Certificate of Need Application

FOR

Replacement MRI

On Behalf Of

St. Luke’s Center for Diagnostic Imaging, LLC

Project No. 5364 HS

Submitted to:
Missouri Health Facilities Review Committee

August 26, 2016

Submitted by:
Richard D. Watters
Richard W. Hill, III
Attorneys At Law
Lashly & Baer, P.C.
714 Locust Street
St. Louis, MO 63101
Certificate of Need Program

EQUIPMENT REPLACEMENT APPLICATION
- Expedited review if equipment to be replaced was CON-approved.
- Full review if equipment to be replaced was not CON-approved.

Project Name: Replacement MRI
Project No: 5364 HS
Project Description: Replace 1.5T MRI with 3T MRI

Divider I. Application Summary:
1. Applicant Identification and Certification (Form MO 580-1861).
2. Representative Registration (Form MO 580-1869).
3. Proposed Project Budget (Form MO 580-1863) and detail sheet with documentation of costs.

Divider II. Proposal Description:
1. Provide a complete detailed project description.
2. Provide a listing with itemized costs of the medical equipment to be acquired.
3. Provide bid quotes for the proposed equipment.

Divider III. Community Need Criteria and Standards:
1. Describe the financial rationale for the proposed replacement equipment.
2. Document if the existing equipment has exceeded its useful life.
3. Describe the effect the replacement unit would have on quality of care.
4. Document if the existing equipment is in constant need of repair.
5. Document if the lease on the current equipment has expired.
6. Describe the technological advances provided by the new unit.
7. Describe how patient satisfaction would be improved.
8. Describe how patient outcomes would be improved.
9. Describe what impact the new unit would have on utilization.
10. Describe any new capabilities that the new unit would provide.
11. By what percent will this replacement increase patient charges?

Divider IV. Financial Feasibility Review Criteria and Standards:
1. Document that sufficient financing is available by providing a letter from a financial institution or an auditor's statement indicating that sufficient funds are available.
2. Provide Service-Specific Revenues and Expenses (Form MO 580-1865) projected through three full years beyond project completion.
3. Document how patient charges are derived.
4. Document responsiveness to the needs of the medically indigent.
DIVIDER I. APPLICATION SUMMARY

1. Applicant Identification and Certification (Form MO 580-1861)
   See attached.

2. Representative Registration (Form 580-1869)
   See attached.

3. Proposed Project Budget (Form MO 580-1863) and detail sheet with documentation of costs.
   See attached.
# Certificate of Need Program

## APPLICANT IDENTIFICATION AND CERTIFICATION

The information provided must match the Letter of Intent for this project, without exception.

### 1. Project Location

<table>
<thead>
<tr>
<th>Title of Proposed Project</th>
<th>Project Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement MRI</td>
<td>5364 HS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Address (Street/City/State/Zip Code)</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 McBride &amp; Sons Center Drive, Suite 101, Chesterfield, MO 63005</td>
<td>St. Louis County</td>
</tr>
</tbody>
</table>

### 2. Applicant Identification

<table>
<thead>
<tr>
<th>List All Owner(s):</th>
<th>Address (Street/City/State/Zip Code)</th>
<th>Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Luke's Center for Diagnostic Imaging, LLC</td>
<td>6 McBride &amp; Sons Center Drive, Suite 101, Chesterfield, MO 63005</td>
<td>638-519-7856</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>List All Operator(s):</th>
<th>Address (Street/City/State/Zip Code)</th>
<th>Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Luke's Center for Diagnostic Imaging, LLC</td>
<td>6 McBride &amp; Sons Center Drive, Suite 101, Chesterfield, MO 63005</td>
<td>638-519-7856</td>
</tr>
</tbody>
</table>

### 3. Ownership

- [ ] Nonprofit Corporation
- [X] Individual
- [ ] City
- [ ] District
- [ ] Partnership
- [X] Corporation
- [ ] County
- [X] Other LLC

### 4. Certification

In submitting this project application, the applicant understands that:

- (A) The review will be made as to the community need for the proposed beds or equipment in this application;
- (B) In determining community need, the Missouri Health Facilities Review Committee (Committee) will consider all similar beds or equipment within the service area;
- (C) The issuance of a Certificate of Need (CON) by the Committee depends on conformance with its Rules and CON statute;
- (D) A CON shall be subject to forfeiture for failure to incur an expenditure on any approved project six (6) months after the date of issuance, unless obligated or extended by the Committee for an additional six (6) months;
- (E) Notification will be provided to the CON Program staff if and when the project is abandoned;
- (F) A CON, if issued, may not be transferred, relocated, or modified except with the consent of the Committee.

We certify the information and date in this application as accurate to the best of our knowledge and belief by our representative's signature below:

### 5. Authorized Contact Person

<table>
<thead>
<tr>
<th>Name of Contact Person</th>
<th>Title</th>
<th>Telephone Number</th>
<th>Fax Number</th>
<th>E-mail Address</th>
<th>Date of Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard D. Watters</td>
<td>Attorney</td>
<td>314-621-2939</td>
<td>314-621-6844</td>
<td><a href="mailto:rdwatters@lashlybaer.com">rdwatters@lashlybaer.com</a></td>
<td>8/24/16</td>
</tr>
</tbody>
</table>
Certificate of Need Program

**REPRESENTATIVE REGISTRATION**

(A registration form must be completed for each project presented.)

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement MRI</td>
<td>5364 HS</td>
</tr>
</tbody>
</table>

(Please type or print legibly.)

<table>
<thead>
<tr>
<th>Name of Representative</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard D. Watters</td>
<td>Attorney</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Firm/Corporation/Association of Representative (may be different from below, e.g., law firm, consultant, other)</th>
<th>Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lashly &amp; Baer, P.C.</td>
<td>314-621-2939</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address (Street/City/State/Zip Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>714 Locust Street, St. Louis, MO 63101</td>
</tr>
</tbody>
</table>

Who's interests are being represented?
(If more than one, submit a separate Representative Registration Form for each.)

<table>
<thead>
<tr>
<th>Name of Individual/Agency/Corporation/Organization being Represented</th>
<th>Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Luke's Center for Diagnostic Imaging, LLC</td>
<td>636-519-7856</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address (Street/City/State/Zip Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 McBride &amp; Sons Center Drive, Suite 101, Chesterfield, MO 63005</td>
</tr>
</tbody>
</table>

Check one. Do you:  
☑ Support  
☐ Oppose  
☐ Neutral

Relationship to Project:  
☐ None  
☐ Employee  
☑ Legal Counsel  
☐ Consultant  
☐ Lobbyist  
☐ Other (explain):  

Other Information:

__________________________________________________________

I attest that to the best of my belief and knowledge the testimony and information presented by me is truthful, represents factual information, and is in compliance with §197.326.1 RSMo which says: *Any person who is paid either as part of his normal employment or as a lobbyist to support or oppose any project before the health facilities review committee shall register as a lobbyist pursuant to chapter 105 RSMo, and shall also register with the staff of the health facilities review committee for every project in which such person has an interest and indicate whether such person supports or opposes the named project. The registration shall also include the names and addresses of any person, firm, corporation or association that the person registering represents in relation to the named project. Any person violating the provisions of this subsection shall be subject to the penalties specified in §105.478, RSMo.*

Original Signature:  

[Signature]

Date:  

8/24/16
Certificate of Need Program

REPRESENTATIVE REGISTRATION

(A registration form must be completed for each project presented.)

Project Name
Replacement MRI

Number
5364 HS

(Please type or print legibly.)

Name of Representative
Richard W. Hill, III

Title
Attorney

Firm/Corporation/Association of Representative (may be different from below, e.g., law firm, consultant, other)
Lashly & Baer, P.C.

Telephone Number
314-621-2939

Address (Street/City/State/Zip Code)
714 Locust Street, St. Louis, MO 63101

Who’s interests are being represented?
(If more than one, submit a separate Representative Registration Form for each.)

Name of Individual/Agency/Corporation/Organization being Represented
St. Luke’s Center for Diagnostic Imaging, LLC

Telephone Number
636-519-7856

Address (Street/City/State/Zip Code)
6 McBride & Sons Center Drive, Suite 101, Chesterfield, MO 63005

Check one. Do you: Relationship to Project:
☐ Support
☐ Oppose
☐ Neutral
☐ None
☐ Employee
☒ Legal Counsel
☐ Consultant
☐ Lobbyist
☐ Other (explain): Other Information:

I attest that to the best of my belief and knowledge the testimony and information presented by me is truthful, represents factual information, and is in compliance with §197.326.1 RSMo which says: Any person who is paid either as part of his normal employment or as a lobbyist to support or oppose any project before the health facilities review committee shall register as a lobbyist pursuant to chapter 105 RSMo, and shall also register with the staff of the health facilities review committee for every project in which such person has an interest and indicate whether such person supports or opposes the named project. The registration shall also include the names and addresses of any person, firm, corporation or association that the person registering represents in relation to the named project. Any person violating the provisions of this subsection shall be subject to the penalties specified in § 105.478, RSMo.

Original Signature

Date
8/24/16

MO 580-1869 (11/01)
# Certificate of Need Program

## PROPOSED PROJECT BUDGET

### Description

**COSTS:**

(Comprehensive list of project costs)

- **1. New Construction Costs *****
- **2. Renovation Costs *****
- **3. Subtotal Construction Costs (#1 plus #2)**
- **4. Architectural/Engineering Fees**
- **5. Other Equipment (not in construction contract)**
- **6. Major Medical Equipment**
- **7. Land Acquisition Costs *****
- **8. Consultants' Fees/Legal Fees *****
- **9. Interest During Construction (net of interest earned) *****
- **10. Other Costs *****

**Dollars**

- $0
- $0
- $0
- $0
- $0
- $0
- $0
- $0
- $0
- $0

**11. Subtotal Non-Construction Costs (sum of #4 through #10**

**12. Total Project Development Costs (#3 plus #11)**

- $1,701,260

### FINANCING:

- **13. Unrestricted Funds**
- **14. Bonds**
- **15. Loans**
- **16. Other Methods (specify)**

**Dollars**

- $1,701,260
- $0
- $0
- $0

**17. Total Project Financing (sum of #13 through #16)**

- $1,701,260

### New Construction Details

- **18. New Construction Total Square Footage**
- **19. New Construction Costs Per Square Foot *****

### Renovated Space Details

- **20. Renovated Space Total Square Footage**
- **21. Renovated Space Costs Per Square Foot *****

---

* Attach additional page(s) detailing how each line item was determined, including all methods and assumptions used. Provide documentation of all major costs.

** These amounts should be the same.

*** Capitalizable items to be recognized as capital expenditures after project completion.

**** Include as Other Costs the following: other costs of financing; the value of existing lands, buildings and equipment not previously used for health care services, such as a renovated house converted to residential care, determined by original cost, fair market value, or appraised value; or the fair market value of any leased equipment or building, or the cost of beds to be purchased.

***** Divide new construction costs by total new construction square footage.

****** Divide renovation costs by total renovation square footage.
PRELIMINARY PROPOSAL

Customer Number: 0000251367

Date: 7/19/2016

CENTER FOR DIAGNOSTIC IMAGING
6 MCBRIDE&SONS CORP CENTER DR STE 1
CHESTERFIELD, MO 63005

Estimated Delivery Date: 09/30/2016

Estimated delivery date is subject to change based upon factory lead times, acceptance date of this quote, customer site readiness, and other factors. A Siemens representative will contact you regarding the final delivery date.

This proposal includes the trade-in of equipment referenced in Trade Sheet Project #2016-896

This offer is only valid if a firm, non-contingent order is placed with Siemens and a signed POS contract must accompany the equipment order.

Quote Nr: 1-FOOP4I Rev. 1

MAGNETOM Skyra

All items listed below are included for this system: (See Detailed Technical Specifications at end of Proposal.)

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14441800</td>
<td>MAGNETOM Skyra - System</td>
</tr>
</tbody>
</table>

MAGNETOM Skyra is designed to provide you the versatility you need to meet the increasing demands in healthcare. Maximize 3T with its core technologies Tim(r) 4G and Dot(r), along with its comprehensive application portfolio and experience unique functionalities to increase patient comfort.

Every case. Every day.

