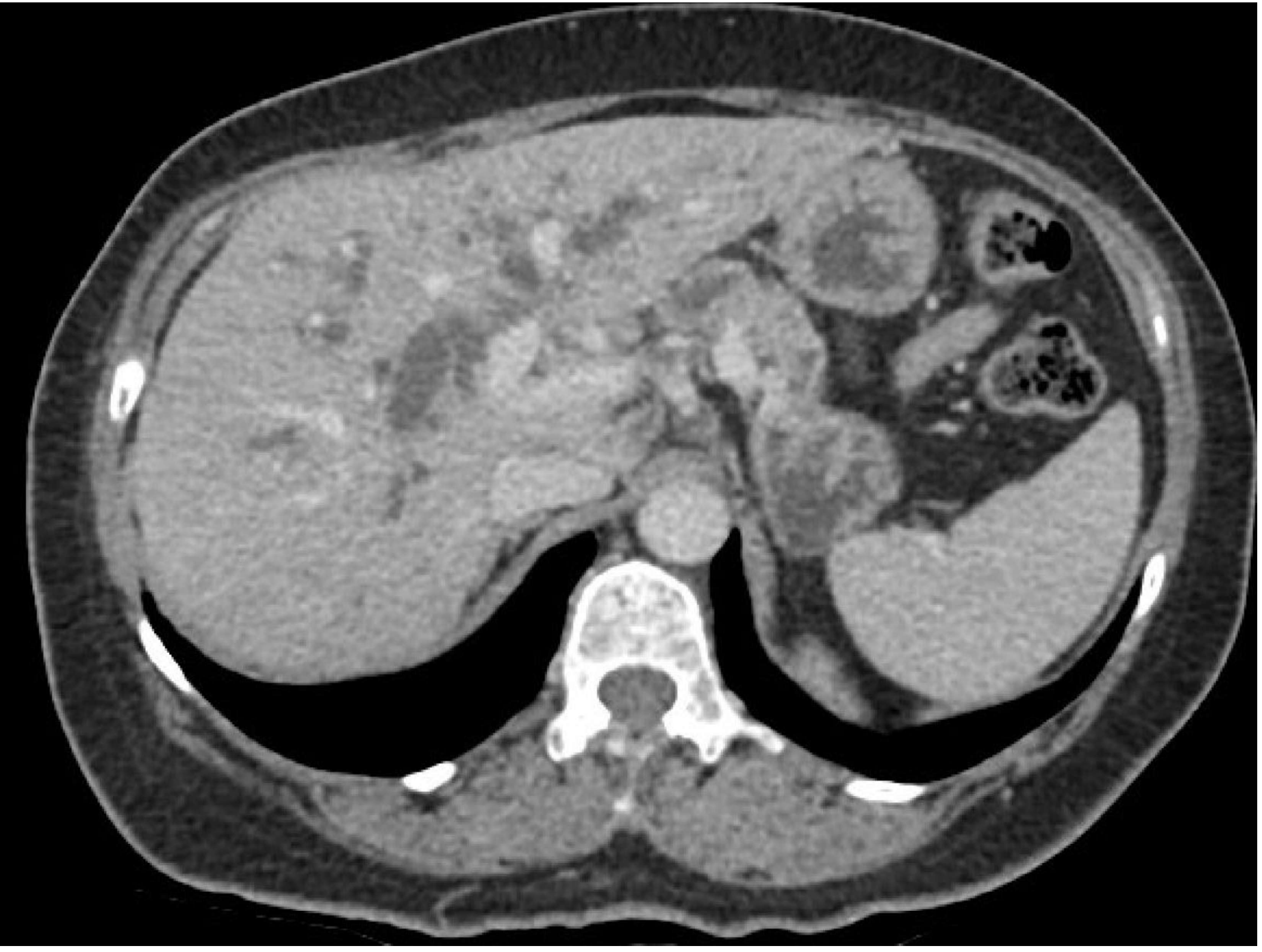
