Canon

Vantage Galan 3T

Quiet. Digital. Quick.


Canon

Peacefully Quiet.
Remarkably Fast.

Outstanding patient comfort
Pure image quality
Streamlined workflow

Canon Medical's Vantage Galan 3T offers a transformational experience for you and your patients in 3T Magnetic Resonance Imaging.
By prioritizing the patient experience while delivering the 3T imaging performance you expect and the clinical workflow you need to support a busy MRI environment, Vantage Galan 3T is designed to surpass your expectations – all delivered in a small and quiet MRI system.

Vantage Galan 3T

Deliver a quieter, more comfortable MR exam with Galan 3T's patient-focused design

Quiet exams with Pianissimo and Pianissimo Zen

Pianissimo technology significantly reduces the noise in and around the MRI environment for every patient, every sequence, every time thanks to the vacuum chamber encasing the super slim gradient coil which suppresses acoustic noise. And Pianissimo Zen quiet sequences further reduce noise by up to 99%, making exams even more comfortable and easier to complete.

Conventional

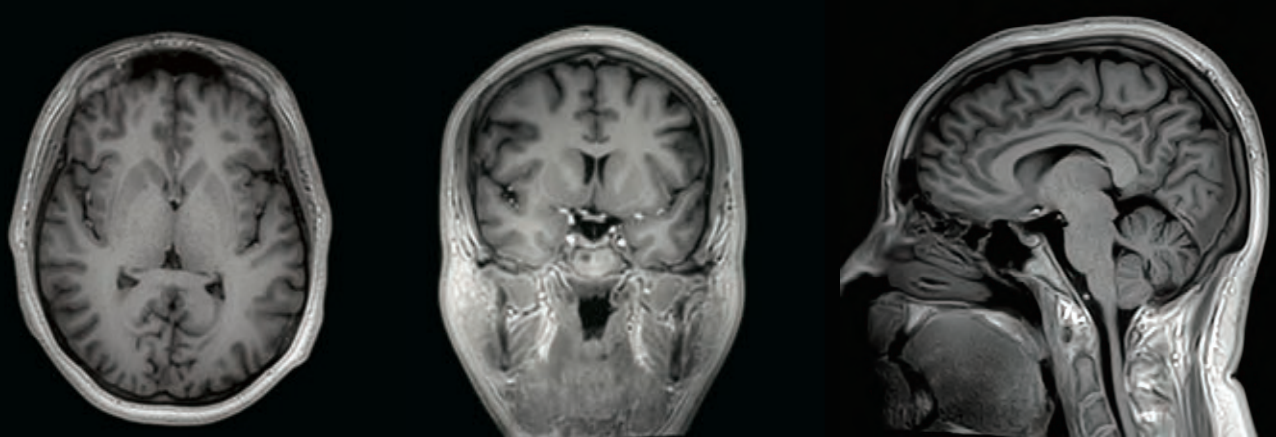
Pianissimo Zen

1 Depending on the condition of usage and examination.

Even quieter scanning with mUTE 3D T1

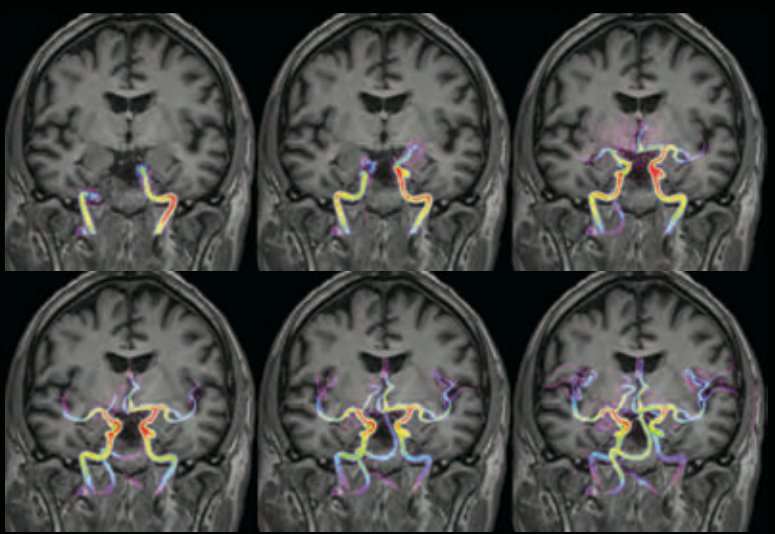
The mUTE[2] applications suppress high-speed gradient field switching, making it possible to provide even quieter scanning.

2 mUTE: minimized acoustic noise utilizing UTE



Capturing hemodynamics with mUTE 4D MRA

Vantage Galan 3T's UTE sequences allow for less dephasing and more homogeneous vessel signals. At the same time, the use of multiple inversion times (TIs) allows generation of dynamic images (4D) visualizing the blood flow without the need for contrast agents.



Give your patients a greater sense of freedom

Along with a 71 cm bore opening, Vantage Galan 3T offers an immersive in-bore MR Theater option which creates a unique environment where patients hardly notice they are moving into the bore, helping to maximize comfort and put the patient at ease.

An MR designed for patient comfort

A successful exam begins with a comfortable patient. Vantage Galan 3T is designed to maximize patient comfort without compromising image quality. The 71 cm bore opening and a short magnet delivers an open feeling and enables patients of all sizes to be imaged successfully. This is achieved by the slim gradient design which provides ample space between the patient and the inside of the bore.

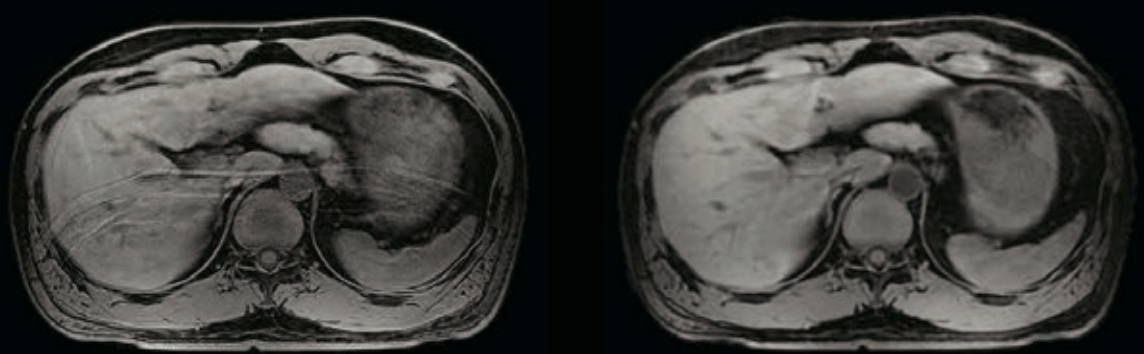
Be the 3T MR imaging center of choice for challenging patients

With new applications addressing even the most challenging patients, ensure your 3T imaging facility is the preferred choice for referrals. Free breathing and contrast-free applications help to deliver a comfortable patient experience.

Free breathing with Quick Star

Quick Star reduced motion artifacts can be helpful for challenging patients that have difficulty holding their breath or especially for liver examination.