- System Design
  - Short and open appearance (173 cm system length and 70 cm Open Bore Design) to reduce patient anxiety and claustrophobia
  - Whole-body superconductive Zero Helium Boil-Off 3T magnet
  - Actively Shielded water-cooled Siemens gradient system for maximum performance
  - TrueForm Magnet and Gradient Design

- Tim 4G (Total imaging matrix in the 4th generation) for excellent image quality and speed
  - Siemens unique DirectRF(tm) technology enabling the all digital-in/ digital-out design
  - Dual-Density Signal Transfer Technology
  - Head/Neck 16 DirectConnect
  - Spine 24 DirectConnect
  - Body 6
  - Flex Large 4
  - Flex Small 4
  - Flex Coll Interface
  - Tim Coll Interface
### PRELIMINARY PROPOSAL

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>14441801</td>
<td>Dot (Day optimizing throughput) for higher consistency, flexibility and efficiency</td>
</tr>
<tr>
<td></td>
<td>14441801</td>
<td>- Dot Display</td>
</tr>
<tr>
<td></td>
<td>14441801</td>
<td>- Dot Control Centers</td>
</tr>
<tr>
<td></td>
<td>14441801</td>
<td>- Brain Dot Engine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tim Application Suite allowing excellent head-to-toe imaging</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Neuro Suite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Angio Suite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Cardiac Suite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Body Suite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Onco Suite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Breast Suite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Ortho Suite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Pediatric Suite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Scientific Suite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Further included</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- High performance host computer and measurement and reconstruction system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Siemens unique TimCT FastView localizer and CAIPIRINHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- syngo MR software including</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1D/2D PACE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- BLADE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- iPAT²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Phoenix</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inline Diffusion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- WARP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- MDDW (Multiple Direction Diffusion Weighting)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- CISS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- DESS</td>
</tr>
</tbody>
</table>

The system (magnet, electronics and control room) can be installed in 31 sqm space. For system cooling either the Eco Chiller options or the Separator is required.

1. **Tim [204x24] XQ Gradients #Sk**
   - Tim [204x24] XQ-gradients performance level

   Tim 4G with its newly designed RF system and innovative coil architecture enables high resolution imaging and increased throughput.

   Up to 204 simultaneously connected coil elements allow in combination with the standard 24 independent RF channels for the most flexible parallel imaging and support the most demanding applications.

   Maximum SNR is ensured through the new Tim 4G matrix coil technology.

   **XQ - gradients**

   The XQ-gradients are designed combining high performance and linearity to support clinical whole body imaging at 3T. The force compensated gradient system minimizes vibration levels and acoustic noise. The XQ gradients combine 45 mT/m peak amplitude with a slew rate of 200 T/m/s.

2. **PC Keyboard US english #Tim**
   - Standard PC keyboard with 101 keys.

3. **Pure White Design #T+D**
   - The MAGNETOM Aera / MAGNETOM Skyra design is available in different light and appealing variants which perfectly integrates into the different environments. The color of the main face plate cover of the Pure White Design Variant with the integrated Dot Control Centers and the unique Dot Display is brilliant white surrounded by a brilliant
# PRELIMINARY PROPOSAL

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Item Description</th>
</tr>
</thead>
</table>
|     | 14418507 | **Tim Dockable Table #Sk**  
silver trim. The asymmetrical deco area on the left side is colored white matte and also with a brilliant surrounding silver trim.  
The table cover is presented also in the same color and material selection. |
| 1   | 14446550 | **SW syngo MR E11C**  
syngo MR E11C software with new features and applications.  
GObrain protocols (for Aera and Skyra with 48 or more rf-channels). |
| 1   | 14441748 | **Quiet Suite #T+D**  
Quiet Suite enables complete, quiet examinations for neurology and orthopedics with at least 70% reduction in sound pressure levels. |
| 1   | 14441866 | **DotGO Routine Package #T+D**  
The DotGO Routine Package includes both:  
- Spine Dot Engine and  
- Large Joint Dot Engine.  
As a package they offer a comprehensive set of workflows with guidance and automation, for standardized image quality in Spine and MSK MR imaging.  
The Spine Dot Engine provides the functionality of Inline Composing and Tim Planning Suite for streamlining workflows in all spine imaging. Tools, such as auto-positioning and vertebral recognition with AutoAlign Spine, AutoCoverage and Spine Labelling support and optimize reproducibility for your cervical, thoracic and lumbar spine imaging for all clinical indications.  
The Large Joint Dot Engine enhances standardization of the knee, hip and shoulder workflows and optimizes reproducible image quality by incorporating automation tools, such as anatomically based auto-positioning (AutoAlign). Dedicated imaging techniques, such as Advanced WARP, are included and can help to expand the access of diagnostic MRI to a broader range of patient types. |
| 1   | 14418513 | **Hand/Wrist 16 #Sk**  
The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technology combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility.  
Hand/Wrist 16 for examinations of the left or right hand and wrist region consists of a base plate and an IPAT compatible 16-channel coil and allows high resolution imaging of the wrist and the hand within one examination.  
Hand/Wrist 16 will be connected via a SlideConnect plug for fast and easy patient preparation. |
| 1   | 14430404 | **Tx/Rx 15-channel Knee Coil DDST #Sk**  
New 15-channel transmitter/receiver coil for joint examinations in the area of the lower extremities.  
Main features:  
- 15-element design (3x5 coil elements) with 15 integrated preamplifiers  
- IPAT-compatible  
- SlideConnect Technology |
| 1   | 14416954 | **2/4/8-ch Sentinelle BreastCoil #Sk**  
The 2-/4-/8-channel Sentinelle Breast Coil consists of a positioning frame with exchangeable coils with different numbers of channels as described in detail in the E text.  
The 2-/4-/8-channel Sentinelle Breast Coil can be used as an 8-channel imaging coil, a 4-channel biopsy coil for lateral biopsy access, as well as a 2-channel biopsy coil for medial biopsy access. This coil provides a large biopsy access.  
The preamplifiers are integrated into the coil.

Created: 7/19/2016 9:58:00 AM  
Siemens Medical Solutions USA, Inc. Confidential  
Siemens Medical Solutions USA, Inc. Confidential Page 3 of 3  
PRO 1-HB3WTK
PRELIMINARY PROPOSAL

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MR_STD_RIG_INST</td>
<td>MR Standard Rigging and Installation</td>
</tr>
<tr>
<td></td>
<td>MR_CRYO</td>
<td>Standard Cryogens</td>
</tr>
<tr>
<td></td>
<td>MR_INITIAL_32</td>
<td>Initial onsite training 32 hrs</td>
</tr>
<tr>
<td></td>
<td>MR_FOLLOWUP</td>
<td>Follow-up training 24 hrs</td>
</tr>
<tr>
<td></td>
<td>MR_INT_DOT_BCLS</td>
<td>MR Dot Training Class</td>
</tr>
<tr>
<td></td>
<td>MR_ADD_32</td>
<td>Additional onsite training 32 hours</td>
</tr>
<tr>
<td></td>
<td>4MR5142696K</td>
<td>Armrest #MR</td>
</tr>
<tr>
<td></td>
<td>KKT ECOCHILLER 133L</td>
<td>The KKT ECO 133-L chiller is a dedicated 20°C cooling system for MAGNETOM Aera and MAGNETOM Skyra</td>
</tr>
</tbody>
</table>

The coil is iPAT-compatible.
A positioning guidance is provided.

This quotation includes standard rigging and installation of your new MAGNETOM system.

Standard rigging into a room on ground floor level of the building during standard working hours (Mon. - Fri./ 8 a.m. to 5 p.m.)

It remains the responsibility of the Customer to prepare the room in accordance with the SIEMENS planning documents.

Any rigging requiring a crane over 80 tons and/or special site requirements (e.g. removal of existing systems, etc.) is an incremental cost and the responsibility of the Customer.

All other "out of scope" charges (not covered by the standard rigging and installation) will be identified during the site assessment and remain the responsibility of the Customer.

MR STANDARD RIGGING AND INSTALLATION

MR Standard Rigging and Installation

MR STANDARD RIGGING AND INSTALLATION

This quotation includes standard rigging and installation of your new MAGNETOM system.

Standard rigging into a room on ground floor level of the building during standard working hours (Mon. - Fri./ 8 a.m. to 5 p.m.)

It remains the responsibility of the Customer to prepare the room in accordance with the SIEMENS planning documents.

Any rigging requiring a crane over 80 tons and/or special site requirements (e.g. removal of existing systems, etc.) is an incremental cost and the responsibility of the Customer.

All other "out of scope" charges (not covered by the standard rigging and installation) will be identified during the site assessment and remain the responsibility of the Customer.

SIEMENS REPRESENTATIVE
Jay White - (870) 404-3656
## PRELIMINARY PROPOSAL

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>which automatically adapts to the different cooling requirements (e.g. system in operation, standby, ...) to reduce the energy consumption for cooling.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The cooling system must be used in combination with the IFP (Interface Panel), if there is no on-site chilled water supply at all.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The IFP is included in the scope of supply.</td>
</tr>
<tr>
<td>1</td>
<td>CHILINST_AV</td>
<td><strong>Chiller Start-up and Warranty for TIM</strong></td>
</tr>
<tr>
<td>1</td>
<td>ML11685</td>
<td><strong>MR Wall sign -English</strong></td>
</tr>
<tr>
<td></td>
<td>MRISMNS0001</td>
<td>Highly durable 1mm PVC wall sign with high-tack, double-back tape. Sticks to most any surface. English. 12&quot; x 18&quot;.</td>
</tr>
<tr>
<td></td>
<td>MR_PM</td>
<td><strong>MRI Patient Audio System</strong></td>
</tr>
<tr>
<td></td>
<td>MR_PR_ELEVATE_2</td>
<td>The MRI Patient Audio System is to be installed in the technologist room and is connected to the Siemens intercom system. The package provides the following benefits:</td>
</tr>
<tr>
<td></td>
<td>MR_BTL_INST</td>
<td>• Create custom, commercial-free radio stations based on artist, song or genre preferences.</td>
</tr>
<tr>
<td></td>
<td>ALL</td>
<td>• Avoid any AM/FM tuning issues that may occur in RF-shielded rooms.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Compatible with all popular audio apps (e.g. tunein, Spotify, iTunes, Audible, iHeartRadio, Pandora, etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Includes amplifier; all cables and adapters; Bose Companion 2 technologist speakers; 3.5 mm to RCA cable; and customized iPad Mini with all original accessories and Tuneln Radio Pro App (pre-paid and installed).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The MR Stereo can play regular radio, internet radio (depending on quality of and access to Radio wave signals and Wi-Fi signals) and device (iPad) stored audio content. Optimal performance requires access to radio wave signals for regular radio and Wi-Fi signals for Internet radio through the facility’s wireless network.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Installation is not included unless purchased with the Siemens system.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Includes 3 year limited liability warranty on all system components through MRlaudio.</td>
</tr>
<tr>
<td>1</td>
<td>MR_PM</td>
<td><strong>MR Project Management</strong></td>
</tr>
<tr>
<td></td>
<td>MR_PR_ELEVATE_2</td>
<td>A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemens equipment. The assigned PM will work with the customer’s facilities management, architect or building contractor to assist you in ensuring that your site is ready for installation. Your PM will provide initial and final drawings and will coordinate the scheduling of the equipment, installation, and rigging, as well as the initiation of on-site clinical education.</td>
</tr>
<tr>
<td>1</td>
<td>MR_PREINST_DOCK</td>
<td><strong>T+D Preinstall kit for dockable table</strong></td>
</tr>
<tr>
<td>1</td>
<td>14407258</td>
<td><strong>MR Workplace Table 1.2m</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Table suited for syngo Acquisition Workplace and syngo MR Workplace based on syngo Hardware.</td>
</tr>
<tr>
<td>1</td>
<td>14407261</td>
<td><strong>MR Workplace Container, 50cm</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 cm wide extra case for the syngo host computer with sliding front door to allow change of storage media (CD/DVD/USB).</td>
</tr>
<tr>
<td>1</td>
<td>14441738</td>
<td><strong>Foot/Ankle 16 #Sk</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The new Tim 4G coil technology with Dual Density Signal Transfer and DirectConnect Technology combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Foot/Ankle 16 for examinations of the left or right foot and ankle region consists of a base plate and an IPAT compatible 16-channel coil and allows high resolution imaging of the foot and ankle within one examination.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Foot/Ankle 16 is a cable-less coil and will be connected via DirectConnect for fast and easy patient preparation.</td>
</tr>
<tr>
<td>1</td>
<td>14441735</td>
<td><strong>Shoulder 16 Coil Kit #Sk</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technology combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility.</td>
</tr>
</tbody>
</table>

