INTRODUCTION OF PET INTO THE AUSTRALIAN HEALTH CARE SYSTEM

by Richard King and John Hastings
on behalf of
Medical Services Advisory Committee funded by
Department of Health and Ageing
Commonwealth of Australia

PET IN AUSTRALIA

- PET prior to 1999 – two centres
- Rebate fee Aus$2,300
- In 1999 two other providers applied for benefits

FIRST 10 YEAR INDICATIONS FOR PET

- 10% Myocardial
- 40% Neurology
- 50% Oncology

CURRENT INDICATIONS

- 1% Myocardial
- 9% Neurology
- 90% Oncology

1999 ....

- Minister refers PET to Inquiry and Technology Assessment by MSAC
- MSAC (Medical Services Advisory Committee of Federal Department of Health
- Remit is to recommend to the Minister on new technology based on HTA (Health Technology Assessment) and evidence of safety, efficacy and cost effectiveness

MINISTERIAL ADVISORY COMMITTEE COMPRISED OF INDEPENDENT EXPERTS IN:

- Radiology
- Nuclear Medicine
- Administration
- Oncology
- Internal Medicine

MSAC (MEDICAL SERVICES ADVISORY COMMITTEE) COMPRISED

- Independent Chairman (from MSAC)
- Representatives from
  - Oncology
  - Cardiology
  - Neurology
  - Four PET providers

MINISTERIAL ADVISORY COMMITTEE RECOMMENDATIONS

- 1- 7 PET sites in Australia
- PET rate rebate to be at $800
- MSAC recommendations accepted
- Only full ring PETS to be used
- Data collection mandatory

1. MSAC REVIEW (Initial)

- HTA's were done on:
  1. Complex Epilepsy
  2. Myocardial disease
  3. Lymphoma
  4. Non-small cell carcinoma of the lung
  5. Carcinoma of colon
  6. Melanoma
  7. Glioma

2. MSAC REVIEW (Subsequent)

1. CARCINOMA OF THE CERVIX
2. SARCOMA
3. CARCINOMA OF OESOPHAGUS
4. CARCINOMA OF STOMACH
5. HEAD & NECK CARCINOMA
6. METASTATIC SQUAMOUS CELL CARCINOMA
7. OVARIAN CARCINOMA

MSAC REVIEW FOUND

- PET SAFE AND EFFECTIVE BUT NO EVIDENCE FOR MANAGEMENT CHANGE

MSAC REVIEW RECOMMENDED THAT

- FUNDING BE UNDER AN INTERIM DETERMINATION
- THIS DOES NOT PUT IT ON TO THE MEDICARE SCHEDULE BUT PLACES A REQUIREMENT FOR DATA COLLECTION
- AUSTRALIA NEW ZEALAND SOCIETY OF PHYSICIANS IN NUCLEAR MEDICINE AGREED TO BE THE CENTRE FOR DATA COLLECTION

DATA COLLECTION

- Demographic for all patients
- Various Protocols were developed for each indication to show management change by PET
- The time frame was 3 years

MMC – MOORABBIN DIAGNOSTIC IMAGING DEPARTMENT

Centre Road, East Bentleigh 3165 (East of East Boundary Road)
Phone: 9928 8590 9928 8550
Fax: 9928 8563 Melway Ref. 77 K1

