Medical Policy Reference Manual
Medical Policy

6.01.022 Magnetic Resonance Imaging (MRI) of the Breast

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Description

Magnetic resonance imaging (MRI) is a non-invasive diagnostic imaging tool capable of demonstrating a wide variety of lesions. MRI of the breast uses Magnetic Resonance (MR) scanners with specialized breast coils and intravenous MR contrast agents for a variety of clinical indications including early detection or diagnosis of breast cancer.
Breast MRI exams uses a dedicated breast coil and by radiologists familiar with the optimal timing sequences and other technical aspects of image interpretation. The breast MR imaging center should also be able to perform MRI-guided biopsy and/or wire localization of findings detected by MRI.

Policy

MRI of the breast is **medically necessary** in breast cancer patients, for purposes of diagnosing and treatment planning, where specific tumor information provided by MRI is needed.

MRI of the breast is **medically necessary** to evaluate the contralateral breast in those patients with a new diagnosis of breast cancer who have normal clinical and mammographic findings in the contralateral breast.

MRI of the breast is **medically necessary** as a secondary breast imaging method when mammography is inconclusive.

MRI of the breast is **medically necessary** for detection of a suspected occult breast primary tumor in patients with axillary nodal adenocarcinoma (negative mammography and physical exam).

MRI of the breast is **medically necessary** to confirm the clinical diagnosis of rupture of silicone breast implants.

MRI of the breast is **medically necessary** to evaluate skin changes consistent with serious breast disease (inflammatory breast cancer; Paget's disease BI-RADS® category 1-3).

MRI of the breast is **medically necessary** for the following indications for screening for breast cancer in the following high-risk patients:

- with a known BRCA1 or BRCA2 mutation; or
- a high-risk of BRCA1 or BRCA2 mutation, due to the known presence of the mutation in first or second-degree relatives (male or female); ***** or
- who have Li-Fraumeni syndrome or Cowden syndrome or Bannayan-Riley-Ruvalcaba syndrome or who have a first-degree relative with one of these syndromes, or
- at elevated risk (20% or greater lifetime risk) of developing breast cancer as identified by model ****** that are defined by family history, or
- in conjunction with mammography for women with a lifetime risk >20% based on a history of lobular carcinoma in situ (LCIS) or atypical ductal hyperplasia (*ADH)/*atypical lobular hyperplasia (*ALH*) or

- who received radiation therapy to the chest between the ages of 10 and 30 years of age.

MRI of the breast for routine screening and all other conditions is **not medically necessary.**

*** NOTE**: First-degree relatives includes the patient's parents, full siblings, and children. A second-degree relative includes the individual's grandparents, grandchildren, aunts, uncles, nephews, nieces, and half siblings.

****** Examples of models used in estimating risk and that utilize family history include the Claus, Tyrer-Cusick and BRCAPRO models (see References, Claus, et al; Parmigiani, et al; Tyrer, et al).

MRI of the breast is available to certain members pursuant to the DC Breast Cancer Screening and Notification Amendment Act of 2018, see Medical Policy Operating Procedure 6.01.049A (cross-referenced below).

Policy Guidelines

There are no Policy Guidelines for this Operating Procedure.

Rationale:

According to a study by Kriege, Brekelmans, et al, of 1909 eligible women, MRI has a significantly higher sensitivity than standard mammography, when used for the surveillance or diagnosis of intraductal and invasive familial or hereditary cancer when applied to high genetic risk patients.

For routine screening of the population, mammography is the standard testing modality for the early detection of breast cancer.

Update 2022:

Health Care Policy Analyst performed a search of the peer-reviewed literature from December 2019 through April 2022. Findings in the recent literature do not change the conclusions on MRI of the breast. Based on a medical director decision, MRI for screening indications has been changed to not medically necessary. No change has been made to medically necessary indications.

Update 2020:

A search of the peer-reviewed literature for the period of December 2017 through December 2019 revealed findings in the recent literature do not change the conclusions regarding the medically necessary indications for the use of magnetic resonance imaging of the breast. Therefore, the policy statements remain unchanged.

Update 2017:

A search of the peer-reviewed literature for the period of October 2015 through November 2017 revealed findings in the literature do not change the conclusions regarding medically necessary indications for the use of magnetic resonance imaging of the breast. Therefore, the policy statements remain unchanged.

