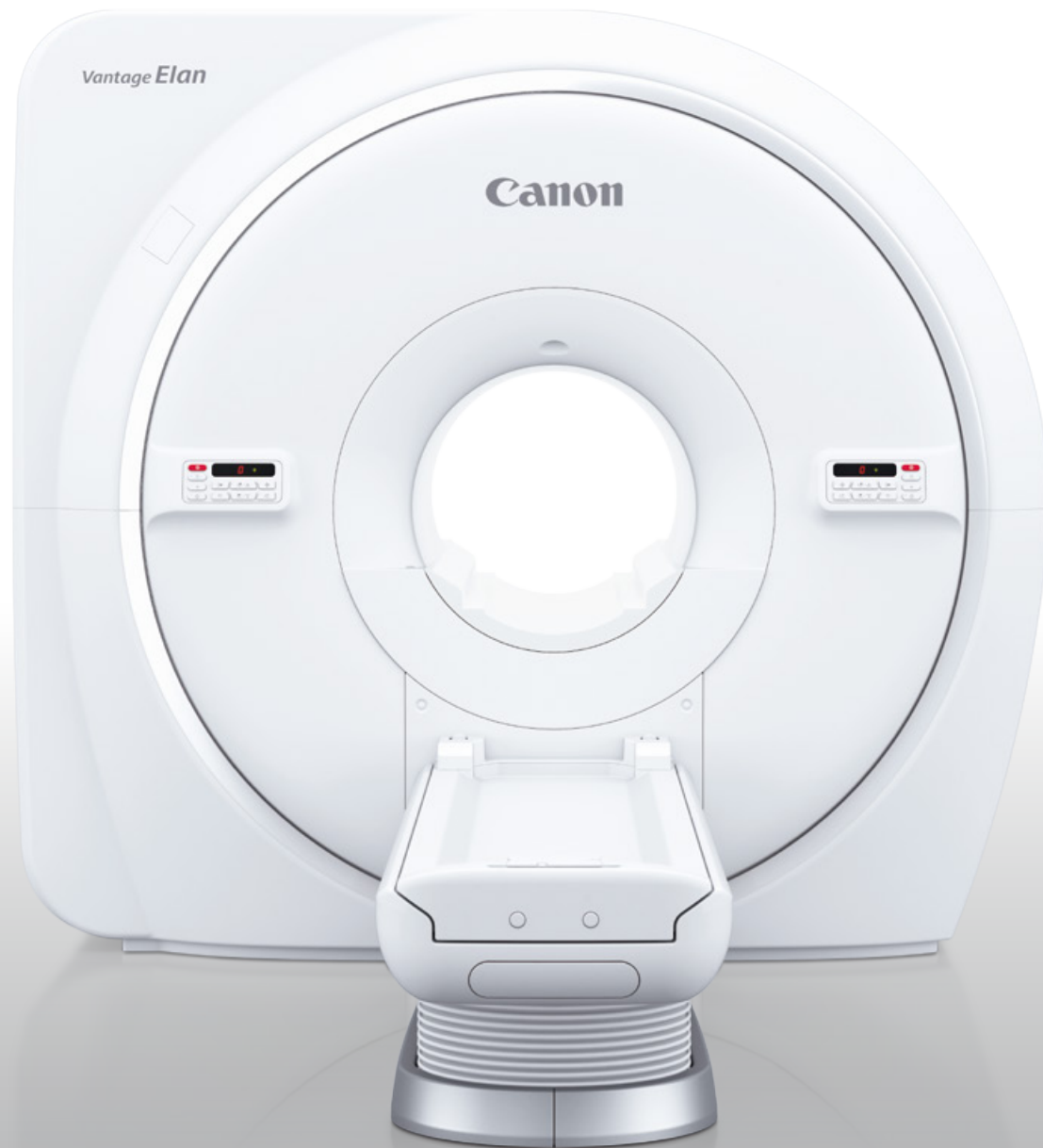


Canon



Vantage Elan

Active Edition

Express. Efficient. Eco.



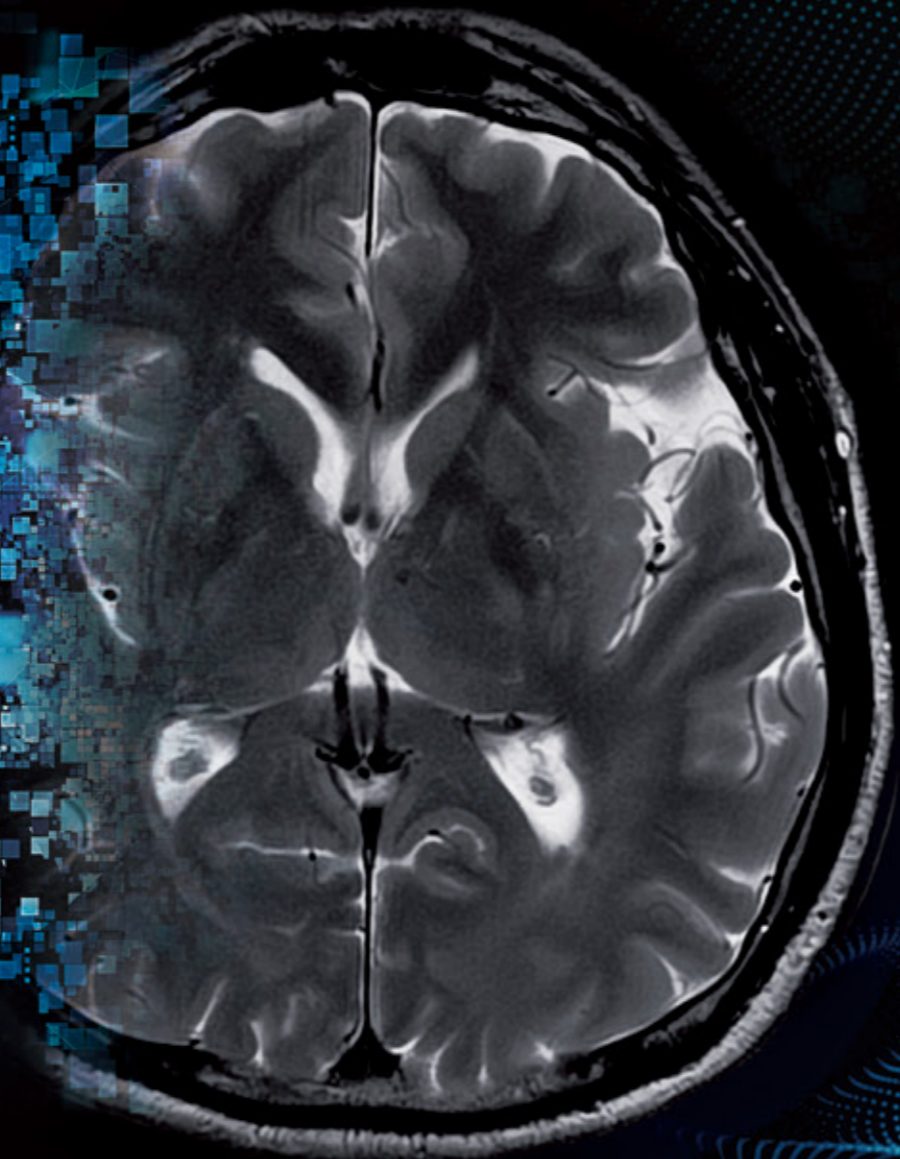
Vantage *Elan*

Canon

Express. Efficient. Eco.

Experience speed, efficiency and economy with Vantage Elan / Active Edition, with intelligent solutions delivered in a compact 1.5T MR system. Integrated with AI powered technology and fast and robust imaging, this eco friendly system redefines performance for the active MRI suite. Utilizing high-end migrated technology to deliver express examinations, unlock your imaging potential to meet today's MR imaging needs.

Vantage Elan
Active Edition



Express MRI with Deep Learning Reconstruction

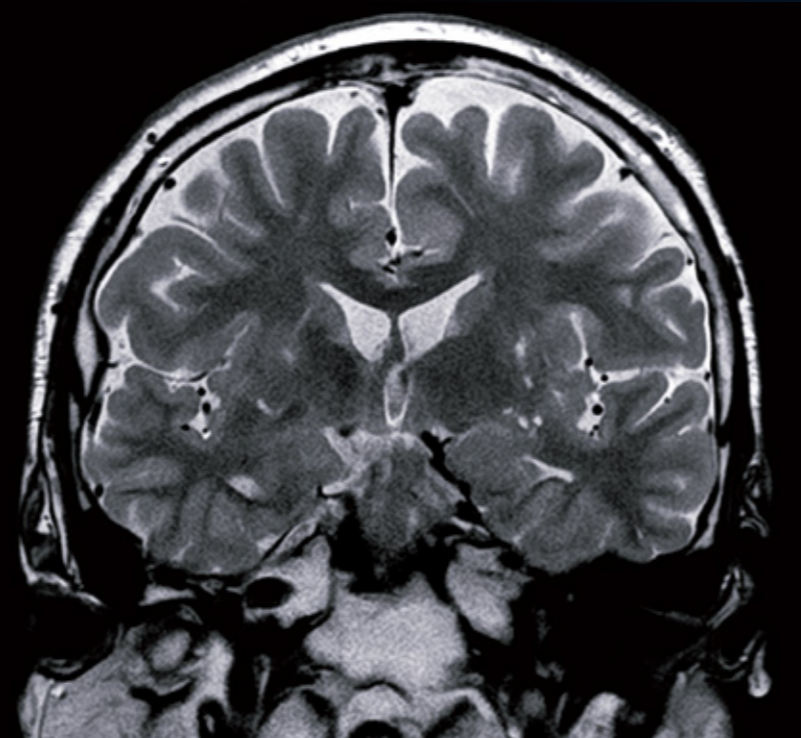
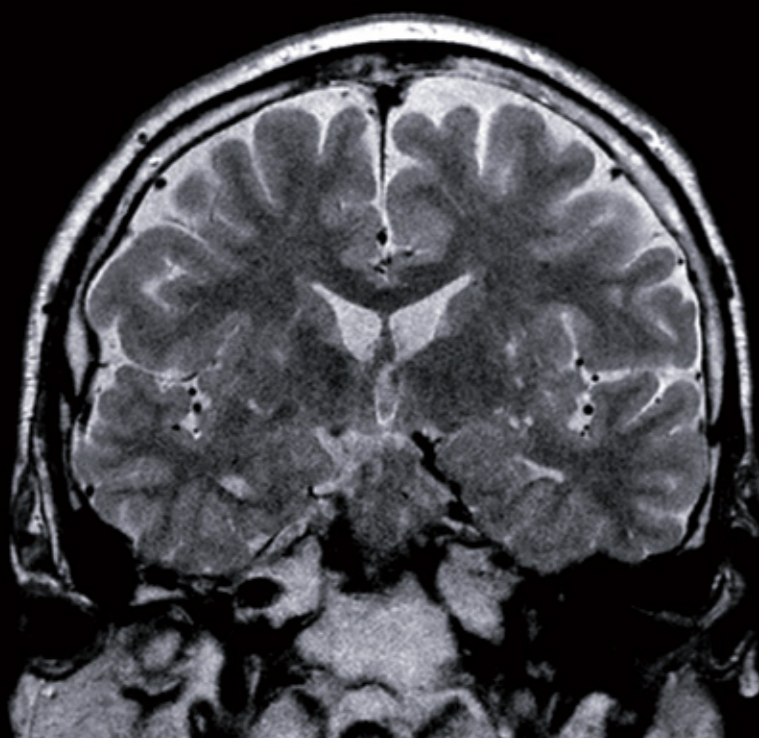
Experience the future of MRI with the new Vantage Elan, where excellence meets innovation. Elevate image quality with intelligent noise removal and rapid scanning techniques, ensuring faster examinations and enhanced patient comfort. Discover the perfect balance of speed, clarity and procedural flexibility with Advanced intelligent Clear-IQ Engine (AiCE).



