

Canon



Vantage Elan

Zen Edition

Comfortable.
Effortless. Efficient.

Total patient focus
Effortless workflow
Efficient design

Vantage Elan / Zen Edition delivers a comfortable patient experience combined with outstanding image quality and intuitive workflow.

With a small footprint and best in class power consumption, Vantage Elan / Zen Edition is designed to help you achieve complete operational efficiency without compromise.

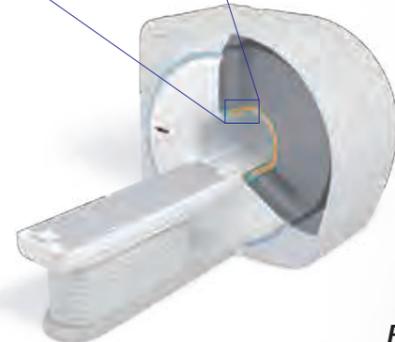
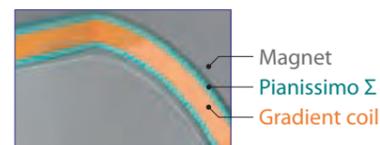


A quieter MR exam for every patient, every sequence, every time

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.

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.

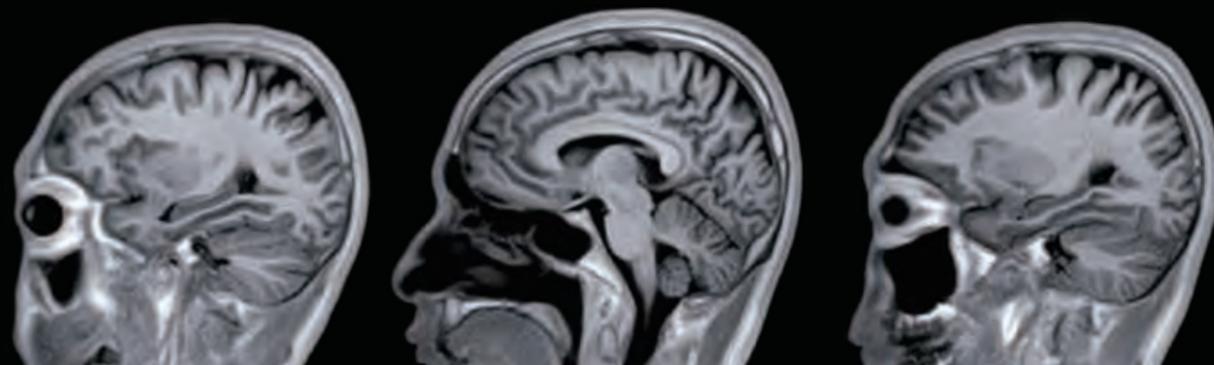


Pianissimo Σ



mUTE² 3D T1

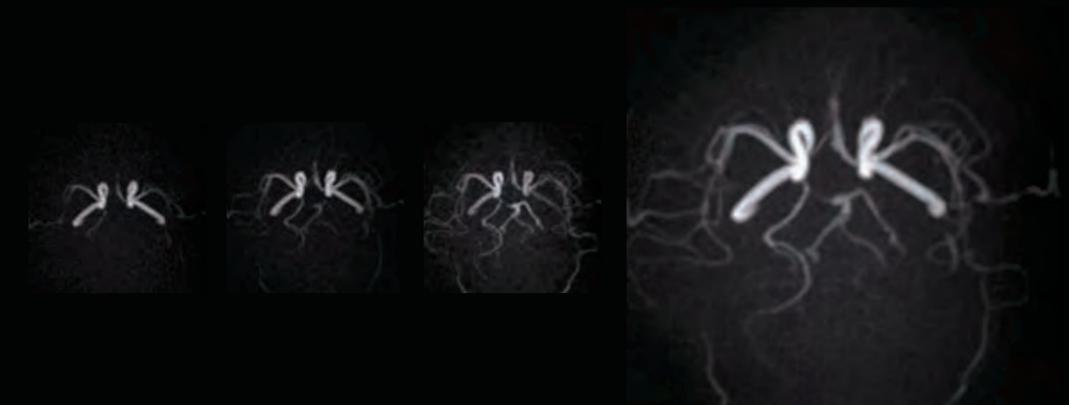
The mUTE application suppresses high-speed gradient field switching, making it possible to provide quiet scanning.



¹ Depending on the condition of usage and examination
² mUTE: minimized acoustic noise utilizing UTE

Capturing hemodynamics with mUTE 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.



Contrast in your images, not in your patients

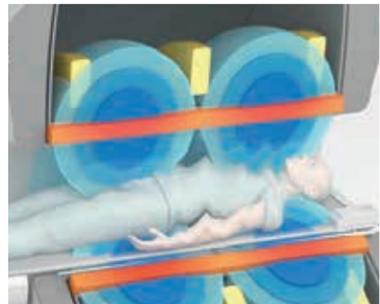
Patient safety and comfort continues to be the driving force behind Canon Medical Systems' unique non-contrast MRA techniques enabling physicians to minimize patient risk while producing exceptional image quality.

Achieving high image quality in a compact system

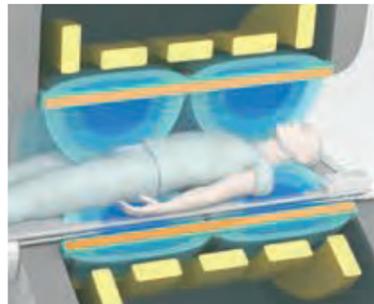
Vantage Elan utilizes original hardware technologies to enable excellent image quality to be achieved.

Excellent stability with the advanced shielded gradient coil

Vantage Elan's unique gradient coil technology enables excellent stability and high image quality.



