

Clinical Indications for PET/CT

Dorset Cancer Network

April 2008

Clinical/diagnostic problem	Recommendation	Comment
Brain and Spinal Cord	[B] [B] [C] [C] [C]	<p>Indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Suspected tumour recurrence when anatomical imaging is difficult or equivocal and management will be affected. Often a combination of methionine and FDG PET scans will need to be performed <input type="checkbox"/> Benign versus malignant lesions, where there is uncertainty on anatomical imaging and a relative contraindication to biopsy <input type="checkbox"/> Investigation of the extent of tumour within the brain or spinal cord <p>Not indicated routinely:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Secondary tumours in the brain <input type="checkbox"/> Assess tumour response to therapy
Paratoid	[C]	<p>Indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identification of metastatic disease in the neck from a diagnosed malignancy <p>Not indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Differentiation of Sjogrens Syndrome from malignancy in the salivary glands <input type="checkbox"/> Primary tumour of the parotid to distinguish benign from malignant disease
Malignancies of the Oropharynx	[C] [C] [C]	<p>Indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify extent of the primary disease with or without image registration <input type="checkbox"/> Identify tumour recurrence in previously treated carcinoma <p>Not indicated routinely:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Preoperative staging of known

	[C]	<p>oropharyngeal tumours</p> <ul style="list-style-type: none"> <input type="checkbox"/> Search for primary with nodal metastases.
Larynx	[C] [C] [C]	<p>Indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify tumour recurrence in previously treated carcinoma <p>Not indicated routinely:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Staging known laryngeal tumours <input type="checkbox"/> Identification of metastatic disease in the neck from a diagnosed malignancy
Thyroid	[B] [C]	<p>Indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Assessment of patients with elevated thyroglobulin and negative iodine scans for recurrent disease <p>Not indicated routinely:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Assessment of tumour recurrence in medullary carcinoma of the thyroid <p>Not indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Routine assessment of thyroglobulin positive recurrence with radioiodine uptake
Parathyroid	[C]	<p>Not indicated routinely:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Localisation of parathyroid adenomas with methionine when other investigations are negative
Lung	[A] [A] [B] [C] [C]	<p>Indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Differentiation of benign versus malignant lesions where anatomical imaging or biopsy is inconclusive, or there is a relative contraindication to biopsy <input type="checkbox"/> Preoperative staging of non small cell primary lung tumours <input type="checkbox"/> Staging of lung cancer <input type="checkbox"/> Assessment of recurrent disease in previously treated areas where anatomical imaging is unhelpful <p>Not indicated routinely:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Assessment of response to treatment
Oesophagus	[B] [C]	<p>Indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Staging of primary cancer <input type="checkbox"/> Assessment of disease recurrence in

		previously treated cancers Not indicated routinely: <input type="checkbox"/> Assessment of neoadjuvant chemotherapy
Stomach	[C] [C] [C]	Indicated: <input type="checkbox"/> No routine indication Not indicated routinely (but may be helpful): <input type="checkbox"/> Assessment of gastro-oesophageal malignancy and local metastases
Small Bowel	[C] [C]	Indicated: <input type="checkbox"/> No routine indication Not indicated routinely: <input type="checkbox"/> Proven small bowel lymphoma to assess extent of disease
Breast Cancer	[C] [C] [C] [C] [C]	Indicated: <input type="checkbox"/> Assessment and localisation of brachial plexus lesions in breast cancer (radiation effects versus malignant infiltration) <input type="checkbox"/> Assessment of the extent of disseminated breast cancer Not indicated routinely: <input type="checkbox"/> Axillary node status (breast cancer) especially where there is a relative contraindication to axillary dissection <input type="checkbox"/> Assessment of multifocal disease within the difficult breast (dense breast or equivocal radiology) <input type="checkbox"/> Suspected local recurrence <input type="checkbox"/> Assessment of chemotherapy response Not indicated: <input type="checkbox"/> Routine assessment of primary breast cancer
Liver: Primary Lesion		Not indicated: <input type="checkbox"/> Routine assessment of hepatoma
Liver: Secondary Lesion	[C] [C] [C]	Indicated: <input type="checkbox"/> Equivocal diagnostic imaging (CT, MRI, Ultrasound) <input type="checkbox"/> Assessment pre and post therapy intervention <input type="checkbox"/> Exclude other metastatic disease prior to

