

Putting Prevention into Practice

An Evidence-Based Approach

Screening for Pancreatic Cancer

Howard Tracer, MD, Medical Officer, U.S. Preventive Services Task Force Program,
Agency for Healthcare Research and Quality

Aliye Sanou, DO, Preventive Medicine Resident, Uniformed Services University of the Health Sciences

Case Study

A 71-year-old woman comes to your office for a regularly scheduled visit. She has type 2 diabetes mellitus and a 50-pack-year smoking history, and had non-ulcer dyspepsia two years ago. Her body mass index is 32 kg per m², and her blood pressure is normal. She says that she feels well and has no abdominal pain, weight loss, or any other symptoms. She has no family history of pancreatic, colon, breast, or ovarian cancer. She tells you that her best friend has been recently diagnosed with pancreatic cancer and is about to undergo surgery. She asks whether she can be screened for pancreatic cancer.

Case Study Questions

1. Based on the U.S. Preventive Services Task Force (USPSTF) recommendation statement, how should you counsel this patient?

- A. She should not be screened for pancreatic cancer. She is asymptomatic, and based on her medical and family history, she is not at high risk of pancreatic cancer.
- B. She should be screened for pancreatic cancer because she is older and has type 2 diabetes.
- C. She should be screened for pancreatic cancer because of her history of cigarette smoking.
- D. She should be screened for pancreatic cancer with computed tomography, endoscopic ultrasonography, or magnetic resonance imaging.
- E. She should be screened for pancreatic cancer with a multiple biomarker panel.

2. Which of the following people are at high risk of pancreatic cancer and therefore fall outside the scope of the USPSTF recommendation on screening for pancreatic cancer?

- A. People who have preexisting diabetes.
- B. People who have Peutz-Jeghers syndrome.
- C. People who have a history of cigarette smoking.
- D. People who have a history of familial pancreatic cancer.

3. Which one of the following statements represents the USPSTF's findings regarding the potential benefits and harms of screening for pancreatic cancer?

- A. The USPSTF found adequate evidence that screening for pancreatic cancer improves disease-specific morbidity but not all-cause mortality.
- B. The USPSTF found adequate evidence that the harms of treatment of pancreatic cancer are small.
- C. The USPSTF found insufficient evidence to assess the benefits and harms of screening for pancreatic cancer.
- D. The USPSTF found no evidence that screening for pancreatic cancer improves disease-specific morbidity or mortality.
- E. Based on the increasing incidence of pancreatic cancer, the USPSTF found convincing evidence that the potential benefits of screening outweigh the harms.

Answers appear on the following page.

See related U.S. Preventive Services Task Force Recommendation Statement at <https://www.aafp.org/afp/2019/1215/od1.html>.

This PPIIP quiz is based on the recommendations of the USPSTF. More information is available in the USPSTF Recommendation Statement and supporting documents on the USPSTF website (<https://www.uspreventiveservicestaskforce.org>). The practice recommendations in this activity are available at <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/pancreatic-cancer-screening1>.

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CME This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 738.

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Answers

1. **The correct answer is A.** The USPSTF recommends against screening for pancreatic cancer in asymptomatic adults. The patient does not have a history of familial pancreatic cancer, and her history does not suggest that she has an inherited genetic syndrome that would place her at high risk of pancreatic cancer (i.e., she does not belong to a high-risk group that is excluded from this recommendation). Other factors such as new-onset diabetes, preexisting diabetes, older age, cigarette smoking, obesity, or a history of chronic pancreatitis increase the risk of pancreatic cancer to a lesser degree. The USPSTF considers asymptomatic people with these other factors part of the general population, and they are thus included in this recommendation. The USPSTF does not recommend screening for pancreatic cancer in the general population using any method (i.e., computed tomography, endoscopic ultrasonography, or magnetic resonance imaging). There are currently no accurate, validated biomarkers for early detection of pancreatic cancer.^{1,2}

2. **The correct answers are B and D.** Patients at high risk of pancreatic cancer include people with certain inherited genetic syndromes known to be associated with pancreatic cancer (e.g., Peutz-Jeghers syndrome, hereditary pancreatitis) or with a history of familial pancreatic cancer, which is defined as a kindred with at least two affected first-degree relatives. This recommendation does not apply to these high-risk populations. People who have preexisting diabetes and people with a history of cigarette smoking are included in the USPSTF recommendation on screening for pancreatic cancer.^{1,2}

3. **The correct answer is D.** The USPSTF found no evidence that screening for pancreatic cancer or treatment of screen-detected pancreatic cancer improves disease-specific morbidity or mortality or all-cause mortality. The USPSTF found adequate evidence that the magnitude of the benefits of screening for pancreatic cancer in asymptomatic adults is small. The USPSTF found adequate evidence that the magnitude of the harms of screening for pancreatic cancer and treatment of screen-detected pancreatic cancer is at least moderate.^{1,2}

The views expressed in this work are those of the authors and do not reflect the official policy or position of the Uniformed Services University of the Health Sciences, the Department of Defense, or the U.S. government.

References

1. Owens DK, Davidson KW, Krist AH, et al. Screening for pancreatic cancer: US Preventive Services Task Force reaffirmation recommendation statement. *JAMA*. 2019;322(5):438-444.
2. Henrikson NB, Aiello Bowles EJ, Blasi PR, et al. Screening for pancreatic cancer: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. 2019;322(5):445-454. ■

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