Conventional

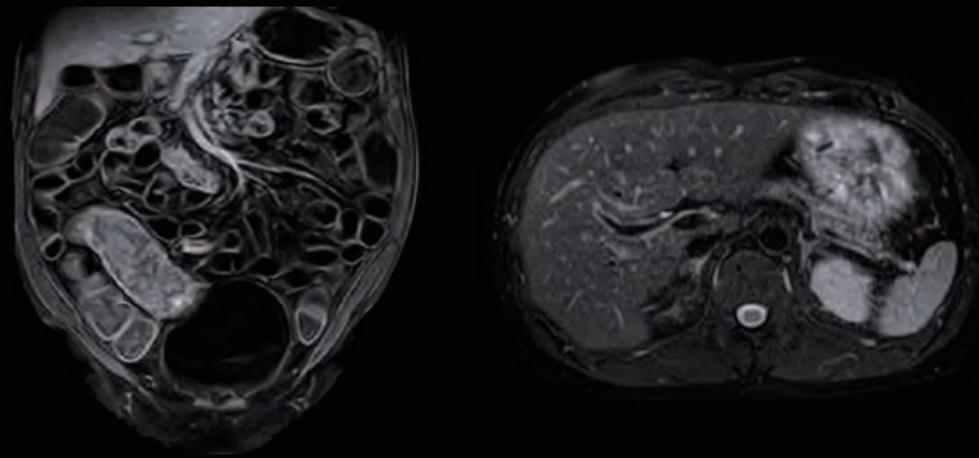


Vantage Elan



Fat sat imaging with MSOFT

With high quality magnet homogeneity and our exclusive slice selective fat suppression called MSOFT, Vantage Elan's innovative design enables uniform fat suppression, even on large areas such as the abdomen.



Off-center and large field of view imaging

With a highly homogenous magnetic field, it is possible to acquire data for a range of 50 cm in the z-axis and 55 cm on the x-y axes.



Courtesy of DASA

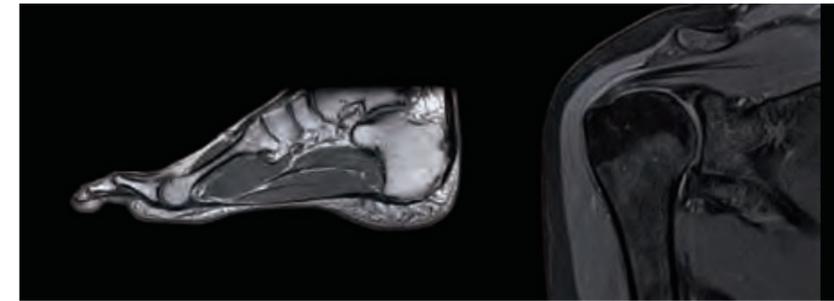
Achieving high image quality with a wide range of unique coil technology

Vantage Elan's unique RF technology results in high-precision images.



MSK SPEEDER package

MSK SPEEDER package consists of a dedicated Shoulder SPEEDER coil and Knee/ Foot SPEEDER coil. These coils provide easy patient set up and enhanced workflow for shoulder, knee, foot and ankle examinations with FOV up to 30 cm while maintaining a high signal and good homogeneity.



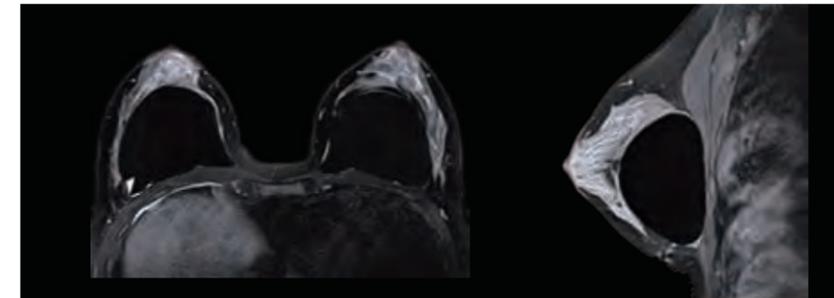
Sg T1

Co PD Fat Sat



Breast SPEEDER CX

The Breast SPEEDER CX coil can be adjusted to the patient's body habitus by adjusting the position of the lateral surface coils.



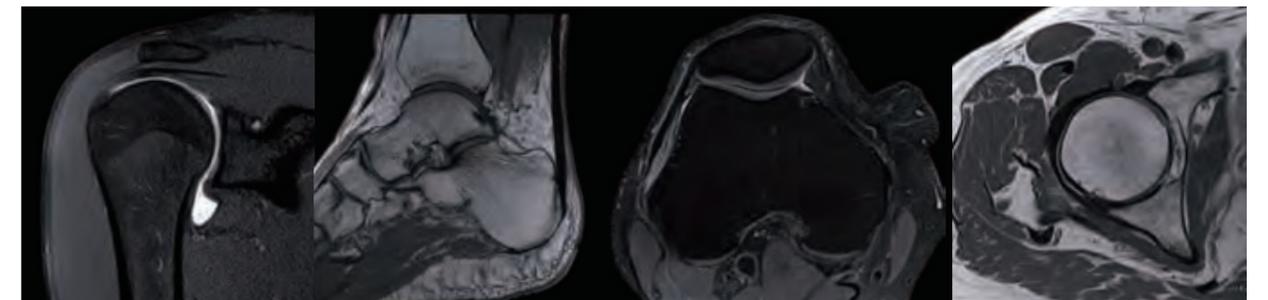
Ax T2 Fat Sat

Sg T1 Fat Sat



16ch Flex SPEEDER

The high SNR and large field of view of this soft and flexible 16-channel array coil makes it possible to acquire high-quality images of a variety of anatomical regions, including the head, joints, extremities, and torso.



Co PD Fat Sat

Sg T1

Ax PD Fat Sat

Ax PD



Effortless workflow – with consistent results

Optimize daily workflow and productivity with Vantage Elan's user interface, M-Power. Intuitively designed based on clinical workflow, M-Power enhances daily productivity and makes MR operations remarkably easy to learn and use, enabling technologists and physicians to easily access its full range of functionality.



M-Power user interface

M-Power intuitive icons and operation windows are designed for ease of use. For operators, colors were specifically chosen to reduce eye fatigue.



Advanced post-processing as easy as 1-2-3

Advanced post-processing functions such as fMRI, spectroscopy, diffusion or tensor tractography can be accessed directly on the main console using a simple, three-step process. These optional applications can be added as your clinical practice grows.



Automated, reliable and robust

With the complexity of scan planning, achieving scan plane reproducibility can be quite challenging and time-consuming. EasyTech technology helps you improve workflow with automatic slice alignment for brain, spine and cardiac exams, standardizing your workflow with automatic positioning.

