Advances in Pancreas Surgery

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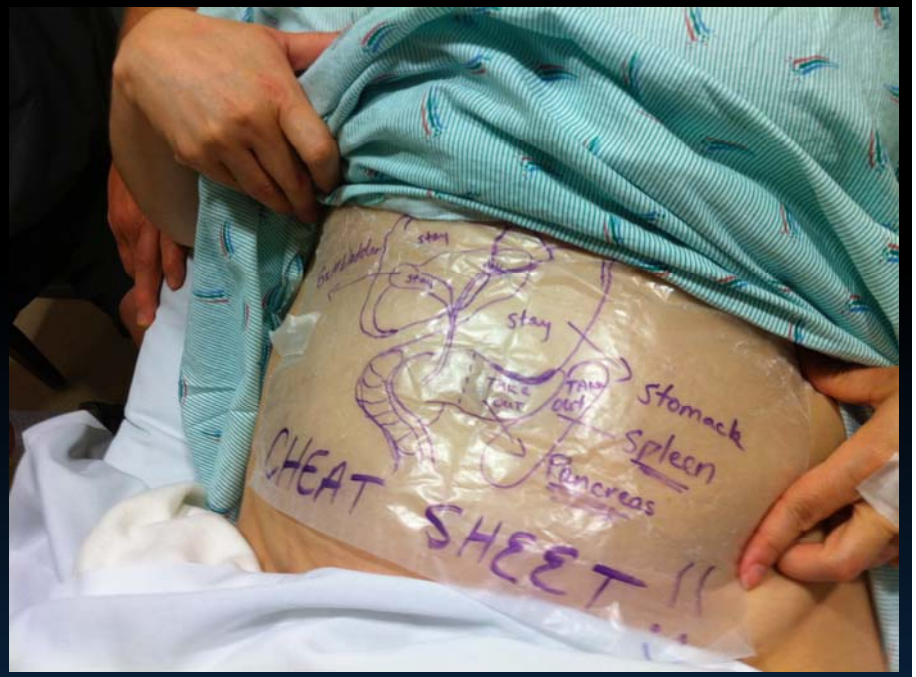
What advances are there?



- Improved evaluation, classification of pts, planning of procedures, image review
- Improved survival of resected pts
  - Crazy good recent results
- Avoided injury
- Lessened impact of surgery on pts

Evaluation of Pancreas Tumors

- Multidisciplinary tumor board at high volume hospital
- High quality pancreas protocol CT (thinnest possible < 3mm, prefer 1mm)
  - Within 4-6 weeks of surgery, prior to stenting
- CT chest with contrast
- EUS-FNA preferred diagnostic tool
  - 1999 EUS useful, 2018 mandatory*
- CA 19-9 important (repeat after resolution of biliary obstruction)
- MRI and PET only as problem solving tools (indeterminate liver lesions, non regional adenopathy
- +/- diagnostic laparoscopy

*Gress. Gastrointest Endosc 1999 Dec;50(6):786-91.
NCCN Guidelines Version 3.2017Pancreatic Adenocarcinoma

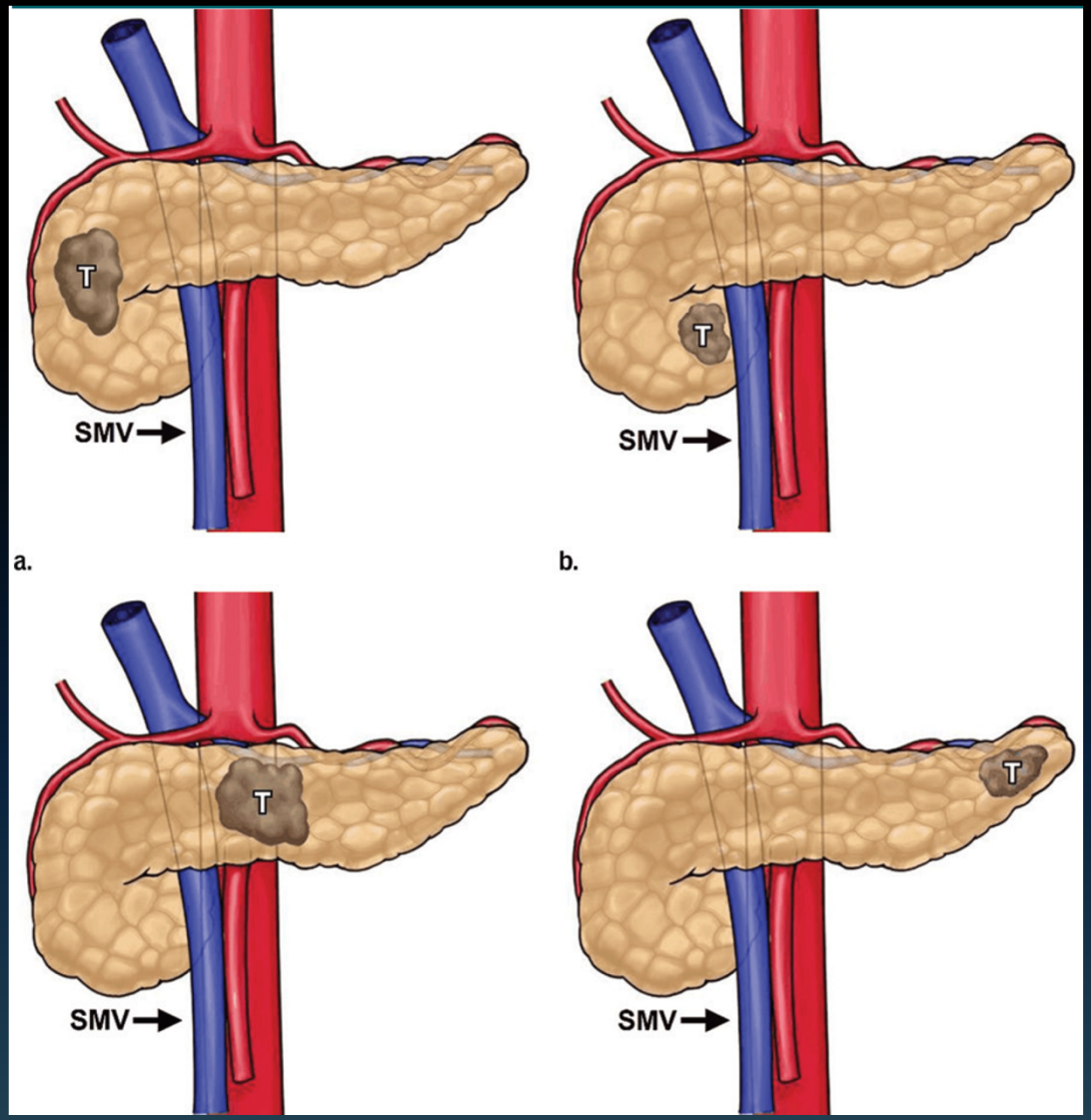
Pancreas Resectability

Resectable

-no contact

mesenteric

vessels.



