TOMORROW TODAY

SIGNA™ Architect

Fueled by SIGNA™Works

gehealthcare.com/mr

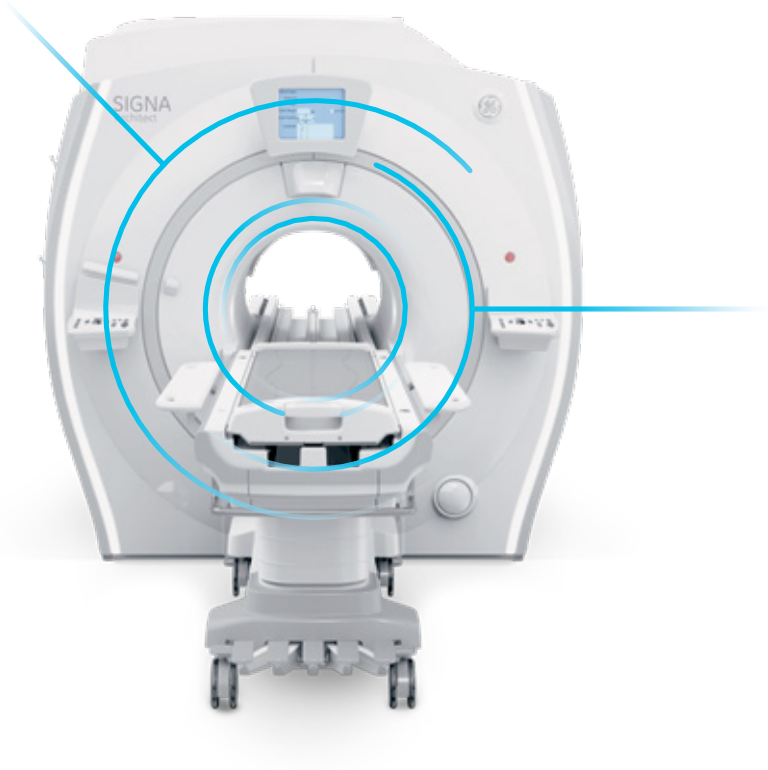

SIGNA
Architect

Unleash

Clear advances with clear advantages

Now the potential for MR is even more astonishing with the SIGNA™ Architect 3.0T, a state-of-the-art imaging solution that combines the advancements in MR technology with GE Healthcare's intuitive engineering. Fueled by our new SIGNA™Works productivity platform, the SIGNA™ Architect is a harmonious design of form and function. Everything in its blueprint is crafted to significantly energize your productivity, enhance security, improve diagnostics and boost your bottom line.

Welcome to the future of MR. Forge ahead with SIGNA™ Architect.



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.

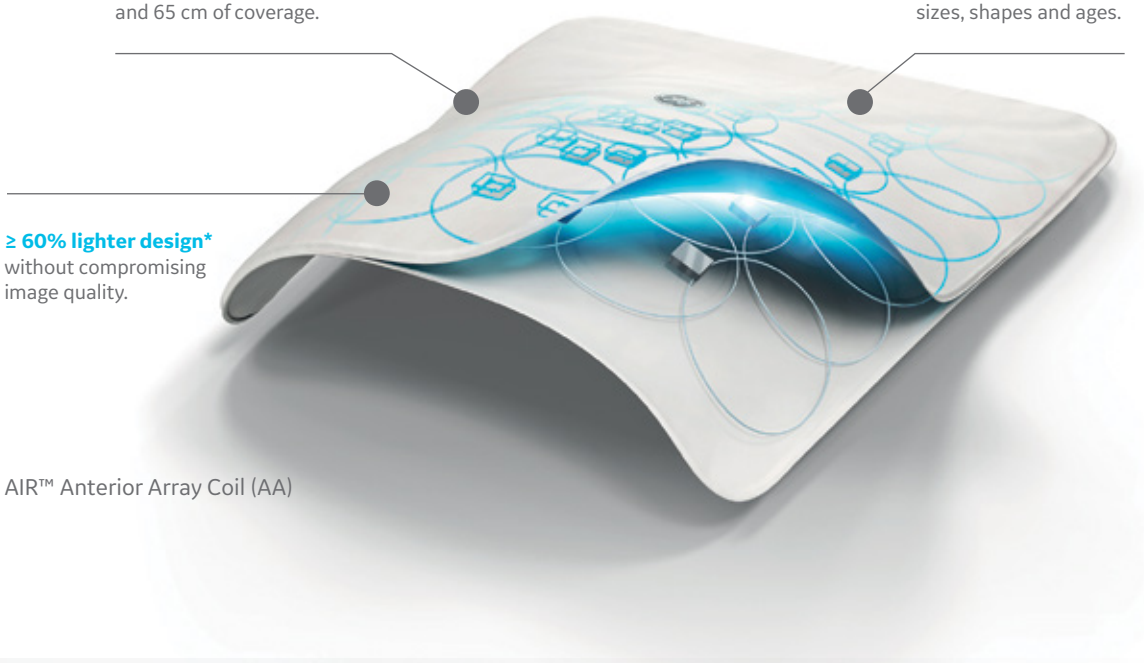
As a result, AIR™ is reinventing the way imaging should be.

AIR™
Simply better

Highest channel
count with 30 channels and 65 cm of coverage.

Highly **flexible to fit all** sizes, shapes and ages.

≥ 60% lighter design*
without compromising image quality.



