

Clinical Anatomy of the Large Intestine

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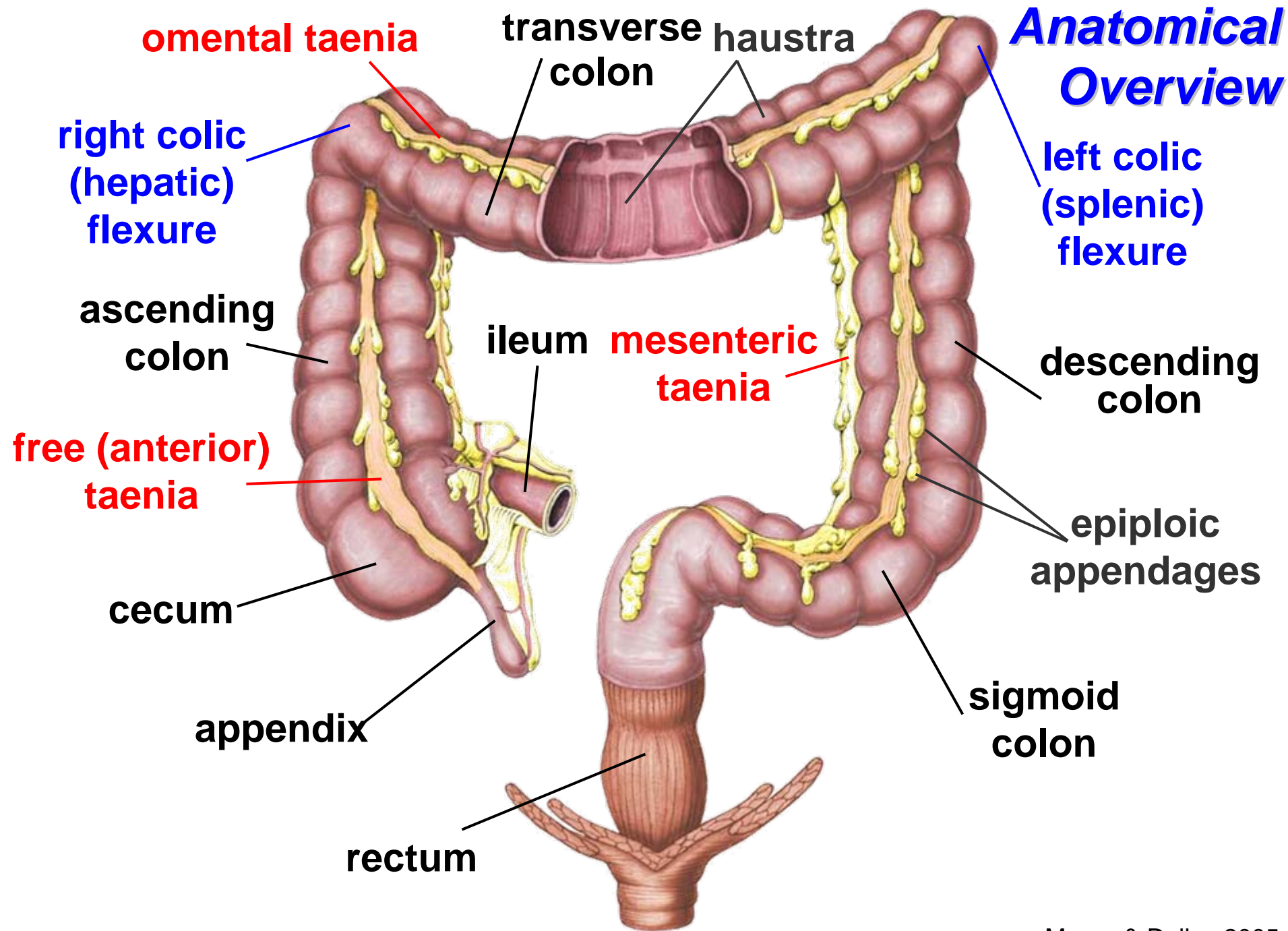
College of Osteopathic Medicine

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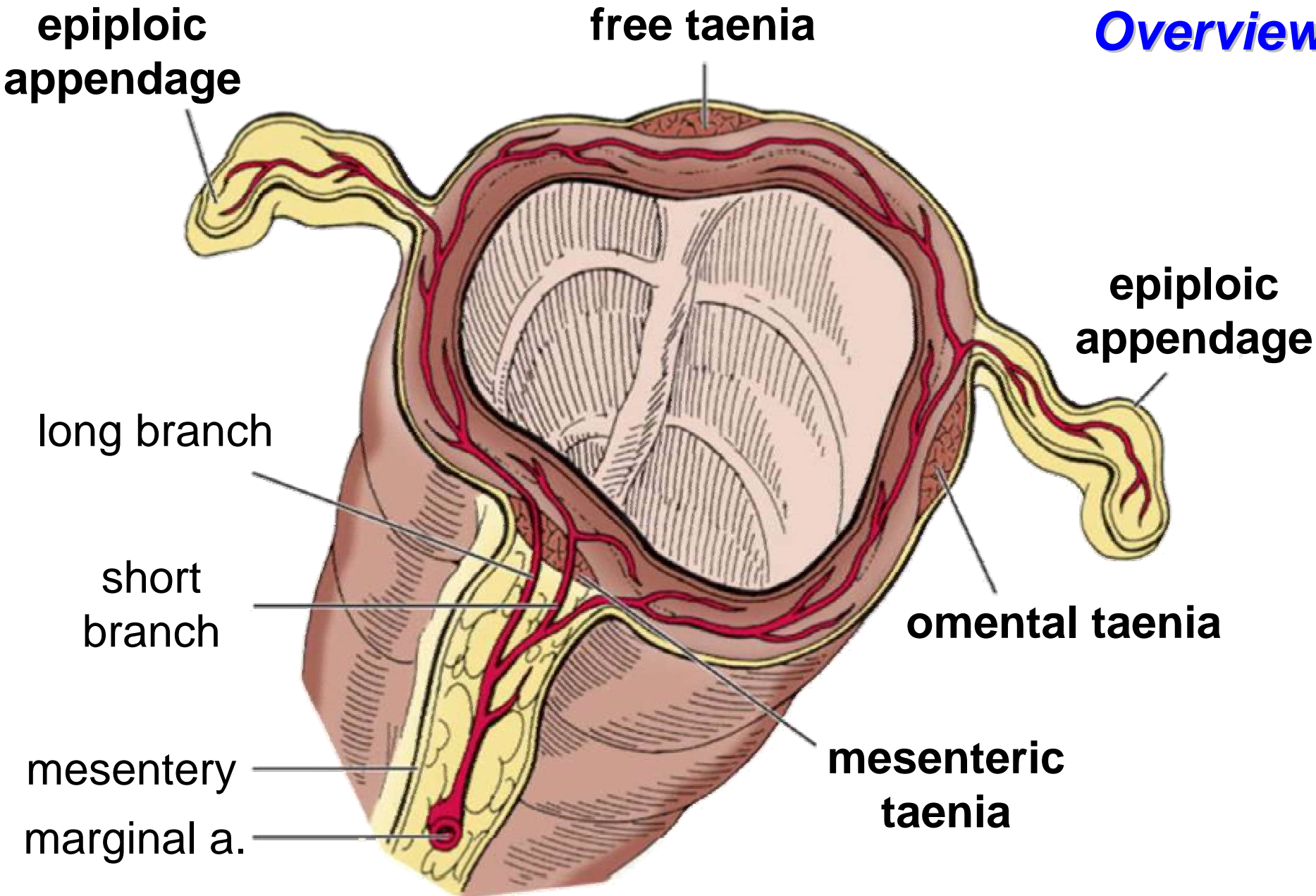
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Anatomical Overview