Ax FFE3D Quick Star free breathing



1.1×1.1 1:33

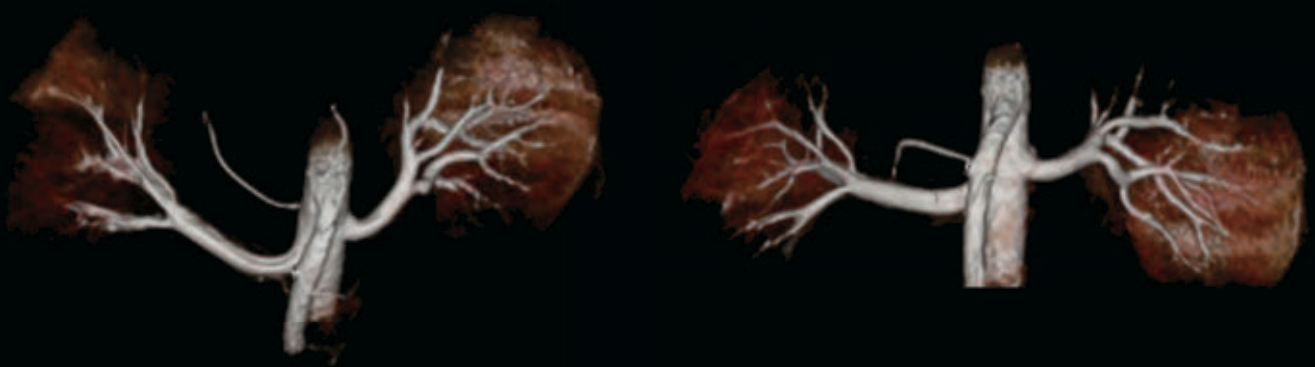
Without Quick Star

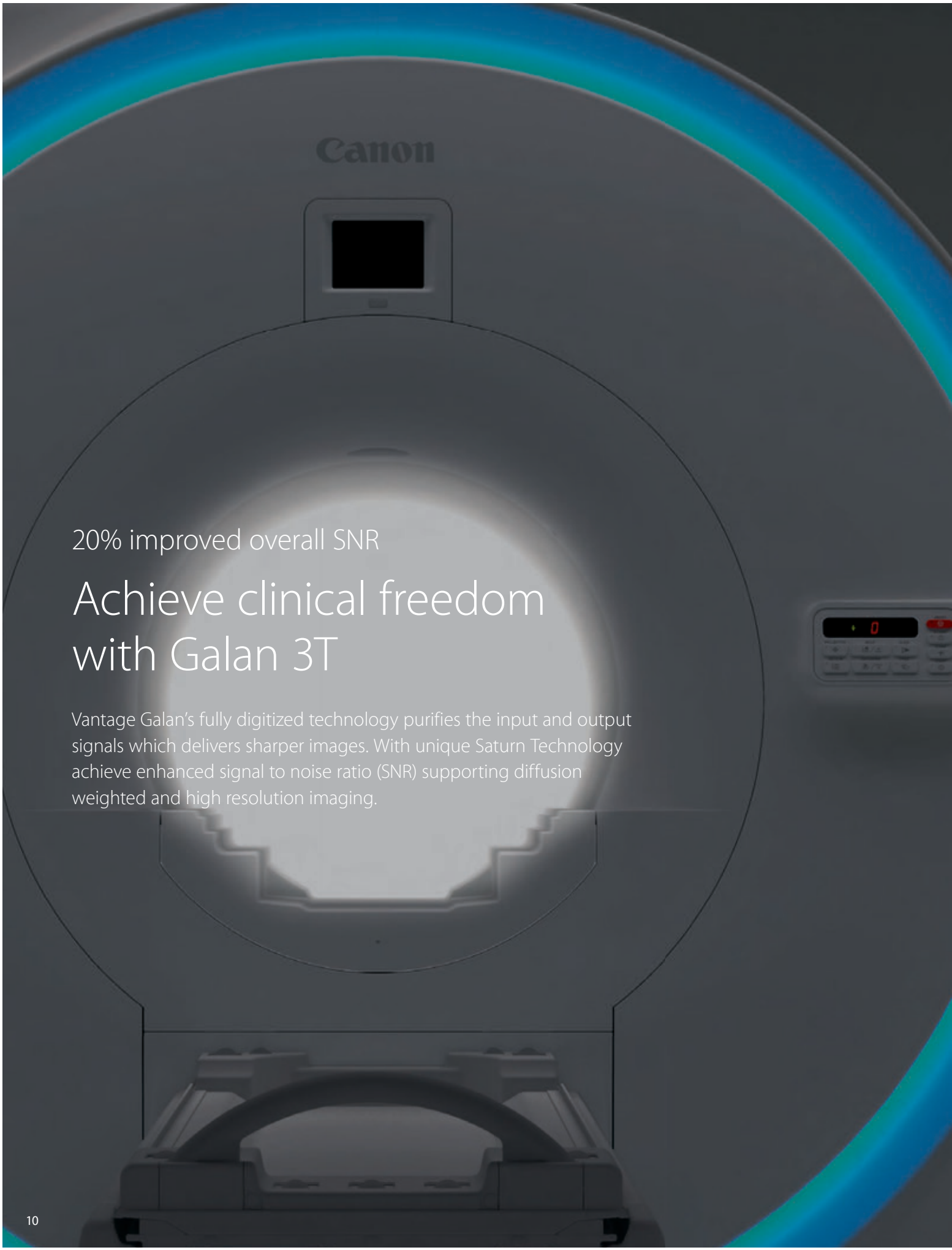
1.1×1.1 2:18

With Quick Star

Non-Contrast MRA

An increasing awareness of the potential risks associated with gadolinium-based contrast agents has revealed the need for alternative, contrast-free MRA techniques. Non-Contrast MRA sequences minimize risk to patients with sensitivity to contrast while producing exceptional diagnostic images.





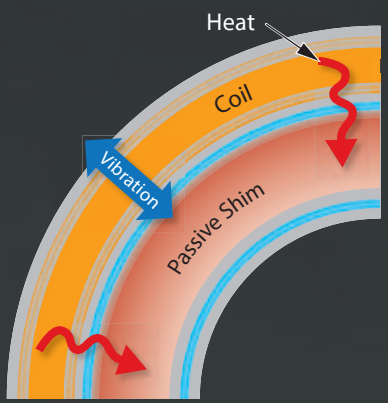
20% improved overall SNR

Achieve clinical freedom with Galan 3T

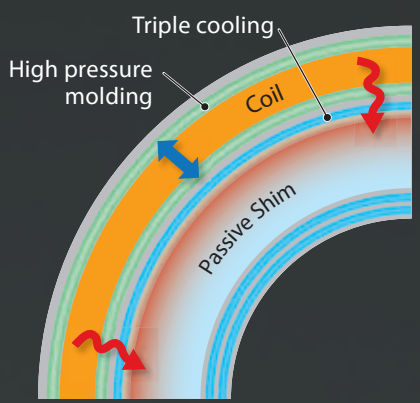
Vantage Galan's fully digitized technology purifies the input and output signals which delivers sharper images. With unique Saturn Technology achieve enhanced signal to noise ratio (SNR) supporting diffusion weighted and high resolution imaging.

Saturn Technology

Our intelligent Saturn Technology provides more consistent image quality through increased gradient stability and precise center frequency control.



Conventional



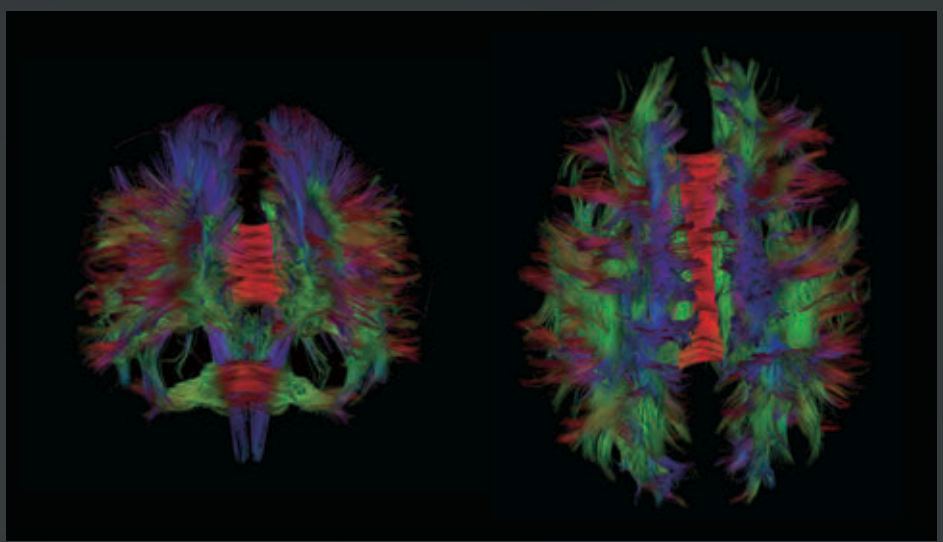
Saturn Technology

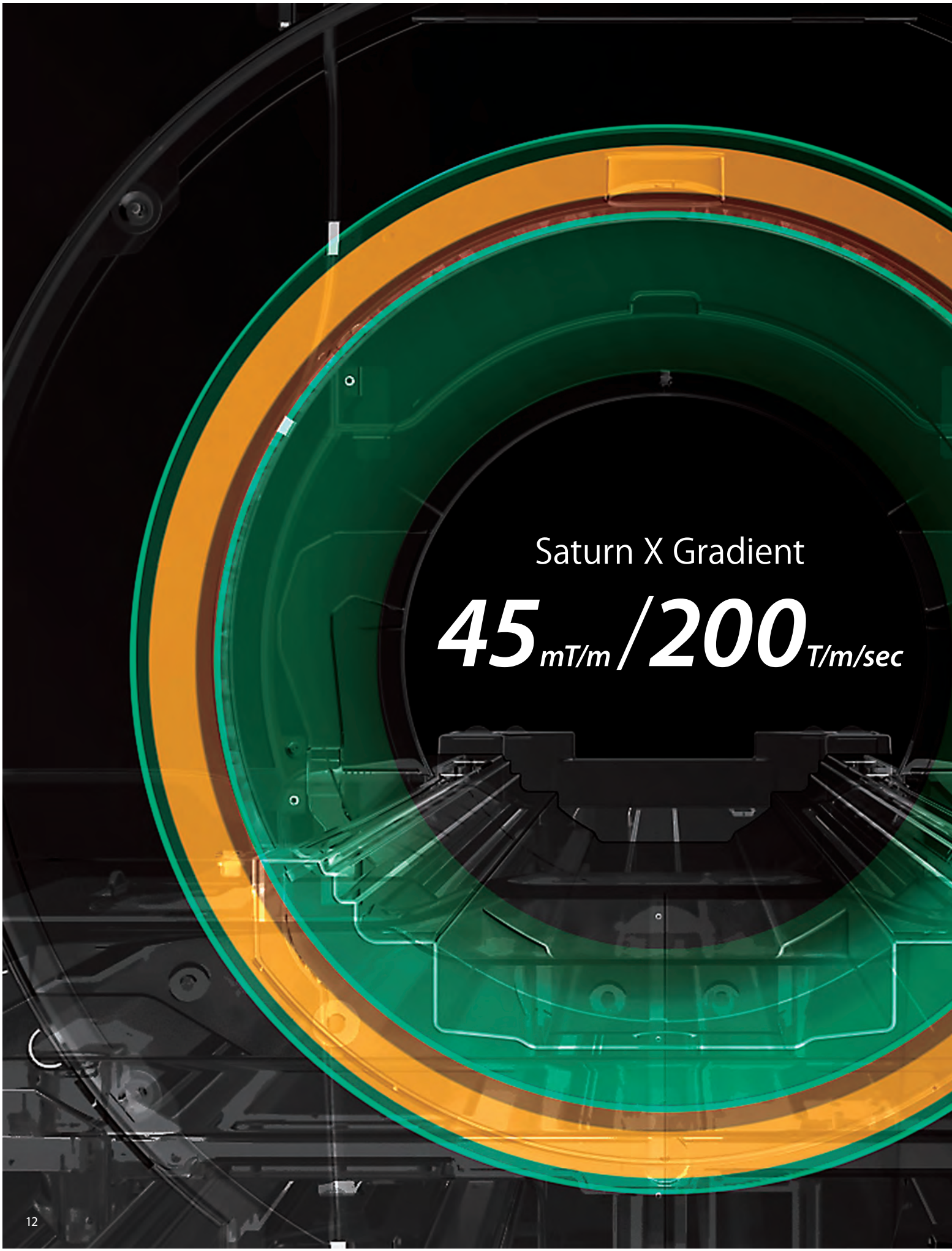
Increased gradient stability

With less vibration comes more stability, resulting in crisper images. Saturn Technology delivers this through hardening the gradient coil with high-pressure molding. The result is less signal blur and thus better image resolution.

