Magnetic Resonance Imaging (MRI) of the Breast with or without Computer-Aided Detection (CAD)

Policy Number: PG0309
Last Review: 06/27/2019

GUIDELINES
This policy does not certify benefits or authorization of benefits, which is designated by each individual policyholder contract. Paramount applies coding edits to all medical claims through coding logic software to evaluate the accuracy and adherence to accepted national standards. This guideline is solely for explaining correct procedure reporting and does not imply coverage and reimbursement.

SCOPE
X Professional
X Facility

DESCRIPTION
Breast Magnetic Resonance Imaging (MRI) is a non-invasive imaging modality that uses magnetic and radiofrequency fields to image body tissue producing very detailed, cross-sectional pictures of the body. MRI of the breast can be performed using MR scanners equipped with breast coils and intravenous MR contrast agents. Inconsistent with CT, MRI uses no ionizing radiation and is generally a safe procedure. However, the strong magnetic fields and radio pulses can affect metal implants within the body. MRI is sometimes used in combination with mammography.

The use of computer-aided detection (CAD) is proposed to assist radiologists’ interpretation of contrast-enhanced magnetic resonance imaging (MRI) of the breast and improve the accuracy of diagnosis of malignancy. MRI of the breast is suggested as an alternative or adjunct to mammography or other screening and diagnostic tests because of its high sensitivity in detecting breast lesions. However, it has a high false-positive rate because of the difficulty in distinguishing between benign and malignant lesions. MRI may be used to screen women at high risk of breast cancer or to look for more extensive disease in women who are eligible for breast-conserving surgery; it is also being studied to gauge the impact of cancer treatment. The CAD/CAE systems are intended to improve the specificity of MRI in detecting or measuring malignant tissue, while maintaining the generally high sensitivity of MRI. The use of CAD/CAE may also shorten the time needed to interpret breast MRI images, which currently takes much longer than reading mammograms.

POLICY
Routine screening Magnetic Resonance Imaging (MRI) of the Breast with or without Computer-Aided Detection (CAD) is noncovered for routine screenings for all product lines. When the criteria listed below is met Breast Magnetic Resonance Imaging (MRI) is covered without a prior authorization for all product lines.

COVERAGE CRITERIA
HMO, PPO, Individual Marketplace, Elite/ProMedica Medicare Plan, Advantage

Breast magnetic resonance imaging (MRI) has been validated as an effective supplementary screening approach for high-risk women. MRI is an effective screening for women with a history of breast cancer and for those with strong familial and genetic risk factors, but is not covered for routine screenings.

Paramount may cover breast magnetic resonance imaging (MRI) for individuals who are high risk for breast cancer...
and may be indicated by one or more of the following:

- Personal history of breast cancer
- Two or more first degree family history with breast cancer
- History of radiation therapy to the chest
- Dense breast tissue with any one of the following risk factors:
  - Lifetime risk of breast cancer of 20% or greater using standard risk assessment models that are defined by family history
  - Personal history of BRCA1 or BRCA 2 gene mutation carrier
  - History of radiation therapy to the chest between the ages of 10-30
  - First-degree relative of a BRAC1 or BRACA2 mutation carrier who has not yet been tested
  - Personal history or has first degree relative who has genetic variants know to predispose to high risk of breast cancer:
    - Li Fraumeni Syndrome - TP53,
    - Cowden syndrome - PTEN,
    - Bannayan-Riley-Ruvalcaba syndrome,
    - Hereditary diffuse gastric cancer with CDH1 mutation, or
    - Peutz-Jeghers syndrome

Breast magnetic resonance imaging (MRI) for individuals with dense breast tissue not accompanied by defined risk factors as described above is unproven and not medically necessary due to insufficient evidence of efficacy.

Other applications of MRI of the breast are considered investigational and not medically necessary including, but not limited to the following:

- To further characterize indeterminate breast lesions identified by clinical exam, mammography or ultrasound;
- For the diagnosis of low suspicion findings on conventional testing not indicated for immediate biopsy and referred for short-interval follow up;
- For the diagnosis of a suspicious breast lesion in order to avoid biopsy;
- To determine response during (as opposed to before and after) neoadjuvant chemotherapy for individuals with locally advanced breast cancer;
- For evaluation of residual tumor in individuals with positive margins after lumpectomy;
- As a screening technique in average risk individuals;
- To further characterize suspicious micro calcifications;
- As routine surveillance in individuals who do not otherwise meet the medical necessity criteria above.

