


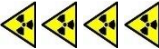






Referral Criteria- Department of Nuclear Medicine, Royal Brompton Hospital (including 77 Wimpole Street PET Site)

The following table should be used as a guide for referrers when requesting Nuclear Medicine studies at the Royal Brompton Hospital (including the PET site at 77 Wimpole Street). The departments will also accept appropriate requests made in accordance with published referral criteria including:

- RCR iRefer guidelines
- RCP/RCR Evidence based indications for the Use of PET CT in the United Kingdom 2016

The same radiation dose ranges have been adopted as within the iRefer guidelines and these dose ranges are explained below.

Radiation dose key:  <1mSv  1-5mSv  5.1-10mSv  >10mSv

| Investigation | Dose | Recommendation | Comment |
|-----------------------------------|---|--|---|
| Paediatric lung ventilation study |  | Indicated only in specific circumstances | 1. As an annual check for functional assessment of lung ventilation in Cystic Fibrosis children |
| Paediatric lung perfusion study |  | Indicated only in specific circumstances | 1. For assessment of intra-cardiac/ intrapulmonary shunts |
| Paediatric gastric reflux study |  | Indicated only in specific circumstances | 1. For assessment of gastro-oesophageal reflux as a cause of aspiration. 2. For assessment of treatment response in gastro-oesophageal reflux. |
| Paediatric gastric emptying study |  | Indicated only in specific circumstances | 1. For assessment of gastric motility in children |

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Written by: L Hossen, MPE and K Wechalekar

Last reviewed by: LHossen, K Wechalekar, Jan 2023














Doc ID: NMLocalreferralcriteria

Status: issued

Next Review date: Jan 2025

Approved by: K Wechalekar

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| Adult lung perfusion study |   Planar or SPECT imaging | Indicated only in specific circumstances | <ol style="list-style-type: none"> For assessment of intra-cardiac/ intrapulmonary shunts For assessment of lung perfusion |
| Investigation | Dose | Recommendation | Comment |
| Adult lung VQ Study |   Planar or SPECT without CT imaging or SPECT with CT imaging | Indicated | <ol style="list-style-type: none"> VQ scintigraphy is an alternative to CTPA in patients without pre-existing pulmonary disease and with normal CXR. In view of the lower radiation dose, VQ scintigraphy should be considered as first choice in young patients, particularly during pregnancy. A normal perfusion scintigram excludes clinically significant pulmonary emboli. VQ scintigraphy is also helpful in patients with suspected chronic pulmonary thromboembolism and in suspected small peripheral pulmonary embolism (CTPA negative + persistent symptoms). |
| Adult lung SPECT/CT |   | Indicated | <ol style="list-style-type: none"> Pre-operative assessment of quantitative lobar function in patients with severe COPD and lung cancers |
| SPECT Myocardial perfusion imaging (MPI) Performed at Royal Brompton hospital site |    to     Depending on tracer and protocol (Tc99m/ Tl201) | Indicated only in specific circumstances | <ol style="list-style-type: none"> For diagnosis of coronary disease in intermediate risk CAD population NM is indicated for risk assessment in haemodynamically stable patients after successful thrombolysis before discharge. Also can be helpful to assess the significance of moderate stenosis after coronary angiography. To assess haemodynamic significance of anomalous origin and course of major coronaries (e.g. muscle bridge) Assessment of perioperative risk for non-cardiac surgery For planning revascularization strategies To assess myocardial viability and hibernation |

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
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| | | | <ul style="list-style-type: none"> 7) For assessment of ischaemia in certain occupational groups e.g. pilots/ taxi drivers 8) Congenital heart disease affecting coronary arteries (e.g. Kawasaki's disease) in children |
|--|--|--|--|
| Investigation | Dose | Recommendation | Comment |
| PET -CT Myocardial perfusion imaging at 77 Wimpole Street PET-CT site |  Rb-82 | Indicated only in specific circumstances | <ul style="list-style-type: none"> 1) For diagnosis of coronary disease in intermediate risk CAD population 2) NM is indicated for risk assessment in haemodynamically stable patients after successful thrombolysis before discharge. Also can be helpful to assess the significance of moderate stenosis after coronary angiography. 3) Assessment of perioperative risk for non-cardiac surgery 4) For planning revascularization strategies 5) To assess myocardial viability and hibernation 6) To assess multi-vessel coronary disease with suspicion of balanced ischaemia. 7) To assess microvascular dysfunction |
| NM PET-CT Sarcoid study (Fasting) performed at 77 Wimpole Street PET-CT site |  | Specialised investigation | <ul style="list-style-type: none"> 1) For assessment of myocardial inflammation in patients with suspected cardiac sarcoidosis and for assessment of response to treatment. 2) For assessing cardiac device related infection/unexplained fever(PUO) 3) For assessment of large vessel vasculitis/inflammatory conditions |
| Radionuclide ventriculography (RNV/MUGA) |  | Indicated only in specific circumstances | <ul style="list-style-type: none"> 1) Multiple-gated acquisition (radionuclide angiography) or gated rest SPECT techniques using Tc-99m agents can quantify ejection fraction. 2) To assess LV function in patients with cardiotoxic chemotherapy. |
| Whole body +Cardiac ¹²³ I-mIBG |  | Indicated only in specific circumstances | <ul style="list-style-type: none"> 1) To assess integrity of cardiac neuronal function and integrity in cardiomyopathies of different types. 2) Suspicion of pheochromocytoma |

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







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| ¹¹¹ In-WBC scan ^{99m} Tc-WBC scan |  to   depending on tracer. | Indicated only in specific circumstances | 1) For assessing cardiac device related infection 2) Unexplained fever (PUO) |
| ^{99m} Tc-DPD Whole body bone scan for cardiac amyloidosis |   | Indicated only in specific circumstances | 1) Heart failure with preserved ejection fraction 2) Suspicion of cardiac (TTR-type) amyloidosis |
| ^{99m} Tc-HDP Whole body bone scan |   | Indicated only in specific circumstances | 1) For assessing bone metastasis 2) For assessing fractures in patient with long term steroid therapy 3) Suspected bone/joint infection |
| ^{99m} Tc-Pertechnetate thyroid scan |   | Indicated only in specific circumstances | 1) For assessment of solitary thyroid nodule 2) Amiodarone related thyroid disease 3) Grave's disease 4) Multinodular goitre |

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