Lesion characterization

Hyperechoic lesion (2.5 cm) with central scar at segment VII
Resection: Adenoma
Case

- Male 32 years
- **Von-Hippel-Lindau syndrome**
- Partial pancreatectomy (body and tail) due to adenocarcinoma, Rt partial nephrectomy and splenectomy 2 years ago

2009 MRI: solid lesion around 1 cm at the uncinate process of the pancreas + 1 liver subcapsular lesion 1 cm. + 2 lesions at the left kidney <3cm.
Von-Hippel-Lindau Syndrome

*Inherited multi-system autosomal dominant genetic disorder with abnormal growth of blood vessels (neurocutaneous dysplasia - phakomatosis)*

- **Conjunctiva:** hemangioblastomas, angiomas,
- **CNS:** hemangioblastomas
- **Kidneys:** cysts, RCC
- **Adrenals:** Pheochromocytoma
- **Pancreas:** hemangioblastomas, cysts, neuroendocrine tumours, adenocarcinoma (rare)
- **Liver:** cysts, hemangioma, adenoma
- **Skin:** café au lait stains
- Surgical treatment
- T-shaped linear probe (5-10 MHz; B-K Medical)
- 12.6 mm lesion mixed echogenicity at the uncinate process of the pancreas next to the IVC (white arrow)
IOUS-guided pancreas RFA

- IOUS-guided pancreas RFA as to avoid total pancreatectomy (7 min, CoolTip RF, ValleyLab, USA)

- RFA of the liver lesion (5-minute RF session)

- Plan: surgical treatment of the renal tumours with laparoscopic partial nephrectomy
Follow up

- Pancreatic fistula in the immediate post-surgical follow up (surgical drain placed)

- Normal surgical follow up

- Clinical improvement with decrease of the flow from the fistula (<100mls/day)
Complication

- 22th post-surgical day, 22:00:
- Massive bleeding (large amount of fresh blood from the surgical drain)
- Emergent 3-phase CT scan: non-enhanced, early arterial and delayed
- Regions of RFA-necrosis in the liver and pancreas (white arrows)
- Extensive hematoma around the head of the pancreas
3-phase CT scan

Active bleeding

Pseudoaneurysm
- SMA: Active bleeding
- Celiac axis: negative for bleeding
**Anatomy**

**Anterior pancreatic arcade:** anterior superior + anterior inferior

**Posterior pancreatic arcade:** posterior superior + posterior inferior

*anterior and posterior superior pancreaticoduodenal arteries* (arise from the gastroduodenal artery)

*anterior and posterior inferior pancreaticoduodenal arteries* (arise from the SMA)
Superselective embolization

- Microcatheter (Progreat, Terumo)
- Inferior pancreaticoduodenal artery (posterior arcade)
- Microcoil embolization (2x50mm 0.018-inch coils; SPI)
DSA of the gastroduodenal artery to exclude haemorrhage from the superior pancreaticoduodenal artery (retrograde bleeding)
Follow up

- Bleeding control
- Patient was discharged after 1 month (with the surgical drain)
- Fistula closed after 2 months
- Laparoscopic partial nephrectomy