INAHTA Briefs

Issue 2002/23

Title Positron Emission Tomography (PET) for a Number of Services, May 2001

Agency MSAC, Medical Services Advisory Committee

Commonwealth Department of Health and Aged Care, GPO Box 9848, Canberra ACT 2601 Australia; tel: +61 2 6289 6811, fax: +61 2 62 6289 8799, msac.secretariat@msac.gov.au, www.msac.gov.au

Reference MSAC application 1027. Assessment report, ISSN 1443-7120.

Aim

To assess the safety and effectiveness of the services and under what circumstances such services should be supported with public funding.

Conclusions and results

Safety: PET is non-invasive and generally accepted as a safe diagnostic procedure. A large US study found no adverse reactions to over 80 000 doses of positron emitting radiopharmaceuticals.

Effectiveness: PET has improved diagnostic accuracy over conventional imaging for several indications:

- Assessment of suspected recurrent disease in patients with ovarian cancer;
- Detection of nodal and distant metastatic involvement in the pretreatment staging of patients with cervical cancer;
- Detection of nodal and distant metastatic involvement in the pretreatment staging of patients with esophageal cancer; and
- Detection of nodal and distant metastatic involvement in the pretreatment staging of gastric and gastroesophageal cancer.
- It was not possible to evaluate the role of PET in the staging of endometrial cancer due to a paucity of data.

Cost-effectiveness: There are documented examples of where the results of PET have led to changes in patient management in these indications. It is difficult to establish long-term clinical effectiveness due to lack of direct evidence on consequent improved health outcomes for patients. In the clinical scenarios evaluated in this review, PET is used to provide incremental information over conventional imaging. At present, the evidence is insufficient concerning the impact of PET on-long term clinical outcomes to be able to provide any reliable estimates of cost effectiveness.

Recommendations

Currently the evidence is insufficient on the clinical and cost effectiveness of PET to warrant unrestricted funding. Despite this, the evidence suggests that PET is safe, potentially clinically effective, and potentially cost effective for the indications reviewed. As such, interim funding was recommended for:

1. Assessment of disease following initial therapy in patients with suspected recurrence of epithelial ovarian carcinoma based on equivocal anatomical imaging findings or an elevation of CA-125,
2. Staging of disease in patients with a pathological diagnosis of primary carcinoma of the uterine cervix, prior to planned radical radiation therapy or combined modality therapy,
3. For staging of a patient with proven esophageal carcinoma where curative surgery or chemoradiation is planned, and
4. For staging of a patient with proven gastric cancer where curative surgery is planned.

(continued next page)

Prepared by Kirsten Howard, NHMRC CTC, Australia

INAHTA Briefs

Issue 2002/23

Title Positron Emission Tomography (PET) for a Number of Services, May 2001

Agency MSAC, Medical Services Advisory Committee

Commonwealth Department of Health and Aged Care, GPO Box 9848, Canberra ACT 2601 Australia; tel: +61 2 6289 6811, fax: +61 2 62 6289 8799, msac.secretariat@msac.gov.au, www.msac.gov.au

Reference MSAC application 1027. Assessment report, ISSN 1443-7120.

Method

The National Health and Medical Research Council (NHMRC) Clinical Trials Centre at the University of Sydney conducted a systematic review of the literature (with eligibility criteria defined *a priori*) on the role of FDG PET. The following sources were searched from commencement to March 2001: MEDLINE, PreMedline, National Library of Medicine Health Services Research Databases, CINAHL, Australian Medical Index, Biological Abstracts, Best Evidence, Current Contents, EmBase, the Cochrane Library, ISTAHC, and the NHS Databases, DARE, EED, and HTA. Internet and health technology assessment agency sources were searched, and studies were also identified from MSAC applications and members of the Supporting Committee.

Prepared by Kirsten Howard, NHMRC CTC, Australia