



[PRACTICE INSIGHTS]

Celebrating the Success of Tomosynthesis



40% increase in detection of invasive breast cancers

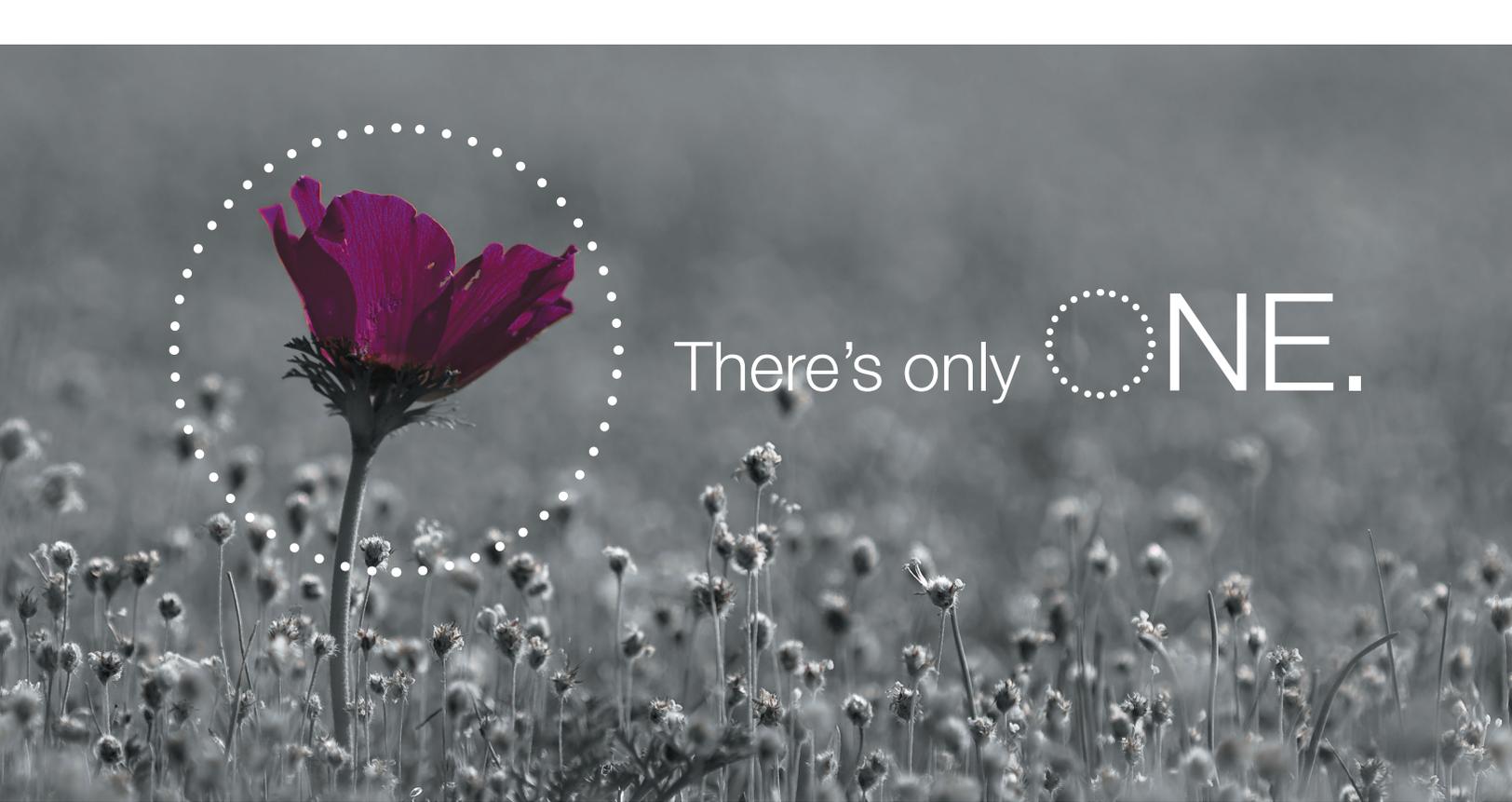
Over 1 million women imaged with Hologic Selenia Dimensions tomosynthesis systems

27% increase in overall detection of breast cancers

20% decrease in false-positive recalls

51 countries with commercial systems in use





There's only ONE.

