TOMORROW TODAY

SIGNA™ Artist

AIR™ Edition

gehealthcare.com/mr

A masterful balance of comfort and productivity

Designed with both patients and providers in mind, the SIGNA™ Artist AIR™ Edition, GE Healthcare's premium 1.5T MR system, leverages intelligent scanning technology to enable comfortable, patient-friendly exams with optimal image quality in less time. The SIGNA™ Artist provides feet-first imaging and 360 degrees of coil coverage to accommodate all types of scans and patient sizes, helping to reduce patients' table time by 37%. From plan to scan, your practice will appreciate the system's versatility – delivering consistent image quality, while improving exam setup productivity by 59%.

AIR™

A simply better MR experience

The AIR™ family of products delivers clinical versatility, intelligent productivity improvements and consistently superior image quality.

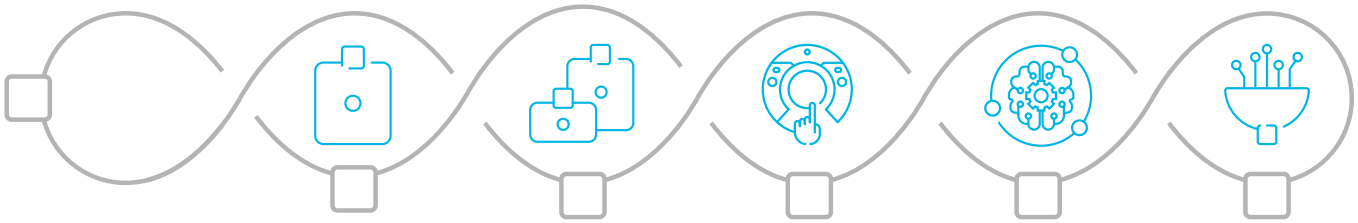
AIR™ Coils

Clinical versatility and comfort

Awarded Best New Radiology Device of 2019, AIR™ Coils are the foundation of a simply better MR experience. The engineering breakthrough at the heart of our AIR™ Coils allowed us to create a revolutionary coil design that is lighter, offers more flexibility and provides greater coverage, laying the groundwork for greater positioning freedom and a comfortable patient experience.

- **AIR™ Anterior Array Coil** – Scan the chest, abdomen and pelvis without repositioning the coil.
- **AIR™ Multi-Purpose Coils*** – Easy ortho, body and cardiac scans with medium and large sizes.

** Not yet CE marked. Not available for sale in all regions.*

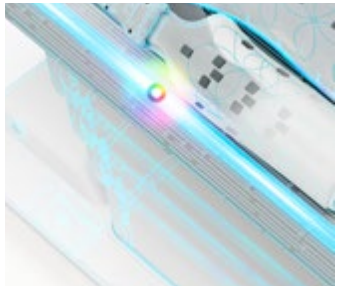


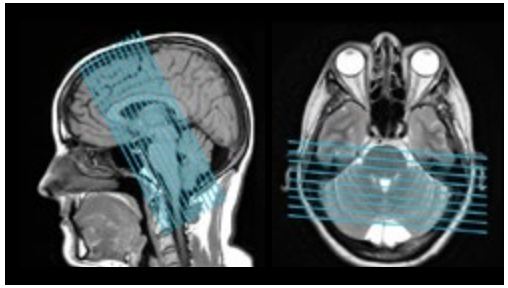
AIR™ Workflow

Intelligent productivity improvements

Enhance your MR productivity with intelligent workflow applications developed to optimize your scans. AIR™ Workflow helps you accelerate scan times, increase diagnostic confidence across skill levels and consistently deliver accurate results. Automated applications, AIR Touch™ and AIR x™, make a clinically impactful difference for a simply better workflow.

- **AIR Touch™** – Smart coil selection that automatically knows the best combination for every patient. With AIR Touch™, you simply use IntelliTouch™, GE's 1-touch landmarking tool, to activate an optimized set of coils that is selected based on the patient's anatomy.
- **AIR x™** – Intelligent MR slice prescription for routine and challenging neurological exams. Powered by a deep-learning algorithm created from a database of 36,000 images, AIR x™ automatically detects anatomy and prescribes slices in the brain.



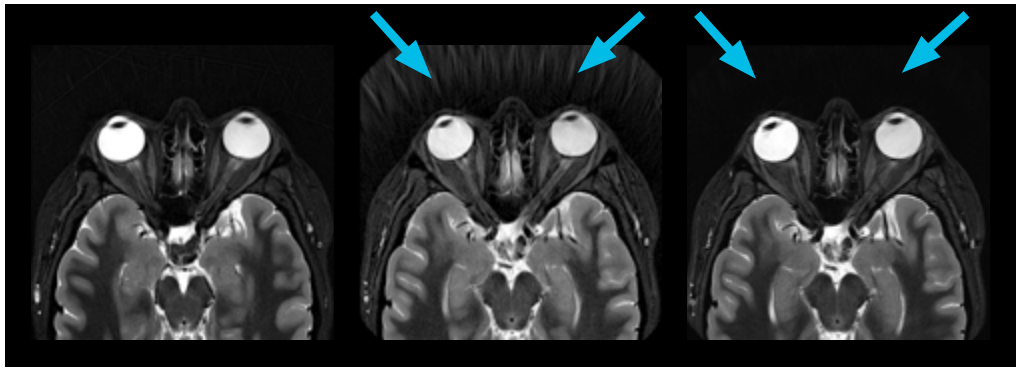


AIR™ Image Quality

Consistently superior image quality

AIR™ Image Quality completes the AIR™ family of products with image reconstruction software that reduces background noise and out-of-FOV artifacts. It helps improve signal-to-noise in every image without having to overcompensate in your scanning protocol.

- **AIR™ Recon** – Makes exceptional and consistent image quality in faster scan times the new standard for MR imaging.



