

TOMORROW TODAY



# SIGNA™ Artist

Fueled by SIGNA™Works



[gehealthcare.com/mr](http://gehealthcare.com/mr)



# Unleash

Clear advances with clear advantages

SIGNA™ Artist is an advanced and intuitive 1.5T MR from GE Healthcare. Fueled by our SIGNA™Works productivity platform, the SIGNA™ Artist with AIR™ is a harmonious design of form and function. Everything in its blueprint is crafted to significantly energize your productivity, improve diagnostics and boost your bottom line.



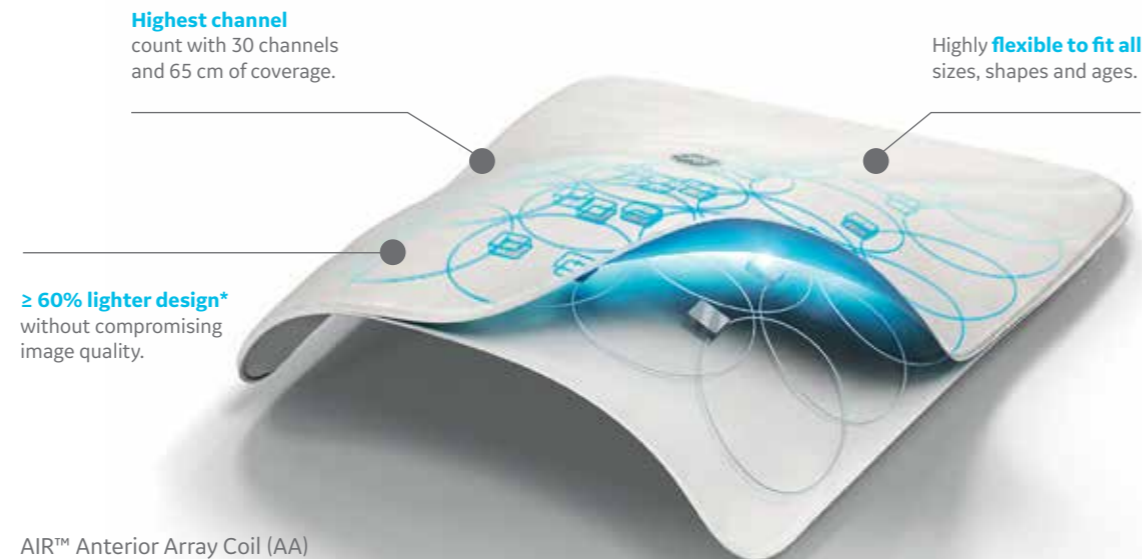
## AIR™ | Simply better

### Form fitting for every form

Freedom in coil positioning is the ultimate design goal behind AIR™.

Its flexible design improves the scan experience while increasing signal quality.

As a result, AIR™ is reinventing the way imaging should be.



## AIR™ Anterior Array Coil

The 30-channel AIR™ Anterior Array Coil (AA) is the next generation anterior array that allows flexibility in all directions to conform to the patient's anatomy.

Based on the innovative technologies behind the Inca conductor and the Emode electronics, the AA provides uncompromised SNR and acceleration performance, while improving the overall patient and user experience. The coil has been designed to adapt various patient shapes and sizes, with an ultra-light weight distribution. The AA can be used for torso, cardiac, abdomen, prostate, pelvis, msk, whole-body and peripheral vascular examinations, potentially in conjunction with other coils.



### Promotes patient satisfaction

Lightweight, industry-leading flexible design.

### Redefine clinical excellence

Consistent high-quality imaging.

### Perform efficiently

Breakthrough freedom in coil positioning.



Highest channel count and coverage in the industry



Increases signal-to-noise ratio and reduces imaging artifacts



Improves signal quality by bringing the elements closer to the patient



Improves parallel acceleration



Simple, more durable design



Large coverage



### Streamline and optimize scan setup with AIR Touch™

Automatically select coil element combinations to optimize uniformity, SNR and parallel imaging tradeoff with AIR Touch™.

And with AIR Touch™ intelligent coil selection, technologists no longer have to worry about selecting the optimal coil element configuration for every exam, resulting in reduced coil setup time and fewer errors.



### Intelligent MR slice prescription

- Automatically detects anatomy and prescribes slices in the brain.
- Delivers consistent and quantifiable results.
- Helps eliminate rescans and scanning inefficiencies.



A smart reconstruction algorithm that improves SNR, reduces background noise and suppresses artifacts. The result is cleaner, crisper images.

\* Compared to conventional coil technology.  
Simply better compared to conventional coil technology.





# SIGNA™ Works

Fueling the future of MR

Our SIGNA™Works platform redefines productivity across our core imaging techniques. The SIGNA™Works standard applications portfolio is an extensive set of high quality and efficient imaging capabilities that enables you to achieve desired outcomes across your entire practice area.

These standard applications come pre-loaded with the SIGNA™ Artist as a fully integrated solution. It is value-added technology that's upgradeable and can be customized further, giving you the flexibility to add applications to suit the needs of your growing practice.

SIGNA™Works takes full advantage of Total Digital Imaging (TDI), further advancing diagnostics and quickening throughput, while simultaneously improving patient outcomes and your ROI.

## Energize

Phenomenal exams to meet  
your clinical needs

The SIGNA™Works applications portfolio covers a wide variety of imaging solutions: NeuroWorks, OrthoWorks, BodyWorks, OncoWorks, CVWorks and PaedWorks.

SIGNA™Works provides all the tools you need to complete a fast and high-quality clinical exam, including 2D, 3D and motion correction capabilities.

