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## New Dimensions in Breast Screening

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**Radiologist Stephen L. Rose**, M.D., knows that pairing experienced breast radiologists with state-of-the-art equipment can make a life-saving difference in the early detection and diagnosis of breast cancer. As president and founder of Rose Imaging Specialists, the largest community-based breast imaging practice in Houston, Texas, he has helped revolutionise the way breast imaging is done, using full-field digital mammography, stereotactic biopsies, breast ultrasounds, and breast MRI. The practice's 13 breast radiologists serve eight major hospitals in the Houston area providing women with a full range of imaging services and performing up to 75,000 mammograms annually.

Dr. Rose is part of the national clinical trial to evaluate tomosynthesis technology, working since 2009 with the Breast Care Center at Memorial Hermann Memorial City Medical Center in Texas to install Hologic's Selenia® Dimensions® digital tomosynthesis system.

### Tomosynthesis to Revolutionise Breast Cancer Screening

Dr. Rose is impressed with the quality of the technology. "I think tomosynthesis will revolutionise the way we screen for breast cancer," declares Dr. Rose. "The quality of images with Hologic's 2D digital mammography systems is excellent, but the ability to peel away layers with tomosynthesis is a tremendous advance and provides an opportunity to markedly improve what we're doing in breast screening," explains Dr. Rose.

Dr. Rose chose Hologic's Selenia Dimensions 3D system because of its unique implementation of tomosynthesis technology. "I see Hologic as the leader in tomosynthesis," states Dr. Rose. "Prior to recommending Hologic's Dimensions 3D system I thoroughly researched this technology; talking to other radiologists and manufacturers. I really like Hologic's approach to tomosynthesis – combining 2D and 3D imaging on a single system gives us the flexibility to use both imaging modes. No other vendor offers this combination in one system."

In addition to the Hologic Dimensions 3D system, Dr. Rose and the eight hospitals he serves transitioned to 16 Hologic Selenia Dimensions 2D systems, which will easily convert to 3D breast imaging when the technology receives FDA approval. "At the end of the day, I don't think the cost of tomosynthesis will be all that different from digital mammography, yet it will enable us to reduce our callback rate significantly and increase our ability to find smaller breast cancers. So it really does appear to be a win-win situation, which very few new technologies provide."

Dr. Rose considers a screening mammogram the most critical tool for the early identification of breast cancer. "If we don't see anything on the screening mammogram, then it doesn't matter what other tools or modalities we have because we won't look any further." To date, Dr. Rose and his staff have performed almost 400 mammograms using tomosynthesis. "I think tomosynthesis is the biggest thing to happen to breast imaging in a long time because unlike some modalities, tomosynthesis is easy-to-use and efficient, enabling us to screen almost everyone," declares Dr. Rose.

### Tomosynthesis Greatly Improves Specificity

"Tomosynthesis allows us to look at slabs to see if anything is hiding in the breasts," continues Rose. "It allows us to be much more confident that an area is ok. We can see more clearly those areas we might have questioned on a digital mammogram and put to rest our concerns on questionable areas that we previously banged our heads against the wall trying to decide if they were something or not. With tomosynthesis it is pretty obvious, as we page through the area, if what we see is just breast tissue or something more significant. Tomosynthesis will also be a big help with cysts as it allows us to see the margins of the cysts and put concerns about those to rest as well."

Initially, Dr. Rose looked to tomosynthesis as a tool for women with dense breast tissue, but he also has found it to be a valuable screening tool for women with fatty breast tissue. "I had a case recently where I did a digital mammogram and was concerned about an area so I brought the patient back and one of my partners did an ultrasound. The patient also agreed to a tomosynthesis mammogram, which showed clearly that the area was cancer. This is a situation where we saw something with digital mammography, but we weren't sure what we were seeing. Using tomosynthesis it was very obvious we were looking at cancer. So even with fatty tissue there are cases where we will find very small tumors that otherwise would have been missed."

As he looks to the future, Dr. Rose sees a real benefit to having both 2D and 3D imaging functionality on a single mammography system. "There are some cases where you might need to take a 2D mammogram, such as patients with large breasts or with implants. I like having the capability to do both two and three-dimensional imaging with all my systems so tomosynthesis is available for every patient possible."

"Tomosynthesis is the most exciting tool I've seen in my professional career," concludes Dr. Rose. "This technology will help us find cancers earlier with fewer call backs for additional studies."

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