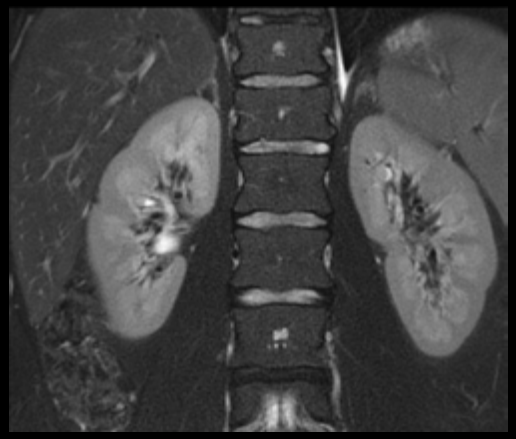
Before
Axial T2 STIR PROPELLER
0.5 x 0.5 x 2.5 mm
4:33 min
1.7 No Phase Wrap

Before
Axial T2 STIR PROPELLER
0.5 x 0.5 x 2.5 mm
3:33 min
1.3 No Phase Wrap

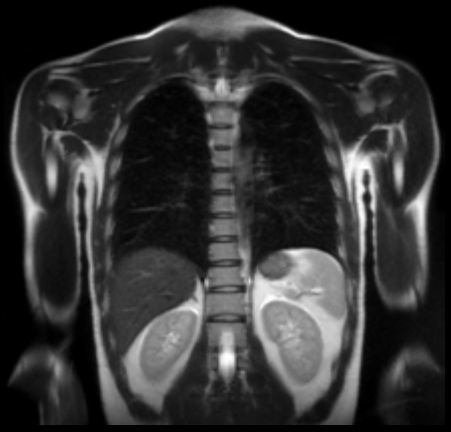
Using SIGNA™Works AIR™ Edition
Axial T2 STIR PROPELLER
0.5 x 0.5 x 2.5 mm
3:33 min
1.3 No Phase Wrap with AIR™ Recon

AIR™ Anterior Array Coil

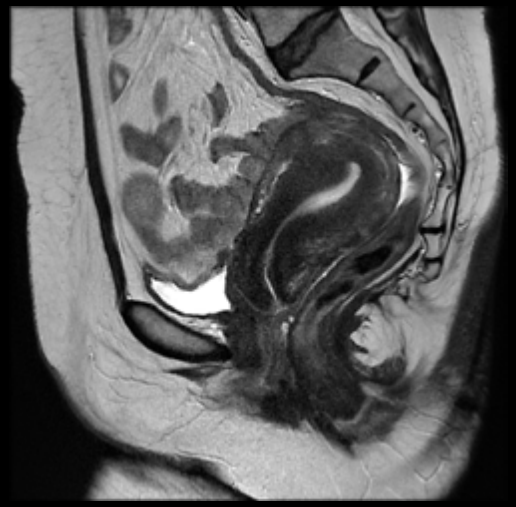
Industry-leading flexibility allows you to scan the chest, abdomen and pelvis without repositioning the coil.



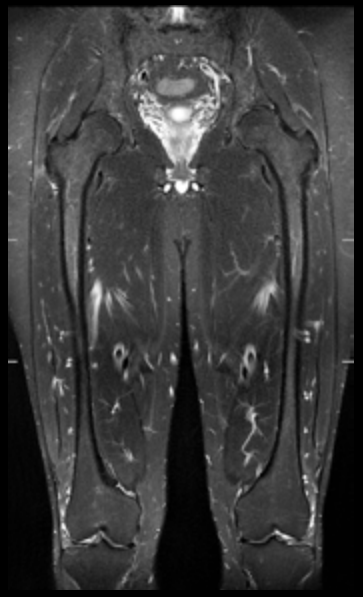
Coronal T2 PROPELLER FatSat
Free-breathing with Auto Navigator
0.8 x 0.8 x 4.0 mm



Coronal, 55 cm FOV, 24 sec.
21ch Head/Neck Unit + 30ch AIR™ Anterior Array Coil + 40ch Posterior Array



Sagittal T2 PROPELLER
0.7 x 0.7 x 3.5 mm

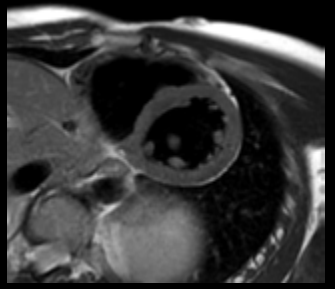


Coronal STIR
56 cm FOV
2 stations

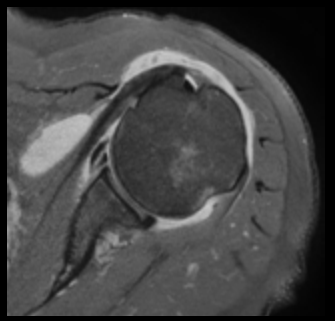
AIR™ Multi-Purpose Coils*

Easily perform pediatric, ortho, body and cardiac scans with medium and large sizes.

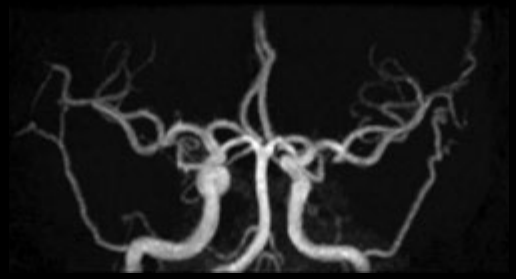
Coronal PD FatSat
0.4 x 0.6 x 3 mm



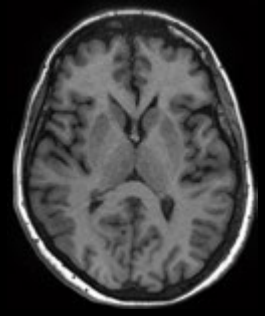
Short Axis T2 Double IR
1.2 x 1.4 x 10 mm



Axial PD FatSat
0.4 x 0.6 x 3 mm



Axial 3D TOF with HyperSense
0.56 x 0.56 x 1 mm
2:47 min.



Axial 3D T1 BRAVO
1 x 1 x 1.2 mm
3:19 min.

** Not yet CE marked. Not available for sale in all regions.*

SIGNA™ Works AIR™ Edition

Exceptional versatility, productivity and image quality

Imagine a software package that can help you do more with less. This is the goal of SIGNA™Works AIR™ Edition, GE's latest software release, which introduces simply better technologies and improvements to your MR scanner. Whether it's simplifying scan setup, accelerating image acquisition or improving patient comfort, AIR™ packs innovations that deliver versatility, productivity and consistent quality to all customers.

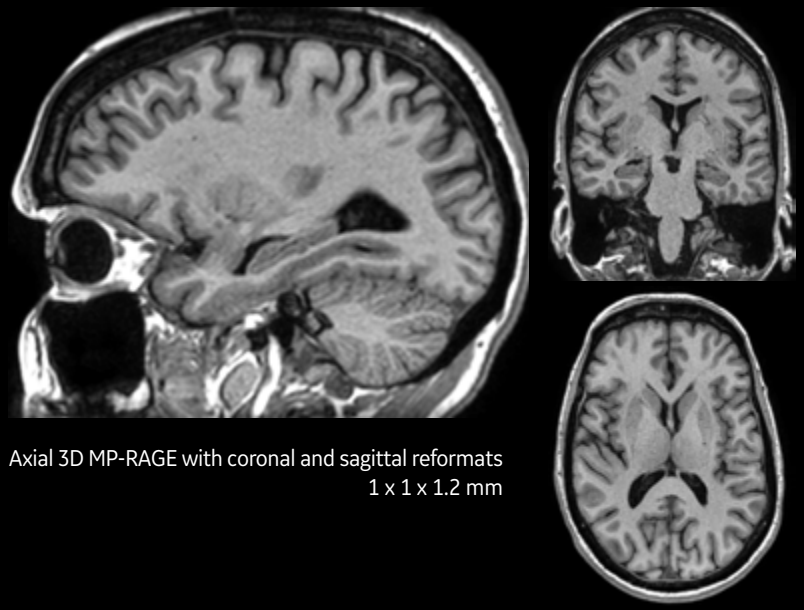
In addition, this release brings new applications along with enhancements to existing applications with the goal of empowering any technologist to easily deliver images with remarkable clarity.

NeuroWorks

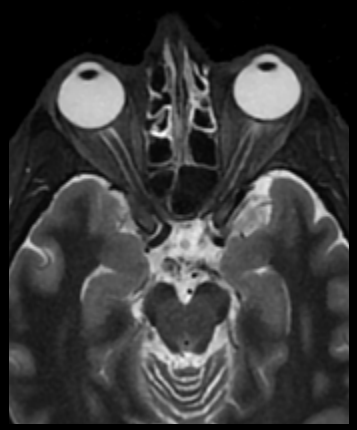
This one-stop solution enables you to image brain, spine and vascular anatomy with exceptional tissue contrast. These motion-insensitive techniques feature single-click auto alignment, providing the complete neuro solution from scanning to post processing.

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

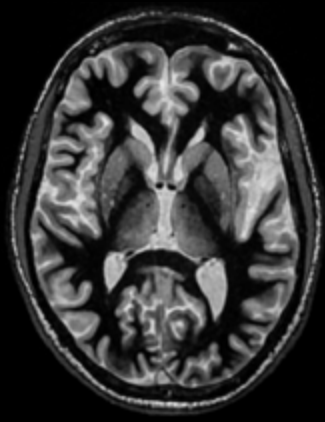
Preserve tissue contrast, both in T1 and T2 scans, while also reducing motion artifacts with PROPELLER MB.



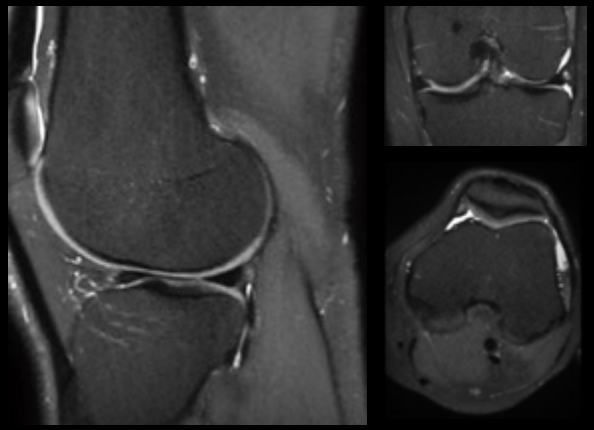
Axial 3D MP-RAGE with coronal and sagittal reformats
1 x 1 x 1.2 mm



T2 STIR PROPELLER
Axial 0.77 x 0.77 x 2 mm



3D BRAVO
White matter nulling



Cube PD FatSat
0.6 x 0.6 x 0.6 mm
HyperSense* 2 x 2 x 1.5
4:29 min.

Coronal PD PROPELLER
0.4 x 0.4 x 3 mm

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.

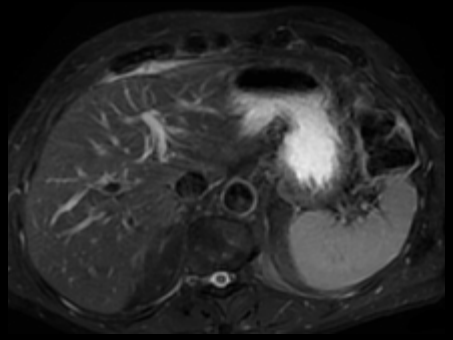
** Purchasable option.*

BodyWorks

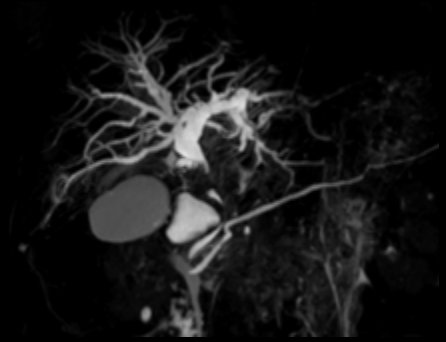
Scan whole-body, abdominal and pelvic anatomy with speed and flexibility to adapt to different patient types.

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 multi-phase T1 imaging.

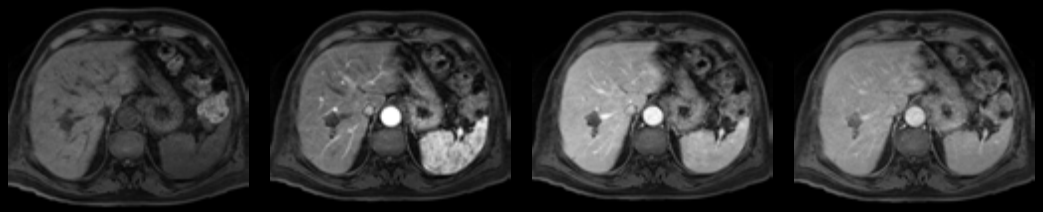
Coronal T2 SSFSE
Large FOV



Axial T2 FatSat PROPELLER free-breathing
with Auto Navigator



3D MRCP Navigated with HyperSense*
0.9 x 0.9 x 1.8 mm
3:15 min.

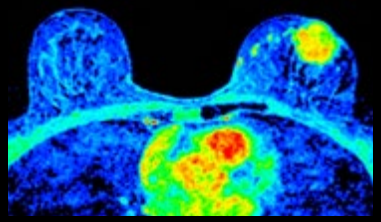


Axial LAVA
Free-breathing with Auto Navigator
1.4 x 2.2 x 4.4 mm

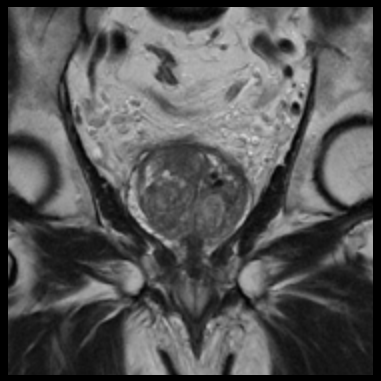
OncoWorks

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

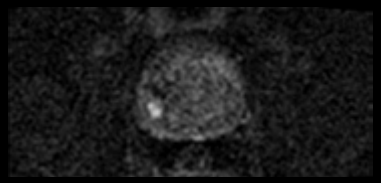
3D volumetric imaging with an optimized adiabatic fat suppression, combined with ARC or ASSET, provides high spatial and temporal resolution capture contrast uptake patterns.



Axial T1 Dynamic Contrast
Positive Enhancement
Integral Map

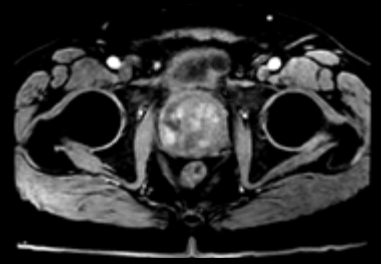


Coronal T2 PROPELLER
0.6 x 0.6 x 4 mm
Small FOV and motion-correction



DWI FOCUS* – b1000

Whole-body
Coronal LAVA Flex
T1 water image



3D DISCO* Flex

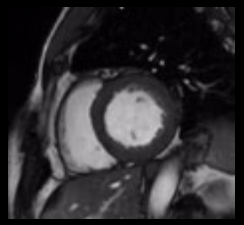
** Purchasable option.*

CVWorks

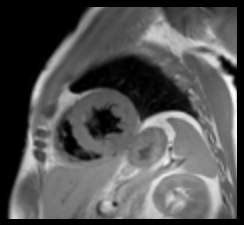
Intuitive cardiac techniques that adapt to different patient types. Assess morphology, flow, function and tissue viability to gain crucial insights into vascular structure and flow dynamics.

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

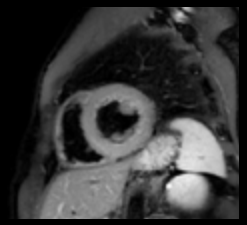
With our workflow-simplified QuickStep protocols, scanning whole body vasculature can be done in less than 6 minutes. High-performance gradients allow bright blood pool and myocardial tissue contrast on FIESTA Cine with high spatial and temporal resolution.



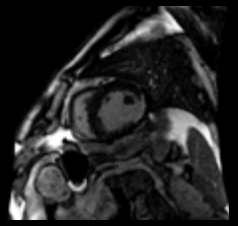
Short Axis 2D
FIESTA Cine



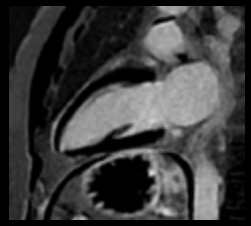
Black Blood T1



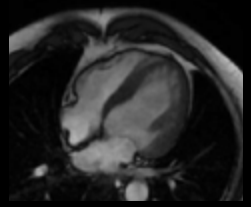
Black Blood SSFSE T2
ASPIR



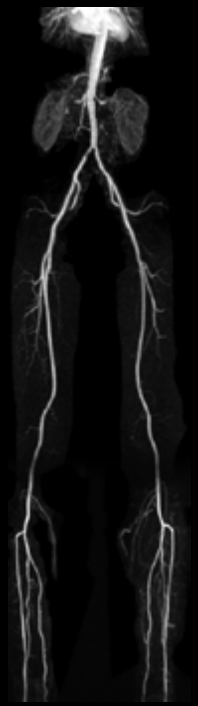
PSIR Single Shot MDE



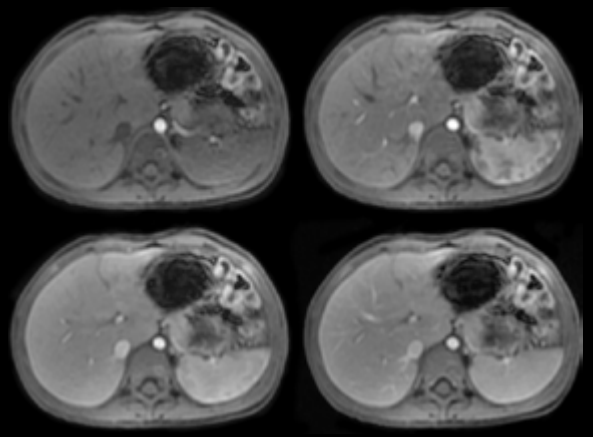
PS MDE



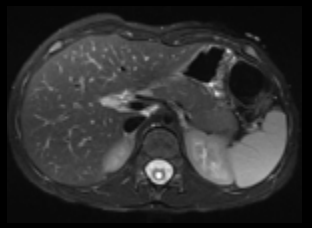
4ch FIESTA Cine



QuickStep MRA



Turbo LAVA with
free-breathing Auto
Navigator 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. PROPELLER can be combined with Auto Navigator and diffusion imaging for patient-friendly, free-breathing exams.

When it comes to cardiac, Single Shot MDE provides faster and more reliable results.

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

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. Improve image quality, efficiency and workflow with innovative applications including HyperSense and HyperBand for acceleration, and HyperCube for 3D imaging.

HyperMAVRIC SL* automatically tailors the acquisition to the patient's implant. When used with MAVRIC SL, HyperMAVRIC SL can enable 40% shorter scan times, and as a 3D acquisition, it can provide isotropic resolution that can lead to improved lesion conspicuity.[1]

ViosWorks*
ViosWorks leverages deep learning and the imaging analytic power of the Arterys™ cloud-based platform to precisely visualize and quantify cardiac flow in a single, free-breathing acquisition.

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

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*
MUSE reduces blurring and susceptibility induced distortions compared to conventional parallel imaging techniques while pushing the boundaries of spatial resolution for DWI/DTI imaging.

PROGRES*
Improve diffusion image quality even more with the distortion correction of PROGRES. PROGRES cleans up unwanted distortion artifacts on DWI/DTI images as well as enables up to 300 diffusion tensor directions.

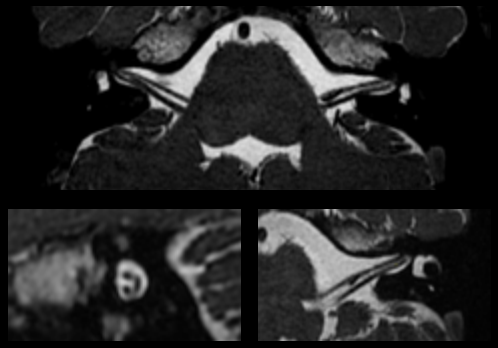
** Purchasable option.*

HyperWorks*

HyperCube

Significantly reduce scan times and minimize artifacts such as motion and aliasing with the expanded 3D imaging capabilities of HyperCube.

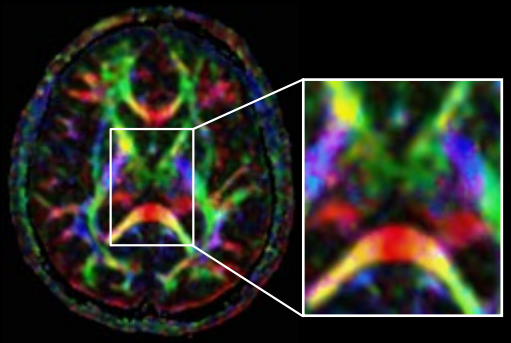
Coronal T2 HyperCube Flex
Brachial Plexus
Water image – MIP
1.2 x 1.2 x 1.4 mm
3:49 min.



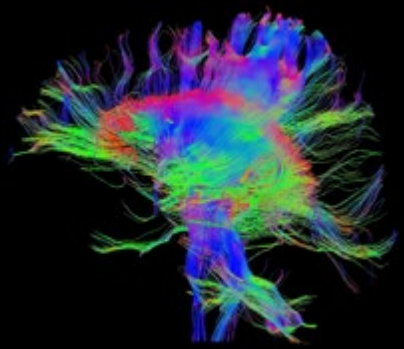
Axial T2 HyperCube IAC with HyperSense
0.6 x 0.6 x 0.8 mm
3:26 min.

HyperBand

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



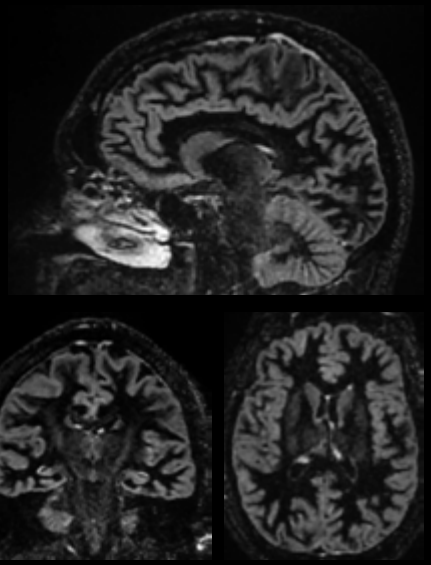
HyperBand colored orientation map



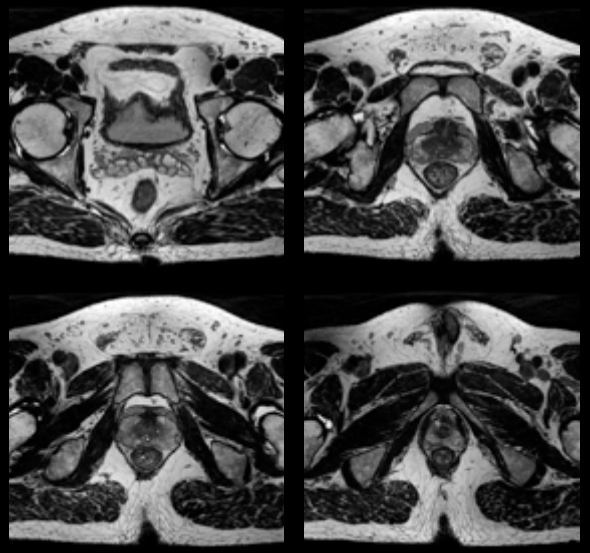
HyperBand DTI

HyperSense

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



Sagittal 3D Cube DIR
with HyperSense
1.3 x 1.3 x 1.4 mm
4:02 min.



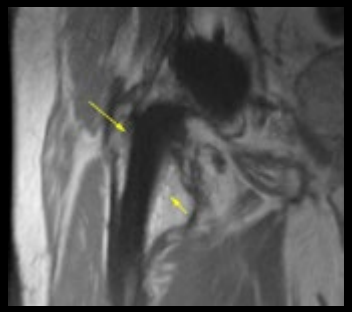
HyperCube T2 with HyperSense
0.7 x 0.7 x 0.7 mm
3:58 min.

Axial 3D TOF COW
with HyperSense
0.7 x 0.8 x 1.0 mm
2:38 min.

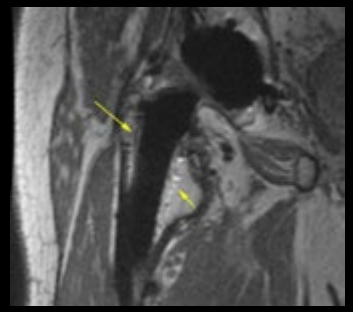
** Purchasable option.*

HyperMAVRIC SL

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



MAVRIC SL PD
0.4 x 0.6 x 4 mm



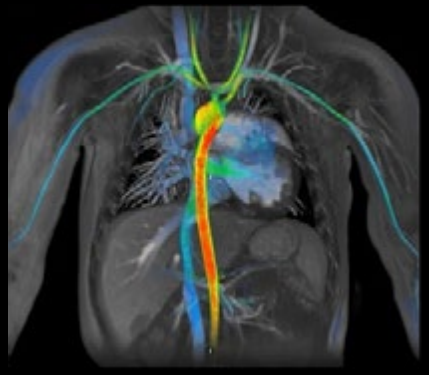
HyperMAVRIC SL PD
1.3 mm isotropic

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

ViosWorks*

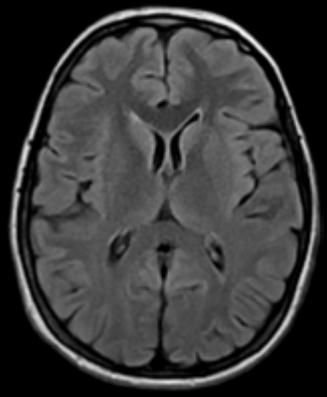
Complete a whole heart functional exam in a non-gated, free-breathing acquisition. ViosWorks 4D Flow accelerates acquisition using HyperKat reconstruction to capture routine clinical information and aid in imaging of complex anatomy.