Created: 7/19/2016 9:58:00 AM

Siemens Medical Solutions USA, Inc. Confidential

Page 5 of 5
**PRELIMINARY PROPOSAL**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14441731</td>
<td>Imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility. The Shoulder 16 Coil Kit for examinations of the left or right shoulder consists of a base plate and two different sized iPAT compatible 16 channel coils (Shoulder Large 16 and Shoulder Small 16). These will be attached and can be relocated on the base plate. The 16-element coils with 16 integrated pre-amplifiers ensure maximum signal-to-noise ratio. Shoulder Large 16 and Shoulder Small 16 will be connected via a SlideConnect plug for fast and easy coil set-up and patient preparation.</td>
</tr>
<tr>
<td>1</td>
<td>14430439</td>
<td><strong>RESOLVE</strong> is a diffusion-weighted, readout-segmented EPI sequence optimized towards high resolution imaging with reduced distortions. The sequence uses a very short echospacing compared to single-shot EPI, reducing susceptibility effects. A 2D-navigator correction is applied to avoid artefacts due to motion-induced phase errors. This combination allows diffusion weighted imaging of the whole body.</td>
</tr>
<tr>
<td>1</td>
<td>14418596</td>
<td>Susceptibility Weighted Imaging is a high-resolution 3D imaging technique for the brain with ultra-high sensitivity for microscopic magnetic field inhomogeneities caused by deoxygenated blood, products of blood decomposition and microscopic iron deposits. Among other things, the method allows for the highly sensitive proof of cerebral hemorrhages and the high-resolution display of venous cerebral blood vessels.</td>
</tr>
<tr>
<td>1</td>
<td>14441739</td>
<td><strong>Peripheral Angio 36 #Sk</strong> The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technology combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility: - 36 channels - Dual Density Signal Transfer - Ultra light-weight - SlideConnect Technology The 36-channel coil includes 36 integrated pre-amplifiers for excellent signal-to-noise ratio. The single SlideConnect Plug allows for fast and easy patient preparation. The Peripheral Angio 36 features: - 36-element design with 36 integrated preamplifiers, distributed over 6 planes with 6 elements each - Operates in an integrated fashion with Body 18 coils and with the Spine 32. For Whole-Body examinations also with the Head/Neck 20 - Automatic table feed and active coil switch - Can be utilized head and feet first - Both legs are independently covered with coil elements, maximizing the coil filling factor and the signal-to-noise ratio - No coil tuning - iPAT-compatible - Dual-Density Signal Transfer enables ultra-high density coil designs by integrating key RF components into the local coil - SlideConnect technology for easy coil set up - One cable only for easy handling - Includes special non-ferromagnetic coil cart for safe, user-friendly storage</td>
</tr>
</tbody>
</table>
# PRELIMINARY PROPOSAL

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14416862</td>
<td>TWIST syngo #V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This package contains a Siemens unique sequence and protocols for time-resolved (4D) MR angiographic and dynamic imaging in general with high spatial and temporal resolution. syngo TWIST supports comprehensive dynamic MR angio exams in all body regions. It offers temporal information of vessel filling in addition to conventional static MR angiography, which can be beneficial in detecting or evaluating malformations such as shunts. In case of general dynamic imaging, for example an increase in spatial resolution by a factor of up to 2 at 60 seconds temporal resolution (compared to conventional dynamic imaging) is possible due to intelligent k-space sampling strategies. Alternatively, increased temporal resolution at constant spatial resolution is possible.</td>
</tr>
<tr>
<td>1</td>
<td>14441728</td>
<td>NATIVE syngo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integrated software package with sequences and protocols for non-contrast enhanced 3D MRA with high spatial resolution. syngo NATIVE particularly enables imaging of abdominal and peripheral vessels and is an alternative to MR angiography techniques with contrast medium, especially for patients with severe renal insufficiency.</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>MR Trade-in-Allowance &quot;Free Pull&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Additional Rigging MR Union Labor $7,600</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>12 Months Extended Warranty $99,500</td>
</tr>
</tbody>
</table>

System Total: $1,660,344
OPTIONS for MAGNETOM Skyra

All items listed below are OPTIONs and will be included on this system ONLY if initialed: *(See Detailed Technical Specifications at end of Proposal.)*

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Item Description</th>
<th>Extended Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14441759</td>
<td>FREEZEit Body MRI Package #T+D</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FREEZEit Body Package contains two robust sequences for advanced body imaging: TWIST VIBE and StarVIBE.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- TWIST VIBE is a new fast, high-resolution 4D imaging sequence for multi-arterial liver imaging.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- StarVIBE is a motion insensitive VIBE sequence using a stack-of-stars trajectory.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>14436740</td>
<td>syngo BreVis Biopsy #T +D</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>syngo BreVis Biopsy is a task card for easy and effective breast biopsy planning for the Acquisition Workplace (AWP).</td>
<td></td>
</tr>
</tbody>
</table>

FINANCING: The equipment listed above may be financed through Siemens. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

Siemens Healthcare is pleased to submit this Preliminary Pricing Proposal. A Preliminary Pricing Proposal is provided for planning purposes only; it is not contractually binding. To receive a contractually binding proposal for the Products listed above, inclusive of Terms, Conditions, and Warranty coverage, please contact your Siemens Healthcare Sales Representative.

Siemens Healthcare  
Jay White  
(870) 404-3656  
jay.white@siemens.com
Detailed Technical Specifications

**MAGNETOM Skyra**

<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14441800 MAGNETOM Skyra - System</td>
<td>MAGNETOM Skyra - the first 3T Tim+Dot system - integrates the next generation Tim (Total imaging matrix)- Tim 4G and the Siemens unique Dot (Day optimizing throughput) engines enabling workflow efficiency combined with higher diagnostic confidence due to consistent results. The system includes: Tim 4G+Dot Tim 4G provides increased patient comfort and optimized workflow efficiency. Only one patient setup, no repositioning, no changing of coils. Ultra-light-weighted coils with high density of coil elements for maximized patient comfort and increased SNR. Feet-first positioning for almost all examinations possible reduces anxiety and claustrophobia. Tim 4G with its 4G flexibility, 4G accuracy and 4G speed brings image quality and acquisition speed to a new level. Dot offers a customizable framework for patient personalization, user guidance and exam automation. Optimized scan strategies are provided and can be selected based on patient condition, which allow for high quality exams even when conditions change. Integrated decision points allow the user to easily add or remove one or a group of protocols with one click. Step by step image and text guidance guides novice users even through the most complicated exams. Exam automation allows optimal timing for breathing, scanning, planning or contrast arrival. Dot can be easily customized to follow the individual standards of care. Dot is personalized, guided and automated and designed to improve workflow efficiency and image consistency. MAGNETOM Skyra with its 70 cm Open Bore design and a system length of only 173 cm gives a patient friendly appearance that can significantly help patients with anxiety or claustrophobia. Magnet: - Ultra-short 163 cm long, whole-body superconductive 3T magnet with active shielding (AS) technology with counter coils - External Interference Shielding (E.I.S.) - Excellent homogeneity enabled TrueForm magnet design which allows for a cylindrically optimized homogeneity volume resulting in higher image quality (50 x 50 x 45 cm³ DEV, typ. 3.6 ppm based on the 24-plane plot method) - The magnet has a helium capacity of approximately 1,200 liters and a typical Helium boil-off rate of 0 llyr during typical, undisturbed clinical operation depending on the sequences used and examination time, and provided the system is serviced in regular intervals. - It has an integrated magnet cooling system. - The combination of standard active shim with 3 linear channels (1st order) and 5 nonlinear channels (2nd order) and passive shim allows for maximized magnetic field homogeneity and consistently high image quality for a wide range of applications Gradient system: - Actively shielded water-cooled world class gradient system - All axes force compensated - TrueForm Gradient Design DirectRF - RF Transmit/Receive System: - Fully integrated Transmit- and Receive path in the magnet housing including extremely compact water-cooled solid state amplifier with 37.5 kW peak power - High dynamic range</td>
</tr>
</tbody>
</table>

Created: 7/19/2016 9:58:00 AM Siemens Medical Solutions USA, Inc. Confidential
<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
</table>
| (Continued) 14441800 | - Immediate feedback loop for real-time sequence adaptation  
| MAGNETOM Skyra - System | - Integrated no tune transmit/receive Body Coil  
| | - TimTX TrueForm includes innovative techniques in the RF excitation hardware as well as new application and processing features to guarantee uniform RF distribution in all body regions. TimTX TrueForm for MAGNETOM Skyra consists of TrueForm excitation, which uses amplitude and phase transmission settings optimized for dedicated body regions. Feeding the 2 ports of the integrated body coil with an optimized weighting yields a homogeneous B1 distribution.  
| | - The revolutionary Tim 4G technology allows connecting up to 204 coil elements simultaneously enabling higher SNR and iPAT in all directions. No repositioning of patients is needed even for large Field of View examinations.  
| | - Dual-Density Signal transfer enables ultra-high density coil design by integrating key RF components into the local coil.  
| | **Tim 4G Coils:**  
| | The new Tim 4G coil technology with Dual-Density Signal Transfer, DirectConnect and SlideConnect technology combines key imaging benefits:  
| | - Excellent image quality, high patient comfort, and unmatched flexibility  
| | The Tim 4G coils are designed for highest image quality combined with easy handling. The high coil element density increases SNR and reduces examination times. DirectConnect and SlideConnect™ technology reduce patient set up time significantly. The coils are designed with the patient in mind. Light weight coils with an open design ensure highest patient comfort resulting in better patient cooperation and image quality. No coil changing with multi-exam studies saves patient setup- and table time.  
| | AutoCoilSelect for dynamic, automatic, or interactive selection of the coil elements within the Field of View fastens the exam preparation at the host.  
| | All coils are time-saving “no-tune” coils.  
| | A comprehensive set of pads for comfortable and stable patient positioning together with safety straps are included.  
| | - **Head/Neck 16**  
| | The 16-channel coil with its 16 integrated pre-amplifiers ensures excellent signal-to-noise ratio. The unique DirectConnect technology allows users connecting the 16 coil elements of the Head/Neck 16 without cables. The patient friendly open design allows for maximum patient comfort which is supported in addition by a look-out mirror for claustrophobic patients. The high channel coil is iPAT compatible in all directions.  
| | The open and light design of the upper coil part increases patient comfort and is removable for easy patient handling. The lower coil part may remain on the table for most of the examinations can be used without the upper part. The Head/Neck 16 and Spine 24 are smoothly integrated into the patient table, thus enabling high flexibility in imaging and fewer coil changes and easy handling when switching patients. The Head /Neck 16 coil is equipped with two removable cushioned head stabilizers for stable and comfortable patient positioning.  
| | The Head/Neck 16 can be used for applications like head examinations, neck examinations, MR Angiography, combined head/neck examinations or for imaging of the TMJ (temporomandibular joints).  
| | Typically combined with the Spine 24 and Body 6 or Peripheral Angio 36 but also other combinations eg with flexible coils like the Flex Large 4 are possible.  
| | - **Body 6**  
| | The 6-channel coil with its 6 integrated pre-amplifiers ensures excellent signal-to-noise ratio. The SlideConect plug allows for fast and easy patient preparation resulting in less table time. Fast acquisition times enabled by iPAT in all directions. The light-weighted coil ensures highest patient comfort.  
| | The Body 6 can be combined with further Body 6 coils for larger coverage.  
| | The Body 6 is typically used in combination with the Spine 24 for examinations of the thorax, abdomen, pelvis or hip. The Body 6 can also be used for cardiac or vascular applications. Through its perfect combinability with the Spine 24, further Body 6 (optional), the Peripheral Angio 36 (optional), but also the Head/Neck 16 and all flexible coils (e.g. Flex Large 4, Flex Small 4) it contributes for a broad range of indications up to whole-body imaging.  

