

# Non-occlusive mesenteric ischemia (NOT) to be missed

Christiaan Boerma



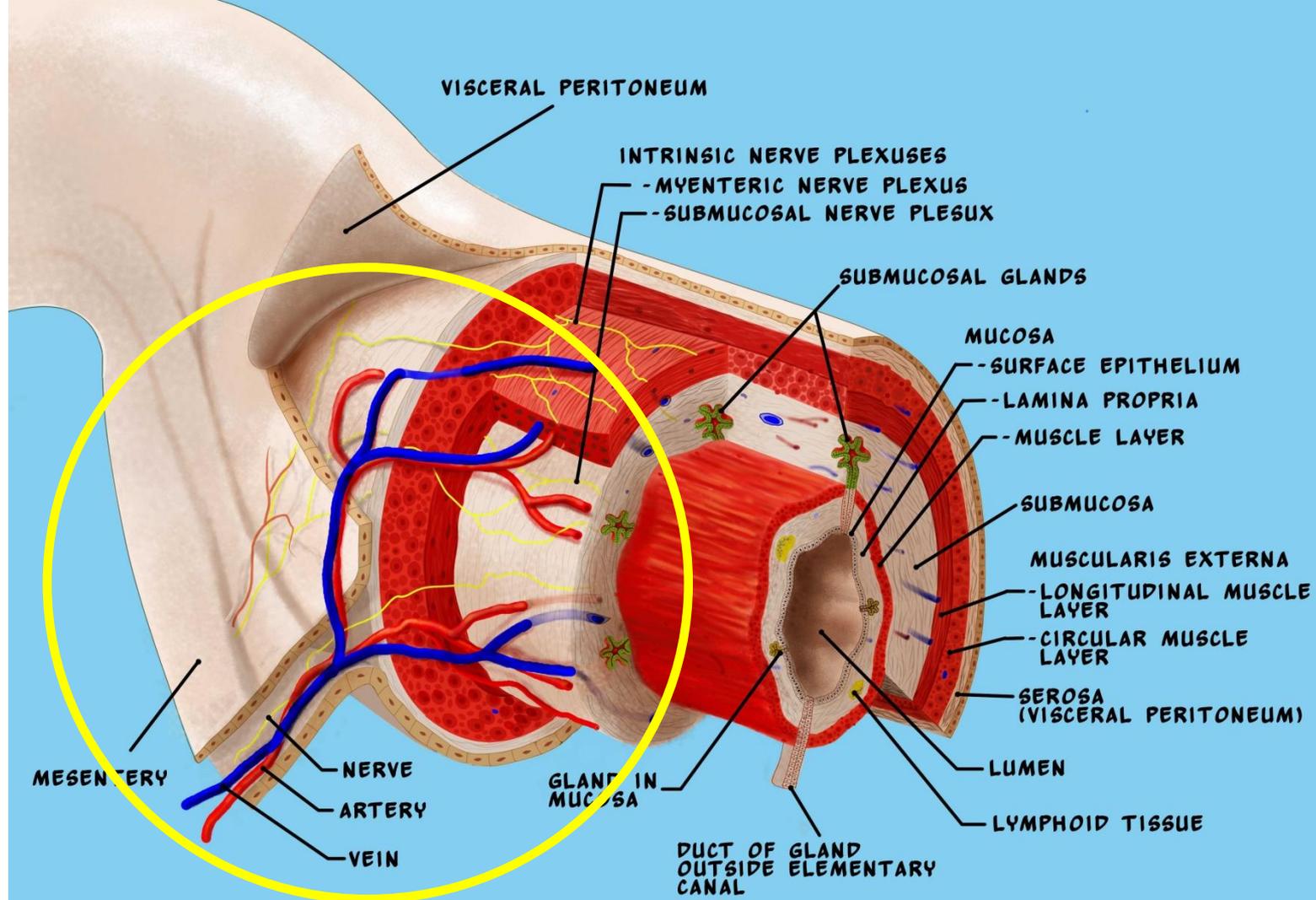
**mcl**  
medisch centrum  
leeuwarden

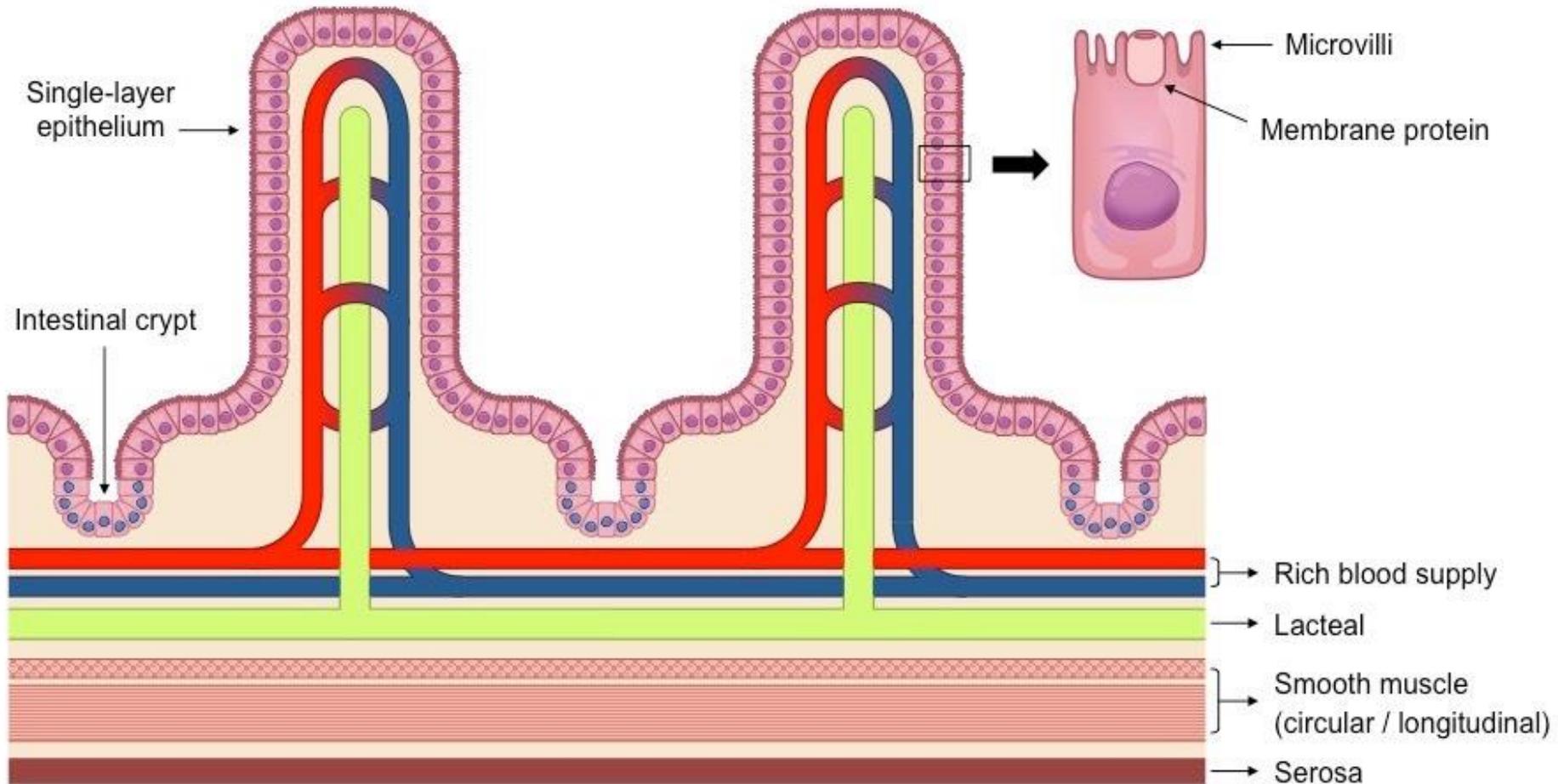
# What is NOMI?

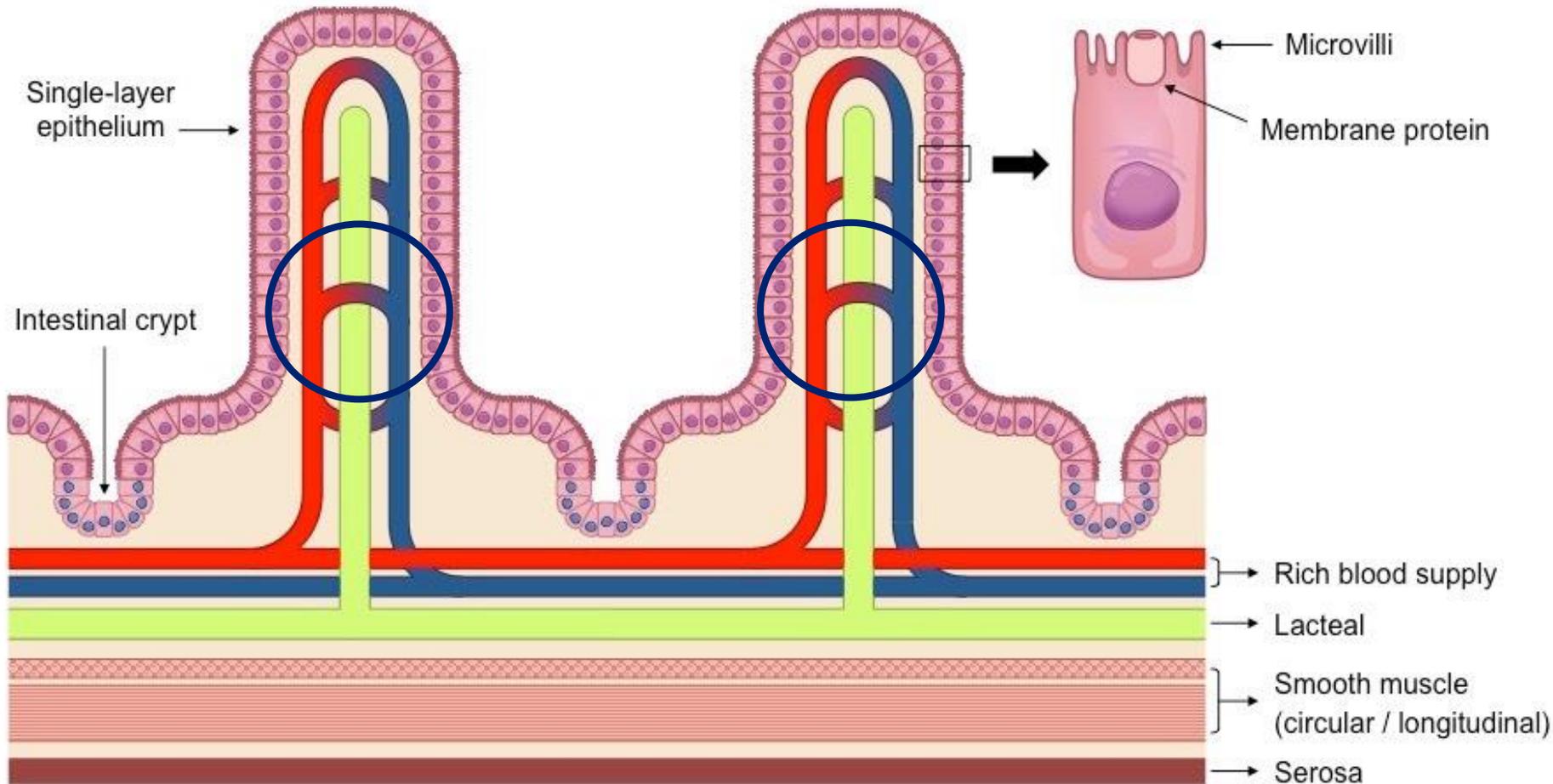
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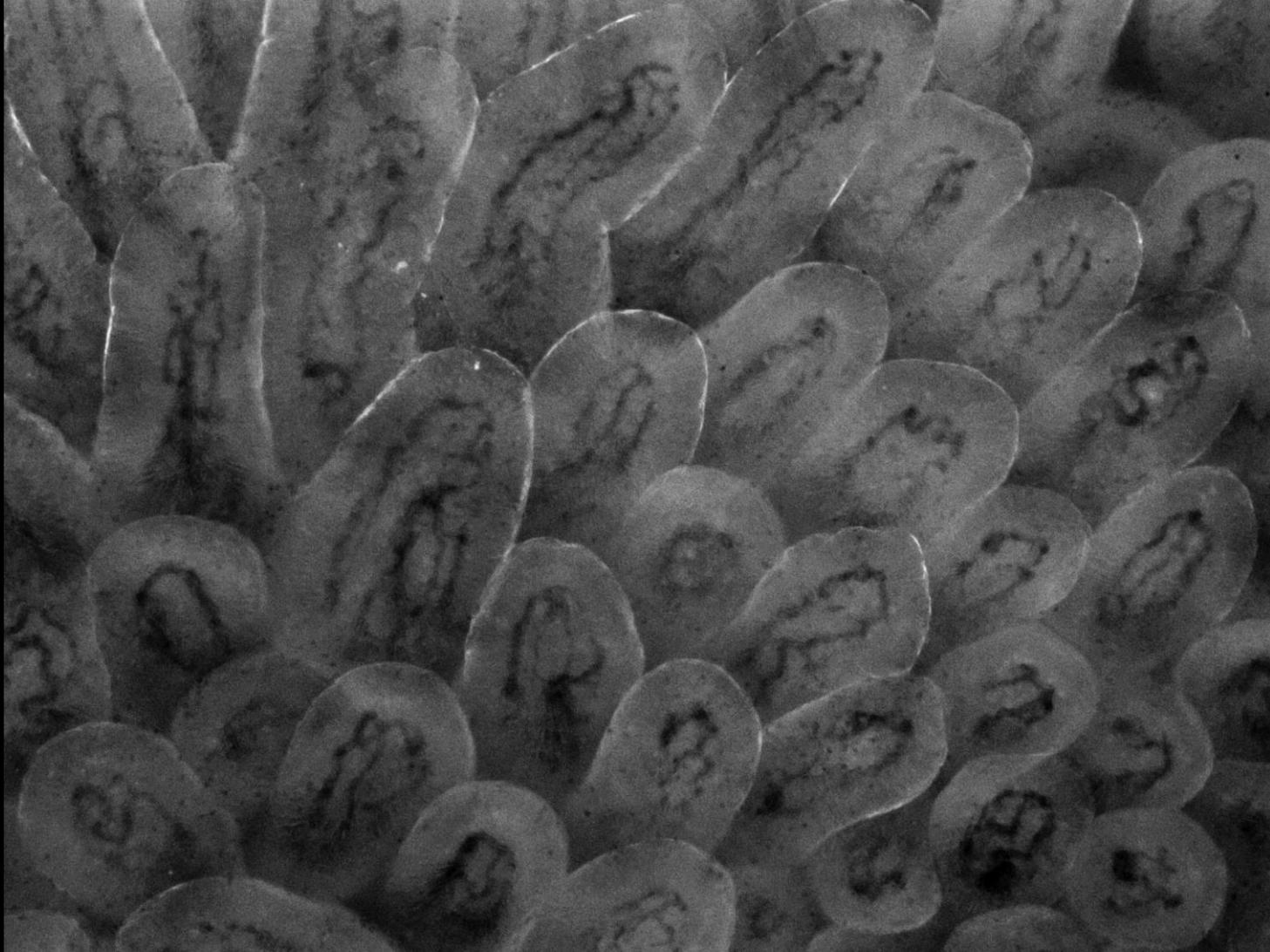


