Abdominal surgery

-commonly deals with a large problems in the abdominal region and digestive tract

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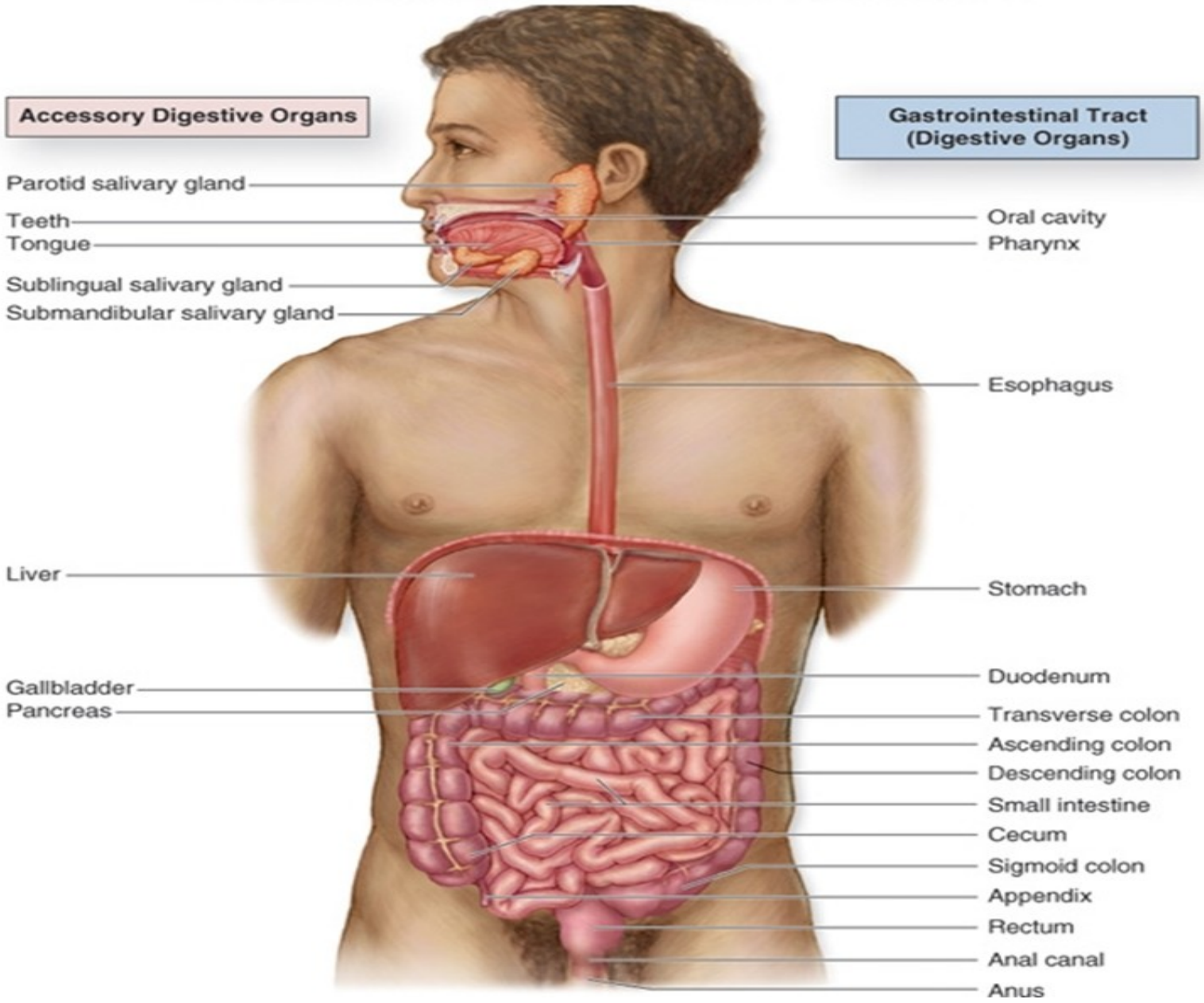


Where to start?

	Inflamation	Tumors	Trauma	Morfologie/Fyziologie
Oesophagus	GERD	SpinoCa		Atrezia
Stomach	Ulcus	AdenoCa		Hiatové hernie
Intestine	M.Crohn, UC	Adeno Ca		Divertikls, maldigestion/ malabsorption
Anus	UC, Abscess	Adeno/Spino		haemorrhoids
Biliary tract	cholecystitis	cholangioCa		lithiasis
Hepar	Hepatitis, abscess	Meta, hepatocellular		cyst
Pankreas	pancreatitis	AdenoCa		p. divisum
Spleen	abscess	Hemalology	Delayed rpt	
Abdominal wall			Blunt/sharp/….	Hernia

Diagnostics

- Anamnesis
- Clinical exam
- Laboratory methods/tests
- Radiodiagnostics (sono, RTG, CT, NMR, PET)
- Endoskopic methods
- Functional tests (manometry, pH metry…)

Therapy

- Conservative
- Miniinvasive (endoskopy, angiografy/embolisation, …)
- Invasive (OP)

Curative X Paliative

Esophagus

GERD: inflamation…overgrow of cylindric epithelium…Baret´s oesophagus

(precancerosis)