Update 2015:

A search of the peer-reviewed literature was performed for the period of September 2013 through September 2015. The NCCN Guidelines® for Breast Cancer Screening and Diagnosis, updated in 2015, conclude that breast MRI is optional for patients presenting with nipple discharge but no palpable mass. MRI of the breast should also be considered for patients presenting with skin changes suggestive of inflammatory breast cancer after mammography/ultrasound (BI-RADS® category 1-3 (negative, benign, or probably benign findings) and a benign biopsy. Breast MRI screening should also be considered for patients with a lifetime risk > 20% based on history of LCIS and ADH/ALH based on emerging evidence according to NCCN. (2A recommendation). Additionally, the NCCN concludes there is insufficient evidence to recommend for or against MRI screening for women with a lifetime risk of breast cancer of 15-20%, as defined by models that are dependent on family history, heterogeneously or extremely dense breasts on mammography or women with a personal history of breast cancer, including ductal carcinoma in situ (DCIS). The NCCN recommends against MRI screening for women with a lifetime risk of breast cancer < 15% based on Expert Consensus Opinion.

Based on the above NCCN conclusions, additional medically necessary indications for MRI of the breast are added for the evaluation of skin changes consistent with serious breast disease (inflammatory breast cancer, Paget's disease BI-RADS® category 1-3) and for screening, in conjunction with mammography, for women with a lifetime risk >20% based on a history of lobular carcinoma in situ (LCIS) or atypical ductal hyperplasia (*ADH)/*atypical lobular hyperplasia (*ALH*).

Update 2013:

A search of the peer-reviewed literature was performed for the period of August 2011 through August 2013. Findings in the literature do not change the conclusions regarding medically necessary indications for the use of magnetic resonance imaging of the breast. Mammography remains the standard testing modality for persons of average risk.

Update 2011:
A search of the peer-reviewed literature for the period of July 2009 through July 2011. Revealed findings in the recent literature do not change the conclusions on the use of magnetic resonance imaging of the breast. Therefore, the policy statements are unchanged.

The medically necessary indications for the screening and diagnosis of breast cancer using MRI listed in the policy remain consistent with the current guidelines and recommendations of the American Cancer Society (2011, January) and the National Comprehensive Cancer Network (2011, March) regarding MRI of the breast. For persons at average risk, mammography remains the standard testing modality in the screening for breast cancer.

Update 2009:
The medically necessary indications for the screening and diagnosis of breast cancer using MRI listed in the policy are consistent with the current guidelines and recommendations of the American Cancer Society and the National Comprehensive Cancer Network (NCCN) regarding MRI of the breast. For persons at average risk, mammography remains the standard testing modality in the screening for breast cancer.

Update 2007:
In March 2007, the American Cancer Society published guidelines recommending MRI screening for breast cancer for certain high-risk women. In addition, a study (Lehman, et al, 2007) regarding MRI found tumors in the contralateral breast of women newly diagnosed with breast cancer. After review of the current literature, the policy revision includes additional medically necessary indications for MRI for breast cancer. For the general population, mammography remains the standard testing modality in the early detection of breast cancer.

Benefit Applications

NOTE: For FEP business, check member's contract for benefits.

In the 2009 legislative session, the Maryland General Assembly approved House Bill 405 revising the language of Insurance Article Sec. 15-814 and Health General Article Sec. 19-706 mandating that insurers, nonprofit health service plans and health maintenance organizations provide breast cancer screening in accordance with the latest screening guidelines issued by the American Cancer Society. The criteria outlined above are compliant with this mandate.

Provider Guidelines

There are no Provider Guidelines for this Operating Procedure.

Cross References to Related Policies and Procedures

6.01.049A	Breast Cancer Screening and Notification Amendment Act of 2018 (D.C. Mandate), Procedure
11.01.002	Genetic Testing for Inherited BRCA1 or BRCA2 Mutations, Policy

References

The following were among the resources reviewed and considered in developing this policy. By reviewing and considering the resources, CareFirst does not in any way endorse the contents thereof nor assume any liability or responsibility in connection therewith. The opinions and conclusions of the authors of these resources are their own and may or may not agree with those of CareFirst.

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