ ¹⁶⁰ ¹⁶¹ ¹⁶² ¹⁶³ ¹⁶⁴ ¹⁶⁵ ¹⁶⁶ ¹⁶⁷ ¹⁶⁸ ¹⁶⁹ ¹⁷⁰ ¹⁷¹ ¹⁷² ¹⁷³ ¹⁷⁴ ¹⁷⁵ ¹⁷⁶ ¹⁷⁷ ¹⁷⁸ ¹⁷⁹ ¹⁸⁰ ¹⁸¹ ¹⁸² ¹⁸³ ¹⁸⁴ ¹⁸⁵ ¹⁸⁶ ¹⁸⁷ ¹⁸⁸ ¹⁸⁹ ¹⁹⁰ ¹⁹¹ ¹⁹² ¹⁹³ ¹⁹⁴ ¹⁹⁵ ¹⁹⁶ ¹⁹⁷ ¹⁹⁸ ¹⁹⁹ ²⁰⁰ ²⁰¹ ²⁰² ²⁰³ ²⁰⁴ ²⁰⁵ ²⁰⁶ ²⁰⁷ ²⁰⁸ ²⁰⁹ ²¹⁰ ²¹¹ ²¹² ²¹³ ²¹⁴ ²¹⁵ ²¹⁶ ²¹⁷ ²¹⁸ ²¹⁹ ²²⁰ ²²¹ ²²² ²²³ ²²⁴ ²²⁵ ²²⁶ ²²⁷ ²²⁸ ²²⁹ ²³⁰ ²³¹ ²³² ²³³ ²³⁴ ²³⁵ ²³⁶ ²³⁷ ²³⁸ ²³⁹ ²⁴⁰ ²⁴¹ ²⁴² ²⁴³ ²⁴⁴ ²⁴⁵ ²⁴⁶ ²⁴⁷ ²⁴⁸ ²⁴⁹ ²⁵⁰ ²⁵¹ ²⁵² ²⁵³ ²⁵⁴ ²⁵⁵ ²⁵⁶ ²⁵⁷ ²⁵⁸ ²⁵⁹ ²⁶⁰ ²⁶¹ ²⁶² ²⁶³ ²⁶⁴ ²⁶⁵ ²⁶⁶ ²⁶⁷ ²⁶⁸ ²⁶⁹ ²⁷⁰ ²⁷¹ ²⁷² ²⁷³ ²⁷⁴ ²⁷⁵ ²⁷⁶ ²⁷⁷ ²⁷⁸ ²⁷⁹ ²⁸⁰ ²⁸¹ ²⁸² ²⁸³ ²⁸⁴ ²⁸⁵ ²⁸⁶ ²⁸⁷ ²⁸⁸ ²⁸⁹ ²⁹⁰ ²⁹¹ ²⁹² ²⁹³ ²⁹⁴ ²⁹⁵ ²⁹⁶ ²⁹⁷ ²⁹⁸ ²⁹⁹ ³⁰⁰ ³⁰¹ ³⁰² ³⁰³ ³⁰⁴ ³⁰⁵ ³⁰⁶ ³⁰⁷ ³⁰⁸ ³⁰⁹ ³¹⁰ ³¹¹ ³¹² ³¹³ ³¹⁴ ³¹⁵ ³¹⁶ ³¹⁷ ³¹⁸ ³¹⁹ ³²⁰ ³²¹ ³²² ³²³ ³²⁴ ³²⁵ ³²⁶ ³²⁷ ³²⁸ ³²⁹ ³³⁰ ³³¹ ³³² ³³³ ³³⁴ ³³⁵ ³³⁶ ³³⁷ ³³⁸ ³³⁹ ³⁴⁰ ³⁴¹ ³⁴² ³⁴³ ³⁴⁴ ³⁴⁵ ³⁴⁶ ³⁴⁷ ³⁴⁸ ³⁴⁹ ³⁵⁰ ³⁵¹ ³⁵² ³⁵³ ³⁵⁴ ³⁵⁵ ³⁵⁶ ³⁵⁷ ³⁵⁸ ³⁵⁹ ³⁶⁰ ³⁶¹ ³⁶² ³⁶³ ³⁶⁴ ³⁶⁵ ³⁶⁶ ³⁶⁷ ³⁶⁸ ³⁶⁹ ³⁷⁰ ³⁷¹ ³⁷² ³⁷³ ³⁷⁴ ³⁷⁵ ³⁷⁶ ³⁷⁷ ³⁷⁸ ³⁷⁹ ³⁸⁰ ³⁸¹ ³⁸² ³⁸³ ³⁸⁴ ³⁸⁵ ³⁸⁶ ³⁸⁷ ³⁸⁸ ³⁸⁹ ³⁹⁰ ³⁹¹ ³⁹² ³⁹³ ³⁹⁴ ³⁹⁵ ³⁹⁶ ³⁹⁷ ³⁹⁸ ³⁹⁹ ⁴⁰⁰ ⁴⁰¹ ⁴⁰² ⁴⁰³ ⁴⁰⁴ ⁴⁰⁵ ⁴⁰⁶ ⁴⁰⁷ ⁴⁰⁸ ⁴⁰⁹ ⁴¹⁰ ⁴¹¹ ⁴¹² ⁴¹³ ⁴¹⁴ ⁴¹⁵ ⁴¹⁶ ⁴¹⁷ ⁴¹⁸ ⁴¹⁹ ⁴²⁰ ⁴²¹ ⁴²² ⁴²³ ⁴²⁴ ⁴²⁵ ⁴²⁶ ⁴²⁷ ⁴²⁸ ⁴²⁹ ⁴³⁰ ⁴³¹ ⁴³² ⁴³³ ⁴³⁴ ⁴³⁵ ⁴³⁶ ⁴³⁷ ⁴³⁸ ⁴³⁹ ⁴⁴⁰ ⁴⁴¹ ⁴⁴² ⁴⁴³ ⁴⁴⁴ ⁴⁴⁵ ⁴⁴⁶ ⁴⁴⁷ ⁴⁴⁸ ⁴⁴⁹ ⁴⁵⁰ ⁴⁵¹ ⁴⁵² ⁴⁵³ ⁴⁵⁴ ⁴⁵⁵ ⁴⁵⁶ ⁴⁵⁷ ⁴⁵⁸ ⁴⁵⁹ ⁴⁶⁰ ⁴⁶¹ ⁴⁶² ⁴⁶³ ⁴⁶⁴ ⁴⁶⁵ ⁴⁶⁶ ⁴⁶⁷ ⁴⁶⁸ ⁴⁶⁹ ⁴⁷⁰ ⁴⁷¹ ⁴⁷² ⁴⁷³ ⁴⁷⁴ ⁴⁷⁵ ⁴⁷⁶ ⁴⁷⁷ ⁴⁷⁸ ⁴⁷⁹ ⁴⁸⁰ ⁴⁸¹ ⁴⁸² ⁴⁸³ ⁴⁸⁴ ⁴⁸⁵ ⁴⁸⁶ ⁴⁸⁷ ⁴⁸⁸ ⁴⁸⁹ ⁴⁹⁰ ⁴⁹¹ ⁴⁹² ⁴⁹³ ⁴⁹⁴ ⁴⁹⁵ ⁴⁹⁶ ⁴⁹⁷ ⁴⁹⁸ ⁴⁹⁹ ⁵⁰⁰ ⁵⁰¹ ⁵⁰² ⁵⁰³ ⁵⁰⁴ ⁵⁰⁵ ⁵⁰⁶ ⁵⁰⁷ ⁵⁰⁸ ⁵⁰⁹ ⁵¹⁰ ⁵¹¹ ⁵¹² ⁵¹³ ⁵¹⁴ ⁵¹⁵ ⁵¹⁶ ⁵¹⁷ ⁵¹⁸ ⁵¹⁹ ⁵²⁰ ⁵²¹ ⁵²² ⁵²³ ⁵²⁴ ⁵²⁵ ⁵²⁶ ⁵²⁷ ⁵²⁸ ⁵²⁹ ⁵³⁰ ⁵³¹ ⁵³² ⁵³³ ⁵³⁴ ⁵³⁵ ⁵³⁶ ⁵³⁷ ⁵³⁸ ⁵³⁹ ⁵⁴⁰ ⁵⁴¹ ⁵⁴² ⁵⁴³ ⁵⁴⁴ ⁵⁴⁵ ⁵⁴⁶ ⁵⁴⁷ ⁵⁴⁸ ⁵⁴⁹ ⁵⁵⁰ ⁵⁵¹ ⁵⁵² ⁵⁵³ ⁵⁵⁴ ⁵⁵⁵ ⁵⁵⁶ ⁵⁵⁷ ⁵⁵⁸ ⁵⁵⁹ ⁵⁶⁰ ⁵⁶¹ ⁵⁶² ⁵⁶³ ⁵⁶⁴ ⁵⁶⁵ ⁵⁶⁶ ⁵⁶⁷ ⁵⁶⁸ ⁵⁶⁹ ⁵⁷⁰ ⁵⁷¹ ⁵⁷² ⁵⁷³ ⁵⁷⁴ ⁵⁷⁵ ⁵⁷⁶ ⁵⁷⁷ ⁵⁷⁸ ⁵⁷⁹ ⁵⁸⁰ ⁵⁸¹ ⁵⁸² ⁵⁸³ ⁵⁸⁴ ⁵⁸⁵ ⁵⁸⁶ ⁵⁸⁷ ⁵⁸⁸ ⁵⁸⁹ ⁵⁹⁰ ⁵⁹¹ ⁵⁹² ⁵⁹³ ⁵⁹⁴ ⁵⁹⁵ ⁵⁹⁶ ⁵⁹⁷ ⁵⁹⁸ ⁵⁹⁹ ⁶⁰⁰ ⁶⁰¹ ⁶⁰² ⁶⁰³ ⁶⁰⁴ ⁶⁰⁵ ⁶⁰⁶ ⁶⁰⁷ ⁶⁰⁸ ⁶⁰⁹ ⁶¹⁰ ⁶¹¹ ⁶¹² ⁶¹³ ⁶¹⁴ ⁶¹⁵ ⁶¹⁶ ⁶¹⁷ ⁶¹⁸ ⁶¹⁹ ⁶²⁰ ⁶²¹ ⁶²² ⁶²³ ⁶²⁴ ⁶²⁵ ⁶²⁶ ⁶²⁷ ⁶²⁸ ⁶²⁹ ⁶³⁰ ⁶³¹ ⁶³² ⁶³³ ⁶³⁴ ⁶³⁵ ⁶³⁶ ⁶³⁷ ⁶³⁸ ⁶³⁹ ⁶⁴⁰ ⁶⁴¹ ⁶⁴² ⁶⁴³ ⁶⁴⁴ ⁶⁴⁵ ⁶⁴⁶ ⁶⁴⁷ ⁶⁴⁸ ⁶⁴⁹ ⁶⁵⁰ ⁶⁵¹ ⁶⁵² ⁶⁵³ ⁶⁵⁴ ⁶⁵⁵ ⁶⁵⁶ ⁶⁵⁷ ⁶⁵⁸ ⁶⁵⁹ ⁶⁶⁰ ⁶⁶¹ ⁶⁶² ⁶⁶³ ⁶⁶⁴ ⁶⁶⁵ ⁶⁶⁶ ⁶⁶⁷ ⁶⁶⁸ ⁶⁶⁹ ⁶⁷⁰ ⁶⁷¹ ⁶⁷² ⁶⁷³ ⁶⁷⁴ ⁶⁷⁵ ⁶⁷⁶ ⁶⁷⁷ ⁶⁷⁸ ⁶⁷⁹ ⁶⁸⁰ ⁶⁸¹ ⁶⁸² ⁶⁸³ ⁶⁸⁴ ⁶⁸⁵ ⁶⁸⁶ ⁶⁸⁷ ⁶⁸⁸ ⁶⁸⁹ ⁶⁹⁰ ⁶⁹¹ ⁶⁹² ⁶⁹³ ⁶⁹⁴ ⁶⁹⁵ ⁶⁹⁶ ⁶⁹⁷ ⁶⁹⁸ ⁶⁹⁹ ⁷⁰⁰ ⁷⁰¹ ⁷⁰² ⁷⁰³ ⁷⁰⁴ ⁷⁰⁵ ⁷⁰⁶ ⁷⁰⁷ ⁷⁰⁸ ⁷⁰⁹ ⁷¹⁰ ⁷¹¹ ⁷¹² ⁷¹³ ⁷¹⁴ ⁷¹⁵ ⁷¹⁶ ⁷¹⁷ ⁷¹⁸ ⁷¹⁹ ⁷²⁰ ⁷²¹ ⁷²² ⁷²³ ⁷²⁴ ⁷²⁵ ⁷²⁶ ⁷²⁷ ⁷²⁸ ⁷²⁹ ⁷³⁰ ⁷³¹ ⁷³² ⁷³³ ⁷³⁴ ⁷³⁵ ⁷³⁶ ⁷³⁷ ⁷³⁸ ⁷³⁹ ⁷⁴⁰ ⁷⁴¹ ⁷⁴² ⁷⁴³ ⁷⁴⁴ ⁷⁴⁵ ⁷⁴⁶ ⁷⁴⁷ ⁷⁴⁸ ⁷⁴⁹ ⁷⁵⁰ ⁷⁵¹ ⁷⁵² ⁷⁵³ ⁷⁵⁴ ⁷⁵⁵ ⁷⁵⁶ ⁷⁵⁷ ⁷⁵⁸ ⁷⁵⁹ ⁷⁶⁰ ⁷⁶¹ ⁷⁶² ⁷⁶³ ⁷⁶⁴ ⁷⁶⁵ ⁷⁶⁶ ⁷⁶⁷ ⁷⁶⁸ ⁷⁶⁹ ⁷⁷⁰ ⁷⁷¹ ⁷⁷² ⁷⁷³ ⁷⁷⁴ ⁷⁷⁵ ⁷⁷⁶ ⁷⁷⁷ ⁷⁷⁸ ⁷⁷⁹ ⁷⁸⁰ ⁷⁸¹ ⁷⁸² ⁷⁸³ ⁷⁸⁴ ⁷⁸⁵ ⁷⁸⁶ ⁷⁸⁷ ⁷⁸⁸ ⁷⁸⁹ ⁷⁹⁰ ⁷⁹¹ ⁷⁹² ⁷⁹³ ⁷⁹⁴ ⁷⁹⁵ ⁷⁹⁶ ⁷⁹⁷ ⁷⁹⁸ ⁷⁹⁹ ⁸⁰⁰ ⁸⁰¹ ⁸⁰² ⁸⁰³ ⁸⁰⁴ ⁸⁰⁵ ⁸⁰⁶ ⁸⁰⁷ ⁸⁰⁸ ⁸⁰⁹ ⁸¹⁰ ⁸¹¹ ⁸¹² ⁸¹³ ⁸¹⁴ ⁸¹⁵ ⁸¹⁶ ⁸¹⁷ ⁸¹⁸ ⁸¹⁹ ⁸²⁰ ⁸²¹ ⁸²² ⁸²³ ⁸²⁴ ⁸²⁵ ⁸²⁶ ⁸²⁷ ⁸²⁸ ⁸²⁹ ⁸³⁰ ⁸³¹ ⁸³² ⁸³³ ⁸³⁴ ⁸³⁵ ⁸³⁶ ⁸³⁷ ⁸³⁸ ⁸³⁹ ⁸⁴⁰ ⁸⁴¹ ⁸⁴² ⁸⁴³ ⁸⁴⁴ ⁸⁴⁵ ⁸⁴⁶ ⁸⁴⁷ ⁸⁴⁸ ⁸⁴⁹ ⁸⁵⁰ ⁸⁵¹ ⁸⁵² ⁸⁵³ ⁸⁵⁴ ⁸⁵⁵ ⁸⁵⁶ ⁸⁵⁷ ⁸⁵⁸ ⁸⁵⁹ ⁸⁶⁰ ⁸⁶¹ ⁸⁶² ⁸⁶³ ⁸⁶⁴ ⁸⁶⁵ ⁸⁶⁶ ⁸⁶⁷ ⁸⁶⁸ ⁸⁶⁹ ⁸⁷⁰ ⁸⁷¹ ⁸⁷² ⁸⁷³ ⁸⁷⁴ ⁸⁷⁵ ⁸⁷⁶ ⁸⁷⁷ ⁸⁷⁸ ⁸⁷⁹ ⁸⁸⁰ ⁸⁸¹ ⁸⁸² ⁸⁸³ ⁸⁸⁴ ⁸⁸⁵ ⁸⁸⁶ ⁸⁸⁷ ⁸⁸⁸ ⁸⁸⁹ ⁸⁹⁰ ⁸⁹¹ ⁸⁹² ⁸⁹³ ⁸⁹⁴ ⁸⁹⁵ ⁸⁹⁶ ⁸⁹⁷ ⁸⁹⁸ ⁸⁹⁹ ⁹⁰⁰ ⁹⁰¹ ⁹⁰² ⁹⁰³ ⁹⁰⁴ ⁹⁰⁵ ⁹⁰⁶ ⁹⁰⁷ ⁹⁰⁸ ⁹⁰⁹ ⁹¹⁰ ⁹¹¹ ⁹¹² ⁹¹³ ⁹¹⁴ ⁹¹⁵ ⁹¹⁶ ⁹¹⁷ ⁹¹⁸ ⁹¹⁹ ⁹²⁰ ⁹²¹ ⁹²² ⁹²³ ⁹²⁴ ⁹²⁵ ⁹²⁶ ⁹²⁷ ⁹²⁸ ⁹²⁹ ⁹³⁰ ⁹³¹ ⁹³² ⁹³³ ⁹³⁴ ⁹³⁵ ⁹³⁶ ⁹³⁷ ⁹³⁸ ⁹³⁹ ⁹⁴⁰ ⁹⁴¹ ⁹⁴² ⁹⁴³ ⁹⁴⁴ ⁹⁴⁵ ⁹⁴⁶ ⁹⁴⁷ ⁹⁴⁸ ⁹⁴⁹ ⁹⁵⁰ ⁹⁵¹ ⁹⁵² ⁹⁵³ ⁹⁵⁴ ⁹⁵⁵ ⁹⁵⁶ ⁹⁵⁷ ⁹⁵⁸ ⁹⁵⁹ ⁹⁶⁰ ⁹⁶¹ ⁹⁶² ⁹⁶³ ⁹⁶⁴ ⁹⁶⁵ ⁹⁶⁶ ⁹⁶⁷ ⁹⁶⁸ ⁹⁶⁹ ⁹⁷⁰ ⁹⁷¹ ⁹⁷² ⁹⁷³ ⁹⁷⁴ ⁹⁷⁵ ⁹⁷⁶ ⁹⁷⁷ ⁹⁷⁸ ⁹⁷⁹ ⁹⁸⁰ ⁹⁸¹ ⁹⁸² ⁹⁸³ ⁹⁸⁴ ⁹⁸⁵ ⁹⁸⁶ ⁹⁸⁷ ⁹⁸⁸ ⁹⁸⁹ ⁹⁹⁰ ⁹⁹¹ ⁹⁹² ⁹⁹³ ⁹⁹⁴ ⁹⁹⁵ ⁹⁹⁶ ⁹⁹⁷ ⁹⁹⁸ ⁹⁹⁹ ¹⁰⁰⁰

(1 step) low: reconstruction sx

- definitive single stage sx: (low ARM)
- penneal fistula
 - Rectum 1cm from skin
 - vestibular fistula

↳ jackknife position

↳ check site of the anal sphincter by muscle stimulation!!



Good Luck :)
Rama Rayyan