TOMORROW TODAY

SIGNA™ Premier

Fueled by SIGNA™Works

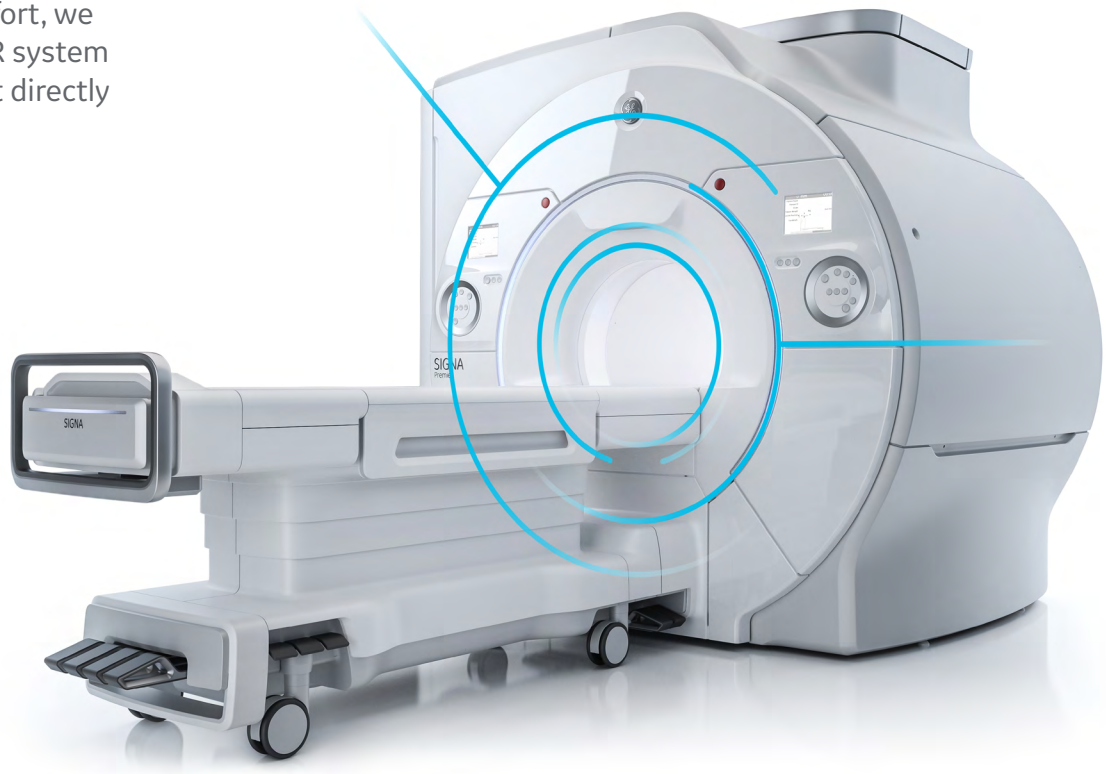
gehealthcare.com/mr


SIGNA
Premier

Tomorrow's MR...Today

There is a real-world need for a shift in engineering philosophy towards disease-specific, outcomes-based technology. This need is so great that we've formed strategic partnerships with organizations that are investing millions of dollars in the research and development of neuro applications to enable progress in Traumatic Brain Injury (TBI) evaluation. To help with this effort, we built tomorrow's MR, the SIGNA™ Premier, an advanced MR system equipped with innovative coil and gradient technology that directly links to cloud-based analytics.

It's the future of MR technology and it's ready today.



POWER

The power to turn on minds

Experience our innovative SuperG gradient coil technology

Introducing SIGNA™ Premier with

SuperG

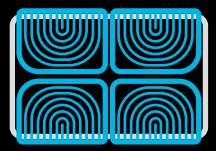
70 cm bore with 60 cm performance

You should have access to high-performance MR image quality. That's why, with SIGNA™ Premier, we started with the 70 cm patient bore. From there, we found a way to maintain the thermal stability of a high-performance gradient in a wide bore. It's called SuperG.

This innovative gradient coil technology allows SIGNA™ Premier to maximize the duty cycle for Human Connectome protocols (Multi-shell DTI and high-resolution fMRI) and high-resolution body, musculoskeletal and cardiac imaging without sacrificing patient comfort or bore size. As a result, SIGNA™ Premier is the only MR that combines 60 cm performance in a true 70 cm bore.

SuperG gradient design

All-hollow conductor design with independent cooling circuits to enable long duty cycles



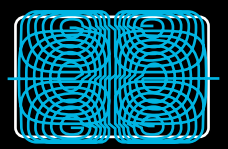
Force and torque-balanced design for cutting-edge stability and minimal vibration

