

# OVAL ECHELON



# The **New** **Shape** of MR

Echelon Oval is designed around the shape of the human body, allowing for an optimal patient experience with outstanding comfort, space, and efficiency.

The game-changing 74cm oval bore is the widest 1.5T MR system available. Enhanced patient accessibility combined with Hitachi's Workflow Integrated Technology (WIT), advanced imaging capabilities, and UltraPlus Customer Support, makes Echelon Oval an ideal solution for improved workflow, greater diagnostic confidence, and increased cost-efficiencies.

Echelon Oval, the innovation that's changing the shape of MR.

# Accessibility, Workflow & Clinical Capability



## 74cm Oval Bore (Widest 1.5T MR)

Provides a comfortable and spacious environment around the patient

## 7 Coil Plug-in Ports

Supports head-first or feet-first positioning for all imaging

## WIT Coils

Lightweight, multi-element design for high image quality, and easy positioning



## IV Pole

Deploys effortlessly when needed

## 3 Modes of Steering

Provides easy maneuverability and docking

## Widest 1.5T Patient Table (63cm)

Better patient accommodation and decreases anxiety for all patient types





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### WIT Monitor

Allows technologist to review and update patient information with ease

### Wireless Gating

Fast and simple connection verified with WIT monitor

### In Bore Lighting and Ventilation

Enhances patient experience

### Oval Drive RF Transmit

2 ch. 20 kw solid state transmitter

### Optical RF Transmission

Reduces noise and maximizes SNR

### A/D Conversion at Gantry

Reduces signal loss and maximizes SNR

### WIT Mobile Table

Minimizes moves for non-ambulatory and infirm patients

### 3 Position Armboards

Provides patient comfort and safety





## Every Patient. **Every Time.**

Hitachi has a long history of delivering patient-friendly systems that allow imaging practices to serve the broadest spectrum of patients. Echelon Oval carries on this Hitachi system tradition.

The 74cm oval bore is designed around the shape of the body, providing a comfortable and spacious environment for an optimal imaging experience. Echelon Oval is the widest 1.5T system available and delivers the most lateral freedom. Your anxious, claustrophobic, broad-shouldered, and bariatric patients will experience greater comfort and peace-of-mind. In turn, your imaging practice will decrease sedation costs, reduce rescans and improve throughput. **The unique oval bore design produces winning results for both patient and practice.**



**Geriatric**

Table lowers to 20" for easy accessibility for elderly or infirm patients.



**Pediatric**

Ample space allows for constant visual and physical contact with a loved one.



**Bariatric**

More space on the sides means larger patients are afforded greater comfort and accommodation.



**Breast**

Roomier where it matters most for greater comfort and less anxiety.

Every patient type will benefit from Echelon Oval's vast array of patient amenities.

**Critical Care**—Patients can more easily be visually observed and monitored by personnel with the oval bore

**Sports Medicine**—More comfortable positioning options for extremity imaging. Lateral anatomy is more closely imaged to iso-center

**Anxious**—Feet-first positioning puts the patient at ease, while the oval bore means the patients have more room on the sides so they do not feel restricted

**Oncology**—The oval bore and wide patient table provide needed comfort, while the vertical table motion makes for easy accessibility





# Workflow Efficiency with WIT

Hitachi is committed not only to patient comfort and outstanding clinical capabilities, but also to improving the overall performance of your imaging practice. Echelon Oval meets this commitment through a comprehensive suite of features known as WIT, or Workflow Integrated Technology. **Hitachi's WIT system optimizes the entire imaging process. From patient setup and positioning through scanning and image processing, WIT delivers the highest level of patient comfort and operator productivity.**

## WIT Mobile Table

The WIT Mobile Table delivers outstanding benefits to both patient and practice. Technologists can easily move the table to the patient rather than moving the patient to the table. This minimizes transfers for non-ambulatory and infirm patients. The ultra-wide WIT mobile table measures 63cm, providing comfort, capacity, and safety for large patients, and simplified patient positioning. The table mobility and extra width promote patient acclimation to alleviate anxiety. The large vertical range of motion provides easy patient accessibility, and the feet-first imaging capability further reduces patient anxiety.