Enhance Image Quality with AiCE

AiCE intelligently removes noise from images which can enhance SNR. Achieve the perfect balance between image quality and speed utilizing Deep Learning Reconstruction.

Conventional



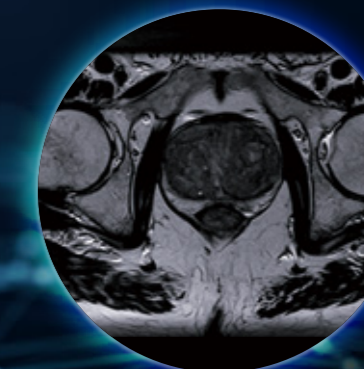
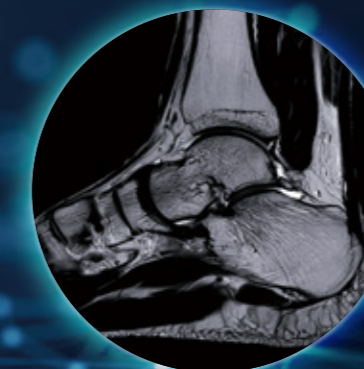
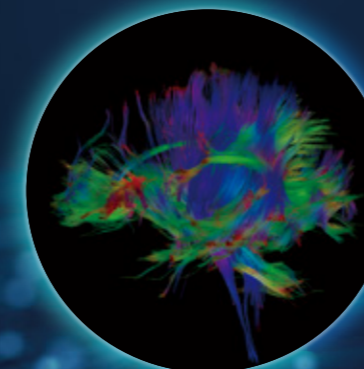
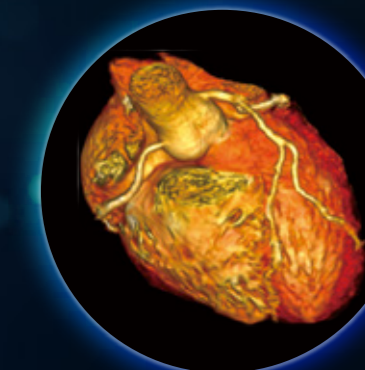
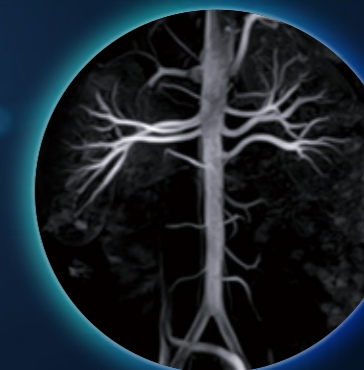
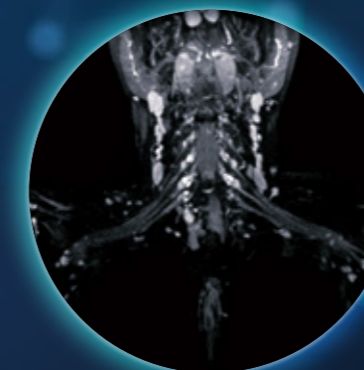
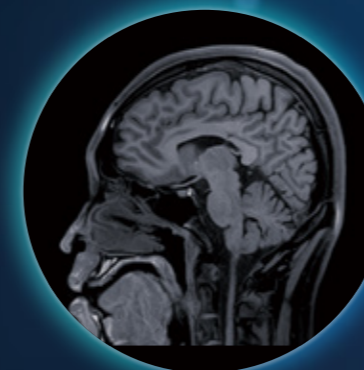
Coronal T2w, 0.52x0.52 resolution, 2 mm

Seamless Integration for a broad range of imaging solutions

With AiCE applicable to a broad range of anatomies, contrast and applications, image quality is enhanced to boost your scanning capability to a higher level than ever before.



All Contrast × Almost all Sequences × Any Parameter × All Body regions × All RF coils



Delivering express examinations to the compact MRI suite

With the advantage of Vantage Elan's high image quality, now you can add fast scan techniques to increase throughput. With our intelligent rapid scan technology, procedures move faster meaning patients spend less time on the table and go home quicker.



powered by Altiivity

Compressed SPEEDER enables accelerated imaging while maintaining high image quality. Now, with the integration of AiCE, you can harness the power of deep learning in combination with Compressed SPEEDER to further boost imaging performance.



Fast

Enables higher acceleration up to x16



Stable

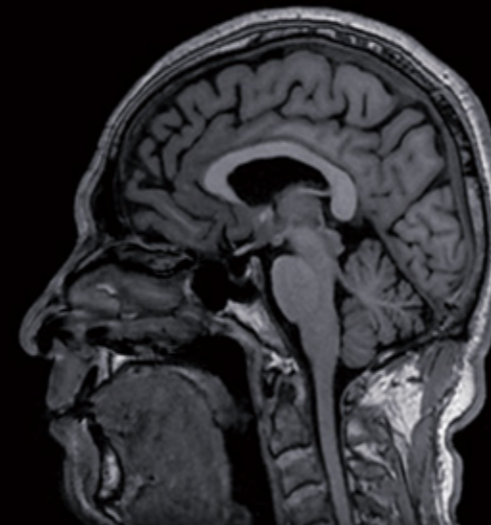
Keeps sharp and clear image quality



Consistent

Aids productivity & reproducibility

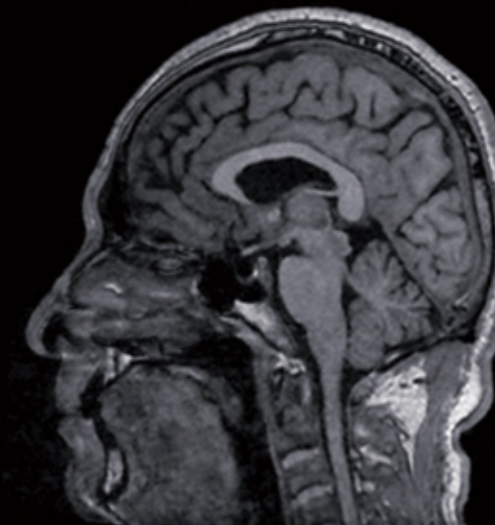
Conventional



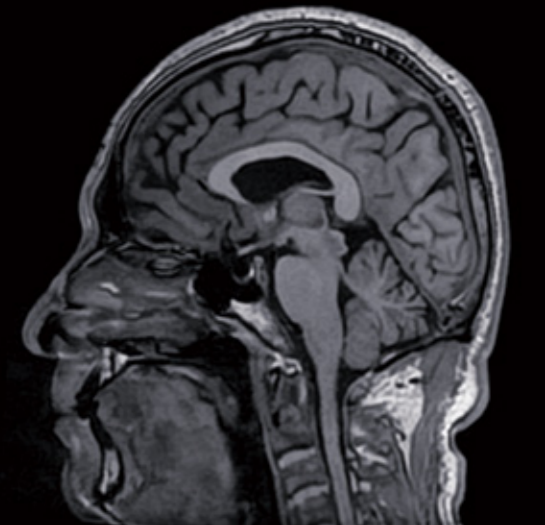
Sagittal FFE3D T1w MPRAGE, 1.0x1.0 mm resolution, 1 mm, 10:00

62%
Scan time Reduction

Compressed SPEEDER 3D



Compressed SPEEDER 3D + AiCE



Sagittal FFE3D T1w MPRAGE, 1.0x1.0 mm resolution, 1 mm, 3:53, Compressed SPEEDER 2.6x1.5

Advanced approach to reduce 3D imaging scan time

Fast 3D mode is the next step for your 3D imaging experience. Traditionally requiring long scan times, with our advanced 3D imaging technology scan times can be reduced by up to 50%¹ while also being applicable to a wide range of anatomies.

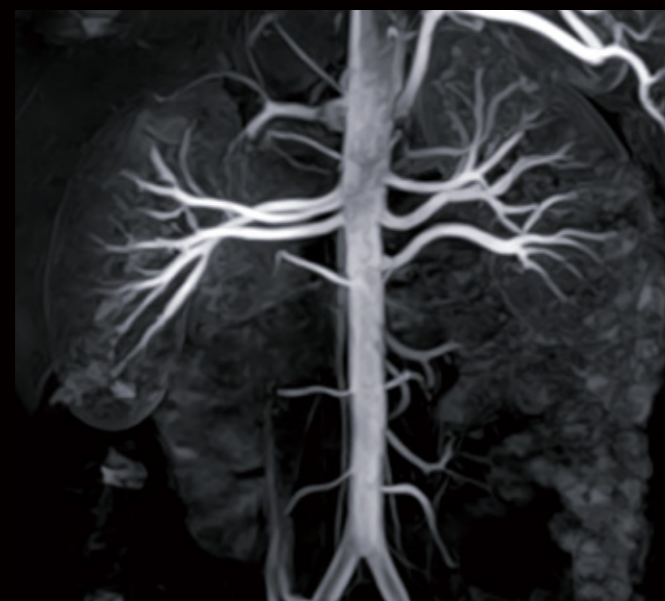


Fast 3D mode

For SSFP

powered by Altiivity

Conventional + AiCE



7:17

Fast 3D mode + AiCE



3:39

Coronal SSFP3D Time SLIP, 1.28x1.28 mm resolution, 2 mm

Volunteer

For TOF

Conventional



7:09

3D TOF, 0.83x0.69 mm resolution, 1 mm

Fast 3D mode



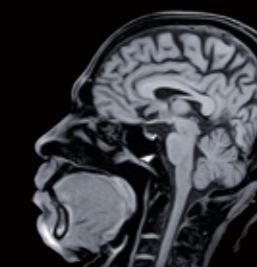
3:09

3D TOF, 1.5x1.3 mm resolution, 1 mm

Volunteer

For multi-voxel imaging (mVox)

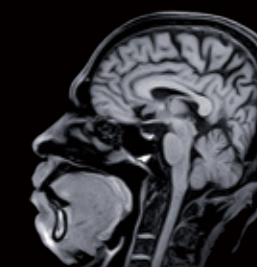
Conventional



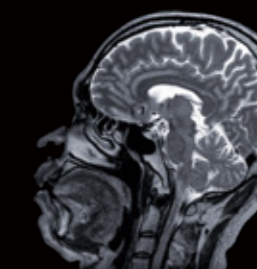
5:09

Sagittal 3D T1w FatSat, 1.04x1.04 mm resolution, 2 mm

Fast 3D mode

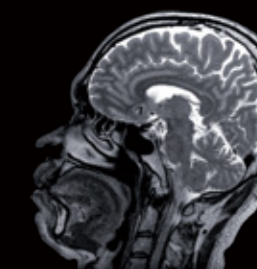


3:00



7:21

Sagittal 3D T2w, 1.04x1.04 mm resolution, 2 mm



3:41

Volunteer

¹ As compared to conventional examination for each sequence.

Enhance reliability with advanced parallel imaging technology

With unique time saving accelerated scans that ensure the robustness of your image, you now have a suite of imaging options that are reliable and powerful for your work.




