GE HealthCare

SIGNA™ Premier

For advanced imaging and research

Tomorrow’s MR...today

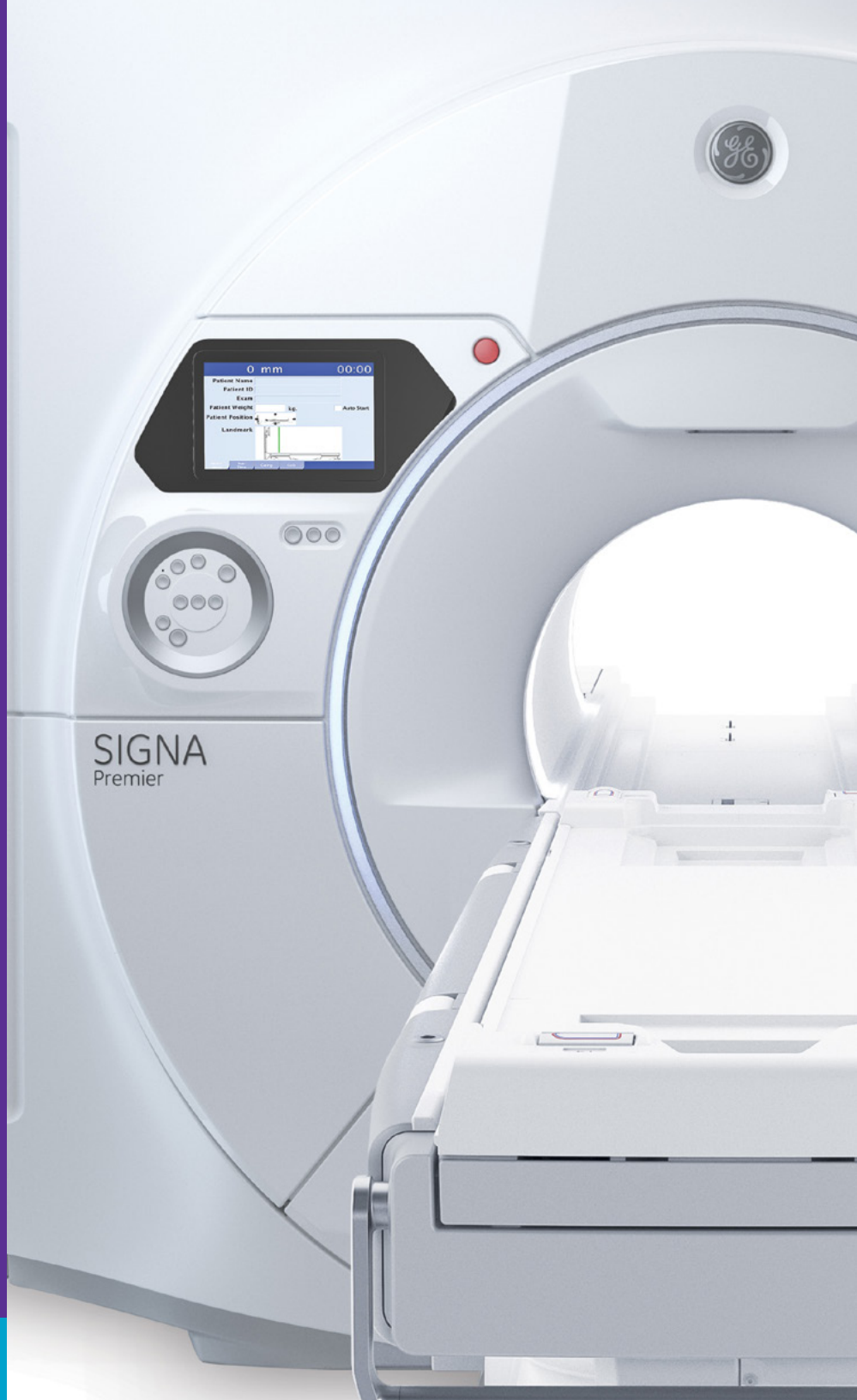
There is a real-world need for a shift in engineering philosophy towards disease-specific, outcomes-based technology. This need is so great that we’ve formed strategic partnerships with organizations that are investing millions of dollars in the research and development of neuro applications to enable 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

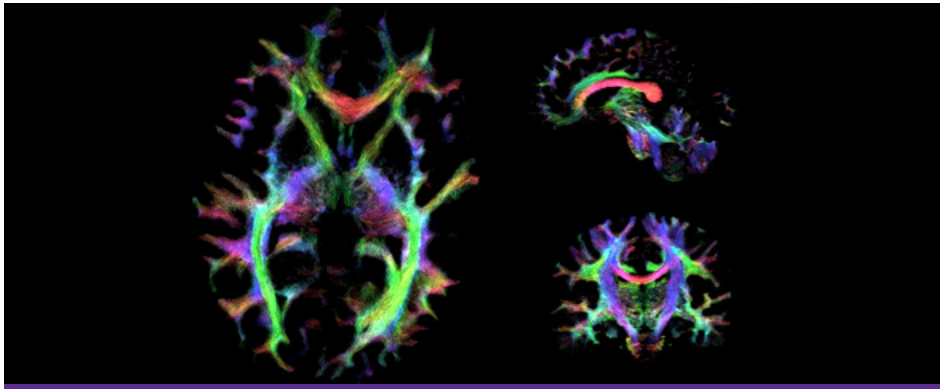


Introducing SIGNA Premier with SuperG

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.



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

SuperG gradient design

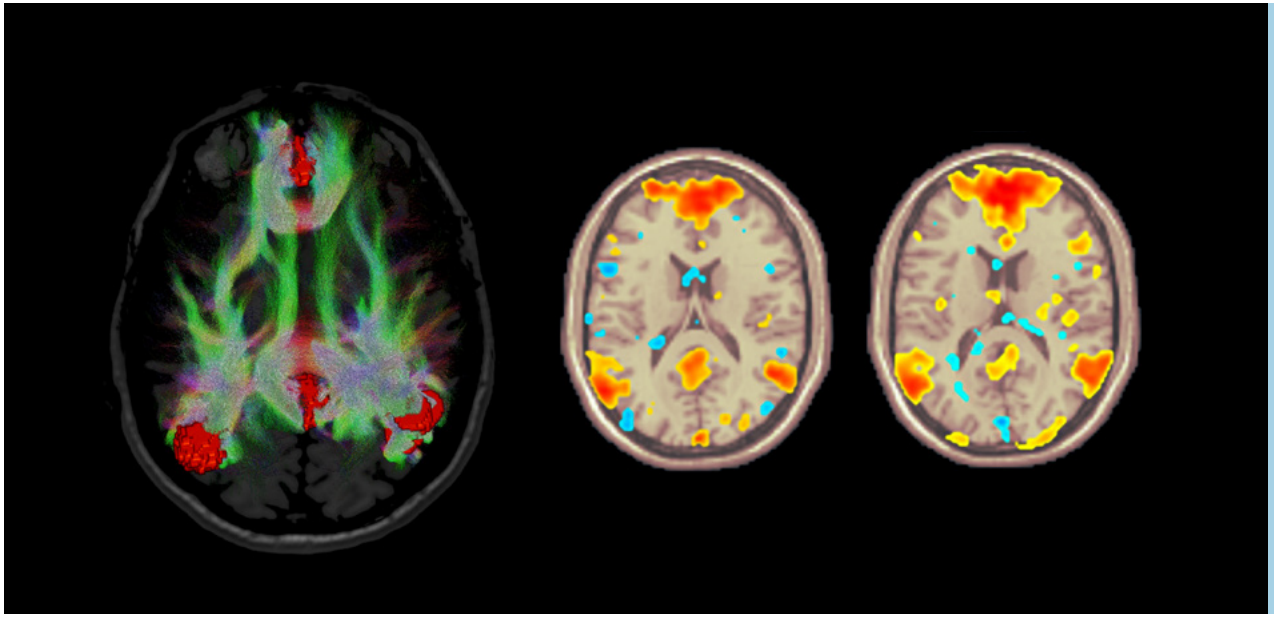
All-hollow conductor design with independent cooling circuits to enable long duty cycles

Active, passive and higher order shimming

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

80
mT/m amplitude

200
T/m/s slew rate



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 to reduce 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™ Coils technology, a revolutionary lightweight coil design that comfortably conforms to a patient's body.

Experience freedom.