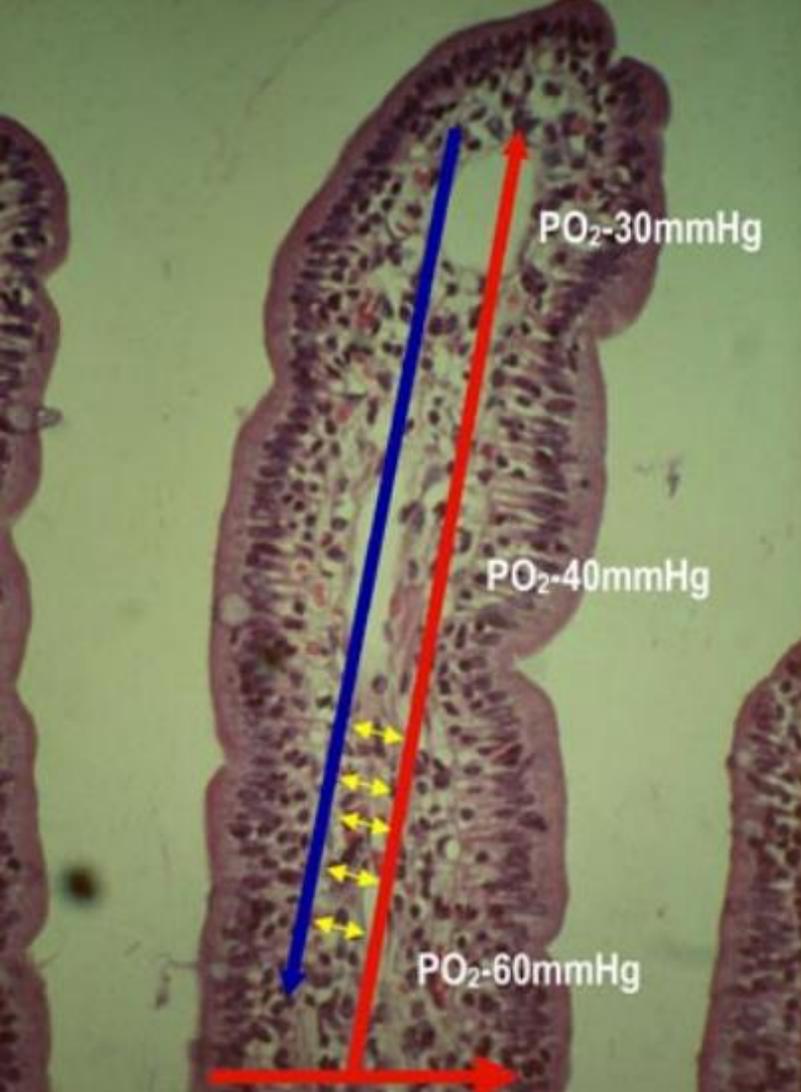
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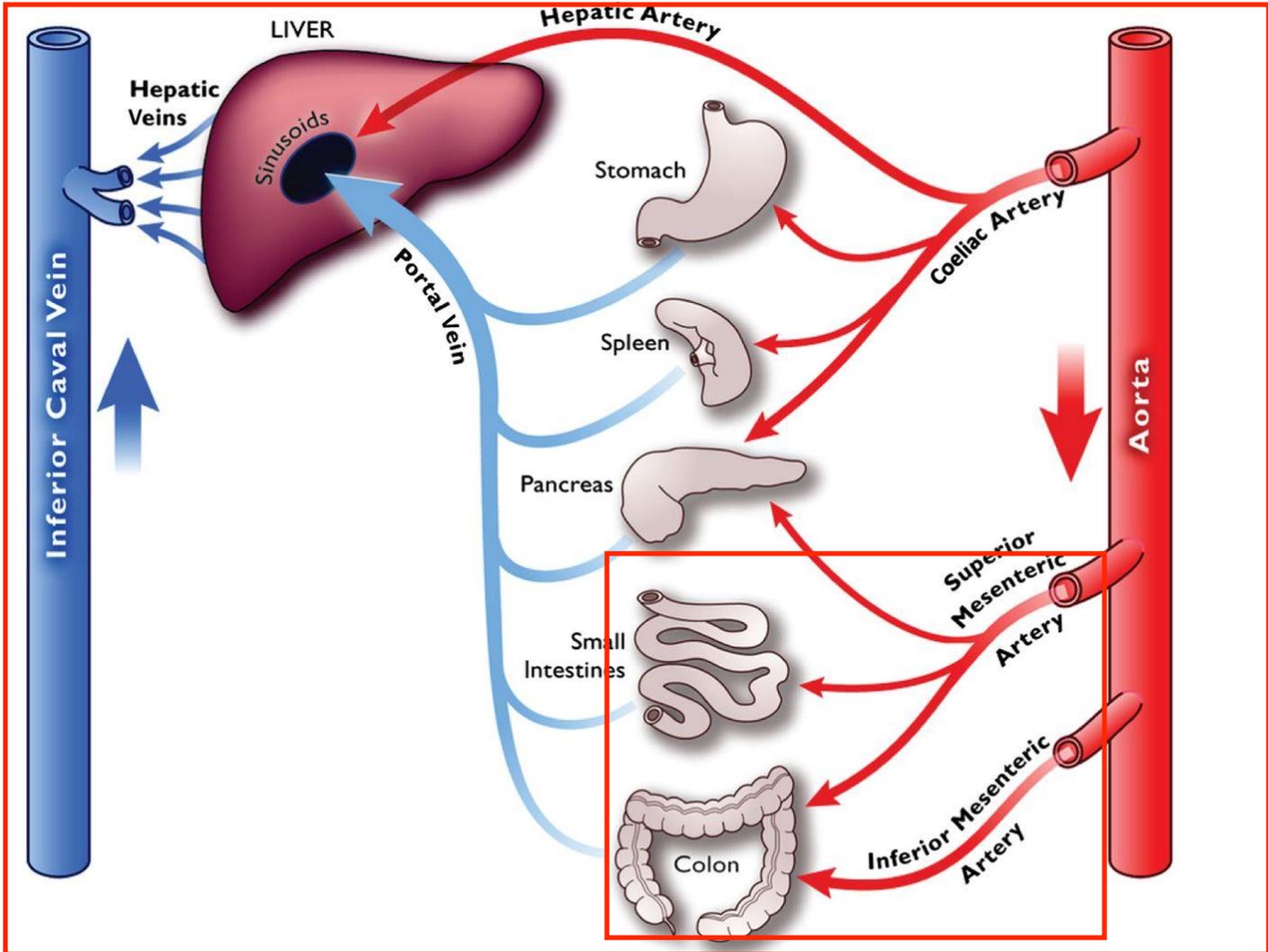


