Diagnosis and management of pancreatic cancer; common dilemmas

Evaluation of patients with obstructive jaundice and dilated CBD without stones in CBD or GB

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Key Issues

- What cross-sectional imaging to perform before ERCP?
- What test to perform if no mass seen on CT/MRI?
- Role of EUS FNA in these patients
- Staging of pancreatic cancer; role of EUS
- ERCP for biliary drainage; how to decide who will benefit?

Best preoperative imaging in pancreatic ca

- Most common: CT
- Future: MRI
- Best technique now: CT and MRI are equivalent*
  - Prospective trial comparing gadolinium enhanced MRI with MRCP vs MDCT
  - Similar diagnostic performance in resectability, vascular involvement, LN assessment and distant metastasis
  - MRI better for conspicuity (clarity of imaging)

*Park et al. J Magn Reson Imaging 2009;30(3):586-95

What test to perform if CT/MRI shows no mass

EUS

Accuracy of EUS compared to ERCP, US and CT in the diagnosis of pancreatic cancer

AUTHOR	TUMORS	n	EUS	US	CT	ERCP
YASUDA, ET AL	ALL TUMORS	50	100%	78%	86%	94%
	TU. < 3CM	13	100%	54%	62%	85%
ROSCH ET AL.	ALL TUMORS	76	99%	67%	77%	90%
	TU. < 3CM	28	100%	61%	64%	86%

ENDOSCOPY, 1992;24:305

EUS compared to spiral CT for detection of pancreatic cancer relative to tumor size

	0-15 mm	15-35 mm	> 35 mm
CT	67	100	100
EUS	100	100	100

Legmann et al AJR 1998

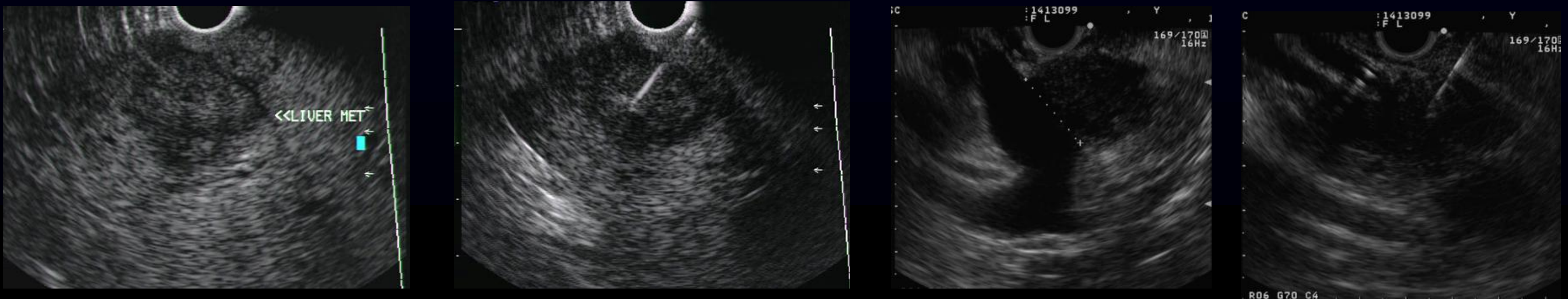
Diagnostic value of EUS – negative predictive value

EUS findings	# pts	Panc surg required	Panc Ca diagnosed
Panc mass	4	3	1
Normal	58	0	0
Chronic pan	13	1	1
Other	6	0	0

Catanzaro et al. GIE 2003;58(6):836-40

Role of EUS FNA in these patients

- FNA indicated if unresectability is determined
  - metastasis
  - vascular (especially arterial) invasion
  - co-morbidities prevent surgery
- Increased use of neo adjuvant protocols is creating increased need for EUS FNA
- Local preferences still vary



Staging pancreatic cancer – role of EUS

- Most cost effective when applied after CT/MRI shows resectabilty
- Persistent problems with arterial assessment – a call for the linear scope
- Likely would be enhanced with contrast agents – better detection of liver mets
- Diminishing role as MRI and MDCT improve

The clinical and economic impact of endoscopic ultrasound, MRA, and helical CT in the staging of pancreatic cancer

STAGING STRATEGY	COST/CURATIVE RESECTION	CURABLE, NOT EXPLORED/100	EXPLORED, NOT CURABLE/100
HCT ALONE	$136,000	0.8	23.0
HCT EUS	$103,400	1.9	4.4
HCT MRA	$115,200	2.8	8.1
HCT-EUS-MRA	$113,500	0.9	10.3

Conclusion: cost per curative resection lowest for HCT followed by EUS

Tierney WM et al. Am J Gastroenterol 2000;95(7):1708-13

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ERCP for biliary drainage; how to decide who will benefit?

- Pre-operative: meta-analysis revealed no trend either for or against relative to morbidity and mortality – Saleh et al. Gastrointest Endosc 2002;56(4):529-34
- Palliation: Improves quality of life
  - Abraham et al. Gastrointest Endosc 2002;56:835-41
  - Luman et al. Eur J Gastroenterol Hepatol 1997;9(5):481-4