AIR™ Anterior Array Coil (AA)

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

SNR

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

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

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.

AIR™ 48ch Head Coil

The AIR™ 48ch Head Coil delivers phenomenal performance for every patient, with a fit-adaptable design that addresses 99.99% of the population. It also preserves the highest SNR and supporting advanced imaging capabilities such as HyperWorks technologies. The AIR™ 48ch Head Coil is compatible with advanced features such as video goggles for patient comfort and fMRI studies, plus an industry-leading EEG-compatible design.

AIR Touch™

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.

AIR x™ Edison

Intelligent MR slice prescription

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

AIR™ Recon

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

SIGNA™ Works

The new standard is extraordinary

SIGNA™Works is the fuel that drives your imaging to the next level. The standard applications come pre-loaded with the SIGNA™ Architect, enabling you to achieve efficient and high-quality imaging. The application suite is upgradeable and customizable, giving you the flexibility to add applications to suit the needs of your growing practice.

SIGNA™Works takes full advantage of TDI (Total Digital Imaging), further advancing diagnostics and increasing 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.

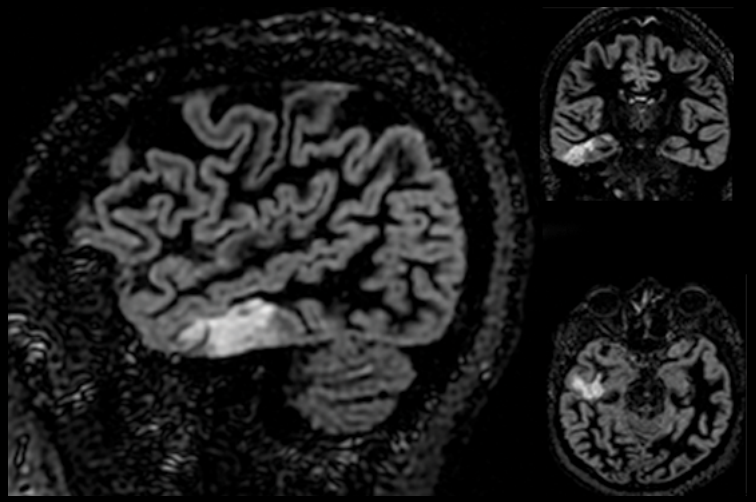
SIGNA™Works provides all the tools you need to complete a fast and high-quality clinical exam, including 2D, 3D and motion correction capabilities.

NeuroWorks

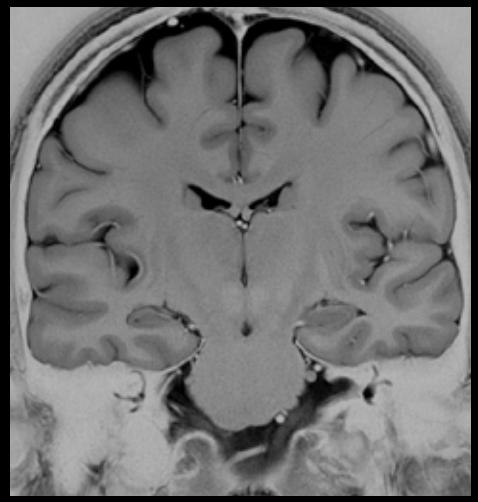
This one-stop solution enables you to image brain, spine, vascular and peripheral nerve anatomy with exceptional tissue contrast. These motion-insensitive techniques feature single-click auto alignment, providing the complete neuro solution from scanning to post processing.

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

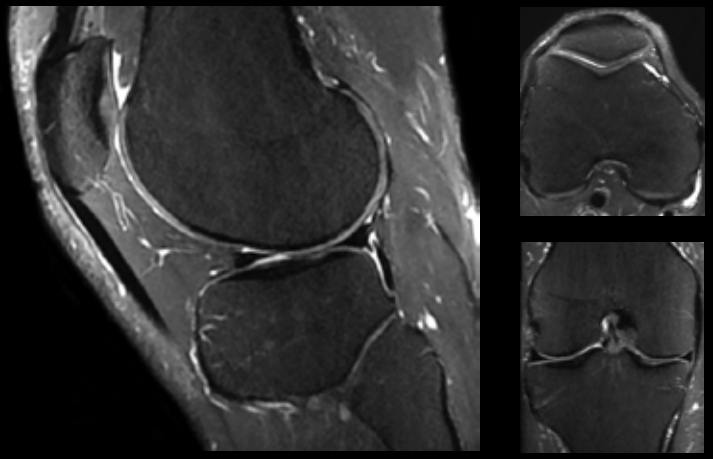
Preserve tissue contrast, both in T1 and T2 scans, while also reducing motion artifacts with PROPELLER MB.