The WIT Mobile Table provides a wide range of workflow and safety features.

## WIT Monitor

The WIT Monitor is located at the top of the gantry, allowing the technologist to review and adjust patient information with ease and efficiency, without leaving the patient. The operator can verify gating function right at the gantry. This is another way Echelon Oval improves workflow while decreasing patient anxiety.



Technologists can review and update patient information at the gantry.





## WIT Integrated RF Coil System

The WIT integrated coil system is a Hitachi technological advancement that improves all three elements of MR imaging: patient comfort, throughput, and clinical results. The integrated body/spine coil system resides within the table itself, delivering quick setup and optimized workflow. Anterior coils are immediately accessible, lightweight, and easy to position. And intelligent element selection chooses optimum coil elements, which not only aids in improving workflow, but also works to consistently produce the best image quality.

The signal from the coils is digitized (A/D conversion) right at the gantry to prevent signal loss, and is digitally transmitted via fiber optics to minimize noise. The result is the highest possible SNR.

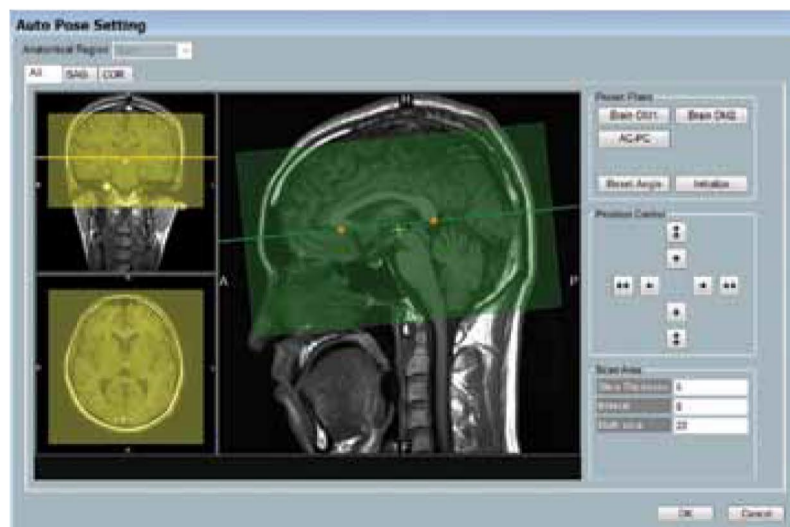


Technologists can easily change WIT coils' position for head-first or feet-first positioning.

## ORIGIN™ MR Operating Software with AutoPose™

Origin MR Operating Software optimizes every facet of imaging workflow with features including simultaneous scan/recon, ultra-fast acquisitions, motion compensation techniques, scan parameter guidance, interoperability, and specifically AutoPose.

AutoPose moves workflow forward by automatically determining and placing optimal scan slice locations based on the initial scanogram, saving the operator time and improving consistency of routine brain scans.



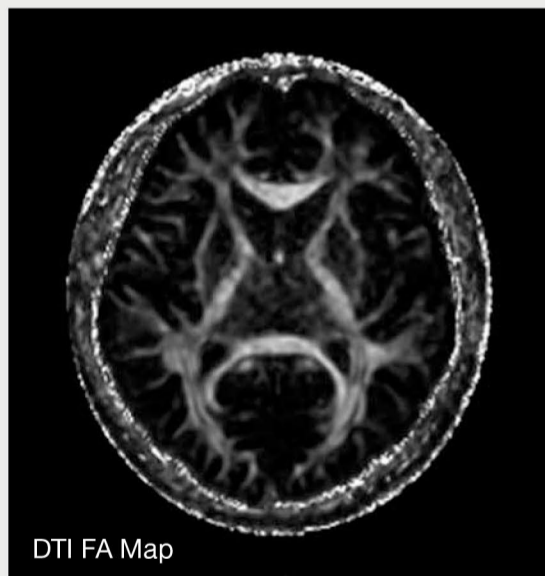
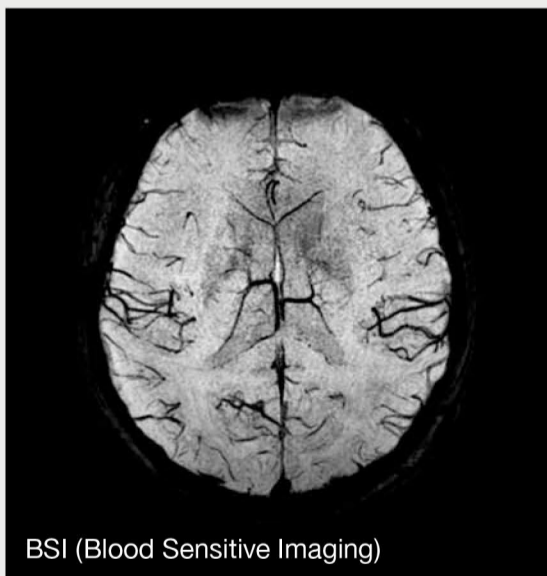
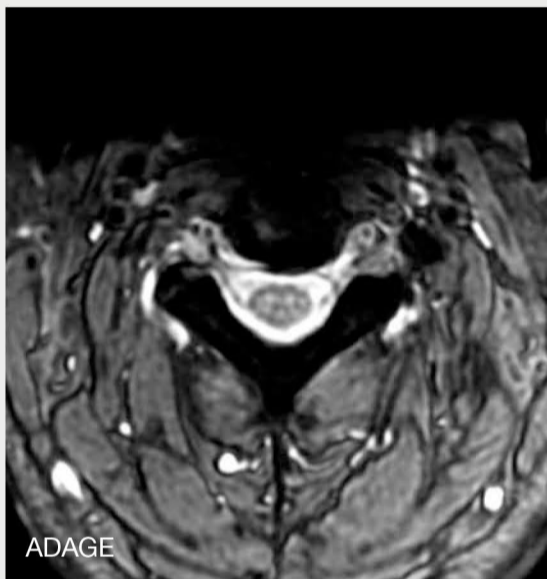
AutoPose saves time and provides consistent results.

# Diagnostic Confidence

Echelon Oval features a 1.5T imaging system that delivers the full spectrum of clinical capabilities, acquisition features, and post processing tools providing high quality, high-field whole-body imaging.

## Neuro Imaging

The powerful gradient system, sensitive RF coils, and comprehensive imaging features drive short scan times and high resolution for brain, head/neck, and spine imaging.

