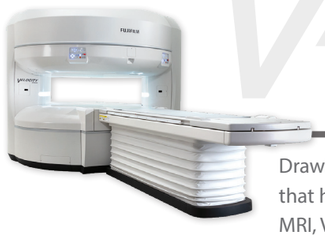
tolland imaging center

MRI

VELOCITY



THEDIAGNOSTICEDGE

Drawing upon the wide experience in magnet, gradient and RF technology that has made Fujifilm the recognized design innovator in patient-friendly MRI, Velocity delivers high-field clinical utility for today's advanced imaging environment. Velocity is backed by FUJIFILM Healthcare Americas Corporation, a recognized leader in imaging technology.

tolland imaging center

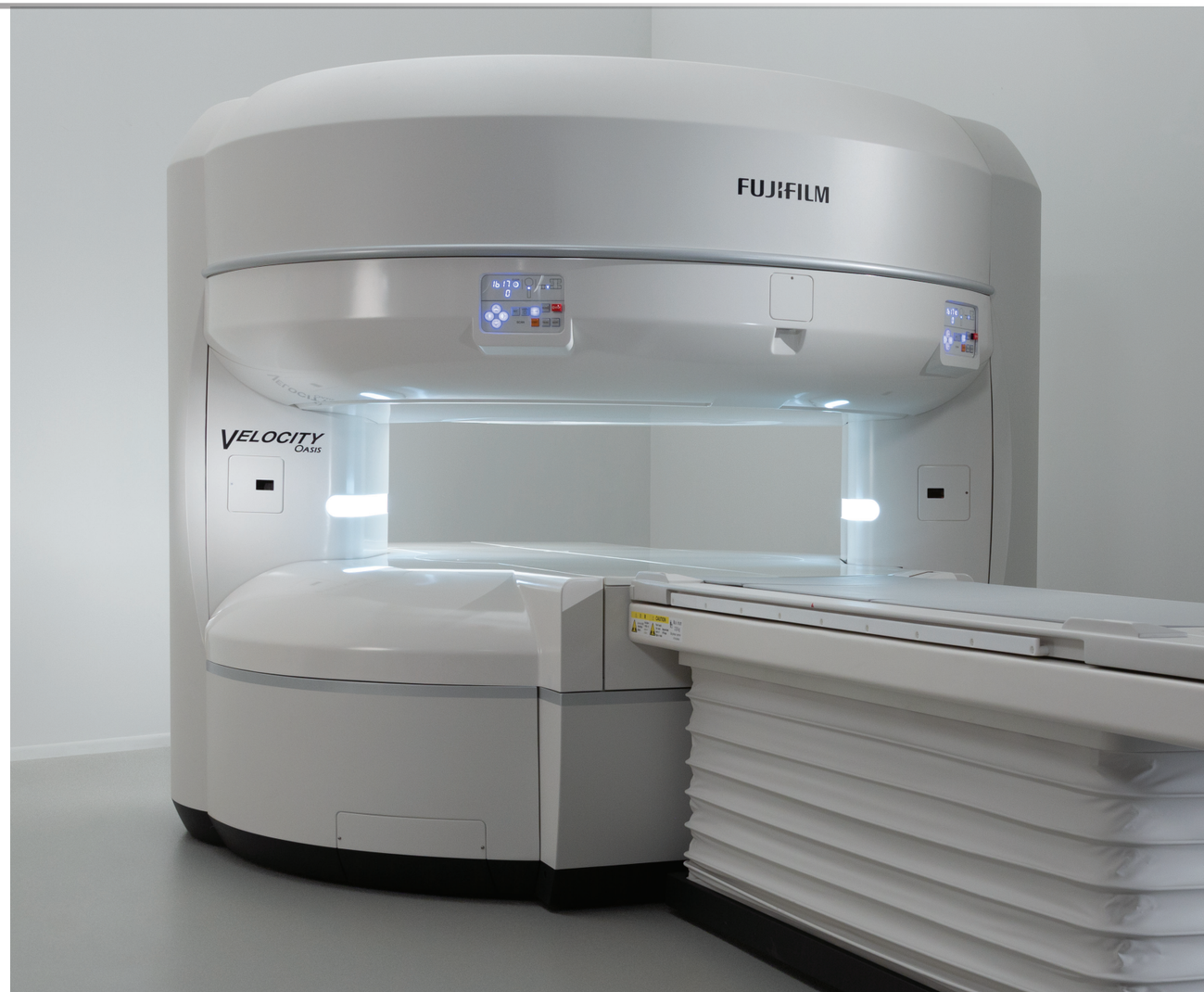
6 Fieldstone Commons, Suite E, Tolland, CT 06084
(860) 896-4848 • tollandimaging.com