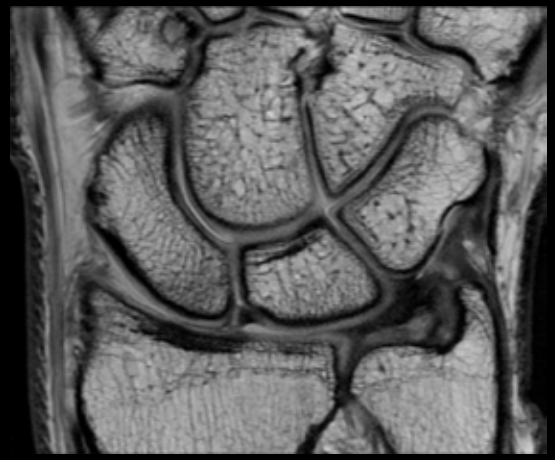
3D Cube DIR
1.4 x 1.4 x 1.4 mm



Coronal (inverted) T2 PROPELLER MB
0.6 x 0.6 x 3 mm



Sagittal PD FatSat Cube
0.6 x 0.6 x 1.2 mm



Coronal PD FatSat
0.2 x 0.3 x 2.5 mm

OrthoWorks

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

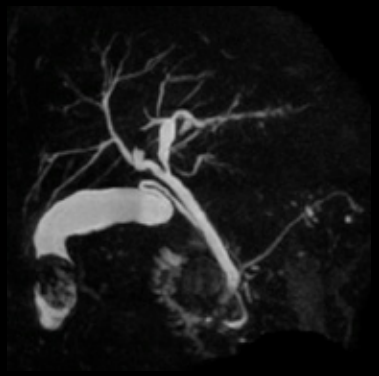
Cube, combined with ASPIR, produces proton-density 3D images with improved fat suppression uniformity.

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

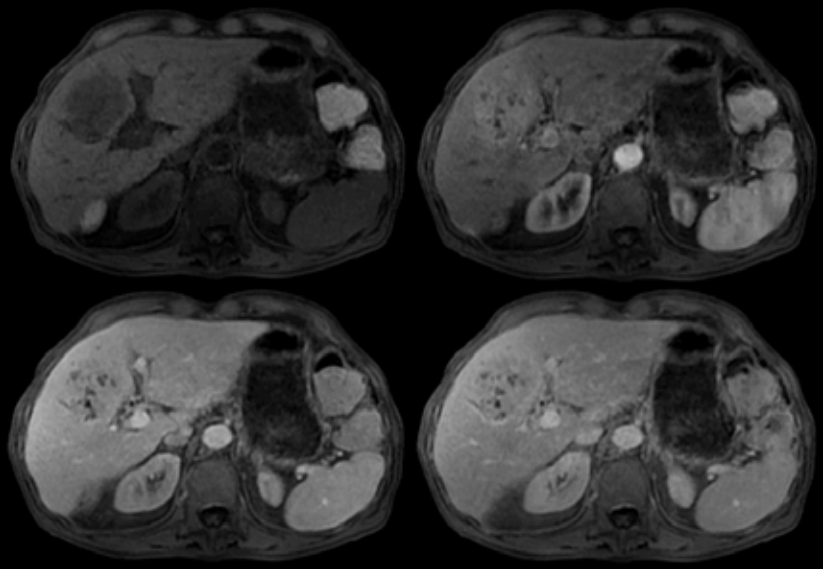
BodyWorks

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 MRCP
1.4 x 1.4 x 1.2 mm

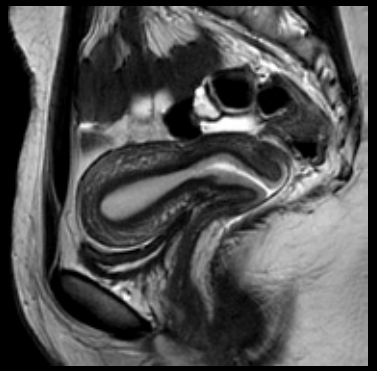


Axial Navigated Turbo LAVA
Free-breathing Dynamic Liver
1.9 x 2 x 4 mm
20 sec / phase

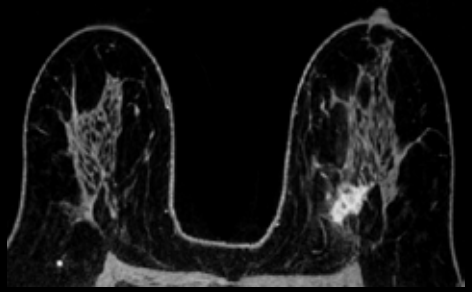
OncoWorks

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.

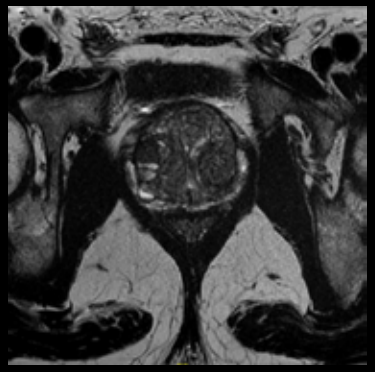
3D volumetric imaging with an optimized adiabatic fat suppression, combined with ARC or ASSET, provides high spatial and temporal resolution capture contrast uptake patterns.



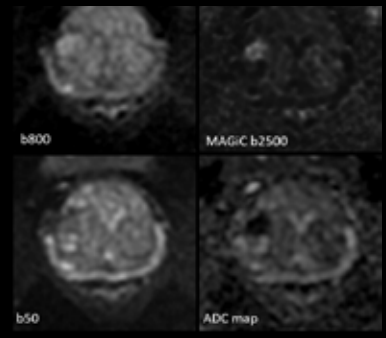
Sagittal T2 PROPELLER
0.75 x 0.75 x 4 mm



Axial T1 Vibrant
0.8 x 0.9 x 1.8 mm



Axial T2 FSE
0.7 x 0.7 x 2.5 mm



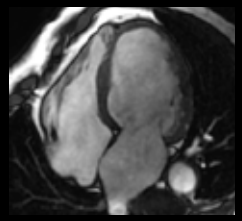
Axial DWI FOCUS
2 x 2 x 3 mm

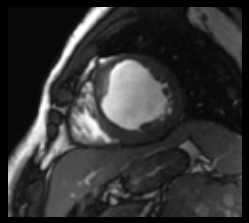
CVWorks

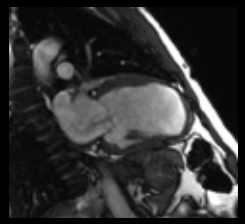
Intuitive cardiac techniques that adapt to different patient types. Assess morphology, flow, function and tissue viability to gain crucial insights into vascular structure and flow dynamics.

