

The William W. Backus
Hospital

David A. Whitehead
PRESIDENT AND
CHIEF EXECUTIVE OFFICER

RECEIVED

2009 JUL 14 P 3:30

CONNECTICUT OFFICE OF
HEALTH CARE ACCESS

July 14, 2009

Cristine A. Vogel
Commissioner
State of Connecticut
Office of Health Care Access
410 Capitol Avenue
P.O. Box 340308
Hartford, CT 06134-0308

Dear Commissioner Vogel:

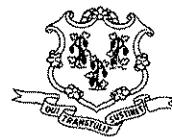
Enclosed please find an original and five (5) copies of our Certificate of Need Letter of Intent concerning the Hospital's proposal to establish outpatient MRI imaging services through the operation of a 1.2 Tesla Oasis Boreless High Field Open MRI unit to be installed at a fixed site location within the Backus Outpatient Care Center at 113 Salem Turnpike in Norwich, CT.

The project cost associated with this proposal is \$2,014,493.

If you have any questions concerning this submittal, please contact me at 860-889-8331, extension 2722 or at dwhitehead@wwbh.org. As always, I look forward to working with your staff on this submission.

Sincerely,

David A. Whitehead
President and CEO



State of Connecticut

Office of Health Care Access

Letter of Intent Form

Form 2030

All Applicants involved with the proposal must be listed for identification purposes. A proposal's Letter of Intent (LOI) form must be submitted prior to a Certificate of Need application submission to OHCA by the Applicant(s), pursuant to Sections 19a-638 and 19a-639 of the Connecticut General Statutes and Section 19a-643-79 of OHCA's Regulations. Please complete and submit Form 2030 to the Commissioner of the Office of Health Care Access, 410 Capitol Avenue, MS# 13HCA, P.O. Box 340308, Hartford, Connecticut 06134-0308.

SECTION I. APPLICANT INFORMATION

If this proposal has more than two Applicants, please attach a separate sheet, supplying the same information for each additional Applicant in the format presented in the following table.

	Applicant One	Applicant Two
Full legal name	The William W. Backus Hospital	
Doing Business As	Same	
Name of Parent Corporation	Backus Corporation	
Applicant's Mailing Address, if Post Office (PO) Box, include a street mailing address for Certified Mail (Zip Code Required)	326 Washington Street Norwich, CT 06360	
Identify Applicant Status: P for Profit or NP for Nonprofit	P	
Does the Applicant have Tax Exempt Status?	Yes	Yes No
Contact Person, including Title/Position: This Individual will be the Applicant Designee to receive all correspondence in this matter.	David Whitehead President & CEO	
Contact Person's Mailing Address, if PO Box, include a street mailing address for Certified Mail (Zip Code Required)	326 Washington Street Norwich, Ct 06360	
Contact Person Telephone Number	860-889-8331, x2722	
Contact Person Fax Number	860-892-2728	
Contact Person e-mail Address	dwhitehead@wwbh.org	

SECTION II. GENERAL APPLICATION INFORMATION

a. Project Title: **Establishment of Open MRI Services at the Backus Outpatient Care Center**

b. Project Proposal: **The William W. Backus Hospital proposes to establish Open MRI imaging services focused on meeting the needs of service area geriatric, pediatric, claustrophobic and obese populations through the operation of a 1.2 Tesla Oasis Boreless High Field Open MRI unit to be installed at a fixed site location within the Backus Outpatient Care Center at 113 Salem Turnpike in Norwich, CT.**

c. Type of Project/Proposal, please check all that apply:

Inpatient Service(s):

Medical/Surgical Cardiac Pediatric Maternity

Trauma Center Transplantation Programs

Rehabilitation (specify type) _____

Behavioral Health (Psychiatric and/or Substance Abuse Services)

Other Inpatient (specify) _____

Outpatient Service(s):

Ambulatory Surgery Center Primary Care Oncology

New Hospital Satellite Facility Emergency Urgent Care

Rehabilitation (specify type) _____ Central Services Facility

Behavioral Health (Psychiatric and/or Substance Abuse Services)

X Other Outpatient (specify) Diagnostic Imaging

Imaging:

X MRI CT Scanner PET Scanner

CT Simulator PET/CT Scanner Linear Accelerator

Cineangiography Equipment New Technology: _____

Non-Clinical:

Facility Development Non-Medical Equipment Renovations

Change in Ownership or Control Land and/or Building Acquisitions

Organizational Structure (Mergers, Acquisitions, & Affiliations)

Other Non-Clinical: _____

d. Does the proposal include a Change in Facility (F), Service (S)/Function (Fnc) pursuant to Section 19a-638, C.G.S.?

Yes No

If you checked "Yes" above, please check the appropriate box below:

New (F, S, Fnc) Additional (F, S, Fnc) Replacement
 Expansion (F, S, Fnc) Relocation Termination of Service
 Reduction Change in Ownership/Control

e. Will the Capital Expenditure/Cost of the proposal exceed \$3,000,000, pursuant to Section 19a-639, C.G.S.?

Yes No

If you checked "Yes" above, please check the boxes below, as appropriate:

New equipment acquisition and operation
 Replacement equipment with disposal of existing equipment
 Major medical equipment
 Change in ownership or control

f. Location of proposal, identifying Street Address, Town and Zip Code:

113 Salem Turnpike, Norwich, CT 06360

g. List each town this project is intended to serve:

Bozrah, Canterbury, Colchester, Franklin, Griswold, Lebanon, Ledyard, Lisbon, Montville/Uncasville, North Stonington, Norwich, Plainfield, Preston, Salem, Scotland, Sprague, Sterling and Voluntown.

h. Estimated starting date for the project: **December 2009.**

i. If the proposal includes change in the number of beds provide the following information:

Type	Existing Staffed	Existing Licensed	Proposed Increase or (Decrease)	Proposed Total Licensed

SECTION III. ESTIMATED CAPITAL EXPENDITURE/COST INFORMATION

- a. Estimated Total Project Expenditure/Cost: **\$2,014,493**
- b. Please provide the following tentative capital expenditure/costs related to the proposal:

Major Medical Equipment Purchases*	
Medical Equipment Purchases*	
Non-Medical Equipment Purchases*	\$15,000
Land/Building Purchases	
Construction/Renovation	\$410,493
Other (Non-Construction) Specify:	
Total Capital Expenditure	\$425,493
Major Medical Equipment – Fair Market Value of Leases Medical Equipment – Fair Market Value of Leases	\$1,589,000
Non-Medical Equipment – Fair Market Value of Leases*	
Fair Market Value of Space – Capital Leases Only	
Total Capital Cost	\$1,589,000
Total Project Cost	\$2,014,493
Capitalized Financing Costs (Informational Purpose Only)	

- Provide an itemized list of all medical and non-medical equipment to be purchased and leased.

MRI compatible stretcher	\$2400
IV starting chair	1500
IV cart	2100
PCS Gear and license	2100
Computer, monitor & printer	2000
Requisition printer	1600
Office Supplies	2000
Chairs (3)	1300
Total	\$15,000

- c. If the proposal has a total capital expenditure/cost exceeding \$20,000,000 or if the proposal is for major medical equipment exceeding \$3,000,000, you may request a Waiver of Public Hearing pursuant to Section 19a-643-45 of OHCA's Regulations? Please check your preference.

Yes No N/A

1. If you checked "Yes" above: please check the appropriate box below indicating the basis of the projects eligibility for a waiver of hearing

Energy Conservation Health, Fire, Building and Life Safety Code
 Non Substantive

2. Provide supporting documentation from elected town officials (i.e. letter from Mayor's Office).

d. Major Medical and/or Imaging Equipment Acquisition:

Equipment Type	Name	Model	Number of Units	Cost per unit
MRI	Hitachi	1.2 Tesla Oasis Boreless Open Field	1	\$1,589,000

Note: Provide a copy of the vendor contract or quotation for each major medical/imaging equipment.

e. Type of financing or funding source (more than one can be checked):

Applicant's Equity Capital Lease Conventional Loan
 Charitable Contributions Operating Lease CHEFA Financing
 Funded Depreciation Grant Funding
 Other (specify) _____

SECTION IV. PROJECT DESCRIPTION

The William W. Backus Hospital currently provides Magnetic Resonance Imaging (MRI) services for the patient population within its service area at the Hospital's main campus located at 326 Washington Street, Norwich, CT and at the Backus Health Center located at 163 Broadway, Colchester, CT. The Hospital's DPH License is attached. The current population served is those individuals within the Hospital's service area who seek MRI services.

The Hospital proposes to provide high field open MRI services at the Backus Outpatient Care Center located at 113 Salem Turnpike in Norwich, CT. This satellite location is within the Hospital's primary service area, approximately 3 miles from the Hospital's main campus. Currently, there is no other truly open high field MRI in the Hospital's service area. The addition of this technology would better serve the geriatric, pediatric, claustrophobic, and obese populations in the Hospital's service area. This target population would be further served by the physical layout of the Backus Outpatient Care Center in Norwich, CT given its single floor orientation, ease of accessibility and parking configuration. The William W. Backus Hospital will be responsible for the provision of the proposed service through a purchased service agreement with Alliance Imaging.

