

**Advances and Innovations in Endoscopic Oncology and
Multidisciplinary Gastrointestinal Cancer Care**

Optimal Multidisciplinary GI Cancer Staging: Evidence Based Approach (Pancreatic)

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Disclosures

- I do not have any relevant financial relationships.

This presentation and/or comments will provide a balanced, non-promotional, and evidence-based approach to all diagnostic, therapeutic and/or research related content.

Cultural Linguistic Competency (CLC) & Implicit Bias (IB)

STATE LAW:

The California legislature has passed Assembly Bill (AB) 1195, which states that as of July 1, 2006, all Category 1 CME activities that relate to patient care must include a cultural diversity/linguistics component. It has also passed AB 241, which states that as of January 1, 2022, all continuing education courses for a physician and surgeon **must** contain curriculum that includes specified instruction in the understanding of implicit bias in medical treatment.

The cultural and linguistic competency (CLC) and implicit bias (IB) definitions reiterate how patients' diverse backgrounds may impact their access to care.

EXEMPTION:

Business and Professions Code 2190.1 exempts activities which are dedicated solely to research or other issues that do not contain a direct patient care component.

This presentation is dedicated solely to research or other issues that do not contain a direct patient care component.



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Report: Pancreatic cancer second most deadly by 2030

By Jacque Wilson, CNN

Updated 3:56 PM ET, Mon May 19, 2014



Medscape Medical News > Oncology

'Looming Crisis' of Rising Pancreatic Cancer Death Rates in US

Neil Osterweil

November 26, 2013

6 comments

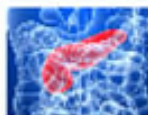


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EDITORS' RECOMMENDATIONS



Improved Survival in Pancreatic Cancer: Results Published



FDA Approves Abraxane for Pancreatic Cancer

Epidemiologists are at a loss to explain why pancreatic cancer death rates in the United States rose for more than a decade in white adults but decreased in black adults.

From 1995 to 2009, the death rate from pancreatic cancer in white men increased by 0.4% per year and in white women increased by 0.5%. In contrast, the death rate in black men declined by 0.9% per year and in black women declined by 0.5%.

News and updates for the pancreatic cancer community. [View in browser](#)

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JANUARY 27, 2024

PROGRESS MATTERS

[Register for PanCAN PurpleStride 2024!](#) Take steps at our biggest fundraising event of the year, happening on Saturday, April 27, 2024, in communities across the nation. [Register](#) and raise or self-donate your first \$50+ to earn your official PurpleStride 2024 T-shirt and see below for an exciting opportunity!

BECAUSE OF YOU

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Pancreatic Cancer Five-Year Survival Rate Increases to 13%

For the third year in the row, the five-year survival rate for pancreatic cancer has increased one percentage point, according to the American Cancer Society's Cancer Facts & Figures 2024 Report. Now at 13%, this steady progress in survival means more hope for people diagnosed with this tough disease. Read more about these newly released statistics.

[READ MORE](#)

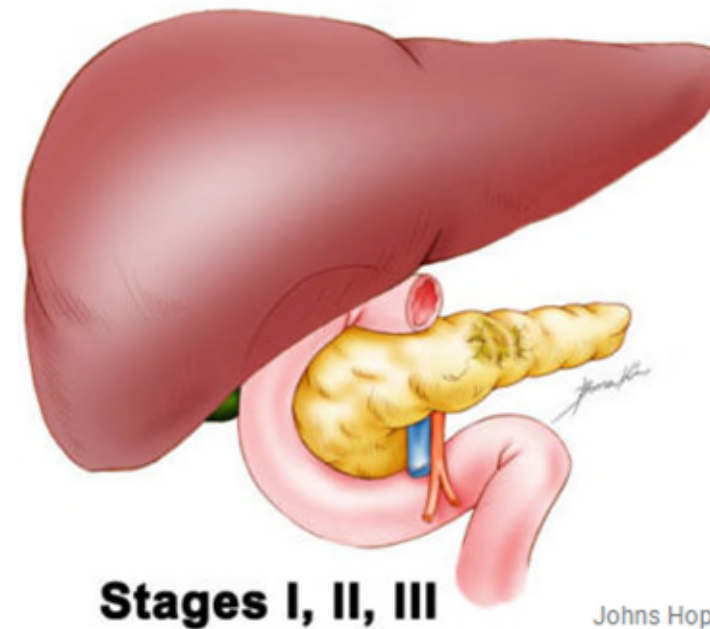
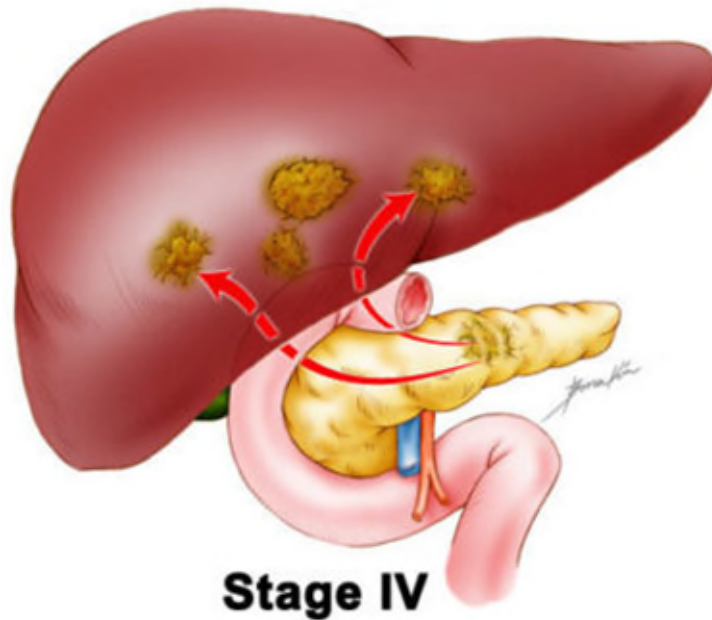
Pancreas Adenocarcinoma