Precise center frequency control

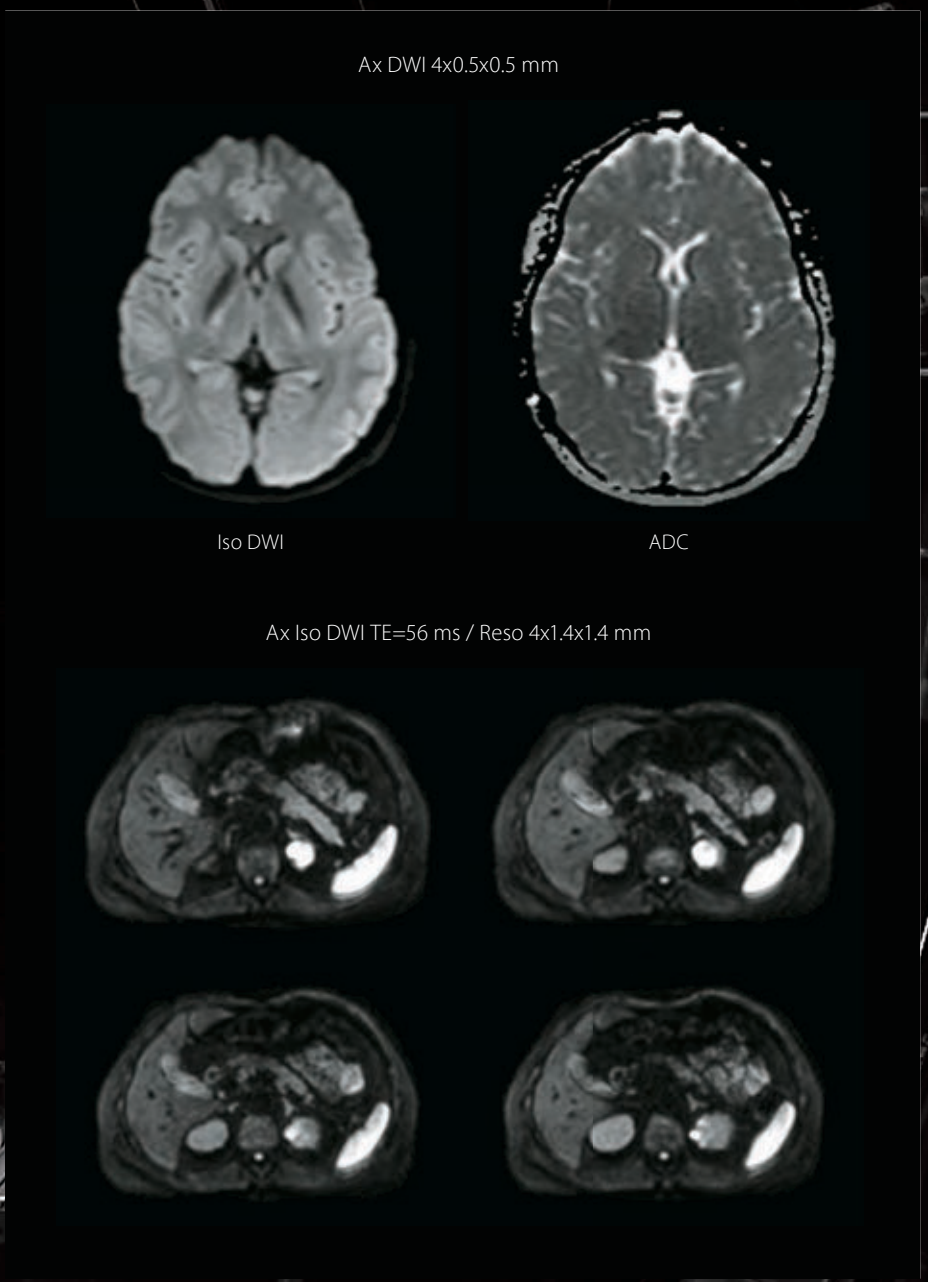
In Vantage Galan 3T, increased image sharpness is achieved through improved thermal stability and thus a more stable center frequency. Triple cooling layers suppress temperature increases under high load leading to more stable image quality over long scan sessions.




Saturn X Gradient
45 mT/m /200 T/m/sec

Diffusion Weighted Imaging with PURE Gradient

With Saturn X Gradient[3] performance now available, up to 30% increase in SNR in Diffusion Weighted Imaging in the brain and up to 51% in the liver can be achieved, resulting in enhanced diagnostic capability in diffusion imaging.



3 Optional standard gradient allows maximum gradient amplitude 33 mT/m, slew rate 200 T/m/sec

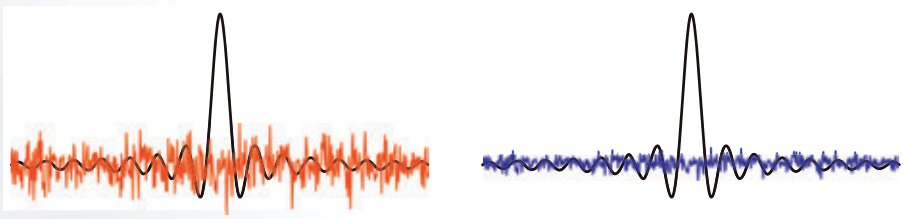
Pure digital signal for sharper images

Our unique PURERF technology increases the SNR of Vantage Galan 3T by up to 20% for all clinical applications. The system's digital RF transmit and receive efficiency enhances clinical confidence in imaging performance while shortening scan times.

PURE RF Rx

PURERF Rx OFF

PURERF Rx ON



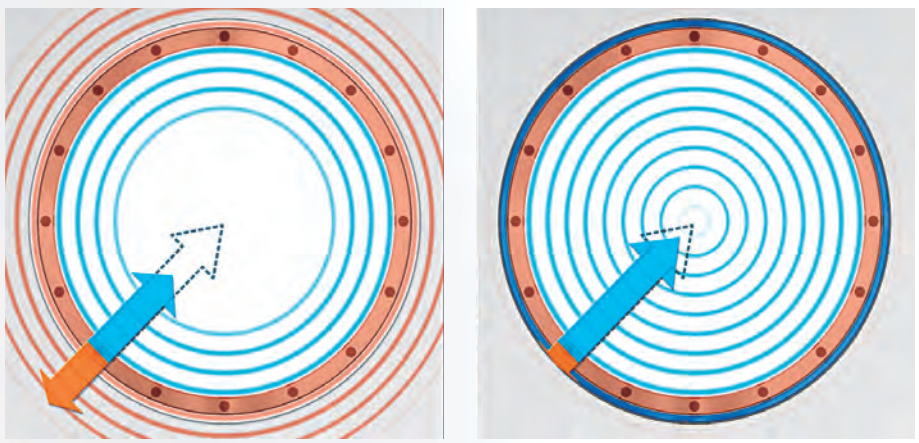
Adaptive noise cancellation

PURERF Rx digital technology employs a proprietary algorithm and reduces noise at the source. The result is an increase in SNR and improved image quality.

PURE RF Tx

Conventional

PURERF Tx shielding technology



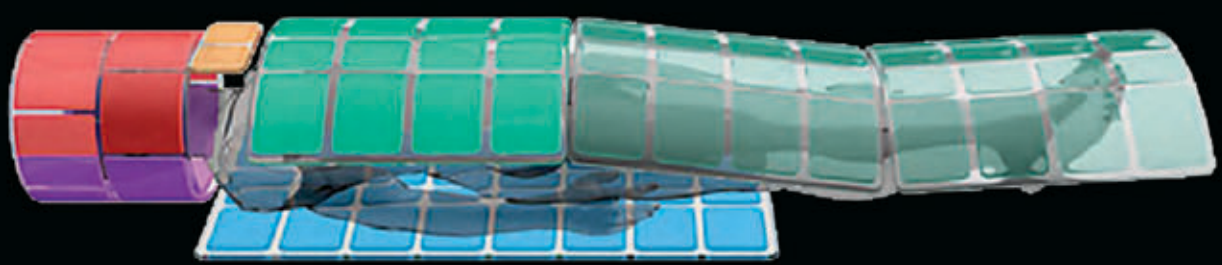
Ideal RF transmission Actual RF transmission Transmission loss

Advanced shielding design

Vantage Galan 3T's unique PURERF Tx technology allows you to acquire sharper images with improved SNR. Its novel shielding design is aimed at maximizing the efficiency of RF transmission.

Integrated workflow solution

Atlas SPEEDER coils are uniquely designed to improve workflow and patient comfort. Vantage Galan 3T easily handles multiple studies by allowing you to position the patient and utilize the coils you need in one easy step.