Created: 7/19/2016 9:58:00 AM
Siemens Medical Solutions USA, Inc. Confidential
Page 10 of 10
PRO 1-HB3WTK
<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
</table>
| (Continued) 14441800 MAGNETOM Skyra - System | - Spine 24  
The 24-channel coil with its 32 integrated pre-amplifiers ensures maximum signal-to-noise ratio. The unique DirectConnect technology allows connecting the 24 coil elements of the Spine 24 without the need to plug in any cable. The patient friendly ergonomical design allows for maximum patient comfort. The high element coil is IPAT compatible in all directions.  
Smoothly integrated into the patient table the Spine 24 may remain on the patient table for nearly all exams.  
The Spine 24 is typically combined with Body 6, Head/Neck 16, Peripheral Angio 36 (optional) or Flex Large 4, Flex Small 4.  
- Flex Large 4/ Flex Small 4  
Light-weighted, very flexible, IPAT compatible, 4-element no-tune receiver coils which are made of soft and smooth material. The coils can be wrapped around or used flat.  
Both coils can be connected via Flex Coil interface. One Flex Coil interface is already delivered as standard.  
The coils can be used for different examinations ranging from examinations of the extremities to abdominal examinations. |
| Tim Table | - The maximum scan range of the Tim Table is 140 cm. A scan range of 205 cm can be achieved with the Tim Whole Body Suite (optional)  
- The maximum patient weight of 250 kg (550 lbs) is valid for horizontal and vertical movements, which ensures maximized patient comfort for obese patients.  
- The patient table can be lowered to a minimum height of 52 cm from the floor, for easier patient positioning and better accessibility for geriatric, pediatric or immobile patients. An infusion stand is integrated to ensure fast patient set up also for critical patients.  
- Multiple Tim4G coils can be connected at once for efficient and patient friendly examinations.  
- The Tim Table can be moved with two clicks into the isocenter - one click to the upmost position and one click into the isocenter. |
| Dot (Day Optimizing Throughput) engine | Dot multiplies the power of Tim resulting in greater image consistency and diagnostic confidence |
| Dot Control Centers and Dot Display | - The ergonomically designed Dot Control Centers are integrated left and right into the front covers for controlling table movement and interaction with the Dot Display. The Dot Control Centers are well illuminated for easy visual recognition.  
- Automated table move up to upmost position, to center position or Home position facilitate smooth patient preparation and will reduce table time  
- Variable (6 levels) ventilation and lighting inside the magnet bore or volume adjustments are possible for increased patient comfort  
- The Dot Display provides on board guidance for patient set up where it's needed - directly at the scanner. Information such as patient name or exam type or required patient position, guidance for ECG set up and immediate visualization of physiological curves will be provided for convenient operation.  
- Almost all table control functions, including ventilation and illumination of the magnet bore, can be also controlled from the operator console for convenient operation. |
| Dot Technology | Dot gives uniquely tailored, optimized scans configurable to patient condition or clinical question. Dot provides patient personalization, user guidance and exam automation and is of course configurable by the user to adapt to the different clinical needs and standards of care. |
**PRELIMINARY PROPOSAL**

<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brain Dot Engine</strong></td>
<td>The Brain Dot Engine provides guided and automated workflows customizable to the site specific standards of care for general brain examinations. The Brain Dot Engine supports the user in achieving reproducible image quality with increased ease of use and time efficient exams. The brain workflow can be personalized to the individual patient condition and clinical need. Several predefined strategies are included, which can be easily selected with one click. They can be changed at any time during the brain workflow. Protocols tailored for use of contrast media are integrated.</td>
</tr>
<tr>
<td><strong>(Continued)</strong></td>
<td>- Standard: Standard examination with 2D protocols</td>
</tr>
<tr>
<td>14441800 MAGNETOM Skyra - System</td>
<td>- Resolution focus: Examination with 3D protocols (with e.g. SPACE) for detailed views</td>
</tr>
<tr>
<td></td>
<td>- Speed focus: Examination with fast 2D protocols (with e.g. HASTE) for further speeding up the exam</td>
</tr>
<tr>
<td></td>
<td>- Motion insensitive: Examination with syngo BLADE protocols</td>
</tr>
<tr>
<td></td>
<td>- to minimize and correct the effects of motion automatically</td>
</tr>
<tr>
<td></td>
<td>Step-by-step user guidance is seamlessly integrated. Example images and guidance text are displayed for each individual step of the scanning workflow. Both - images and text - are easily configurable by the user.</td>
</tr>
<tr>
<td></td>
<td>Easy positioning of the patient with AutoPosition. The patient is automatically placed at the isocenter without any laser marking required.</td>
</tr>
<tr>
<td></td>
<td>AutoAlign Head provides automated, positioning and alignment of slice groups to the anatomy, relying on multiple anatomical landmarks. Besides basic brain positioning, AutoAlign Head computes reference position for several other brain structures such as the inner ear, the orbits and the optic nerve.</td>
</tr>
<tr>
<td></td>
<td>Automatic real-time calculation of trace-weighted images and ADC maps with Inline Diffusion Technology.</td>
</tr>
<tr>
<td></td>
<td>Easy rerun or repeat with functionality allows for reduced table time. Alternatively an exam can be repeated with a changed strategy.</td>
</tr>
<tr>
<td></td>
<td>The Brain Dot Engine as all Dot engines can be modified by the user to their individual standard of care.</td>
</tr>
<tr>
<td><strong>Tim Application Suite</strong></td>
<td>The Tim Application Suite offers a complete range of clinically optimized sequences, protocols and workflow functionalities for all body regions. Excellent head-to-toe imaging can be accomplished with the sequences and features included in this application suite. To enable this comprehensive application range, ten dedicated application packages have been included.</td>
</tr>
<tr>
<td></td>
<td>- syngo TimCT FastView</td>
</tr>
<tr>
<td></td>
<td>- Neuro Suite</td>
</tr>
<tr>
<td></td>
<td>- Angio Suite</td>
</tr>
<tr>
<td></td>
<td>- Cardiac Suite</td>
</tr>
<tr>
<td></td>
<td>- Body Suite</td>
</tr>
<tr>
<td></td>
<td>- Onco Suite</td>
</tr>
<tr>
<td></td>
<td>- Breast Suite</td>
</tr>
<tr>
<td></td>
<td>- Ortho Suite</td>
</tr>
<tr>
<td></td>
<td>- Pediatric Suite</td>
</tr>
<tr>
<td></td>
<td>- Scientific Suite</td>
</tr>
</tbody>
</table>

*syngo TimCT FastView*

*syngo TimCT FastView* is a “one go” localizer for the whole body or large body regions such as the whole spine or the whole abdomen. It acquires the complete extended Field of View in one volume with isotropic resolution. Transversal, coronal and sagittal reformats of the volume are calculated inline and displayed for planning subsequent exams. Moreover, while planning is underway, adjustments are acquired automatically for further time savings in subsequent measurements.
### Part No. / Product Description

**syngo TimCT FastView** runs without laser light positioning to further streamline the workflow for several indications.

**Neuro Suite**

Comprehensive head and spine examinations can be performed with dedicated programs. High resolution protocols and fast protocols for uncooperative patients are provided. The Neuro Suite also includes protocols for diffusion imaging, perfusion imaging, and fMRI. It includes for example:

- EPI sequences and protocols for diffusion, perfusion and fMRI for advanced neurological applications.
- Diffusion weighted imaging is possible with up to 16 b-values in the orthogonal directions. Dynamic Analysis software (included in standard configuration) enables calculation of:
  - ADC maps
  - t-test maps from the EPI images for fMRI
  - Time-to-Peak maps for perfusion analysis.
- Whole spine protocols acquire in multiple steps via software controlled table movement in a single click.
- 3D isotropic resolution volume imaging using T1 3D MPRAGE / 3D FLASH, SPACE DarkFluid, T2 SPACE and 3D TSE
- T2-weighted high resolution 3D Restore protocols optimized for inner ear examinations
- Whole-spine protocols in multiple steps with software controlled table movement
- 2D and 3D MEDIC protocols for T2-weighted imaging, particularly for C-spine examinations in axial orientation where reproducibility is difficult due to CSF pulsations and blood flow artifacts
- 3D Myelograms with 3D HASTE and 3D True-FISP for anatomical details
- Dynamic sacro-iliac joint imaging after contrast administration using a fast T1-weighted FLASH 2D sequence
- Spine diffusion protocols to differentiate osteoporosis versus tumor infiltration and post-radiotherapy changes versus residual tumor with PSIF sequence
- Precision filter for high spatial accuracy e.g. for neuro intra-operative imaging and stereotactic planning
- 3D CISS (Constructive Interference in Steady State) for excellent visualization of fine structures such as cranial nerves. High resolution imaging of inner ear and spine
- AutoAlign Head LS providing a fast, easy, standardized, and reproducible patient scanning supporting reading by delivering a higher and more standardized image quality

**Angio Suite**

Excellent MR Angiography can be performed to visualize arteries and veins with or without contrast agent. **Contrast-enhanced MRA**

- 3D contrast-enhanced MRA protocols for e.g. single step, dynamic, peripheral, whole body MRA with the shortest TR and TE. The strong gradients make it possible to separate the arterial phase from the venous phase.
- TestBolus workflow for optimized bolus timing and superb image quality.
- CareBolus functionality for accurate determination of the bolus arrival time and the "Stop and Continue" of the 3D ce-MRA protocol after the 2D bolus control scan.
- Dynamic ce-MRA for 3D imaging over time.

**Non-contrast-MRA and venography**

- 2D and 3D Time-of-Flight (ToF) protocols for MRA for the Circle of Willis, carotids, neck vessels, and breath-hold protocols for abdominal vessels
- Triggered 2D ToF sequences for non-contrast MRA, particularly of the abdomen and the extremities
- 2D/3D Phase-Contrast
- MR venography with 2D/3D Time-of-Flight (ToF) and Phase-Contrast
- TONE (Tilted Optimized Non-saturation Excitation) and MTC (Magnetization Transfer Contrast) techniques for improved Contrast-to-Noise Ratio (CNR)

**Image processing tools**

- MPR, MIP, MinIP, and 3D SSD (Multiplanar Reconstruction, Maximum Intensity Projection, Minimum Intensity Projection, Shaded Surface Display)
## PRELIMINARY PROPOSAL

<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Inline MIP for immediate results</td>
<td>- Inline subtraction of pre- and post-contrast measurements</td>
</tr>
<tr>
<td>- Inline standard deviation maps of Phase-Contrast measurements for delineation of arteries and veins</td>
<td>Cardiac Suite</td>
</tr>
<tr>
<td>The cardiac suite covers comprehensive 2D routine cardiac applications, ranging from morphology and ventricular function to tissue characterization. Featuring syngo BEAT 2D in conjunction with iPAT and T-PAT techniques.</td>
<td></td>
</tr>
</tbody>
</table>

### Cardiac views

- Fast acquisition of the basic cardiac orientations for further examination planning
- Cardiac scouting provides users with a step-by-step procedure for the visualization and planning of typical cardiac views, e.g. based on TrueFISP or Dark Blood TurboFLASH: short axis, 4-chamber and 2-chamber views.

### syngo BEAT

- Unique tool for fast and easy cardiovascular MR imaging
- E.g. 1 click change from FLASH to TrueFISP for easy contrast optimization
- 1-click to switch arrhythmia rejection on / off
- 1-click change from Cartesian to radial sampling to increase effective image resolution (e.g. in pediatric patients) and avoid folding artifacts in large patients

### Visualization of structural cardiovascular pathologies with CMR – syngo BEAT

- Breath-hold and free breathing techniques for strong contrast between the blood and vascular structures.
- Dark Blood TSE and HASTE imaging are available for the structural evaluation of the cardiothoracic anatomy, including vessels or heart valves. Cine techniques (FLASH & TrueFISP) for high-resolution valve evaluation
- Multiple contrasts such as T1- and T2-weighted imaging for use in diseases such as myocarditis (inflammation / hyperaemia), ARVD (fibrous-fatty degeneration) or acute myocardial infarction (edema)
- Dark-blood TSE with motion compensation for high-quality vessel wall imaging in small or large vessels

### Tools for rapid evaluation of left or right ventricular function

- Acquisition of a stack of short-axis slices (standard segmented FLASH, or advanced segmented TrueFISP)
- Automatic adjustment of the acquisition window to the current heart rate
- Use of the Inline ECG for graphical ECG triggering setup
- Retrospective gating with cine sequences (TrueFISP, FLASH)
- Protocols for whole-heart coverage
- iPAT integration for highest temporal and spatial resolution
- Real-time imaging in case the patient is not able to hold his breath

### Dynamic imaging and tissue characterization with syngo BEAT

- Protocols for high-contrast and high-resolution tissue characterization
- Protocols for stress and rest imaging with TrueFISP or TurboFLASH contrast support the acquisition of multiple slices with high resolution and arbitrarily adjustable slice orientation for each slice
- T-PAT with mSENSE and GRAPPA for advanced parallel imaging provides fast high-resolution dynamic imaging
- Segmented IR TrueFISP / FLASH with Ti scout for optimization of tissue contrast
- Advanced tissue characterization with 2D phase-sensitive IR (PSIR) sequences TrueFISP and FLASH contrast. Magnitude and phase-sensitive images with one acquisition
- Simple: no adjustment of inversion time (TI) necessary with PSIR technique
- Ungated single-shot PSIR imaging for tissue characterization under difficult conditions: free-breathing technique that can be applied even in case of arrhythmia

### Physiological Measurement Unit (PMU) - Wireless Physio Control

- Synchronizes the measurement with the physiological cycles (triggering to minimize motion artifacts caused by cardiac and respiratory movements)
- Wireless Sensors
## PRELIMINARY PROPOSAL

### Part No. / Product Description

- **Wireless Vector ECG / respiration and pulse sensors for physiologically synchronized imaging, rechargeable battery-powered - for optimized patient handling**
- **Physiological Signals Display**
  - ECG (3 channels)
  - Pulse
  - Respiration
- **External Trigger Input Display**

### Part No. / Product Description (Continued)

- **14441800 MAGNETOM Skyra - System**
  - **ECG Triggering:**
    - Acquisition of multiple slices, e.g. of the heart, at different phases of the cardiac cycle
    - Excellent image quality by synchronizing data acquisition with cardiac motion
    - Peripheral Pulse Triggering: Reduces flow artifacts caused by pulsatile blood flow
    - Excellent image quality by synchronizing data acquisition to the pulsatile blood flow
    - Respiratory Triggering: Excellent image quality by synchronizing data acquisition with the respiratory motion
    - External Triggering: Interface for trigger input from external sources (e.g. Patient Monitoring System) inside the examination room
    - Interface for trigger input from external sources (e.g. pulse generator, trigger sources for fMRI) outside the examination room
    - Optical trigger output for fMRI
    - Retrospective gating for ECG, peripheral pulse, and external trigger input

#### Breast Suite

MR imaging has proven a very high sensitivity for breast lesions and is the gold standard for the examination of silicone implants. Extremely high spatial and temporal resolution can be achieved in very short measuring times by using iPAT with GRAPPA.