General Facts

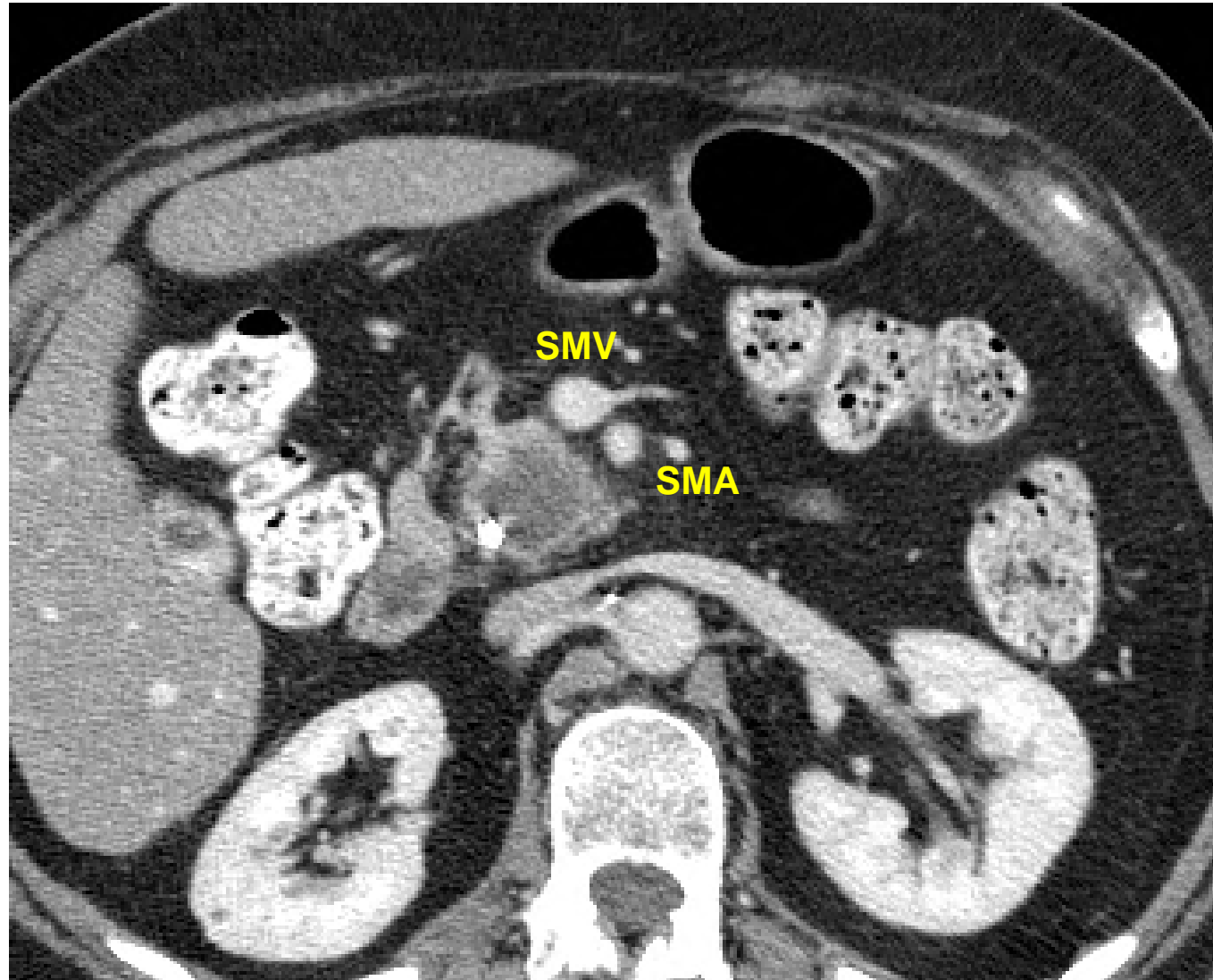
50% of patients present with metastatic disease (stage IV)

30% of patients present with locally advanced disease (stage III)

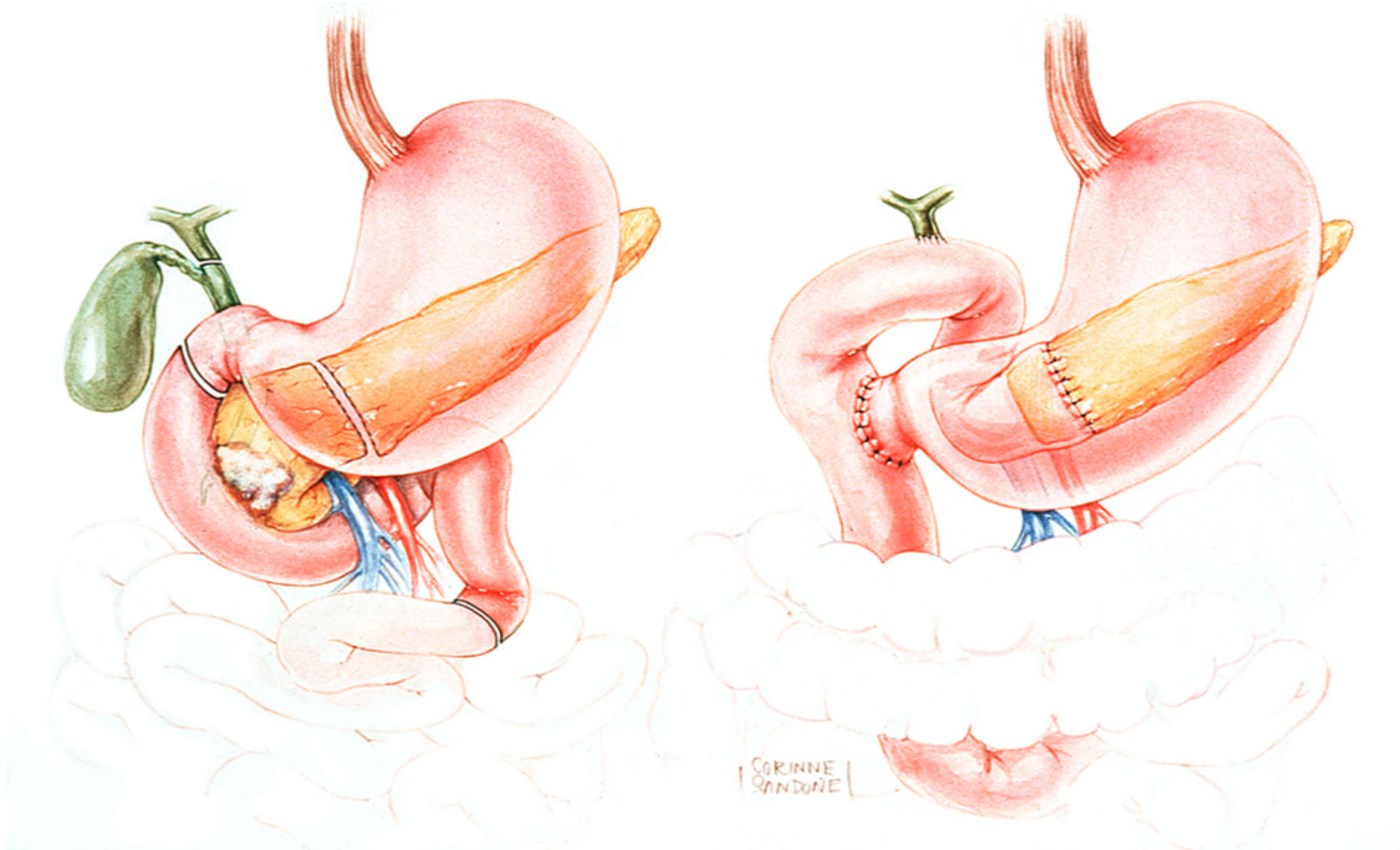
20% of patients present with localized resectable disease (stage I and II)



