UPDATE IN AJCC 8TH GROSS ROOM EDITION

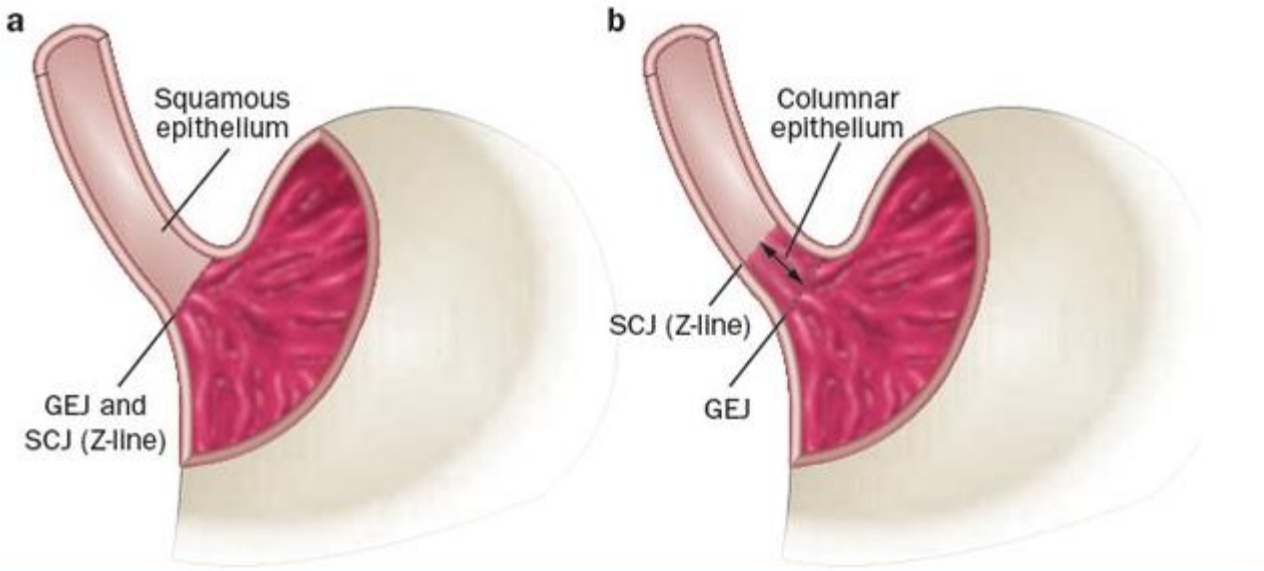
Esophagus and E-G junction

Site of tumor

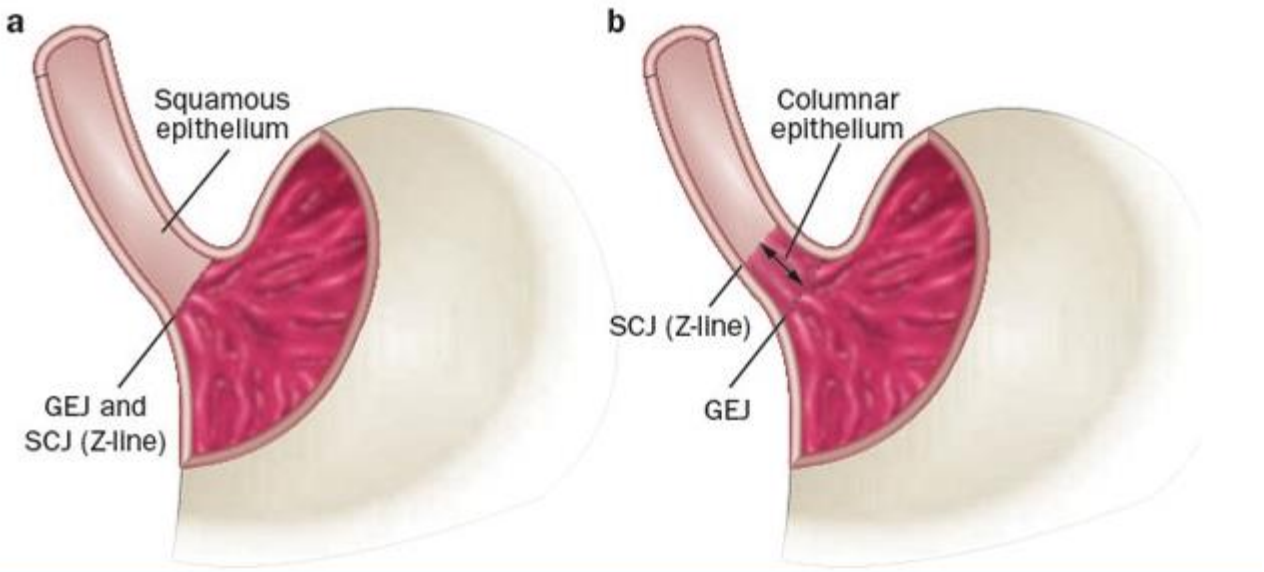
- สำคัญมาก เพราะ Gross เป็นตัวตัดสินว่าจะเป็น CA ของ esophagus หรือ stomach
  - มีการ staging ต่างกัน
  - มีการรักษา ต่างกัน

EG-junction and Z-line

- **EG-junction** = junction that tubular change to sac shape
- **Z-line** = squamo-columnar junction
  - Junction between 2 types of mucosa
  - White and hard – soft and pink



- Normal = Z line at EG-junction
- Barrett's esophagus = Z line above GE junction

