



# Effective Health Care

## Primary Diagnosis and Staging of Pancreatic Cancer Nomination Summary Document

### Results of Topic Selection Process & Next Steps

- Primary diagnosis and staging of pancreatic cancer will go forward for refinement as a systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list/>.

### Topic Description

**Nominator:** Organization

**Nomination Summary:** The nominator is interested in the comparative effectiveness of various tests for the primary diagnosis and staging of pancreatic cancer.

#### Staff-Generated PICO

**Population(s):** People (primarily adults) at high risk for pancreatic cancer (with signs or symptoms of the disease requiring testing, or with a strong family history of pancreatic cancer)

**Intervention(s):** Imaging tests used in the U.S. to make the preliminary diagnosis of pancreatic cancer (prior to biopsy or surgical confirmation), including ultrasonography (US), conventional computed tomography (CT), multidetector computed tomography (MDCT), magnetic resonance imaging (MRI), fludeoxyglucose positron emission tomography (FDG-PET), variants of these tests, and combinations of tests

**Comparator(s):** The same list of imaging tests, used as comparators

#### Outcome(s):

- Diagnostic accuracy (with pathological confirmation as the reference standard)
- Cancer-related morbidities, including quality of life and other patient-related outcomes (related to accurate diagnosis leading to immediate appropriate management or false negative test results resulting in delayed appropriate management)
- Cancer-related mortality (related to accurate diagnosis leading to immediate appropriate management or false negative test results resulting in delayed appropriate management)
- Harms and costs related to false positive test results, including unnecessary

invasive testing (e.g., biopsies and surgery), unnecessary treatment (e.g., surgery), unnecessary further testing, and anxiety and related conditions

**Key Questions  
from Nominator:**

1. What is the comparative effectiveness of ultrasonography (US), conventional computed tomography (CT), multidetector computed tomography (MDCT), magnetic resonance imaging (MRI), fludeoxyglucose positron emission tomography (FDG-PET) or FDG-PET/CT for the primary diagnosis and staging of pancreatic cancer?
2. Which imaging test or test that can “see” some functions of a cancer (e.g., blood flow, consumption of sugar, etc.) is the best test to diagnose pancreatic cancer and tell how advanced it is or how widely it has spread?

## Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- Definitive cure of pancreatic cancer is more likely with early diagnosis. Accurate initial staging of pancreatic cancer can improve decision-making about appropriate therapy, including whether invasive procedures are necessary. There currently exists no standard procedure for the diagnosis and staging of pancreatic cancer. The diagnostic accuracy (sensitivity and specificity), practical issues (ease of use, costs, operator training), and potential risks posed by their use (exposure to radiation, unnecessary biopsies due to false positives) of these imaging techniques have yet to be systematically assessed and compared. The effect of these imaging techniques on clinical outcomes, such as morbidity and mortality, is unknown. Finally, it is unclear whether the comparative effectiveness of these imaging techniques may differ among patients with specific clinical characteristics (e.g., family history, chronic pancreatitis, diabetes) compared with patients with no risk factors for pancreatic cancer.
- No recent review or clinical guidelines were identified that comprehensively address the topic of diagnosis and staging of pancreatic cancer; therefore, a new review on this topic could have impact at this time.