



**Better detection.**  
Clinically superior. Low dose.<sup>1-13</sup>

The Selenia® Dimensions® 3D Mammography™ System

Revolutionary Technology

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Dimensions

HOLOGIC®

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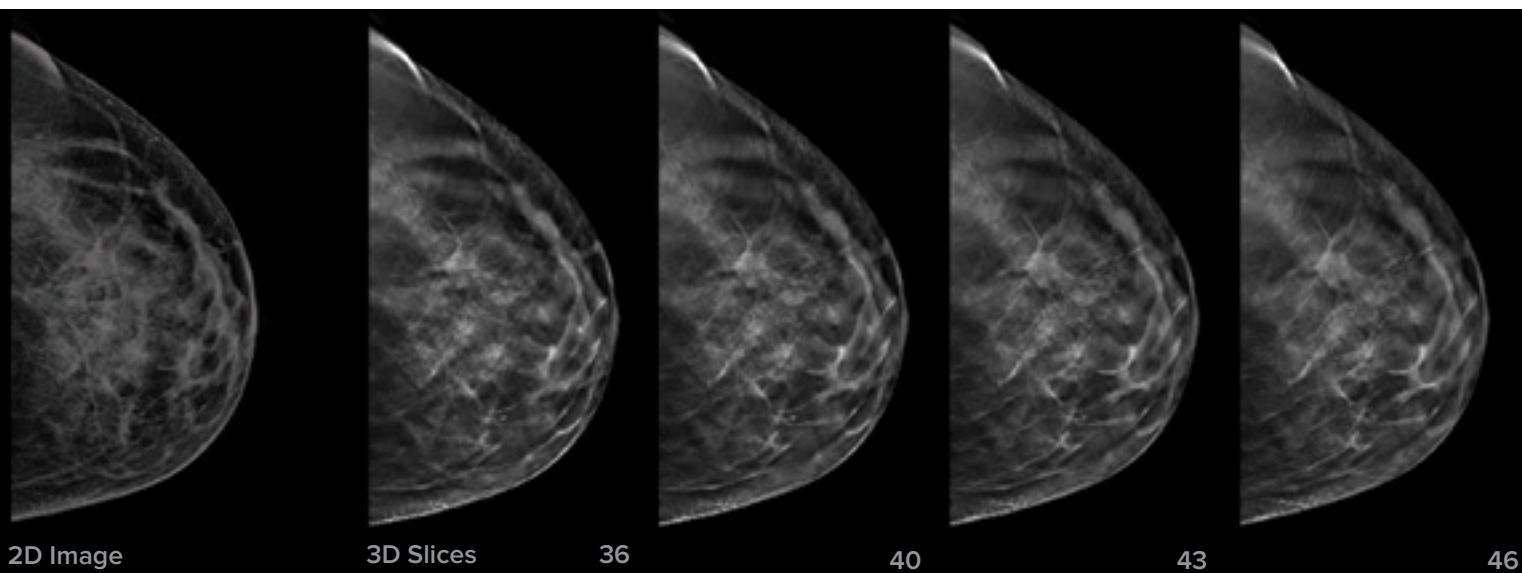
# Simply a better mammogram.<sup>1, 5-9</sup>

The Genius™ 3D Mammography™ exam from the Selenia® Dimensions® system helps to find invasive cancers earlier<sup>1,5-9</sup> and reduce unnecessary recalls.<sup>1,7</sup> It is simply a more accurate mammogram.<sup>1,5</sup>

Now we're raising the bar even higher with scientific advances designed to put you at the forefront of mammography technology and early detection—all in one powerful, flexible system:

- C-View™ software drives the low-dose Genius 3D Mammography exam, delivering superior performance to 2D mammography at a comparable patient dose.<sup>10-13</sup>
- I-View™ software for Contrast Enhanced 2D (CE2D) imaging increases sensitivity for enhanced precision in breast cancer detection.
- Innovations in ergonomic workstations increase technologist comfort and streamline procedures.
- 2D and 3D breast biopsy procedures are made fast and easy with the Affirm™ breast biopsy guidance system.

The Selenia Dimensions platform is paving the way for the future of patient care with its 3D Mammography exam. That's simply Genius.