A unique partnership with

ECHN Eastern Connecticut Health Network

Johnson Memorial Hospital Trinity Health

Windham Hospital A Hartford HealthCare Partner



WHY SHOULD I REFER MY PATIENT TO AN VELOCITY-EQUIPPED IMAGING SERVICES PROVIDER?

Velocity represents an uncompromised understanding of what it takes to provide a completely satisfying imaging experience for everyone involved: diagnostic confidence and patient comfort. Velocity is a truly open, vertical field whole body magnet that allows your patients a 270° unobstructed view; which makes the scanning procedure as pleasant as possible. Velocity easily manages a wide array of patients: anxious, elderly large, small; all approach the Velocity without apprehension.

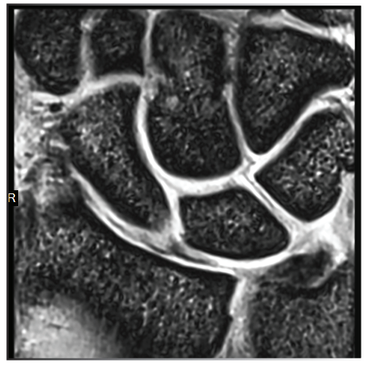
You benefit from consistently high quality diagnostic examinations, combined with the highest levels of service to you and your patients.

ORTHOPEDIC IMAGING CAPABILITIES

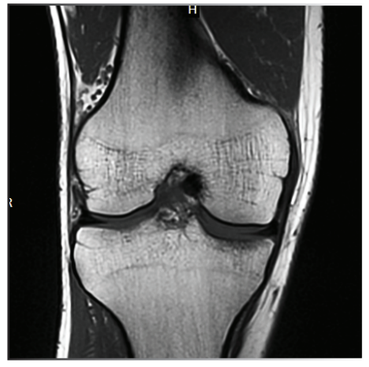
The superb image contrast of MRI makes it an ideal choice for orthopedic imaging. The ability to distinguish between cartilage, cortical bone, marrow, and muscle coupled with multiplane imaging options and high spatial resolution enables accurate diagnosis of a broad range of pathology. Occult fractures, avascular necrosis, tumors and tears are well delineated on MRI.

Velocity's high performance anatomically designed Zenith™ RF coils, such as the shoulder coil, provide superb penetration of the anatomy for the evaluation of small internal structures. The array of pulse sequences available can be used to accentuate or suppress anatomical structures to enhance pathology.

Excellent resolution and tissue contrast for evaluation of middle ankle bone structures, cartilage and connective tissue integrity.

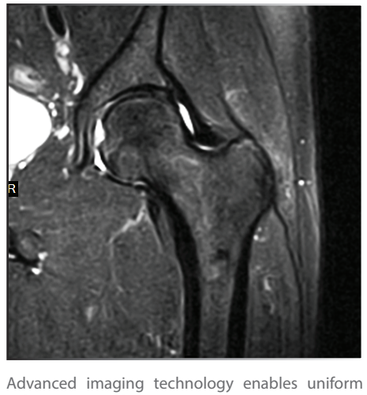


2mm slices in this coronal wrist image and 5 FOV enable exquisite detail.