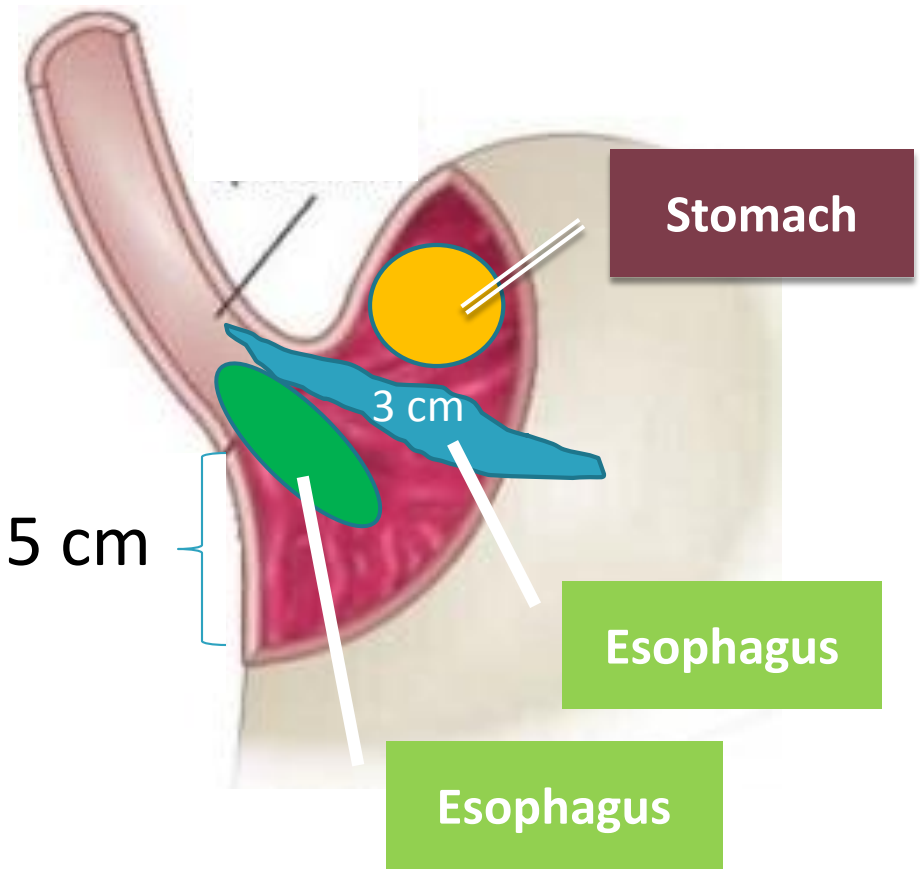


Changes in AJCC 8th

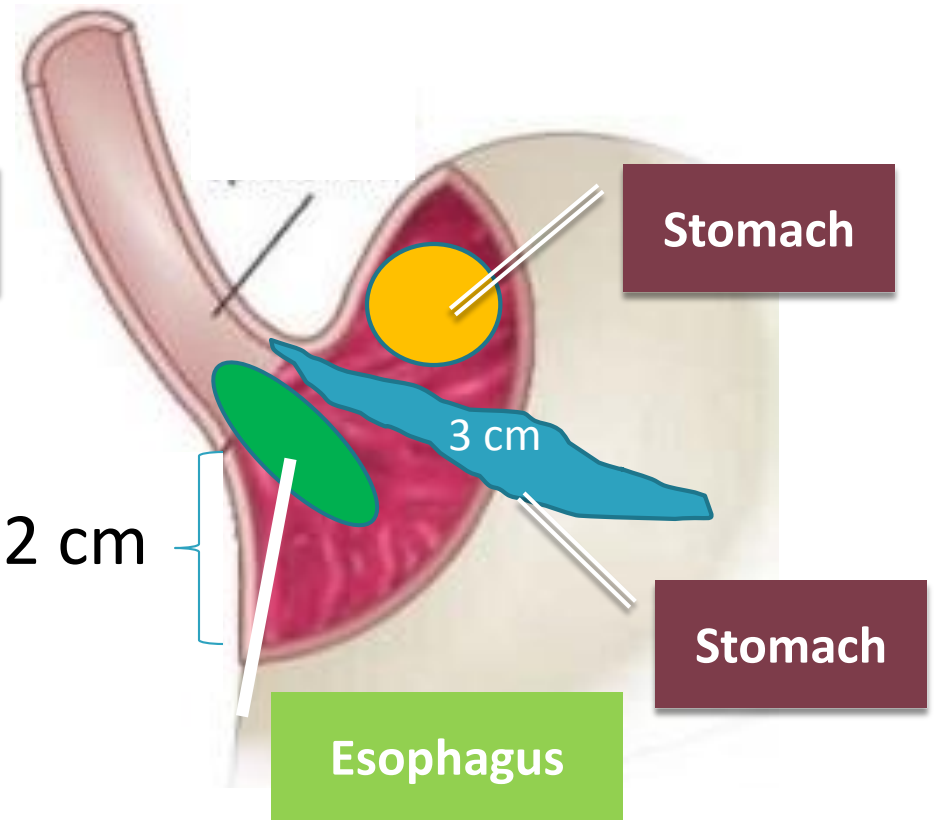
AJCC 7	
Location of epicenter	**Stage as:**
Proximal stomach < 5 cm + involve EGJ	Esophagus
Proximal stomach < 5cm NOT involve EGJ	Stomach

AJCC 8	
Location of epicenter	**Stage as:**
Proximal stomach <2 cm + involve EGJ	Esophagus
Proximal stomach < 2cm NOT involve EGJ	Stomach
Proximal stomach > 2 cm (even + extension to EGJ)	Stomach

AJCC7


Stomach
3 cm
5 cm
Esophagus
Esophagus

AJCC8


Stomach
3 cm
2 cm
Stomach
Esophagus

Additional remarks

- Lymph node
  - The more the better
  - Accurate staging + better survival
  - Post CMT → node atrophy → submit most periesophageal tissue to retrieve grossly impalpable nodes
- Surgical margin : record as R category
  - Tumor<1mm = R1
  - If gross visible = R2

Stomach

Anatomy-Primary site

- Same as stated in esophagus-EGJ carcinoma

Additional Remarks

- **Tumor deposits** in subserosal fat adjacent to gastric CA, w/o residual LN are considered regional LN metastasis
- **Intramural extension** to the duodenum or esophagus is *not considered invasion* of an adjacent struction, but is *classified using the depth of the greatest invasion* in any of these sites

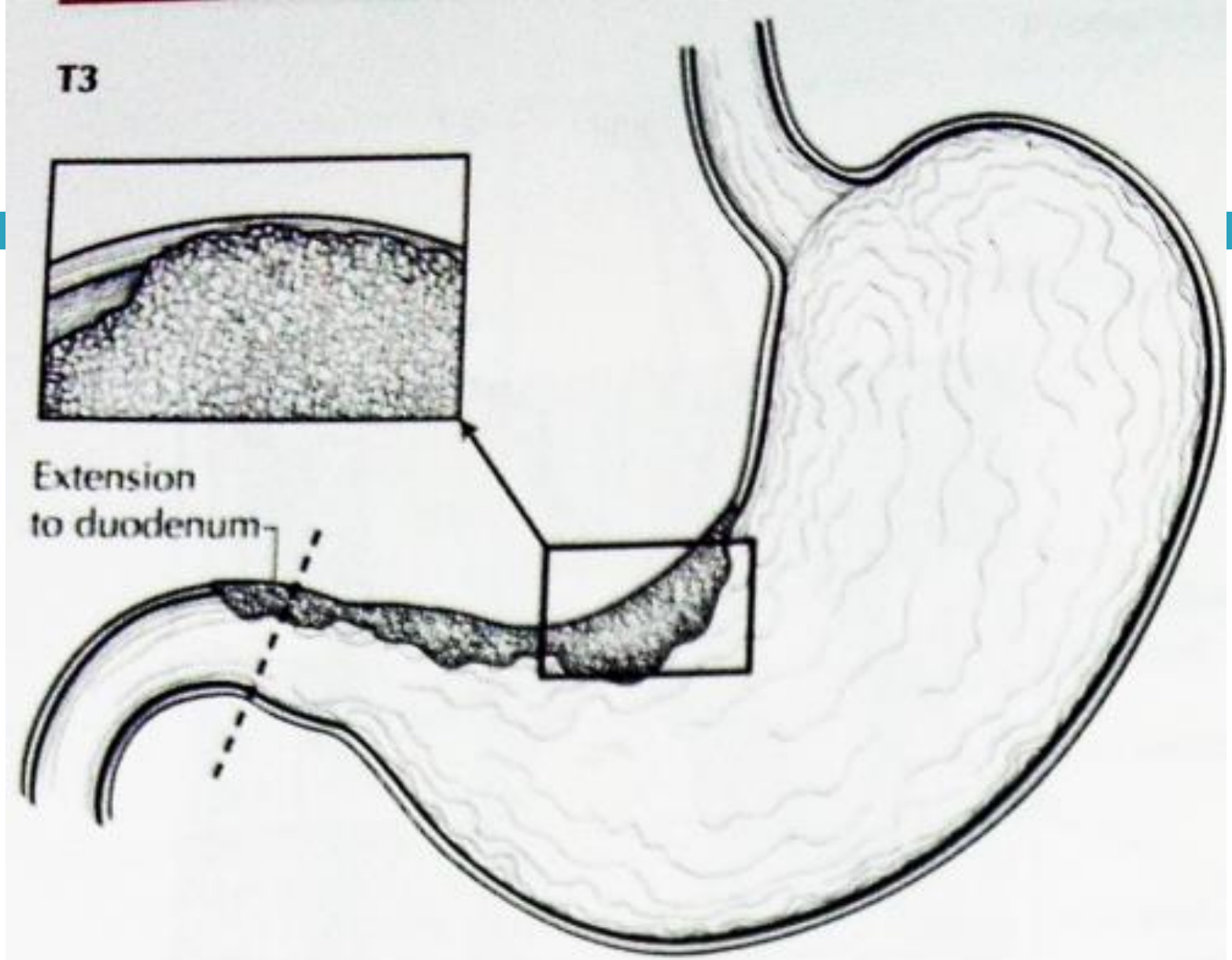


Fig. 17.10 Distal extension to duodenum does not affect the T3 category

- Node at least 16, but >=30 is desirable
- R classification (only of surgical resected specimen)
  - R = radial / circumferential margin
  - R1
    - CAP = tumor at margin
    - RCP = tumor <1mm from margin
  - R2 = grossly visible

Small Intestine

Primary Tumor

- For T3 and T4, the description of **extent of penetration into the retroperitoneum was omitted**. It is not reliable reported in the pathology assessment and is not a validated prognostic factor

AJCC7

T3	Tumor invades through the muscularis propria into the subserosa or into the nonperitonealized perimuscular tissue (mesentery or retroperitoneum) with extension 2 cm or less* (Figures 12.6)
T4	Tumor perforates the visceral peritoneum or directly invades other organs or structures (includes other loops of small intestine, mesentery, or retroperitoneum more than 2 cm, and abdominal wall by way of serosa; for duodenum only, invasion of pancreas or bile duct) (Figures 12.6, 12.7, 12.8, and 12.9)

**Note*: The nonperitonealized perimuscular tissue is, for jejunum and ileum, part of the mesentery and, for duodenum in areas where serosa is lacking, part of the interface with the pancreas.

