High-Field, Bore-Less MR

Comfortably meeting your MRI challenges
High-Field Imaging Excellence

“The Hitachi Oasis has essentially made our Open MRI services limitless. Patients are able to tolerate its wide open design very well. The image quality is exceptional. Our radiologists have expressed that, in some cases, the image quality exceeds even that of our 1.5T conventional MRI system.”

Sandra Holman
Administrative Director
Frye Regional Medical Center

“In the first seven months working with the scanner, we have seen a 19% incremental increase in patient volume. The OASIS now handles the bread-and-butter outpatient exams and it can also handle patients who are not candidates for either of the closed-bore 1.5T or 3T magnets at SLU Hospital.”

Jeffrey Dossett
Director of Imaging Services
St. Louis University Hospital
Neuro – Brain
Vital pulse sequences, acquisition features and post processing tools for high-quality imaging of the brain.

Neuro – Spine
Oasis’ standard CTL coil sensitivity and uniformity complements spine imaging sequences and tools.

MSK – Upper
High SNR potential from Oasis’ vertical field and iso-center positioning promotes high spatial resolution critical for orthopedic imaging.

MSK – Lower
The ability to move the patient table laterally and perform imaging on iso-center gives Oasis inherent advantages in comfort and image quality.

Body
High SNR from the 1.2T magnet and Zenith™ RF coil technology is complemented by 2D and 3D protocols for abdomen, pelvis, MRCP and liver.

Breast
When coupled with the 8-channel Breast coil, Oasis’ suite of Breast imaging features delivers excellent image quality and broad capability.

Vascular
Conventional 2D/3D TOF and advanced acquisition techniques such as Time Resolved MRA (TRAQ™) and 3D vessel post-processing are included.

Cardiac
Basic cardiac imaging is supported by standard dark blood and bright blood sequences and the 6-channel Body coil.

Pediatric
With its wide open design and RADAR™ motion compensation, Oasis provides the ideal platform for comfortable pediatric imaging.

Bariatric
Expansive room for the patient, a 660 lb.- capable table, and the largest flex coil in the industry accommodate bariatric cases other systems can’t handle.
• RADAR minimizes motion and flow effects. Complete brain studies can be done with RADAR

• RAPID™ parallel imaging technique, enables short scan times

• High performance gradients drive fast, high resolution studies

• HOAST™ promotes fat saturation uniformity for small and large FOV

• Diffusion Weighted SS-EPI with seamless ADC map and isotropic DW image creation

• Zenith RF coils drive high resolution imaging with high SNR
RADAR assures a diagnostic result even when there is extreme patient motion.

RAPID and Driven Equilibrium promote fast scans with high SNR.

Thin slices and high resolution with short scan times.

HOAST delivers excellent fat saturation.

OASIS BRAIN: Large field of view, high resolution and high signal uniformity with Oasis NeuroVascular Coil.

DWI ADC

Resolution: <0.6mm
Slice: 1.0mm
Scan time: 3:40

Resolution: <1mm
Slice: 3.0mm
Scan time: 3:45
• RADAR minimizes motion and flow effects. Complete spine studies can be done with RADAR

• RAPID parallel imaging technique enables short scan times

• High performance gradients drive fast, high resolution studies

• primeFSE reduces susceptibility artifacts from prostheses

• HOAST promotes fat saturation uniformity for small and large FOV

• BASG delivers excellent nerve root delineation

• Zenith RF coils drive high resolution imaging
Neuro - Spine

Spin Echo - T1W
Complete study can be done using RADAR to minimize artifacts from voluntary or involuntary motion

Driven Equilibrium keeps scan time low for T2 weighting

Fast gradients deliver T1 weighting in a short scan time

PrimeFSE minimizes susceptibility artifacts from prostheses

Myelogram at 400ms TE and 80ETL

HOAST promotes excellent large field of view fat sat saturation

Nerve root detail with BASG sequence
• Isocenter positioning enabled with lateral movement and wide patient table

• Dedicated RAPID orthopedic imaging coils for high SNR and signal uniformity

• HOAST and regional shimming deliver outstanding extremity RF fat saturation

• RADAR motion compensation

• Driven Equilibrium FSE enables heavy T2 weighting with fast scan time
Oasis’ extra-wide patient table can move laterally to position anatomy of interest on iso-center. The result is high image quality with the patient maintaining a comfortable position.

Oasis’ powerful gradients promote high resolution imaging with fast scan times.

Excellent cartilage depiction with RSSG or BASG and water excitation

Driven Equilibrium for PD weighting with fat saturation
- Isocenter positioning enabled with lateral movement and wide patient table
- Dedicated RAPID orthopedic imaging coils for high SNR and signal uniformity
- HOAST and regional shimming deliver outstanding extremity RF fat saturation
- Water Excitation with 3D Gradient Echo sequences for cartilage imaging
- primeFSE reduces susceptibility artifacts from prostheses
- RADAR motion compensation
- Driven Equilibrium FSE enables heavy T2 weighting with fast scan time
Oasis’ extra-wide patient table can move laterally to position anatomy of interest on iso-center. The result is high image quality with the patient maintaining a comfortable position.

Oasis’ powerful gradients promote high resolution imaging with fast scan times.

primeFSE provides for imaging in the presence of prostheses.

