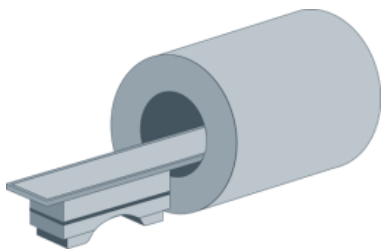


Breast MRI

Breast MRI



Technology In Brief

What Is It:

- Breast MRI is the imaging of breast tissue with either a whole-body MRI scanner or a dedicated unit engineered specifically for breast imaging.

How Does it Work:

- Breast MRI requires a specially-designed coil optimized for breast imaging. Software then processes images into three-dimensional renderings. Alternatively, a small number of vendors offer breast-only MRI units.
- A contrast agent is often injected to illuminate potential abnormalities and assess tumor margins.

Adoption Status:

- FDA-approved; 50-60 dedicated breast MRIs installed nationwide

FDA Status:

- Approved

Major Vendors:

- Aurora, GE, Philips, Siemens, Toshiba,

Competing Products:

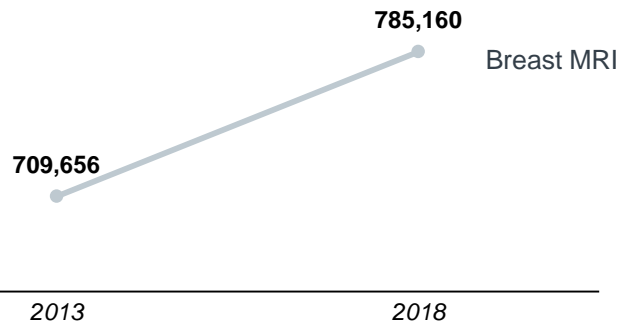
- Breast ultrasound, molecular breast imaging, tomosynthesis, positron emission mammography (PEM)

Consideration	Service Line Strategy Advisor's Take
Clinical	<ul style="list-style-type: none"> Despite a high false-positive rate, its use in screening high-risk patients as well as in pre-surgical planning continue to drive adoption and position it to be a "must have" for breast centers, though its high false positive relative to mammography remains a concern
Reimbursement	<ul style="list-style-type: none"> Reimbursed by most major insurers including Medicare
Cost	<ul style="list-style-type: none"> Breast coil: \$35K-\$60K Dedicated breast table: \$125K-\$175K Dedicated breast scanner: \$1.3M-\$1.5M
Payer Coverage	<ul style="list-style-type: none"> Nearly 100 percent reimbursement for both Medicare and private payers as a screening tool for high-risk patients and as an aid to diagnosis in select circumstances
Market Potential	<ul style="list-style-type: none"> The aging population will likely increase the number of patients receiving mammograms, leading to increased breast MRI through downstream referrals, especially as the number of high risk cases rises
Operational Needs	<ul style="list-style-type: none"> 450-600 sq ft footprint, including control room, requires specialized space to account for magnetic field
Impact in Accountable Care	<ul style="list-style-type: none"> Increased preventive care efforts leading to increased mammography may translate into additional breast MRI scans, though cost-effectiveness efforts may attempt to decrease the use of breast MRI
Competitive Take	<ul style="list-style-type: none"> Breast MRI is currently the modality of choice for pre-surgical planning, making it an important component of many breast centers Some organizations have chosen to forego breast MRI adoption for another second-line modality such as PEM, though this is uncommon
Position on the Adoption Curve	<ul style="list-style-type: none"> Breast coil – Late Majority; Breast Table – Early Majority; Dedicated Breast MRI – Early Adopter

Breast MRI Standard at Comprehensive Breast Centers

Market & Financial Overview

National Outpatient Market Estimates

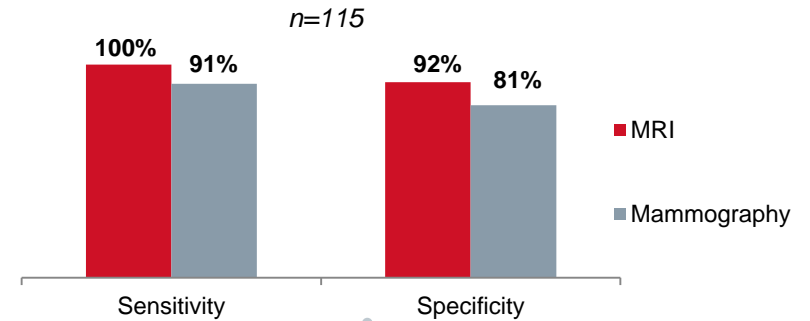


Reimbursement Rates

HCPCS	2013 Final Rate	2014 Final Rate	Percent Change
C8903/8906 – One or Both Breasts with Contrast	\$454	\$426	-6%
C8904/8907 – One or Both Breasts without Contrast	\$338	\$295	-13%

Clinical Considerations

Sensitivity and Specificity of MRI vs. Mammography in a Mixed Patient Population



This retrospective study showed the utility of breast MRI as compared to mammography, both in detecting abnormalities (sensitivity) and reducing the number of false positives (specificity). Through review of prior patient imaging and charts, physicians determined that in a mixed-risk patient population MRI was more effective than conventional mammography. Unlike similar studies, this study showed that relatively low false positive rates can be achieved among certain providers.



Keys for Investment Success

- Determine whether the unit should be placed in the breast center or the main hospital. This determination is dependent upon the location of the breast center (i.e. freestanding outpatient center vs. center within the hospital) with respect to other services.
- Assess current patient volumes to determine the sustainability of purchasing a breast MRI unit or breast MRI coil
- Consider the type of unit to purchase – 3T, wide-bore, or open unit, depending upon market demands and radiologist input.