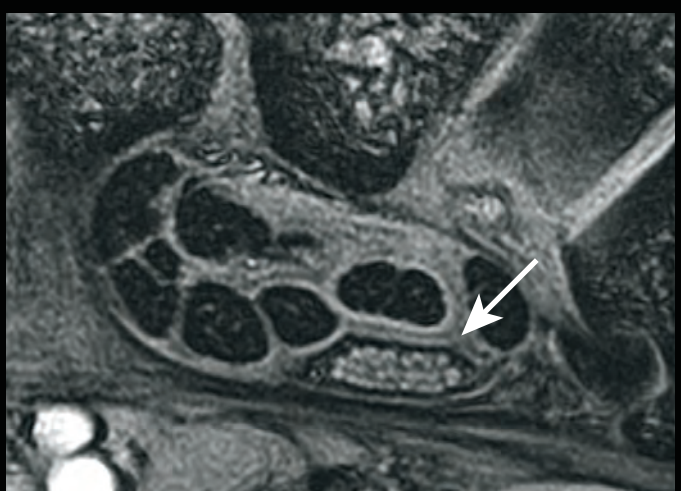


Atlas SPEEDER technology empowers the technologist

Compared to conventional coils, Atlas SPEEDER technology utilizes a unique combination of smaller elements, which deliver a higher SNR, and larger elements which provide greater penetration.
By simultaneously integrating up to 128 RF channels, Vantage Galan 3T provides excellent image quality throughout the entire imaging volume.

Positioning flexibility

- Multiple coils can be used simultaneously, creating flexibility for operators and comfort for patients
- Convenient port locations mean that a large segment of exams can be performed feet first
- 205 cm of table movement coupled with a sliding spine coil provides maximum flexibility for operators and greater comfort for patients



Wrist Median Nerve (3D FE mEcho) with 16ch Flex SPEEDER Medium

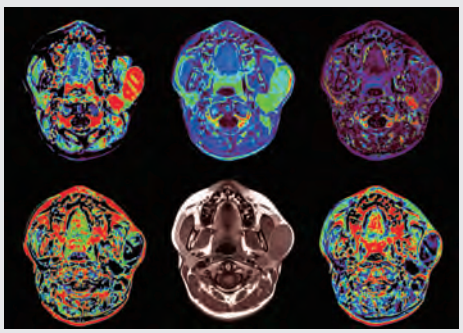
Advanced post processing enhances diagnosis and the opportunity for expanded services

Access advanced applications with Olea/Vitrea™ post processing tools

Olea MEDICAL
Improved diagnosis for life™

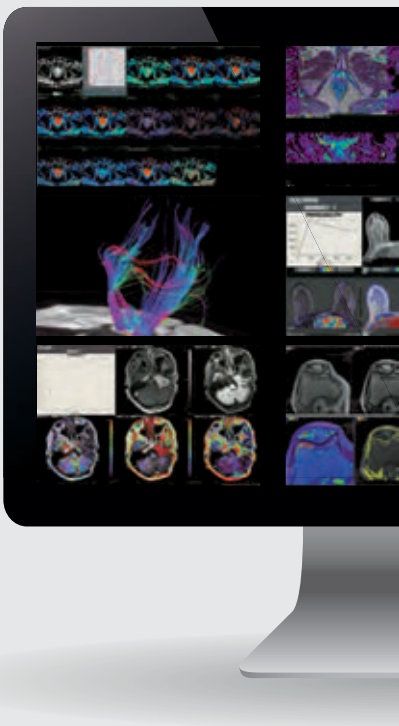
DTI-Fibertracking

Automatically compute tensor maps and track fibers from specific area or whole brain.



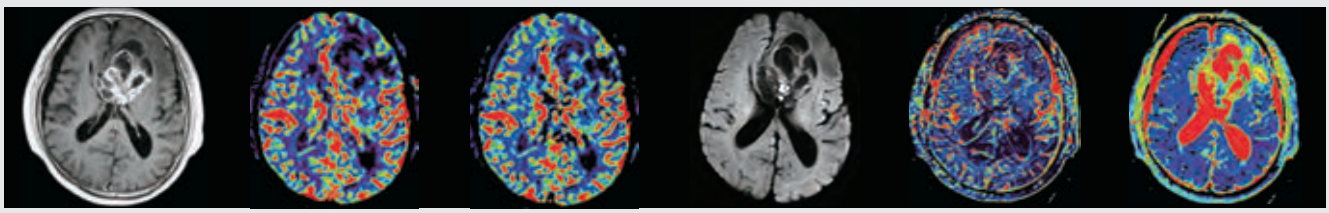
Permeability analysis

Automatically and accurately computes qualitative and quantitative permeability maps.



Perfusion and IVIM

Perfusion automatically and accurately computes perfusion maps.
IVIM automatically quantifies micro-perfusion with diffusion only or computes non-acquired diffusion b-values.



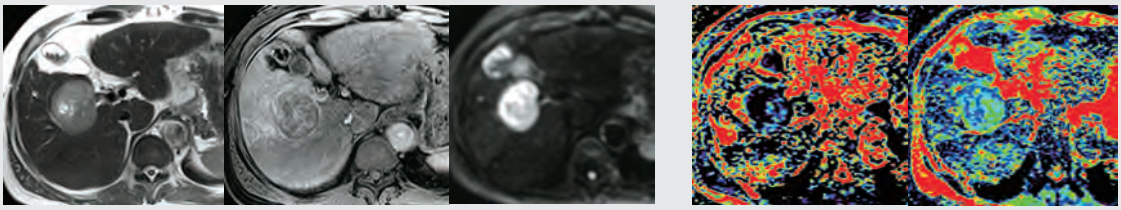
Post CE | CBF | rCBV with leakage correction | DWI | F[4]: 0.06 | D[5]: 0.79

4 Vascular volume fraction
5 Molecular diffusion restriction coefficient

Courtesy of St. Marianna University School of Medicine, Japan

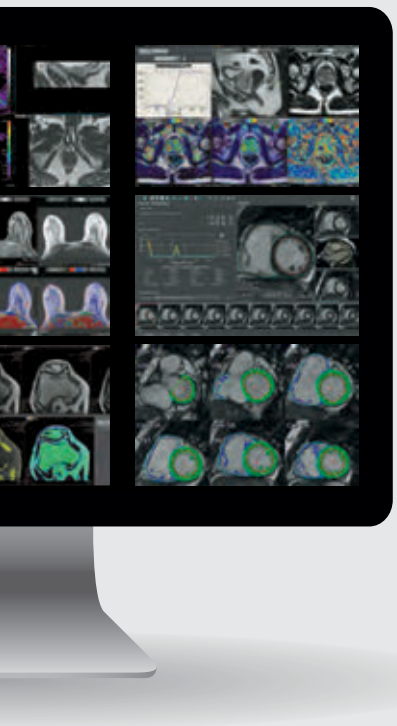
Bayesian

Bayesian-based method provides a rigorous probabilistic estimation of parameters. It is fully adaptive, delay-insensitive and highlighted better results than other methods.



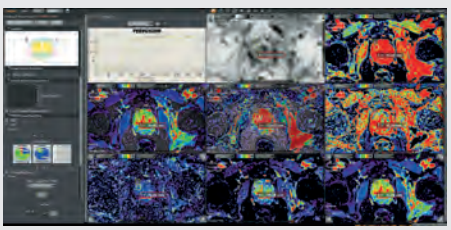
T2WI | Dynamic Arterial phase | DWI | F^4 : 0.08 | D^5 : 0.79

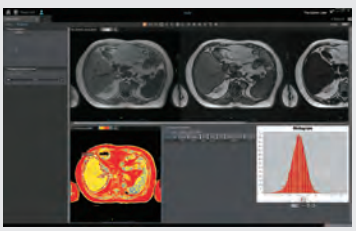
Courtesy of St. Marianna University School of Medicine, Japan

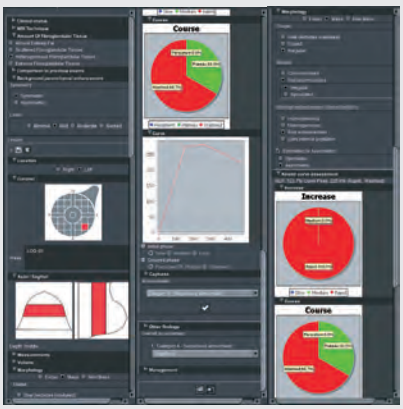


Dedicated automatic reporting

Stroke, prostate (PI-RADS v1 and v2) and breast (BI-RADS) automatic compliant reports.

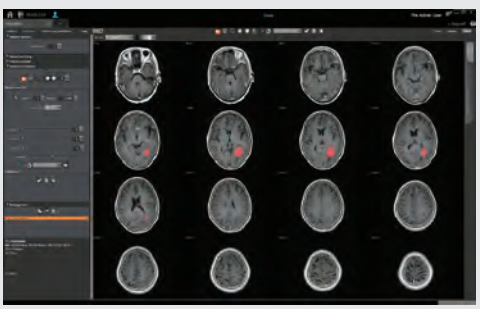


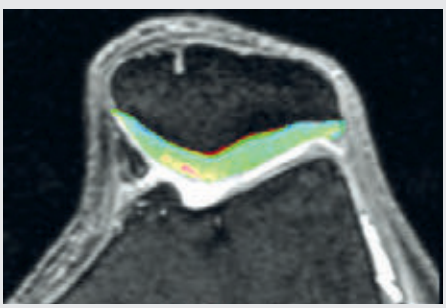




Volume segmentation

Automatic or semi-automatic segmentation tools to compute volume of interests from various anatomical areas such as cartilage or brain.





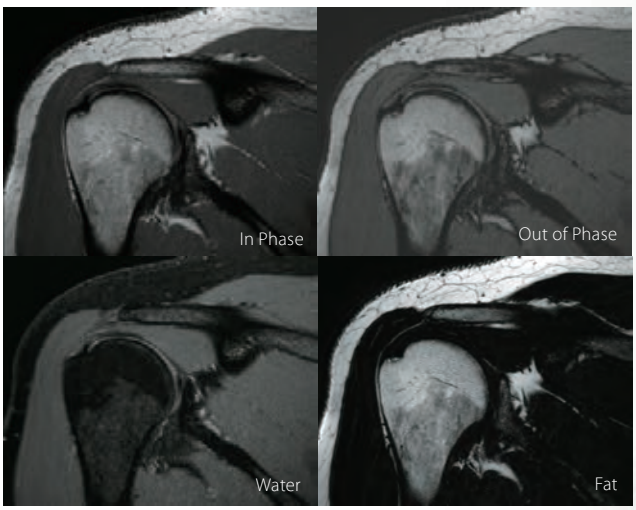
Intelligent new technology to advance productivity

Reducing scan time improves the patient experience and increases throughput. With intelligent new technology that advances our rapid scan technology, Vantage Galan 3T delivers on a productivity promise that goes beyond expectations.