Other important prognostic factors

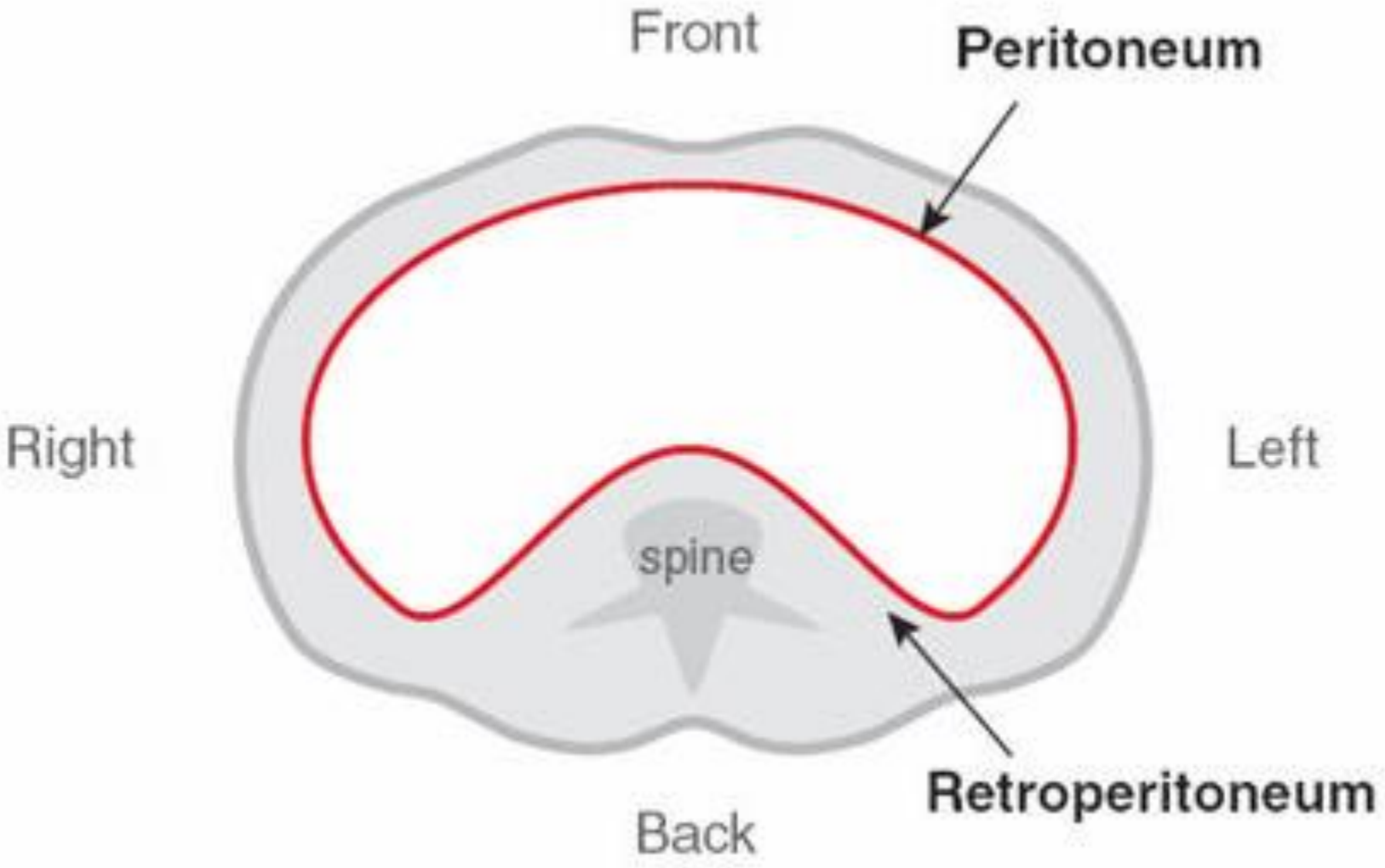
- Site of tumor : CONTRAVERSIAL
  - Duodenum worst than non-duodenum
- Number of LN examined : CONTRAVERSIAL
  - ≥5 for non-ampullary duodenal adenoCA
  - ≥ 9 for non-duodenal
  - >8 for small bowel adenoCA
- Presence of Crohn's Disease
  - Poorer outcome

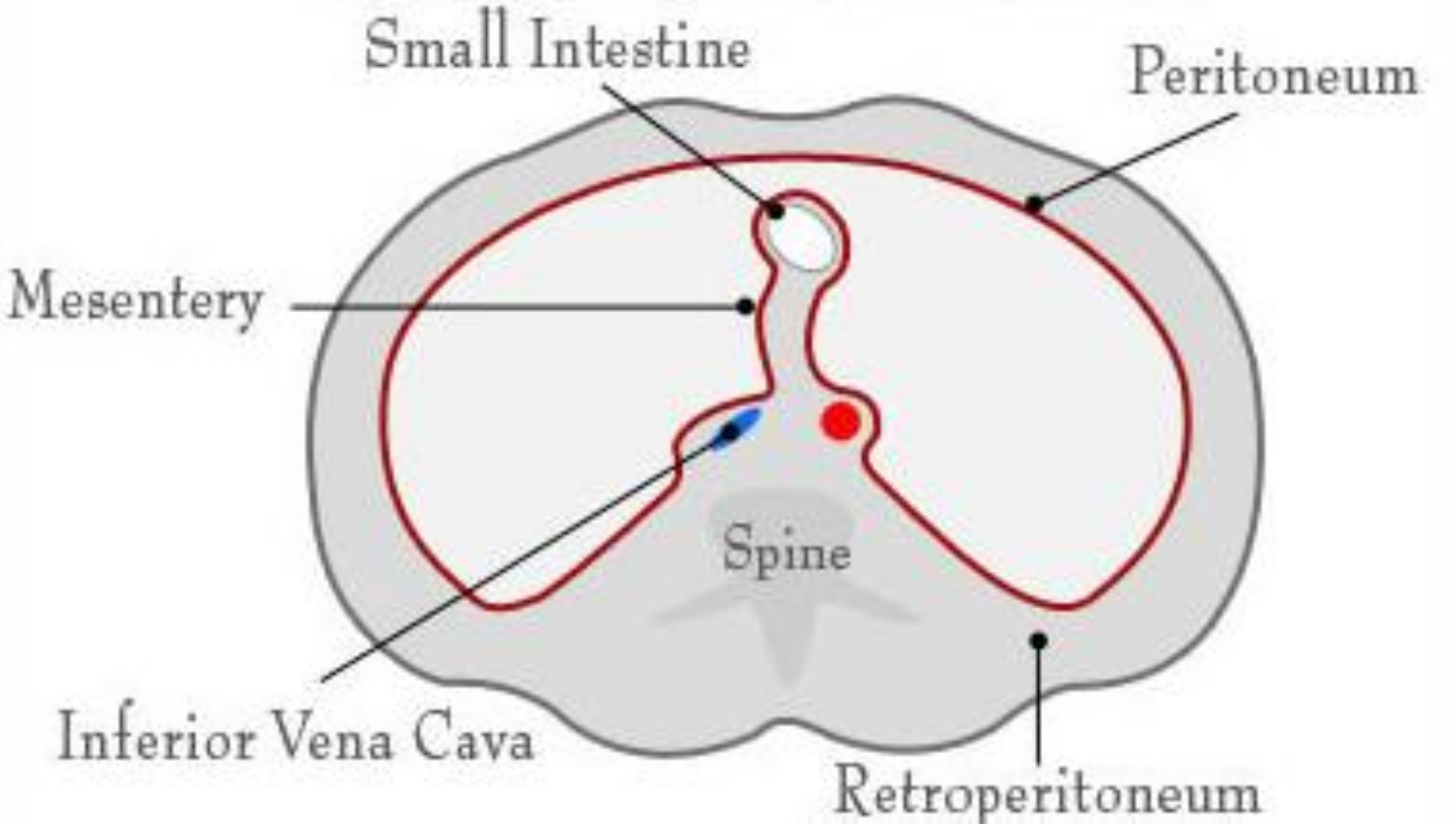
Additional Remarks

- In **polypectomy** entirely removal of tumor also staged
  - Don’t forget to ink margin
- Don’t forget **mesenteric margin** (except retroperitoneal part of duodenum)