**Detect invasive cancer earlier with the Genius 3D Mammography exam.<sup>1</sup>** The 3D Mammography slices reveal an area of architectural distortion, histologically proven to be cancer, which is not visible on the 2D mammogram.

# Experience a mammography system **unlike any other.**

The versatile Selenia Dimensions system was designed from the ground up to deliver revolutionary breast tomosynthesis. Its Genius 3D Mammography exam has been shown to consistently lower false positive recall rates<sup>1,7</sup> when integrated into a screening program – to accelerate efficiency and lower costs.<sup>14-15</sup> You can even achieve superior accuracy and performance in its low-dose mode.<sup>10-13</sup>

## Proven performance and design.

- The X-ray tube continuously sweeps in a 15-degree arc over the breast to acquire a series of low-dose projection images at multiple angles.
- The projection images are mathematically reconstructed into what is essentially a 3D image of the breast.
- In the breast tomosynthesis mode, the HTC™ (High Transmission Cellular) grid automatically retracts and then comes into the imaging field to acquire a 2D mammogram.
- In the low-dose mode, the system generates the 2D image from the tomosynthesis data.

Both Hologic modes offer superior performance to 2D mammography.<sup>1-4,10-13</sup>

Hologic sets performance standards with its 3.7-second tomosynthesis scan time regardless of breast thickness. It delivers a more comfortable patient experience while lowering the risk of patient motion.

## Why the Genius 3D Mammography exam?

- **Earlier detection.**  
The Genius 3D Mammography exam is the only one that finds 41% more invasive cancers versus 2D mammography alone.<sup>1</sup>
- **More accuracy.**  
It increases Positive Predictive Value (PPV)\* for both recalls (49%) and biopsy (21%) compared with 2D mammography.<sup>1</sup>
- **Clinical efficiency.**  
It reduces recalls due to false positives by up to 40%,<sup>1,7</sup> saving time and money.<sup>14,15</sup>

**41%**

Increase in detection of invasive cancers.<sup>1</sup>

Reduction in recalls due to false positives<sup>1,7</sup> by up to

**40%**

Genius 3D Mammography exams available on the Selenia Dimensions system.

\*PPV for recall measures the proportion of women recalled from screening who are found to have breast cancer.



**Faster scans for greater comfort.**  
A 3.7-second scan time for tomosynthesis, regardless of breast size, **lowers the risk of patient motion** to reduce retakes and increase comfort.





## Advancing mammography together.

The Selenia Dimensions system packages were inspired by you and created for you – to give you the flexibility and versatility to create a mammography solution that's customized for your facility. So you can choose – and only pay for – the options you need to meet your workflow and practice goals.

- Hologic offers three system packages, each available in 2D, 3D and mobile mammography. All are built around the way you work and are designed to deliver intelligent ergonomics, exceptional efficiency and outstanding image quality.
- With the Selenia Dimensions platform, you can start with breast tomosynthesis for screening, diagnostic and interventional procedures.
- You can also purchase a 2D mammography-only system, then add interventional, breast tomosynthesis and more advanced workflow features with simple upgrades in the future.

No matter which Selenia Dimensions package you choose, you'll be making an investment that pays – both now and in the future. It's the foundation for a continuing stream of world firsts like Affirm™ 3D breast biopsy, low-dose breast tomosynthesis with C-View software, and I-View Contrast Enhanced 2D imaging that can be co-registered with tomosynthesis. And it's the only system proven to reduce costs associated with false positive recalls.<sup>14-15</sup>

# 3D

Means business

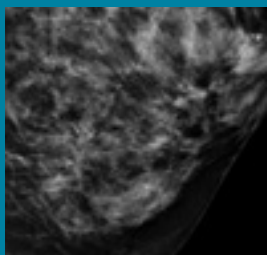
# Leading-edge 3D Mammography exams, **so you can do more, sooner.**

## Superior clinical performance and low dose in 3.7 seconds.

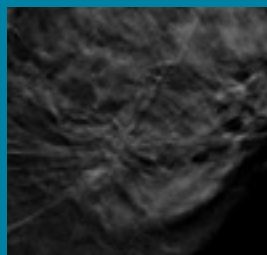
Hologic always strives for the lowest dose possible. Our low-dose Genius 3D Mammography exam is powered by C-View software, which generates 2D images from tomosynthesis data without additional 2D exposures – in a 3.7-second scan. So you can achieve higher levels of accuracy compared with 2D mammography at a dose comparable to the U.S. average mammogram.<sup>10-13</sup> View the detail and clarity needed to make an accurate assessment and avoid unnecessary follow-up exams<sup>10-13</sup> – further reducing radiation dose.