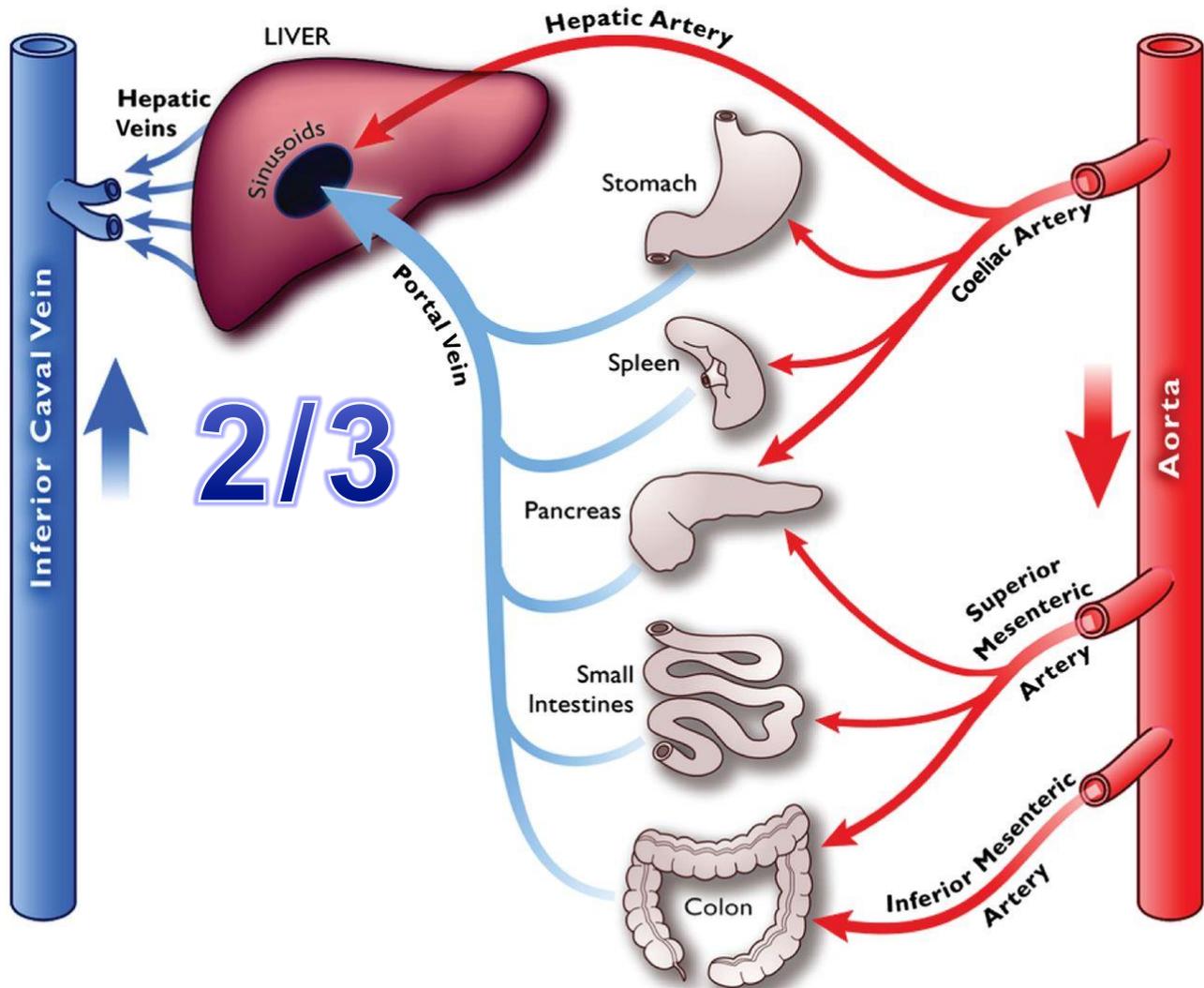


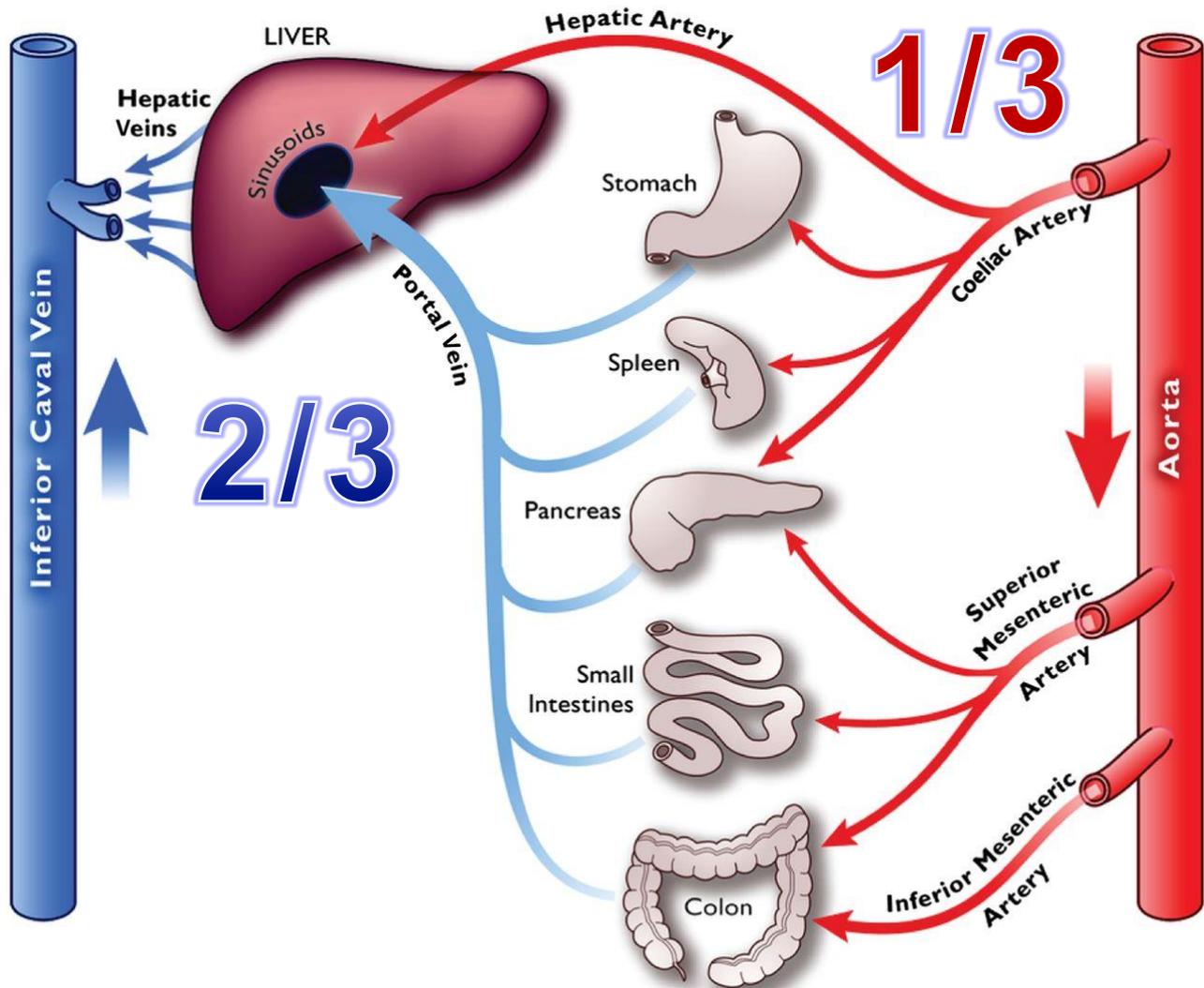


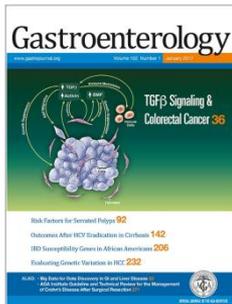






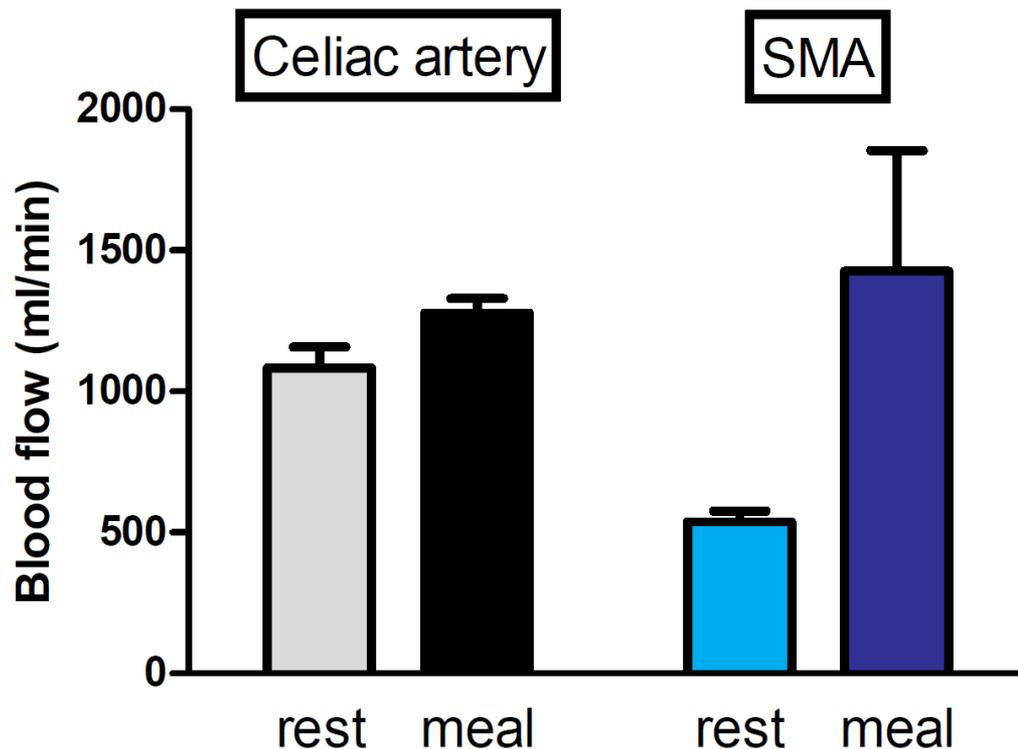






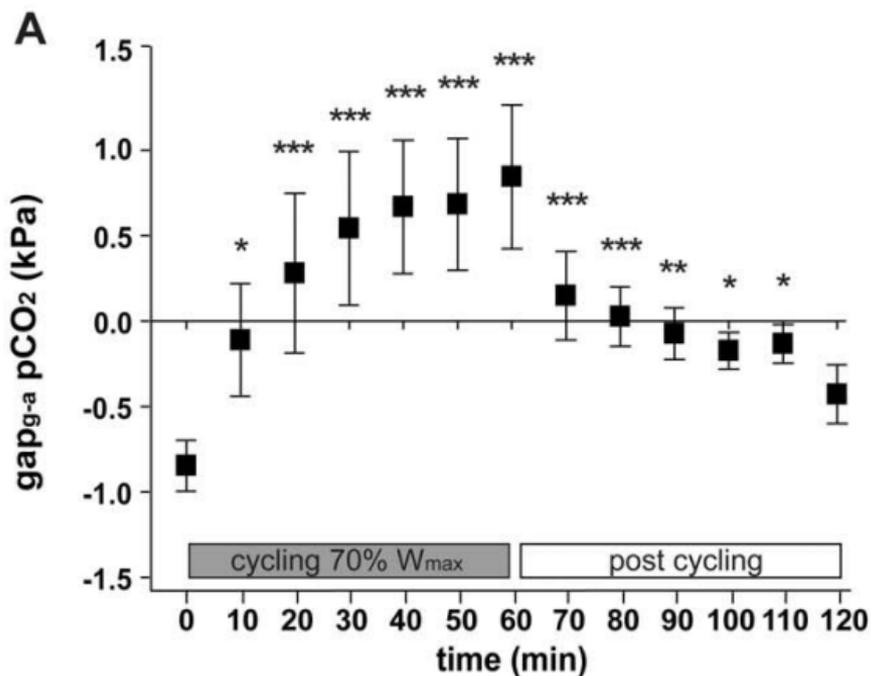
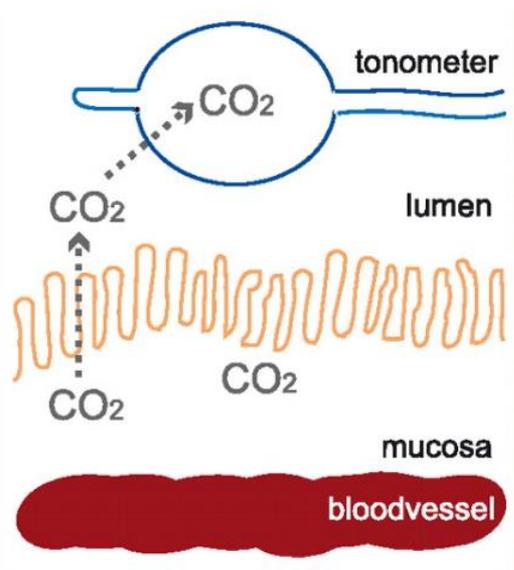
# Duplex Ultrasound Measurement of Postprandial Intestinal Blood Flow: Effect of Meal Composition

GASTROENTEROLOGY 1988;95:1294-301



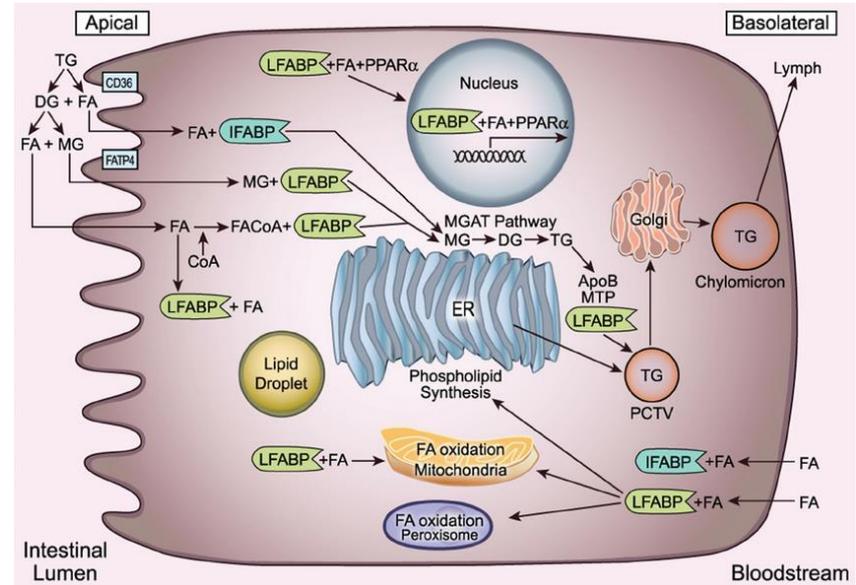
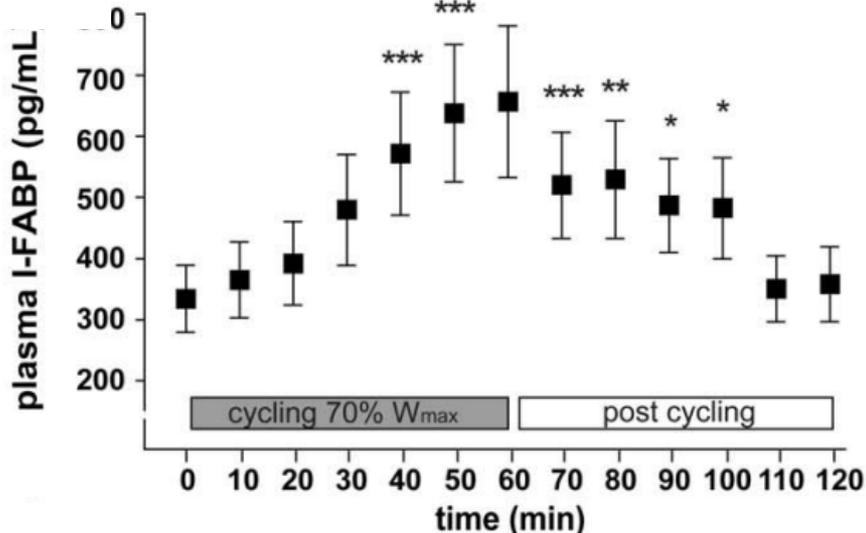
# Exercise-Induced Splanchnic Hypoperfusion Results in Gut Dysfunction in Healthy Men