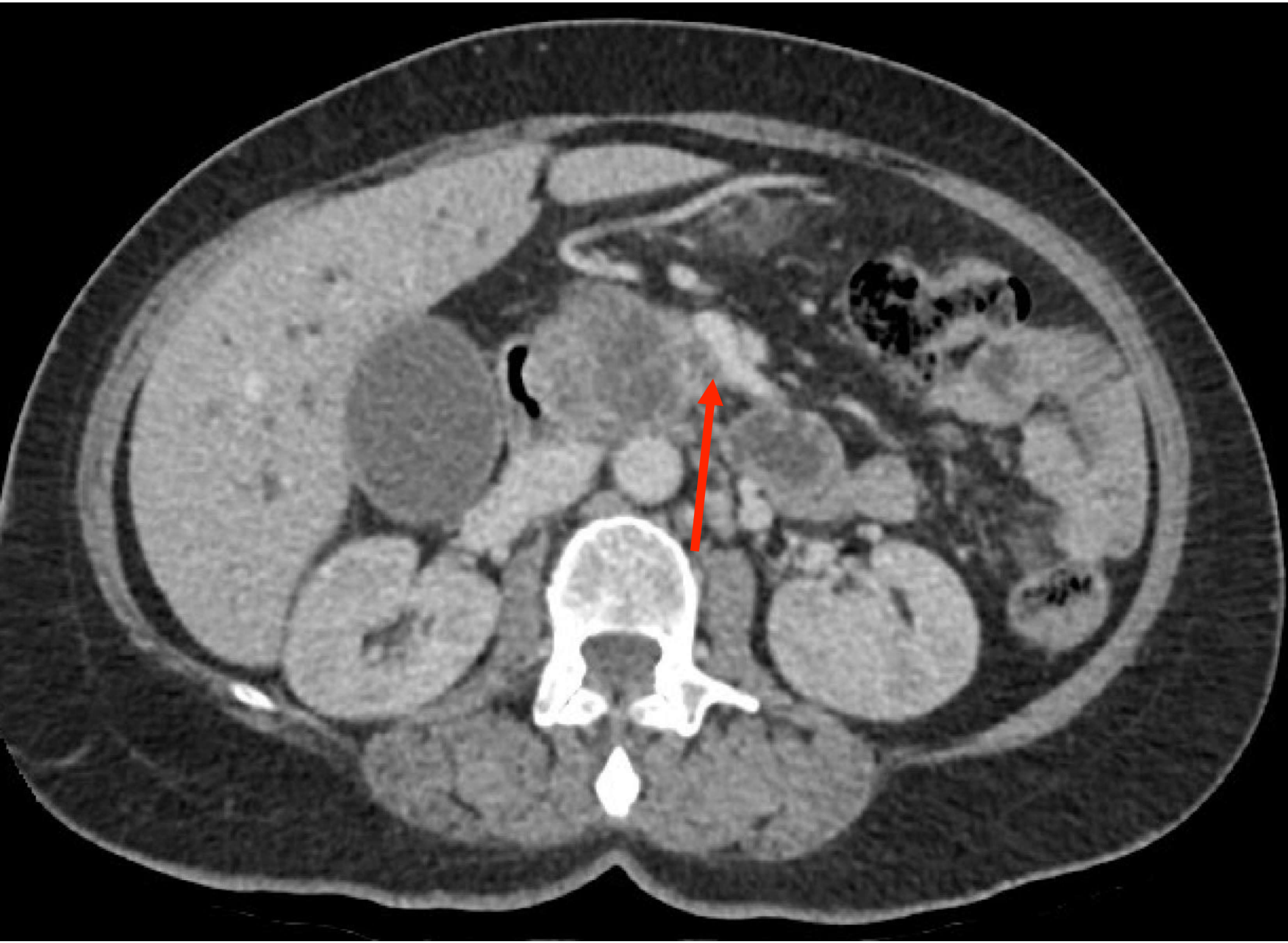
Pancreatic Cancer