ViosWorks 4D Flow helps you get functional cine information, along with flow velocity and direction of flow information.

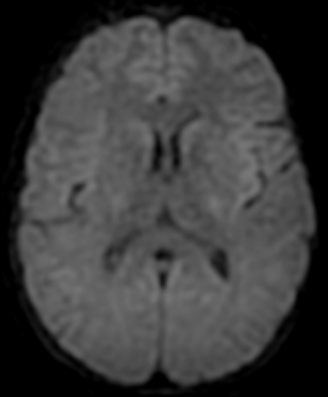


SilentWorks*

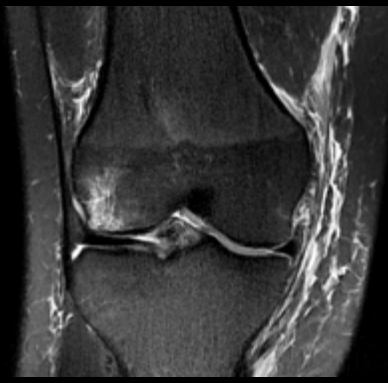
SilentWorks is available across all anatomies and can be done with multiple coils and weightings, including DWI. And with new enhancements like 3D Silenz and PROPELLER MB, your exam time is shortened without compromise.



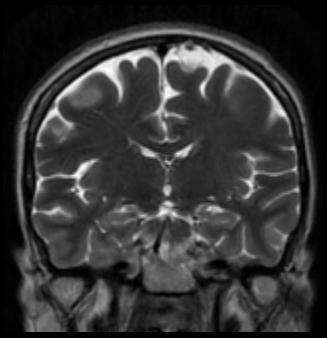
Axial T2 FLAIR
Silent PROPELLER <11 dB
0.9 x 0.9 x 5 mm



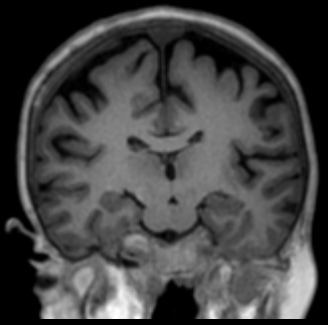
Axial DWI
Silent PROPELLER <11 dB
2.1 x 2.1 x 5 mm



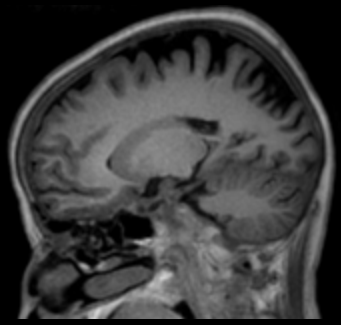
T2 PROPELLER FatSat
Coronal with SilentScan



Coronal T2
Silent PROPELLER <11 dB
0.8 x 0.8 x 4 mm



Coronal reformat
(Sagittal T1 Silenz <3 dB)
1.2 x 1.2 x 1.2 mm

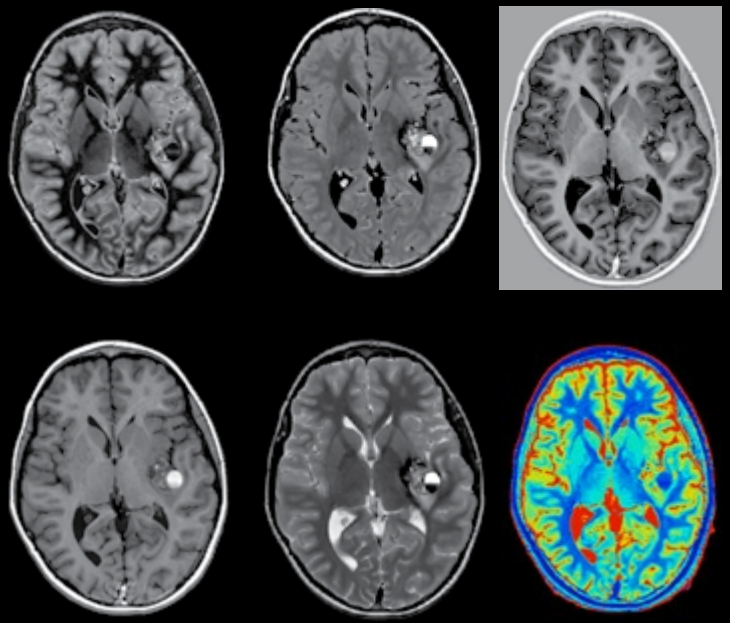


Sagittal T1 Silenz <3 dB
1.2 x 1.2 x 1.2 mm

ImageWorks*

MAGiC

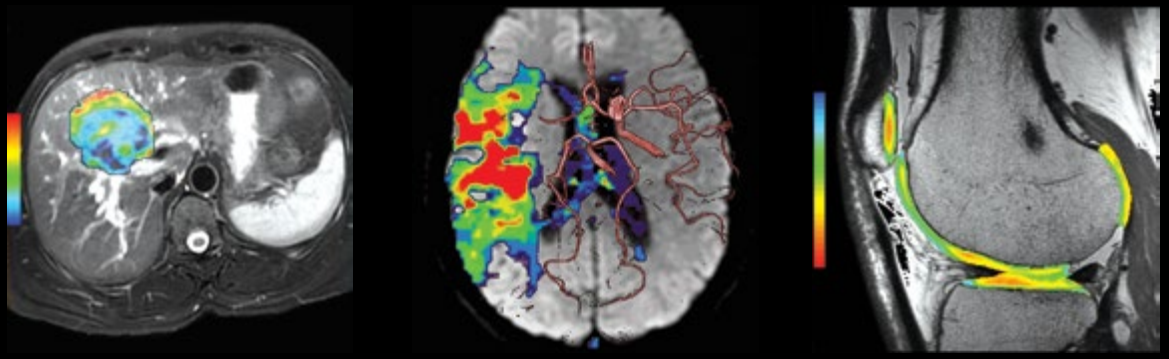
The secret of MAGiC lies in its unique ability to deliver multiple image contrasts in a single neuro scan. MAGiC delivers enhanced clinical flexibility by freeing up time for advanced imaging. MAGiC goes beyond the routine, providing complementary parametric data for a more complete picture. Image contrast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



