Challenging NET Cases

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Patient Profile 1

69 year old male patient

- Co-morbidities: Diabetes, hypertension, thromboembolic disease, malabsorption

- Initial diagnosis 2003
  - presented with pancreatic obstructive symptoms
  - Underwent surgery: Whipple procedure
  - Pathology: non-functional pNET, well differentiated, Ki-67 2%

- Well until 2015 when recurrent abdominal disease
  - Initial therapy: LANREOTIDE; no response; disease progression
  - Second line: SUNITINIB ; Complicated by thrombocytopenia
  - Third line: EVEROLIMUS; variable response

MRI Findings

Extensive upper abdominal lymphadenopathy involving:

- root of mesentery, celiac region, and medial to stomach
    - 10 x 8.3 x 9.8 cm, previously 8 x 9.2 x 8.8 cm
- IVC to just below hepatic veins, compressing portal vein but remains patent
    - 4.3 x 3.4 x 6.9 cm , previously 5.5 x 4.7 x 7.6 cm
- left renal vein, resulting in multiple collaterals upstream
- right renal artery wrapping around the aorta
    - no thrombosis below right renal vein (present on previous examination)

Therapeutic Options

Medical: combination chemo such as CAP/TEM

Radiotherapy: PRRT

Other alternatives: Immunotherapy

Patient Profile 2

- 65-year-old male patient
- Surgery in 2016
  - Resection of small bowel primary
  - Partial hepatectomy + RFA of liver mets
- Pathology: well differentiated NET, Ki-67 3.6 %

Imaging

- Status post left hepatectomy
- Segments 4A and 4B, two adjacent regions of T1 hypointense, mildly T2 hyperintense signal, likely sites of previous RF ablation
  - Segment 4A, 3.3 x 2.3 cm
  - Segment 4B, 4.9 x 2.4 cm
- No definite evidence of recurrent tumor in RF zones
- Spleen, adrenals, and pancreas are unremarkable
- No ascites or lymphadenopathy in upper abdomen
- Lung bases are clear
- Bone marrow signal unremarkable

Therapeutic Options

Medical:

– Continue SSA and add second agent such as everolimus

Interventional:

– Consider liver embolization

Radiotherapeutic:

– Consider PRRT