Currently, The William W. Backus Hospital operates a fixed site 1.5 Tesla Avanto MRI unit (Docket Number 07-31070-WVR) and a mobile 1.5 Tesla Avanto MRI unit (Docket Number 08-31225-WVR). Within the Hospital's service area there is only one other provider of MRI services, Neurology Associates, which operates a 1.5 Tesla Avanto MRI unit (Docket Number 06-30674-CON). This proposal will improve access to magnetic

resonance imaging for the bariatric, pediatric, geriatric, and claustrophobic patients in the hospital's service area given the open high field configuration of the proposed equipment.

The payers of these services will be consistent with the current payer mix for The William W. Backus Hospital:

YTD Gross Revenue by Payer Class 12/31/08:

Medicare	39.2%
Medicaid/Town	13.4%
Blue Cross	20.6%
Commercial	2.9%
HMO/PPO	15.5%
Self-Pay	3.5%
All Other	<u>4.9%</u>
	100.0%

AFFIDAVIT

To be completed by each Applicant

Applicant: **The William W. Backus Hospital**

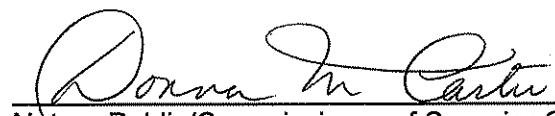
Project Title: **Establishment of MRI Services at the Backus Outpatient Care Center in Norwich, CT**

I, David A. Whitehead, President and CEO of The William W. Backus Hospital being duly sworn, depose and state that the information provided in this CON Letter of Intent (Form 2030) is true and accurate to the best of my knowledge, and that The William W. Backus Hospital complies with the appropriate and applicable criteria as set forth in the Sections 19a-630, 19a-637, 19a-638, 19a-639, 19a-486 and/or 4-181 of the Connecticut General Statutes.


Signature

07/18/09
Date

Subscribed and sworn to before me on July 14, 2009


Donna M. Carter
Notary Public/Commissioner of Superior Court

My commission expires: September 30, 2010

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07/14/09
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2009
JULY 14 2009
OFFICE OF
CONNECTICUT
HEALTH CARE
AGENCIES

HITACHI MEDICAL SYSTEMS AMERICA, INC.
1959 Summit Commerce Park, Twinsburg, Ohio 44087-2371
Tel: 330.425.1313 Fax: 330.425.1410

Quotation Number: MG1135
Revision Number: 0
Quotation Date: 02/25/2009

HITACHI
Inspire the Next

HMSA Quotation for:

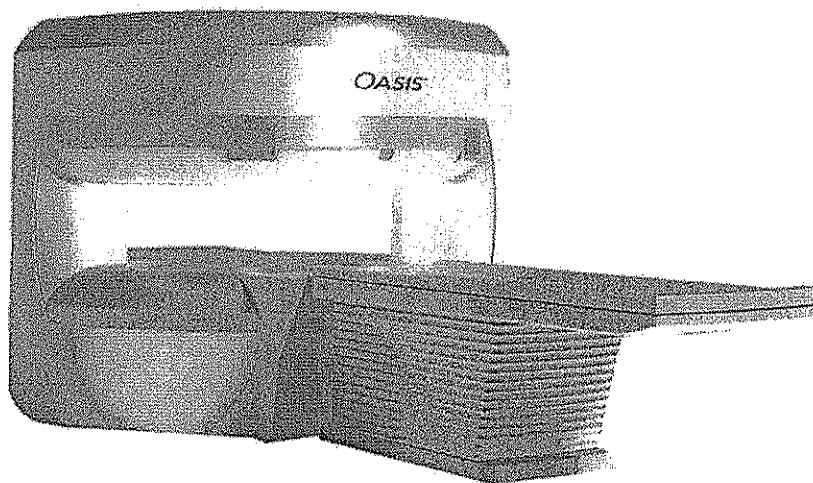
William W Backus Hospital
326 Washington St
Norwich, CT 06360

This quotation constitutes Hitachi Medical Systems America, Inc.'s offer to sell the products described herein. Purchaser's agreement to be bound by this offer shall be indicating acceptance of the Terms and Conditions of Sale printed on the reverse side of this page.

This agreement shall not bind Hitachi Medical Systems America, Inc. until it has been countersigned by an authorized representative in its corporate offices in Twinsburg, Ohio.

This Quotation is valid: 45 Days
Quote Expires: 04/11/2009
Sales Representative: Michael Germano
Phone: (330) 425-1313 x4950

OASIS 1.2T HIGH PERFORMANCE OPEN MRI



Customer Acceptance

By: _____ (signature)
Name/Title: _____
Date: _____

HMSA is currently scheduling systems for delivery a minimum of 120 days after satisfaction of any contingencies contained in a signed order that has been received and accepted by the President of HMSA.

Hitachi Medical Systems America, Inc.

Submitted by: _____ Date: _____
Accepted: _____ Date: _____

William W Backus Hospital

System:

Qty	Description	List Price	Customer Price
1	OASIS 1.2T HIGH PERFORMANCE OPEN MRI	2,350,000	1,589,000

Included:

Qty	Description	List Price	Customer Price
1	OASIS WORKFLOW PLUS	24,000	INCLUDED
1	OASIS RAPID Multi Array Breast Coil	43,750	INCLUDED
1	OASIS RAPID Multi Array Wrist Coil	27,500	INCLUDED
<i>System Package:</i>			\$1,589,000
<i>Invoice Total:</i>			\$1,589,000

William W Backus Hospital

STANDARD QUOTATION TERMS AND CONDITIONS

1. Refer to reverse side of Page 1 of this quotation form for complete terms and conditions.
2. Quotation is valid for 45 days from the date of issue.
3. Customer is responsible for providing all site preparation (i.e., RF shielding, electrical power, support structure, etc.) necessary for installation of the equipment.
4. Oasis system includes monitoring electronics and heat exchanger for system cooling. An optional chiller is available based on specific site needs.
5. While HMA will use its best effort to deliver all purchased options with the system, Purchaser agrees that availability, or lack thereof, of a specific option will not hold up acceptance or any progress payments on the remainder of the system.
6. The customer is responsible for its compliance with any applicable local or state laws and regulations that may be applicable to the purchase and/or installation of the equipment quoted herein.
7. The price as quoted is only valid if the attached Service Maintenance Agreement is signed at the time of equipment purchase. The SMA must be for a full five years after any applicable system warranty expires.

MODIFICATIONS/ADDITIONS TO STANDARD TERMS AND CONDITIONS:

8. Payment Terms:
 - a. \$100,000 is due with the signed order
 - b. Balance equaling 25% is due 90 days prior to shipment
 - c. An Additional 65% due upon delivery and before installation
 - d. 10% is due upon completion of installation and before first clinical use
9. Prices are F.O.B. Port of Entry; Freight and Insurance to site will be prepaid and invoiced separately.
10. Customer is responsible for rigging.

NON-DISCLOSURE STATEMENT

THE CONTENTS OF THIS QUOTATION SHALL NOT BE DISCLOSED TO ANYONE EXCEPT TO EMPLOYEES OF CUSTOMER WITH A LEGITIMATE NEED TO KNOW SUCH INFORMATION WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN CONSENT OF HMA.

LASER IMAGER DISCLOSURE

ANY LASER IMAGER TO BE CONNECTED TO THIS UNIT MUST BE CONFIGURED WITH A DICOM PRINT CONNECTION (REQUIRES DICOM 3.0 OPTION) AND APPROPRIATE ADDITIONAL MEMORY. LASER IMAGER COMPATIBILITY IS SUBJECT TO HMA PRIOR APPROVAL.

OASIS OPERATOR TRAINING

William W Backus Hospital

1. On-Site Applications Training

Following system installation, on-site application training for up to three technologists will be provided for a one week period (5 days, from 8:00 a.m. to 5:00 p.m. including travel time) and will cover principles of MR, system operation, and imaging techniques.

- Overview of system configuration
- Review of MR principles of operation and imaging techniques
- System operation, scanning procedures, image analysis and data management
- Patient management and safety procedures
- System performance verification and testing, using standard clinical sequences and phantoms.

This on-site applications training provides Category A ECE credits for ARRT registered technologists.

2. Follow-up Applications Training

Follow-up applications training visits will be provided during the system's warranty period. The first follow-up application visit would occur within eight weeks after initial training. The follow-up applications will provide additional system training along with advanced applications such as MRA refinements, cardiac imaging and site specific special applications. Additional visits throughout the warranty period will be scheduled at the user's request.

3. Applications Telephone Support Line

An Application telephone support line will provide continuous application support for the user on an as needed basis. The support line is available for users to obtain rapid responses to critical questions concerning system operation when patient studies are currently in process. The applications telephone support line is available Monday through Friday, 8:00 a.m. to 9:00 p.m. Eastern Standard Time excluding Weekends and HMSC Holidays.

OASIS MARKETING PLANNER

The OASIS Customer Marketing Planner provides suggestions and guidelines when marketing your OASIS to the local community, referring physicians and patients. Our guidelines are designed to help you achieve the best possible marketing results.