Esophageal Diverticulum

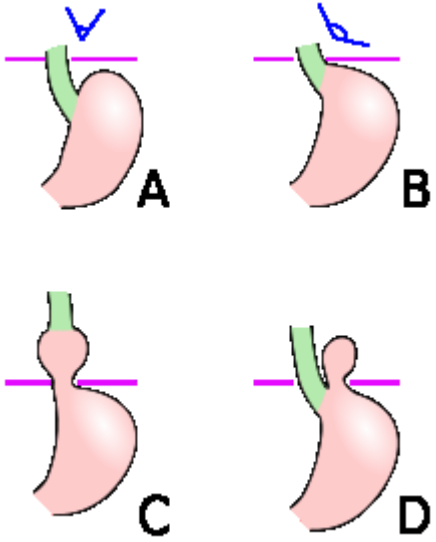
*** true** (all the wall layers) x **spurious** (mucosa and submucosa are going through the muscle layer)
*** tractive** (arising due the external traction) x **pulsar** (arising due the higher intraluminar pressure)
*** Faryngeal (Zenker´s)** x **parabronchial (middle) x epifrenic**

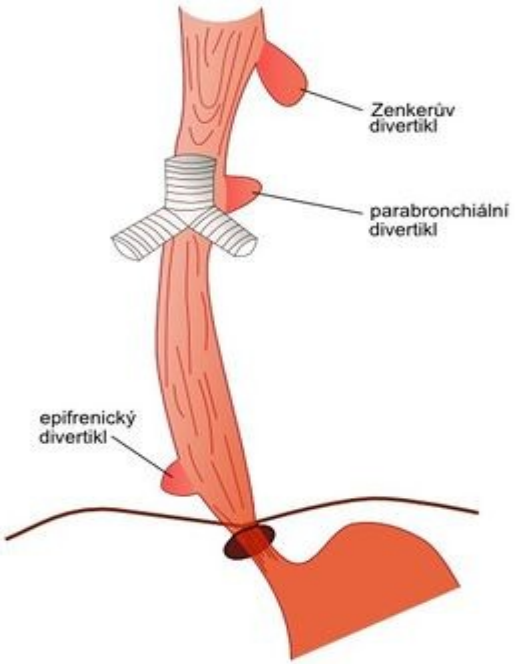
Achalazia: motility disorder…swellowing/passage problems …dilatation

Atrezia: embryonal/congenital impassibility

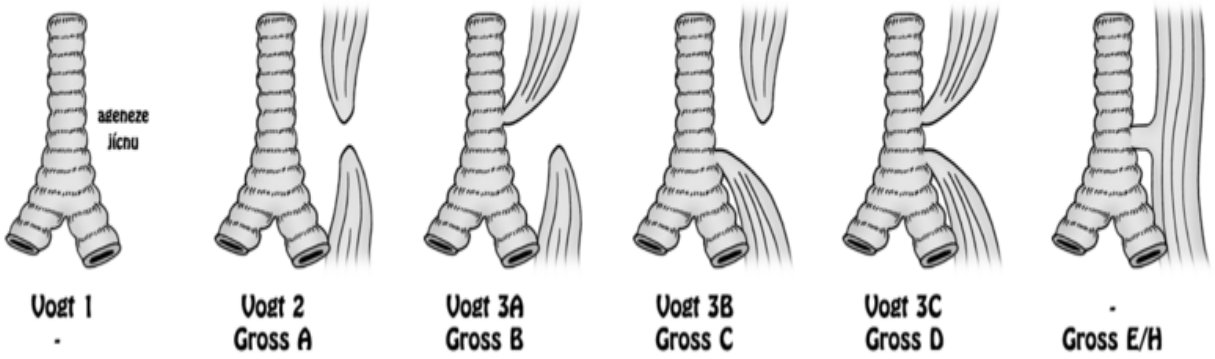
Varices: compound with portal hypertrnsion

Hernias of diaphragma: slide x paraesofageal, Hiss angle





VROZENÉ ATRÉZIE/PÍŠTĚLE JÍCNU - KLASIFIKACE



Esophageal tumor

- ***Benign:*** not common
- ***Malign:*** mostly in G-E junction

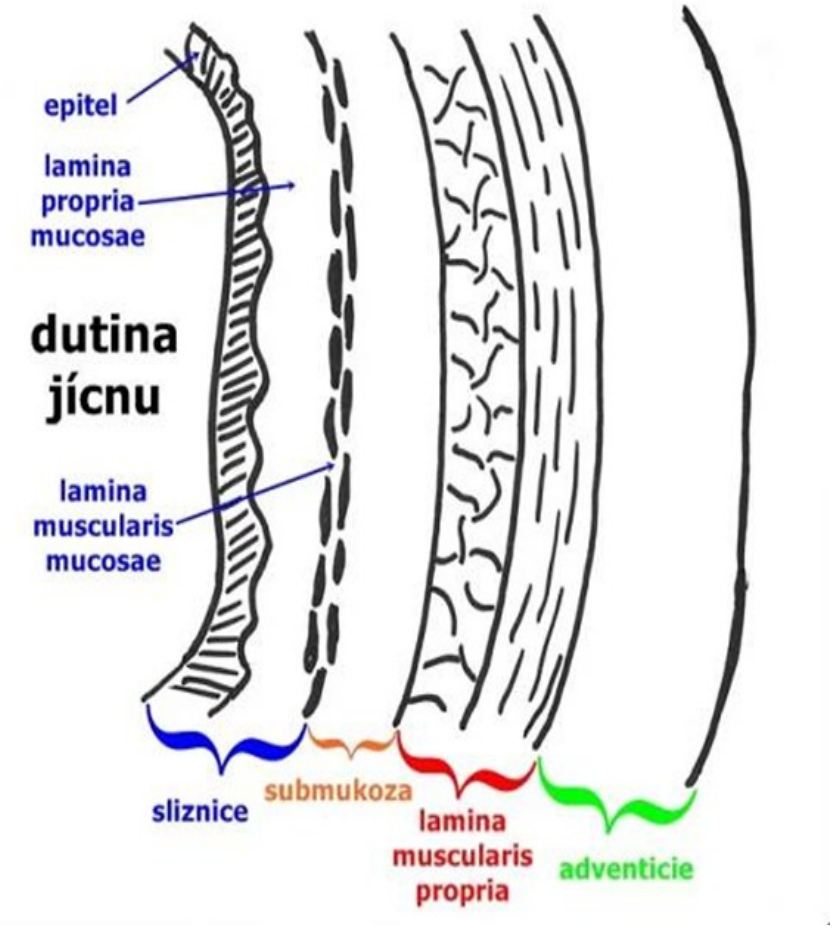
  Spinocelular

  AdenoCa

Symptoms: dysphagia, bleeding

Dg: gastroskopy, biopsy

Th: often paliative (stents)



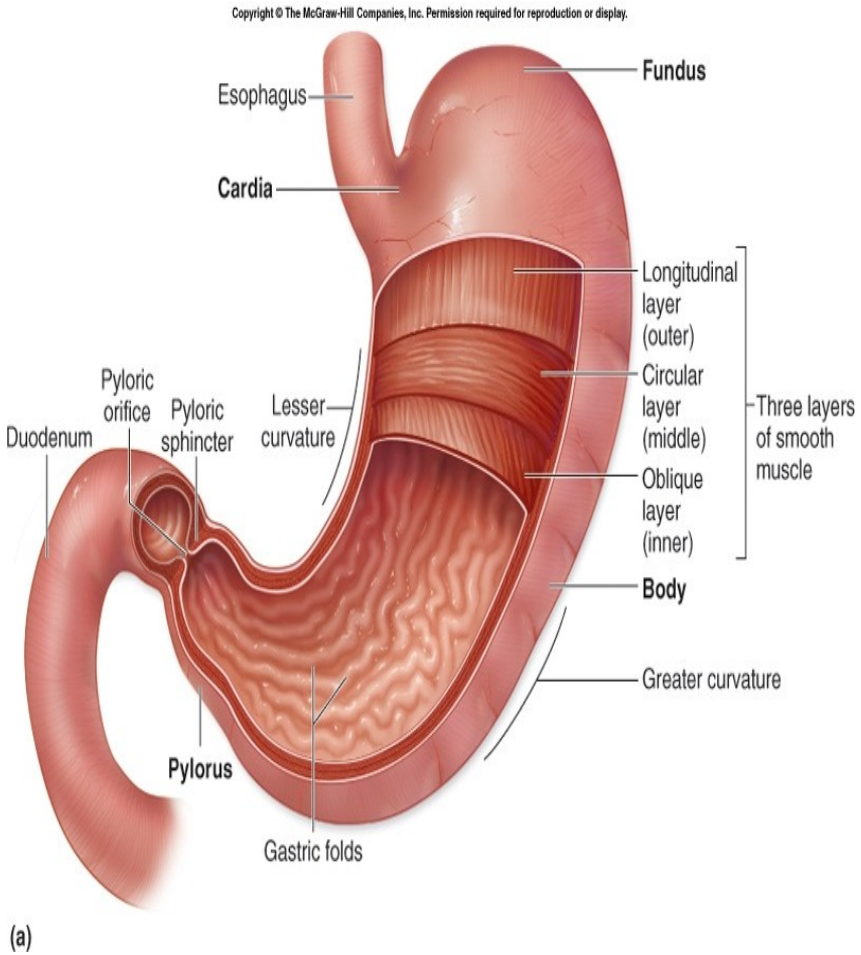
Stomach

Specific HCl environment

- **ulcus** – mucosal defekt, going to submukosa or deeply
- **erosion** – mucosal defekt limited in mucosa (not through muscularis interna into submukosa).

- **Dysbalance is leading to desease/problems**

- **Agresiv factors** – HCl, pepsin, NSA, ethanol, smoking, coffe, spicy food, *Helicobacter pylori infection*
- **Protective factors** – mucin/phlegm, prostaglandin, secretion HCO_3, food

