I. Overview → KNOW Fig. 12-1 (with some exceptions)
   A. Components
      1. continuous tube from oral cavity → anus
         = Gastrointestinal (GI) tract
      2. accessory organs — secrete into tube
         -- salivary glands
         -- pancreas
         -- liver & gallbladder
   B. Functions
      1. Physical & chemical breakdown of nutrients (= digestion) to absorbable size
      2. Movement of nutrients into blood (= absorption)
      3. Excretion of wastes
   C. Regional terms for abdominopelvic cavity
      1. Clinical divisions (quadrants) → KNOW Fig. 12-3 (but sloppy!)
         -- intersection of dividing lines is umbilicus (navel)
         RUQ, RLQ, LUQ, LLQ
      2. Anatomic divisions (“9ths”) is more precise
         → KNOW Fig. 12-2 (sloppy: lines don’t curve!)
         -- questionable value
         chondro/o = cartilage (portion of rib)
         inguinal = groin [lower limb joins trunk]
         lumbar = loin [waist]
      3. Peritoneum & peritoneal cavity → extensive & irregular

II. “Upper” GI tract
   A. Oral cavity → or/o-, stomat/o- = mouth
      so, stomatitis ≠ “stomach inflammation”
      1. tongue = lingu-, gloss-
      2. teeth = dent/odont
      3. lip = cheil/o [ki], chil/o, labi/o
         • Don’t confuse with celi/o[see] = abdomen
      4. separated from nasal cavity by hard/soft palate
   B. Pharynx → review
   C. Esophagus
      --collapsed muscular tube
      --food moved by peristalsis (stalsis = constriction)
      --common site of hernia at hiatus in diaphragm = hiatal hernia (Fig. 12.10 & 12.18)
D. Stomach = gastr-

-- **lower esophageal sphincter (cardiac sphincter)** regulates entry
   → improper function leads to **GERD** (gastroesophageal reflux disease)

-- **pyloric ( = gatekeeper) sphincter** regulates exit into small intestine
   **pyloric stenosis** usually congenital

E. Small intestine = enter/o

--Major organ of chemical digestion & absorption (hence its length – 6 m!)
  1. Duodenum = 2 + 10 = “12” fingers long
  2. Jejunum (= *empty*) ~ 1 m living
  3. Ileum (= *twisted*) ~ 2m living

III. “Lower” GI tract → KNOW Fig. 12.1
   A. Large intestine = colon-
      ≠ colon anatomic
      1. cecum
         -- **ileocecal sphincter (valve)** prevents backflow
         -- appendix – functions as lymphatic tissue
      2. colon
         ascending → transverse → descending → sigmoid (= *S-like*)
         -- common site for –ostomy (Fig. 12-21)
      3. rectum – “straight”
         -- **rectal ampulla** = enlarged portion

   4. anal canal
      --wall contains **anal sphincters** – control defecation
      an/o=“ring”
      **internal anal sphincter** - involuntary
      **external anal sphincter** – voluntary

proct/o = anus + rectum

IV. Accessory organs
   A. Salivary glands = “sial-“
      1. Parotid
      2. Submandibular
      3. Sublingual

   B. Liver = hepat-
      1. vital metabolic organ:
         --processes all major nutrients
         --regulates blood levels
         --detoxifies
hepatitis – 3 major viral types
  i. hepatitis A (HAV) – oral/fecal transmission
  ii. hepatitis B (HBV) – sexual/blood transmission
  iii. hepatitis C (HCV) – blood transmission

2. produces bile = “chol-“

C. Gallbladder = “cholecyst-“ → **Know Fig. 12-1**
  1. Stores bile
  2. Forms gallstones (“cholelith-“) if bile becomes too concentrated
     ↓
     Cholelithiasis (Fig. 12-13)

(sphincter of Oddi wrong in text)

So,

choledocholithiasis =
cholecystolithiasis =
cholangitis =

D. Pancreas
  --secretes many digestive enzymes in an alkaline (basic) fluid to neutralize
  stomach acid
  --transported to duodenum via pancreatic duct
  --also an endocrine organ: insulin & other hormones

V. Clinical
A. endoscopy (Fig. 12-15)
  - most terms are anatomically descriptive
    Ex.: esophagogastroduodenoscopy (EGD)
    endoscopic retrograde cholangiopancreatography (ERCP)
- laparoscopy (Fig. 12-16)
  • requires puncturing abdominal wall
B. Sonography
- endoscopic ultrasonography (EUS)

C. Many similar terms → read and spell carefully
- celiotomy vs. cheilotomy
- diverticulosis vs. diverticulitis (Fig. 12-9, 12-15)

D. Surgical anastomoses (= joining two hollow organs)
esophagogastrostomy
vs.
esophagostomy

E. Fistula – any abnormal passage
Ex.: anal fistula (Fig. 12-8)
-- may be blind-ended (= a big diverticulum)
  Ex. umbilical fistula/hernia
  or
-- may connect two organs/body cavities
  Ex: tracheoesophageal fistula

--particularly common between parts of digestive tube
  Ex. gastrocolic fistula

F. Hernia “-cele” → Fig. 12-10
- any abnormal protrusion
  1. hiatal – through the diaphragm
  2. inguinal – below the inguinal ligament
  3. umbilical

-- any hernia may become
  incarcerated = “trapped”
  or
  strangulated = trapped & constricted