The OASIS Marketing Planner includes:

Some of the items include guidelines and suggestions on how to develop a marketing plan

Marketing to the Community:

- Sample news release

Marketing to the Referring Physician:

- Sample announcement letter
- Sample press releases to introduce new coils
- Clinical brochure for referring physicians

Marketing to the Patient:

- What is MRI brochure
- Patient information video

Sample OASIS product and clinical image photography

William W Backus Hospital

Service and Warranty

1. Prices include installation and 12 month warranty including Preventative Maintenance and all parts and labor.
2. The HMSA warranty will begin upon the completion of installation.
3. During the warranty period, HMSA service coverage hours will be 8:00 a.m. to 9:00 p.m., Monday through Friday. Preventative Maintenance can be scheduled during these hours allowing completion by 9:00 p.m.
4. Should equipment not provide 99% uptime during the warranty period coverage hours as defined above over a three (3) month period, then HMSA will extend the term warranty period by one (1) month for each quarter below the 99% guarantee level.

William W Backus Hospital

Product	Description
OASIS	OASIS 1.2T HIGH PERFORMANCE OPEN MRI

You've Found the OASIS. Expansive, Advanced Magnetic Resonance Imaging.

For You and Hitachi, It's About the Patient. Day in. Day out. High throughput diagnostic performance with uncompromised patient comfort.

OASIS brings high speed gradients, multi-channel RF technology and unmatched Zenith™ RF Coils to the only truly open architecture high-performance systems ever installed-Hitachi Systems.

This powerful 1.2T vertical field MRI delivers image quality for today's high-field applications. Combines uncompromised MR imaging with Hitachi's legendary reliability and responsive service. And offers these advancements on the established Hitachi easy-to-learn and use platform.

Patient comfort. Diagnostic confidence. And investment value. The OASIS ownership opportunity is a powerful way to position your imaging abilities as the best in patient care.

Unique Oasis features:

- PACT™ - Patient Active Comfort Technology
- 1.2T Hitachi High Field Superconducting Magnet
- HOAST™ - Higher Order Active Shimming Technology
- High Output Gradient System
- Zenith™ Radiofrequency System and Zenith Coils
- Vertex™ Computer System
- Origin™ MR Operating System
- Clinical Imaging Suites - Neuro, Ortho, Body, Vascular
- Hitachi Customer Support

PACT™ - Patient Active Comfort Technology

Like you, the Hitachi focus is on the patient. Our mastery of patient-focused MR imaging is demonstrated in the PACT feature, delivering patient comfort and operator convenience/benefits in concert with diagnostic confidence. The Hitachi-exclusive PACT feature set includes:

- Unobstructed view offered by our truly Open MRI design and 30 degree rotated table - magnet alignment - patients will always have a clear lateral view
- Patient area lighting to further reduce anxiety
- SoftSound™ Gradient Technology reduces gradient noise without compromising clinical performance
- 500 LBS Capacity, 82cm wide table with 20cm lateral (in bore), 222cm longitudinal and 40cm vertical motor driven movement control (lowers to 51cm for easy wheelchair transfer)
- Multiple simultaneous coil connections to minimize setup time
- Constant two-way communication system reduces patient anxiety
- Operator alert (patient initiated) brings attention to the patient even without speaking

Oasis also features a full complement of custom pads and straps to promote patient comfort and consistent image quality, with a wide range of patients and body habitus'.

The quadrature T/R Body coil provides the basic transmit capability for the system, as well as offering an alternative receiver coil when surface and volumetric coils cannot be employed.

The benefits that flow from PACT and the other Oasis patient management features include minimized patient non-compliance, access to MRI for patients who cannot be managed in other scanners, and high patient volumes.

William W Backus Hospital

Product	Description
OASIS	OASIS 1.2T HIGH PERFORMANCE OPEN MRI
<p>1.2T Hitachi High Field Superconducting Magnet At 1.2 Tesla, OASIS is the highest field strength, whole body vertical field magnet. And only the proven experience of Hitachi could bring this high-field performance to you. Hitachi expertise in vertical field magnet design and solenoid coil signal detection delivers outstanding image quality-with no compromise to patient comfort.</p> <p>Important Oasis magnet features include:</p> <ul style="list-style-type: none">-1.2T vertical field strength for high SNR-Iron core for high field strength, uniformity and stability-Homogeneity: 0.3ppm@35cm DSV(VRMS) for excellent general image quality and RF fat saturation-Shimming features including Computer-modeled passive shims placement and Per-patient Higher Order Active Shim Technology-Active magnetic shielding to minimize the 5 Gauss footprint-Helium only cryogen design (single cryocooler) with refill every two years <p>HOAST™ - Higher Order Active Shimming Technology Linear through 4th order per patient electronic shimming provided by the standard HOAST feature delivers reliable, uniform RF fat saturation from large to small FOVs (for axial, coronal and sagittal planes).</p> <p>High Output Gradient System Recognizing that a high performance gradient system is key to meeting today's expectations for image quality and resolution, Hitachi equipped Oasis with the most powerful gradient system available for open MRI. Capable of strength up to 33 mT/m and slew rate of up to 100 T/m/sec, Oasis' gradient system enables selection of low TR, TE and JET in combination with small FOV, and thin slices. This level of gradient capability also positions Oasis to adapt to changing MR technology and widening applications far into the future. Note that all gradient measurements represented here are single axis (not "effective") and represent x, y and z axis capabilities.</p> <p>Hitachi's SoftSound gradient coil mounting technique reduces acoustic noise without compromising image quality or capability.</p> <p>Zenith™ Radiofrequency System and Zenith Coils The Hitachi Zenith System is a powerful combination of multi-channel RF technology and Hitachi exclusive Zenith RF coils. Zenith drives excellent image quality, seamless workflow, wide clinical capability and optimized patient comfort. This multi-channel RF system allows simultaneous coil connection for patient comfort and efficiency. And includes RAPID (Hitachi's parallel imaging feature) to reduce scan times and optimize the most comprehensive collection of vertical field RF coils.</p> <p>Transmit System: An 18kW solid state transmit amplifier ensures sufficient power is available for the broadest range of patient sizes. Oasis' additional power also leaves room for future expansion of MR technology that may require additional RF power. SAR is closely monitored and limited to protect the patient while not needlessly constraining the operator. Oasis' transmit and receiver system is designed for interactive, real-time parameter changes and motion compensation techniques.</p> <p>Receiver System: Oasis' 8 channel RF receiver system manages 2 coil connection points on the table, each offering up to 8 coil element connections. Users can plug coils in simultaneously for maximum convenience and patient comfort. Automatic coil detection ensures the correct coil is in operation for each step of the examination.</p> <p>Receiver Coils: Oasis' Zenith receiver coils support RAPID parallel imaging as well as conventional imaging modes for maximum clinical flexibility and image quality. These are all Hitachi designs and include features that drive imaging time and quality benefits not available on other equipment.</p>	

William W Backus Hospital

Product	Description
OASIS	OASIS 1.2T HIGH PERFORMANCE OPEN MRI

The standard Zenith receiver coils include:

- 5 Channel Head - Patient comfort is complemented by an ultra fast, high-resolution Brain imaging capability that drives image quality and workflow benefits.
- 6 Channel Body - The multi-channel design enables application from dynamic abdominal breath holds to cardiac imaging with RAPID parallel imaging.
- 8 Channel Cervical spine - Volumetric solenoid coil sensitivity and RAPID parallel imaging provide excellent C-spine imaging capability. Even with kyphotic patients.
- 8 Channel CTL - Optimized to provide the SNR and signal uniformity that is essential for high quality images of the entire spine, this coil supports RAPID as well as conventional imaging modes.
- 6 Channel Shoulder - The inclusion of a through-arm loop with comfort pads delivers an outstanding axillary penetration capability and coil stability.
- 6 Channel Knee - The 6-channel Knee coil supports high-resolution acquisitions and provides excellent patient comfort in a compact design. The coil's volumetric solenoid technology enables exquisite orthopedic anatomic detail.

Additional standard Quadrature, Multiple Array and Solenoid coils include:

- MA Flexible Body Large - The 2 Channel quadrature design of this coil delivers excellent abdomen, torso and spine imaging for larger patients.
- MA Flexible Body Extra Large - The industry's largest body receiver coil at 190cm circumference enables collection of diagnostic images from patients at the extreme of the demographic spectrum.
- Integrated transmit/receive - The basic transmit coil for the system also provides receive capability delivering good imaging results for patients that cannot be imaged with a surface or volumetric coil.
- Large Joint - The two-furn Solenoid loops of this coil deliver good SNR for large joint imaging. The coil can also be used as a Brain coil.

Vertex Computer System and Origin MR Operating Software

Oasis' Vertex computer technology and the advanced Origin MR operating system allow access to and application of Oasis' powerful imaging technologies. Origin was developed under experienced MR technologist guidance to net an extremely user friendly, easy to learn graphical user interface. Mouse clicks are minimized for every task, while the dual core CPU provides for seamless multi-tasking. The Vertex reconstruction engine provides for background reconstruction promoting minimal waiting time and a high level of operational efficiency.

