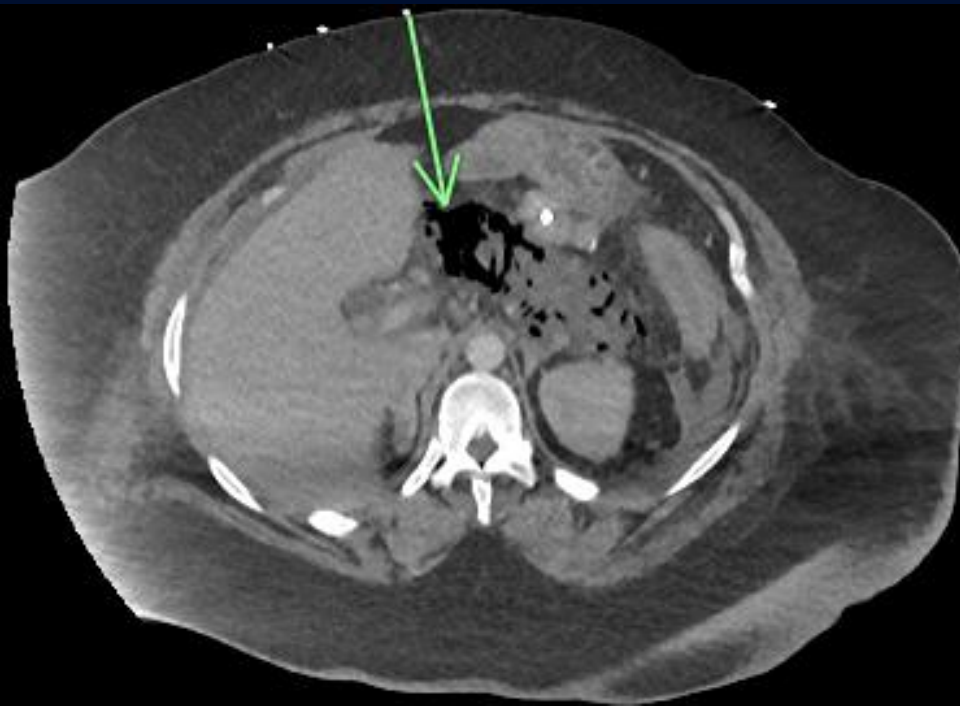


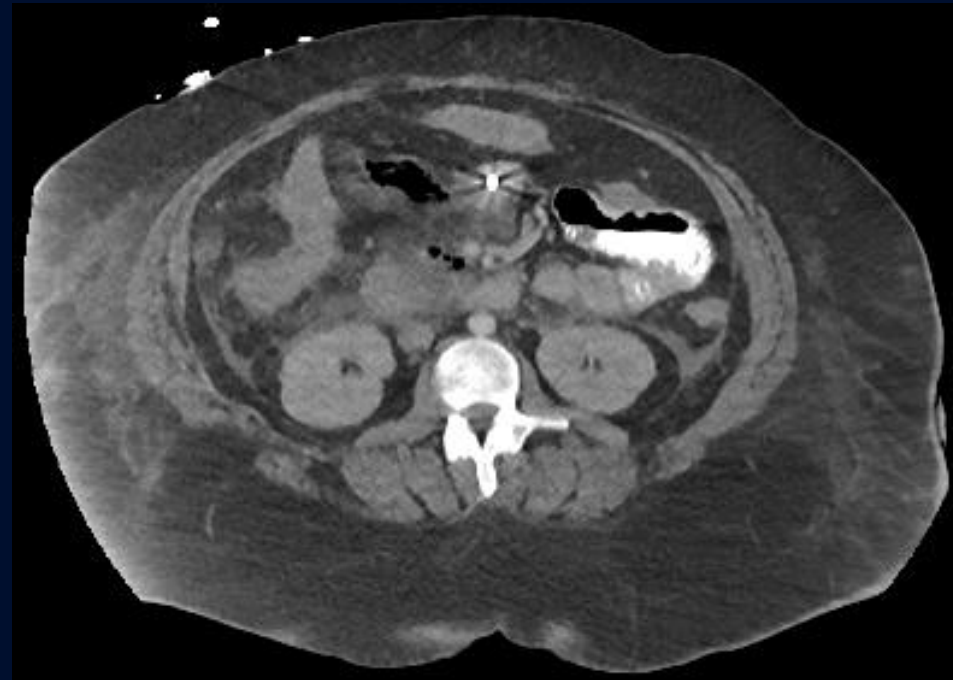
49-year-old female with acute severe  
abdominal pain, burning chest pain  
and acid reflux