Introducing innovative AIR Coils

Form fitting for every form

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

AIR Coils

Industry-leading flexible design

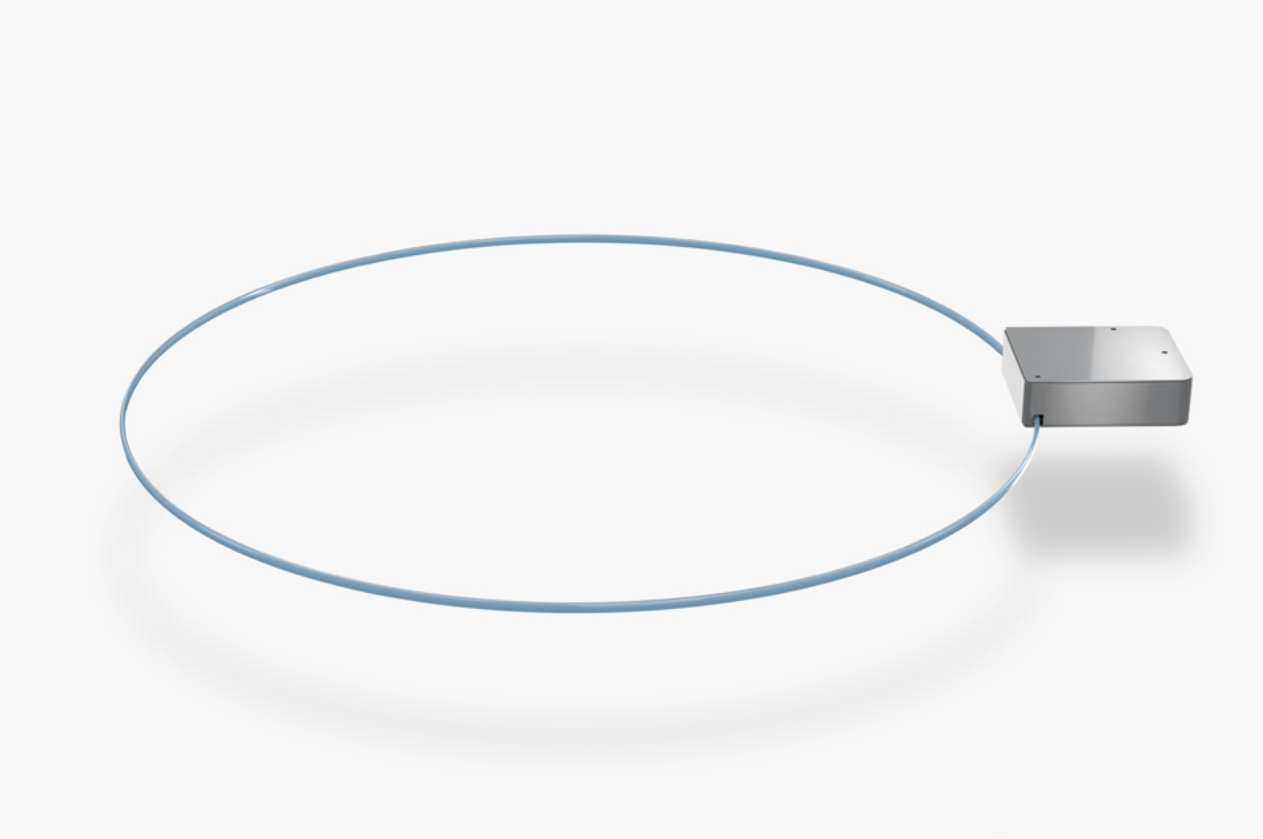
Comfortably conforms to the size and shape of every patient

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

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[1]

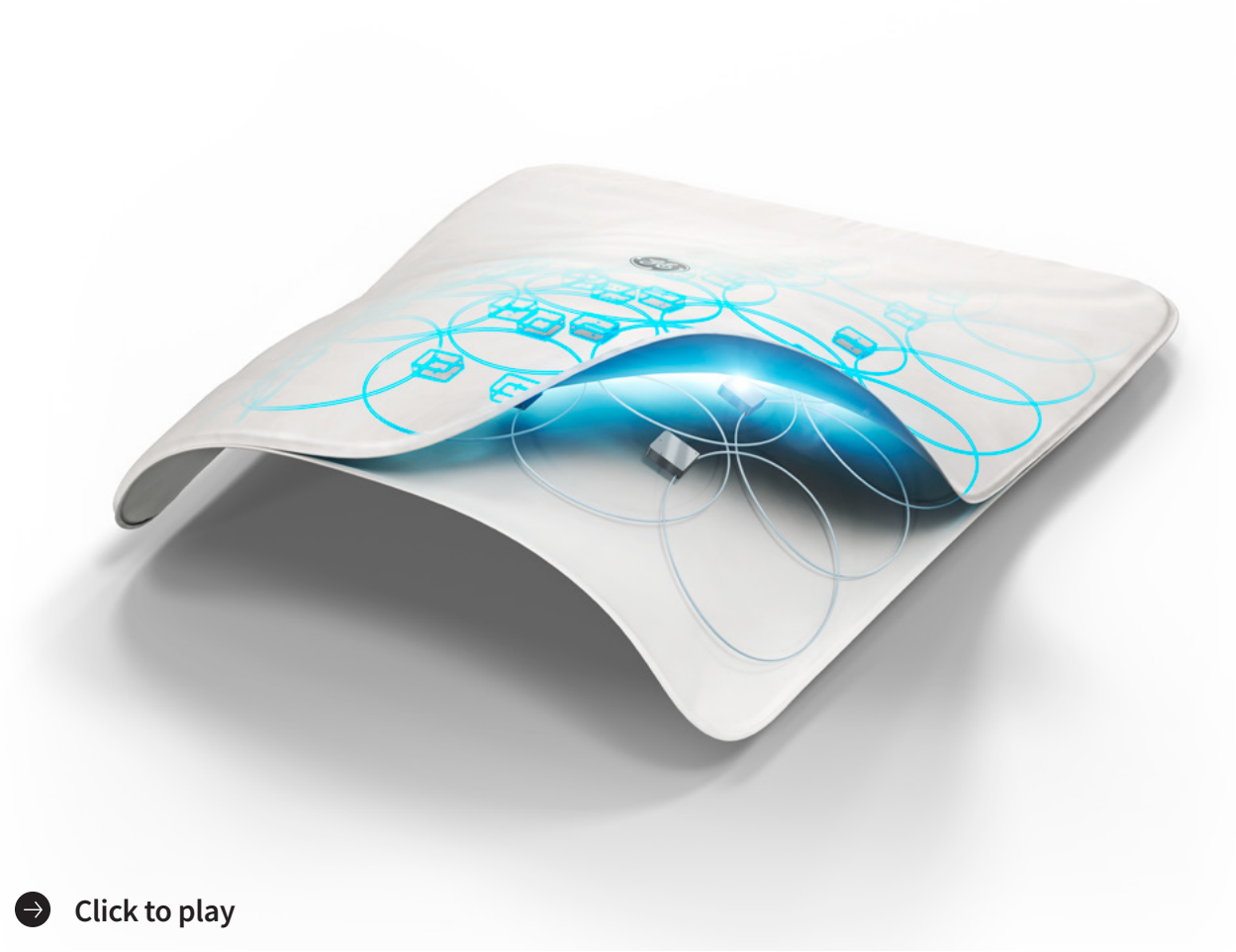
Revolutionary coil design that is

60%

lighter or more[1]