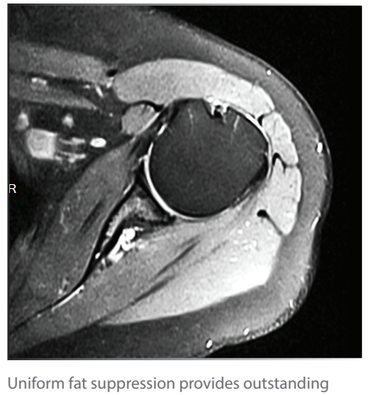


Coronal knee image with 3 mm slices and 15 cm FOV. T1 weighting results in excellent soft tissue contrast of the knee.

Proton Density weighted shoulder acquired with RF fat saturation offers excellent tissue contrast for assessment of anatomical structures.



Advanced imaging technology enables uniform offisocenter RF fat saturation with suppression of high signal from marrow.



Uniform fat suppression provides outstanding visualization in this axial shoulder.

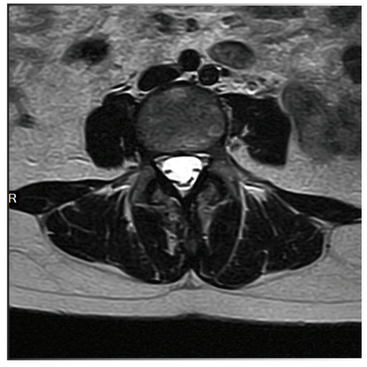
NEUROLOGICAL IMAGING CAPABILITIES

MRI of the brain excels in the detection of pathology because of broad soft tissue contrast. Multi-plane imaging can be accomplished without repositioning the patient and without volume CT's ionizing radiation. Because MRI doesn't have bone artifacts, the base of the brain, internal auditory canals, and the pituitary are well visualized.

Several methods are available for evaluating the cerebral vascular system. Time-of-Flight is commonly used to evaluate the Circle-of-Willis and the tertiary vessels. Visualization of the blood vessels from the level of the Aortic Arch to the Circle-of-Willis can be obtained by Velocity's ultra fast scanning capabilities in one acquisition.

Specialized scans are available to assist in diagnosing ischemic brain tissue. Called Diffusion Weighted Imaging, these sequences can detect an infarct in the sub acute stage, as well as distinguish between acute and chronic lesions.

RADAR radial acquisition reduces patient motion artifact, yielding diagnostic quality scans in even the most difficult to image patients. RADAR can potentially eliminate the need for sedation, and enable diagnostic quality scans for pediatric, geriatric, and other compromised patients.

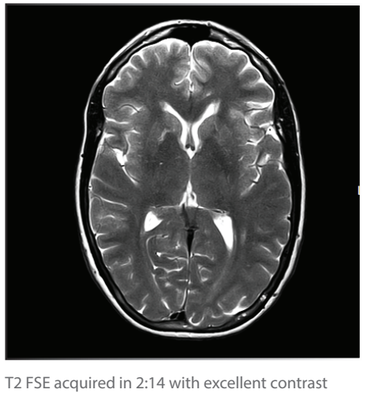


This T2 weighted image exhibits exceptional detail of nerve roots, vertebral and soft tissue structures.

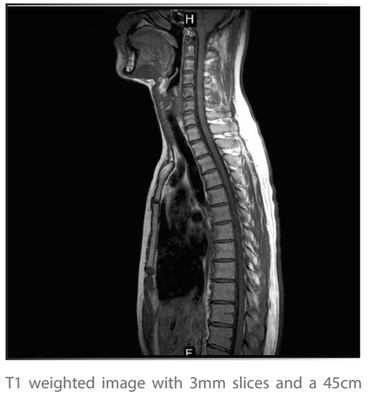
This T2 cervical spine sequence demonstrates excellent high-contrast tissue differentiation for the evaluation of the vertebral structures.

The same uncooperative patient is scanned with and without RADAR™ to demonstrate how it can reduce or elimiate patient motion.

T2 weighted image exhibits outstanding tissue contrast with <1mm in-plane resolution.



T2 FSE acquired in 2:14 with excellent contrast resolution, spatial and 4mm in-plane resolution.