Vertex Computer/ Origin MR Operating System Features:

- Minimal operator interaction - fewer mouse clicks
- Wide 24 inch LCD workspace
- Multiple sequences and post processing steps are collected in virtually unlimited customized protocols, ensuring efficient, easy completion of the most complex imaging tasks
- Permanent Hitachi protocol recommendations stored for reference
- Intelligent Parameter Guidance for quick resolution of parameter selection conflicts
- Basic and Advanced control modes adapt to user experience
- Real time Image Quality Calculator shows impact of parameter changes prior to scanning
- Real time spatial resolution update shows impact of parameter changes prior to scanning
- CD burner combines patient images with auto launching viewer for patient and referring physician convenience
- Patient data security features including audit trail and user authentication

William W Backus Hospital

Product	Description
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OASIS	OASIS 1.2T HIGH PERFORMANCE OPEN MRI
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Interoperability features:

DICOM 3.0 compliance is a cornerstone of Oasis' software. Basic image Storage (SCP/SCU), Query/Retrieve (SCP/SCU), Storage Commitment and Print are all standard.. Automatic transfer of image series to multiple destinations is basic to Oasis' DICOM Store feature.

Imaging Suites

Oasis' powerful, cutting edge imaging architecture delivers its outstanding clinical imaging benefits through Oasis' Imaging Suites. Oasis' standard imaging suites include a broad range of acquisition sequences, sequence enhancements and post processing tools. Imaging and processing features are available to meet the clinical challenge in Neuro, Orthopedic, Body Vascular, Breast, Cancer, Cardiac, and Pediatric imaging.

Unique Imaging Suite Features

RAPID: Hitachi's parallel imaging feature provides real imaging advantages. Oasis RAPID imaging software is provided in two user selectable modes to best meet the clinical need. RAPID-PCM mode collects the necessary coil sensitivity information during a short prescan period for maximum acceleration. RAPID-SCM mode collects the sensitivity data intra-scan for excellent image quality even with physiological motion. RAPID parallel imaging capable receiver coils are the Oasis standard as well - virtually all of Oasis' coils are designed for use with this cutting edge MR imaging advantage.

RADAR: (RADial Acquisition Regime) is a powerful tool for collecting motion suppressed images without sedation or excessive patient restraint. RADAR relies on a radial k-space filling technique. Hitachi's RADAR technique generates T2 weighted images. Its 2D and 3D modes, combinability with Fat saturation, FLAIR or STIR type contrast plus its application to all coils, anatomy and slice planes nets the most broadly applicable radial feature available in MR imaging.

Balanced SARGE (BASG): Hitachi's BASG pulse sequence is available in 2D and 3D modes, and can be combined with RF fat saturation. BASG delivers high signal to noise bright fluid images, and is ideal for high spatial resolution cardiac, body, orthopedic and neuro imaging applications.

TIGRE™: Fast T1 weighted 3D Gradient Echo sequence with fat suppression enables the combination of high spatial and high temporal resolution for outstanding dynamic liver and breast imaging.

Water Excitation: An alternative to CHESS type fat suppression, useful for orthopedic applications (cartilage imaging).

FLUTE™: Fluoro triggered MRA enables easy, consistent capture of the arterial phase of a bolus procedure. Users monitor for arrival of contrast in the artery of interest using a real time scanning mode, switching instantly to the 3D diagnostic scan upon contrast arrival. FLUTE with TPEAKS ensures minimal venous contamination.

TRAQ™: Time resolved MRA (4D imaging) provides insight into the dynamics of blood flow, enabling effortless depiction of arterial and venous phases, without consideration of bolus timing

PEAKS, RPEAKS, TPEAKS: Hitachi's centric k-space ordering techniques ensure easy, consistent capture of the critical arterial phase. Three different implementations provide for maximum clinical flexibility.

Diffusion Imaging: The high slew rate gradient system, pre-programmed multiple axes acquisitions, and automatic creation of ADC and isotropic images make Oasis' SS-EPI (Single Shot Echo Planar Imaging) Diffusion Imaging capability powerful and workflow oriented.

HOAST™ (Higher Order Active Shimming Technology): Magnet uniformity is adjusted on each patient with Oasis to promote consistent and uniform large FOV and off-isocenter RF fat suppression. Body and orthopedic imaging benefit in particular from this important Oasis feature.

William W Backus Hospital

Product	Description
OASIS	<p>OASIS 1.2T HIGH PERFORMANCE OPEN MRI</p> <p>HOAST™ (Higher Order Active Shimming Technology): Magnet uniformity is adjusted on each patient with Oasis to promote consistent and uniform large FOV and off-isocenter RF fat suppression. Body and orthopedic imaging benefit in particular from this important Oasis feature.</p> <p>VASCTM Non contrast MRA: For peripheral vessel cases complicated by renal insufficiency, users can employ Hitachi's VASC pulse sequence, netting exceptional image quality without a bolus.</p> <p>Driven Equilibrium FSE: Provides a method to shorten TR for 2D/3D fast spin echo sequences while maintaining excellent target contrast. The net result is shorter scan time and better patient compliance. The Driven Equilibrium technique also applies to FIR (Fast Inversion Recovery) imaging sequences and can be combined with the RADAR motion compensating technique.</p> <p>NeuroSuite Features</p> <p>The vital pulse sequences, acquisition features and post processing tools for high-quality imaging of the brain, head/neck and spinal structures are standard on OASIS. OASIS' powerful gradient system coupled with RAPID™ drives short neuro scan times for high throughput.</p> <ul style="list-style-type: none">-Hitachi and user customized Head and Spine Protocols-5 Channel RAPID Head coil, 8 Channel Cervical Spine coil and 8 Channel CTL coil support parallel imaging for fastest scanning and optimal image quality-Multiple coil plug-in feature promotes patient comfort and technologist efficiency-RADAR motion compensated imaging technique (all plane, all coil) for uncooperative or infirm patients-Large 45cm FOV (all axes) complemented by Higher Order Shimming feature-Fat Suppression - RF Fat saturation, Fast STIR, Water Excitation.-High resolution Driven Equilibrium 3D FSE for features for IAC imaging-BASG (Balanced SARGE) sequences for bright fluid imaging-Isotropic volume acquired datasets can be reconstructed in any plane with MPR (Multi-Planar Reconstruction)-FLAIR, Fast FLAIR and RADAR FLAIR for CSF suppression-MR Myelography-Diffusion Weighted Imaging with fat suppressed single shot and high resolution multi-shot techniques and ADC mapping capabilities

William W Backus Hospital

Product	Description
OASIS	OASIS 1.2T HIGH PERFORMANCE OPEN MRI

OrthoSuite Features

Only OASIS delivers the very high field strength and truly open architecture enabling exquisite orthopedic MR imaging. Its inherent high SNR potential promotes high spatial resolution critical for orthopedic imaging, and permitting all anatomy to be imaged at isocenter delivers remarkable RF fat saturation.

- Hitachi and user customized Upper and Lower Extremity Protocols
- 2D/3D pulse sequences
- RADAR motion compensated imaging technique for uncooperative or infirm patients
- RF Fat Saturation benefits from easy placement of anatomy at Isocenter
- Regional shimming capability provides highest uniformity when off-isocenter imaging is required
- 6 Channel RAPID Shoulder demonstrates excellent image quality with unique "under the arm" loop and RAPID parallel imaging capability
- 6 Channel RAPID Knee coil supports high-resolution acquisitions providing exceptional orthopedic anatomic detail
- Driven Equilibrium FSE enables heavy T2 weighting (increased CNR) with reduced scan time
- Fast STIR fat suppression
- User selectable TE mode for FSE and FIR imaging
- Water Excitation with 3D Gradient Echo sequences for cartilage imaging
- MR arthrograms benefit from excellent RF fat suppression
- User selectable receiver bandwidth, user selectable fat suppression frequency, and RAPID parallel imaging contribute to ability to successfully image in presence of prostheses

BodySuite Features

The exceptional power of OASIS is demonstrated in this demanding and fastest-growing group of applications. High SNR from the 1.2T magnet and Zenith RF coil technology is complemented by the TIGRE fast, fat suppressed imaging sequence and Hitachi's all coil/all plane motion compensating RADAR technique. 2D and 3D protocols for abdomen, pelvis, MRCP and dynamic liver imaging techniques are all standard.

- Hitachi and user customized Body Protocols
- 2D/3D pulse sequences
- RADAR motion compensated imaging technique enables artifact suppressed free breathing acquisitions for uncooperative or infirm patients
- Respiratory triggered, breath hold and free breathing acquisitions supported
- RAPID parallel imaging with 6 Channel Torso/Abdomen coil for fastest scanning while maintaining excellent SNR
- 4 total standard Body imaging coils (includes the T/R Body coil) deliver high SNR and broadest patient population support available
- In/Out of phase multi-echo Gradient Echo technique
- TIGRE™ standard fast T1 weighted 3D Gradient Echo sequence with fat suppression enables the combination of high-spatial and high temporal resolution for outstanding dynamic liver and breast imaging.
- HOAST - Higher Order Active Shimming Technology drives excellent large FOV fat suppression in all planes.
- Multi-echo FSE for fast collection of proton density and T2 weighted images.
- 3D FSE acquisitions can be post processed with MPR to yield images from any plane.

