



# Beyond the Bore

Issue 11 • April 2008

## News about Philips Panorama High Field Open

## London's MedTel International uses Panorama for unique scanning techniques

The new MedTel International Harley Street Medical Center in London is one of several MRI centers in the prestigious Harley Street medical district. A key differentiator for MedTel is its Panorama HFO, the first in London and the second in the U.K.

Dr. Simon Blease, F.R.C.R., F.F.S.E.M., F.I.B.R., is head of Musculoskeletal (MSK) Radiology at MedTel. He says MedTel's Harley Street site is built on MedTel's reputation for offering open MRI scanning. "To that extent, we could not ignore the Panorama HFO," he says. "We couldn't in all honesty stay true to our open MRI ideals and not have a Panorama HFO. The images have been just stunning right from the start. It's been performing very, very well for us."

*"You cannot scan a patient in this position in a closed-bore system, but you can in the Panorama HFO."*

### **New techniques can provide better images**

In addition to using the system's high field open capabilities for claustrophobic and obese patients, MedTel is taking advantage of the Panorama's wide open patient space to facilitate better scans. For instance, the position that MedTel uses for Abduction and External Rotation (ABER) for the shoulder differs from the normal protocol. "To be able to accommodate a patient inside a closed-bore mag-



Dr. Simon Blease, head of Musculoskeletal (MSK) Radiology at MedTel.

net in a position that properly stresses the shoulder joint, the shoulder is over-rotated behind the head and pointing upward," explains Dr. Blease. "That's not the best position for the scan, because it's not the so-called 'apprehension position,' what I call the 'policeman's stop' position with the arm at 90°. That's where patients usually experience pain, and that's

how they should be scanned. You cannot scan a patient in this position in a closed-bore system, but you can in the Panorama HFO."

Caroline Whitty, MR superintendent radiographer at MedTel, says, "The ABER position is one that MSK radiologists do like to see, and it's very often quite difficult for the patient to get into the position, especially when they're symptomatic. To maintain that position in a conventional scanner is even more difficult." MedTel includes the new ABER position as an extra on all routine shoulder exams, and Ms. Whitty says it does improve the specificity and sensitivity of the exams.

continued on page 2

# PHILIPS



continued from page 1



MedTel International Harley Street Medical Center, London.

### Experimental hip technique and real-time imaging in the works

Dr. Blease is also evaluating a hip impingement scan. “The hip is put into flexion and internal rotation, which is completely impossible inside a closed-bore tube,” he says. “We’ve done it experimentally with a volunteer on the Panorama HFO, and we’ve had very good results.”

*“From an operator’s point of view, all of our MSK work tends to be a lot easier on the Panorama.”*

Dr. Blease recently went to Philips at Eindhoven (the Netherlands) to evaluate real-time joint imaging such as shoulder motion imaging. “Up until now, we’ve only been able to do kinematic imaging,” he says, “but with the Panorama, we can actually move the shoulder slowly, and scan it with the muscles in active movement rather than in static mode. I’m hoping to integrate this technique into our practice soon.”



Caroline Whitty, MR superintendent radiographer at MedTel.

Ms. Whitty says, “Musculoskeletal work is our most common scan, along with soft tissue neck and neurological examinations. From an operator’s point of view, all of our MSK work tends to be a lot easier on the Panorama, because we don’t have problems with positioning the patient at the isocenter of the magnet for optimal image quality.” Radiographers often have to improvise on the positioning of patients, she says, but correct positioning is very straightforward with the openness of the Panorama HFO. “The fact that we can use the standard Panorama equipment and coils with these new techniques goes to prove how versatile this machine is,” she adds.

### Patients are often claustrophobic, obese

Ms. Whitty says the MedTel staff have a lot of experience with claustrophobic patients, who regularly travel from all over the U.K. and abroad to be scanned on the Panorama. “We also have patients who are too large to fit into a conventional scanner, especially for body work.” MedTel receives a lot of referral patients, says Ms. Whitty, because physicians know their patients will be comfortable, and MedTel can produce high quality images.

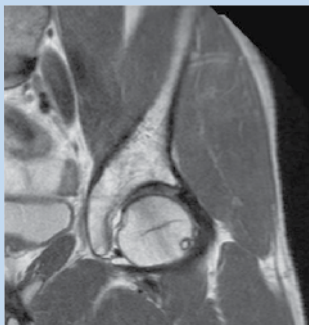


# CLINICAL CASE Study

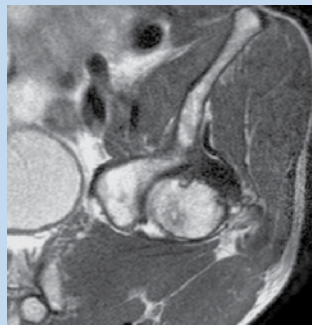
**The Panorama HFO allows “Beyond-the-Bore” exams that are either not possible in cylindrical scanners or extremely difficult, enabling users to offer a wider range of services to referring physicians. The clinical case study in this issue highlights the Panorama HFO’s capability to excel in imaging patients in novel scanning positions.**

A 49-year-old male runner had minimal symptoms of hip impingement in deep hip flexion. The Large Body Coil was used to scan the patient in a supine position, with pelvis tilted under the symptomatic hip. The hip was flexed to 90° and internal rotation induced by downward pressure on the knee using the patient’s hand.