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.

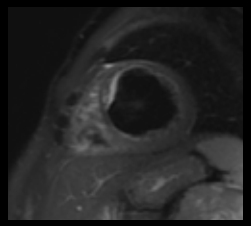
With our workflow-simplified QuickStep protocols, scanning whole body vasculature can be done in less than 6 minutes. High-performance gradients allow bright blood pool and myocardial tissue contrast on FIESTA Cine with high spatial resolution.

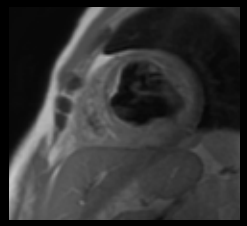




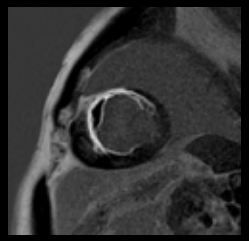


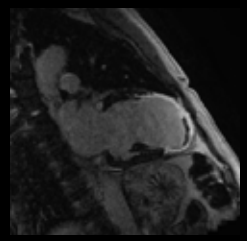
2D Cine FIESTA





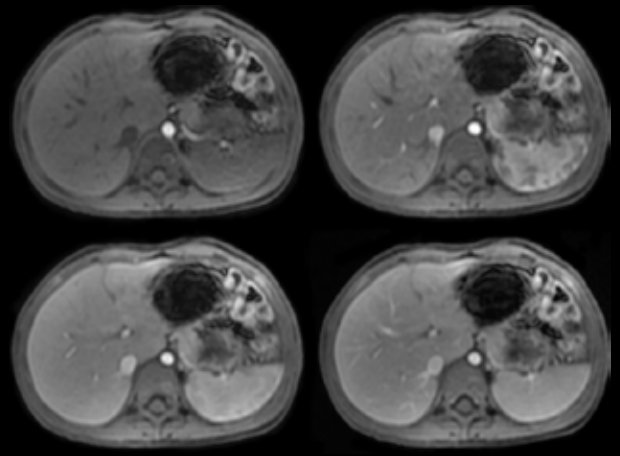
Black Blood – SSFSE



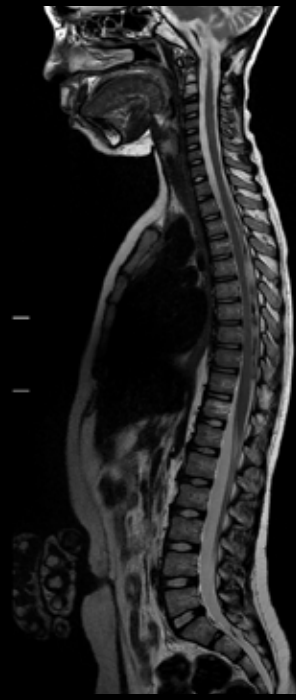


PS MDE

QuickStep MRA



Axial Navigated Turbo LAVA
Free Breathing Dynamic Liver
1.2 x 1.7 x 2.5 mm
25 sec / phase



Sagittal T2 frFSE

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 delivers up to x8 faster results.*
**When used in combination with ARC.*

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.

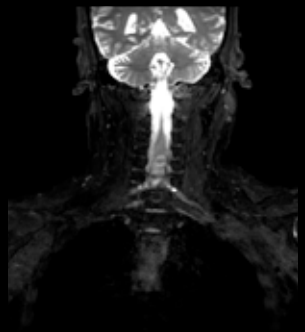
MUSE
A diffusion weighted and diffusion tensor technique that allows higher spatial resolution with reduced EPI-based distortions. MUSE implements a segmented readout approach along the phase encoding direction and utilizes a dedicated image reconstruction algorithm to mitigate shot-to-shot motion-induced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

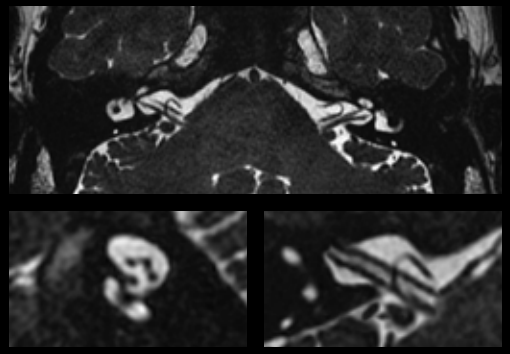
HyperWorks

HyperCube

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



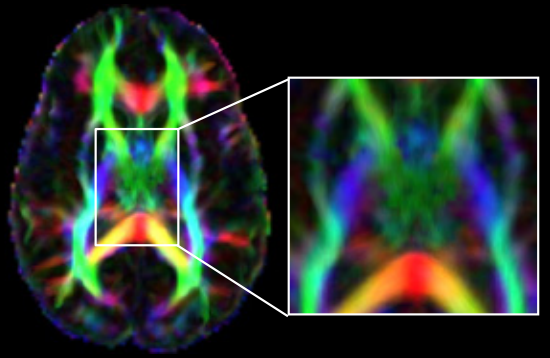
HyperCube T2 with Flex



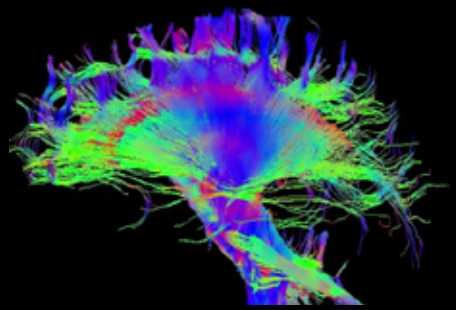
HyperCube with HyperSense
IAC Cube T2
0.5 x 0.5 x 0.6 mm

HyperBand

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



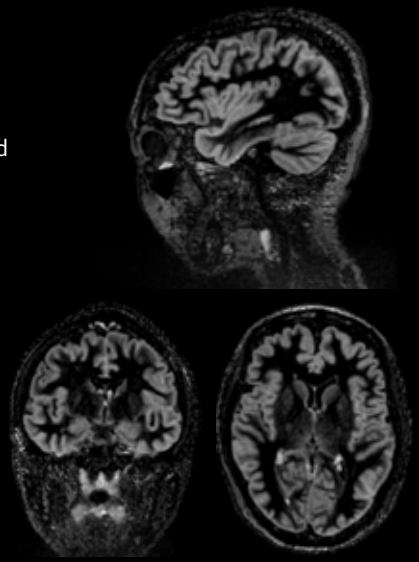
HyperBand colored orientation map



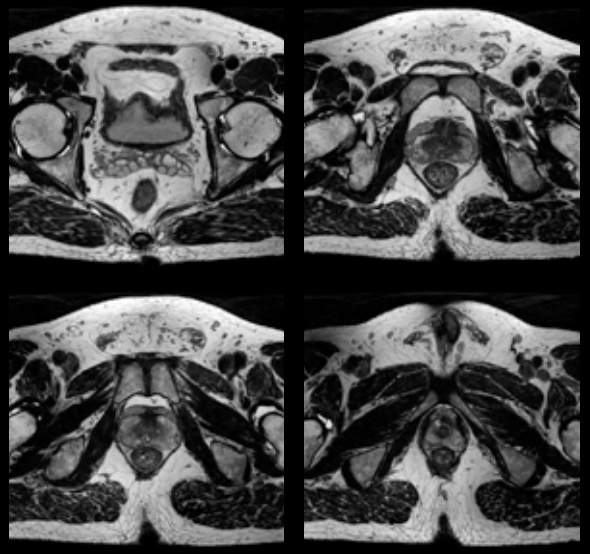
HyperBand DTI

HyperSense

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



3D & MPR Cube DIR
1.4 x 1.4 x 1.4 mm
3:09 min



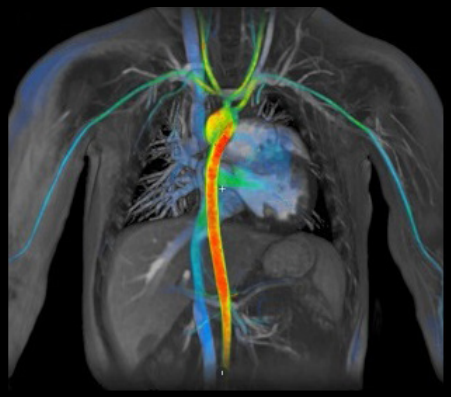
Axial HyperCube T2 with HyperSense
0.7 x 0.7 x 0.7 mm
3:58 min

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

ViosWorks

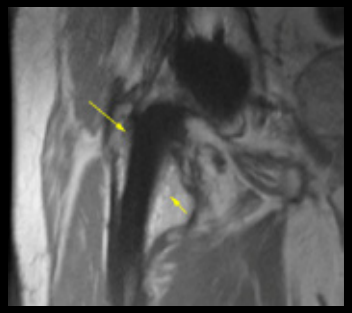
Extend cardiac MR assessment beyond the anatomy by acquiring all 7 dimensions of information (spatial, time and velocity) in a cardiovascular scan of 10 minutes or less with ViosWorks.

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

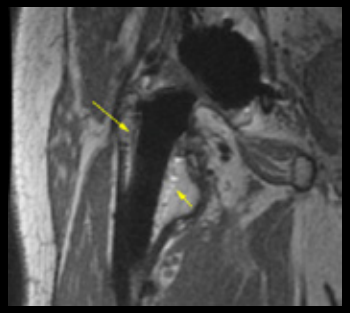


HyperMAVRIC SL

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



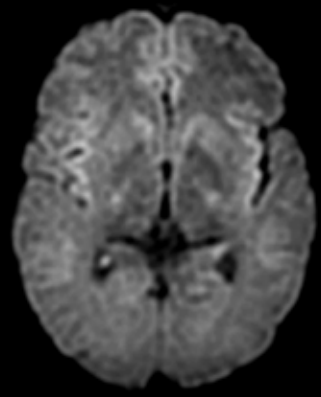
HyperMAVRIC SL
1.3 mm isotropic

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

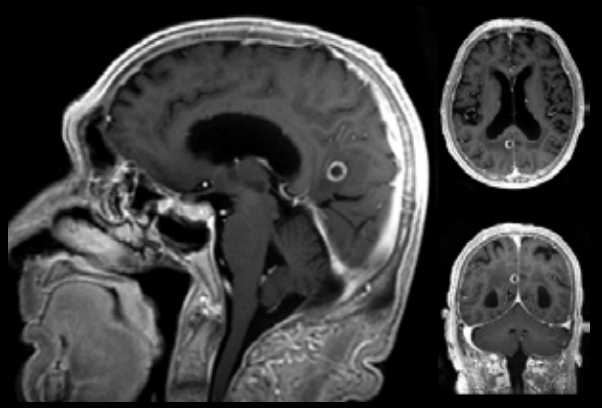
SilentWorks

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.

ZTE Silent MRA



Axial DWI with SilentScan



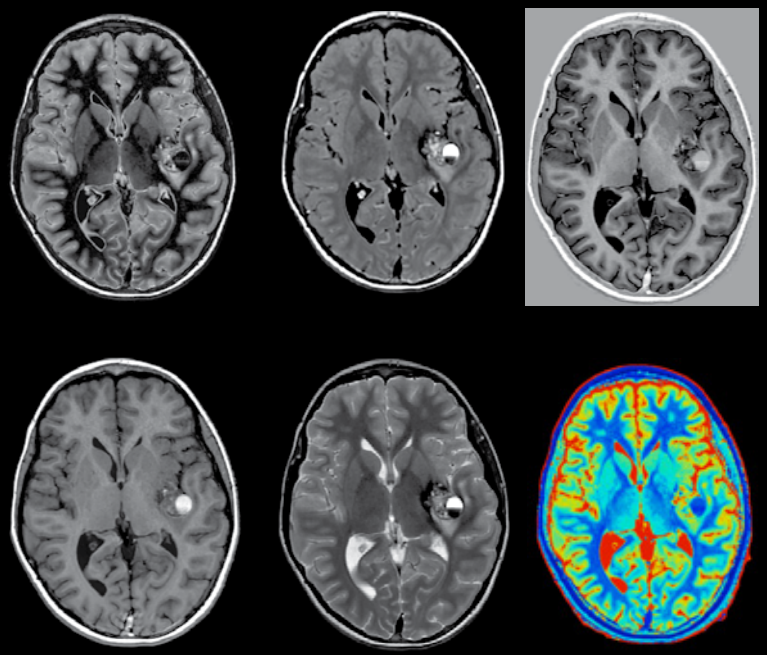
Sagittal 3D T1 SilentScan
with Axial and Coronal MPR's

Coronal T2 PROPELLER
FatSat with SilentScan

ImageWorks

MAGiC

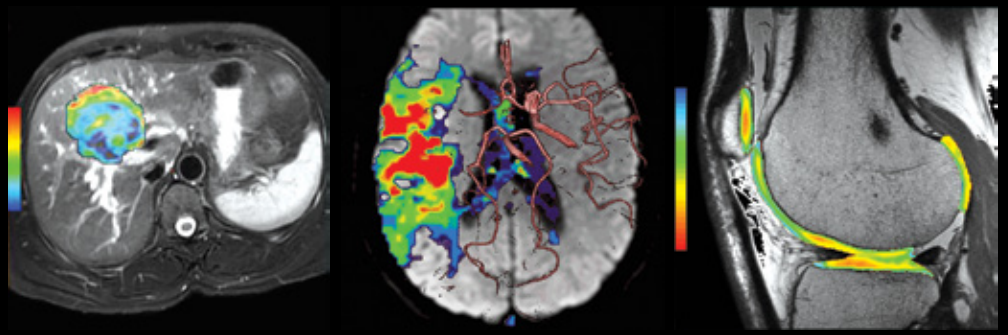
The secret of MAGiC lies in its unique ability to deliver multiple image contrasts in a single neuro scan. MAGiC delivers enhanced clinical flexibility by freeing up time for advanced imaging. MAGiC goes beyond the routine, providing complementary parametric data for a more complete picture. Image contrast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



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

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.



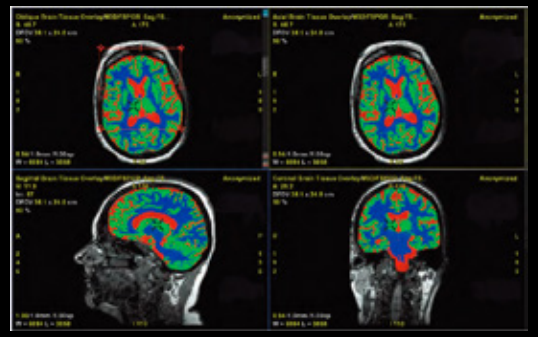
Visualization

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.

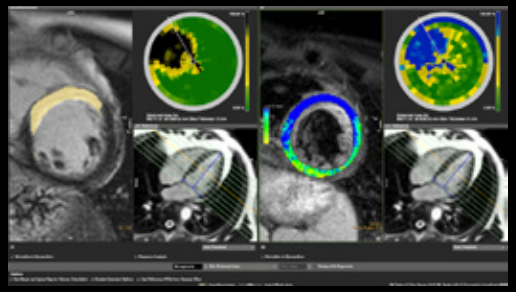
The Quantib™ Brain output consists of segmentations, visualizations and volumetric measurements of grey matter, white matter, and cerebrospinal fluid. The output also visualizes and quantifies white matter hyperintensity (WMH) candidates.

