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uAIFI inside
uMR Omega
Ultra-wide Bore 3.0T MR
Think BIG.

ABOUT UIH

At United Imaging, we develop and produce advanced medical products, digital healthcare solutions, and intelligent solutions that cover the entire process of imaging diagnosis and treatment. Founded in 2011 with global headquarters in Shanghai, our company has subsidiaries and R&D centers across China, the United States, and other parts of the world. With a cutting-edge digital portfolio and a mission of broader access to healthcare for all, we help drive industry progress and bold change.

To learn more, visit <https://www.united-imaging.com>

uMR Omega | *uAI*F*inside*

Think Big

| *Innovative technology*

| *New experience*

| *Full capability*



Grow MRI Utilization By Providing Expanded Access



As the population grows older and disease states such as obesity, stroke, cancer, and cardiac issues become more endemic, MRI has been slow to adapt. Many patients who need an MRI simply are not being served. For example, there has been little change in MRI hardware since the 2004 introduction of the 70cm bore size, while obesity rates have increased steadily.

In addition, the limited space and relatively long exam times of existing MR technology can limit access for patients who suffer from claustrophobia or feelings of anxiety. In sum, many patients with a clinical need today do not have access to MRI, which is critical to their health.



uMR Omega is designed to provide greater access for patients with the world's first 75cm, ultra-wide bore 3T MRI. The uMR Omega has an industry-leading table weight capacity of 680 lbs. and good image quality provided by its world-class homogeneity.

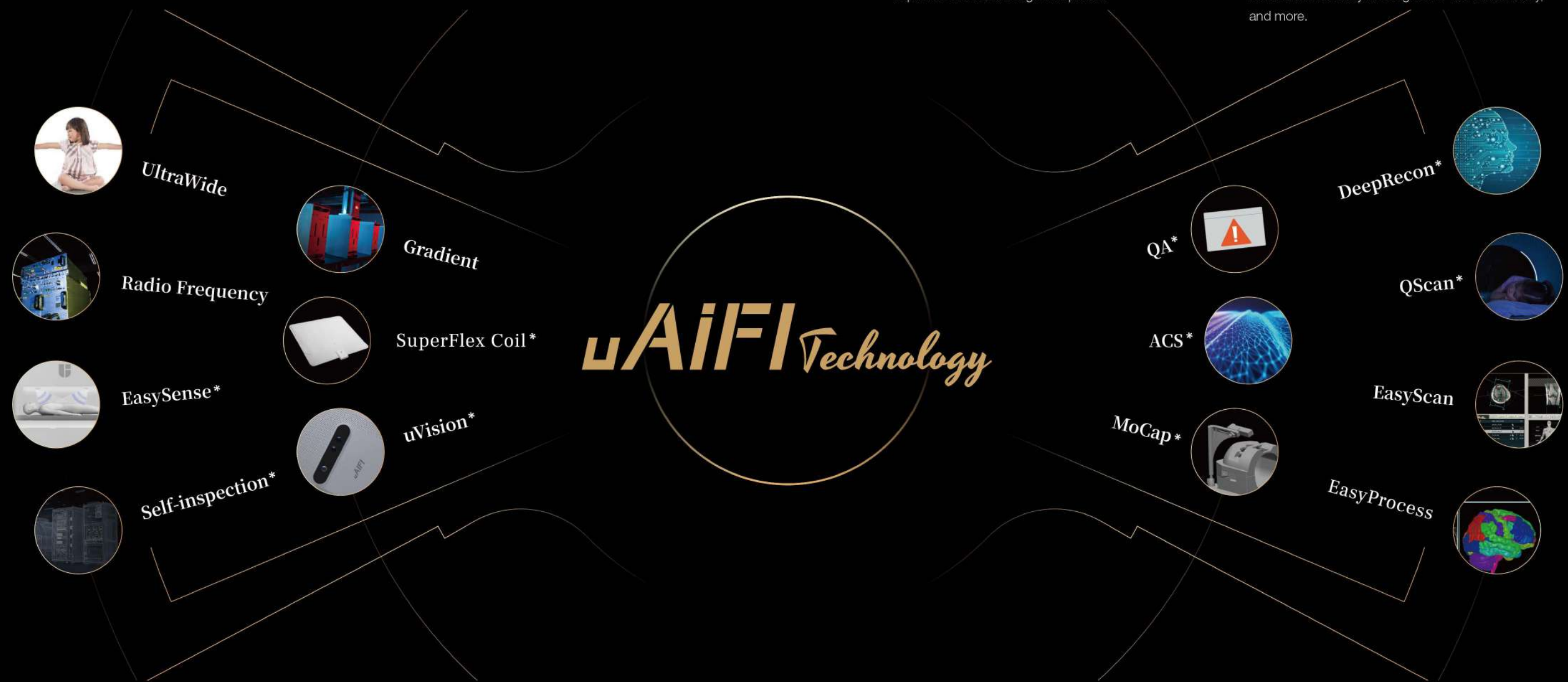
Together, these two factors enable uMR Omega to better accommodate bariatric patients and greatly improve the patient experience overall.

With uCS^{2.0} imaging techniques, 2D, 3D, and 4D acquisitions across all anatomy can be performed with up to 16x acceleration. This acceleration enables faster exams for your patients and creates opportunity for added time slots and advanced diagnostics.

uMR Omega is your platform for growth.

uAIFI Technology

The uAIFI (united AI for Imaging) Technology includes a series of innovations including both hardware and software to fully empower uMR.



ACS (AI-assisted compressed sensing), an integral MR acceleration technology capable of doing acquisitions in seconds.

DeepRecon, a deep learning (DL) based image reconstruction technology, that simultaneously improves SNR and image sharpness.

EasySense, the industry's first remote dual-source phased array millimeter-wave contactless respiratory motion sensing technology.

Moreover, there is also QScan, a quiet scanning technique for whole body, the SuperFlex Coil with remarkable flexibility and higher RF element density, and more.

*FDA 510(k) pending and not CE marked, not commercially available in the U.S. or the EU.

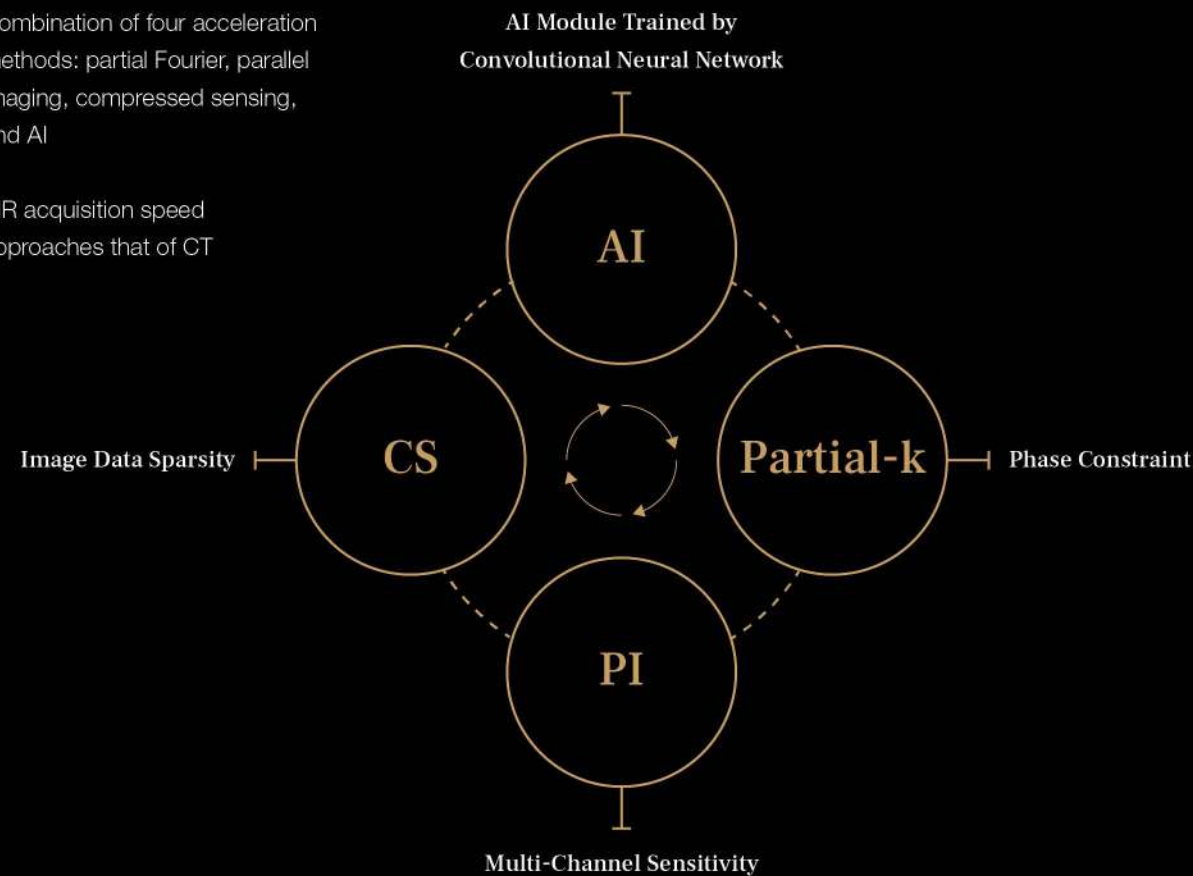
ACS (AI-assisted Compressed Sensing) is United Imaging's exclusive MR acceleration solution to best balance speed and image quality, combining CS, HF and PI and innovatively introducing the state-of-the-art deep learning neural network as the AI module into the reconstruction procedure.

For the first time, ACS yields:

Historical prior knowledge & AI-assisted technology

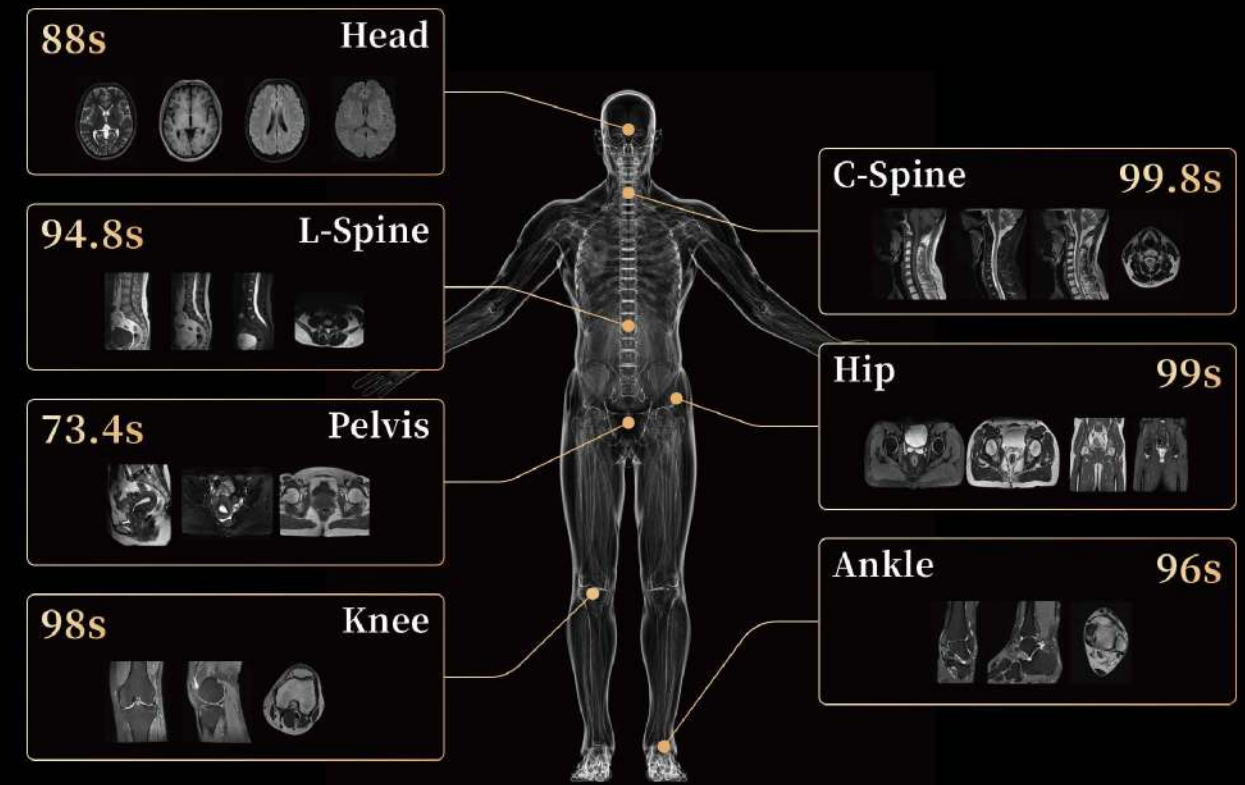
Combination of four acceleration methods: partial Fourier, parallel imaging, compressed sensing, and AI

MR acquisition speed approaches that of CT



Optimized Coverage:

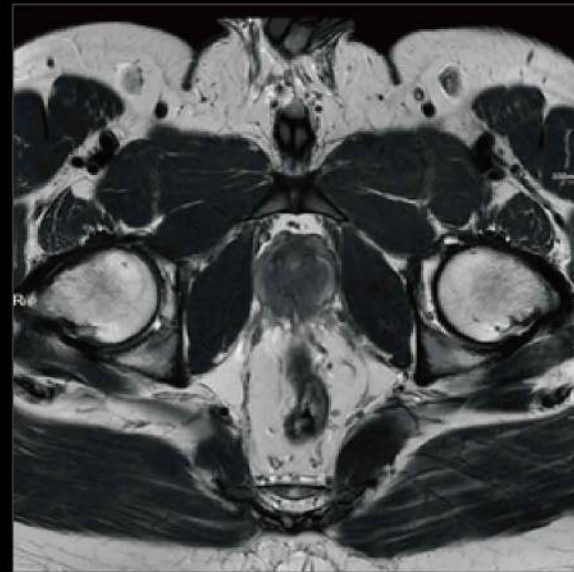
ACS can be used on all anatomies



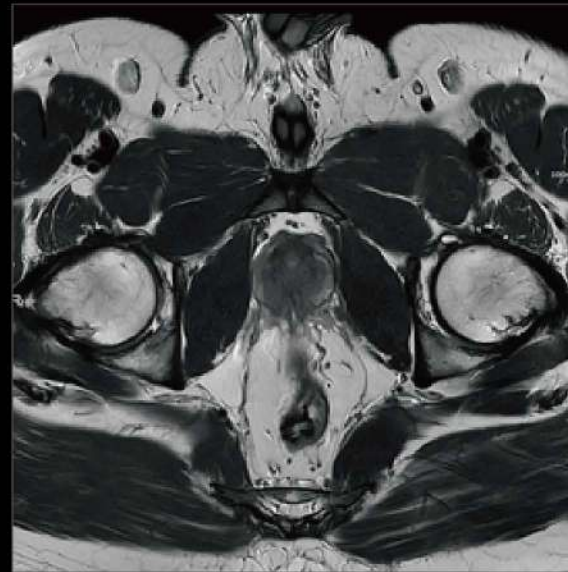
* Not CE marked, and not commercially available in the EU.

ACS (AI-assisted Compressed Sensing) empowers users to achieve either improved image quality without prolonging imaging time, or reduced imaging time without sacrificing image quality, allowing more complete examinations but also enriching radiologists' confidence and enhancing patient comfort.

Higher Resolution, Shorter Scan Time

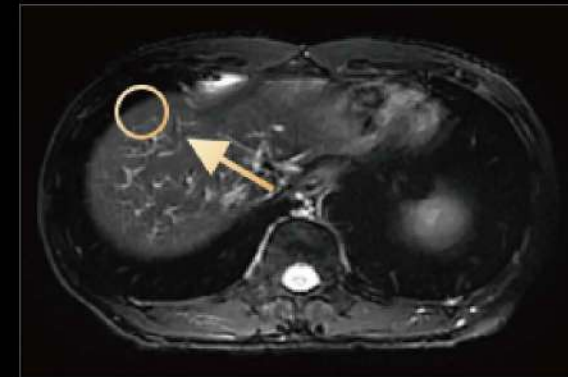


Conventional
AD: 5:51min
0.6x0.6x3mm³

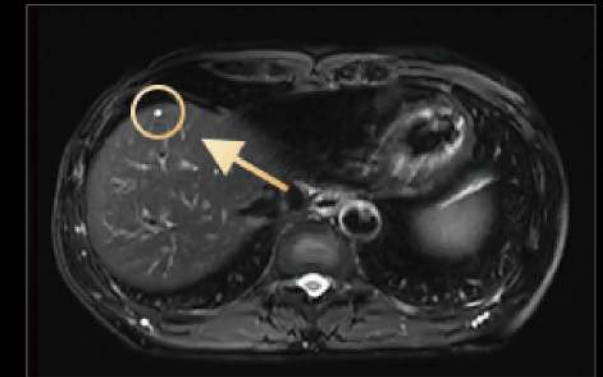


ACS
AD: 2:39min
0.4x0.4x2mm³

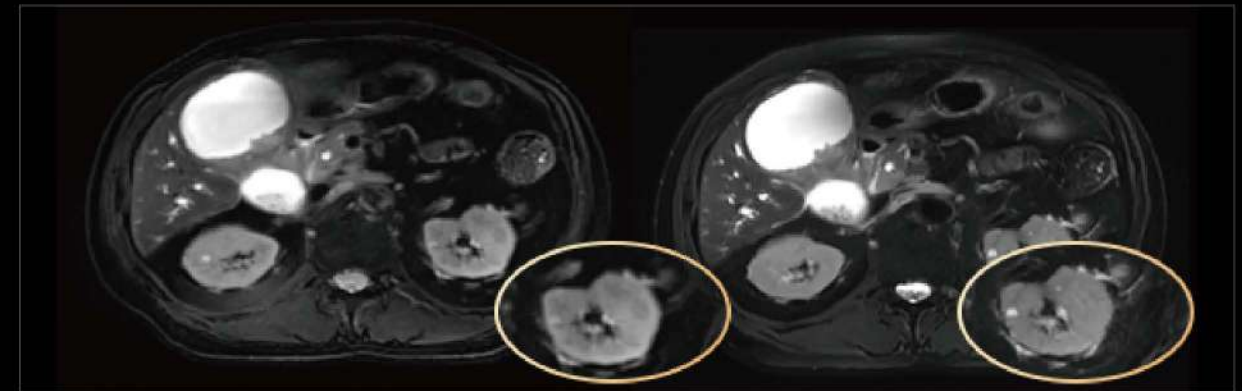
Improve Lesion Detection



Multi breath hold
AD: 3x16s



ACS Single breath hold
AD: 15s

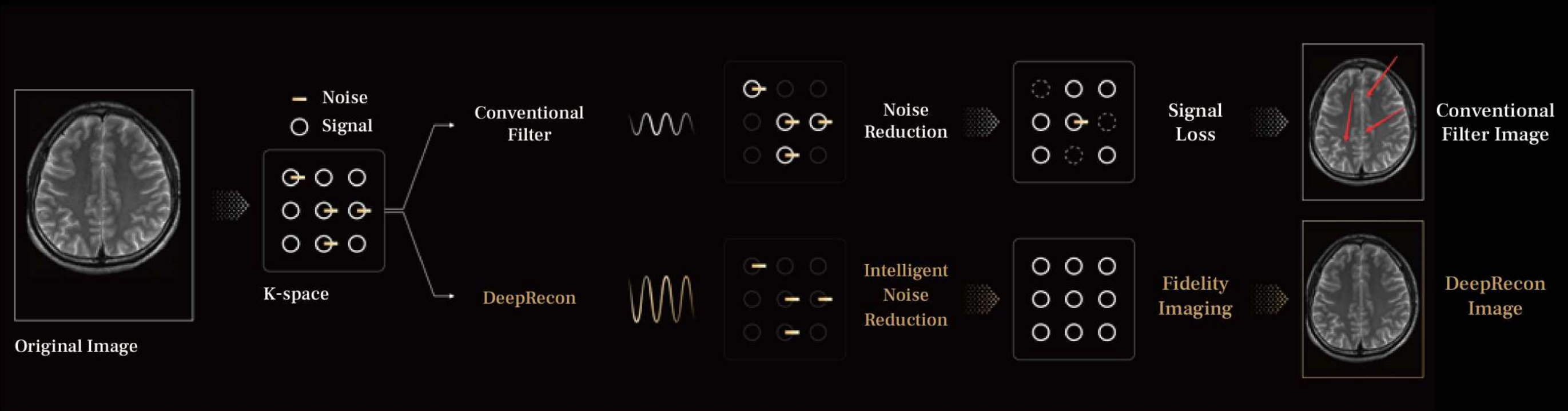


Multi breath hold
AD: 3x16s

ACS Single breath hold
AD: 15s

AIFI Technology DeepRecon*

Deep Learning based image reconstruction,
simultaneously improve SNR and image sharpness.



*FDA 510(k) pending and not CE marked, not commercially available in the U.S. or the EU.

AIFI Technology DeepRecon*

Deep Learning based image reconstruction,
simultaneously improve SNR and image sharpness.



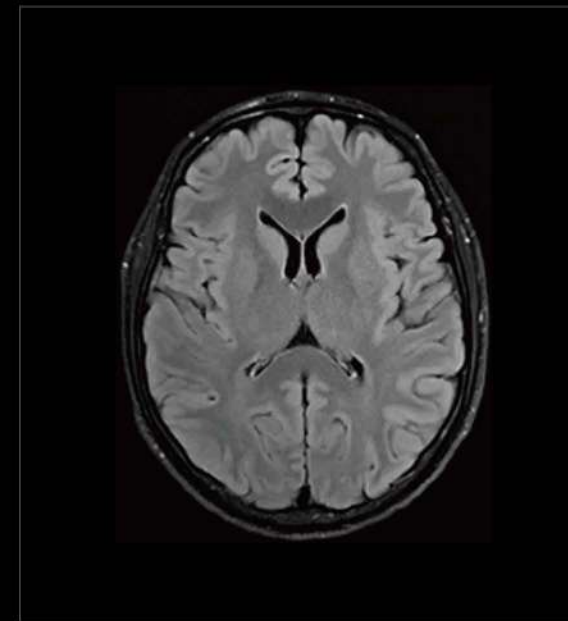
Conventional

T2 FSE COR
0.40x0.40x3.0 mm³
AD: 3:29min



DeepRecon

T2 FSE COR
0.20x0.20x3.0 mm³
AD: 3:29min



Conventional

T2 FSE FLAIR TRA FS
0.90x0.90x5 mm³
AD: 2:56min



DeepRecon

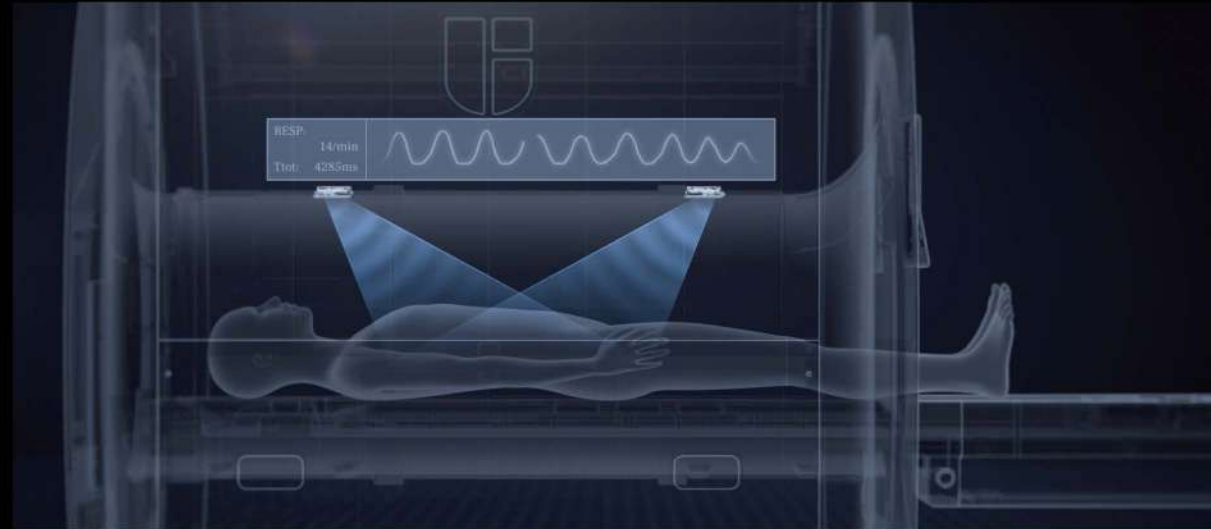
T2 FSE FLAIR TRA FS
0.60x0.60x5 mm³
AD: 1:52min

*FDA 510(k) pending and not CE marked, not commercially available in the U.S. or the EU.

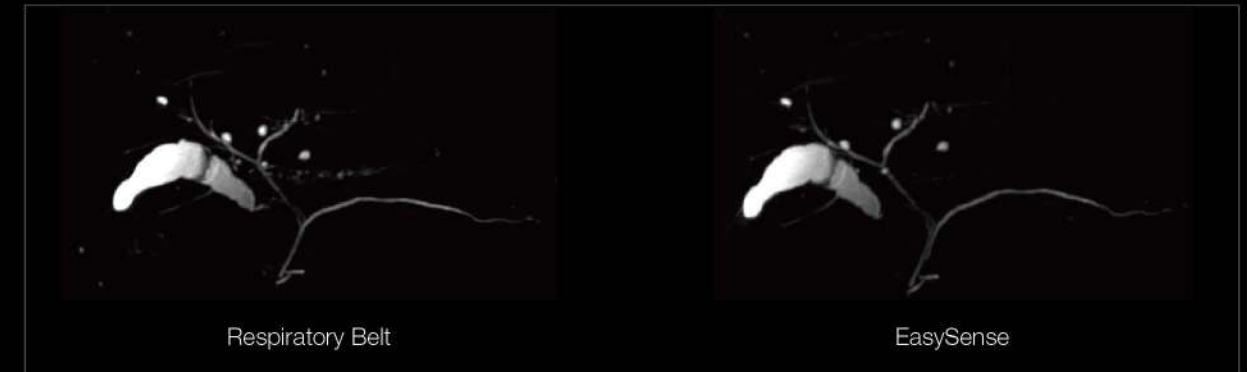
uAIFI Technology EasySense*

Industry's First **Contactless Dual-source** phased-array

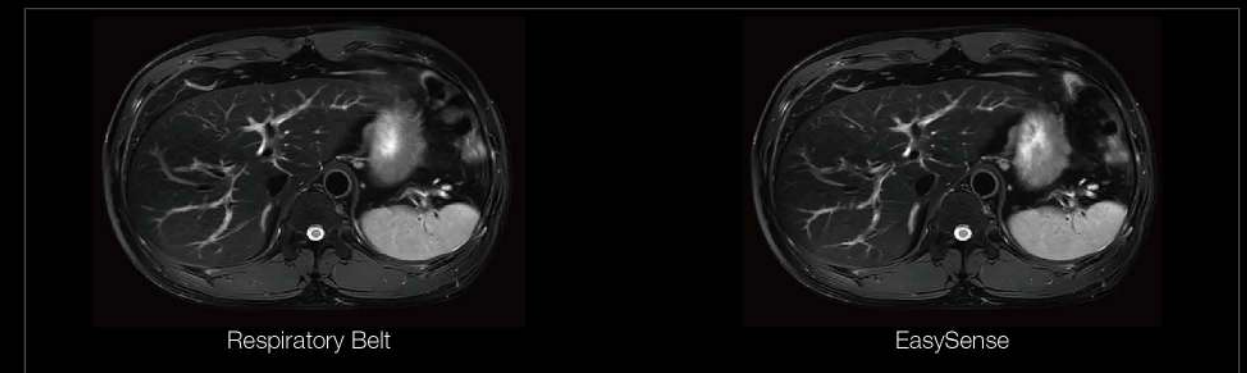
Millimeter-wave Radar Solution for respiratory-triggered scans



Free-breathing scanning without the need for the application of respiratory belt or a navigator setup



3D MRCP



T2W FS TRA

*FDA 510(k) pending and not CE marked, not commercially available in the U.S. or the EU.

uAIFI Technology SuperFlex Coil*

Soft, Comfortable, and Form Fitting



SuperFlex Body Coil - 24



SuperFlex Coil Small/Large - 12

Soft, Comfortable, and Form Fitting

Made of innovative conductive polymer composite material

Easy Positioning

Flexibly adapts to patient's body contour

New Decoupling Technology

No coil coupling effect for high-density coil unit arrangement

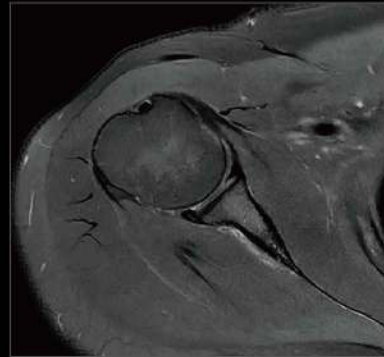
New Integrated Preamplifier

Reduced power consumption and thickness

*FDA 510(k) pending and not CE marked, not commercially available in the U.S. or the EU.

AIFI Technology SuperFlex Coil*

Soft, Comfortable, and Form Fitting



PD FSE FS



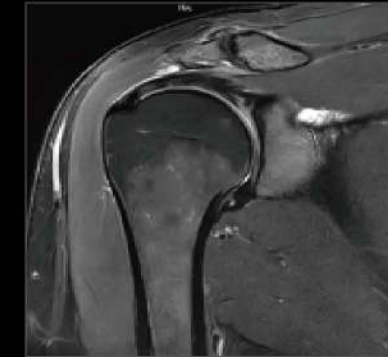
PD FSE FS



PD FSE FS



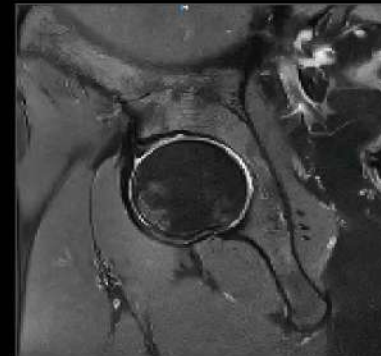
PD FSE FS



T2 FSE FS



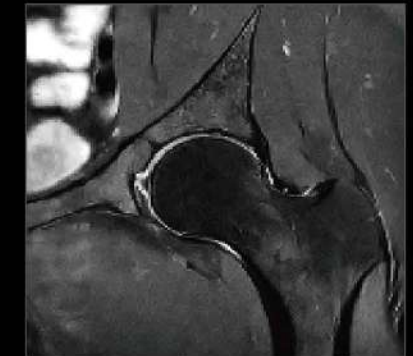
T1 FSE COR



PD FSE



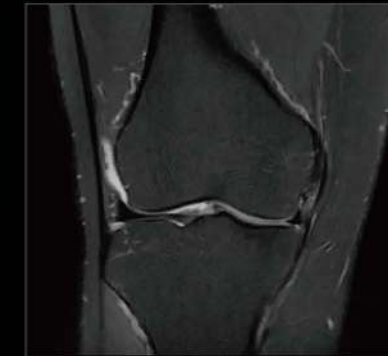
T1 FSE



PD FSE



T2 FSE



PD FSE FS

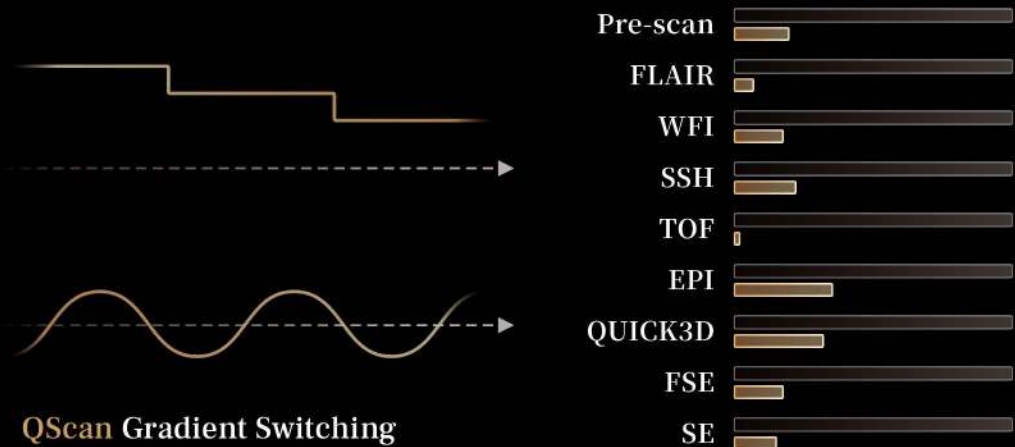
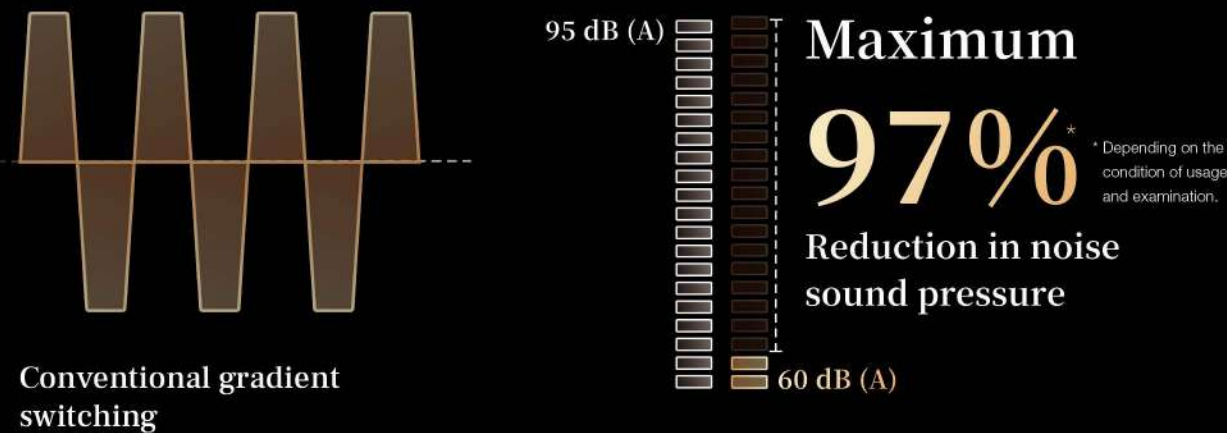


PD FSE FS

*FDA 510(k) pending and not CE marked, not commercially available in the U.S. or the EU.

AIFI Technology QScan*

Quiet scanning for better patient satisfaction



Up to 97% Reduction in Sound Pressure**

Suppresses the noise from the source by intelligently optimizing and smoothing the gradient trajectory.

Improved Patient Comfort and Satisfaction

Quiet scanning is provided during whole time of the scan including pre-scan and scout imaging.

Across a Broad Range of Sequences

Available for 2D/3D anatomical imaging as well as DWI, SWI, and MRS.

Covers Complete Clinical Examinations

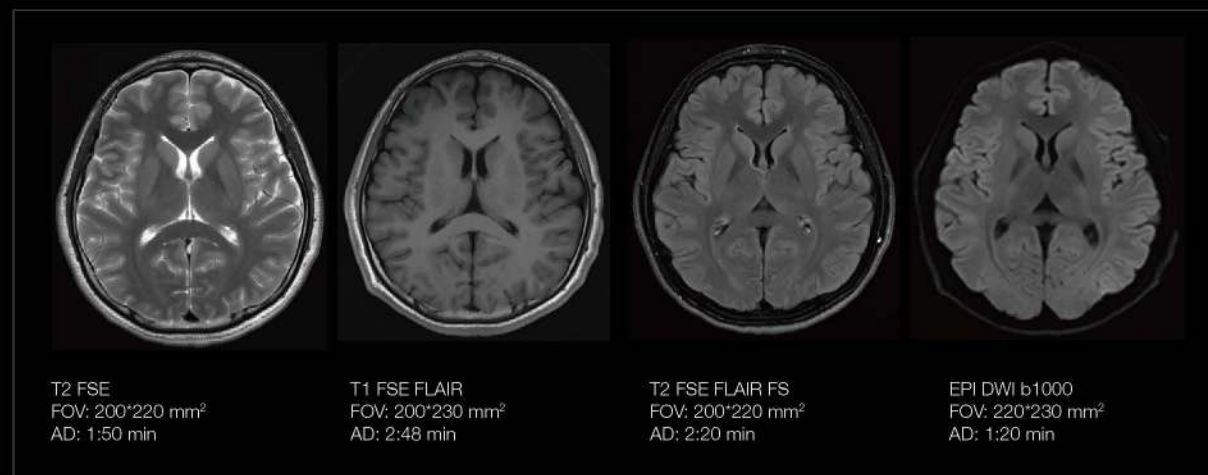
Supports the whole body including brain, musculoskeletal, cardiac, abdomen, pelvis, angiography, and more.