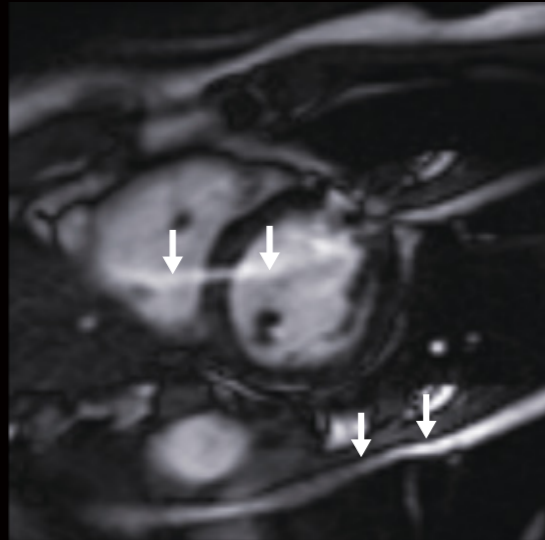
Exsper

Exsper is a robust parallel imaging technique that provides accelerated scans in order to speed procedures. Designed to suppress unfolding errors even in the small FOV images, delivering exceptional imaging performance with its highly reliable and fast scanning technology. Exsper can be combined efficiently with other applications like AiCE.


powered by  Altiivity

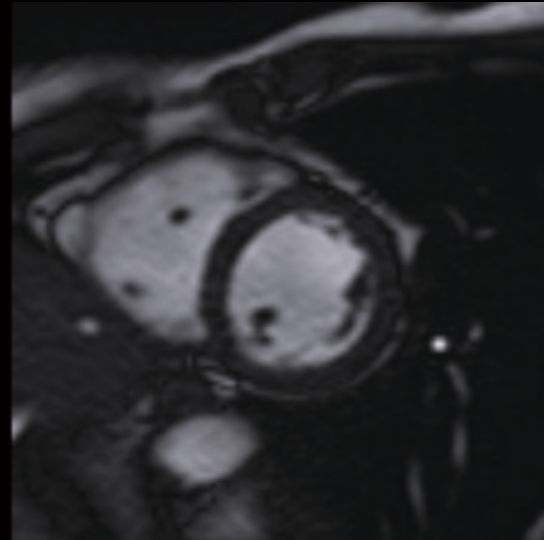
Small FOV
160mm

SPEEDER +  AiCE
Integrated Intelligence




Short Axis SSFP2D, 1.4x1.7 mm resolution, 8 mm, 0:09, SPEEDER 3.0

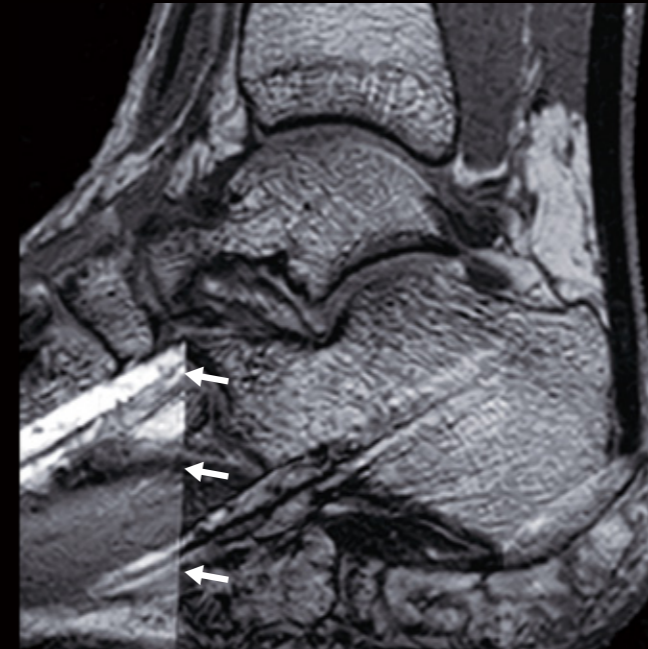
Exsper 2D +  AiCE
Integrated Intelligence




Short Axis SSFP2D, 1.4x1.7 mm resolution, 8 mm, 0:08, Exsper 3.0

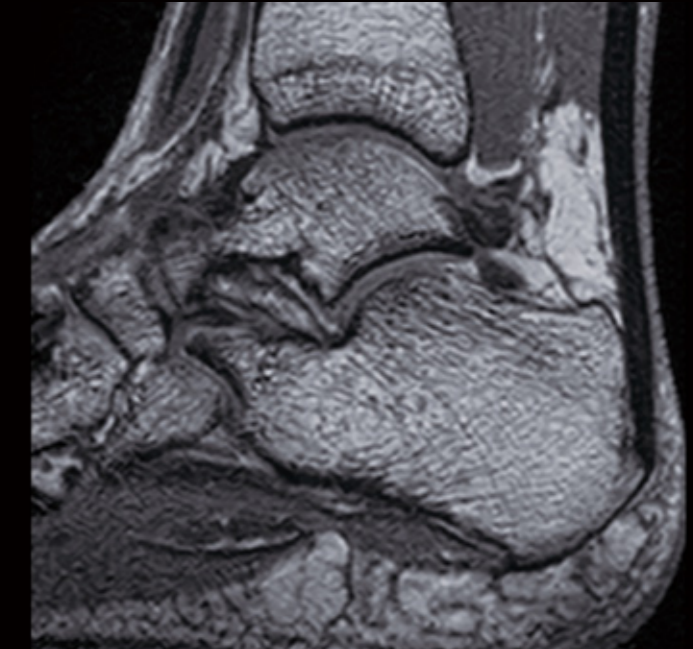
Volunteer

SPEEDER +  AiCE
Integrated Intelligence



Sagittal FE3D T1, 0.5x0.5 mm resolution, 1 mm, 2:46, SPEEDER 2.0x1.5

Exsper 3D +  AiCE
Integrated Intelligence



Sagittal FE3D T1, 0.5x0.5 mm resolution, 1 mm, 3:00, Exsper 2.0x1.5

Volunteer

Improving imaging robustness to enhance diagnostic capability

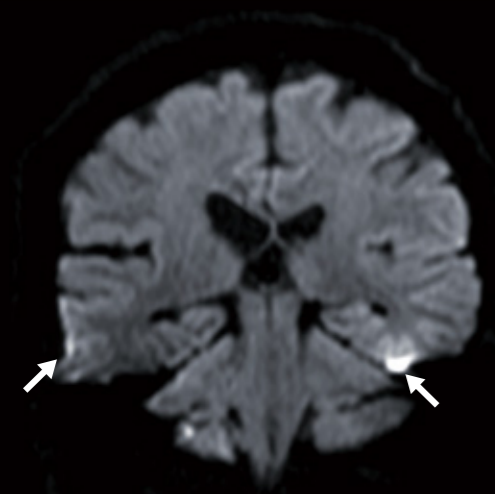
Our intelligent imaging solutions deliver robust images that are diagnostically relevant to avoid re-scans and complete procedures efficiently. Meeting motion and distortion challenges head on, higher throughput is the result.



RDC DWI

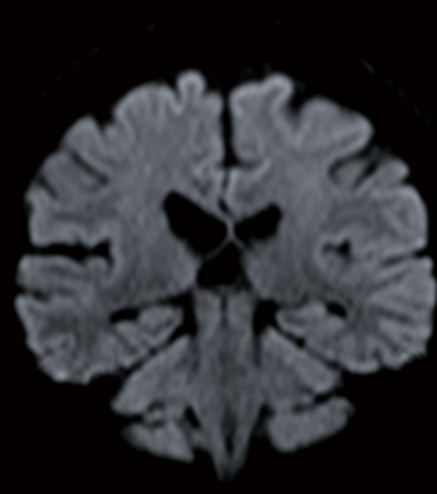
RDC DWI (Reverse encoding Distortion Correction DWI) is intended to reduce distortion in phase encoding direction due to B0 field inhomogeneity or eddy current, in DWI sequence. When combined with AiCE, the SNR of the image can be increased while also maintaining excellent resolution.

Conventional




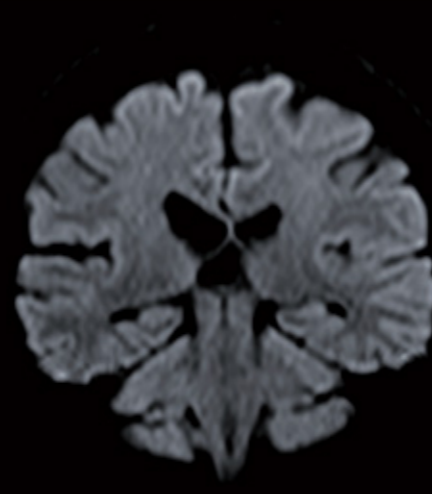
Coronal DWI b1000, 1.4x1.4 mm resolution, 4 mm, 1:26, Exsper 2.0

RDC DWI



Coronal DWI b1000, 1.4x1.4 mm resolution, 4 mm, 1:44, Exsper 2.0

RDC DWI + 



Coronal DWI b1000, 1.4x1.4 mm resolution, 4 mm, 1:44, Exsper 2.0

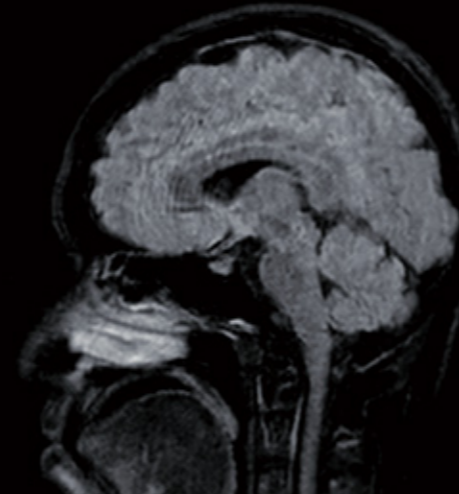
Volunteer

Iterative Motion Correction (IMC)

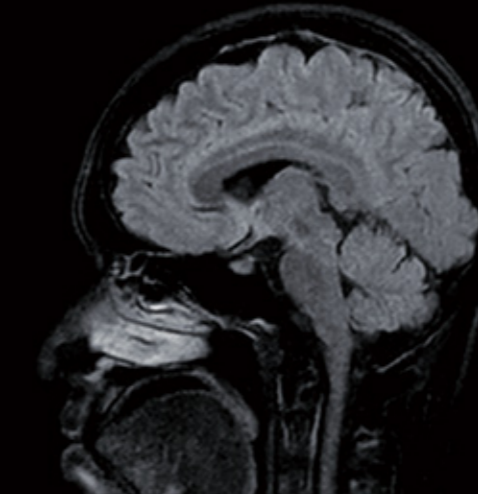
IMC is a motion correction technology for reducing motion artifacts caused by sporadic movements. Combined with AiCE, more reliable images with high SNR and less artifacts can be obtained.

powered by  **Activity**

Conventional

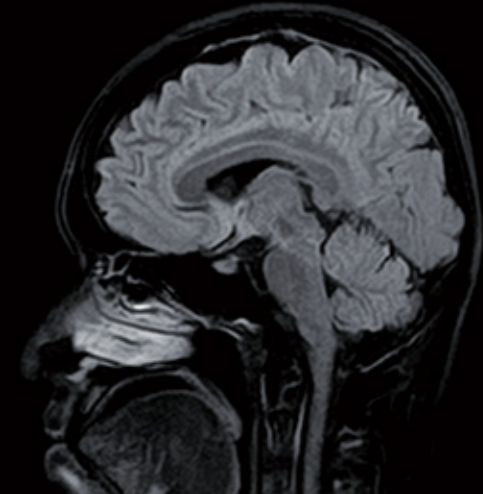


IMC



Sagittal FLAIR, 1.0x1.0 mm resolution, 5 mm, 2:34

IMC + 



Volunteer

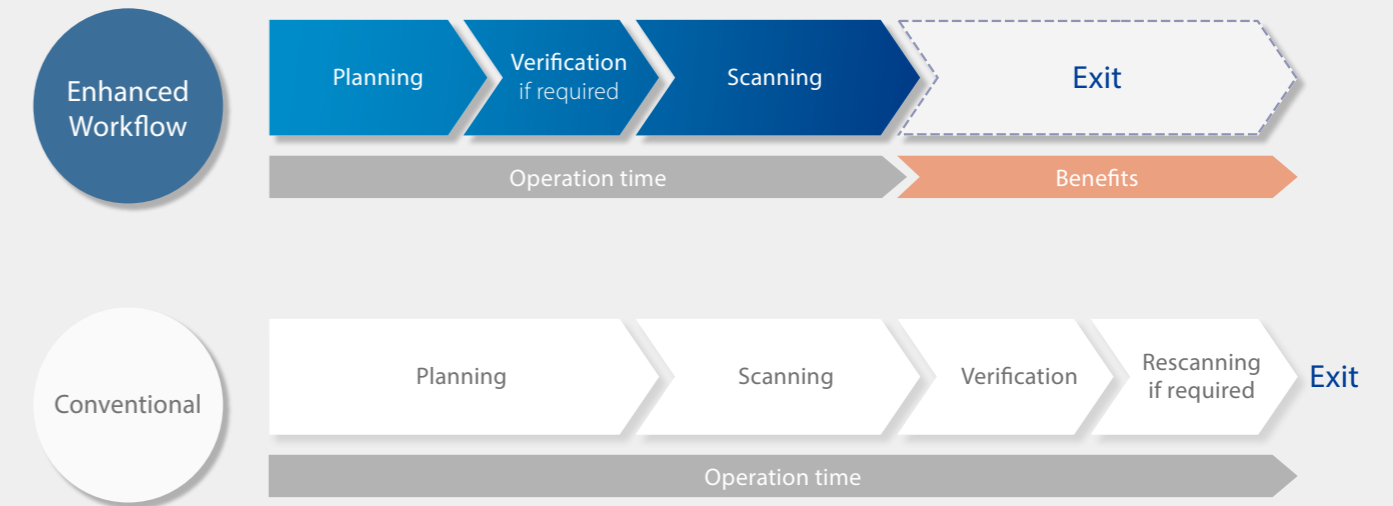
Efficient Workflow to Save Time and Effort

Vantage Elan delivers intelligent and efficient technology to support routine MRI operations in a quiet, patient-friendly procedure.



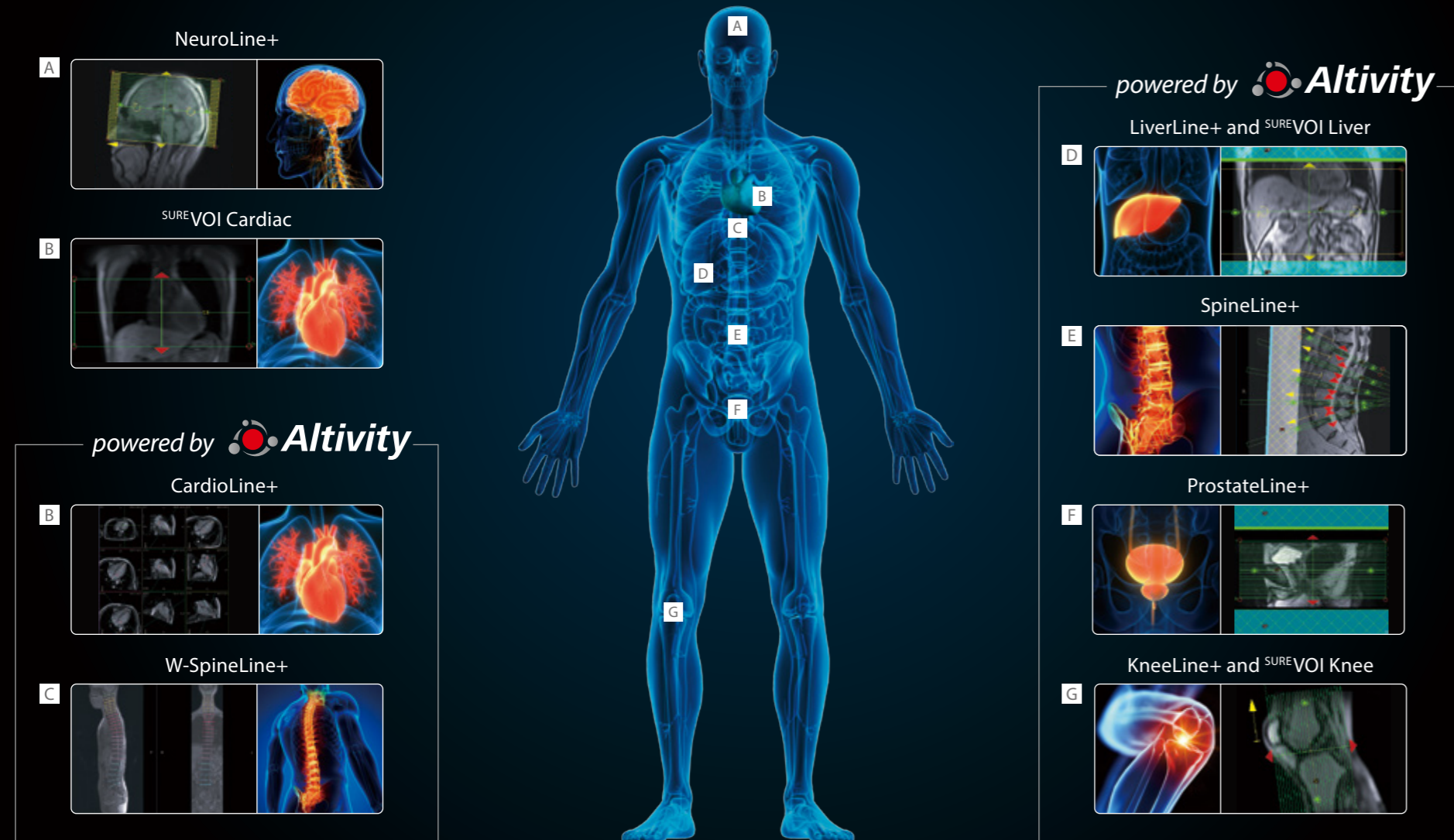
Enhanced scan planning solutions that simplify operation

With the complexity of scan planning, reproducing scan planes can be challenging and time-consuming. Utilizing intelligent solutions to enhance your scan planning procedures, you can shorten operation time which can support an increase procedure numbers. Simplifying procedures also results to less reliance on operator experience and reduces the need for additional training.



Auto Scan Assist minimizes set-up steps and improves workflow

Powered by Altivity, Auto Scan Assist takes away the variability and helps you improve workflow with automatic slice alignment for neuro, spine, cardiac, liver, prostate and knees, standardizing your workflow with automatic positioning.



Simply preview your required images in advance with ForeSee View

ForeSee View is an essential scan planning tool designed to allow you to preview your slice planning in real time.

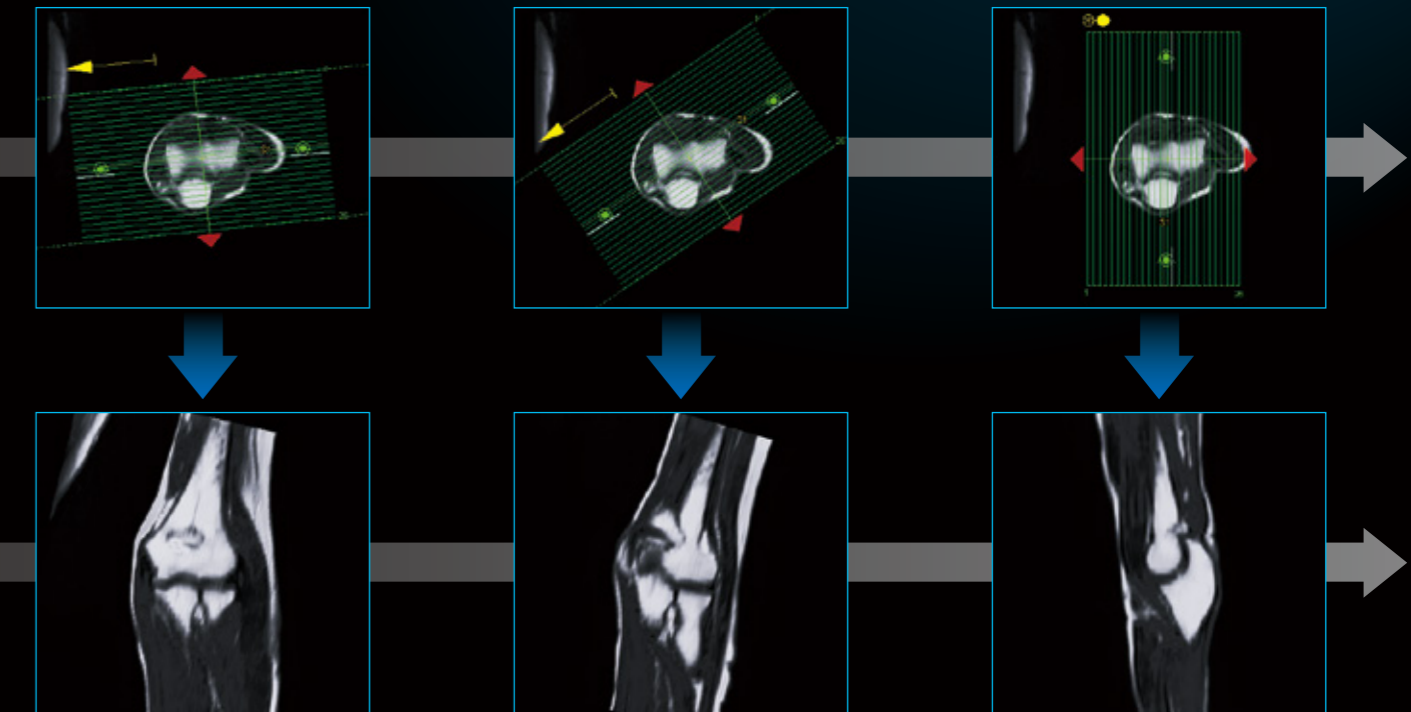
This tool is particularly useful in anatomies that can be difficult to plan such as the pancreas, the heart, and certain orthopedic joints. This excellent new feature reduces the need for re-scanning and save time on scan planning for all body regions.



Cross-section setting

Linked

Real-time display of the cross-section to be imaged



The desired cross section is displayed in real time in conjunction with the positioning operation.

Redefine efficient MR-imaging

Enabled by a range of high-end applications, efficient MRI procedures are the result. Providing the ability to support daily imaging challenges, you can maximize your MRI procedural flexibility and expertise.