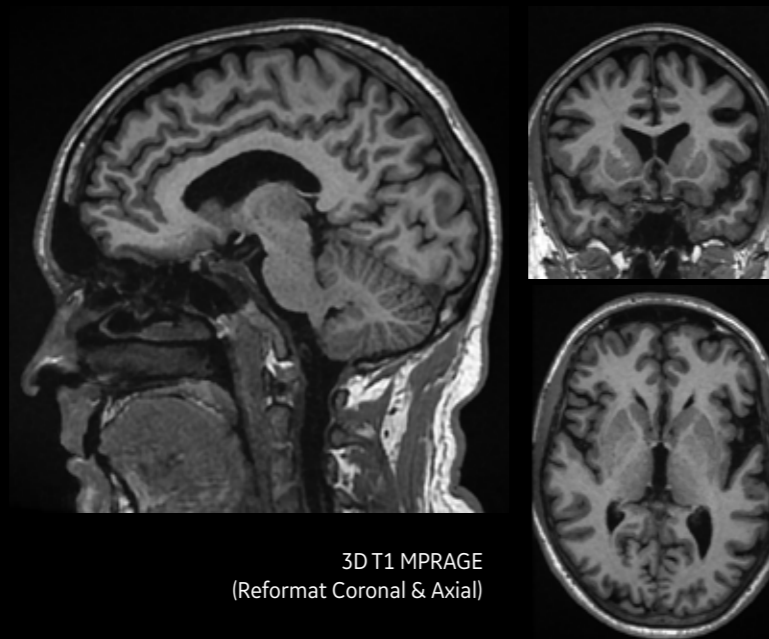


## NeuroWorks

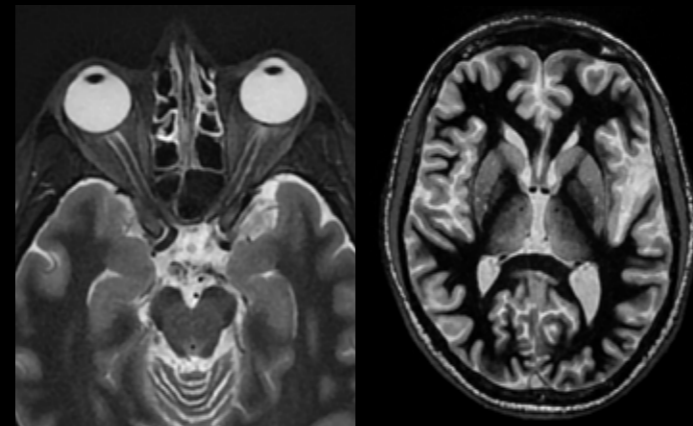
This one-stop solution enables you to image brain, spine, vascular and peripheral nerve anatomy with exceptional tissue contrast. These motion-insensitive techniques feature single-click auto alignment, providing the complete neuro solution from scanning to post processing.

Suppress CSF and either white or gray matter to increase lesion conspicuity with Cube, our 3D volumetric imaging suite.

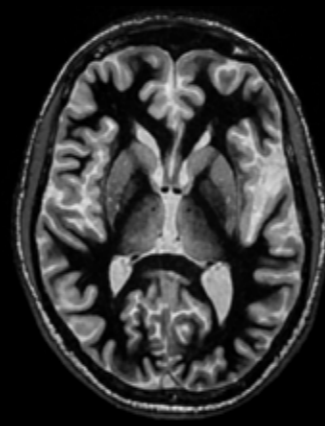
Preserve tissue contrast, both in T1 and T2 scans, while also reducing motion artifacts with PROPELLER MB.



3D T1 MPRAGE  
(Reformat Coronal & Axial)



T2 STIR PROPELLER  
Axial 0.77 x 0.77 x 2 mm  
Coronal 0.77 x .0.77 x 3 mm

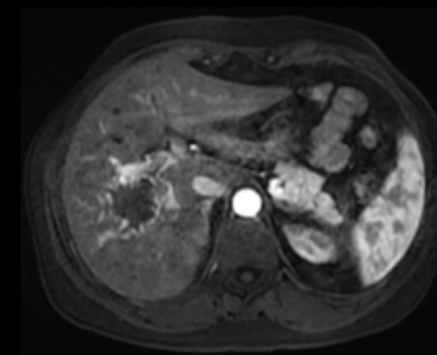


3D BRAVO  
White matter nulling

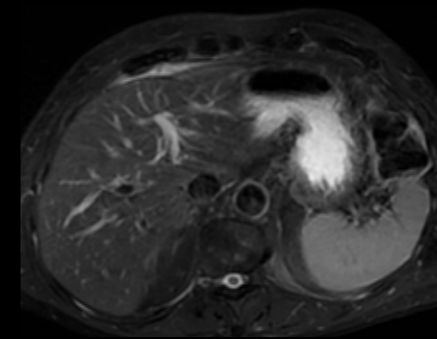
## BodyWorks

Scan whole-body, abdominal and pelvic anatomy with speed and flexibility to adapt to different patient types.

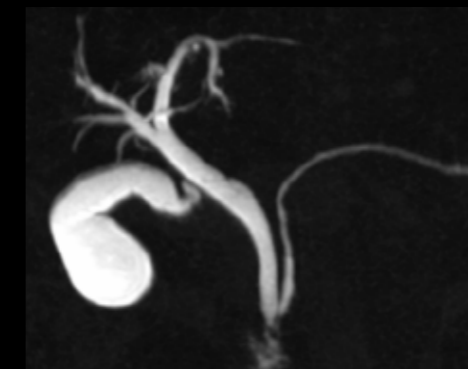
Reduce respiratory motion for more accurate abdominal imaging with Auto Navigator. This free-breathing approach is compatible with multiple pulse sequences including diffusion, PROPELLER MB, MRCP and dynamic T1 imaging.



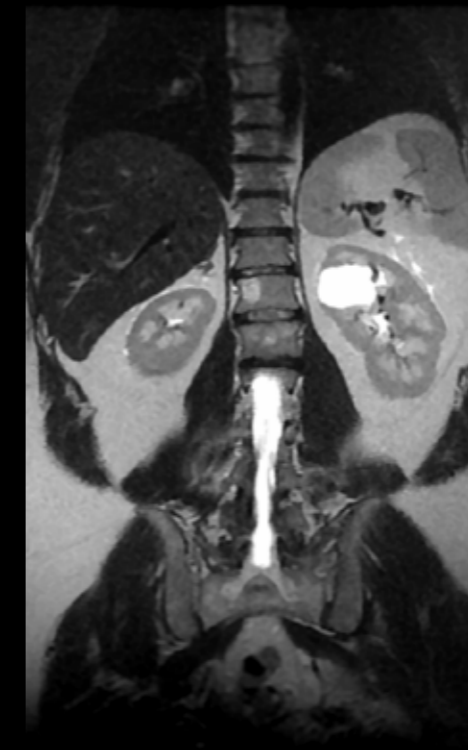
3D Turbo LAVA free-breathing  
with Auto Navigator  
Temporal resolution: 6 sec



