



# Beyond the Bore

April 2007

## News about Philips Panorama High Field Open

### Panorama HFO expands scanning options at non-profit clinic

Imaging over 9,000 patients annually, the Cobalt Appeal Fund (Cheltenham, U.K.) is a leading medical charity with a state-of-the-art imaging center. Operating an impressive array of Philips diagnostic equipment, including five 1.5T mobile scanners, a 3.0T Achieva system and a Gemini PET/CT system, Cobalt Appeal has the imaging prowess to conduct virtually any scan. And with the addition of the Panorama HFO last May, the clinic is capable of performing off-center scans and studies for obese and claustrophobic patients, according to Howard Crooks, clinical director and chief executive.

*“With the Panorama HFO, patient self-referrals have increased considerably.”*

“The Panorama HFO seemed like a perfect fit here,” he says. “Not only does it offer a tremendously open patient aperture, but it also provides exceptional image quality by virtue of the 1.0T field strength.”

The Cobalt Appeal Fund is using the Panorama HFO for a wide range of studies, including brain and spine, musculoskeletal, abdominal and small joints. “With the Panorama, we have been able to perform dynamic joint imaging in the shoulders, elbows and knees,” Mr. Crooks notes. “Off-center imaging helps physicians manipulate joints to obtain high-quality images, which is problematic in a cylindrical system.”

Since the Panorama HFO was installed in 2006, the center has experienced a significant reduction in the use of sedation. The Panorama system’s superb patient access enables radiologists and technologists to easily converse with patients throughout the process. “The Panorama is



Howard Crooks, clinical director and chief executive, Cobalt Appeal Fund

especially good with claustrophobic patients, because they’re often nervous and appreciate the human contact,” he adds.

With the Panorama HFO, patient self-referrals have increased considerably. Mr. Crooks attributes this rise to the system’s spaciousness. “Patients say they can’t or won’t tolerate being scanned on a cylindrical system, but will proceed on the Panorama,” he says.

Cobalt is using the versatile Panorama HFO to expand its professional referral base as well. In fact, it was the United Kingdom’s first center to open its MRI service to supplementary medicine professionals, including chiropractors, osteopaths, physiotherapists and sports injury specialists.

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# PHILIPS



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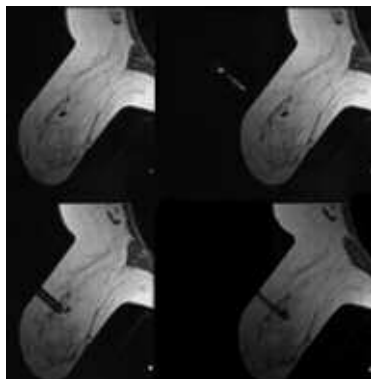
A longtime Philips customer and supporter of the development of an open system with a minimum field strength of 1.0T, Cobalt was eager to place an order for the system once it was complete. "Our partnership with Philips is something we're quite proud of," Mr. Crooks says. "We have been committed to the Panorama HFO and see it as an excellent product."

## CLINICAL CASE Study

**The Panorama HFO allows "Beyond-the-Bore" exams that are either not possible in cylindrical scanners or extremely difficult, enabling you to offer a wider range of services to referring physicians. The clinical case study in this issue highlights the Panorama HFO system's capability in image-guided breast biopsies.**

The Panorama HFO provides the advantages of "real-time" MR image-guided wire localization. It simplifies workflow and reduces interventional procedure time. It enables precise localization of the guide wire tip. In addition, lesions are approachable that would not be accessible with standard grid techniques (chest wall, axillary tail and close to implants).

One of the main advantages is that the patient can remain in the isocenter of the Panorama HFO system during these



Panorama HFO allows easy access for real-time imaging of breast biopsy.

*Images courtesy of: University of Cologne, Germany*

procedures, while one has to move the patient 4-5 times in/out of the magnet on cylindrical systems.

# PANORAMA HFO News

## ST coil combinations provide increased functionality

New functionality for Panorama HFO systems will be available with the Total Neuro, Total Spine, and Total Body applications expected in August 2007. Available in the extension pack on R2, this functionality is offered through the combination of existing ST coils:

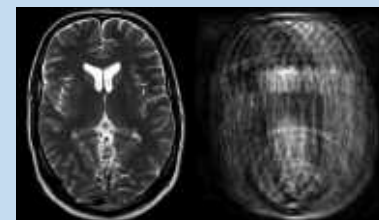
- Total Neuro (Brain + C/T/L Spine) is obtained with ST SENSE Head + ST Body/Spine XL coil
- Total Spine (C/T/L Spine) is obtained using ST Neck + ST Body/Spine XL coil
- Total Body (complete Torso including Neck) is obtained by using ST Neck + ST Body/Spine XL coil

The extension pack will also include M-FFE, a gradient echo technique that is especially useful in orthopedic imaging and spine imaging, and MultiVane, a technique that can be applied with restless patients to obtain high-resolution imaging.



(left) Examples of Total Spine.

(below left) Same patient scanned with and without MultiVane. With MultiVane, motion-free, high resolution images can be obtained, in this case T2W TSE 25 slices, 5mm in 4:30 minutes.



# Versatile Panorama HFO differentiates Swedish hospital

Since 1995, doctors at Sabbatsberg Närsjukhus (Stockholm, Sweden) have taken pride in their ability to offer open MRI services to generous-sized and claustrophobic patients via their low field open system – which worked alongside the hospital's three other high field cylindrical systems. In the summer of 2006, after a thorough system review, the center replaced its low field open scanner with a high field open system, the Panorama HFO. Sabbatsberg clinicians can still claim they're able to scan almost all patient varieties – while also taking advantage of the higher signal to noise available with Panorama HFO.