Colon

ทบทวน Peritoneum




Small Intestine
Peritoneum
Mesentery
Spine
Inferior Vena Cava
Retroperitoneum

ทบทวน Peritoneum

- Cecum
  - Intraperitoneum
- Ascending colon
  - Retroperitoneum (มี serosa หน้า+ซ้าย-ขวา)
- Transverse colon
  - Intraperitoneum + mesentery
  - Omentum
- Descending colon
  - Retroperitoneum (มี serosa หน้า+ซ้าย-ขวา)
- Sigmoid colon
  - Intraperitoneum + mesentery

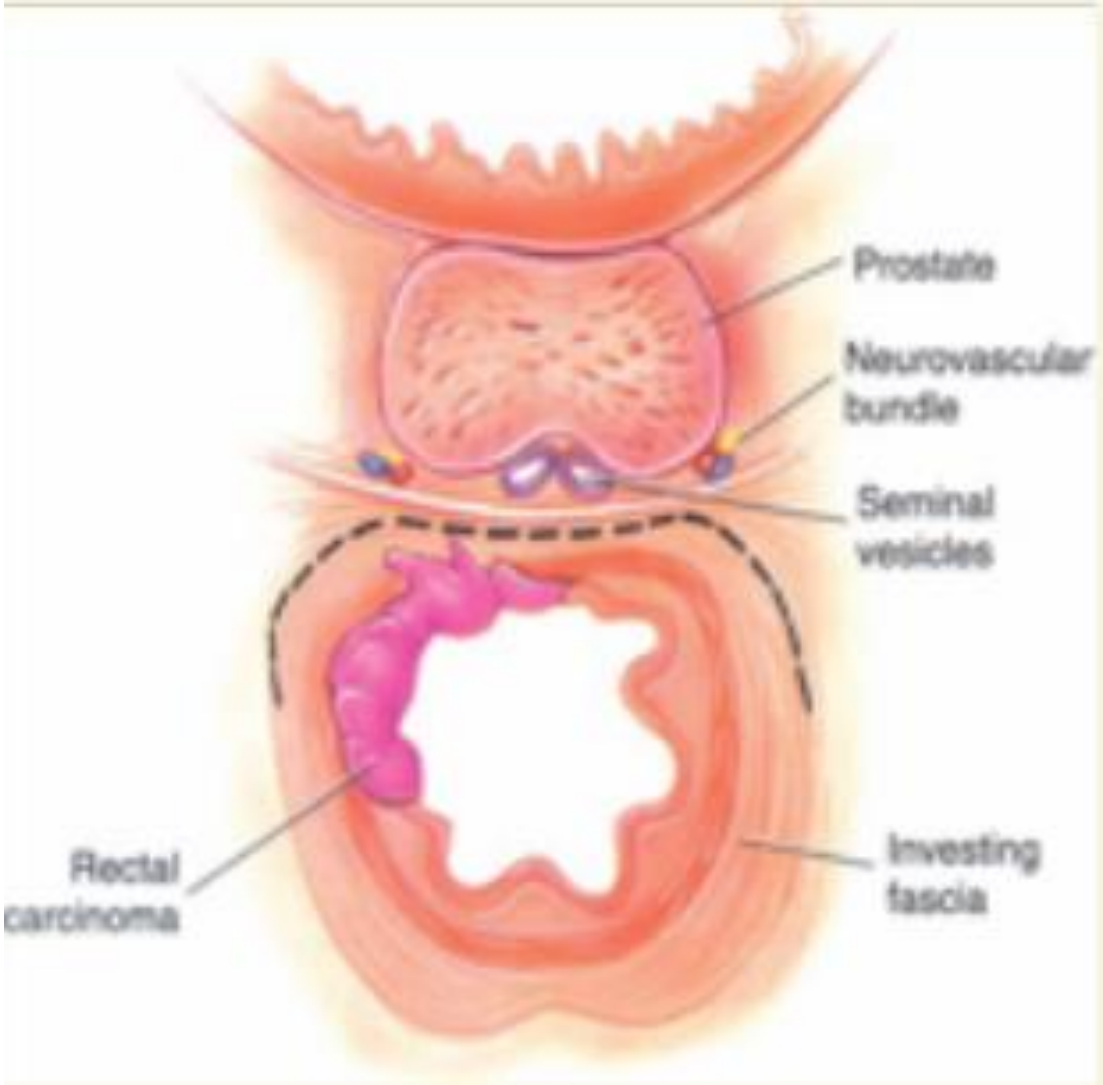
Circumferential resection margin

- CRM
- From edge of tumor to closest non-serosal margin
- **Retroperitoneal organ** only
- ≤1 mm = positive
- Factor in making treatment decision

- Transition of sigmoid – rectum : fusion of taenia to circumferential longitudinal muscle of rectum