Axial T2 FatSat PROPELLER free-breathing  
with Auto Navigator



3D MRCP  
1 x 1 x 1.6 mm

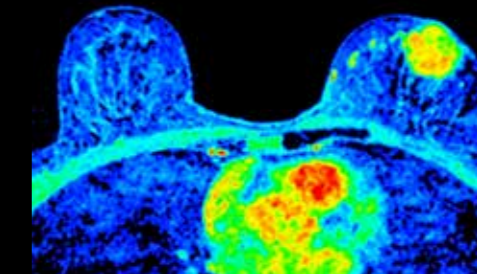


Coronal T2 SSFSE Large FOV

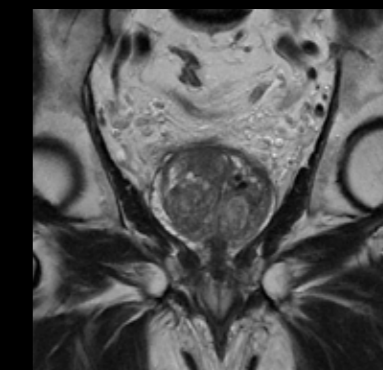
## OncoWorks

This extensive library of techniques captures anatomic data to uniquely enable oncological assessment of the anatomy. OncoWorks includes robust tissue contrast, motioninsensitive, high temporal and spatial resolution imaging.

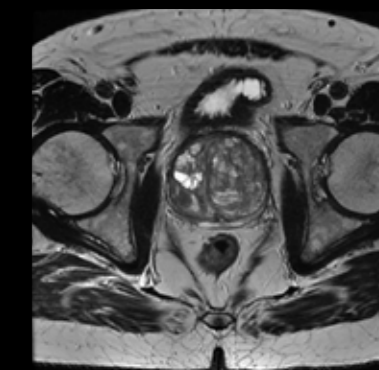
3D volumetric imaging with an optimized adiabatic fat suppression, combined with ARC or ASSET, provides high spatial and temporal resolution capture contrast uptake patterns.



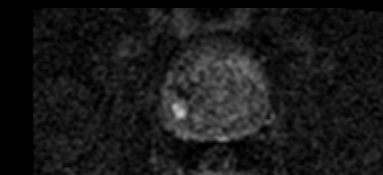
Axial T1 Dynamic Contrast  
Positive Enhancement  
Integral Map



Coronal T2 PROPELLER  
0.6 x 0.6 x 4 mm  
Small FOV and motion-correction



T2 FRFSE



DWI FOCUS - b1000



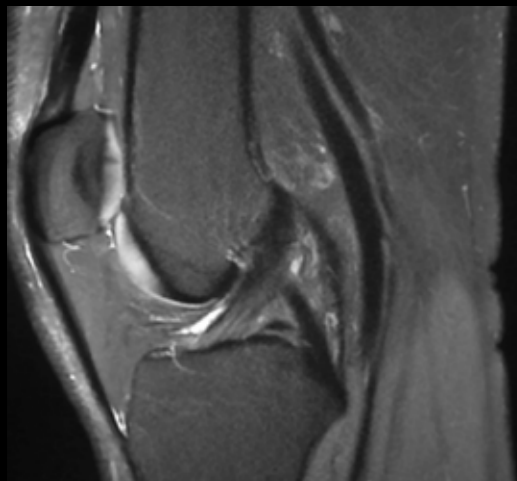
3D DISCO Flex

## OrthoWorks

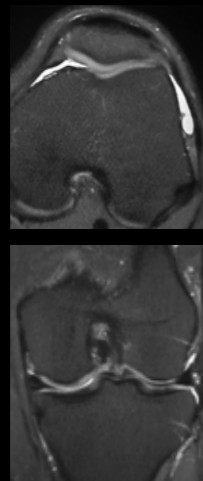
This extensive library of musculoskeletal imaging techniques enables you to image bone, joint and soft tissue with remarkable tissue contrast.

Cube, combined with ASPIR, produces proton-density 3D images with improved fat suppression uniformity.

With one 3D acquisition and multi-planar reformats, Cube may replace individual 2D scans.



Sagittal PD FatSat Cube  
0.6 x 0.6 x 0.6 mm



Coronal PD PROPELLER  
0.4 x 0.4 x 3 mm

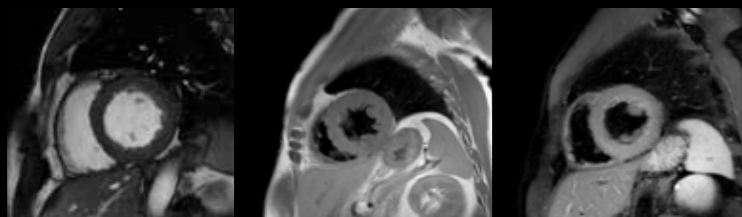


# CVWorks

Intuitive cardiac techniques that adapt to different patient types. Assess morphology, flow, function and tissue viability to gain crucial insights into vascular structure and flow dynamics.

Multi breath-hold imaging is no longer needed with Single Shot MDE and Black Blood techniques, which provide patient-friendly alternatives to uncomfortable breath-holds.

With our workflow-simplified QuickStep protocols, scanning whole body vasculature can be done in less than 6 minutes. High-performance gradients allow bright blood pool and myocardial tissue contrast on FIESTA Cine with high spatial resolution.