Only ONE system has proven clinical results, widespread global acceptance and industry accolades – Selenia® Dimensions® breast tomosynthesis from Hologic.



The Selenia Dimensions system is the only ONE:

- ~~That when combined with digital mammography, has been shown to increase cancer detection by 27% and increase invasive cancer detection by 40%.¹~~
- ~~That had a 15% reduction in pre-arbitration false positive rates in a major European study when using 3D mammography plus 2D digital mammography compared to using 2D alone.¹~~
- ~~That has been installed in over 50 countries around the world since 2008 and the only ONE that has FDA approval in the U.S.~~
- ~~That has over 60 citations in trade publications, abstracts and scientific presentations.~~

¹~~For references and additional information e-mail us at tomoinfo@hologic.com.~~

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The amount of time, effort, and cost that goes into developing a new technology can be staggering, with no up-front guarantees that the investment will be effective. That's why it's especially rewarding when the hard work pays off and success stories begin to pour in, as we're seeing with our Selenia® Dimensions® tomosynthesis program.

Since receiving CE marking in 2008, our tomosynthesis systems have been installed in 54 countries around the world and in 48 states in the U.S. More than a million women have been imaged with the system, and it has been cited in over 60 publications, presentations, and abstracts. Most significantly, the growing number of peer-reviewed publications all show that adding Hologic's tomosynthesis images to a conventional 2D mammogram provides a significant increase in cancer detection rates, while at the same time decreasing false positive recalls.

One major breakthrough is the January 2013 publication of the landmark Oslo Tomosynthesis Screening Study. This publication, which analyzed results of the first 12,000+ patients enrolled in the study, reported a 40% increase in detection of invasive breast cancers, a 27% increase in detection of all cancers, and a 15% decrease in recalls.

We also celebrate the achievements of individual practices and radiologists using our tomosynthesis systems for the benefit of their patients. This special collection of case studies features seven hospitals and imaging centers that created their own unique success stories through the adoption of tomosynthesis.

For all references, please go to [HYPERLINK](http://www.hologic.com/data/)
"http://www.hologic.com/data/" www.hologic.com/data/

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Breast Tomosynthesis Increases Early Detection While Reducing Unnecessary Recalls

~~Trentino Health Authority, Trento, Italy.~~ The Trento province in Italy, with a population of 523,000 residents, is home to a unique breast clinic, the Unit of Diagnostic Breast. The clinic is staffed by six fully dedicated radiologists who manage the entire breast clinic as well as the Regional Mammography Screening Program. The Screening Program covers resident women between the ages of forty-nine and seventy who are invited for screening every two years. The target population of the Screening Program is about 75,000 women.



0, Dr. Daniela Bernardi, Director of the Mammography Screening Program, saw breast tomosynthesis images in Turin and enrolled in a workshop to learn more about the new technology. Six months later, the Health Authority installed its first Hologic Selenia® Dimensions® breast tomosynthesis system in Trento.

“We have seen two major benefits since we began using tomosynthesis: an increase in the detection of cancer and a reduction in the number of 2D recalls,” explains Dr. Bernardi. “These improvements are very important because we can find cancers earlier, we can spare some women the anxiety of being called back for additional views and we can reduce the expense of recalls.”

Tomosynthesis Helps Radiologists Detect Cancer Earlier

The Health Authority initially used tomosynthesis in two studies, one about execution and reading time¹ and another on the possible reduction of 2D recalls using tomosynthesis². In addition, the Clinic soon began using the tomosynthesis system as part of its STORM (Screening with Tomosynthesis OR Mammography) trial, the first clinical trial in Italy to study the benefits of tomosynthesis in a screening program.

“In our STORM trial results to date we have clearly seen that tomosynthesis is able to detect more cancer, compared to 2D mammography alone, in all women, not just those with dense breasts.”

