Criteria for the establishment of a paediatric PET-CT Centre

Report January 2009

UK PET-CT Advisory Board
The Board were reminded that the strategy document on PET-CT produced in 2005, had recommended specific paediatric PET-CT centres where any aged infant or child could be scanned. This was to cater for any infant or a child who required sedation/anaesthesia where adequate appropriate facilities must exist.

The UK PET-CT Board have outlined criteria for the safe Paediatric PET-CT scans. The Board was keen to ensure ongoing competence for any site undertaking Paediatric PET-CT scans. Expertise in all aspects of the PET-CT i.e. scan procedure, patient preparation, numbers needed to scan per annum and reporting of the PET-CT need to be maintained. The Board acknowledged that any PET site could undertake examinations on children, but the board hopes that the criteria as stated in this document will be in place in any such site.

- This document assumes that any site undertaking paediatric PET-CT scans will have all the appropriate paediatric staff and facilities for sedation, anaesthesia and total care of infants and children of all ages.
- As only a small number of infants and children will require a PET-CT scan, so there will be limited expertise in the UK in reporting these studies. There is therefore a need to ensure all aspects of the scan including reports are undertaken by those with appropriate experience.
- While there is a national desire to provide services close to the patient’s home, children who require PET-CT all suffer from a serious illness and the highest quality service must be provided, even if that requires significant travel.

The document will be posted on the BNMS web site for the special attention of the RCPCH as well as current PET-CT providers/users and paediatric oncologists.

1. PET-CT in the UK. A strategy for the development and integration of a leading edge technology within routine clinical practice. (BRCR(05)5.

http://www.rcr.ac.uk/docs/general/pdf/PETCT_final.pdf
1. Advanced resuscitation capability. The personnel and equipment must be available on site to manage paediatric emergency situations

2. Appropriate facilities for sedation and anaesthesia of children in the PET-CT suite. These facilities should be at the same level as for paediatric surgery

3. Staff of all crafts familiar with the resources needed for Paediatric practice

4. Staff of all crafts who are competent for the needs of Paediatric practice

5. Adequate throughput to maintain and develop service. The estimated total number of paediatric scans in England will be +/- 400. The PET-CT Board would suggest that at least 50 scans per year will be required to maintain expertise.

6. On-site paediatric medical and nursing support including access to paediatric inpatient beds

7. Specific paediatric support e.g. ability to manage prolonged epilepsy seizures

8. Nuclear medicine/radiology staff familiar with the relevant PET and CT variants and the pathologies being studied.

9. Staff familiar with the issues relating to radiation hygiene in paediatrics

10. The ability to liaise directly with the referrers and to provide data in the appropriate form for MDT

11. TVs for entertainment during uptake phase

12. Straps / cushions / mould to keep the child comfortable and still
Additional Criteria

- Not onerous travelling time for patients and families/carers
- Ability to adjust PET/CT cameras to give minimum radiation exposure
- Designated waiting areas
- Previous experience in performing whole body studies in children using general anaesthesia
- Previous experience in paediatric research
- Neurophysiology facilities for EEGs?
- Potential ability to perform PET-CT guided radiotherapy planning