Elite Breast Clinical Solution leapfrogs conventional breast MR
Philips investigated current issues surrounding breast MR, seeking one solution that would benefit both physicians and patients. The resulting Elite Breast Clinical Solution includes the new MammoTrak dockable patient support, DynaCAD Enterprise solution for advanced imaging data analysis and efficient biopsy planning at the MR console.

The Elite Breast Clinical Solution is just one aspect of Philips’ focus on the Care Cycle, a representation of linked stages in the delivery of healthcare that includes prevention, screening, diagnosis, treatment, management and surveillance.

**MammoTrak with integrated coil improves workflow and scan quality**
Time and efficiency are significant considerations when preparing patients for a breast MR scan. To that end, the new MammoTrak dockable patient support with its integrated breast coil allows patient preparation outside scanner room, so, while one patient is being scanned, another can be prepared away from the magnet, and simply rolled into the scanner room at the appropriate time, where the trolley is then docked over the existing patient table of the scanner. This provides considerable improvement in workflow efficiency.

The integrated MammoTrak breast coil comes in two versions. The new open design 7-channel SENSE Breast coil with integrated lighting enables imaging and biopsy. The new 16-channel SENSE Breast coil enables superb temporal and spatial resolution to facilitate early diagnosis. The new coils also allow better visualization of the axilla, an important region to evaluate in breast patients. The excellent image quality is combined with the high reproducibility offered by new SmartExam Breast.

**Patient comfort**
Especially if a patient enters head first into the scanner, she may feel uncomfortable during a breast MR exam. MammoTrak brings the patient into the scanner feet first, and uses materials and a design that are focused on patient comfort such as an adjustable headrest with a mirror.
Since July, General Hospital St. Jan (Brugge, Belgium) has been scanning about 10 to 15 breast patients a week using the Philips Elite Breast Clinical Solution on its Intera 1.5T with 16-channel FreeWave upgrade. In October, the hospital began patient biopsies.

Jan Casselman, M.D., Ph.D., Radiologist, Head and Neck Imaging, and Chairman of the Department of Radiology at General Hospital St. Jan, says there are many differences between conventional breast MR and the Elite Breast Clinical Solution.

“With the new 16-channel coil, the resolution is higher, so we have far more detail and we can pick up smaller lesions. Because of the integrated coil, the patient is also lower on the coil, so there’s less chance of the patient’s back being at the roof of the tunnel.”

“Patients go into the magnet feet first, so they don’t have the claustrophobic effect they might have had in the past, when they went in head first through the complete tunnel. Patients who have been scanned without the Elite Breast Clinical Solution and with it, say the latter is much more comfortable.”

“Most importantly, both new MammoTrak Breast coils have higher sides, so we see the axilla. We can now evaluate the lymph nodes without artifacts from the heart.”
Intuitive biopsy planning from MR console
Also contributing to time savings is the DynaCAD Enterprise solution for breast MR, that provides simultaneous access to a patient’s breast exam data from different computers within the hospital – including the MR operator’s console. User specific viewing protocols help clinicians navigate through the large amount of breast MR data. DynaCAD includes integrated reporting according to BI-RADS standards. It allows intuitive and efficient biopsy planning directly from the MR console – exactly where it’s needed. An in-room display near the magnet shows the optimal trajectory to breast lesions using the biopsy grid or the pillar that enables biopsy from feet-head, lateral or medial directions.

Philips Breast MR network
Philips MR has also initiated an Ambassador network among key opinion leaders in breast MRI. Ambassador sites offer breast MR courses that teach other physicians the best practices in breast MR diagnostics and intervention with the confidence of the Elite Breast Clinical Solution.

Biopsies performed quickly, comfortably at General Hospital St. Jan

“With the MammoTrak patient support, we can completely prepare biopsy patients outside the MR room,” explains Dr. Casselman. “Then, when the patient is ready, she can be easily brought in and scanned. With Elite Breast the biopsy planning is done on the MR console. The in-room display allows us to check the correct needle block or pillar position at the magnet, and shows how far the needle has been inserted to position it at the lesion. When the needle is in the correct position, we just undock the MammoTrak and roll it with the patient on top to the prep room, where the vacuum assisted biopsy (VAB) can take place. These VAB procedures can take considerable time, up to 30 minutes, since in our institution we continue to take samples until there is no breast tissue coming back anymore. As soon as the MammoTrak is removed, the next patient can be scanned, thereby drastically reducing the non-scanning time.”

“With the Elite Breast Clinical Solution, Philips has brought everything together to make a very reliable breast imaging system.”