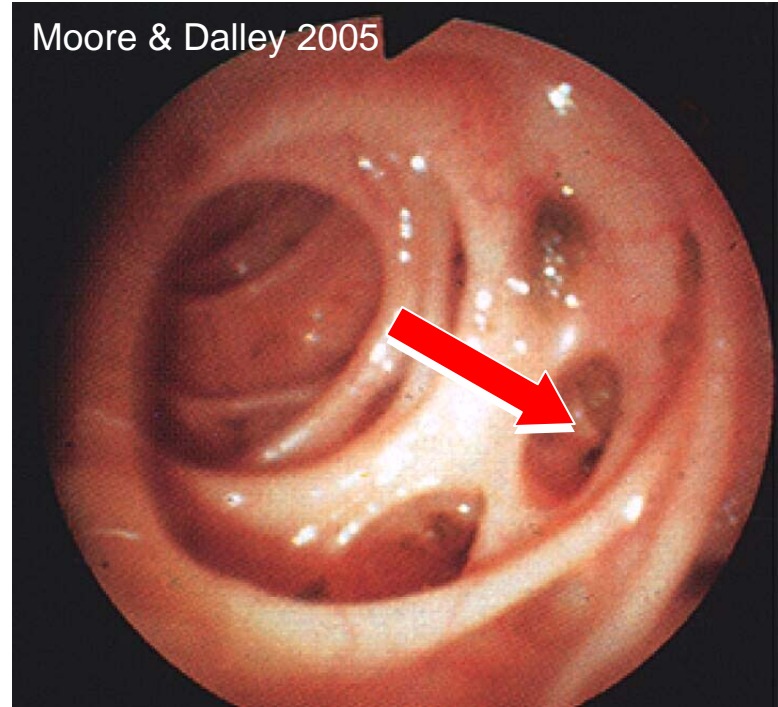
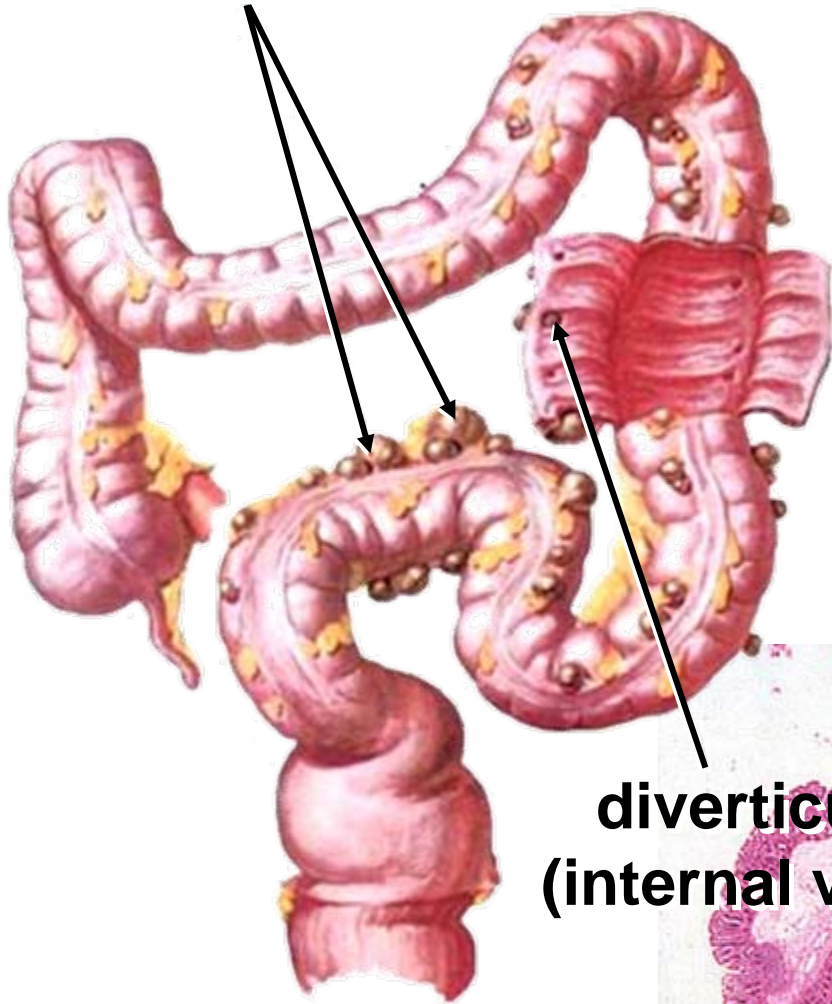


Anatomical Overview

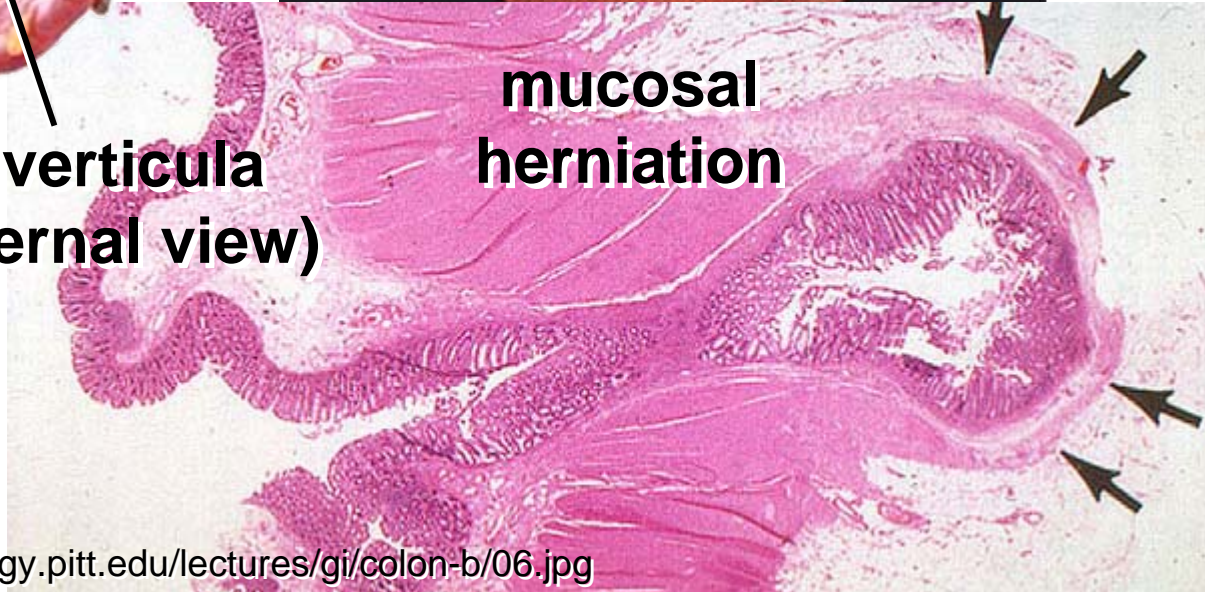


Diverticulosis

**diverticula
(external view)**



**diverticula
(internal view)**



**mucosal
herniation**

[www.bondisalud.com.ar/
1a%20diverticulosis.jpg](http://www.bondisalud.com.ar/1a%20diverticulosis.jpg)

<http://www.pathology.pitt.edu/lectures/gi/colon-b/06.jpg>

Diverticulosis

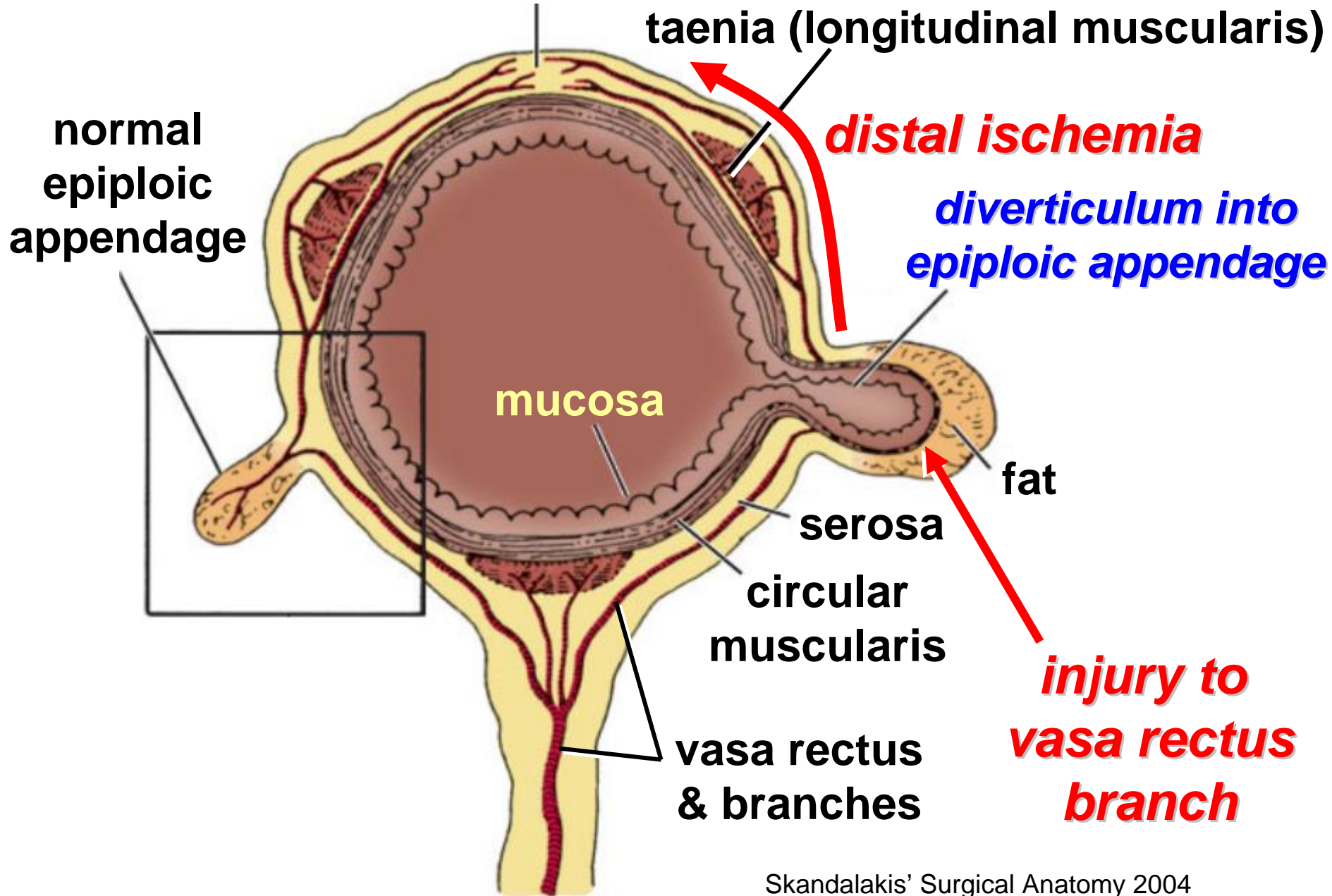
antimesenteric anastomosis

taenia (longitudinal muscularis)