Zachary Towne, MS3

# CT with IV & Oral Contrast



# CT with IV & Oral Contrast

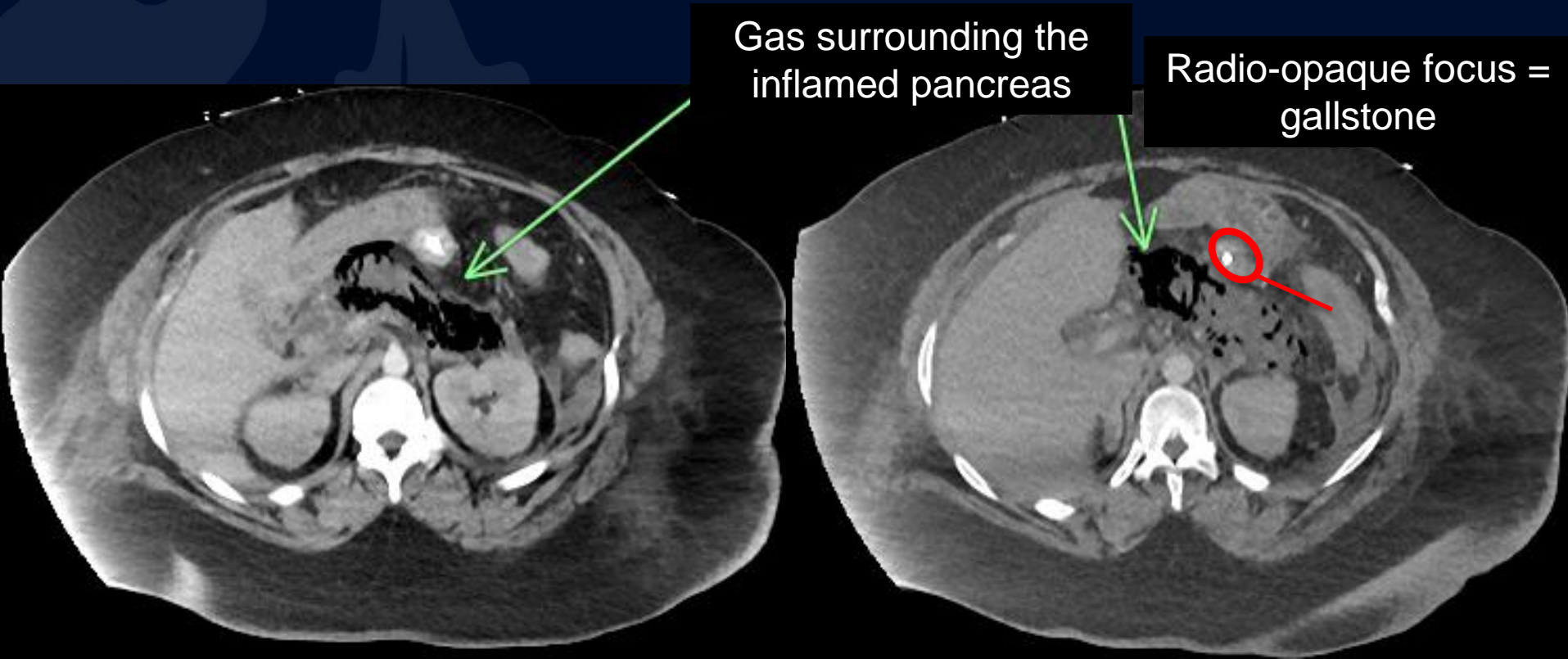




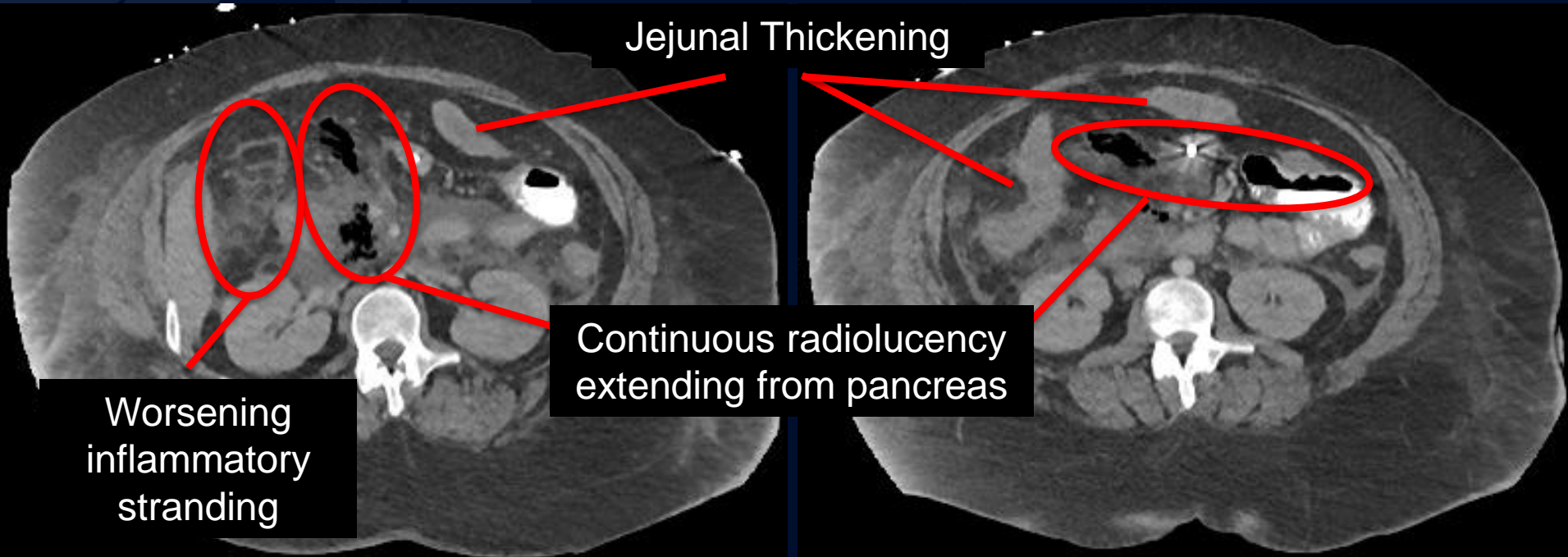
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# Emphysematous Pancreatitis

# CT with IV & Oral Contrast



# CT with IV & Oral Contrast



# Emphysematous Pancreatitis

## Emphysematous Pancreatitis

- Considered as an unusual complication of acute pancreatitis due to necrosis of the pancreas.
  - Acute necrotic collections are common; often lack the inflammatory wall like a pancreatic pseudocyst
  - Occur in 10-20% of patients with acute pancreatitis
- Emphysema due to bacteria producing gas within or surrounding the pancreas
  - Introduction of bacteria via systemic polymicrobial infections or fistula formation between pancreas and digestive tract. Typical organisms include *E.coli*, *Pseudomonas spp*, *Enterobacteriaceae* or anaerobes.
- 80% of acute pancreatitis patients present with mild gas formation; this does not represent increase in severity and does not require aggressive treatment.

