Intraperitoneal focal fat infarction

- Group of benign, self-limited entities in which focal necrosis of intraperitoneal fat produces acute abdominal pain.
- IFFI encompasses
  - Epiploic Appendagitis
  - Segmental omental infarction
  - Lesser omental and falciform ligament infarction
  - Other torsed/infarcted peritoneal fatty appendages
- Processes share a final pathway of vascular compromise of localized fat, with sterile inflammation.
- No primary bowel or solid organ disease

CT findings:

- Epiploic appendagitis:
  - Ovoid 1.5–3.5 cm pericolonic fat-attenuation lesion abutting the colon, with a thin hyperattenuating rim (“ring sign”) and often a central high-attenuation focus (“central dot” sign for thrombosed vein).
  - Only mild adjacent colonic wall thickening, helping to distinguish it from diverticulitis, where wall thickening and segmental hyperenhancement are more marked.
- Omental infarction:
  - Larger, often 3–7 cm, heterogeneous fatty mass with “cake-like” or triangular configuration and whorled internal linear stranding between the anterior abdominal wall and colon, often right-sided.
  - Typically located away from the colonic wall, which favors omental infarction over epiploic appendagitis.
- Falciform/lesser omental infarction:
  - Area of fat attenuation with surrounding stranding and a thin peripheral hyperattenuating rim in the expected course of the ligamentum teres (adjacent to anterior left hepatic lobe) or in the lesser sac along the lesser curvature.
  - A “central dot” corresponding to a thrombosed draining vein may be seen, analogous to other IFFI sites

Omental Infarction

- Classic location
  - Right lower quadrant medial to the ascending colon or cecum.
  - The vascular compromise occurs along the right edge of the greater omentum where the arterial supply is usually tenuous.
- The omentum may infarct without torsion, and this is called primary idiopathic segmental infarction.
- Secondary omental infarction
  - Post-surgery
  - Abdominal trauma
  - Omental inflammation