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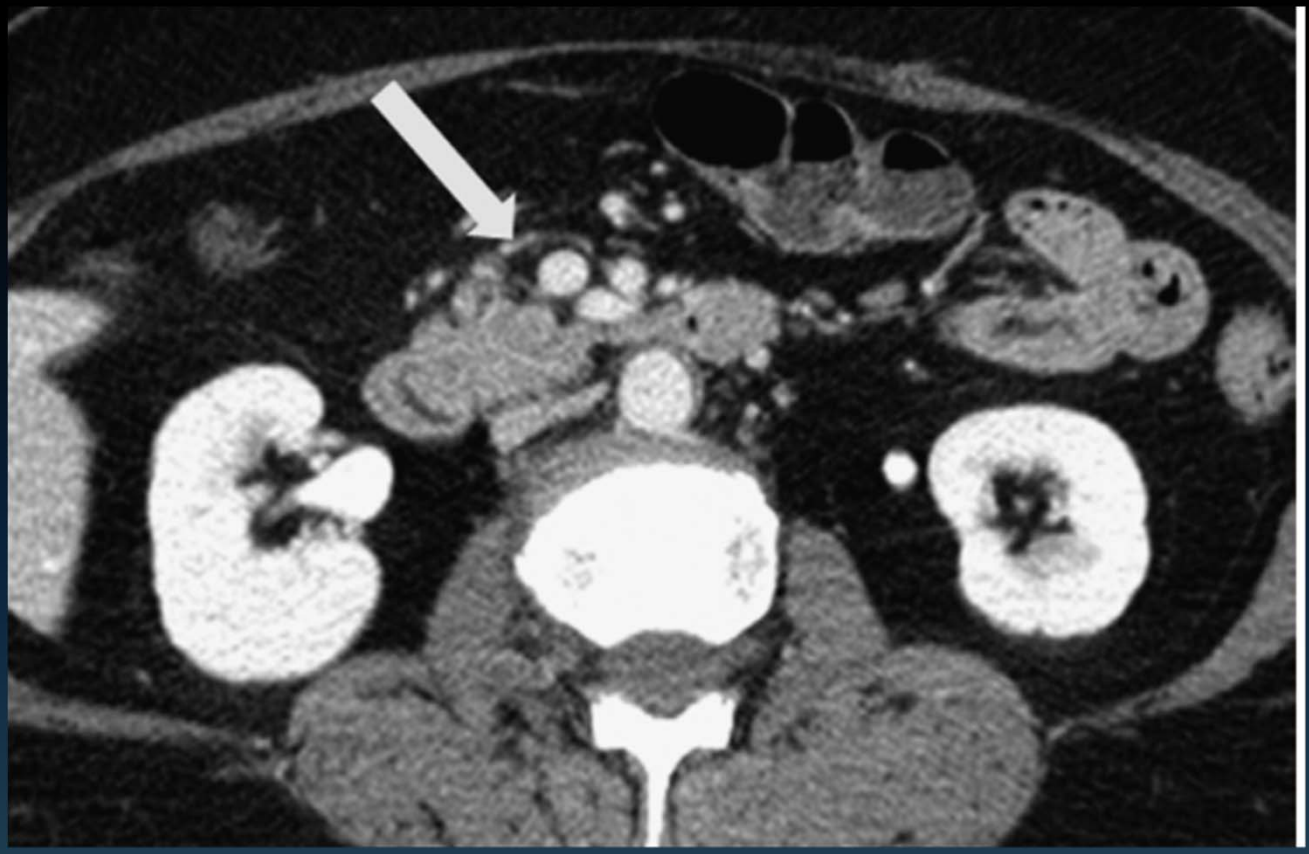