## Clinical presentation

- Acute abdominal pain, abdominal fullness, recurrent vomiting, sudden leukocytosis
- Possible associations with alcohol consumption, diabetes mellitus, gallstones or history of pancreatitis

## Imaging

- CT with IV contrast allows for identification of gas within necrotic parenchyma.

## Treatment

- Conservative management: antibiotics, percutaneous interventions
- Aggressive management: surgical debridement of necrotic tissues.
  - No significant difference in mortality or complication outcomes

## Prognosis

- High mortality rates due to sepsis, up to 20-30%.
- Early onset of emphysematous pancreatitis (< 1 week) is associated with higher mortality rate (44.1%)



# References

- Hamada S, Shime N. Emphysematous pancreatitis. *Intensive Care Med.* 2016;42(6):1075-1075. doi:[10.1007/s00134-015-4180-8](https://doi.org/10.1007/s00134-015-4180-8)
- Schattner A, Drahy Y, Dubin I. Emphysematous Pancreatitis. *The American Journal of Medicine.* 2017;130(11):e499-e500. doi:[10.1016/j.amjmed.2017.06.011](https://doi.org/10.1016/j.amjmed.2017.06.011)
- Muzio BD. Emphysematous pancreatitis | Radiology Reference Article | Radiopaedia.org. Radiopaedia. doi:[10.53347/rID-26455](https://doi.org/10.53347/rID-26455)
- Martínez D, Belmonte MT, Kośny P, Ghitulescu MA, Florencio I, Aparicio J. Emphysematous Pancreatitis: A Rare Complication. *Eur J Case Rep Intern Med.* 2018;5(11):000955. doi:[10.12890/2018\\_000955](https://doi.org/10.12890/2018_000955)
- Porter NA, Lapsia SK. Emphysematous pancreatitis: a severe complication of acute pancreatitis. *QJM: An International Journal of Medicine.* 2011;104(10):897. doi:[10.1093/qjmed/hcq154](https://doi.org/10.1093/qjmed/hcq154)
- Balani A, Dey AK, Sarjare S, Chatur C. Emphysematous pancreatitis: classic findings. *Case Reports.* 2016;2016:bcr2016217445. doi:[10.1136/bcr-2016-217445](https://doi.org/10.1136/bcr-2016-217445)
- Brunschot S van, Grinsven J van, Santvoort HC van, et al. Endoscopic or surgical step-up approach for infected necrotising pancreatitis: a multicentre randomised trial. *The Lancet.* 2018;391(10115):51-58. doi:[10.1016/S0140-6736\(17\)32404-2](https://doi.org/10.1016/S0140-6736(17)32404-2)
- van Brunschot S, van Grinsven J, van Santvoort HC, et al. Endoscopic or surgical step-up approach for infected necrotising pancreatitis: a multicentre randomised trial. *Lancet.* 2018;391(10115):51-58. doi:[10.1016/S0140-6736\(17\)32404-2](https://doi.org/10.1016/S0140-6736(17)32404-2)
- Management of acute pancreatitis - UpToDate. Accessed April 11, 2023. [https://www.uptodate.com/contents/management-of-acute-pancreatitis?search=emphysematous%20pancreatitis&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/management-of-acute-pancreatitis?search=emphysematous%20pancreatitis&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1)
- Chida K, Ishido K, Sakamoto Y, et al. Necrotizing pancreatitis complicated by retroperitoneal emphysema: two case reports. *Surgical Case Reports.* 2022;8(1):183. doi:[10.1186/s40792-022-01542-2](https://doi.org/10.1186/s40792-022-01542-2)
- Boumitri C, Brown E, Kahaleh M. Necrotizing Pancreatitis: Current Management and Therapies. *Clin Endosc.* 2017;50(4):357-365. doi:[10.5946/ce.2016.152](https://doi.org/10.5946/ce.2016.152)