

Nuclear Medicine External Referrals:

Guidelines for referring patients

The following outlines referral guidelines for registered healthcare professionals referring patients for diagnostic or therapeutic nuclear medicine procedures at Sheffield Teaching Hospitals NHSFT (STH).

Referrals for any patient for any clinical indication not listed below or by any clinical team not covered in the agreements in place as outlined below should be discussed directly with one of our Radionuclide Radiologist Practitioners before referral: please contact the department via email sth.nuclearmedappointments@nhs.net or by phone - Nuclear Medicine reception on 0114 2712779.

[If you are a member of STH staff then please submit referrals via ICE and note that relevant referral information is provided via i-Refer linked from the MIMP Intranet site.]

Responsibilities for Referrers

The following outlines key referrer responsibilities when referring patients for diagnostic or therapeutic procedures involving ionising radiation – as defined under the Ionising Radiation (Medical Exposures) Regulations 2017 (IR(ME)R):

- The referrer must be a registered healthcare professional as defined in IR(ME)R.
- Referrals take into account the referral guidelines provided below and as outlined in the STH Nuclear Medicine procedures outlining who referrals can be accepted from.
- Any referral not within the guidelines below should be discussed directly with one of the Nuclear Medicine Practitioners – please contact us as above.
- Referrers must provide enough information to enable us to appropriately identify the individual undergoing the procedure e.g. full name, date of birth, address, NHS number and/or local hospital number as applicable.
- Referrers must provide sufficient relevant clinical history to enable the appropriateness of the procedure and justification of the medical exposure to be evaluated by the practitioner.
- Where appropriate please ensure you provide information on pregnancy or breast feeding.

Any referral not providing appropriate information as above will not be progressed and the department will contact the referrer accordingly.

Guidelines for referring patients for diagnostic Nuclear Medicine investigations

The following gives referral guidance for accessing those Nuclear Medicine diagnostic investigations that are open to clinical teams outside of Sheffield Teaching Hospitals NHSFT.

Bone scans	Effective Dose: 3.9mSv
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Effective dose quoted is for a "standard" patient weighing 70kg

GPs can refer patients for bone scans at STHFT under the following cases:

1. Screening for bone metastases in known or suspected malignant disease with a potential to spread to bone (breast, prostate, lung, kidney, oesophagus, bladder).
2. Screening for bone metastases in known malignant disease in patients who have bone pain
3. Detection of osteomyelitis
4. Detection of stress fractures and occult trauma
5. Evaluation of unexplained bone pain. This would include most orthopaedic referrals such as plantar fasciitis, sesamoiditis, tarsal coalition and osteoid osteoma.
6. Detection and evaluation of extent of arthropathy (joint disease)
7. Differentiation of monostotic from polystotic bone tumour (the evaluation of patients presenting with a single bone lesion to establish whether further lesions are present)

Dental Practitioners can refer patients for bone scans under the following cases:

8. Evaluation of temporo-mandibular joint (TMJ) hyperplasia

Brain imaging:	
- Ioflupane (DaTSCAN)	Effective Dose: 4.6mSv
- Brain perfusion imaging	Effective Dose: 5.8mSv

Effective dose quoted is for a "standard" patient weighing 70kg

Any medical staff from Sheffield Health and Social Care NHS Foundation Trust can refer patients under the following cases:

DaTSCAN:

1. Assessment of tremors and other symptoms indicative of Parkinson's disease or Parkinsonian syndromes
2. Assessment of dementia in order to diagnose or exclude Lewy body dementia.

NB: DaTSCANS involve administration of non-radioactive potassium iodide to provide thyroid protection. If any request is received that does not state permission to administer this we will contact the referrer directly to ensure this is given before proceeding. If you have any questions, please contact the department to discuss prior to submitting a referral.

Brain perfusion imaging:

3. Assessment of dementia (including Alzheimer's and fronto-temporal etc.).

Labelled white blood cell imaging / infection imaging:	
- In-111 labelled white blood cell imaging	Effective Dose: 7.2mSv
- Tc-99m labelled white blood cell imaging	Effective Dose: 2.2mSv

Effective dose quoted is for a "standard" patient weighing 70kg

Please note that the decision to perform either Tc-99m labelled or In-111-labelled white blood cell investigations will be made by the Nuclear Medicine Practitioner (Radionuclide Radiologist) based on the clinical question to be answered.

Medical staff in Bassetlaw, Doncaster, Rotherham and Barnsley Hospitals can access labelled white blood cell imaging at STHFT in the following cases:

1. Suspected soft tissue sepsis involving the thorax or abdomen²
2. Suspected post-operative infection involving the thorax or abdomen
3. Suspected bone infection.
4. Pyrexia of unknown origin only when FDG PET is either not available or cannot be performed within a reasonable time.
5. Inflammatory bowel disease where there is some indication that there could be an abscess.
6. Investigation of known inflammatory bowel disease to determine disease activity and/or extent
7. Investigation of suspected inflammatory bowel disease
8. Suspected post-operative infection involving the extremities (ie, legs arms, head or neck)*
9. Suspected soft tissue sepsis involving the extremities (ie, legs, arms, head or neck)*

***NB:** If the area under investigation is very small (e.g. a small stent) then nuclear medicine imaging is unlikely to be helpful, for clarification please contact the department to discuss.

Gastric emptying studies	Effective Dose: 0.3mSv
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Effective dose quoted is for a "standard" patient weighing 70kg

Agreement is in place for Dr W Lambert, CNDRH NHS Trust to refer patients for the following indications:

1. Unexplained vomiting or food regurgitation
2. Bloating, fullness, nausea, epigastric pain or drowsiness after meals
3. NIDDM or IDDM with suspected autonomic neuropathy and gastroparesis
4. Suspected dumping syndrome after gastric surgery
5. Chronic constipation secondary to laxative abuse

Guidelines for referring patients for Molecular Radiotherapy Treatment of benign thyroid disorders

Molecular radiotherapy treatment of benign thyroid disorders

Service Line Agreements are in place for named Consultant Endocrinologists to refer patients for molecular radiotherapy treatment of benign thyroid disorders; specific details are provided in the SLAs and communicated directly with relevant consultant teams.

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