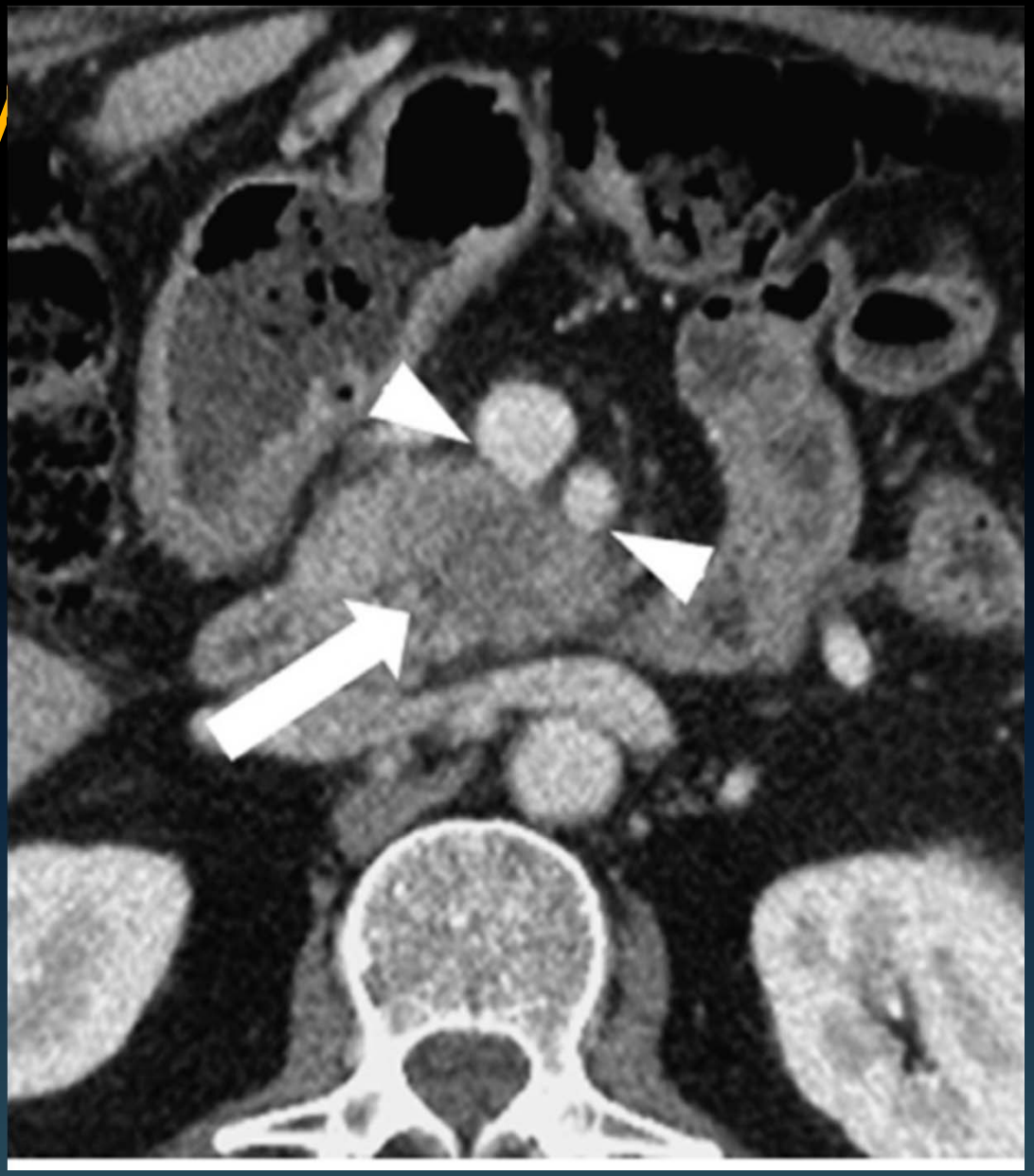
Resectability

Borderline

-contact mesenteric vessels, < 180 deg artery

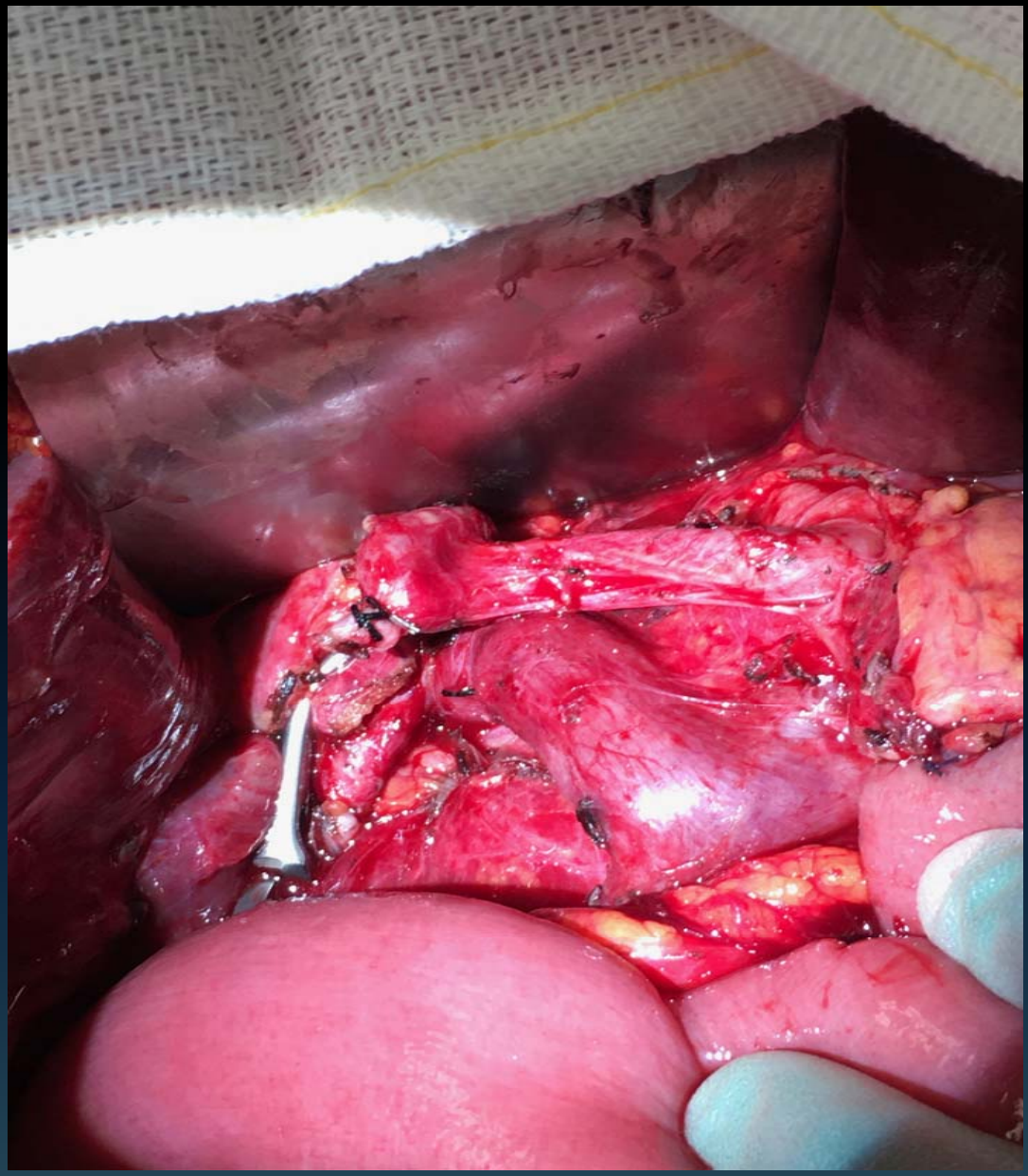
-distortion, clot OK

-reconstructable



Arterial Anatomy -Borderline Criteria

- Contact with CHA, no extention to celiac axis or hepatic artery bifurcation
- Solid tumor contact with SMA < 180
- Contact with variant arterial anatomy (replaced right HA)



Callery 2009. Ann Surg Onc, 16:1727.

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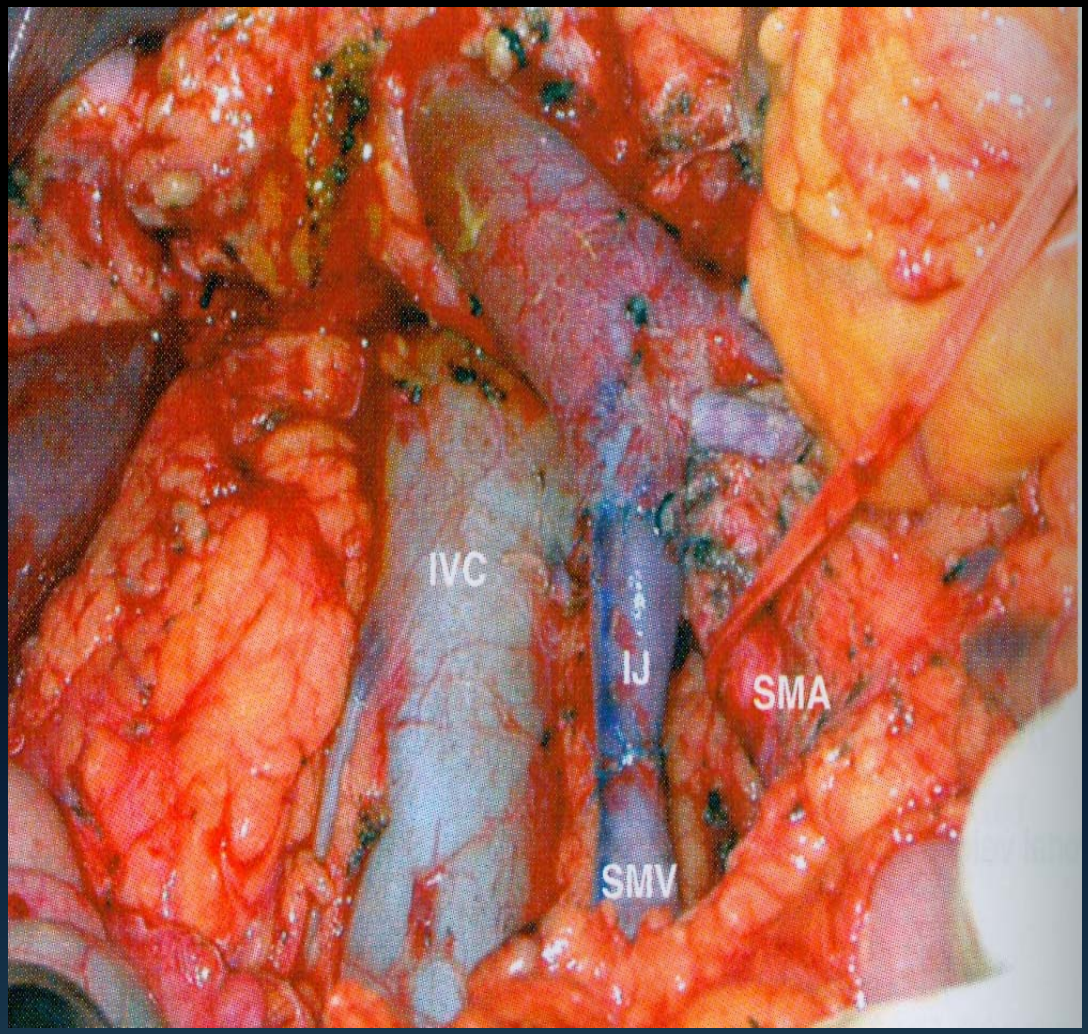
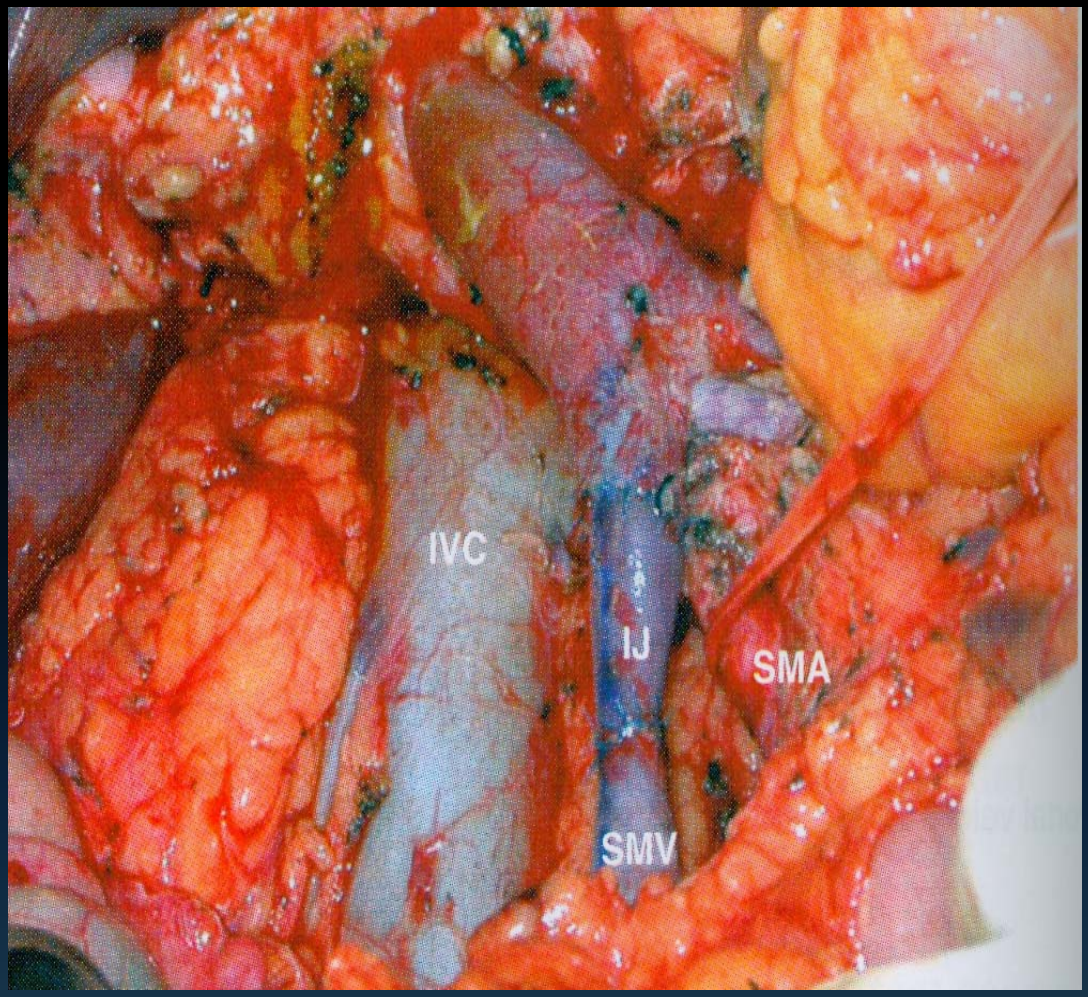


Venous Anatomy -Borderline Criteria

- Contact with SMV or PV > 180
- Contact of < 180 with contour irregularity of vein or thrombosis
- Suitable vessel for resection and reconstruction