Excellent soft tissue differentiation, customized protocols (e.g. with fat saturation or water excitation or silicone excitation), as well as flexible multiplanar visualization allow for fast, simple and reproducible evaluation of MR breast examinations.

This package includes:

- Quantitative evaluation and fast analysis of the data with colorized Wash-in, Wash-out, Time-To-Peak, Positive-Enhancement-Integral, MIP/time and combination maps with Inline technology or for offline calculation
- High-resolution 2D protocols for morphology evaluation
- High-resolution 3D protocols covering both breasts simultaneously
- Protocols to support interventions (fine needle and vacuum biopsies, wire localization)
- Protocols for evaluating breasts with silicone implants
- Automatic and manual frequency adjustment, taking into account the silicone signal
- Detection of the silicone signal either to suppress the silicone signal, if the surrounding tissue is to be evaluated, or to suppress the tissue signal in order to detect an implant leakage
- SPAIR - robust fat sat (robust fat suppression using an adiabatic frequency selective inversion pulse)
- DIXON - 2-point Dixon with 3D VIBE, the following contrasts can be obtained: in-phase, opposed phase, fat and water image.
- iPAT with GRAPPA for maximum resolution in short time
- Inline subtraction and MIP display
- Offline subtraction, MPR and MIP display
- syngo REVEAL: diffusion imaging for breast exams
- iPAT Extension that allows state-of-the-art sagittal breast imaging
- iPAT Extension allows bilateral 3D sagittal breast imaging with Fat Sat or Water excitation
## The Breast Suite also includes:

**syngo VIEWS (Volume Imaging with Enhanced Water Signal)**
- bilateral - both breasts are examined simultaneously
- axial - the milk ducts are directly displayed
- fat-saturated or water-excited - fat complicates clinical evaluation and is suppressed
- near-isotropic 3D measurement - the same voxel size in all three directions for reconstruction in any slice direction
- submillimeter voxel - highest resolution for precise evaluation

### Body Suite

Body Suite covers your needs for clinical body applications. Ultrafast high resolution 2D and 3D protocols are provided for abdomen, pelvis, MR Colonography, MRCP, dynamic kidney, and MR Urography applications.

### Part No. / Product Description

**Part No. / Product**

- MAGNETOM Skyra - System

**Description**

Siemens unique 2D PACE technique makes body imaging easy allowing for multi-breath hold examinations as well as free breathing during the scans. Motion artifacts are greatly reduced with 2D PACE inline technology. This package includes:

- Free breathing 2D PACE applications with 2D/3D HASTE (RESTORE) and 2D/3D TSE (RESTORE)
- Optimized fast single shot HASTE protocols and high-resolution 3D RESTORE protocols based on SPACE and TSE for MRCP and MR Urography examinations

**ABDOMEN:**

- 2D:
  - T1w (FLASH) breath-hold scans +/- Fat Sat (SPAIR, Q-FatSat, in-/opp-phase)
  - T2w (HASTE, TSE/BLADE, EPI) breath-hold scans +/- Fat Sat (SPAIR, FatSat, STIR)
  - T1w (TFL) triggered scans (2D PACE free breathing) in-/opp-phase
  - T2w (HASTE, TSE/BLADE, EPI) triggered scans (2D PACE free breathing) +/- Fat Sat (SPAIR,FatSat, STIR) as well as HASTE- and TSE-multi-echo
  - Optimized fast single shot HASTE protocols and high-resolution 3D RESTORE protocols based on SPACE and TSE for MRCP and MR urography examinations

- 3D:
  - Dixon (VIBE 2pt-Dixon) breath-hold scans, following contrasts can be obtained: in-phase, opposed phase, fat and water image.
  - Dynamic (VIBE + Q-FatSat) protocols for best visualization of focal lesions with high spatial and temporal resolution
  - Colonography dark lumen with T1-weighted VIBE
  - CAIPRINHA enables VIBE sequence with improved iPAT2 algorithm to improved abdominal dynamic scans as well as SNR. Reduced patient stress can be achieved through reduced acquisition (and breathhold) times.

**PELVIS:**

- High-resolution T1w, T2w pelvic imaging (prostate, cervix)
- Isotropic T2w SPACE 3D protocols for tumor search in the pelvis
- Dynamic volume examinations with 3D VIBE
- syngo REVEAL: diffusion imaging for liver and whole body exams

### Onco Suite

MR imaging has an excellent advantage of soft tissue contrast, multi-planar capabilities and the possibility of selectively suppressing specific tissue e.g. fat or water. This helps visualize pathologies, particularly metastases. The Onco Suite features a collection of sequences as well as protocols and evaluation tools that guide through a detailed screening of clinical indications, such as in hepatic neoplasms. This package includes:

- STIR TSE and HASTE, FLASH in-phase and opposed-phase protocols with a high sensitivity to metastases visualization
- Dynamic imaging protocols for assessment of the kinetic behavior for lesion visualization and characterization
- Quantitative evaluation and fast analysis of the data with colorized Wash-in, Wash-out, Time-To-Peak, Positive-Enhancement-Integral, MIPtime and combination maps with inline technology or for offline
<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>calculation</td>
<td>Display and analysis of the temporal behavior in selected regions of interest with the included MeanCurve postprocessing application. This includes the capability of using additional datasets as a guide for defining regions of interest even faster and easier than before.</td>
</tr>
<tr>
<td>- <strong>syngo REVEAL</strong>: diffusion imaging for liver and whole body exams</td>
<td>Dedicated prostate protocols for detection, localization, and staging of tumors and recurrences</td>
</tr>
<tr>
<td>Ortho Suite</td>
<td>Ortho Suite is a comprehensive collection of protocols for joint and spine imaging. MR imaging is especially suitable for avascular necrosis and internal derangements. The protocols included in this Suite can also be applied for imaging of tumors and infections.</td>
</tr>
<tr>
<td>MAGNETOM Skyra - System</td>
<td>This package includes:</td>
</tr>
<tr>
<td>(Continued)</td>
<td>- 2D TSE protocols for PD, T1 and T2-weighted contrast with high in-plane resolution and thin slices</td>
</tr>
<tr>
<td>14441800</td>
<td>- 3D MEDIC, 3D TrueFISP protocols with water excitation for T2-weighted imaging with high in-plane resolution and thin slices</td>
</tr>
<tr>
<td>MAGNETOM Skyra - System</td>
<td>- High resolution 3D VIBE protocol for MR arthrography (knee, shoulder and hip)</td>
</tr>
<tr>
<td>- 3D MEDIC, 3D TrueFISP, 3D VIBE protocols with water excitation having high isotropic resolution, optimized for 3D post-processing</td>
<td>PD SPACE with fat saturation and T2 SPACE with high isotropic resolution optimized for 3D post-processing</td>
</tr>
<tr>
<td>- Whole spine single-step or multi-step protocols</td>
<td>Excellent fat suppression in off-center positions, e.g. in the shoulder due to high magnet homogeneity</td>
</tr>
<tr>
<td>- Dynamic TMJ and illo-sacral joint protocol</td>
<td>Susceptibility-insensitive protocols for imaging in the presence of a prosthesis</td>
</tr>
<tr>
<td>- Multi-Echo SE sequence with up to 32 echoes for the calculation of T2 time maps (calculation included in the Scientific Suite)</td>
<td>High resolution 3D DESS (Double Echo Steady State): T2 / T1-weighted imaging for excellent fluid-cartilage differentiation.</td>
</tr>
<tr>
<td>- High resolution 3D DESS (Double Echo Steady State): T2 / T1-weighted imaging for excellent fluid-cartilage differentiation.</td>
<td><strong>syngo WARP Susceptibility Artifact Reduction</strong></td>
</tr>
<tr>
<td>- <strong>2D TSE sequences with high bandwidth protocols tailored to reduce susceptibility artifacts. Available protocols include T1-weighted, T2-weighted, proton density and STIR contrast.</strong></td>
<td>Pediatric Suite</td>
</tr>
<tr>
<td>The parameters for pediatric imaging vary significantly in comparison to the parameters for adults. The reasons are developing tissues, body size, faster heart rates and restricted compliance with breath-hold commands. Protocols can be adapted for imaging infants.</td>
<td>Scientific Suite</td>
</tr>
<tr>
<td>Scientific Suite supports the scientifically oriented user with an easy access to application-specific data for further processing and advanced image computation methods.</td>
<td>- Support of USB memory sticks</td>
</tr>
<tr>
<td>- Access to the file system by means of a secure and convenient browser</td>
<td>- Anonymization of patient data</td>
</tr>
<tr>
<td>- Easy generation of AVIs and screenshots for integration into presentations and training videos</td>
<td>- Export function for tables, statistics and signal-time-courses in a communal format (MeanCurve, Spectroscopy, DTI evaluation)</td>
</tr>
<tr>
<td>- Advanced image computation methods such as T2 and T1 time calculation, addition, subtraction, multiplication, division, and integration of images</td>
<td></td>
</tr>
</tbody>
</table>
### Tim Application Suite

The sequences, features and techniques for acquisition and reconstruction included in the Tim Application Suite are described in detail below.

#### Sequences

**Spin Echo family of sequences:**
- Spin Echo (SE) - Single, Double, and Multi Echo (up to 32 echoes); Inversion Recovery (IR)
- 2D / 3D Turbo Spin Echo (TSE) - Restore technique for shorter TR times while maintaining excellent T2 contrast; TurboIR: Inversion Recovery for STIR, DarkFluid T1 and T2, TrueIR; Echo Sharing for dual-contrast TSE
- 2D / 3D HASTE (Half-Fourier Acquisition with Single Shot Turbo Spin Echo) - Inversion Recovery for STIR and DarkFluid contrast
- SPACE for 3D imaging with high isotropic resolution with T1, T2, PD, and DarkFluid Contrast

**Gradient Echo family of sequences:**
- 2D / 3D FLASH (spoiled GRE) - dual echo for in-/opposed phase imaging
- 3D VIBE (Volume Interpolated Breathhold Examination) - quick fat saturation; double echo for in-phase / opposed phase 3D imaging;
- DynaVIBE: Inline 3D elastic motion correction for multi-phase data sets of the abdomen;
- Inline Breast Imaging

#### Part No. / Product

### Description

**Evaluation**
- 2D / 3D MEDIC (Multi Echo Data Image Combination) for high resolution T2 weighted orthopedic imaging and excellent contrast
- 2D / 3D TurboFLASH - 3D MPRAGE; single shot T1 weighted imaging e.g. for abdominal imaging during free breathing
- 3D GRE for field mapping
- 2D / 3D FISP (Fast Imaging with Steady State Precession)
- 2D / 3D PSIF - PSIF Diffusion
- Echo Planar Imaging (EPI) - diffusion-weighted; single shot SE and FID e.g. for BOLD imaging and Perfusion-weighted imaging; 2D / 3D Segmented EPI (SE and FID)
- ce-MRA sequence with Inline subtraction and Inline MIP
- 2D / 3D Time-of-Flight (ToF) Angiography - single slab and multi slab; triggered and segmented
- 2D / 3D Phase Contrast Angiography
- syngo BEAT Tool - TrueFISP segmented; 2D FLASH segmented;
- Magnetization-prepared TrueFISP (IR, SR, FS); IR TI scout; Retrogating