80

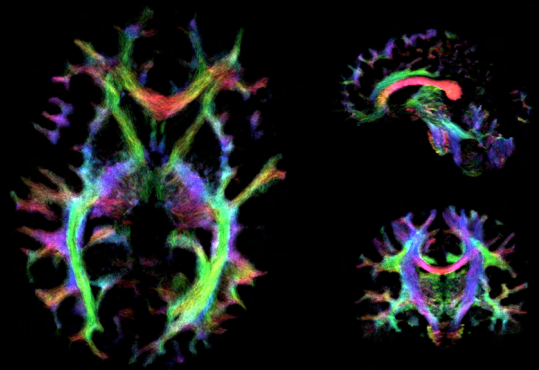
mT/m amplitude

200

T/m/s slew rate

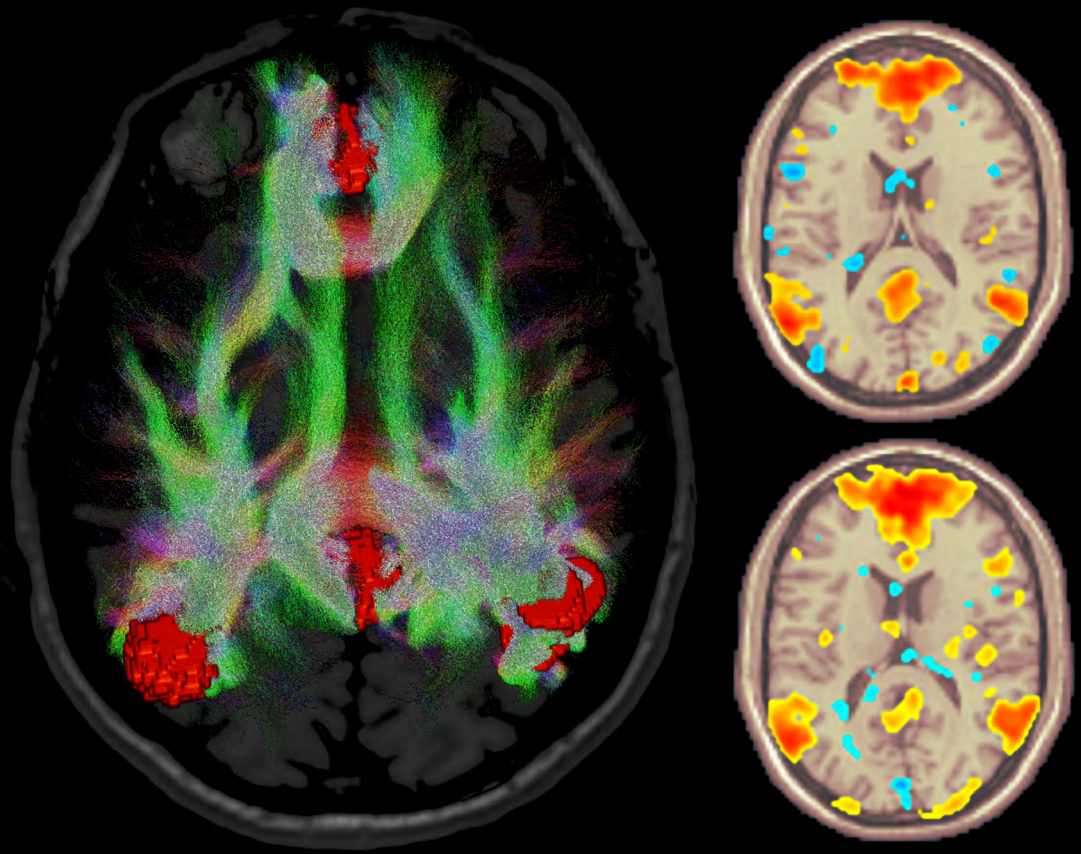


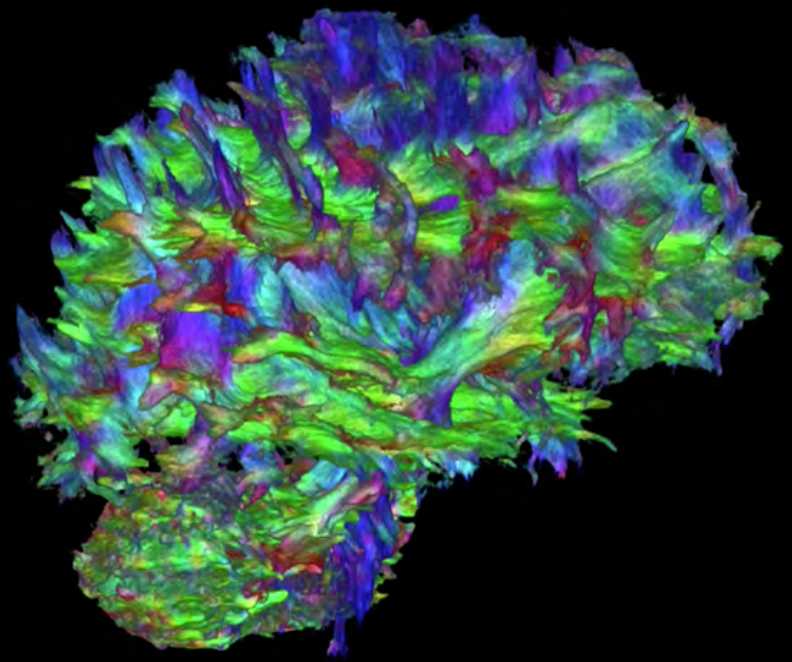
Active, passive and higher order shimming



Multi-shell Diffusion Tensor b1000, b2000, and b3000 Super-resolved 'track density' at 300 microns

Greater consistency and stability for advanced fMRI and other demanding applications





With great speed comes great clarity

Speed plays an important role in making research protocols practical for clinical use. SIGNA™ Premier includes three accelerating techniques, HyperBand, HyperSense and HyperCube, which provide astonishing imaging with unsurpassed speed. Used together with SuperG, our high-performance gradient coil, and an industry-leading number of channels, these technologies enable advanced imaging protocols in routine exam slots.

HyperBand

Excites multiple slices during a single acquisition to accelerate scan speed

HyperCube

Selective excitation for higher spatial resolutions and reduced scan times

HyperSense

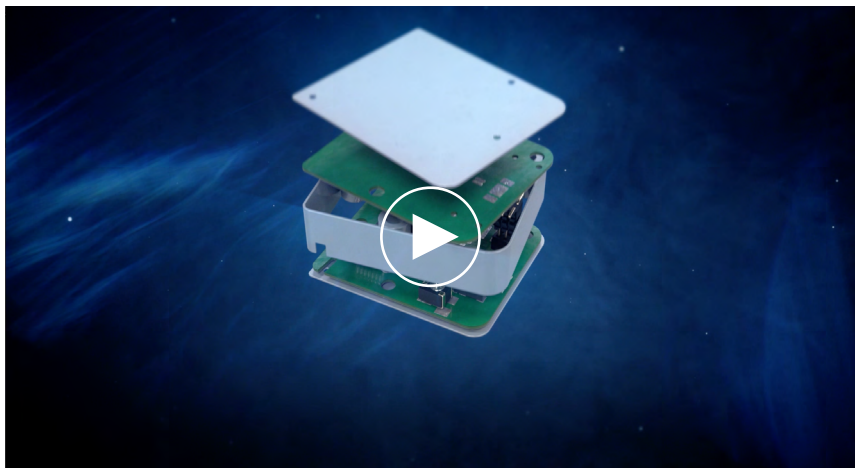
Utilizes proprietary compressed sensing technology for up to 8x reduction in scan time while maintaining resolution

CONSISTENCY

Engineering with patients in mind

We set out to build the MR of the future and to do that, we needed to revolutionize the patient experience. This led us to develop the innovative AIR Technology*, a revolutionary lightweight coil design that comfortably conforms to a patient's body.

Experience freedom.



*AIR Technology is not CE-marked and cannot be placed on the EU market or put into service until it has been made to comply with the Medical Device Directive requirements for CE marking. Not available for sale in all regions.

Form fitting for every form

Freedom in coil positioning is the ultimate design goal behind AIR Technology*. Its flexible coil design improves the scan experience while increasing signal quality. As a result, AIR Technology is reinventing the way imaging should be.