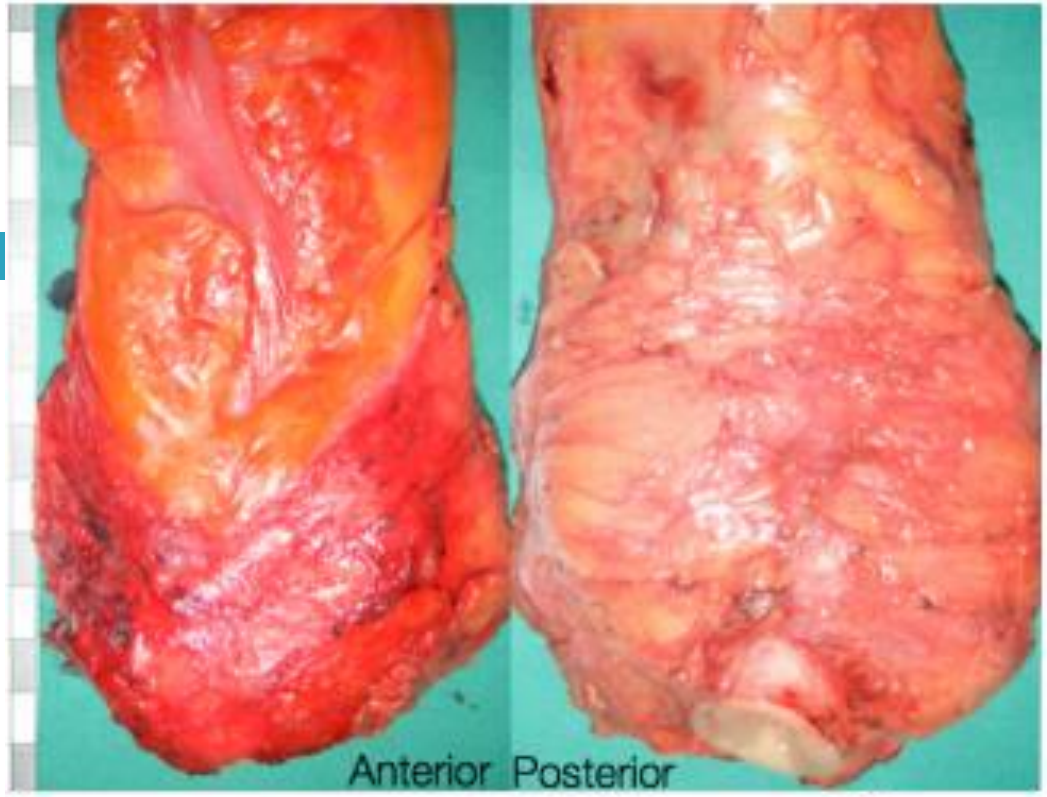
Total mesorectal excision

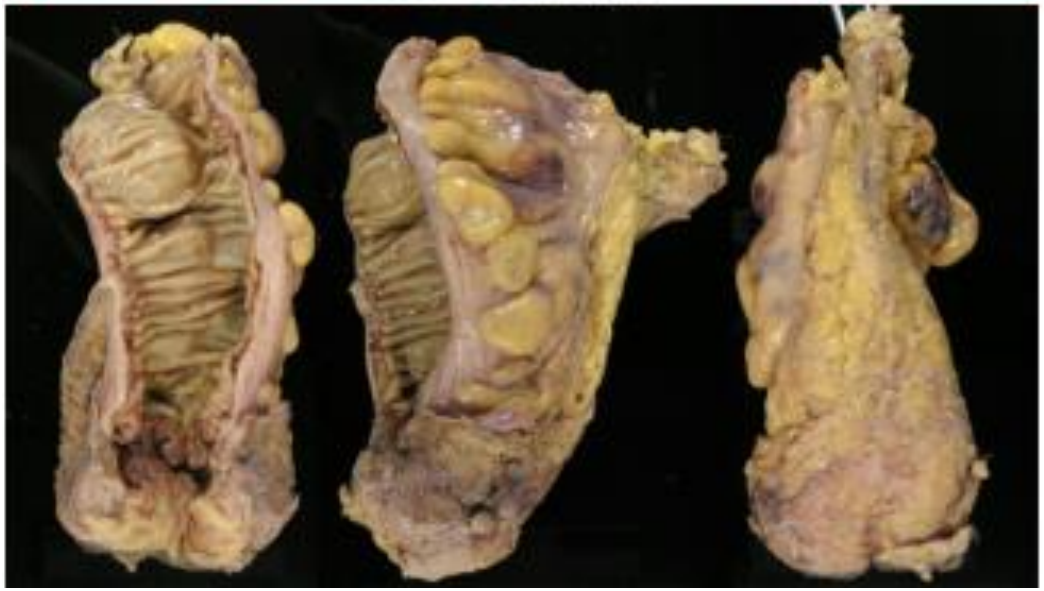
- การประเมิน Mesorectum
- Fat รอบ rectum
- ให้คะแนนตามส่วนที่แย่ที่สุด
- Examine both uncut and sectioned specimen



Complete

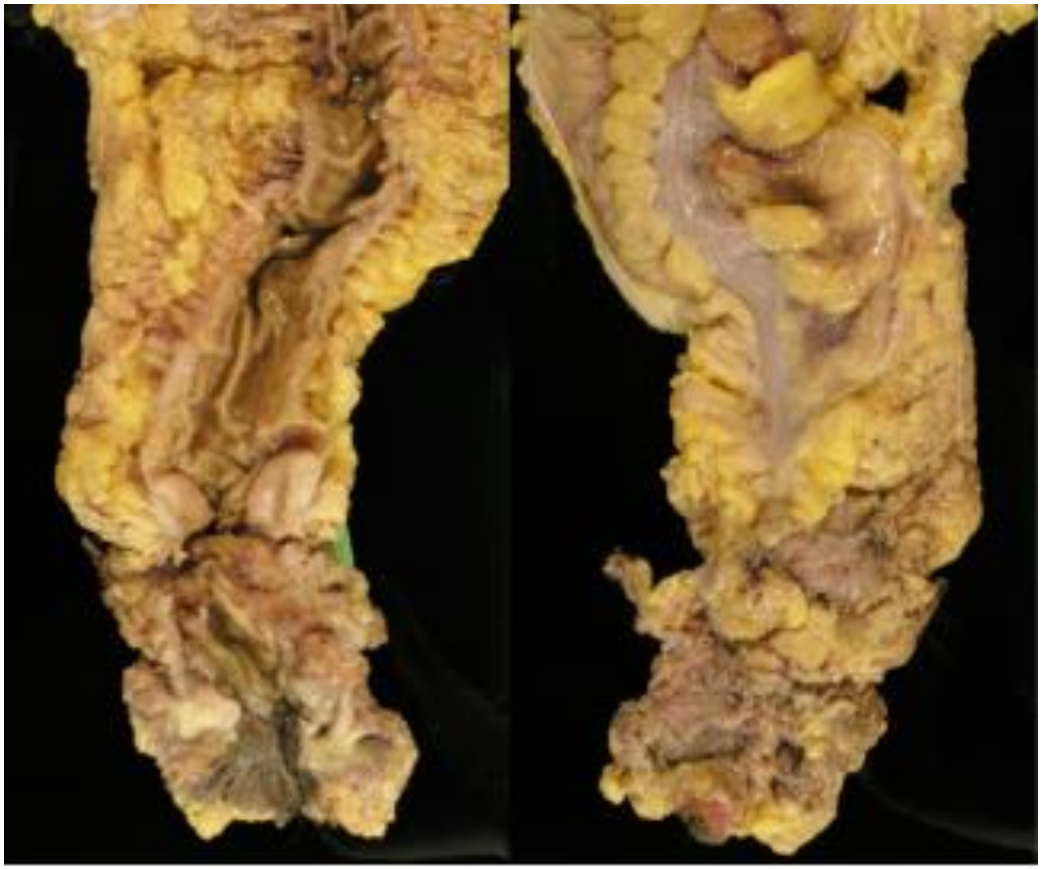
- Intact bulky
- smooth surface
- minor irregularities
- No surface defects > 5 mm in depth
- No coning
- (Sectioned) Circumferential margin appears smooth





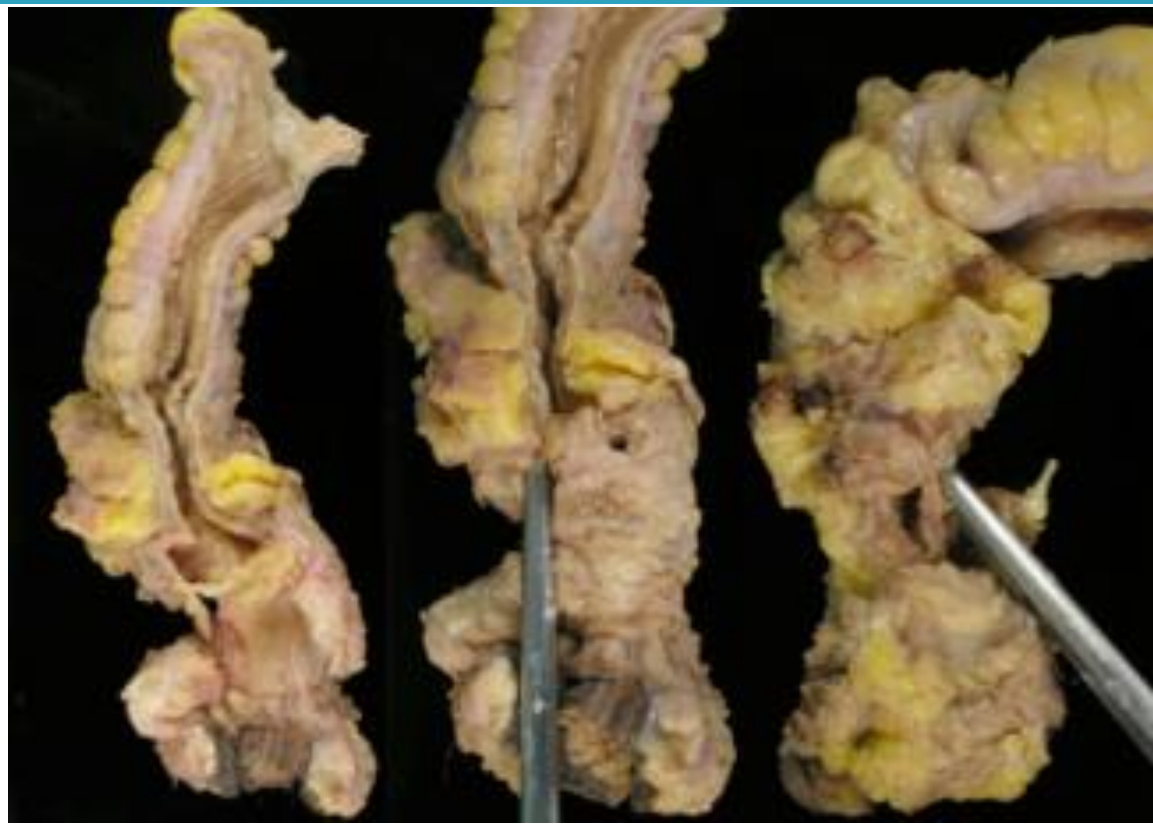
Nearly Complete

- Moderate bulk
- surface with defects > 5 mm, but not to muscularis propria
- No areas of visibility of the muscularis propria