Short Axis 2D  
FIESTA Cine

Black Blood T1

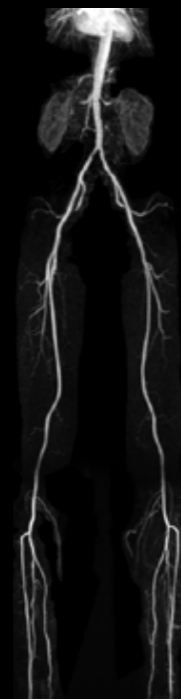
Black Blood SSFSE T2  
ASPIR



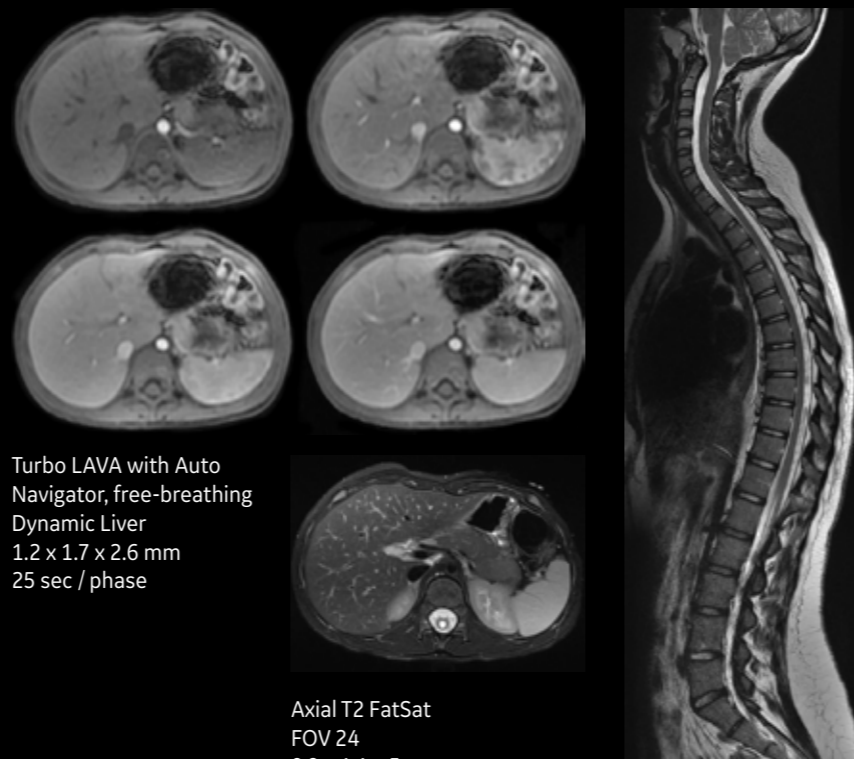
PSIR Single Shot MDE

PS MDE

4ch FIESTA Cine



QuickStep MRA



Turbo LAVA with Auto  
Navigator, free-breathing  
Dynamic Liver  
1.2 x 1.7 x 2.6 mm  
25 sec / phase

Axial T2 FatSat  
FOV 24  
0.9 x 1.1 x 5 mm

Sagittal T2 frFSE Pasted

# PaedWorks

Specialized protocols to simply address the needs of your smallest, most fragile patients. Techniques such as Auto Navigator combined with PROPELLER MB can be used with diffusion imaging for patient-friendly free-breathing exams. When it comes to cardiac, Single Shot MDE provides faster and more reliable results.

Images on the left demonstrate dynamic T1 imaging with Auto Navigator, which enables the patient to breathe freely while capturing contrast. Whole spine evaluation can be obtained simply with routine T2 frFSE imaging.

# Expand

## Broaden your areas of expertise

Take your expertise to the next level when you move beyond the standard with SIGNA™Works innovative applications. Improved image quality, higher efficiency and a more streamlined workflow help you perform better than ever before.

### HyperWorks

HyperWorks means hyper scanning with astonishing imaging and impressive speed. Innovative applications that improve image quality, efficiency and workflow to help you perform better than ever before. HyperWorks includes HyperSense, which can deliver higher spatial resolution images or reduced scan times.

### ViosWorks

Extend cardiac MR assessment beyond the anatomy with a comprehensive solution that captures all 7 dimensions of information in a cardiovascular scan in 10 minutes or less with ViosWorks.

### SilentWorks

Virtually eliminate the acoustic noise of MR across all anatomies without compromising image quality with SilentScan.

### HyperMAVRIC SL

Hyper Multi-acquisition with Variable Resonance Image Combination SeLective (HyperMAVRIC SL) is our latest imaging technique for bone and soft tissue around MR Conditional metallic implants, enabling an average scan time reduction of 40%.

### ImageWorks

Boost your overall MR performance with ImageWorks applications. Deliver multiple contrasts in a single scan with MAGiC, reducing scan time by up to 50 percent compared to acquiring all contrasts separately.

### MUSE

A diffusion weighted and diffusion tensor technique that allows higher spatial resolution with reduced EPI-based distortions. MUSE implements a segmented readout approach along the phase encoding direction and utilizes a dedicated image reconstruction algorithm to mitigate shot-to-shot motion-induced phase errors inherent to multi-shot diffusion.

### PROGRES

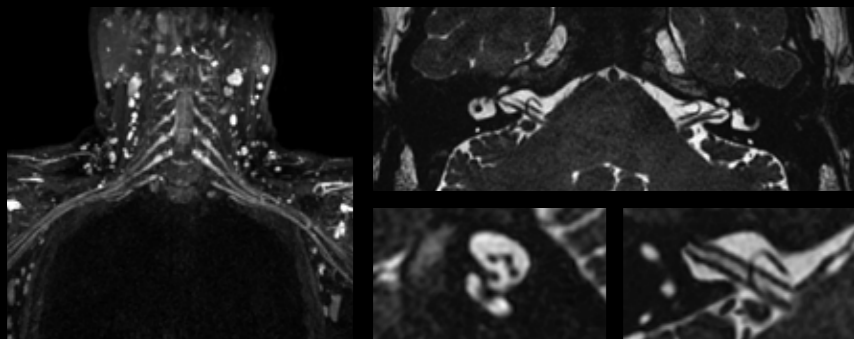
Providing an automated distortion, motion and eddy current correction technique, based on an integrated Reversed Polarity Gradient (RPG) acquisition. Using a rigid affine registration, the technique outputs images with reduced susceptibility artifacts at no significant impact in overall scan time. Extended DTI capabilities allowing the selection and customization of up to 300 diffusion-encoding directions, resulting in more accurate diffusion tensor estimations.



# HyperWorks

## HyperCube

HyperCube expands the capabilities of 3D imaging, allowing you to significantly reduce scan times and minimize artifacts such as motion and aliasing by reducing the phase field of view without the presence of aliasing artifacts.