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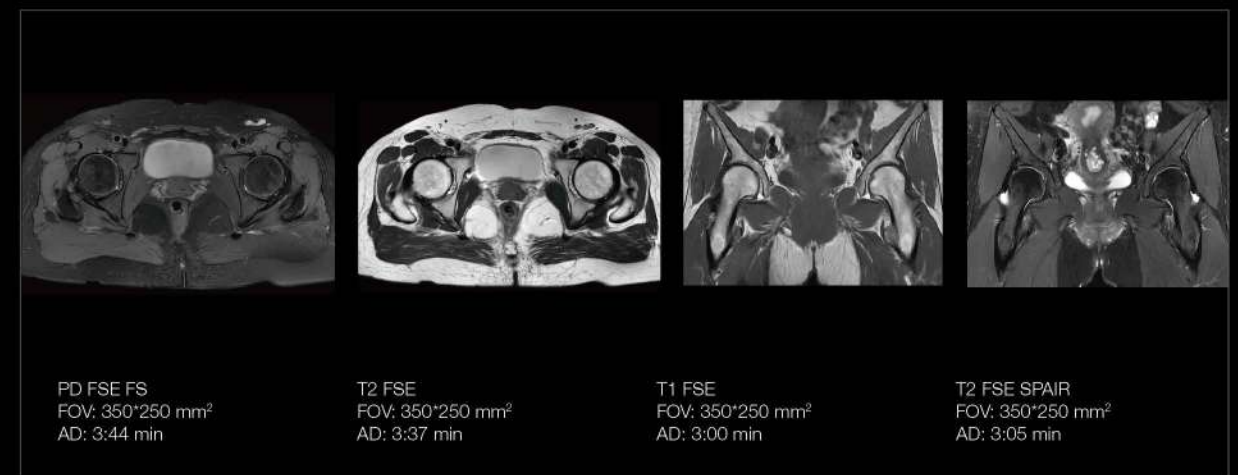
AIFI Technology ACS × QScan*

Quiet Scanning Without Compromising Scanning Speed

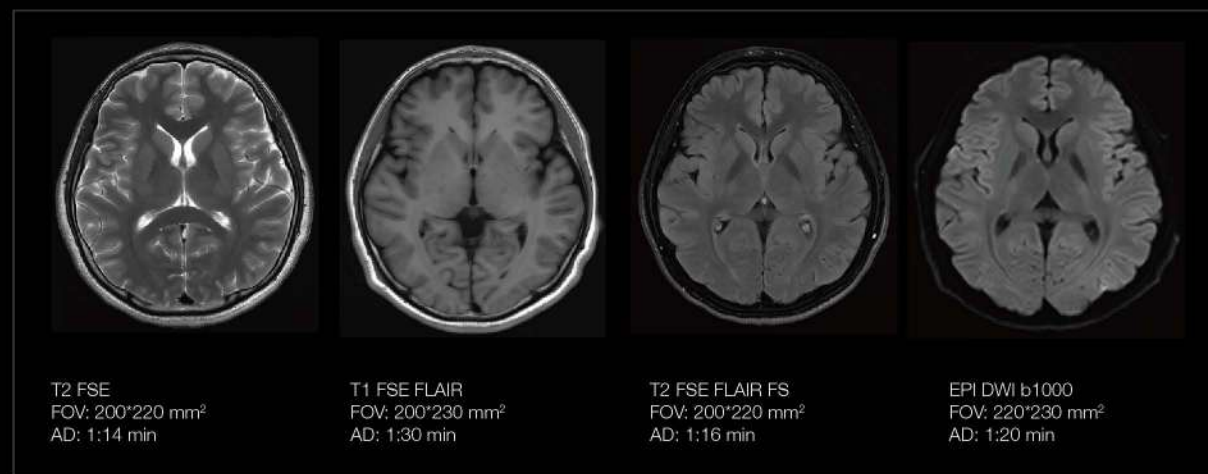
Brain Conventional AD: 8:18 min



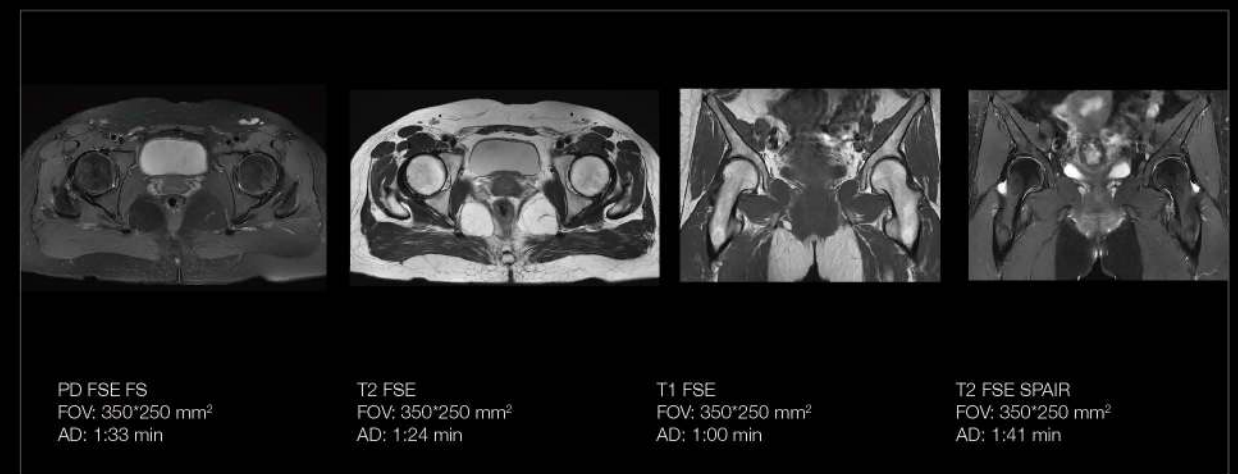
Brain Conventional AD: 13:26 min



Brain ACS × QScan AD: 5:20 min



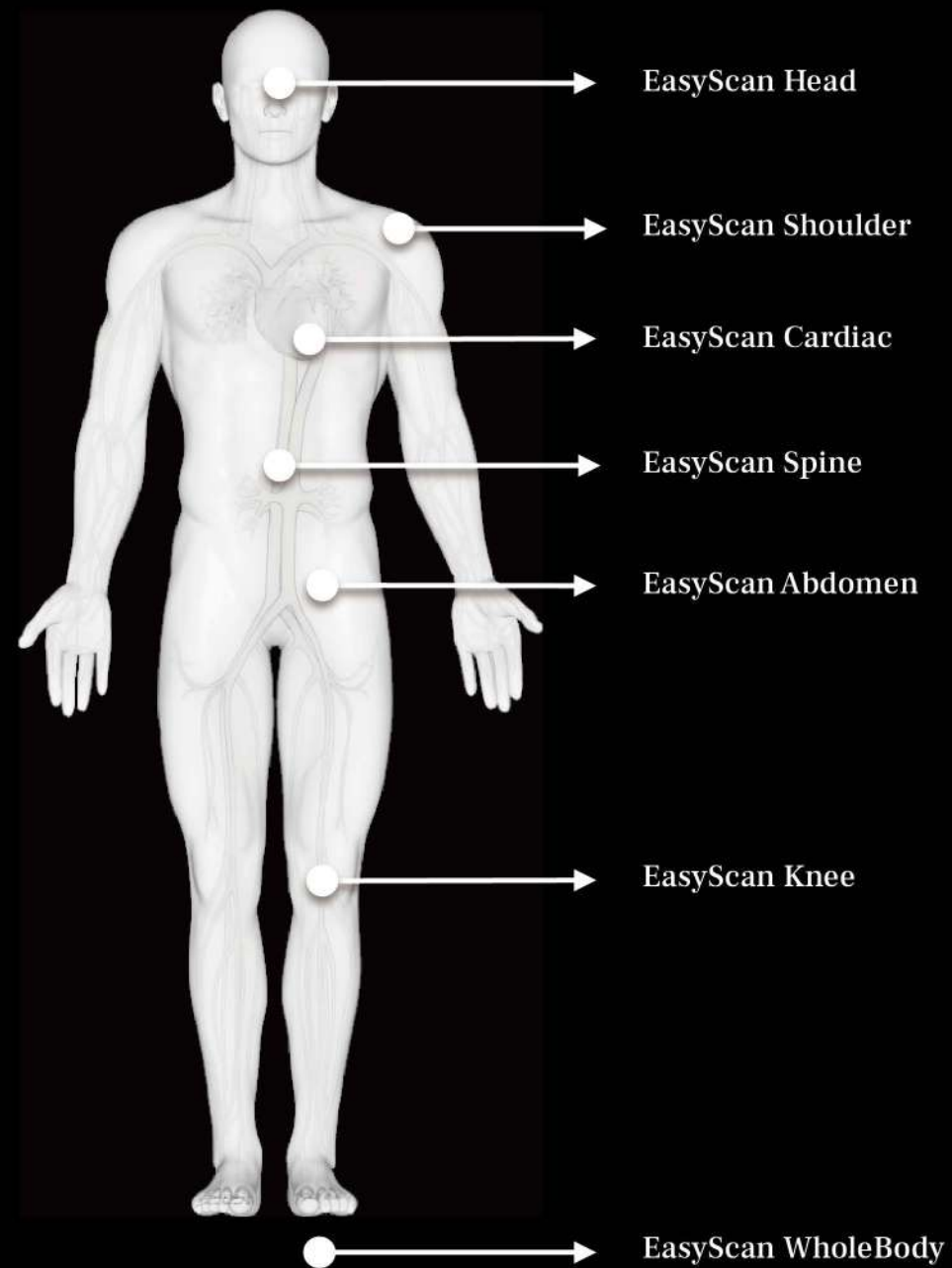
Brain ACS × QScan AD: 5:38 min



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uAIFI Technology EasyScan & EasyPlan

Simplified Workflow



EasyPlan

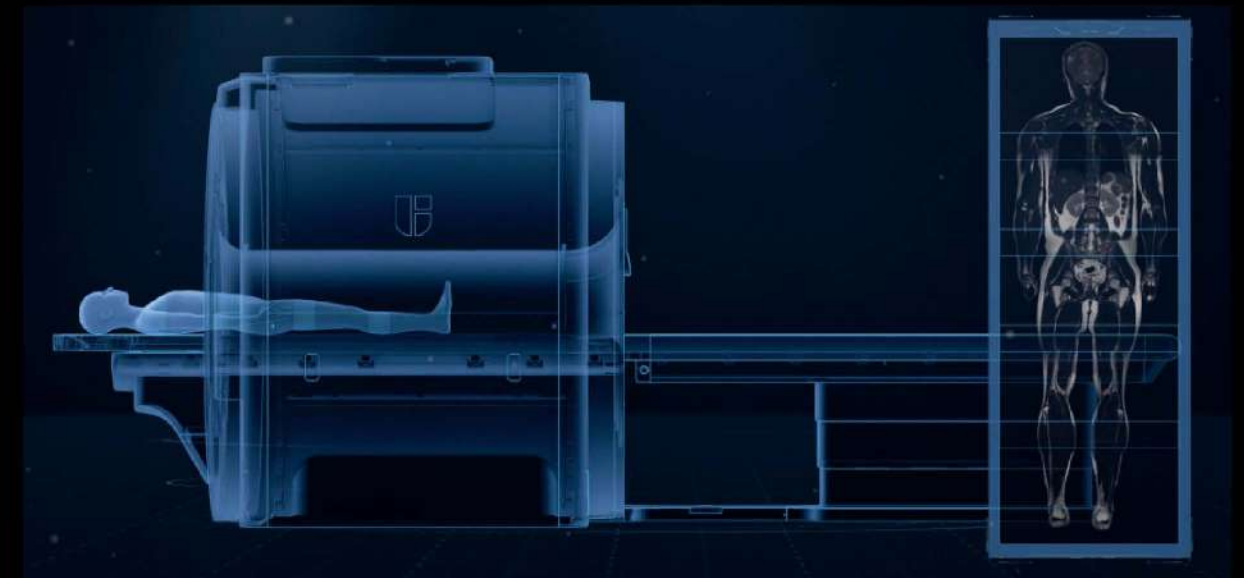
Automatic multi-step scan planning and image stitching with ONE-click

EasyScan

Intelligent, automatic, and consistent anatomical orientation

EasyScan Cardiac

One 3D breath hold scout for 7 views.

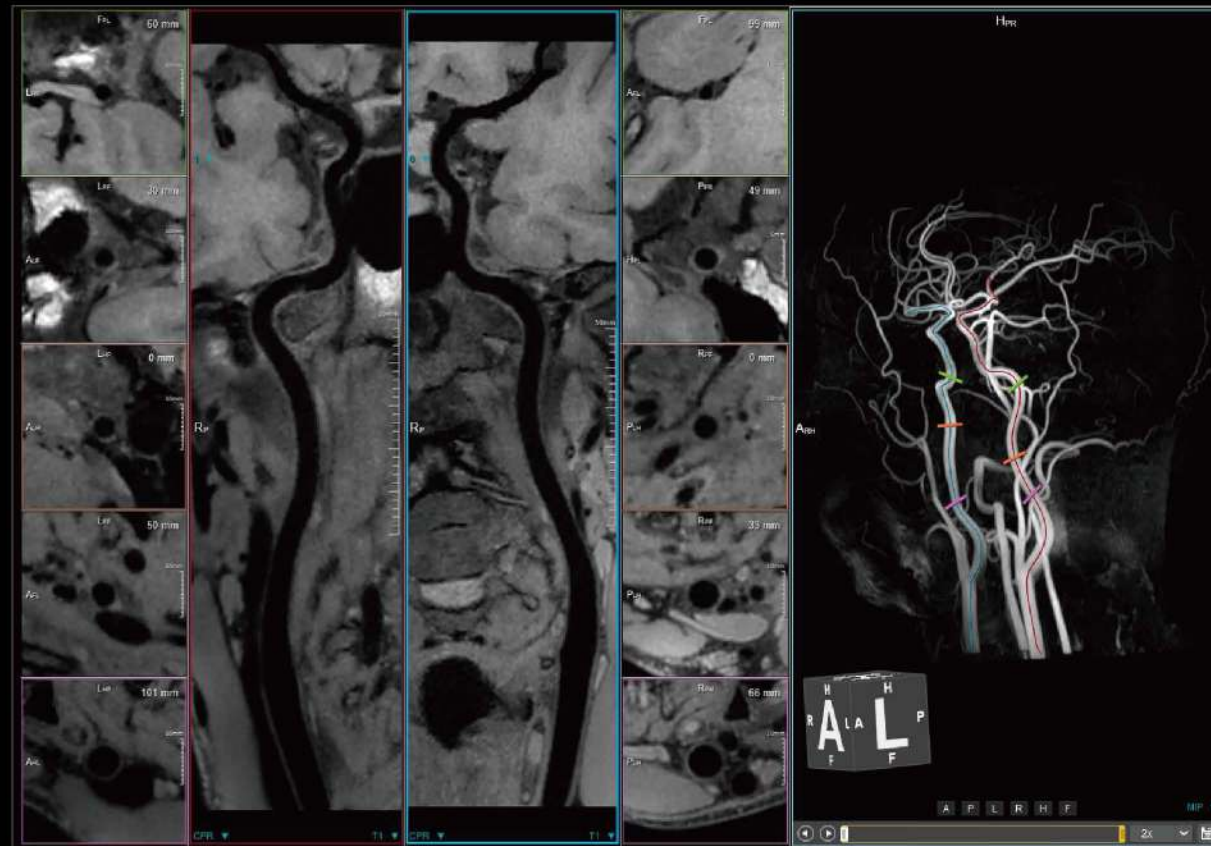


AIFI Technology EasyProcess

Simplified Workflow

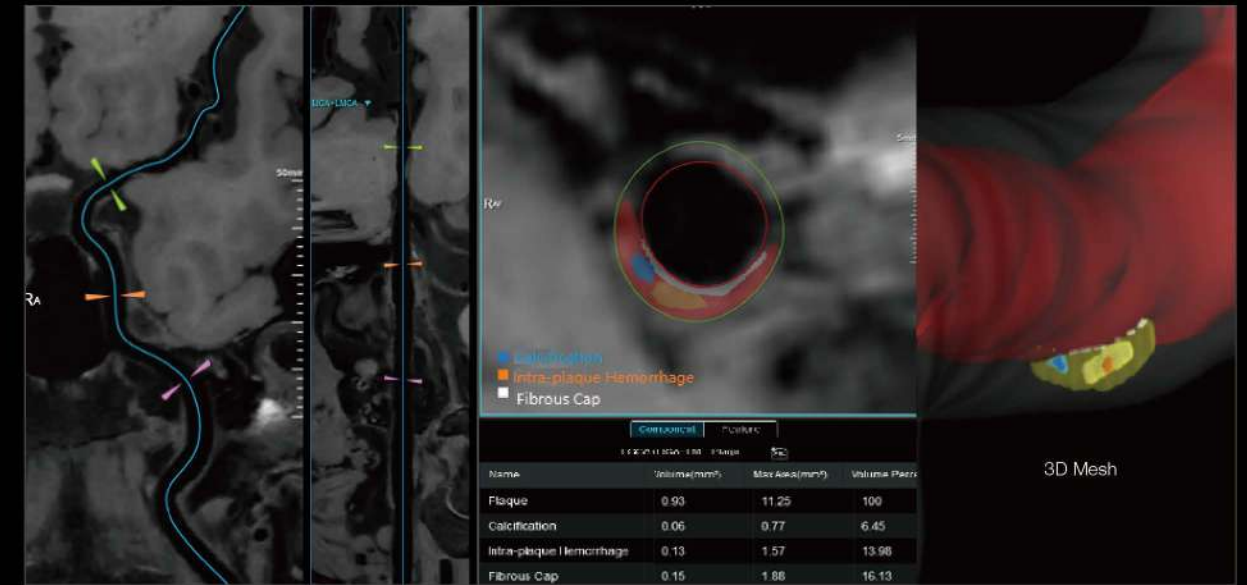
Vessel Wall Analysis

One-click intelligent post-processing for vessel wall analysis.



PlaqueTool

One-click post-processing for plaque identification and analysis



Think BIG.

Well-Equipped



Innovative Magnet Technology

uMR OMEGA is thoughtfully designed to expand current access to MRI by combining many breakthrough innovations that provide additional diagnostic information throughout the 60 x 60 x 50 cm field of view and high homogeneity.

New 3T magnet design with a 75-cm bore size

60×60×50 cm Max FOV

High homogeneity providing excellent image quality

Uniform magnet

60×60×50cm	4.40ppm*
55×55×50cm	2.00ppm*
30×30×30cm	0.029ppm*



T2 FSE FS

*Typical value are measured by V-RMS 24 planet plot.

Innovative Gradient Technology

Based on the world's first 3.5MW GPA, uMR OMEGA can achieve the high gradient performance of 45mT/m & 200mT/m/s, and the big FOV of 60cm in the 75cm bore size.

Next generation GPA with 3.5MW peak power

Optimized gradient design to meet 60×60×50cm FOV imaging

High gradient performance with 45mT/m & 200T/m/s



Ultra-wide Bore with 75cm

Think *Big*
Access *More*

|-----| **75** cm |-----|

Improve Patient Experience

Starlight
Design

Lighting experience helps
patients feel more comfortable.





Reduce Claustrophobic Feeling

The 75cm, ultra-wide bore helps reduce claustrophobic feeling, while the lighting experience expands the environment and gives patients a pattern to focus on so they feel more comfortable.

uMR Omega can help to recapture lost revenue from halted and missed exams due to anxiety and claustrophobia.

75cm

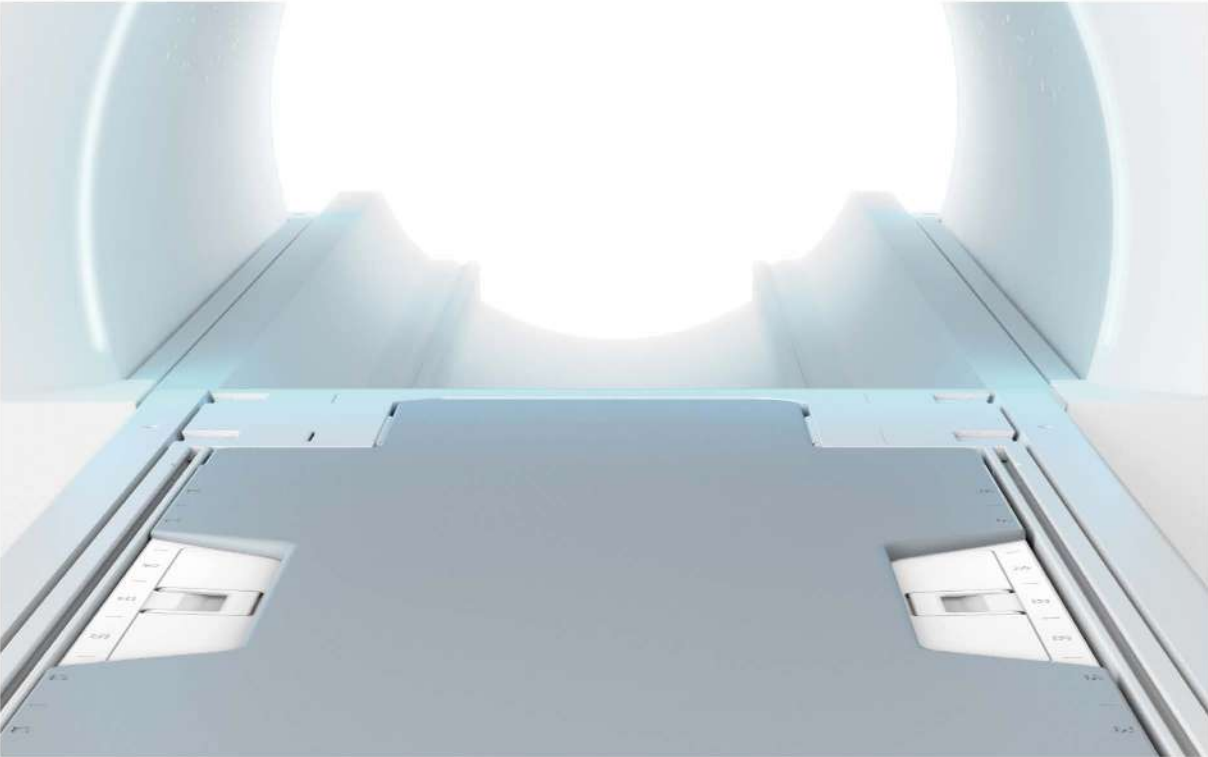
25% extra more space*.
More comfortable experience.