Kim van Wijck<sup>1,2,3</sup>, Kaatje Lenaerts<sup>1,2,3\*</sup>, Luc J. C. van Loon<sup>1,2,4</sup>, Wilbert H. M. Peters<sup>5</sup>, Wim A. Buurman<sup>2,3</sup>, Cornelis H. C. Dejong<sup>1,2,3</sup>



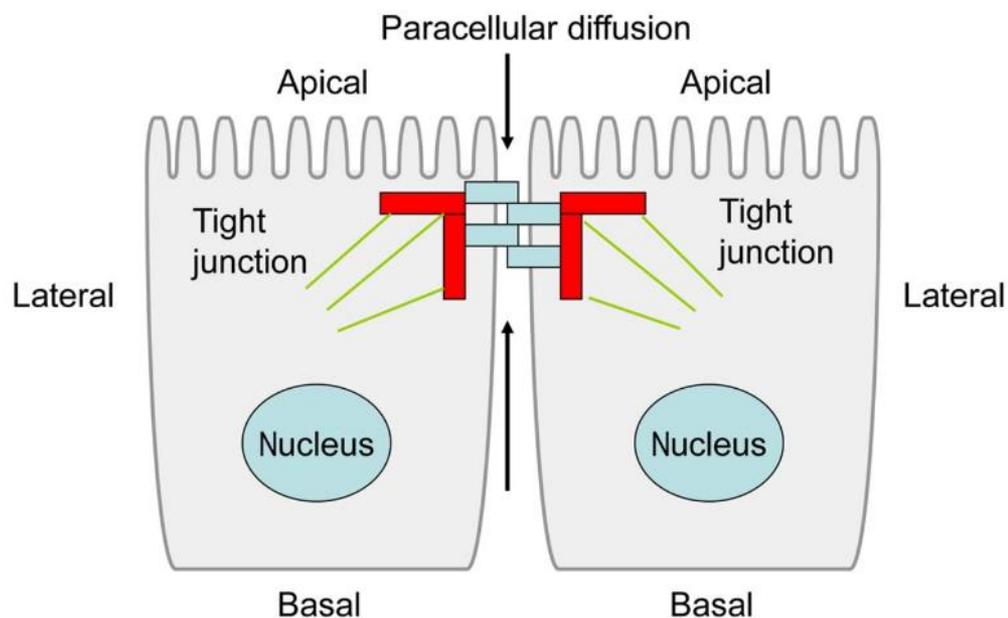
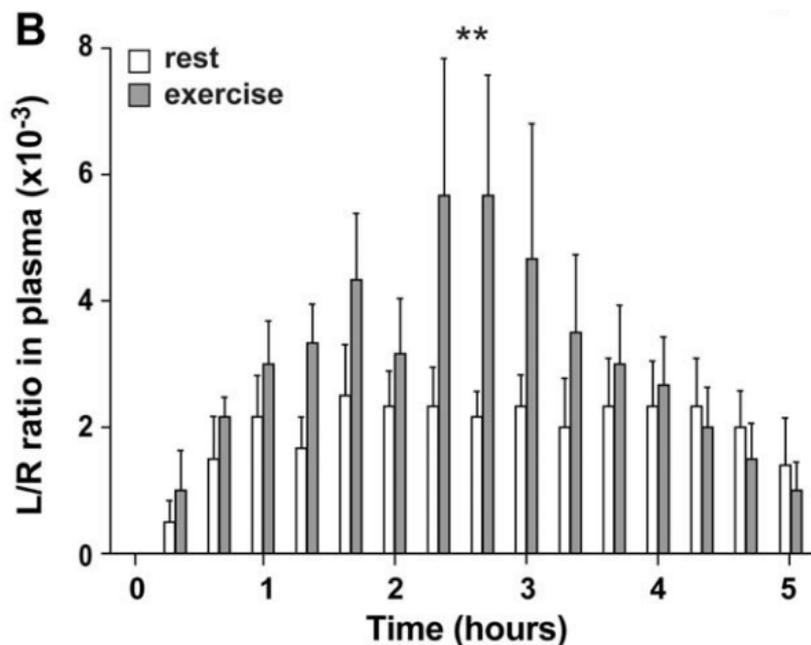
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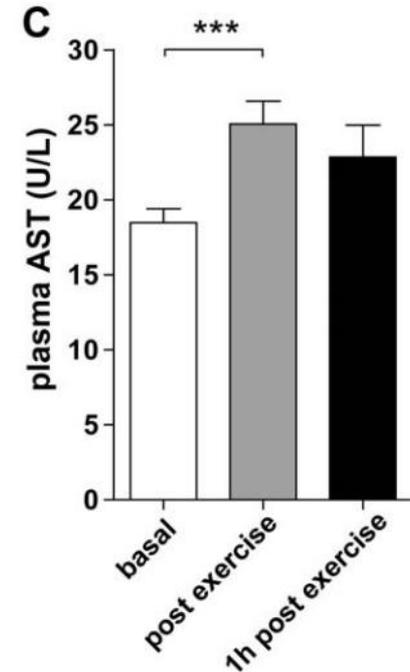
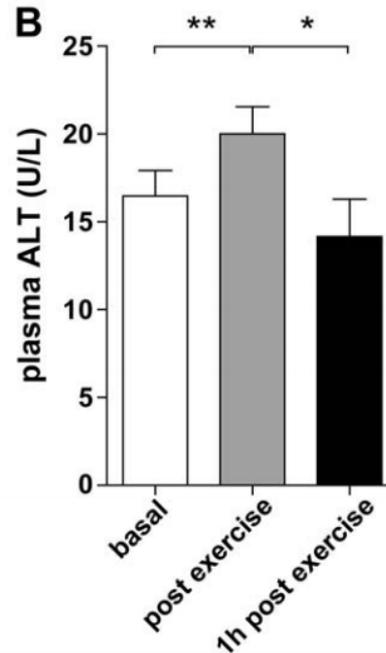
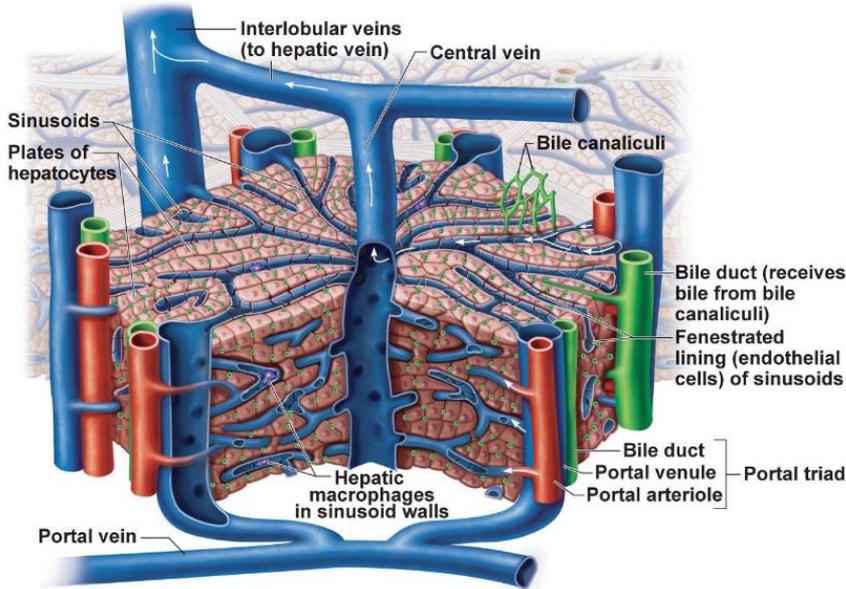
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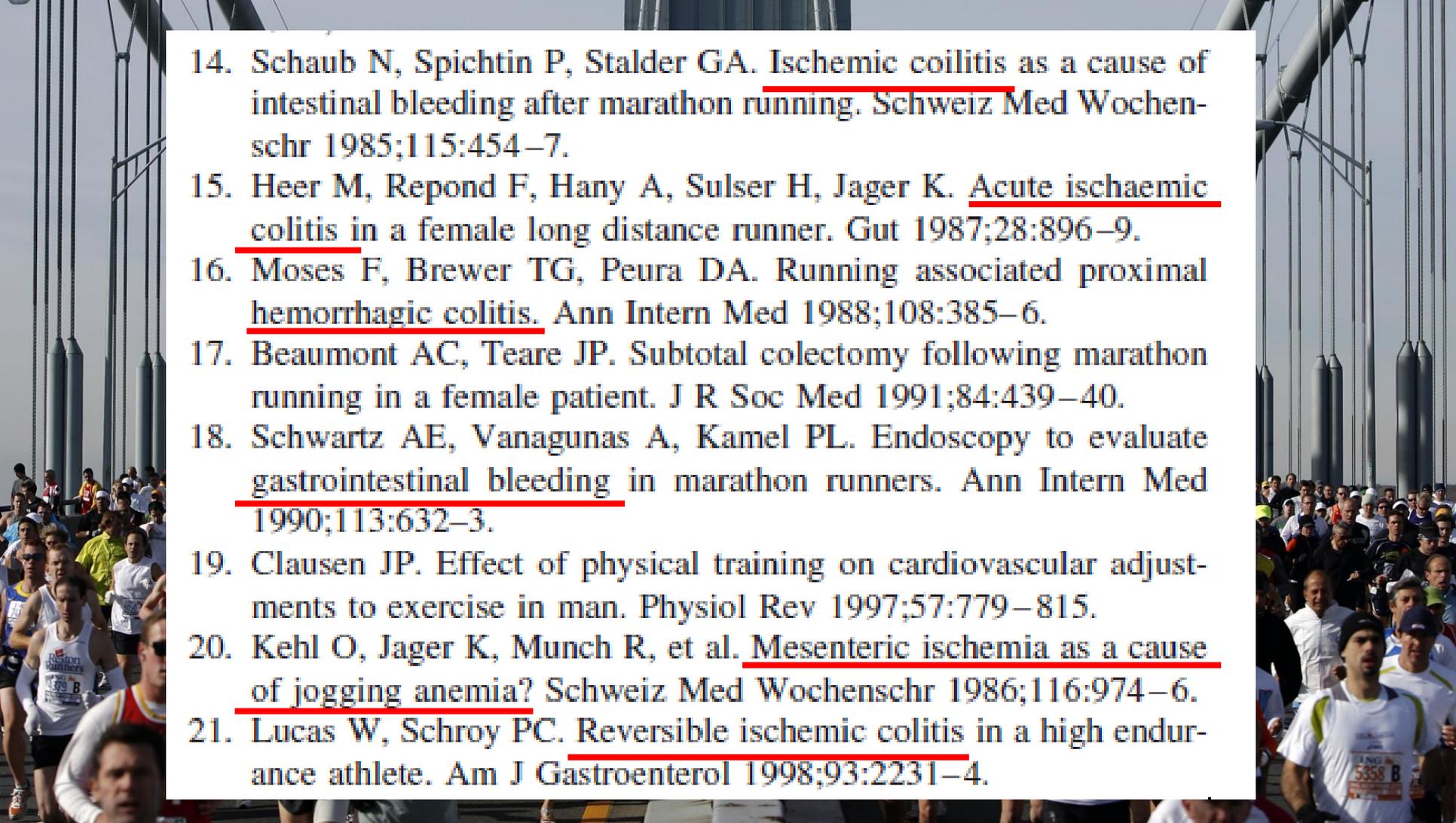


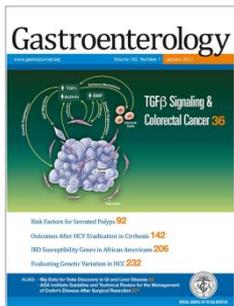
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- 
- A large crowd of runners is participating in a marathon on a suspension bridge. The runners are wearing various athletic gear, including tank tops and shorts. Some runners have bib numbers visible, such as '5358 B'. The bridge's steel cables and towers are visible in the background, and the sky is clear.
14. Schaub N, Spichtin P, Stalder GA. Ischemic colitis as a cause of intestinal bleeding after marathon running. Schweiz Med Wochenschr 1985;115:454–7.
  15. Heer M, Repond F, Hany A, Sulser H, Jager K. Acute ischaemic colitis in a female long distance runner. Gut 1987;28:896–9.
  16. Moses F, Brewer TG, Peura DA. Running associated proximal hemorrhagic colitis. Ann Intern Med 1988;108:385–6.
  17. Beaumont AC, Teare JP. Subtotal colectomy following marathon running in a female patient. J R Soc Med 1991;84:439–40.
  18. Schwartz AE, Vanagunas A, Kamel PL. Endoscopy to evaluate gastrointestinal bleeding in marathon runners. Ann Intern Med 1990;113:632–3.
  19. Clausen JP. Effect of physical training on cardiovascular adjustments to exercise in man. Physiol Rev 1997;57:779–815.
  20. Kehl O, Jager K, Munch R, et al. Mesenteric ischemia as a cause of jogging anemia? Schweiz Med Wochenschr 1986;116:974–6.
  21. Lucas W, Schroy PC. Reversible ischemic colitis in a high endurance athlete. Am J Gastroenterol 1998;93:2231–4.