Generated 2D images are available in your selection of modes:

- **ComboHD mode:** 2D + 3D + generated 2D imaging (transitional)
- **TomoHD mode:** 3D + generated 2D imaging



2D Image



C-View 2D Image

“Architectural distortions and spiculations are often more conspicuous in the C-View 2D image than on the traditional 2D image.”

**Dr. Linda Greer**

Director of Radiology, HonorHealth



Optional equipment shown.

# A new product family designed around you.

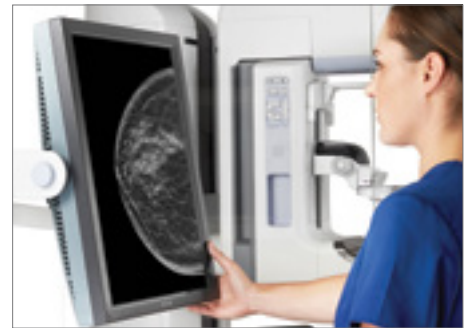
Hologic revolutionized mammography with the introduction of the Genius 3D Mammography exam. Now we've done the same for the workstation – with a family of designs built around your body, your ideas and the way you work. The Selenia Dimensions system's healthy workspace design sets the standard in ergonomics – to help increase productivity, reduce physical and mental fatigue, eliminate eyestrain and avoid repetitive injury. Symmetrically configurable tabletop controls, a functional, flat work surface, and precisely located X-ray exposures streamline exams and accelerate workflow.



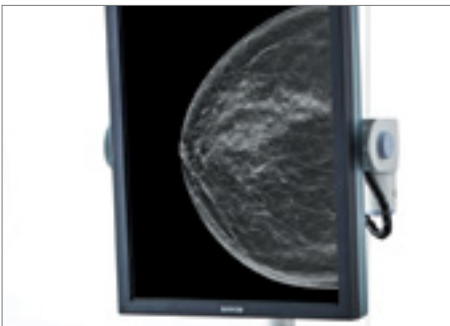
**Biometric login.** Start an exam with a single touch of the finger with pre-configured workflow preferences and ergonomic settings.



**Personalized height adjustment.** A fast, silent motor easily adjusts the unit to the height preference of users (84 cm to 114 cm). Store individual profiles and activate with each biometric login.\*



**Dynamic display.** Tilt, swivel, and precisely position the versatile display to optimize your view of images, even while attending to your patient.



**High-resolution display.** View exceptionally detailed images on the 3MP DICOM display and compare with previous studies.\*\*



**Touchscreen controls.** Intuitive icons and functional onscreen controls free you to navigate through exams quickly and easily.\*



**Hands-free imaging.** Activate image exposure with just the press of a foot pedal. Minimize fatigue and stay safely shielded.

\* Available with the Selenia Dimensions system 9000 package only.

\*\* Choice of display monitors and mounts.

Optional equipment shown. Refer to product package chart for full details.





# A comfortable care experience for your patients.

The Selenia Dimensions system not only streamlines workflow for you, it provides a more comfortable mammography exam for your patients. The retractable face shield is designed to simplify positioning, yet remains stable during the tomosynthesis exam. So patients can rest their faces comfortably on the shield to minimize movement.

## Other system features include:

- **Comfortable paddles.** Clear, smooth-edged paddles enhance patient comfort and grip to make positioning easier.
- **Anatomical design.** Our FAST paddle™ system conforms to the contours of the breast to provide even compression.
- **Easy positioning.** Indented spaces on the gantry give patients a natural recess to place their hands during exams.
- **Minimal compression.** Compression automatically releases after fast, efficient imaging in any mammography mode.