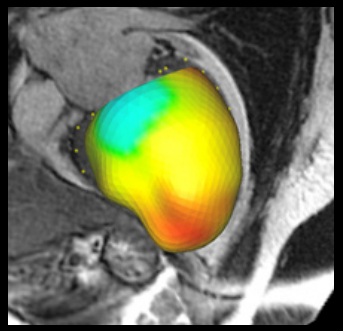
The Quantib™ Brain WMH segmentation function can perform a longitudinal analysis on validated WMHs for comparison of multiple exams of an individual patient.

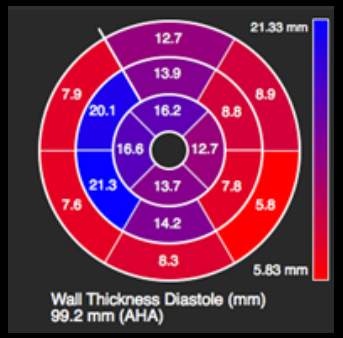


cvi42

cvi42 is a comprehensive cardiovascular post processing solution that uses automated algorithms to characterize tissue, generate maps, and assess flow and function.



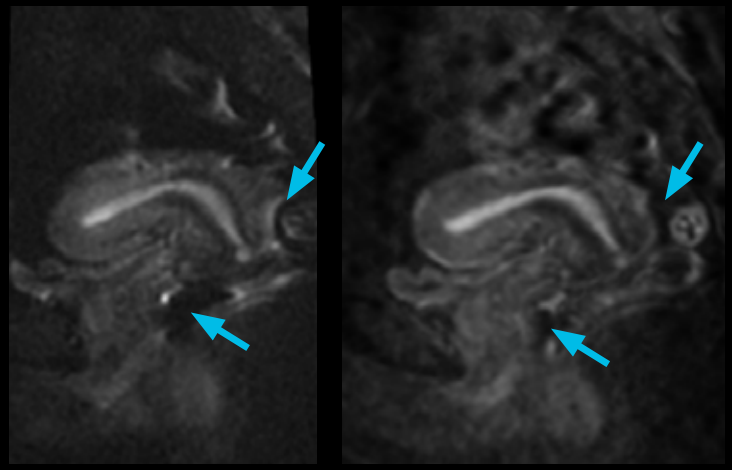




MUSE

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

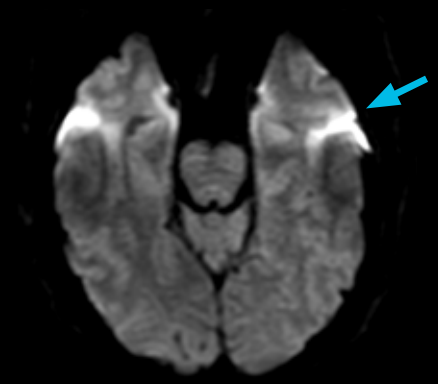
Sagittal T2 320 x 320 3.5 mm



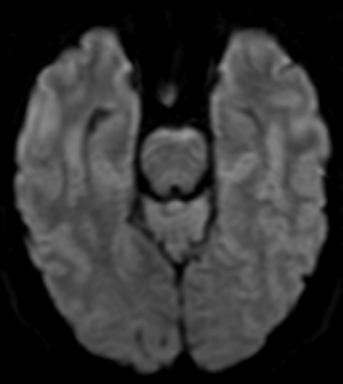
Standard EPI DWI on the left shows increased susceptibility likely from air on the bowel. MUSE image on the right demonstrate increased revolution and reduction in artifacts

PROGRES

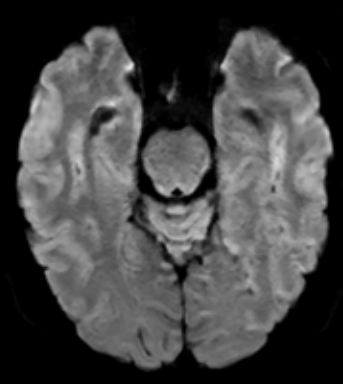
PROGRES provides automated distortion and eddy current correction, based on an integrated Reversed Polarity Gradient (RPG) acquisition.



Axial EPI DWI without PROGRES



Axial EPI DWI with PROGRES



MUSE DWI 0.9 x 0.8 x 4 mm

Elevate

Raise your MR performance to new heights with groundbreaking technology

The SIGNA™ Architect is designed to overcome barriers that held you back. The cutting-edge platform makes it one of the most versatile, adaptable and powerful systems available from GE Healthcare to date.

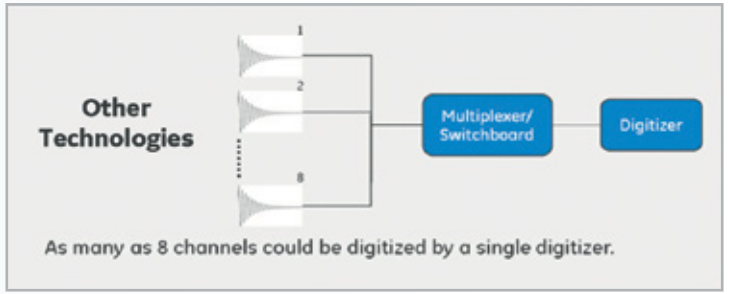
Now, feet-first, whole body coverage is made easy. Dynamic yet insightful, the SIGNA™ Architect is MR built to work for you, not the other way around.