AIR Technology

- Industry-leading flexible design
- Comfortably conforms to the size and shape of every patient
- Improves signal quality by bringing the elements closer to the patient
- Anterior Array coil covers 65 cm of anatomy, enabling multi-station exams without having to reposition the coil

Click to play

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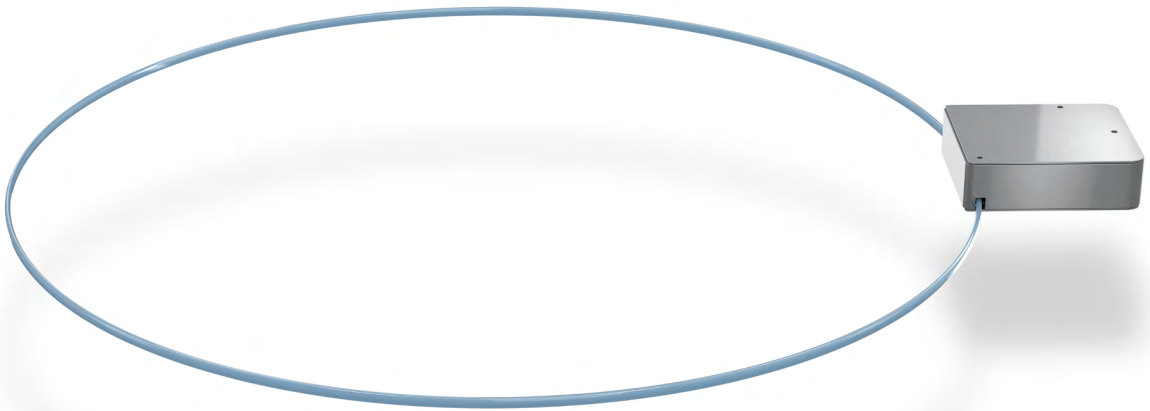

Click to play

The revolution starts with a single loop

To design a lighter, form-fitting coil that conforms to the unique shape of every patient, we started with the underlying coil technology. AIR Technology* Coil elements are comprised of two components, the Inca conductor and E-mode module. The minimal design of this powerful technology is not only lighter, it leads to faster scanning and improved SNR, regardless of condition. It's also what enables the flexibility to create coil geometries without compromising image quality.

Simplified design increases reliability

Weighs less than

0.35

grams per cm^2

Revolutionary coil design that is

60%

lighter or more**

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**Compared to previous generation technology

146 channels of industry-leading coverage

Unlike traditional electromechanical designs, AIR Technology* removes overlap constraints to enhance signal performance and provide higher parallel imaging acceleration. Patients and technologists benefit from a lightweight, flexible design and radiologists get the extra channels they need for outstanding image quality. In the end, everybody wins with AIR Technology.

Click to play

Highest channel count in the industry

Head-neck imaging

68

channels over 50 cm FOV

Body imaging

60

channels over 50 cm FOV

More than

140

channels for whole-body, multi-station imaging

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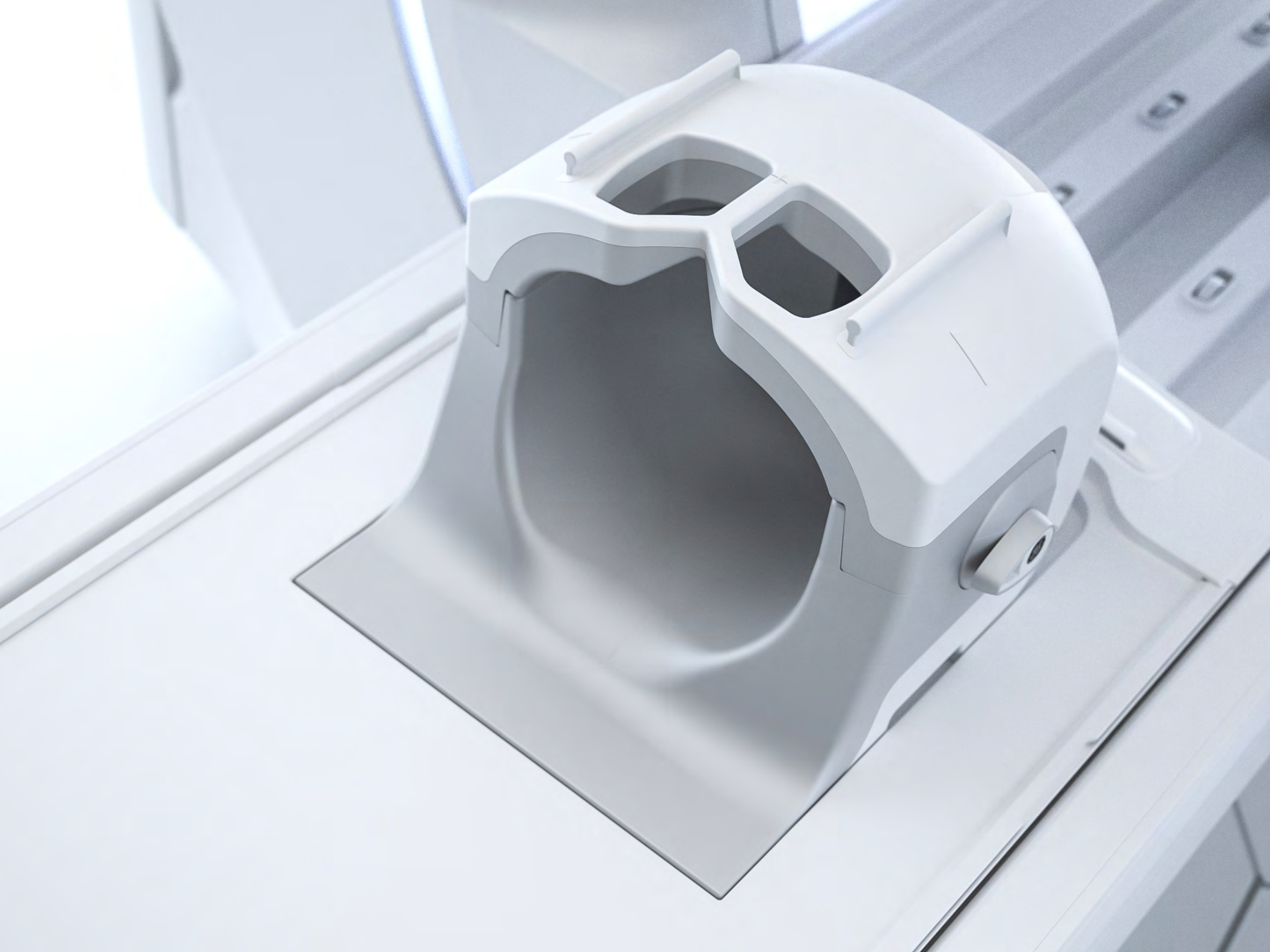