* Based on internal test and data on file.

Expanded Capacity for MRI

Expanded Bariatric
Imaging Capabilities



75cm, ultra-wide bore is designed for more elbow room.

Expanded capacity table can lift up to 310kgs.

Extended field of view (60 x 60 x 50cm) can capture more anatomy.



Expanded Capacity for MRI

Coils Designed for
Comfort and Coverage



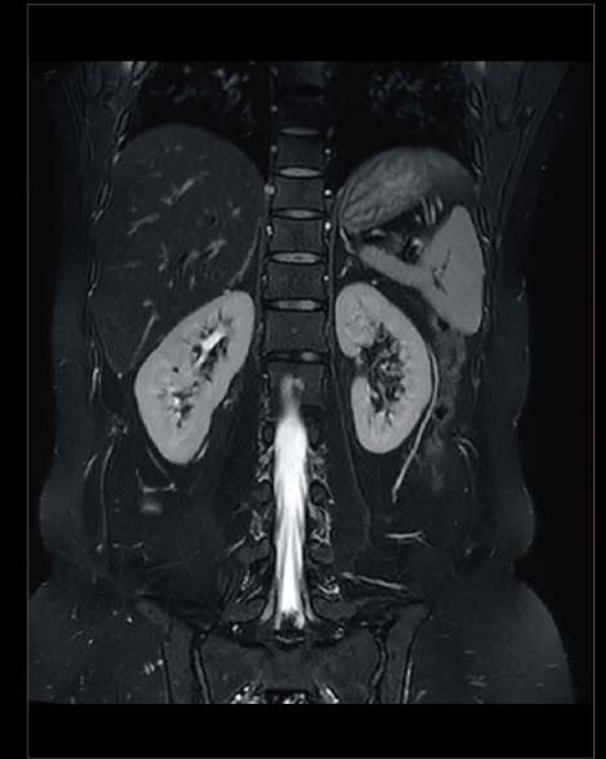
Extended Body Array Coil – 24 channels with wide coverage of 70x50cm to fit large body sizes.

High homogeneity with 60x60x50cm FOV enables a more complete picture of patient anatomy and provides excellent image quality.

Male, 48Y, BMI 44



T2 FSE



T2 FSE FS

Expanded Capacity for MRI

Off-Center Exams with
Comfortable Anatomical Alignment

Shoulder Examinations



Hip Examinations

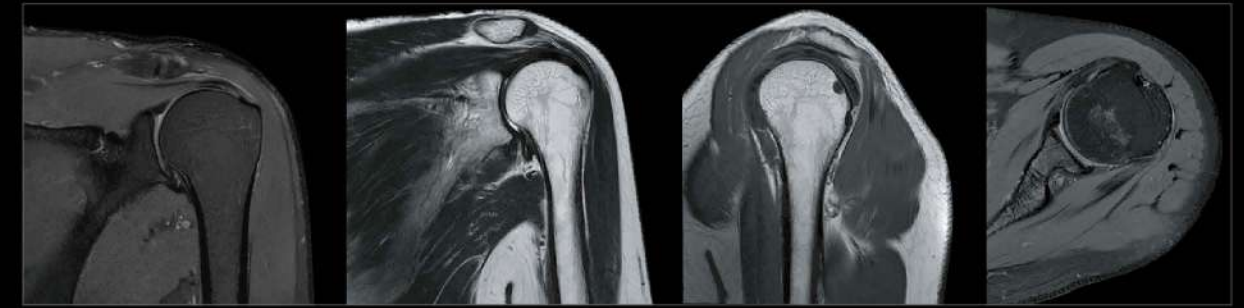


Knee Examinations



The 75cm aperture design allows for comfortable patient positioning when performing off-center examinations.

World-class homogeneity with ACS Imaging platform leads to faster and higher resolution off-center images.

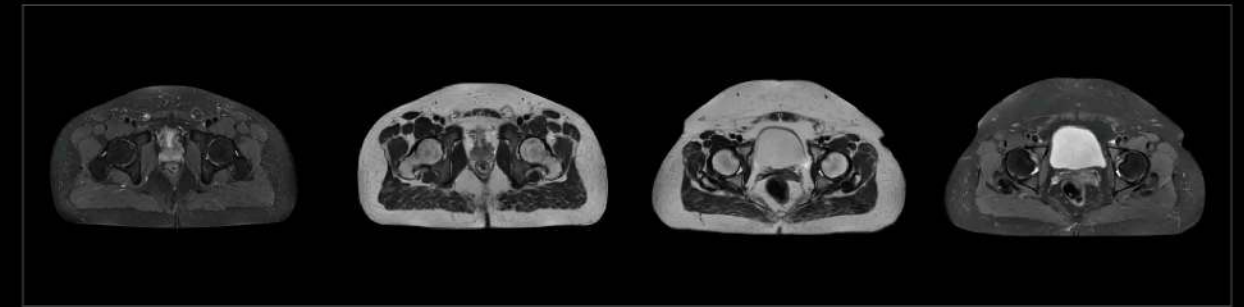


PD FSE FS

T2 FSE

T1 FSE

PD FSE FS

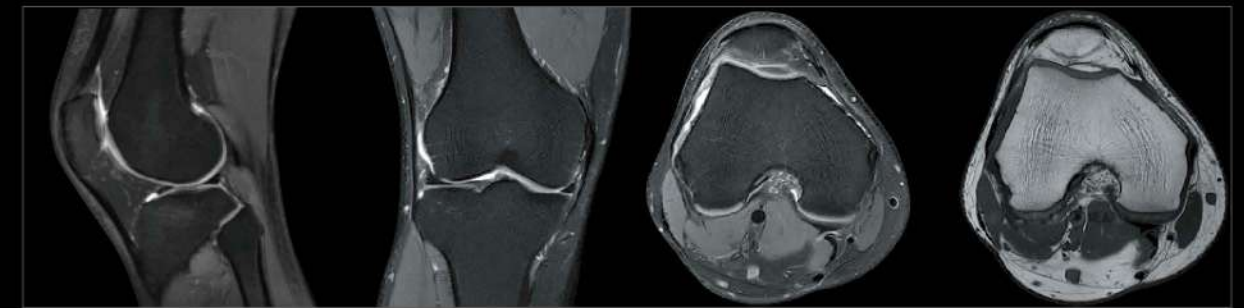


PD FSE FS

T2 FSE

T2 FSE

PD FSE FS



PD FSE FS

PD FSE FS

PD FSE FS

T1 FSE

Expanded Special Positioning

Lateral Position



T1 FSE
0.7mm×0.7mm



T2 FSE
0.7mm×0.7mm



T2 FSE FS
0.8mm×0.8mm

Flexed Elbow Position



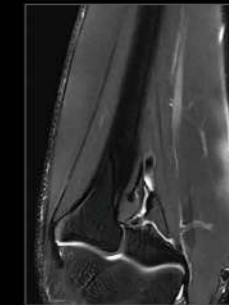
T1 FSE
0.52mm×0.41mm



T2 FSE
0.52mm×0.41mm



PD FSE
0.5mm×0.4mm



T2 FSE FS
0.55mm×0.45mm

External Shoulder Joint Position



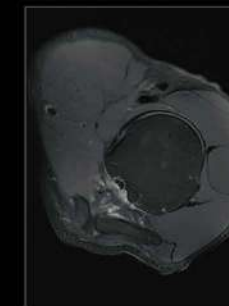
PD FSE FS
0.9mm×0.7mm



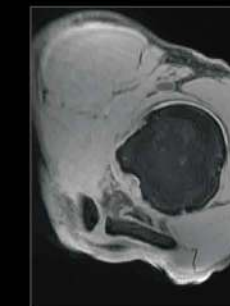
T2 FSE
0.9mm×0.7mm



T2 FSE
0.9mm×0.7mm



PD FSE FS
0.8mm×0.6mm



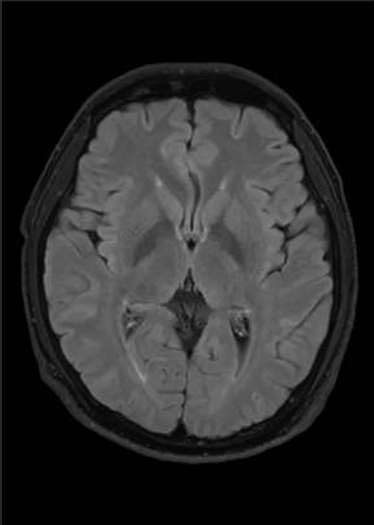
T1 QUICK3D FS
0.6mm×0.6mm



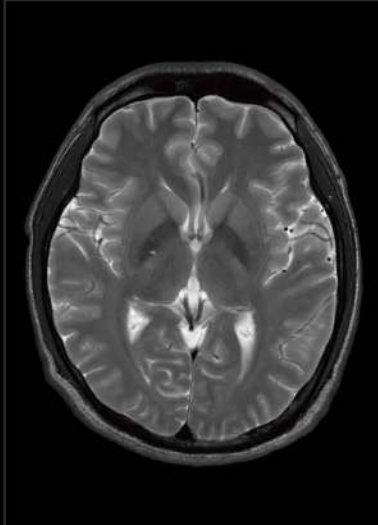
Clinical Applications

Neurology

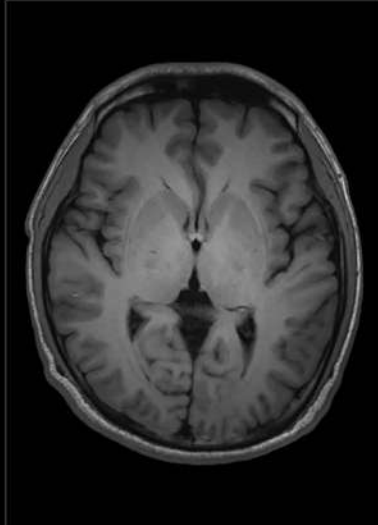
Brain



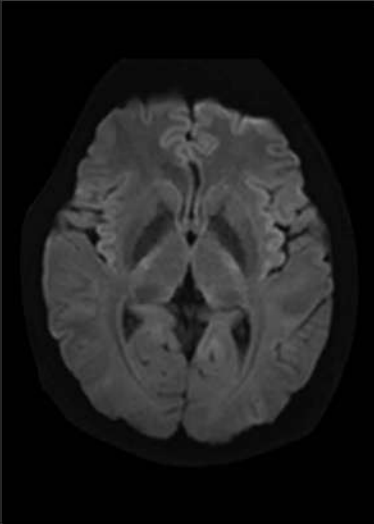
T2W FSE FLAIR FS



T2W FSE



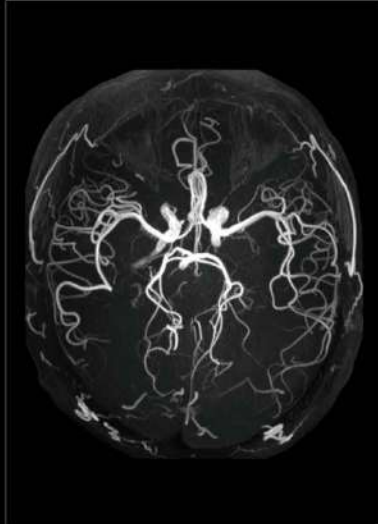
T1W FSE FLAIR



DWI b1000

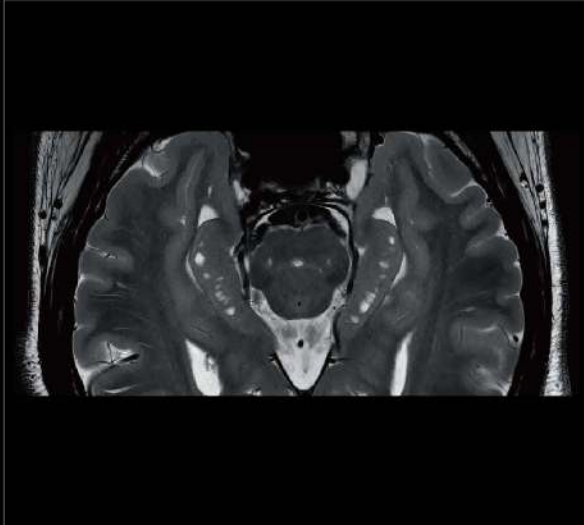


T1W FSE FLAIR

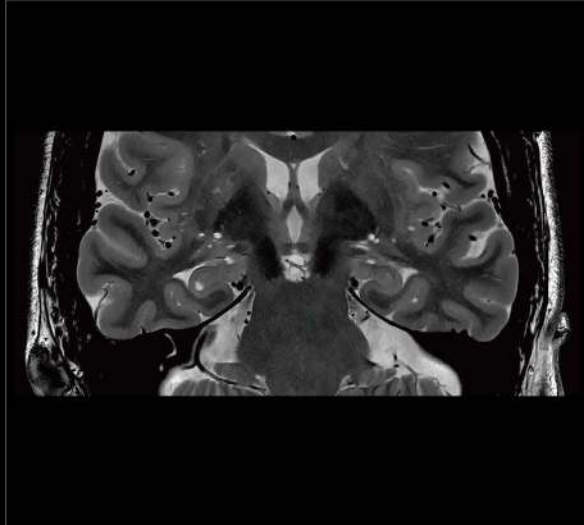


TOF MRA

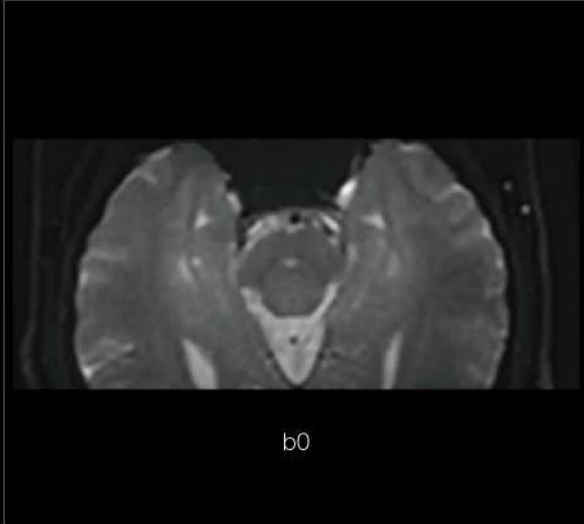
Hippocampus



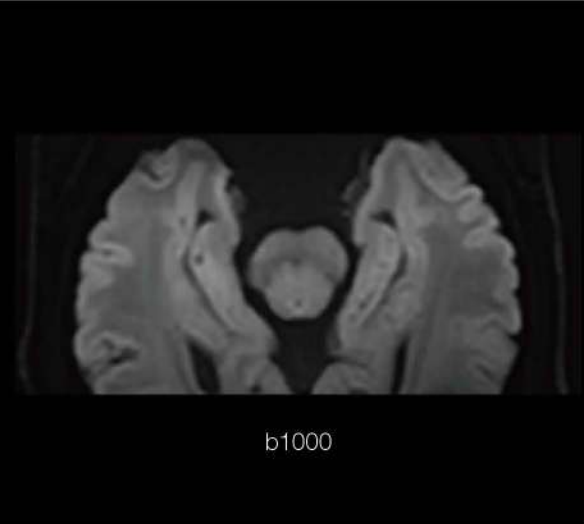
T2 FSE



T2 FSE



b0

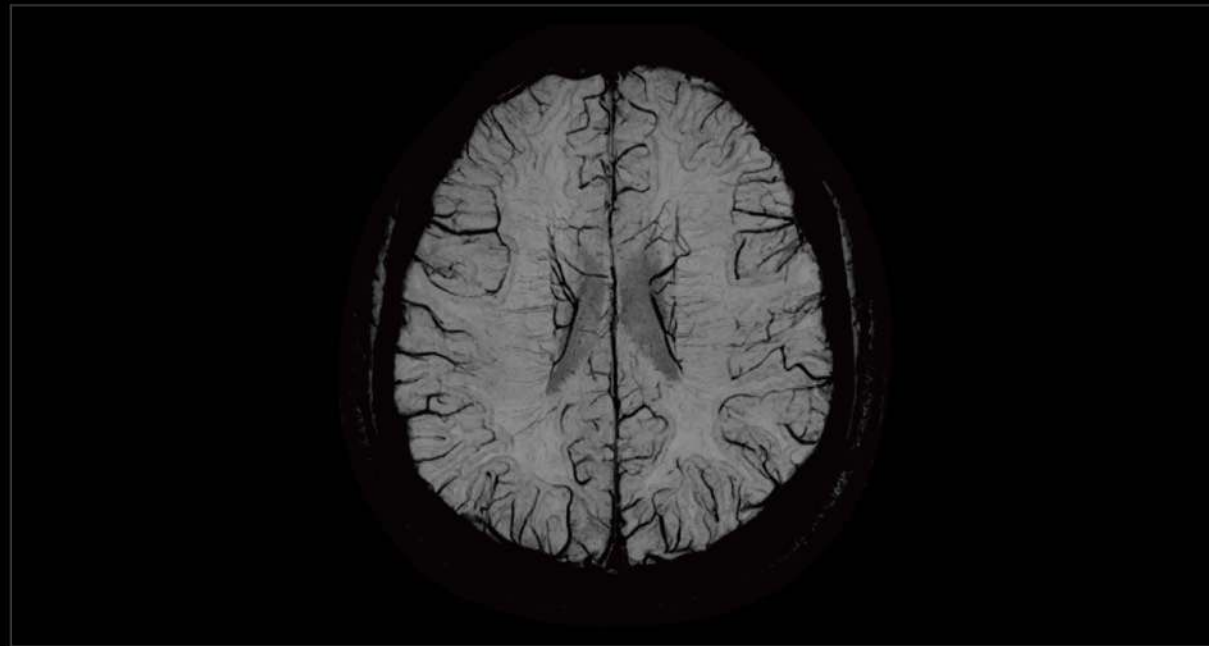


b1000

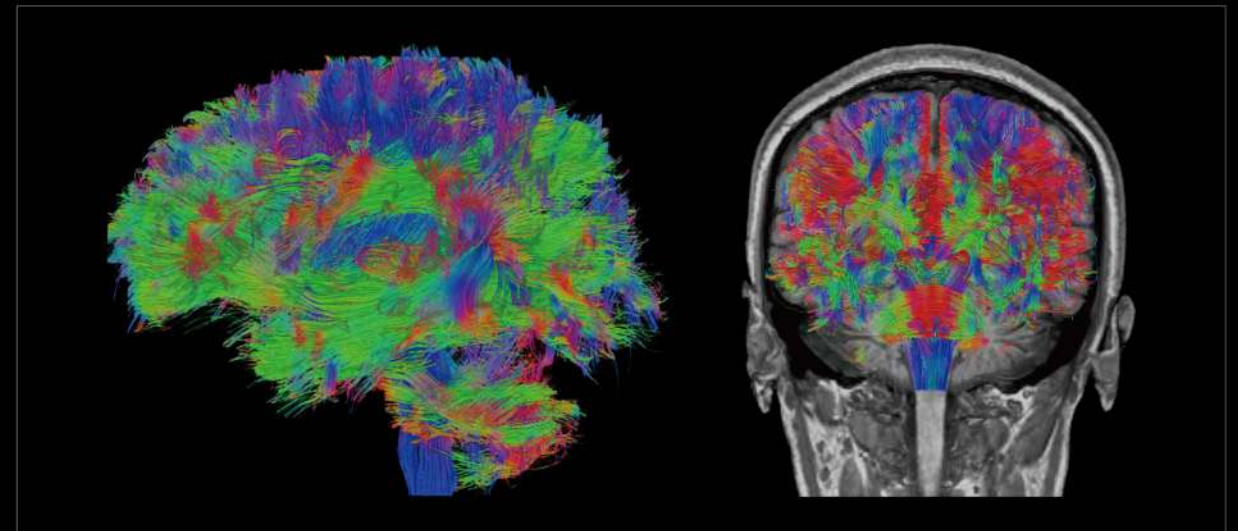
EPI DWI MicroV

Neurology

SWI

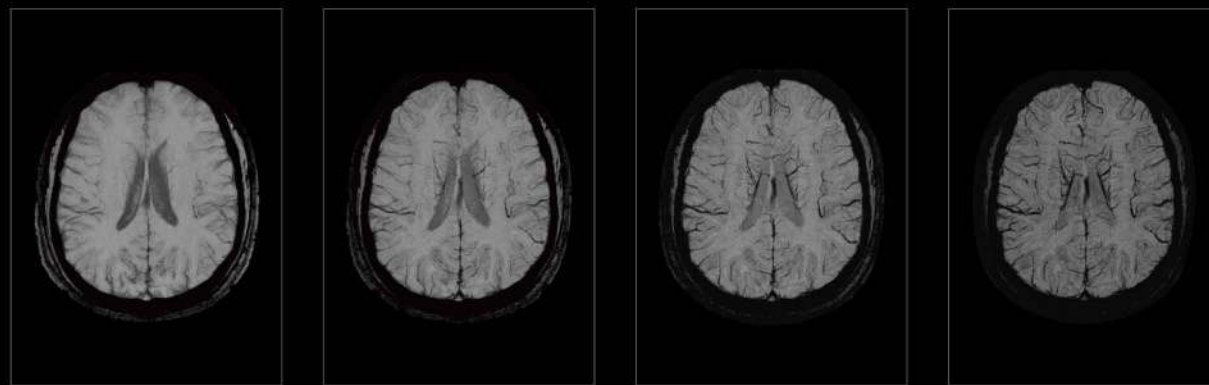


DTI



TE 81.7ms, Slice 34, Direction 32
Resolution 1.95 x 1.95 x 4mm³
Fiber length > 70mm, Tract selection angle = 45°

SWI+



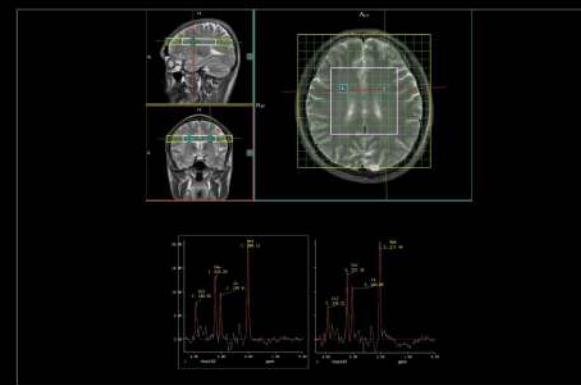
TE 6.1ms

TE 13.4ms

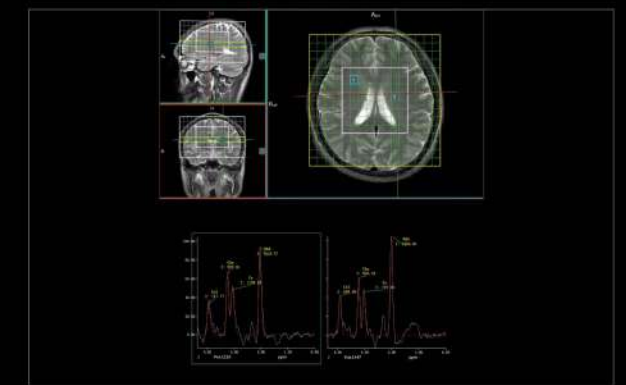
TE 20.7ms

TE 28ms

CSI 2D

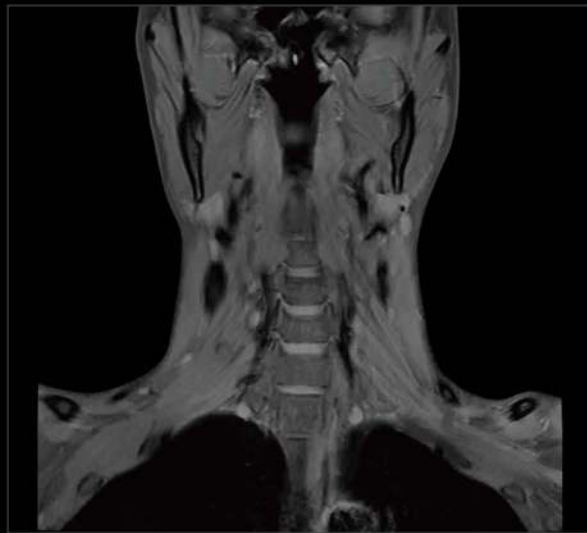


CSI 3D



Neck & Plexus

Neck



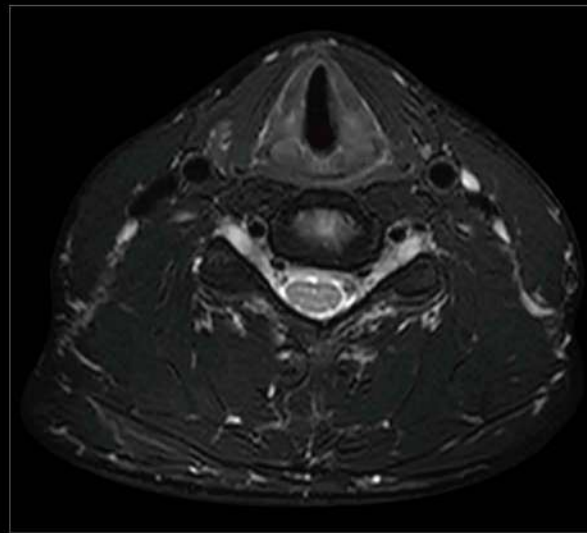
T1W FSE WFI



T1W QUICK 3D WFI

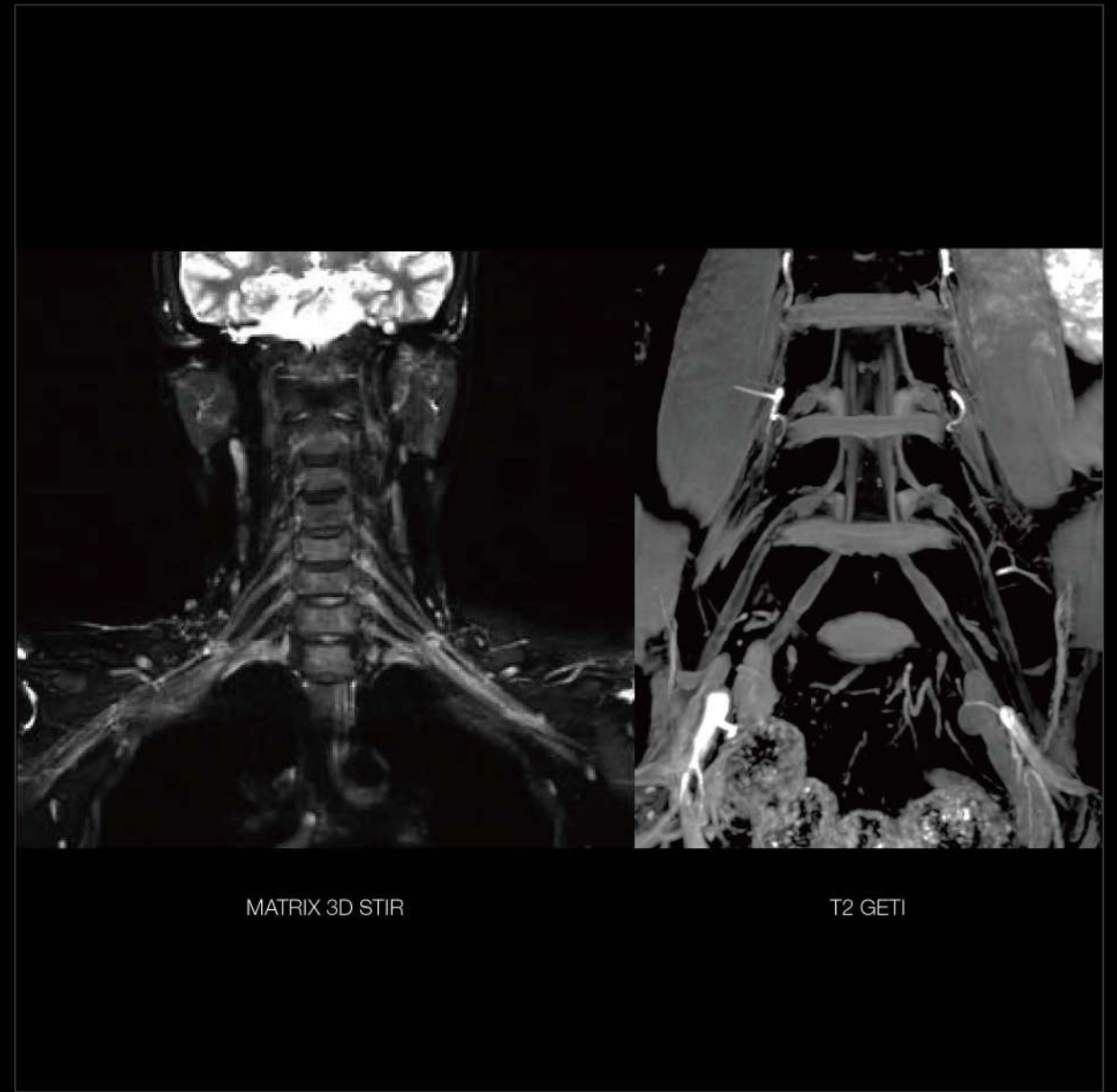


T2W FSE WFI



T2W FSE WFI

Brachial-plexus & Lumbosacral-plexus

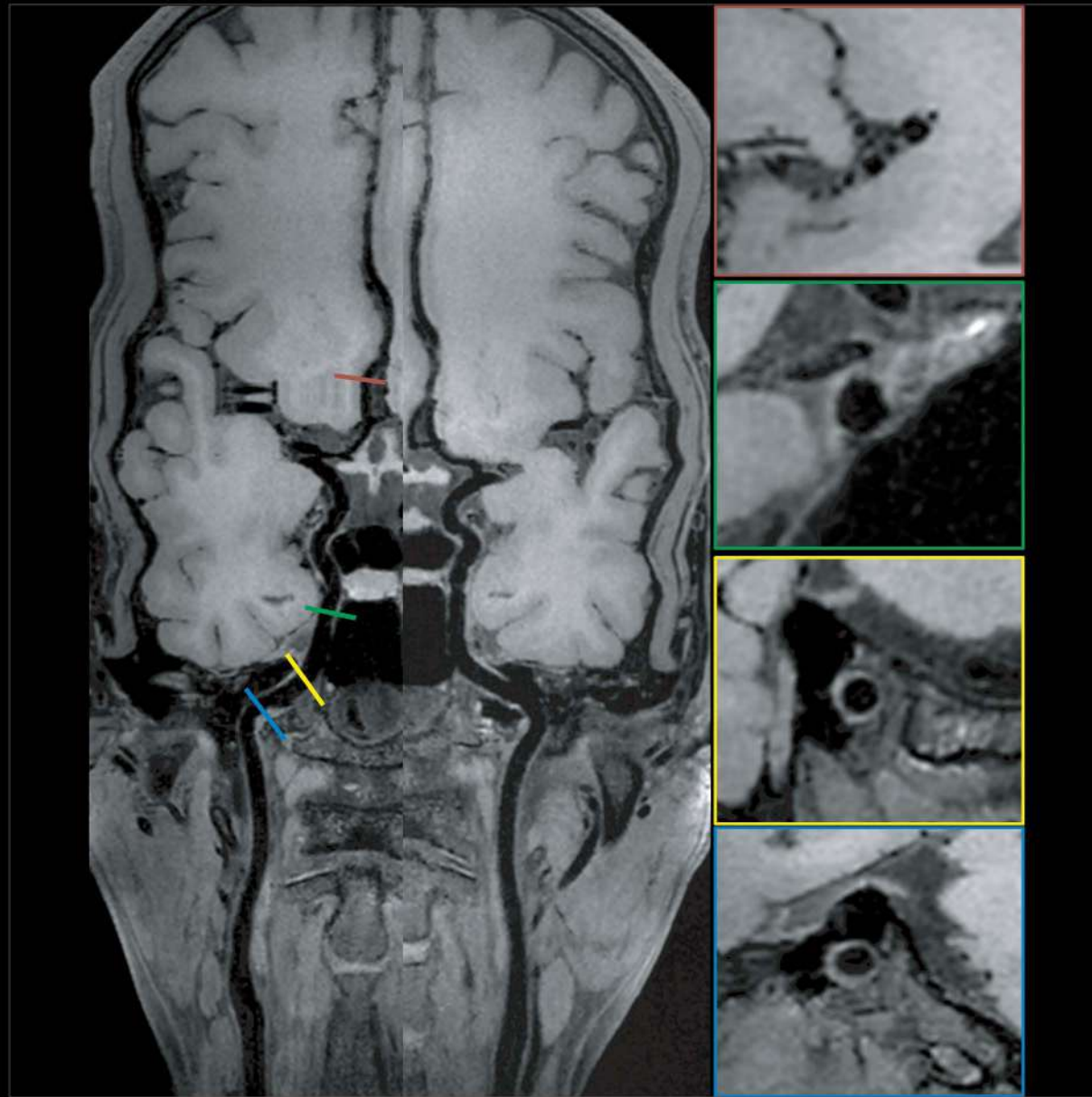


MATRIX 3D STIR

T2 GETI

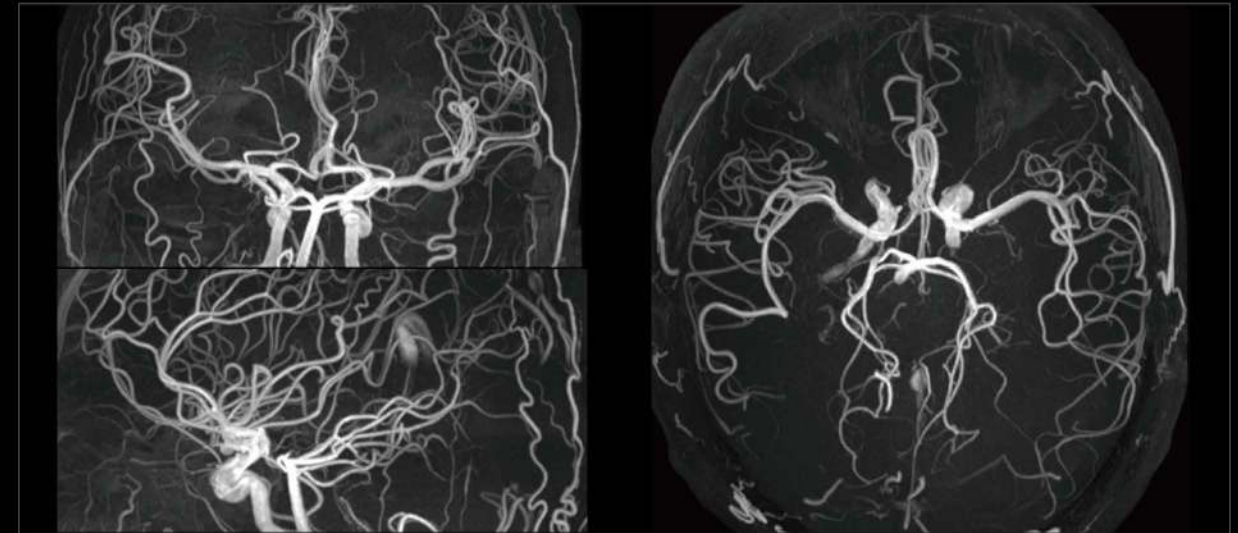
Angiography

Whole Brain Vessel Wall



T1W MATRIX FS
FOV 180x220mm
0.6mm isotropic
Acceleration factor uCS 3.5x

Angiography



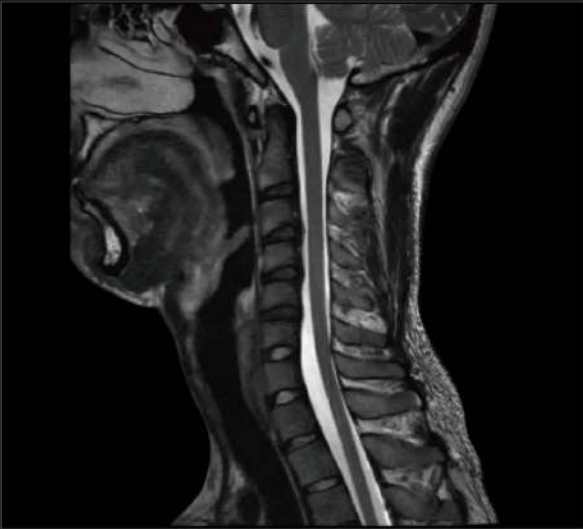
TOF MRA



FIRM

Spine

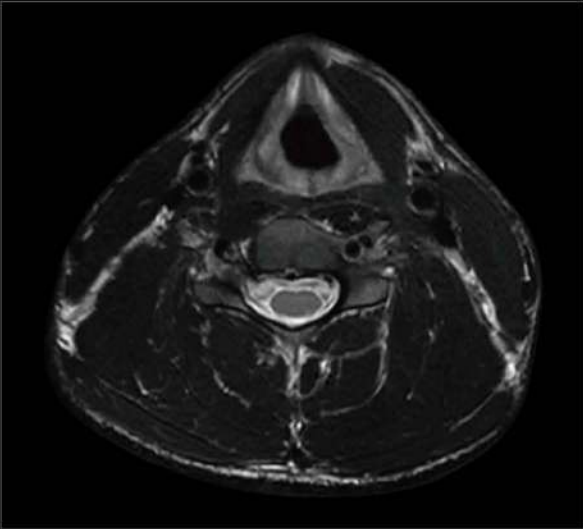
C-Spine



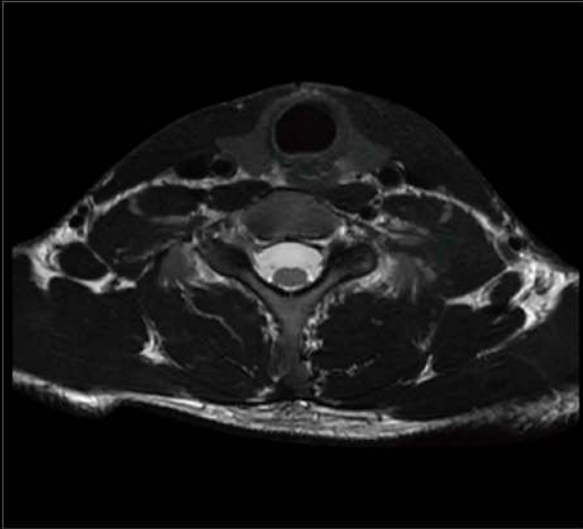
T2W FSE



T1W FSE

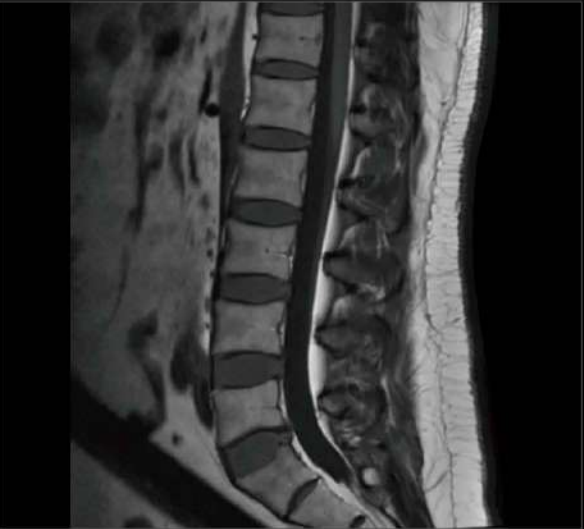


T2W FSE

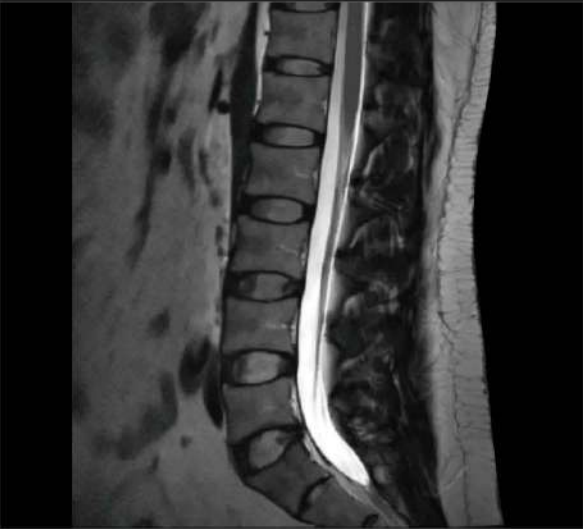


T2W FSE

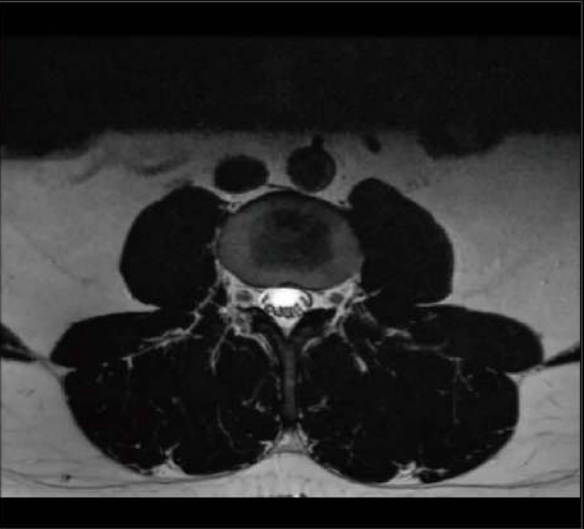
L-Spine



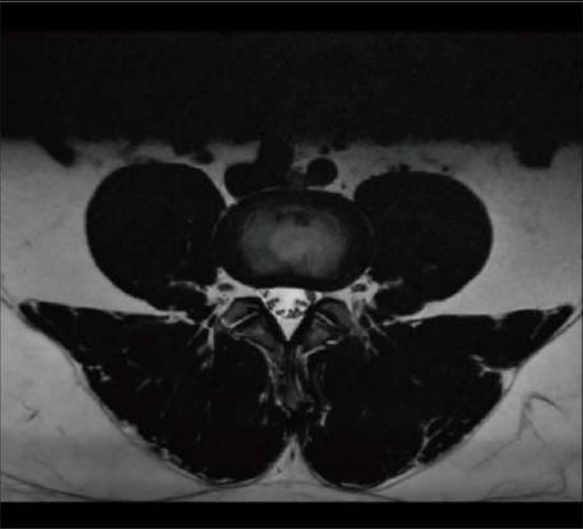
T1W FSE



T2W FSE



T2W FSE



T2W FSE

Whole Spine & Whole Body

Whole Spine



T2 FSE SAG

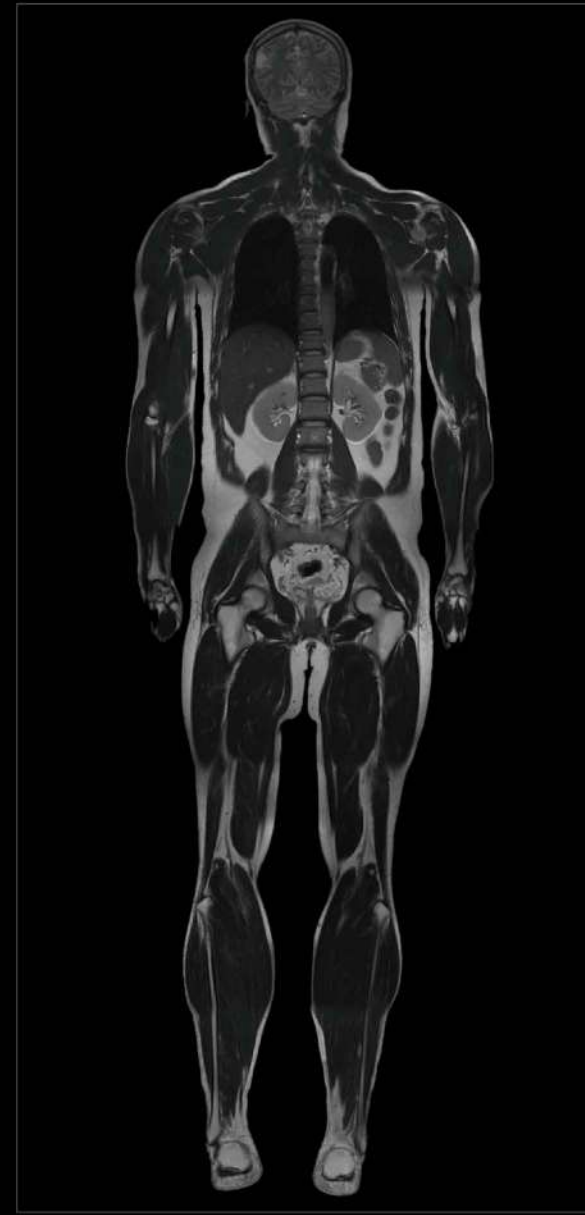


T1 FSE



STIR FSE SAG

Whole Body



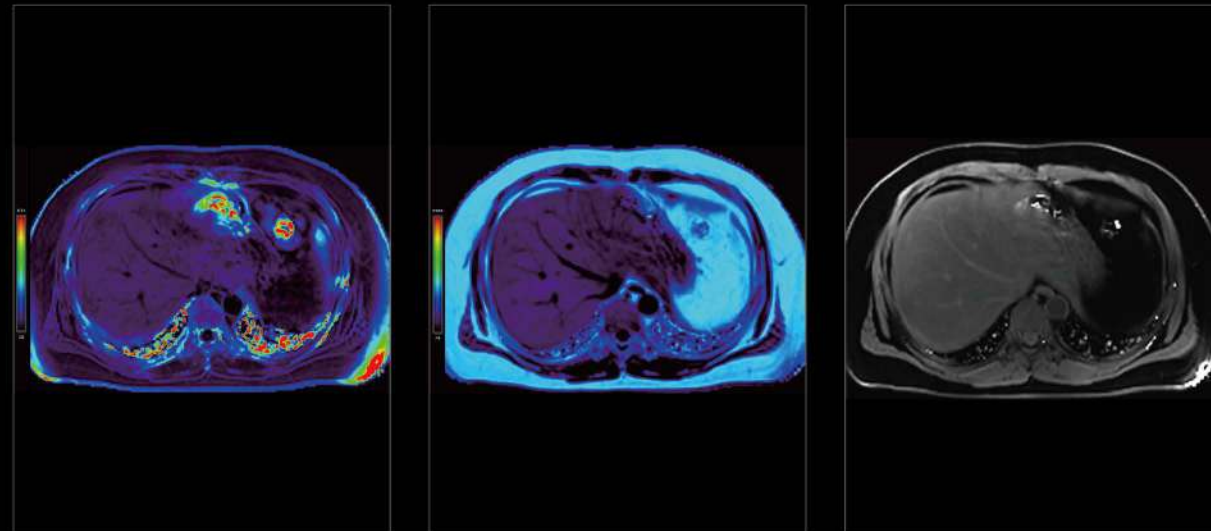
T2W ARMS
5 steps



DWI b800

Body

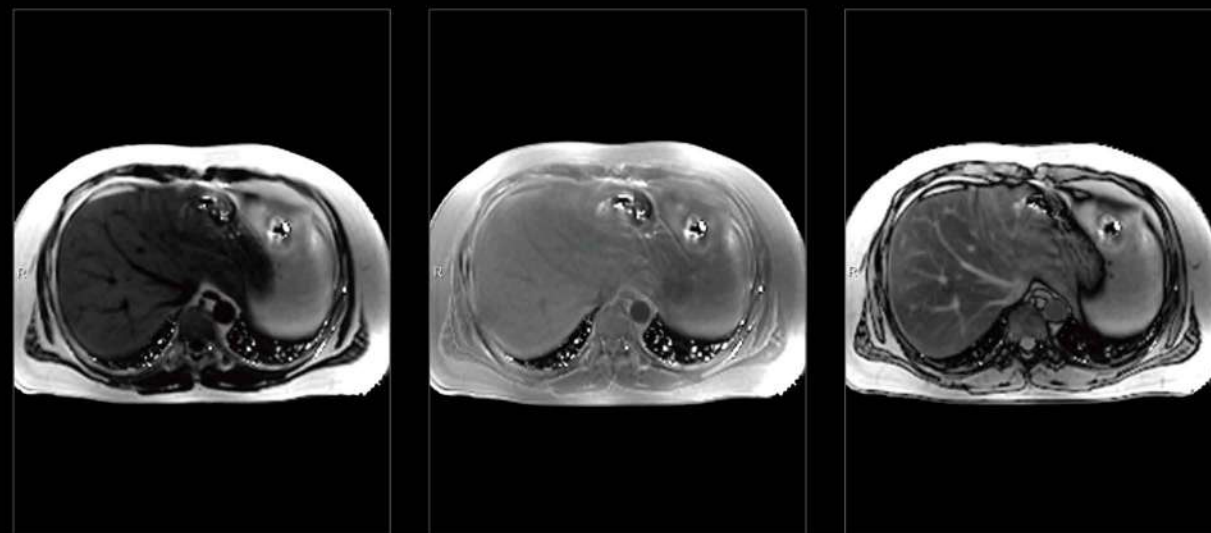
FACT(Fat Analysis & Calculation Technique)



FF

R2*

Water

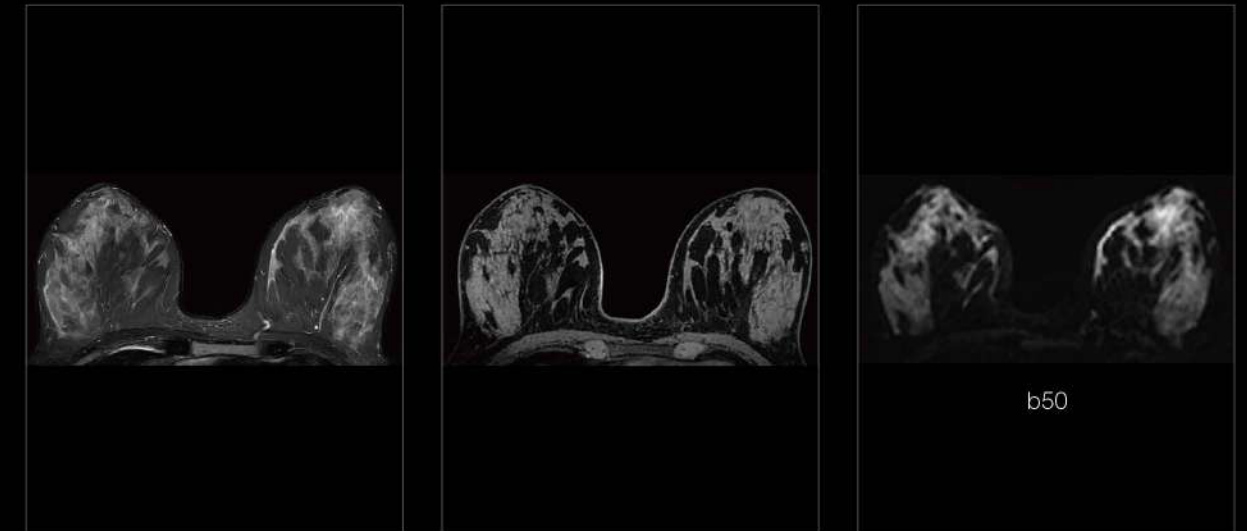


Fat

IP

OP

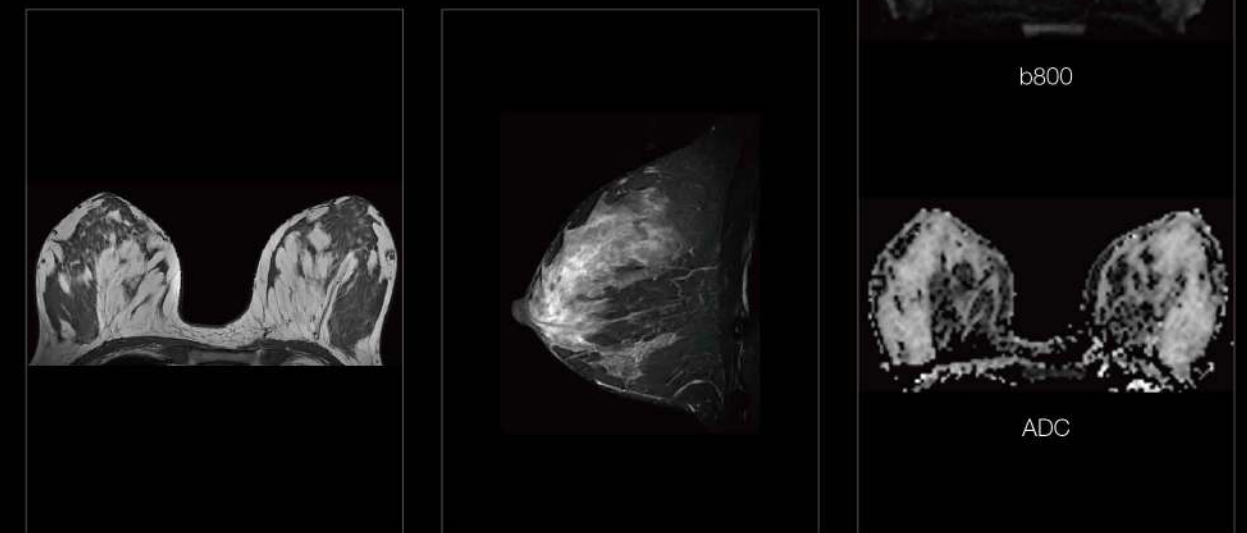
Breast



STIR FSE

T1 QUICK3D FS

b50



T1 FSE

STIR FSE

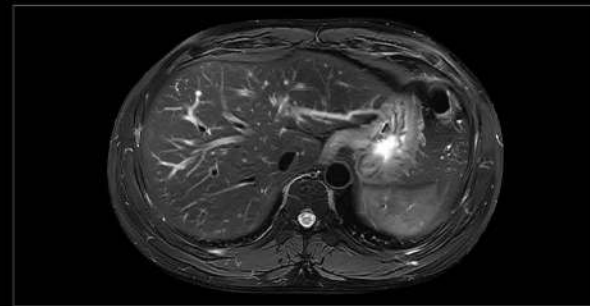
b800

ADC

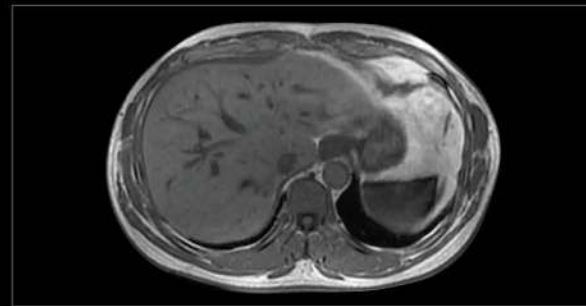
EPI DWI

Body

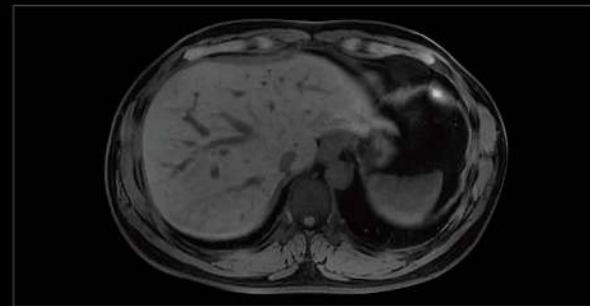
Abdomen



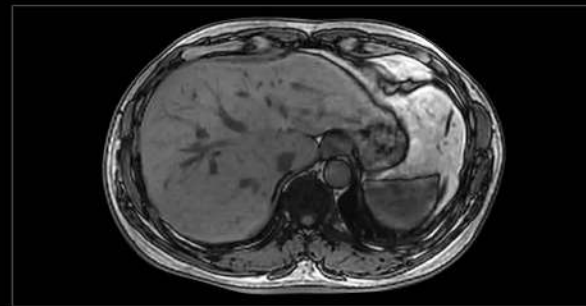
T2 FSE TRA FS



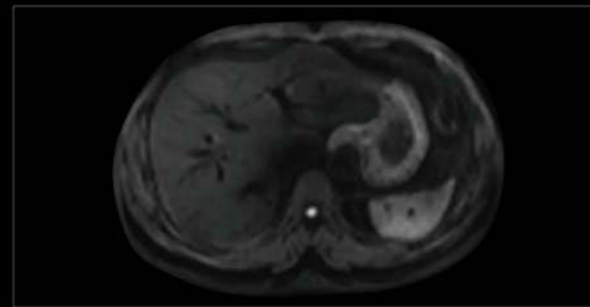
T1 QUICK3D In-phase



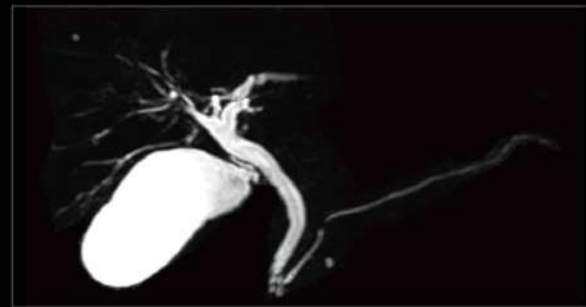
T1 QUICK3D TRA FS



T1 QUICK3D Out-phase

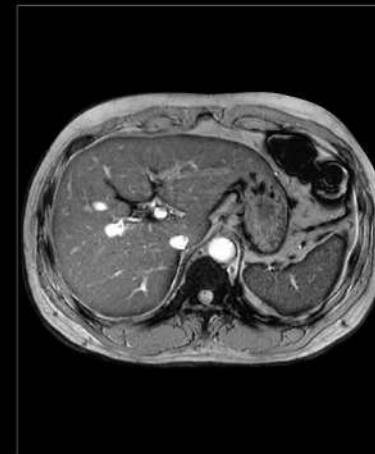


EPI DWI TRA b800

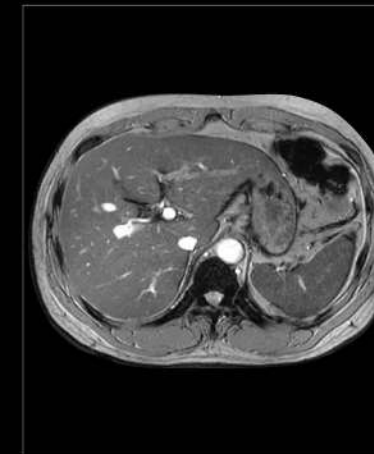


T2 MATRIX3D SPAIR TRIG

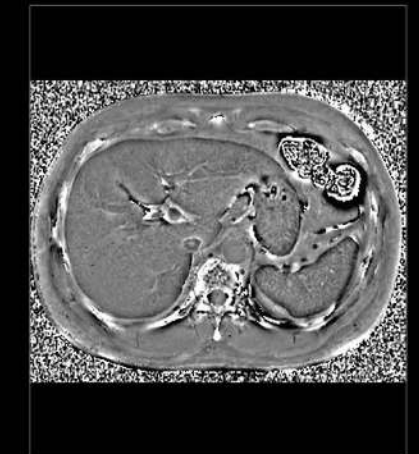
uSWIFT



uSWIFT SWI

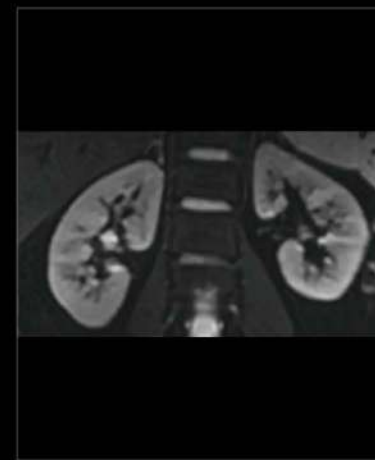


uSWIFT Amplitude



uSWIFT LocalP

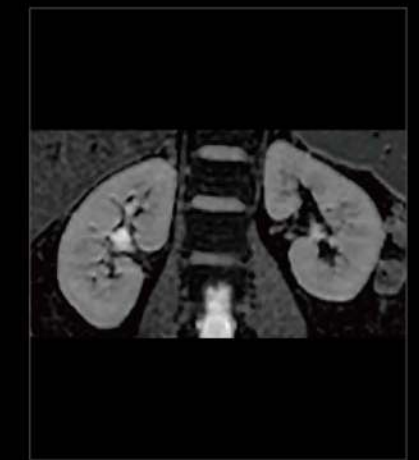
MicroView



MicroView DWI b50



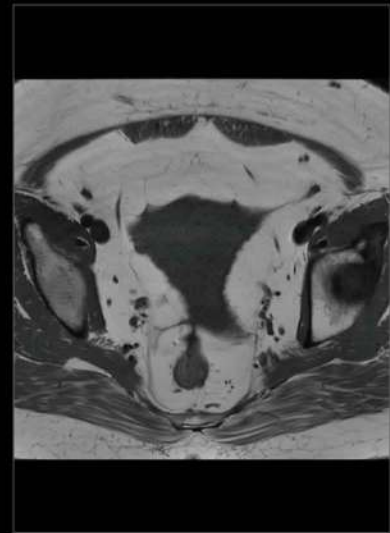
MicroView DWI b800



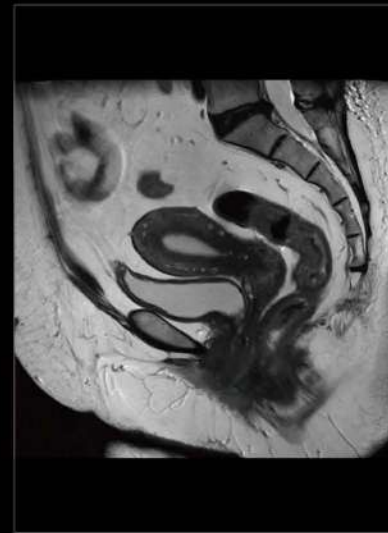
MicroView DWI ADC

Body

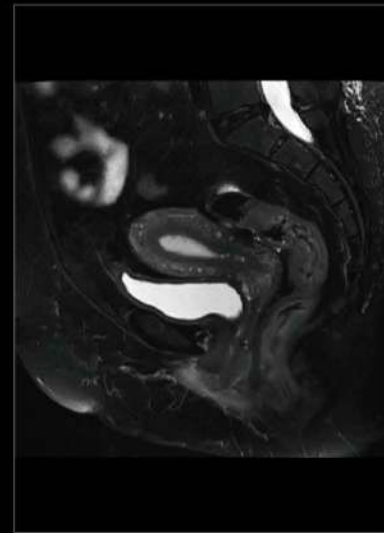
Uterus



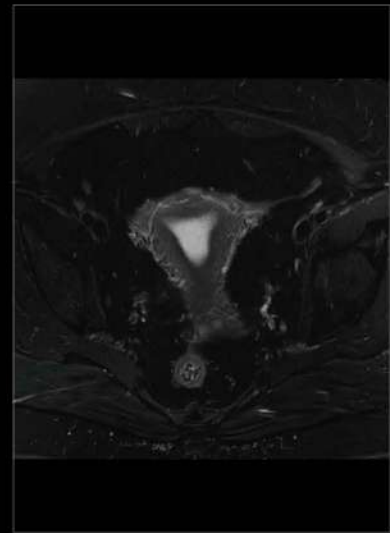
T1W FSE



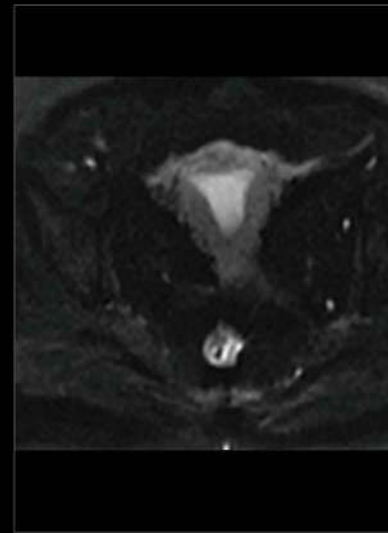
T2W FSE



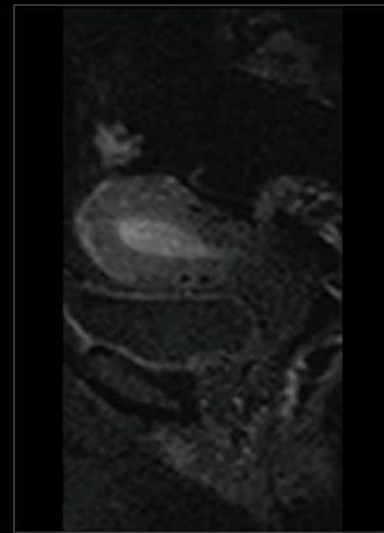
T2W FSE SPAIR



T2W FSE SPAIR
FOV 60 x 50cm

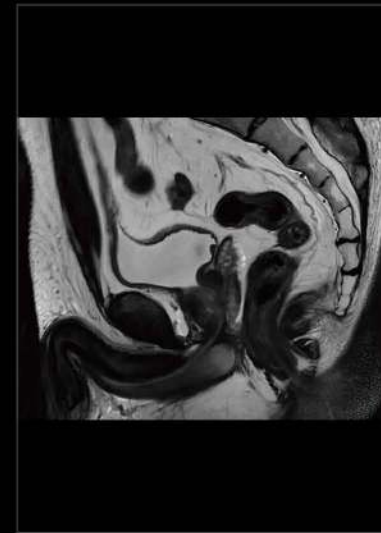


DWI b800



MicroV
DWI b800

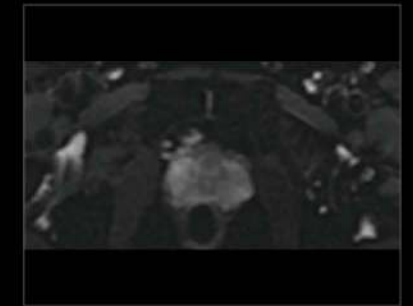