Incomplete

- Little bulk
- Visible muscularis propria
- (Sectioned) Circumferential margin appears very irregular



Anastomotic recurrence

- **Assign organ to proximal segment of anastomosis**
  - Unless in colo/rectal CA that the proximal segment is small intestine

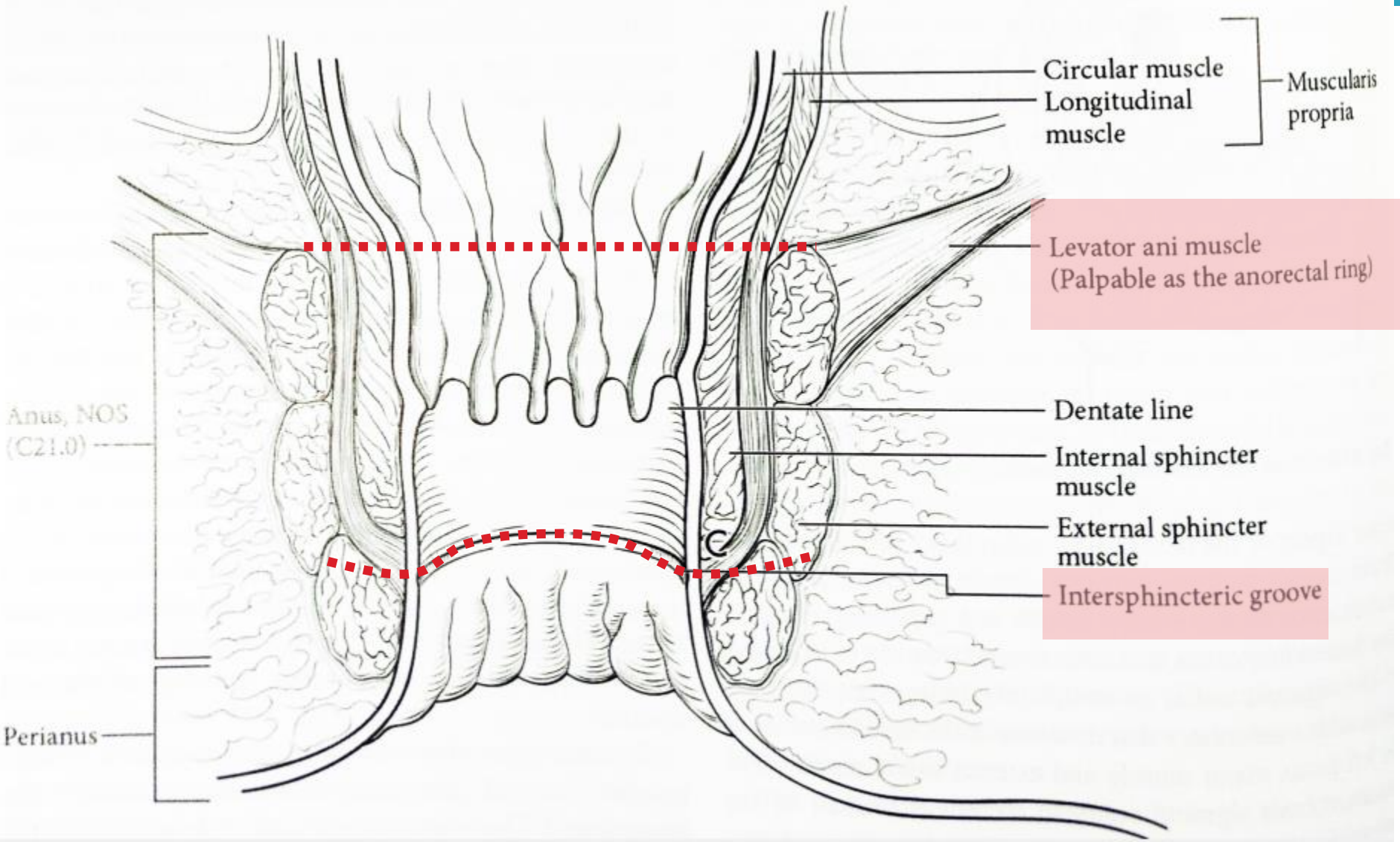
Anus

- Define landmark between **anal** and **perianal**

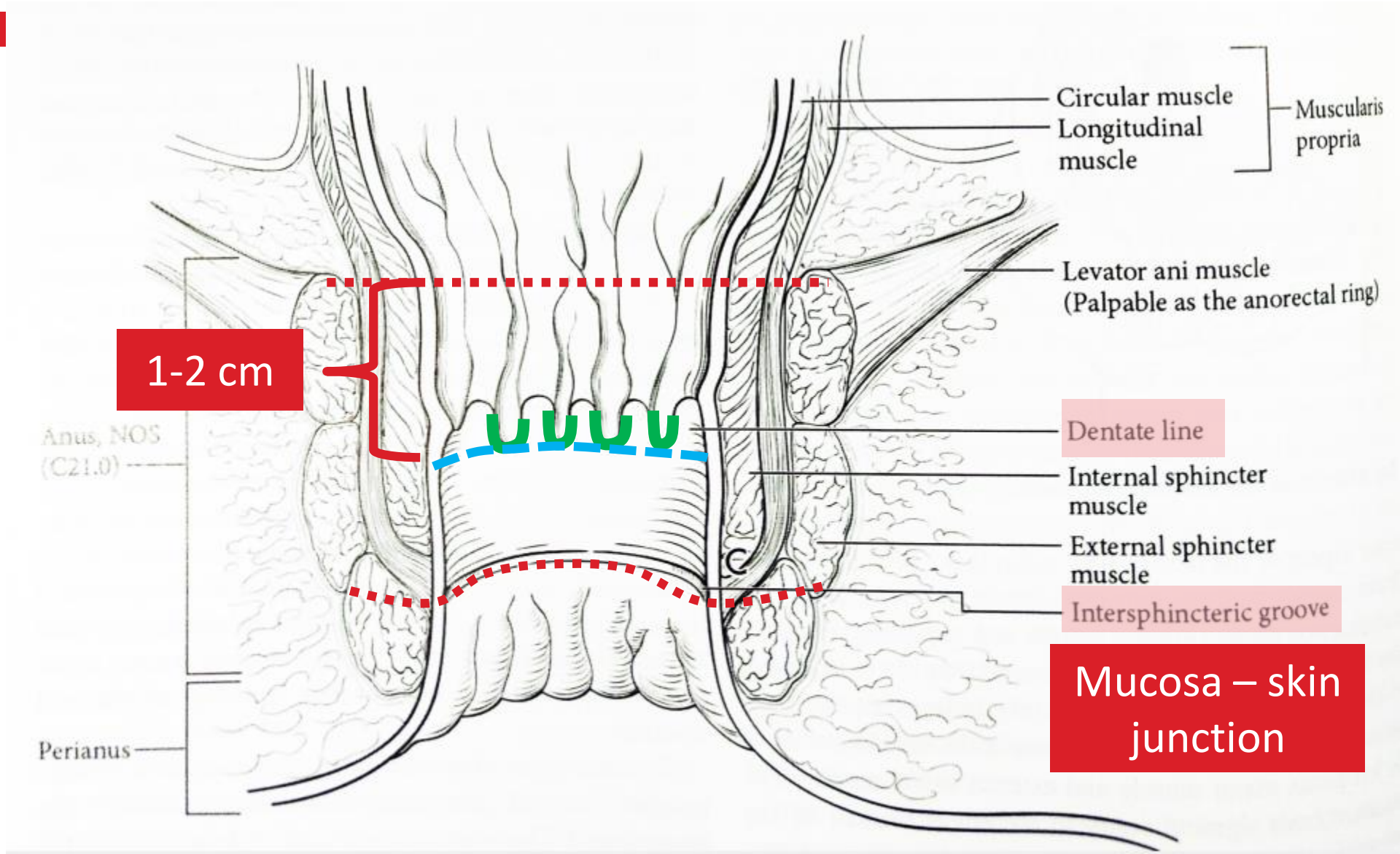
Anal canal

- Proximal
  - Anorectal ring (PR)
  - Puborectalis (part of levator ani muscle)
- Distal
  - Interspinchteric groove (PR)
  - Outmost border of internal spincter muscle (PR)
  - Junction between squamous mucosa and perianal skin