Embrace all patient forms with new functionality

48-channel Head Coil and Coil Suite

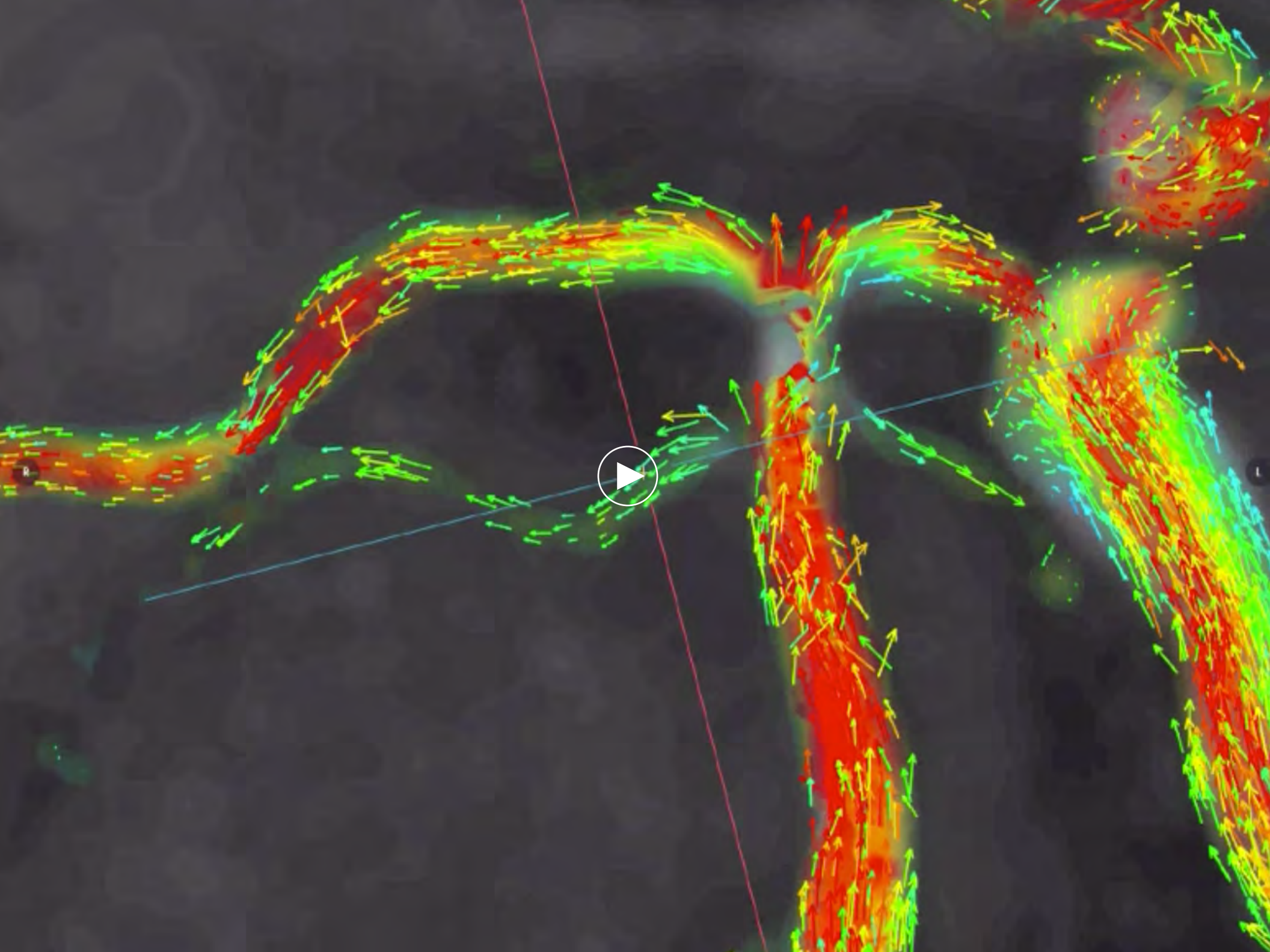
The 48-channel Head Coil leverages AIR Technology to deliver phenomenal performance for every patient. Its fit-adaptable design adjusts to most patient sizes and because it brings the gradient closer to the anatomy, it improves signal quality as well.

- Excellent penetration for high diagnostic confidence, even in the center of the image
- Maximizes the clinical capabilities of advanced imaging applications
- Compatible with both EEG and fMRI simultaneously