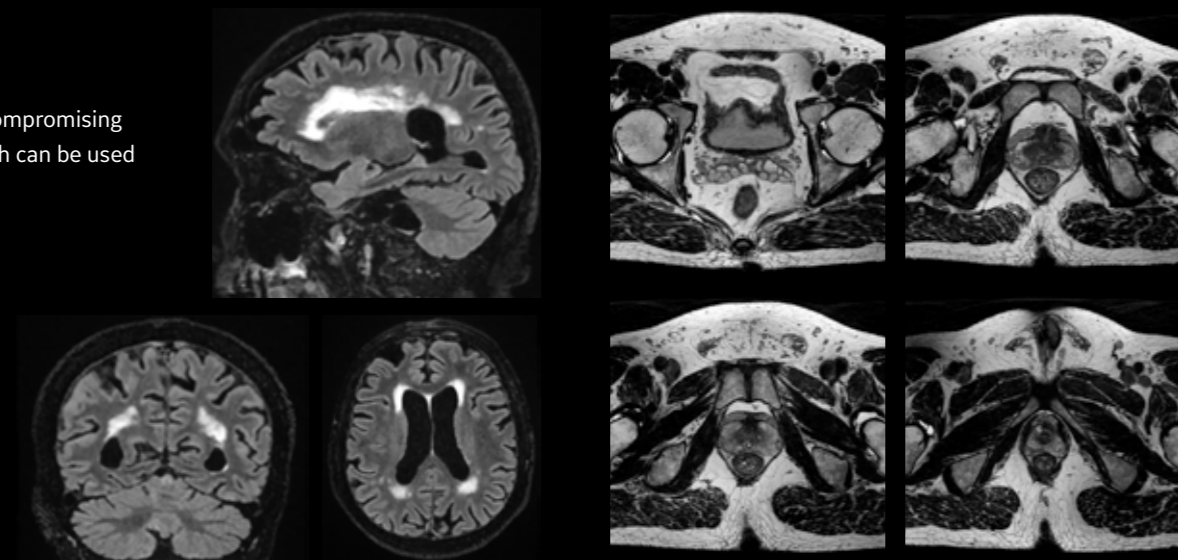


HyperCube T2 STIR with HyperSense 5:15 min  
1.4 x 1.4 x 2.0 mm

HyperCube with HyperSense IAC Cube T2 0.5 x 0.5 x 0.6 mm

## HyperSense

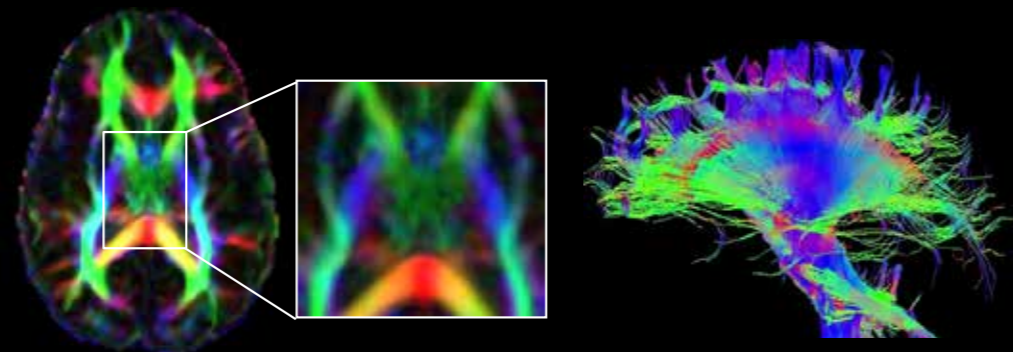
Reduce overall scan times without compromising image quality with HyperSense, which can be used in 88% of all clinical procedures.



Cube T2 FLAIR with HyperSense 3:55 min  
1.2 x 1.1 x 1.4 mm

## HyperBand

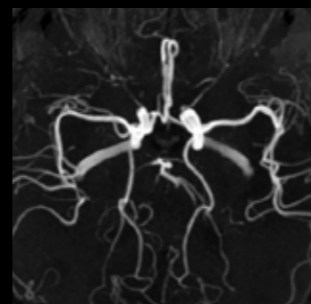
HyperBand takes your diffusion to a new level by allowing you to acquire more slices or diffusion directions within a typical scan.



HyperBand colored orientation map

HyperBand DTI

HyperCube T2 with HyperSense 0.7 x 0.7 x 0.7 mm  
3:58 min

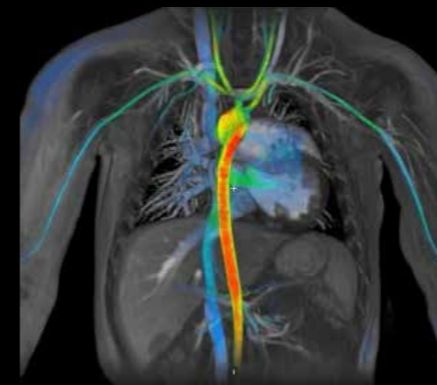


3D TOF with HyperSense 0.6 x 0.6 x 0.6 mm  
3:29 min

# ViosWorks

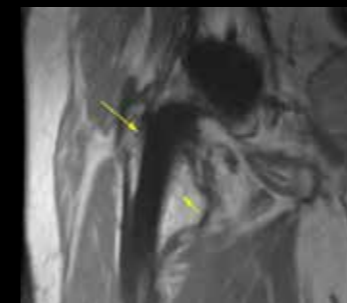
Extend cardiac MR assessment beyond the anatomy by acquiring all 7 dimensions of information (spatial, time and velocity) in a cardiovascular scan of 10 minutes or less with ViosWorks.

ViosWorks leverages the imaging analytic power of the Arterys™ cloud-based platform to precisely visualize and quantify cardiac flow.

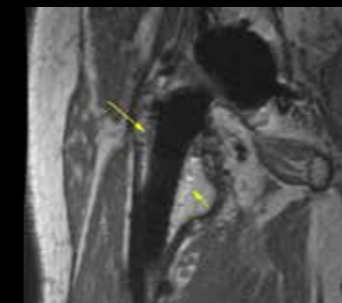


# HyperMAVRIC SL

HyperMAVRIC SL now brings T2-weighting, Flexible No Phase Wrap and an automated-parameter setting for streamlined UI workflow.