normal
epiploic
appendage

distal ischemia

*diverticulum into
epiploic appendage*



mucosa

fat

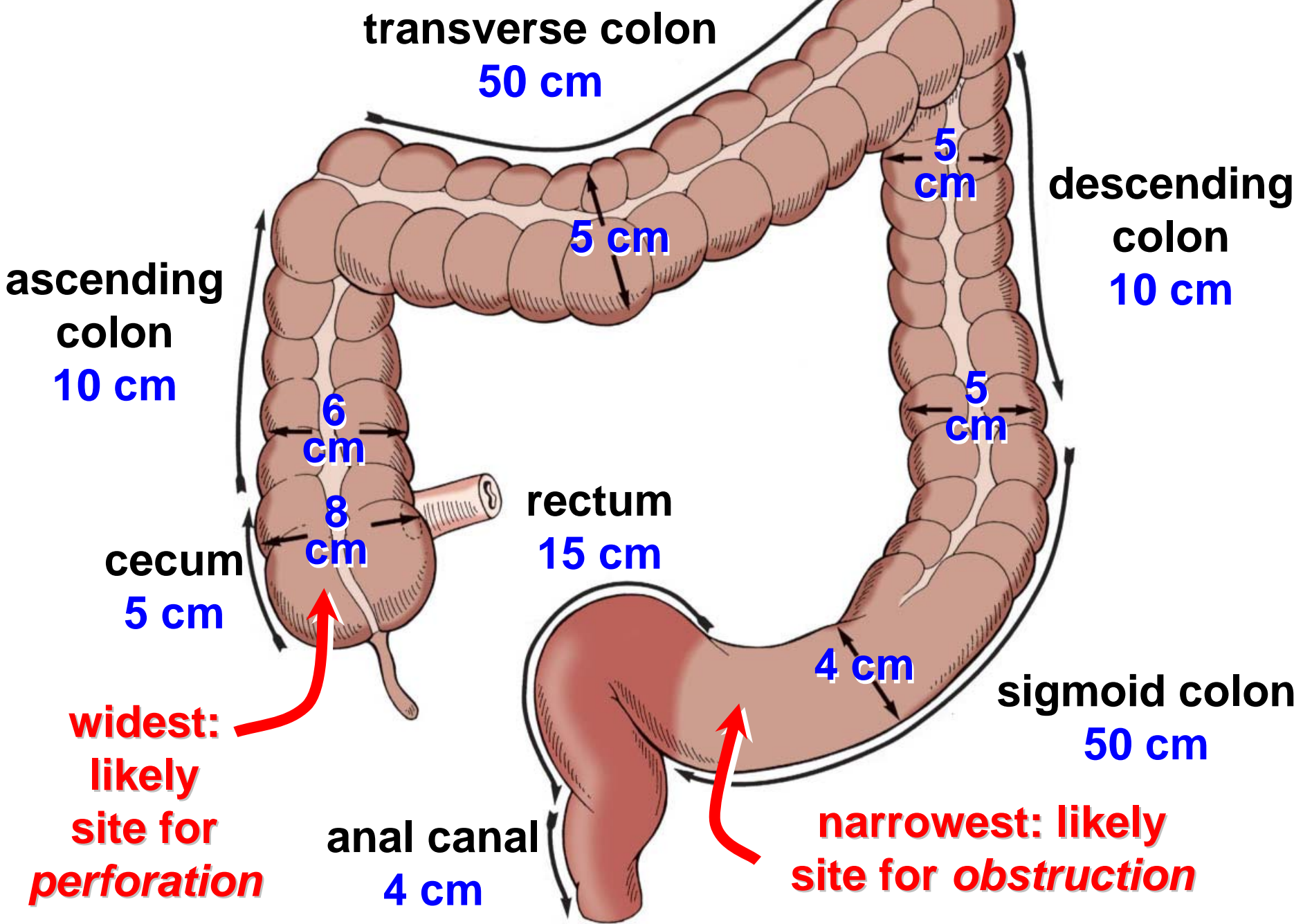
serosa

circular
muscularis

vasa rectus
& branches

*injury to
vasa rectus
branch*

Dimensions



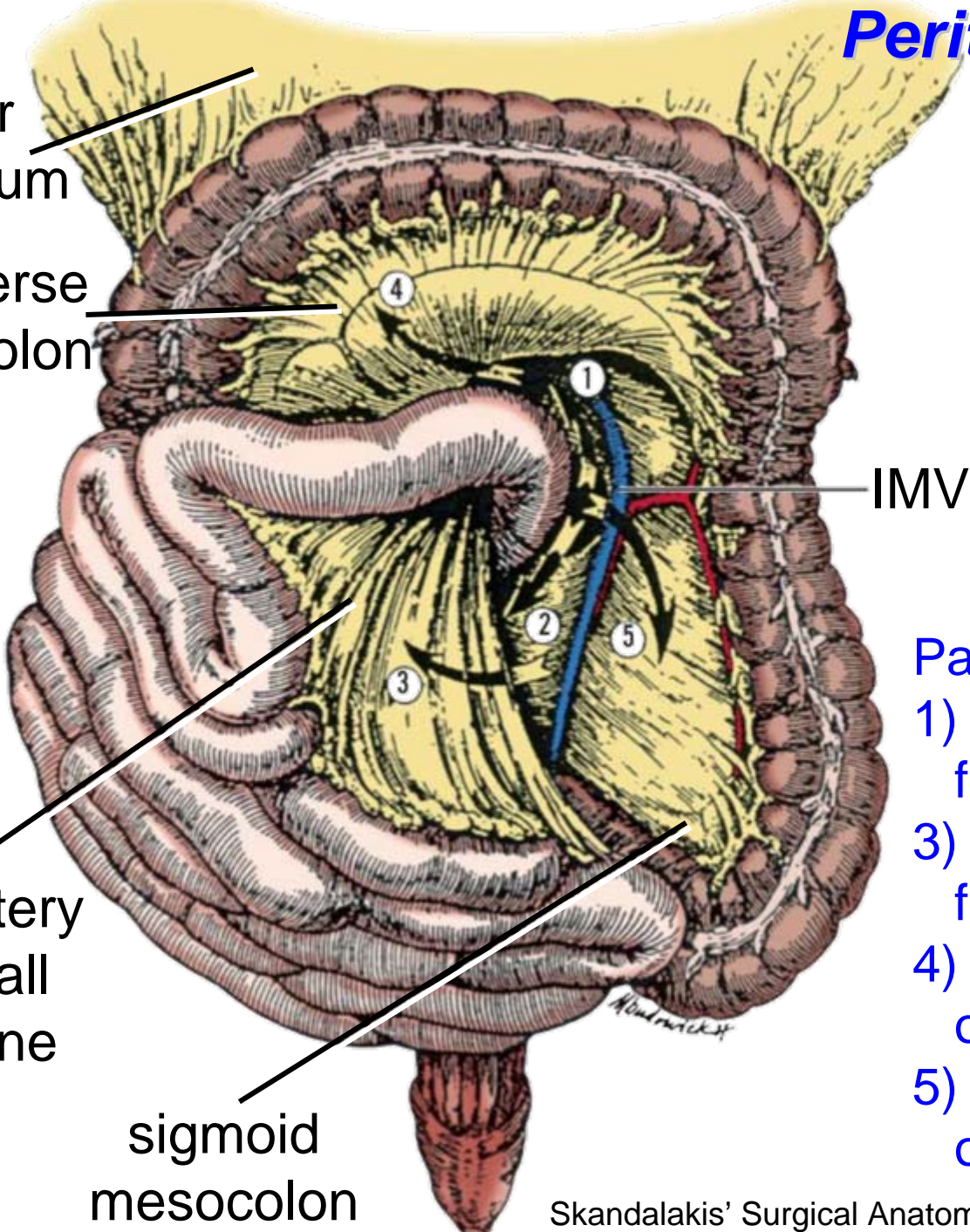
Peritoneal Relations

greater omentum

transverse mesocolon

mesentery of small intestine

sigmoid mesocolon



- **Mobility**
- **Vascularization**
- **Compartments**
- **Volvulus**
- **Internal hernias**
- **many more**

IMV

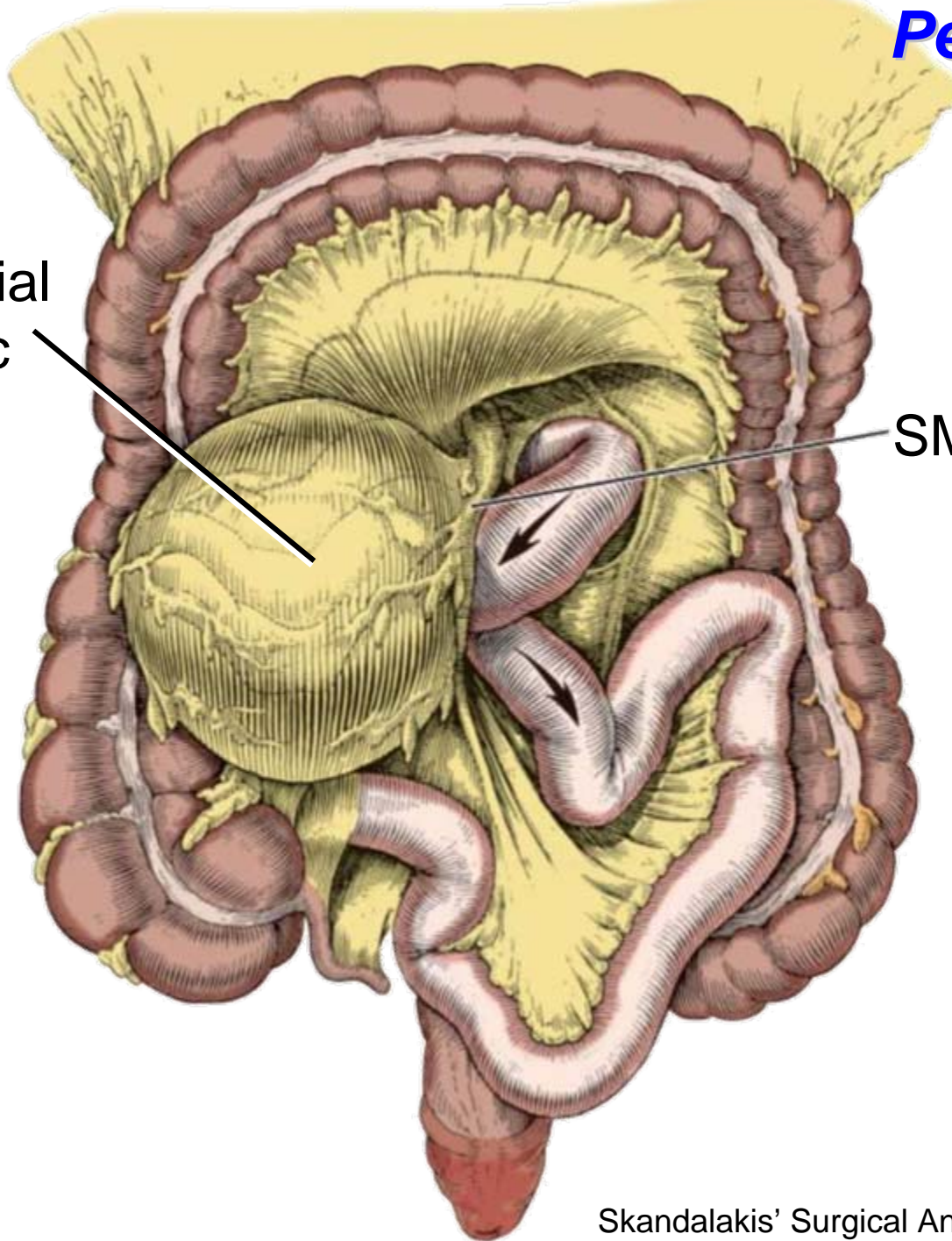
- Paraduodenal fossae:
- 1) Superior & 2) Inferior fossae of Trietz
 - 3) Mesentericoparietal fossa of Waldeyer
 - 4) Intermesocolic fossa of Brooke
 - 5) Paraduodenal fossa of Landzert