MIA

PET Imaging Request Form - Oncology

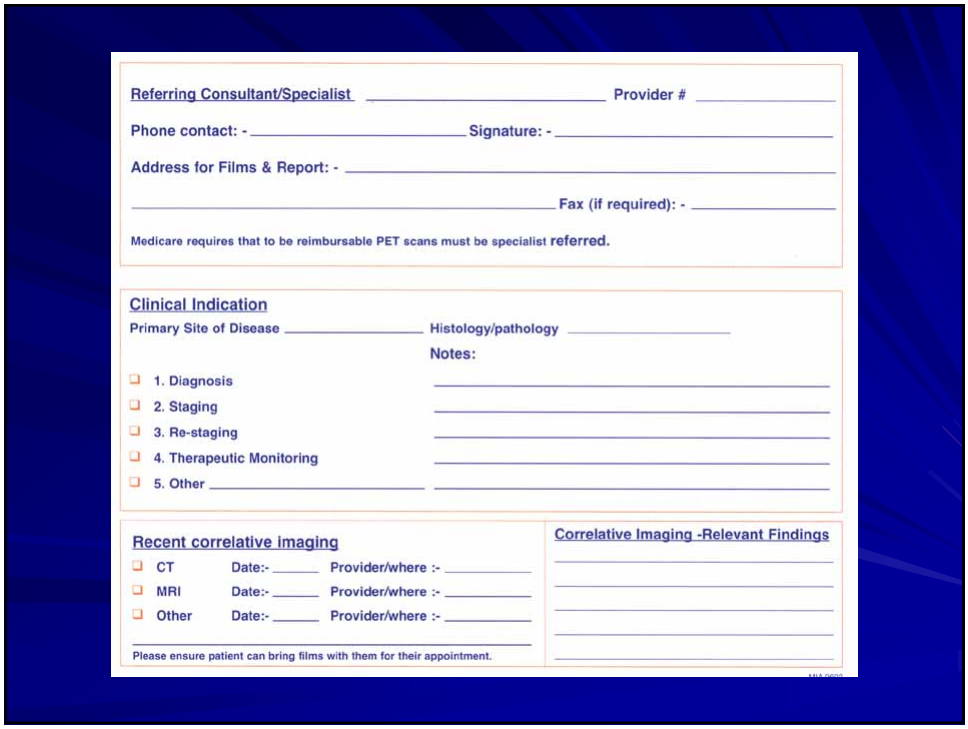
Attention :- Drs Andrew Baldey, John Stuckey
PLEASE COMPLETE BOTH SIDES AND ENSURE FORM IS SIGNED BY THE REFERRING CONSULTANT

Patient Identification
SURNAME:
FIRST NAME:
ADDRESS:
PHONE NO:
DATE OF BIRTH:
Or ID Sticker
Phone - Work/Mobile/Other _____

PET Scan results required by: ____/____/____
Reason for urgent scan: _____

Patient Information :-
- Patient status at present OP or IP. If IP where ? _____
- Diabetic No / IDDM / NIDDM
- Is patient claustrophobic? Yes or No.

Referring Consultant/Specialist _____ Provider # _____
Phone contact: - _____ Signature: - _____
Address for Films & Report: - _____
_____ Fax (if required): - _____
Medicare requires that to be reimbursable PET scans must be specialist referred.



Referring Consultant/Specialist _____ Provider # _____

Phone contact: - _____ Signature: - _____

Address for Films & Report: - _____

_____ Fax (if required): - _____

Medicare requires that to be reimbursable PET scans must be specialist referred.

Clinical Indication

Primary Site of Disease _____ Histology/pathology _____

Notes:

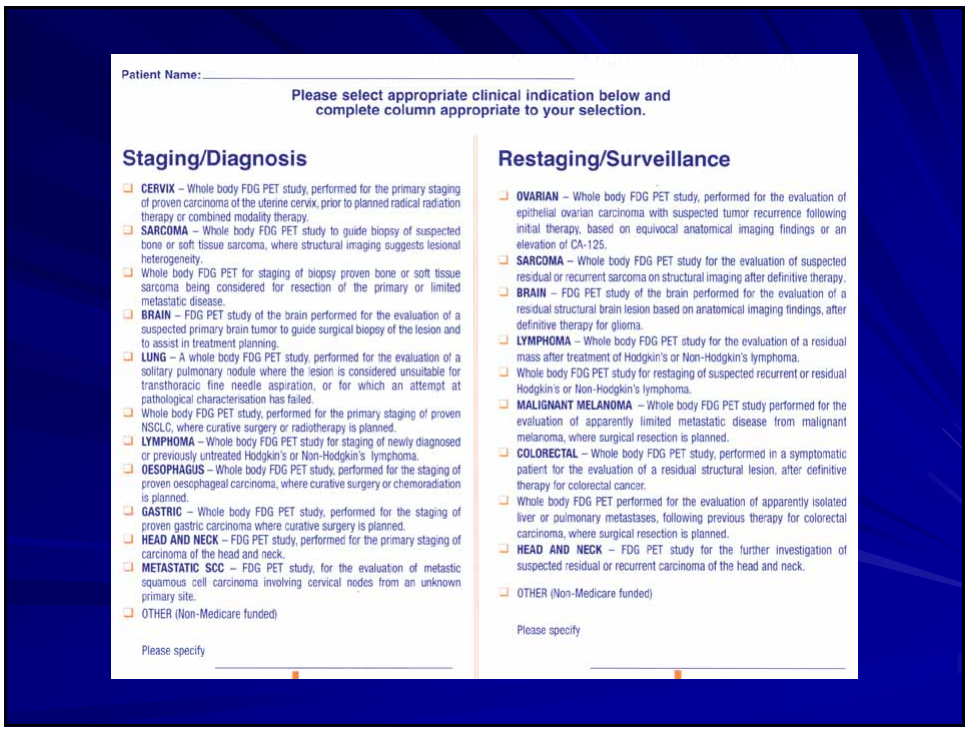
- ❑ 1. Diagnosis
- ❑ 2. Staging
- ❑ 3. Re-staging
- ❑ 4. Therapeutic Monitoring
- ❑ 5. Other _____