Excellent cartilage depiction with RSSG and water excitation.

Driven Equilibrium fast IR (FIR) with fast scan time.
• TIGRE™ fat suppressed 3D dynamic imaging for thin slice and complete organ coverage

• RAPID reduces breath hold and study times. RAPID 3D accelerates volume acquisitions for dynamic imaging

• RADAR for comprehensive free breathing abdominal series

• HOAST optimizes field uniformity for excellent image quality and fat suppression

• In-phase/out-of-phase results in one breath hold

• Large to small FOV capability promoted by sensitive RF Coils
Excellent uniformity over large fields of view

Free breathing kidneys with RADAR

Dual echo gradient echo provides in-phase and out-of-phase images in a single, 23-second breath hold

MRCP with heavy T2 weighting and MIP processing

Excellent soft tissue depiction with water excitation

TIGRE Gradient Echo Sequence for T1 weighting with fat saturation for dynamic liver maging. Fast, 18-second breath hold
• TIGRE for dynamic studies meets ACR guidelines

• RAPID 3D further accelerates volume acquisitions

• Sensitive Breast RF Coil delivers bilateral, high SNR coverage and patient comfort

• Workflow-focused image processing

• Automatic position correction and subtraction

• DICOM exportable time/intensity curves

• Compatibility with CAD
Women’s Health

Dynamic Tissue Intensity analysis. Images can be sent by DICOM to a separate CAD workstation

8-channel bi-lateral breast coil provides for high SNR and RAPID parallel imaging

Driven Equilibrium T2 Weighting

Maximum Intensity Projection

RADAR reduces motion artifacts

Uniform fat saturation with HOAST

High resolution pelvic imaging

Dynamic acquisition in full compliance with ACR Guidelines:
- Sub-millimeter in-plane resolution
- <3mm slice thickness
- Bilateral imaging
- Repeat series in 3 min or less (typically <90 sec)
• 2D and 3D TOF for intra-cranial and extra-cranial imaging

• FLUTE™ ensures arterial phase capture

• TPEAKS™ centric k-space filling

• TRAQ MRA depicts blood flow dynamics

• PVA with multi-coil connections, auto table movement, and large FOV

• VASC™ non-contrast MRA for renal, carotid and peripheral applications

• Dedicated RF Coils provide outstanding coverage and uniformity

• Volume Rendering and auto MIP preview
FLUTE, fluoro triggering, and TPEAKS ensure excellent depiction of the arterial phase.

Auto Table Step enables multi-station runoff studies. Image stitching creates a single image for archive or export.

Sensitive Zenith RF coils provide for high SNR and uniformity and large field of view.

Volume rendering helps visualize vascular abnormalities.

Sensitive Zenith coils provide detail in lower vasculature.
• Flexible, workflow-focused tools to assess cardiac morphology and function

• Double and triple inversion recovery breath hold acquisitions

• Navigator echo free-breathing scan

• RAPID parallel imaging increases temporal resolution and image quality

• Multi-slice, multi-phase cine

• Viability assessment benefits from powerful gradients and sensitive RF Coils
Cardiac Viability assessment with dynamic tissue intensity

Multi-slice/multi-phase cine for functional assessment

Myocardium assessment with delayed enhancement

Viability assessment with dynamic tissue intensity
• Imaging free of ionizing radiation – a safer alternative for pediatric patients

• Constant parent-child contact dramatically improves patient compliance

• RADAR motion free imaging eliminates repeat scans and improves image quality

• Fast scanning techniques keep study time minimal

• Halo coil delivers quality imaging and an all-around view
Pediatric Oasis' RADAR feature delivers diagnostic results even with non-compliant patients

Echo Planar sequence for DW weighting with ADC

White matter suppression with primeFIR

High quality pediatric head imaging with the solenoid “halo” coil

Out of phase Gradient Echo

Aortic arch

Small FOV – High resolution MSK imaging

High SNR Body Imaging
• Oasis’ coil offerings accommodate larger patients while maintaining high SNR

• NATURAL™ provides signal intensity compensation necessary for larger patients

• Optimal image quality with iso-center positioning for even the largest of patients

• 82 cm wide patient table with 660 lb. capacity

• Extra large flexible body coil for patients at the extreme of the demographic spectrum

• Integrated transmit/receive coil for good imaging results if no other coil is appropriate
NATURAL provides signal compensation necessary in spine studies for larger patients.

Driven Equilibrium combines with prime-FIR to keep scan time low.

High quality body imaging with the Extra Large flex body coil.

MSK imaging of large patients is less challenging with Oasis due to the wide open design, large table and iso-center positioning.
Image Annotation Guide
Locations and meaning of annotation text used with Oasis images

Patient Name
Sex/Age/Weight
Slice#/Total Slices

Site Name
Date/Time

Phase Encoding Direction
Scan Time
TR/TE
Flip Angle
TI Time
FOV/Slice Thickness/Interval
Freq x Phase/RAPI/NSA/Recon Matrix
Seq. Type/Shot #/Echo Factor/Fat Sat
b-factor

Contrast

Sequence Name
Slice Position

Window
Level
System Name
Providing the images you need and the comfort your patients deserve

Critical Care

Pediatric

Anxious

Open Access

Bariatric