Selenia Dimensions 70 cm SID is the largest in the industry. It offers ample working space for interventional procedures. You can accommodate patients of all breast sizes and use a wide variety of needles.

The Genius 3D Mammography exam **improves breast biopsy's positive predictive value (PPV) by 21%.<sup>1</sup>**

Go directly from a **3D Mammography exam to biopsy** to surgical planning.

**13 minutes**

The Affirm biopsy system provides superior performance in 13 minutes.\*<sup>16,17</sup>



The need to quickly find small, invasive cancers visible only with Genius 3D Mammography exams has led to the world's first 3D breast biopsy procedure. The Affirm breast biopsy guidance system gives you the power to conduct 2D or 3D breast biopsies in the same modality as imaging. This innovative add-on works seamlessly with the Selenia Dimensions system to give you accurate targeting right away. It is a cost-effective, space-saving and ergonomic way to expand your range of services

A 10-degree angle moves the biopsy device out of the X-ray path for improved visibility.

### Simplify biopsy procedures.

- Go directly from mammography to biopsy in under a minute.
- Pinpoint lesions faster, with greater accuracy and in fewer X-ray exposures with Affirm 3D biopsy.\*<sup>16,17</sup> And, expedite procedures with automated image acquisition and one-click targeting.
- Shorter procedure time and reduced patient dose from Affirm 3D biopsy procedures may lead to higher patient satisfaction.
- Simplify targeting of challenging lesions, such as those in the axilla or close to the chest wall, with either Affirm 2D or 3D biopsy.

### Target challenging cases.

The Affirm 3D biopsy option makes it easy to target areas that may be difficult or impossible to localize in other imaging modalities. This allows you to keep your patients for their continuum of care. Treat challenging cases such as:

- Non-calcified masses, asymmetries or architectural distortions seen only with a 3D Mammography exam.
- Areas seen only in one view.

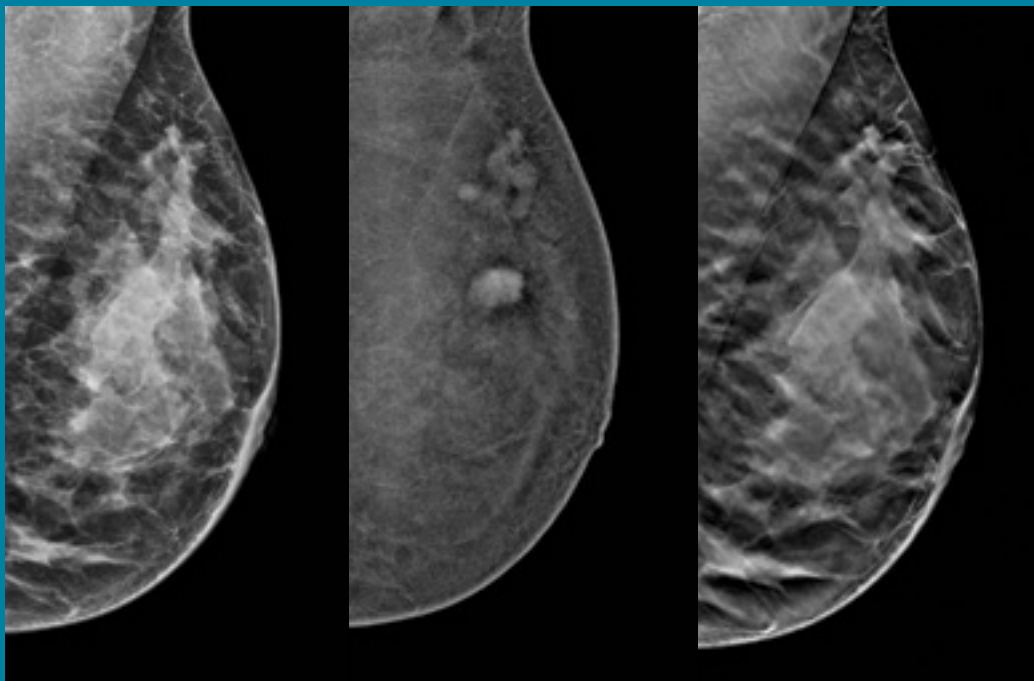
\*Compared with stereotactic biopsy.

