

**SUBJECT: POSITIONAL MAGNETIC RESONANCE IMAGING (MRI)**

**POLICY NUMBER: 6.01.36**  
**CATEGORY: Technology Assessment**

**EFFECTIVE DATE: 11/15/07**

**REVISED DATE: 11/20/08, 11/19/09, 11/18/10, 11/17/11**

**ARCHIVED DATE: 11/15/12**

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- *If the member's subscriber contract excludes coverage for a specific service it is not covered under that contract. In such cases, medical policy criteria are not applied.*
- *Medical policies apply to commercial and Medicaid products only when a contract benefit for the specific service exists.*
- *Medical policies only apply to Medicare products when a contract benefit exists and where there are no National or Local Medicare coverage decisions for the specific service.*

## **POLICY STATEMENT:**

Based upon our criteria and review of the peer-reviewed literature, positional (e.g. non-recumbent or non-supine) magnetic resonance imaging (MRI) has not been proven to improve health outcomes and is considered **investigational**, including the following:

- I. Evaluation of patients with cervical, thoracic or lumbosacral back pain; and
- II. Repeat MRI scans in different positions (e.g. flexion, extension, rotation and lateral bending).

*Refer to Corporate Medical Policy #6.01.35 regarding MRI of the Breast.*

*Refer to Corporate Medical Policy #11.01.03 regarding Experimental and Investigational Service.*

## **POLICY GUIDELINES:**

The Federal Employee Health Benefit Program (FEHBP/FEP) requires that procedures, devices or laboratory tests approved by the U.S. Food and Drug Administration (FDA) may not be considered investigational and thus these procedures, devices or laboratory tests may be assessed only on the basis of their medical necessity.

## **DESCRIPTION:**

It has been suggested that imaging the body in various positions with “loading” of the spine or joint may lead to more accurate diagnosis. Loading can be accomplished by having the patient stand upright or in a sitting position. Imaging may also be performed with the patient in the position that causes symptoms.

Open MRI systems have been developed that allow imaging with the patient in various positions. Imaging may be conducted with partial or full weight bearing. A conventional MRI scan with the patient in a recumbent position is performed in addition to positional MRI scans.

Standing and sitting position MRI scanners are a form of open MRI (open on all sides). Patients walk in, stand up or sit during the scan and walk out. These are typically low field-strength scanners (magnet strength is below 1.0 Tesla). Proposed advantages are that weight-bearing studies allowing unrestricted range of motion for flexion, extension, rotation and lateral bending. Images are not the same quality as with enclosed magnets, which are typically higher in field strength.

## **RATIONALE:**

FONAR Corporation has received 510(k) marketing clearance from the U.S. Food and Drug Administration (FDA) for an MRI system that performs positional MRI scans.

Published results about positional MRI remain at an early phase of development. It is important to determine whether positional MRI results in additional findings, and if treatment of these additional findings results in improved health outcomes. Due to insufficient clinical evidence, the incremental benefit of this imaging in clinical practice is not yet known.

Additional study is needed to determine the characteristics of patients who might benefit from positional MRI scans. The clinical benefit of basing treatment decisions, including surgery, on additional findings from these scans need to be established. Positional scans, which use lower field strength magnets, may be of lesser quality than those from

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traditional supine MRI scans which use intermediate or high field-strength magnets. Randomized trials may be needed to adequately evaluate this technique. Studies that correlate positional MRI findings with patient symptoms and outcomes of treatment are also needed.

A prospective cohort study of 148 patients reported that many MRI findings have a high prevalence in subjects without low back pain and that findings such as bulging discs and disc protrusion are of limited diagnostic use. The study also reported that less common findings of moderate or severe central stenosis, root compression, and disc extrusion were more likely to be clinically relevant.

Some studies have concluded that positional MRI can identify abnormalities in patients where conventional (supine) MRI did not identify significant abnormal findings. A prospective comparative study of 30 patients with chronic low back pain reported finding 13 instances of nerve root deviation in the seated extension position compared with 10 instances in the supine position. A prospective clinical trial of 20 patients with cervical spine disorders reported changes in spinal cord compression, angulation, and alignment that occurred during physiologic movement. An additional study concluded that supine MRI underestimated the presence and degree of gravity-dependent spinal pathology and missed pathology of a dynamic nature.

**CODES:**      **Number**      **Description**

*Eligibility for reimbursement is based upon the benefits set forth in the member's subscriber contract.*

**CODES MAY NOT BE COVERED UNDER ALL CIRCUMSTANCES. PLEASE READ THE POLICY AND GUIDELINES STATEMENTS CAREFULLY.**

Codes may not be all inclusive as the AMA and CMS code updates may occur more frequently than policy updates.

**CPT:**      No specific codes

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**HCPCS:**      No specific codes

**ICD9:**      No specific codes

**ICD10:**      No specific codes

**REFERENCES:**

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\* key article

#### **KEY WORDS:**

Cervical MRI, dynamic MRI, flexion MRI, extension MRI, standing MRI, sitting MRI, upright MRI, vertical MRI.

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## **CMS COVERAGE FOR MEDICARE PRODUCT MEMBERS**

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There is currently no National Coverage Determination (NCD) or Local Coverage Determination (LCD) for Positional MRI.