Pelvis



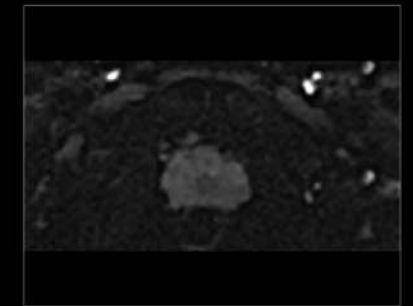
T2W FSE



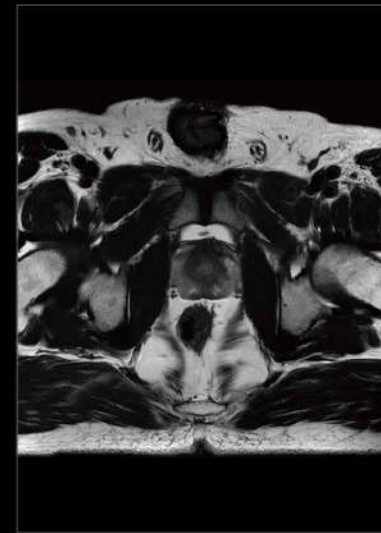
T2 FSE



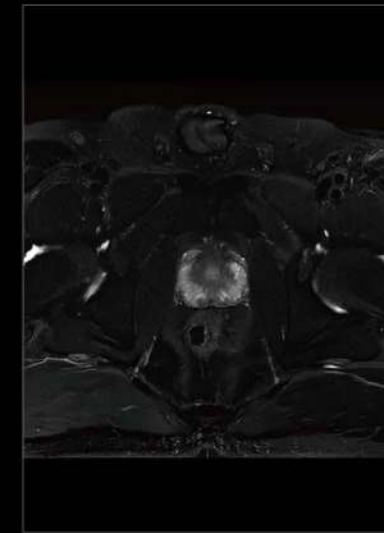
MicroView DWI b50



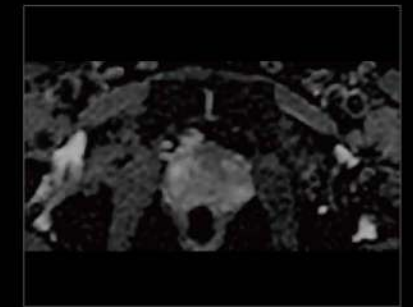
MicroView DWI b800



T2 FSE



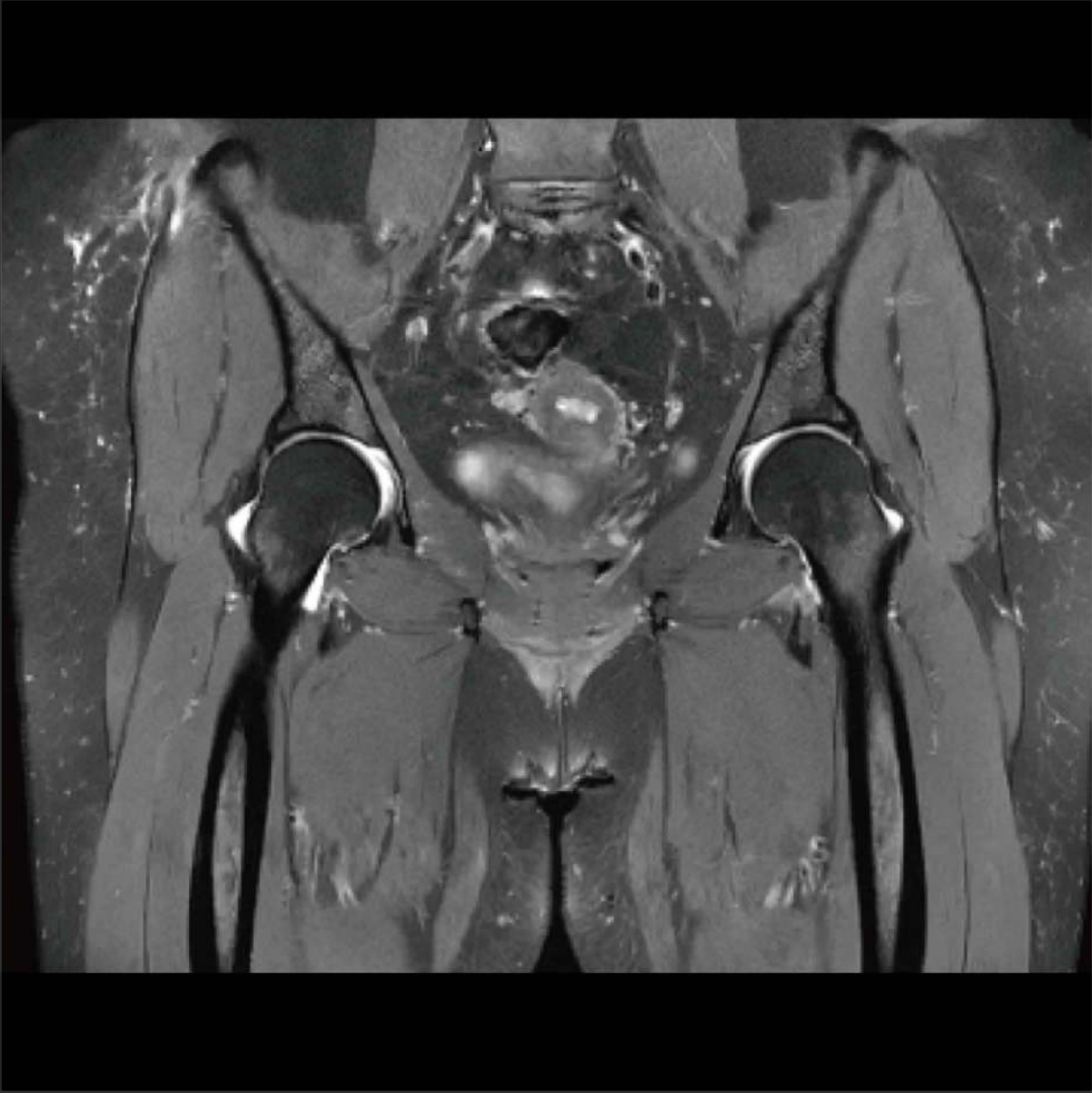
T2 FSE FS



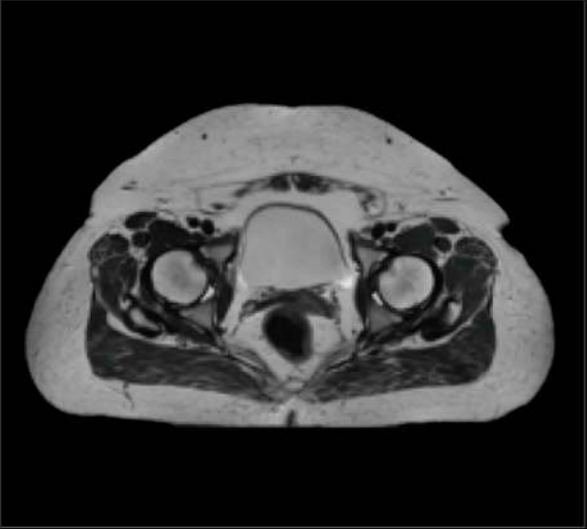
MicroView DWI ADC

Orthopedics

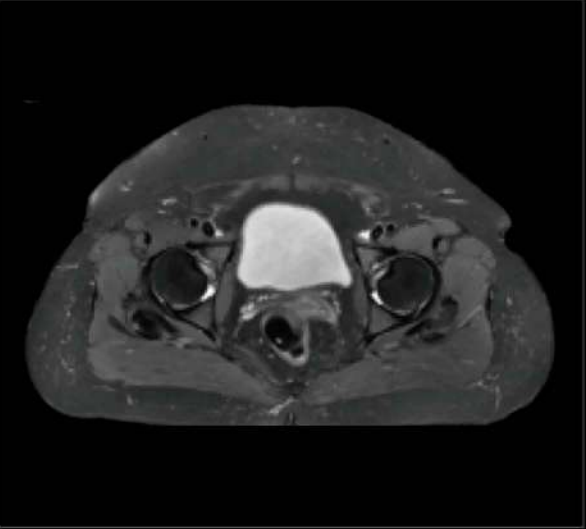
Hip



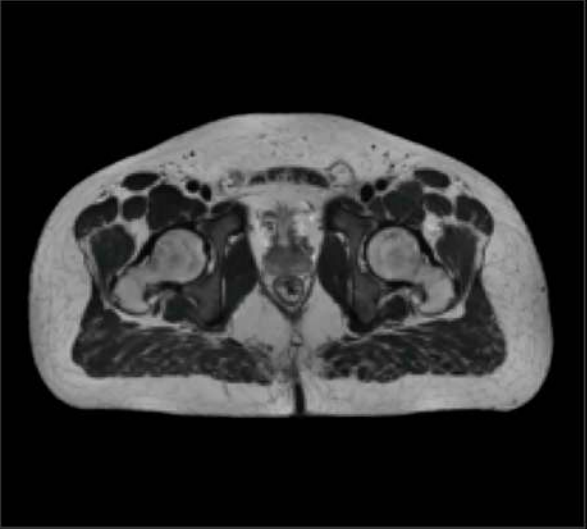
PDW FSE FS



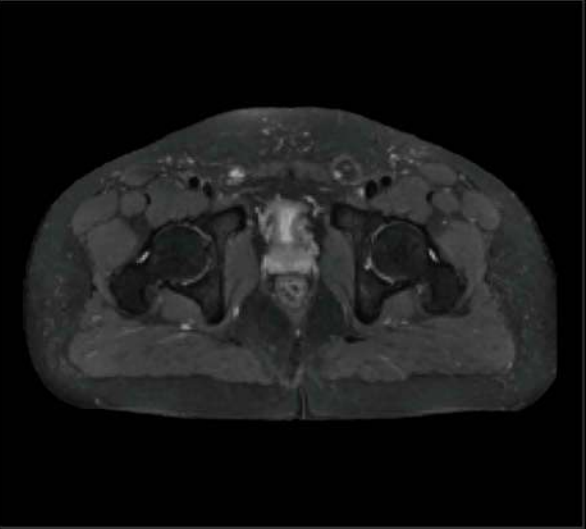
T2W FSE



PDW FSE FS



T2W FSE
FOV 60 x 60cm



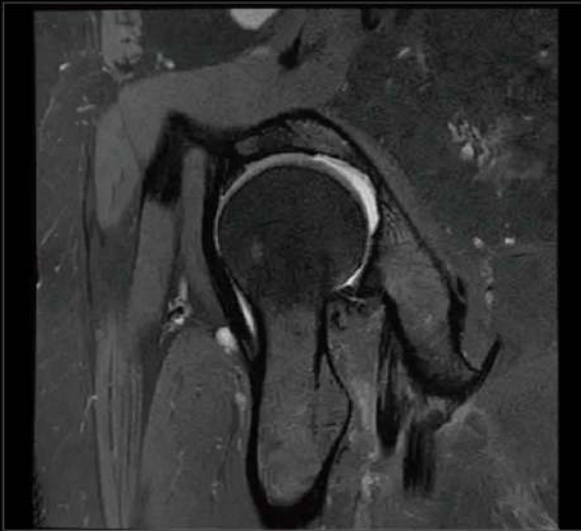
PDW FSE FS
FOV 60 x 60cm

Orthopedics

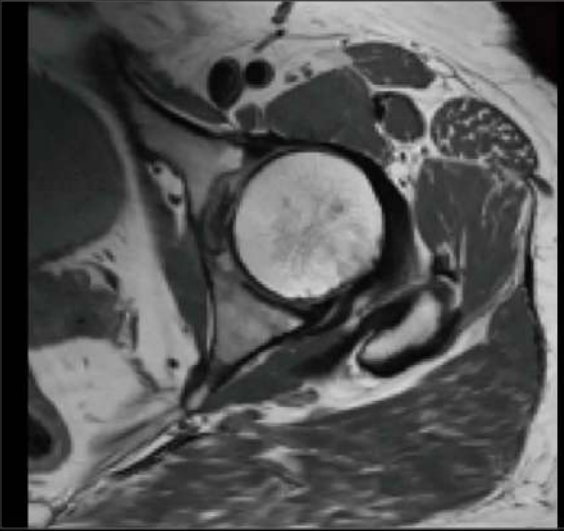
Hip



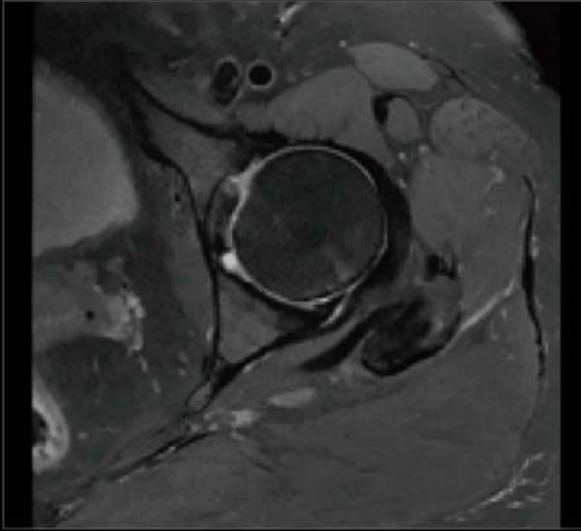
T2W FSE



PDW FSE FS

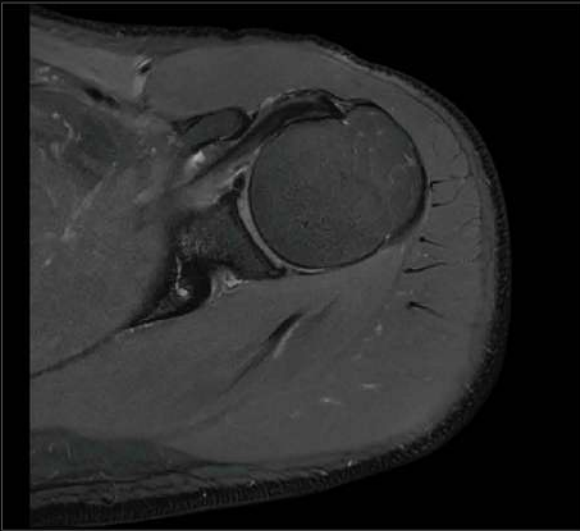


T2 FSE

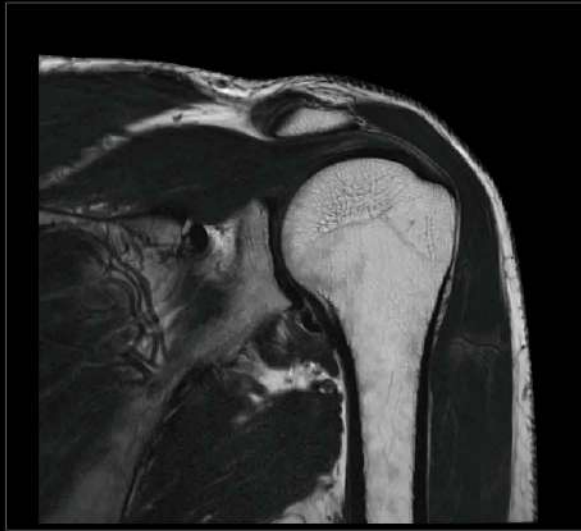


PDW FSE FS

Shoulder



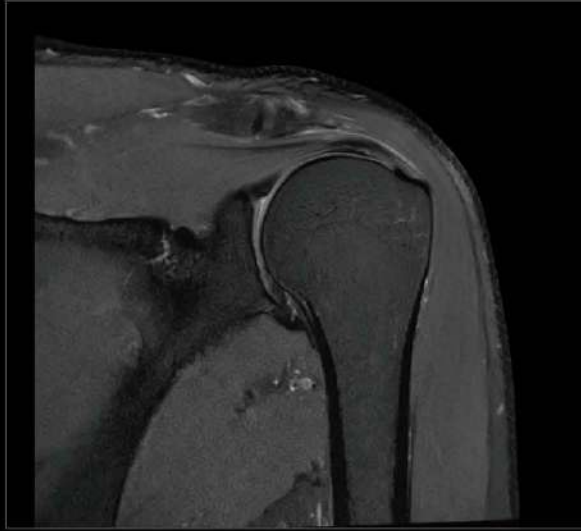
PDW FSE FS



T1W FSE



T1W FSE



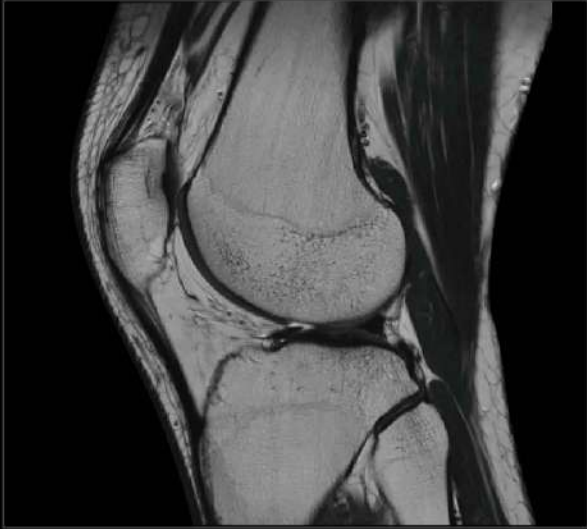
PDW FSE FS

Orthopedics

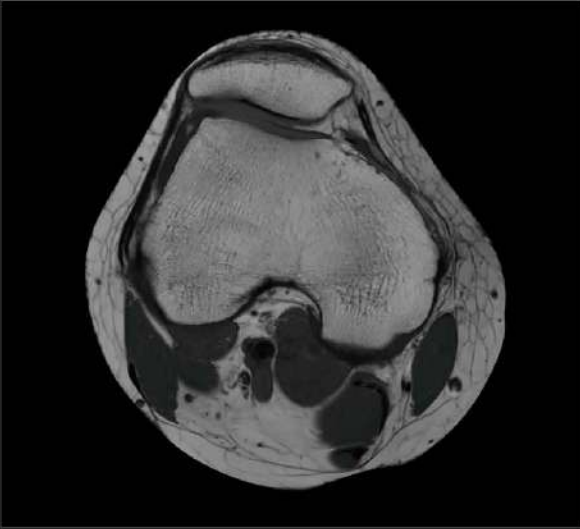
Knee



PDW FSE FS



T2W FSE

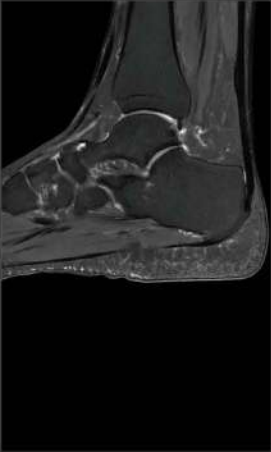


T1W FSE

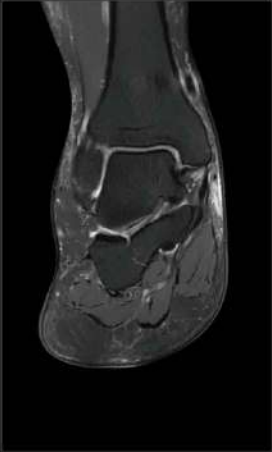


PDW FSE FS

Ankle



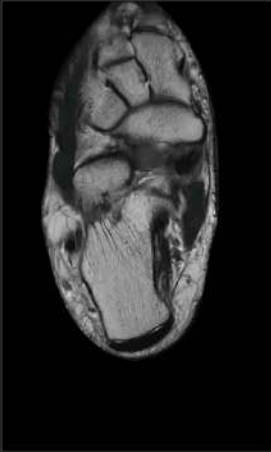
PDW FSE FS



PDW FSE

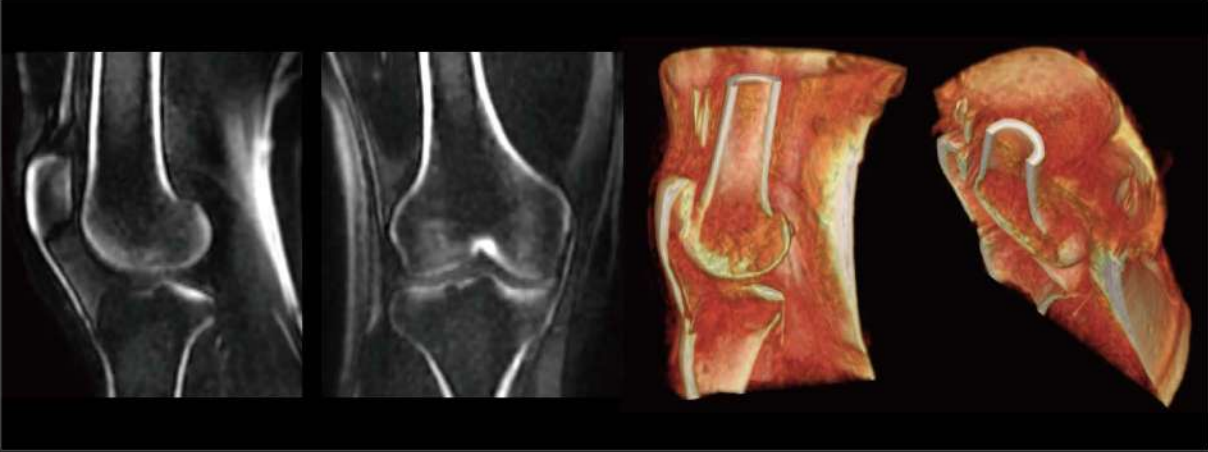


T1W FSE



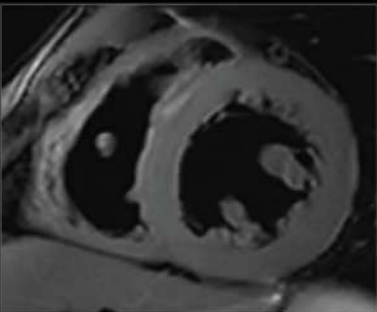
