MASSACHUSETTS

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Medical Policy
Computer-Aided Evaluation as an Adjunct to Magnetic Resonance Imaging of the Breast

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Policy Number: 578
BCBSA Reference Number: 6.01.45
NCD/LCD: Local Coverage Determination (LCD): Breast Imaging: Breast Echography (Sonography)/Breast MRI/Ductography (L33585)

Related Policies
Magnetic Resonance Imaging (MRI) Breast Also referred to as MR Mammography (MRM), #774

Policy
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

The use of computer-aided evaluation for interpretation of magnetic resonance imaging of the breast is considered **INVESTIGATIONAL**.

Medicare HMO Blue^{SM} and Medicare PPO Blue^{SM} Members

Medical necessity criteria and coding guidance for **Medicare Advantage members living in Massachusetts** can be found through the link below.

Local Coverage Determinations (LCDs) for National Government Services, Inc.

Local Coverage Determination (LCD): Breast Imaging: Breast Echography (Sonography)/Breast MRI/Ductography (L33585)

Note: To review the specific LCD, please remember to click "accept" on the CMS licensing agreement at the bottom of the CMS webpage.

For medical necessity criteria and coding guidance for **Medicare Advantage members living outside of Massachusetts**, please see the Centers for Medicare and Medicaid Services website at https://www.cms.gov for information regarding your specific jurisdiction.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	This is **not** a covered service.
Commercial PPO and Indemnity	This is **not** a covered service.
Medicare HMO Blue^{SM}	Prior authorization is **not required**.
Medicare PPO Blue^{SM}	Prior authorization is **not required**.

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

According to the policy statement above, the following CPT codes are considered investigational for the use of computer-aided evaluation for interpretation of magnetic resonance imaging of the breast for Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity:

CPT Codes

CPT codes:	Code Description
77048	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
77049	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

The following HCPCS code is considered investigational for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

HCPCS Codes

HCPCS codes:	Code Description
C8937	Computer-aided detection, including computer algorithm analysis of breast mri image data for lesion detection/characterization, pharmacokinetic analysis, with further physician review for interpretation (list separately in addition to code for primary procedure)

Description

Magnetic resonance imaging (MRI) of the breast may be used to: screen women at high risk of breast cancer, to detect the extent of disease in women diagnosed with breast cancer who are eligible for breast-conserving surgery, and to monitor the impact of breast cancer treatment. While MRI of the breast

has been shown to have high sensitivity in detecting breast lesions, it has a high false-positive rate because it is difficult to distinguish between benign and malignant lesions. The use of computer-aided evaluation (CAE) as an adjunct to MRI is designed to assist radiologists' interpretation of contrast-enhanced MRI of the breast, improving specificity while maintaining high sensitivity.

Benefits of improved detection and measurement with MRI include: reduction in biopsy rates when MRI-detected lesions are identified as benign; reduction in reoperation rates when tissue that should be removed is clearly identified; and reduction in time needed to interpret breast MRI images.

CAE systems for MRI are designed to facilitate the interpretation of MRIs by detecting patterns of contrast enhancement across a series of images, which in turn may help identify lesions and their likelihood of being malignant. There are 2 aspects of enhancement (also called kinetics): (1) Within the first 1 to 2 minutes of the contrast injection, how quickly does the lesion enhance? and (2) What is the subsequent pattern of enhancement?[1] Malignant lesions demonstrate a rapid enhancement in contrast within the first 1 to 2 minutes after the contrast injection, followed by a washout period in which the contrast fades within minutes. Benign lesions exhibit a slow progressive rise in intensity, with no washout of the contrast.

A large number, potentially hundreds, of images are produced during MRI of the breast. Images are taken at varying "depths" through each breast, multiplied by the number of times the breast is imaged to capture different time points in the enhancement process. Radiologists view the images to detect suspicious areas, and then pick a region of interest and look at the enhancement pattern. There may be variations across radiologists in the regions of interest selected and in the precise definition of the region of interest. CAE systems use color-coding and differences in hue to indicate the pattern of enhancement for each pixel in the breast image, thereby allowing radiologists to analyze enhancement patterns systematically.

Summary

The use of computer-aided evaluation (CAE) is proposed to assist radiologists' interpretation of contrast-enhanced magnetic resonance imaging (MRI) of the breast and to improve the accuracy of diagnosis of malignancy.

For individuals with risk of breast cancer, with suspected breast cancer, or diagnosed with breast cancer, who receive CAE as an adjunct to breast MRI, the evidence includes diagnostic accuracy studies, retrospective studies, and systematic reviews. Relevant outcomes are disease-specific survival, test validity, and resource utilization. The most recent systematic review (2011) did not find a statistically significant improvement in the sensitivity or specificity of CAE as an adjunct to MRI vs MRI alone. Moreover, retrospective studies published after the systematic reviews generally did not find that CAE as an adjunct to MRI resulted in statistically significant improvement in diagnostic accuracy compared with MRI alone. Studies were generally conducted in women already diagnosed with breast cancer; there is less literature on breast cancer detection. Retrospective studies that conducted multivariate modeling analyses found associations between kinetic features from CAE readings (peak enhancement and washout components) and disease-specific survival. However, there are no comparative studies evaluating the impact of CAE with MRI on patient management decisions or health outcomes compared with MRI alone. The evidence is insufficient to determine the effects of the technology on health outcomes.

Policy History

Date	Action
2/2019	Local Coverage Determination (LCD): Breast Imaging: Breast Echography (Sonography)/Breast MRI/Ductography (L33585) added for Medicare Advantage members. Effective 1/1/2019.
1/2019	Clarified coding information.
11/2018	BCBSA National medical policy review. Title changed. Policy statement unchanged. Description and summary clarified. New references added.
10/2017	New references added from BCBSA National medical policy.

10/2016	New references added from BCBSA National medical policy.
3/2015	New references added from BCBSA National medical policy.
4/2014	New references added from BCBSA National medical policy.
2/2013	New references from BCBSA National medical policy.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
9/2011	Reviewed - Medical Policy Group – Urology, Obstetrics and Gynecology. No changes to policy statements.
7/2011	Reviewed - Medical Policy Group – Hematology and Oncology. No changes to policy statements.
10/20/2010	New policy describing on-going non-coverage.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:
Medical Policy Terms of Use
Managed Care Guidelines
Indemnity/PPO Guidelines
Clinical Exception Process
Medical Technology Assessment Guidelines

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