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Product	Description
OASIS	<p>OASIS 1.2T HIGH PERFORMANCE OPEN MRI</p> <p>Optimal clinical flexibility defines OASIS. Conventional 2D/3D TOF and advanced acquisition techniques such as Time Resolved MRA (TRAQ™) and 3D vessel post-processing features provide the tools you need in this fast-growing application segment.</p> <ul style="list-style-type: none">-Hitachi and user customized Vascular Protocols-VASC™ Non contrast MRA - Non contrast MRA sequence provides an excellent alternative to peripheral bolus MRA for patients with renal insufficiency.-2D/3D inflow and bolus methods-RAPID parallel imaging for fastest scanning while maintaining excellent SNR-Sloped Slab Profile (SSP) and Magnetization Transfer Contrast (MTC) methods for uniform signal intensity and background suppression-MRA benefits from 100 T/m/sec slew rate - short TE's are available to minimize intravoxel dephasing-ECG gating is standard to maximize image quality-FLUTE Fluoro triggering for easy, consistent arterial phase capture-PEAKS, RPEAKS, TPEAKS: Hitachi's centric k-space ordering techniques ensure easy, consistent capture of the critical arterial phase. Three different implementations provide for maximum clinical flexibility-TRAQ Time resolved MRA provides insight into the dynamics of blood flow, enabling effortless depiction of arterial and venous phases, useful when flow direction is uncertain-MIP (Maximum Intensity Projection) and Volume Rendered MIP for excellent 3D vessel depiction

Breast Imaging Features - complemented by the Optional 8 Channel Breast coil

- Hitachi and user customized Breast Protocols
- RADAR motion compensated imaging technique enables artifact suppressed free breathing acquisitions for uncooperative or infirm patients
- Excellent off-isocenter Fat Suppression with Regional Shimming
- RAPID parallel imaging for fastest scanning while maintaining excellent SNR
- TIGRE™ standard fast T1 weighted 3D Gradient Echo sequence with fat suppression enables the combination of high-spatial and high temporal resolution for outstanding dynamic bilateral or unilateral breast imaging.
- HOAST - Higher Order Active Shimming Technology drives excellent large FOV fat suppression in all planes.
- DICOM exportable time intensity curves for Dynamic studies. Multiple graph modes include: Normalized Signal
- Intensity time graph, Multiplicative Signal Intensity-time graph, and Signal Intensity change rate-time graph

Cardiac Imaging Features

- Hitachi and user customized Cardiac Protocols
- Cardiac, Peripheral and Respiratory gating system
- Dark blood Fast Spin Echo for morphologic imaging
- 2D/3D BASG (Balanced SARGE) bright blood sequences support functional analysis
- RADAR motion compensated imaging technique enables artifact suppressed free breathing acquisitions for uncooperative or infirm patients
- RAPID parallel imaging with 6 Channel Torso/Abdomen coil for fastest scanning while maintaining excellent SNR
- Multiphase bright blood imaging
- Real-time cine review

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Product	Description
OASIS	OASIS 1.2T HIGH PERFORMANCE OPEN MRI Pediatric Imaging Features <ul style="list-style-type: none"> -PACT and Oasis' Open MR geometry provide an ideal pediatric imaging environment, while Oasis' powerful imaging architecture promotes diagnostic confidence -RADAR motion compensated imaging technique enables artifact suppressed free-breathing acquisitions for uncooperative or infirm patients -SoftSound™ mechanical gradient noise damping minimizes acoustic noise without constraining acquisition parameters -RAPID parallel imaging for fastest scanning while maintaining excellent SNR -Multiple coil plug-in feature promotes patient comfort and technologist efficiency -Truly open patient area promotes patient acceptance

Magnet Specifications

-Magnet Type:	Superconducting Iron Core
-Field Strength:	1.2 Tesla
-Field Orientation:	Vertical
-Shielding:	Active self shielding
-5G Fringe field from isocenter	
-Horizontal:	4.2 m
-Vertical:	3.3 m
-Gantry Size (L x W x H):	2.7m x 2.5m x 2.1m
-Patient Aperture:	44cm
-Gantry Weight:	34,200 lbs
-Static Field Homogeneity:	0.3ppm @ 35cm DSV (VRMS)
-Shimming:	
-Installation:	Computer placed iron shims
-Patient:	Linear plus Higher Order Active Shim Technology (HOAST)
-Cryogen:	Helium only
-Refill Frequency:	Once every two years

*With HMSC approved maintenance, without power interruption

Gradient Specifications

-Peak Amplitude:	33 mT/m
-Peak Slew Rate:	100 T/m/s
-Cooling method:	Water
-Shielding:	Active
-Eddy Current compensation:	Computer optimized, with B0 compensation
-Gradient noise reduction:	SoftSound mechanical gradient noise dampening

Zenith RF System Specifications

Solid State Transmitter

- Quadrature transmitter
- 18 kW Peak Envelope Power
- Quadrature Radial type Transmit and Receive Coil

Digital Receiver

- Eight Channels Standard
- Two table-top connection points enable simultaneous coil connections
- Ultra low noise figure (0.5dB) coil mounted preamplifiers
- Variable Receive Bandwidth (manual or automatic)
- RAPID™ parallel imaging capability

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Product	Description
OASIS	OASIS 1.2T HIGH PERFORMANCE OPEN MRI
	VERTEX Workstation
	<ul style="list-style-type: none"> -Host CPU: Core2Duo -RAM: 3 GB -Operating System: Windows XP based, mouse driven intuitive GUI -Ethernet Interface: 10/100/Gigabit Auto-sensing -High Resolution monitor: 24 inch LCD color monitor -Operator input: Mouse and QWERTY keyboard -Magnetic disk: 3.5 inch 250 GB storage capacity, capable of holding 400,000 images at 256x256 matrix -Image archive: DVD writer for image data archive low cost, reliable DVD-RAM 9.4GB media stores up to 60,000 256x256 images -CD writer: Includes auto-launching image viewer application for patients and referring physician convenience -Intercom: Two way patient - operator -System controls: Start scan, pause scan, abort scan, emergency stop -Security Features: User Authentication, Automatic Logout and Audit Log
	Pulse Sequences
	<ul style="list-style-type: none"> -Spin Echo (SE) with up to 4 echoes -Gradient Echo and Multi-Echo Gradient Echo -Inversion Recovery (IR) -FLAIR -STIR -Fast Spin Echo (FSE) -Echo Factors (ETL): 2-256 -User defined Inter Echo Spacing, TE -User defined Echo allocation including Centric, Anti-centric, ADA, and Sequential -Single Shot FSE-Ultra fast acquisition, Ultrahigh Echo Factor for MRCP, MR Urography, and MR Myelography -Driven Equilibrium- Increases SNR and Contrast over conventional FSE without increasing TR. Alternatively, a reduction of TR can be used to decrease scan time. -RADAR radial k-space acquisition -Prime FSE (multi-echo FSE) -Fast Inversion Recovery (FIR) -Echo Factors: 2-256 -Inversion Time: 20-8000 enables Fast STIR, Fast FLAIR imaging -Driven Equilibrium -RADAR radial k-space acquisition -Steady-State Acquisition Rewound Gradient Echo (SARGE SG) -RF-Spoiled SG- (RSSG) provides T1 weighting -Rephased SG -Flow compensation for reduced artifacts -Balanced SG (BASG) -Completely balanced SG provides high SNR and bright fluids in a rapid acquisition. -Time Reversed SG (TRSG)- T2 weighted Fluoro acquisition -Diffusion Weighted Imaging (DWI) -Single Shot SE EPI <ul style="list-style-type: none"> -B-Factor: 0-2000 -Fat Saturation -IR pulse -3D T1 Gradient Echo (TIGRE™) -Fast gradient echo with optimized fat suppression

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Product	Description
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OASIS OASIS 1.2T HIGH PERFORMANCE OPEN MRI

Acquisition Features and Protocol Enhancements -

- Image Plane Selection
- Transverse, Sagittal and Coronal
- Single and Double Oblique
- Multi-slice, Multi-angle
- Two and Three Plane Selection
- Prescan
- RF power adjustment
- Center Frequency
- Volume Shim adjust
- User Defined Regional Shim
- Fat Suppression Techniques
- Water Excitation (Binomial technique)
- RF Fat Saturation
- STIR, Fast STIR (FIR)
- In/out of phase GE
- Motion Compensation
- RADAR Radial Acquisition (FSE, FIR, FLAIR)
- Gradient Rephasing
- Presaturation Pulses-up to eight
- Walking Presaturation
- Cardiac Gating with Arrhythmia Rejection
- Peripheral Pulse Gating with Arrhythmia Rejection
- Respiratory Gating
- Diaphragm Navigation Echo
- User defined Variable Bandwidth
- Dual Slice Acquisition
- Rectangular Field of View
- Anti-aliasing
- User defined inter-echo spacing
- Half Scan and 3/4 scan
- Half Echo
- Asymmetric Measurement Imaging (AMI)
- Real Time Image Quality graph
- Silent Mode gradient noise reduction scan mode
- Image Centering ensures that the volume of interest is automatically placed at isocenter for optimal image quality
- Auto Voice
- Coil mode search optimizes SNR when multiple coils are used simultaneously

