

Early whole-body magnetic resonance imaging in the staging of cancer

Introduction

The aim of the HTA programme is to ensure that high quality research information on the effectiveness, costs and broader impact of health technologies is produced in the most efficient way for those who use, manage, provide care in or develop policy for the NHS. Topics for research are identified and prioritised to meet the needs of the NHS. Health technology assessment forms a substantial portfolio of work within the National Institute for Health Research and each year about fifty new studies are commissioned to help answer questions of direct importance to the NHS. The studies include both primary research and evidence synthesis.

Question

In selected patients with a new diagnosis of cancer does early whole-body magnetic resonance imaging (WB-MRI) lead to a more rapid detection of distant metastases and better staging of tumours?

- 1 Technology:** Whole-body magnetic resonance imaging (WB-MRI).
- 2 Patient group:** Newly diagnosed adult patients with lung cancer or colorectal cancer.
- 3 Setting:** Secondary care in-patients or out-patients.
- 4 Comparators:** Proposals to describe the combination of modalities in the ‘standard’ diagnostic pathway (typically including PET/CT where used) / time.
- 5 Design:** A cohort study to assess the diagnostic accuracy and costs of early use of WB-MRI to replace a series of existing tests “early” in the diagnostic pathway. Proposals should clearly describe the existing pathway and grouping of tests being compared and explore whether early WB-MRI might be effective at replacing a number of existing imaging tests in the diagnostic pathway and reducing the time to major treatment decisions. Applicants will need to give careful consideration and describe at what point in time and how WB-MRI tests are to be handled to ensure the integrity of the study.
- 6 Important outcomes:** Comparison of test accuracy of ‘pathways’ for metastases, time to definitive staging, significant changes in patient management, occurrence of incidental findings, patient acceptability, an economic evaluation.
- 7 Minimum duration of follow-up:** 12 months.

Background to commissioning brief:

Whole-body magnetic resonance imaging (WB-MRI) represents a new approach to the existing stepwise multi-modality approach for staging of malignancies. A number of studies have shown that for some cancers it might provide an alternative to some current diagnostic techniques and there are a large number of patients who might potentially benefit from this approach.

WB-MRI has been compared with conventional imaging (a combination of chest computerised tomography (CT) scan, scintigraphy or Fludeoxyglucose-Positron emission tomography (FDG-PET) and abdominal/pelvic CT scan/MRI). WB-MRI may provide an acceptable “one-stop” investigation, reducing the time spent in waiting for and undergoing tests. This could represent a cost-effective use of resources whilst eliminating the radiation burden of conventional staging investigations.

Making an application

The NIHR Health Technology Assessment programme is funded by the NIHR, with contributions from the CSO in Scotland and WORD in Wales. Researchers from Northern Ireland should contact NETSCC to discuss their eligibility to apply.

If you wish to submit a proposal on this topic, complete the on-line application form at <http://www.hta.ac.uk/funding/standardcalls/index.shtml> and submit it on line by **30th September 2010**. You need to send a copy of the application form with original signatures, along with a detailed project description, to the HTA Commissioning Manager at the National Coordinating Centre for Health Technology Assessment, Alpha House, Enterprise Road, Southampton Science Park, Chilworth, Southampton, SO16 7NS.

Your full proposal will be assessed by designated board members, alongside other applications submitted in the same topic area. A maximum of three proposals will be taken forward for peer review by external referees, and subsequent consideration by the HTA Commissioning Board at its meeting in January 2011.

Applications received electronically after 1300 hours on the due date will not be considered.

Please see GUIDANCE ON APPLICATIONS overleaf.

Guidance on applications

Methods

Applicants should demonstrate knowledge of current research in the field and of systematic review methods and state how these would apply to the question posed. Valid and reliable methods should be proposed for identifying and selecting relevant material, assessing its quality and synthesising the results. Guidance on choice of appropriate methods is contained in NHS CRD Report *Systematic Reviews: CRD's guidance for undertaking reviews in health care (third edition)* (http://www.york.ac.uk/inst/crd/systematic_reviews_book.htm). Where policy implications are considered, the emphasis should be on assessing the likely effects of a range of policy options open to decision makers rather than a judgement on any single strategy. Where epidemiological modelling or economic evaluation is required, the range of uncertainty associated with the results should be assessed. In the assessment of cost-effectiveness, further data collection may be required to estimate resource use and costs. If there is evidence that the ratio of costs and benefits may differ between readily identifiable groups, applicants are encouraged to state how they will identify these differences.

Cochrane

Applicants wishing to produce and maintain a Cochrane systematic review from this HTA commissioned systematic review should make the case in their proposal. This will need to include the approval of the relevant Cochrane Review Group (www.cochrane.org). Any additional costs associated with the initial preparation of a Cochrane review should be included in your project proposal. Maintenance costs cannot be met.

In evaluating diagnostic and imaging techniques, the emphasis of the HTA programme is to assess the effect on patient management and outcomes (particularly where changes in management can be shown to have patient benefits). Improvements in diagnostic accuracy, whilst relevant, are not the primary interest of this commissioned research programme. Applicants should justify where they consider improvements in diagnostic accuracy to be relevant to these objectives. Where there is poor evidence to link diagnostic improvements to patient benefits, part of the research may be to assess the effects of such changes on patient outcome.

Public involvement in research

The HTA programme recognises the benefit of increasing active involvement of members of the public in research and would like to support research projects appropriately. The HTA programme encourages applicants to consider *how* the scientific quality, feasibility or practicality of their proposal *could* be improved by involving members of the public. Examples of how this has been done for health technology assessment projects can be found at <http://www.hta.ac.uk/PPIguidance/>. Research teams wishing to involve members of the public should include in their application: the aims of active involvement in this project; a description of the members of the public (to be) involved; a description of the methods of involvement; and an appropriate budget. Applications that involve members of the public will not, for that reason alone, be favoured over proposals that do not but it is hoped that the involvement of members of the public will improve the quality of the application.

Updating

It is the policy of NETSCC, HTA that all search strategies undertaken as part of evidence synthesis/secondary research projects must not be more than 12 months out of date when the draft final report is submitted. We expect that most projects will manage to bring their searches up to date prior to analysis and writing up. As research funders we are aware that exceptional circumstances can apply that would not allow this to be case but this must be the exception rather than the rule and will be assessed on a case by case basis. The expectation is that projects funded by the HTA programme will deliver information that is both relevant and timely.

In addition, in order to inform decisions on whether and when to update the review, researchers will be expected to give some indication of how fast the evidence base is changing in the field concerned, based on the nature and volume of ongoing work known at the time the review is completed. Applicants should note that they will not be expected to carry out any future updating as part of the contract to complete the review.

Communication

Communication of the results of research to decision makers in the NHS is central to the HTA Programme. Successful applicants will be required to submit a single final report for publication by the HTA programme. They are also required to communicate their work through peer-reviewed journals and may also be asked to support NETSCC, HTA in further efforts to ensure that results are readily available to all relevant parties in the NHS. Where findings demonstrate continuing uncertainty, these should be highlighted as areas for further research.

Timescale

There are no fixed limits on the duration of projects or funding. However, there is a pressing need within the NHS for the information and so the research would normally be expected to be completed as soon as possible – however it is for applicants to justify the duration and costs proposed.