CODING/BILLING INFORMATION
The appearance of a code in this section does not necessarily indicate coverage. Codes that are covered may have selection criteria that must be met. Payment for supplies may be included in payment for other services rendered.

<table>
<thead>
<tr>
<th>CPT CODE</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0159T</td>
<td>Computer-aided detection, including computer algorithm analysis of MRI imaging data for lesion characterization, pharmacokinetic analysis, with further physician review for interpretation, breast MRI. (Deleted 12/31/2018)</td>
</tr>
<tr>
<td>77046</td>
<td>Magnetic resonance imaging, breast, without contrast material; unilateral</td>
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<tr>
<td>77047</td>
<td>Magnetic resonance imaging, breast, without contrast material; bilateral</td>
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<tr>
<td>77048</td>
<td>Magnetic resonance imaging, breast, without and with contrast material(s), including computer-aided detection (CAD real-time lesion detection, characterization and pharmacokinetic analysis), when performed; unilateral</td>
</tr>
<tr>
<td>77049</td>
<td>Magnetic resonance imaging, breast, without and with contrast material(s), including computer-aided detection (CAD real-time lesion detection, characterization and pharmacokinetic analysis), when performed; bilateral</td>
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</tbody>
</table>

ICD-10-CM CODES
C50.011 - Malignant neoplasm of breast
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>C50.929</td>
<td>Secondary malignant neoplasm of breast</td>
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<tr>
<td>C79.81</td>
<td>Carcinoma in situ of breast</td>
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<tr>
<td>D05.00 - D05.92</td>
<td>Benign neoplasm of breast</td>
</tr>
<tr>
<td>D24.1 - D24.9</td>
<td>Neoplasm of uncertain behavior of breast</td>
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<tr>
<td>N60.01 - N65.1</td>
<td>Disorders of breast</td>
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<tr>
<td>Q85.8</td>
<td>Other phakomatoses, not elsewhere classified [Cowden syndrome]</td>
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<tr>
<td>Z12.31</td>
<td>Encounter for screening mammogram for malignant neoplasm of breast</td>
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<tr>
<td>Z15.01</td>
<td>Genetic susceptibility to malignant neoplasm of breast [Li-hyphenFraumeni syndrome]</td>
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<tr>
<td>Z80.3</td>
<td>Family history of malignant neoplasm of breast</td>
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<tr>
<td>Z84.81</td>
<td>Family history of carrier of genetic disease</td>
</tr>
<tr>
<td>Z85.3</td>
<td>Personal history of malignant neoplasm of breast</td>
</tr>
<tr>
<td>Z86.000</td>
<td>Personal history of in-hyphensitu neoplasm of breast</td>
</tr>
<tr>
<td>Z92.3</td>
<td>Personal history of irradiation</td>
</tr>
</tbody>
</table>

**REVISION HISTORY EXPLANATION**

**ORIGINAL EFFECTIVE DATE: 08/22/2014**

08/22/14: Policy created to reflect most current clinical evidence per TAWG.
08/20/15: Policy reviewed and updated to reflect most current clinical evidence per TAWG.
08/26/16: Title changed from Computer-Aided Detection (CAD) with Mammography, to Computer-Aided Detection (CAD)/Computer Aided Evaluation (CAE) with Magnetic Resonance Imaging (MRI) of the Breast. Policy reviewed and updated to reflect most current clinical evidence per TAWG.
06/27/19: Title changed from Computer-Aided Detection (CAD)/Computer Aided Evaluation (CAE) with Magnetic Resonance Imaging (MRI) of the Breast, to Magnetic Resonance Imaging (MRI) of the Breast with or without Computer-Aided Detection (CAD) – addressing the new 2019 CPT codes 77046, 77047, 77048, 77049. Routine screening MRI is noncovered. Created diagnosis codes supporting coverage.
12/21/2020: Medical policy placed on the new Paramount Medical Policy Format

**REFERENCES/RESOURCES**

Centers for Medicare and Medicaid Services, CMS Manual System and other CMS publications and services
Ohio Department of Medicaid
American Medical Association, Current Procedural Terminology (CPT®) and associated publications and services
Industry Standard Review
Hayes, Inc.