Definition

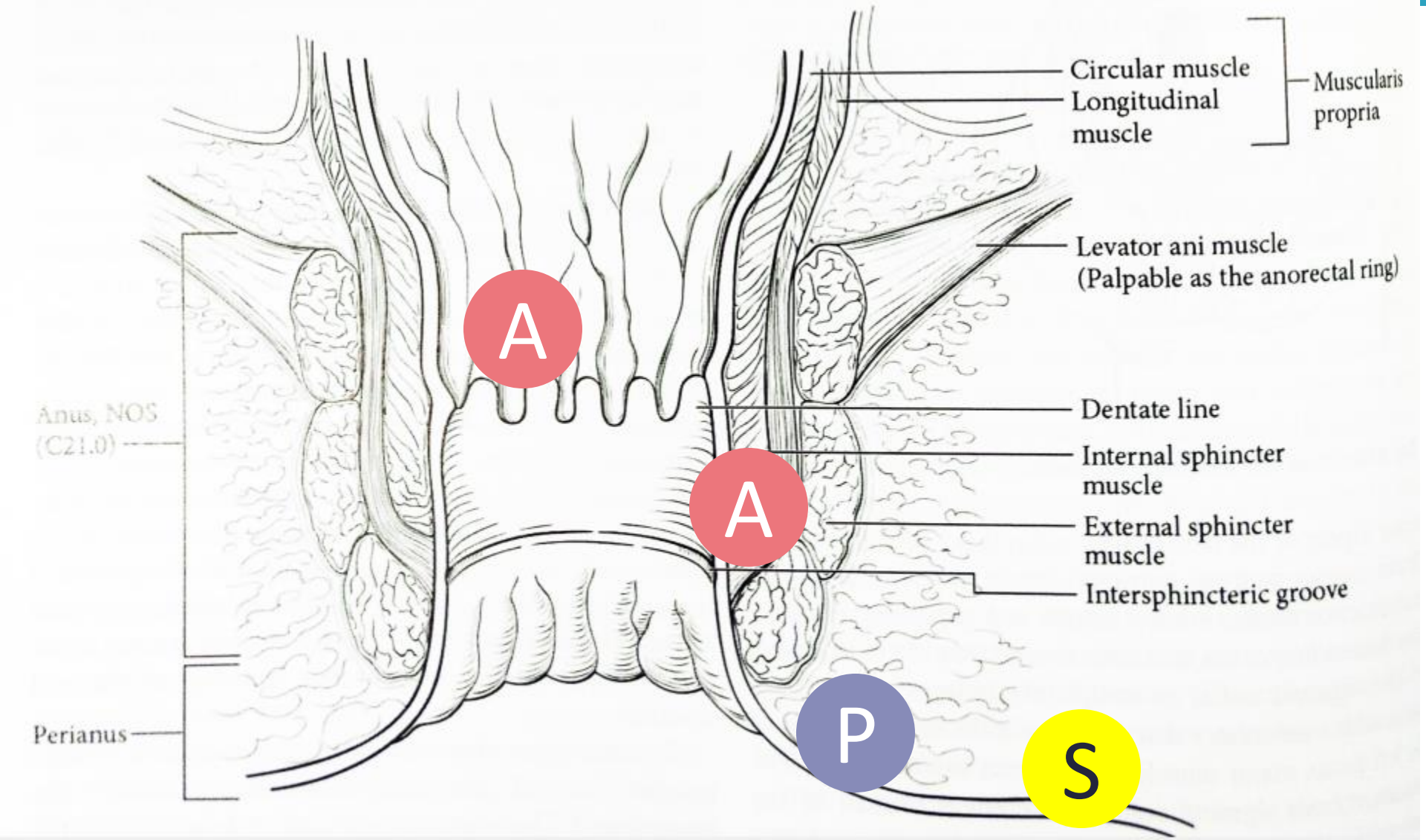

Circular muscle
Longitudinal muscle
Muscularis propria
Levator ani muscle
(Palpable as the anorectal ring)
Dentate line
Internal sphincter muscle
External sphincter muscle
Intersphincteric groove
Anus, NOS
(C21.0)
Perianus

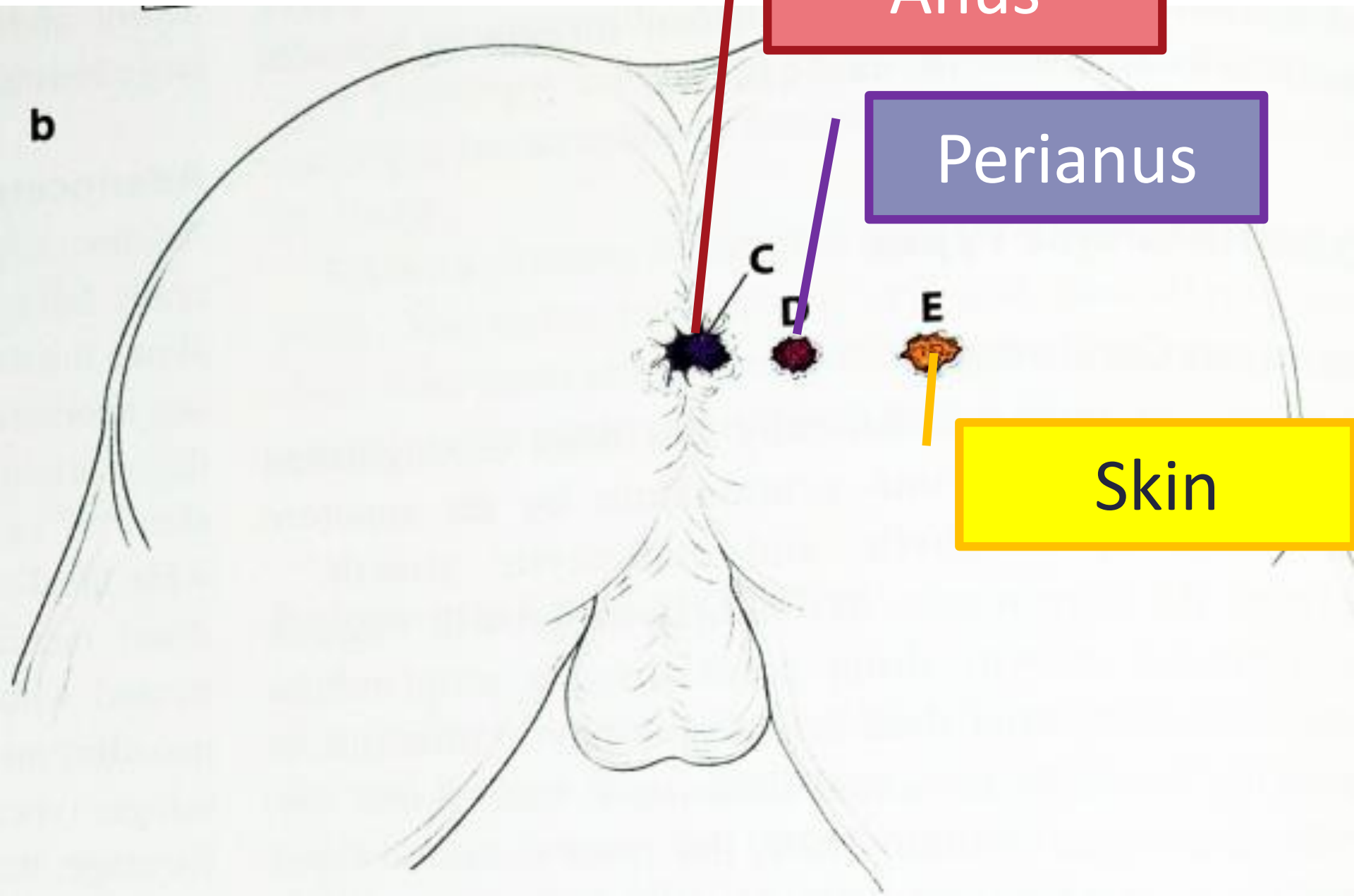
Gross examination



Anal – Perianal – Skin CA

- Anal = มองเห็นได้แต่ไม่หมดโดยการ gentle traction
- Perianal = มองเห็นได้หมดโดยการ gentle traction + <5 cm from anus
- Skin cancer = >5 cm from anus