# Comprehensive **diagnostic tools** speed analysis.

## **I-View software – for Contrast Enhanced 2D Imaging**

Hologic I-View software for Contrast Enhanced 2D imaging (CE2D) enables you to create comprehensive image studies that reveal exceptional clinical detail and sensitivity in your mammography images. Plus, you can combine CE2D and 3D Mammography studies for further analysis. Together, this advanced exam provides powerful co-registered images with both functional and morphological information. Two CE2D modes offer a faster workflow and increased patient comfort compared with other modalities using contrast.

- CE2D mode: Contrast Enhanced 2D Imaging
- Combo CE2D mode: Contrast Enhanced 2D + 3D Imaging



2D image

I-View CE2D image  
showing single foci

Tomosynthesis slice  
showing tumor morphology

“I-View CE2D with 3D slices has the potential to be a valuable additional imaging tool, helping you to solve contrast false positives and identify additional foci.”

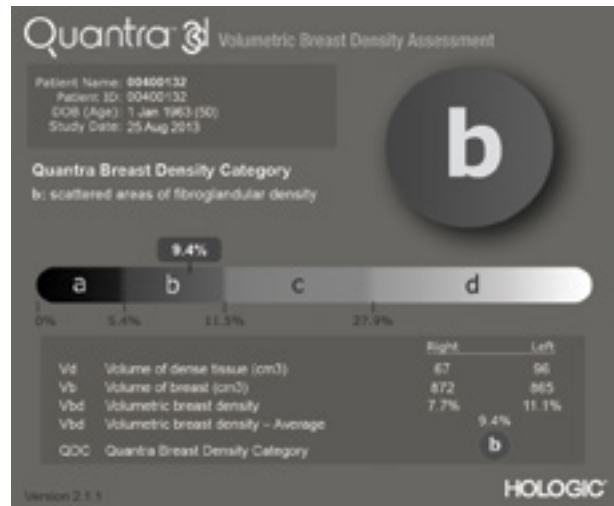
**Dr. Daniela Bernardi**

Director of the Mammography  
Screening Program Trentino Health  
Authority – Trento, Italy





**ImageChecker® CAD.** Use this tool to identify regions of interest on traditional 2D or C-View 2D images to help minimize observational oversights by the radiologist – and decrease false negative readings. Hologic pioneered this technology and leverages a growing database of clinical cases to effectively identify masses, architectural distortions and micro-calcifications.



### **Quantra™ 2D and 3D breast density analysis software.**

This unique 2D and 3D volumetric breast density assessment tool allows radiologists to monitor changes in breast density over time. So patients and doctors can take screening steps to help identify potential cancer at the earliest stage. Quantra software provides accurate, reproducible information to meet regulatory reporting requirements.

## **The right tools – in your hands.**

The SecurView® DX diagnostic workstation is optimized to support the Selenia Dimensions system – with novel, customizable workflow tools to ensure accurate, efficient review of any 2D and breast tomosynthesis exam. You can take advantage of speed-adjustable cine loop, user-selectable slabbing-all mode, and co-registered 2D/3D mammography images to speed your diagnosis. Plus, we offer a host of specialized tools for Genius 3D Mammography exams including ImageChecker CAD for C-View images, Quantra breast density assessment software and more.

### **Complete workflow solutions.**

Select from a variety of options to streamline review and analysis.

A Hologic representative can help you plan for a successful breast tomosynthesis implementation, including evaluation of your unique workflow needs.



# Genius 3D Mammography

## exam - a smart choice for your patients and your business.

An investment in a Selenia Dimensions system is an investment in improving the lives of your patients while achieving your business goals.

A recent survey by the Society of Women's Health Research reported that women want a more accurate mammogram. Hologic's U.S. consumer research also reveals that a growing number of patients are seeking out the Genius 3D Mammography exam. That is why Hologic embarked on the Genius 3D Mammography campaign – to let women know they now have a better choice.

By offering the Genius 3D Mammography exam in your community, you're giving women access to the clinically superior mammogram.<sup>1-3,10-13</sup> At the same time, you help to establish your reputation as a provider of world-class breast imaging.