MAVRIC SL PD 0.4 mm x 0.6 mm x 4 mm

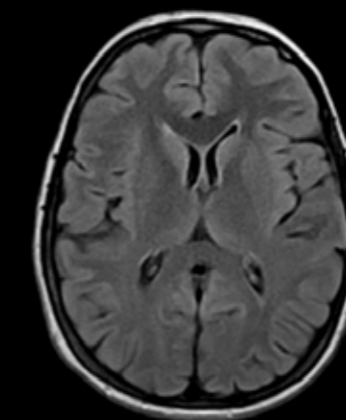


HyperMAVRIC SL 1.3 mm isotropic

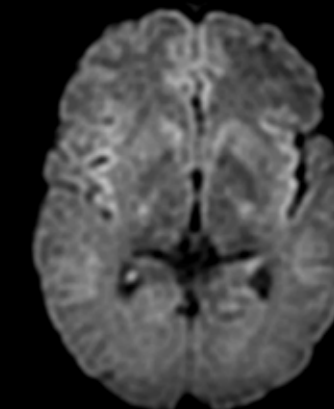
Fibrous membrane formation in femur that was not appreciated in a conventional acquisition or same scan time.

# SilentWorks

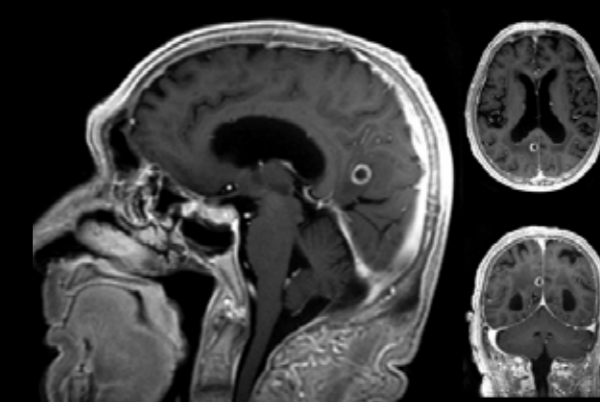
SilentWorks is available across all anatomies and can be done with multiple coils and weightings, including DWI. And with new enhancements like 3D Silenz and PROPELLER MB, your exam time is shortened without compromise.



T2 FLAIR PROPELLER With SilentScan



DWI with SilentScan



3D T1 Silent Sagittal with SilentScan



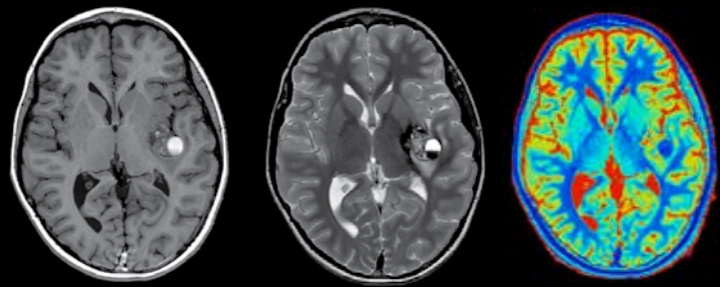
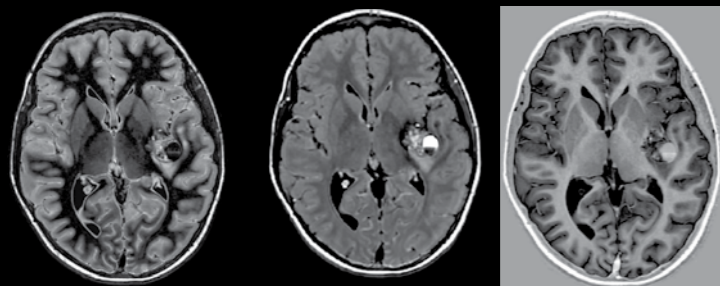
T2 PROPELLER FatSat Coronal with SilentScan



# ImageWorks

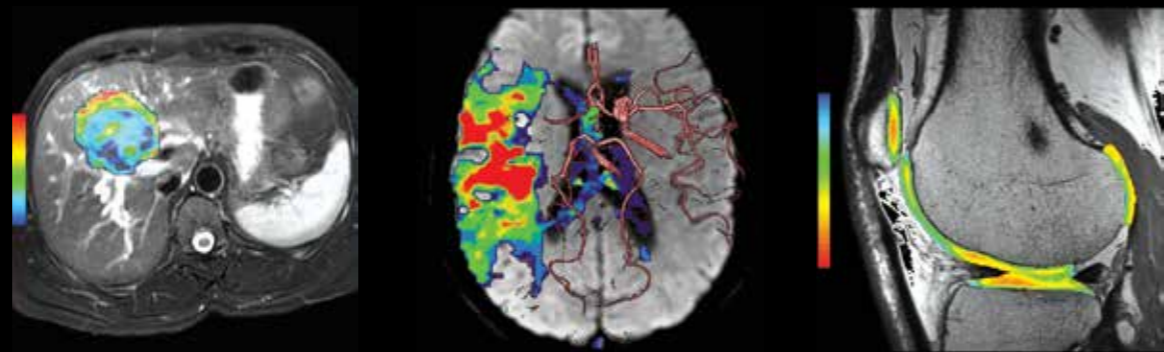
## MAGiC

The secret of MAGiC lies in its unique ability to deliver multiple image contrasts in a single neuro scan. MAGiC delivers enhanced clinical flexibility by freeing up time for advanced imaging. MAGiC goes beyond the routine, providing complementary parametric data for a more complete picture. Image contrast can be changed by applying simple adjustments after acquisition.