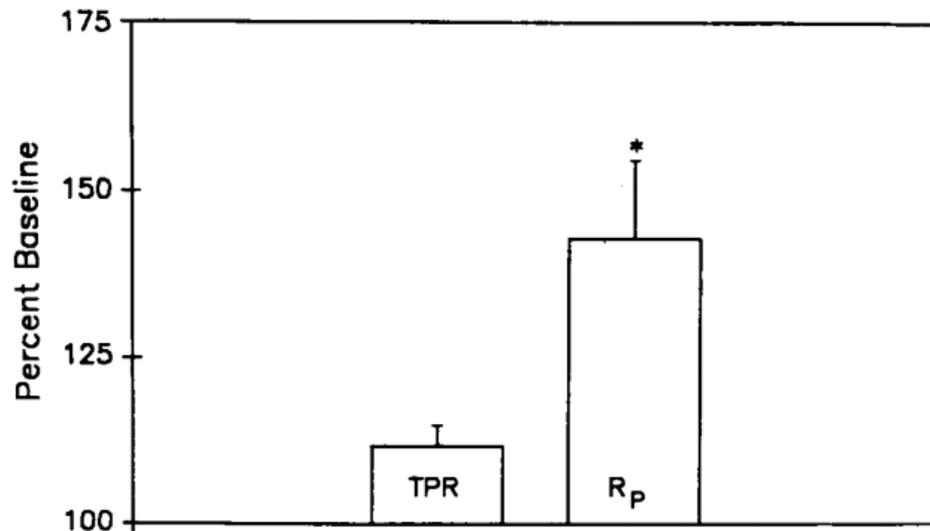
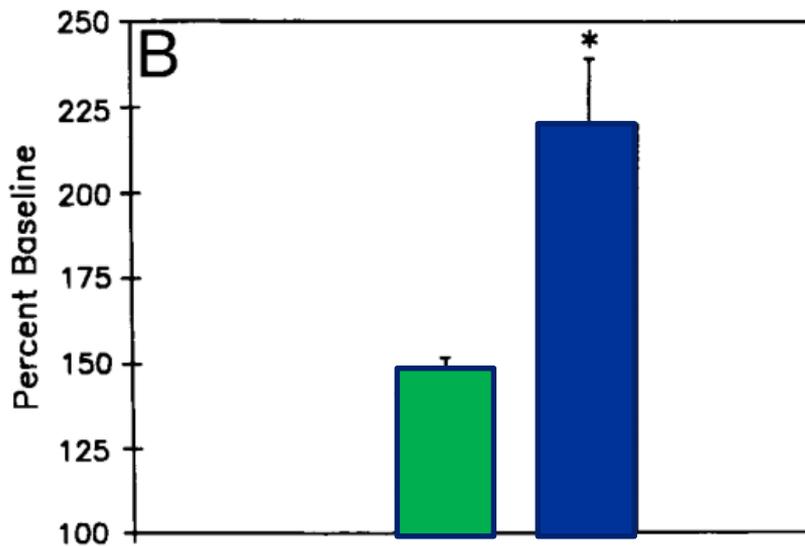
# Hemodynamics of Pancreatic Ischemia in Cardiogenic Shock in Pigs

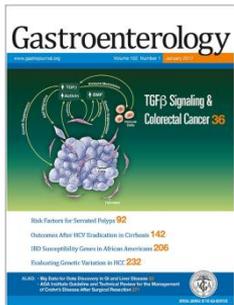
GASTROENTEROLOGY 1997;113:938-945

PATRICK M. REILLY, THOMAS J. TOUNG, MASAHIKO MIYACHI, HENRY J. SCHILLER, and GREGORY B. BULKLEY

## Shock

- Total vascular resistance
- Pancreatic vascular resistance



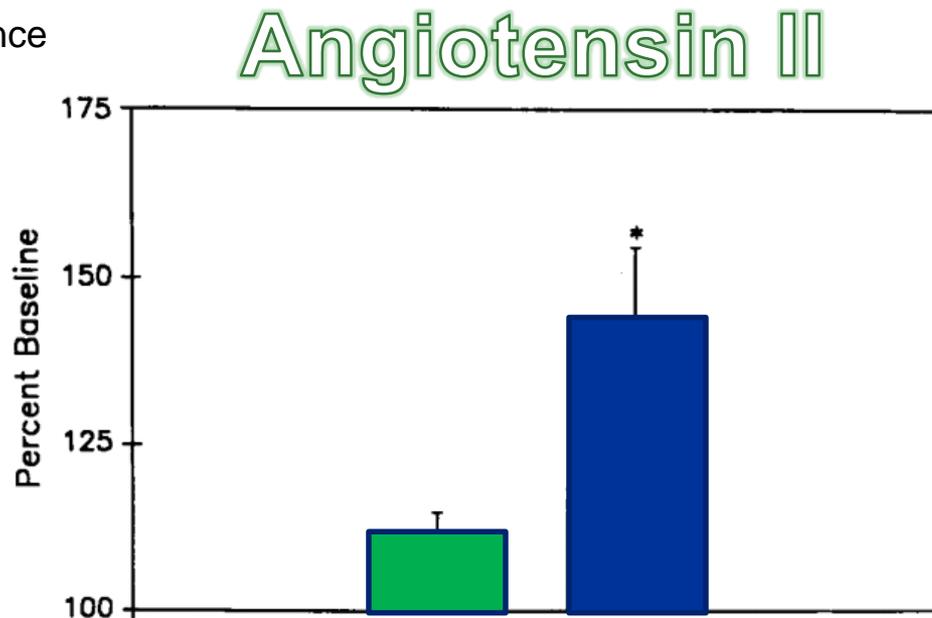
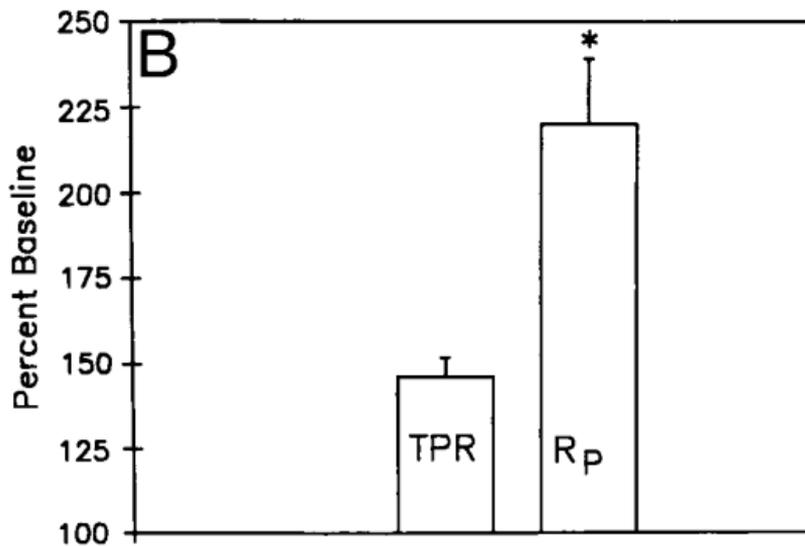


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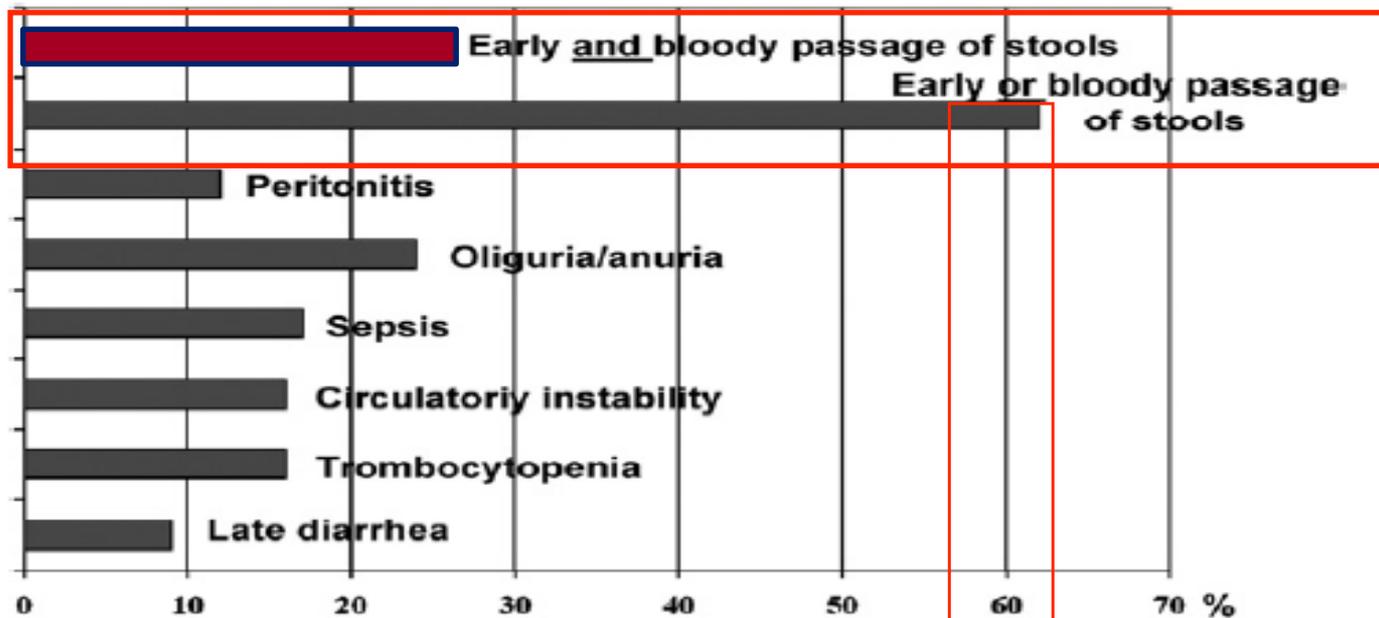