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, multistation imaging

Adaptive

Embrace all patient forms with new functionality

48-channel Head Coil and Coil Suite

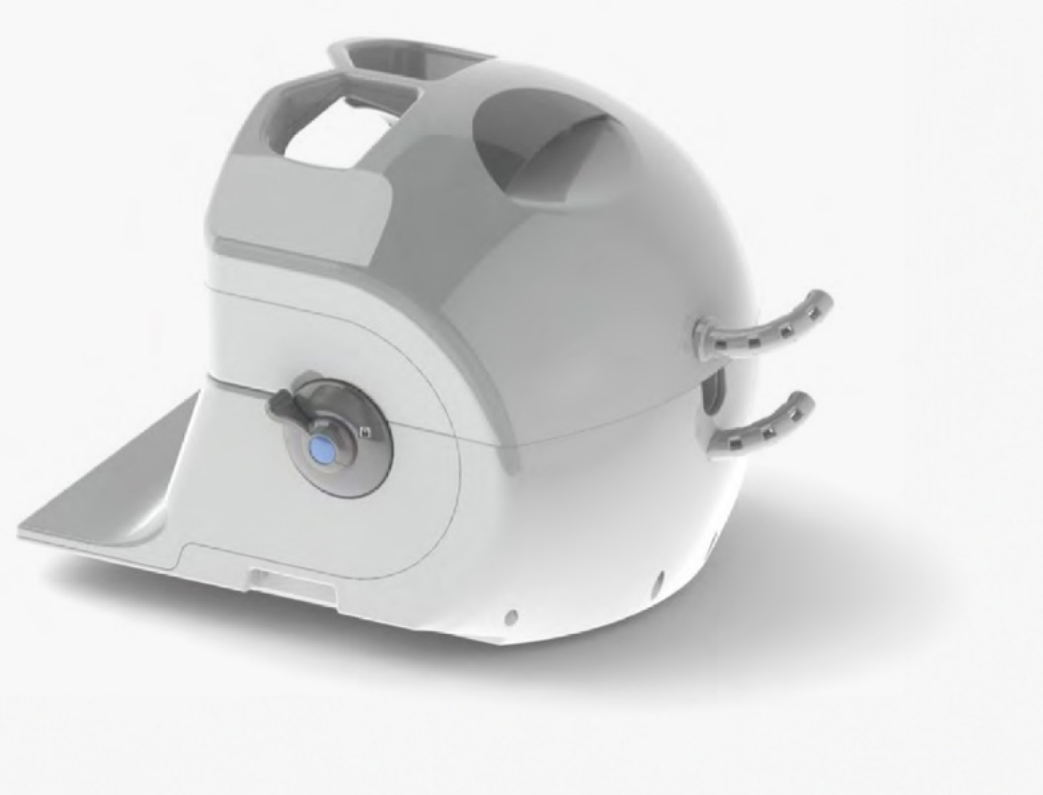
The 48-channel Head Coil leverages AIR Technology to deliver phenomenal performance for every patient

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.

Fits

99.99%

of the patient population



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

An enhanced experience for you and your patients

SIGNA Premier improves the scanning experience for both you and your patients. Our deep learning reconstruction algorithm AIR Recon DL and automated applications such as AIR x™ and AIR Touch™ ensure scans can be completed faster, so patients spend less time on the table, reducing their anxiety and stress. For clinicians, faster scan times can help to reduce backlogs.

Scan faster to reduce backlogs with AIR Recon DL, AIR x and AIR Touch

Improve efficiency with our eXpress Detachable Table

Reduce in-room patient coil adjustments with AIR Coils and Whole Body Imaging workflows

Unmatched productivity with the AIR family of technologies

AIR Coils and AIR Recon DL enable you to carry out end-to-end clinical solutions in areas such as prostate cancer, as part of mainstream clinical practice. This comprehensive MR solution enables fast, consistent and measurable results in ten minutes while adhering to the PI-RADS® v2.1 criteria guidelines. The sharper imaging helps eliminate unnecessary biopsies, making prostate cancer evaluation more efficient.

In MR, long scan times mean imaging is compromised by the body's movement. Until now. Using deep learning, we have cut scan times from minutes to seconds, reducing motion artifacts and the need for rescans. Acceleration with Sonic DL™ equips your scanner with the ability to match the speed of the human body, enabling image acquisitions that were previously not possible.

Sonic DL slashes scan time by up to 83%[2] while maintaining diagnostic value. In the critical area of cardiac imaging, up to 12X acceleration means capturing rapidly moving anatomies like heart valves easily and accurately. Now you can reach the apex between swiftness and diagnostic quality with Sonic DL acceleration.

Diagnose confidently with end-to-end clinical solutions for vital exams

Access help from clinical radiology experts whenever you need it

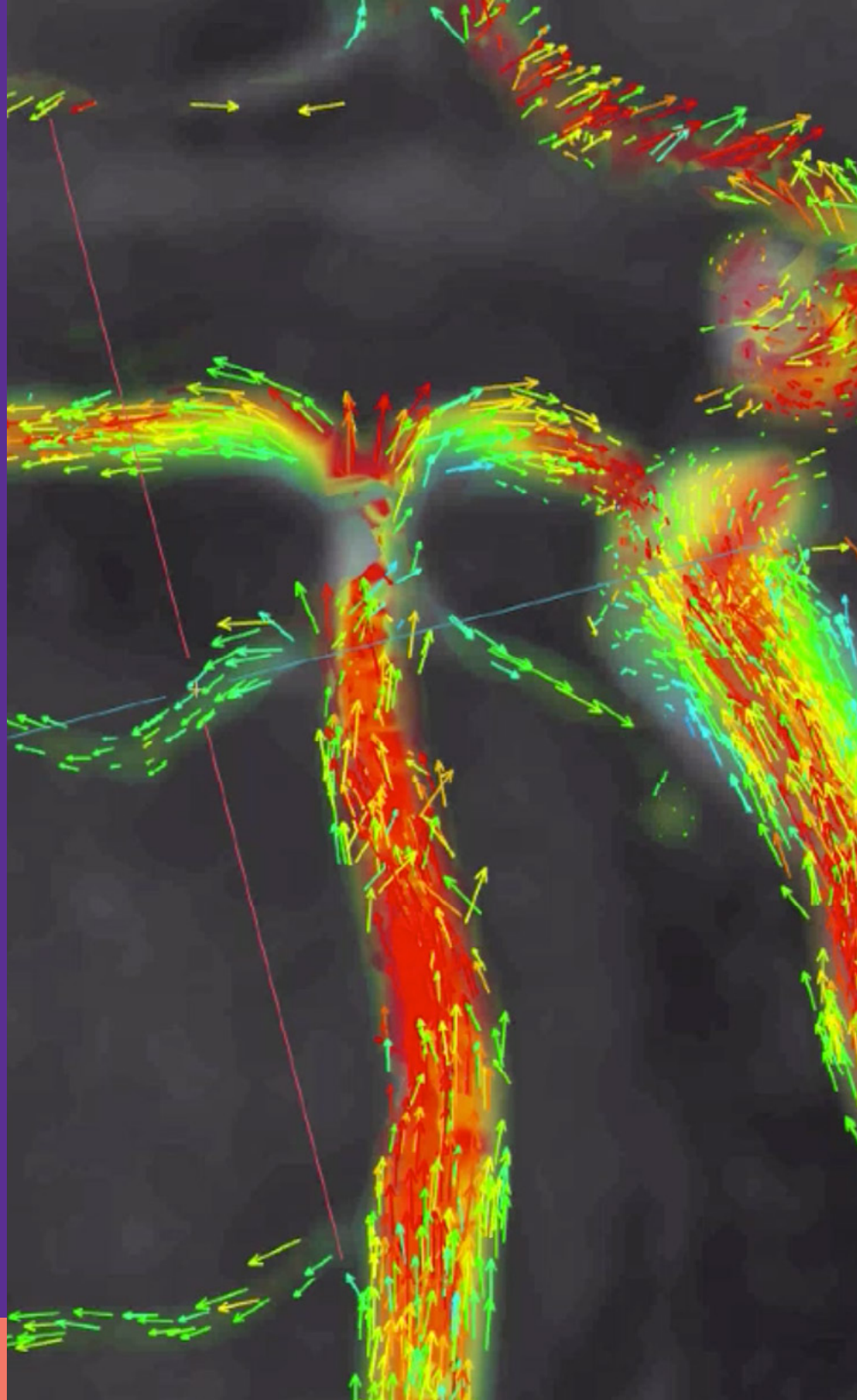
Streamline protocols seamlessly and optimize staff training