*Dr. Daniela Bernardi, Director of Mammography Screening Program
Trentino Health Authority in Trento, Italy*

“In our STORM trial results to date we have clearly seen that tomosynthesis is able to detect more cancer, compared to 2D mammography alone, in all women, not just those with dense breasts,” states Dr. Bernardi.

In the STORM trial all four standard screening views are acquired using tomosynthesis. “Historically we know that we lose 5-10 % of cancers doing mammography with only one view,” explains Dr. Bernardi. “For that reason, we decided to use our Hologic tomosynthesis system to acquire all four views in combo-mode - which is acquiring the 2D + 3D images in a single compression.” Combo-mode is the standard screening procedure in the United States and other countries. It allows radiologist to compare prior images to current images in a mode that they are

comfortable with, 2D, while giving them all the additional data of the 3D image series.

Resolving the Problem of Superimposed Tissue

Radiologists at the Health Authority report tomosynthesis virtually resolves the issue of overlapping structures that can hide breast lesions or create false positives, explains Dr. Bernardi. Tomosynthesis enables them to see around superimposed tissue, making it easier to diagnose cancer and rule out potential masses seen on 2D images that are actually overlapping structures. As a result, radiologists are more confident in their diagnosis. “We ask a lot of doctors what they would do if we did not have tomosynthesis, and they would be very unhappy because of the increased confidence they have with the tomosynthesis images.”

¹ Br. J Radiol, 2012; vol 85(1020) pp e1174-8

² Breast Cancer Res. Treat, 2012 vol 133(1) pp 267-71



According to Dr. Daniela Bernardi, Director of the Mammography Screening Program in Trento, Italy: "We have seen two major benefits since we began using tomosynthesis: an increase in the detection of cancer and a reduction in the number of 2D recalls."

Solving the Issue of Longer Reading Time with Tomosynthesis

According to Dr. Bernardi, it takes longer to read the additional tomosynthesis images. "We demonstrated that it took double the time to read a combo-mode exam and, if you think not in terms of seconds but in terms of doubling the number of radiologists, this might be a problem because we don't have enough radiologists in Europe to do screening with double reading. However, in results to date from our STORM trial, we are finding that a single reading of the combo-mode of 2D + 3D images detects more cancer than a double 2D reading. If this finding is confirmed it means that you may be able to work with the number of radiologists you have because, although tomosynthesis takes double the time to read, you only need to do one reading. This could solve the issue of longer reading times in screening."

Beyond the Use of Tomosynthesis in Breast Cancer Screening

The Health Authority began using tomosynthesis for biopsies in January 2013, shortly after the technology became available. "Tomosynthesis-guided biopsies will allow us to study breast lesions that are not visible with ultrasound or conventional 2D images," explains Dr. Bernardi. "Using tomosynthesis for biopsies will help us establish and understand the advantages and disadvantages of 3D guided biopsies compared to the well-established 2D method.

We are looking forward to being able to complete the diagnoses for lesions only seen on tomosynthesis images."

Replacing the Conventional 2D Image in a Screening exam

Dr. Bernardi is also enthusiastic about the potential for Hologic's C-View™ software. C-View is an optional software module for the Dimensions tomosynthesis system which creates a synthesized 2D image using data from the tomosynthesis scan. Clinical studies conducted by Hologic show the synthesized 2D image combined with a tomosynthesis data set is superior to a conventional 2D mammogram alone.³ The C-View software eliminates the need to perform an actual 2D mammogram and reduces the overall radiation dose of a tomosynthesis exam.

"My first impression of the C-View software is very positive, I think that the synthesized 2D image is very similar

to the standard 2D image," states Dr. Bernardi. "We need studies to confirm this hypothesis, so we plan to start a new trial to validate it. If its value is confirmed, in the future we will probably use C-View plus tomosynthesis instead of conventional 2D plus tomosynthesis. The tomosynthesis acquisition will provide both the 2D and 3D images, eliminating the need for dual acquisitions. This will save radiation dose!"