# Nonocclusive Mesenteric Hypoperfusion Syndromes: Recognition and Treatment

Martin Björck and Anders Wanhainen. Semin Vasc Surg 23:54-64 2010



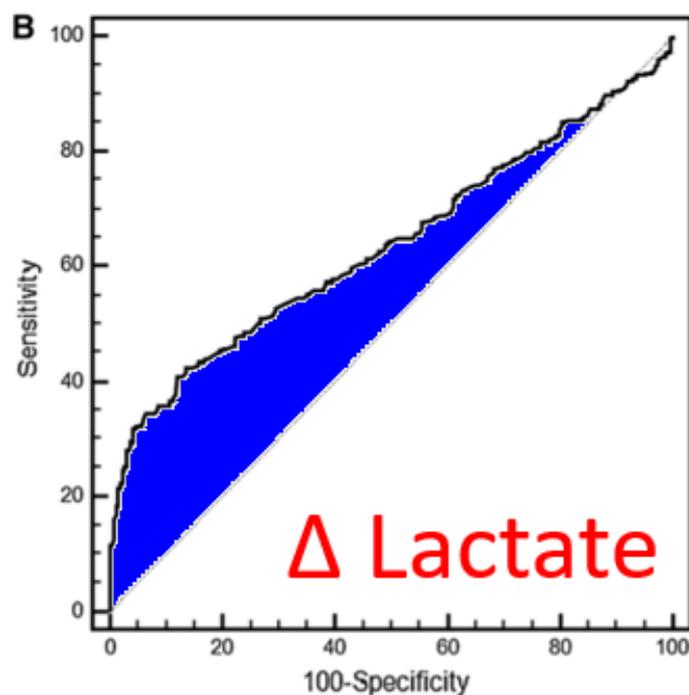
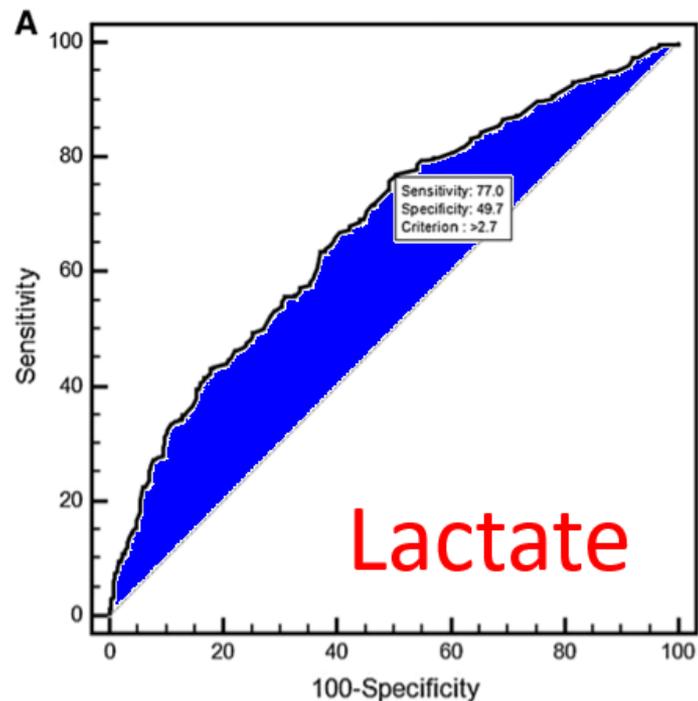
	R	L	p Value
<i>Symptoms</i>			
Abdominal pain	78.6%	71.9%	0.266
Rectal bleeding	44.9%	87.4%	<0.001
Diarrhea	55.3%	45.5%	0.160
Nausea	57.6%	39.4%	0.013
Weight loss	55.6%	18.8%	<0.001
<i>Physical examination</i>			
Temperature $\geq 38^\circ$	22.3%	15.2%	0.178
Hypotension (<100 mmHg systolic pressure)	12.5%	15.9%	0.481
Tachycardia (>100/min)	33.0%	25.0%	0.207
Paralytic ileus	31.5%	17.9%	0.018
Peritoneal signs	27.1%	6.7%	<0.001

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# Outcome of acute mesenteric ischemia in the intensive care unit: a retrospective, multicenter study of 780 cases

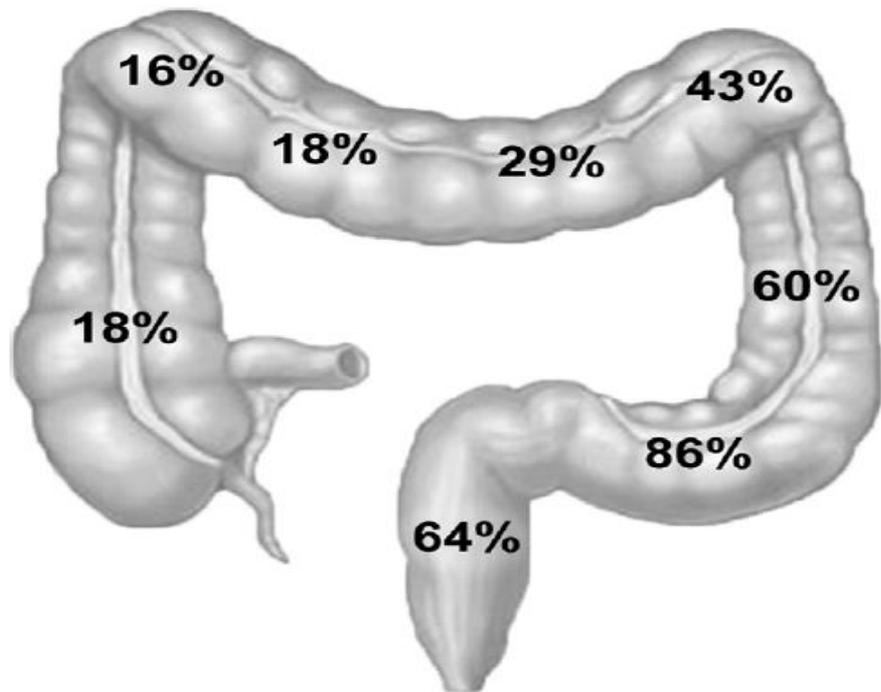
Intensive Care Med (2015) 41:667–676

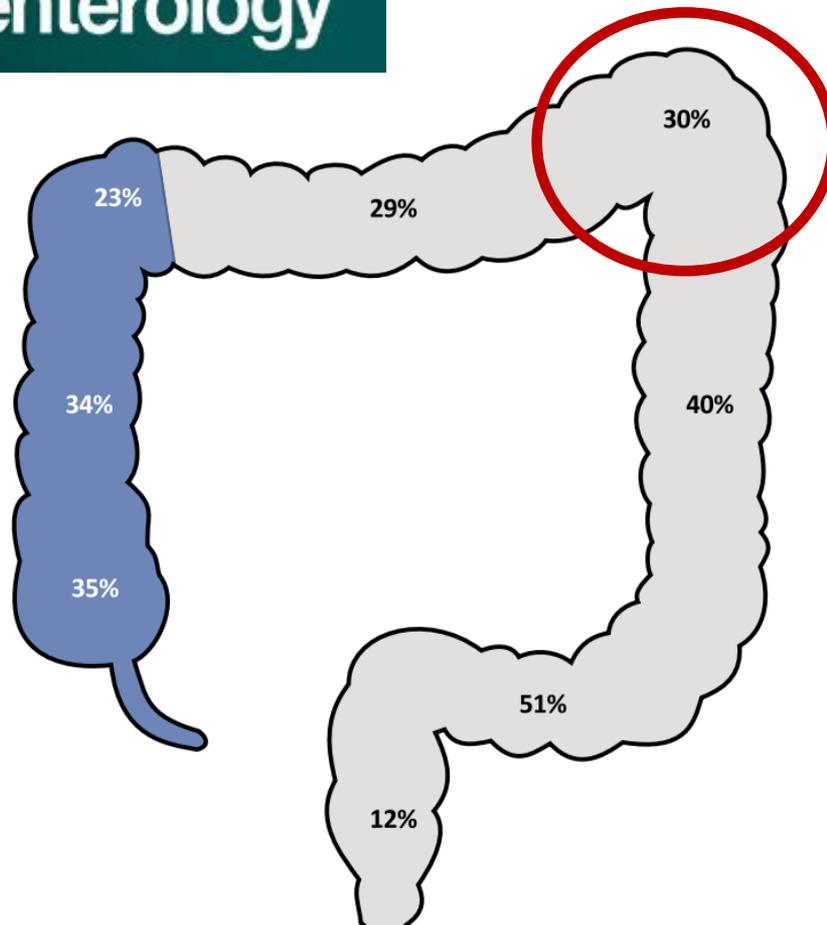


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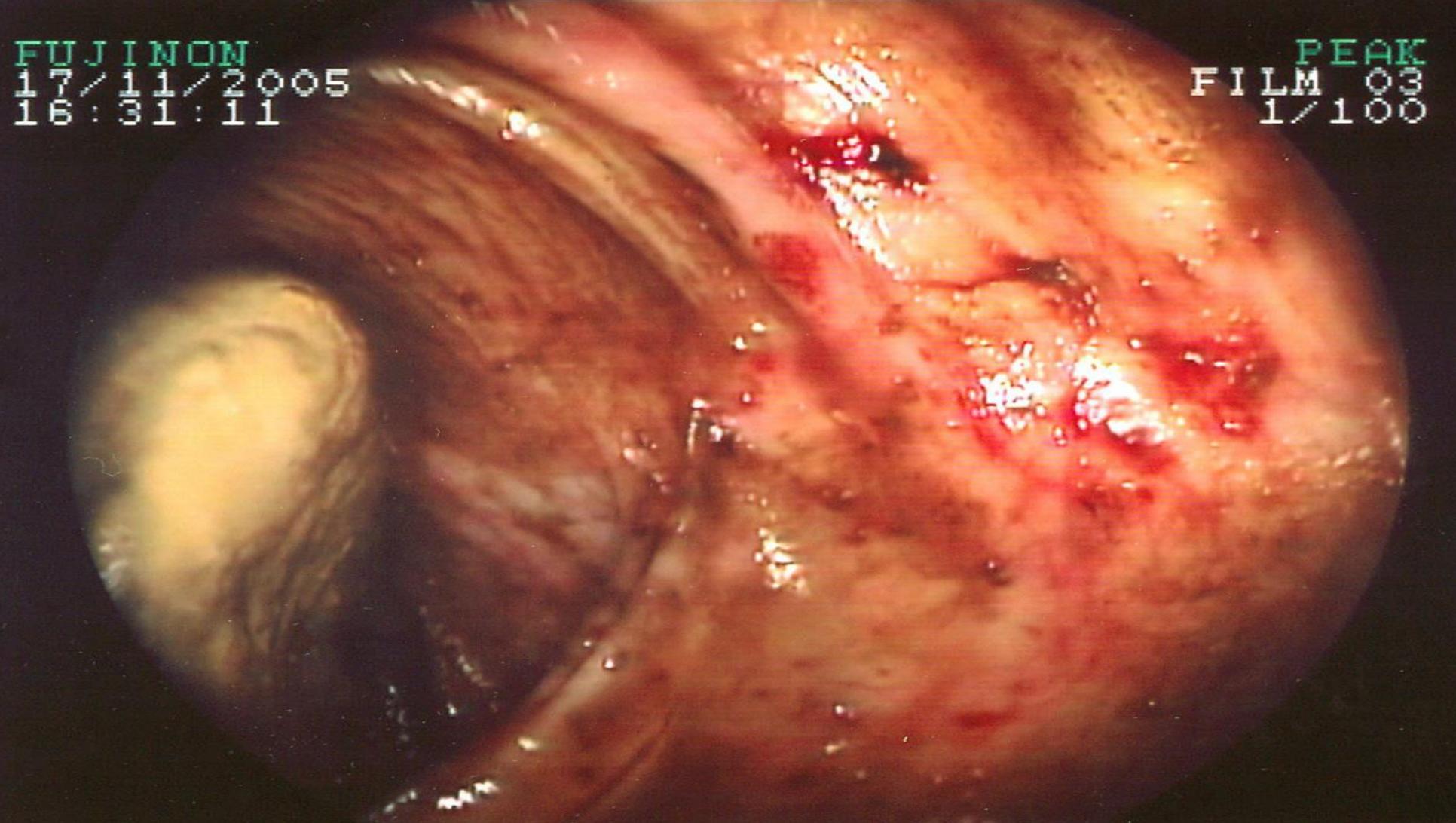
Seminars in  
**V**ASCULAR  
SURGERY