Fits

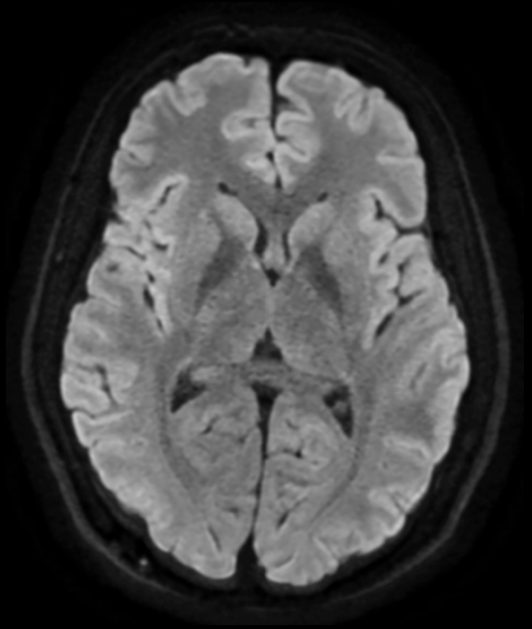
99.99%

of the patient population

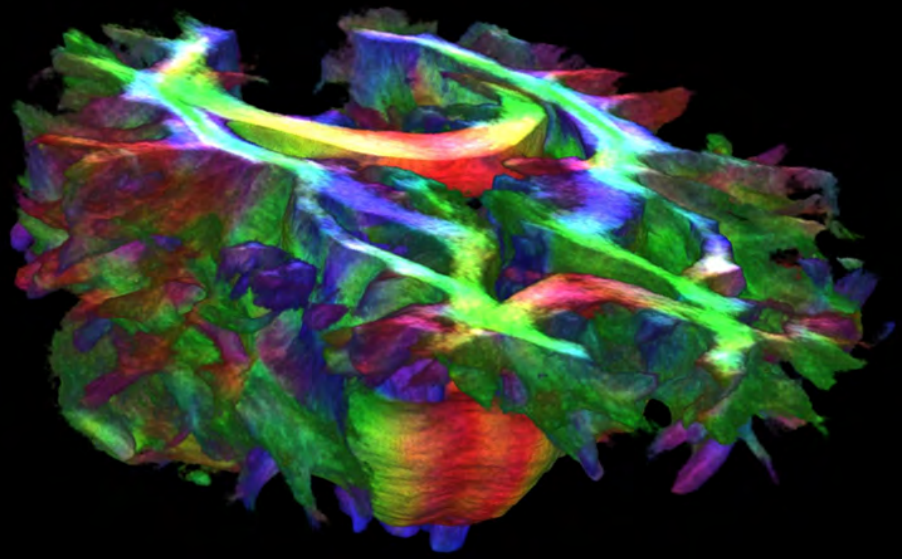


Outstanding images with spectacular detail

Advanced Diffusion



MUSE DWI high resolution
0.9 x 0.8 x 3 mm

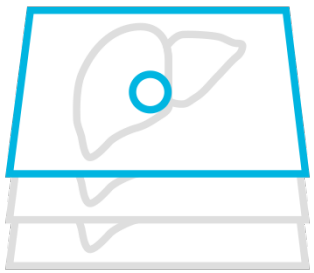


Multi-shell DTI
2.5 mm isotropic
b = 1,000 and 2,500 s/mm^2

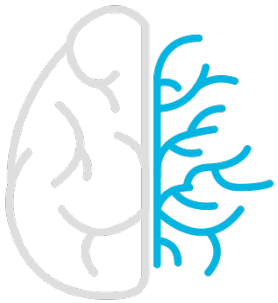
Diffusion imaging has never been so intelligent

The current standard for diffusion imaging is limited by anatomical regions that are prone to large distortions. SIGNA™ Premier uses intelligent solutions and an advanced diffusion package, including PROGRES, SuperG Boost and MUSE, to automatically detect and correct distortion, artifacts and motion. This is achieved without any user intervention, additional scan time or complicated workflow.

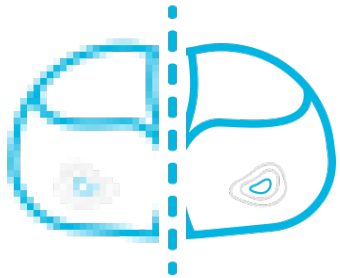
Resolving the limits of diffusion distortion, diffusion SNR and diffusion resolution.



Improved co-registration



Improved visualization of the most challenging areas



Higher resolution without any restrictions

Fueling the future of MR

Our SIGNA™Works productivity platform redefines what's possible. You can get calculated ADC maps with MAGiC DWI. ImageWorks applications can streamline your post-processing for higher efficiency and enhanced workflow. You can even get results up to eight times faster without compromising image quality using our HyperWorks applications.

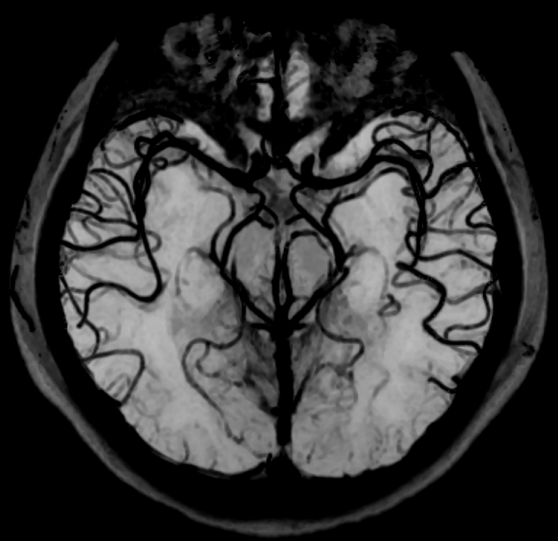
Learn more about SIGNA™Works

CLINICAL GALLERY

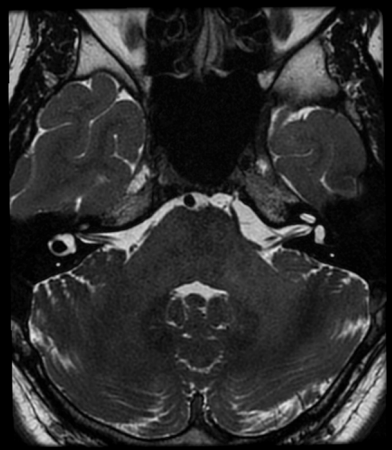
NeuroWorks

48-channel Head Coil

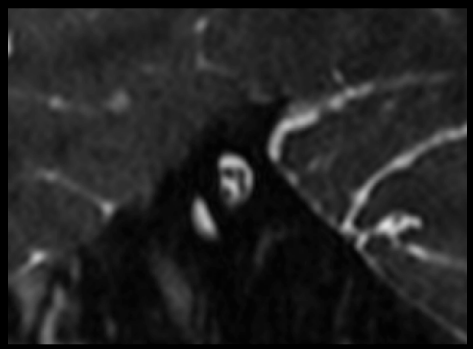
Offering neuro applications from positioning to post-processing and faster imaging with greater diagnostic value.