Intelligence

Outstanding images with spectacular detail

Advanced Diffusion

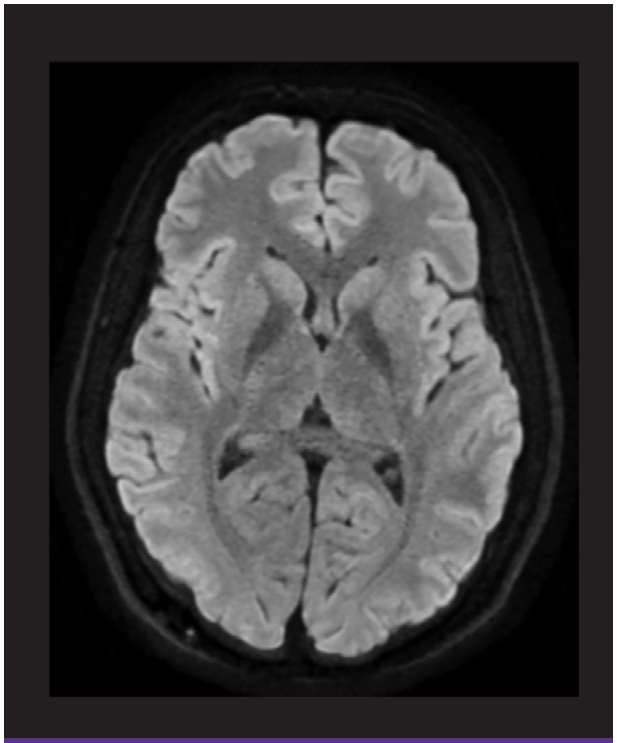
View 4D flow of the brain



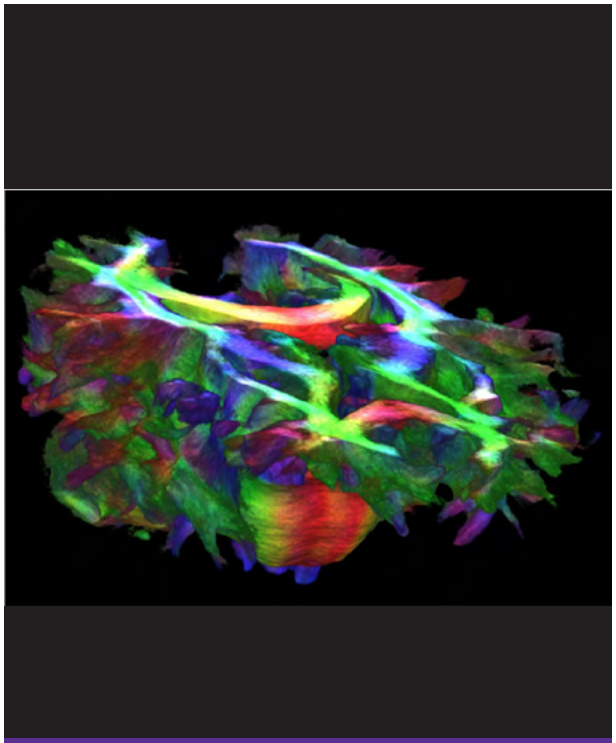
Diffusion imaging has never been so intelligent

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.



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[1]

Improved co-registration

Improved visualization of the most challenging areas

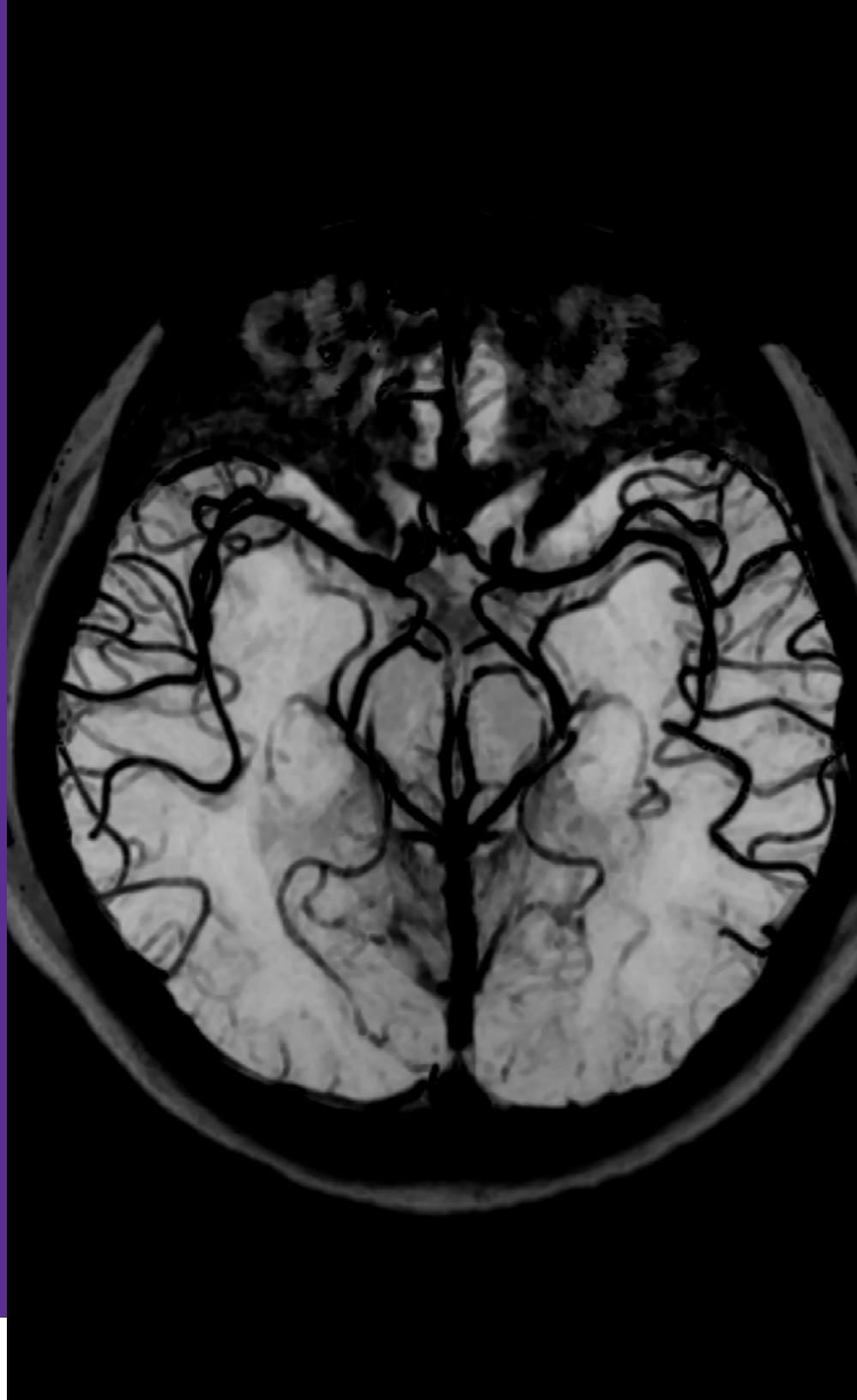
Higher resolution without any restrictions

Fueling the future of MR

Our suite of Imaging Applications for SIGNA MR 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