**Standard Fat/Water Imaging:**
- Fat and Water Saturation. Additional frequency selective RF pulses used to suppress bright signal from fatty tissue. Two selectable modes: weak, strong
- Quick FatSat
- SPAIR: robust fat suppression for body imaging using a frequency selective inversion pulse
- Fat / Water Excitation. Spectral selective RF pulses for exclusive fat / water excitation
- Dixon technique for fat and water separation - available both based on VIBE (2 point Dixon)

**Standard Techniques:**
- True Inversion Recovery to obtain strong T1-weighted contrast
- Dark Blood inversion recovery technique that nulls fluid blood signal
- Saturation Recovery for 2D TurboFLASH, gradient echo, and T1-weighted 3D TurboFLASH with short scan time (e.g. MPRAGE)
- Freely adjustable receiver bandwidth, permitting studies with increased signal-to-noise ratio
- Freely adjustable flip angle. Optimized RF pulses for image contrast enhancement and increased signal-to-noise ratio
- MTC (Magnetization Transfer Contrast). Off-resonance RF pulses to suppress signal from certain tissues.
<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>enhancing the contrast. Used e.g. in MRA</td>
</tr>
<tr>
<td></td>
<td>- Argus viewer for reviewing cine studies</td>
</tr>
<tr>
<td></td>
<td>- Report Viewer for DICOM structured reports including report editing</td>
</tr>
<tr>
<td></td>
<td>- Dynamic Analysis for addition, subtraction, division, standard deviation, calculations of ADC maps, T1 and T2 values, TTP, t-Test, etc.</td>
</tr>
<tr>
<td></td>
<td>- Image Filter</td>
</tr>
<tr>
<td></td>
<td>- 3D post-processing MPR, MIP, MinIP, SSD</td>
</tr>
<tr>
<td></td>
<td>- Flexible film formats and paper print</td>
</tr>
<tr>
<td></td>
<td>- Data storage of images and cine AVI files on CD / DVD with DICOM viewer as the viewing tool for hand out to the patients or referrals</td>
</tr>
<tr>
<td></td>
<td>- Selectable centric elliptical phase reordering via the user interface</td>
</tr>
<tr>
<td></td>
<td>- Inversion Recovery to nullify the signal of fat, fluid or any other tissue</td>
</tr>
<tr>
<td></td>
<td>- Multiple Direction Diffusion Weighting (MDDW) - perform diffusion tensor imaging with multiple diffusion weightings and up to 12 directions for generating data sets.</td>
</tr>
<tr>
<td></td>
<td>Standard techniques for Flow Artifact reductions:</td>
</tr>
<tr>
<td></td>
<td>- LOTA (LongTerm Data Averaging) technique to reduce motion and flow artifacts</td>
</tr>
<tr>
<td></td>
<td>- Pre-saturation techniques using RF saturation pulses to suppress flow and motion artifacts</td>
</tr>
</tbody>
</table>

Part No. / Product (Continued)  
14441800 MAGNETOM Skyra - System  
- Tracking SAT bands maintain constant saturation of venous and/or arterial blood flow eg. for 2D/3D sequential MRA  
- TONE (Tilted Optimized Non-saturating Excitation - variable excitation flip angle to compensate inflow saturation effects in 3D MRA - selectable on desired flow direction and speed  
- Gradient Motion rephasing permitting effective reduction of flow artifacts  
Standard Motion Correction:  
- syngo BLADE - improves image quality by minimizing and correcting for the effects of motion during an MR sequence acquisition. e.g. head, spine, orthopedic imaging and the abdomen  
- 1D PACE (Prospective Acquisition CorrEdition) allows examination of patients with free breathing  
- 2D PACE (Precise Motion Correction) detects and corrects respiratory motion eg of the heart or liver  
MAGNETOM Skyra runs syngo MR software. syngo® is the unique software platform for medical applications. Parallel working and one-click exams are efficiently supported and increase productivity. Parallel scanning and reconstruction are standard. The unique Phoenix technique is the easiest way to exchange protocol data. It supports intelligent extraction of sequence parameters from images acquired on a MAGNETOM Skyra system. Inline technologies, scan@center or AutoVoiceCommands speed up the workflow further.  
The context-sensitive "Online Help" function and syngo Scan Assistant offer support and propose solutions to MR-specific questions and parameter conflicts.  
Studies can be easily networked and managed using the standard DICOM 3.0 protocol for efficient support of workflow. The following standard functions are supported: Send/Receive, Query/Retrieve, Basic Print for DICOM-compatible laser cameras (Camera is not included in the basic unit. Verify if existing camera is compatible or order separately.), DICOM Worklist, DICOM Storage Commitment (SC) DICOM Modality Perform Procedure Step (MPPS), DICOM Structured Report (SR), DICOM Study Split  
Patient Communication  
- The intercom system includes an ergonomically designed patient communication unit for desktop positioning on the syngo Acquisition Workplace and pneumatic headphones for the patient.  
- Control features include an emergency table stop, volume control of speaker and headphones in the examination room, volume control of speaker in the control room, response to the patient's activation of the assistance-call button and provides a connection to an external audio system for music playback (external...
Computer system

The high performance measurement and reconstruction system and the high performance host computer are ideally suited for even the most demanding applications. The PC-based computer system uses the intuitive syngo MR user interface. The computer system includes the following components:

* High-performance measurement and reconstruction system
  - Quadcore Processor E3-1225
  - clock rate of 3.2 GHz
  - Main memory (RAM) of 32 GB,
  - Hard disk for raw data ≥ 300 GB
  - Hard disk for system software ≥ 100 GB
  - Parallel Scanning and Reconstruction of up to 8 data sets
  - Reconstruction speed
    - 12.987 recons per second (256 x 256 FFT, full FoV)
    - 57.971 recons per second (256 x 256 FFT, 25 % recFoV)

* High-performance host computer
  - Intel Xeon processor E5-1620 QuadCore
  - clock rate 3.6 GHz
  - Main Memory (RAM) 32 GB

---

### Part No. / Product Description

<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
</table>
| (Continued) 14441800 MAGNETOM Skyra - System | - three hard disks
- system SW ≥ 300 GB SAS
- data base ≥ 300 GB SAS
- images ≥ 300 GB SAS
- DVD-R writer for CD-R (approx. 4000 images 256² DICOM Standard, ISO 9660 ) and DVD-R (approx. 25 000 images 256² DICOM Standard, ISO 9660) storage of DICOM data or other data like AVI files
- DVD-ROM drive
- Electronic mouse. |
|                     | - The combination of host computer and the measurement and reconstruction system offers a truly powerful imaging system designed for large image matrix sizes of up to 1024 x 1024. The unrestricted multitasking capability allows time-saving parallel scanning and reconstruction. |
|                     | - High-resolution 19" color LCD flatscreen monitor with 1280 x 1024 pixel display, integrated gamma correction for optimum display of radiographic grayscale images and automatic backlight control for longterm brightness stability. |
|                     | - Installation:
  - The relatively lightweight design of the MAGNETOM Skyra in most cases eliminates the need for structural building reinforcements and thus facilitates installation in upper floors. |
  - The compact integrated design allows for short installation times and reduces the required space to less than 31 sqm (334 sq. ft.) for the entire installation. The necessary room height clearance is only 2.40 m (7' 10"). |
  - MAGNETOM Skyra allows siting of the system without a dedicated computer room - no additional cooling or floor requirements. |
  - MAGNETOM Skyra combines state-of-the-art performance with peace of mind. High system availability is ensured by the expert, highly trained Siemens MR service engineers; |
  - Your Siemens service contract (not included in the basic unit) offers a comprehensive range of benefits such as Uptime Remote Diagnostics for improved productivity and maximum uptime. |
### Part No. / Product | Description
--- | ---
14441801 Tim [204x24] XQ Gradients #Sk | Tim [204x24] performance level
Tim 4G offers DirectRF - a completely new redesigned RF architecture. This new all digital-in/ digital-out design integrates all RF transmit and receive components at the magnet, eliminating analog cables for true signal purity. This compact and efficient design enables a dynamic feedback control for temporal stability and power linearity. The all-new innovative coil architecture packs more coil elements in a smaller space and allows for simultaneous connection of up to 204 coil elements. Combined with the 24 independent RF channels advanced iPAT capabilities and SNR are enabled. An additional benefit of multiple coil elements and receiver channels is improved performance in multi-directional, i.e. three dimensional, high-speed, high-resolution iPAT in the head-feet, anterior-posterior or left-right directions.

XQ gradients
Siemens XQ gradients provide actively shielded, water cooled world-class gradients. All axes are force-compensated.

The XQ gradients have:
- Maximum gradient amplitude of 45 mT/m, per axis, i.e. 78 mT/m vector summation gradient performance,
- Maximum slew rate 200 T/m/s per axis, i.e. 346 T/m/s vector summation,
- Minimal rise time 225 µs, from 0 to 45 mT/m amplitude
- Maximum output voltage for each of the gradient axes 2250 V
- Maximum output current for each of the gradient axes 750 A
- Separate cooling channels that simultaneously cool primary and secondary coils allow the application of extremely gradient intensive techniques in a new class of performance.
- 100% duty cycle for fast and demanding techniques such as ultra-short TE MRA in continuous operation, thin slice single breath-hold liver studies and EPI imaging techniques (all optional in appropriate clinical packages).
- Variable Field-of-View selection from 0.5 cm to 50 cm (up to 45 cm in z direction) for optimal coverage and

08464872 PC Keyboard US English #Tim | The keys of the numerical key panel are assigned to syngo-specific functions and labeled with the corresponding syngo icons. The keyboard supports the country specific special characters.

14416914 Pure White Design #T+D | The unique color and material selection enhances the visual appeal of the new system design, thereby creating an enticing, patient-friendly impression.
The Dot Control Centers and the unique Dot Display are neatly integrated into this main face plate. The aesthetically pleasing and ergonomically designed control elements of the Dot Control Centers are well illuminated for easy visual recognition.
In particular, the table cover and the asymmetric left deco area cover have also been designed to promote a modern visual appearance. This combination of ingenuity and practical design as presented with "Pure White" design with its brilliant white and the silver trim simply makes the MAGNETOM an overall visually appealing system and creates a patient-friendly environment.

14418507 Tim Dockable Table #Sk | The Tim Dockable Table with its light appealing design allows for a fast patient preparation and maximized patient comfort.
It provides unobstructed foot space for attending staff and direct access to the patient. The patient table can be lowered to a minimum height of 56 cm (18.5") from the floor, for easier moving of immobile patients and better access for geriatric, pediatric patients or immobile patients. The Tim Dockable Table can be moved with two clicks into the isocenter - one click to the upmost position and one click into the isocenter. The tabletop travels beyond the rear end of the system, enabling additional patient access.
<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Tim 4G coils can be connected at once for efficient patient set up and patient friendly examinations. The seamless integration of multiple Tim4G coils is possible via 4 SlideConnect and 4 DirectConnect connector slots, which are embedded in the table. This allows for comprehensive examinations without the need of repositioning. The Tim Dockable Table is easily adjustable for height even in the undocked state. A minimum height of 61 cm allows for easy wheelchair access or easy patient movement to the hospital bed. The integrated infusion stand and arm rests allow for fast patient set up anywhere and also for critical patients.</td>
<td></td>
</tr>
</tbody>
</table>
| 14446650 SW syngo MR E11C | **syngo MR E11C** provides several workflow and performance enhancements, and an extended IT security configuration. There are new options (with separate licenses) available with the syngo MR E11C software:  
- Simultaneous Multi-Slice EPI (for brain diffusion and BOLD imaging)  
- Advanced Diffusion (RESOLVE and QuietX Diffusion for brain)  
- syngo Security Package Enhanced  
GOBrain comes standard for MAGNETOM Aera and Skyra with Tim [204x48] or higher configurations with E11C. GOBrain is a set of optimized protocols for diagnostic neuroimaging developed by the board-certified neuroradiologists at Massachusetts General Hospital, USA. These protocols aim to achieve a diagnostic brain examination and are optimized for short acquisition times. The following contrast and orientations are provided with this protocol:  
- sagittal T1-weighted GRE  
- axial T2-weighted TSE  
- axial T2 TSE FLAIR  
- axial Diffusion-weighted single-shot EPI  
- axial T2*-weighted EPI-GRE |
| 14441748 Quiet Suite #T+D | Effective noise reduction is achieved through Quiet Suite by targeting the main source of MRI noise - rapid switching in the gradient coils. Quiet Suite consists of QuietX, an intelligent algorithm which effectively reduces noise through summation of gradients and reduction of slew rates while keeping timing parameters within the same range. QuietX has been enabled for TSE, SE and GRE sequences for T1, T2 and DarkFluid contrasts as well as for SWI. Within the TSE-sequence, the parameter “Echo-spacing” allows the user to further lower the gradient slew-rates. The automated algorithm runs in parallel to normal protocol handling. All features and contrasts of the TSE, SE, and GRE sequences remain available. In addition, Quiet Suite contains PETRA, a 3D T1 UTE sequence. The PETRA sequence allows for even lower gradient switching. With its unique gradient trajectories, no acoustic noise associated with gradient switching is generated during a PETRA scan. Residual noise may arise due to radio frequency switching. With Quiet Suite, optimized quiet protocols for imaging the brain and large joints are also provided. |
| 14441866 DotGO Routine Package #T+D | Spine Dot Engine:  
The Spine Dot Engine provides optimized cervical, thoracic and lumbar spine imaging for patients of all conditions. Spine Dot Engine provides the functionality to simplify your spine workflow by providing tools to reduce examination times, achieve optimal image quality, and assist you during reading.  
- User guidance step-by-step  
- AutoPosition  
- AutoAlign Spine with intervertebral disc detection  
- AutoCoverage  
- AutoSatPosition  
- Initial and interactive snapping  
- AutoLabeling of vertebrae  
- Automatic curved multiplanar reconstructions of 3D datasets |
The Spine Dot Engine includes:
- Tim Planning Suite
- Inline Composing
- syngo WARP Susceptibility Artifact Reduction
  syngo WARP integrates different techniques tailored to reduce susceptibility artifacts caused by orthopedic MR-Conditional metal* implants. 2D TSE sequence combining optimized high-bandwidth protocols and View Angle Tilting (VAT) technique, tailored to reduce susceptibility artifacts caused by orthopedic MR-Conditional metal* implants. This helps in evaluation of soft tissue in proximity of the implant. Available protocols include T1-weighted, T2-weighted, proton density and STIR contrast.