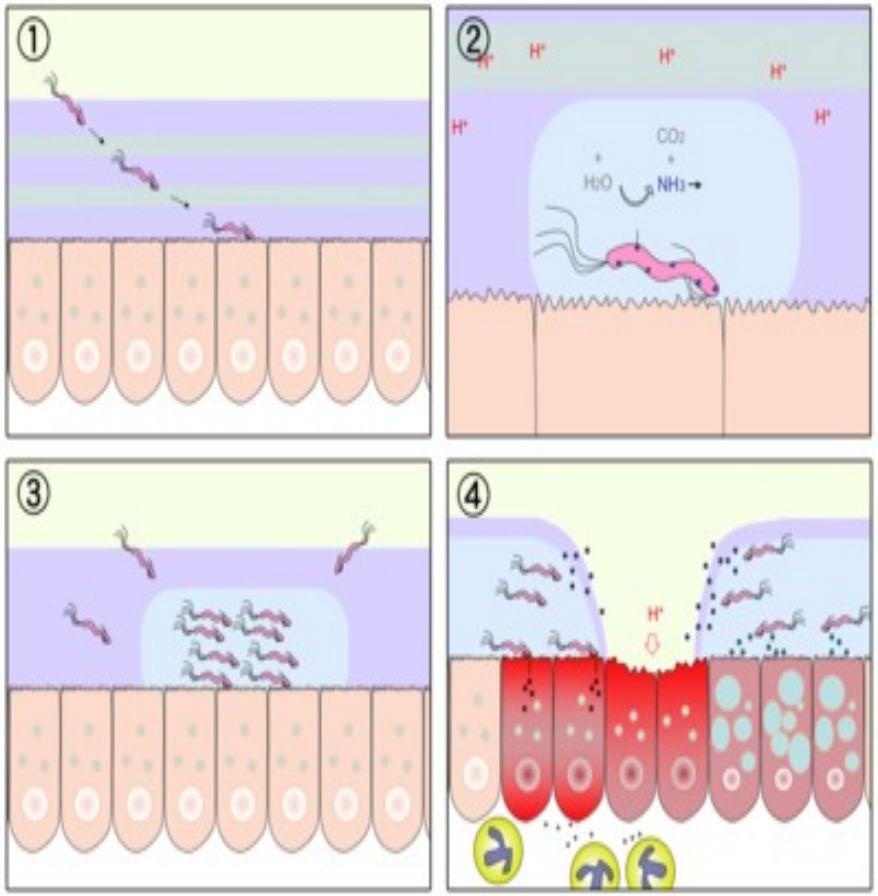


- **Ulcus ventriculi** – pain (visceral) in epigastrium after the food (antacidas not leading to decrease the problems)
- Food aversion, fullness, heartburn, intermittent vomiting with bile – the patients are hungry from fear
- Within elderly patients

- **Duodenal ulcus** – pain in epigastrium in hungry (often leads to problems in the night/sleeping – „night hungry pain“)
- Food ant antacids leading to relief
- Typical seasonal incidence for 1–2 weeks in spring and autumn
- Within younger patients

Ulcus desease

- Diagnostic: endoskopic methods, H. pylori detection
- Therapy: on the first place conservative (H. Pylori eradication, H2 blockers, PP blockers)
- Surgical therapy: today only treating the complications (acute bleeding/perforation, chronic stenosis)

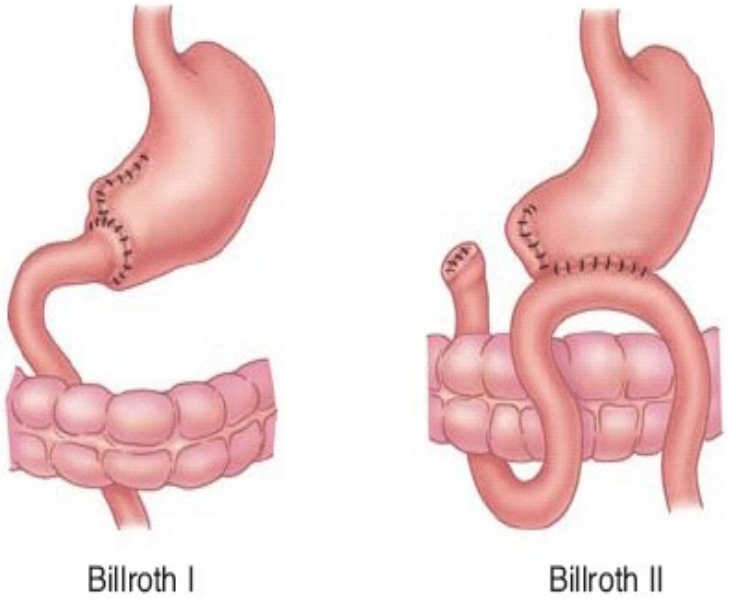


Ventrical tumors

- Benig: polyps
- Malign: AdenoCa

- Decreasing incidence in CZ
- Dominating in Asia (Japan)
  - another dietary usage

