



<b>Title</b>	<b>HTA Magnetic Resonance Imaging (MRI)</b>
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<b>Reference</b>	2006. KCE reports 37A (D/2006/10.273/32). <a href="http://kce.fgov.be/index_nl.aspx?ID=0&amp;SGREF=5269&amp;CREF=7368">http://kce.fgov.be/index_nl.aspx?ID=0&amp;SGREF=5269&amp;CREF=7368</a>

## Aim

- To evaluate the effectiveness of MRI and the possibilities to substitute CT for MRI.
- To analyze the pros and cons of MRI and CT reimbursement systems and compare MRI reimbursement systems in other European countries with the Belgian system.
- To evaluate the feasibility of implementing mobile MRI units in Belgium.

## Conclusions and results

Technical improvements in MRI have led to an increase in potential indications for MRI, but quantitative assessments of the clinical effect of MRI in large case series or controlled trials are missing. The high quality and wide use of MRI make such studies difficult. Hence, the evidence is often limited to “diagnostic accuracy”.

Belgium has many CT units. The ratio of CT/MRI examinations is among the highest reported. Financing of MRI and CT differs considerably without a clear explanation.

In Belgium, mobile MRI is used as a temporary solution when a fixed MRI is down or being rebuilt.

## Recommendations

A biennial update of referral guidelines regarding indications for which MRI or CT should be used, and the optimal imaging technique for each indication, is recommended. A computing system incorporating the referral guidelines would be helpful for prescribers. Appropriate use of medical imaging should be a priority in basic and continuing medical education.

For quality assurance, different measures could be taken, eg, regular MRI and CT site visits by a commission, training and support by experienced radiologists, regular conferences between providers and prescribers of CT and MRI examinations, regulation of MRI installations, and limiting certain exams to expert centers.

Financing mechanisms for CT and MRI should be harmonized, and reimbursement of certain medical imaging procedures revised. The current fee-for-service system for radiologists and lack of financial responsibility of prescribers preclude development of incentive mechanisms to stimulate appropriate use and discourage inappropriate use of medical imaging procedures.

Evidence is insufficient to conclude that the advantages of mobile MRI in Belgium outweigh the disadvantages or otherwise.

## Methods

MEDLINE, EMBASE, the HTA Database, NHS EED, CINAHL, and DARE were searched. Study quality was assessed using the QUADAS quality assessment tool for diagnostic research. The level of evidence for diagnostic efficacy was identified for each indication. Information on financing systems in other countries was obtained by a survey of INAHTA members and a literature review. Manufacturers and users of mobile MRI units were contacted.

## Further research/reviews required

Biennial updating of the referral guidelines for medical imaging procedures requires regular review of new evidence. In the Belgian context more research is needed on possible financing systems for CT and MRI.