

Evidence Discussion (ONC 13.1)

Pancreatic Cancer Screening

Note: this section pertains to adenocarcinoma only; neuroendocrine tumors are addressed in ONC 15.

Screening Studies for pancreatic cancer in high-risk individuals

International Cancer of the Pancreas Screening Consortium (CAPS) recommends screening for those with an estimated lifetime risk of pancreatic cancer >5%, to facilitate early detection, as the survival of patients diagnosed with advanced disease at presentation is extremely poor. Patients may be high risk due to family history of 2 -3 relatives with pancreatic adenocarcinoma with first degree relative affected, or those with known deleterious genetic mutations in conjunction with one first- or second-degree relative with pancreatic adenocarcinoma (Canto 2013, Abe 2019, Daly 2024). Asymptomatic screening has not been shown to improve outcomes in those without an established lifetime risk of >5%, including those with only more distant relatives affected, a single relative affected and no known high-risk mutation, or those with mutations whose risk is unknown (Canto 2013, Abe 2019).

The lifetime risk and age at presentation varies with each genetic mutation. Updated CAPS recommendations generally support imaging at age 50 or ten years younger than the age of the youngest relative with pancreatic adenocarcinoma. EviCore guidelines align with CAPS and NCCN with multiple exceptions to this to allow screening at younger ages for patients with mutations known to be higher risk or present at younger ages (Daly 2024, Goggins 2020). US preventative Services Task Force (USPSTF) does not generally recommend pancreatic cancer screening, though they did not evaluate patients with high risk criteria in this data. As such, eviCore has chosen to align with more recent and subspecialized recommendations of CAPS and NCCN, however the USPSTF notes that screening has moderate risk due to unnecessary imaging and management of incidental findings (Owens 2019). These findings further support the eviCore guidelines that screening for those that do not meet the clearly defined risk factors listed in the guideline is not indicated.

MRI without and with contrast shows up to 93% sensitivity for pancreatic lesions and better illustrates pancreatic ducts, which may indirectly identify pancreatic malignancy,

and is the preferred modality for screening for most patients in the eviCore guidelines.. This is superior to both CT and endoscopic ultrasound, which may not detect smaller lesions (Khayat 2024). Generally, invasive or uncomfortable procedures are avoided for screening to maximize patient safety, but MRCP is supported as an alternative for patients with CDKN2A mutation due to their unique disease characteristics, specifically linked to liver involvement. CT pancreatic protocol is supported in the eviCore guidelines if indeterminate findings on MRI in the interest of early detection.

A unique group is patients with new onset diabetes and ENDPAC score ≥ 3 . These patients are at an elevated risk of developing pancreatic cancer within 6 months even in the absence of family history or known deleterious mutations. MRI or CT is supported in this population at diagnosis of diabetes and again in 6 months (Hajibandeh S 2023, Sharma 2018).

References

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