



Enhanced patient care, low-dose mammography

Philips MicroDose Mammography at Putra Specialist Hospital

Who/where

Radiology Department, Putra Specialist Hospital, Malacca, Malaysia
Dr Imran Yahya, Consultant Radiologist
Rabiah Binte Ramli, Radiographer
Mr Zainudin bin Alias, Manager, Diagnostic Radiology Department

Challenge

Putra Specialist Hospital needed to switch from analog to digital mammography in order to increase efficiency and patient care experience in mammography screenings since they are the dedicated screening center in the Malacca region

Solution

By combining features that enhance image quality and speed with those that provide outstanding patient comfort and low dose, Philips MicroDose mammography system was the natural choice

With an increasing population and demand for outstanding healthcare in Malaysia, Putra Specialist Hospital Malacca strives to be one of the best private hospitals to offer high quality and affordable healthcare with minimum waiting time. Having acquired many Philips products across several departments, Putra Specialist Hospital decided to go one step further. In 2012, the hospital installed a Philips MicroDose digital mammography system to be the backbone of the most sought after service offered within their radiology department – mammography screenings. The hospital's radiology department is now able to screen more patients in a less stressful work environment with increased workflow efficiencies.

Centrally located in Malacca, Putra Specialist Hospital offers its patients one-stop medical care in Malaysia. Putra Specialist Hospital is housed in a 12-story building with 225 beds, having opened its doors in 1995 under the name 'The Southern Hospital'. Patient throughput in the radiology department is about 30 to 40 cases a day.

Putra Specialist Hospital has been chosen as the main center for mammography screening in Malacca, an accreditation representative of the level of care they deliver. This certification was awarded to the hospital as they operate according to very specific rules in agreement with the Malaysian Society of Quality Health.



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Dr Imran Yahya, Consultant Radiologist at Putra Specialist Hospital.

“In a private hospital setup, the main issue is time. For instance, we have to clear both in-patients and out-patients within a specific timeframe, as stipulated by the Malaysian Society of Quality Health. All X-rays and ultrasounds have to be completed within half an hour. The peak period between 11am and 1pm can be very stressful for all of us,” says Dr Imran Yahya, Consultant Radiologist at Putra Specialist Hospital.

To increase the level of care provided and meet the increasing demand by both patients and clinicians to have faster and accurate mammography screenings, the radiography department’s management made it a priority to find a suitable solution.

Excellent image quality with lower dose

The MicroDose system delivers high quality images with 18 to 50% lower radiation dose than used on other digital mammography systems, with an average dose reduction of 40%^{*1-2-3-4}.

“It is mandatory that radiologists have consistently high-quality images of the patient’s mammogram. If you do not have good quality images, we would have to

repeat the process,” says Dr Yahya.

“With this new system in place, there is significant dose reduction and workflow efficiency. Furthermore, analog systems would use cassette tapes and if the process had to be repeated, that would result in the patient incurring extra dose.”

“With this new system in place, there is significant dose reduction and workflow efficiency.”

Through his experience, Dr Yahya puts this into context, “The clinicians need to make a diagnosis. With poor quality images no diagnosis can be made. Similarly in the context of mammography, you are looking at exceptionally small changes in the breasts that require very good image quality. The MicroDose has helped us to detect these changes.”

High image quality facilitates the workflow of both radiologists and radiographers.

“The machine is easily adjustable and the mechanics allow it to move automatically into different positions for imaging. This helps to simplify the workflow for all of us, as we do not have to perform retakes thanks to the high image quality,” explains Rabiah Binte Ramli, a radiographer at Putra Specialist Hospital.

Improving hospital productivity

Everyone in the mammography team at Putra Specialist Hospital has been very impressed with the swiftness of the MicroDose system, which has assisted the team to manage their demanding workload.

Mr Zainudin bin Alias, Manager, Diagnostic Radiology Department has seen a change in his colleagues’ workflow and also noted their feedback about the MicroDose system. He comments, “The feedback I have received from my colleagues is that the system is very user-friendly, and they have less stress during their work as there is less radiation for both the patients and staff. Overall, they are very comfortable with this system.”

He added, “After we installed the MicroDose, I realized that the number of patients increased because the examination times were shorter compared to the previous system. Before, we took about 20 minutes to finish one patient’s examination but now with MicroDose, we have managed to cut it down to 10 minutes, therefore we reduced the exam time by almost 50 percent.”

Dr Yahya has been able to see more women due to the increase in productivity with the system, “We were only able to screen about 30 patients a day. With this new screening programme in place, we are now confident of lining up 50 to 60 patients with a shorter turnaround time”, he said.

The user friendliness of the system helps technologist focus more on the patient.

“The current machine is very user-friendly. It gives us the option of different viewing angles such as lateral or MLO positions by just pressing the necessary buttons. Everything will then move automatically.” Rabiah explains. “It is now easier to position the patient, and my entire team loves the new machine. We can now focus more on each patient as the examination time per patient is reduced. It also reduces the other patients’ waiting time and our patients now feel very comfortable and keen to be examined.”

“Before, we took about 20 minutes to finish one patient’s examination but now with MicroDose, we have managed to cut it down to 10 minutes,”



Enhancing patient care and comfort

The MicroDose has helped patients at Putra Specialist Hospital feel more comfortable when they are having their mammography exam. “With the older system, when we used to place the patient’s breast on the examining surface, the patient would feel cold and it would tend to get uncomfortable. But with the new MicroDose system in place, the patient feels comfortable due to the warm surface,” Rabiah explains.

“I have to say that it was much less painful this time,” one patient says. “I used to postpone or skip my mammograms in the past because it was not a very pleasant experience, but this machine has changed my opinion. I also noticed that the warm surface, which was very reassuring and took away the clinical experience of the examination. I think I will start going for my annual mammograms more regularly from now.”

The addition of MicroDose now allows the hospital to provide patients with faster results after the examination.

“When we reviewed the images from a mammogram conducted on our old analog system, we had to call patients back for a complementary ultrasound,” says Dr Yahya. “But it was already a hassle for the patient to come for a mammography examination, let alone another schedule for an ultrasound in addition.”



A great discovery

The value of such high-quality images quickly was evident, as the teams in Putra Specialist Hospital were able to examine a lump in a patient's breast. "About three months ago, we had a patient with a very small nodule in her breasts. She is 60 years old and at that age, we cannot be sure whether or not the small nodule was cancerous. With our new MicroDose system, we managed to put in a hook wire for localization. The patient underwent surgery and the lump turned out to be non-cancerous. She is happy with the outcome and so are all of us," said Dr Yahya.

Excellent customer service

To help the transition from the old analog system to digital, Philips conducted trainings to ease the shift for the hospital staff.

"We have been purchasing Philips products since 2002, when we first bought our CT scanner. After that, it was followed by fluoroscopy, MRI, cardiac catheterization machine, and image intensifier. This is why Phillips became a natural choice for a new mammography system," said Dr Yahya.

"I used to postpone or skip my mammograms in the past because it was not a very pleasant experience, but this machine has changed my opinion."

Adding to her pleasant experience with the MicroDose, Rabiah added, "It was very easy to learn and understand this new machine when we were trained by Philips. It did not take very long to learn the new procedures."

The team at Putra Specialist Hospital has confirmed that the patients that they have screened previously, as well as first-timers to the system, have positive and encouraging recommendations about the enhanced comfort and satisfaction with the MicroDose system.

References

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* The actual result of the average dose reduction will vary based on variations of digital mammography systems.

Please visit www.philips.com/microdose

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