

When Standard Approaches are Insufficient: Innovate!

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Innovation in Care

- **Communication**
 - **Patient**
 - **Caregivers**
- **Experience**
 - **Medicine is an art based on science**
- **Institutional Resources**



Innovation in Care

- **Knowledge of Nascent Technologies**
 - **Device or pharmaceutical**
- **Application of Novel Techniques**
- **Novel Applications of either established techniques or technology**



Innovation in Care

- **Clinical recommendations (expert opinion)**
 - **Proven**
 - ◆ Most MDs agree
 - ◆ Often standard of care
 - **Unproven (nascent)**
 - **Disproven**
 - ◆ Most MDs agree on lack of benefit or unfavorable risk/benefit



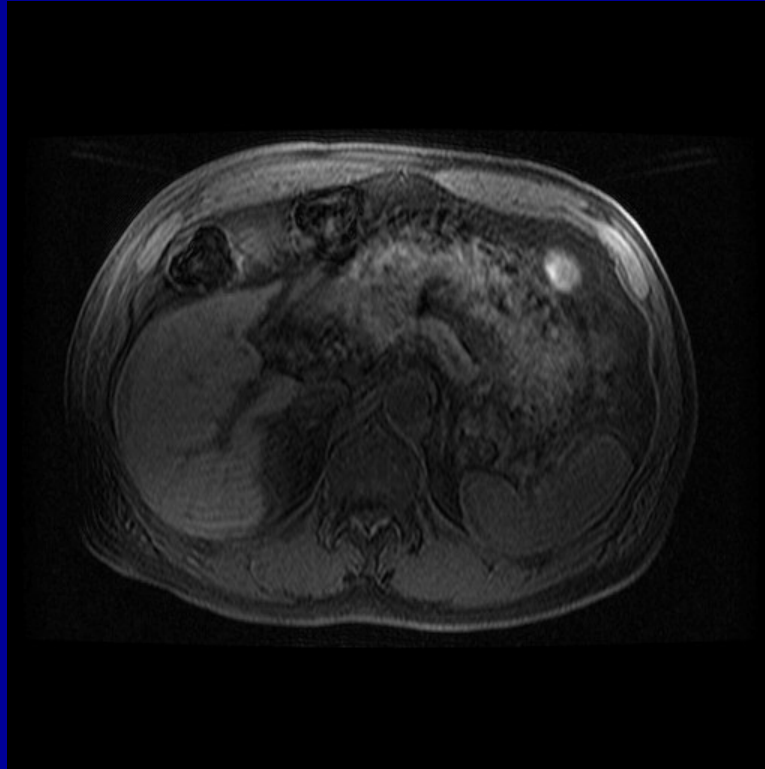
- **Absence of data is not the data of absence**

Case

- **61 year-old male with a family history of pancreas cancer referred to Risk Assessment Program**
 - **Father at age 60 and uncle at age 62**
 - **Any recommendations?**



Case



Case

- **MR and EUS performed over next 2 months**
 - **Both reveal several non-aggressive 3-5 mm cysts in the pancreas**
 - **Any additional recommendations?**
 - **CEA and CA19-9 normal**
 - **ERCP and pancreas cytology normal**



Case

- **A distal pancreatectomy was recommended**
 - **Pre-op, post-op, and nutritional counseling?**
 - **“Pancreas with multifocal mucinous metaplasia with at most mild dysplasia (PaIN1b); pancreatic resection margin with mucinous metaplasia”**
 - ◆ **Spleen unremarkable**



Pancreatic Intraepithelial Neoplasia

- **PanIN-1A**: The neoplastic nature of many cases of PanIN-1A has not been established.
 - **PanIN-1B**: Slight change in microscopic appearance, but act benign.
 - **PanIN-2**: These lesions must nuclear abnormalities. These abnormalities may include some loss of polarity, nuclear crowding, enlarged nuclei, pseudo-stratification and hyperchromatism.
 - **PanIN-3**: These lesions are characterized by a loss of nuclear polarity, dystrophic goblet cells, mitoses which may occasionally be abnormal, nuclear irregularities and prominent (macro) nucleoli
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- Any further recommendations?