Doug Evans MDACC

Resectability

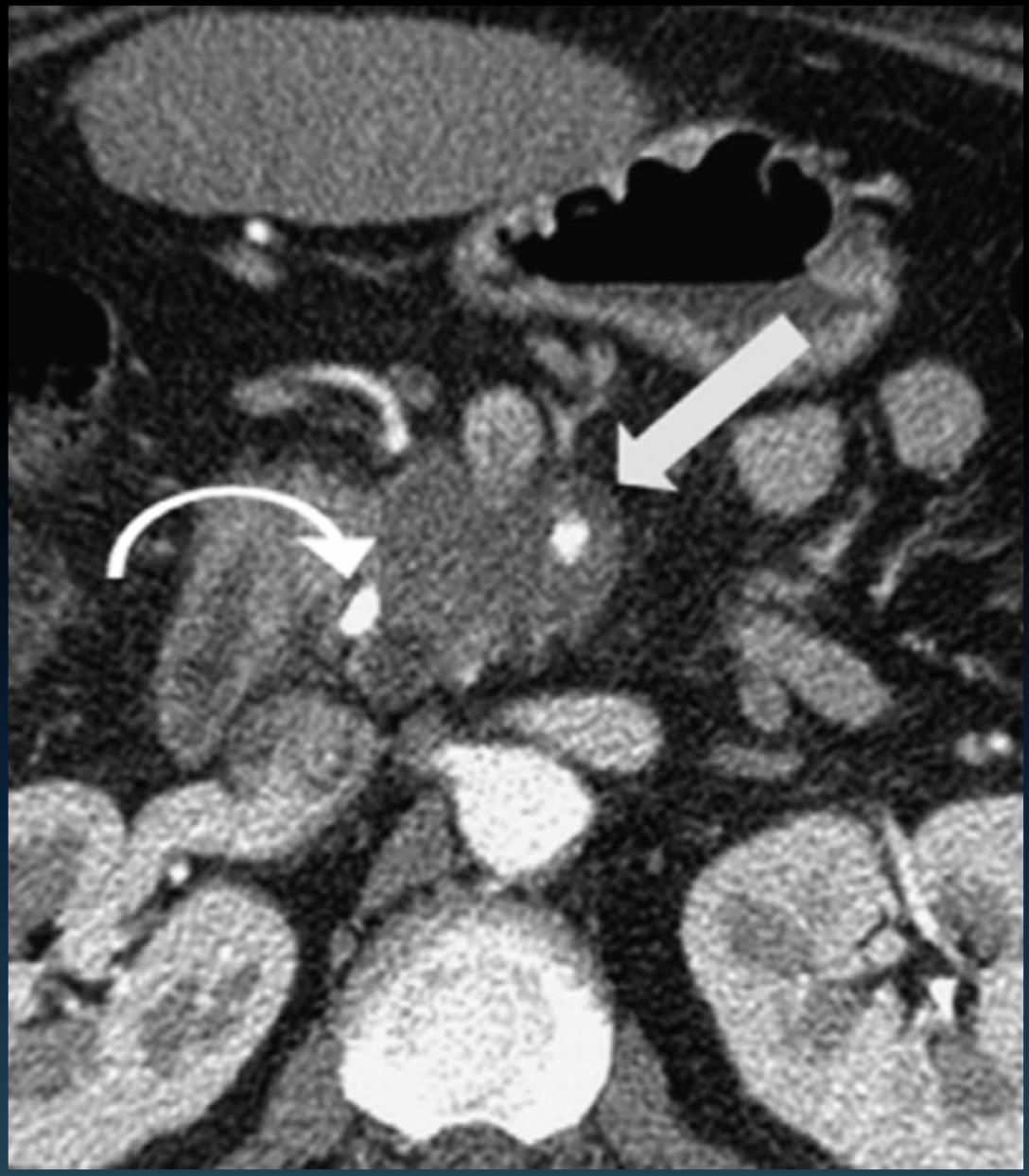
Local advanced/

Unresectable

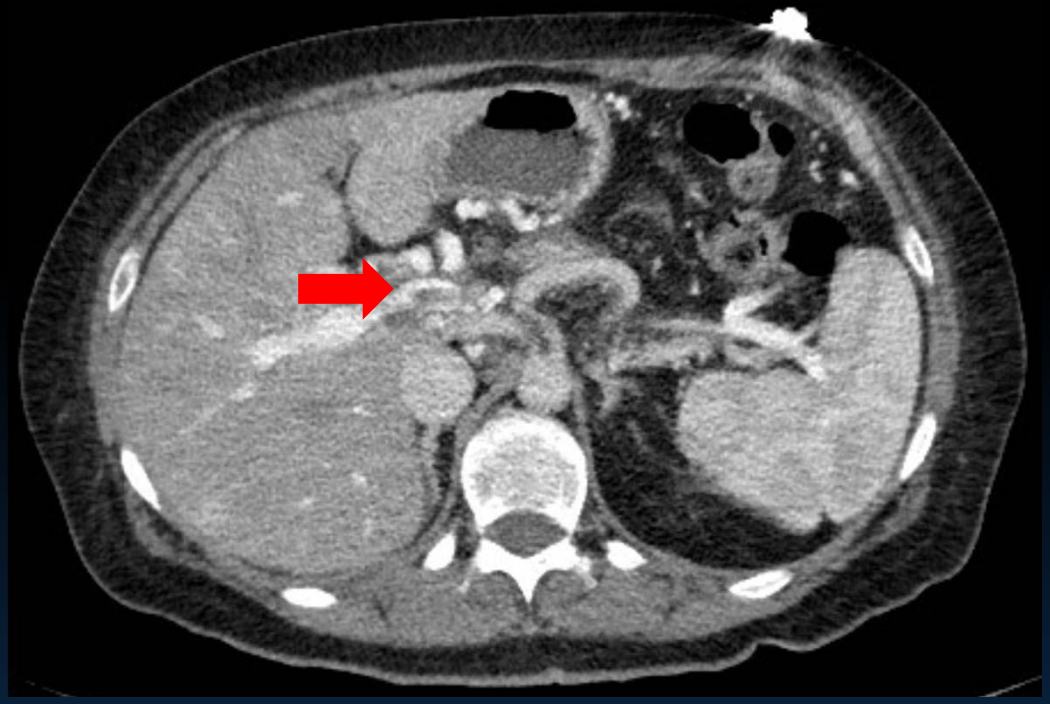
-arterial mesenteric

encasement.