LargeJoint Dot Engine:
LargeJoint Dot Engine optimizes image quality of knee, hip and shoulder scans by proposing the most appropriate protocols according to the examination strategy chosen for the specific patient. It ensures reproducible image quality and streamlines large joint examinations to the greatest extent.

Dot Exam Strategies
The workflow can be personalized to the individual patient condition and clinical need. The LargeJoint Dot Engine comes with the following predefined strategies, which the user can select according to patient conditions or change at any time during the workflow, when conditions change:
- Image quality: Achieve highest image quality in a reasonable scan time with 2D and 3D protocols.
- Speed focus: Examine patients in the shortest possible time with protocols being accelerated to the maximal extent.
- Motion artifact reduction: Compensate for the effects of motion, e.g. with motion insensitive syngo BLADE protocols.
- Artifacts reduction: Reduce susceptibility artifacts, using syngo WARP.

AutoAlign
- Automated, localizer based positioning and alignment of slice groups to the anatomy, relying on anatomical landmarks. Providing fast, easy, and reproducible patient scanning and supporting the reading by consistently delivering high image quality with a standardized slice orientation.

Inline MPRs - Automatic multiplanar reconstruction for 3D datasets
- The Multi Planar Reconstruction (MPR) tool uses the position information from the AutoAlign algorithm and can be easily configured to automatically generate any required 2D images from high resolution 3D acquisitions.

Guidance View
- Step-by-step user guidance is seamlessly integrated.
- Example images and guidance text are displayed for each individual step of the scanning workflow.
- Both images and text are easily configurable by the user

syngo WARP - Susceptibility Artifact Reduction
- syngo WARP integrates different techniques tailored to reduce susceptibility artifacts caused by orthopedic MR-Conditional metal* implants. 2D TSE sequence combining optimized high-bandwidth protocols and View Angle Tilting (VAT) technique, tailored to reduce susceptibility artifacts caused by orthopedic MR-Conditional metal* implants. This helps in evaluation of soft tissue in proximity of the implant. Available protocols include T1-weighted, T2-weighted, proton density and STIR contrast.

Advanced WARP:
- Advanced WARP application consists of SEMAC, a technique to reduce gross metal* artifacts (i.e. through-plane artifacts) caused by big orthopedic implants. The main clinical applications are in hip and knee joint replacements. Available protocols include T1-weighted, T2-weighted, proton density and STIR contrast.

Customization
The LargeJoint Dot Engine can be modified by the user to their individual standard of care.
- Add/remove protocol steps
<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Change guidance content (images and text)</td>
</tr>
<tr>
<td>-</td>
<td>Change or add Dot exam strategies</td>
</tr>
<tr>
<td>-</td>
<td>Add clinical decision points</td>
</tr>
<tr>
<td>-</td>
<td>Add/remove parameters in the parameter viewing card</td>
</tr>
<tr>
<td>-</td>
<td>MR imaging of patients with metallic implants brings specific risks. However, certain implants are approved by the governing regulatory bodies to be MR conditionally safe. For such implants, the previously mentioned warning may not be applicable. Please contact the implant manufacturer for the specific conditional information. The conditions for MR safety are the responsibility of the implant manufacturer, not of Siemens.</td>
</tr>
<tr>
<td>14418513</td>
<td>The 16-element coil with 16 integrated pre-amplifiers excels in highest resolution imaging with exceptional signal/noise ratio, while taking full advantage of iPAT in all directions. Hand/Wrist 16 is ergonomically designed and adapted to the shape of the hand/wrist region. The coil features a hinged design of the upper part and slidable attachment to the base plate. Together with the included stabilization pads the coil allows easy, fast and comfortable patient positioning.</td>
</tr>
<tr>
<td>14430404</td>
<td>Thank you for its 15-channel design this coil is perfectly suited for high-resolution images with excellent SNR. With the arrangement of the antennas in three rings of 5 elements each, the coil is specially designed for parallel imaging with high acceleration factors. The coil is positioned on a laterally movable support and therefore allows for comfortable patient positioning of both legs for off-center examinations. SlideConnect Technology allows for fast and easy patient preparation, resulting in less table time. Furthermore, the upper part can be removed for easier patient positioning. Additional cushions allow for optimum patient immobilization. The integrated transmission function makes volume-sensitive excitation with greatly reduced RF power possible on the one hand and, on the other, prevents aliasing artifacts (e.g. due to the other knee).</td>
</tr>
</tbody>
</table>
# Preliminary Proposal

<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14416954 2/4/8-ch Sentinelle BreastCoil #Sk</td>
<td>The 8-channel configuration of the Sentinelle Breast Coil consists of 2 lateral 3-channel coil elements and a 2-channel coil middle element. Feature list: 1/4/8-channel configuration. Supports the Grid biopsy method. The 2-/4-/8-channel Sentinelle Breast Coil delivers brilliant image quality for high-resolution 2D and 3D MR breast imaging. Techniques for reducing scan times, such as parallel imaging, can be used very well. Together with the Tim Whole Body Suite, the coil can also be operated in &quot;feet first&quot; mode. This function substantially improves the examination flow with claustrophobic patients. (Note: With Spectra and Prisma, the Sentinelle Coil can only be operated in &quot;head first&quot; mode.) For optimal patient positioning, a set of comfortable positioning cushions and aids, such as a height-adjustable head rest, is included in the scope of delivery. Furthermore a set of grid plates and a Biopsy Training Starter Kit (not for use on humans) are included in the delivery. The 2-/4-/8-channel Sentinelle Breast Coil measures approx. 1097 mm x 582 mm x 279 mm (L x W x H) and weighs approx. 22 kg with base plate and 16 kg without base plate.</td>
</tr>
<tr>
<td>4MR5142869 Armrest #MR</td>
<td>An MR-compatible arm rest that supports the patient's arm on the magnet patient table when starting intravenous lines. The board is removed after the IV is inserted. This product has been tested and verified for compatibility with the following Siemens' products: MAGNETOM Trio, Verio, Espree, Essenza, Avanto, Symphony, Area Skyra and Biograph mMR. Compatibility with other products cannot be assured and may void service contracts and/or system warranties.</td>
</tr>
<tr>
<td>KKTECOMR_60 KKT ECOCHILLER 133L</td>
<td>Chiller KKT ECO 133 - L Function: Supplies dedicated primary chilled water in cases where no chilled water supply is available on site. Air-cooled version, for outdoor installation up to a maximum distance of 25 m for connection to the IFP, incl. 50 m FOC for control. The cooling capacity of the chiller is 60 kW, the chilled water temperature is 20°C, the water flow is 130 l/min. Ambient temperature: -20 to +48°C Connection rating: 28 kW Voltage: 3/PE 400 V to 480 V / 50/60 Hz Fuse rate: 60 A Power consumption: 66 A Dimensions: 2000 mm x 1100 mm x 2100 mm (height x width x depth). Weight: 750 kg Noise level at a distance of 10 m at outside temperatures of: 21°C 47 dB(A) 32°C 52 dB(A) 48°C 58 dB(A) IFP (Interface Panel) Main functions of the IFP: - Interface function between the KKT chiller and the MR cabinet. - Water supply for MREF, MBB, CBB and TX box. Additional devices such as integrated differential pressure control, a pressure gage, and a filter are used in order to guarantee the precise functioning of the cooling circuit, especially for the cold head compressor (MREF). The connection must be made locally with 2&quot; lines up to a maximum distance of 25 m. Dimensions: 800 mm x 1150 mm x 210 mm (height x width x depth). Weight: 67 kg</td>
</tr>
<tr>
<td>Part No. / Product</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>CHILINST_AVT Chiller Start-up and Warranty for TIM</td>
<td>Start up and initial set up service performed by the chiller manufacturer or designated service representative. This service does not include the piping and other prerequisite siting, of the waterchiller, which are the responsibility of the customer. 12 months warranty and performed by the chiller manufacturer.</td>
</tr>
<tr>
<td>14407258 MR Workplace Table 1.2m</td>
<td>The table design matches the MED-wide uniform design with silver-finished rim, use of friendly colors matching the Siemens color pattern for MAGNETOM and SOMATOM.</td>
</tr>
<tr>
<td></td>
<td>- Width 120 cm</td>
</tr>
<tr>
<td></td>
<td>- Depth 80 cm</td>
</tr>
<tr>
<td></td>
<td>- Height 72 cm</td>
</tr>
<tr>
<td>14407261 MR Workplace Container, 50cm</td>
<td>The table design matches the MED-wide uniform design with silver-finished rim, use of friendly colors matching the Siemens color pattern for MAGNETOM and SOMATOM. Table height 72 cm, matching the syngo Acquisition Workplace and syngo MR Workplace console table, for installation in the operator room either directly to the left or right of the syngo Acquisition Workplace or syngo MR Workplace console table or separately.</td>
</tr>
<tr>
<td></td>
<td>- Width 50 cm</td>
</tr>
<tr>
<td></td>
<td>- Depth 80 cm</td>
</tr>
<tr>
<td></td>
<td>- Height 72 cm</td>
</tr>
<tr>
<td></td>
<td>Alternatively this casing is also suited for the Recon image processor (except for the MR systems with the Tim generation: there the Recon image processor is always placed inside the electronics cabinet).</td>
</tr>
<tr>
<td>14441738 Foot/Ankle 16 #Sk</td>
<td>The 16-element coil with 16 integrated pre-amplifiers excels in highest resolution imaging with exceptional signal/noise ratio, while taking full advantage of iPAT in all directions. Foot/Ankle 16 is ergonomically designed and features a boot-like coil design. Together with the included stabilization pads the coil allows easy, fast and comfortable patient positioning.</td>
</tr>
<tr>
<td>14441735 Shoulder 16 Coil Kit #Sk</td>
<td>The iPAT compatible Shoulder 16 Large and Shoulder 16 Small are ergonomically designed and adapted to the shape of the shoulder. The different sizes obtain maximum image quality for different body sizes:</td>
</tr>
<tr>
<td></td>
<td>- 165 mm (6.5 in) diameter for small and medium sized shoulders</td>
</tr>
<tr>
<td></td>
<td>- 200 mm (7.9 in) diameter for large shoulders</td>
</tr>
<tr>
<td></td>
<td>The coils can be used either for left or right shoulders. It features sliding attachments to the base plate and can easily be adjusted for comfortable positioning. The coils excels in highest resolution imaging with exceptional signal/noise ratio.</td>
</tr>
<tr>
<td>14441731 Tim Whole Body Suite #T+D</td>
<td>Tim and the Tim Whole Body Suite enable for true whole body MR scanning for head-to-toe imaging. Whole body imaging with highest image quality without patient repositioning and without the need to change a single coil, not even once, this means whole body imaging without compromise. The Tim Whole Body Suite features:</td>
</tr>
<tr>
<td></td>
<td>- The all-new Tim Table or Tim Dockable Table enable a full Field-of-View with coverage up to 205 cm (6' 9`). The table top has the same length as the standard system without whole body capabilities. Additional free space is required at the rear part of the magnet to ensure, that the table movement is not limited by the rear wall.</td>
</tr>
<tr>
<td></td>
<td>- Table movement to its full extent can be remotely controlled from the operator console either by the operator or by sequence protocols.</td>
</tr>
<tr>
<td></td>
<td>- Protocols and programs for whole body MR angiography and morphology e.g. for metastasis visualization and preventive care examinations.</td>
</tr>
<tr>
<td></td>
<td>- Whole body MR Angiography is possible with high speed, high resolution and high image contrast on the</td>
</tr>
<tr>
<td>Part No. / Product</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| (Continued) 14441731 Tim Whole Body Suite #T+D | entire volume combining high speed gradients and iPAT.  
- The large FoV of 205 cm supports the assessment of metastases distribution in the body with sequences such as TIRM (Turbo Inversion Recovery). |
| 14430439 RESOLVE | RESOLVE is a diffusion-weighted, readout-segmented EPI sequence optimized towards high resolution imaging with reduced distortions.  
The sequence uses a very short echo-spacing compared to singleshot EPI, reducing susceptibility effects. A 2Dnavigator correction is applied to avoid artefacts due to motioninduced phase errors. This combination allows diffusion weighted imaging of the whole body.  
Additionally, an automatic reacquisition of data with large phase errors can be used to ensure that diffusion-weighted images of the brain are not affected by CSF pulsation. |
| 14418596 SWI | Despite a strong sensitivity for local magnetic field inhomogeneities Susceptibility Weighted Imaging (SWI) as a 3D technology keeps up the signal near large susceptibility leaps due to very thin slices and high resolution in the slice (high image quality e.g. in the area of the forebrain near the frontal sinus).  
Moreover, the phase information of the MR signal is integrated in the image display. In order to further increase sensitivity for localized microscopic field inhomogeneities, large-area magnetic field inhomogeneities (e.g. caused by susceptibility leaps near the sinus) are specifically suppressed in the phase images.  
This allows even smallest amounts of deoxygenated hemoglobin (e.g. in cerebral veins) or from products of hemoglobin decomposition (e.g. from hemorrhages) to be displayed.  
Interesting measuring times for the ultra-high-resolution 3D protocols are achieved through parallel imaging with iPAT (GRAPPA).  
The Susceptibility Weighted Imaging package includes:  
- SWI measuring sequence, iPAT compatible  
- optimized measuring protocols for the head  
- inline-postprocessing for automatic calculation of relevant images within the scope of image reconstruction:  
- calculation of susceptibility-weighted images  
- venous angiography: MIP of a thin slice block  
SWI has been optimized for clinical use to support diagnostics with cerebrovascular diseases (e.g. cerebral insult), venous malformation, brain trauma and tumors. |
| 14441739 Peripheral Angio 36 #Sk | The Peripheral Angio 36 has a 36-element design with 36 integrated preamplifiers distributed over 6 planes with 6 elements each.  
A uniquely designed non-ferromagnetic coil cart for safe coil storage is included. The PA Matrix Coil is also shipped with a set of positioning cushions for proper handling.  
No tuning of the fully iPAT-compatible Peripheral Angio 36 is required.  
With a length of about 1m both legs are covered from the iliac artery level down to the foot arch vessels using multiple, flexible wings. For the visualization of the abdominal aorta and the iliac bifurcation it can be combined with the Body 18 and Spine 32. For larger body coverage eg whole body with up to 205 cm possible coverage, it can be combined with Head/Neck20 or a further Body18 to allow for large Field of View examinations with high patient comfort. Patient set up is done once and no repositioning is necessary  
For peripheral Angiography the PA Matrix coil will be typically used in feet-first position, but also head-first positioning for whole-body examinations is possible (optional Tim Whole Body Suite required).  
The dimensions of the Peripheral Angio 36 are:  
860 mm x 300 - 640 mm x 280 mm |
| 14416862 TWIST syngo #V | syngo TWIST provides:  
- Visualization of contrast agent dynamics in the vessel system of interest with maximum flexibility. |
<table>
<thead>
<tr>
<th>Part No. / Product</th>
<th>Description</th>
</tr>
</thead>
</table>
| (Continued) 14416862 TWIST syngo #V | - Needs only a low amount of contrast agent.  
- Imaging in all body regions, e.g. carotids, pulmonary and peripheral vessels with brilliant spatial and temporal resolution.  
- Clear separation of the arterial and venous phase.  
- High speed acquisition by intelligent k-space strategies and use of iPAT, powered by Tim.  
- syngo TWIST provides fat suppression using water selective excitation.  
- Inline technologies, such as subtraction and MIP are provided for optimal workflow.  
- In case of very high spatial resolution syngo TWIST may even replace conventional static MR angio. Moreover, syngo TWIST does not require any bolus timing - just inject and go. |
| 14441728 NATIVE syngo | syngo NATIVE offers:  
- Non-contrast enhanced MRA  
- Separate imaging of arteries and veins  
- Visualization of - e.g. - renal arteries or peripheral vessels  
The syngo NATIVE package comprises:  
- syngo NATIVE TrueFISP  
- syngo NATIVE SPACE |
| 14441759 FREEZEit Body MRI Package #T+D (Optional) | Main Features:  
- TWIST VIBE is a VIBE sequence with CAIPRINHA capability providing high spatial resolution. The view-sharing mode provides temporal information to ensure the right contrast timing for different lesions. Dixon is used for fat-water separation.  
- StarVIBE allows body imaging in free breathing mode, providing a solution for patients without breath hold capabilities. |
| 14436740 syngo BreVis Biopsy #T+D (Optional) | User interface for MR interventional planning. A guidance is included.  
The software supports the use of the above listed MR breast coils and the most common MR interventional accessories:  
Siemens 4-channel BI, Sentinelle Vanguard for MAGNETOM Avanto, Espree, ESSENZA, Symphony a Tim System, Trio a Tim System, Verio, Aera, Skyra as well as, Noras BI 320/160 and InVivo BBC. |
Date: 8/10/16