Recent correlative imaging

- ❑ CT Date:- _____ Provider/where :- _____
- ❑ MRI Date:- _____ Provider/where :- _____
- ❑ Other Date:- _____ Provider/where :- _____

Please ensure patient can bring films with them for their appointment.

Correlative Imaging -Relevant Findings



Patient Name: _____

Please select appropriate clinical indication below and complete column appropriate to your selection.

Staging/Diagnosis

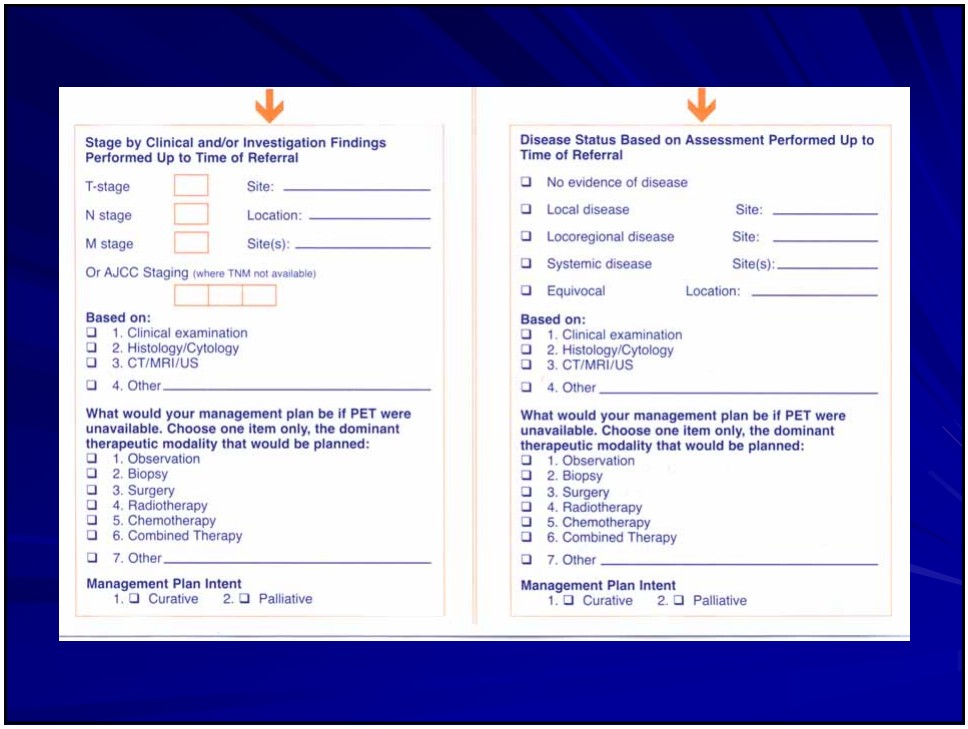
- ❑ **CERVIX** – Whole body FDG PET study, performed for the primary staging of proven carcinoma of the uterine cervix, prior to planned radical radiation therapy or combined modality therapy.
- ❑ **SARCOMA** – Whole body FDG PET study to guide biopsy of suspected bone or soft tissue sarcoma, where structural imaging suggests lesional heterogeneity.
- ❑ Whole body FDG PET for staging of biopsy proven bone or soft tissue sarcoma being considered for resection of the primary or limited metastatic disease.
- ❑ **BRAIN** – FDG PET study of the brain performed for the evaluation of a suspected primary brain tumor to guide surgical biopsy of the lesion and to assist in treatment planning.
- ❑ **LUNG** – A whole body FDG PET study, performed for the evaluation of a solitary pulmonary nodule where the lesion is considered unsuitable for transthoracic fine needle aspiration, or for which an attempt at pathological characterisation has failed.
- ❑ Whole body FDG PET study, performed for the primary staging of proven NSCLC, where curative surgery or radiotherapy is planned.
- ❑ **LYMPHOMA** – Whole body FDG PET study for staging of newly diagnosed or previously untreated Hodgkin's or Non-Hodgkin's lymphoma.
- ❑ **OESOPHAGUS** – Whole body FDG PET study, performed for the staging of proven oesophageal carcinoma, where curative surgery or chemoradiation is planned.
- ❑ **GASTRIC** – Whole body FDG PET study, performed for the staging of proven gastric carcinoma where curative surgery is planned.
- ❑ **HEAD AND NECK** – FDG PET study, performed for the primary staging of carcinoma of the head and neck.
- ❑ **METASTATIC SCC** – FDG PET study, for the evaluation of metastic squamous cell carcinoma involving cervical nodes from an unknown primary site.
- ❑ OTHER (Non-Medicare funded)

