Neuroendocrine tumor of the rectum

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Rectal neuroendocrine tumors

• Neuroendocrine tumors (NET) of the GI tract are rare, but the incidence has increased over time
• Increased incidence may be related to increased frequency of endoscopic procedures detecting small lesions
• Small bowel NETs are thought to be most common, but some suggest rectal NETs may become more common
• Rectal NET shows no gender preference, on average in 50’s
• Often asymptomatic, especially small lesions. Can present with pain, bleeding or constipation; “carcinoid” syndrome presentation is uncommon for rectal NET
Case 1: Small, low grade rectal NET

72 year-old female with a 0.6 cm polyp on the right lateral rectal wall seen on virtual colonography (arrows, A and B). The small submucosal polyp was confirmed on CT source images (arrow, C). Biopsy showed a well differentiated NET, intermediate grade (G2), with Ki-67 proliferation index of 5.4%. Following endoscopic excision, the patient has been NED for several years.
Case 2: Large, high grade rectal NET

79 year-old female with a large T2-intermediate signal mass arising from the mid to upper rectum. There is extension into the mesorectal fat (arrow, A), as well as restricted diffusion (arrow, B) and avid homogenous post-contrast enhancement (arrow, C).

Imaging features of rectal NET

- On MRI → usually a small submucosal nodule, and most are < 1 cm
- A minority of rectal NET (~5%) are larger than 2 cm and tend to be higher grade/poorly differentiated histology
- Typically T1 iso- and T2 iso- to hyperintense
- Restricted diffusion and diffuse homogenous enhancement
- Superficial appearance due to location of enteroendocrine cells in the submucosa or muscularis mucosa
- Lymph node metastases are uncommon for small low grade rectal NET, but the risk of nodal metastases is higher for larger, poorly differentiated rectal NET
References


