

Shanghai United Imaging Healthcare Co., Ltd.  
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Shanghai, China  
2258 Chengbei Rd., Jiading District, Shanghai, 201807.

Email | [info.global@united-imaging.com](mailto:info.global@united-imaging.com)  
Business Consultation | +86 (21) - 67076666  
After-sales Service | 4006 - 866 - 088

Edition ID | 88000004 - MPD - BRE - 03



# uMR 780

## ACS Edition

Fast. Accessible.

## 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>

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# uMR 780 ACS Edition

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Intelligent 3.0T MRI Driven by ACS

uMR 780 is driven by the unique ACS platform which includes the ACS imaging technology and the ACS processing engine, providing higher performance in both ultra-fast and high-resolution imaging.

| *ACS Platform*

| *Comprehensive Applications*

| *Powerful SuperSystem*



# ACS Platform

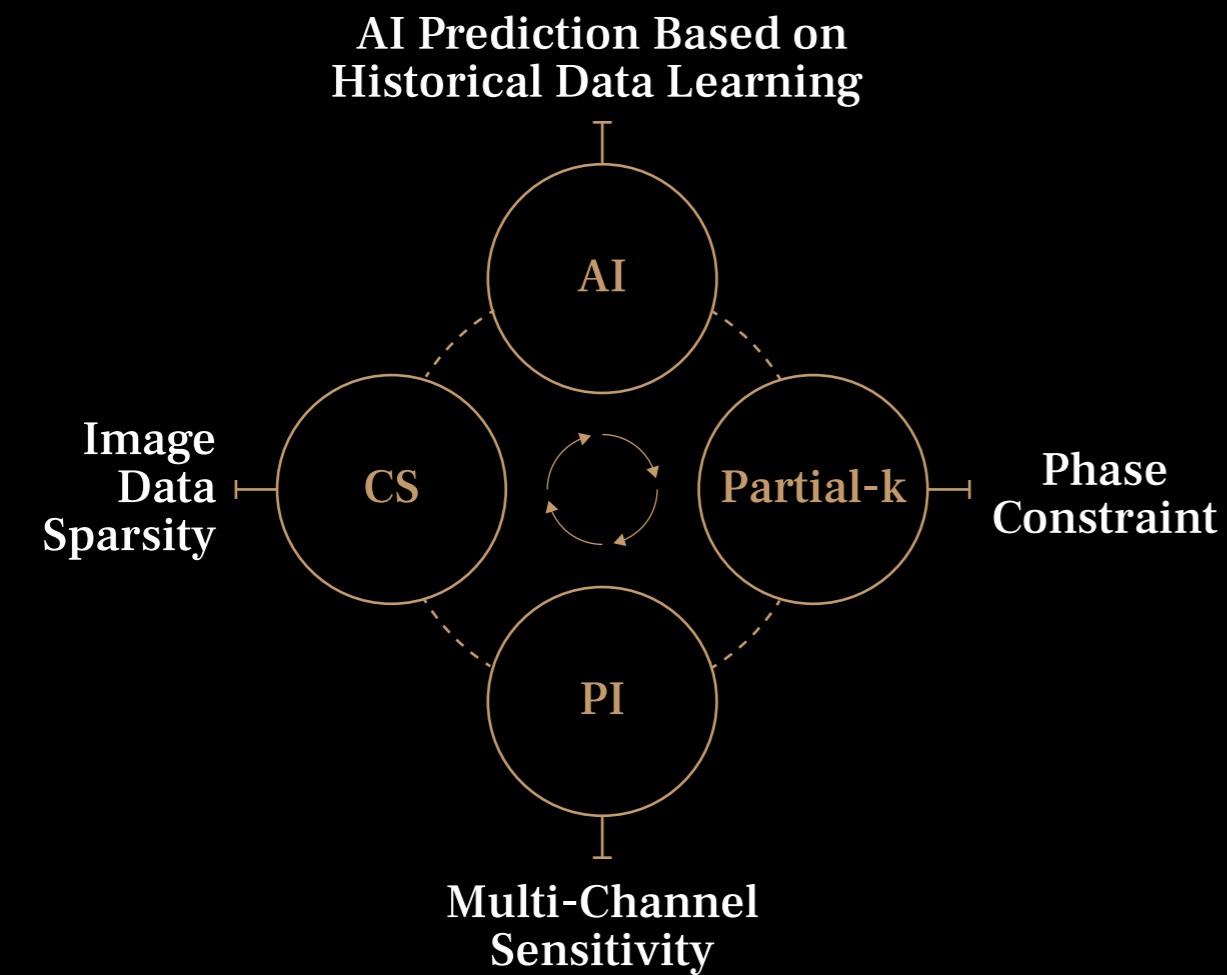
(AI-assisted Compressed Sensing)

## For the first time, ACS yields:

Historical prior knowledge & AI-assisted technology

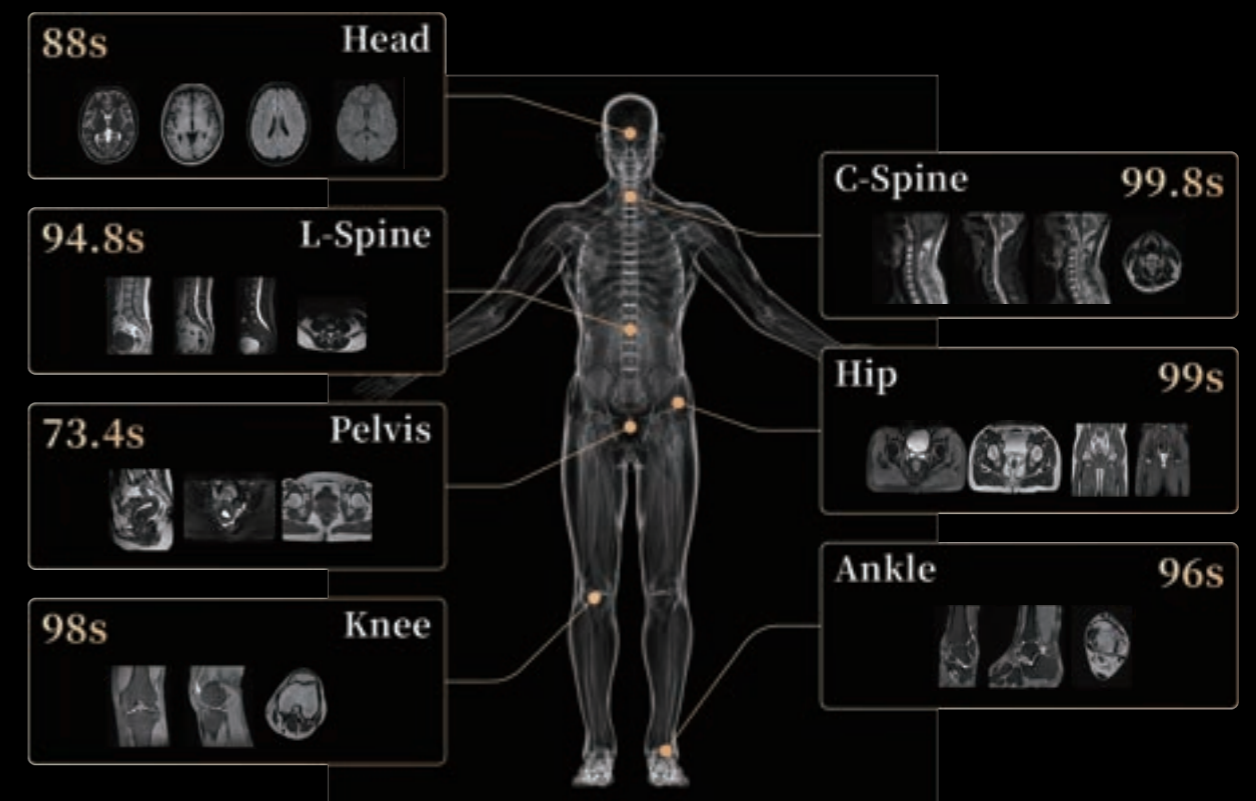
Combination of four acceleration methods: partial Fourier, parallel imaging, compressed sensing, and AI

MR acquisition speed approaches that of CT



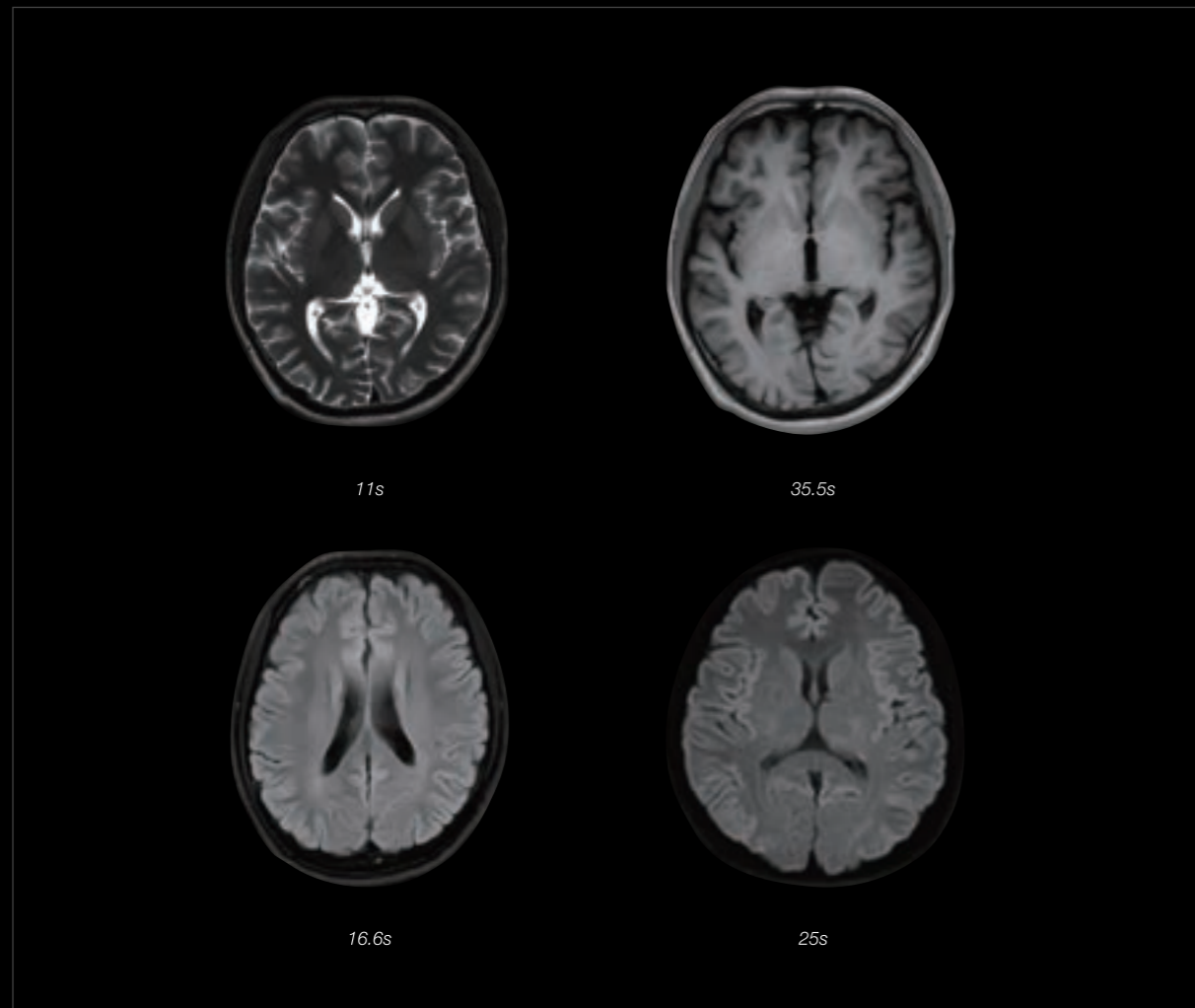
## Optimized Coverage:

ACS Can Be Used on All Anatomies



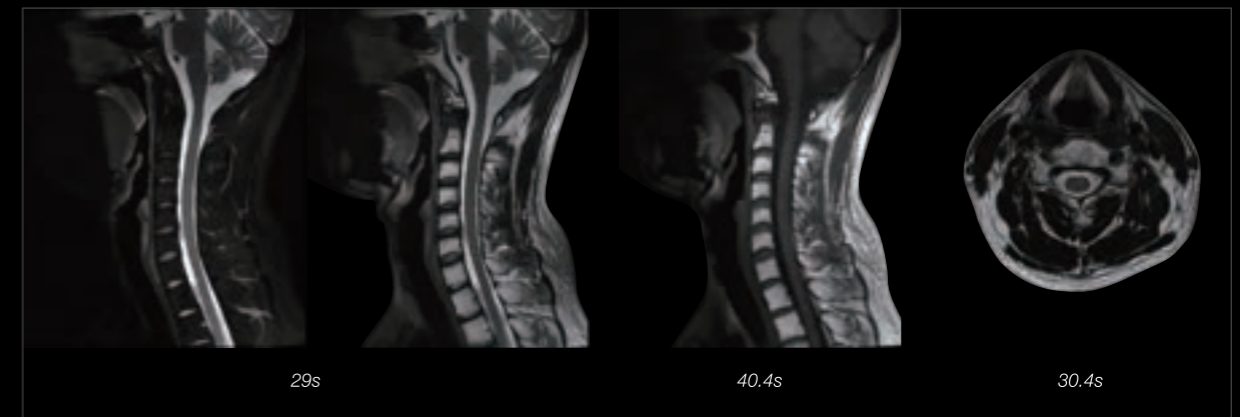
# Comprehensive ACS Applications

## Optimized Neuro

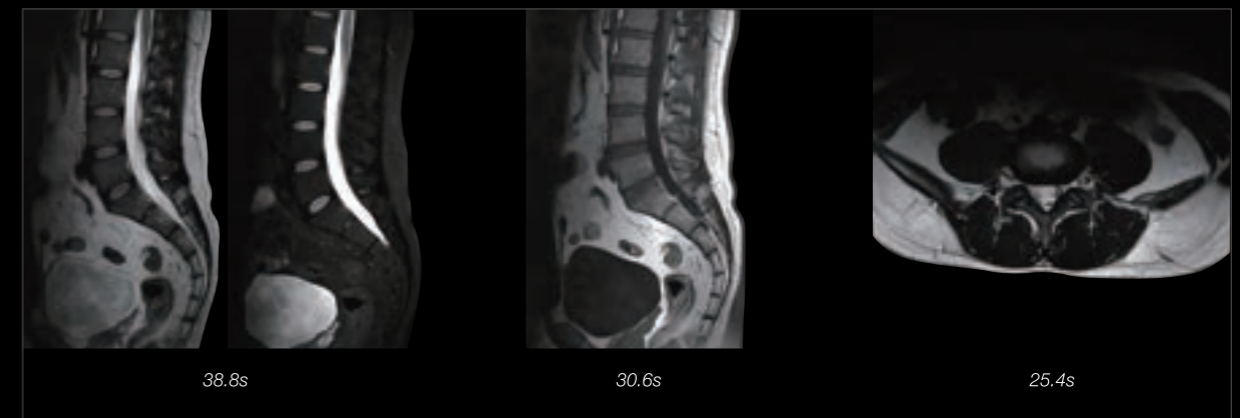


Total AD: 88.1 seconds

## Optimized Spine



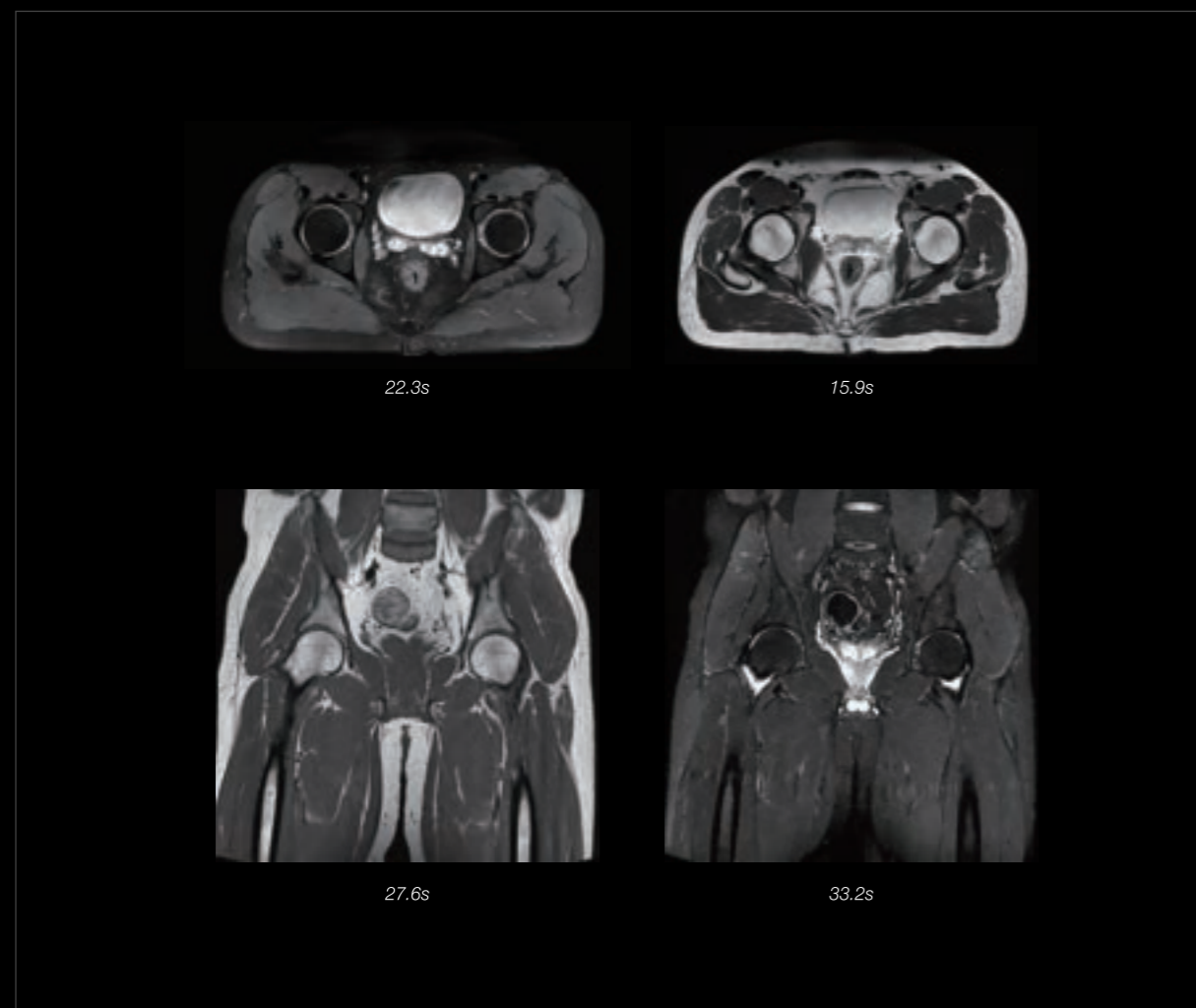
C-Spine  
Total AD: 99.8 seconds



L-Spine  
Total AD: 94.8 seconds

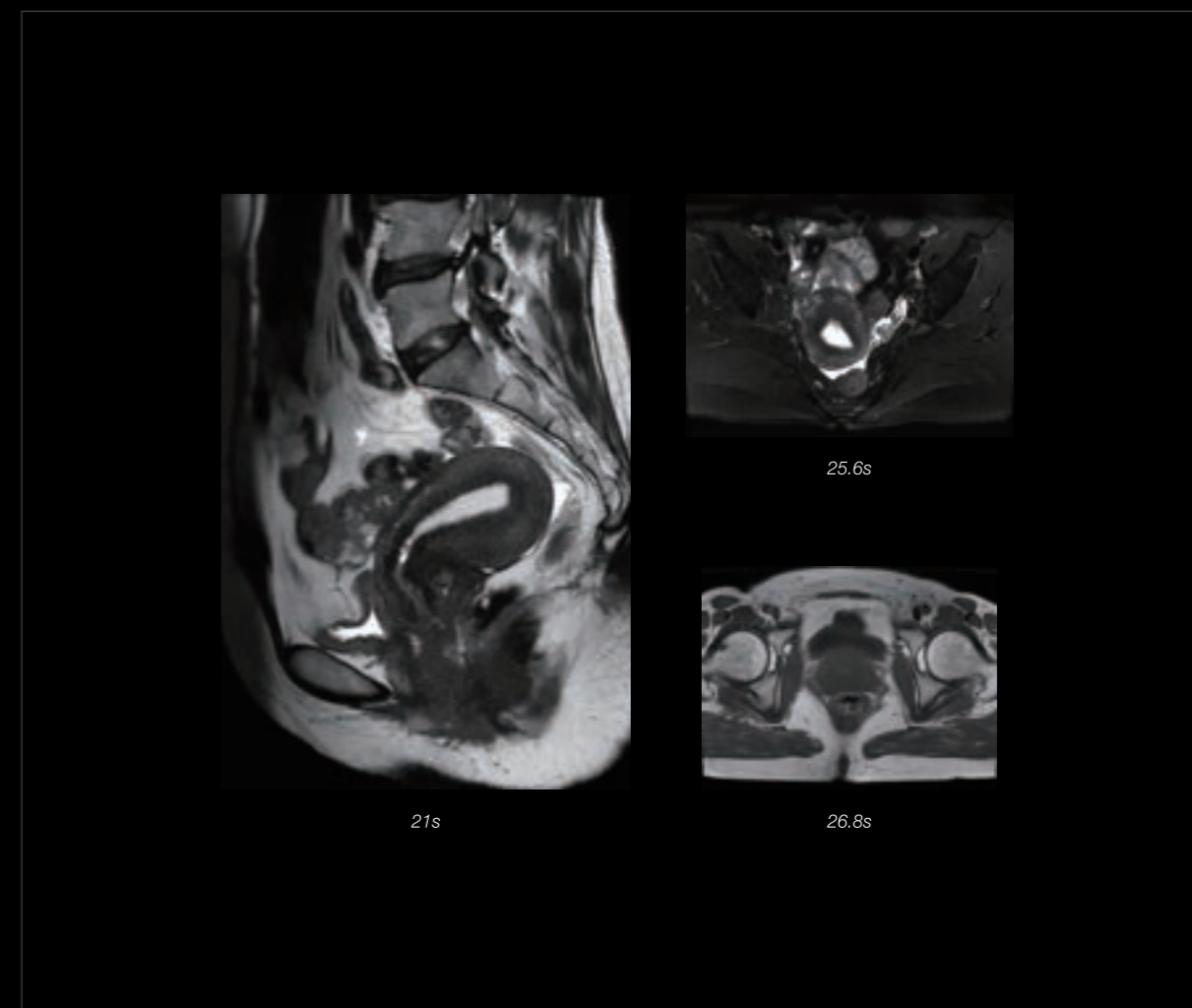
# Comprehensive ACS Applications

## Optimized Hip



Total AD: 99 seconds

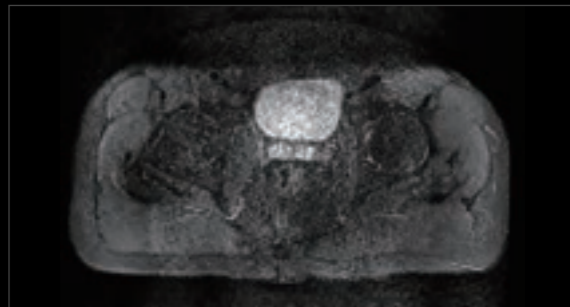
## Optimized Pelvis



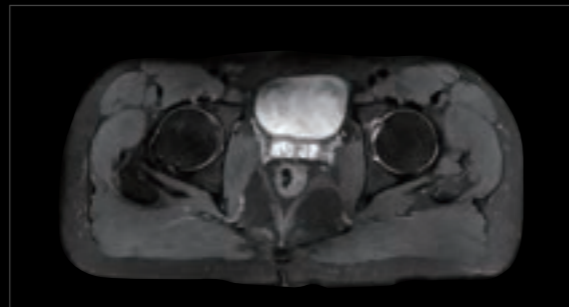
Total AD: 73.4 seconds

# Comprehensive ACS Applications

## Optimized Fidelity

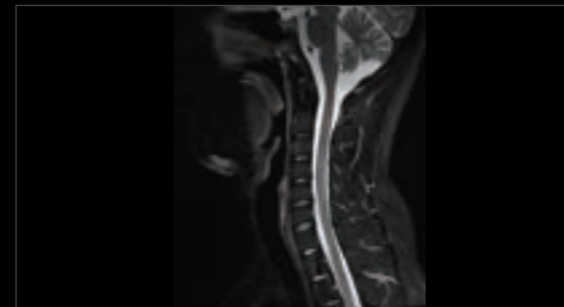


Parallel Imaging  
AD: 27.2s



ACS  
AD: 28s

## Pulsation Freezing

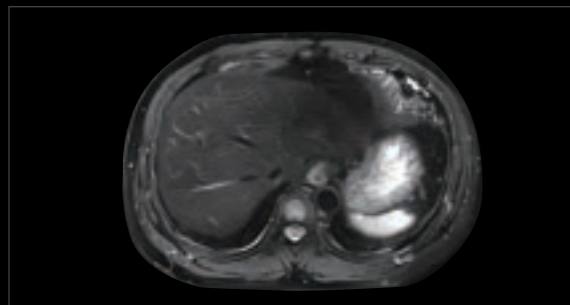