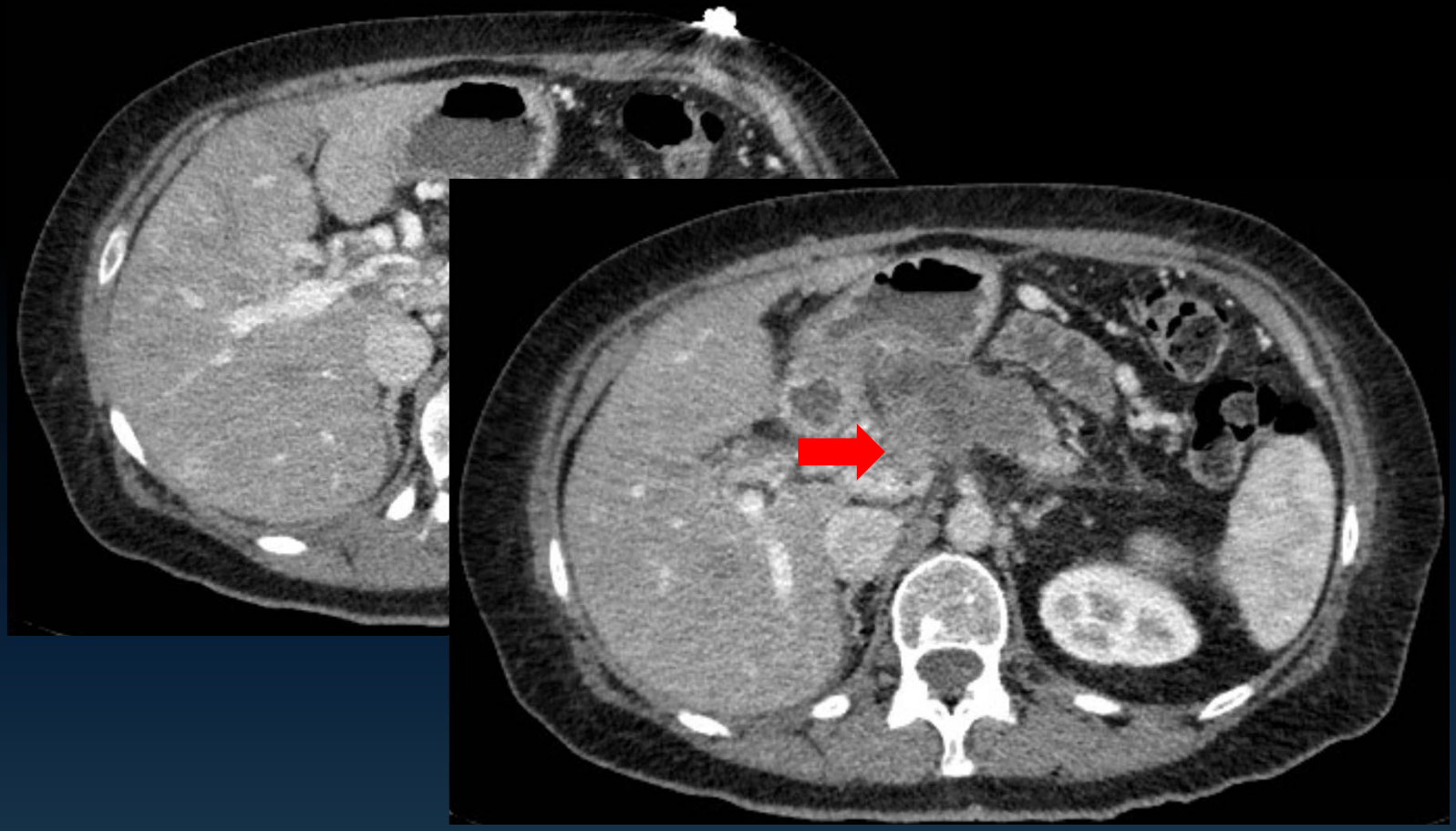
-nonreconstructable



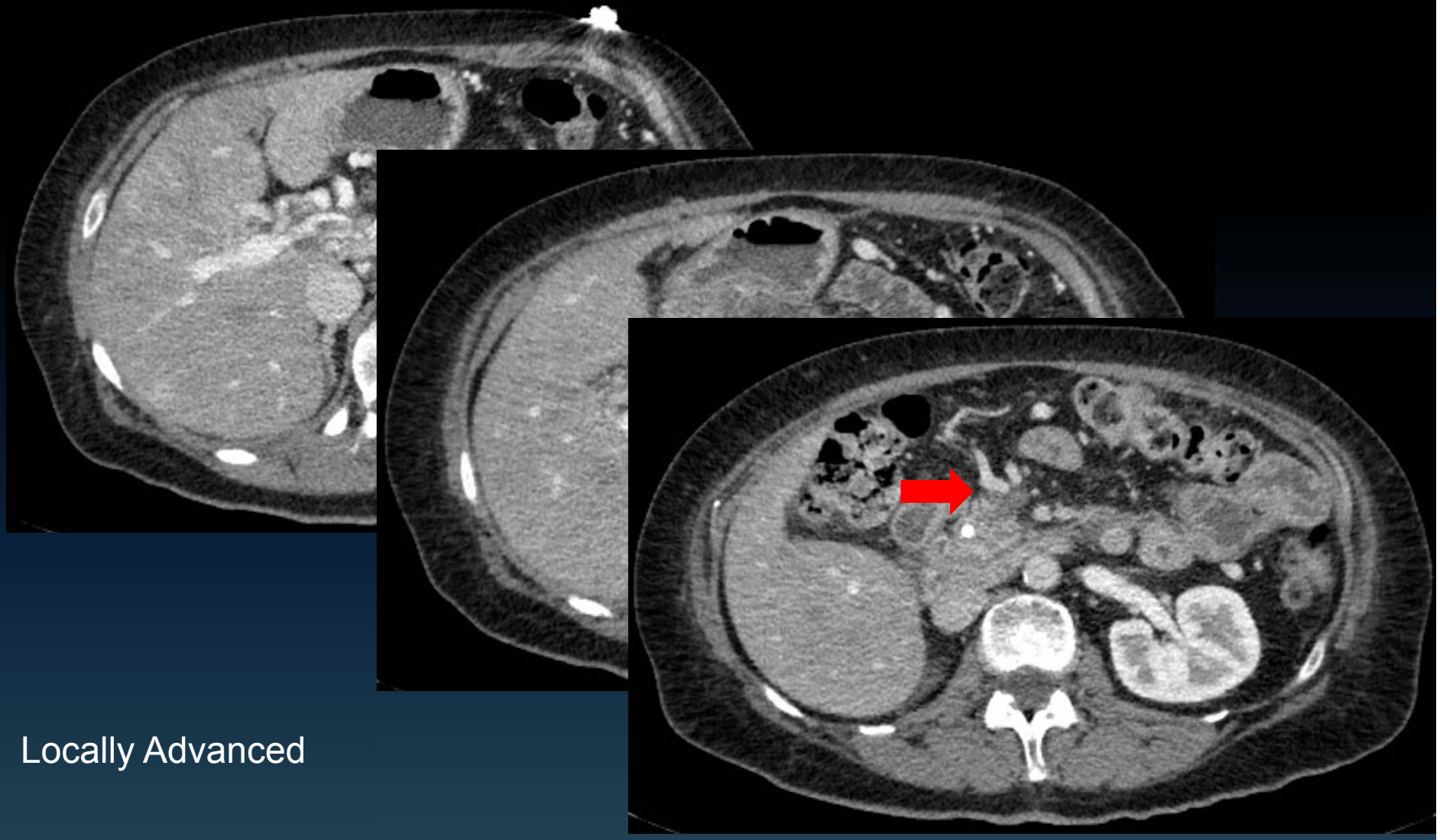
Borderline vs local adv



Borderline vs local adv



Borderline vs local adv



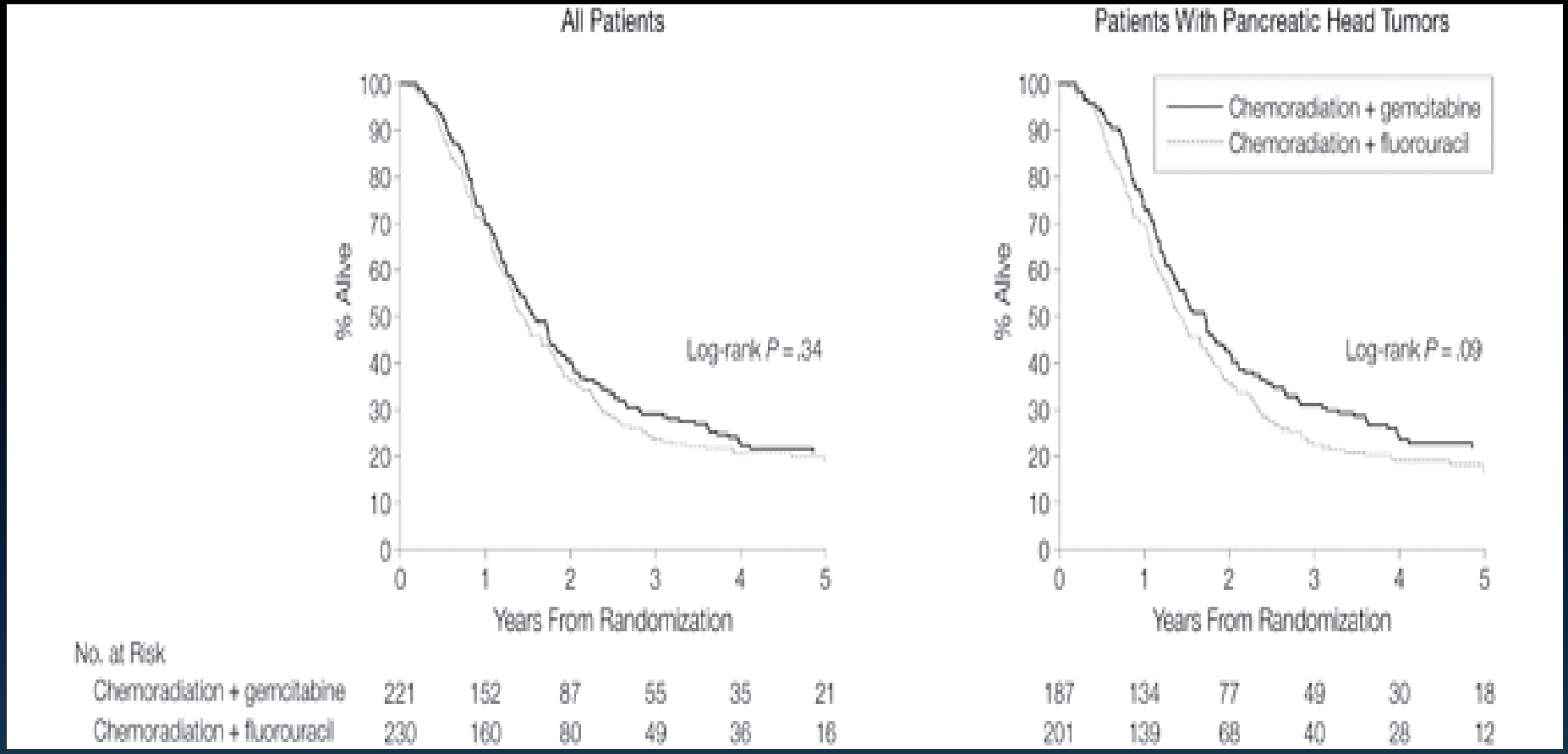
Locally Advanced

RTOG 9704

- First American phase III trial since GITSG in 1970's
- Still utilized radiation, whereas Europe has dropped EBRT from pancreas trials
- Completed 2002, 538 pts