Reduce scans with FSE DIXON

The technology based on FSE2D achieves consistent fat suppression and homogeneity while acquiring four different tissue contrasts in one scan, reducing the total number of scans you need to acquire. Available for T1, T2 and PD image contrast sequences which can be scanned throughout the entire body.

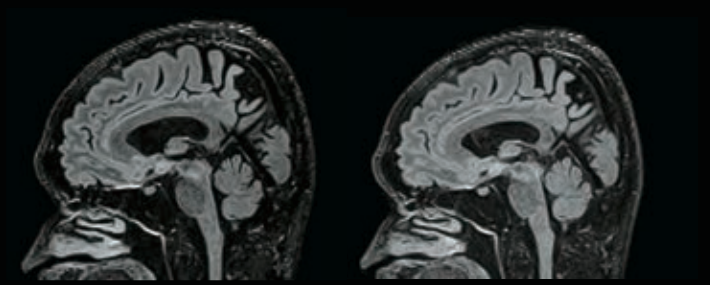
Co PD FSE DIXON



Faster scans with Fast 3D mode

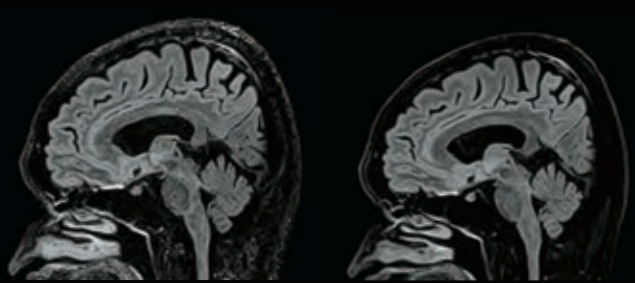
New Fast 3D reduces mVox scan time by up to 50%[6], allowing you to more quickly collect 3D isotropic imaging that can be reformatted into any plane.

6 As compared to standard FASE3D sequence



3D FLAIR 6:05 min

Fast 3D FLAIR 3:00 min



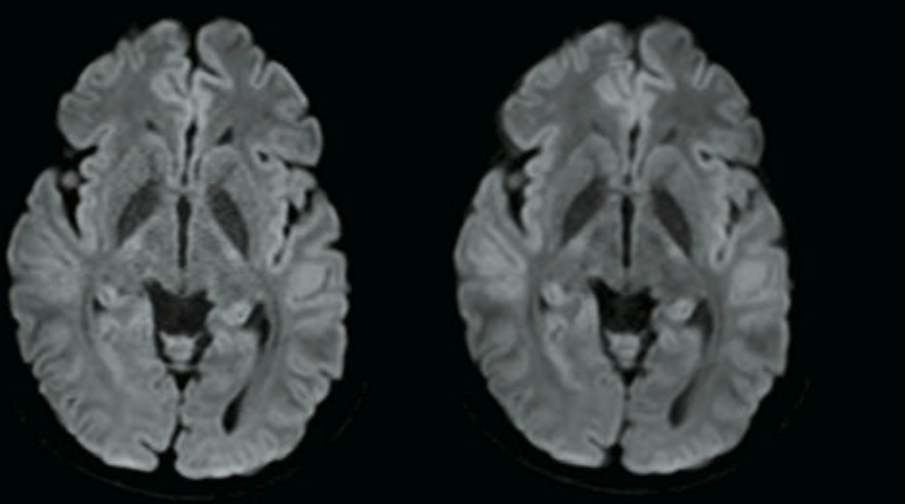
3D FLAIR 6:05 min
1 NAQ

Fast 3D FLAIR 6:05 min
2 NAQ

Accelerated Diffusion Weighted Imaging with MultiBand SPEEDER

MultiBand SPEEDER acquires multiple slices simultaneously, which enables reduced scan times. DWI scans in particular can be acquired in about half the time compared to previous sequences.

Ax DWI 3 x 0.8 x 1.2 mm



MultiBand 2 x SPEEDER 3 3:24

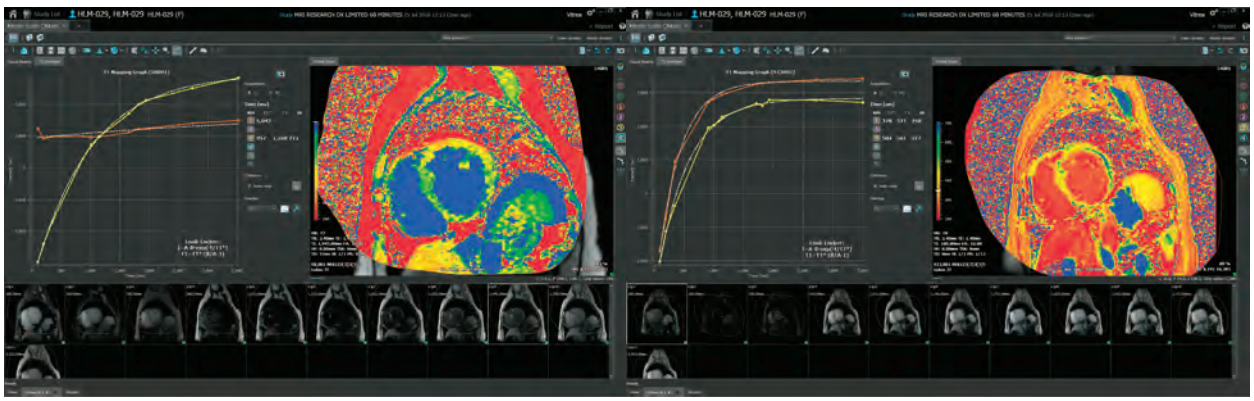
SPEEDER 3 6:27

Cardiac applications

With cardiac MRI becoming increasingly important, Canon Medical's cardiac applications allow a range of new imaging capabilities in order to expand diagnostic services, and improve the patient experience by reducing the number of breath holds.

Full T1 map in a single breath hold with MOLLI

Expand your cardiac toolset with T1 mapping, allowing you to acquire a more quantitative characterization of myocardial tissue. T1 mapping utilizes a MOLLI sequence, enabling the acquisition of a full T1 map within a single breath hold.



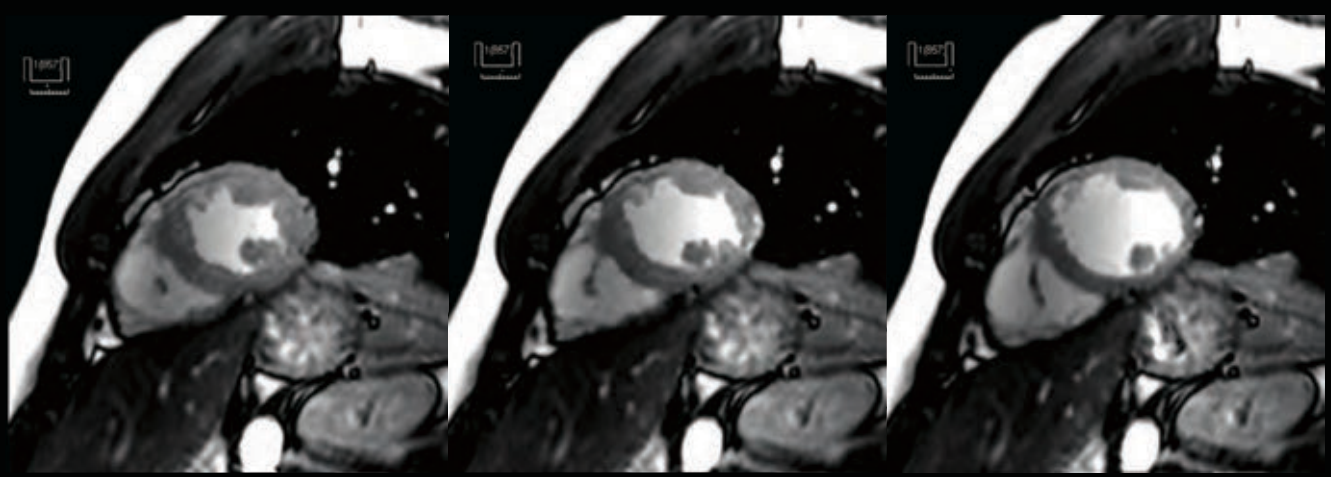
T1 mapping pre contrast enhancement post processed by Vitrea/Medis software

T1 mapping post contrast enhancement post processed by Vitrea/Medis software

Courtesy of Johns Hopkins University, USA.

Higher temporal resolution and fewer breath holds with k-t SPEEDER

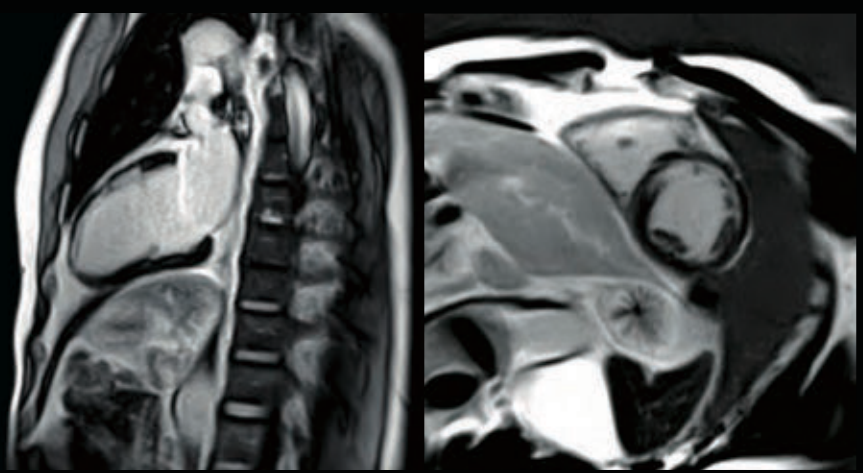
k-t SPEEDER provides up to 8x acceleration, enabling you to acquire high temporal resolution cardiac cine. The high acceleration factor can also reduce breath hold times so your patients can be scanned more comfortably.



