
Health Technology Clinical Committee

Findings and Coverage Decision

Date: May 18, 2007

Topic: Upright/Positional MRI

Number and Coverage Topic

20070501 – Upright/Positional MRI

HTCC Coverage Determination

Upright and positional MRI is **not a covered benefit** due to insufficient evidence to conclude that the health technology is safe, efficacious, and cost-effective.

HTCC Reimbursement Determination

❖ **Indications and Limitations of Coverage**

Not Applicable

❖ **Non-Covered Indicators**

All

Health Technology Background

Upright and positional MRI (uMRI) is a magnetic resonance imaging test designed to be performed with patients in weight bearing or different positions, (e.g. upright, sitting, standing, flexed or extended). Current alternative imaging tests used to diagnose spinal and other joint conditions are a regular MRI (lying down), Computerized Tomography (CT) myelogram, regular or flexion and extension radiographs (x-rays), and discography.

The potential advantage of a uMRI is that the weight bearing or positional images may capture additional findings. Also, the open MRI equipment may improve patient compliance by combating the claustrophobia of traditional MRI scanners and enhance patient comfort. Potential disadvantages are that weight bearing and different positions can cause patient pain and result in an inability to complete the test; and the magnet strength, which determines image quality, of a uMRI is lower (0.6T for uMRI compared to a standard MRI range of 1.0T to 3.0T).

The potential impact on the health system is unknown. Potential benefits may include: more accurate findings, reduced reliance on other tests, and more appropriate treatments and better health outcomes. Potential risks are that lower quality images, less accurate findings, or more findings without an understanding of clinical significance lead to additional or unnecessary tests, inappropriate treatment, and poorer health outcomes.

Committee Findings

The HTCC reviewed and considered the upright and positional MRI technology assessment report, information provided by the Administrator, and invited public and agency comments.

Committee members were confident that scientific evidence confirms that the technology is safe because the technology is comparable to other MRI tests and administration of the test is unlikely to cause a significant adverse health effect.

Committee members found that there was insufficient scientific evidence to make any conclusions about uMRI's effectiveness, including whether uMRI: accurately identifies an appropriate diagnosis; can safely and effectively replace other tests; or results in equivalent or better diagnostic or therapeutic outcomes.

Taking safety and effectiveness data together, the committee found that there was insufficient evidence to conclude whether the use of uMRI would result in less, equivalent, or more health benefit. Most compelling evidence cited by committee members included:

- Technology is ten years old, but no accuracy studies and very few reliability studies
- Of the studies available, most were poor quality and sample sizes were very small
- Image quality is lower and some evidence of higher percentage of individuals not being able to complete the test due to pain from positioning
- Other tests are currently available for diagnosing same conditions, even though it was noted that those tests might also have limitations
- One study that was of higher quality raised the possibility that uMRI might be less beneficial due to decreased findings
- Most other payers do not cover, though one payer does
- There was no National Medicare Coverage Decision
- There are no evidence based clinical guidelines addressing appropriate uMRI usage

Committee members found that there were no independent cost analysis, but the cost of use of the uMRI would be higher based on manufacturer reported costs of \$1450 for a single image with additional images costs ranging from \$350 to \$1200.