Regine, W. JAMA 2008;299:1019

RTOG 9704



Regine, W. JAMA 2008;299:1019

S1505 SWOG clinical trial number

A Randomized Phase II Study of Perioperative mFOLFIRINOX versus Gemcitabine/nab-Paclitaxel as Therapy for Resectable Pancreatic Adenocarcinoma

Open

Phase II

Accrual

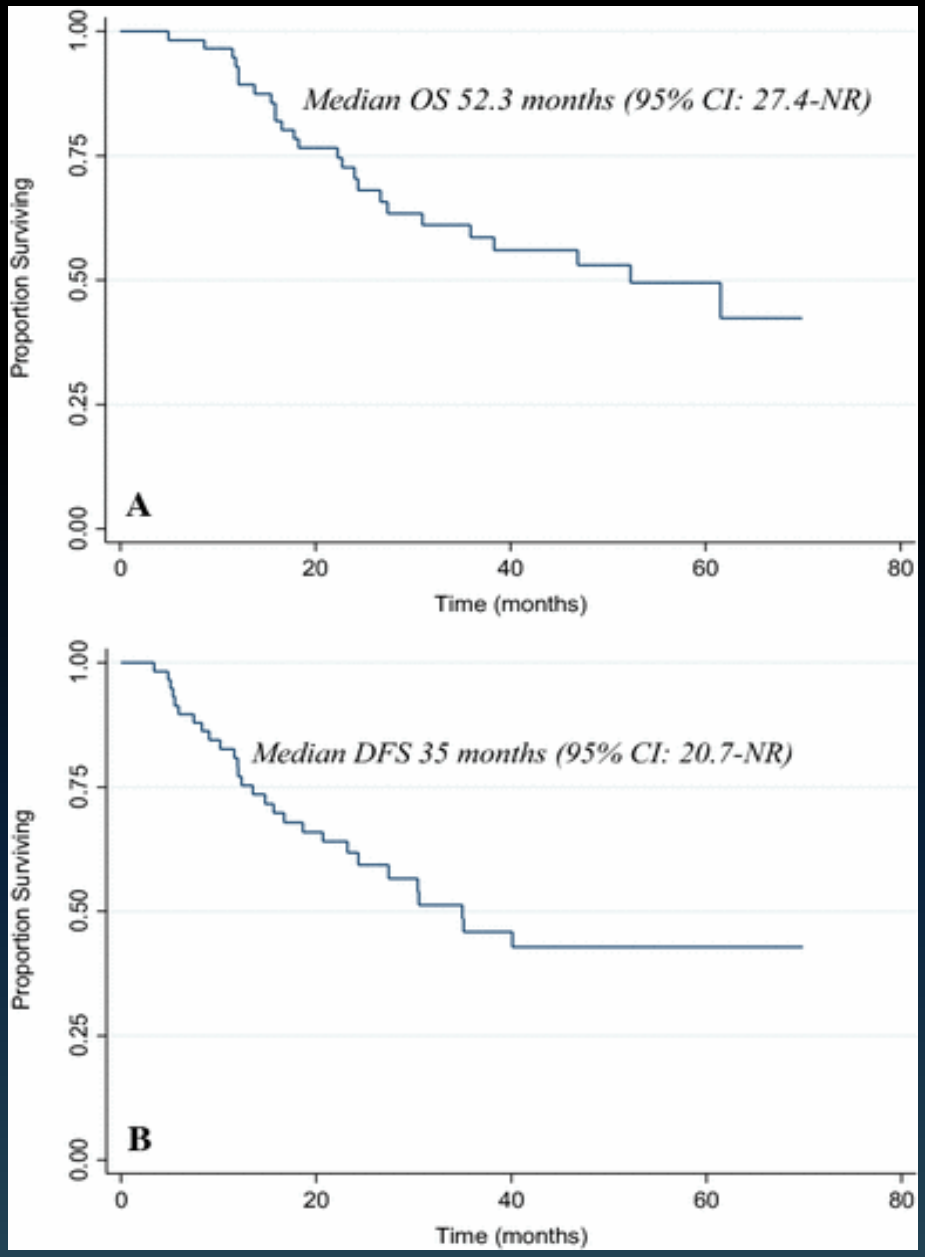
Abbreviated Title	Perioperative FOLFIRINOX vs Gem/nab-Pac for Resectable Panc Adeno
Status Notes	S1505 is now re-activated as of 06/16/2017 at 01:00 pm ET.
Activated	10/12/2015
Participants	ALL NATIONAL CLINICAL TRIALS NETWORK MEMBERS

SWOG 1505

- Resectable pancreatic adenocarcinoma pts
- Measurable disease, left or right sided
- Randomized to
  - mFOLFIRINOX every 28 days, 3 courses pre op and post op
  - Gem Abraxane similar split course
  - Pts with progressive disease avoid surgery

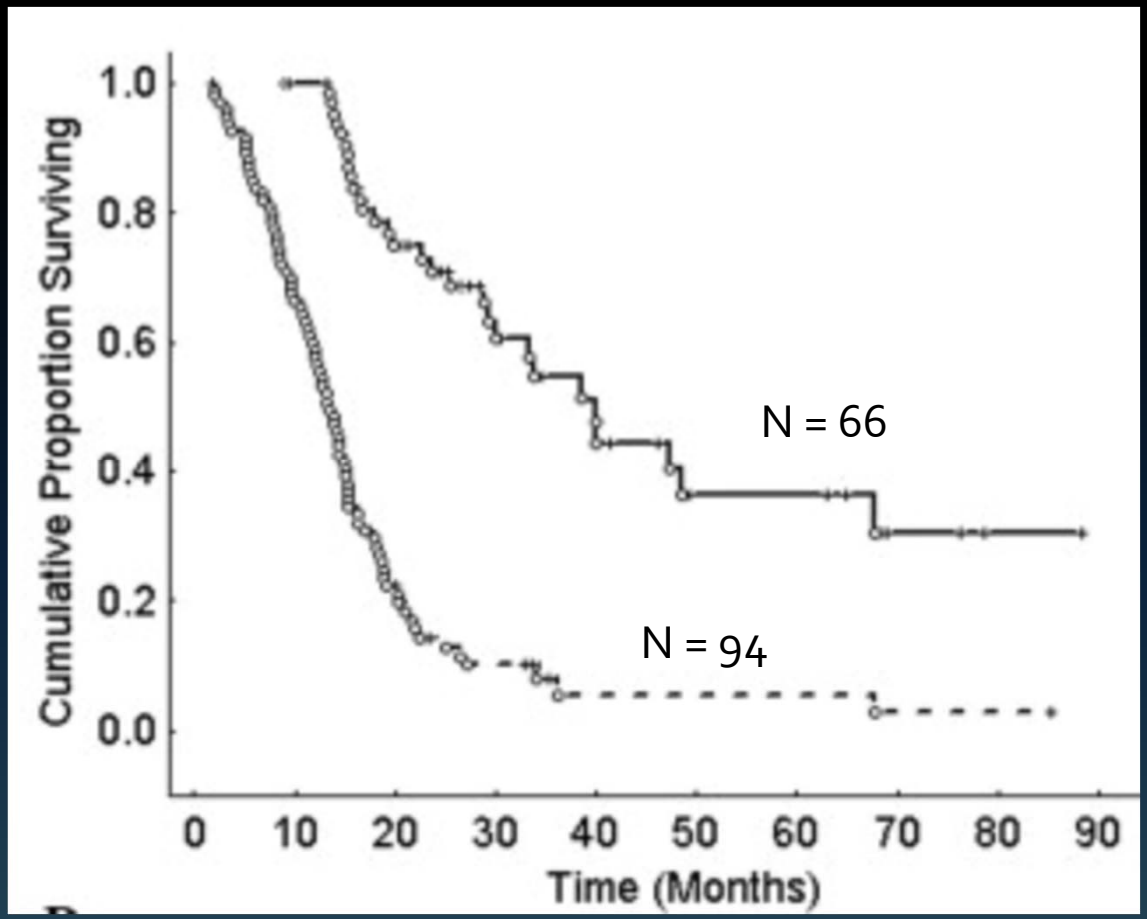
Gemcitabine and Taxane Adjuvant Therapy with Chemoradiation in Resected Pancreatic Cancer: A Novel Strategy for Improved Survival?

