

Cost-Effectiveness Of PET/CT In Pre-Operative Staging Of Pancreatic Cancer

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- No longer than 300 words.
- OBJECTIVES; METHODS; RESULTS; CONCLUSIONS and must include results.
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<u>QUALITY OF STUDY CRITERIA (FOR RESEARCH STUDY OR RESEARCH ON METHODS</u> <u>ABSTRACTS):</u>

- 1. Research design is appropriate & transparent.
- 2. Data sources are appropriate & transparent.
- 3. Data analyses are appropriate & transparent.
- 4. Results ARE INCLUDED and are transparent and comprehensible.
- 5. Conclusions are consistent with the results.

DEADLINE 27/07/2017

REESARCH TOPIC: Cost studies.

RESEARCH SUB-TOPIC: Cost-effectiveness analysis.

DISEASE AREA: Cancer.

HEALTH CARE TREATMENT: Medical device/diagnostics

TITLE: COST-EFFECTIVENESS OF PET/CT IN PRE-OPERATIVE STAGING OF PANCREATIC CANCER: AN ECONOMIC EVALUATION OF THE PET-PANC COHORT STUDY

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Edwards

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OBJECTIVES: Diagnosis of pancreatic cancer is challenging as patients may be relatively asymptomatic during its early course. PET/CT may improve diagnosis and staging of pancreatic cancer but is not widely used across the UK. There is uncertainty whether PET/CT represents good value for money. This study aimed to model the cost-effectiveness of PET/CT compared with multidetector computed tomography (MDCT) alone in the diagnosis and management of patients with pancreatic cancer, based on data collected from the multi-centre PET-PANC cohort study.

METHODS: A decision-analytic model was developed to compare patient pathways following diagnosis with PET/CT compared with MDCT alone. Patient management strategies following PET/CT were taken from PET-PANC. Patient management strategies following MDCT alone were based on clinical interpretation of the initial MDCT diagnosis. Event-based regressions were used associate strategies with cost and QALY data collected during PET-PANC. Analysis was conducted from the perspective of the UK National Health Service (NHS), over a 12-month time-horizon. Uncertainty was considered in univariate and multivariate sensitivity analyses. Subgroup analysis considered the impact of PET/CT on patients with diagnosis of chronic pancreatitis; malignancy; and those who were scheduled for resection surgery.

RESULTS: The mean total cost and QALYs of pancreatic cancer service use over 12-months were £13,193 per patient (95% confidence interval (CI): £11,634, £14,802), and 0.5540 (95% CI: 0.5261, 0.5811), respectively. PET/CT dominated MDCT, being both less costly and more effective. The

largest cost saving and highest QALY gain were seen for the subgroup scheduled for resection surgery. The probability of cost-effectiveness at a threshold of £20,000/QALY was 82%.

CONCLUSIONS: It is likely that use of PET/CT in the diagnosis and staging of pancreatic cancer is costeffective for the UK NHS, with the most cost-effective use of PET/CT being in patients who are suspected of having pancreatic cancer and are scheduled for resection surgery following MDCT.