Non-Contrast MR-Angiography



1 Capturing hemodynamics with mUTE² 4D-MRA

Vantage Elan's UTE sequences allow for less dephasing and more homogeneous vessel signals. At the same time, the multiple TI (4D) generates dynamic images visualizing the blood flow without the need for contrast agents.

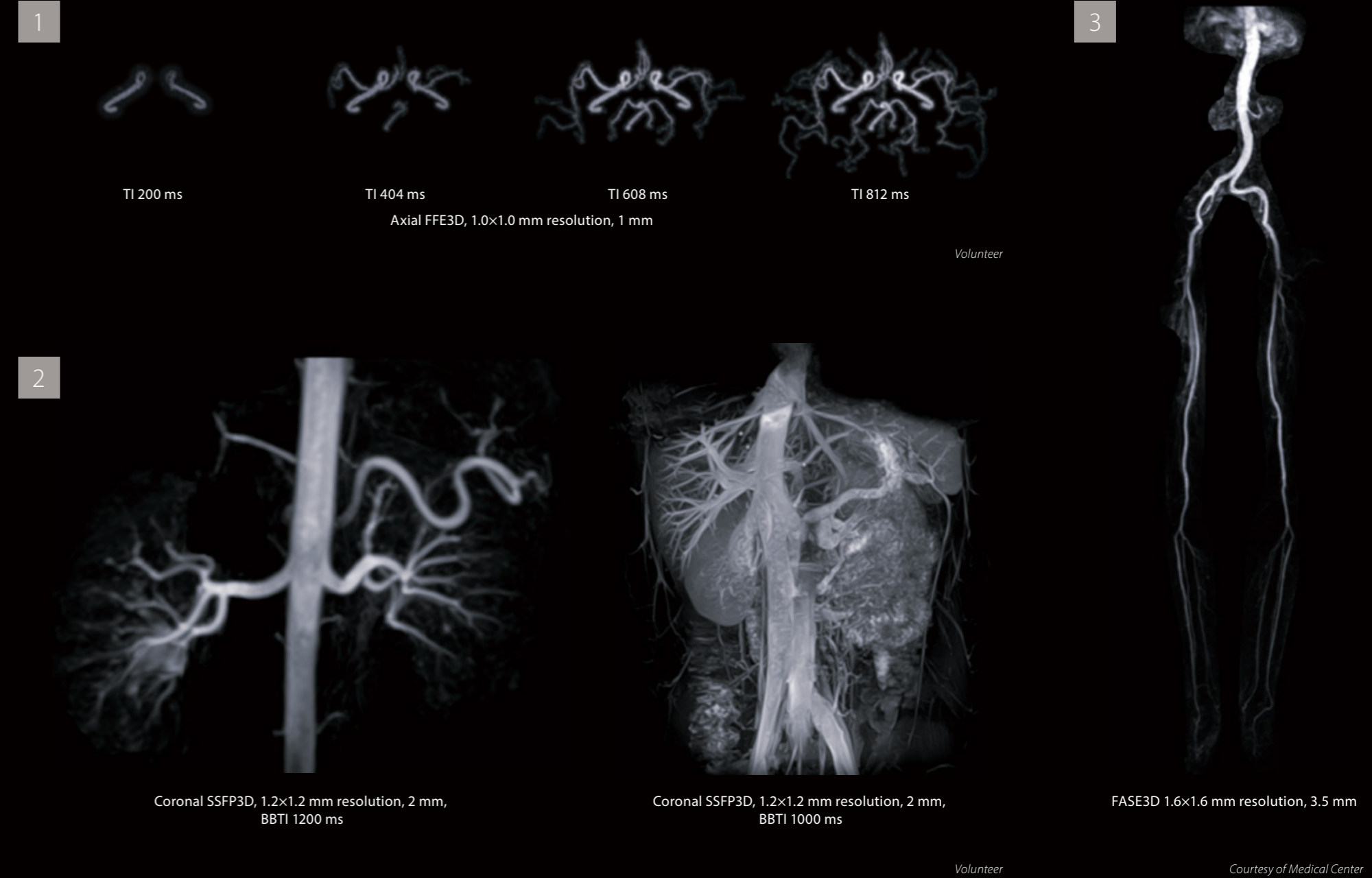
2 Time-Spatial Labeling Inversion Pulse (Time-SLIP)

Time-SLIP is an Arterial Spin Labeling (ASL) variant that is typically used to depict blood vessels within a targeted region in any imaging orientation. Time-SLIP has been evaluated for use in the renal arteries, carotid arteries, pulmonary system and portal-venous system. It produces accurate angiograms using blood as an endogenous tracer, instead of a contrast agent.

3 Flow-Spoiled FBI (FS-FBI)

3D FASE, ECG gated sequence, designed to improve the natural visualization of blood vessels. FBI distinguishes arteries from veins by utilizing the loss of arterial signal in systole due to fast flow compared to diastole. FS-FBI utilizes a small dephasing gradient to vastly improve flow depiction in the lower extremities or patients with poor circulation.

² mUTE : minimized acoustic noise utilizing UTE



1

TI 200 ms TI 404 ms TI 608 ms TI 812 ms
Axial FFE3D, 1.0x1.0 mm resolution, 1 mm

3

Volunteer

2

Coronal SSFP3D, 1.2x1.2 mm resolution, 2 mm, BBTI 1200 ms

Coronal SSFP3D, 1.2x1.2 mm resolution, 2 mm, BBTI 1000 ms

FASE3D 1.6x1.6 mm resolution, 3.5 mm

Volunteer

Courtesy of Medical Center

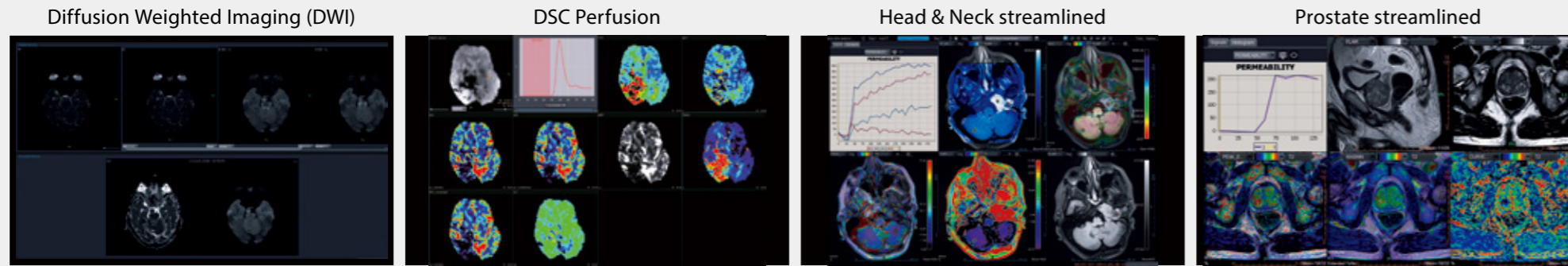
Advanced post processing enhances diagnosis while helping to expand patient services



Access advanced applications with post processing tools.

MR Clinical suite

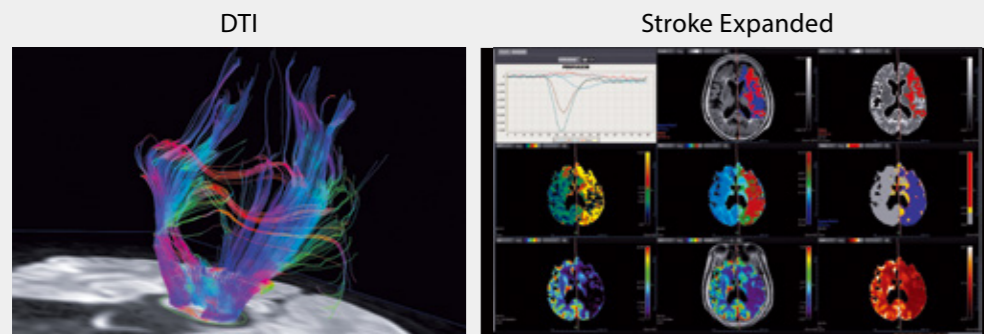
Versatile and sophisticated interface applications for all body regions.



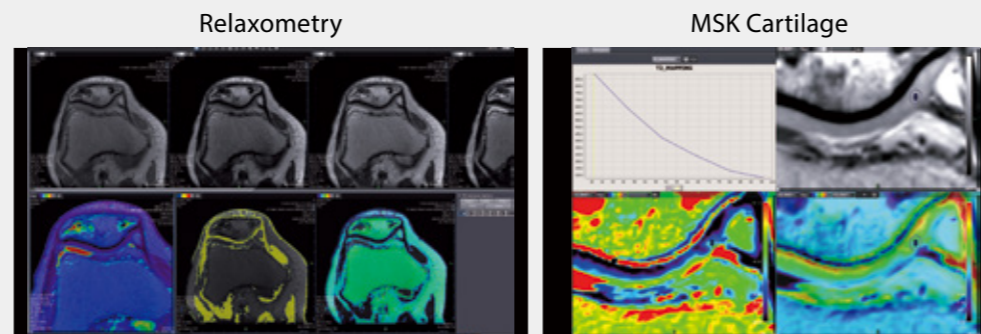
Comprehensive application packages for clinical experts

By providing access to advanced clinical tools, Vitrea software enables physicians to have meaningful interactions wherever they are.