Peritoneal Relations

Internal Hernia Right Paraduodenal Hernia

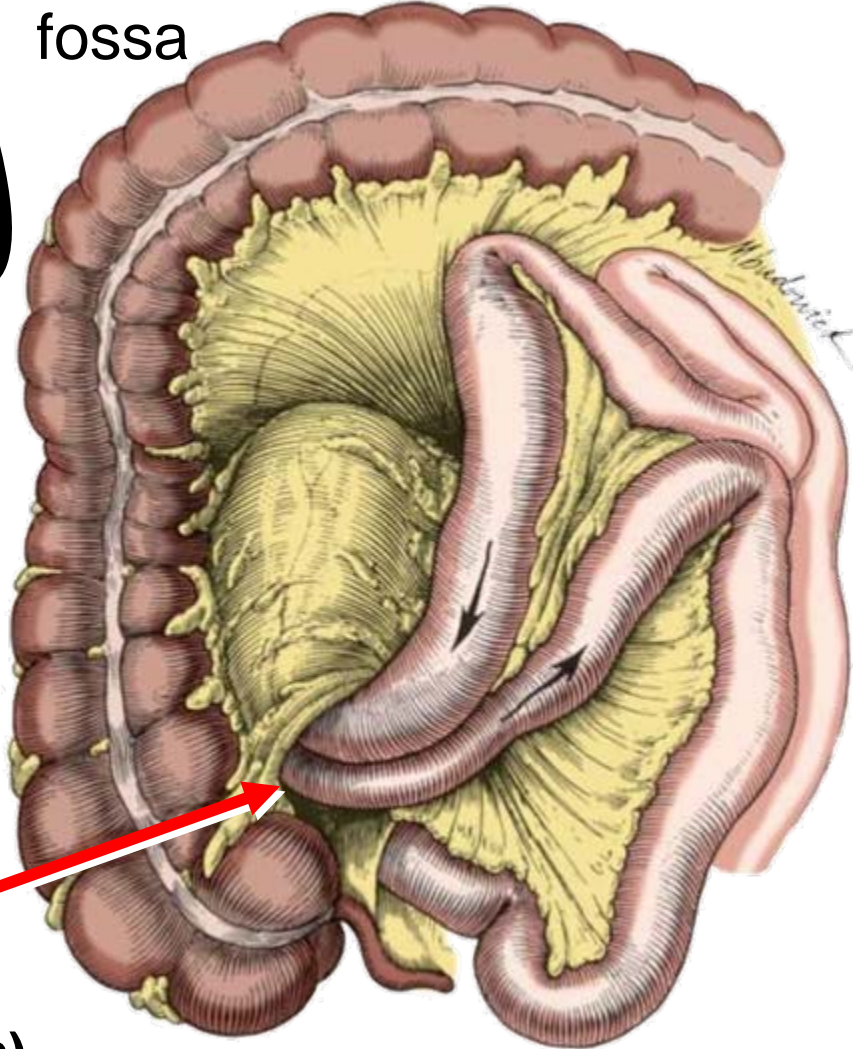
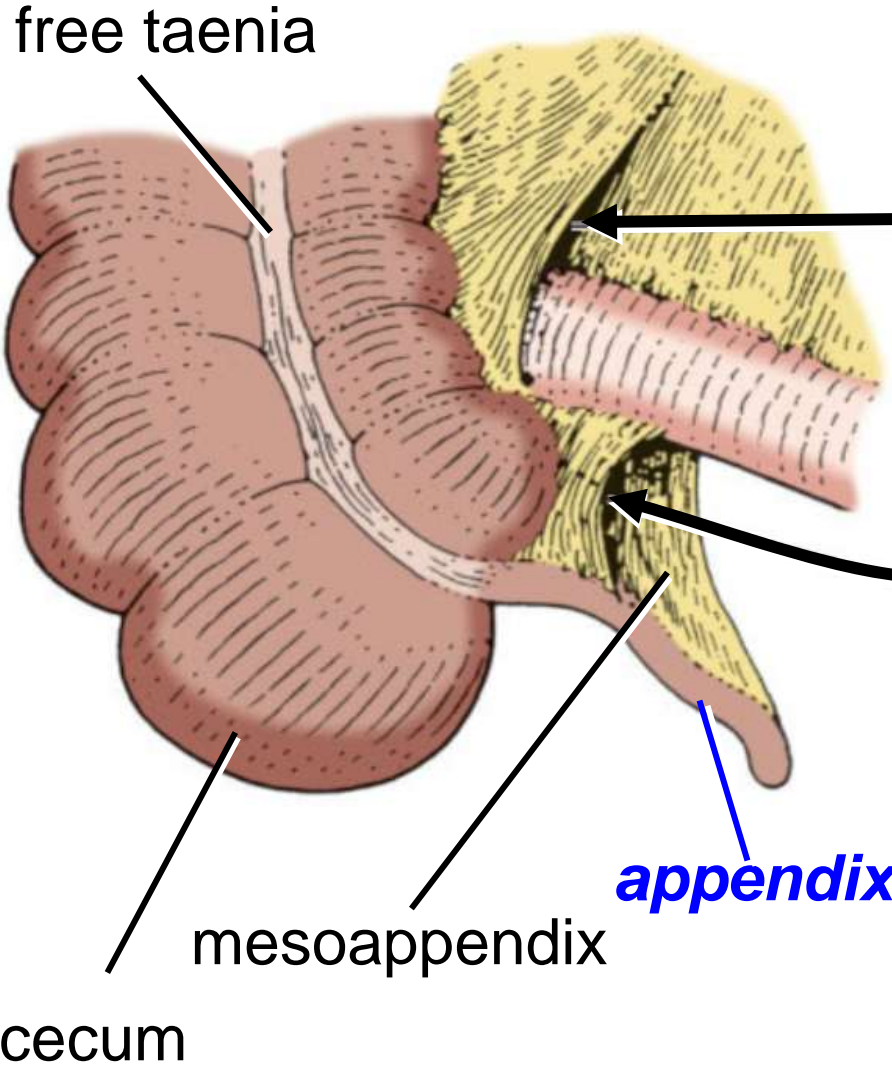
hernial
sac

SMA



- Paraduodenal fossae:
- 1) Superior & 2) Inferior fossae of Trietz
 - 3) Mesentericoparietal fossa of Waldeyer
 - 4) Intermesocolic fossa of Brooke
 - 5) Paraduodenal fossa of Landzert

Peritoneal Relations



**superior ileocecal
internal hernia**

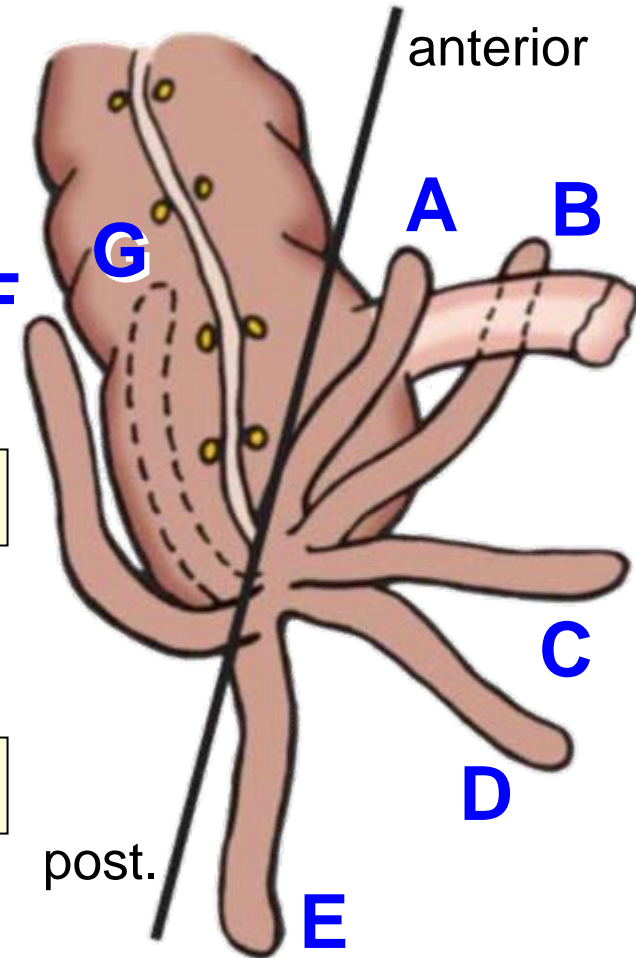
(a pericecal hernia;
6-13% of all internal hernias)