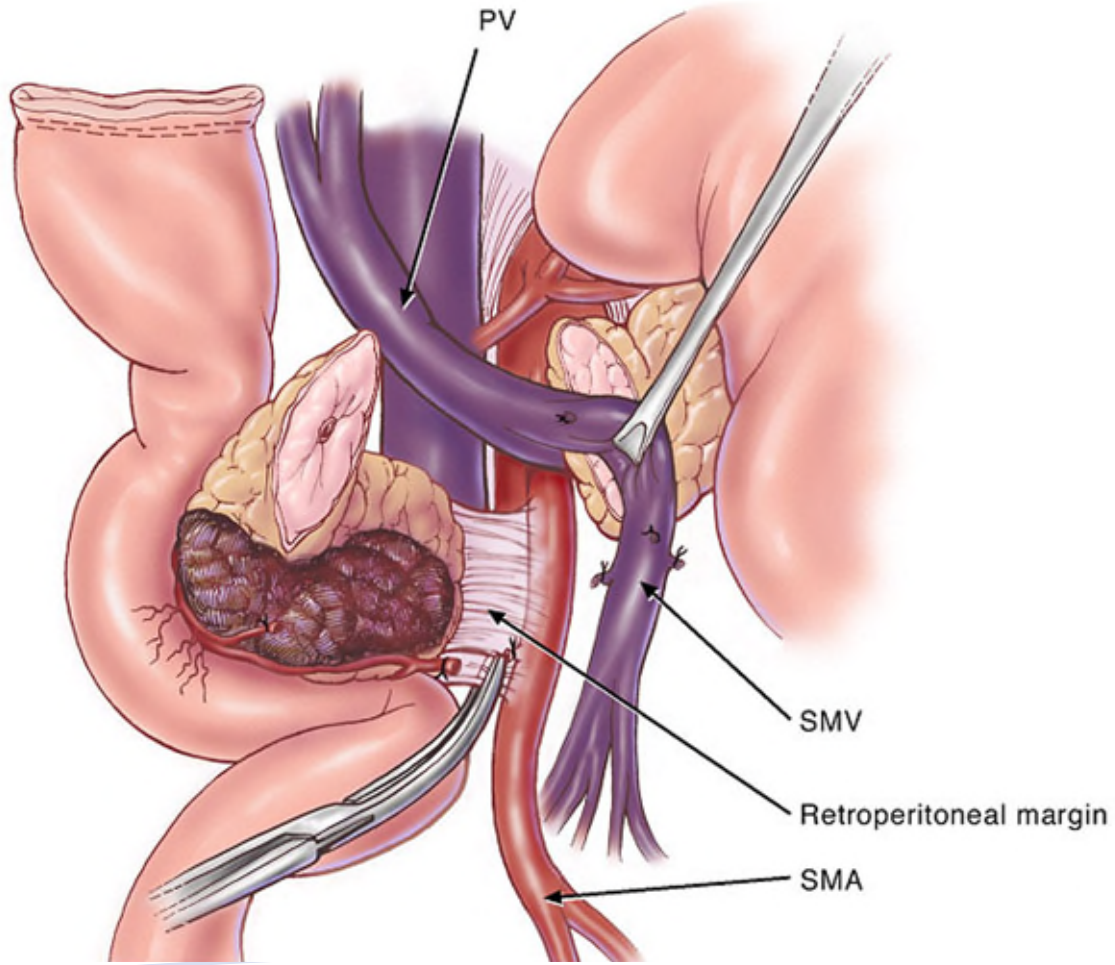
Resectable Adenocarcinoma of the Pancreatic Head