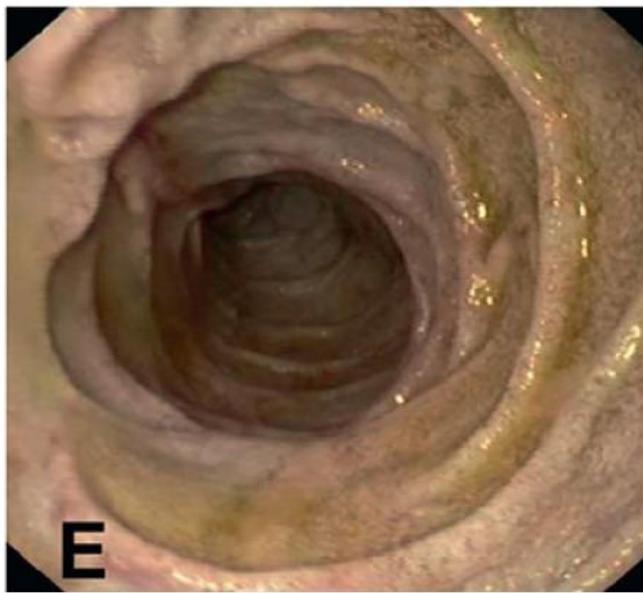
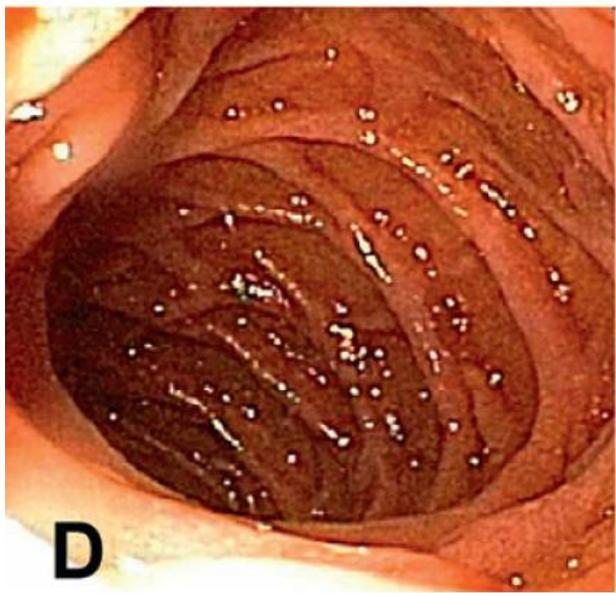
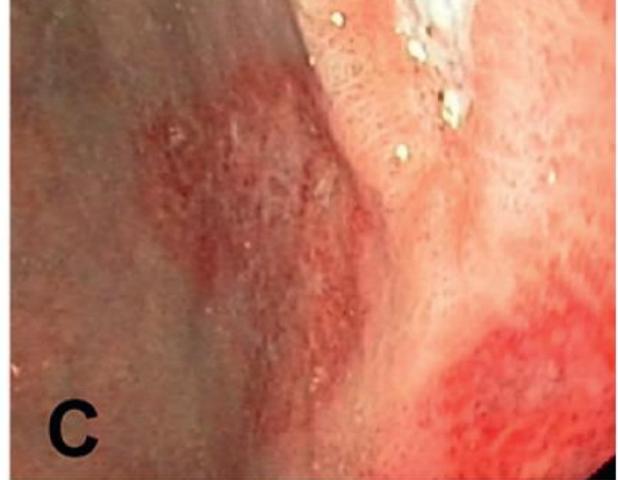
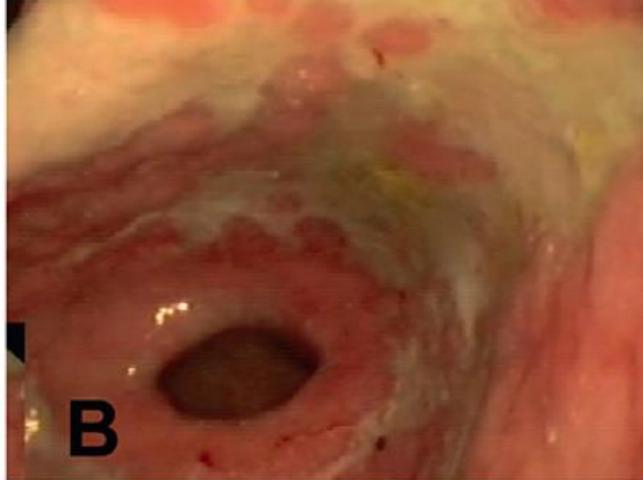


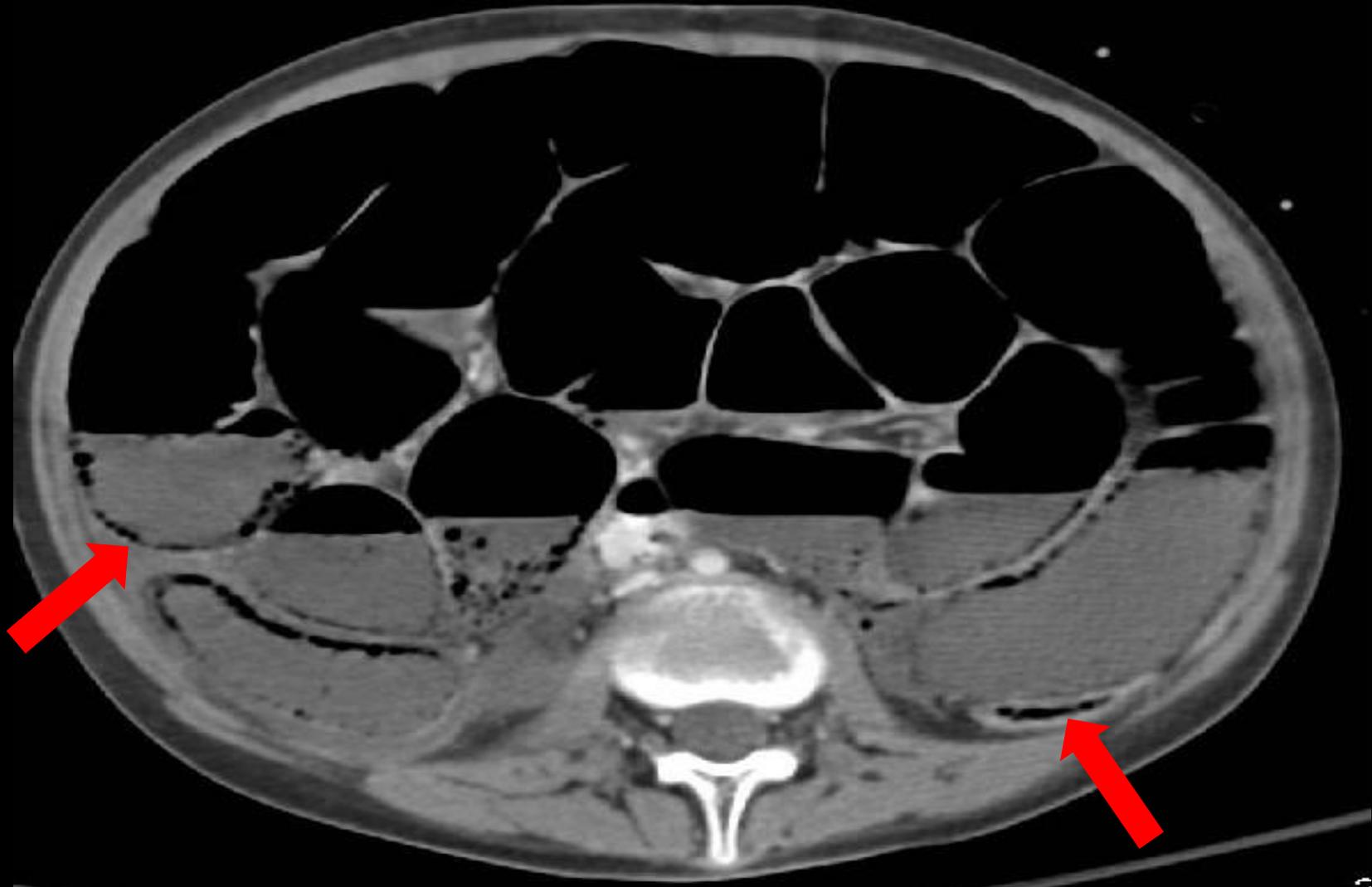


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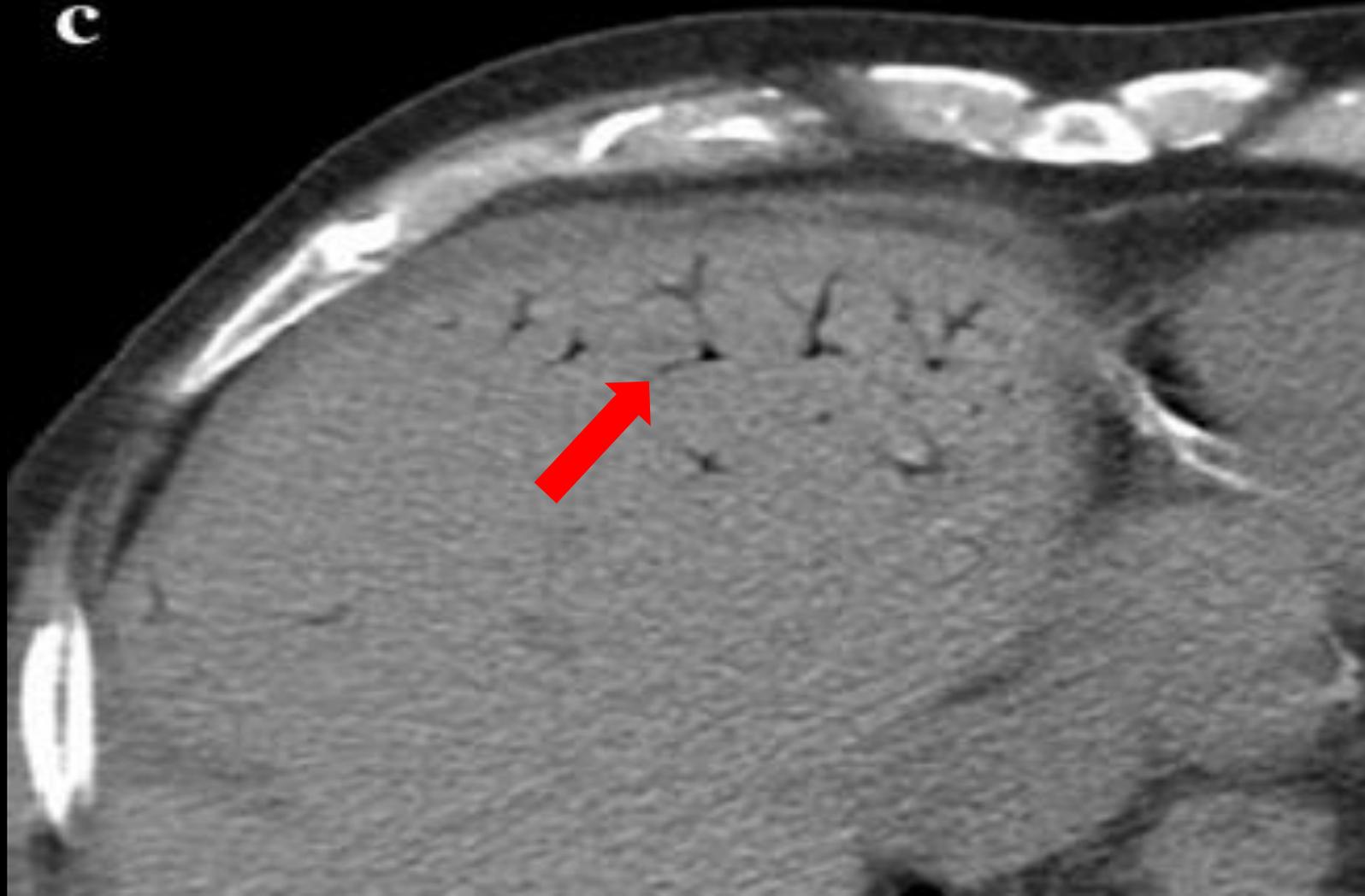
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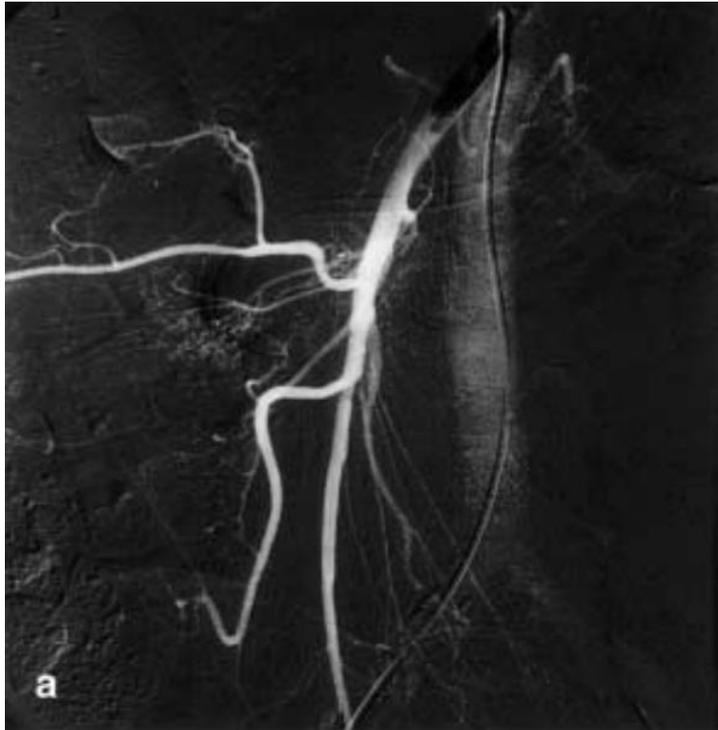


c



Markus Trompeter  
Thurid Brazda  
Christopher T. Remy  
Thomas Vestring  
Peter Reimer