Parallel Imaging  
AD: 2:30min

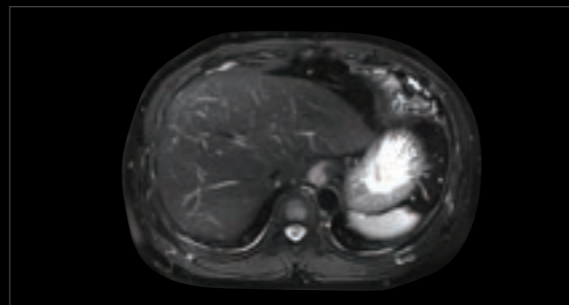


ACS  
AD: 29s

## Motion Freezing

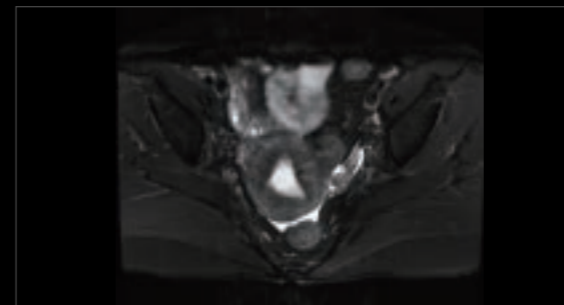


Parallel Imaging  
AD: 2:43min

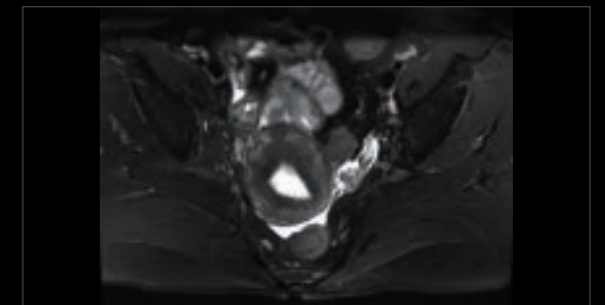


ACS  
AD: 52s

## Motion Freezing



Parallel Imaging  
AD: 2:04min



ACS  
AD: 25.6s



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# Comprehensive Applications

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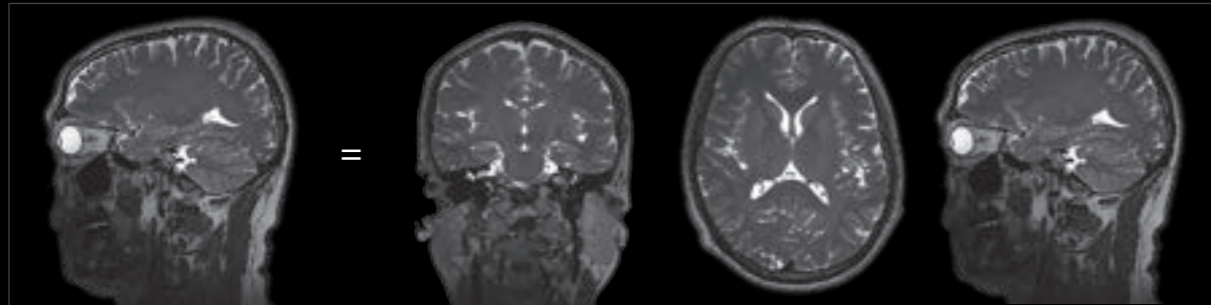
uMR 780 provides comprehensive clinical applications for whole body to meet the routine clinical and scientific research needs.

# Neurology

uCS static imaging technology combined with MATRIX acquisition provides high-resolution and multi-contrast isotropic images for Neurology diagnosis.