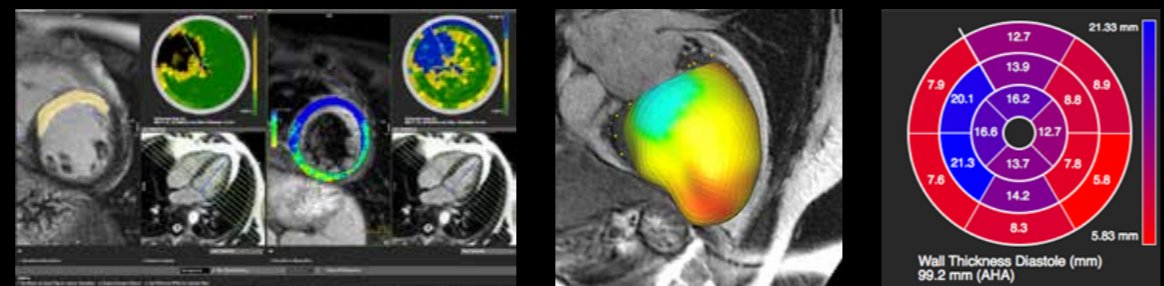
DIR, FLAIR, PSIR (top), T2, T1 and T2 maps (bottom) were acquired in one scan.

It is recommended to acquire conventional T2 FLAIR images in addition to MAGiC.



## READYView

READYView helps simplify complex exams by providing a visualization platform that gives you access to advanced post processing technology. Being directly available on the MR operator console, READYView accelerates workflow and reading readiness by eliminating time consuming post processing steps.



## cvi<sup>42</sup>

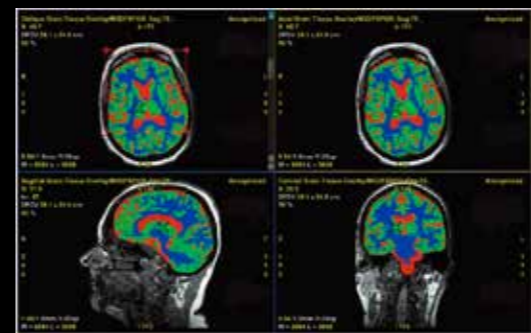
cvi<sup>42</sup> is a comprehensive cardiovascular post processing solution that uses automated algorithms to characterize tissue, generate maps, and assess flow and function.

## Quantib™ Brain

Quantib™ Brain is a medical imaging processing software that is intended for automatic labeling, visualization, and volumetric quantification of segmentable brain structures from a set of MR images.

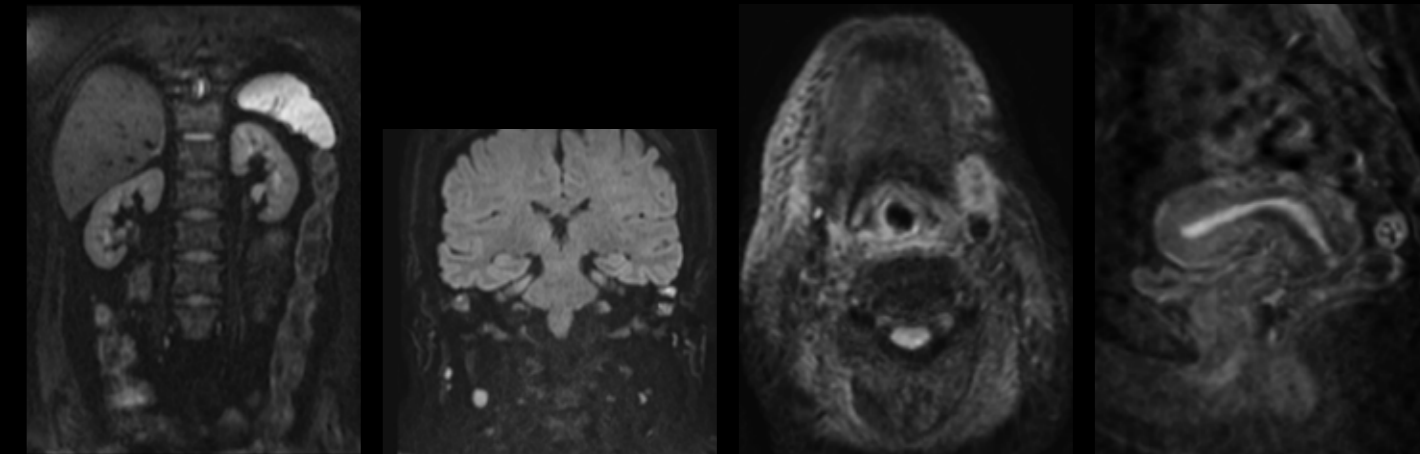
The Quantib™ Brain output consists of segmentations, visualizations and volumetric measurements of grey matter, white matter, and cerebrospinal fluid. The output also visualizes and quantifies white matter hyperintensity (WMH) candidates.

The Quantib™ Brain WMH segmentation function can perform a longitudinal analysis on validated WMHs for comparison of multiple exams of an individual patient.



# MUSE

A diffusion weighted and diffusion tensor technique that allows higher spatial resolution with reduced EPI-based distortions.



Coronal MUSE DWI

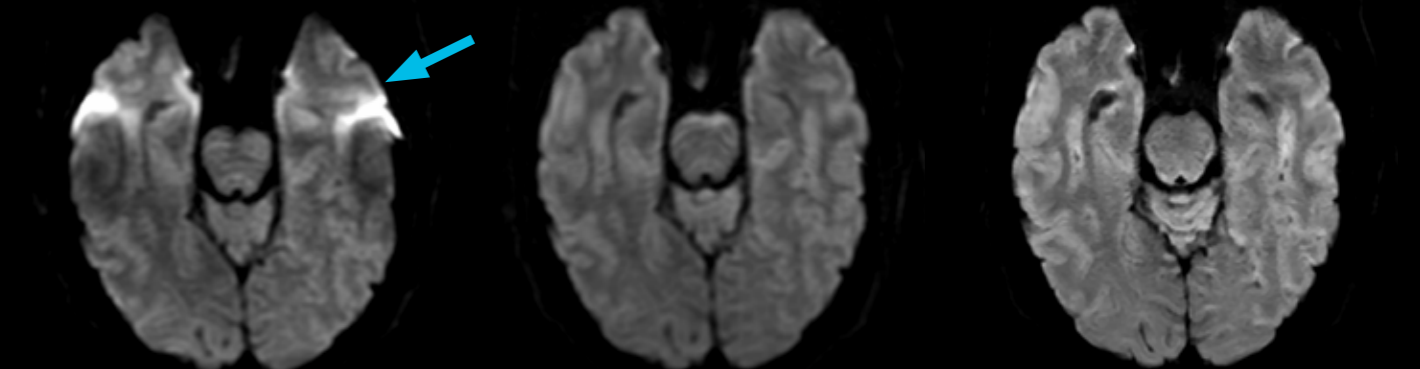
Coronal MUSE DWI

Axial MUSE DWI

Sagittal MUSE DWI b800

# PROGRES

PROGRES provides automated distortion and eddy current correction, based on an integrated Reversed Polarity Gradient (RPG) acquisition.