Please specify _____

Restaging/Surveillance

- ❑ **OVARIAN** – Whole body FDG PET study, performed for the evaluation of epithelial ovarian carcinoma with suspected tumor recurrence following initial therapy, based on equivocal anatomical imaging findings or an elevation of CA-125.
- ❑ **SARCOMA** – Whole body FDG PET study for the evaluation of suspected residual or recurrent sarcoma on structural imaging after definitive therapy.
- ❑ **BRAIN** – FDG PET study of the brain performed for the evaluation of a residual structural brain lesion based on anatomical imaging findings, after definitive therapy for glioma.
- ❑ **LYMPHOMA** – Whole body FDG PET study for the evaluation of a residual mass after treatment of Hodgkin's or Non-Hodgkin's lymphoma.
- ❑ Whole body FDG PET study for restaging of suspected recurrent or residual Hodgkin's or Non-Hodgkin's lymphoma.
- ❑ **MALIGNANT MELANOMA** – Whole body FDG PET study performed for the evaluation of apparently limited metastatic disease from malignant melanoma, where surgical resection is planned.
- ❑ **COLORECTAL** – Whole body FDG PET study, performed in a symptomatic patient for the evaluation of a residual structural lesion, after definitive therapy for colorectal cancer.
- ❑ Whole body FDG PET performed for the evaluation of apparently isolated liver or pulmonary metastases, following previous therapy for colorectal carcinoma, where surgical resection is planned.
- ❑ **HEAD AND NECK** – FDG PET study for the further investigation of suspected residual or recurrent carcinoma of the head and neck.
- ❑ OTHER (Non-Medicare funded)

Please specify _____



Stage by Clinical and/or Investigation Findings Performed Up to Time of Referral

T-stage ☐ Site: _____

N stage ☐ Location: _____

M stage ☐ Site(s): _____

Or AJCC Staging (where TNM not available) ☐☐☐

Based on:
- ❑ 1. Clinical examination
- ❑ 2. Histology/Cytology
- ❑ 3. CT/MRI/US
- ❑ 4. Other _____

What would your management plan be if PET were unavailable. Choose one item only, the dominant therapeutic modality that would be planned:
- ❑ 1. Observation
- ❑ 2. Biopsy
- ❑ 3. Surgery
- ❑ 4. Radiotherapy
- ❑ 5. Chemotherapy
- ❑ 6. Combined Therapy
- ❑ 7. Other _____

Management Plan Intent
1. ❑ Curative 2. ❑ Palliative

Disease Status Based on Assessment Performed Up to Time of Referral
- ❑ No evidence of disease
- ❑ Local disease Site: _____
- ❑ Locoregional disease Site: _____
- ❑ Systemic disease Site(s): _____
- ❑ Equivocal Location: _____

Based on:
- ❑ 1. Clinical examination
- ❑ 2. Histology/Cytology
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- ❑ 6. Combined Therapy
- ❑ 7. Other _____

Management Plan Intent
1. ❑ Curative 2. ❑ Palliative

OUTCOME .....

1. 12 Protocols developed
2. Carcinoma of the cervix and myocardial infarction delayed because of not enough patient numbers
3. Non small cell carcinoma lung only required demographic data as local data showed PET was effective in changing management

OUTCOME ..... (contd)

4. Complex Epilepsy unresponsive to medical treatment was being reviewed
5. Data collection will continue till 2006 when a full review of the local and international literature will take place to see whether PET will be placed on a more open basis