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

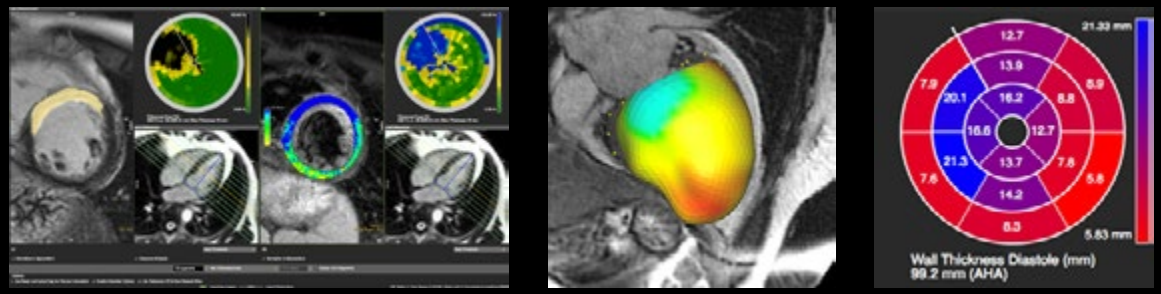
It is recommended to acquire conventional T2 FLAIR images in addition to MAGiC.

** Purchasable option.*



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.



cvi42®

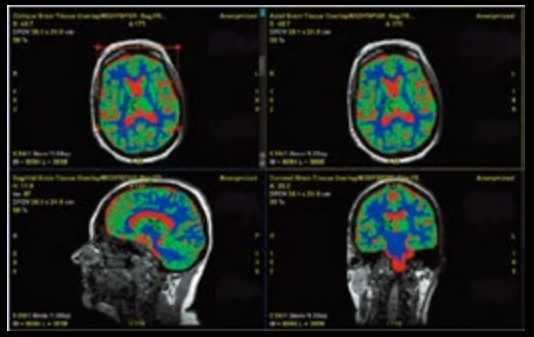
cvi**42**® is a deep-learning based, comprehensive cardiovascular post processing solution that uses automated algorithms to characterize tissue, generate maps, and assess flow and function.

Quantib™ Brain

Quantib™ Brain is a medical imaging processing software using machine learning 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.

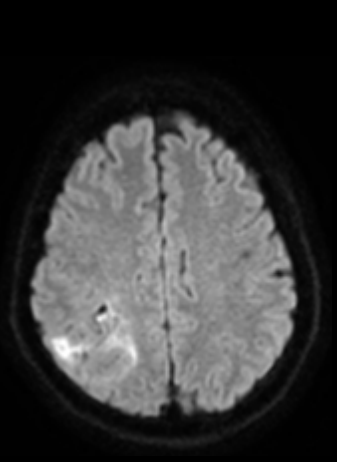


** Purchasable option.*

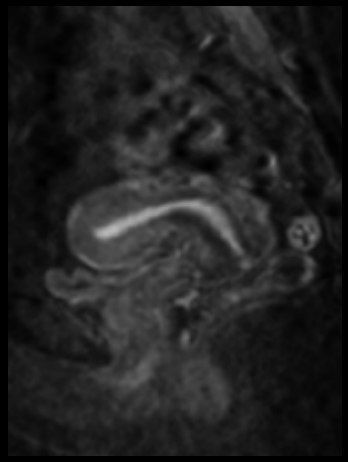
MUSE*

MUSE delivers sharper DWI/DTI images by reducing blurring and susceptibility induced distortions compared to conventional parallel imaging techniques. Use MUSE in areas vulnerable to susceptibility artifacts, such as the brain and prostate.

Coronal MUSE DWI



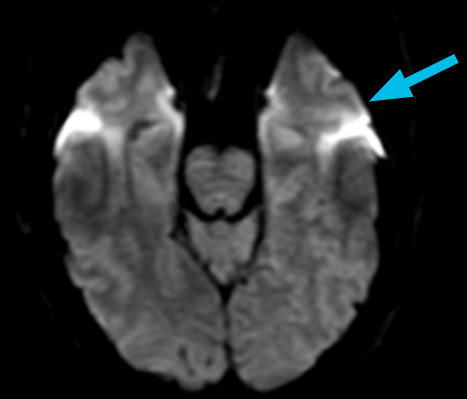
Axial MUSE DWI b1000



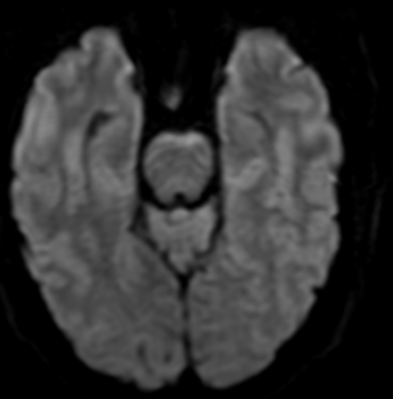
Sagittal MUSE DWI b800

PROGRES*

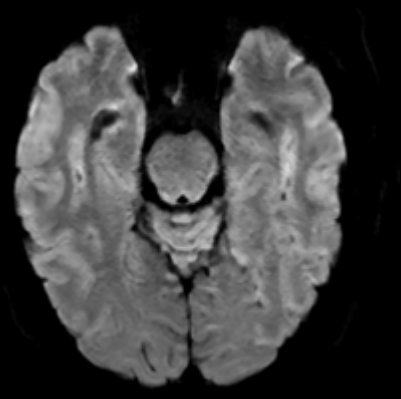
PROGRES, which includes Distortion Correction, addresses distortion in diffusion scans that typically arises from B_0 inhomogeneity and the EPI readout but can also occur less frequently from motion and gradient-related imperfections such as eddy currents.



EPI DWI without PROGRES



EPI DWI with PROGRES



MUSE DWI with PROGRES

MR technology that empowers your performance

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

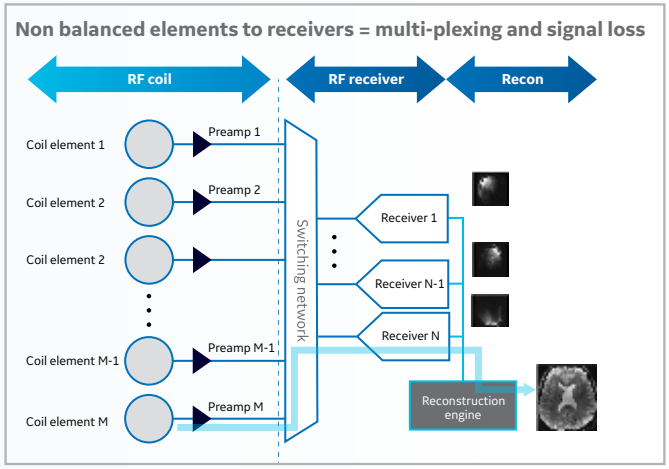
Now feet-first, whole-body coverage is made easy. Dynamic yet insightful, the SIGNA™ Artist is MR built to work for you.