CAVE: often without clinical symtoms for a long time

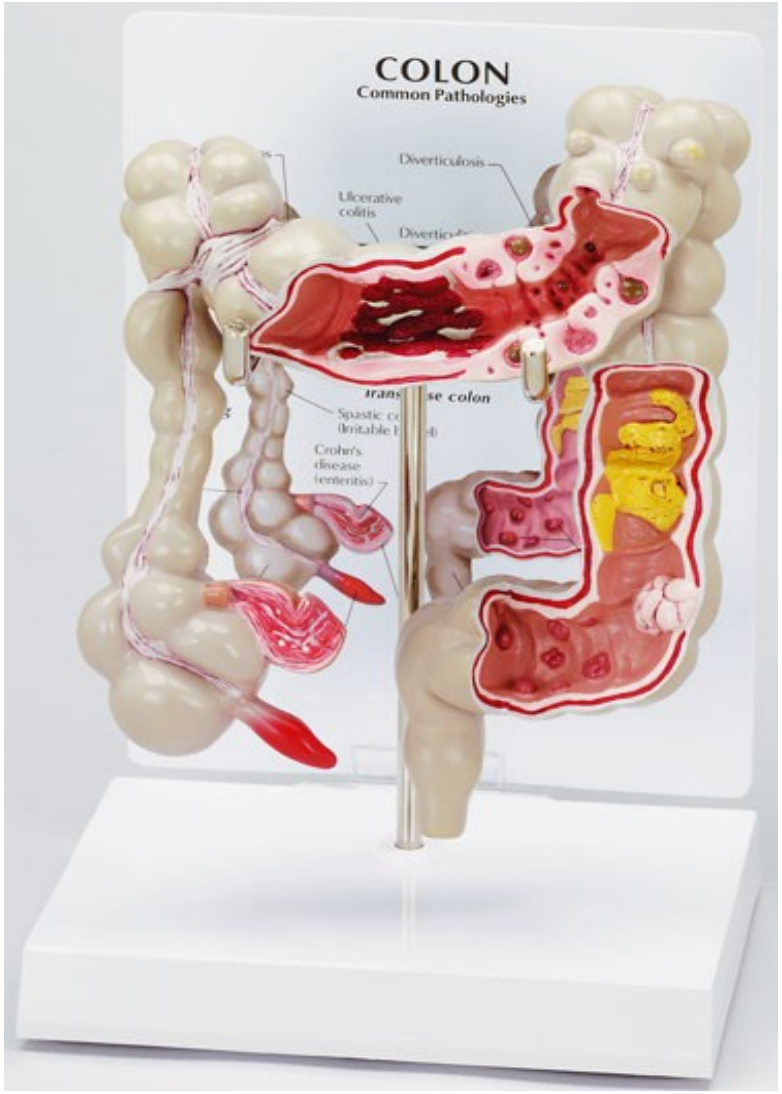


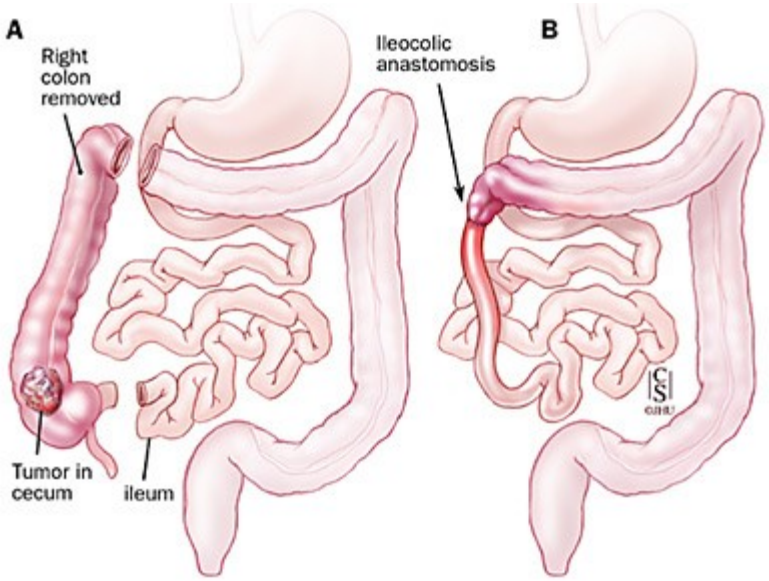
Small intestine

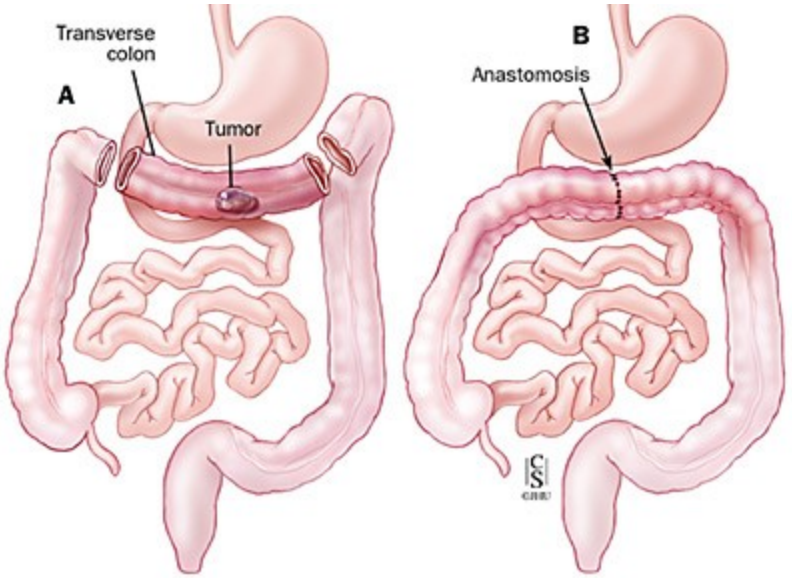
- Congenital: Meckel´s diverticulum, malrotation, atrezia, Gasser´s divertikulum (spurious)
- Malabsorbtion: Celiakia
- Maldigestion
- M. Crohn (IBD): multiorgan/system desease, mostly in the digestive tract region, first of all as acute appendicitis signs
- Tumos
  - Benign (polyps)
  - Malign (not common)
  - Carcinoid: the tumor outgoing fron the cells of DNES (difuse neuroendocrine system), earlier called APUD-system (amine precursors uptake and decarboxylation system). Relatively rare, but the incidence is increasing