Case Study 3

- 62y woman
- Saw GP with painless jaundice
- Referred to NSH
- CT showed pancreatic head mass with some abutment of superior mesenteric vein

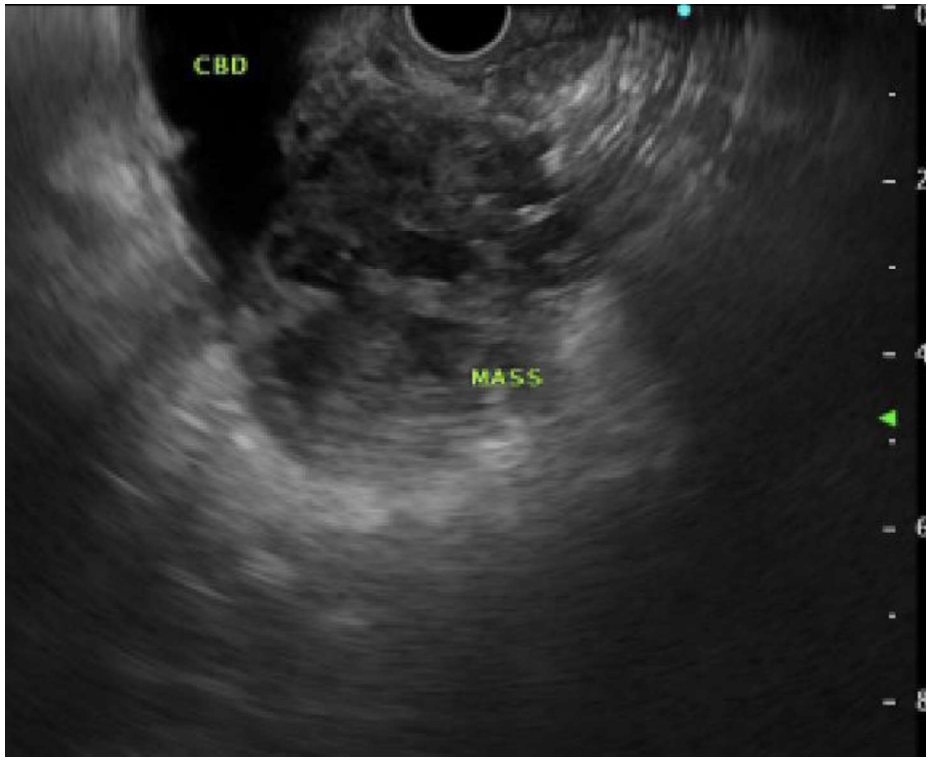




Pancreatic Cancer

Case Study 3

- ERCP stent
- EUS biopsy - adenocarcinoma



Pancreatic Cancer

Case Study 3

- Discussed at MDM - due to venous contact, classify as “borderline resectable” - recommended neoadjuvant chemo
- Workup complete - 7 days after seeing GP

Pancreatic Cancer

Case Study 3

- Neoadjuvant chemo
  - FOLFIRINOX (started 4 weeks after initial presentation)
  - 10 cycles (2 weekly = 5 months) with CT showing no progression and mild reduction in size
- Whipple, 8 weeks after completion of chemo (7 months from initial presentation)
- Uncomplicated recovery, 8 days in hospital

Pancreatic Cancer

Case Study 3

- Pathology: mod differentiated adenocarcinoma, T2N0, PNI-, LVI-, R0
- No further chemo (as completed 12 cycles of neoadjuvant)
- Prognosis?
  - 2-4 years survival

Pancreatic Cancer

Case Study 3

- Take home points
  - Painless jaundice needs urgent assessment
  - Vascular involvement is the most important local anatomical factor that determines resectability
  - Borderline resectable cases are given neoadjuvant chemo
  - Unresectable tumours (due to vascular involvement) may occasionally downstage to resectability
  - Some argue that ALL patients with pancreas cancer should receive neoadjuvant chemo… (debate ongoing)

Pancreatic Cancer

Surgical Techniques

- Whipple
  - Removes head of pancreas including duodenum and bile duct
  - High risk procedure with major complication rates of around 20% and mortality around 2-3%
  - Pancreatic leak (“fistula”) most common major complication
  - Gastrointestinal symptoms common afterwards
  - 3-6 months to recover
  - Longterm potential side effect of exocrine and endocrine insufficiency
  - Mostly done open but occasionally can be done laparoscopically

Pancreatic Cancer

Surgical Techniques

- Distal pancreatectomy
  - Removes variable amount of neck/body/tail of pancreas, often with spleen
  - Moderate risk procedure (lower compared with Whipple) but major complications still >10%.
  - Patients do not usually get exocrine or endocrine insufficiency afterwards
  - Splenectomy has some implications - recommend vaccinations, on-hand antibiotics
  - Often done laparoscopically but some require open