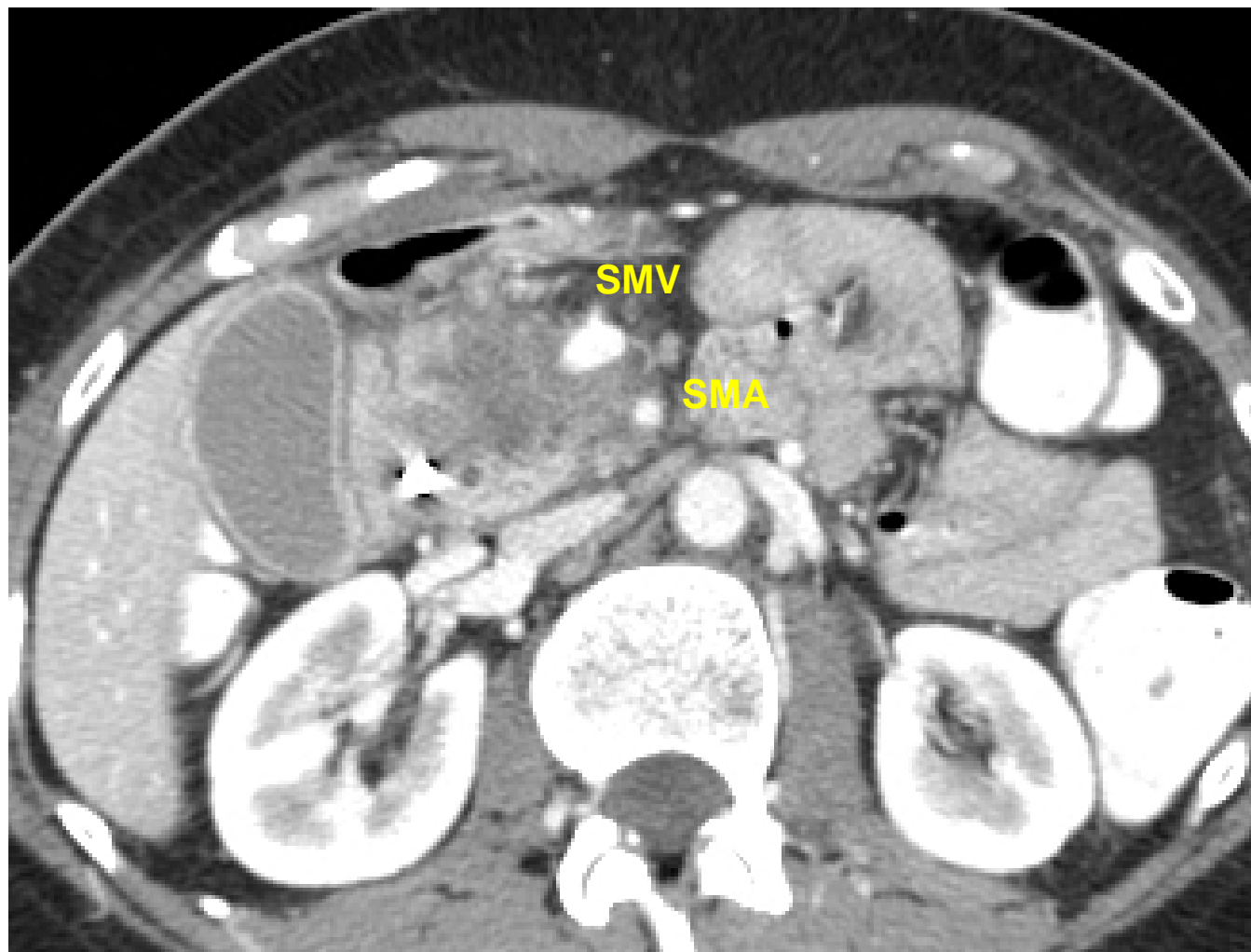
Pancreaticoduodenectomy (Whipple)



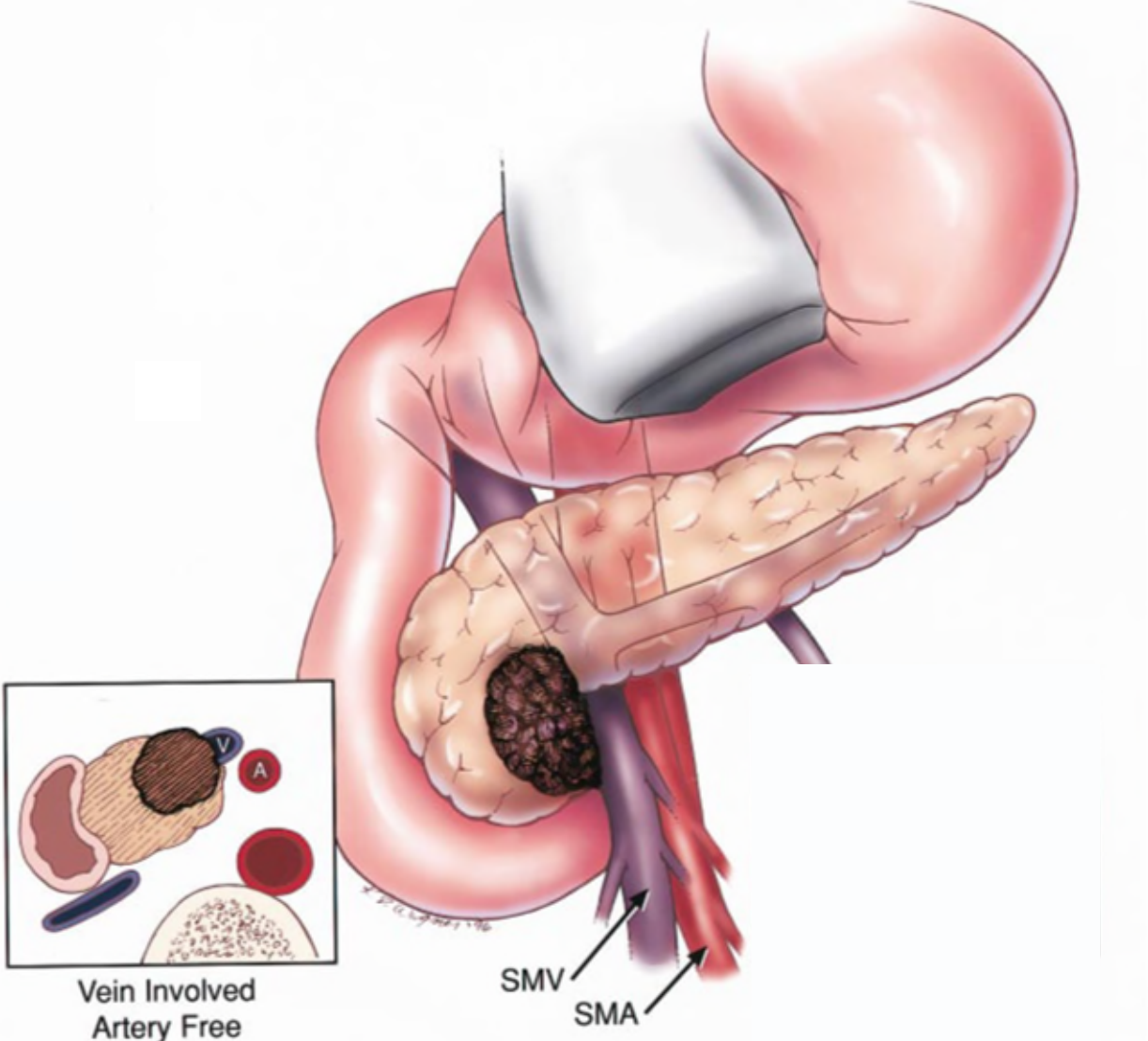
Achieving Negative Surgical Margins (R0)