T1 Cube Flex
Water image
Vascular - Black Blood imaging



Axial T2 Cube IAC
0.5 x 0.5 x 0.6 mm

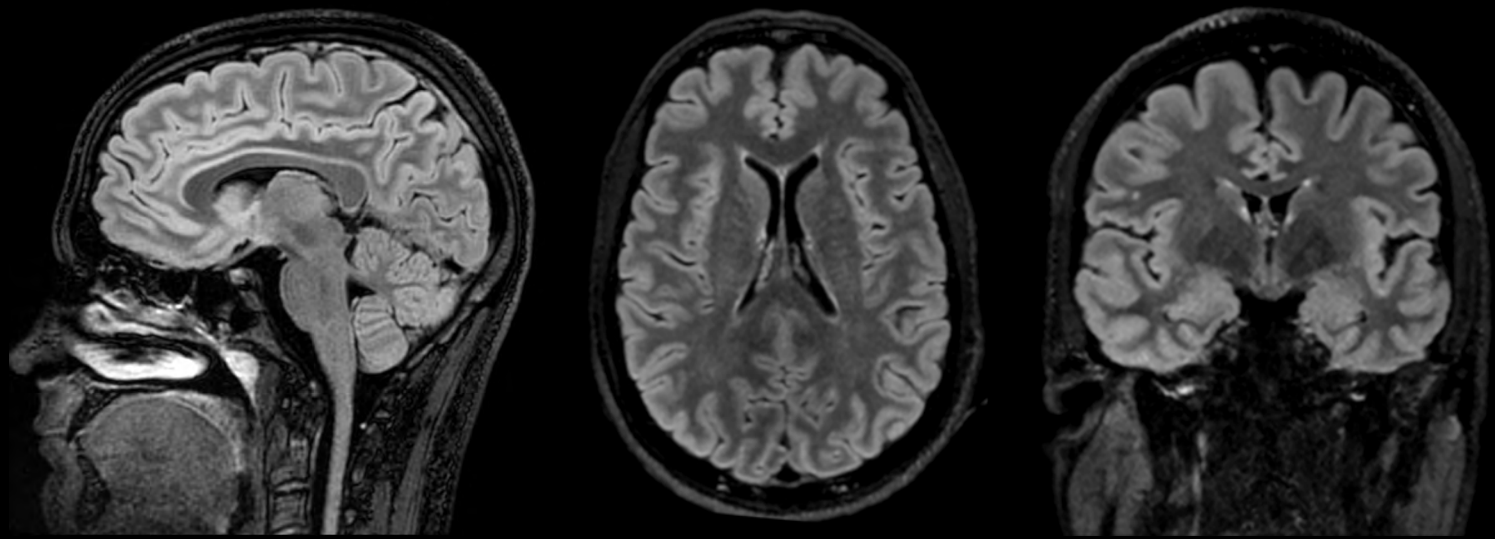


Axial T2 Cube IAC
0.5 x 0.5 x 0.6 mm
Perpendicular reformat

CLINICAL GALLERY

NeuroWorks

48-channel Head Coil

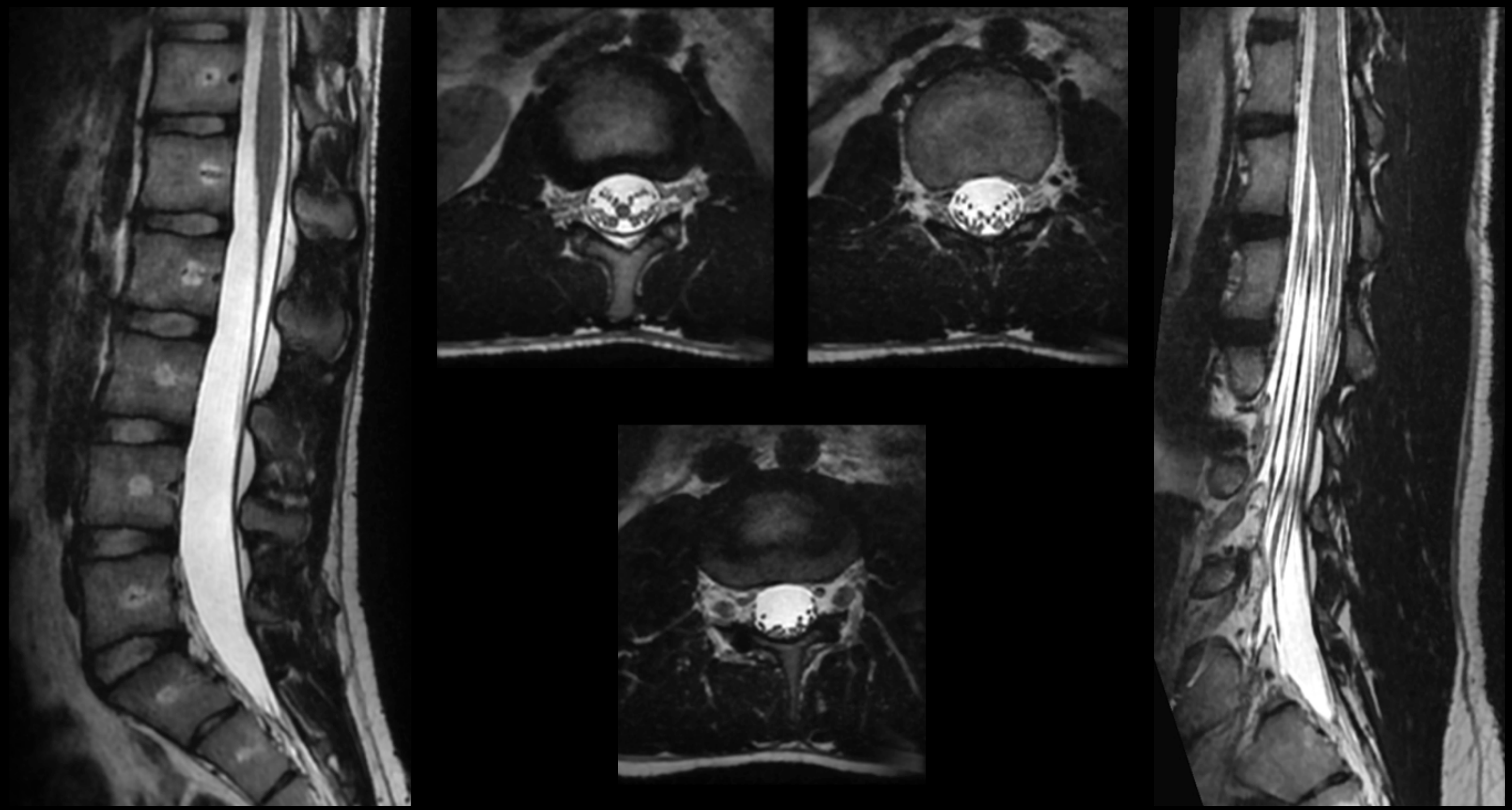


T2 FLAIR Cube with HyperCube and HyperSense
1 x 1 x 1 mm

NeuroWorks

Spine

AIR Technology Coils



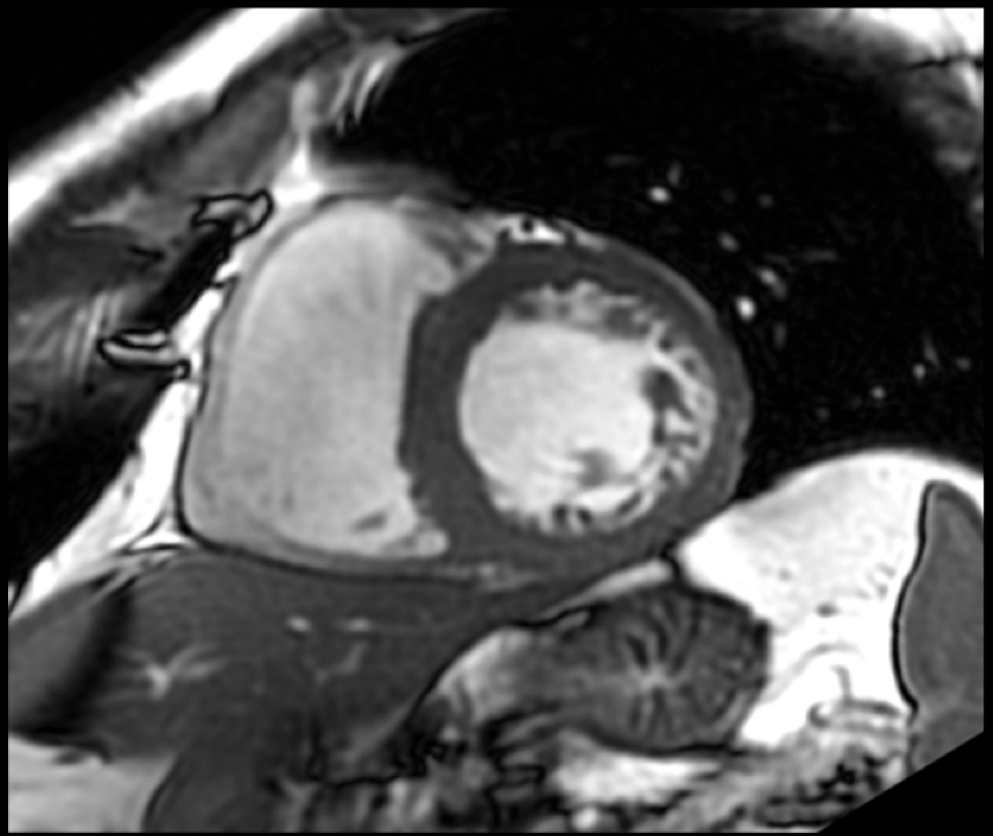
T2 HyperCube with HyperSense
Sagittal acquisition
0.8 mm isotropic