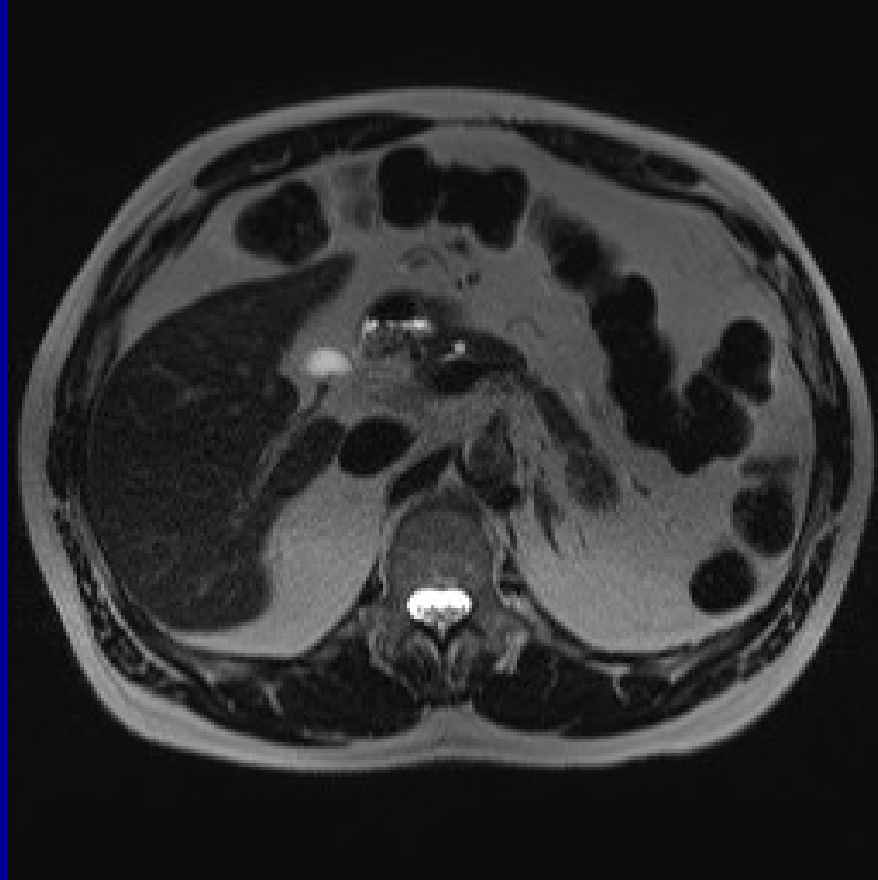


Case

- **What sort of surveillance would you recommend?**
 - **Role for PET, MR, CT, EUS, biopsy?**
 - **For this patient:**
 - ◆ MR q 6 months
 - ◆ EUS q year
 - ◆ CEA, CA19-9 q 6 months



Case



Case

- **Pt underwent 2.5 years of surveillance. Felt well, resumed activities of daily living, weight stable.**
 - **2 EUS and 4 MR with no changes. Stable cyst in pancreas**
 - **CEA and CA19-9 normal.**

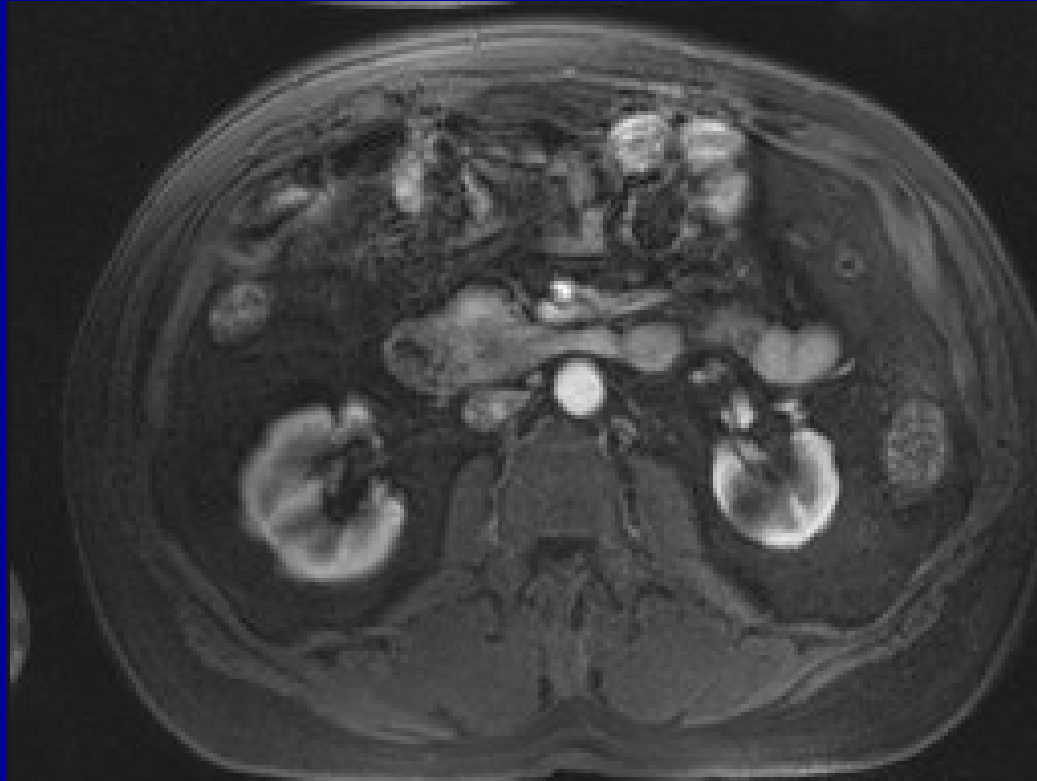


Case

- **EUS performed**
 - **2.5 cm head of pancreas mass**
 - ◆ **FNA revealed adenocarcinoma**
 - **CEA 5.2, CA19-9 247**
 - **Any additional recommendations?**



Case



- **Staging MR without signs of unresectability**



Case

- What are the pre-op concerns, post-op issues, and dietary counseling recommendations?
- Patient underwent a completion pancreatectomy.
 - The resection was uneventful with clear margins.
 - ◆ The tumor was 3 cm in size and 1/11 lymph nodes contained tumor



Case

- **What post-op recommendations would you make?**
 - **Chemotherapy?**
 - **Radiation?**
 - **Protons?**
 - **Surveillance?**



Case

- **Follow-up:**
 - **Patient is doing well without evidence of cancer over 2 years from his completion pancreatectomy.**
 - **The family is entered in the screening program.**