T1 weighted image with 3mm slices and a 45cm FOV demonstrates an excellent large FOV.

VASCULAR IMAGING CAPABILITIES

MR Angiography (MRA) is a non-invasive method of visualizing vascular structures and has been proven to be effective in evaluation of vascular disease with a minimum of patient discomfort and risks associated with iodinated contrast agents used in conventional radiography and CT. MRI has the unique capability to visualize and quantify blood flow. Tools are available for evaluation of regions with complex blood flow patterns, including arteriovenous malformations and aneurysms.

An advanced MRA technique supported on Velocity is TRAQ™, a time-resolved MRA technique. This ultra-fast imaging method used in bloodflow kinetics has great potential in regions where the arterialvenous transition occurs rapidly. This method results in a set of images that distinctly display the arterial phase, mixed phase and venous phases.

VASC-FSE provides a contrast-free MRA method for patients with reduced renal function and allows high resolution depiction of peripheral arteries.

Superb COW visualization through the Aortic arch in this Fluro-triggered MRA (FLUTE™). 3D processing techniques allow rotation of vessels for unobstructed views of abnormalities.

The Circle of Willis (COW) can be clearly seen along with the small outer tertiary vessels using TOF MRA. Excellent depiction of arterial structures.

VASC-ASL enables excellent depictions of vasculature without a contrast agent.

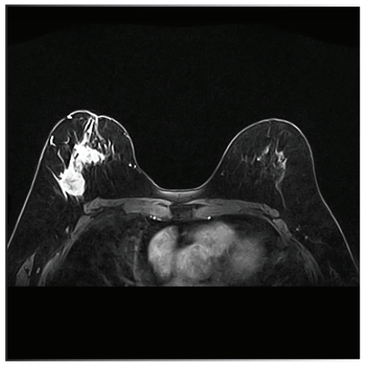
BODY IMAGING CAPABILITIES

Fast scanning acquires abdominal slices in one breath hold, and respiratory gating reduces breathing motion. Sequences are available to visualize the adrenals, hepatobiliary system, and liver, evaluate therapy for reproductive organ disease and provide detailed images of the prostate gland, fibroid cysts, and tissue abnormalities. Velocity provides a host of capabilities to aid in diagnosing abdominal and pelvic disease, such as RADAR to reduce patient motion artifacts and ultra fast scanning techniques.

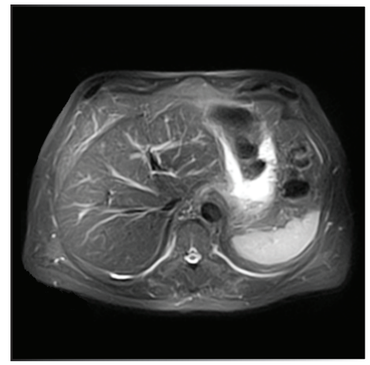
Velocity's high performance RF coils maximize image quality. It also provides multiple methods of visualizing pathology and normal tissue boundaries for presurgical and preradiation planning. Fujifilm's dynamic sequence, TIGRE™, is a Fast T1 weighted 3D Gradient Echo sequence with fat suppression delivering high temporal resolution.

MRCP (MR Cholangio Pancreatography) is a non-invasive alternative to ERCP.

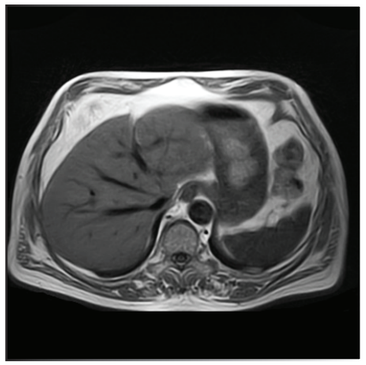
TIGRE™ delivers excellent dynamic imaging for liver abnormality diagnosis.



HOAST (Higher Order Active Shim Technology) maintains uniform fat saturation across larger FOV's important for accurate diagnoses.



An example of how RADAR™ reduces motion artifact in a free-breathing patient.



T1 weighting results in excellent soft tissue contrasts.