Pancreatic Cancer

Advanced/unresectable/metastatic cancer

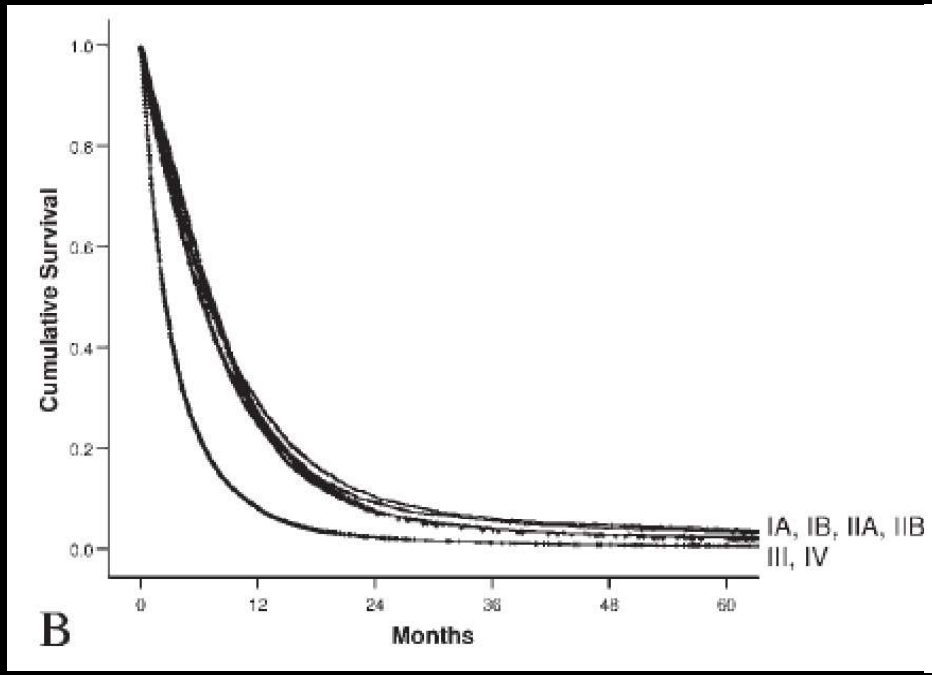
- Majority of pancreatic cancer patients present with advanced unresectable disease
  - Distant mets (liver, lung, distant nodes)
  - Locally advanced with unresectable vascular involvement
- Palliative treatment
  - Chemo - 5-FU/FOLFOX, gemcitabine, FOLFIRINOX
  - Radiotherapy - rarely used as first line
  - Ablation (IRE) - experimental, technically challenging
- Best supportive care
  - Pain relief - community hospice care
  - Treat jaundice - stenting via ERCP or PTC
  - Treat gastric outlet obstruction - stenting, surgical bypass, EUS AXIOS gastrojejunostomy

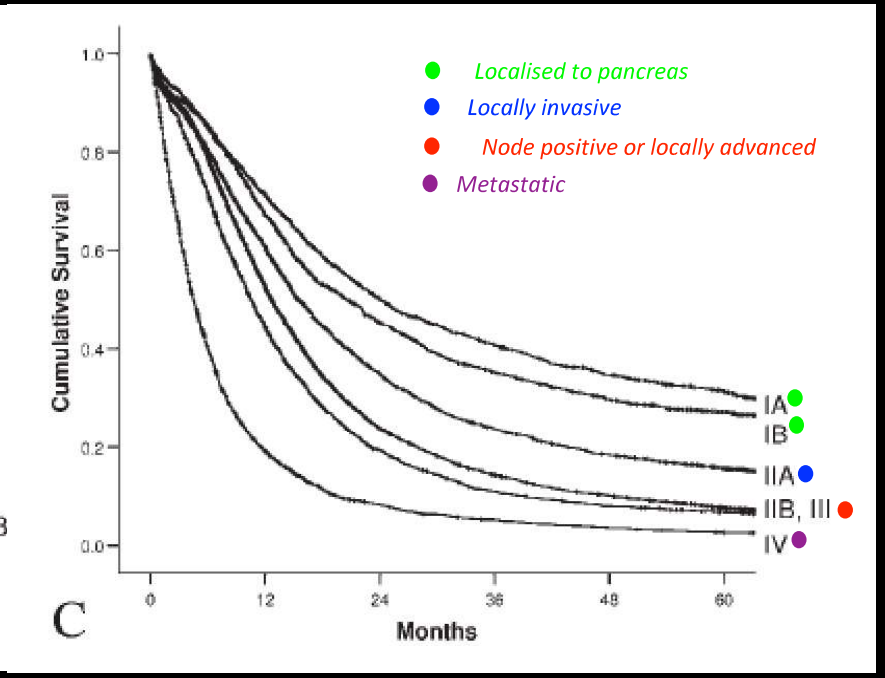
Pancreatic Cancer

Chemotherapy

- Pancreas cancer is an aggressive disease with early systemic spread
- Surgery alone rarely cures
  - All patients with resected pancreas cancer regardless of stage should be considered for chemotherapy
  - In resected cases, chemotherapy (adjuvant) prolongs life by 12-18 months on average
  - Debate regarding pre vs post-op chemo
- In unresectable/metastatic cases, chemo prolongs life by 6-12 months