- Retrospective database report
- 102 pts down to 58 pts
  - No adjuvant tx
  - Medically unfit
  - Surgical complications
  - Different chemo or RT
- Chemo RT
  - 5040 cGy
  - 5-FU/Cis/α interferon



Kanji, Rocha. Ann Surg Onc Jan 2018 on line

MDACC neoadjuvant borderline trials 1988-2006



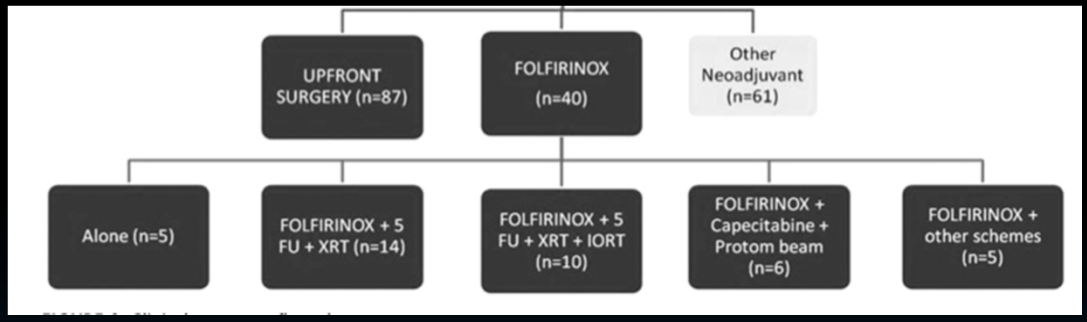
Katz. JACS 2008. 216:833.

Alliance A021501

- **Preoperative chemotherapy vs. chemotherapy and short-course radiation for borderline resectable adenocarcinoma of the head of the pancreas**
- **Randomization of 8 preop cycles FFX vs. 6 cycles FFX + hypofractionated XRT** (5 days, SBRT or other)
- **Approved by NCI GISC, waiting.**

Matt Katz MD PI

Treatment Borderline Resectable



- Crazy good result #2
- Ferrone, Fenandez-del Castillo et al
- 188 Borderline/LA pts resected
  - 40 neoadj FOLFIRINOX
  - 87 no neoadj treatment