Tomosynthesis - A Good Thing for Patients and Radiologists

"After our experience with tomosynthesis, and especially its use in the screening program, it's almost impossible to go back to simple 2D images," concludes Dr. Bernardi. "We are working for women and if we can increase the early detection of cancer, it is a good thing for our patients." ■

"Tomosynthesis-guided biopsies will allow us to study breast lesions that are not visible with ultrasound or conventional 2D images."

*Dr. Daniela Bernardi, Director of Mammography Screening Program
Trentino Health Authority in Trento, Italy*

³ Hologic PMA S001 - 080003

Tomosynthesis Increases Confidence, Helps find Cancers Earlier, and Reduces Unnecessary Recalls

~~Dr. Renate Tewaag, RadPrax MVZ, Wuppertal, Germany.~~ As one of the first radiologists in Germany to use tomosynthesis, Dr. Renate Tewaag's initial interest in the technology began when she saw its potential to improve the diagnostic outcome of mammography for all women, but she was especially interested in its effectiveness in women with dense breast tissue. "Tomosynthesis is a brilliant tool for identifying and studying suspicious structures hidden in dense glandular tissue," comments Dr. Tewaag. "In that way it gives us more confidence in our diagnosis."

Dr. Tewaag specializes in breast diagnosis at the RadPrax MVZ, a group of private practices in the Bergisch Triangle of Germany that offers a comprehensive range of services in radiology, nuclear medicine and radiotherapy. She is also the responsible physician for the German Mammography Screening Program in the Wuppertal, Solingen, Bergischen Land and Dusseldorf regions. RadPrax MVZ began using the Hologic® Selenia® Dimensions® tomosynthesis system in 2012.

Meeting Expectations for Patients and Radiologists

"When we examined the first women with the Hologic tomosynthesis system, our hopes and expectations were met; we are able to see much more detail and discover small carcinomas that would otherwise have been overseen in the dense glandular tissue," explains Dr. Tewaag.

Dr. Tewaag has found that her practice experienced two major benefits with tomosynthesis. First, a reduction in recalls was seen, because the level of detail provided in a tomosynthesis exam allows suspicious structures in dense glandular tissue to be identified as insignificant - just an overlap of structures. Second, small cancers are being detected earlier, because

many lesions hidden by overlapping tissue and not detectable with 2D mammography have been identified through the use of tomosynthesis.

Dr. Tewaag continues, "After the first year using the Hologic tomosynthesis system, we reviewed our findings and ascertained that with tomosynthesis we avoided unnecessary recalls and surgery. We conclude that tomosynthesis is an important and very reliable aid especially for women with very dense glandular breast tissue. Also, our patients are satisfied because they know they get a more certain outcome."

The Future of Tomosynthesis

Dr. Tewaag is anxious to incorporate Hologic's C-View™ synthesized 2D image into her screening practice because it will reduce exposure time and radiation dose. A C-View image is created from a single

tomosynthesis data set and eliminates the need for a separate exposure to acquire a 2D image.

Tomosynthesis is not currently approved for use in screening mammography in Germany. Dr. Tewaag believes the technology would be desirable in a screening setting and thinks it will be implemented when more large-scale clinical studies prove its effectiveness. "I believe it will improve results by avoiding uncertainties, especially for women with dense glandular tissue, so saving on recall rates and on interventions," concludes Dr. Tewaag. In this way it will prove to be very economical because it saves time and additional examinations while reducing unnecessary anxiety for many patients." ■



"When we examined the first women with the Hologic tomosynthesis system, our hopes and expectations were met; we are able to see much more detail and discover small carcinomas that would otherwise have been overseen in the dense glandular tissue."

Dr. Renate Tewaag

In India, Tomosynthesis Makes a Difference for Radiologists and Patients

Dr. Bagyam Raghavan, Senior Consultant Radiologist at Apollo Specialty Cancer Hospital in Chennai, India, knew in 2008 that tomosynthesis would have a dramatic impact on the care she and her colleagues would be able to deliver to the patients the hospital serves. So, when the hospital began planning to replace its analog mammography equipment, it chose to wait for the state-of-the-art, three-dimensional technology to become available.