Initial scanning shows fibrocystic change in the anterolateral femoral neck. In flexion and internal rotation, this fibrocystic change approximates the anterolateral border of the acetabulum, indicating mild femoroacetabular impingement of the left hip.



Standard coronal T1 weighted coronal scan of pelvis, showing an area of fibrocystic change in the anterolateral neck of the left femur.



T1 weighted coronal scan through the flexed, internally rotated hip, showing abutment of fibrocystic change against anterolateral margin of the acetabulum.

*Images courtesy of MedTel International, London.*



The King's Daughters Center for Advanced Imaging.

## Panorama HFO a perfect fit for Ohio patient

Frank Brumfield is 6 feet 3 inches tall and 435 lbs. and he's very claustrophobic. After a serious auto accident, Brumfield needed an MRI. He went to numerous MRI facilities in search of a machine where he could be scanned, at one time even driving seven hours, only to realize that none of them would accommodate him.

Then, Brumfield discovered King's Daughters Center for Advanced Imaging at King's Daughters Medical Center (KDMC, Ashland, Kentucky, USA). "I was at the KDMC Spine & Pain Center, about 20 minutes from home, and they said, 'we can do your MRI at our imaging center,' so I called them to ask if I could see the machine."

### Test run leads to successful scan

Brumfield met with Chad Blair R.T.(R), (MR), who showed him the Panorama HFO and let him lay down in it to see if he would feel comfortable. "When I came back for the appointment, they did a wonderful job," says Brumfield. "Chad went beyond the call of duty to make sure I was comfortable in there. He talked to me throughout the scan, and when my back started to hurt, he asked if I could hang on for another two or three minutes, or if I wanted to quit and reschedule. He didn't rush me."

Blair used the Integrated Quadrature Body Coil to obtain high-signal, high-resolution images of Brumfield's mid and lower spine. "The Panorama was the only choice," says Blair. "Not only were we able to make him comfortable, but the images were outstanding." Because of his positive experience with the Panorama scan, Brumfield is now transferring all his family's medical care – cardiac, family practice and pediatric – to KDMC.

### Imaging center provides convenience, comfort for all

KDMC's Center for Advanced Imaging has been using the Panorama since June 2006 to scan about 15 patients a day. "We are able to provide convenient, comfortable scanning with high quality imaging to meet the needs of all our patients," says Blair.

# PANORAMA HFO News

## Panorama HFO users offer tips for coil use



Cervical spine, using ST Neck Coil.

Several sites are using innovative coil techniques to boost the effectiveness of their Panorama HFO. Tiina Karjalainen, clinical product specialist, Advanced Concepts Development at Philips Medical Systems MR Cleveland (Cleveland, Ohio, USA), explains, “Many sites, for instance, are using the ST Neck coil for

head scans on claustrophobic patients, because it doesn’t enclose the head.”

Because the Panorama’s wide, moveable couch enables creative coil and patient positioning, sites are also using the ST Extremity coil to scan in ‘panoramic positions’ where patients lie on their sides if they cannot be scanned on their backs. “The ST Extremity coil provides better signal to noise ratio and better coverage than the Flex M coil, and it’s a very good choice for shoulder and knee studies too,” says Tiina.

Tiina has been visiting U.S. Ambassador sites, providing training, offering new ideas and receiving valuable customer feedback. She has visited all 22 sites and hosted three off-site training programs at Philips Medical Systems MR Cleveland. “During training, we concentrate on areas that people at the site are having trouble with or haven’t



Tiina Karjalainen (left) and customer Joi Swan from King’s Daughters Medical Center, Ashland, Kentucky, USA.

been scanning a lot of,” she says. “We go through scanning methods, image contrast, coil positioning and coil loading, and they create ExamCards to be published in the Ambassador sub-community.”

## World’s first microtherapy intervention using Panorama HFO

On January 30, the Klinik für Radiologie at University Hospital Magdeburg, (Magdeburg, Germany) performed the first microtherapy procedure using a Panorama HFO.

In microtherapy, tiny MR-guided instruments are inserted directly into the tumor site to deliver high-precision radiation. Because of this direct approach, suspicious tissue around the tumor can also be irradiated if necessary, while healthy tissue is spared.

Until now, microtherapy has been performed with the image guidance of CT or ultrasound, but MR provides more accurate, real-time imaging for the precise radiation required for difficult-to-treat anatomies. Additionally, the openness of the Panorama HFO can accommodate both doctor and patient, without exposure to X-ray radiation.



© 2008 Koninklijke Philips Electronics N.V.  
All rights are reserved.

Philips Medical Systems Nederland B.V. reserves the right to make changes in specifications and/or to discontinue any product at any time without notice or obligation and will not be liable for any consequences resulting from the use of this publication.

Philips Medical Systems is part of Royal Philips Electronics

www.medical.philips.com  
medical@philips.com  
tel: +31 40 27 87246

Philips Medical Systems  
22100 Bothell-Everett Highway  
Bothell, WA 98021-8431  
tel: 1-800-229-6417