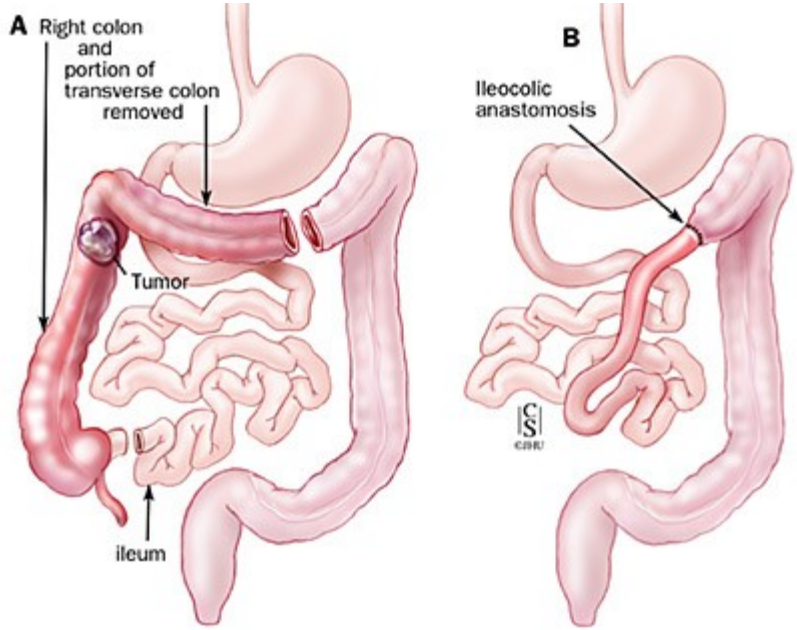
Large bowel

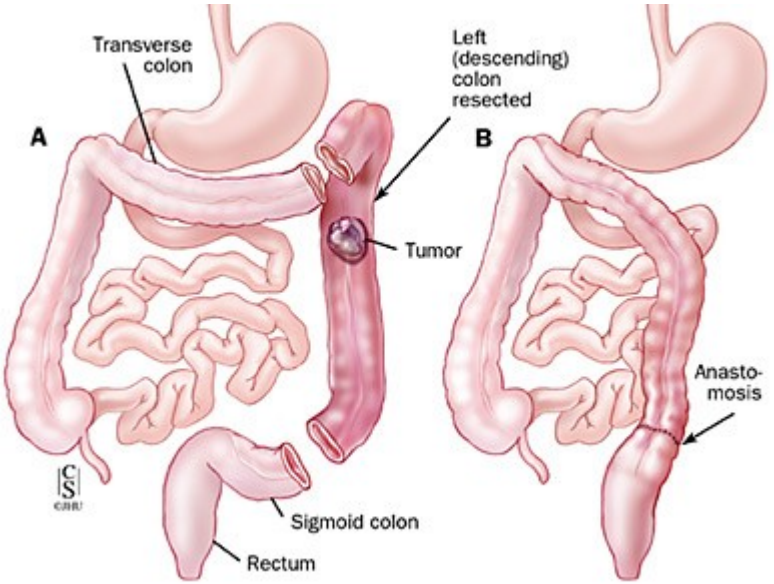
- Diverticls - higher risk of inflamation and perforation, bleeding
- Colitis ulcerosa (IBD) - chronic desease of bowel mucosa. Disease usually starting in anus and limited into large bowel
  - CAVE: System desease, the problems could be out of digestive systém
- Tumors
  - Benign (polyps/adenomas)
  - Familiar polyposis (prekancerosis)
  - Malign (AdenoCa)




A
Right colon removed
Tumor in cecum
ileum
Ileocolic anastomosis
B

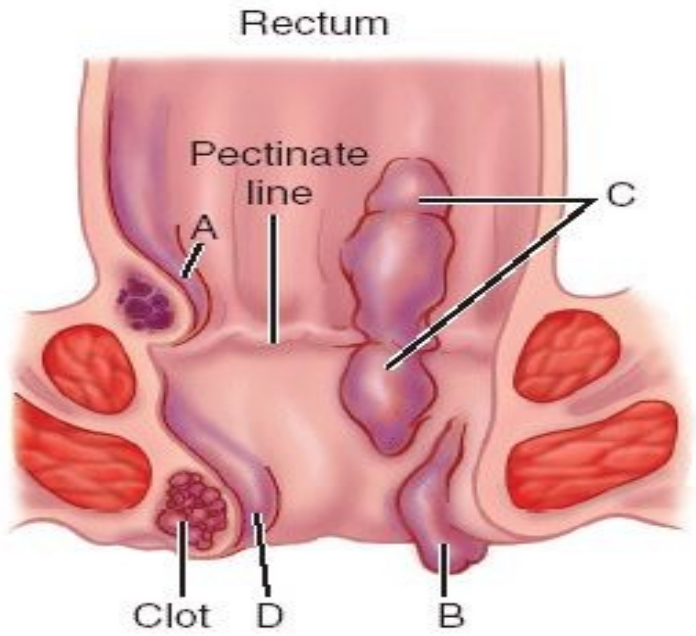

Transverse colon
A
Tumor
B
Anastomosis

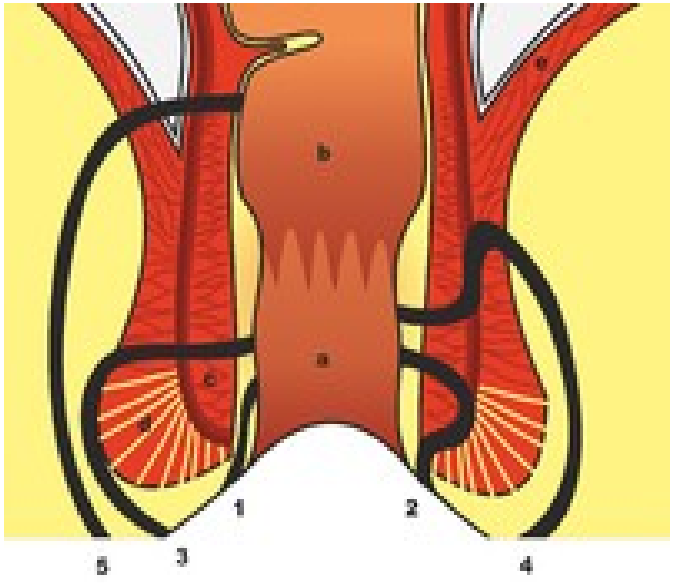

A
Right colon and portion of transverse colon removed
Tumor
ileum
B
Ileocolic anastomosis


Transverse colon
A
Left (descending) colon resected
Tumor
Sigmoid colon
Rectum
B
Anasto-mosis

Anus

- Atrezia, anal stenosis
- Haemorrhoids
- Sphincter disorders (↑↓)
- Fissura ani
- Fistula ⟷ Absces
- Condylomata
- Tumors
  - Benign
  - Malign (Spino x Adeno)

