Introduction:
Neuroendocrine tumors (NETs) of the gastrointestinal tract and the pancreas are rare tumors that arise from cells of the diffuse neuroendocrine system. They comprise about 1.5% of all gastrointestinal and pancreatic neoplasms (2). Overall incidence for males (52%) is slightly more compared with females (48%) (3). In the gastrointestinal tract, 30% of NETs occur in the ileum (2), followed by the rectum (21%–27%) and the appendix (17%–20%). Stomach and duodenum and jejunum are less common sites (4,7). Pancreatic NETs account for 7% of all GEP-NETs. NETs can produce metabolically active hormones and amines, resulting clinical syndrome related to their hypersecretion (1). The nonfunctional tumors tend to be larger and frequently present as locally advanced disease or with metastases (1,4,5). Functional tumors are usually smaller, present earlier and can be sometime be very difficult to identify on Imaging. We have collected 7 cases with different NETs in a six-month period.

Discussion:
The diagnosis of neuroendocrine tumor depends on clinical features, laboratory findings, imaging features, and tissue biomarkers in a biopsy specimen. Morphologic imaging with post contrast computed tomography and magnetic resonance imaging is most widely used for initial evaluation and staging of disease. CT is the most common initial imaging test (2), where unenhanced scans are performed to detect calcification or hemorrhage within the lesions and subsequent multi phase postcontrast scan to detect GEP-NETs and their metastases. As they are often hypervascular and usually more conspicuous in the early arterial phase (10,11). Magnetic resonance (MR) imaging offers improved lesion detection and characterization (8, 9, 12,13) which is best used as a problem-solving tool in patients with negative or equivocal findings in other imaging modalities, such as CT (5). Endoscopic US allows depict small lesions on other imaging methods. It also allows concurrent fine-needle aspiration (FNA) of the lesions and adjacent lymph nodes. Somatostate receptor scintigraphy (SRS) Octreo scan help diagnose receptor-positive lesions by using scintigraphy (13).

Case 1: 64 years old male presented with upper abdominal pain and hypoglycemia.

Findings: CT, MRI and Octreotide scan were done which showed enhancing mass at the head of the pancreas having intense octreotide uptake. Endoscopic ultrasound and biopsy were done which proved pancreatic NET.

Case 2: 57 years old lady presented with upper abdominal pain.

Findings:增强 nodular lesion close to the head of the pancreas is noted in post contrast CT which showed increased tracer uptake in Octreotide scan. Endoscopic USG and biopsy demonstrated NET.

Case 3: 65 years old gentleman with left sided abdominal pain.

Findings: Lobulated mild enhancing calcified mesenteric mass in CT scan showed increased tracer uptake in octreotide scan. Two small lesions were detected in oesophageal not appreciable in CT. Biopsy proved metastatic NET of unknown primary.

Case 4: 70 years old male with right upper quadrant pain.

Findings: Mesenteric mass with calcification, associated with desmoplastic reaction and thickening of the adjacent small bowel wall demonstrated in postcontrast CT scan. Increase uptake noted in Octreotide scan. Post surgical biopsy showed NET in small bowel.

Case 5: 46 years old lady with upper abdominal pain and vomiting.

Findings: A small enhancing nodular lesion is seen in proximal small bowel. Endoscopic biopsy suggested NET.

Conclusion:
GEP-NETs are rare heterogeneous group of neoplasms. With advancement in imaging modalities, detection of NETs has increased in recent years. NETs are being encountered in a DGH setting with less resources and limited imaging modalities. CT and MRI are useful imaging tools, especially when used in conjunction with radio- peptide imaging. It can be managed effectively if Radiologists become mindful and fully aware of findings related to imaging tests available at their centre.

References: