



SIGNA™ Premier *Evo**

Open up

Power

Open up to the future of imaging

MR technology is always advancing, and if your current system isn't meeting your growing needs, you might be thinking about a replacement. However, this has a major impact on your department, especially when you factor in unnecessary disruption and downtime.

Fortunately, you don't need to replace your 3.0T MR system to broaden its clinical capabilities. GE HealthCare technology is incredibly easy to transform—you can keep your magnet and reconfigure around it.

Introducing SIGNA Premier Evo

A transformation that breathes new life into legacy 3.0T MR systems. Not only is this the world's first upgrade that opens up narrow-bore scanners from 60 cm to 70 cm for more comfortable scans, but it also opens up a vast array of clinical capabilities for your imaging department.





Open up potential

A SIGNA Premier *Evo* transformation gives your legacy 3.0T MR system a makeover, equipping it for the future. With a wider bore and a larger field of view, you can make the scan experience more comfortable for patients and scan them more effectively.

An improved gradient performance and more Total Digital Imaging (TDI) RF Channels increase the quality of images, and a higher maximum weight limit means you can scan broader body types, extending your service to a wider patient population.



Legacy MR System¹ 60cm

60 cm Narrow-bore magnet

48 x 48 x 48 cm Field of view

23/80 or 40/150 Twinspeed gradient
(amplitude/slew rate)

8, 16 or 32 RF channels

350 lbs / 159 kg Max. patient weight

Detachable table

SIGNA Premier Evo 70cm

Same magnet, wider bore

Field of view **50 x 50 x 50 cm**
Gradient up to **80 mT/m, 200 T/m/s**
3 x 32 ch coil ports in table
Channels up to **146**

Max. patient weight **550 lbs / 250 kg**

eXpress™ Detachable Table with
60 Channel AIR Posterior Array

Toe-to-head whole-body
imaging & **feet-first scanning**

Bilateral **IRD's**

Deep Learning in its DNA
AIR™ Recon DL standard,
including **3D & PROPELLER**
enhancements

AIR Coils: Head 48 channels,
Anterior Array 30 channels,
Multi-Purpose 21 or 20 channels



Consistency

The wider view



For patients

Patients will benefit from shorter scan times and the added comfort delivered from a wider 70 cm bore and AIR Technology.



For radiologists

Radiologists will achieve pin-sharp image precision, undeniable speed, and consistent results.



For the environment

As well as extending the lifespan of your initial investment, SIGNA Premier *Evo* is a sustainable option that reduces helium usage and eliminates magnet waste.





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



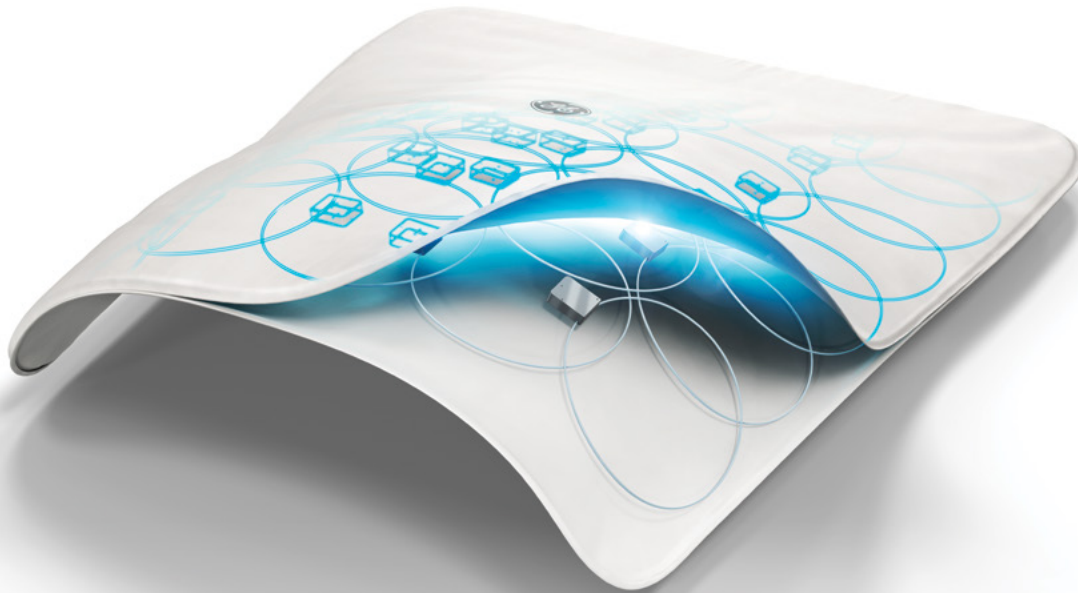
Improves signal quality by bringing the elements closer to the patient



Anterior Array coil covers 65 cm of anatomy, enabling multi-station exams without having to reposition the coil

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.



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

Enhance the patient experience

Your imaging department needs to accommodate different types of patients by improving comfort and accessibility. Fortunately, the SIGNA Premier *Evo* transformation helps you remain receptive to their needs, without sacrificing the quality of results.

SIGNA Premier *Evo* is the first 60 cm to 70 cm upgrade that expands the bore of legacy 3.0T MR systems. This 36% larger cross-section and the addition of feet-first imaging will greatly enhance patient satisfaction, reduce claustrophobia rejection rates by up to 90%² and the need for sedation³. Our wider eXpress Detachable Table lets you prepare patients outside the imaging room and accommodates a 1.6x greater maximum weight limit (550 lbs / 250 kg) than your legacy MR system, meaning you can expand your service to a wider patient population.

Lightweight, blanket-like AIR Coils are 50% lighter than conventional coil technology, providing added comfort. Patients no longer need to be readjusted during their scans as whole-body imaging workflows allow different organs to be scanned simultaneously, helping procedures to run seamlessly and smoothly. AIR Recon DL also reduces scan time by up to 50%.

“Instantly that’s saving three or four minutes...without losing image quality”

Prof. Martin Graves, University of Cambridge, UK.

Regarding scan time improvement and patient comfort with AIR Recon DL



Larger bore

gives patients 36% more room, making scans more comfortable³

AIR Coils

are 50% lighter than conventional coil technology

AIR Recon DL

reduces scan time by up to 50%, improving productivity and the patients' experience

Intelligence

Expand clinical capabilities

To provide the best clinical service for your patients, it's important to have access to the latest technologies so you can enhance your performance and improve results. A SIGNA Premier *Evo* transformation revolutionizes your legacy MR system, making it fit for your future research and advanced clinical endeavors.

With access to the latest advanced AI technologies users can scan all anatomies and achieve pin-sharp, consistent images faster, broadening your scanning capabilities and ensuring your patients get the most accurate results.

Our pioneering Deep Learning based reconstruction algorithm, AIR Recon DL, has been proven to improve signal-to-noise ratio (SNR). This in turn accelerates scan time by up to 50%, meaning you can see more patients daily and work faster.

To further enhance your image quality and scan uniformity, SIGNA Premier *Evo* comes with a higher gradient performance of up to 80 mT/m (peak amplitude) and 200 T/m/s (slew rate), and 146 Total Digital Imaging (TDI) RF Channels. You'll also notice the difference automated applications such as AIR Touch™ and AIR x™ make to both your workflow and patient throughput.



Improve

confidence from referring physicians
with an MR system that enhances
your clinical service

Access

the latest advanced AI
technologies to speed up scan
time and improve accuracy

Enhance

image quality and uniformity with a higher
gradient and more Total Digital Imaging
(TDI) RF Channels than legacy MR systems

Investment

Extend investments

Replacing your legacy MR system is a significant expense, especially when you factor in the cost of installation, unnecessary downtime, and disruption to your daily practice. SIGNA Premier *Evo* avoids all these challenges, making upgrading a more cost-effective and less disruptive investment.

Improve your productivity and get the most out of your initial investment by retaining your long-lasting magnet.

For added assurance, we're providing legacy MR systems with new covers, electronics, and software updates to improve future capabilities, as well as system life.

“MR systems are... expensive and there’s constant changes in the technology. So, I think this is an important investment.”

Dr. Andres Von Heijne, Danderyds Hospital, Sweden
Regarding AIR Recon DL

Clinical gallery

All-round better imaging

For pin-sharp precision, you need a SIGNA Premier *Evo* transformation. With AIR Recon DL, radiologists can achieve sharper, more consistent images like these, making diagnoses simpler.



NeuroWorks

AIR Recon DL imaging for speed | total exam time 248 seconds



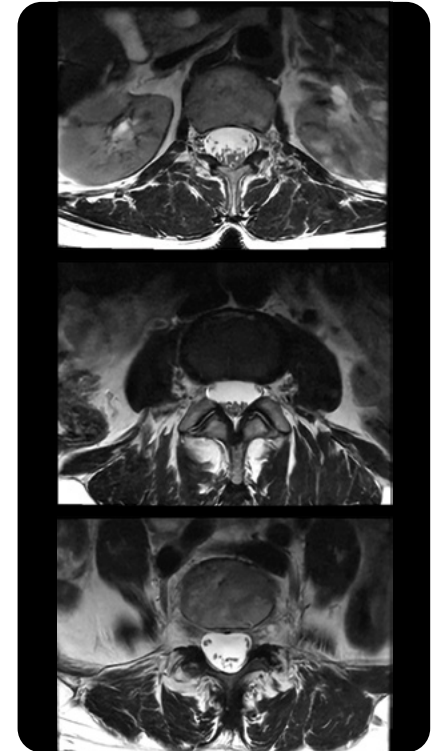
Sag T2 FSE
0.6 x 0.9 x 3.5 mm
50 sec



Sag T1 FSE
0.8 x 1 x 3.5 mm
1:08 min



Sag T2 STIR
0.7 x 1 x 3.5 mm
1:38 min



Ax T2 FSE
0.7 x 0.9 x 4 mm
40 sec

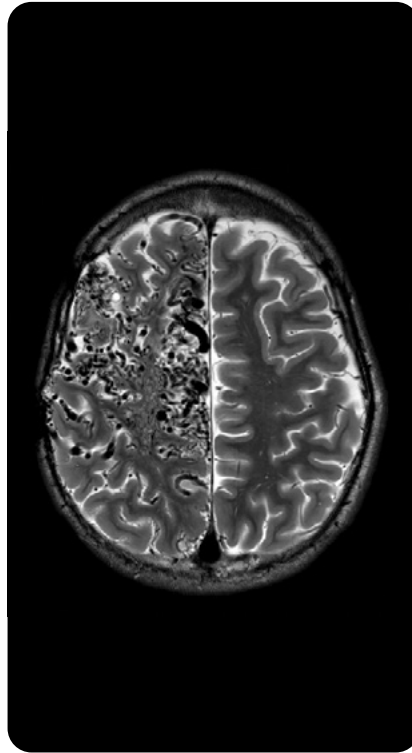


NeuroWorks

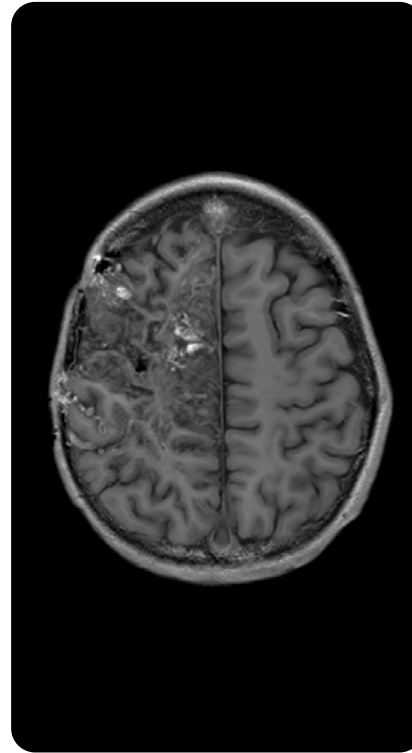
Proliferative angiopathy



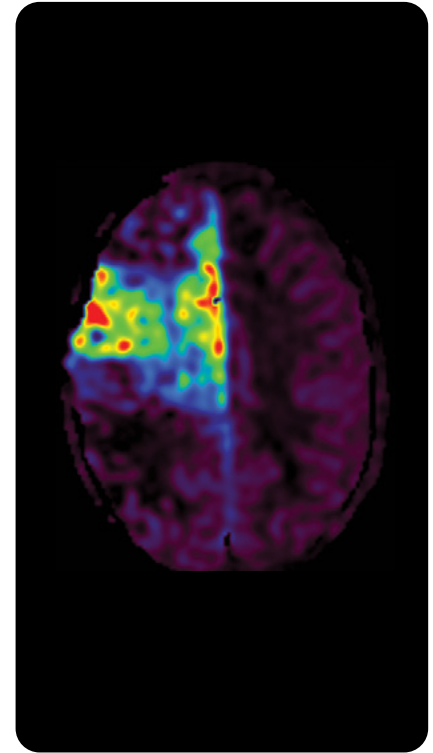
Sag T2 FSE
0.4 x 0.5 x 3 mm
2:08 min



Ax T2 FSE
0.4 x 0.4 x 3 mm
2:14 min



Ax T1 SE Gado
0.6 x 0.7 x 5 mm
0:40 min



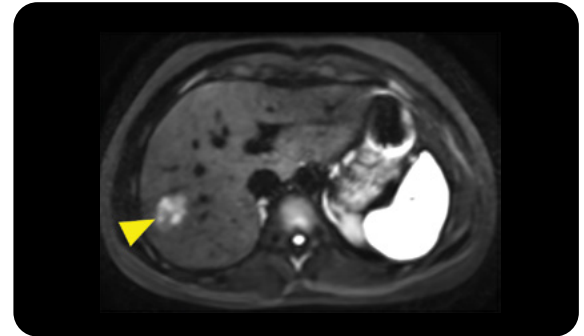
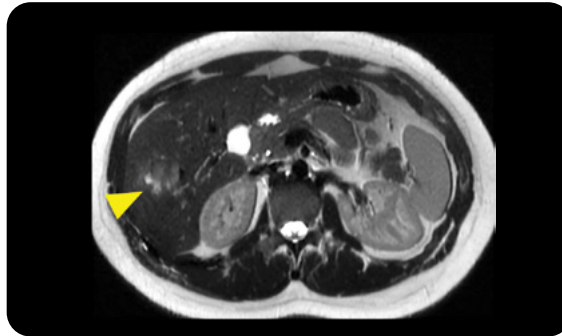
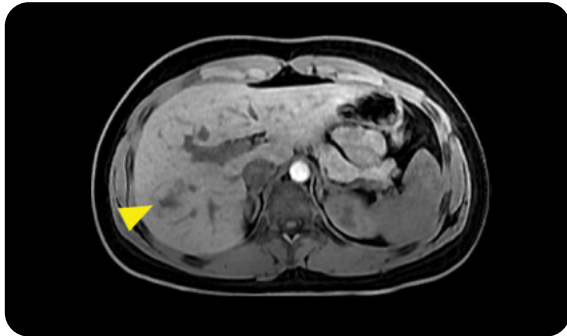
3D ASL
Matrix: 512 x 8
4:05 min



BodyWorks

Liver Imaging with the large AIR MP Coil: FNH

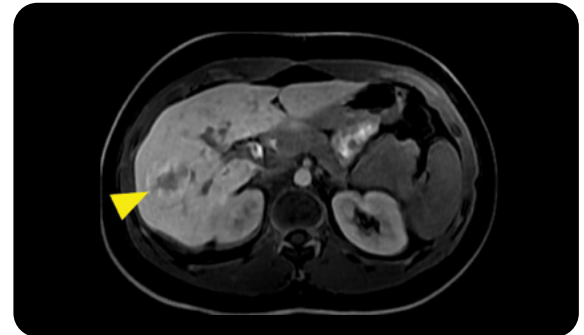
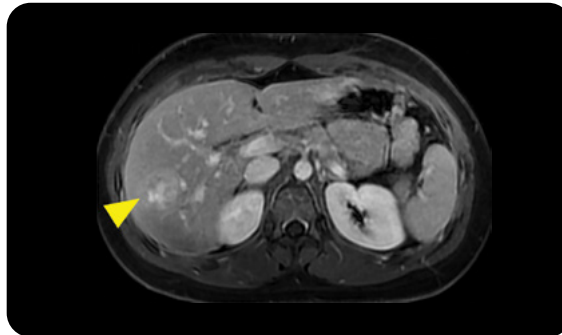
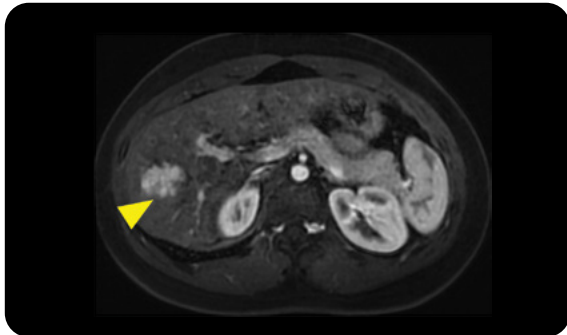
Early enhancement on arterial phases.
Hepatobiliary phase shows central scar, typical of FNH



LAVA Flex free breathing. HyperSense with Nav
1.3 x 1.5 x 1.3 mm
52 sec

Ax T2 SSFSE 2xBH
1.2 x 1.4 x 3 mm
40 sec

Ax DWI FS b800 RTr
3.3 x 1.7 x 5 mm
2:26 min



LAVA HyperSense
Dynamic phase 2 min
1.5 x 1.5 x 1.3 mm
10 sec

LAVA HyperSense.
Late phase 5 min
1.3 x 1.5 x 1.3 mm
19 sec

LAVA HyperSense
Hepatobiliary phase
1.3 x 1.7 x 1.3 mm
17 sec

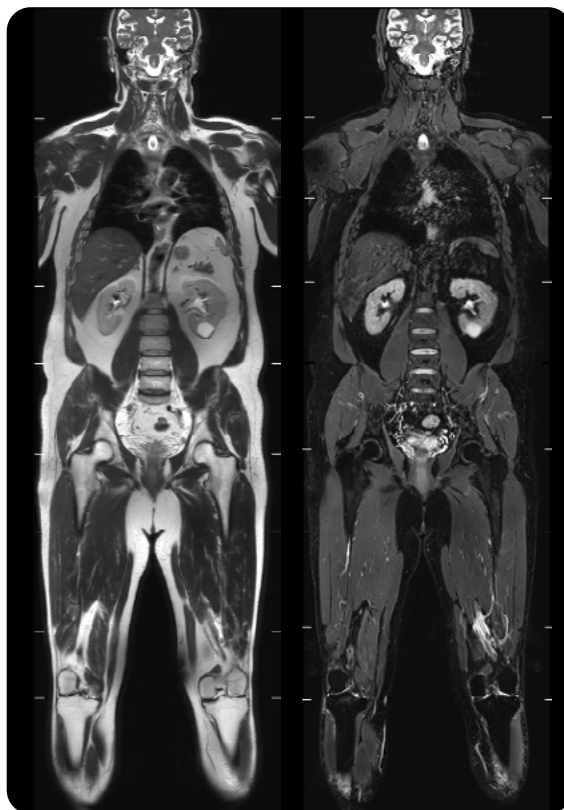


BodyWorks

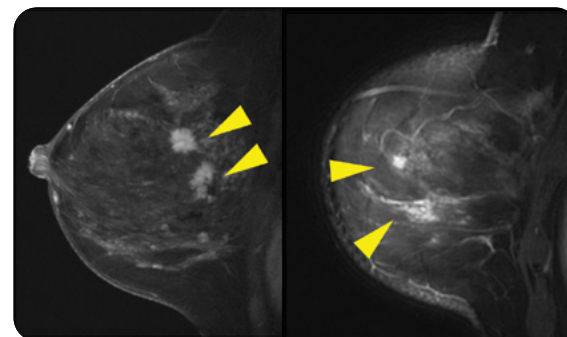
Liver Imaging with the large AIR MP Coil: FNH



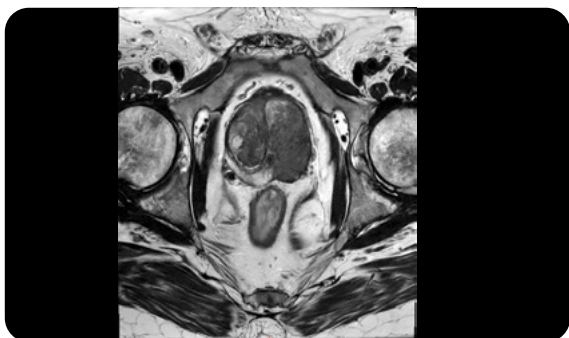
Sag T2 FSE Fast
0.4 x 0.6 x 3 mm
1:17 min



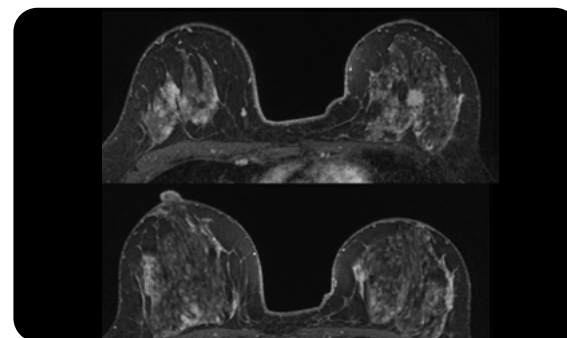
Cor T2 SnapShot
of station: 5
Matrix: 440 x 300
of Slices: 42
42 sec/each



Sag VIBRANT ASPIR with HyperSense
0.65 x 0.65 x 2.8 mm 1 min/phase 5 phases



Ax T2 FSE
0.5 x 0.6 x 2.5 mm
2:42 min

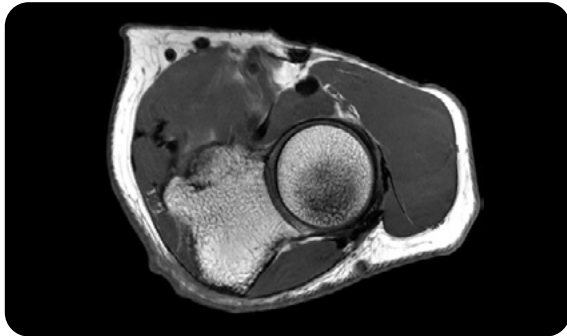


Ax VIBRANT ASPIR with HyperSense
0.68 x 0.68 x 1 mm
2 min

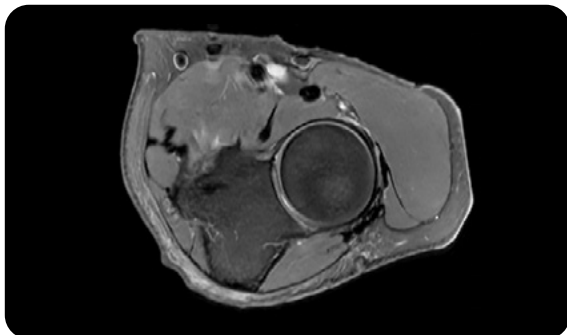


Orthoworks

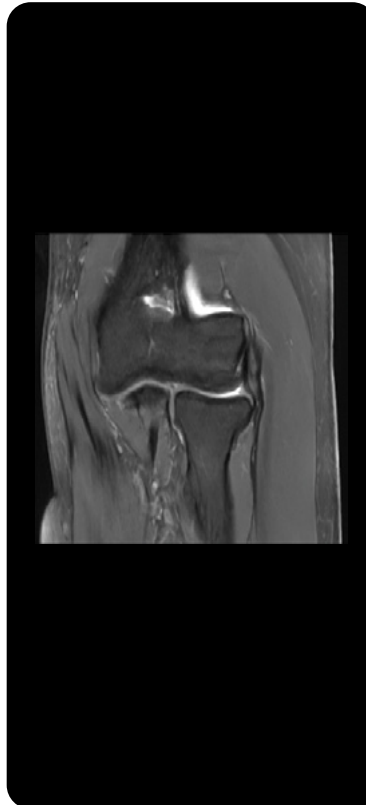
AIR Recon DL: Fast Elbow in five minutes



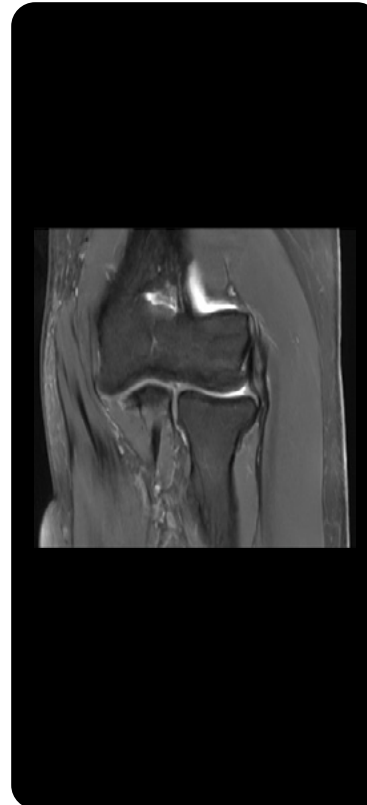
Ax PD FSE
0.2 x 0.4 x 3.0 mm
44 sec / 28 Slices



Ax PD FatSat
0.3 x 0.5 x 3.0 mm
1:18 min / 28 Slices



Cor PD FSE
0.2 x 0.4 x 2.5 mm
49 sec / 19 Slices



Cor PD FatSat
0.3 x 0.6 x 2.5 mm
1:29 min / 19 Slices



Sag PD FatSat
0.3 x 0.6 x 3.0 mm
43 sec / 22 Slices



Orthoworks

Knee imaging: Tibial plateau Fracture



Cor STIRMatrix:
320 x 260
0.5 x 0.7 x 3 mm
3:20 min



Cor T1Matrix:
512 x 420
0.3 x 0.4 x 3 mm
2:09 min

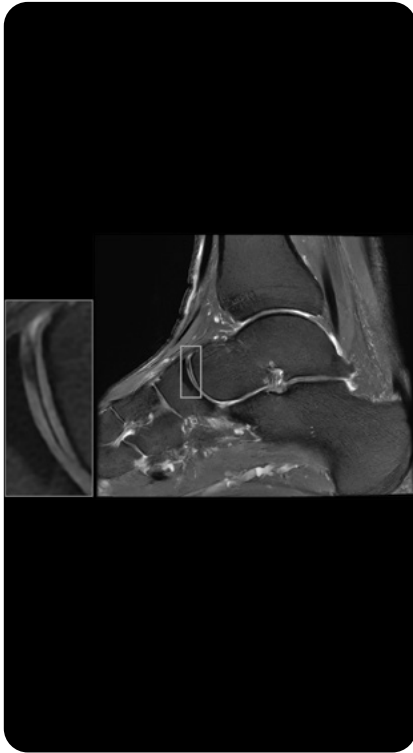


Sag T2 FS Matrix:
420 x 320
0.4 x 0.5 x 3 mm
2:13 min



Orthoworks

High resolution imaging with AIR Recon DL



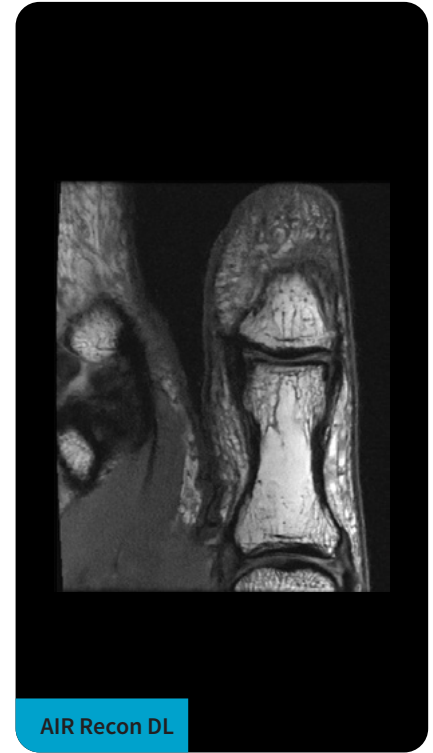
Sag PD FatSat with AIR Recon DL
3:42 min
0.3 x 0.3 x 2.5 mm



Sag T1 FSE with AIR Recon DL
2:45 min
0.2 x 0.3 x 3 mm



Conventional



AIR Recon DL

Cor PD FSE
136 μ m x 182 μ m x 1.2 mm
3:16 min / 18 Slices



Orthoworks

oZTEo Bone Imaging

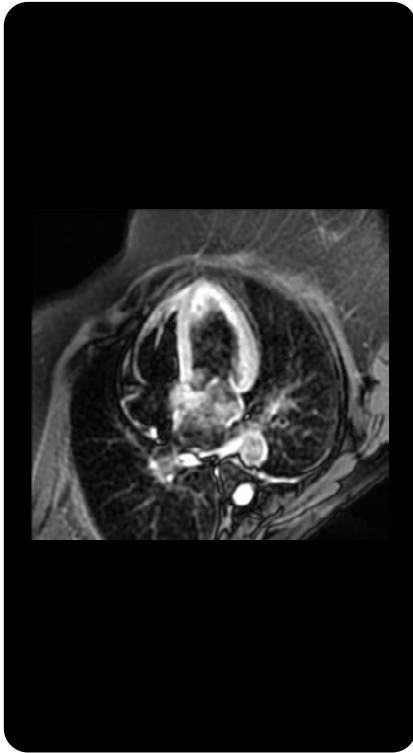


Hand
0.8 x 0.8 x 0.8 mm
4:57 min

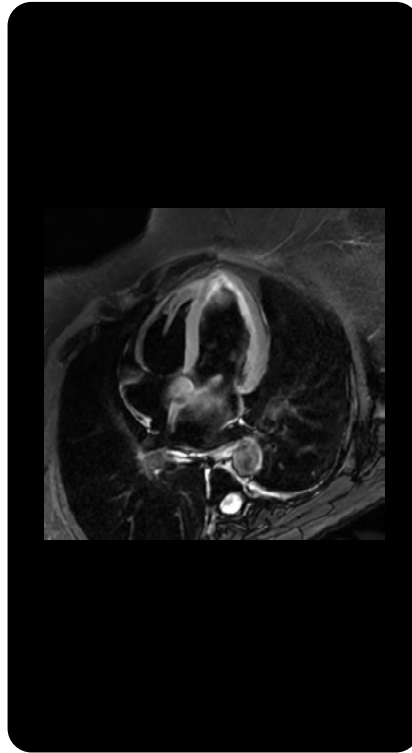


CVWorks

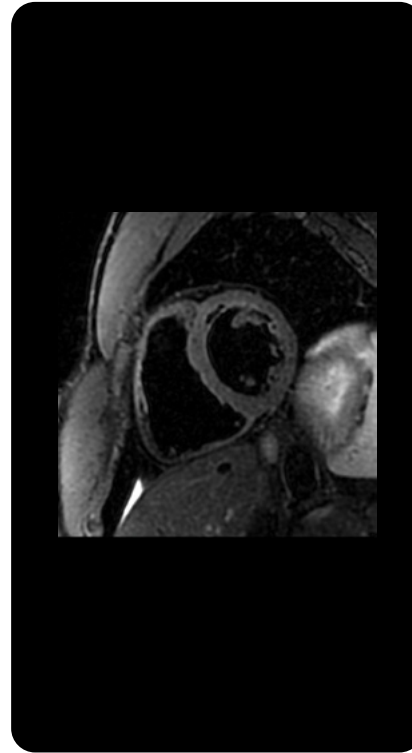
Cardiac imaging with multi-purpose 21ch AIR Coil



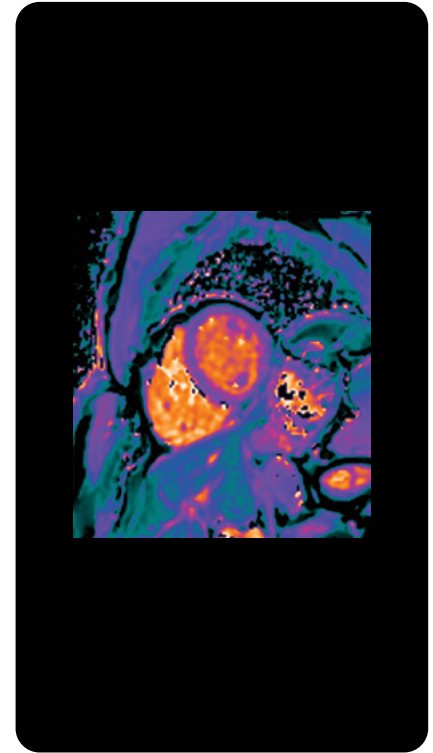
Conventional Long Axis Triple IR
1.8 x 1.8 x 10 mm
1:02 min



AIR Recon DL Long Axis Triple IR
1.8 x 1.8 x 10 mm
34 sec



Short Axis T2 Black Blood
Double IR FatSat
1.3 x 1.3 x 10 mm
44 sec

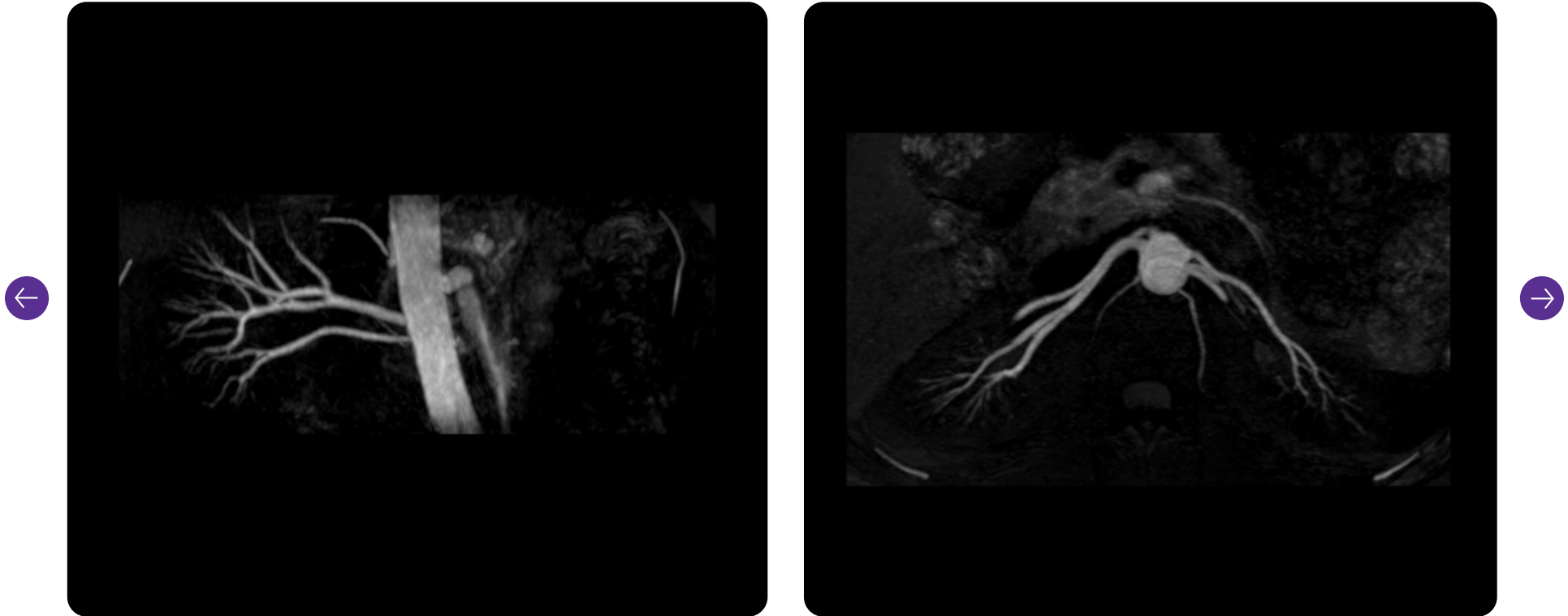


MOLLI T1 Map
2.6 x 2.9 x 8 mm
10 sec



CVWorks

Renal arteries

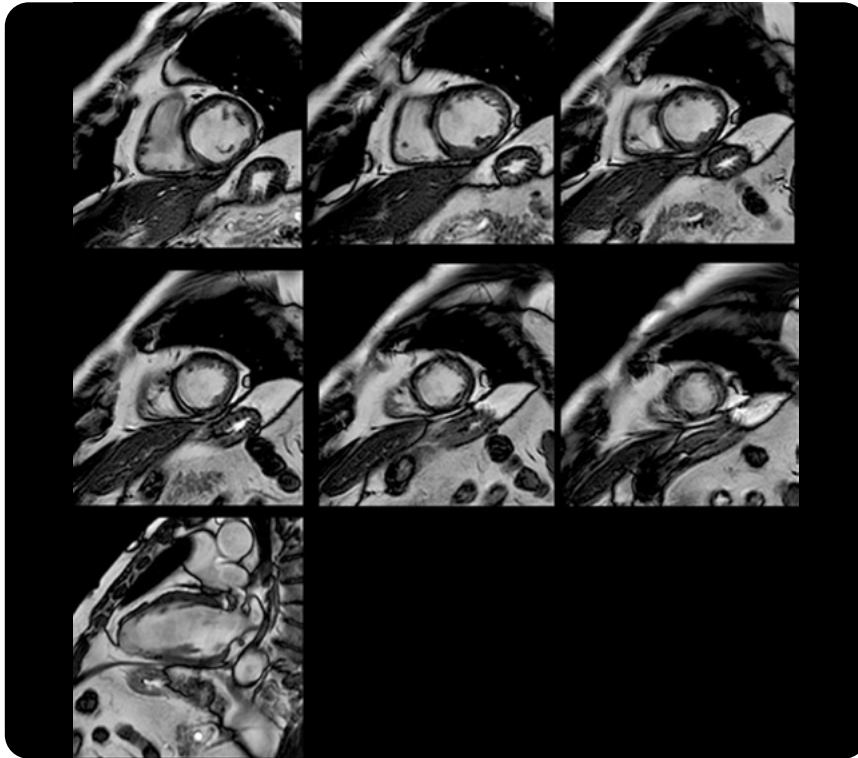


Inhance IFIR Axial (non contrast)
0.8 x 1.3 x 0.8 mm
4:28 min



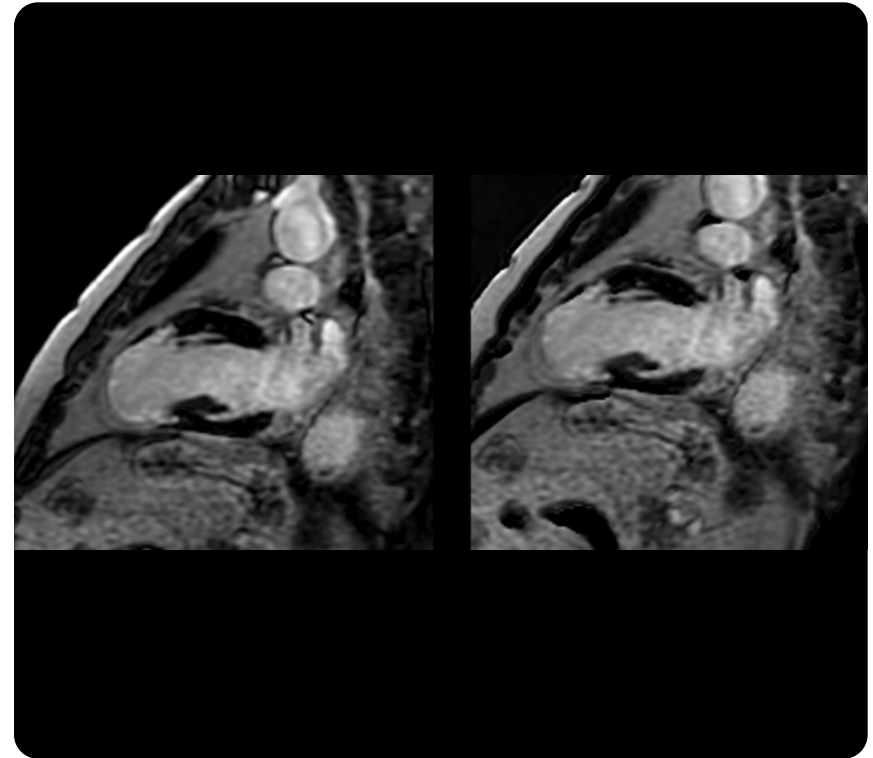
CVWorks

Apical myocardial infarction



Short Axis Cine FIESTA
1.8 x 1.8 x 8 mm
2:33 min/14 Slices

2 Chamber Cine FIESTA
1.8 x 1.8 x 8 mm
1:52 min/10 Slices



Phase Sensitive MDE
1.9 x 2.8 x 8 mm
48 sec





Future

Shining a light on sustainability

SIGNA Premier *Evo* widens the scope for a more sustainable future by allowing you to transform, rather than replace, your legacy MR magnet.

As there is no need to build or transport a new magnet, keeping your current magnet reduces unnecessary fossil fuel emissions. You can also save up to 2,000 L of helium by transforming your legacy MR system instead of replacing it, lowering your carbon footprint. AIR Recon DL also reduces power consumption per patient scan by up to 30%, which is more affordable for you and kinder for the environment.

“AIR Recon DL is really a game-changer”

Dr. Hollis Potter, Hospital for Special Surgery, USA

Less manufacturing

99 tons of CO₂ emission avoided⁴

Less transportation

18.8 tons of CO₂ emission avoided⁴

Less helium

One ton of helium emission avoided⁵

Energy conscious

30% reduction in power consumption per patient⁶



GE HealthCare

Open up with a SIGNA Premier *Evo* transformation 

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.

*SIGNA Premier Evo is an upgrade configuration of SIGNA Premier.

References

1. Image is representative. Most of the GE 3.0T 60 cm systems are eligible for transformation. Contact your GE HealthCare representative for additional details.
2. Claustrophobia rate comparison head-first/feet-first.
3. Enders J, Zimmermann E, Rief M, et al. Reduction of claustrophobia during magnetic resonance imaging: methods and design of the "CLAUSTRO" randomized controlled trial. BMC Med Imaging. 2011 Feb 10;11:4. doi: 10.1186/1471-2342-11-4. PMID: 21310075; PMCID: PMC3045881.
4. Carbon footprint is the reduction of carbon emission that would have happened if the client exchanged system instead of upgrading it. The transportation CO² emission is estimated with the weight of the items not replaced, the mode of the shipment from the factory to a site in France, the distance of the shipment and SimaPro. SimaPro, estimates sustainability KPIs. REF-07016
5. Estimation based on difference of Helium needed vs a new installation and the carbon footprint of liquid helium supplied by a gas company 712 CO²/l He, the on-site shipment. <https://pubs.aip.org/aip/ltp/article/49/8/967/2905263/Carbon-footprint-of-helium-recovery-systems>. REF-07016
6. Projected power consumption reduction on a system with or without deep learning reconstruction. REF-07016

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