## uCS Static Imaging

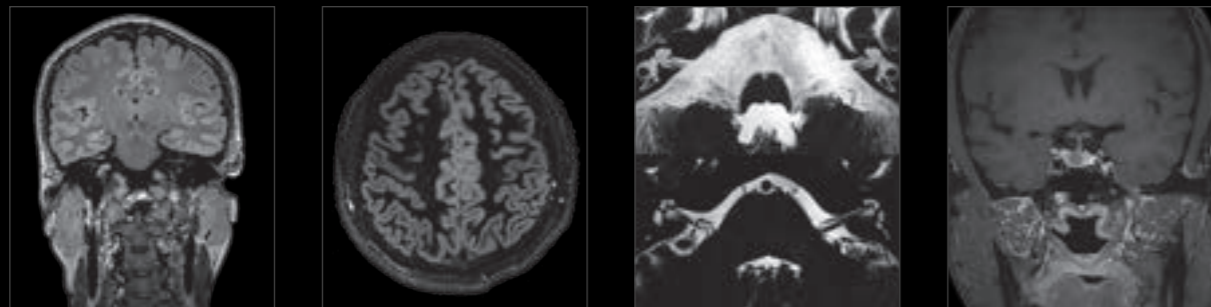
Three Dimensional Acquisition =  
Two Dimensional Reconstruction from any plane



T2W MATRIX, uCS 5x,  
1mm Isotropic, AD: 1:42min

## uCS Static Imaging

Head Multi-contrast Imaging



T2 FLAIR MATRIX

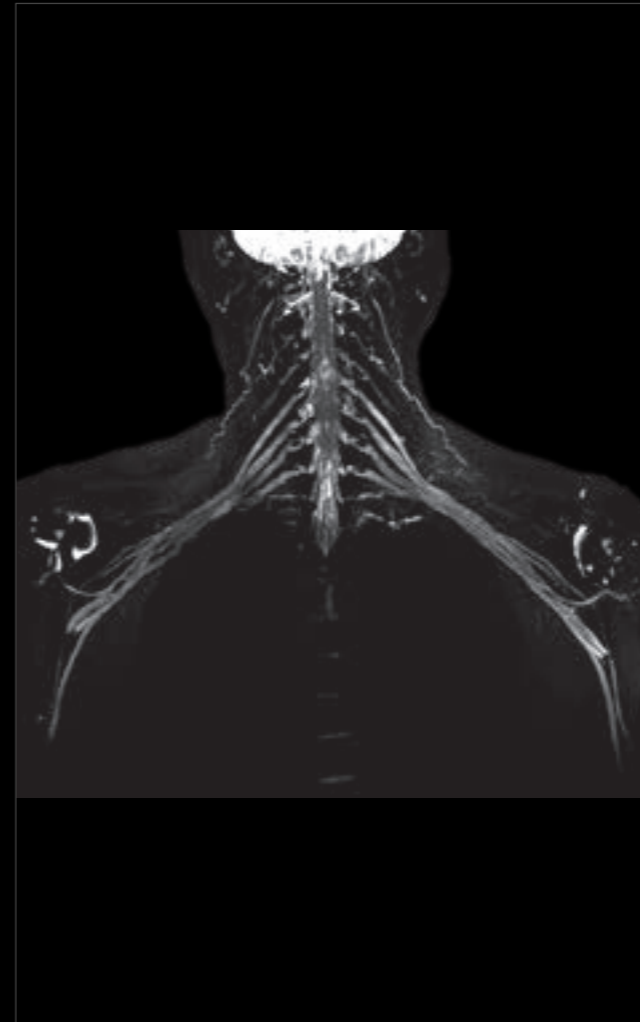
DIR MATRIX

T2W MATRIX

T1W MATRIX

## uCS Static Imaging

Brachial Plexus Imaging



## uCS Static Imaging

Whole-spine Imaging with 2 acquisitions



## uCS Static Imaging

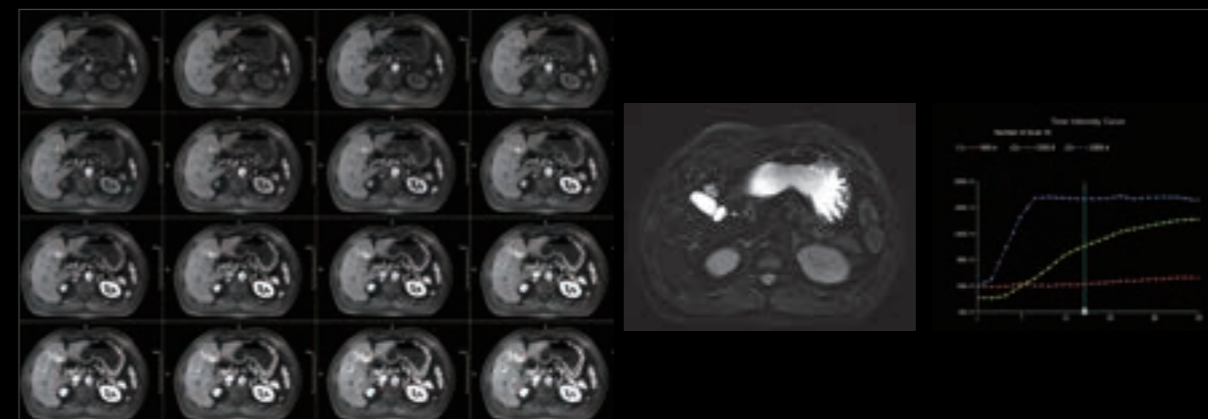
MRCP



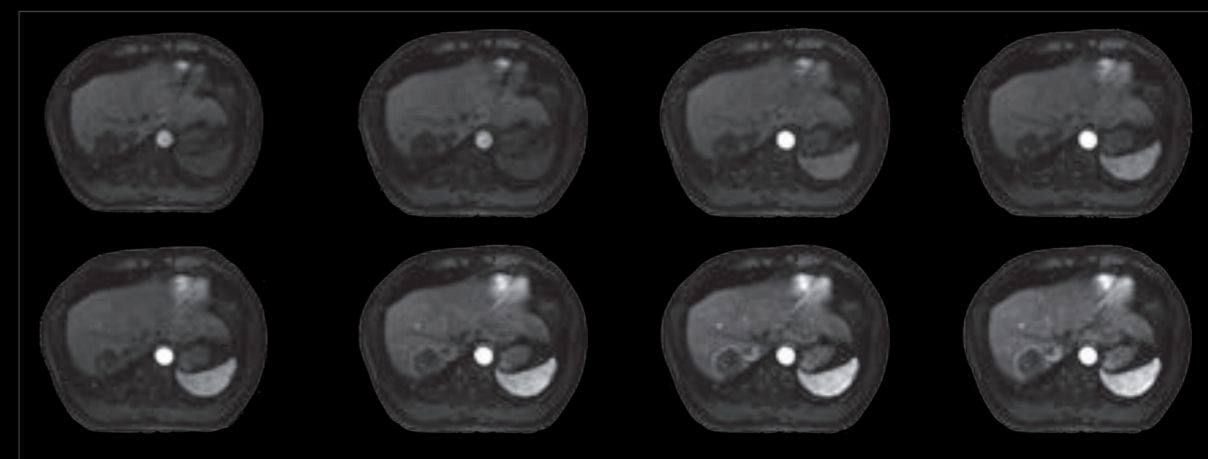
T2 MATRIX FS, uCS 2.6x  
Voxel: 0.9x0.9x1.2mm<sup>3</sup>, AD: 2:18min

## uCS Dynamic Imaging

Dynamic Enhancement with Whole-liver Coverage, easily captures the time course of lesion enhancement

