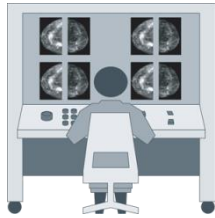


# Mammography CAD

## Mammography CAD



### Technology In Brief

#### What Is It:

- Mammography computer-aided detection (CAD) is an interpretive aid to radiologists as they review screening and diagnostic mammograms. The software uses computer algorithms to analyze images and helps in evaluating abnormal breast tissue and characterizing tumor morphology

#### How Does it Work:

- Used by radiologists in image post-processing, CAD applies a color-coding system that enhances visualization of tissue properties indicative of tumor development. Markers then flag radiologists' attention for review.

#### Adoption Status:

- Early Adopter

#### FDA Status:

- Approved for some systems

#### Major Vendors:

- R2 Technology, iCAD, Parascript

#### Competing Products:

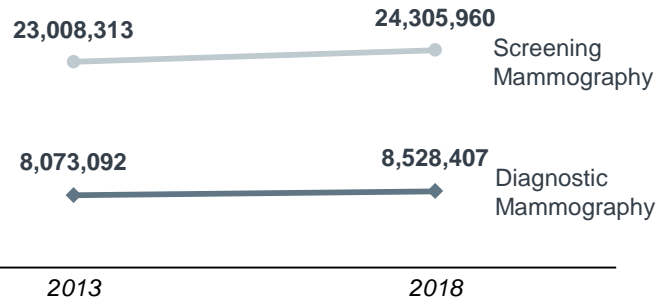
- Ultrasound, automated breast ultrasound, molecular breast imaging, positron emission mammography, digital breast tomosynthesis

Consideration	Service Line Strategy Advisor's Take
<b>Clinical</b>	<ul style="list-style-type: none"> <li>CAD likely to decrease observational oversights—and thus the false negative rates—of physicians interpreting medical images</li> <li>Prospective clinical studies have demonstrated an increase in breast cancer detection with CAD assistance</li> <li>Some studies have found that CAD mammography is associated with increased diagnostic testing, including breast biopsy, among women who did not have breast cancer</li> </ul>
<b>Reimbursement</b>	<ul style="list-style-type: none"> <li>Reimbursed as an add-on CPT code 77051, CAD code must be reported in conjunction with a mammography code; approximately \$12 per use</li> </ul>
<b>Cost</b>	<ul style="list-style-type: none"> <li>Initial license and CAD: \$60,000-\$85,000</li> <li>Each additional license: \$10,000-\$25,000</li> </ul>
<b>Payer Coverage</b>	<ul style="list-style-type: none"> <li>Varies based on payer</li> </ul>
<b>Market Potential</b>	<ul style="list-style-type: none"> <li>Mammography is the standard primary modality for breast screening and diagnosis, and CAD will likely be increasingly used to augment physician judgment in the future</li> </ul>
<b>Operational Needs</b>	<ul style="list-style-type: none"> <li>Very little beyond software installation and integration</li> </ul>
<b>Impact in Accountable Care</b>	<ul style="list-style-type: none"> <li>Can improve patient throughput and improve the accuracy of diagnosis and presurgical planning</li> </ul>
<b>Competitive Take</b>	<ul style="list-style-type: none"> <li>The competitive edge that the addition of breast CAD would give to a center is unknown</li> <li>CAD may have the ability to help radiologists process patient images faster with possible competitive implications</li> </ul>
<b>Position on the Adoption Curve</b>	<ul style="list-style-type: none"> <li>Early Adopter</li> </ul>

# CAD Elevates Diagnostic Capabilities and Improves Workflow

## Market & Financial Overview

### National Market Estimates

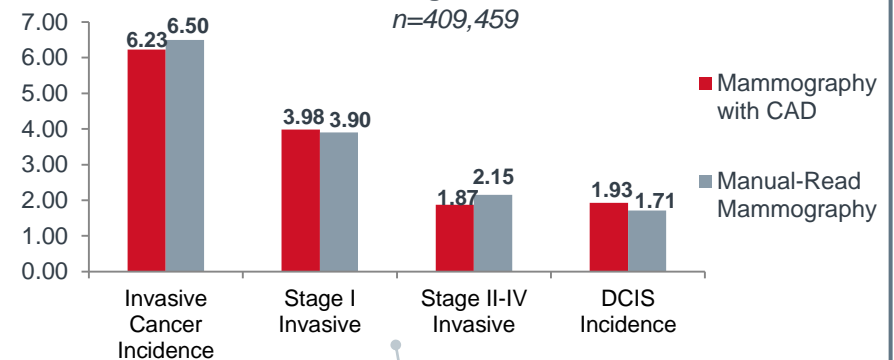


### Reimbursement Rates

CPT	Description	2013 Final Rate	2014 Final Rate	Percent Change
G0202	Screening mammography	\$104	\$126	+21%
G0206	Diagnostic mammography, unilateral	\$99	\$121	+22%
G0204	Diagnostic mammography, bilateral	\$126	\$154	+22%

## Clinical Considerations

### Short-Term Outcomes of Screening Mammography Using CAD



This retrospective cohort study aimed to determine associations between CAD use during screening mammography and the incidence of ductal carcinoma in situ (DCIS) and invasive breast cancer, invasive cancer stage, and diagnostic testing. Overall the study concluded that the use of CAD during screening mammography among Medicare enrollees is associated with increased DCIS incidence, the diagnosis of invasive breast cancer at earlier stages, and increased diagnostic testing among women without breast cancer.



### Keys for Investment Success

- Hospital administrators should let the adoption of this technology be physician-driven based on radiologists' comfort reading images with and without CAD
- Hospital administrators should take into consideration the operational and clinical limitations of their current breast center. Mammography with CAD has been shown to enable more efficient image review and reporting, effectively enhancing radiologist workflow