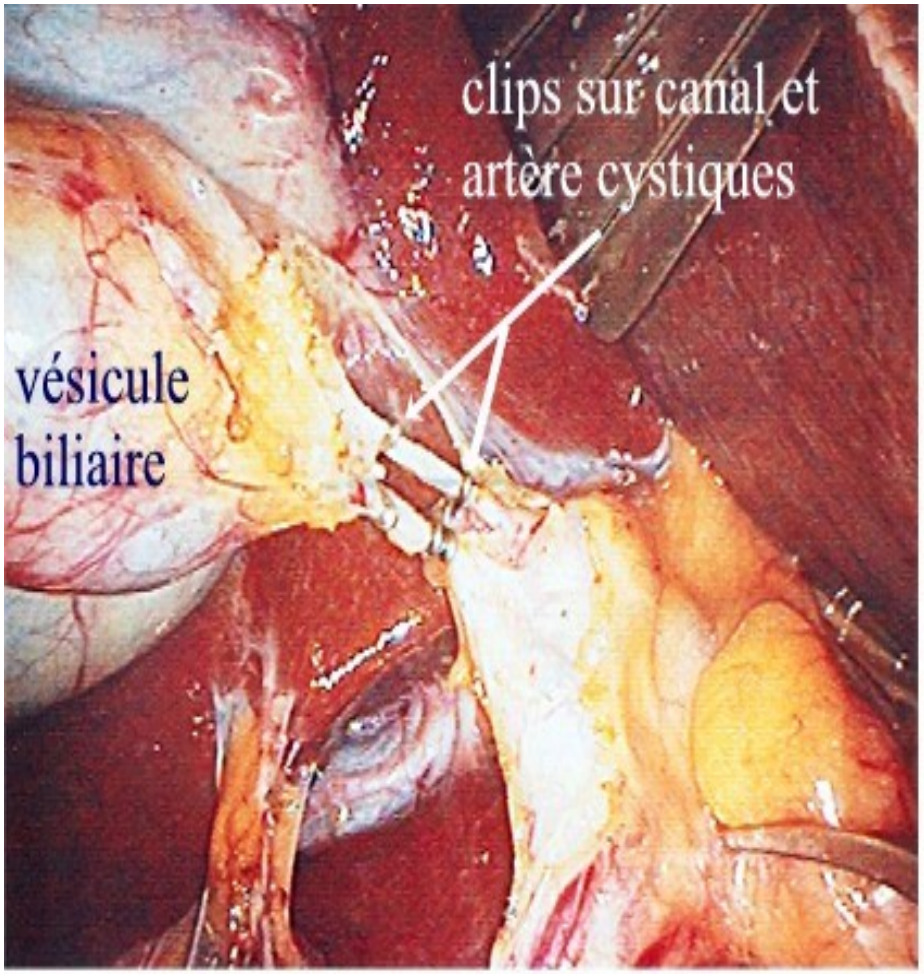




Biliary tract

- Atrezia
- Stenosis
- Inflamation
- Lithiasis: without signs in cca 60% of people
- Tumors: cholangioCa

- Icterus≠desease=sign



Liver

- Inflamation (ethanol, viruses)

- Steatosis

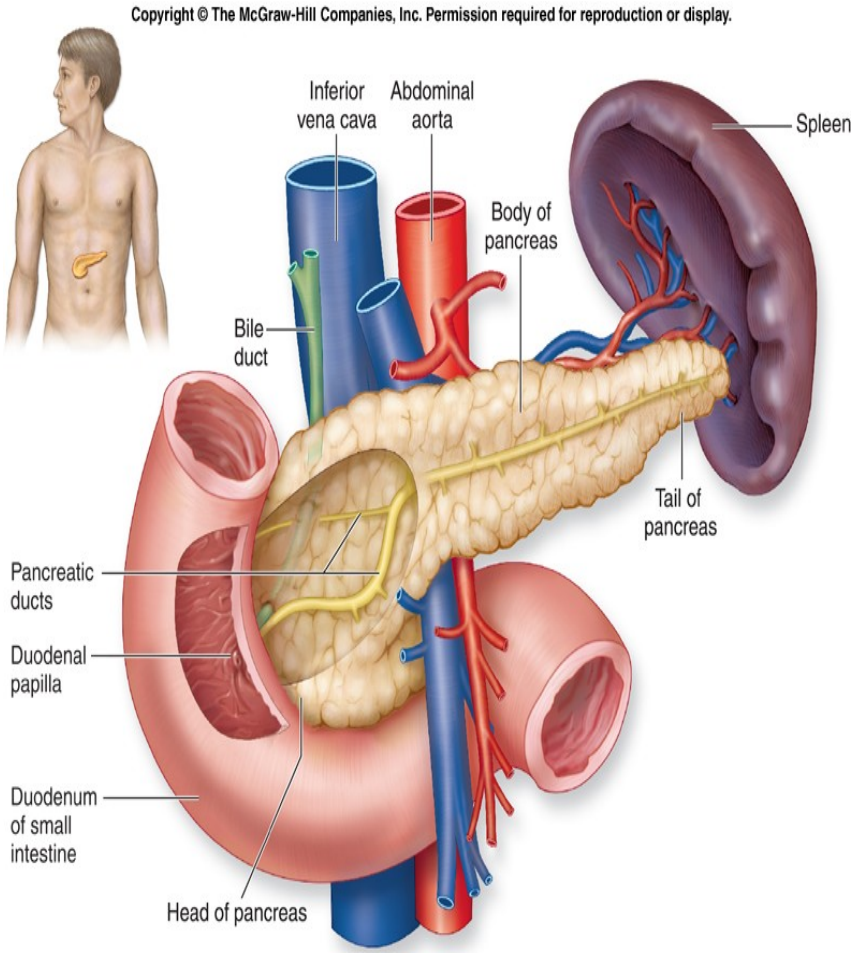
- Cirhosis

- Cyst
- Parasites
- Abscess (imunocompromitation)
- Hemangiomas
- Malignities
  - HepatocellularCa
  - Methastases (often)

Pankreas

- Disorder of exocrine function
- Disorder of endocrine function
- Congenital: pankreas divisum
- Inflamation

  acute ⟷ chronical
- Tumor
  - Adeno Ca
  - Endocrine tumors
    - F.e.: Insulinoma