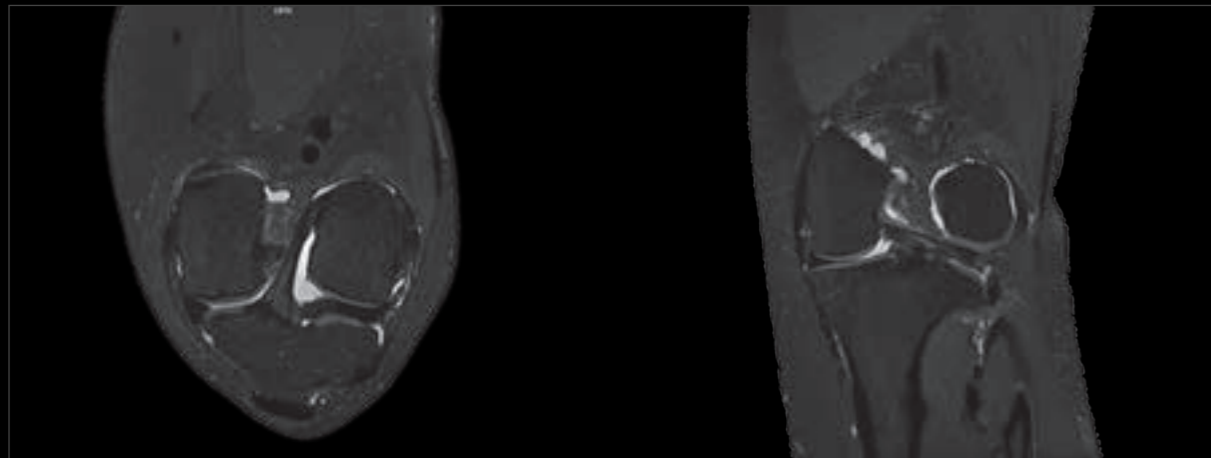


uCS 16x, Single Breath Hold, 0.5s/phase, 32 phases

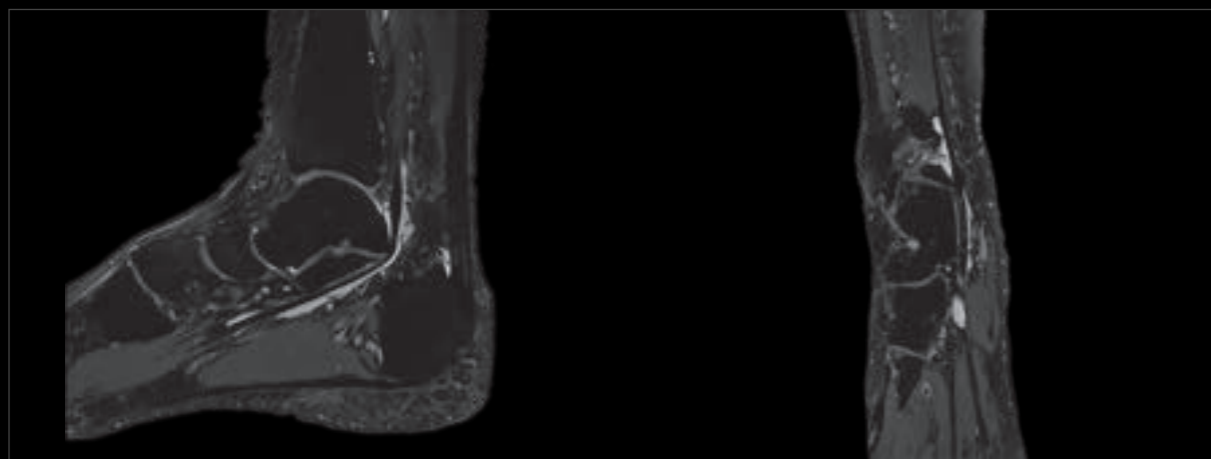


uCS 16x, Single Breath Hold, 2s/phase, Voxel: 1.5x2.2x3mm<sup>3</sup>

## uCS Static Imaging



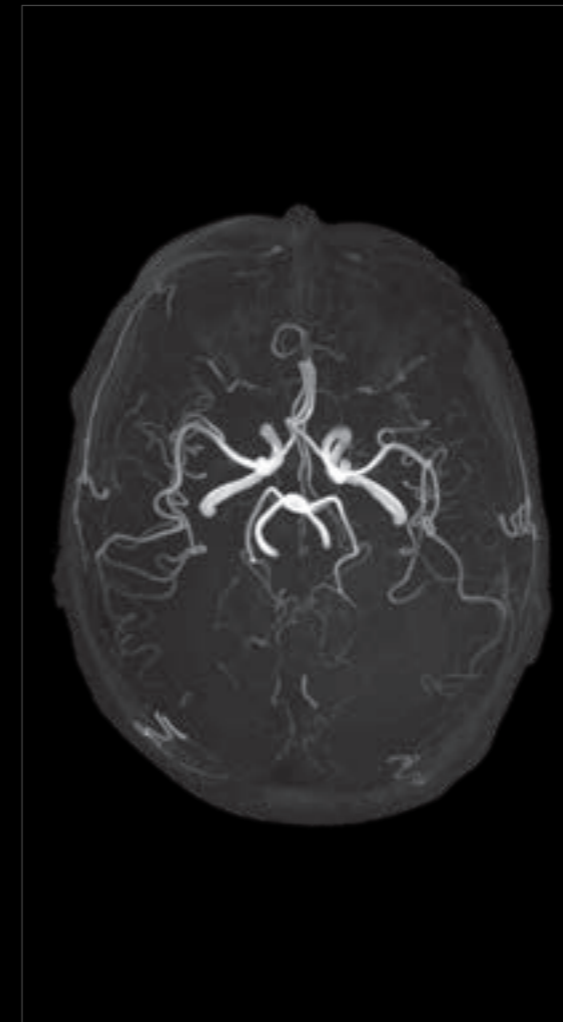
PDW MATRIX, uCS 5x, Voxel: 0.6x0.6x0.6mm<sup>3</sup>



PDW MATRIX FS, uCS 5x, Voxel: 0.6x0.6x0.6mm<sup>3</sup>

## uCS Static Imaging

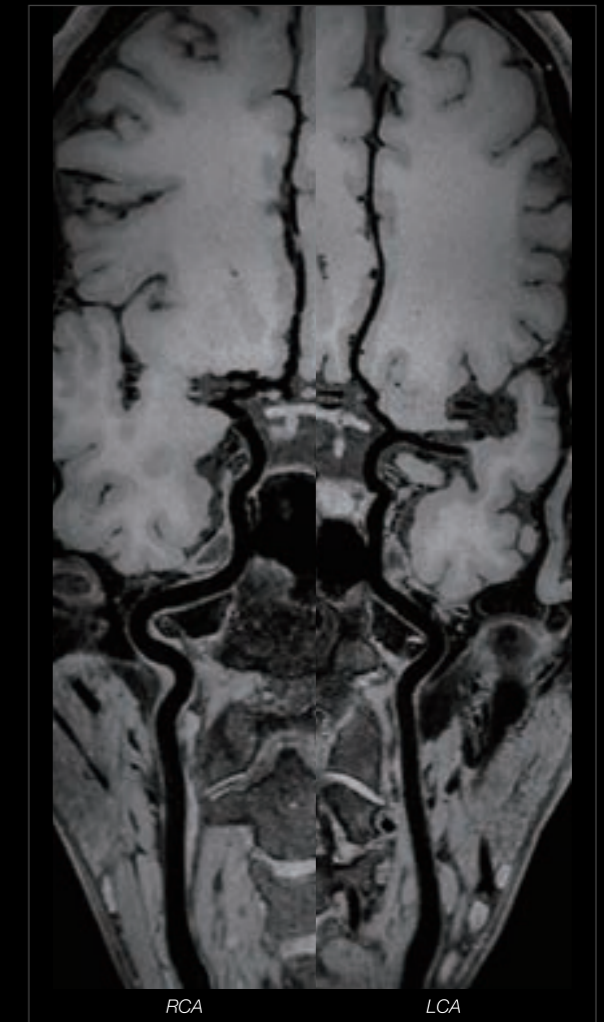
TOF



uCS 3.5x, Voxel: 0.4x0.5x0.5mm<sup>3</sup>

## uCS Static Imaging

Vessel Wall Imaging with Whole-Brain Coverage



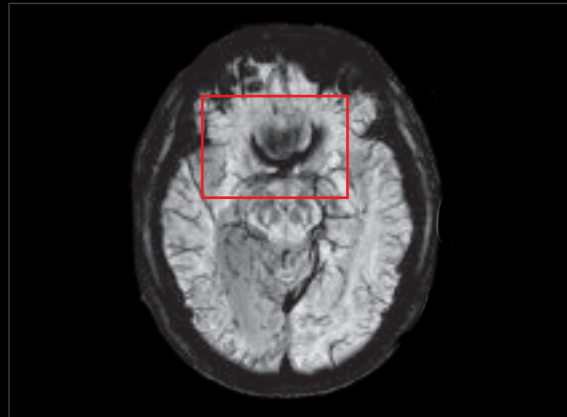
uCS 3x, Voxel: 0.5X0.5X0.5mm<sup>3</sup>

## SWI+

With the all-phase flow compensated multi-echo sequence and optimized reconstruction technique, SWI+ has unique advantages in susceptibility artifact control, imaging stability and information diversity. It also supports virtual TE reconstruction for better display of tiny veins, calcification, bleeding in the brain and precise study of iron deposition.

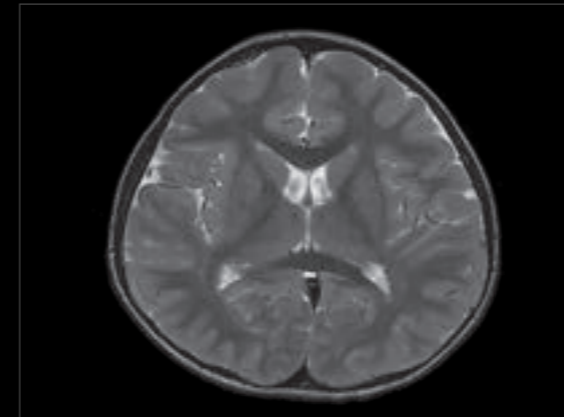
## Pediatrics

With high-density coil and versatile motion correction technologies, pediatric MRI achieves fast imaging and delivers superior image with high SNR.

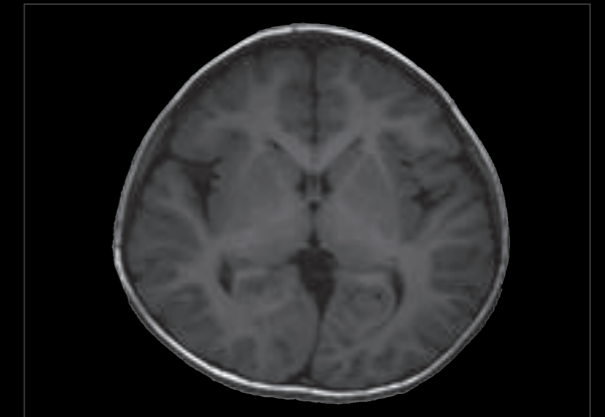


### Conventional SWI

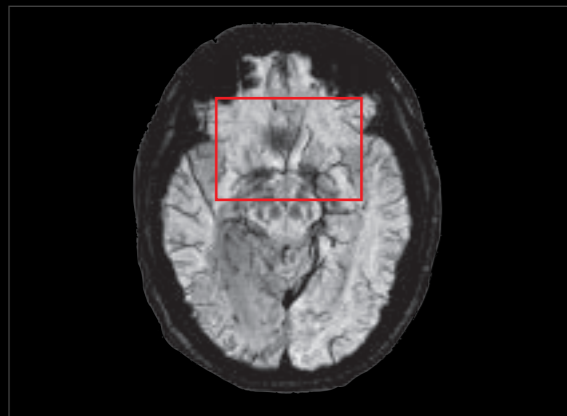
Skull Base Susceptibility Artifacts



T2W, AD: 36s

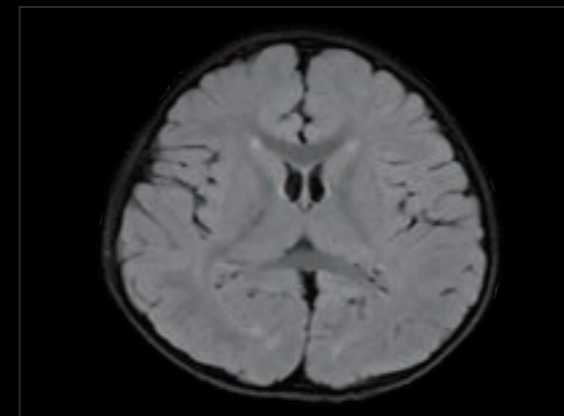


T1W, AD: 44s

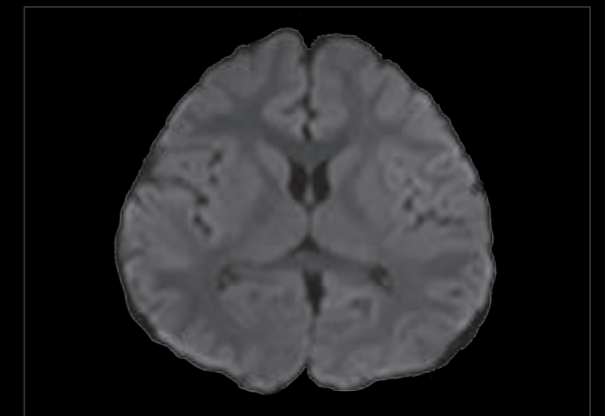


### SWI+

Artifacts Eliminated



T2 FLAIR, AD: 56s

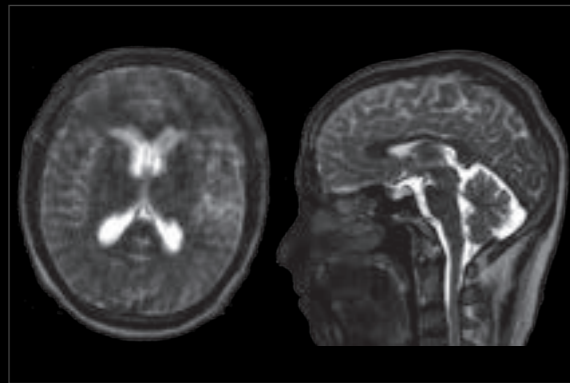


DWI, AD: 33s

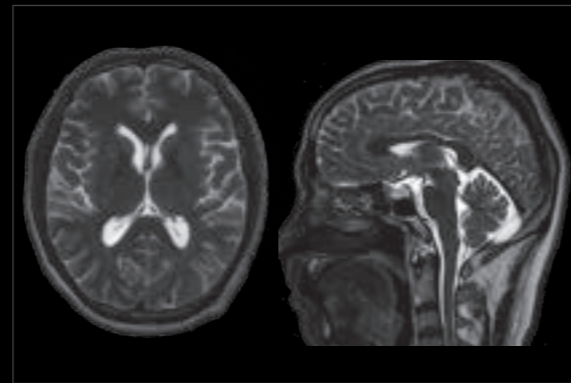
# Motion Artifact Correction

The optimized sequence acquisition and reconstruction eliminates the motion artifacts in head, orbit, abdomen, pelvis, shoulders and many other parts caused by involuntary movements or physiological movements.