Circular muscle
Longitudinal muscle
Muscularis propria
Levator ani muscle
(Palpable as the anorectal ring)
A
Anus, NOS
(C21.0)
Dentate line
Internal sphincter muscle
A
External sphincter muscle
Intersphincteric groove
Perianus
P
S


b
C
D
E
Anus
Perianus
Skin

- Define **vulvar** and **perianal**

- Vulva tumor
  - **Clearly arise from perianal** but extend elsewhere
- Perianal tumor
  - **Clearly arise from perianal** but extend elsewhere
- Perineum tumor
  - **Predominantly involve perinuem**
  - Categorized on clinician clinical's impression
  - **Perineum favor vulva**
  - **Perineum favor perianus**

Pancreas

- ขนาดของ tumor (T stage) ระยะ T1 โดนแยกย่อยเป็น T1a, T1b และ T1c
- เนื่องจากพบว่า tumor ขนาดเล็กมากๆ “minimally invasive tumor” มีพยากรณ์โรคที่ดีกว่า
- **Same cut-off point, but subclassification**

AJCC7	
T1	Limited to pancreas, Tumor ≤ 2 cm

AJCC8	
T1a	Tumor ≤ 0.5 cm
T1b	Tumor >0.5 but <1 cm
T1c	Tumor 1-2 cm

- ขนาดของ tumor ระยะ **T2 and T3** ให้ยึดตาม **size of invasive tumor**; extrapancreatic extension ไม่เอามาคิดแล้ว
- เนื่องจาก extrapancreatic extension ดูได้ยาก และ subjective เพราะไม่มี definite pancreatic capsule
- การแบ่งตามขนาดทำให้ correlate กับ survival rate ได้ดีกว่า

AJCC7	
T2	Tumor limited to pancreas, >2 cm
T3	Tumor extend beyond the pancreas

AJCC8	
T2	Tumor >2 cm and ≤ 4 cm
T3	Tumor > 4 cm

T staging

- **Measuring size of tumor**
  - Gross → Measuring largest diameter in axial plane
    - Axial plane = devide into anterior – posterior part
- Note should be made if there is **pancreatitis → alter the apparent size of the tumor**
  - Fibrosis or desmoplastic?

- ขนาดของ tumor ระยะ **T4** ให้ดูว่ามี **involvement of arteries** หรือไม่ โดย resectability ไม่นำมาคิดแล้ว
- เนื่องจาก resectability มีความ subjective

AJCC7	
T4	Tumor involves celiac axis or superior mesenteric artery (unresectable primary tumor)

AJCC8	
T4	Tumor involves celiac axis, superior mesenteric artery, and/or common hepatic artery, **regardless of size**

- T4 determined by imaging / EUS , NOT by pathological examination
- But should **note relationship of tumor to vessels** if present
  - Degree of circumferential
  - Abutment ≤ 180◦ involvement
  - Encasement >180◦ involvement

- Note relation ship of the tumor to vessels
  - Superior mesenteric and its branches
  - Celiac
  - Splenic
  - Common hepatic
  - Portal vein

Margins

- Bile duct
- Pancreatic parenchymal / pancreatic duct
- **Uncinate / superior mesenteric artery margin**
- Proximal (duodenum / gastric)
- Distal duodenal
- Surface ต่างๆ (anterior, posterior, vascular groove) ไม่รวมใน CAP – AJCC แต่อาจมีผลต่อ prognosis → ควร record

Uncinate margin

- Posterior to uncinate proces, inferior to pancreatic head
- Not peritonealized → true surgical margin
- Lies over superiormesenteric vessel
- Need to preserve vessel -> limited dissection, might be closest to this margin
- Critical in all cases
- Most local recurrence

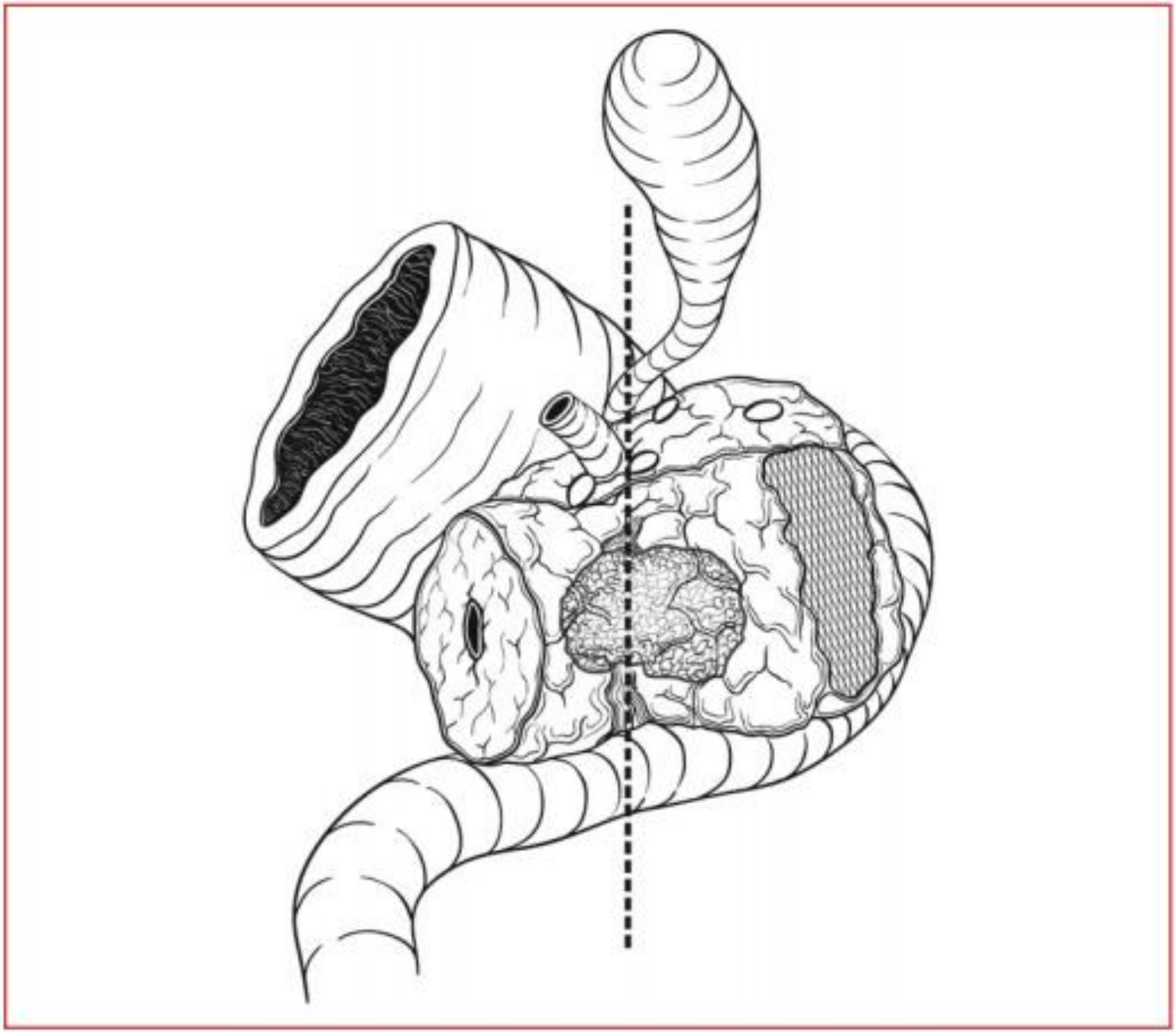


FIGURE 24.4. *Posterior view of pancreatic head with dotted line indicating the location of the confluence of the portal and superior mesenteric veins. The hatched area shows the uncinate process margin.*

- Most local recurrence
- Ink with different color to distinguish from other margin – cut perpendicular to this margin
- Record closest distance from tumor
  - <1 mm = positive
- Record gross and microscopic
  - R0 = negative
  - R1 = grossly negative, microscopic positive
  - R3 = grossly positive

Lymph nodes

- Node involvement (either by direct invasion / metas) is unfavorable → important to **identify as much nodes as possible**
- At least **12 nodes** for accurate stage
- **Anatomic division of reginal LN is not necessary**
  - But should be seperately submitted + report as labeled if devide by surgeon

Lymph nodes

- Node suspicious for metastasis
  - >1 cm in short axis
  - Abnormal morphology
    - Rounded, irregular, involved vessels-other structure