Total Digital Imaging (TDI)

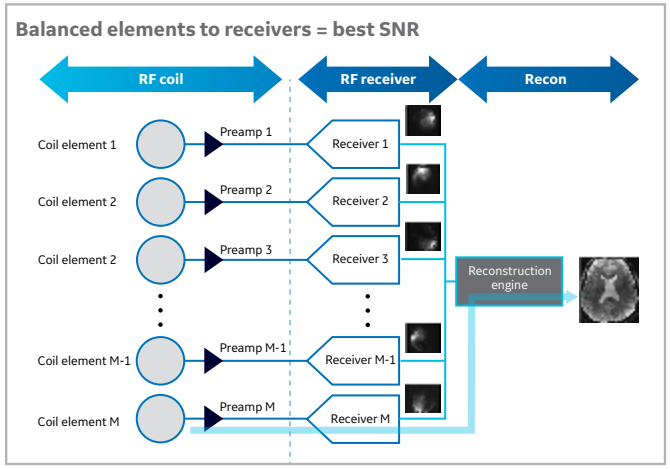
The SIGNA™ Artist AIR™ Edition offers startling advances in imaging and a total imaging win with TDI.

TDI's powerful infrastructure supports the use of AIR™ Coils, redefining clinical excellence with consistent, high-quality imaging.

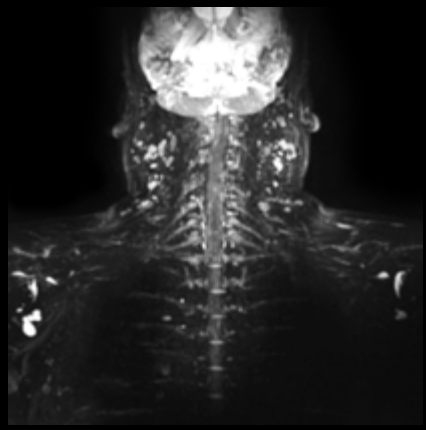
- **Total Digital Imaging (TDI)** employs an independent analog-to-digital converter to digitize inputs from each of up to 128 RF channels, eliminating unnecessary noise enhancement. In other words, every element translates to a digitized signal.
- Designed for higher SNR and uniformity – up to 25% higher SNR.
- **AIR™ Coils**, combined with TDI, allow for an unmatched 88 channels within a single FOV to maximize parallel imaging, resolution and scan time.



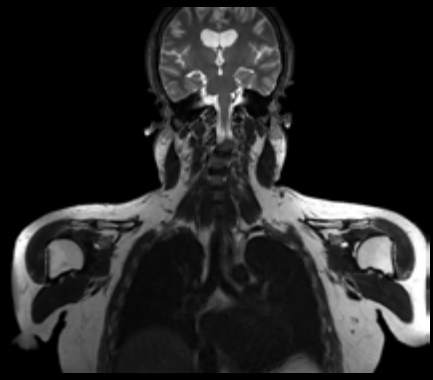
Conventional MR



SIGNA™ Artist AIR™ Edition with TDI



Coronal T2 STIR HyperSense and HyperCube
3x Phase + 1.3x HyperSense Acceleration
1.8 x 1.8 x 1.4 mm



88 channels within FOV
19ch Head/Neck Unit +
(2) 30ch AIR™ Anterior Array Coils +
40ch Posterior Array

We keep your upgrade options open

Get The Works gives you the power of choice in upgrading just your software, upgrading your software and hardware or upgrading to a completely new system built around your existing magnet. Depending on which MR model you have, there may be a couple of options for you. With Get The Works, it is all about making the right equipment upgrade decision easy for your organization.

- **A fraction of the cost** – Up to 50% savings in construction costs vs. a new system install‡
- **Minimize downtime** – The upgrade can be completed in as few as 4-5 days, reducing install time by up to 60%‡

‡ *Results may vary*

You should never compromise between patient comfort and your productivity

And with artificial intelligence (AI) scanning technologies such as AIR x™, cvi**42**® and Quantib Brain, your SIGNA™ Artist brings you the best of both worlds. Experience the masterful balance of patient-friendly exams with optimal image quality in less time.

Maximum comfort and versatility

- 360 degrees of coil coverage accommodating all types of scans and patient sizes
- Feet-first option reduces claustrophobia rejection rate by 90%[2]
- Lightweight eXpress dockable table for fast extraction and improved patient preparation workflow
- Free-breathing for any examination, including dynamic studies as well as compatible needle-free and 2D/3D motion-correction techniques

Consistent image quality

- 80% of cases get improved IQ without added time with AIR™ Recon
- Leverage the highest number of channels within your FOV to boost IQ and productivity

Accuracy and agility

- 59% productivity gain in exam set-up and 37% reduction in table time with AIR Touch™‡
- 5x faster set-up time and 4x fewer mouse clicks with AIR x™‡

The SIGNA™ Artist AIR™ Edition is another way GE Healthcare is bringing you tomorrow's MR today.

‡ Results may vary.

For more information, visit gehealthcare.com/mr or contact your GE Healthcare Sales Representative.

GE Healthcare is a leading global medical technology and digital solutions innovator. GE Healthcare enables clinicians to make faster, more informed decisions through intelligent devices, data analytics, applications and services, supported by its Edison intelligence platform. With over 100 years of healthcare industry experience and around 50,000 employees globally, the company operates at the center of an ecosystem working toward precision health, digitizing healthcare, helping drive productivity and improve outcomes for patients, providers, health systems and researchers around the world. Follow us on Facebook, LinkedIn, Twitter and Insights , or visit our website www.gehealthcare.com for more information.

1 Zochowski, K., Miranda, M., Cheung, J., Argentieri, E., Lin, B., Kaushik, S., Burge, A., Potter, H. and Koff, M., 2019. MRI of Hip Arthroplasties: Comparison of Isotropic Multiacquisition Variable-Resonance Image Combination Selective (MAVRIC SL) Acquisitions With a Conventional MAVRIC SL Acquisition. American Journal of Roentgenology, 213(6), pp.W277-W286.

2 Dewey, M., Schink, T. and Dewey, C., 2007. Claustrophobia during magnetic resonance imaging: Cohort study in over 55,000 patients. Journal of Magnetic Resonance Imaging, 26(5), pp.1322-1327.

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