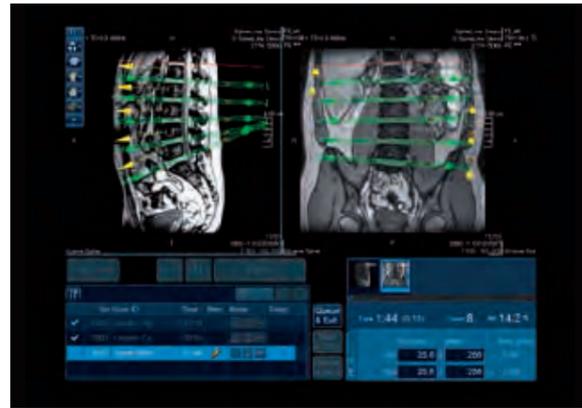
NeuroLine+

Achieve scan consistency for all your brain exams with NeuroLine+. The function's intelligent alignment algorithm allows you to automatically set up according to AC-PC or OM line.



SpineLine

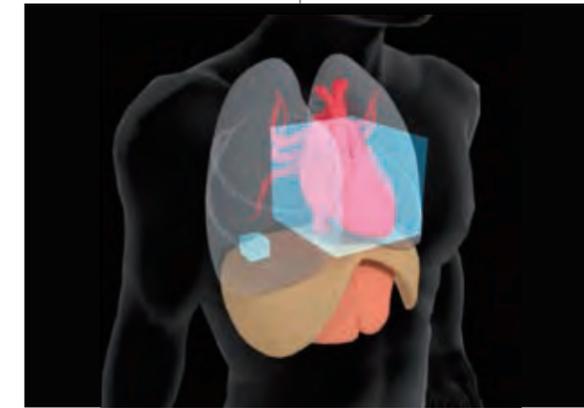
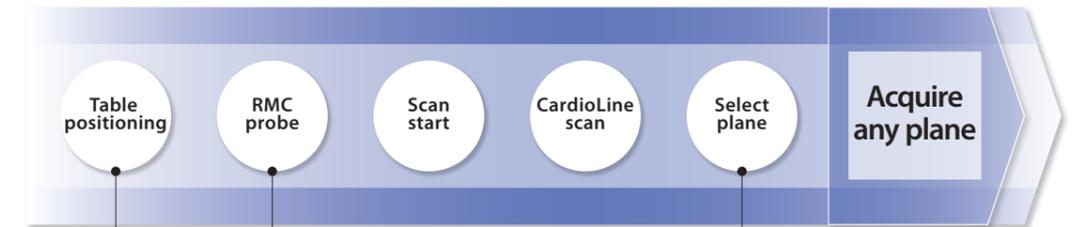
With its auto-locator functionality, SpineLine allows you to plan spine studies quickly and easily. Sagittal and coronal locators allow you to set double-oblique slices, enhancing the reproducibility of follow-up exams.



www.medical.canon/spine.html

Fast, high-quality cardiac exams

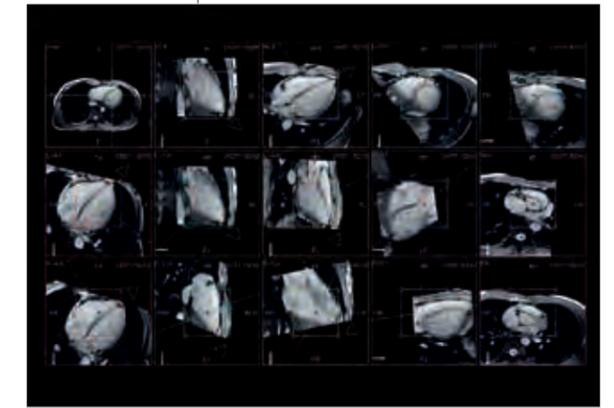
SUREVOI Cardiac and CardioLine+ allow you to significantly reduce the scan time and increase throughput. Challenging cardiac examinations can now be performed as part of your daily routine.



SUREVOI Cardiac

Automatic detection of heart and liver with a non-rigid model allows for full workflow automation from table positioning to the Real-time Motion Correction (RMC), probe placement and fully automated cardiac planning.

www.medical.canon/surevoi.html



CardioLine+

CardioLine+ automatically identifies the 14 standard cardiac planes including right and left ventricle, as well as the four cardiac valves in a single breath-hold scan.



A complete clinical solution for you and your patients

Vantage Elan offers a wide range of diagnostic solutions through many high-end applications such as UTE.



Ultrashort TE (UTE)

Allows clinicians to capture images in tissues that generally disappear too quickly for accurate MR imaging. This enables imaging of anatomy such as the lungs, helping providers obtain information to diagnose and treat their patients.



UTE imaging on MSK

Allows clinicians to evaluate structures with very short echo times such as connective tissue, fibrosis, and osteochondral unions. Most important amongst these structures are connective tissues and their derivatives (such as tendons, meniscus, ligaments, and osteochondral structures).

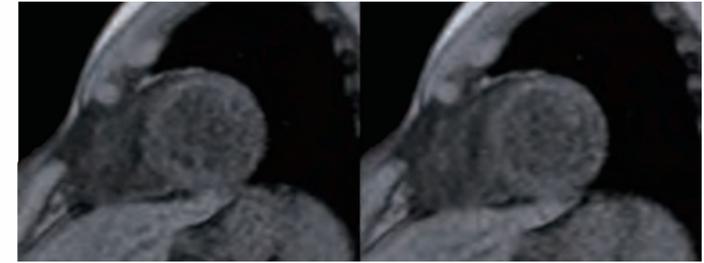


Taking cardiac imaging to new heights

Vantage Elan offers comprehensive applications for cardiac examinations such as MOLLI, PSIR, and T2* mapping, to help cardiologists and radiologists improve their workflow and patient comfort.

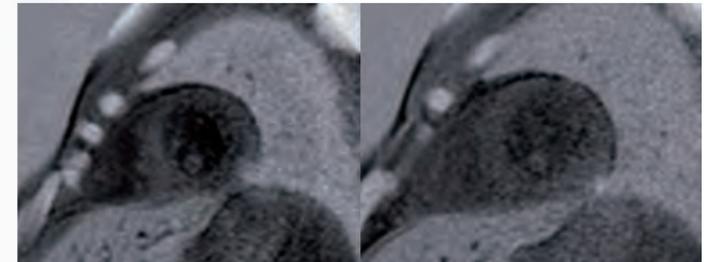
T1 mapping MOdified Look-Locker Inversion recovery (MOLLI) sequence

Expand your cardiac toolset with T1 mapping, allowing you to acquire a much more quantitative characterization of myocardial tissue. T1 mapping utilizes a MOLLI sequence, enabling the acquisition of a full T1 map within a single breath hold.



