

Field Strength

Publication for the Philips MRI Community



Panorama 1.0T attracts large and claustrophobic patients

NEWisconsin MRI Center, finds high field open niche in Green Bay, Wisconsin



This article is part of
Field Strength Issue 29
July 2006

PHILIPS

Panorama 1.0T attracts large and claustrophobic patients

NEWisconsin MRI Center finds high field open niche in Green Bay, Wisconsin

Neurologist Stephen Somerville introduced Green Bay, Wisconsin to MRI in 1987 – serving as a principal in a healthcare business partnership. Since then, MRI systems have proliferated tremendously in Green Bay, intensifying competition and making differentiation of services critically important. This is particularly true for independent centers that cannot rely on the steady patient volume that regional healthcare networks provide. By acquiring Panorama 1.0T in 2005, Dr. Somerville – co-founder and co-owner of NEWisconsin MRI Center – found his niche: large and/or claustrophobic patients. Panorama’s openness makes it incomparable for these patients, while the 1.0T vertical field strength also affords high quality examinations.



Stephen Somerville, M.D.

Dr. Stephen Somerville’s first foray in open MRI featured a 0.3T system that was high in openness, but low in signal-to-noise, resulting in overly long sequences and poor quality cervical spine examinations. The answer to the high quality open MRI study emerged in 2004 when Philips introduced Panorama 1.0T, offering a unique combination of supreme openness and high field performance.

“We knew that Panorama 1.0T would not only be unique in Green Bay – in terms of its combination of openness and high field strength – but would also provide at least as good scanning performance as a 1.5T system due to its distinctive vertical RF coil design combined with the vertical field magnet,” Dr. Somerville says. “This exclusive design pushes the effective SNR to a level equivalent to a 1.5T cylindrical.”



NEWisconsin MRI Center

"Panorama 1.0T has attracted many patients and about 120 new referring physicians."

"It's a terrific advantage to be able to move the table left and right to enable positioning shoulders and wrists in the magnetic isocenter."

In June 2005, NEWisconsin MRI Center's Panorama 1.0T became operational, joining an Achieva 1.5T system at another NEWisconsin site. During the first nine months of operation, Dr. Somerville says Panorama 1.0T has attracted many patients and approximately 120 new referring physicians. NEWisconsin scans the "difficult" patients – the large and claustrophobic individuals not served by cylindrical MRI systems in the major healthcare networks.

The isocenter advantage

A perfect application area that demonstrates the open architecture of Panorama 1.0T is off-center anatomy, such as wrists and shoulders – imaging that is even more challenging with larger-sized patients.

"We've had tremendous experience with Panorama 1.0T in isocenter musculoskeletal imaging," he says. "It's a terrific advantage to be able to move the table left and right to enable positioning shoulders and wrists in the magnetic isocenter where one can achieve better signal uniformity. Clearly, for the larger patients that we scan, this would be impossible in a cylindrical system." In addition, with the new ST SENSE Wrist coil, NEWisconsin will add specialized examinations for the wrist and hand that won't be duplicated at other scanning centers, Dr. Somerville maintains.

"We will be able to capture hand surgeons as a referring group fairly readily," he says. "I know those images are going to be stellar."



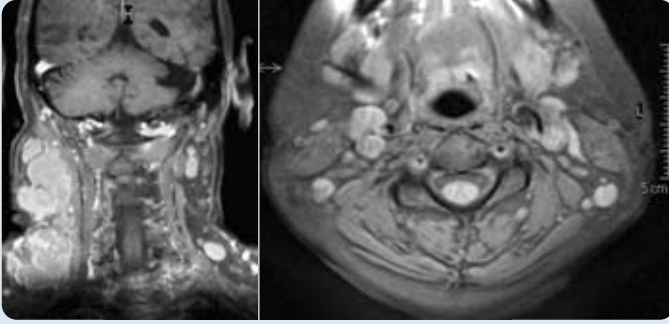
T1-weighted contrast-enhanced FFE scan of the carotids, demonstrating a bilateral plaque at the carotid bifurcation. Acquired using the SENSE Neck coil, acquisition time 53.5 sec. This image also points out routinely reliable visualization of the carotid bifurcation attainable with Panorama 1.0T.



Lori Dufek, R.T. and Susie Vanderkin, R.T.

Net Forum
www.philips.com/netforum

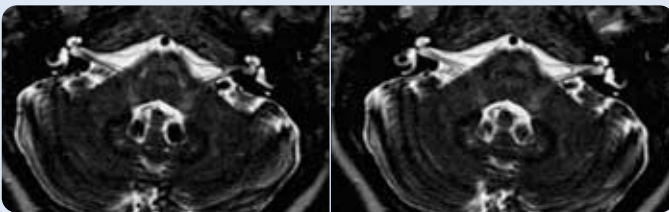
Visit the MRI NetForum Community to view or download **Panorama 1.0T ExamCards** contributed by NEWisconsin MRI Center.



Spin echo coronal and axial images demonstrate extensive soft tissue mass of the neck and lymphadenopathy consistent with a lymphoma. Coronal: Enhanced T1-weighted image, 205 x 256 matrix, 290 mm FOV, scan time 7:00 min. Axial: T2-weighted image, 265 x 512 matrix, 230 mm FOV, scan time 4:29 min.



MRA of the renal vasculature demonstrates excellent SNR and vessel depiction. Scan time 0:25 min.



3D TSE acquisition of the IAC that shows anatomical detail in this region, notably the auditory nerves. 75 slices of 1 mm, scan time 6:00 min.



T2-weighted TSE (TF 15) scan of the lumbar spine depicts a disk protrusion at L4-5. ST Body/Spine coil, 188 x 400 matrix, 300 mm FOV, 4.5 mm slice thickness, scan time 5:20 min.



T2-weighted TSE (TF 34) scan shows C5 disk protrusion with reversal of cervical curvature. 204 x 512 matrix, 6 NSA, scan time, 3:54 min.

Passing the c-spine challenge

With its Panorama 1.0T, NEWisconsin is back in the business of open MRI system cervical spine imaging.

"The acid test in MR for neuro imaging is cervical spine imaging, in which the key question is: 'Will the images be diagnostic?'" Dr. Somerville says.

"Panorama 1.0T performs very well – at 1.0T the T1 contrast is better than at 1.5T, so we see the exit foramina better and we're able to determine foraminal

stenosis reliably, even on the balanced sequences. On balanced TFE and FFE we get better fat brightness. Doing a cervical spine study just becomes a lot easier."

Excellent all-around scanner

Isocenter and cervical spine imaging are just two highlights of NEWisconsin MRI Center's Panorama 1.0T applications.

The center also has had great success in brain, abdominal studies (e.g., MRCP) and MRA studies and uses ExamCards for all of its examinations, he adds. ■

"The acid test in MR for neuro imaging is cervical spine imaging, Panorama 1.0T performs very well."