Locally Advanced



Borderline Resectable

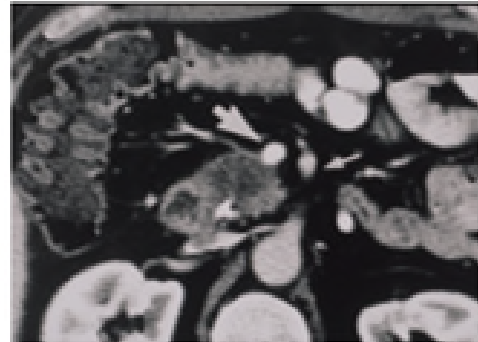
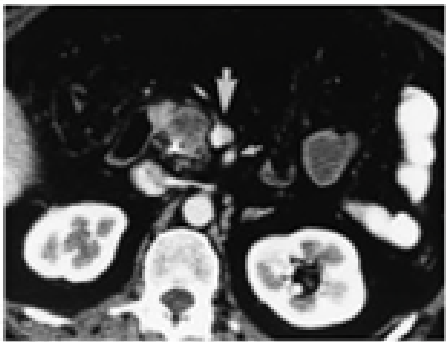
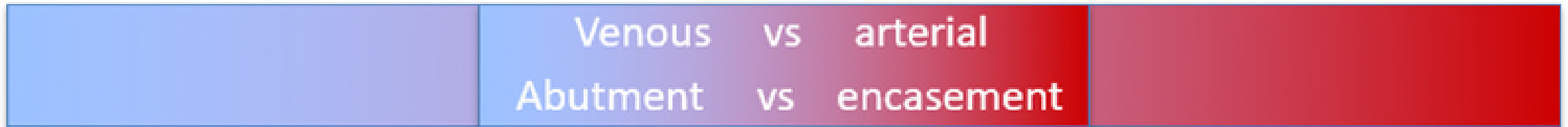