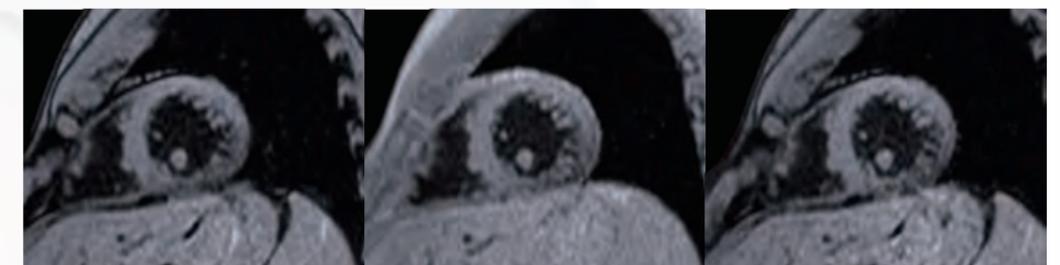
Phase Sensitive Inversion Recovery (PSIR)

PSIR in the heart provides improved contrast in late-enhanced imaging by using a more robust nulling of healthy myocardial signal without the need for an inversion time (TI) calibration scan. By eliminating the need for calibration, cardiac examinations can be completed with fewer breath holds and greater patient comfort.



T2* mapping

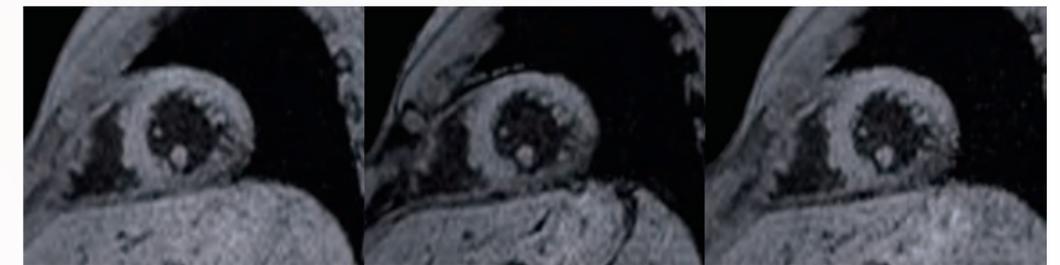
Take your cardiac workflow one step further with T2* mapping. By utilizing our updated FFE2D:mEcho sequence, T2* maps can be used in the quantification and analysis.



TE=2.3

TE=4.6

TE=6.9



TE=9.2

TE=11.5

TE=13.8

Workflow-driven applications making your work easier

An advanced image processing environment provided on Vantage Elan is designed to work with Olea advanced image processing through the Vitrea™ workstation.



Vitrea multi-modality workstation

The Vitrea workstation is the foundation of our advanced visualization. It includes 2D, 3D and 4D viewing with stitching and subtraction, 3D analysis for vascular and organ post-processing along with basic export and reporting tools.

MR advanced applications

The advanced applications provide access to enhanced clinical routine tools including Diffusion, Perfusion, Curve Kinetics with streamlined application workflows for a variety of target organs.

MR Expert packages

The MR Expert packages provide access to the latest and most advanced tools and application to expert users for a wide variety of neuro, cardiac, orthopedic and body examinations.



MR spectroscopy

The addition of MR single and/or multi voxel spectroscopic information with the conventional MRI sequences have improved detection of early staged prostate tumor and volumes. Moreover, the spectroscopic data can be superimposed on anatomical images while depicting the tumor volumes, in all three planes. Lastly, thanks to the automation of the M-Power post-processing software, the analysis and results can be performed efficiently and effectively.

Efficient design to meet your needs

This extremely compact system meets your needs by reducing construction and operating costs.³

³ Internal comparison



One of the smallest MR systems in its class with a minimum footprint⁴ of 23 m²

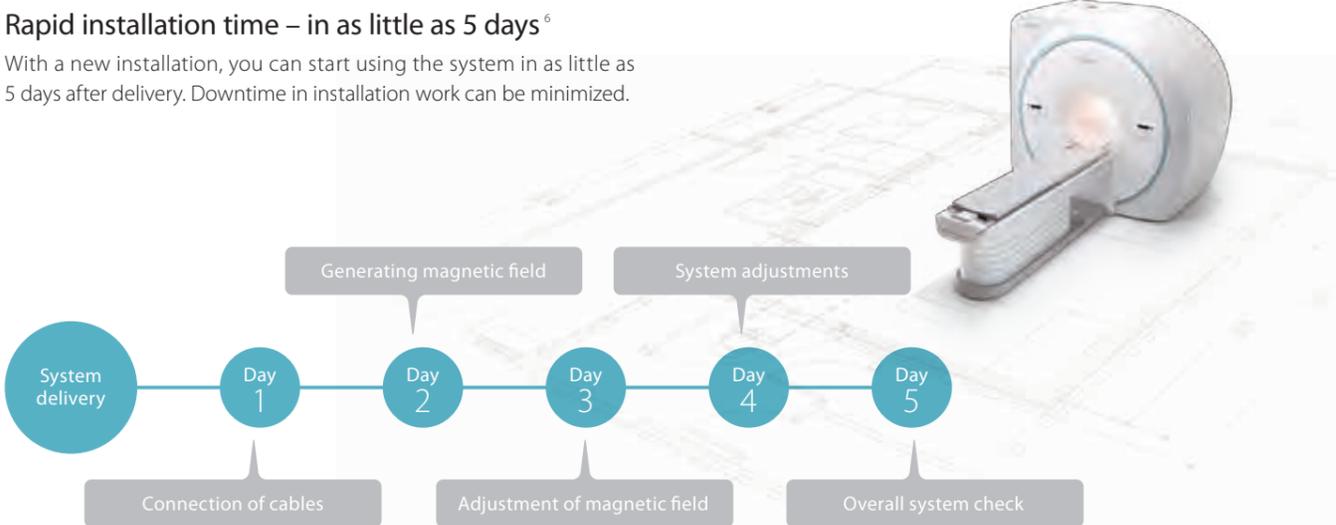
In addition to the reduced system size, the installation method, cooling method, and control cabinet have been innovatively redesigned. Vantage Elan does not require a separate computer room. The overall installation area is approximately 29% smaller than previous 1.5T systems.⁵

⁴ The minimum footprint may not be applied to some cases depending on each site situation.
⁵ Compared to Vantage Titan.