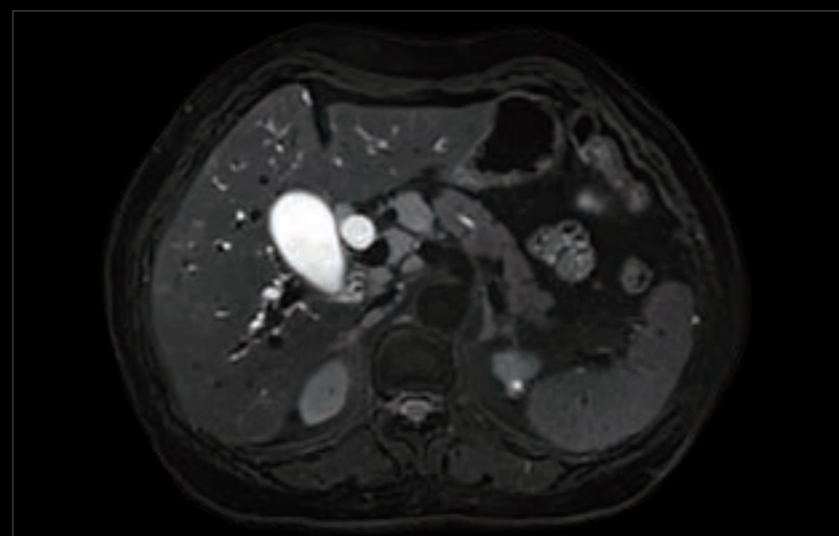
## ARMS



FSE

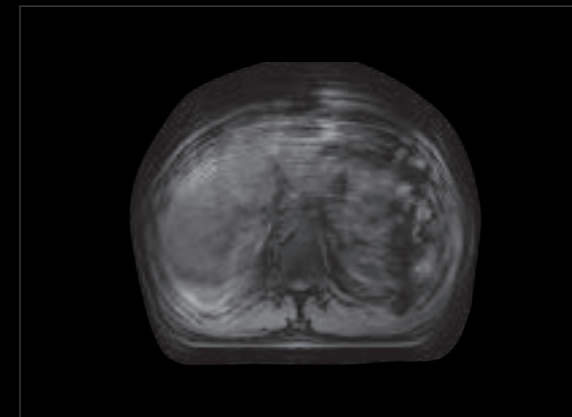


ARMS

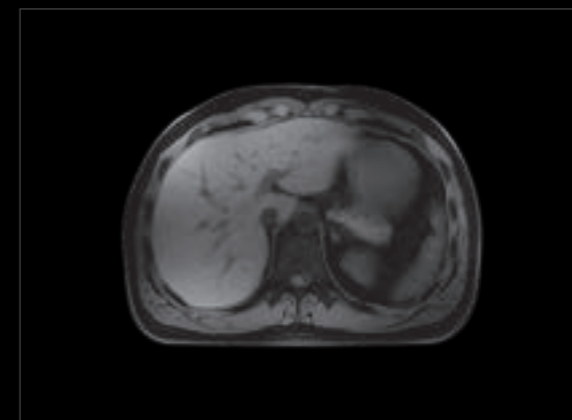


Breath-hold T2W ARMS FS

## uFreeR



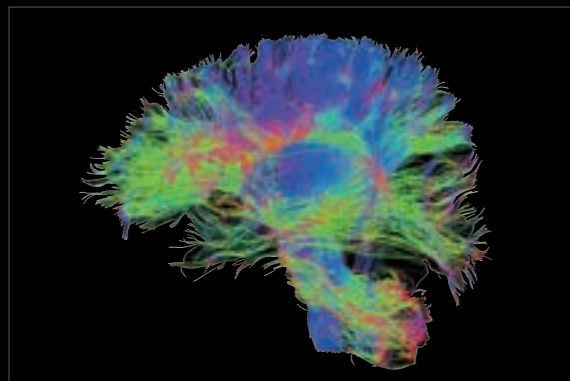
non-uFreeR



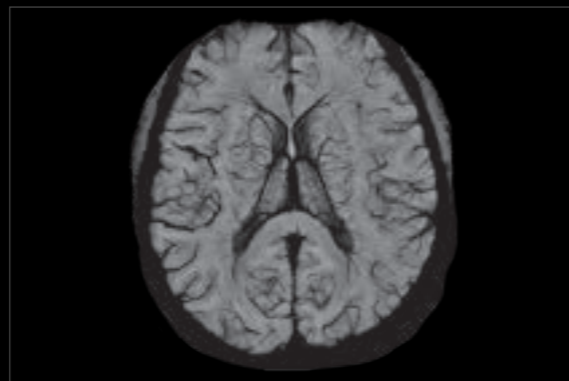
uFreeR

# Neurology

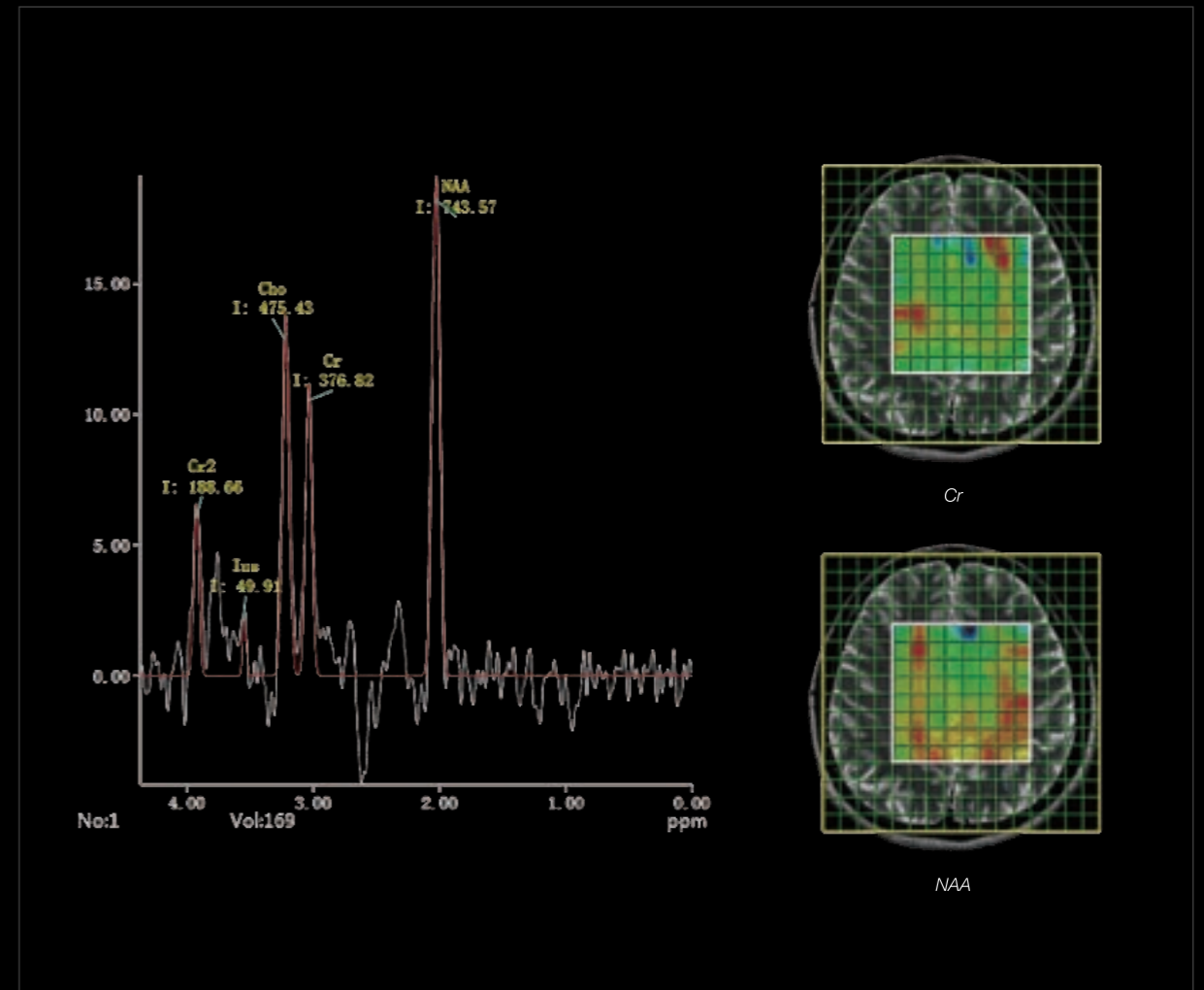
DTI



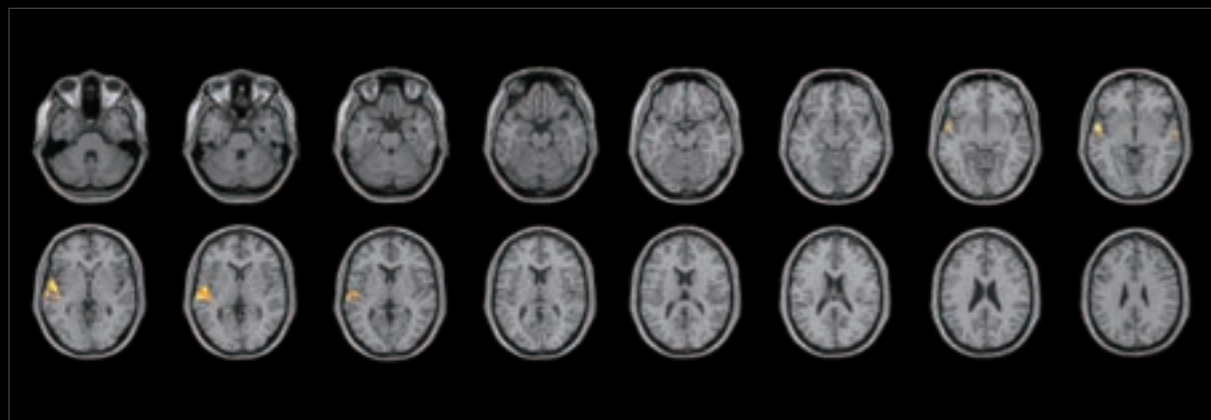
SWI



CSI



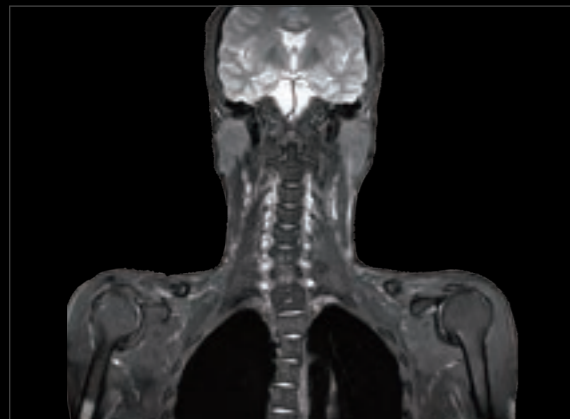
BOLD



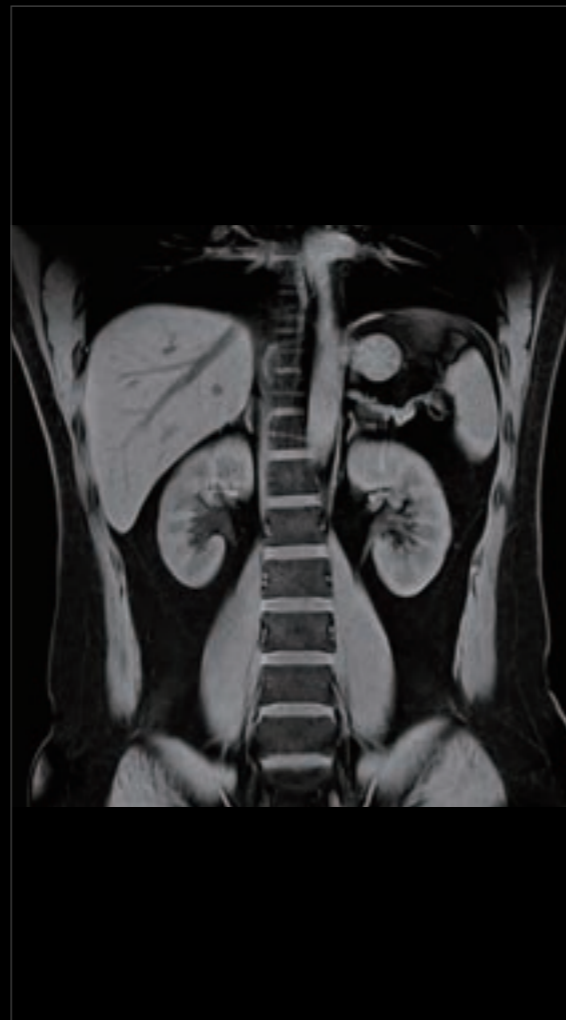
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# Body

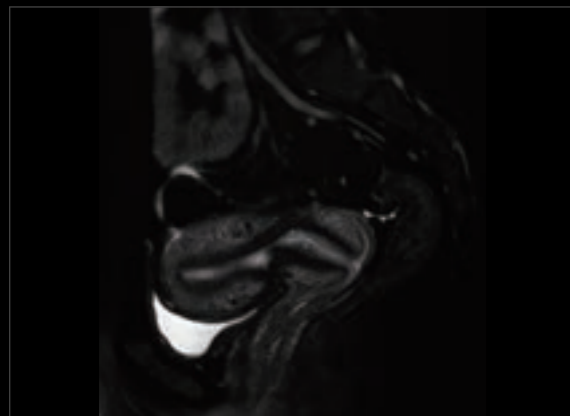
Customized imaging sequences are developed to meet different imaging requirements like multi-contrast, large FOV and motion correction in different parts of body.



*WFI (Water Fat Imaging)*