## **New needs, new technology**

"It has always been our view that we should be able to scan almost all patient types," says Lars Hannerz, M.D., chief radiologist at Sabbatsberg. "That means anxious patients,

*"The neck and shoulders look beautiful on the Panorama HFO."*

those with large body frames and patients presenting with hard-to-position anatomy, such as shoulders." He explains that about 10 percent of the patients that come in to be scanned are obese, claustrophobic or otherwise present a situation where the Panorama HFO is the optimal scanner. And another 10 percent simply prefer the Panorama's open architecture because it helps them feel more comfortable and at ease.

The Panorama HFO patient table has a maximum load of 250 kg. (550 lbs.) and offers excellent fat suppression for superb image quality. The openness of the system has allowed radiologists to change and position patients quickly on the scanner.

## **Excelling in orthopedic exams**

For orthopedic examinations of the shoulders, elbows and wrist, the Panorama provides lateral positioning, which enables radiologists to image anatomy at the isocenter, thereby helping optimize image quality.

"The neck and shoulders look beautiful on the Panorama," says Dr. Hannerz. "The resolution is better than that provided on a traditional 1.5T tunnel-type MRI system."



Lars Hannerz, M.D., chief radiologist at Sabbatsberg, examines a patient on the Panorama HFO

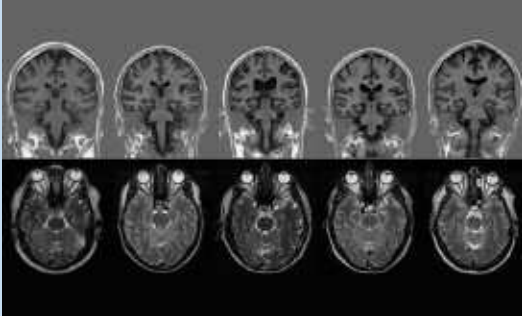
The center also has been able to use the system to scan patients with ankylosing spondylitis, a condition which makes scanning in the supine position very uncomfortable for the patient. By virtue of the Panorama HFO system's vertical field, patients with this disease can lie on their side and complete the examination with minimal discomfort.

## **Smooth transition**

With prior experience on a Philips Intera 1.5T, the Sabbatsberg staff was able to transition to the user-friendly Panorama HFO interface in just three days. Since the system became operational in mid-August 2006, results indicate that the Panorama HFO is fulfilling the center's expectations.

"Patients and referral doctors are glad that we have the Panorama HFO," concludes Dr. Hannerz. "Clinically, it is an excellent system and we are quite pleased with it."

# Q&A SMARTEXAM



SmartExam provides consistent results from patient to patient, from operator to operator and from day to day.

## What is SmartExam?

Introduced at RSNA 2005, Philips-exclusive SmartExam provides complete MRI scan automation – from planning to protocol execution and then automatic push to post-processing. SmartExam, available now for brain, knee and spine studies\*, streamlines department workflow and affords an efficient, reproducible scanning methodology for the majority of a center's patients. SmartExam is built on Philips' ExamCards – complete, standardizable and customizable examinations that start at a single touch. Sophisticated SmartExam software recognizes and localizes anatomy to plan the MR study, then ExamCard software automatically conducts the examination and finishes processing the image data.

\* SmartExam spine will be available during 2007.

With automated scan planning and execution, and export to automatic post-processing, SmartExam is making a dramatic impact on MR productivity, efficiency and precision. Beyond the Bore recently spoke with Robert B. Smith, (RS) MRI supervisor at Saint Barnabas Ambulatory Care Center, (Livingston, New Jersey, USA); Dr. John F. Feller, (JF) medical director at Desert Medical Imaging (Palm Springs, California, USA); and Dr. Axel Gossmann, (AG) radiologist at the University of Cologne (Germany) about SmartExam's impact on the capabilities of the Panorama HFO.

### **BB: How has SmartExam improved operational efficiency and workflow in your department?**

**RS:** "SmartExam enables automated planning, positioning and processing of the protocols. With SmartExam, we now are able to complete our exams in less time than before, without sacrificing quality."

**JF:** "We have gained tremendous efficiencies. SmartExam has helped us reduce to 30 minute scan slots for almost all exams. For a knee MRI, for example, the number of steps the technologist needs to perform has been reduced from 34 steps to just two steps."

**AG:** "Now, even less experienced technologists can perform standardized high-quality examinations. It also helps reduce training time for new technologists."

### **BB: How has SmartExam improved the patient's experience?**

**RS:** "Everything is oriented around making the patient's visit easier, shorter and more comfortable. SmartExam fits perfectly with the Philips philosophy of Sense and Simplicity."

**JF:** "SmartExam has reduced total scan time for the patient, because there are fewer re-do's of scouts and pulse sequences. Our throughput has improved, especially for less experienced technologists."

**AG:** "A standardized high quality examination can help radiologists make a correct diagnosis."

### **BB: What is SmartExam's impact in scanning different patients having the same-type of study? Why is this kind of reproducibility important?**

**RS:** "SmartExam's ability to recognize multiple anatomical markers to facilitate positioning is superb. As technologists, this reproducibility increases scanning performance and improves operator efficiency."

**JF:** "SmartExam ensures consistent image quality despite many different types of patients. In health care, it is important to both the patient and the doctor that image quality is diagnostic, consistent and reproducible for patients of all different shapes and sizes."

**AG:** "As a radiologist, you are trained to search for pathological structure. By producing examinations that replicate 'normal' anatomy in the same way, it is much easier to detect pathological structures. SmartExam is a very useful tool that helps the radiologist, the technologist and most importantly the patient"



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