Rapid installation time – in as little as 5 days⁶

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.



⁶ This installation schedule is a standard schedule for the system and may vary depending on site situation and progress status of the installation.

Caring for our environment

Eco mode minimizes power consumption and contributes to environmental conservation.

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.

Vantage Elan has been recognized for eco performance in the U.K. and has won the Gold Award at the International Green Awards 2016.⁷ Moreover, the excellent eco performance has been confirmed through evaluation by an independent third party organization (TÜV NORD Systems GmbH & Co. KG, Germany).



Reduction in 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 to the floor.

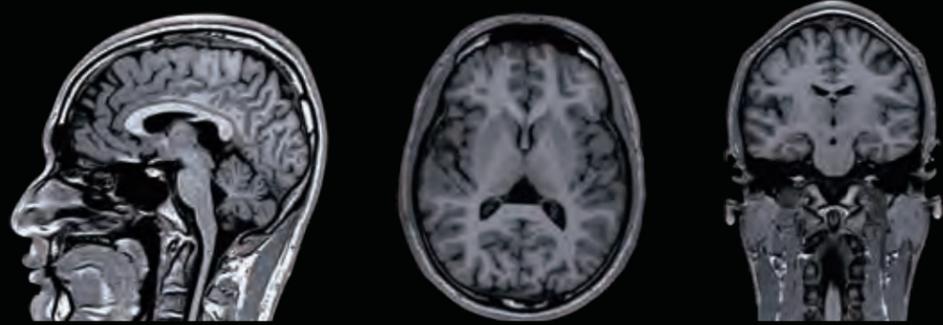


The system can recover from Eco mode within 1 second to be ready for scanning, quick enough to cope with even emergency patients and unscheduled examinations.

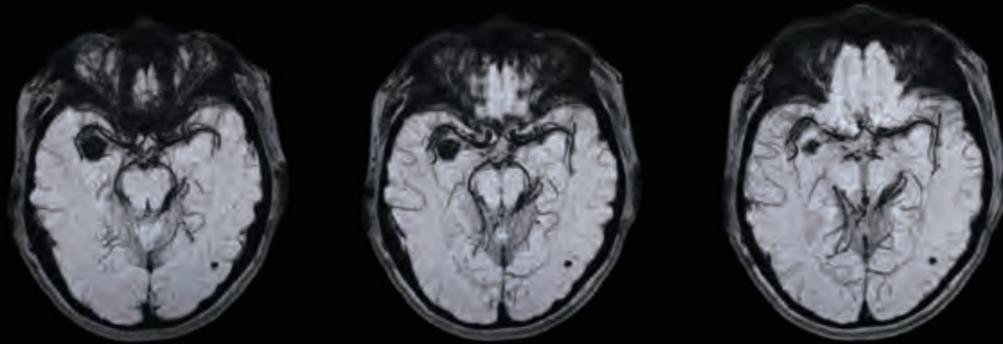
⁷ Green Apple Awards was established in 1994 by The Green Organization, a nonprofit organization in the U.K. The environmental activities conducted by companies, organizations, and individuals are evaluated and selected by specialists in various fields and professionals with practical experience, and winners are chosen based on their contributions to the environment, economics, innovation, and society.

⁸ This report was created prior to our company name change and as such our previous company name is still referred to within this document.

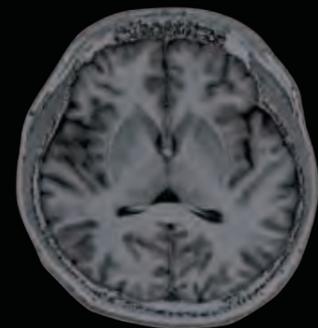
Head



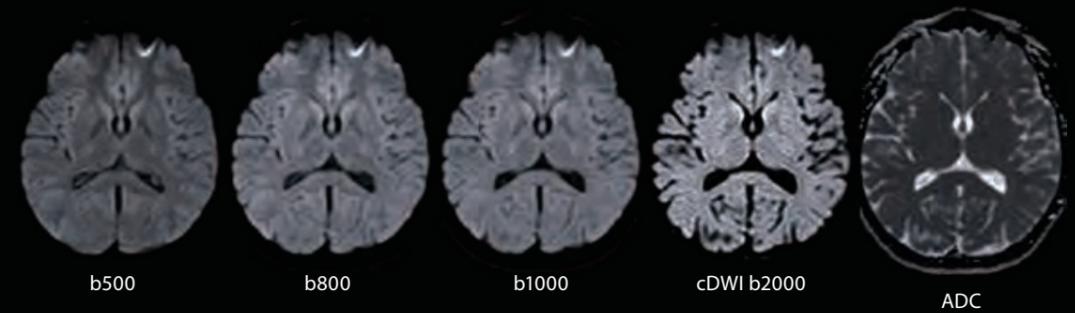
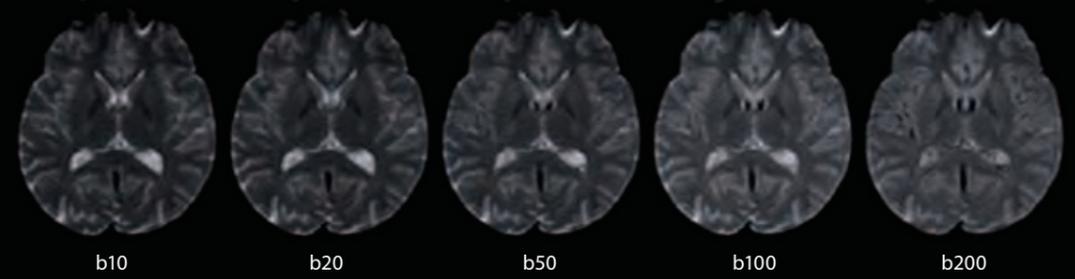
3D T1 MPRAGE 1mm Isotropic