Scan Control

- Hitachi-recommended and user-defined protocol selection
- Intelligent parameter guidance
- 2 and 3 plane Slice positioning
- Up to 6 viewports
- Presaturation positioning
- Post reconstruction image review
- Pause, Restart and Abort scan

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Product	Description
OASIS	<p>OASIS 1.2T HIGH PERFORMANCE OPEN MRI</p> <p>Image Processing Tools</p> <ul style="list-style-type: none">-Maximum Intensity Projection (MIP)-MRA post processing tool-Freehand, Elliptical, and Rectangular Cropping-Include/Exclude mode-Multiplanar Reconstruction (MPR)-Parallel cut-Radial cut-Curved-Vascular Volume Rendering-Radial, Sliding, and Expanding Projection modes-Opacity setting-Filtering Tools-Adaptive imaging filter-Edge Enhancement-Image Mask-Image addition and subtraction-Calculated Images (Proton Density, T1 and T2)-Dynamic analysis-Multiple graph modes include: Normalized Signal Intensity time graph, Multiplicative Signal Intensity-time graph, and Signal Intensity change rate-time graph-Multi-slice support-DICOM exportable-Diffusion Analysis-ADC map-Isotropic DWI map-DICOM exportable-Image Review Tools-Unlimited series review-Flexible window layout-Filming Tool with configurable layouts-Viewport Tools-Maximize/Resize-WW/WL-Magnify-Rotate/Reverse-Cine Tool-Comment/Annotate-ROI-Measuring functions-Statistics-Overlay-Layout-Protocol/Task management-Windows Explorer style-Protocol editing without loaded study-Categorized Anatomic Protocol Library-System Tools-Job Queue-Stopwatch-Waveform Display-Patient Table settings-System Settings

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Product	Description
MR BACK TERMS	MR Reverse side Terms & Conditions

1. Acceptance; Modifications.

1.1 Definitions of Products. "Products" means those magnetic resonance imaging instruments sold to Purchaser under this Agreement.

1.2 Final Acceptance; Entire Agreement. All orders placed pursuant to this Quotation shall be subject to the final acceptance in writing by a duly authorized representative of Hitachi Medical Systems America, Inc. ("HMSA") at its office address as set forth on the first page of this Quotation. The terms and conditions of this Quotation and HMSA's written acceptance thereof (the "Agreement") shall constitute the complete agreement between the parties, reflecting their entire understanding as to matters related hereto and supersedes any prior oral or written statement or agreement. No term or condition of the Purchaser's order which is different from or in addition to the terms and conditions as set forth in the Agreement shall be binding on HMSA unless, and only to the extent, such different or additional term or condition is expressly accepted by HMSA in writing. In the event of any inconsistency between the terms set forth in any of Purchaser's documents and these terms and conditions, the terms and conditions set forth in this Agreement shall control.

2. Price; Terms of Payment.

2.1 Quotes Prices; Transportation. All quoted prices are F.O.B. Port of Entry stated shipping point, unless otherwise specified, and include domestic packaging and are subject to correction for error. Transportation shall be by means that are commercially reasonable and customary and at the Purchaser's expense.

2.2 Taxes. Prices do not include local, state or federal taxes. Consequently, the amount of any sales, use or similar tax applicable to the sale of the Products herein or to the use of such goods by the Purchaser shall be paid by the Purchaser. If HMSA is required to collect or pay any such tax, Purchaser shall reimburse HMSA promptly after demand for such tax payment and for any associated expenses.

2.3 Payment. Unless otherwise agreed in writing, Payment is due upon receipt of invoice with no discount allowed for early payment. Invoices shall be issued upon shipment. In the event shipment is delayed beyond the date (if any) stated in the Quotation for any reason not attributable to HMSA's ability to ship the Product, any payment due upon shipment, delivery, or installation shall be made on the originally scheduled shipping date. Past due invoices are subject to a monthly service charge at a rate equal to the lesser of 1-1/2% per month or the maximum rate from time to time permitted by applicable law. Should any terms of payment provide for either full or partial payment upon installation or completion of installation or thereafter, and installation is delayed for any reason for which HMSA is not responsible, the Products shall be deemed installed upon delivery. In no event shall Purchaser be entitled to withhold payment for undelivered accessories or options in an amount which exceeds the lesser of (a) the quoted purchase price for the subject option or accessory and (b) in the event the purchase price for such accessory is not separately quoted, HMSA's published price for such item.

3. Credit Terms; Security Interest; Purchaser Default

3.1 Credit; Security Interest. To induce HMSA to extend credit to the Purchaser, the Purchaser hereby grants HMSA a purchase money security interest in the Products supplied hereunder, and the Purchaser authorizes HMSA to file a Uniform Commercial Code financing statement with respect to the Products prior to shipment.

3.2 Deposits. Any deposit made by the Purchaser with respect to Products is nonrefundable except to the extent HMSA fails to deliver the Products and such failure does not result from a breach of Agreement by the Purchaser or other wrongful act or omission of the Purchaser.

3.3 Purchaser Default. If default is made in any of the payments herein, the Purchaser agrees that HMSA may retain all payments which have been made on account of the Total System Price to 30% of the Total System Price, as liquidated damages and HMSA shall be entitled to the immediate possession of the Products and shall be free to enter the premises where the Products may be located and remove same as HMSA's property, without prejudice to its right to recover any further expenses or damages it may suffer by reason of such nonpayment.

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Product	Description
MR BACK.TERMS	MR Reverse side Terms & Conditions

4. Warranty

4.1 Warranty. Except as hereinafter provided, HMSA warrants all Products and parts supplied by HMSA to be free of defects in design, material and workmanship for a period of 12 months. The warranty period shall begin upon completion of installation or first use, whichever occurs first. If a failure occurs during the warranty period, and there is no evidence of misuse, abuse, neglect or unauthorized alteration or repair as Purchaser's sole and exclusive remedy, HMSA will repair, replace or correct, at its option, the defective item without charge for parts and labor. THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. HMSA'S WARRANTY DOES NOT APPLY (I) IF PRODUCTS HAVE BEEN SUBJECT TO MISUSE, MISHANDLING, MISAPPLICATION, NEGLECT (INCLUDING, WITHOUT LIMITATION, IMPROPER MAINTENANCE), ACCIDENT OR MODIFICATION NOT EXPRESSLY AUTHORIZED BY HMSA (INCLUDING, WITHOUT LIMITATION, USE OF UNAUTHORIZED PARTS OR ATTACHMENTS) OR IF ANY ADJUSTMENT OR REPAIR HAS BEEN PERFORMED BY ANYONE OTHER THAN HMSA OR AN AUTHORIZED SERVICE REPRESENTATIVE OF HMSA AND (II) TO PERISHABLE AND OTHER MATERIAL SUBJECT TO CONSUMPTION AND WEAR INCLUDING, WITHOUT LIMITATION, RADIO SENSITIVE FILM AND PAPERS, WHICH ITEMS BEING SUBJECT ONLY TO SUCH WARRANTIES AS MAY BE SPECIFIED IN WRITING BY HMSA AT THE TIME OF DELIVERY TO THE PURCHASER. HMSA makes no warranty with respect to the accessory items set forth as "third party accessory" on the face hereof. The warranty for such items shall be as provided by the manufacturer thereof.

4.2 Sole Obligation; Notice. HMSA's sole and exclusive obligation under this warranty is limited to the repair or replacement of defective parts. This warranty is made on condition that prompt notice of any defect is given in writing within the warranty period and that HMSA's inspection does not disclose any invalid claim.

4.3 Returned Products. Goods shall not be returned to HMSA without written authorization. All authorized returns must be properly packaged with transportation charges prepaid by the Purchaser.

5. Damages; Limitation of Action

5.1 Damages. HMSA's liability arising out of or relating to this agreement shall not exceed the amounts paid by Purchaser to HMSA for the Products. HMSA shall not be liable for special, incidental or consequential damages. Consequential damages shall include, without limitation, loss of use, income or profit or loss of or damage to persons or property.

5.2 Limitation of Action. No suit or other proceeding may be brought on an alleged breach of warranty of HMSA set forth in this Agreement more than twelve (12) months after termination of such warranty.

6. Shipment and Risk of Loss

Unless otherwise specified in writing by a duly authorized representative of HMSA, delivery shall be made F.O.B. Port of entry shipping point, and any reference in these terms and conditions to "deliver" shall refer to such delivery. Except for obligations stated under 4.2, HMSA's responsibility ceases upon delivery to the carrier at the stated shipping point, and risk of loss, damage, injury or destruction to any of the goods shall pass to the Purchaser upon such delivery to the carrier. In no event shall any loss, damage, injury or destruction operate in any manner to release the Purchaser from the obligation to make payments required herein. Unless otherwise agreed in writing, HMSA reserves the right to make partial shipments and to submit invoices for partial shipments.