T2W FSE

Knee-UTE



UTE 3D CorticalBone

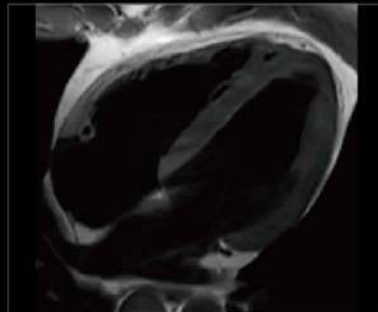
Cardiology



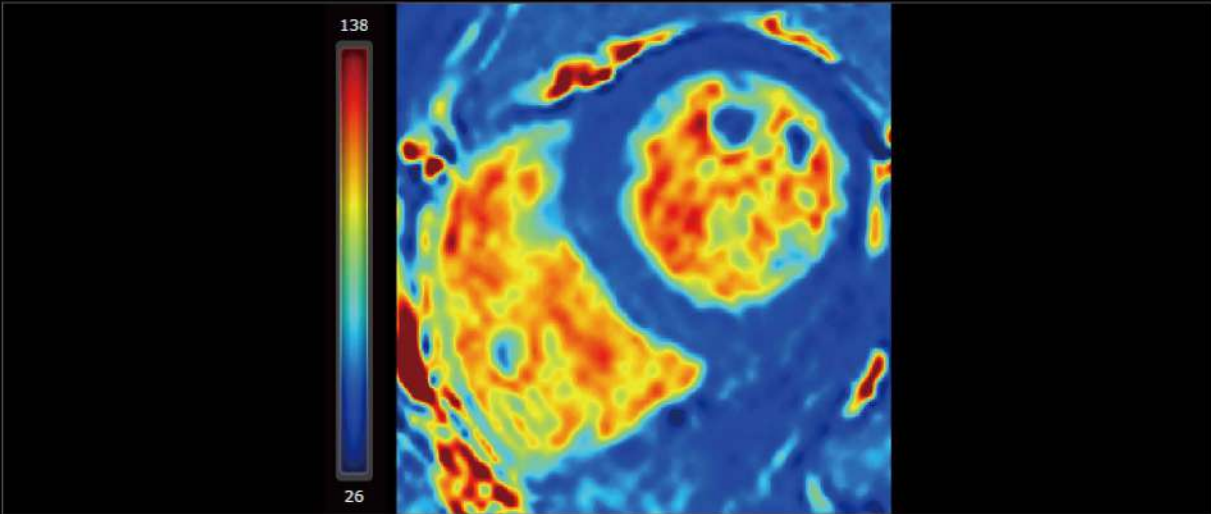
T2 FSE DB FS SAX



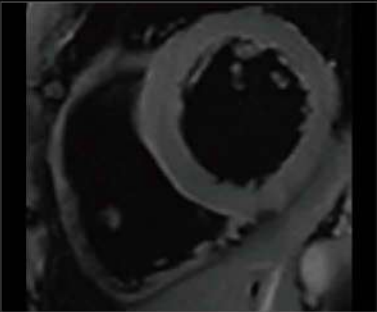
T2 FSE DB 3ch



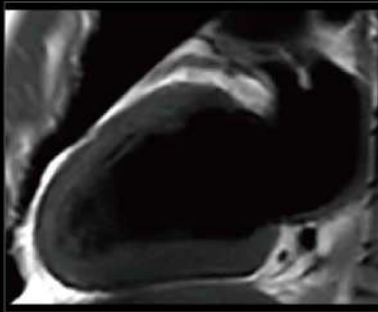
T2 FSE DB 4ch



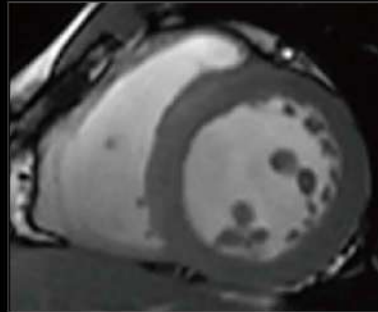
T2 Mapping



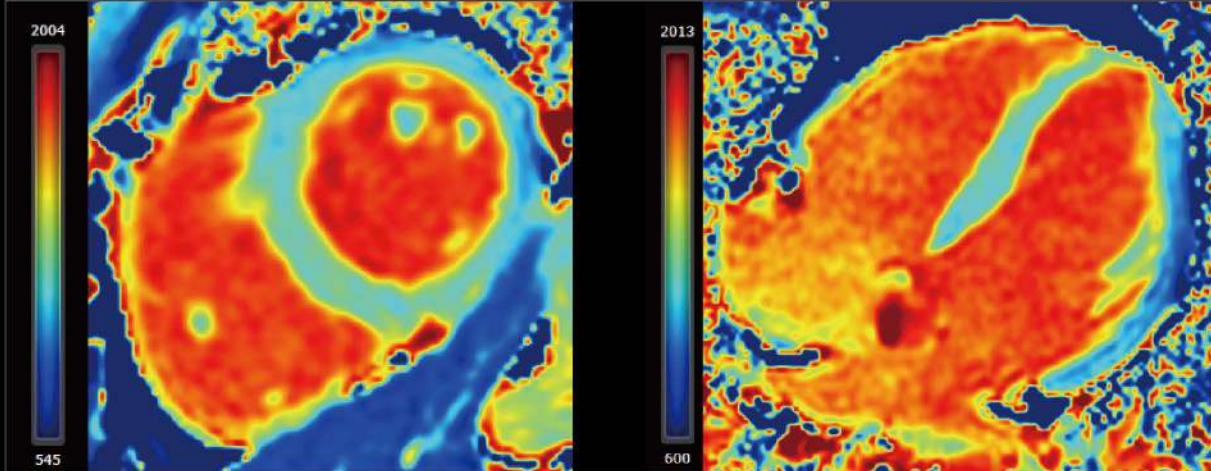
T2 FSE DB FS SAX



T2 FSE DB 2ch



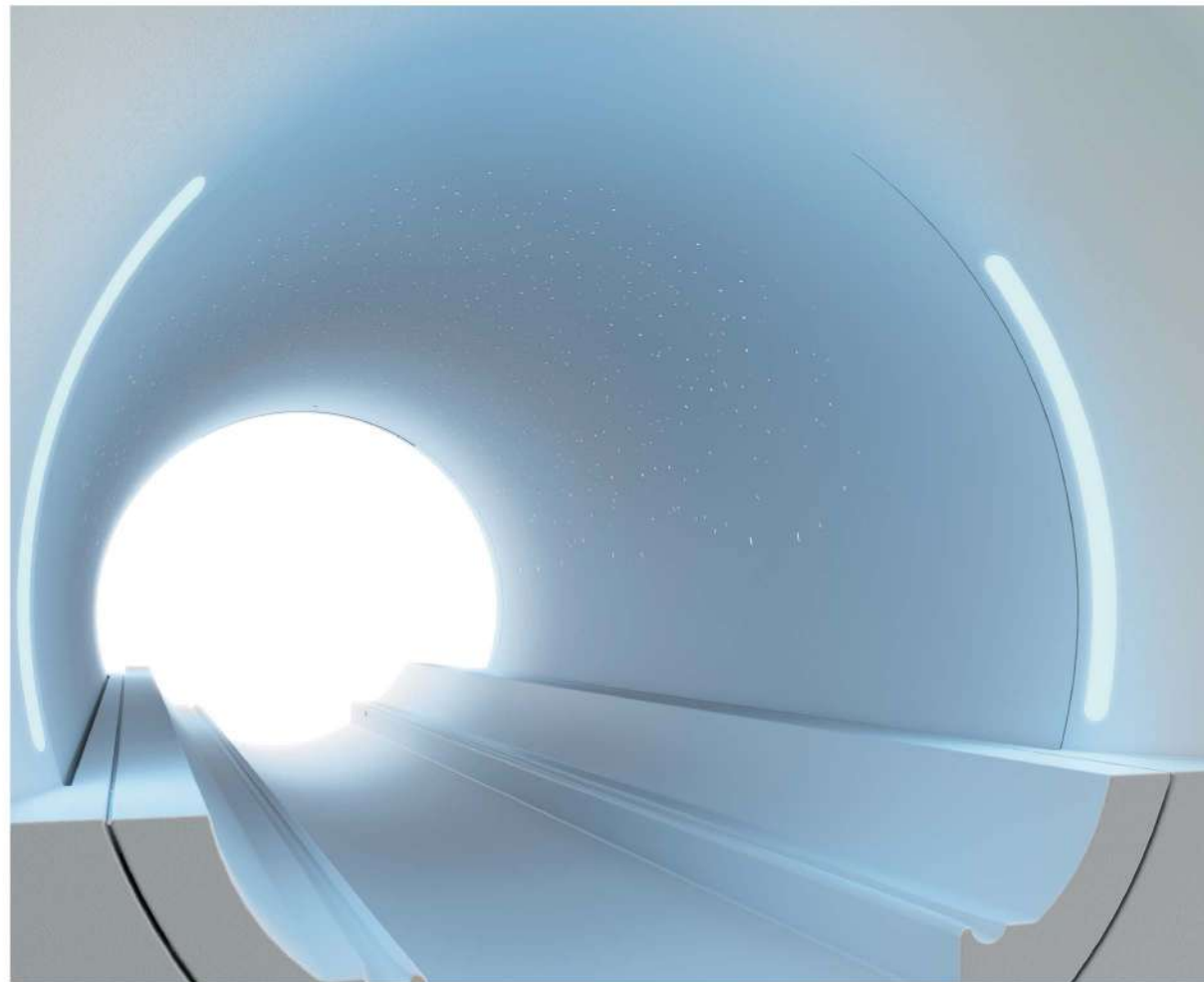
Cine SAX



T1 Mapping

Human-Centered Design

Focusing on user experience, uMR Omega combines accurate operation with a lightweight and artistic design. We bring aesthetic enjoyment and ease of use to the technology, delivering care, trust and respect through our design.



Pleasing Aesthetics

Our design scheme integrates oriental aesthetics with minimalism, presenting a seamless fusion of traditional and modern styling.

User-Friendly Design

The product design delivers comfort, safety, efficiency and ease-of-use. By applying ergonomic principles the uMR Omega combines innovative design with optimal functionality in order to provide a better possible user experience, optimizing patient comfort during the examination.

Sophisticated Craftsmanship

Driven by the tenets of precision design, we fine-tune every technological detail to embody the spirit of craftsmanship in every product.