Appendix Position

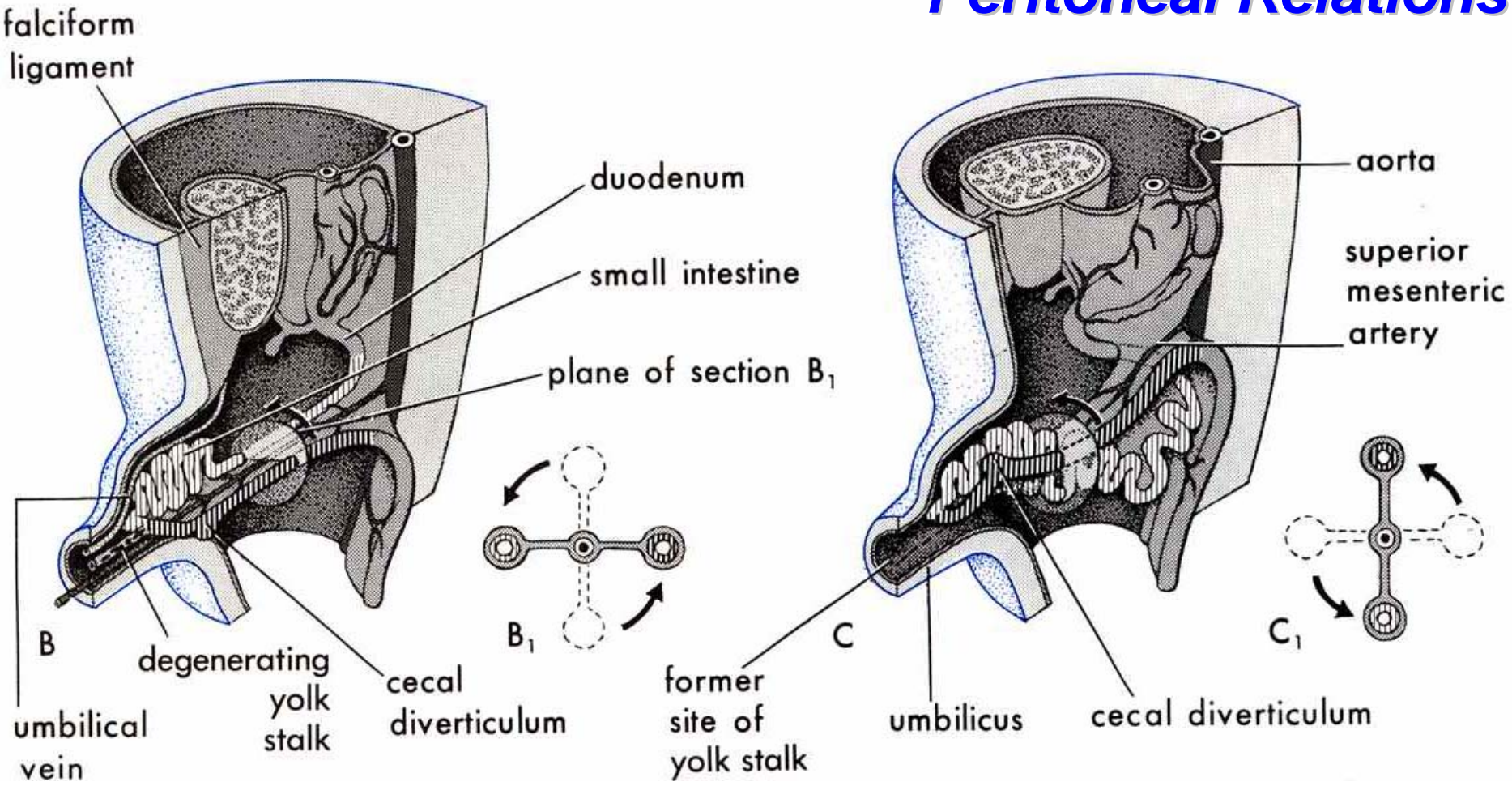
Peritoneal Relations

	Position	Nonapp- endicitis	Appen- dicitis	Total	%
A	Preileal	1	5	6	4
B	Postileal	7	3	10	8
C	Subileal	11	8	19	15
D	Pelvic	14	11	25	19
E	Subcecal	9	5	14	11
F	Paracecal	4	9	13	10
G	Retrocecal	18	24	42	33

data from O'Connor & Reed (1994)

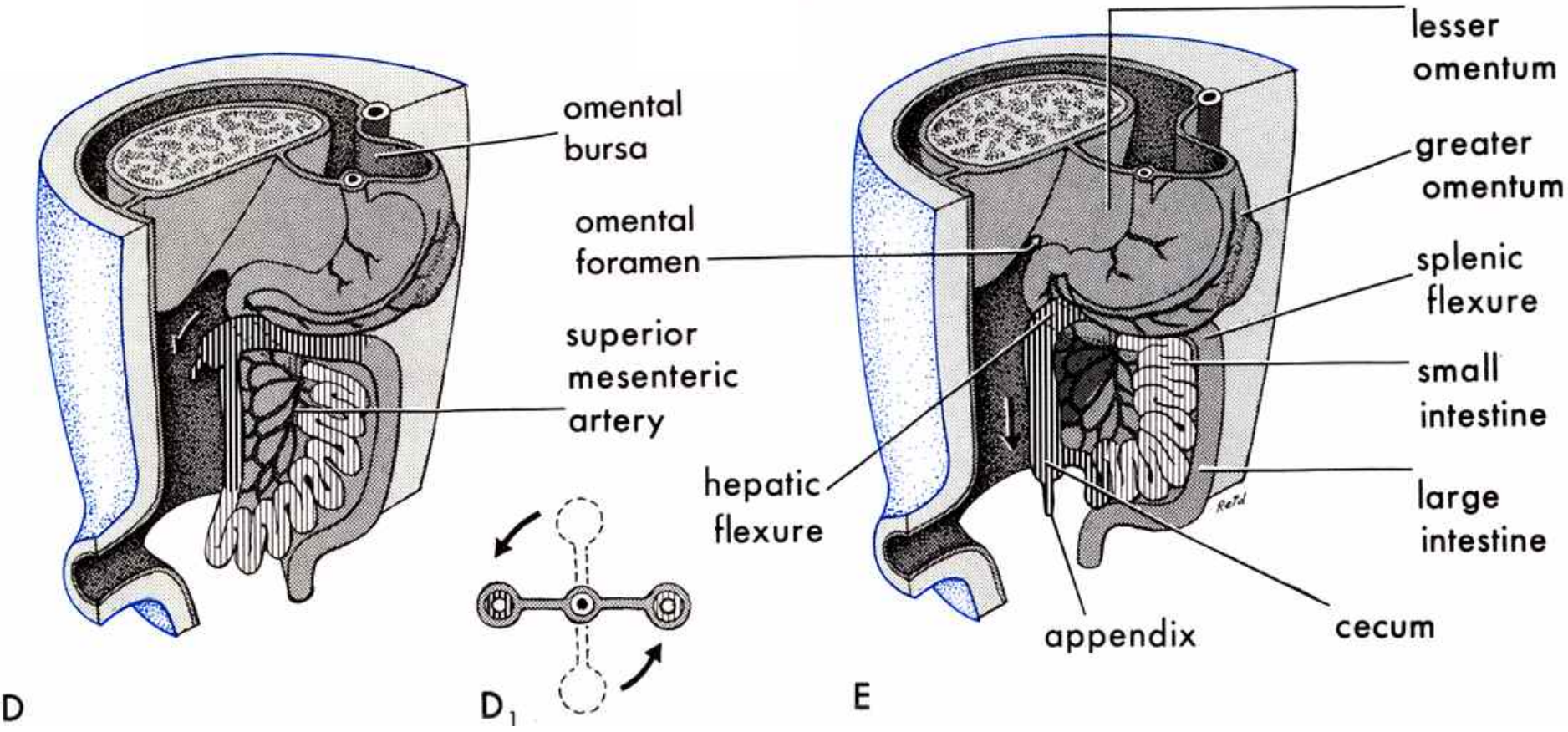


Peritoneal Relations



- Elongation of gut tube
- Herniation into umbilical cord
- Counterclockwise rotations

Peritoneal Relations

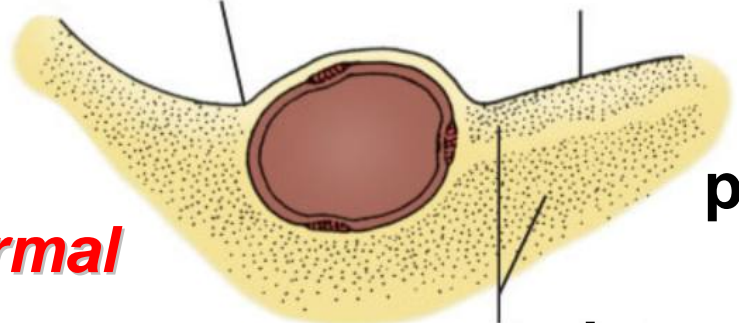


- Retraction & return of gut
- Final counterclockwise rotation
- Descent of cecum
- Fixation to posterior abdominal wall