Clinical image gallery

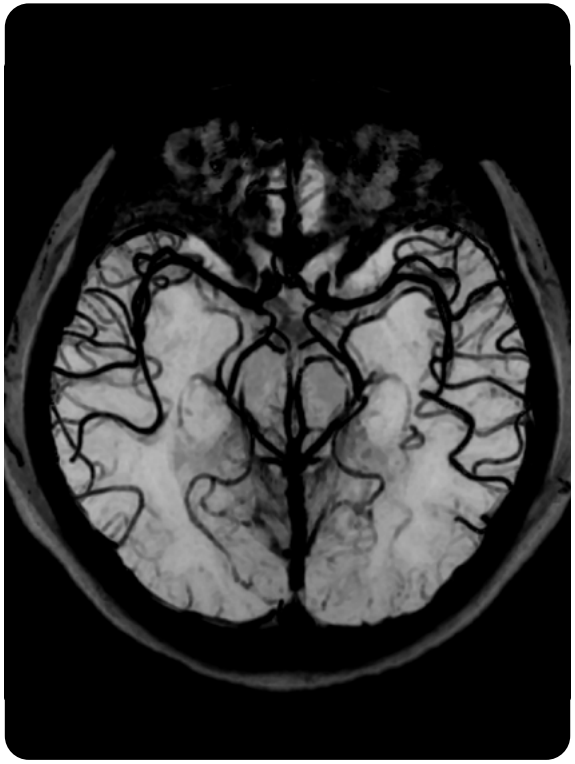


View gallery

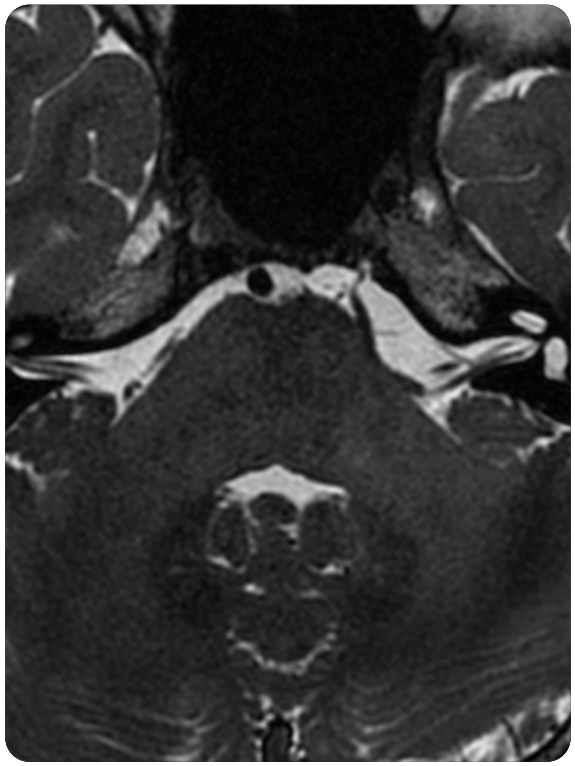
NeuroWorks

48-channel Head Coil

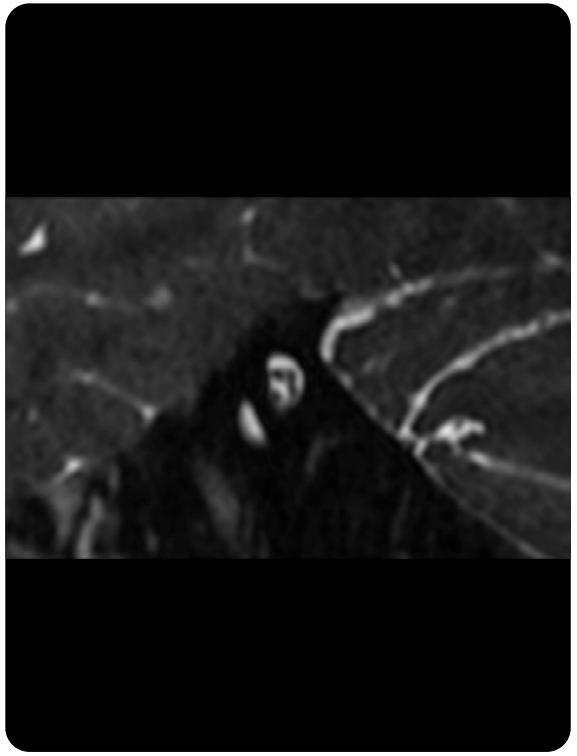
Offering neuro applications from positioning to post-processing
and faster imaging with greater diagnostic value.