EPI DWI without PROGRES

EPI DWI with PROGRES

MUSE DWI with PROGRES





# Elevate

Raise your MR performance to new heights with groundbreaking technology

Designed to overcome barriers, SIGNA™ Artist's cutting edge platform makes it the most versatile, adaptable and powerful 1.5T system available from GE.

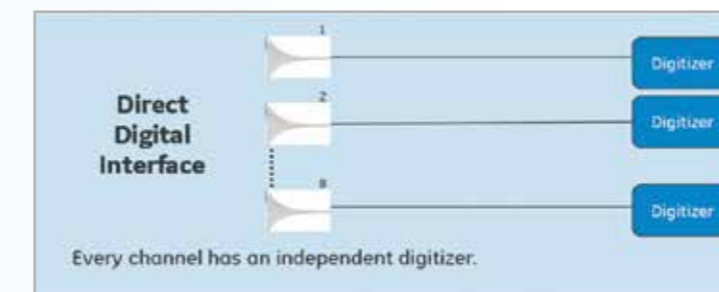
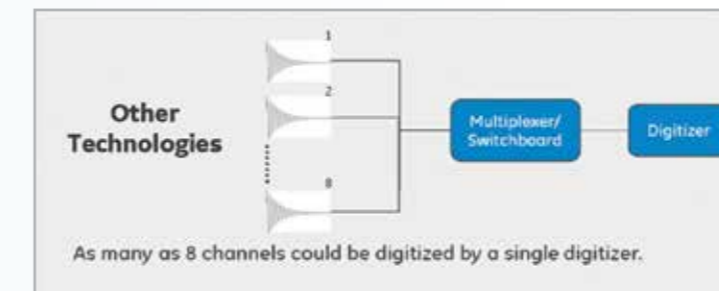
Now feet-first, whole-body coverage is made easy. Dynamic yet insightful, the SIGNA™ Artist is MR built to work for you.

## Total Digital Imaging (TDI)

The SIGNA™ Artist offers startling advances in imaging and a total imaging win with TDI.

TDI offers advances in imaging with this unique technology. Its powerful infrastructure supports the use of AIR™, redefining clinical excellence with consistent, high-quality imaging.

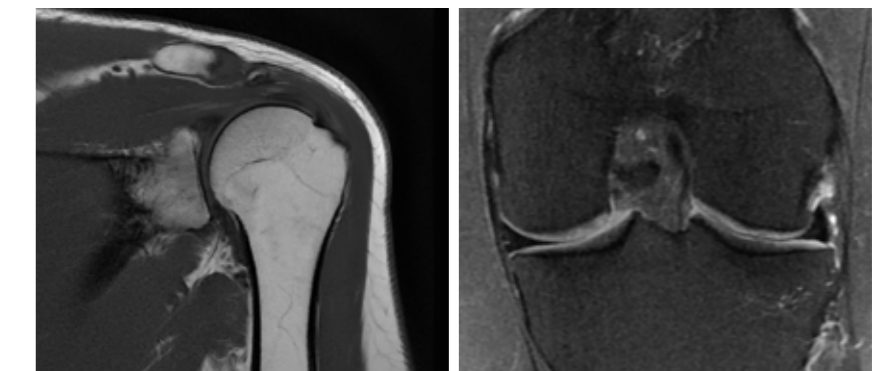
- **Direct Digital Interface (DDI)** employs an independent analog-to-digital converter to digitize inputs from each up to 128 RF channels, eliminating unnecessary noise enhancement. In other words, every element translates to a digitized signal.
- Designed for higher SNR and uniformity – up to 25% higher SNR.
- **AIR™** enables reaching unmatched 88ch and 120ch image in a single FOV.



## 16-channel Shoulder and T/R Knee Coils

The 16-channel shoulder coil is a novel anatomy-adaptive coil design that provides efficient positioning workflow and outstanding patient comfort. The flexibility of the anterior paddle makes it possible to get closer to the patient to maximize SNR and improve imaging outcomes.

The 16-channel transmit/receive (T/R) knee coil delivers high-resolution knee imaging. The T/R design provides improved B1 performance with the potential for higher resolution results, lower SAR and elimination of image backfolding. The larger diameter accommodates a wider range of patients and allows for simplified patient setup and higher patient comfort. The new design supports image acceleration in all directions for faster and enhanced clinical outcomes.





# Transform

Designed with patients in mind

The SIGNA™ Artist transforms the 1.5T MR experience. The result is an MR system with an improved patient experience, exceptional imaging performance and access to a wide range of innovative applications.

Gain operational efficiencies and ensure you transform your MR experience in every aspect of your practice.

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#### **eXpress Dockable Table**

Lightweight eXpress dockable table for fast extraction and improved patient preparation workflow.

#### **Feet-first scanning**

Reduce patient anxiety with feet-first scanning for all exams.

#### **Adapting to all patients**

Free-breathing for any examination, including dynamic studies as well as compatible needle-free and motion-correction techniques.





For more information, visit [gehealthcare.com/mr](http://gehealthcare.com/mr) or contact your GE Healthcare Sales Representative.

GE Healthcare is a leading provider of medical imaging, monitoring, biomanufacturing, and cell and gene therapy technologies.

GE Healthcare enables precision health in diagnostics, therapeutics and monitoring through intelligent devices, data analytics, applications and services. With over 100 years of experience and leadership in the healthcare industry and more than 50,000 employees globally, GE Healthcare helps healthcare providers, researchers and life sciences companies in their mission to improve outcomes for patients around the world.

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**Imagination at work**

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JB76862FR