"I knew the 3D technology would be available soon and that it would give us significantly improved diagnostic capabilities, which is a critical consideration for our patients," explains Dr. Bagyam. "By waiting for ~~3D mammography~~ (breast tomosynthesis), our transition from one platform to another was easier and the learning curve was shortened." In 2011 the hospital installed a Hologic Selenia® Dimensions® tomosynthesis system.

Dr. Bagyam and her team of ten radiologists use tomosynthesis for diagnostic work-ups. "Our patients are all symptomatic; they are referred to us for diagnostic workup when lesions are seen on their mammograms. Tomosynthesis gives us additional value in terms of improved diagnostic capabilities; we've also found that we are doing far fewer spot views. More patients are coming to us because they know we have this technology."

Improved Clarity Helps Find More Cancers

The hospital uses tomosynthesis in combo-mode (2D + 3D imaging in the same compression). "Tomosynthesis improves the way we diagnose and cuts back on the need to recall patients for additional views," she notes. "With traditional 2D mammography, there is overlapping tissue and you waste a lot of time wondering if there is something there or not. Tomosynthesis technology lets us look at the breast as thin, reconstructed slices, so there is no tissue overlap and no need for spot compression views. We can see very clearly if there is a lesion or not by scrolling through the images."

Dr. Bagyam also notes that tomosynthesis improves her ability to analyze margins and asymmetric densities. "What is really important is that we are able to spot additional cancers. Using 3D, we found additional cancers in three of our first 100 patients; including a lobular cancer in the same breast, smaller than the indexed lesion. In another case, we found a cancer in the opposite breast. With the Hologic tomosynthesis system, we are able to see cancers clearly, even cancers not seen on the 2D images."

Patient Volume Doubled with Reduced Exam Time

Digital technology is having a dramatic impact on the staff's workflow, enabling them to double the number of mammograms they perform monthly ~~from 125 to 250~~. "We finish

the exam much more quickly because we are not waiting for film to be developed," explains Dr. Bagyam.

Time is of the essence to patients as well as radiologists. "Our patients come from all over India; some travel two, or three days just for our dedicated oncology services, and they have very little time., continues Dr. Bagyam. "In the patient's mind, the time she waits is all part of the mammogram. When we asked 100 patients for their impressions after having a tomosynthesis exam, most of them said that the examination was far more comfortable, the pain due to compression was less and the examination took less time than their previous examinations."

Tomosynthesis Increases the Radiologist's Confidence

"It is important to diagnose cancer, but it is just as important in mammography, to say this is normal. Tomosynthesis improves my confidence when I scroll through the 3D images and do not find a lesion. It makes a huge difference. I think 3D could soon become the standard of care for mammography," she concludes.

Dr. Bagyam and her team have written up their experiences in their clinical practice for the scientific community. They presented several papers at the European Congress of Radiology 2012 in Vienna, covering the role of tomosynthesis in morphological analysis, size assessment in breast lesions, and positive patient feedback. ■



Dr. Bagyam Raghavan, Senior Consultant Radiologist at Apollo Specialty Cancer Hospital, says that tomosynthesis provides significantly enhanced diagnostic capabilities.

Pioneer in Breast Tomosynthesis Sees Its Potential Fulfilled

Professor Rüdiger Schulz-Wendtland is an internationally recognised authority on breast imaging and interventional oncology. His radiology department at the University of Erlangen in Nuremberg, Germany sees over 20,000 patients and treats 700 primary breast carcinomas every year. The facility began doing digital mammography in 1996 and in 2012 installed its first Hologic® Selenia® Dimensions® tomosynthesis system.

Pioneering a New Technology

It is not surprising that his facility would become an early adopter of breast tomosynthesis. Professor Schulz-Wendtland and his team were long-time believers in the strong potential for the technology, and began using a prototype system in 2006. They went on to publish one of the earliest papers in the world on the topic. "Following the transition from analogue to digital mammography, I am sure the next significant step will be tomosynthesis," Professor Schulz-Wendtland says. "My belief, based on my own experience and many conversations with radiologists, gynecologists and surgeons around the world, is that tomosynthesis will become an integral part of routine breast imaging. Tomosynthesis is an exciting breakthrough which my team believes will lead to significant improvements in breast cancer detection rates."