Borderline Resectable Is a Spectrum

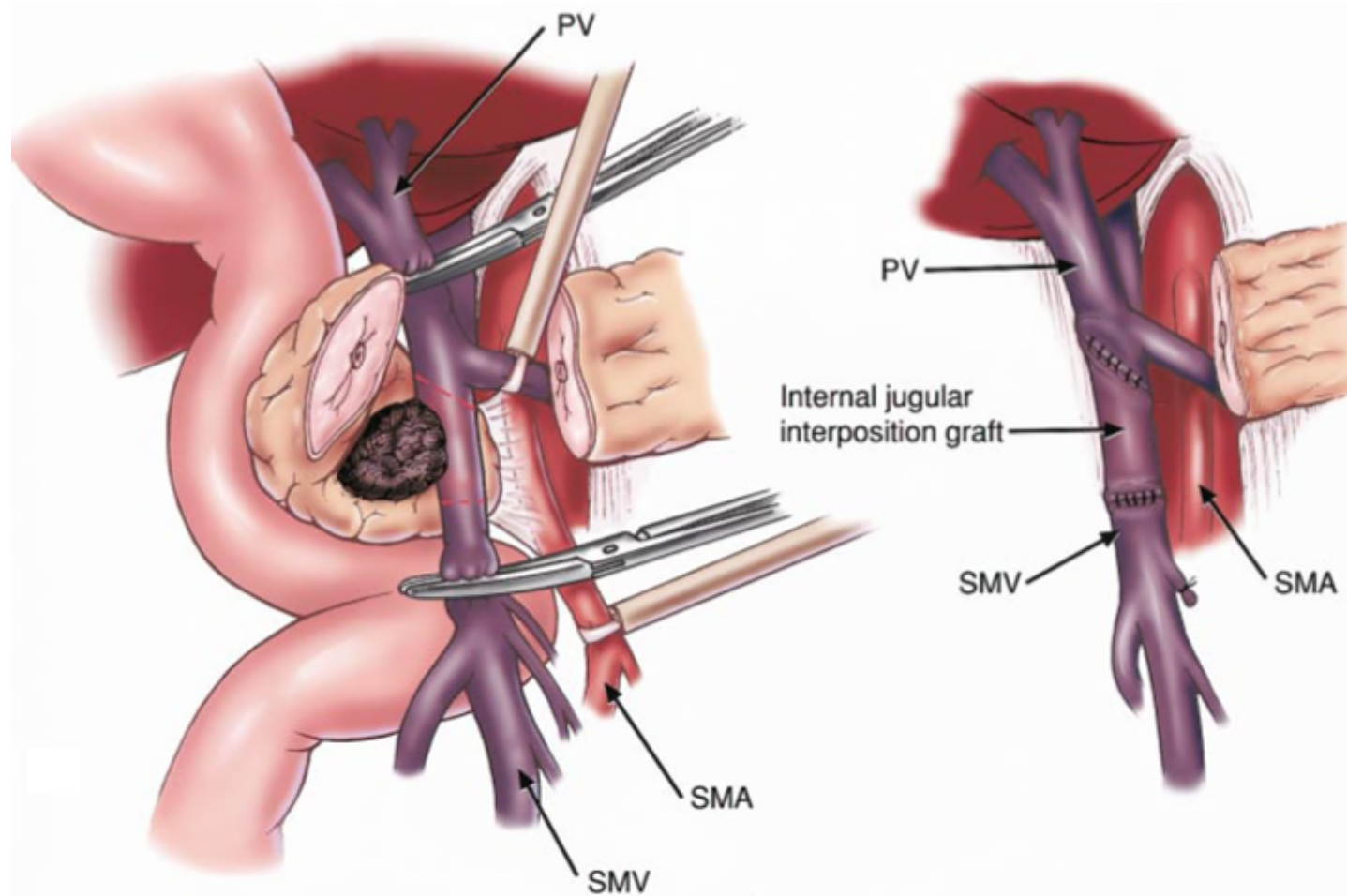
Resectable

Borderline

Locally Advanced



Portal Vein Resection & Reconstruction



Staging for Pancreatic Cancer

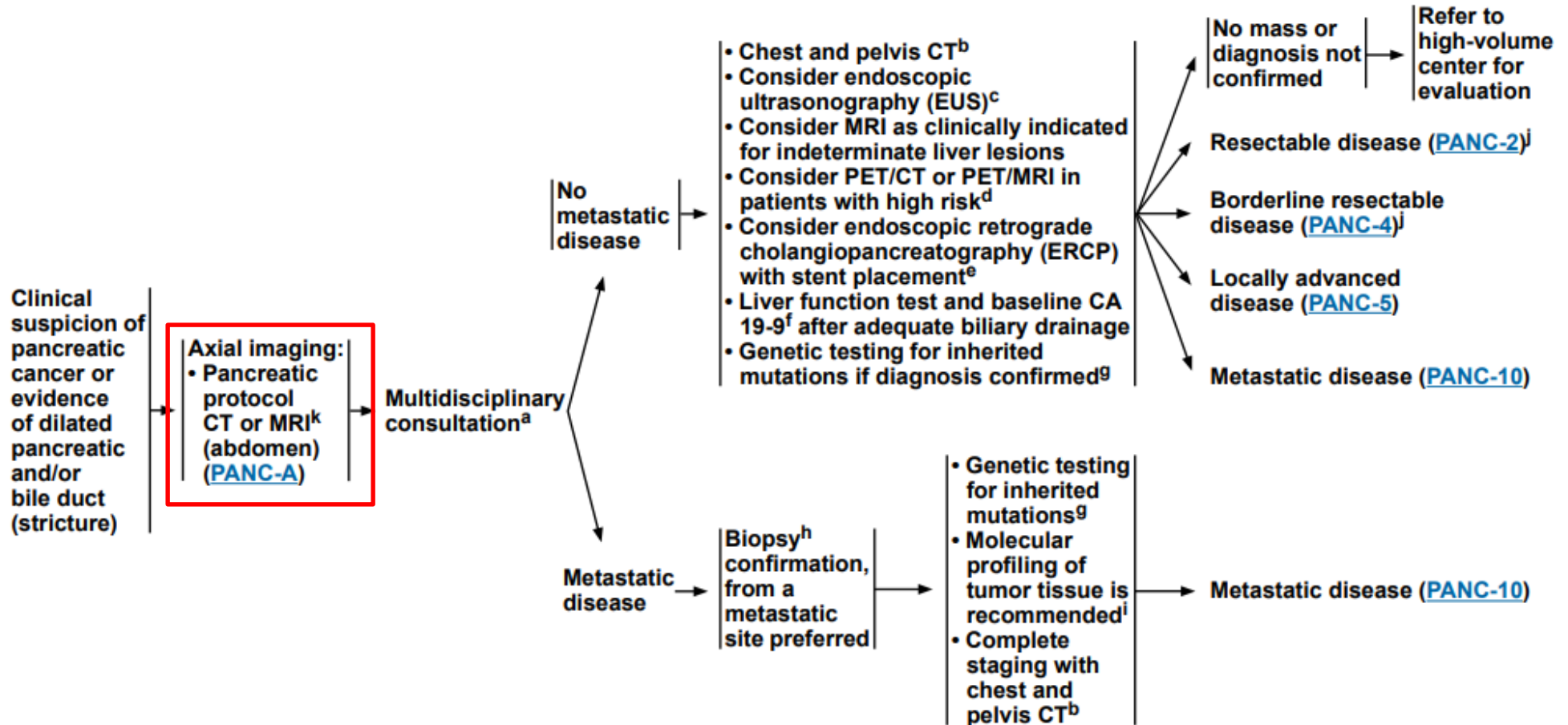


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NCCN Guidelines Version 1.2024 Pancreatic Adenocarcinoma

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CLINICAL PRESENTATION AND WORKUP



Staging for Pancreatic Cancer



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PRINCIPLES OF DIAGNOSIS, IMAGING, AND STAGING

- Decisions about diagnostic management and resectability should involve multidisciplinary consultation at a high-volume center with reference to appropriate high-quality imaging studies to evaluate the extent of disease. Resections should be done at institutions that perform a large number (at least 15–20) of pancreatic resections annually.
- High-quality dedicated imaging of the pancreas should be performed at presentation (even if standard CT imaging is already available), preferably within 4 weeks of surgery, and following neoadjuvant treatment to provide adequate staging and assessment of resectability status. Imaging should be done prior to stenting, when possible. Imaging with contrast as appropriate for disease management (unless contraindicated).
- Imaging should include dedicated pancreatic CT of abdomen (preferred) or MRI with contrast.
 - › Multidetector CT (MDCT) angiography, performed by acquiring thin, preferably sub-millimeter, axial sections using a dual-phase pancreatic protocol, with images obtained in the pancreatic and portal venous phase of contrast enhancement, is the preferred imaging tool for dedicated pancreatic imaging.^a Scan coverage can be extended to cover the chest and pelvis for complete staging as per institutional preferences. Multiplanar reconstruction is preferred as it allows precise visualization of the relationship of the primary tumor to the mesenteric vasculature as well as detection of subcentimeter metastatic deposits. See [MDCT Pancreatic Adenocarcinoma Protocol, PANC-A \(3 of 8\)](#).
 - › MRI is most commonly used as a problem-solving tool, particularly for characterization of CT-indeterminate liver lesions and when suspected pancreatic tumors are not visible on CT or when contrast-enhanced CT cannot be obtained (as in cases with severe allergy to iodinated intravenous [IV] contrast material). This preference for using MDCT as the main imaging tool in many hospitals and imaging centers is mainly due to the higher cost and lack of widespread availability of MRI compared to CT. See [MRI Pancreatic Adenocarcinoma Protocol, PANC-A \(4 of 8\)](#).
- The decision regarding resectability status should be made by consensus at multidisciplinary meetings/discussions following the acquisition of dedicated pancreatic imaging including complete staging. Use of a radiology staging reporting template is preferred to ensure complete assessment and reporting of all imaging criteria essential for optimal staging, which will improve the decision-making process.^a See [Pancreatic Cancer Radiology Reporting Template, PANC-A \(5 of 8\)](#).