MR Neuro Expert



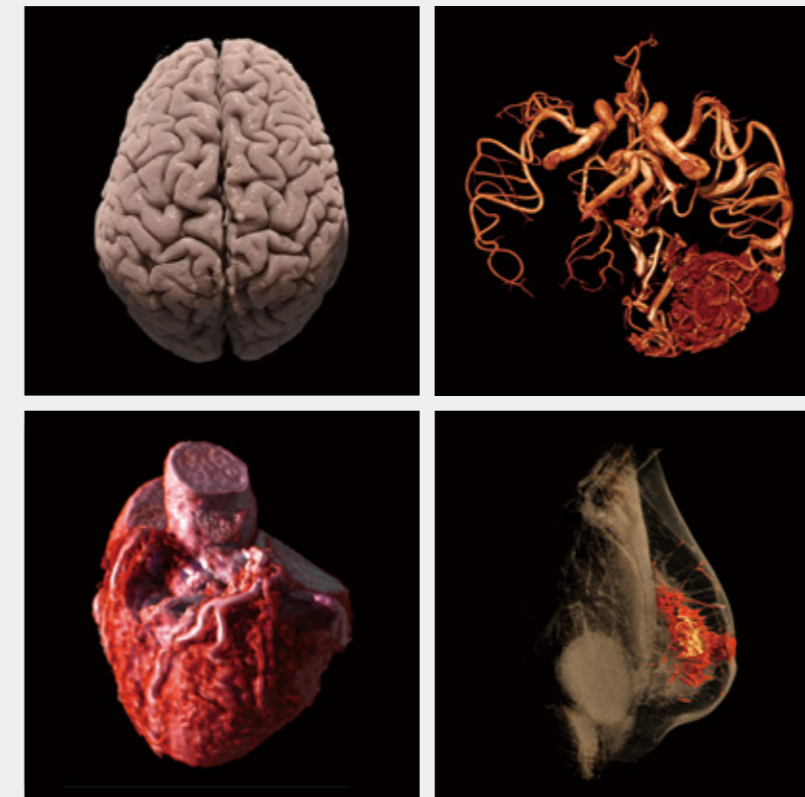
MR Ortho Expert



Advanced technologies for efficient clinical communication

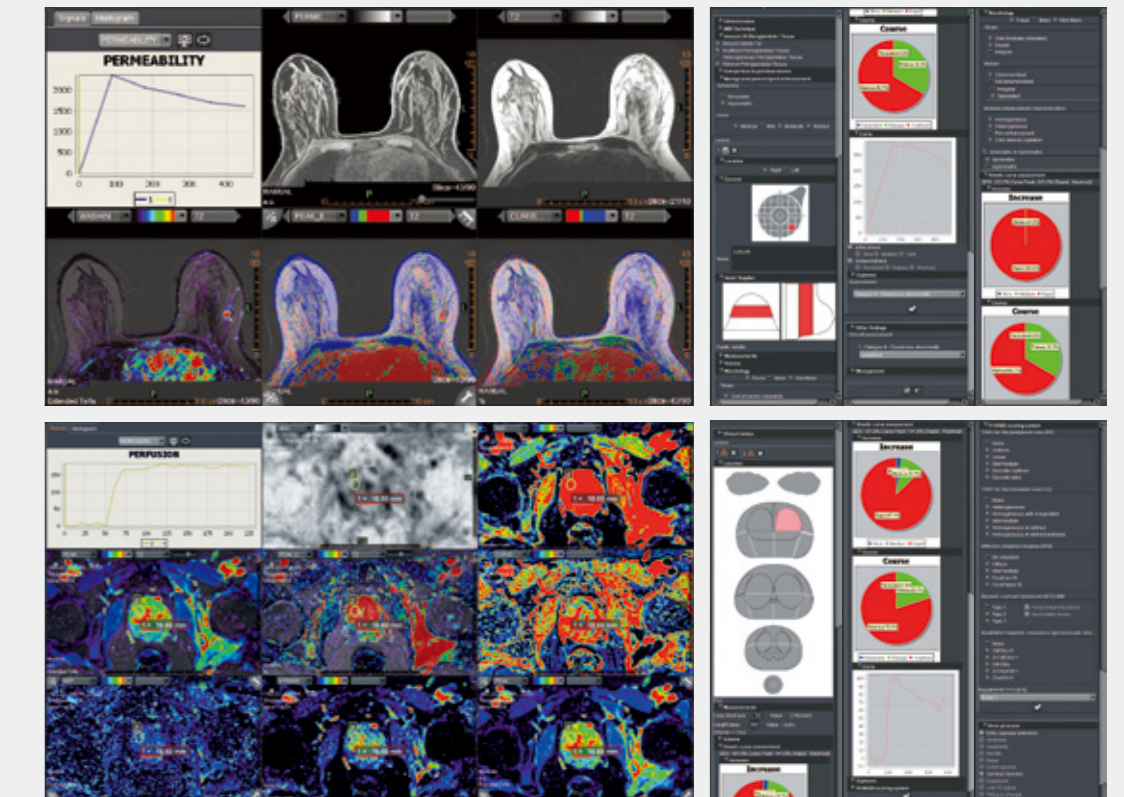
Global Illumination

This unique rendering technique helps to provide a more photorealistic view of human anatomy. Users share findings more clearly with both healthcare professionals and patients.



Dedicated automatic reporting

Stroke, breast, (BI-RADS®) and prostate (PI-RADS® v1 and v2) automatic compliant reports. Providing atlas standardized reporting system, better communication with physicians and patients can be realized.



* These products and functions are designed and manufactured by Olea Medical.

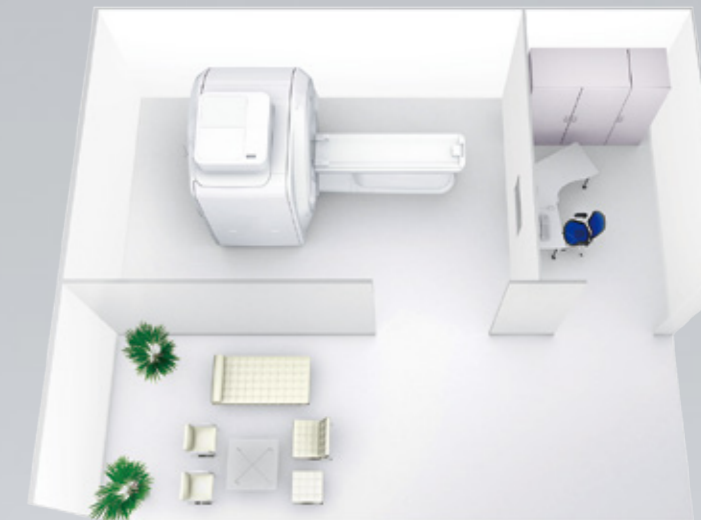
Economical design to meet your needs

This extremely eco-friendly system reduces construction and installations requirements, while also being one of the most energy efficient systems in its class.



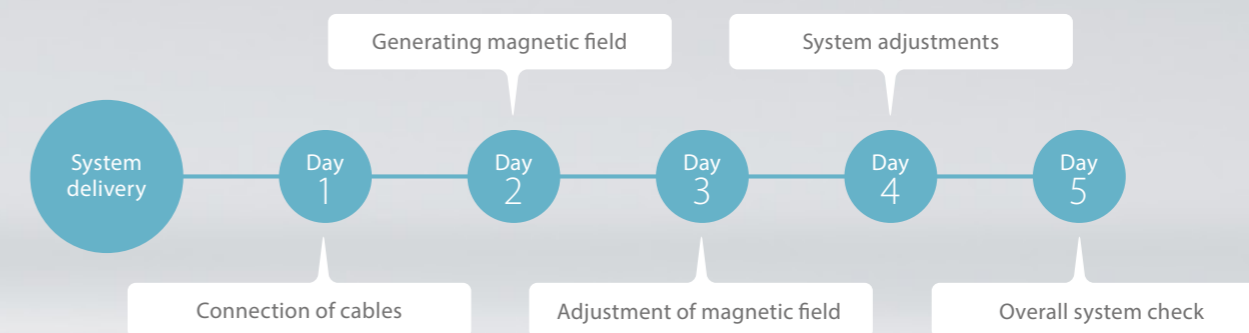
One of the smallest MR systems in its class with a compact footprint of 23 m²

In addition to the reduced system size, the installation method, cooling method, and control cabinet have been innovatively redesigned. Vantage Elan does not require a separate computer room making the overall installation area approximately 29% smaller than previous 1.5T systems³.



Rapid installation time – in as little as 5 days⁴

With a new installation, you can start using the system in as little as 5 days after delivery. Downtime in installation work can be minimized.



³ Compared to Vantage Titan.

⁴ This installation schedule may vary depending on site situation and progress status of the installation.

Canon

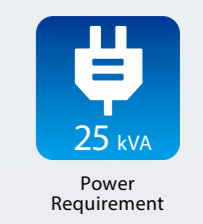
Reduce power consumption with ECO Mode

Vantage Elan's ECO Mode reduces power consumption to minimize system operating costs. Among other methods, the ECO Mode can be automatically activated simply by lowering the couch.



Total power requirement of 25 kVA

Vantage Elan minimizes power consumption through optimization of the gradient system which typically consumes a high amount of electric power, integration of electronic components, and improvement of the chiller. The power capacity required for the entire system including the refrigerator is 25 kVA. This results in lower running costs.



A quieter MR exam for every patient, every sequence, every time

In MRI examinations, the patient's cooperation is essential, and it is important to eliminate psychological discomfort and help the patient relax.

Utilizing Pianissimo Zen technology, Vantage Elan minimizes acoustic noise, one of the major complaints of patients and medical staff.

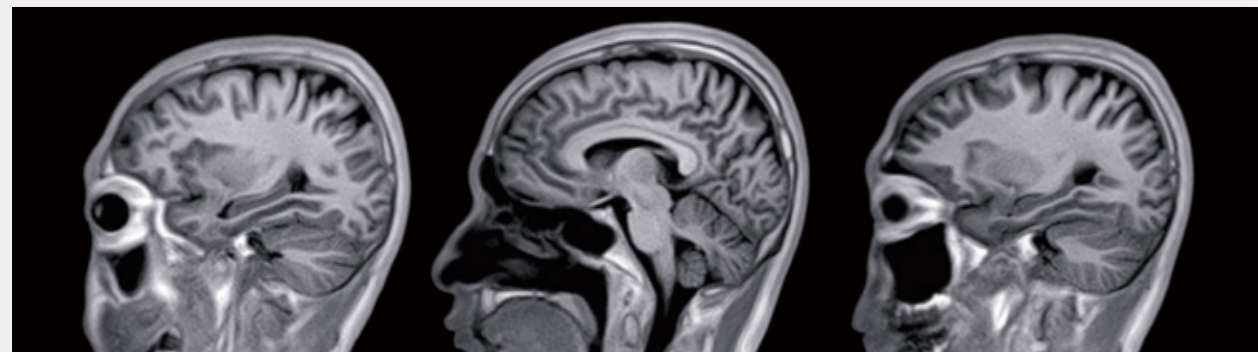
Quieter exams with Pianissimo Σ and Pianissimo Zen

Vantage Elan's unique Pianissimo Σ (sigma) technology significantly reduces the noise in and around the MRI environment for every patient, every sequence, every time. And Pianissimo Zen quiet sequences further reduce noise to just above ambient noise level, making exams even more comfortable and easier to complete.

Up To
99%⁵
Noise
Reduction

Quiet scanning with mUTE

The mUTE application suppresses high-speed gradient field switching, making it possible to provide quiet scanning.



⁵ Depending on the condition of usage and examination.

Volunteer



Head

Fast and Robust imaging for brain routine



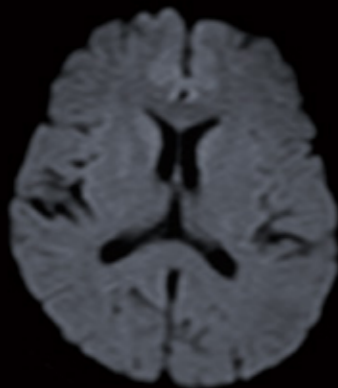
Total Scan time

15:13

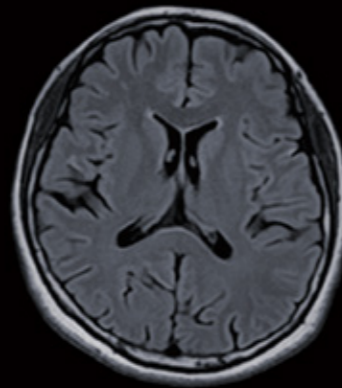


7:17

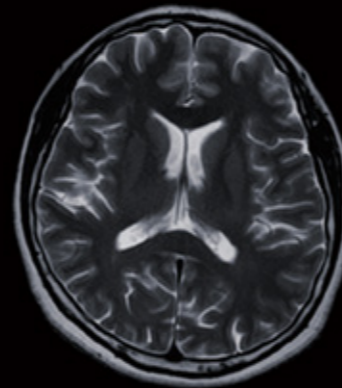
53%
Total Scan time
Reduction



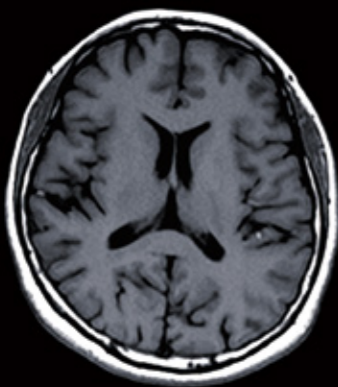
Axial DWI b1000, 1.58x1.58 mm resolution, 5 mm,
RDC DWI, Exsper 2x1
1:07



