A patient-centred approach to mammography

Head radiologist provides feedback on department’s three-year use of the Hologic Selenia® Dimensions® 3D Mammography™ System

In an exclusive interview with HealthManagement.org, Dr. Annie Philippou Papoutsou explains how the implementation of Hologic’s Selenia® Dimensions® 3D Mammography™ System has helped radiologists to detect more cancers, and positively impacted on the department’s workflow, signalling a bright future for breast imaging at the Polyclinic.

Having heard about the vital research that Hologic had put into providing mammography with much less radiation while still providing accurate results, I didn’t want anything less than this for my clinic. I was very keen to implement the Selenia® Dimensions® 3D Mammography™ system. The whole department was eager to get started with the new digital system, so we installed it in April 2015, and we have been more than delighted with the results.

Catching more small cancers

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I was very excited to try out the Selenia® Dimensions® 3DMammography™ Systems as it offered the first breast tomosynthesis technology with proven superior clinical performance to 2D mammography—much more detailed, with less radiation. I was particularly keen to use it since it was designed to clearly reveal subtle lesions and fine calcifications to help pinpoint cancers early. The outcome? The system has helped me tremendously in characterising lesions, and I can find more cancers—more small cancers that could have been missed with conventional mammography. I found a cancer of about 2.5mm, which could have been missed if I didn’t have the 3D mammography unit. The resolution is fantastic, so it is very easy for me to interpret a mammogram using this equipment.

There are three key areas in which the Selenia® Dimensions® 3DMammography™ System has performed well for me and my team:

1. **Dense breasts:** 3D imaging is very fast at under 4 seconds and definitely very good in dense breast tissue where I could miss a cancer. We know that 2D systems can miss up to 48 percent of cancers in very dense and heterogeneously dense breast tissue. On dense breast tissue, the new system is much more detailed.
2. **Lesion characterisation:** 3D imaging can characterise a lesion even on fatty breast tissue—we can characterise a lesion more precisely and we can see the margins in much more detail.
3. **Synthesised 2D view:** Having the C-View™ software gives the benefit to the radiologist of an additional imaging read without the woman having a double radiation dose.
4. **Enables stereotactic biopsy:** We can perform a stereotactic biopsy under tomosynthesis, which is much quicker for the patient, delivers less radiation, and is much more detailed. I therefore feel very happy and extremely confident doing the stereotactic biopsy under tomosynthesis using Hologic’s 3D system.

**Comfort for radiologist and patient**

Our radiologists felt very comfortable with the system from the beginning, and after three years, I am even more pleased with the way it has transformed our service to our patients.

More women have come to us for a mammogram because we have this comfortable system which offers a fast and reliable imaging experience. With 2D mammography systems, compressing the breast caused overlapping tissue, which could sometimes hide a cancer, or the overlapping breast tissue itself could appear to be a mass, meaning that sometimes the patient would need to return for additional mammogram pictures. With Hologic’s Selenia® Dimensions® 3DMammography™ System, there is no need to clear the overlapping tissue anymore, so patients are not called back for more tests. They are very happy, and because they don’t feel heavy compression during the short screening time they don’t feel as uncomfortable as before.

**Introducing the system to your clinic**

At our clinic, the implementation of the system went smoothly because we did it in stages. Hologic’s 3D Mammography™ system is powered by C-View™ software. We installed the C-View™—the synthetic view—from the beginning, and we used 2D mammography in parallel with tomosynthesis and the C-View™ to begin with, to become familiarised. After six months we turned to tomosynthesis only with the C-View™ 2D synthetic view. We can lower the radiation dose delivered to the woman by about 40 percent using C-View™ with tomosynthesis, while getting very accurate results.
Increased workload and efficiency

We perform around 3000 mammograms a year in our private clinic. Since we installed the Selenia® Dimensions® 3D Mammography™ System our workload has increased 50 percent as many more women have chosen to be screened at our clinic. However, due to well-trained technicians and a faster and more accurate mammography system we have been able to absorb increased patient numbers into our workflow.

We hope to get more patients, and our intention now is to install Hologic’s Selenia® Dimensions® I-View software contrast enhanced imaging software, in which a contrast agent is given to patients to provide more contrasting mammography images for detection of suspicious lesions. This will help us a lot in decision making as well as in increasing our workflow even more and providing more income for the department.

A revolution for mammography

I would recommend other hospitals use the Hologic 3D Mammography™ system because the 3D imaging it provides is much more detailed in dense breast tissue. It can characterise a lesion even in fatty tissue much more precisely, and the radiation dose using the synthetic view is lower. I don’t think we have to use any 2D mammography system anymore. The 3D system is wonderful, and the long-term return on our investment has been extremely positive.