Staging for Pancreatic Cancer

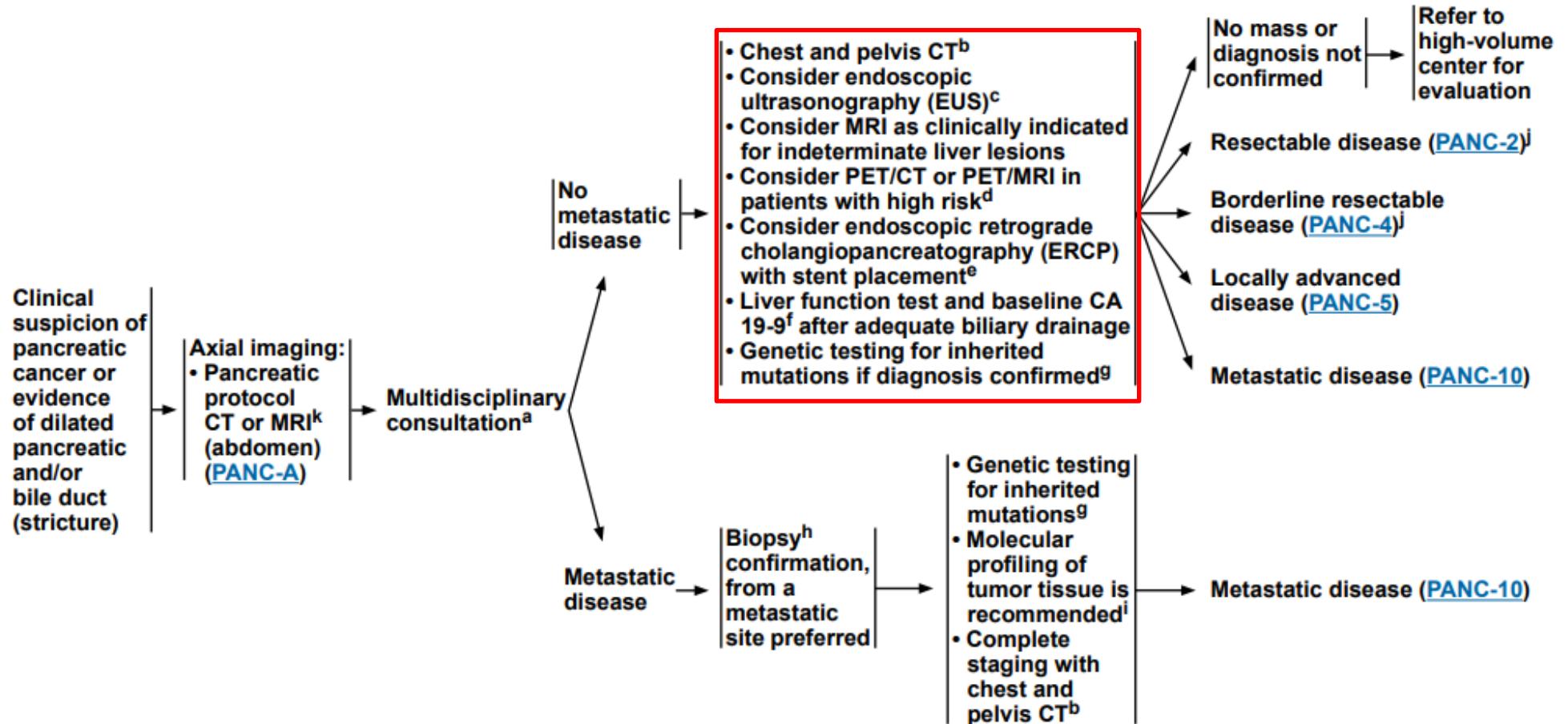


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CLINICAL PRESENTATION AND WORKUP



Staging for Pancreatic Cancer



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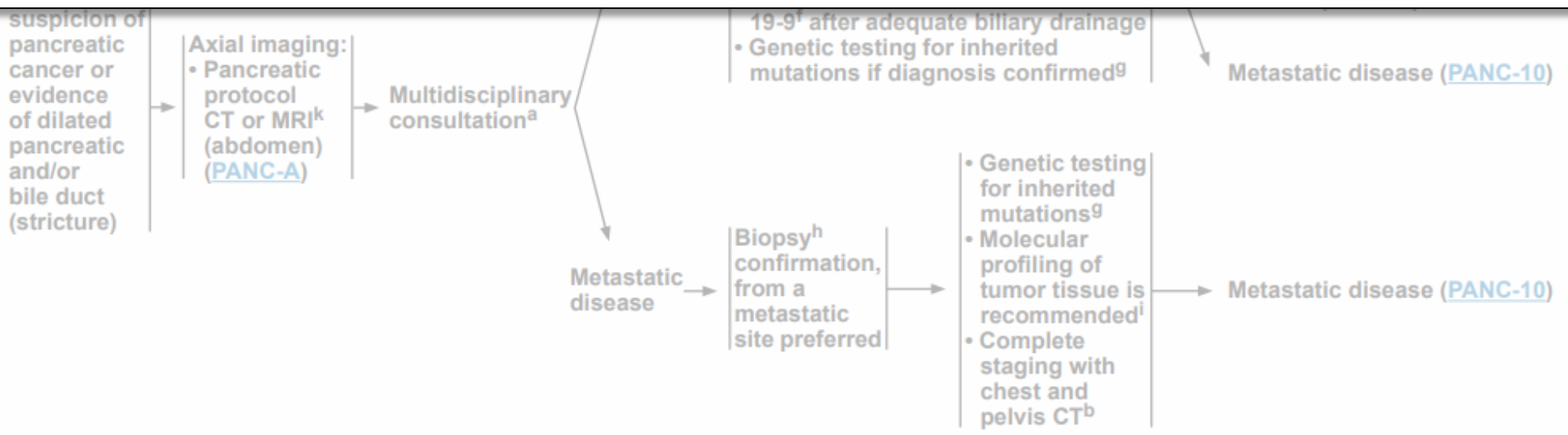
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CLINICAL PRESENTATION AND WORKUP

