



# IMAGING UPDATE

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## OPEN MRI SCANNER - Now Available

Munson now has an open MRI scanner providing a wonderful new service for claustrophobic or



Todd W. Kennell, MD  
Grand Traverse Radiologists, P.C.

large patients who are poor candidates for conventional MRI scanners. It is the only true open MRI in Northern Michigan and has state-of-the-art technology. It is located at Munson Community Health Center providing easy access for outpatients, including weekend and evening appointments. Patients from

the area will no longer have to travel great distances for this service.

## Scanner Specifications

The open design is achieved with a vertical magnetic field. The patient area between the 2 poles of the magnet is 45cm (17") high and 160cm (63") wide with a table limit of 550 lbs. Horizontally there is little obstruction to the patient's view making for a very open feel.

The new scanner is a Philips Panorama High Field Open MRI. At 1.0 Tesla, it has the highest magnetic field strength of the open configuration MRI scanners.

## Image Quality

The images are comparable to the quality of our 1.5 Tesla conventional MRI units. In fact, for some examinations such as elbow and forearm studies, the images are improved since we can position the arm in the middle of the magnetic field due to the wide scanner opening.

The physics of MRI imaging is different with a vertical field. The radiofrequency receiver coils are 40% more efficient in this vertical orientation compared to horizontal field MRI scanners helping make up for the difference in field strength compared to conventional 1.5 Tesla MRI systems. There is also more uniform signal intensity through the imaging volume using coils optimized for this vertical design compared to surface coils on horizontal field systems.



Another big advantage of this high field system is the ability to do frequency selective fat-saturated imaging which is important in musculoskeletal and many other imaging applications. Many open MRI units are 0.15-0.7 Tesla making fat-saturated imaging difficult. Signal intensity is also proportional to field strength and image quality must be compromised to achieve reasonable scan times in low field units.

*Continued on reverse side.*

## Safety

The importance of protecting patients from the hazards of the strong magnetic field is the same for the open MRI and 1.5 Tesla scanners. Implanted devices – brain aneurysm clips, heart valves, stents, filters, insulin pumps – will be compared with the manufacturers' safety guidelines by MRI staff. Advise patients to have information on the exact make and model of implanted devices to assure that the MRI can be performed. Orthopaedic hardware, dental implants/braces, and standard surgical clips, are rarely a safety issue but may degrade MRI images if they are near the region of interest.

## Where to Get More Information

There is more information about this scanner on the Philips MRI website at [www.philips.com/openmri](http://www.philips.com/openmri)

There is more information about radiology on our website at [www.GrandTraverseRadiologists.com](http://www.GrandTraverseRadiologists.com)

## How to Request a Study

MRI scheduling for the open scanner or other Munson MRI scanners can be arranged by calling 231.935.7200.

## Who to Call With Questions

Please feel free to contact me, Dr. Todd Kennell, with any questions, 231.935.0497 or [tkennell@mhc.net](mailto:tkennell@mhc.net).

### DIAGNOSTIC RADIOLOGY

Richard Cover, M.D.  
Steven Hodges, M.D.  
Ryan Holmes, M.D.  
Jesse Johnson, M.D.  
Todd Kennell, M.D.  
Steven Klegman, D.O.  
C. David Phelps, M.D.  
Todd Space, M.D.  
Charles Weitz, M.D.

### INTERVENTIONAL/ VASCULAR RADIOLOGY

Frederick Brodeur, M.D.  
Daniel Dall'Olmo, M.D.  
Michelle Lung, M.D.  
C. Paul Williams, M.D.

### MAMMOGRAPHY

Deborah Crowe, M.D.  
Todd Wilson, M.D.

### NEURORADIOLOGY

L. Nicholas Richmond, M.D.  
David Steffey, M.D.  
Edward Stilwill, M.D.

### PEDIATRIC RADIOLOGY

Linnea Priest, M.D.

### ADMINISTRATION

Jennifer Coleman, MHSA, FACHE  
Charly King, CPC, RCC



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[GrandTraverseRadiologists.com](http://GrandTraverseRadiologists.com)

10850 Traverse Highway, Suite 60  
Traverse City, MI 49684  
Ph 231.935.0497  
Fx 231.935.0498