Peritoneal Relations

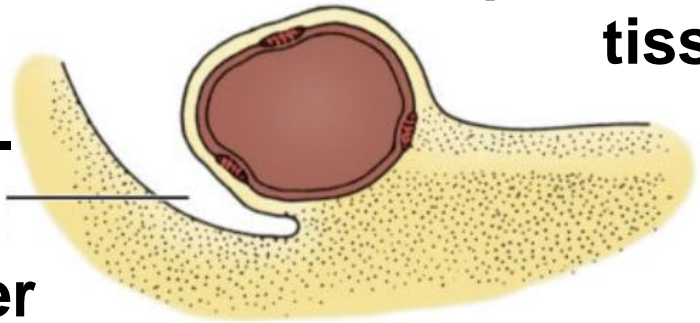
paracolic groove peritoneum

normal



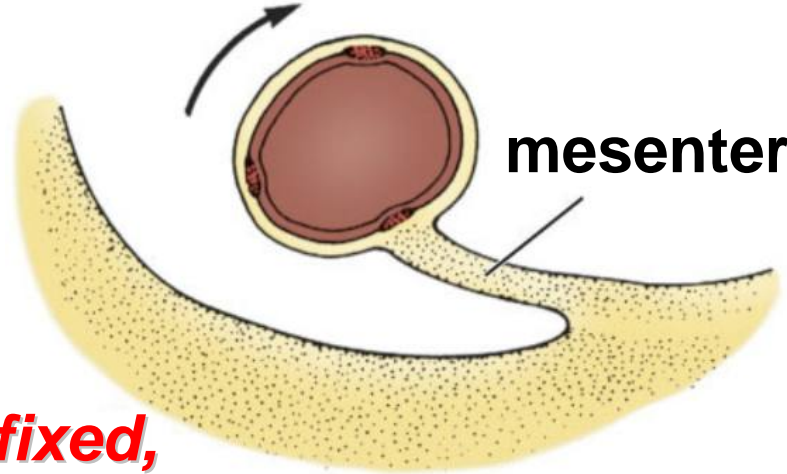
retroperitoneal tissue

para-colic gutter

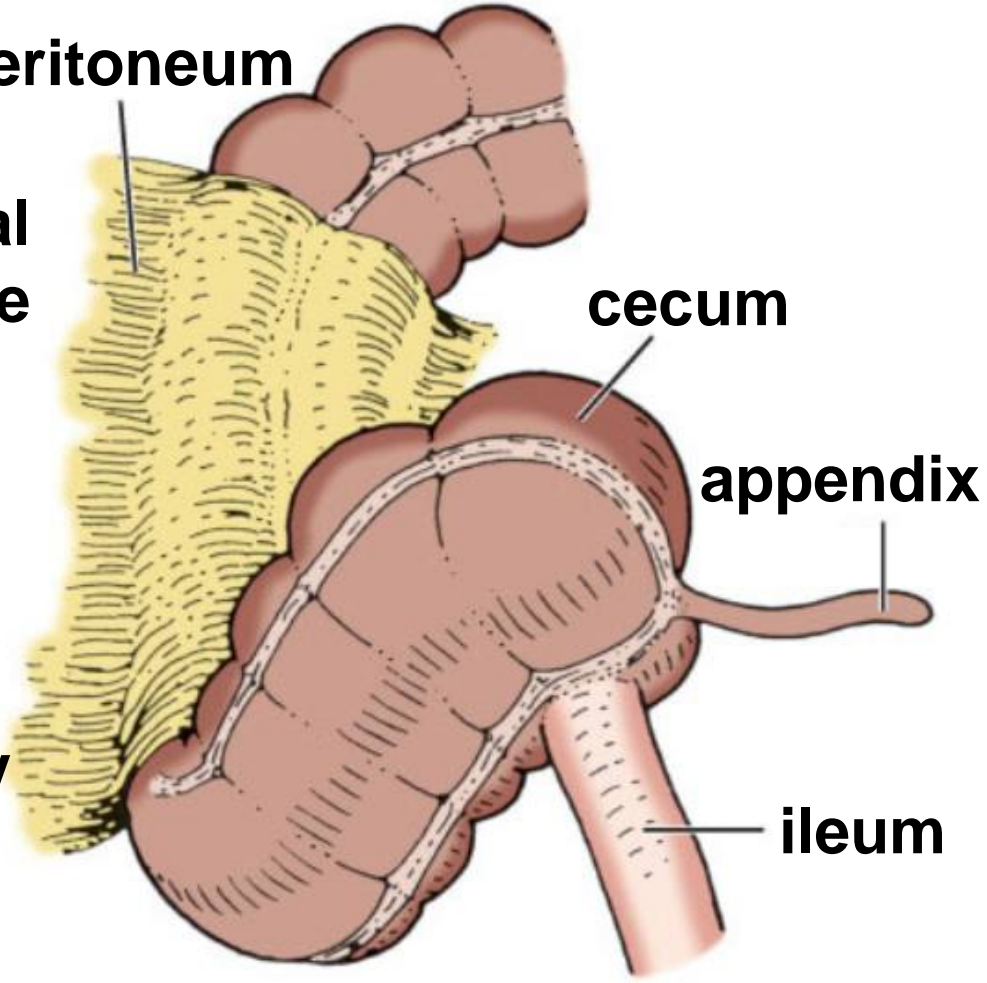


mesentery

unfixed, mobile



peritoneum



cecum

appendix

ileum

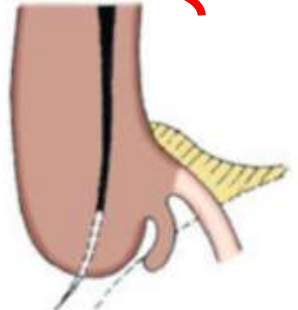
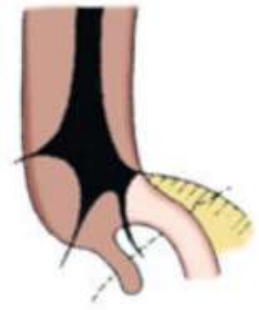
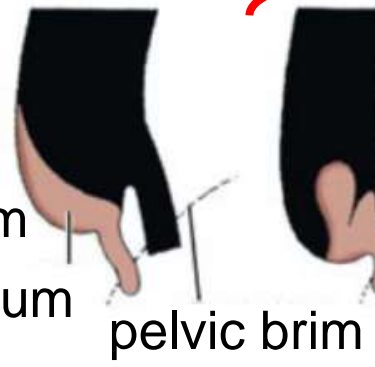
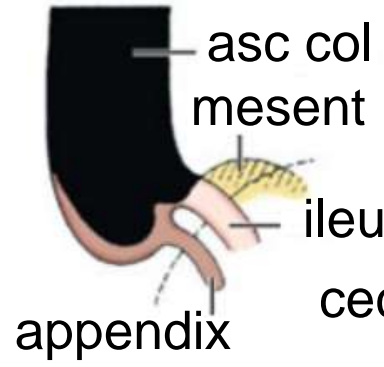
Fixation of cecum

Peritoneal Relations

Type I 11.2%

Ia 8.3%

Type Ib 22.7%

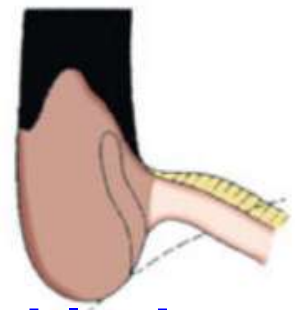
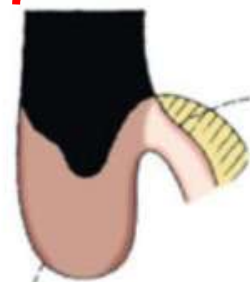
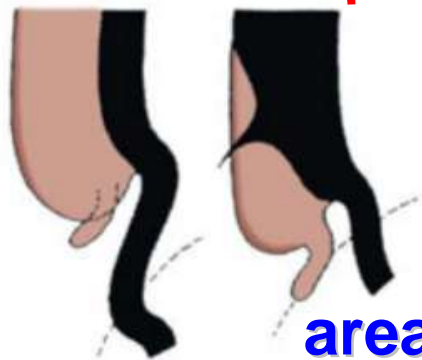
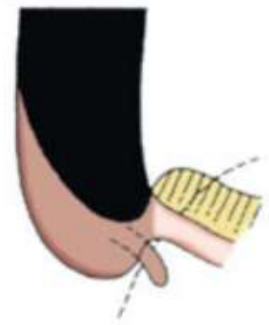


Type II 9.7%

IIa 7.3%

III 11.3%

III 5.7%

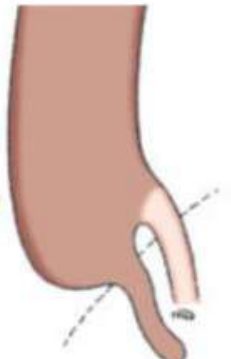
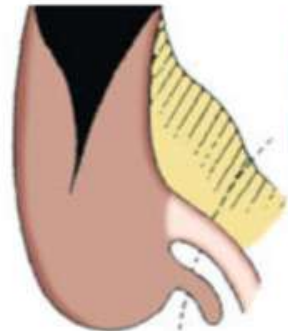
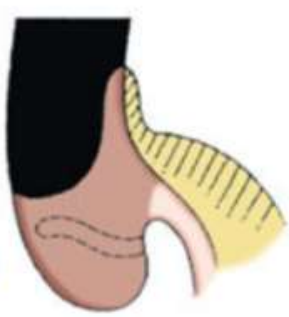
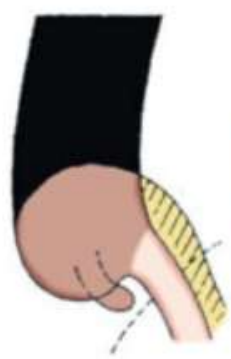