• Chest and pelvis CT^b
• Consider endoscopic
No mass or diagnosis not confirmed → Refer to high-volume center for

- **EUS is not recommended as a routine staging tool. In select cases, EUS may be complementary to CT for staging.**
- **EUS-guided biopsy is preferable to a CT-guided biopsy in patients with non-metastatic disease because of better diagnostic yield, safety, and potentially lower risk of peritoneal seeding when compared with the percutaneous approach. Biopsy proof of malignancy is not required before surgical resection, and a non-diagnostic biopsy should not delay surgical resection when the clinical suspicion for pancreatic cancer is high.**



Rationale for Neoadjuvant Therapy in Pancreatic Cancer

- Early therapy of radiographically occult micrometastatic disease at distant sites.
- Avoids morbid surgical therapy for those with early distant metastases and derive no benefit from surgery
- Increases the number of patients receiving and completing adjuvant therapy
- May improve performance status of those undergoing PD
- Attempt to sterilize the periphery of the primary tumor, allowing for a complete gross resection of the tumor and increased rates of R0 resection

The Role of EUS in Staging PDAC

- EUS has the highest accuracy in detecting small lesions
- Useful in assessing both tumor size and lymph nodes involvement
- Positive preoperative tissue biopsy is mandatory to offer neoadjuvant therapy
- Biopsy of nodes and liver lesions can also be done using EUS

Since an accurate preoperative evaluation is essential to choose the correct management strategy, EUS role is critical

Biliary Drainage



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PRINCIPLES OF OBSTRUCTIVE JAUNDICE AND TISSUE ACQUISITION MANAGEMENT

Biliary Drainage

- Biliary drainage is not routinely recommended prior to planned surgery. However, this decision is best made in a multidisciplinary discussion.
- In obstructive jaundice, it is best practice to perform an EUS needle biopsy and ERCP for biliary drainage in the same anesthesia session.
- Biliary drainage before surgery may be considered for:
 - ▶ Symptoms of cholangitis/fever
 - ▶ Severe symptomatic jaundice (intense pruritus)
 - ▶ If surgery is being delayed for any reason, including neoadjuvant therapy
- Biliary drainage is best accomplished with an endoscopically placed biliary stent.
- If ERCP fails, reattempt at a high-volume center should be considered.
- If endoscopic drainage is not possible, a percutaneous biliary drain (PBD) should be considered. Alternatively, EUS-guided biliary drainage may be considered at a high-volume center.
- SEMS are preferable to plastic stents.
- If the tissue diagnosis is not certain, fully covered SEMS should be considered, since these stents can be removed or exchanged.
- If EUS with biopsy is repeated, the fully covered SEMS may be removed for better EUS visualization of the lesion, and biopsy. The SEMS may be replaced after biopsy.
- Once tissue diagnosis is confirmed, a non-removable (partially covered or bare) SEMS may be used, as the migration rate is lower in this type of SEMS.
- Biliary stents should be as short as feasible.
- Stent placement in the pancreatic duct may be indicated in special circumstances where there is persistent pancreatitis secondary to obstruction of the pancreatic duct, which precludes other therapy.
- Plastic biliary stents may be considered for palliation in patients with predicted short survival of less than 3 months.

Performance and safety of diagnostic EUS FNA/FNB and therapeutic ERCP in patients with borderline resectable and locally advanced pancreatic cancer - results from a population-based, prospective cohort study

Ingvild Farnes^{a,b}, Vemund Paulsen^c, Caroline Sofie Verbeke^{b,d}, Christer Julseth Tønnesen^c, Lars Aabakken^{b,c} and Knut Jørgen Labori^{a,b}

^aDepartment of Hepato-Pancreato-Biliary Surgery, Oslo University Hospital, Oslo, Norway; ^bInstitute of Clinical Medicine, University of Oslo, Oslo, Norway; ^cDepartment of Transplantation Medicine, Oslo University Hospital, Oslo, Norway; ^dDepartment of Pathology, Oslo University HospitalOslo, Norway

Definite diagnosis*

Pancreatic ductal adenocarcinoma	N=214
Pancreatic neuroendocrine tumor	N=2
Pancreatic neuroendocrine carcinoma	N=1
Chronic pancreatitis	N=3
Intraductal papillary mucinous neoplasm	N=1
IgG 4 related disease	N=1
Acinar cell carcinoma	N=1

*Definite diagnosis was based on histopathologic evaluation of the surgical specimen or in nonresected patients by the evolution of the disease assessed to date of last follow up by a combination of EUS FNA/FNB findings, by the clinical course, imaging studies, and/or laboratory tests.

Diagnostic accuracy for first EUS FNA and/or FNB=86.1% (192/223)

Cumulative diagnostic accuracy for all EUS and/or FNB attempts=96% (214/223)

False positive rate for malignancy=0.9% (2/223)

Table 2. Patient and treatment characteristics for 133 patients undergoing primary ERCP with placement of a biliary stent.

Patient characteristics	Overall
Total no.	133
Number of attempts	
One attempt, <i>n</i> (%)	133 (100)
Two attempts, <i>n</i> (%)	16 (12)
Success rate	
First attempt, <i>n</i> (%)	107 (80.5)
Second attempt, <i>n</i> (%)	15 (93.8)
Type of stent	
Metal stent, <i>n</i> (%)	107 (87.7)
Plastic stent, <i>n</i> (%)	15 (12.3)
Proceeded to PTBD ^a , <i>n</i> (%)	11 (8.3) ^b

Conclusions

1. Approximately 60 000 new cases of PDAC are diagnosed per year in the US, with an increasing incidence.
2. Only 20-25% of patients may be eligible for curative intent surgery.
3. Advances in surgical therapies, patient selection, and neoadjuvant therapies have improved outcomes.
4. Decisions about diagnostic management and resectability should involve multidisciplinary consultation at a high-volume center.
5. High-quality dedicated cross-sectional imaging of the pancreas is the principle staging tool.
6. PET-CT can be considered in selected situations.
7. EUS with preoperative biopsy should be considered standard in most cases.
8. In jaundiced patients, biliary drainage with SEMS should be considered in most cases.