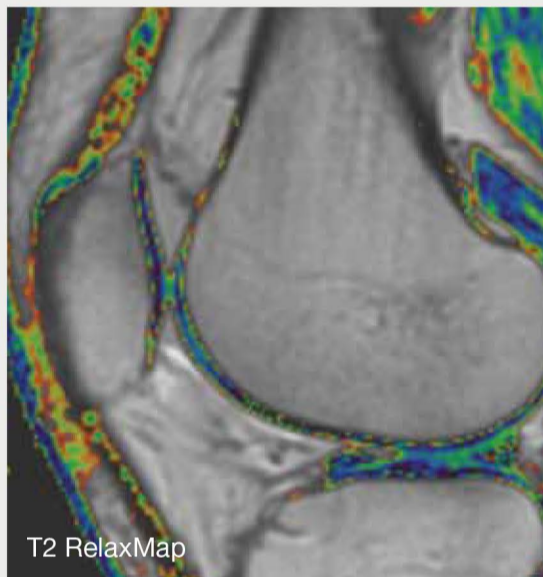


- ADAGE is designed for axial c-spine imaging with high gray/white matter contrast. It uses combinations of multiple echoes to create high contrast T2\* for improved CNR/SNR.
- Isotropic Imaging with isoFSE and 3D-GEIR produces images that can be reconstructed in arbitrary planes using the MPR feature with excellent image quality.
- BSI (Blood Sensitive Imaging) depicts veins, hemorrhage, and micro bleeds without contrast using a 3D multi-shot Gradient Echo EPI sequence. It provides fast T2\* weighted images that are sensitive to differences in magnetic susceptibility.
- Advanced neurological assessment is provided with DWI, DTI, Perfusion, and Spectroscopy.



## Orthopedic Imaging

Highly sensitive multi-channel coils promote high spatial resolution critical for orthopedic imaging, and the HOAST™ with Regional Shim feature for off-isocenter imaging delivers remarkable RF fat saturation.

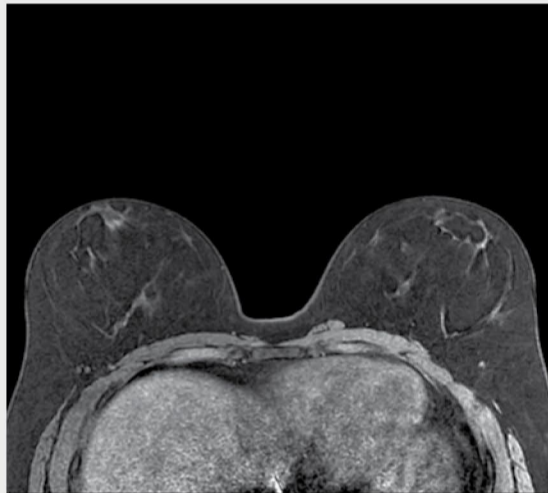


- Comprehensive uniform fat suppression is achieved with the choices of RF Fat Saturation (H-sinc and conventional pulses), FatSep and Water Excitation.
- Cartilage imaging excels using Water Excitation and BASG (Balanced SARGE) or RSSG (RF-Spoiled SARGE) 3D Gradient Echo sequences.
- T2 RelaxMap provides quantitative T2 imaging for cartilage assessment with quantification of actual T2 values within a morphological image. The T2 values are displayed in a color overlay which can depict subtle tissue properties and anomalies.
- Micro TE can be used to analyze cortical bone, surgical planning and for examining the interface of tendon, bone, and ligament using 2D multi-echo gradient echo to provide high contrast imaging of tissue with very short T2 values.

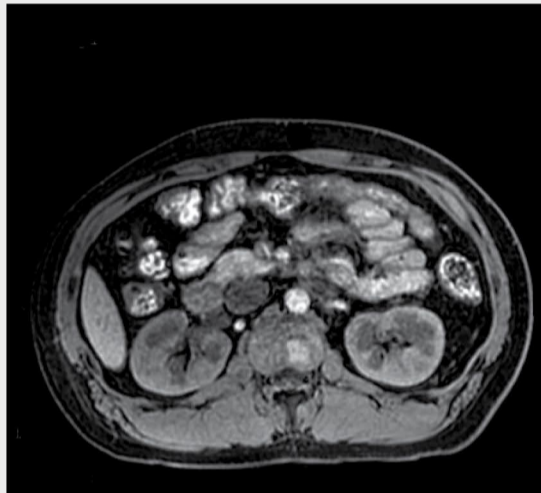


## Body & Breast Imaging

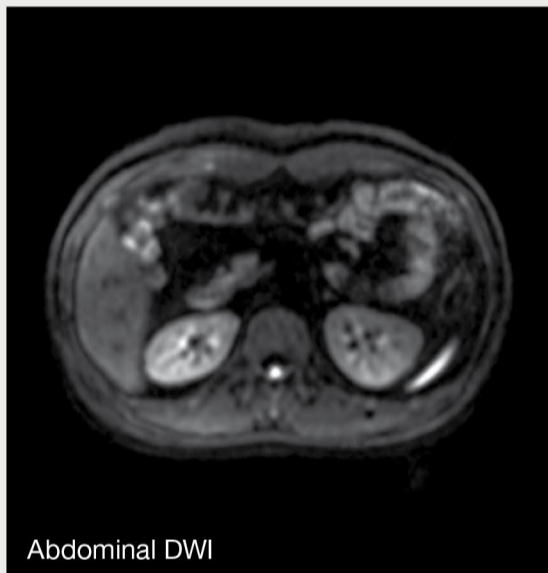
High SNR from the highly sensitive WIT coil technology is complemented by the fast, fat suppressed imaging sequences and Hitachi's all coil/all plane motion compensating RADAR™ technique. Hitachi's standard and user-customized 2D and 3D protocols for abdomen, pelvis, MRCP, and dynamic liver and breast imaging are ready for your Body MRI challenges.



TIGRE Axial Breast



FatSep



Abdominal DWI



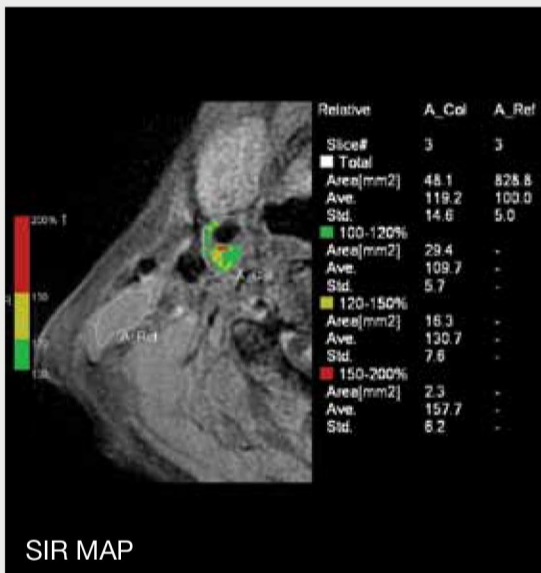
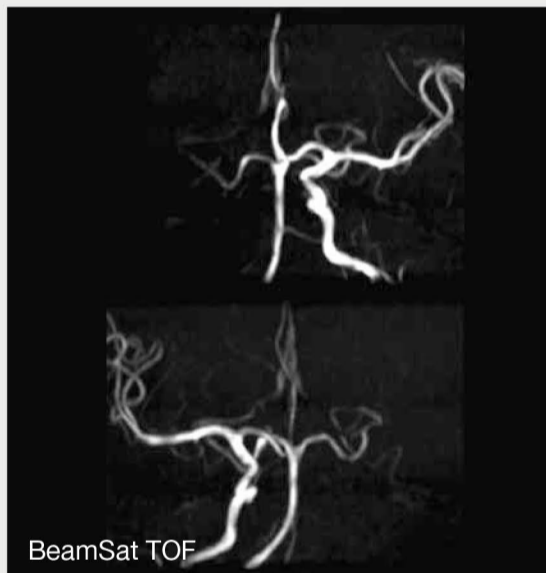
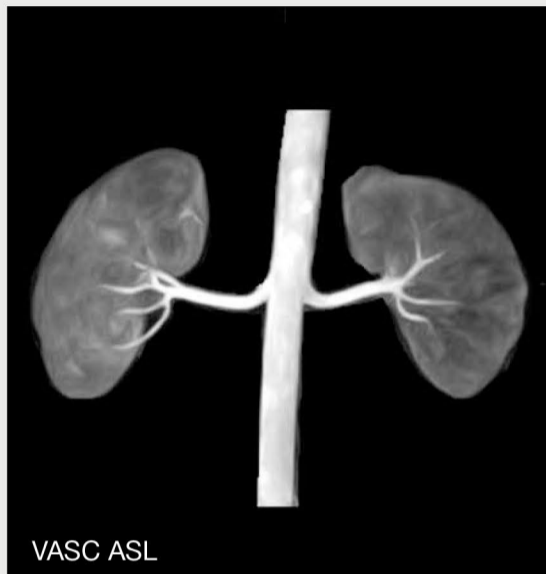
RADAR with RAPID T2 FSE