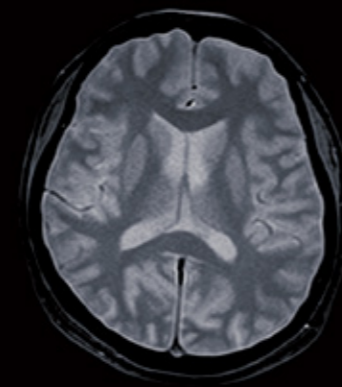
Axial FLAIR, 1.0x1.0 mm resolution, 5 mm,
IMC
1:52



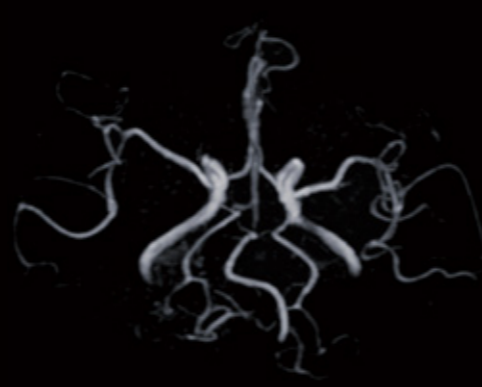
Axial T2w, 0.88x0.88 mm resolution, 5 mm,
Exsper 2x1
0:48



Axial T1w, 0.88x0.88 mm resolution, 5 mm,
Exsper 2x1
0:59



Axial T2*w, 0.88x0.88 mm resolution, 5 mm,
Exsper 2x1
0:46

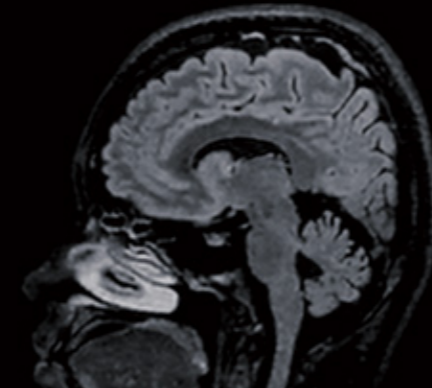


Axial MRA3D, 0.62x0.62 mm resolution, 1.2 mm,
Fast 3D mode 75%
1:45

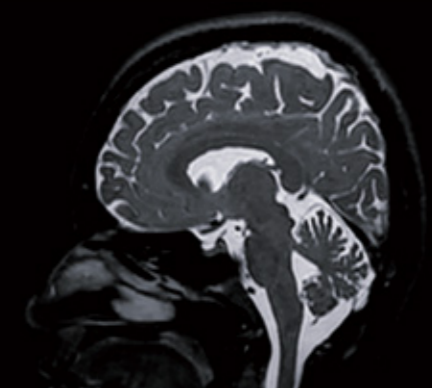
volunteer

Head

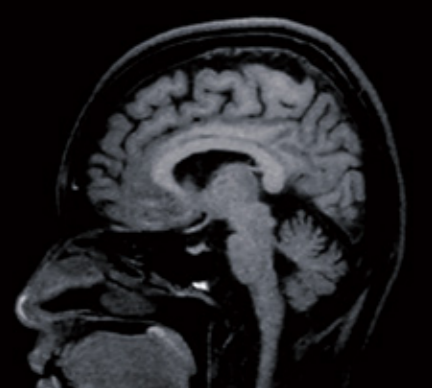
Compressed SPEEDER 3D



Sagittal 3D FLAIR,
1.25x1.25 mm resolution, 1.2 mm,
Compressed SPEEDER 2x2
3:55



Sagittal 3D T2w FatSat,
1.0x1.0 mm resolution, 1 mm,
Compressed SPEEDER 2x2
5:12



Sagittal 3D T1w FatSat,
1.0x1.0 mm resolution, 1 mm,
Compressed SPEEDER 2x2
4:13



+



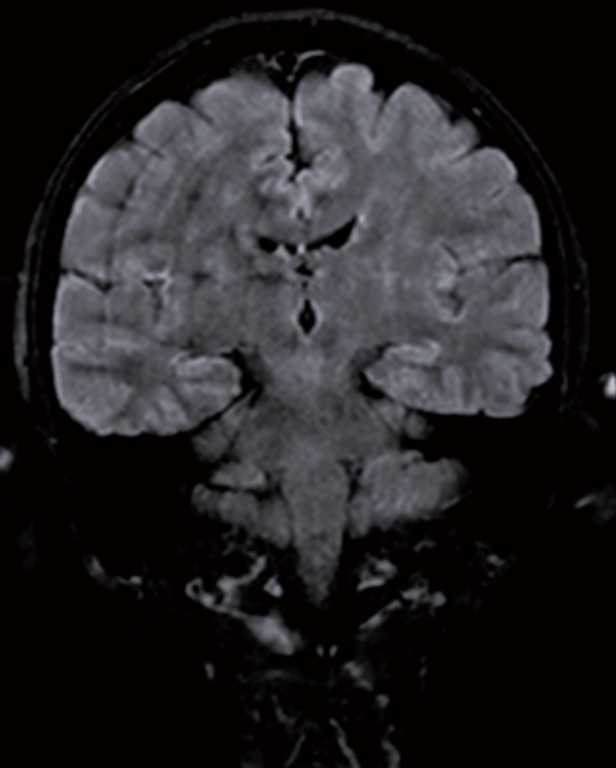
volunteer

Head

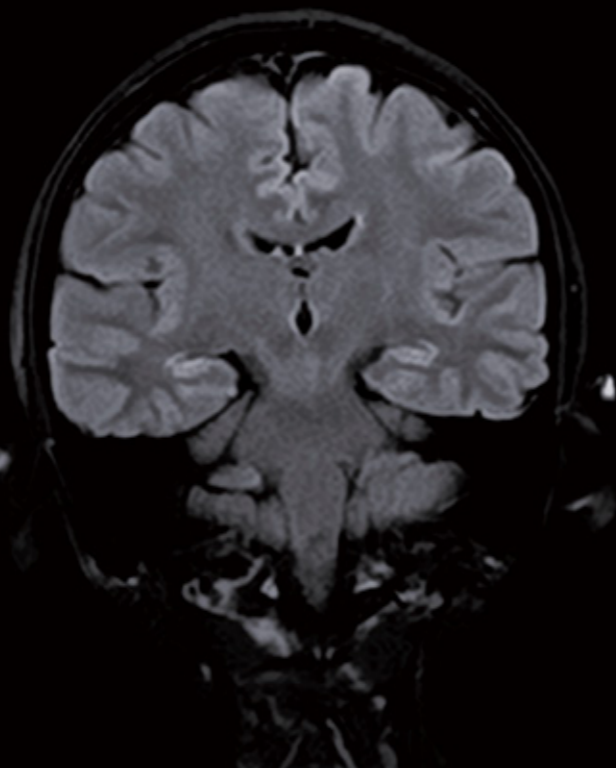
Iterative Motion Correction (IMC)



Conventional



IMC



Coronal FLAIR, 1.0x1.0 mm resolution, 5 mm,
2:34

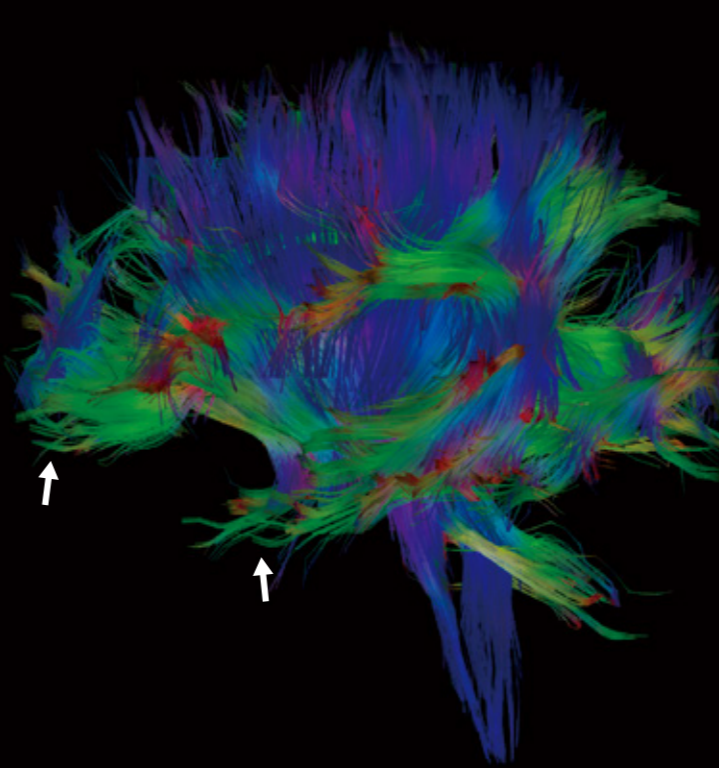
volunteer

Head

RDC DWI for Diffusion Tensor Imaging (DTI)