*Large FOV with FS*



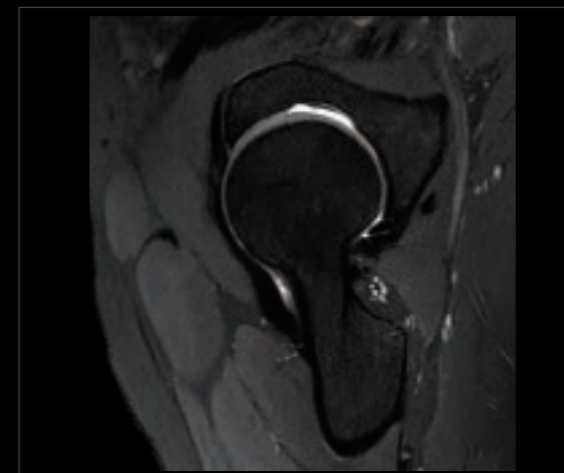
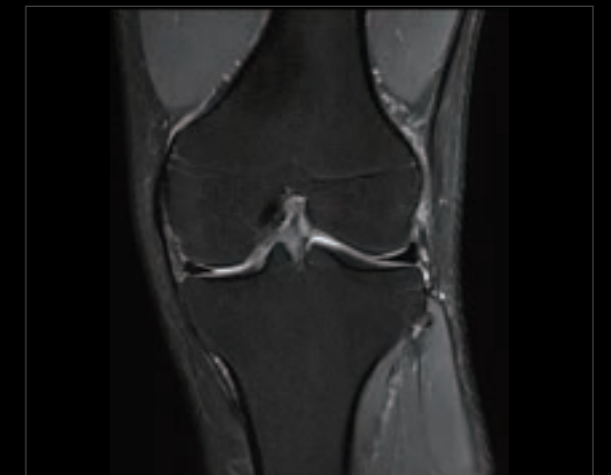
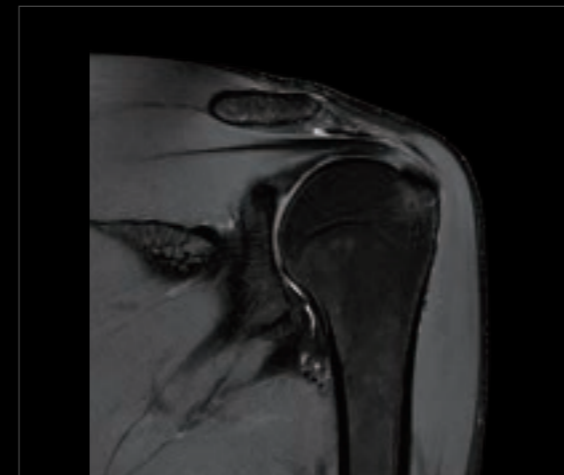
*Pelvis Imaging with FS*

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# Orthopedics

High density extremity coils, which are designed by taking specific anatomical features into consideration, are capable to achieve high quality Musculoskeletal imaging.

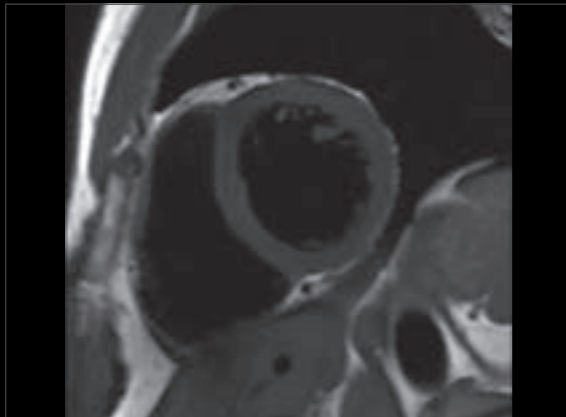
Musculoskeletal Imaging with Fat Saturation



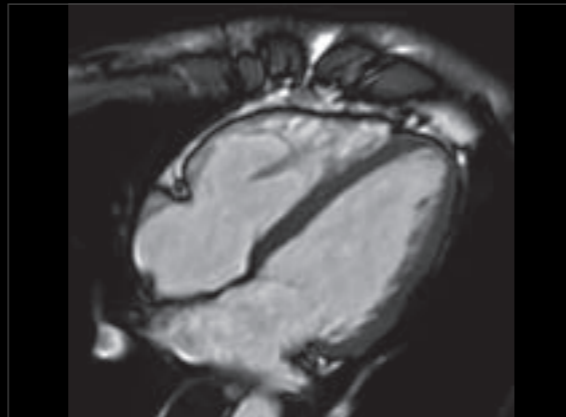
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## Cardiology

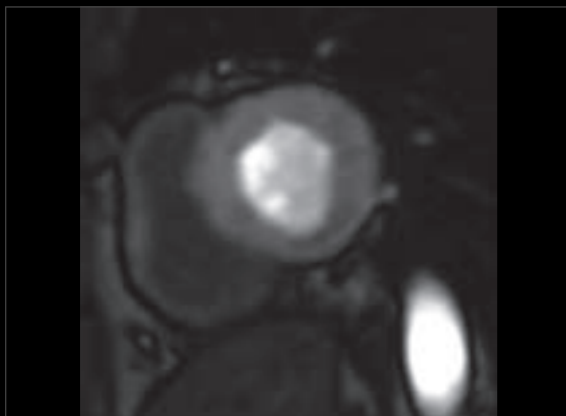
Comprehensive cardiac package consists of excellent scan acceleration and optimized k-space filling, is provided to address complicated cardiology cases.