- TIGRE and TIGRE C provide for dynamic liver and breast imaging using 3D T1 gradient echo with RF fat saturation and RAPID parallel imaging.
- FatSep provides increased SNR and uniformity over large FOV imaging.
- Abdominal Diffusion Weighted Imaging (DWI) with user selectable b-value for enhanced lesion detection.
- The combined benefits of RADAR with RAPID provide compensation for motion and maintain short scan times.

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## Vascular Imaging

Conventional 2D and 3D TOF and advanced acquisition techniques such as Fluoro Triggered MRA (FLUTE™), VASC™ Non-Contrast MRA, and 3D vessel post-processing features provide the tools you need for Head-to-Toe vascular imaging.



- VASC Non contrast MRA, including VASC ASL and VASC FSE is used in cases complicated by renal insufficiency, employing Hitachi's VASC sequence, and netting excellent renal and peripheral vessel image quality without a bolus.
- BeamSat TOF allows users to selectively isolate flow signal with a cylindrical beam saturation pulse, which can localize sources of blood flow when depicting vascular anomalies.
- SIR Map (Signal Intensity Ratio Map) is used with RADAR SE (T1 weighted motion compensation) to evaluate arterial plaque. The result is displayed as a color overlay on the anatomic image. SIR Map of diseased arteries can provide insight into the components of arterial plaque, and may have application in the diagnosis and treatment monitoring of carotid artery stenosis.

# 99% Uptime Backed by 100% Customer Commitment

Hitachi's UltraPlus Customer Support Program delivers unmatched customer support that helps minimize the cost of ownership. From software upgrades to marketing support, from training to implementation, **Hitachi delivers comprehensive customer support at NO CHARGE**, making a significant and tangible impact on bottom line financial performance.

## Hitachi's UltraPlus Customer Support Program

Value-Add	Annual Facility Expenditure*	Cost to You**
On-site Applications Support	\$9,754	No Charge
Accreditation Support	\$5,353	No Charge
Software Upgrades	\$71,031	No Charge
Marketing Support	\$11,302	No Charge
After Hours Service	\$13,806	No Charge
<b>TOTAL</b>	<b>\$111,246</b>	<b>\$0</b>

\*Estimated annual costs, can vary per customer

\*\*For customers under warranty or covered by UltraPlus Customer Support Program

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## Accessibility. Workflow. Clinical Capability.

In today's competitive market, Echelon Oval delivers 1.5T diagnostic capabilities with significant bottom line benefits through greater patient accessibility, tangible cost efficiencies, optimized workflow, and increased throughput. This is how **Hitachi's Echelon Oval is changing the shape of MR.**



## **Hitachi Medical Systems America, Inc.**

1959 Summit Commerce Park  
Twinsburg, Ohio 44087 USA  
Tel: 330.425.1313 800.800.3106  
Fax: 330.425.1410  
[www.hitachimed.com](http://www.hitachimed.com)

## **Hitachi Medical Corporation**

4-14-1 Akihabara UDX  
Soto-Kanda, Chiyoda-ku  
Tokyo, 101-0021 Japan  
[www.hitachi-medical.co.jp](http://www.hitachi-medical.co.jp)

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Hitachi reserves the right to change specifications described herein without prior notice. This document provides general technical descriptions of both optional and standard features.



800-356-3388  
978-374-6371  
Fax – 978-521-2214

49 Newark Street  
Haverhill, MA 01832  
[sales@associatedxray.com](mailto:sales@associatedxray.com)  
[www.associatedxray.com](http://www.associatedxray.com)