7. Changes and Cancellations

Orders accepted by HMSA are not subject to changes or cancellation by the Purchaser except with HMSA's written consent. If Purchaser cancels this Agreement within ninety (90) days prior to delivery of the Products, Purchaser shall pay HMSA a cancellation charge of fifteen percent (15%) of the Total System Price. HMSA shall retain as credit all progress payments made to that point towards this cancellation charge. If Purchaser cancels this Agreement prior to this ninety (90) day period described above, all progress payments which have been made to that date, but not to exceed fifteen percent (15%) of the Total System Price, will be held as cancellation charge.

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Product	Description
MR BACK.TERMS	MR Reverse side Terms & Conditions

8. Delivery and/or Installation Dates

Delivery and/or installation schedules are approximate and are based on conditions at the time of acceptance. HMSA will make every reasonable effort to complete shipment and/or installation as indicated but assumes no liability of any kind by reason of delay or inability to ship or install were such is caused by acts of God, fires, floods, war, embargoes, labor disputes, strikes, acts of sabotage, riots, with facilities, or any accidents, delays of carrier, subcontractors, suppliers, voluntary or mandatory compliance any other cause or causes beyond HMSA's reasonable control. In such event, HMSA may extend delivery and/or installation schedules or may, at its option, cancel the order in full or in part without liability other than to return any deposit or prepayment which is unearned by reason of the cancellation.

9. Installation; Additional Charges

9.1 Installation by HMSA. Unless otherwise expressly stipulated, the Products shall be installed at the expense of HMSA. HMSA shall cause the products to be installed and connect same to the requisite safety switches and power lines to be installed by the Purchaser. Prices shown include the cost of installation and connection, provided that the installation and connection can be performed during normal business hours as HMSA, in its sole discretion, shall determine. Any overtime charges or other special expenses as required by the Purchaser will be subject to additional charges. The Purchaser shall be responsible for all necessary arrangements with the trade union, or unions, involved to permit HMSA to install the Products. If for any reason, assembly or installation must be performed by other than HMSA service personnel or agents, additional charges will be made for the cost of such outside labor. The cost of rigging and any cranes necessary to move or install the Products and the cost of disposal of all packing materials associated with the Products shall be borne by the Purchaser.

9.2 Materials; Labor; Access to Premises. Purchaser shall, at its own expense, provide all site preparation, including without limitation, necessary labor and materials, plumbing service, carpentry work, conduit, wiring and other electrical service required for such installation and connection. All such labor and materials shall be completed and available at the time of delivery of the Products by HMSA. Additionally, the Purchaser shall provide unrestricted access to the Purchaser's premises for installation, and, if necessary, safe space thereon for storage of the Products prior to installation by HMSA. If special work of any type must be performed in order to comply with requirements of any governmental authority, including procurement of special certificates, the same shall be performed and/or procured by the Purchaser at the Purchaser's expense.

10. Title. Except as otherwise agreed in writing, title to the Products or any part thereof shall pass from HMSA when all payments due herein have been fully made. The Products shall be and remain personal or moveable property, notwithstanding their mode of attachment to realty or property.

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Reference	Description
MR	MR Reverse side Terms & Conditions
BACK.TERMS	<p>11. Indemnification. Purchaser agrees to indemnify, defend and hold harmless HMSA from and against any and all claims for relief, rights or causes of action whatsoever arising from or relating to damages or personal injuries to an employee where such damages or personal injuries arise from or relate in any way to the use by the employee of any Products being purchased pursuant hereto, including, without limitation, any Software, together with all manuals, drawings, and technical information which describes such Software or demonstrates how to use or modify such Software to operate the Products. To the extent necessary to give full and complete effect to this agreement to indemnify, Purchaser for itself and for its agents, successors and assigns, specifically and expressly waives whatever immunity from liability it might be afforded under Section 38, Article II of the Ohio Constitution, Ohio Revised Code Section 4123.74 and any and all other immunities afforded by constitutional provisions, statutes, and common law principles currently recognized or that may from time to time be recognized in Ohio and all other states throughout the United States.</p> <p>12. Notice. Any notice required or permitted to be given under this Agreement shall be considered sufficient if delivered personally or mailed via certified mail. Such notices directed to HMSA shall be delivered or sent to its office address set forth on page one of this Agreement to the attention of the President. Notices to the Purchaser shall be sent to the address shown on the first page of the Quotation. Notices to either HMSA or the Purchaser may be sent to such other address as either party may give to the other from time to time pursuant to this provision.</p> <p>13. Severability. If any provision in the agreement shall be found to be void or unenforceable, that provision only shall be deemed stricken to the extent of its invalidity or unenforceability, and all other terms and conditions shall remain in full force and effect.</p> <p>14. Assignment. This Agreement shall be binding upon HMSA and the Purchaser and shall inure to their benefit and to their successors and permitted assigns. This Agreement may not be assigned by Purchaser in whole, or in part, to any third party without the express written consent of HMSA which will not be unreasonably withheld. HMSA may, however, require any proposed assignee to reimburse it for any of its reasonable costs associated with such assignment, and to supply it with such information and to make such representations as HMSA deems appropriate for its protection.</p> <p>15. Construction; Jurisdiction. Any suit directly or indirectly involving this Agreement, including but not limited to the actions of HMSA's employees, representatives or agents, whether arising before, during or after the term of this Agreement, must be filed solely in a federal or state court located in Ohio. This is a mandatory forum selection clause. Jurisdiction over claims arising, directly or indirectly, from the matters covered by this Agreement is proper exclusively in Ohio courts. Venue is proper only in courts located in Cleveland, Ohio. The parties to this Agreement consent to Ohio courts exercising: (a) personal jurisdiction over the parties; and (b) subject matter jurisdiction over any dispute arising from this Agreement. All parties further consent to venue exclusively in Cleveland, Ohio, even if one or more parties to the Agreement have no contact with the selected forum in Cleveland, Ohio. Consent to Ohio courts having sole jurisdiction and venue over disputes involving HMSA is a material inducement for HMSA to enter into this Agreement and, without this consent HMSA would not enter into this Agreement because HMSA's contact with forums outside Ohio is more limited and less convenient than HMSA's contact with Ohio. By entering into this Agreement, the parties acknowledge that they are conducting business in the State of Ohio. Ohio law shall control, govern, and apply in all disputes arising from this Agreement, which shall be construed in accordance with the laws of the State of Ohio. Headings used throughout this Agreement are used for the convenient reference of the parties and are not intended to limit or modify the express terms of the Agreement. Each party hereby appoints each officer of HMSA as its agent for accepting any process in Ohio.</p> <p>16. Export Restrictions. This sale concerns products and/or technical data that may be controlled under U.S. Export Administration Regulations and may be subject to the approval of the U.S. department of Commerce prior to export. Any export or re-export by the purchaser directly or indirectly in contravention of the U.S. Export Administration Regulations is prohibited.</p>

REV. 6/27/07

William W Backus Hospital

Product	Description
MR BACK.TERMS	MR Reverse side Terms & Conditions

1. SERVICE

Hitachi Medical Systems America ("HMSA") agrees to provide service to the Standard System quoted hereunder as indicated on the front of this Agreement.

a. Planned Preventive Maintenance

Including inspection, adjusting, tuning, lubrication, and replacement of non consumable parts as determined to be necessary by HMSA. Such inspections to be provided as outlined by the Manufacturers specifications.

b. On Call Remedial Maintenance

Provided as required due to system malfunction. Replacement pads will be furnished in exchange for the part or pads being replaced. Components, pads, and assemblies will be replaced with new or refurbished items at HMSA's sole discretion. There will be no charge for routine operational software upgrades as long as Purchaser maintains an HMSA service contract.

Service furnished by HMSA at Purchaser's request in addition to those specified hereunder will be invoiced at HMSA's applicable time and material rates and terms then in effect. HMSA has the right to charge extra for service outside the established hours (over time). Purchaser shall provide at no charge to HMSA full and free access to the Equipment covered hereunder, working space in accordance with HMSA site specifications, adequate facilities near the Equipment, and use of any machines attachments, features, user ports or other materials necessary for the specified maintenance services.

2. DOCUMENTATION AND MAINTENANCE MATERIALS

Purchaser agrees that at all times all right, title and interest in and to all diagnostic maintenance media, including, software, shall remain HMSA's and HMSA may remove same from the premises of Purchaser, temporarily or permanently, or discontinue usage thereof at any time for any reason. All HMSA's test, diagnostic and verification information and routines (on HMSA or Purchaser owned media), maintenance equipment and maintenance materials, information and documentation are proprietary and confidential; such item, whether on Purchaser's site or accessible by remote inquiry, are and shall remain the sole property of HMSA in any case, and may be removed, or the usage thereof discontinued at any time. Purchaser will destroy same upon written request from HMSA. Purchaser shall not disclose to any person such confidential items and shall take appropriate action by instruction or agreement with its employees who are permitted access thereto to satisfy its obligation of confidentiality thereunder.

3. SOFTWARE

3.1 Definitions

"Software" means computer instruction or data files, supplied by HMSA and any improvements or modifications to said computer instructions or data files, whether supplied in machine, assembly or higher level languages and such instructions or data files in all forms of interpretation, compilation, media of expression, fixation and storage. "Operating Software" means Software which is essential for operation of Equipment in the end use applications of Purchaser which are known to HMSA as of date of HMSA's written acceptance hereof. "Maintenance Software" means Software used in or with the Equipment to aid their installation, maintenance or repair and includes the Software other than Operating Software.