Maximizing Diagnostic Capabilities

Professor Schulz-Wendtland and his team primarily use their tomosynthesis system as a diagnostic tool. When they see a suspicious area in the breast that requires further examination, they prefer tomosynthesis over 2D spot views. "Spot mammograms are a very hit or miss technique and many lesions are not visualized," says Professor Schulz-Wendtland. "Tomosynthesis is a much better way to see a lesion and assess its extent."



"Tomosynthesis is an exciting breakthrough which my team believes will lead to significant improvements in breast cancer detection rates," says Professor Rüdiger Schulz-Wendtland, an internationally recognised authority on breast imaging and interventional oncology.



The department uses tomosynthesis for specimen radiograms because of its ability to better visualize spiculations and micro-calcifications. Professor Schulz-Wendtland also sees great value in transmitting the tomosynthesis images with the corresponding markings of the biopsied lesion directly into the operating theatre to help surgeons work more precisely.

A Bright Future for Further Advances in Tomosynthesis

For the future, Professor Schulz-Wendtland thinks tomosynthesis technology will be very useful in performing vacuum biopsies, especially for lesions that are visible only on tomosynthesis images. He's also very excited about Hologic's C-View™ software option

that can be used with Selenia Dimensions tomosynthesis systems. "Now, we can create synthesized 2D images from tomosynthesis data sets," Professor Schulz-Wendtland explains. "This approach reduces the number of exposures needed, leading to slightly shorter exam times and reduced patient dose."

"All patients can benefit from tomosynthesis," concludes Professor Schulz-Wendtland, "especially those with dense glandular tissue; tomosynthesis makes it easier to verify cysts, opacities or lesions in these cases. I am very happy to see this amazing technology fulfill its potential." ■

Dutch Hospital Sees Higher Level of Confidence, Reduction of False Positives Using Breast Tomosynthesis

For Dr. Dick Venderink, senior breast radiologist at Canisius-Wilhelmina Hospital (CWZ) in Nijmegen, “tomosynthesis provides a higher level of confidence we are finding more tumors, but also, and more importantly, confidence that what we see is not a tumor.” Dr. Venderink has been using tomosynthesis for diagnostic imaging since 2008, when the breast unit at CWZ became the first facility in the Netherlands and one of the first in Europe to install a Hologic Selenia® Dimensions® breast tomosynthesis system.

Canisius-Wilhelmina Hospital is ranked among the top clinical training hospitals in the Netherlands, recognized for its patient-centered, quality-driven care. Its breast center is one of the largest in the eastern part of the country, with a multidisciplinary team of breast radiologists, breast care nurses, pathologists and breast surgeons providing integrated diagnostic and treatment services. The breast center receives referrals from screening centers across the Netherlands and currently performs almost 7,500 diagnostic mammography exams annually, treating close to 350 breast cancer cases.

As the Netherlands' national breast screening program grew to accommodate one million women annually, the Hospital's referrals rose steadily, prompting the search for a technology that could increase radiologists' confidence in their diagnoses. Hologic's tomosynthesis technology was chosen to meet that need.

Increased Diagnostic Confidence

“We have a large population of mammographic screening patients referred to us; we operate on hundreds of breast cancers each year and perform even more diagnostic work-ups, which is why we needed a technology that could take us to a new level of clarity and accuracy,” states Dr. Venderink. “In addition to symptomatic patients, those with palpable lesions, we also

see a large number of women with a high risk of breast cancer. We wanted the higher level of confidence tomosynthesis provides to best serve the needs of all of our breast patients.”

Since implementing tomosynthesis, the hospital has seen an increase in the number of general practitioners referring patients to CWZ. “We also noticed patients have read about tomosynthesis in the newspaper and are asking to be referred to us because tomosynthesis has a higher sensitivity,” states Dr. Venderink.