It's the reason why so many leading breast centers around the world have embraced 3D Mammography exams as a way to improve recall effectiveness,<sup>1</sup> reduce the number of unnecessary biopsies,<sup>1,7,11</sup> and lower costs.<sup>14,15</sup>

### Our commitment to the future – and you.

As the leader in breast tomosynthesis imaging, Hologic is committed to supporting you with:

- Continuous innovations aimed at detecting breast cancer earlier.
- Connectivity Specialists and Site Planners to ensure smooth implementation now and as you grow.
- Expert education and training services to help your staff get started right away and make the most of your system.
- Healthcare Economics team to assist with local payer negotiations.
- A network of marketing and sales professionals focusing on referring MD and consumer awareness of 3D Mammography exams.
- Listing on the Genius 3D Mammography exam site finder and marketing materials to help you succeed.
- Choice of service contracts providing dependable coverage to reduce costs, minimize downtime and enhance productivity.

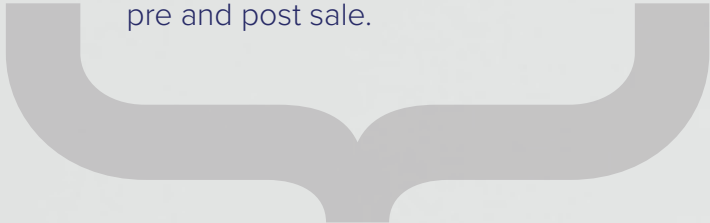
Talk to your Hologic representative about how to access these resources.



**Going mobile?** Exceptional accuracy makes the Genius 3D Mammography exam an excellent choice for mobile breast cancer screening. It allows you to bring state-of-the-art technology directly to women for whom access would otherwise be difficult. The Selenia Dimensions mobile packages are the ideal traveling companion.

**Selenia Dimensions is a platform for the future, one that can grow with you as your needs evolve and new technologies emerge. Only the Selenia Dimension system offers:**

- A significantly more accurate mammogram compared with 2D mammography.<sup>1,5-9</sup>
- A low-dose 3D Mammography exam with superior clinical performance to 2D mammography at a dose similar to the U.S. average mammogram.<sup>10-13</sup>
- Breast density assessment for 3D images and CAD for generated 2D images.
- Superior 3D breast biopsy compared with stereotactic biopsy.<sup>16,17</sup>
- Contrast Enhanced 2D imaging with co-registered 3D images for enhanced diagnostic exams.
- A host of value-added services pre and post sale.





# Selenia Dimensions System – Package Highlight\*



	Avia 3000	6000	9000
2D Screening	●	●	●
2D Diagnostic	○	●	●
3D Screening and Diagnostic	■	○	○
2D/3D Biopsy	■	○	○
X-ray Exposure Foot Switch	○	●	●
Powered Console Height Adjustment	○	●	●
Powered Memory Console Height Adjustment			●
Biometric Login	○	○	●
Touch Screen Control Monitor			●
Barcode Reader	○	○	●
Integrated UPS	○	●	●
3MP Medical Grade Monochrome Image Monitor	○	○	●
2MP Medical Grade Color Image Monitor	●	●	●
Image Monitor Fixed Arm Mount	○	○	○
Image Monitor Swing Mount	○	○	○
Image Monitor Tilt and Swivel Adjustment	●	●	●
Control Monitor Tilt Adjustment	●	●	●
Advanced Connectivity (MPPS and Dose SR) and Notices Licenses	○	○	●
Stowable Keyboard and Mouse	●	●	●
Productive Work Surface with Symmetrical, Configurable Controls	●	●	●
Mobile Kit	○	○	○

● Included ○ Option ■ Not available with initial purchase.

\*For complete details, including standard and optional equipment, accessories and specifications, refer to the Selenia Dimensions system data sheet.