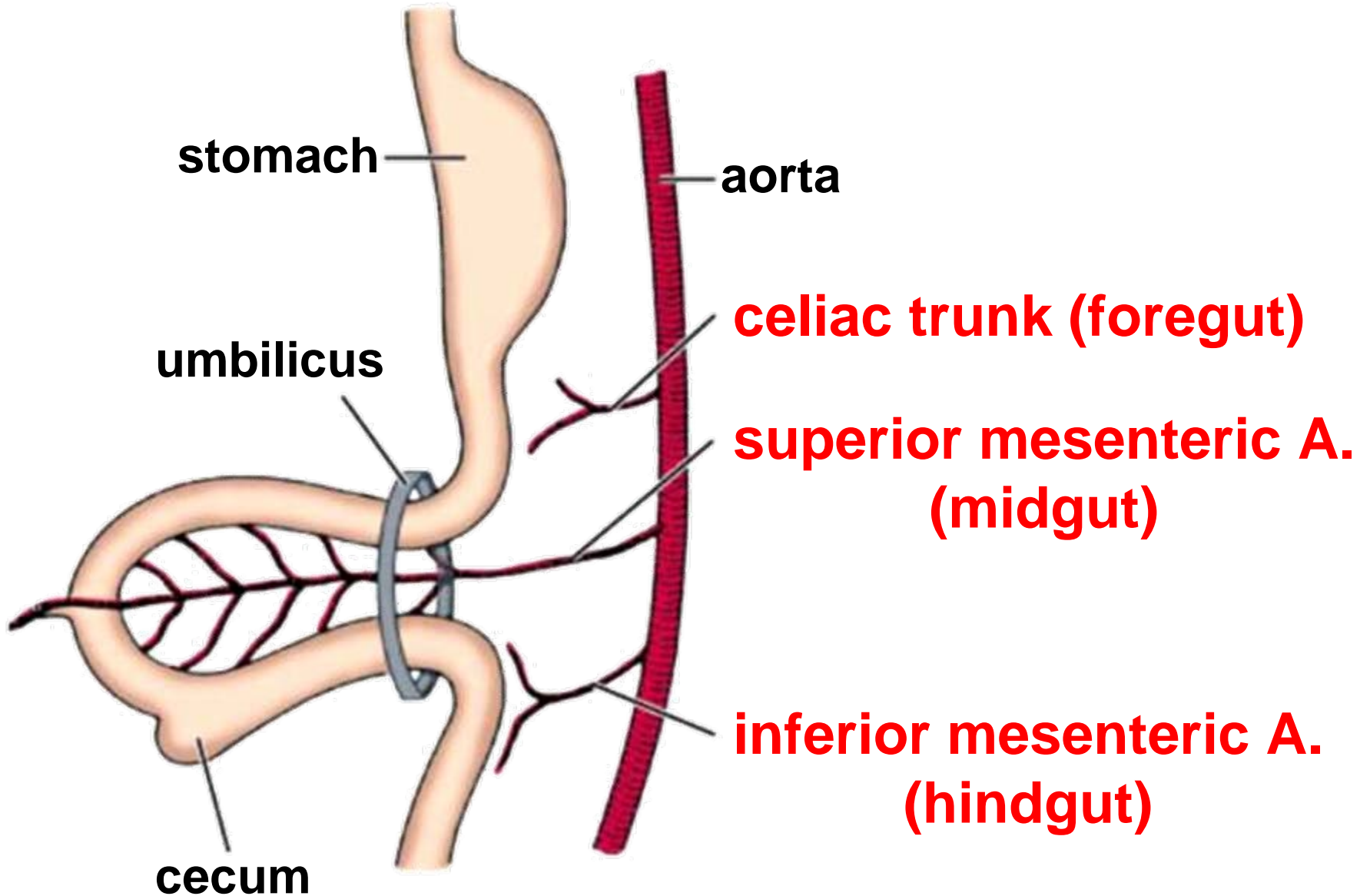
areas of fixation shown in black

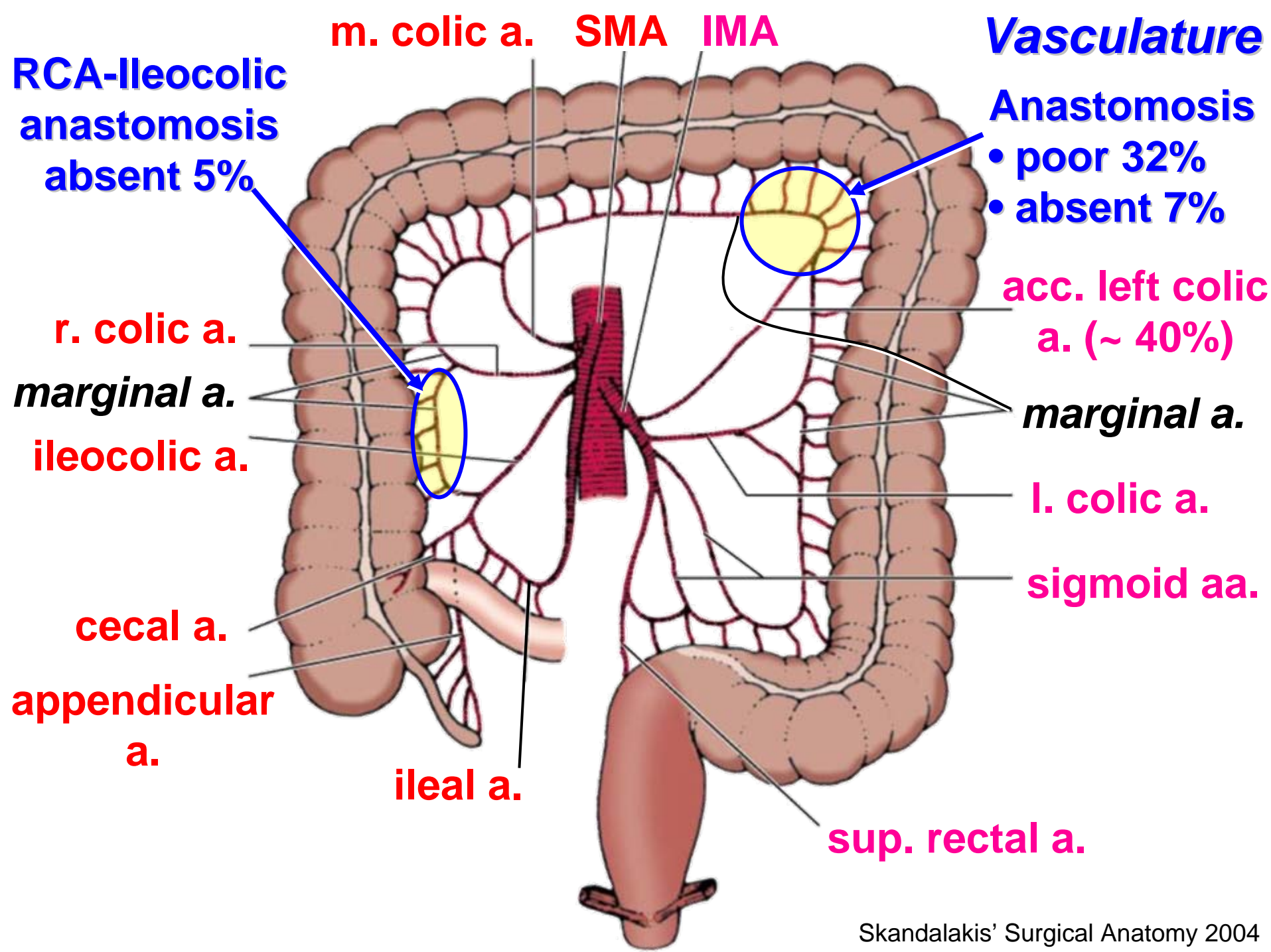
Type IV 17.3%

V 4.7%

VI 2.7%







m. colic a. SMA IMA

Vasculature

RCA-ileocolic anastomosis absent 5%

Anastomosis
 • poor 32%
 • absent 7%

r. colic a.
marginal a.
ileocolic a.

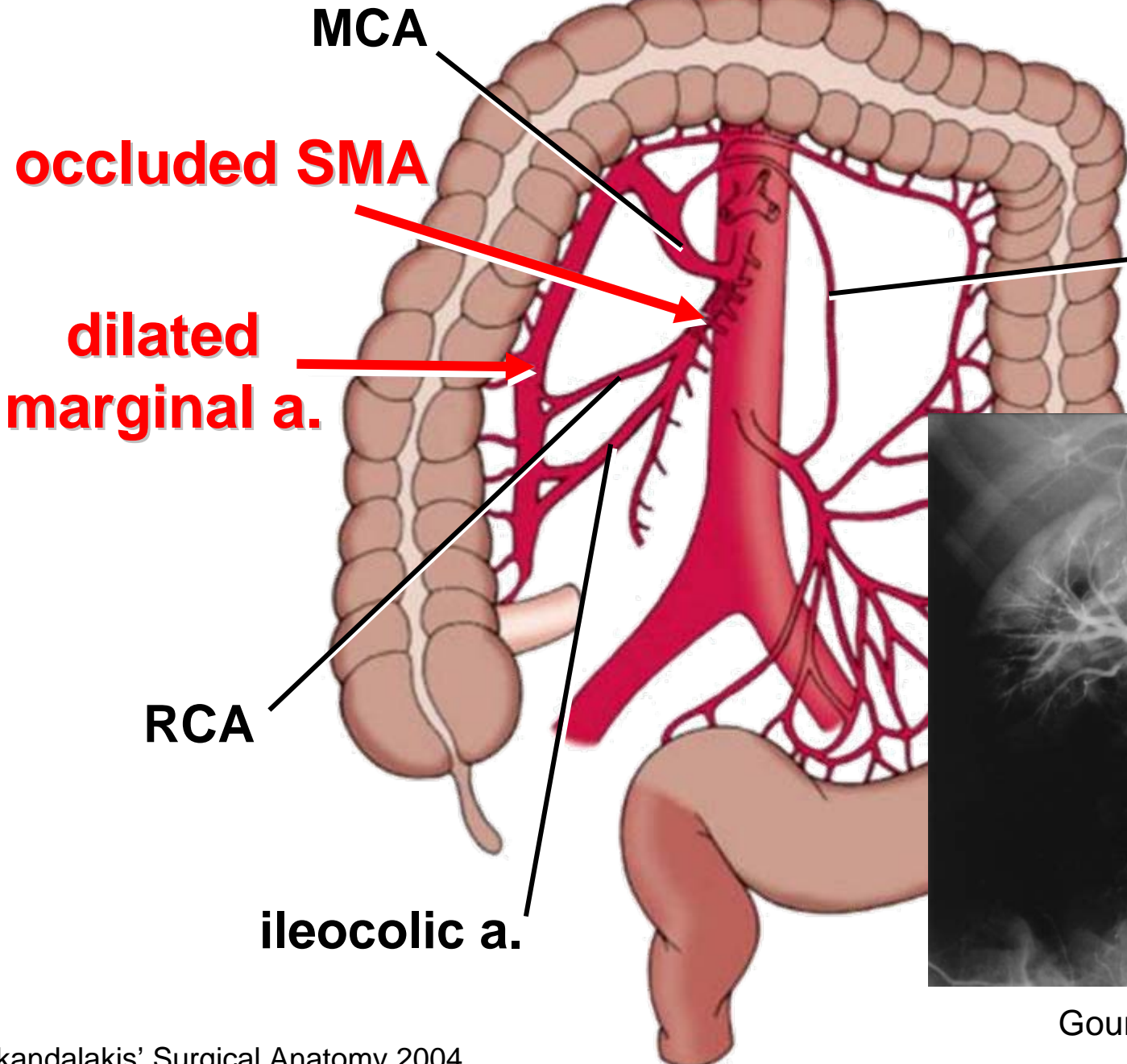
acc. left colic a. (~ 40%)