T1 Cube Flex
Water image
Vascular - Black Blood imaging



Axial T2 Cube IAC
0.5 x 0.5 x 0.6 mm

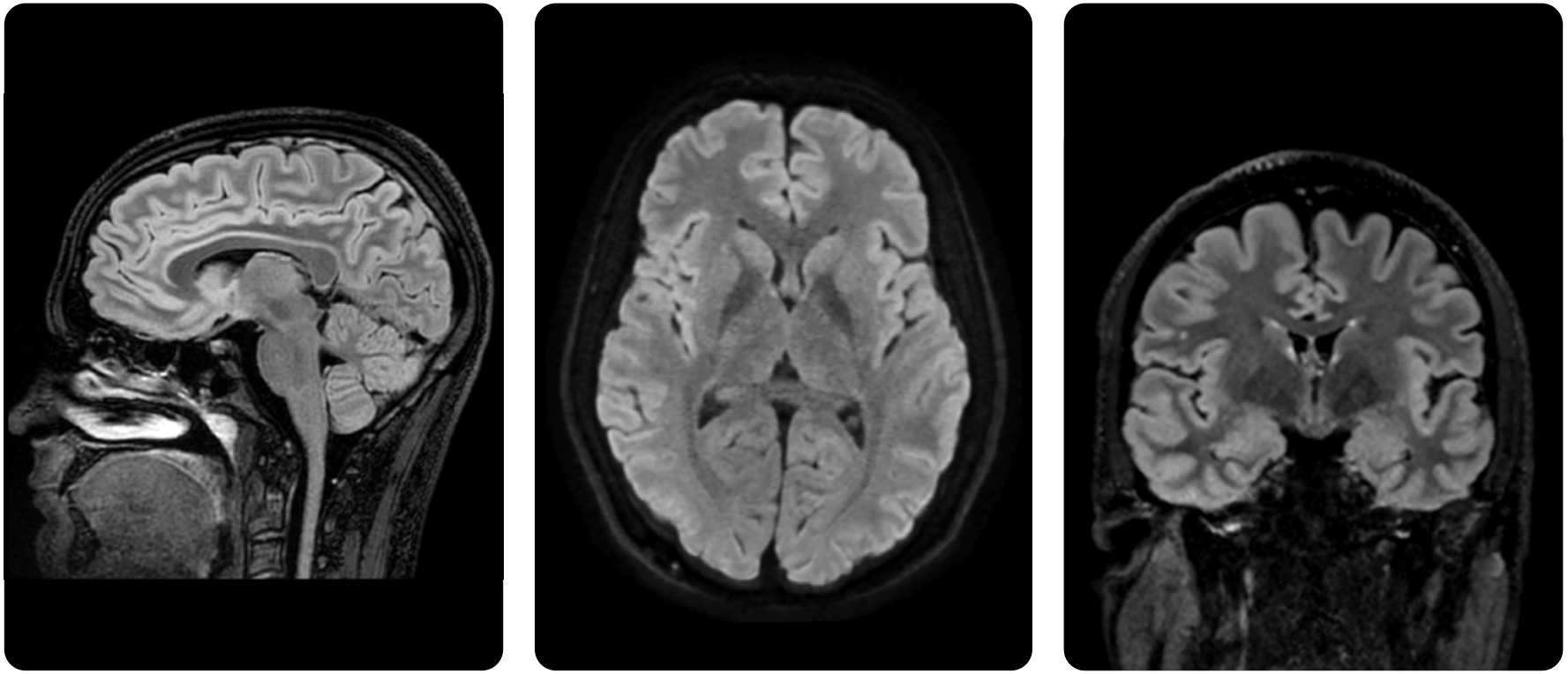


Axial T2 Cube IAC
0.5 x 0.5 x 0.6 mm
Perpendicular reformat

NeuroWorks

48-channel Head Coil

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

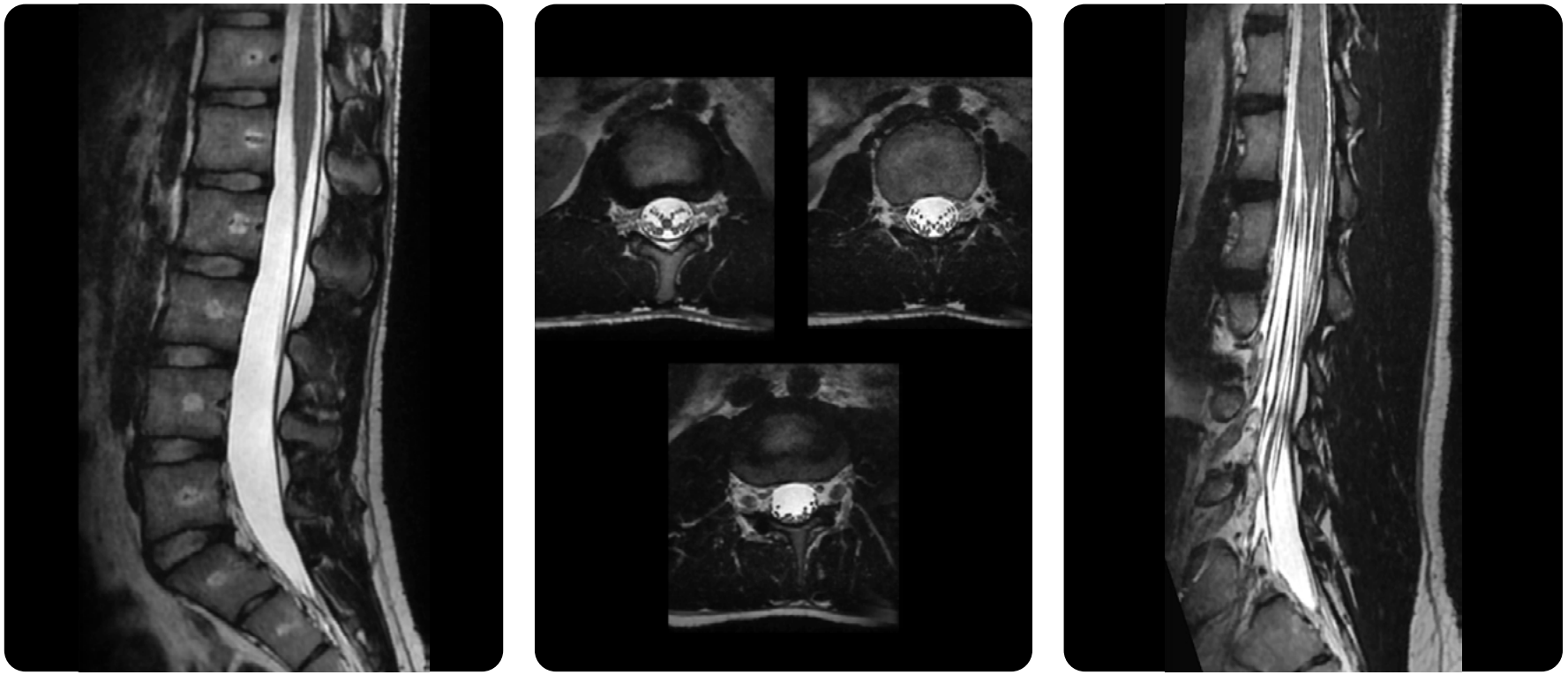


NeuroWorks

Spine

AIR Coil Technology

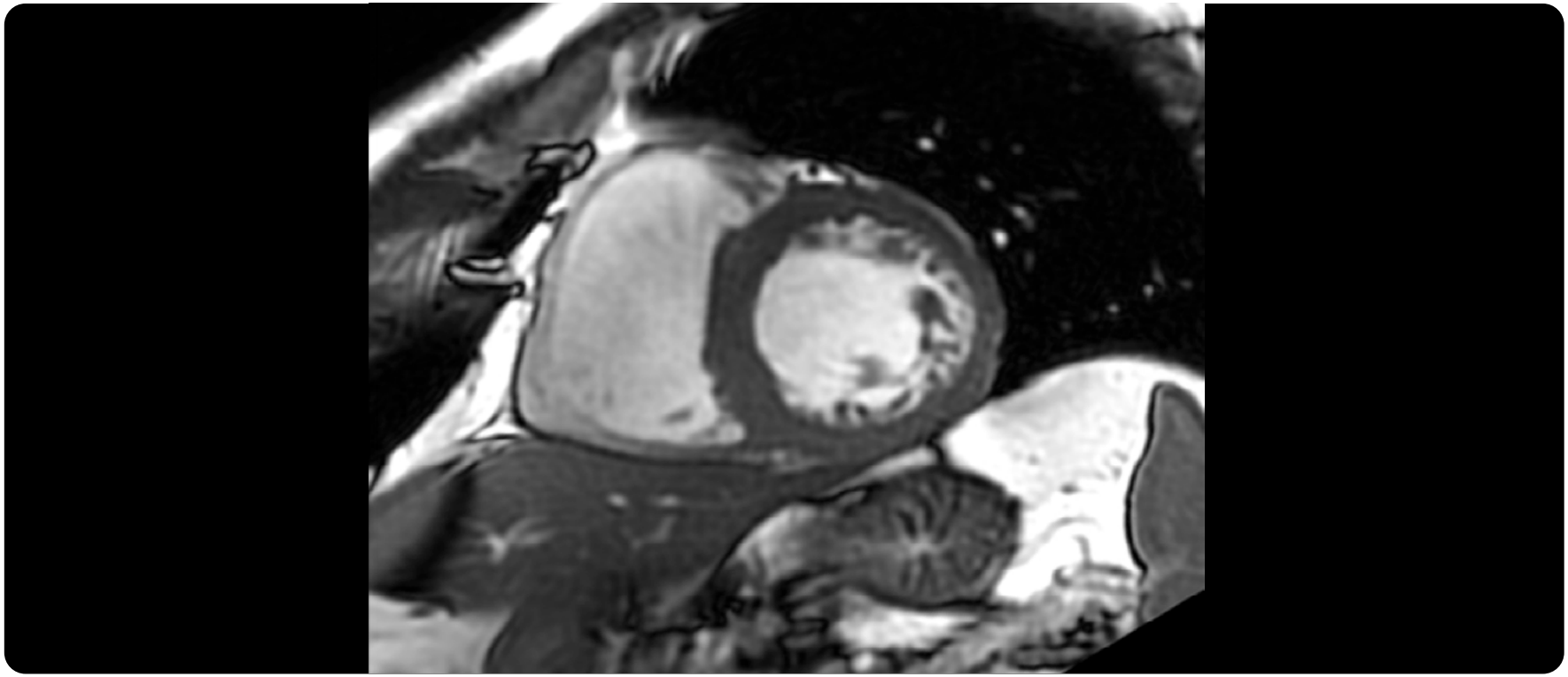
T2 HyperCube with HyperSense
Sagittal acquisition
0.8 mm isotropic