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## References

1. Friedewald S, Rafferty E, Rose S, et al. "Breast Cancer Screening using Tomosynthesis in Combination with Digital Mammography." Journal of the American Medical Association. 2014 July;311(24):2499-2507. Epub 2014 June 24. 2. Rafferty E, Park J, Philpotts L, et al. "Assessing Radiologist Performance Using Combined Digital Mammography and Breast Tomosynthesis Compared with Digital Mammography Alone: Results of a Multicenter, Multireader Trial." Radiology. 2013 Jan; 266(1):104-13. Epub 2012 Nov 20. 3. FDA PMA submission P080003 and FDA PMA submission P080003/S001 physician labeling 4. Zuley M, Bandos A, Ganott M, et al. "Digital Breast Tomosynthesis versus Supplemental Diagnostic Mammographic Views for Evaluation of Noncalcified Breast Lesions." Radiology. 2013 Jan; 266(1):89-95. Epub 2012 Nov 9. 5. Skaane P, Bandos A, Gullien R, et al. "Comparison of Digital Mammography Alone and Digital Mammography Plus Tomosynthesis in a Population-based Screening Program." Radiology. 2013 Apr; 267(1):47-56. Epub 2013 Jan 7. 6. Ciatto S, Houssami N, Bernardi D, et al. "Integration of 3D Digital Mammography with Tomosynthesis for Population Breast-Cancer Screening (STORM): A Prospective Comparison Study" The Lancet Oncology. 2013 Jun;14(7):583-589. Epub 2013 Apr 25. 7. Rose S, Tidwell A, Bujnock L, et al. "Implementation of Breast Tomosynthesis in a Routine Screening Practice: An Observational Study." American Journal of Roentgenology. 2013 Jun; 200(6): 1401-1408. Epub 2013 May 22. 8. McCarthy A, Kontos D, Synnestvedt M, et al. "Screening outcomes following implementation of digital breast tomosynthesis in a general-population screening program." J Natl Cancer Inst. 2014 Oct 13;106(11). 9. Greenberg J, Javitt M, Katzen J, et al. "Clinical Performance Metrics of 3D Digital Breast Tomosynthesis Compared With 2D Digital Mammography for Breast Cancer Screening in Community Practice." AJR Am J Roentgenol. 2014 Sept; 203:687-693. Epub 2014 Jun 11. 10. Skaane P, Bandos A, Eben E, et al. "Two-View Digital Breast Tomosynthesis Screening with Synthetically Reconstructed Projection Images: Comparison with Digital Breast Tomosynthesis with Full-Field Digital Mammographic Images" Radiology. 2014 Jun;271(3):655-663. Epub 2014 Jan 24. 11. Zuley M, Guo B, Catullo V, et al. "Comparison of Two-dimensional Synthesized Mammograms versus Original Digital Mammograms Alone and in Combination with Tomosynthesis Images." Radiology. 2014 Jun;271(3):664-71. Epub 2014 Jan 21. 12. FDA PMA submission P080003/S001 physician labeling 13. Bernardi D, Pellegrini M, Valentini M et al. "The STORM II (Screening with Tomosynthesis or Mammography II) Trial: Interim Comparison of Screen-reading Strategies in Population Breast Screening." (paper presented at the annual meeting of the Radiological Society of North America, Chicago, IL, December 2014). 14. Bonafede M, Kalra V, Miller J et al. "Value analysis of digital breast tomosynthesis for breast cancer screening in a commercially-insured US population" ClinicoEconomics and Outcomes Research. 2015 Jan 13. [Epub ahead of print]. 15. Kalra V, Haas B, Forman H et al. "Cost-Effectiveness of Digital Breast Tomosynthesis." (paper presented at the annual meeting of the Radiological Society of North America, Chicago, IL, November 2012). 16. Schradang S, Martine D, Dirrichs T, et al. "Digital Breast Tomosynthesis-guided Vacuum-assisted Breast Biopsy: Initial Experiences and Comparison with Prone Stereotactic Vacuum-assisted Biopsy." Radiology. 2015 274:3, 654-662 E-pub 2014 Nov 12. 17. Smith A, Sumpkin J, Zuley M, et al. "Comparison of Prone Stereotactic vs. Upright Tomosynthesis Guided Vacuum Assisted Core Breast Biopsies." (paper presented at the annual meeting for the Radiological Society of North America. Chicago, IL, November 2014).

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