cecal a.
appendicular a.
ileal a.

marginal a.
l. colic a.
sigmoid aa.

sup. rectal a.

Vasculature



meandering mesenteric a. (arc of Riolan)

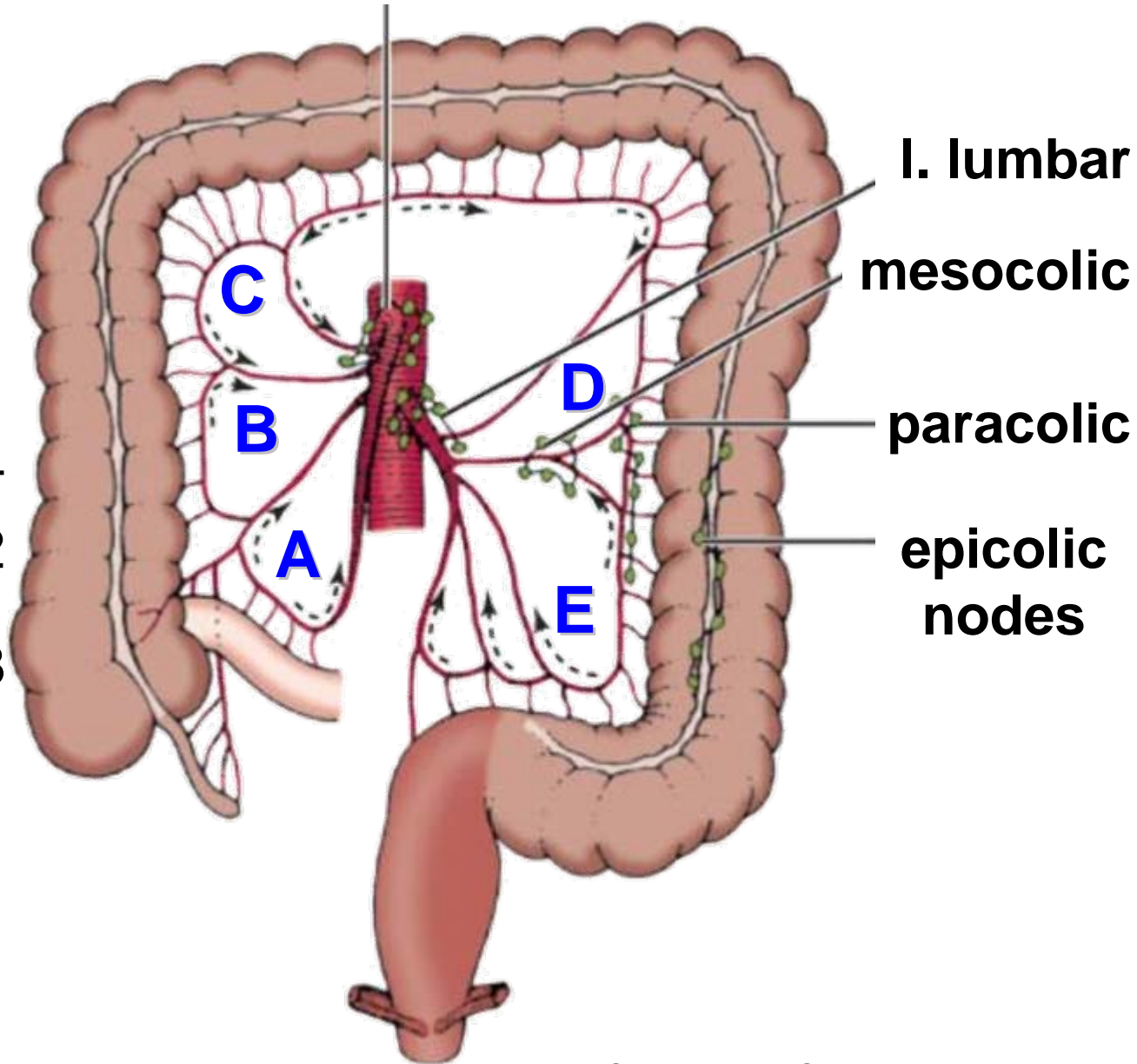


Gourley & Gering 2005

Lymphatic Drainage

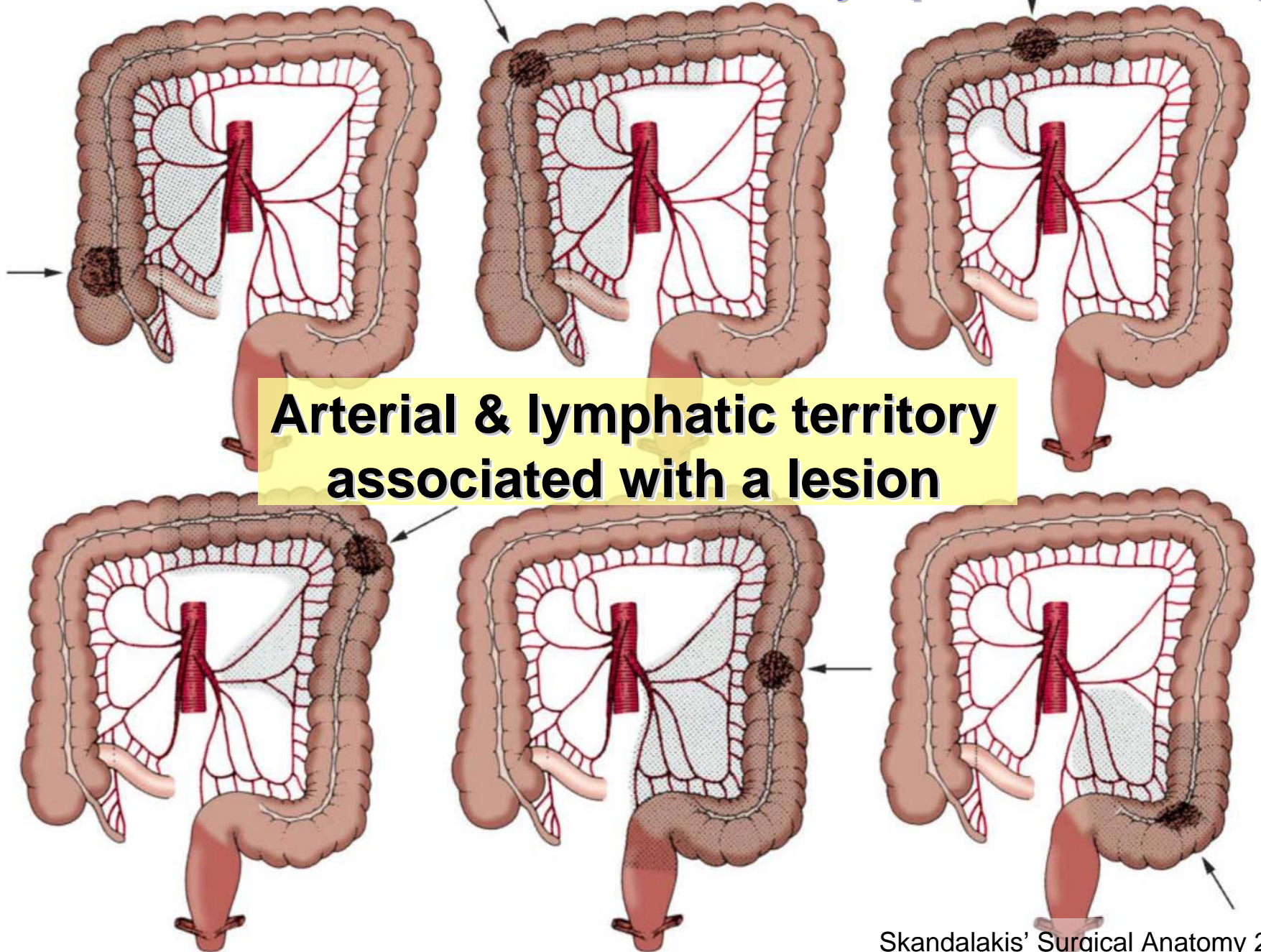
mesenteric nodes

Nodes	N
A Ileocolic	29
B Right colic	11.1
C Midcolic	22.4
D Left colic	25.2
E Sigmoid & rectal	32.8



lesion

Lymphatic Drainage



References

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