TITLE: 1.5 Tesla Versus 3.0 Tesla Magnetic Resonance Imaging Units: Imaging Quality and Guidelines

DATE: 4 March 2010

RESEARCH QUESTIONS:

1. What is the clinical evidence regarding the relative imaging quality of 1.5 Tesla versus 3.0 Tesla magnetic resonance imaging units?

2. What are the evidence-based guidelines for use of 1.5 Tesla versus 3.0 Tesla magnetic resonance imaging units for diagnosis of specific clinical conditions?

METHODS:

A limited literature search was conducted on key health technology assessment resources, including PubMed, the Cochrane Library (Issue 2, 2010), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, EuroScan, international health technology agencies, and a focused Internet search. The search was limited to human, English language articles published between 2005 and February 2010. Filters were applied to limit the retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, controlled clinical trials, and guidelines. Internet links were provided, where available.

RESULTS:

HTIS reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, controlled clinical trials, observational studies, and evidence-based guidelines.

Eight randomized controlled trials and 37 controlled clinical trials were identified regarding the relative imaging quality of 1.5 Tesla versus 3.0 Tesla magnetic resonance imaging units. No evidence-based guidelines were identified for use of 1.5 Tesla versus 3.0 Tesla magnetic resonance imaging units for diagnosis of specific clinical conditions. No relevant health
technology assessments, systematic reviews, or meta-analyses were identified. Additional articles of potential interest can be found in the appendix.

**Health technology assessments**
No literature identified

**Systematic reviews and meta-analyses**
No literature identified

**Randomized controlled trials**


Controlled clinical trials


**Guidelines and recommendations**
No literature identified

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APPENDIX – FURTHER INFORMATION:

Review articles


Product comparisons