7 seconds breath hold with 48 cardiac phases

Fewer breath holds with PSIR

Phase Sensitive Inversion Recovery (PSIR) in the heart provides improved contrast in late-enhanced imaging by using a more robust nulling of healthy myocardial signal without the need for an inversion time (TI) calibration scan. By eliminating the need for calibration, cardiac examinations can be completed with fewer breath holds and greater patient comfort.



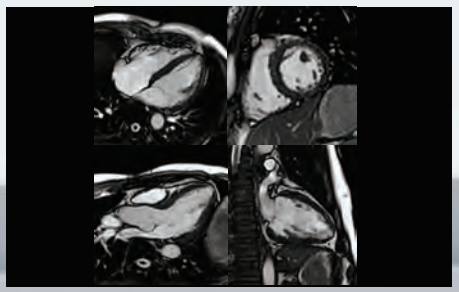
Courtesy of Johns Hopkins University, USA.


Scan Start

Productivity focused technology that improves workflow and image consistency

Enhanced scan planning with ForeSee View

ForeSee View is an essential new scan planning tool designed to allow you to preview your slice planning in real time. This tool is particularly useful in anatomies that can be difficult to plan such as the pancreas, the heart, and certain orthopedic joints. This excellent new feature reduces the need for re-scanning and saves time on scan planning for all body regions.



Outstanding imaging applications for every day performance

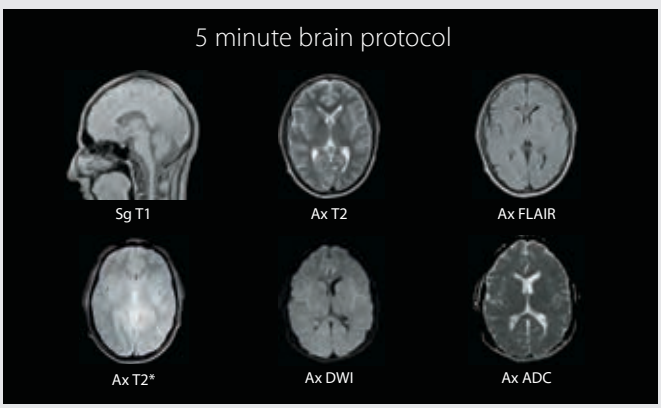
With the complexity of scan planning, achieving scan plane reproducibility can be a challenge. EasyTech technology takes away the variability and helps you improve workflow with automatic slice alignment for neuro, spine, cardiac and now knees, standardizing your workflow with automatic positioning.

SUREVOI Knee and KneeLine+

SUREVOI Knee supports the accurate alignment of the knee to the iso-center which reduces artifact related re-scans. KneeLine+ improves reproducibility and image quality.

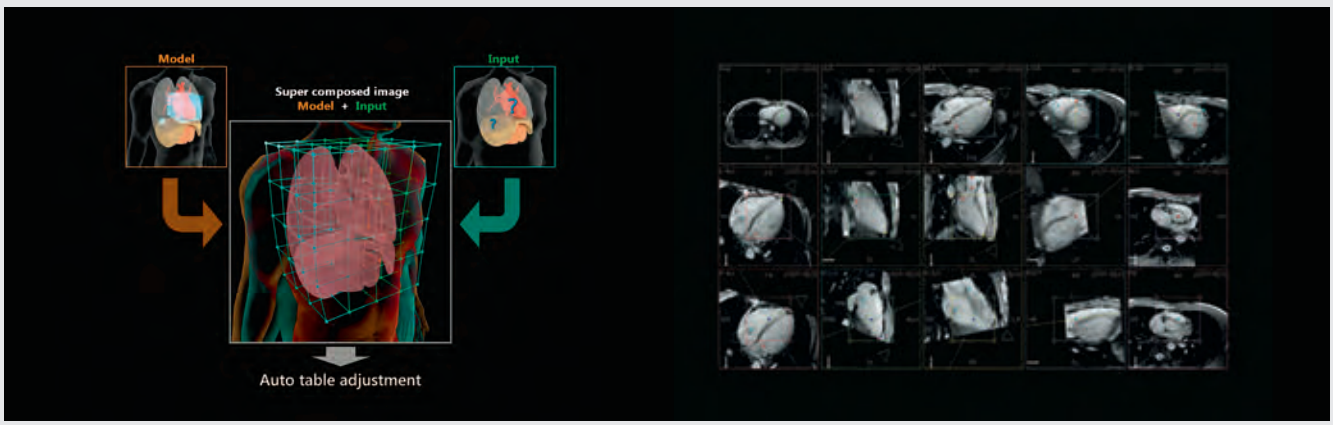
NeuroLine+

Achieve outstanding scan consistency for all your brain exams with NeuroLine+. The function's intelligent alignment algorithm allows you to automatically set up according to AC-PC or OM line.



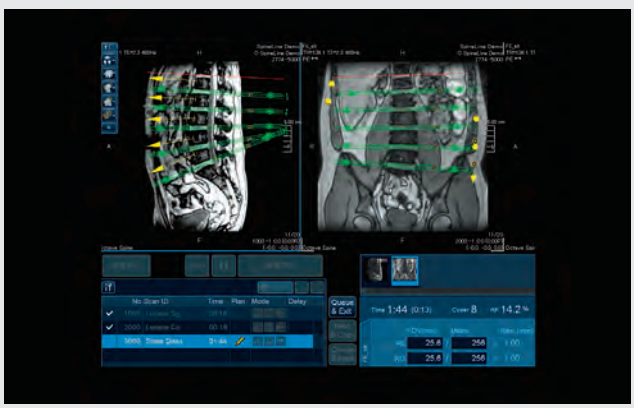
SUREVOI Cardiac and CardioLine+

SUREVOI Cardiac allows you to reduce the cardiac scan plan and set up time to enhance workflow.
CardioLine+ enables challenging cardiac examinations to be performed consistently as part of your daily routine.



SpineLine+

With its auto-locator functionality, SpineLine+ allows you to plan spine studies quickly and easily. Sagittal and coronal locators allow you to set double-oblique slices, enhancing the reproducibility of follow-up exams.



ECO Mode

70 kVA
Power Requirement

27 m²
Total Installation Space[8]

18.6 m²
Scan Room Space

Minimize energy use in a compact space

Every inch on Vantage Galan 3T's design has been considered to maximize use of space while minimizing energy consumption. The system's zero boil-off magnet fits into a small space, while providing a comfortable, open environment for your patients at the same time.

Save space

Small size, big performance. The system's short and compact bore minimizes patient anxiety and at the same time allows a 3T scanner to be installed in a room originally designed to hold a 1.5T system. The eco-friendly cabinet design simplifies and shortens installation time.

Minimize energy consumption

Vantage Galan 3T's power-saving ECO Mode is automatically triggered when you lower the patient couch to help you minimize your running costs. At only 70 kVA[7] Vantage Galan 3T has the lowest rated power requirement in its class.

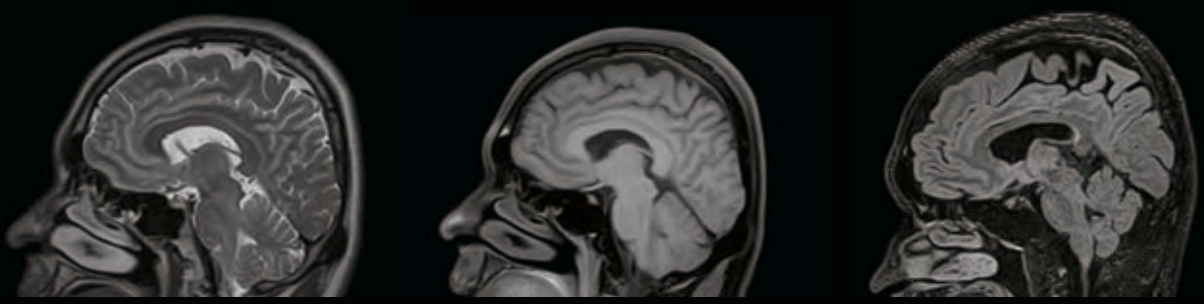
7 For Saturn X Gradient, 90 kVA is required.

9 The 5 Gauss line is not confined within the scan room. Controlled access area should be taken into account by the facility when preparing for installation. The above specifications may not meet the local requirements such as for access as is required by the Americans with Disabilities Act in the United States. Please consult with your architectural and/or electric consultant for coding requirements. Some power equipment may be required to be placed in a dedicated electrical room.