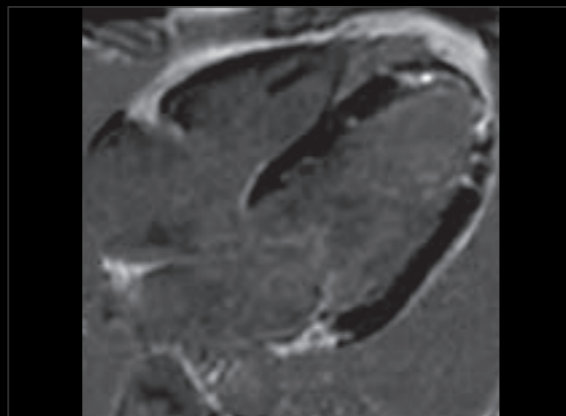
*Dark Blood T1W*



*Bright Blood Cine*



*Myocardial Perfusion*

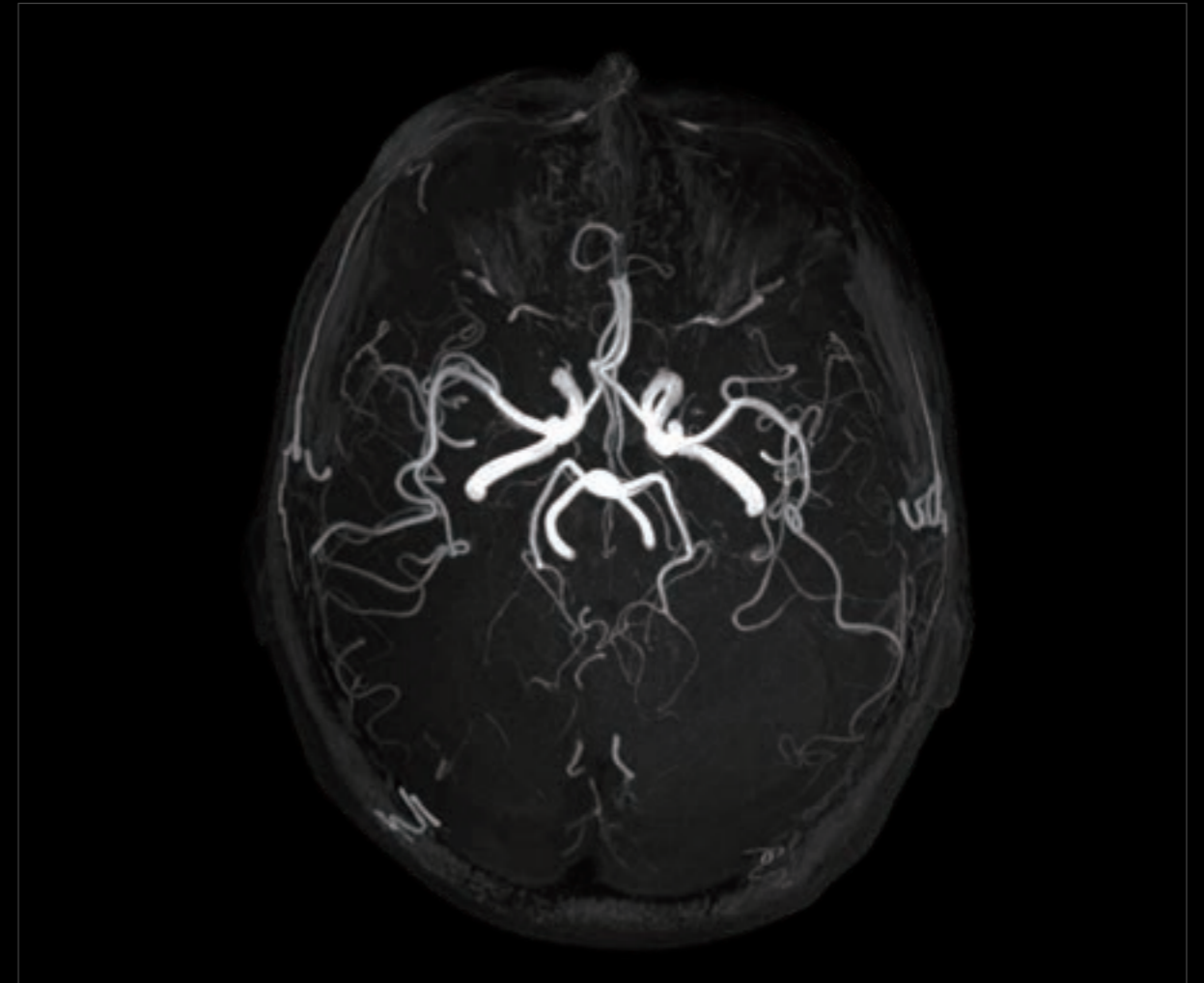


*Myocardial Viability*

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## Angiography

Comprehensive angio application solution consisting Non-CE MRA, is provided to achieve vascular exams of various body parts.



*TOF*

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# Powerful SuperSystem

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Powerful SuperSystem embeds the high-performance components to lay a solid foundation for rapid acquisition and high-resolution imaging.



## High-performance Gradient

The gradient performance is designed with excellent performance to improve sequence acquisition, elevate data acquisition speed, and achieve faster imaging and higher work efficiency.



## High-density RF Channels

The high channel-count RF receiver architecture enables the full use of high-density surface coil arrays, thus significantly increasing image Signal-to-Noise Ratio. Multiple high-density coils can be used in different combinations to reduce scan time and improve workflow efficiency. Each coil element utilizes an independent low-noise amplifier to reduce as much noise as possible while retaining MR signal to the maximum extent.



## Industry-leading Uniform Magnet

Large 50cm FOV and excellent image quality achieved by 170cm short magnet.

The powerful 3.0T magnet adopts an 170cm short magnet design to ensure the leading homogeneity of the magnetic field, bringing fast imaging and large-coverage fat saturation.

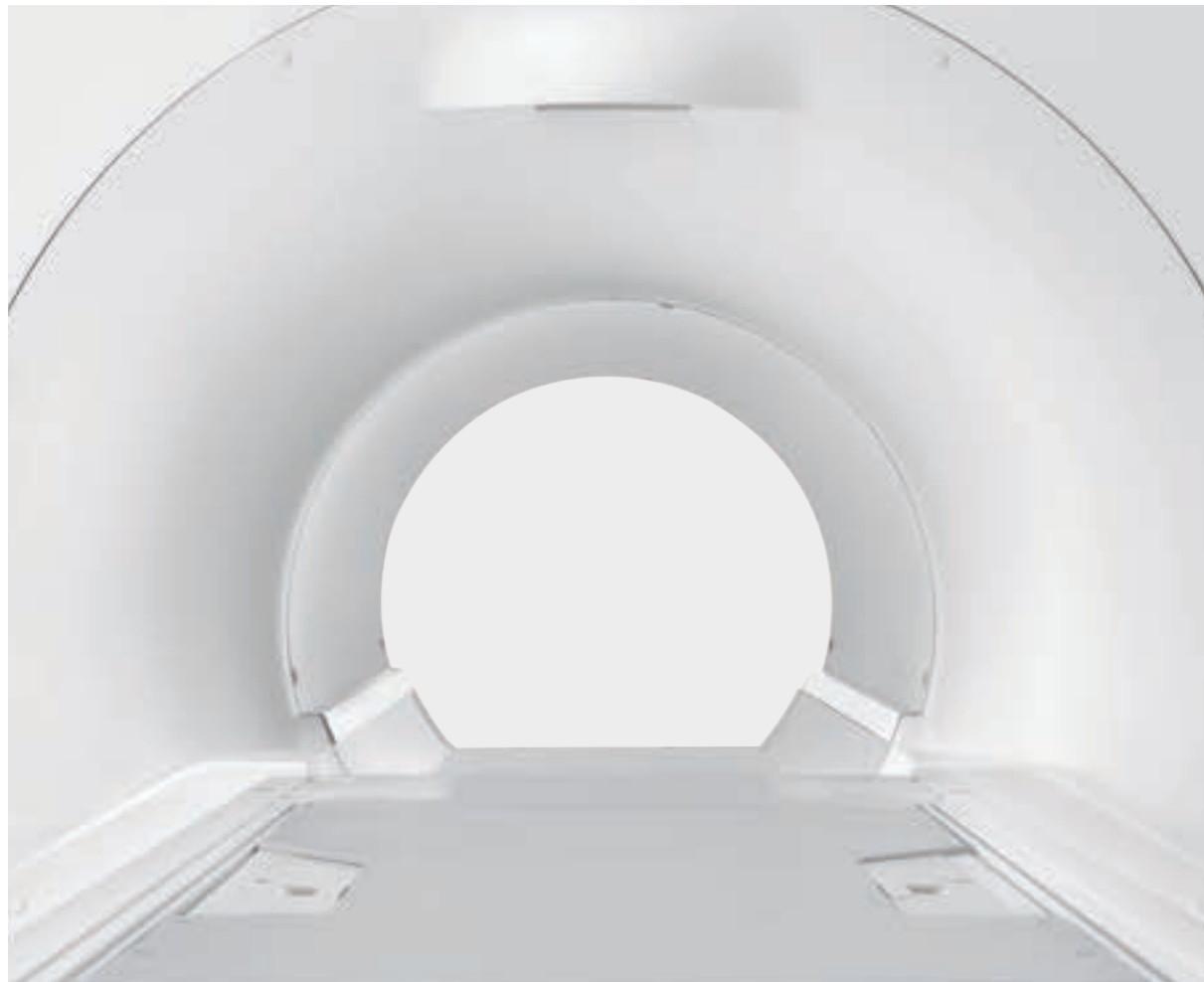


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# User in Mind Design.

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Focusing on user experience, uMR 780 combines precise 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 780 combines innovative design with optimal functionality in order to provide the best possible user experience, optimizing patient comfort during the examination.

## Sophisticated Craftsmanship

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