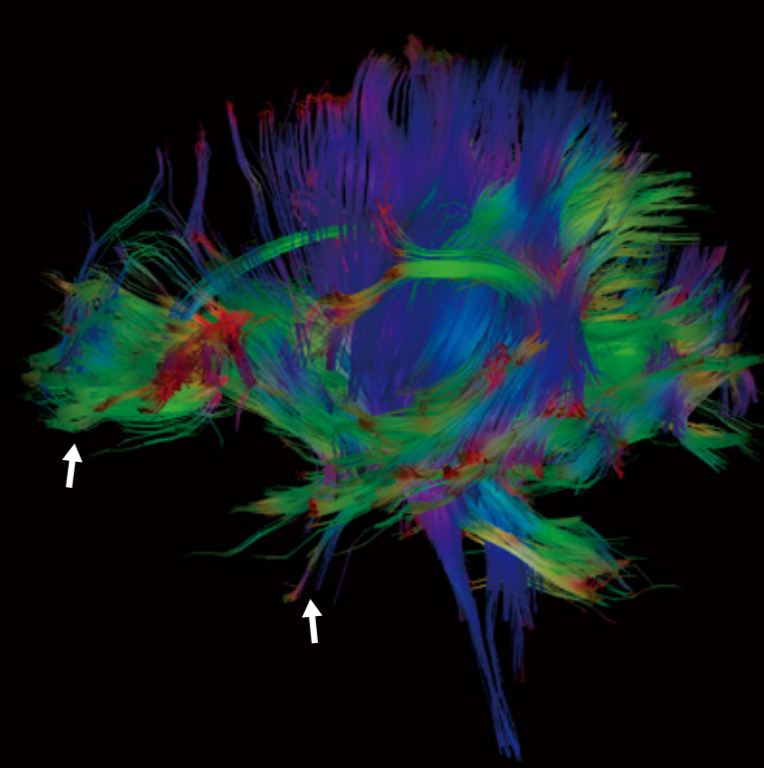


Conventional



Axial DWI b1000, 3.2x3.2 mm resolution, 3 mm,
4:36

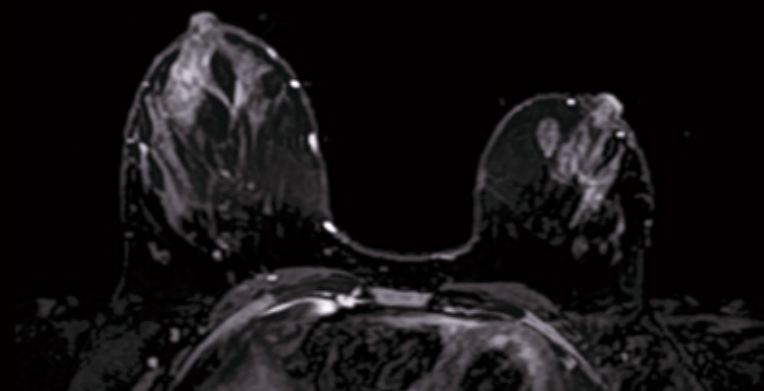
RDC DWI



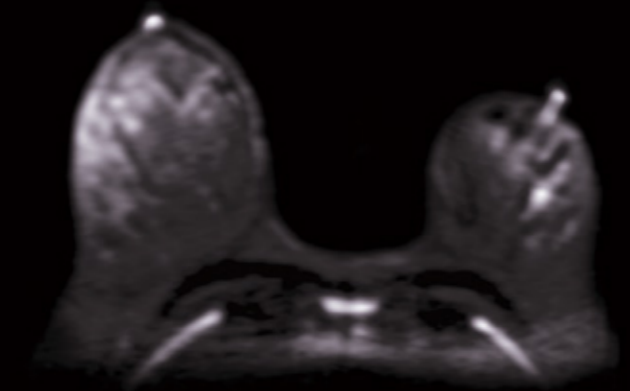
Axial DWI b1000, 3.2x3.2 mm resolution, 3 mm,
4:34

volunteer

Breast



Axial FS T2w, 1.82x1.82 mm resolution, 5 mm



Axial DWI b1000, 1.56x1.56 mm resolution, 5 mm



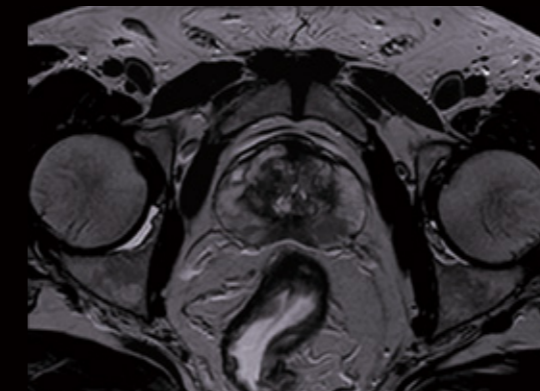
Dynamic study, 1.32x1.32 mm resolution, 3 mm



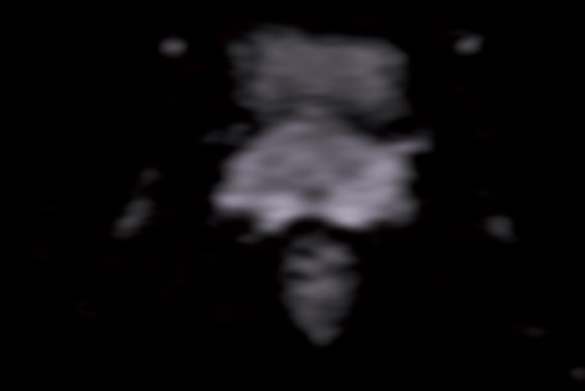
CE sagittal FS 3D, 0.88x0.88 mm resolution, 3 mm

Courtesy of Dubai London Hospital, UAE

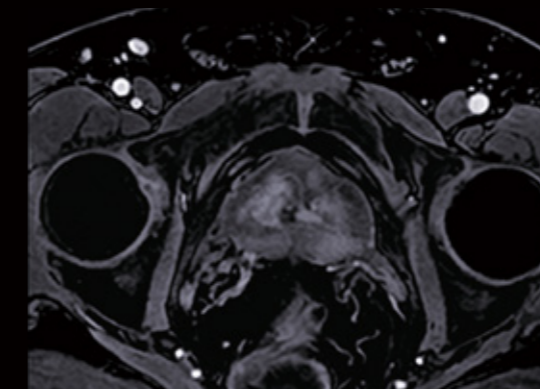
Prostate



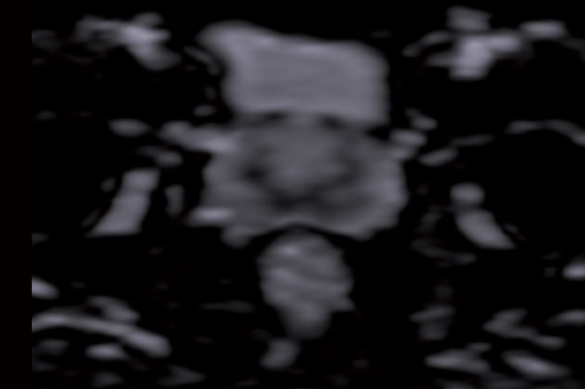
Axial T2w, 0.84x0.84 mm resolution, 3 mm



Axial DWI b800, 1.7x1.7 mm resolution, 3 mm



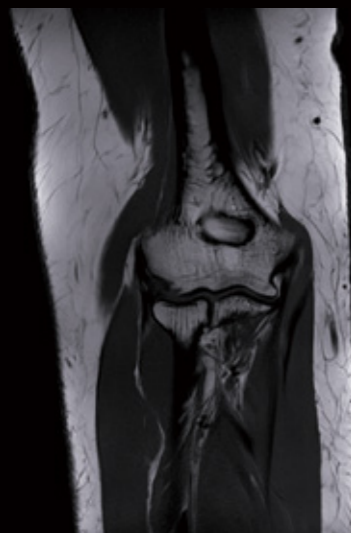
Dynamic study, 1.04x1.04 mm resolution, 3 mm



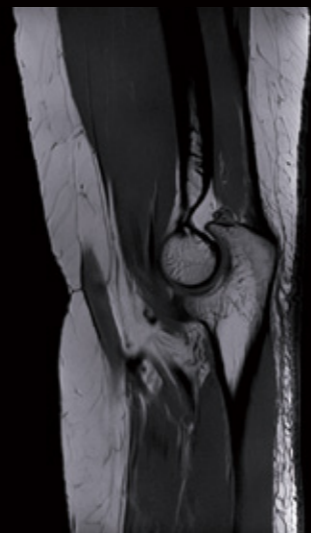
ADC map

Courtesy of Dubai London Hospital, UAE

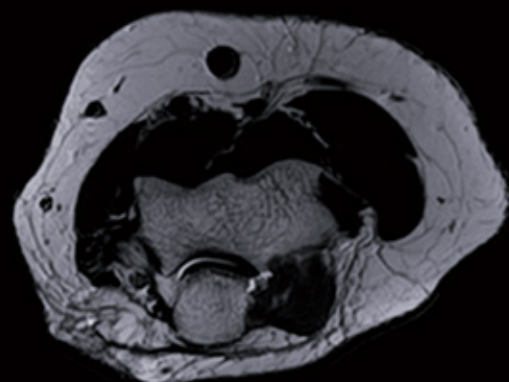
Elbow



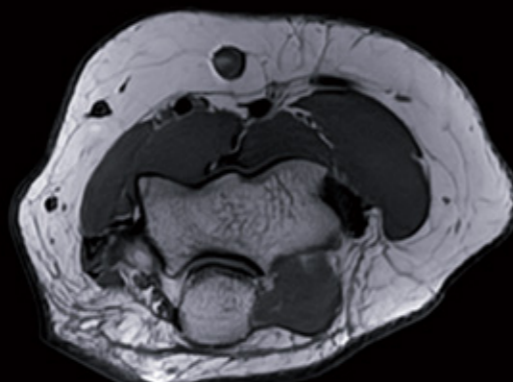
Coronal T1w, 0.4x0.4 mm resolution, 2.5 mm, Compressed SPEEDER 2x1, 1:52



Sagittal T1w, 0.4x0.4 mm resolution, 2.5 mm, Compressed SPEEDER 2x1, 2:38



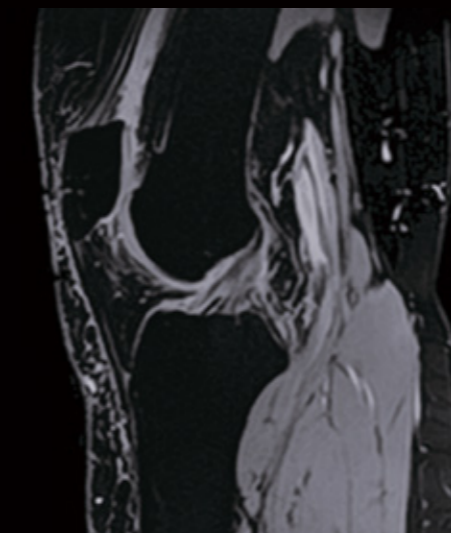
Axial T2w, 0.5x0.5 mm resolution, 3 mm, Compressed SPEEDER 2x1, 2:37



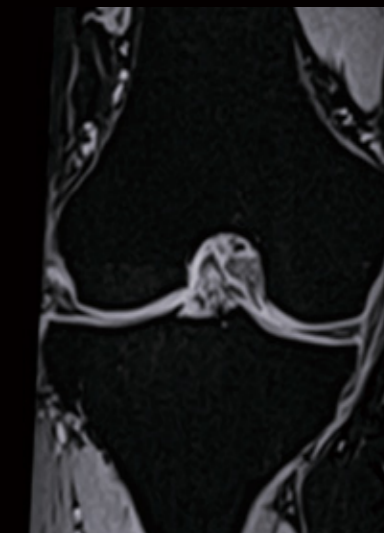
Axial T1w, 0.4x0.4 mm resolution, 3 mm, Compressed SPEEDER 2.2x1, 2:04

Courtesy of Dubai London Hospital, UAE

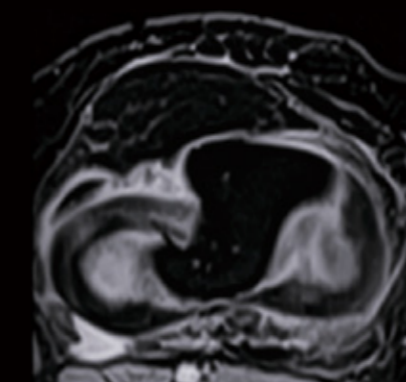
Knee



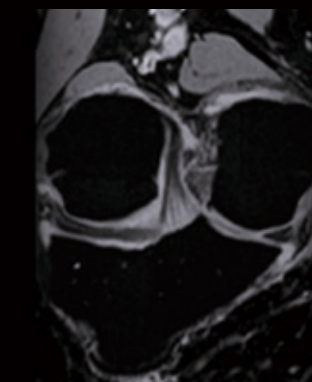
Sagittal 3D T2*, 0.86x0.86 mm resolution, 0.7 mm, SPEEDER 1.5x1.5, 5:03



MPR Coronal




MPR Axial : Meniscus target



MPR Oblique : ACL target

Courtesy of Dubai London Hospital, UAE



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- IMC and RDC DWI deliver more robust images to improve diagnostic capability

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- Auto Scan Assist helps you improve workflow with automatic slice alignment in various body regions
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Eco

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The AI technology was trained during the development phase. When implemented into the product, the AI function no longer self-learns.

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