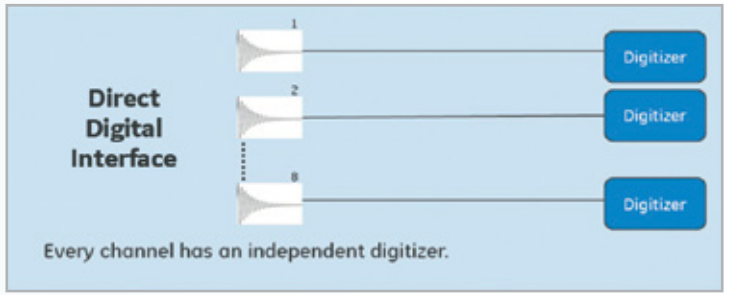
Total Digital Imaging (TDI)

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

GE's **Direct Digital Interface (DDI)** employs an independent analog-to-digital converter to digitize inputs from each of 128 RF channels, eliminating unnecessary noise enhancement. In other words, every element translates to a digitized signal. The result? Not only does DDI technology improve the SNR of our images but it also works with legacy GE coils for unmatched flexibility.

eMode technology replaces analog blocking circuits with intelligent ultra-fast switches which further expand zero TE imaging capabilities.





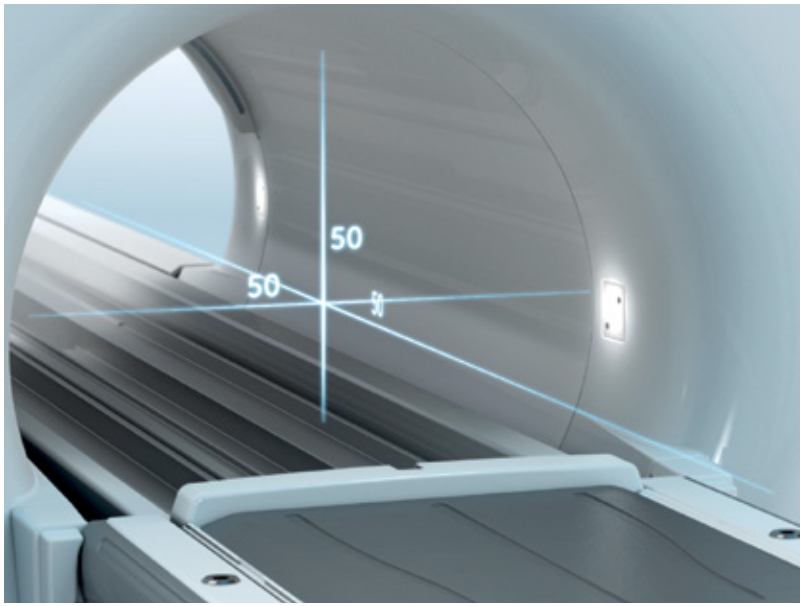
eXpress Dockable Table

The SIGNA™ Architect's eXpress table delivers feet-first or head-first imaging for all, with a more pleasant, quicker, targeted exam. Our table has the most comfortable memory foam surface available, alleviating pressure points.

With its detachable table, you never have to worry about how fast you can exit the MR suite. And with IntelliTouch patient positioning, just touch the edge of the table to position your patients.

FOV

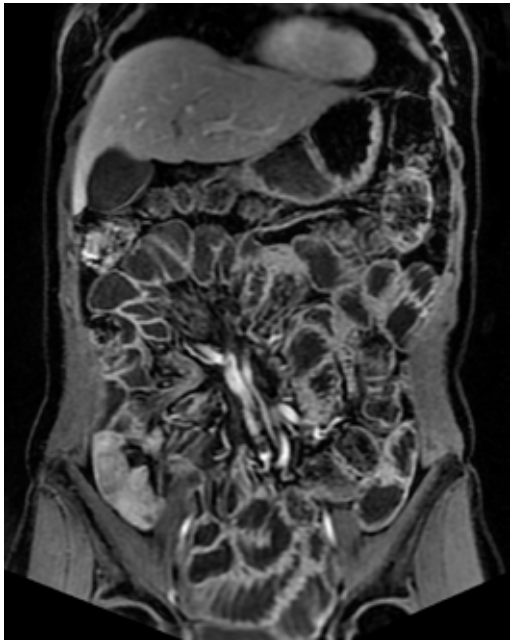
In addition to accommodating larger patients, full 50 x 50 x 50 cm FOV in a 70 cm wide bore allows you to properly image off-center anatomy such as shoulders and hips.
The SIGNA™ Architect's phenomenal homogeneity enables our largest FOV ever, with higher gradient specifications. Additionally, excellent spatial integrity is provided by 3D GradWarp distortion correction.
And no body part is left behind.



reFINE and deFINE

With reFINE, the challenge of 3.0T high-field uniformity has finally met its match. Just like a home theater surround system can be optimized, with reFINE, you increase your control over improved RF pulse efficiency, so you get clearer, crisper signals no matter your patient composition or position. reFINE makes consistent 3.0T imaging the rule, not the exception.

deFINE takes the results of SIGNA™ Architect to the next level by enhancing the image appearance with integrated, in-line, optimizable settings. These settings can be generated for each individual sequence or for the entire exam. With deFINE, you meet your high quality image needs and go beyond the normal.



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.

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