Validation of AJCC 6th Edition (2002) PDAC





Left: unresected
Right: resected

Bilimoria et al. Cancer 2007

Median Survival by Surgical Treatment and AJCC Stage in Months

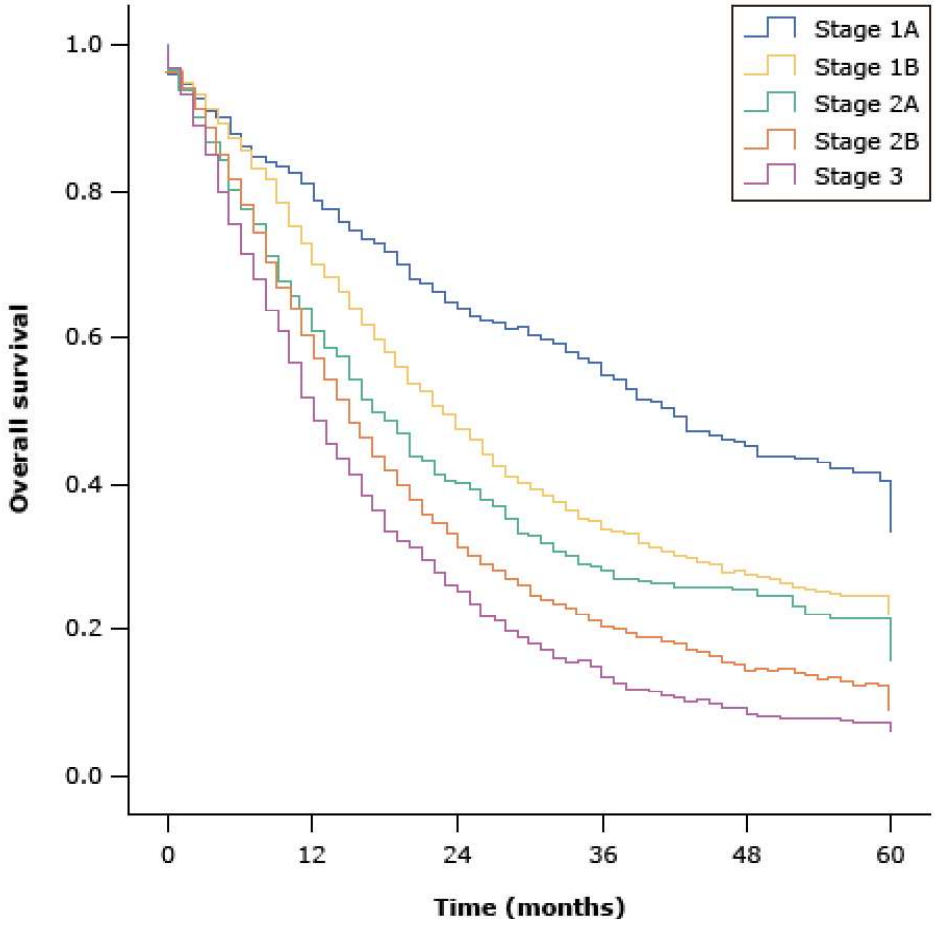
Stage	Nonresected Patients	Resected Patients	All Patients
Ia	6.8	24.1	10.0
1b	6.1	20.6	9.1
IIa	6.2	15.4	8.1
IIb	6.7	12.7	9.7
III	7.2	10.6	7.7
IV	2.5	4.5	2.5
Total	**3.5**	**12.6**	**4.4**

AJCC, American Joint Commission on Cancer.

Data from Bilimoria KY, et al, 2007a: Validation of the 6th edition AJCC pancreatic cancer staging system: report from the National Cancer Database. Cancer 110(4):738-744.

PDAC Survival AJCC 8th Edition (2017)

Predicted overall survival for patients with resected pancreatic cancer according to the eighth edition (2017) American Joint Committee on Cancer (AJCC) prognostic stage groups



	Numbers at risk					
Time (months)	**0**	**12**	**24**	**36**	**48**	**60**
Stage 1A	681	492	314	210	135	61
Stage 1B	1548	1044	588	358	227	99
Stage 2A	581	350	179	105	75	36
Stage 2B	3591	2110	992	518	300	135
Stage 3	2068	1049	421	196	87	40

The eighth edition AJCC Staging System predicts overall survival for patients with resected pancreas cancer and indicates the corresponding number of patients at risk.

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