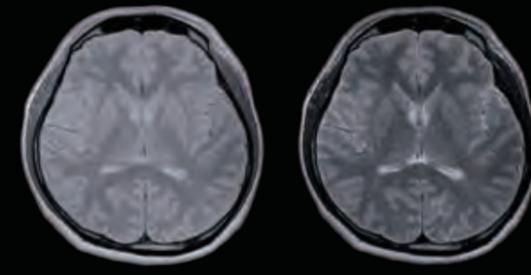
Ax 3D eFSBB



Ax 3D T1 MP2RAGE for T1 mapping
Sequence with 2 TIs and 2 FLIP angles

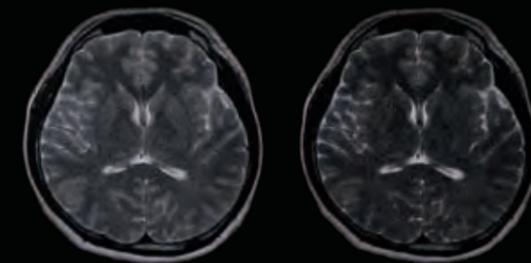


Ax EPI DWI



TE=20

TE=60



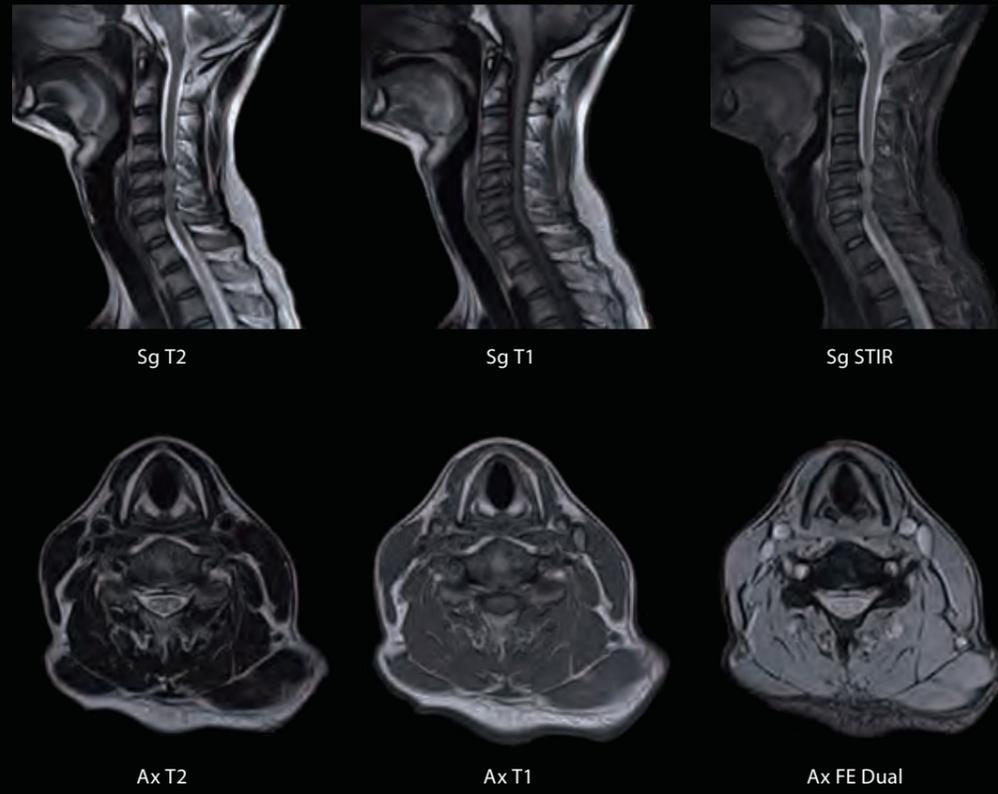
TE=100

TE=140

Ax FSE2D:M-Contrast for T2 mapping
Sequence with 16 different TEs

Spine

C-spine imaging



Whole spine imaging in 2 steps



L-spine imaging



Body

T2* relaxation



TE=2.3

TE=4.6

TE=6.9

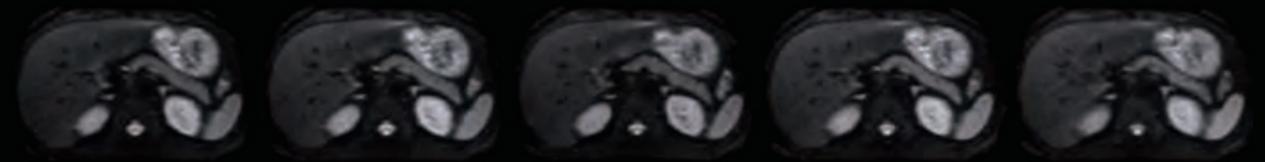


TE=9.2

TE=11.5

TE=13.8

Ax FFE2D:mEcho Black Blood



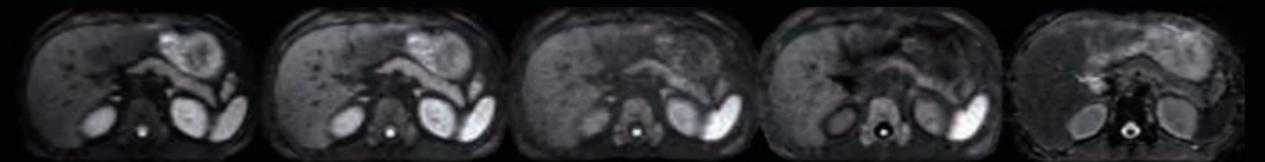
b10

b20

b30

b50

b100



b200

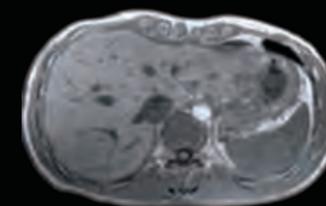
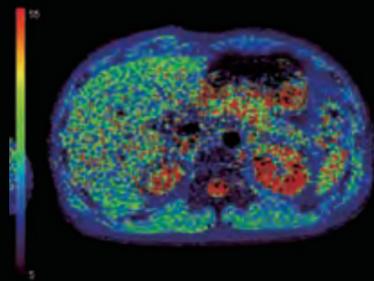
b400