CLINICAL GALLERY

CVWorks

CardioMaps

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

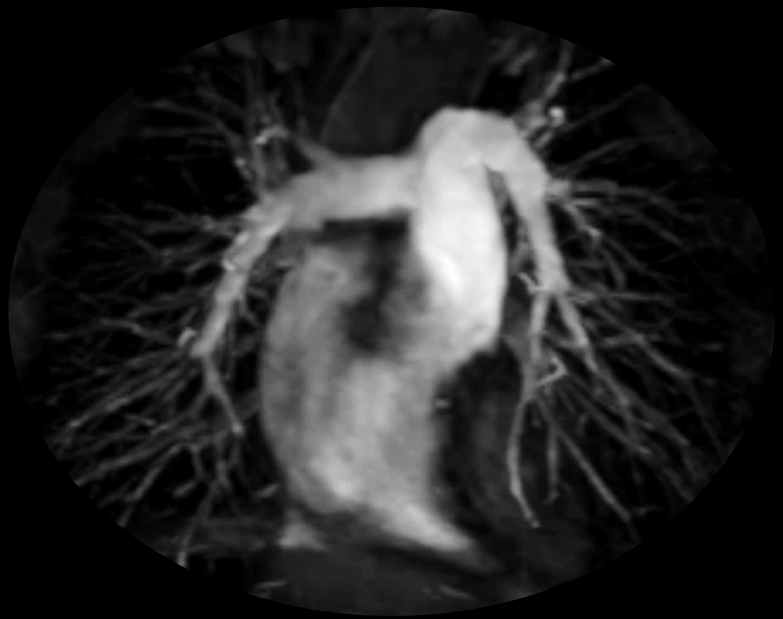


Short Axis FIESTA

CVWorks

Vascular imaging

TRICKS
Arterial phase
4 seconds per phase
1 x 2 x 3 mm



TRICKS
Early arterial phase
Pulmonary arteries
4 seconds per phase
1 x 2 x 3 mm

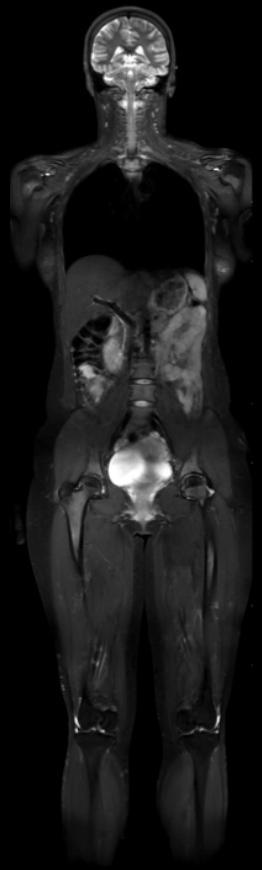
CLINICAL GALLERY

BodyWorks

Whole-body imaging

Images whole-body, abdominal and pelvic anatomy with speed and flexibility.