CVWorks

CardioMaps

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

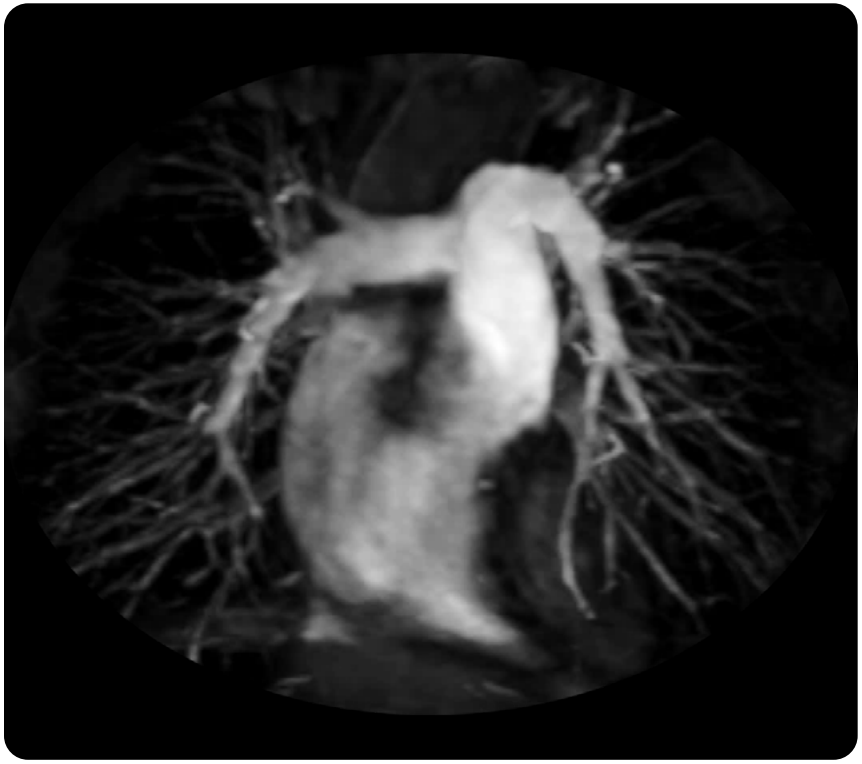


Short Axis FIESTA

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

BodyWorks

Whole-body imaging

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

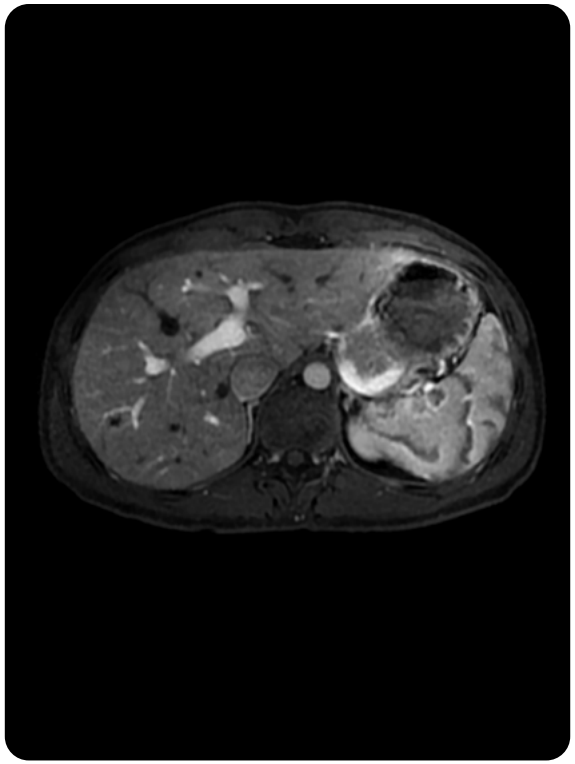
Coronal LAVA Flex

Coronal T2 Flex

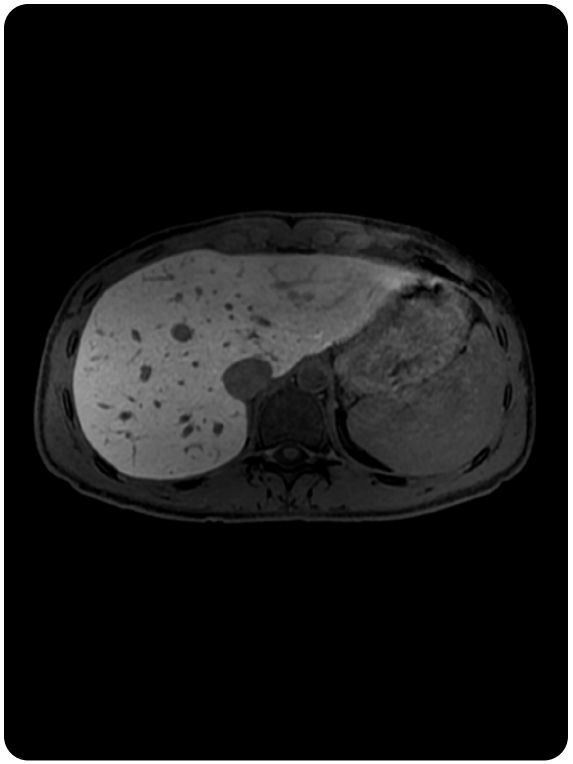
Coronal MIP - DWI

BodyWorks

Liver



Axial LAVA Arterial 3.2 mm

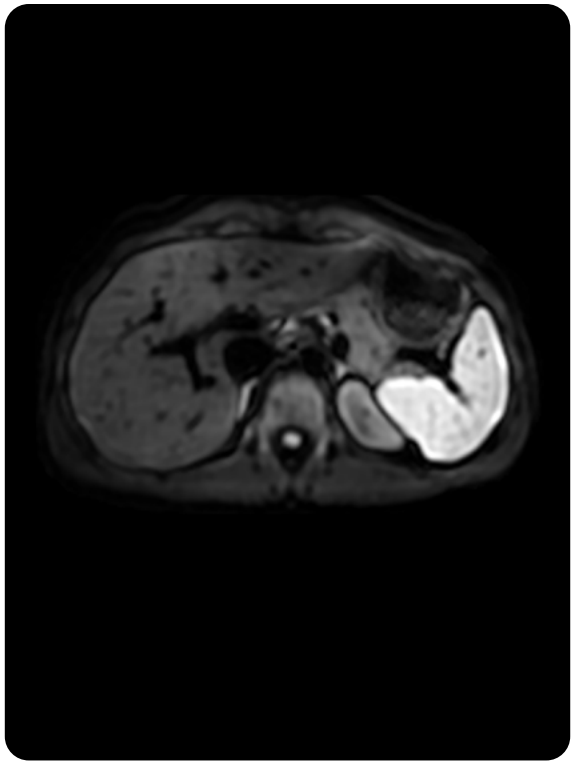


Axial LAVA Navigated 1.6 mm
20 minutes post-injection

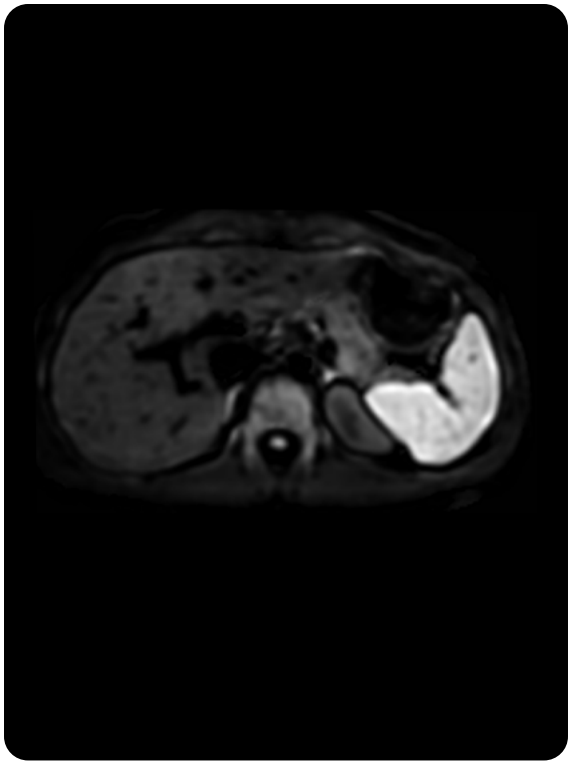
Axial LAVA Navigated
Coronal reformat
1.1 x 1.6 x 1.6 mm