		metastectomy
Pancreas	[C] [C] [C]	Indicated: <input type="checkbox"/> Staging a known primary Not indicated routinely: <input type="checkbox"/> Differentiation of chronic pancreatitis from pancreatic carcinoma <input type="checkbox"/> Assessment of pancreatic masses to determine benign or malignant status
Colon and Rectum	[A] [C] [C] [C] [B]	Indicated: <input type="checkbox"/> Assessment of recurrent disease <input type="checkbox"/> Prior to metastectomy for colorectal cancer. Not indicated routinely: <input type="checkbox"/> Assessment of tumour response <input type="checkbox"/> Assessment of a mass that is difficult to biopsy Not indicated: <input type="checkbox"/> Assessment of polyps <input type="checkbox"/> Staging a known primary
Renal and Adrenal	[C] [C]	Indicated: <input type="checkbox"/> Assessment of possible adrenal metastases Not indicated routinely: <input type="checkbox"/> Paraganglionomas or metastatic pheochromocytoma to identify sites of disease Not indicated: <input type="checkbox"/> Assessment of renal carcinoma <input type="checkbox"/> Pheochromocytoma – MIBG scanning is usually first choice
Bladder	[C] [C]	Not indicated: <input type="checkbox"/> Primary tumour Not indicated routinely: <input type="checkbox"/> Staging a known primary in selected cases <input type="checkbox"/> Recurrence with equivocal imaging
Prostate		Not indicated: <input type="checkbox"/> FDG in prostate cancer assessment

Testicle	[B] [B] [C]	Indicated: <input type="checkbox"/> Assessment of recurrent disease from seminomas and teratomas <input type="checkbox"/> Assessment of residual masses Not indicated routinely: <input type="checkbox"/> Assessment of primary tumour staging
Ovary	[C]	Indicated: <input type="checkbox"/> In difficult management situations to assess local and distant spread
Uterus: Cervix	[C] [C]	Indicated: <input type="checkbox"/> No routine indication Not indicated routinely: <input type="checkbox"/> In difficult situations to define the extent of disease with accompanying image registration
Uterus: Body		Indicated: <input type="checkbox"/> No routine indication
Lymphoma	[B] [B] [B] [C] [C] [C] [C] [C]	Indicated: <input type="checkbox"/> Staging of Hodgkins lymphoma. <input type="checkbox"/> Staging of Non-Hodgkins lymphoma <input type="checkbox"/> Assessment of residual masses for active disease <input type="checkbox"/> Identification of disease sites when there is suspicion of relapse from clinical assessment. <input type="checkbox"/> Assessment of remission from lymphoma <input type="checkbox"/> Response to chemotherapy Not indicated routinely: <input type="checkbox"/> Assessment of bowel lymphoma <input type="checkbox"/> Assessment of bone marrow to guide biopsy
Musculoskeletal Tumours	[B] [B] [B]	Indicated: <input type="checkbox"/> Soft tissue primary mass assessment to distinguish high grade malignancy from low or benign disease <input type="checkbox"/> Staging of primary soft tissue malignancy to assess nonskeletal metastases <input type="checkbox"/> Assessment of recurrent abnormalities in operative sites <input type="checkbox"/> Assessment of osteogenic sarcomas for

	[C] [B] [C]	metastatic disease <input type="checkbox"/> Follow up to detect recurrence or metastases Not indicated routinely: <input type="checkbox"/> Image registration of the primary mass to identify optimum biopsy site
Skin Tumours	[B] [C] [C]	Indicated: <input type="checkbox"/> Malignant melanoma with known dissemination to assess extent of disease <input type="checkbox"/> Malignant melanoma in whom a sentinel node biopsy was not or can not be performed in stage II (AJCC updated classification). Not indicated routinely: <input type="checkbox"/> Staging of skin lymphomas Not indicated: <input type="checkbox"/> Malignant melanoma with negative sentinel node biopsy (see St Johns Dermatology website for management protocol)
Metastases from unknown primary	[C]	Indicated: <input type="checkbox"/> Determining the site of an unknown primary when this influences management Not indicated: <input type="checkbox"/> Widespread metastatic disease when the determination of the site is only of interest.

All other indications must have prior funding agreed by the patient's PCT prior to referral. This should be arranged via the Lead Cancer Clinician at the referring Trust.