## Non-occlusive mesenteric ischemia: etiology, diagnosis, and interventional therapy





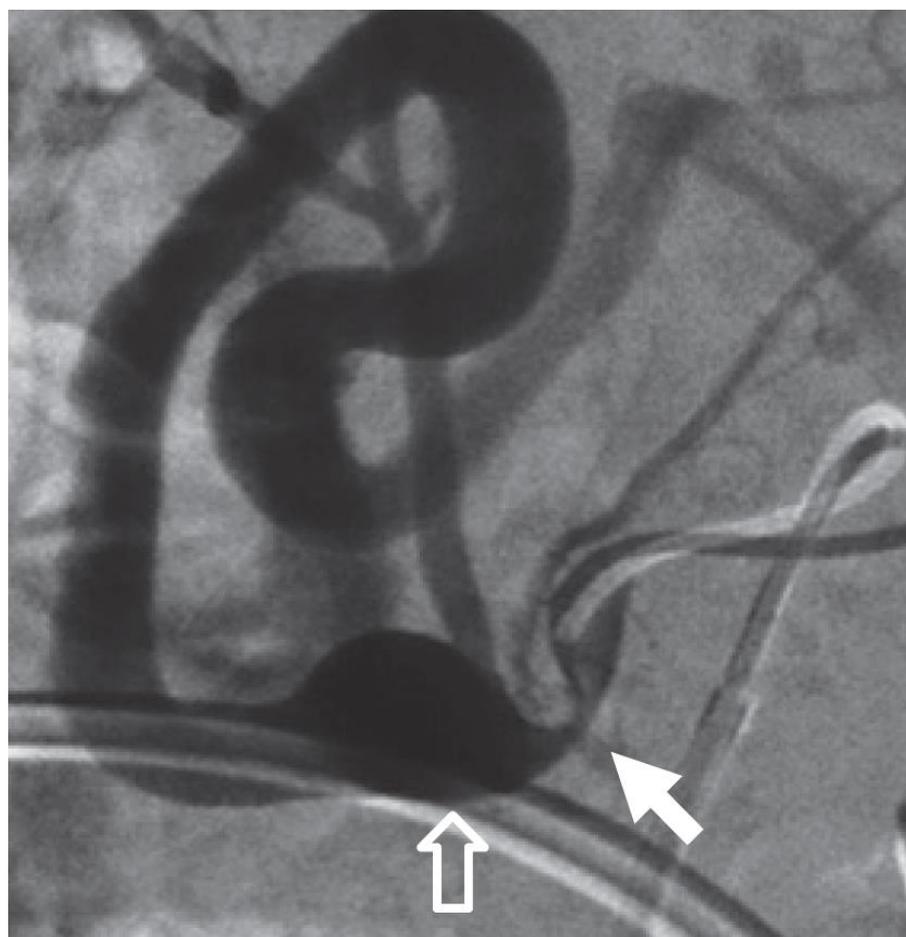






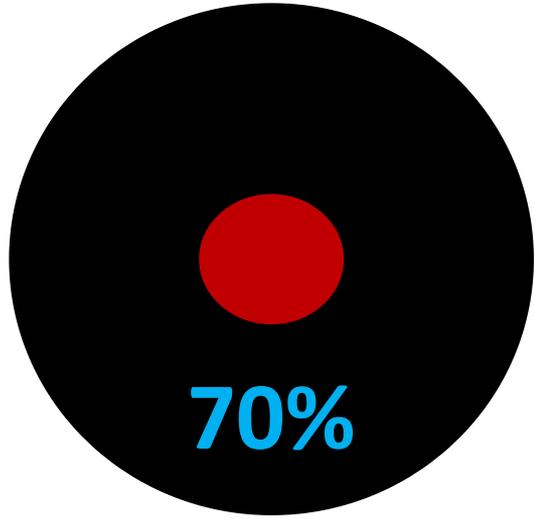


**Inspiration**

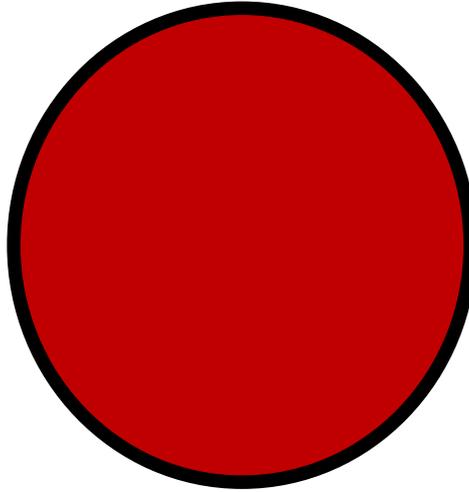


**Expiration**

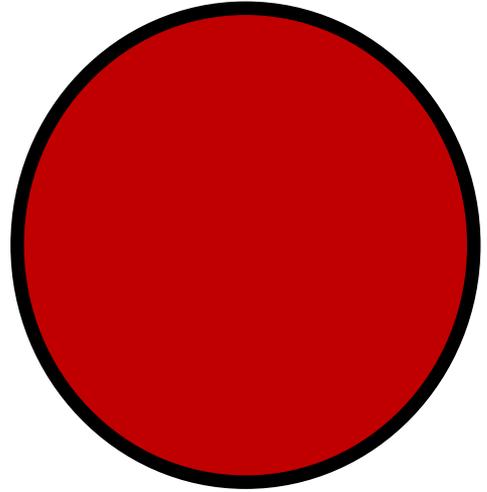
**CA**



**SMA**



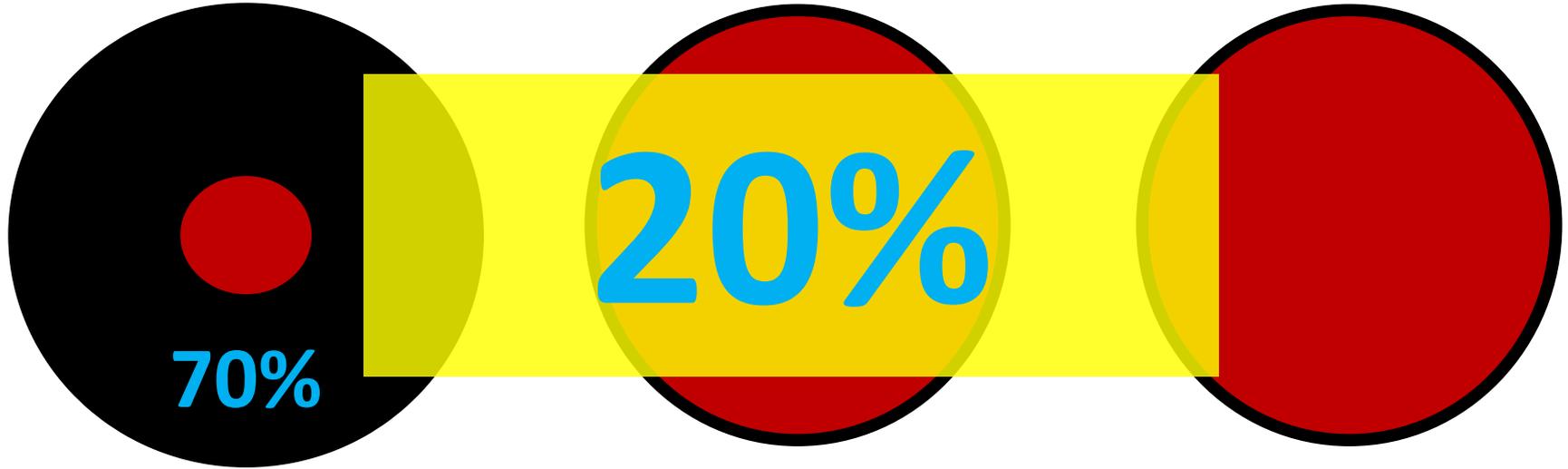
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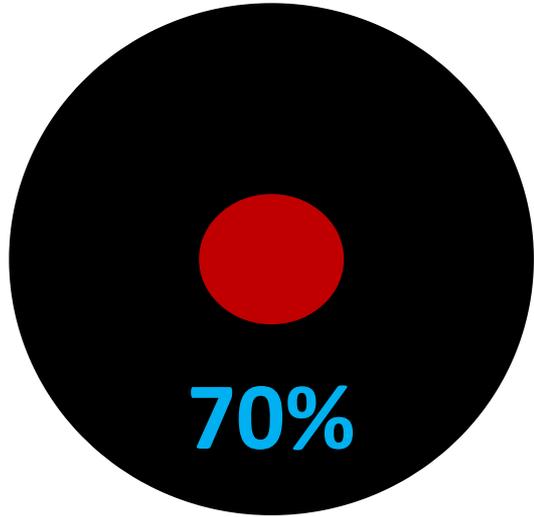
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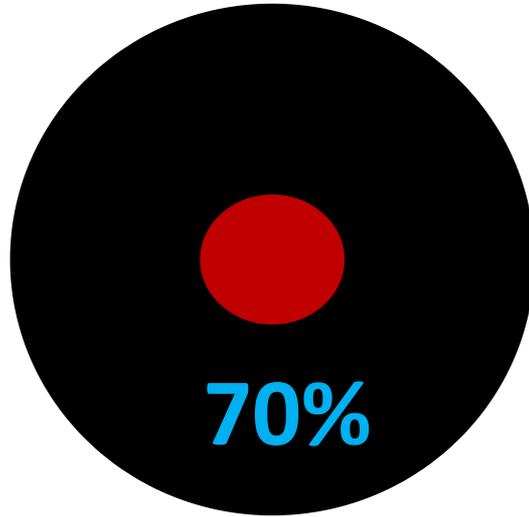
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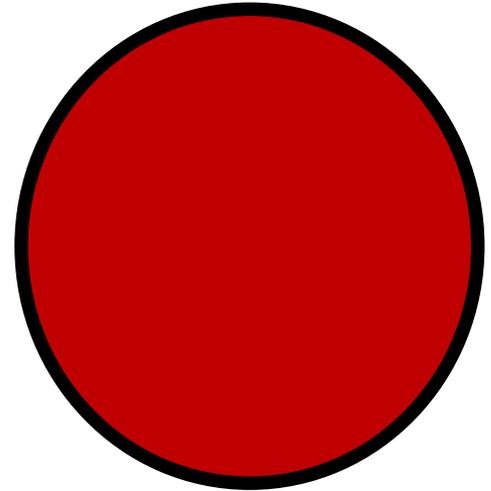
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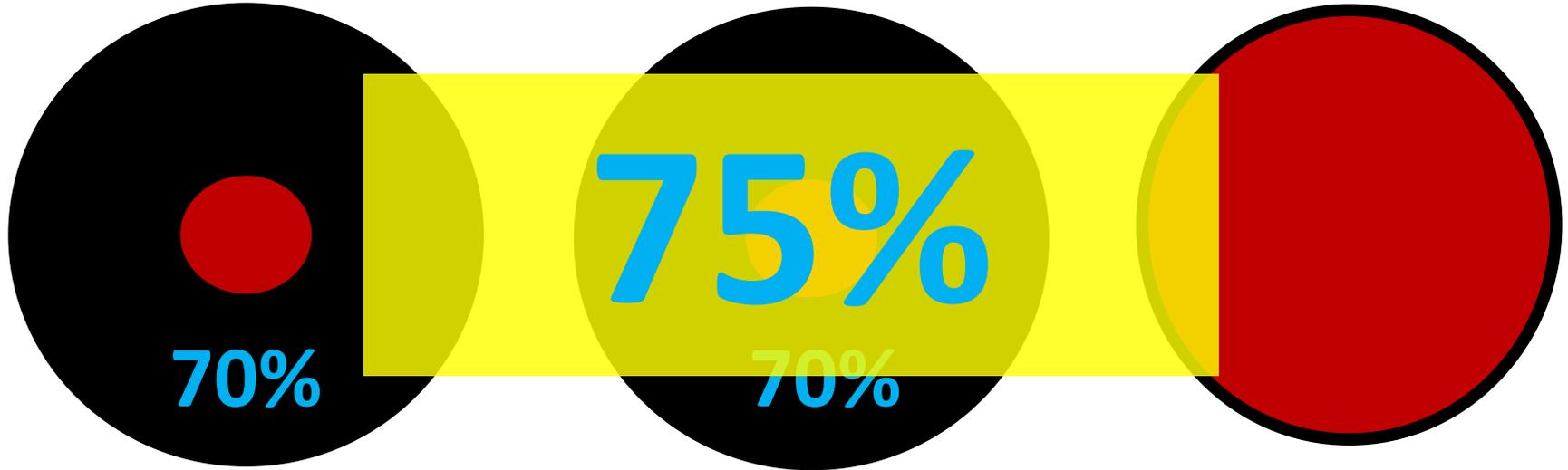
**IMA**



CA

SMA

IMA



**DON'T** rule out



Clinical symptoms



Lactate



Endoscopy/laparoscopy

Christiaan Boerma



# Avoid



Vasopressors/NSAIDS



Intra abdominal hypertension



Enteral feeding

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**mcl**  
medisch centrum  
leeuwarden

# DO



History



Biopsy



Hybrid

Christiaan Boerma