Ferrone Ann Surg 2015. 261:12

Hospital Volume in Pancreas

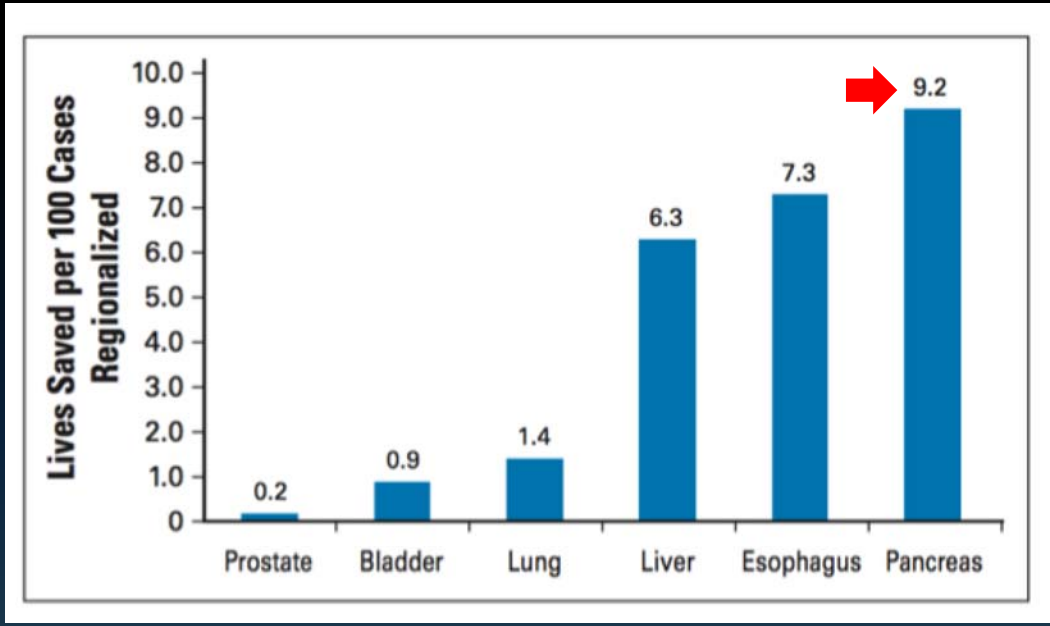
Hospital Volume in Pancreas Surgery

More than operation

Patient rescue

Multidisciplinary care

Oncologic outcomes



Number of lives saved for every 100 procedures regionalized

Hollenbeck et al. J Clin Oncol 2007

Methods

National Cancer Database, 1998-2012

Open Pancreaticoduodenectomy

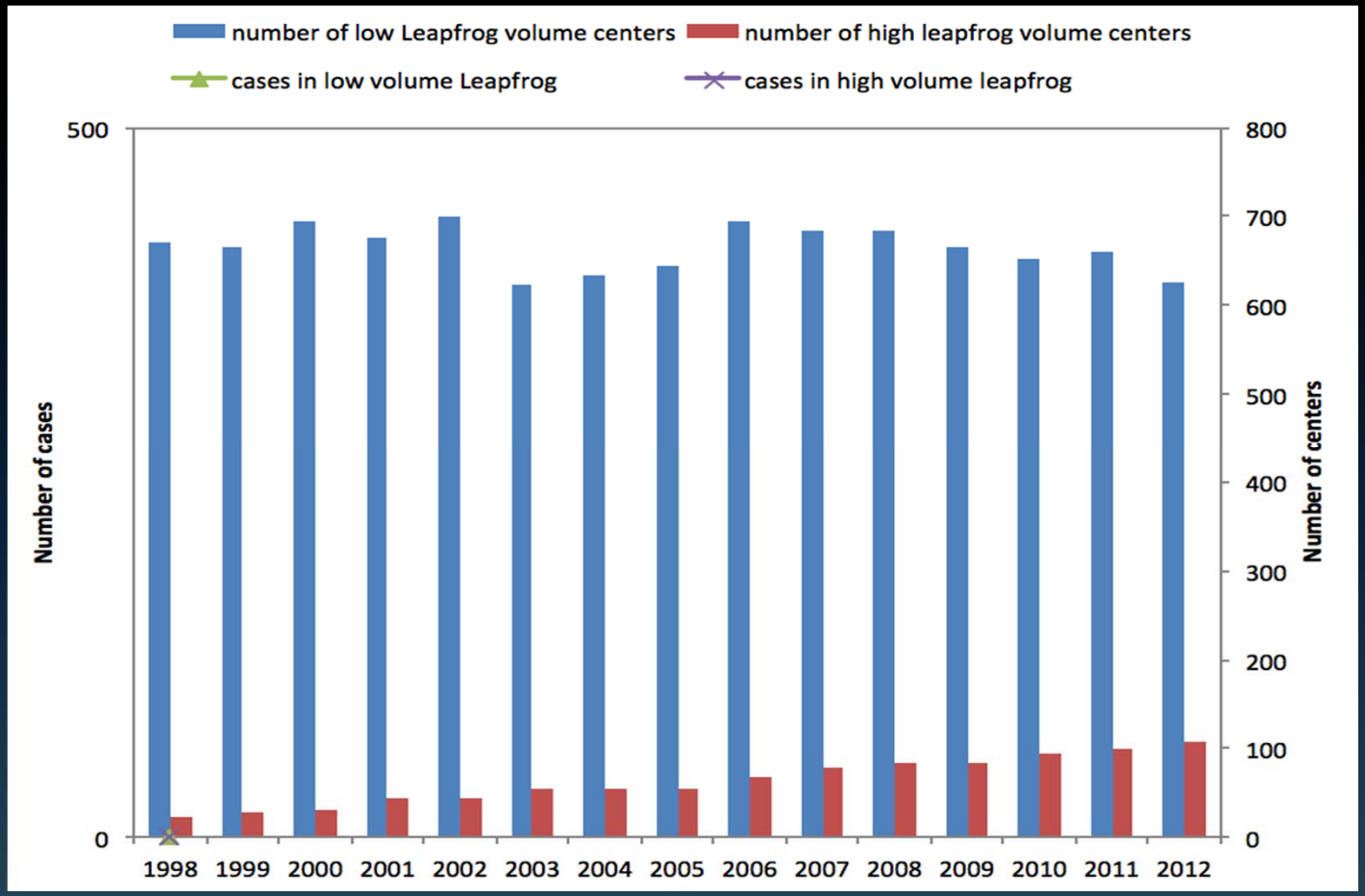
Leapfrog Criteria for Volume

- Low-volume: < 11 PD per year
- High-volume: ≥ 11 PD per year

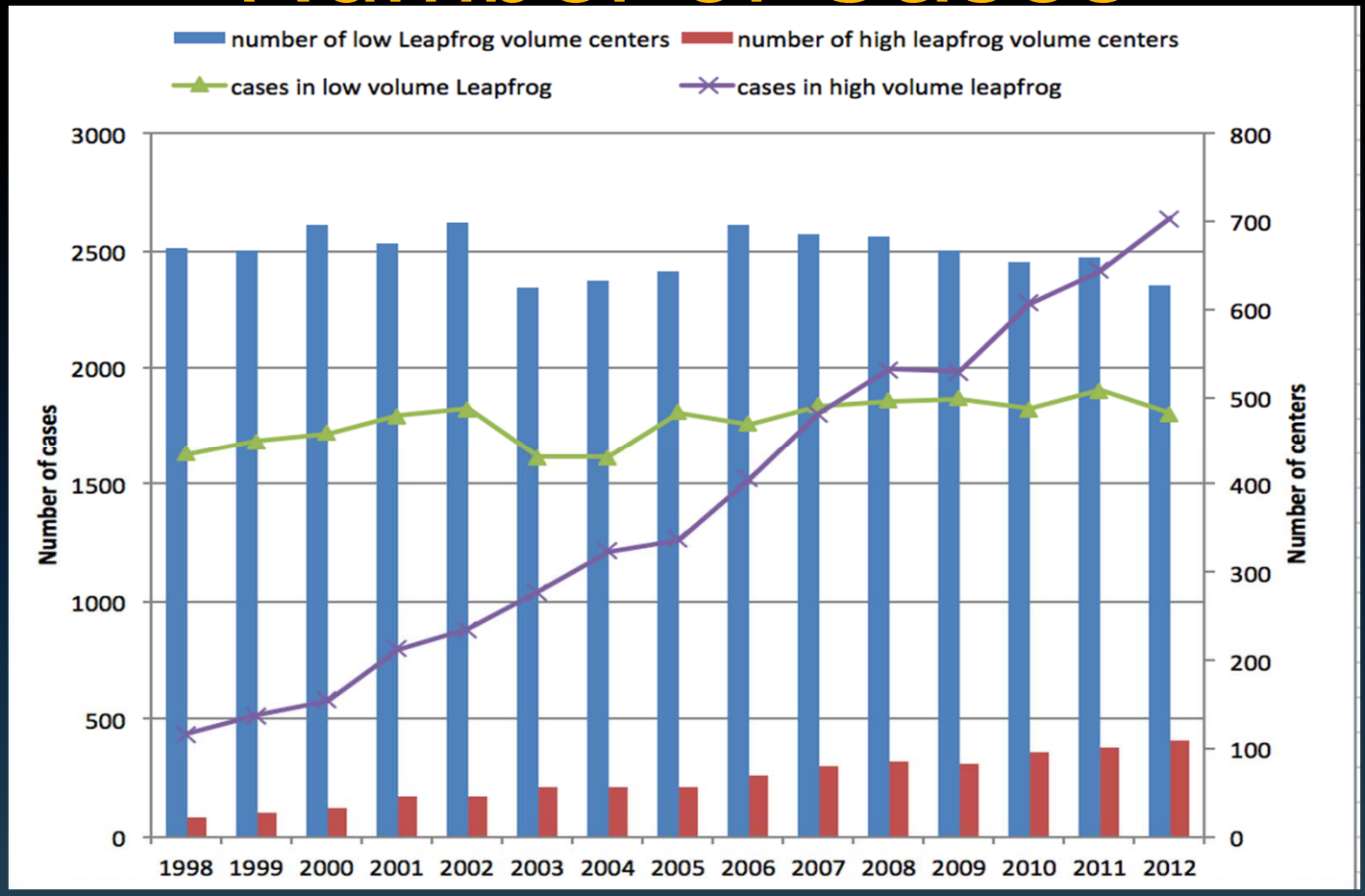
Sub-analysis for very low-volume (< 5 PD per year) and very-high volume (> 20 PD per year)

Assessment of hospital volume by region of the United States

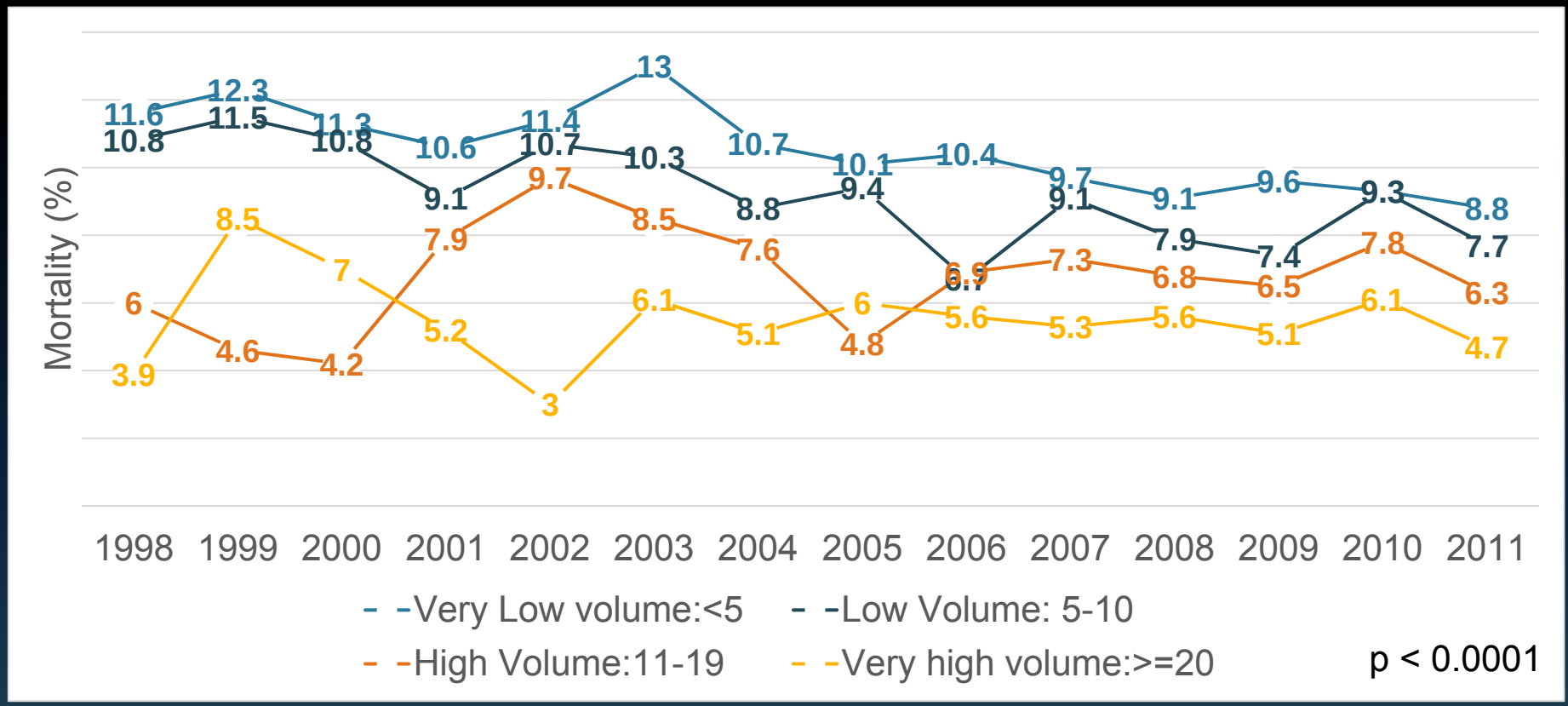
Number of Hospitals



Number of Cases



90-day Mortality Trend by Hospital Volume



Our Team