Tomosynthesis Reduces the Need for Additional Tests

Dr. Venderink also notes tomosynthesis is eliminating the need for some exams. “Since

we started using tomosynthesis, we require fewer spot views,” declares Dr. Venderink. “Usually, we can rule out a lesion simply by looking at the tomosynthesis images.”

As for the future, Dr. Venderink is very enthusiastic about using synthesized 2D images, which will eliminate the need to take both 2D and 3D images in a tomosynthesis exam. “With the new C-View™ software package from Hologic, 2D images can be synthesized from 3D data sets. We will have the same information of a 2D mammogram, but without the additional 2D exposure and dose. This technology will allow us to use tomosynthesis for all of our patients.” ■



“Usually, we can rule out a lesion simply by looking at the tomosynthesis images.”

Dr. Dick Venderink, senior breast radiologist at Canisius-Wilhelmina Hospital in Nijmegen, the Netherlands

Dr. Dick Venderink, senior breast radiologist at Canisius-Wilhelmina Hospital in Nijmegen, the Netherlands depends on Hologic's Selenia Dimensions breast tomosynthesis system to bring a new level of accuracy and clarity to his diagnostic work-ups.

3D Mammography Helps Small Radiology Center Compete and Grow

~~Dr. Paula Martínez Miravete Diagnostic Radiology Center, Zaragoza, Spain.~~ Dr. Paula Martínez Miravete didn't set out to change breast imaging in Spain when she first adopted tomosynthesis. The sole radiologist at a small diagnostic imaging center in Zaragoza, Spain, Dr. Martínez Miravete was looking for new imaging technologies that would help improve the accuracy of her diagnoses. She wanted to find breast cancer earlier, when it was more treatable, and she wanted to save women the anxiety of unnecessary recalls.

"I am the only radiologist in my practice and I began questioning my ability to make good diagnoses based on the analog mammography images I was reading. I decided I needed a new technology to give me more confidence in my diagnoses," notes Dr. Martínez Miravete.

When she learned about ~~3D mammography~~ (breast tomosynthesis) and saw the technology in practice, she knew it was the answer. In 2011, Dr. Martínez Miravete installed the Hologic Selenia® Dimensions® breast tomosynthesis system, becoming a pioneer, in fact, just the second radiologist in Spain to adopt tomosynthesis.

A Leading Advocate for Early Detection

Today, Dr. Martínez Miravete is a frequent speaker at radiology conferences in Spain and is regularly asked to share her experiences with radiologists thinking about making the transition to tomosynthesis.

Dr. Martínez Miravete credits tomosynthesis with helping grow her private diagnostic imaging practice. The small practice was competing against larger, more established radiology centers and radiologists who were initially skeptical of the benefits of tomosynthesis. "At first other radiologists said tomosynthesis was not proven, so I had to struggle a lot in that respect. But the patients Gynaecologists soon realized that we were diagnosing cancer earlier when it is smaller and the treatment is less aggressive.

"After performing 5,700 mammograms with tomosynthesis we saw a 33% increase in sensitivity," states Dr. Martínez Miravete.

"We are finding small lesions in women with dense breasts and implants as well as malignant pathology in younger women that we would not have seen before. These are the cancers we need to find, the ones that can hide and grow and threaten a woman's life."

"We do not have a technique that can diagnose 100% of breast cancers, which is what we aspire to do," continues Dr. Martínez Miravete. "But tomosynthesis helps radiologists diagnose smaller cancers and I believe it is of fundamental help for early diagnosis, which is what we are looking for."

A Better Experience for Patients

Dr. Martínez Miravete feels the all-woman staff at the private diagnostic imaging center puts patients at ease. When women arrive for their mammograms, the staff explains what tomosynthesis imaging consists of and how it differs from conventional mammography. "This way they become aware that we're doing something different, and they communicate that to their friends and family," says Dr. Martínez Miravete. After

the mammogram, the staff asks patients to complete a questionnaire, asking if they noticed any improvement with respect to previous mammograms at other centers. "Ninety-six percent of patients say 3D is an improvement," states Dr. Martínez Miravete.