Image Gallery

Head

Sg Fast 3D / 1mm iso



T2 2:18min

T1 Fat Sat 2:44min

FLAIR Fat Sat 3:00min

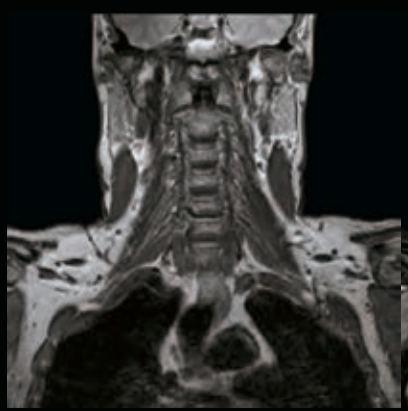
Brain fMRI finger tapping

3D TOF

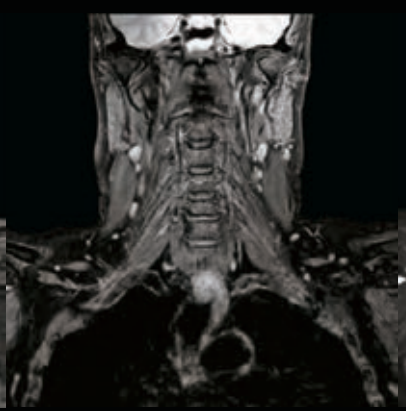
C-Spine

Sg T2

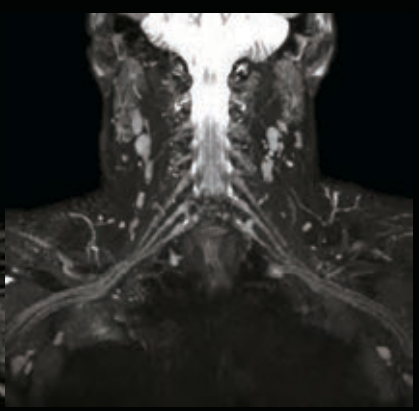
Sg DWI b800



In Phase



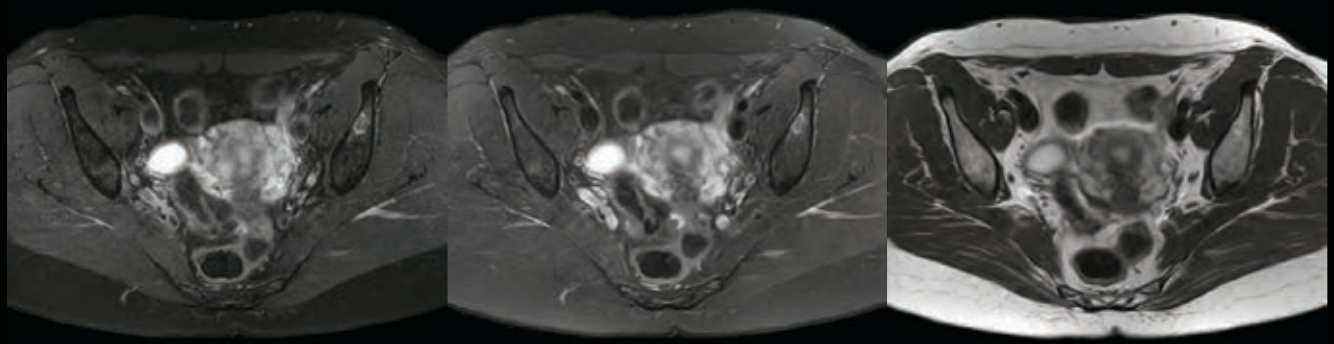
Water Image



Co 3d mVox Fat Sat / MIP reconstruction

Image Gallery

Pelvis

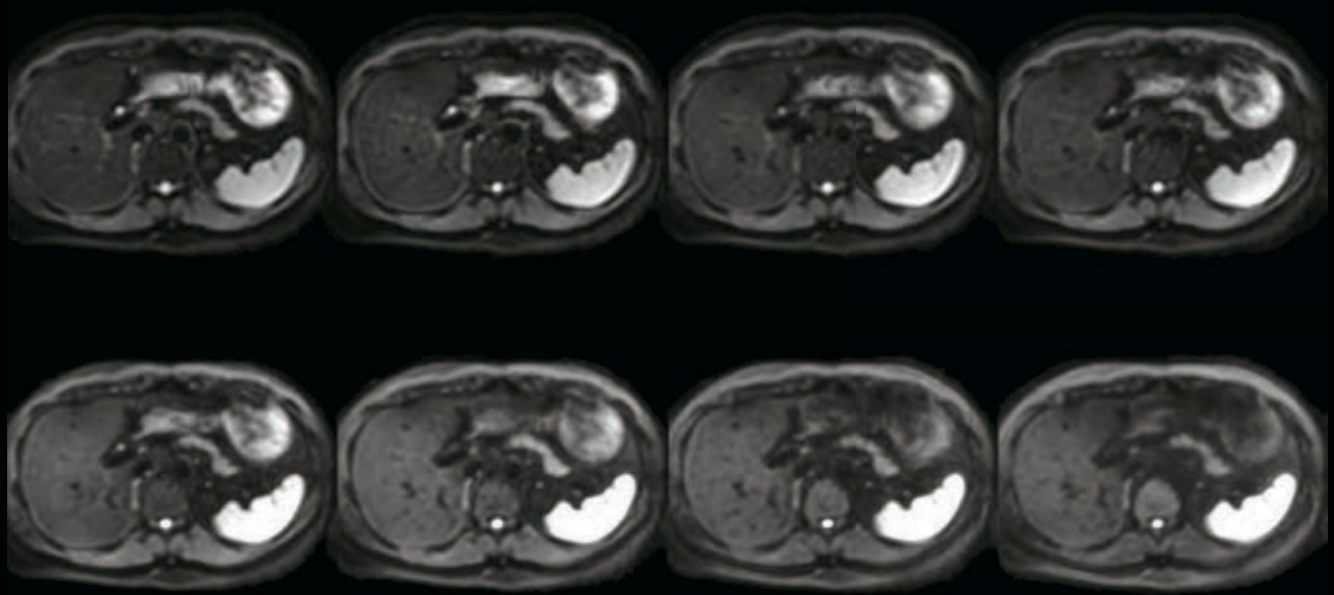


Ax T2 Fat Sat

Ax T2 FSE DIXON / Water

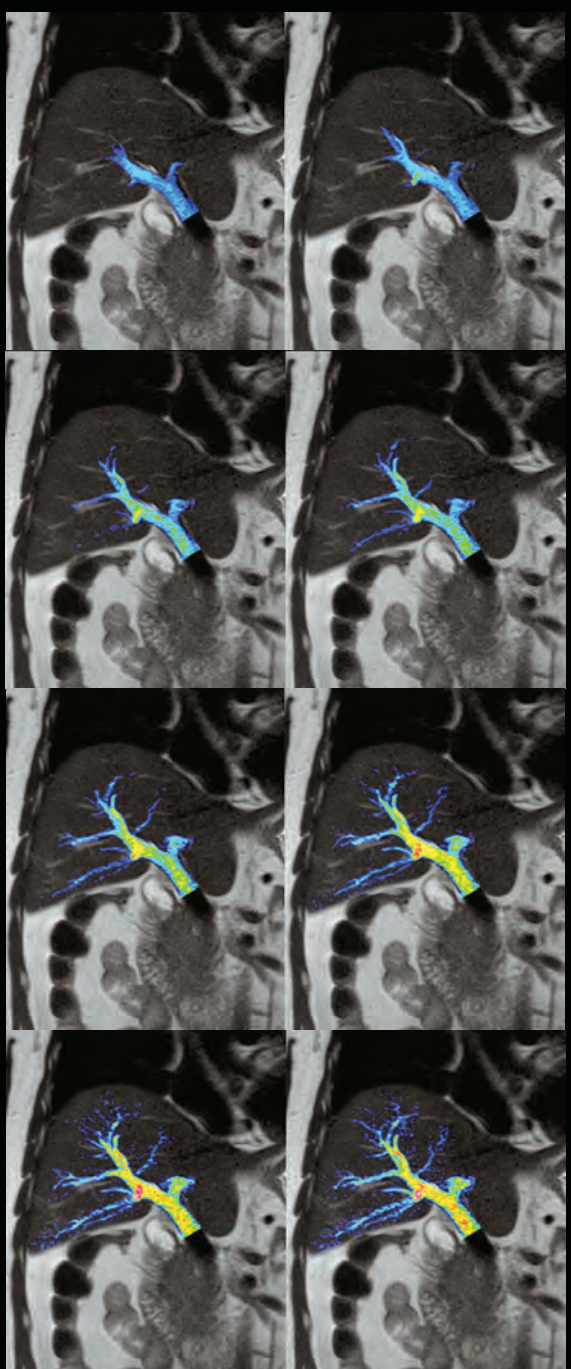
Ax T2 FSE DIXON / In Phase

Abdomen



Ax DWI multi b TE=60 with RMC
b50/100/150/200/300/500/750/1000

Non-contrast imaging



Co mASTAR Portal vein
TI=400ms / TI step=126ms / 8 steps

Co FBI / 3 Steps

Image Gallery

MSK

Ax PD FSE DIXON

Ax T1

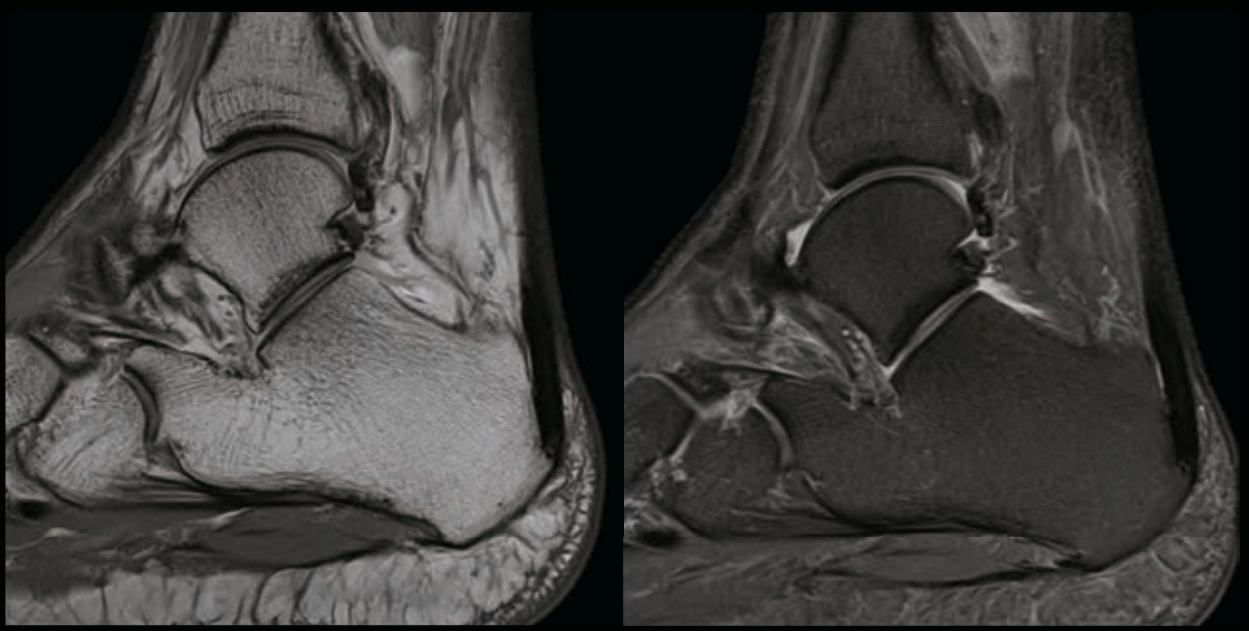
Ax PD Fat Sat

In Phase

Water

MSK

Sg PD and PD Fat Sat



Sg UTE

TE=2.0ms

TE=0.1ms

Subtraction

Image Gallery

MSK

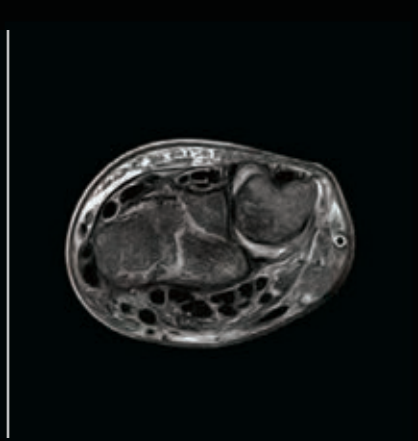
Co T2 Fat Sat

Co T1

Co T2* 3D

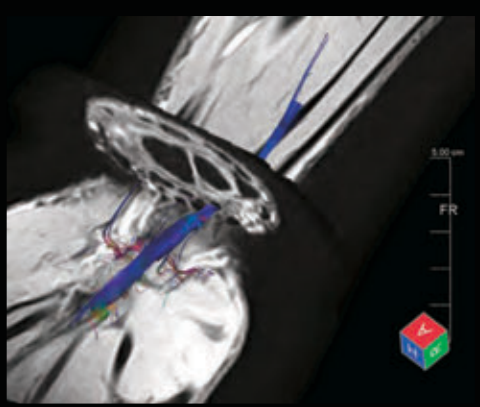
Sg T2 Fat Sat

Sg PD



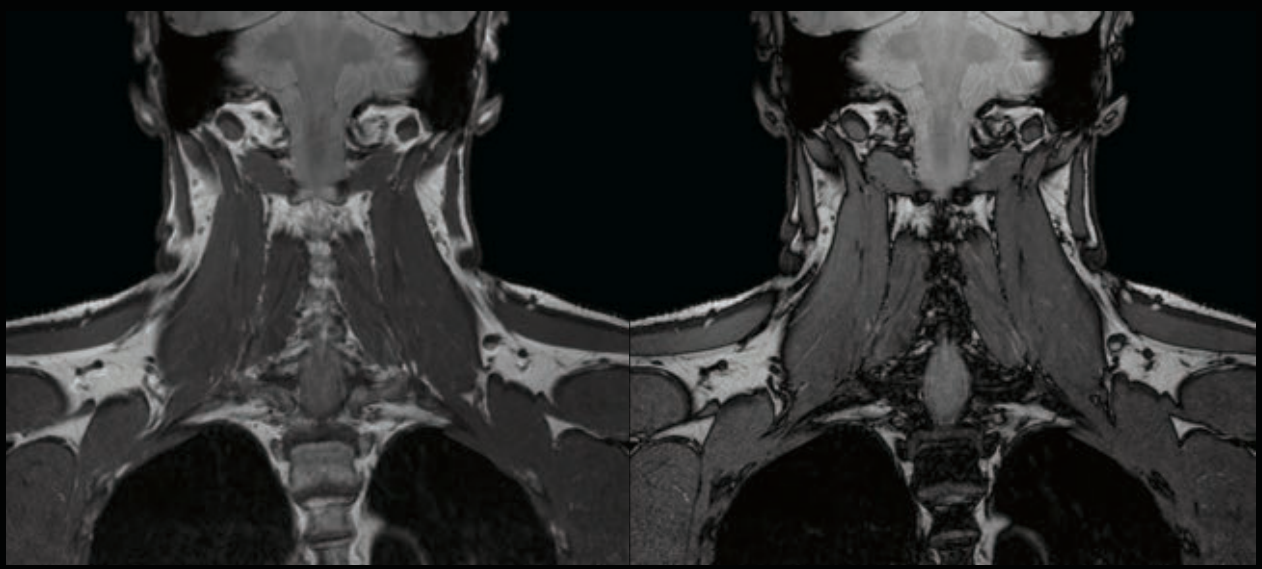
Ax PD Fat Sat

Median nerve DTI 30 axis b1000



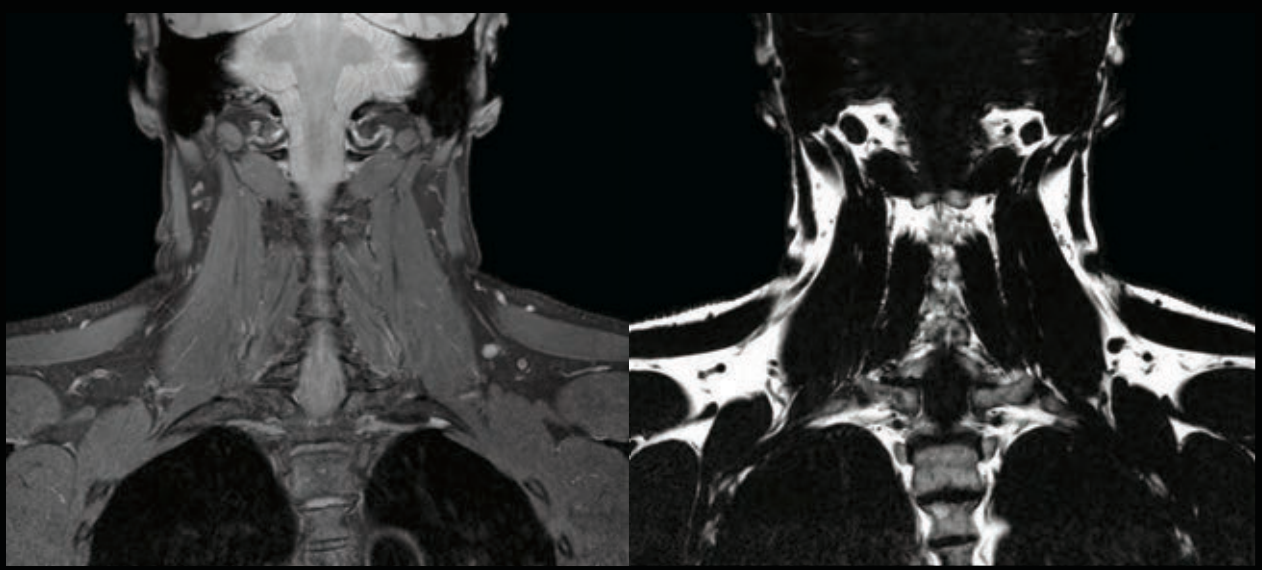
Head and Neck

Co PD FSE DIXON



In Phase

Out of Phase



Water

Fat

Peacefully Quiet.
Remarkably Fast.

Vantage Galan 3T delivers patient focused MRI with outstanding image quality and speed.

With Vantage Galan's high end 3T MRI technology, you can be sure you are offering your referring physicians and your patients the best 3T MRI services available today. Designed to help you prioritize patient comfort, deliver outstanding imaging quality and enhance productivity while minimizing running costs, you can be sure your MRI services are industry leading.