BodyWorks

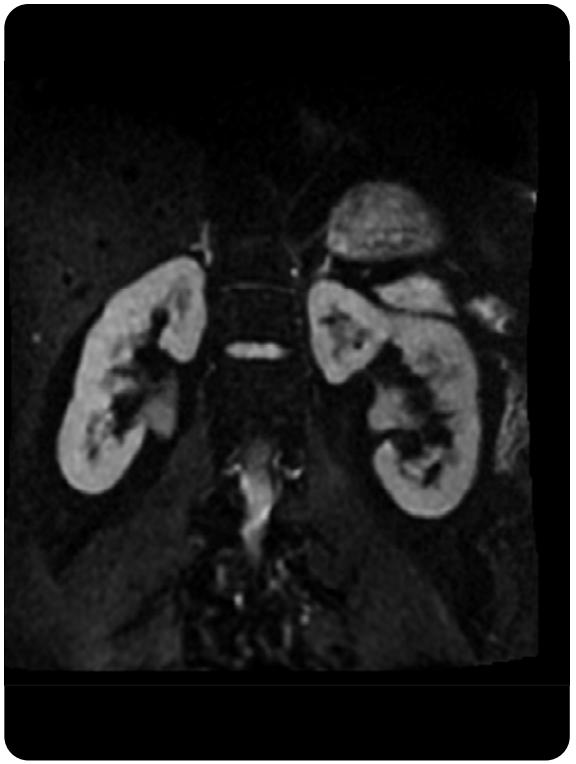
Liver and kidneys



Axial DWI b500



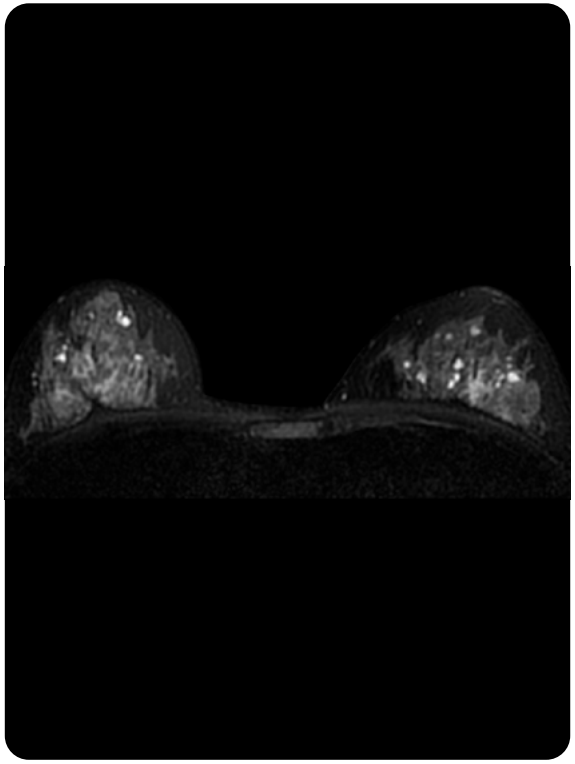
Axial MAGIC DWI b1000



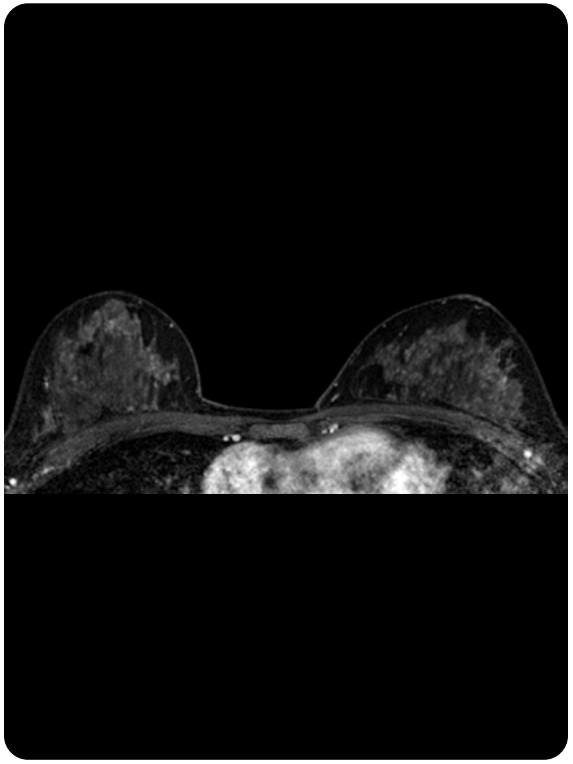
Coronal MUSE of the kidneys

BodyWorks

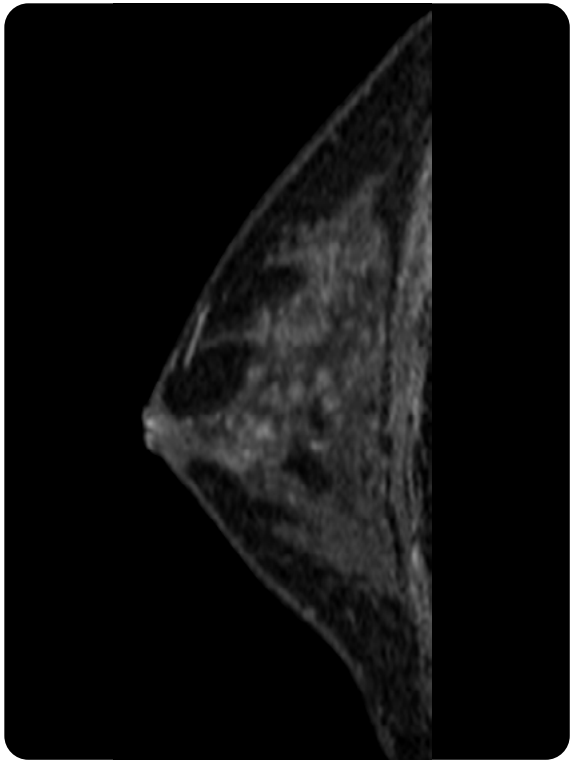
Breast



Axial T2 FatSat
2 mm



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

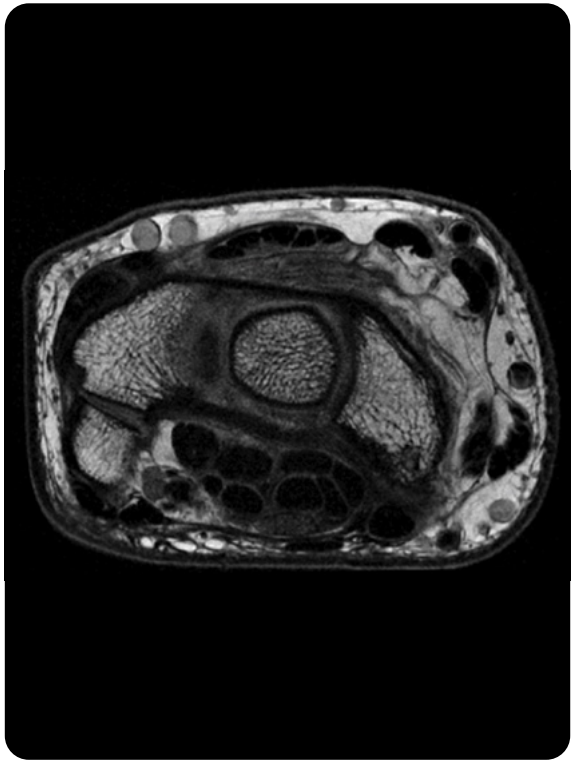


Sagittal reformat

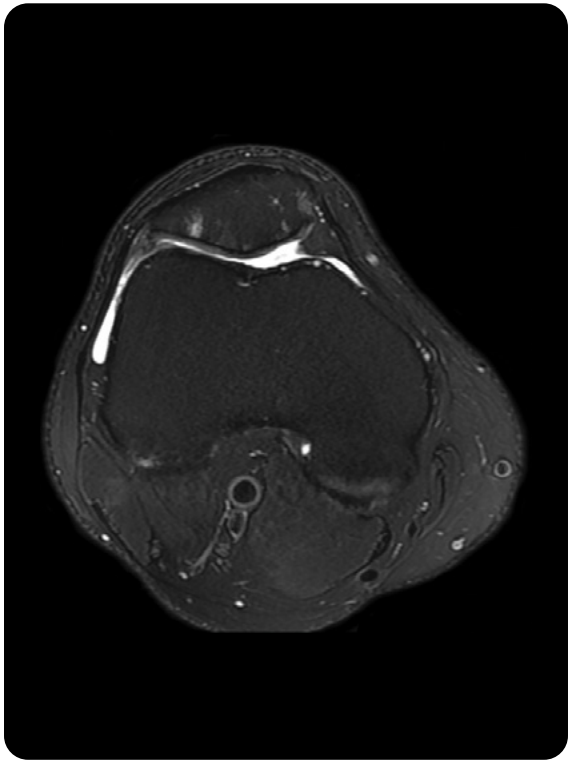
OrthoWorks

Musculoskeletal

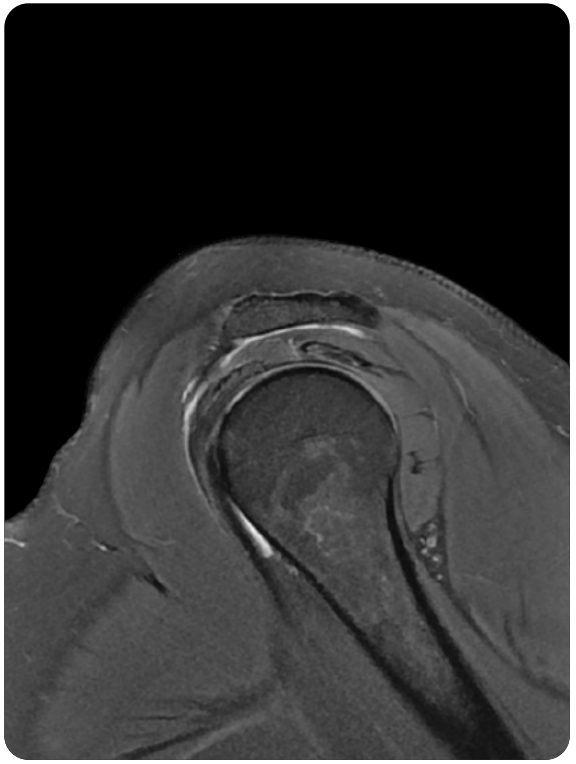
This extensive library of imaging techniques enables you to image bone, joint, and soft tissue with remarkable tissue contrast.



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

Learn more about SIGNA Premier

To learn more about the SIGNA family of MR solutions, click here.

About GE HealthCare Technologies Inc.

GE HealthCare is a trusted partner and leading global healthcare solutions provider, innovating medical technology, pharmaceutical diagnostics, and integrated, cloud-first AI-enabled solutions, services and data analytics. We aim to make hospitals and health systems more efficient, clinicians more effective, therapies more precise, and patients healthier and happier. Serving patients and providers for more than 125 years, GE HealthCare is advancing personalized, connected and compassionate care, while simplifying the patient's journey across care pathways. Together, our Imaging, Advanced Visualization Solutions, Patient Care Solutions and Pharmaceutical Diagnostics businesses help improve patient care from screening and diagnosis to therapy and monitoring. We are a $19.7 billion business with approximately 53,000 colleagues working to create a world where healthcare has no limits.

Follow us on LinkedIn, X, Facebook, Instagram, and Insights for the latest news, or visit our website gehealthcare.com for more information.

References

1. Compared to previous generation technology.
2. With Sonic DL™. Data on file, 2023, Sonic DL vs. fully sampled CINE acquisition.

October 2025
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