Spleen

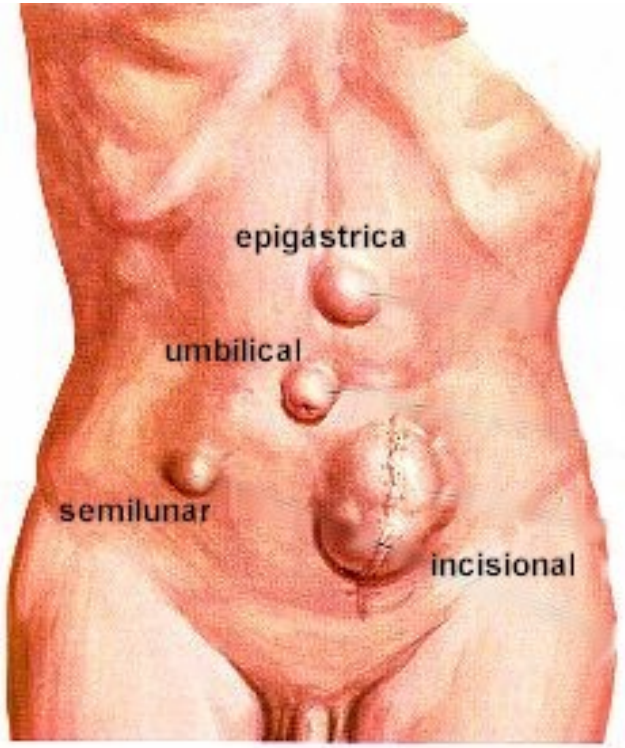
- Renculisation
- Abscesuss
- Hematological deseases
- Trauma!!!
  - Delayed rupture

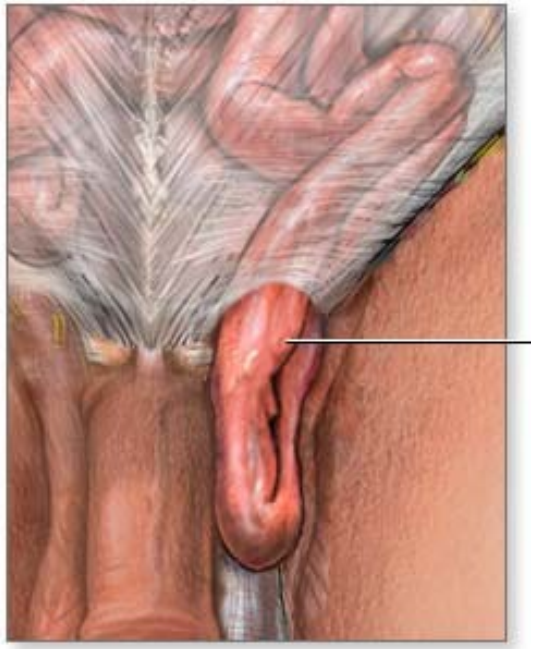
- OPSI
  - **overwhelming post-splenectomy infection**
  - typically characterized by either meningitis or sepsis, and are caused by encapsulated organisms including *Streptococcus pneumoniae*.

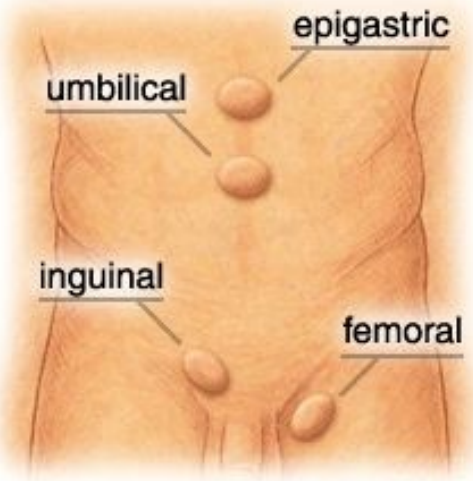
Abdominal Wall

- Omphalocoele /gastroschisis
- Hernias
- Inflamation is rare (phlegmona)
- Trauma
  - Blow x Blunt
  - Penetrating x Non-…

- Right x False/wrong
- Congenital x gained
- External x Intern
- Rare x Common


epigástrica
umbilical
semilunar
incisional




epigastric
umbilical
inguinal
femoral

RHB in surgery

- Importance: integral part of therapy!!!
  - Prevention of T-E/dekubits/bronchopneumonia
  - Restore/preservation of function
  - Adaptation to changes of status/ability/posibilities

- Curative physiotherapy:
  - Mobilisation considering to wounds and status after OP
  - mobilisation with minimal pain
  - breath rehabilitation

Fyzikal fyziotherapy

- Increase or reliefe the pain

elektroléčba – el. proud způsobuje dráždění svalové tkáně, nervů
- využívá se tepelný účinek

SS proud – dráždí nerv při ochrnutí
- je to proud galvanický (má malou intenzitu)
- zvyšuje metabolismus tkání, snižuje otoky, zmírňuje bolest

střídavý proud – je faradický (má malou frekvenci)

diatermie – k prohřívání tkání, má vysokou frekvenci

DD proud (diadinamic) – stejnosměrný proud, zmírňuje bolest

UZ – vysokofrekvenční záření, uvolňování srůstů, svalových napětí, snižuje bolest

radiation – UV (horské slunce) – zlepšuje prokrvení, tvorba vit D, celkové posílení organismu, kožní onemocnění – lupénka

- infračervené záření (solux) – zlepšuje prokrvení, napětí svalového tonu

heat – rozšíření cév, lepší prokrvení, zvýšení metabolismu, podpora růstu buněk, uvolňuje svalový spasmus

cold – zúžení cév, snížení prokrvení, snižuje matabolismus

Wather-therapy – účinek na celý organismus, tepelná, chemická a mechanická složka

- sprchy, střiky, otěry, obklady

mechanotherapy – přímý tah a tlak,

masáž, akupunktura