Making a Business Case for 3D

"For me, tomosynthesis sells itself," continues Dr. Martínez Miravete. "News of the technology is spreading through Spain by word of mouth, and more women are coming to the center because of it. Women are less anxious because they know we diagnose cancer earlier.

"I use tomosynthesis because I work alone. I don't have a colleague I can ask to look at something I think might be troublesome, so I need a technology that helps me find things I might miss. If I help even a single woman or find even one additional lesion it is very important to me, it is an achievement." ■



Dr. Martínez Miravete credits tomosynthesis with helping her make more accurate diagnoses.

Using Tomosynthesis to Accurately Target ~~Small~~ Lesions, Shorten Procedure Time and Lower Dose

~~The Medical Imaging Center at the Hôpital Privé d'Antony, Paris, France.~~ When the Medical Imaging Center at the Hôpital Privé d'Antony implemented tomosynthesis in 2009, its staff realized it would lead to the emergent need to use tomosynthesis imaging for biopsies.

"When we find a suspicious lesion with tomosynthesis, which we could not see on 2D, we need to use the same imaging modality to biopsy the lesion," explains radiologist Dr. Pierre Gignier. "If we try to perform the biopsy with digital mammography, ~~the targeting is not as accurate.~~"

The Medical Imaging Center, located outside of Paris, ~~France,~~ performs approximately 7,000 mammograms annually using the Hologic® Selenia® Dimensions® tomosynthesis system. They also complete as many as four biopsies a week using the Hologic Affirm™ breast biopsy guidance system with the Dimensions system.

Pioneering Advanced Diagnostics

When the hospital originally considered the adoption of tomosynthesis, was interested in working with a company to develop a tomosynthesis biopsy solution. "I saw the need for tomosynthesis-guided biopsy capabilities and wanted to partner with a company that recognized the same need," declares Dr. Gignier. "Hologic seemed to be the ideal partner."

The hospital began using the Affirm system in 2010 for stereotactic biopsies and added tomosynthesis biopsy capabilities in November 2012, as soon as the technology became available.



Pierre Gignier, M.D., Breast Radiologist and Mrs. Corine Roche, Technologist, with the Affirm breast biopsy guidance system used on the Selenia Dimensions tomosynthesis system at the Hôpital Privé d'Antony, Paris, France

"Tomosynthesis is essential for the visualisation of small lesions or architectural distortions that may be hidden by superimposed tissue," states Dr. Gignier. "Now the Affirm tomosynthesis option lets me accurately target those lesions, which may not be visible on standard 2D images."

Improved Visualisation of Lesions

Dr. Gignier reports tomosynthesis biopsy improves accuracy by providing better visualisation of lesions and therefore easier targeting during the biopsy. "With tomosynthesis biopsy we can scroll to the slice where the lesion is located, focus in and target the lesion very easily," explains Dr. Gignier."

According to Dr. Gignier, ~~he~~ Affirm tomosynthesis biopsy option ~~and~~ uses a lower dose than stereotactic biopsy procedures, because only one view is needed ~~view~~ to check the positioning and to target. Dr. Gignier finds that breast biopsy using

tomosynthesis guidance ~~requires fewer views,~~ saves procedure steps and results in time savings compared to stereotactic breast biopsy procedures.

Dr. Gignier uses Hologic's ATEC  breast biopsy system with a 9-gauge hand piece, which gives him the flexibility to choose which needle to use. "I tried different biopsy systems and I prefer the ATEC system. It enables us to acquire samples more quickly because they are automatically collected in the closed chamber at the back of the hand piece. I can control the biopsy better, and I can inject anesthetic during the procedure."

"Tomosynthesis is a major breakthrough in breast imaging," concludes Dr. Gignier. "Now with tomosynthesis biopsy, we have better visualisation of lesions, and we can shorten the procedure time, lower the dose and provide a more efficient procedure. Personally, I always use tomosynthesis biopsy." ■



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