b800

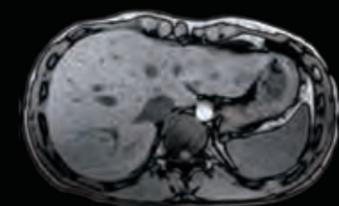
cDWI b1000

ADC

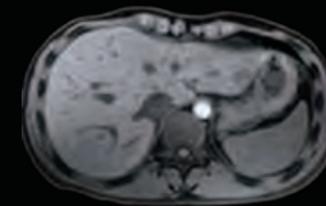
Ax EPI DWI



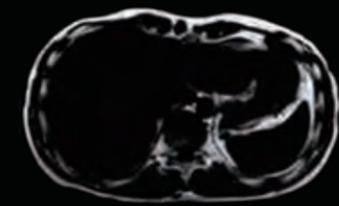
In Phase



Out of Phase



Water



Fat

Ax FE 3D WFS



Ax FFE 3D using 2D RMC
Co and Sg Min IP reformat



Sg FFE 3D UTE TE=0.2 ms



TE=18

TE=36

TE=54



TE=72

T2 map

T2 color map



T1 Long Axes

STIR

Post Contrast

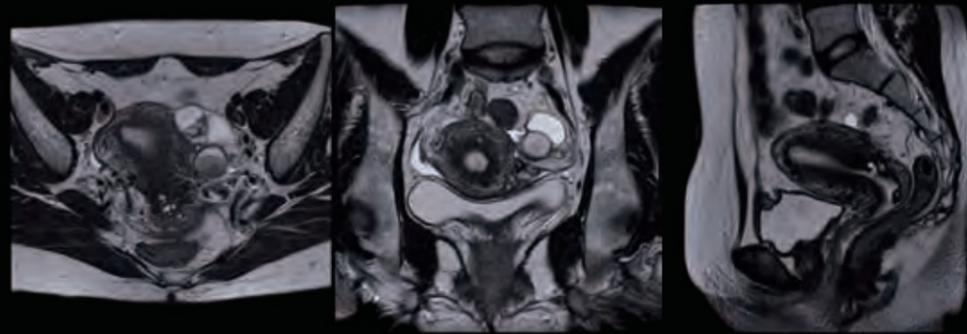


Sg PD

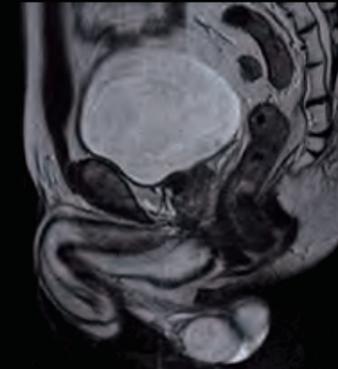
Sg PD Fat Sat

Sg 3D FSE
PD Fat Sat

Pelvis / Prostate



Ax / Co / Sg T2



Sg FSE without JET™



Sg FSE with JET



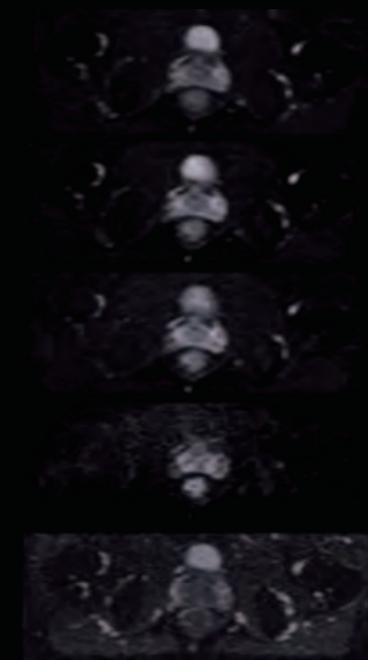
b400

Ax EPI DWI

b800

Ax EPI DWI

Ax T1 Fast Sat



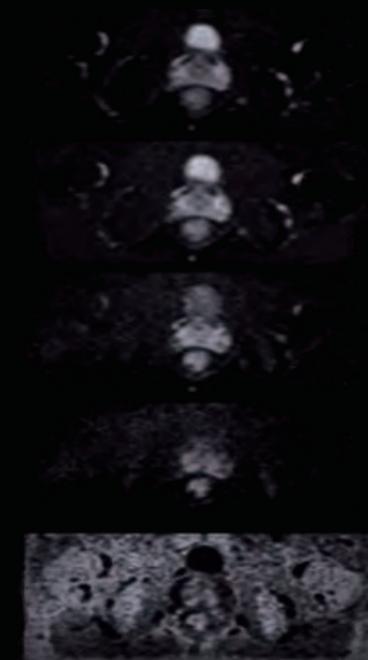
b10

b50

b200

b800