A relaxed patient is key to enable stable MRI images. You can be confident that Vantage Galan 3T takes care of this with whisper quiet scan sequences, and the 71 cm bore opening and MR Theater are designed to put patients at ease. And you can also address challenging patients with free breathing and contrast free applications and ForeSee View for enhanced planning to save preparation time.

With consistent imaging performance delivered through our unique digital PURERF and Saturn Technology, your facility's 3T imaging performance will meet the needs of referrers, staff and patients alike. High performance gradient technology provides improved SNR which enhances essential diffusion weighted imaging quality.

Be quick with a range of new rapid scan and EasyTech technologies that reduce scan time and improve workflow, including neuro, MSK and complex cardiac procedures. And Vantage Galan 3T's small footprint, low power consumption eco features, outstanding reliability and excellent maintenance programs will keep your hospital administrators happy.

Quiet

- MR Theater relaxes patients with a virtual immersive experience
- Pianissimo technology delivers whisper quiet scanning
- Short magnet and 71 cm bore offers an open MRI scanning environment

Digital

- Crisp digitized signals offer 20% increased SNR through PURERF and Saturn Technology
- High performance gradient improves SNR for diffusion weighted imaging
- Advanced post processing capability with Olea/Vitrea technologies

Quick

- Rapid scan technologies reduce scan time
- Automated EasyTech and ForeSee View improve workflow
- Small footprint and low energy consumption minimizes the operational costs

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