



INDICATIONS FOR THE USE OF ^{18}F -FDG PET CT IN BREAST CANCER PATIENTS IN SCOTLAND

Background

Original guidance for the use of FDG PET CT in the context of Breast cancer was first produced in 2016. This updated document is part of a planned guideline review process. During this time period there has been no significant change in the available evidence base to result in any change of current guidance.

There remains insufficient evidence to justify the use of PET CT in routine staging or surveillance of Breast cancer patients. Breast cancer staging requires the detection of small <1cm tumours which are beyond the resolution of the technique. Low grade tumours may also be falsely negative. PET CT also has low sensitivity for nodal metastases and should not be used as a substitute for sampling and the sentinel node procedure.

As with all cases, PET referrals should only be considered where the outcome of the investigation will directly influence individual patient management and treatment. Given the low number of patients likely to benefit, Multidisciplinary Team (MDT) discussion is advised to ensure appropriate use.

Routine indications

- Assessment of multi-focal disease or suspected recurrence in patients with dense breasts in whom MRI is not available or is inconclusive
- Differentiation of treatment-induced brachial plexopathy from tumour infiltration in symptomatic patients with an equivocal or normal MR.
- Assessment of extent of disease in carefully selected patients (following MDT discussion) with disseminated breast cancer if aggressive therapy is being considered, e.g. metastasectomy
- Assessment of response to chemotherapy in patients whose systemic disease is not well demonstrated using other techniques; for example, bone metastases.
- Selected patients where conventional imaging is equivocal or conflicting.
- Consider for patients with inflammatory breast cancer (in whom there is a significant incremental detection rate of distant metastases over and above conventional CT)

Future Considerations

These guidelines will be reviewed on an ongoing basis in order to incorporate any significant changes to the existing evidence base.

References

Evidence-based indications for the use of PET-CT in the United Kingdom 2016. (RCR, RCPL, RCPSG, RCPE, BNMS, ARSAC) Published: May 2016

FDG PET, PET/CT and breast cancer imaging. *Radiographics* 2007; 27:S215-229.

Performance of PET/CT in clinical management of breast cancer. *Radiology* 2013. 266; 2: 388-405.

Advanced breast cancer: diagnosis and treatment. NICE Clinical guideline[[cg81](#)]. Published 2009, updated 2017.

NOTE

This guideline is not intended to be construed or to serve as a standard of care. Standards of care are determined on the basis of all clinical data available for an individual case and are subject to change as scientific knowledge and technology advance and patterns of care evolve. Adherence to guideline recommendations will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgement must be made by the appropriate healthcare professional(s) responsible for clinical decisions regarding a particular clinical procedure or treatment plan. This judgement should only be arrived at following discussion of the options with the patient, covering the diagnostic and treatment choices available. It is advised, however, that significant departures from the national guideline or any local guidelines derived from it should be fully documented in the patient's case notes at the time the relevant decision is taken.