ADC



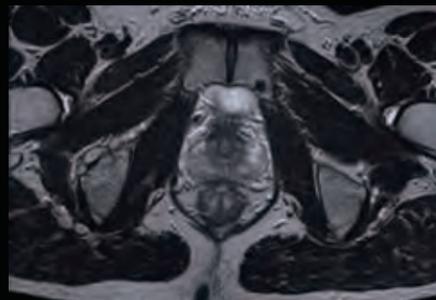
b20

b100

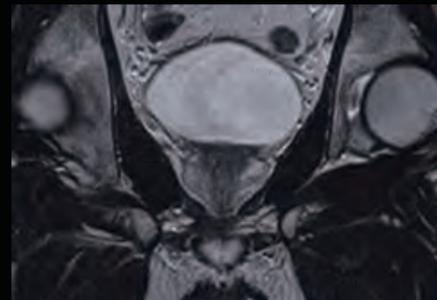
b500

b1000

cDWI
b2000



FSE T2 Ax

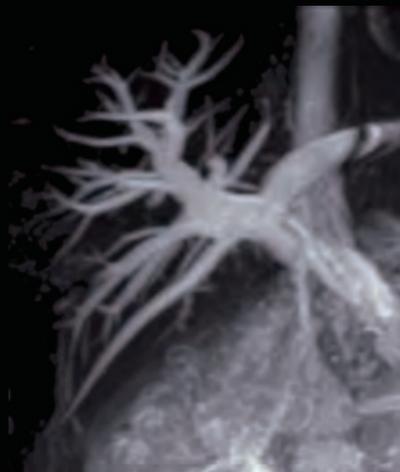


FSE T2 Co

Non-contrast



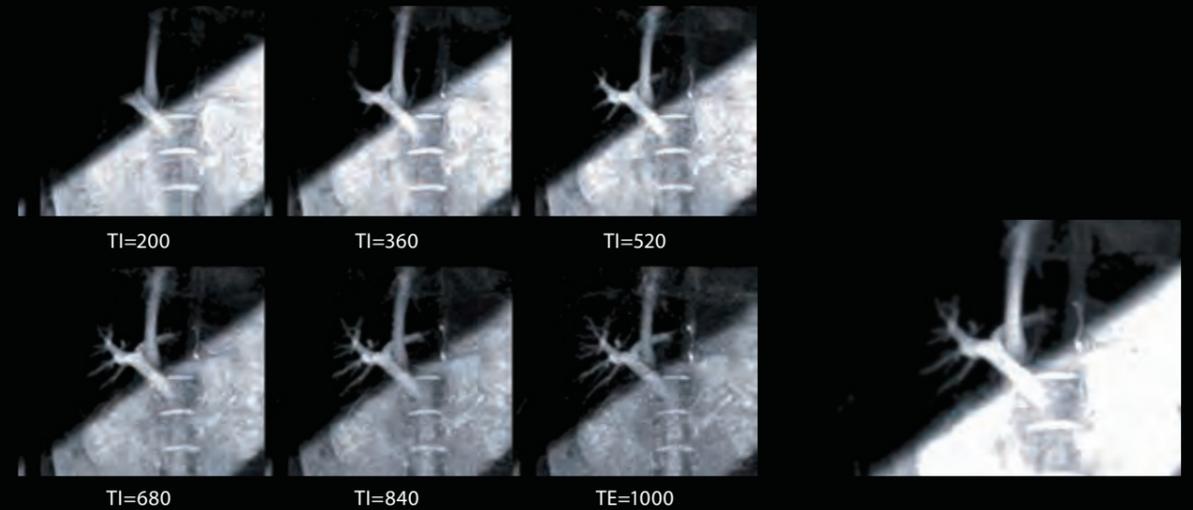
FS-FBI



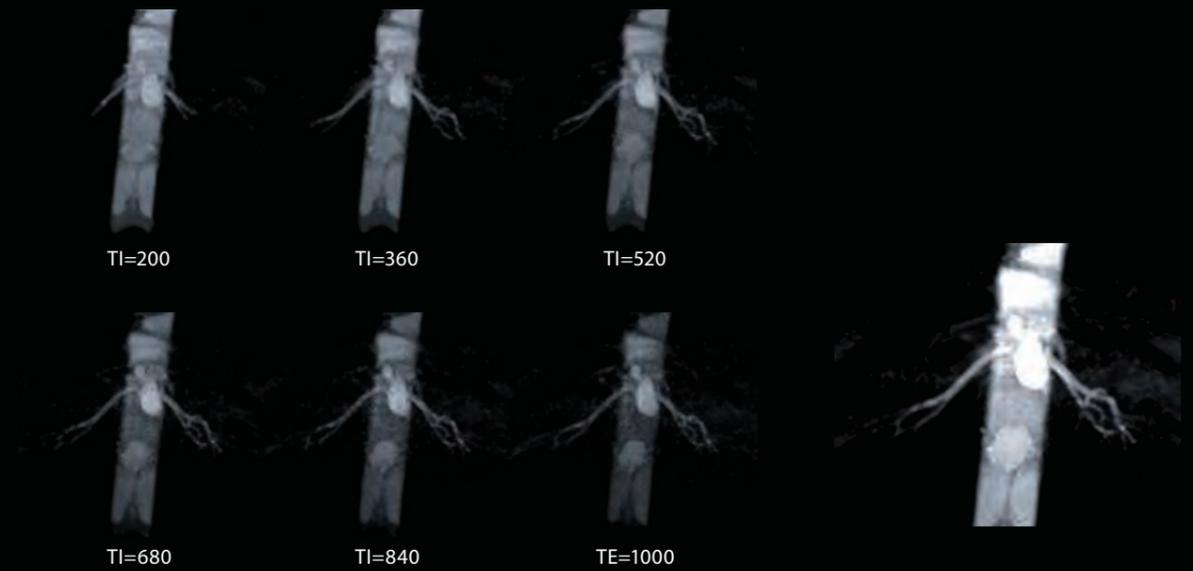
Time-SLIP portal vein



Time-SLIP renal arteries



mASTAR portal vein (6 phases in one coronal sequence)



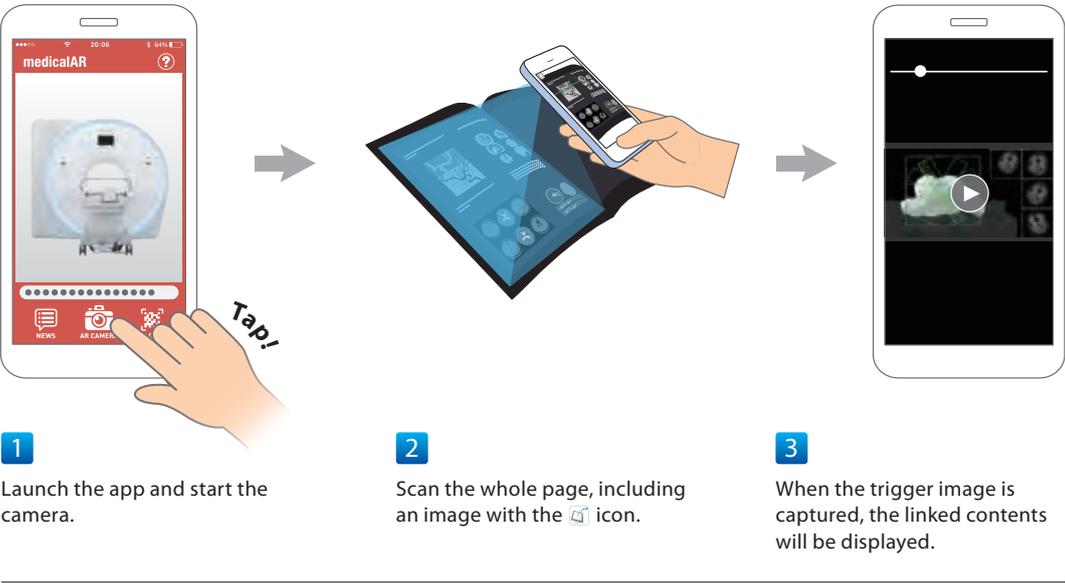
mASTAR renal arteries (6 phases in one axial sequence)

How to Use the medicalAR App

Images with the  icon can be viewed in motion.

Download the app by scanning the QR code or visit our website:

<https://global.medical.canon/about/medicalAR>



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