Coronal LAVA Flex



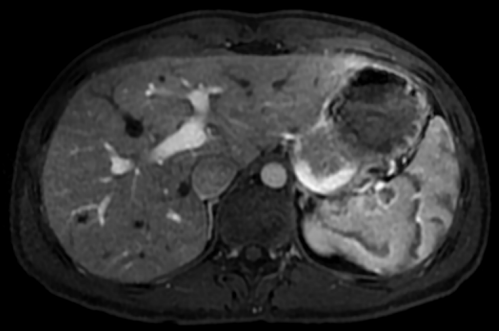
Coronal T2 Flex

Coronal MIP - DWI

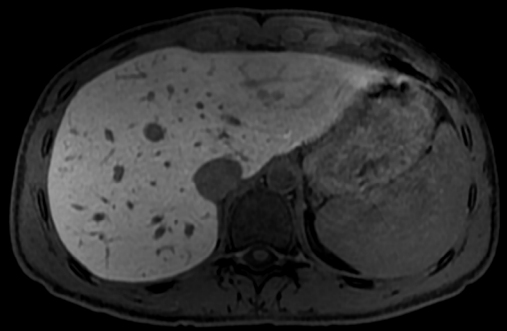
CLINICAL GALLERY

BodyWorks

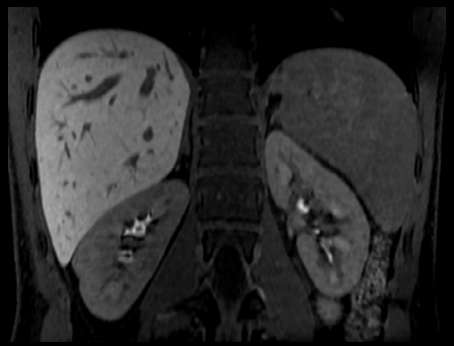
Liver



Axial LAVA Arterial 3.2 mm



Axial LAVA Navigated 1.6 mm
20 minutes post-injection

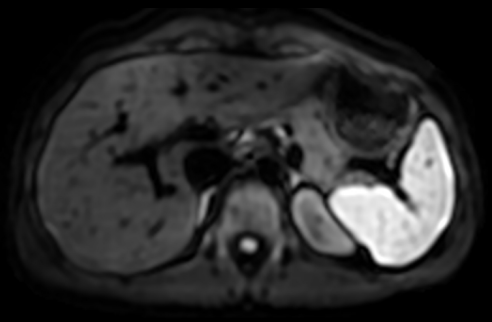


Axial LAVA Navigated
Coronal reformat
1.1 x 1.6 x 1.6 mm

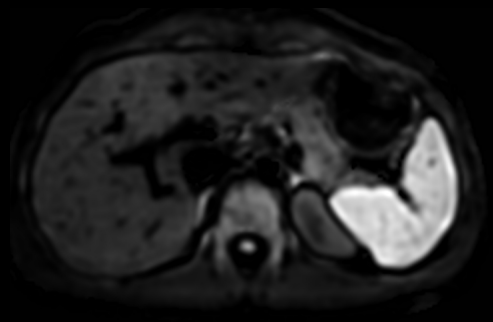
CLINICAL GALLERY

BodyWorks

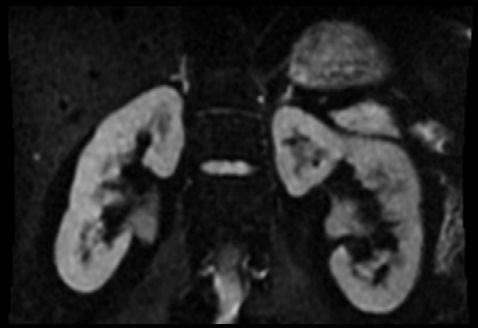
Liver and kidneys



Axial DWI b500



Axial MAGiC DWI b1000

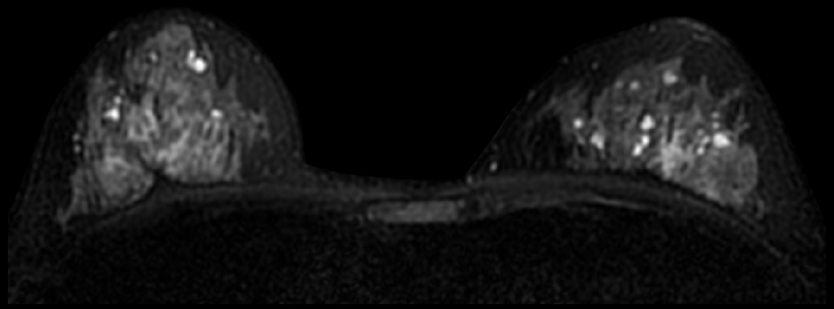


Coronal MUSE of the kidneys

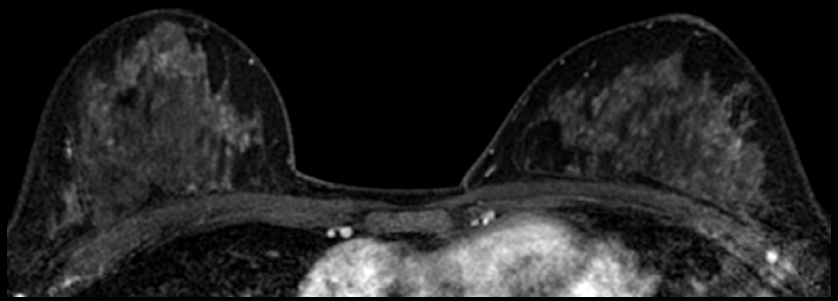
CLINICAL GALLERY

BodyWorks

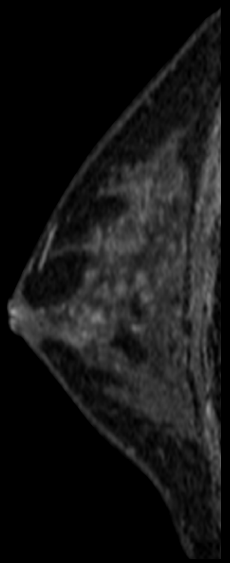
Breast



Axial T2 FatSat
2 mm



Axial 3D VIBRANT
Arterial phase
0.7 x 0.7 x 1.4 mm



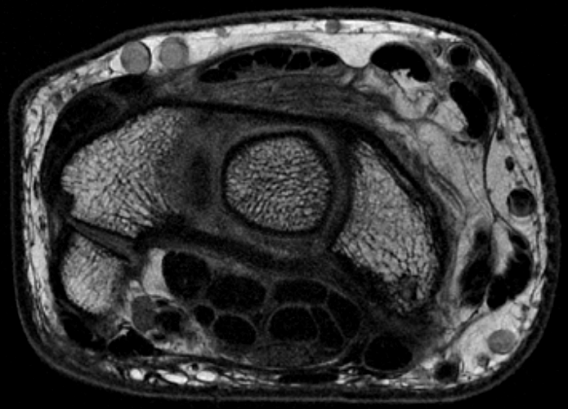
Sagittal reformat

CLINICAL GALLERY

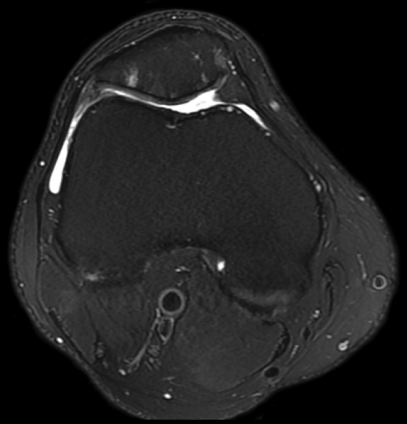
OrthoWorks

Musculoskeletal

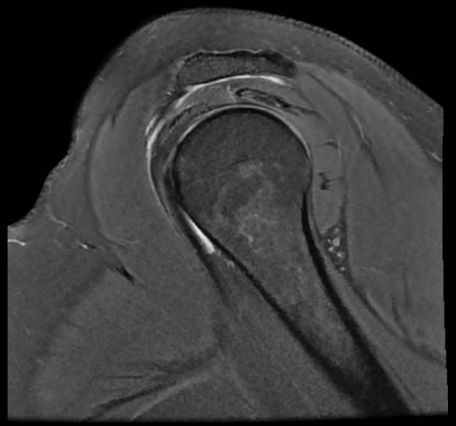
This extensive library of imaging techniques enables you to image bone, joint and soft tissue with remarkable tissue contrast.



Axial PD high resolution
0.2 x 0.2 x 1.2 mm



Axial PD FatSat
0.4 x 0.5 x 3 mm



Sagittal PD FatSat
0.5 x 0.5 x 3 mm

FUTURE

The future is now

Today's clinical challenges are rapidly trending towards more specificity and sensitivity. SIGNA™ Premier was built with the consistency, power and intelligence to meet this growing trend. Adaptable technology gives you greater control over variability. And powerful performance allows you to expand your research while accelerating your clinical outcomes.

SIGNA™ Premier is the MR technology of the future, so we can build a better understanding today.

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter – great people and technologies taking on tough challenges.

From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

Imagination at work

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