3.2 Ownership

All Software shall remain the sole property of HMSA. Without limiting the preceding sentence, Purchaser expressly agrees that any Maintenance Software (including without limitation any copy of all or any thereof shipped to, located on the premises of, or otherwise in the possession of Purchaser remains the sole and exclusive property of HMSA; the accessing, running, performance, display or any other use of such Maintenance Software shall be limited to HMSA, its employees and authorized agents.

William W Backus Hospital

Product	Description
MR BACK TERMS	<p>MR Reverse side Terms & Conditions</p> <p>3.3 License HMSA grants to Purchaser, as of the date of installation of Equipment, a nonexclusive and royalty free license to use the Operating Software. Except as stated above, NO LICENSE IS GRANTED TO PURCHASER WITH RESPECT TO ANY OPERATING SOFTWARE, OR ANY COPIES OF ALL OR ANY PORTION OF THE OPERATING SOFTWARE. PURCHASER ASSUMES FULL RESPONSIBILITY FOR DAMAGES TO HMSA RESULTING FROM ANY UNAUTHORIZED TRANSFER OF OPERATING SOFTWARE TO A THIRD PARTY.</p> <p>3.4 Confidentiality Purchaser acknowledges that the Software is valuable to HMSA and agrees to use reasonable care to prevent disclosure to others of Software in Purchaser's possession or on Purchaser's premises. Purchaser agrees to limit access to Software to those of its employees having a need to use the Operating Software in connection with the Equipment. Purchaser agrees not to copy Maintenance Software and to make only the number of copies of Operating Software required for actual use of the Equipment in their intended applications. Purchaser further agrees to ensure that all copies include applicable HMSA trademark and patent identification notices.</p> <p>3.5 Modifications Because of the highly technical nature of the Software and the high probability that any modifications of it, however, minor, could significantly affect the performance of the Equipment to which it applies, Purchaser agrees that it shall not modify, or allow the modification of, the Software in any manner whatsoever other than by, or with the express written consent of HMSA or its employees. ANY SUCH MODIFICATIONS OF SOFTWARE IN VIOLATION OF THE FOREGOING COVENANT SHALL CONSTITUTE MISUSE OR NEGLECT AND VOID THIS SERVICE AGREEMENT IMMEDIATELY. Purchaser agrees to indemnify and hold HMSA, its employees, agents, subsidiaries and affiliates harmless from any claim or loss, including costs thereof attributable to any such modification of Operating Software violation of the foregoing provision.</p> <p>4. EXCLUSIONS The service to Purchaser hereunder does not include electrical work external to the equipment, maintenance of accessories, attachments, machines or other devices not furnished by HMSA; repair or damage resulting from: accident, transportation, neglect or misuse, failure of electrical power, causes other than ordinary use, or damage caused by catastrophe beyond HMSA control; maintenance or repair to the equipment other than by HMSA's employees; an improper environment for the equipment such as lack of air conditioning or electricity, furnishing photographs, materials, magnetic or paper tape chart paper, bacterial filters, making specification changes or performing services connected with relocation of equipment; adding or removing accessories, attachments, or other devices; service rendered impractical as determined by HMSA by reason of electrical or mechanical connection to other equipment not supplied by HMSA. Purchaser agrees that equipment out of warranty prior to the start of this Agreement may be inspected by HMSA's personnel. Any deficiencies found will be corrected at HMSA's time and material rates then in effect or excluded from coverage under this Agreement</p> <p>5. CHARGES Charges are payable in advance upon receipt of invoice. If Purchaser requests unscheduled, on call maintenance service other than during HMSA's normal working hours or the coverage selected on this Service Agreement, such service will be furnished at HMSA's hourly rates in effect at the time service is performed. Purchaser shall pay HMSA, upon receipt of invoice, all travel and other expenses incurred by HMSA for service performed at Purchaser's request outside of the coverage selected in this Agreement. Invoices not paid within ten (10) days of the invoice date will have a 1.5 percent per month interest charge, or the highest lawful rate, whichever is less, assessed against the unpaid balance from the date of the invoice until the date of payment. Purchaser shall pay all costs involved in HMSA's collecting its overdue accounts from Purchaser including reasonable attorney's fees. All invoicing procedures are subject to change by HMSA at any time following the expiration of the Initial Term upon a minimum of sixty (60) days prior written notice.</p>

William W Backus Hospital

Product	Description
MR BACK.TERMS	MR Reverse side Terms & Conditions

6. TAXES

Prices do not include local, state, or federal taxes. Consequently, the amount of any sales use or similar tax applicable to the sale of the Agreement herein or to the use of such goods by the Purchaser shall be paid by the Purchaser. If HMSA is required to collect or pay any such tax, Purchaser shall reimburse HMSA promptly after demand for such tax payment and for any associated expenses.

7. NOTICE

Any notice required or permitted to be given under this Agreement shall be considered sufficient if delivered personally or mailed via certified mail. Such notices directed to HMSA shall be delivered or sent to its office address set forth on the face hereof to the attention of the President. Notices to the Purchaser shall be sent to the address shown on the front of this Agreement. Notices to either HMSA or the Purchaser may be sent to such other address as either party may give to the other from time pursuant to this provision.

8. TERMINATION

This Agreement shall remain in effect during the entire Service Agreement Period provided for on the face hereof, and shall not be cancelable by either party in the absence of a material breach by the other party.

9. ASSIGNMENT

Upon execution, this Agreement shall be binding upon HMSA and the Purchaser and shall inure to their benefit and to their successors and permitted assigns. This Agreement may not be assigned by Purchaser in whole or in part to any third party without the express written consent of HMSA which will not be unreasonably withheld.

HMSA may, however, require any proposed assignee to reimburse it for any of its reasonable costs associated with such assignment, and to supply it with such information and to make such representations as HMSA deems appropriate for its protection.

10. CONSTRUCTION; JURISDICTION

This Agreement shall be governed by, and construed in accordance with, the laws of the State of Ohio. Headings used herein are for the convenient reference to the parties and are not intended to modify the express terms hereof. Each party consents to the jurisdiction of the federal and state courts located in Ohio, and hereby appoints each officer of HMSA as its agent for accepting any process in Ohio.

11. MISCELLANEOUS

This Service Agreement replaces and supersedes any previous Agreement between the parties respecting the subject matter hereof and constitutes the entire agreement between the parties relative to the subject matter hereof.

HMSA's obligations hereunder are subject to delays incident to labor difficulties; fires; casualties and accidents; acts of the elements; acts of public enemies; transportation difficulties; inability to obtain equipment, materials or qualified labor sufficient to fill its orders; governmental interference or regulations; and other causes beyond HMSA's control.

HMSA's liability arising out of or relating to this Agreement shall not exceed the amounts paid by Purchaser to HMSA for the Agreement.

HMSA shall not be liable for special incidental or consequential damages. Consequential damages shall include, without limitation, loss of use, income or profit or loss of or damage to persons or property.
DUE IN PART TO THE COMPLEXITY AND INTERCHANGEABILITY OF THE COMPONENTS OF HMSA'S EQUIPMENT, SOME PARTS USED IN SERVICING PURCHASER'S EQUIPMENT MAY BE RECONDITIONED. ALL PARTS MEET HMSA'S SPECIFICATIONS IN FORCE ON THE DATE OF THEIR INSTALLATION IN THE PURCHASER'S EQUIPMENT.

This Service Agreement is subject to acceptance by HMSA at its home office. After acceptance, HMSA shall mail to Purchaser a signed duplicate copy hereof, and the same shall constitute the entire Service Agreement between the parties, which shall be changed only by written agreement of the parties.

STATE OF CONNECTICUT

Department of Public Health

LICENSE

License No. 0037

General Hospital

In accordance with the provisions of the General Statutes of Connecticut Section 19a-493:

The William W. Backus Hospital of Norwich, CT, d/b/a William W. Backus Hospital, The is hereby licensed to maintain and operate a General Hospital.

William W. Backus Hospital, The is located at 326 Washington Street, Norwich, CT 06360

The maximum number of beds shall not exceed at any time:

20 Bassinets

213 General Hospital beds

This license expires **March 31, 2010** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, April 1, 2008. RENEWAL.

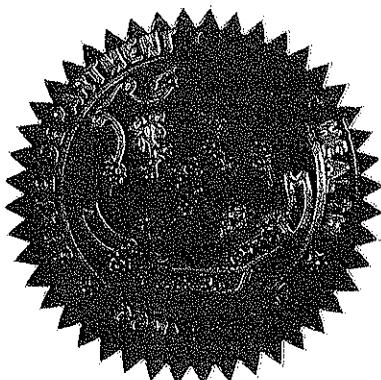
Satellites

Backus Infectious Disease & Std Clinics, 107 Lafayette Street, Norwich, CT

Mobile Health Resource Van, Colchester Town Hall, Colchester, CT

Pain Management, 113 Sachem Street, Norwich, CT

Wound Care, 111 Salem Turnpike, Route 82, Norwich, CT



J. Robert Galvin MD, MPH, MBA

J. Robert Galvin, MD, MPH, MBA,
Commissioner