To: Center for Diagnostic Imaging
   Jake Vogt
   Phone: (952) 738-4476
   Fax: (952) 541-5443
   E-Mail: jacob.vogt@cdirad.com

From: Braden Shielding Systems LLC
      Tony Steffens
      Phone: (918) 624-2888  Ext: 1003
      Direct: (918) 359-2831
      Fax: (918) 624-2886
      E-Mail: tsteffens@bradenshielding.com

Pages: 1 of 5

Reference: Center for Diagnostic Imaging

Subject: RF Shielding Upgrade Quotation #SS36294M

Dear Jake,

Please find attached the Braden Quotation #SS36294M for Center for Diagnostic Imaging located in Chesterfield, MO. Please call or write if you have any questions.

Best Regards,

[Signature]
Tony Steffens
Sales Manager Medical Products

9260 Broken Arrow Expressway, Tulsa, Oklahoma 74145 • Phone (918) 624-2888 • Fax (918) 624-2886
DATE: August 10, 2016

TO: Center for Diagnostic Imaging
5775 Wayzata Blvd, Suite 600
St Louis Park, MN 55416

ATTN: Mr. Jake Vogt

SUBJECT: Center for Diagnostic Imaging
Upgrade the existing Braden RF enclosure for a Siemens Skyra 3.0T
Chesterfield, MO

Dear Jake,

Braden Shielding Systems, is in receipt of your request to bid for the upgrade of the existing RF shield system enclosure as referenced above.

- Previous Siemens Medical Systems Installations.
- Braden Shielding Systems SCM 228 Series Galvanized Shield.
- Labor bid as NON-UNION and NON-PREVAILING WAGE.
- Second Test & Return Trip included.
- Items listed in this quotation.

Therefore, Braden Shielding Systems proposes to design, manufacture, deliver, install, test and warrant the following:

- ONE (1) RF SHIELDED ENCLOSURE SYSTEM UPGRADE:

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE-QUALIFICATION TEST*</td>
<td>$3,500.00</td>
</tr>
<tr>
<td>RF UPGRADE BASE PRICE</td>
<td>$24,847.00</td>
</tr>
<tr>
<td>SUBTOTAL RF UPGRADE BASE PRICE</td>
<td>$28,347.00</td>
</tr>
<tr>
<td>ADD ESTIMATED USE TAX (4.225%) IF REQUIRED**</td>
<td>$425.00</td>
</tr>
<tr>
<td>TOTAL RF UPGRADE PRICE</td>
<td>$28,772.00</td>
</tr>
<tr>
<td>REPLACE EXISTING RF DOOR</td>
<td>$9,144.00</td>
</tr>
<tr>
<td>REPAIR AND TEST DAILY RATE PLUS MATERIAL</td>
<td>$1,500.00 / DAY</td>
</tr>
</tbody>
</table>

If the existing enclosure does not meet Siemens specifications, then Braden will repair and test the enclosure at the daily rate provided plus material cost. Although not anticipated it is possible that the existing enclosure may have to be replaced.

This quotation is inclusive of the insurance coverage’s included in the attached Braden Shielding Insurance certificate. Special insurance forms (if available) may incur additional charges.

* Two week lead time (minimum) prior to upgrade, can be done with magnet up to field.
**If exempt from sales / use tax, an executed exemption, resale certificate, or direct pay permit must be returned.

THE MATERIAL PORTION OF THE ABOVE PRICE IS: $10,048.00, $7,475.00
This total price is based upon:

- The only documentation provided to Braden is that stated above.
- The general contractor to supply all necessary temporary electrical power to the job site. General contractor is to provide adequate temporary lighting as necessary.
- Braden is to be given free and clear access to the site of our work.
- Work stoppages caused by trade union activity or other conflicts that will impede our orderly completion of work will be considered as an extra cost outside our scope of work. The cost relative to work stoppages will be submitted as a change order.
- General contractor is responsible for the removal and replacement of all interior finishes necessary to perform the upgrade and possible repair work on the existing RF enclosure.
- All new mechanical ductwork, piping and electrical work is not by Braden Shielding.
- General contractor to provide adequate refuge containers for the removal of waste crating materials. Waste to be removed from the site by the general contractor.

Braden to provide the following:

First Trip:
1. Perform standard maintenance on RF door as necessary for test.
2. RF Pre-qualification test.

Second Trip:
1. Open magnet entry.
   If the existing enclosure fails to meet Siemens specifications during the Pre-Qualification test:
2. Close magnet entry in RF wall system.
3. Install galvanized sheet metal over existing penetration panel opening.
4. Repair and test enclosure at daily rate provided.
5. Open magnet entry in RF wall system.
6. Remove existing RF floor trench.

Third Trip:
1. Install new RF floor at existing concrete trench in-fill.
2. Remove existing magnet and patient table anchors and repair RF floor.
3. Install Aera base plate interface.
4. Replace existing RF wall panel at existing penetration panel.
5. Install one (1) new Aera penetration panel interface.
7. Supply and install one (1) Pressure Relieve 24" x 24" RF Door as specified by owner.
8. Install two (2) new 2 x 1 AMP filters for EPO UPS, Under-voltage trip.
9. Install all thread rod hangers for new overhead cable tray. (Cable tray not by Braden)

Fourth Trip:
1. Close magnet entry.
2. Final RF test after magnet delivery per Siemens specifications.
Exclusions and Items not Included:

- Removal and replacement of interior framing and finishes.
- Weekly jobsite meetings.
- Magnetic Shielding.
QUOTATION

DATE: August 10, 2016

Unless specifically stated otherwise, prices quoted or stated do not include Fees, Permits, Federal, State or municipal sales, use, excise or other taxes measured, in whole or in part, by gross receipts. Any such taxes applicable to the sale, processing, assembling, installing, use or consumption of any goods or materials and/or any services or labor shall be an obligation of the customer and will be invoiced to the customer.*

*NOTE: Any applicable exemptions to the above stated taxes should be made available to Braden prior to invoicing or sales tax will be charged to the state of destination. Sales tax exemption certificate must correlate with state of destination.

WARRANTY: All new parts such as doors or purchased components such as electrical filters and wave-guides shall carry a ninety-days (90) warranty. Except for the express warranties and guarantees herein, Braden makes no warranties guarantees, or representations of any kind, whether express or implied, including, without limitation, any warranty of merchantability and fitness for a particular purpose. Under no circumstance shall Braden be held liable for loss of profits, loss of goodwill, consequential damages, or any other variety of damages in excess of costs invoiced for the goods and services sold hereunder.

PAYMENTS: Invoice upon completion of enclosure modifications.

TERMS: Net due thirty (30) days from date of invoice. If payment is not made as provided herein, Braden may (1) withhold completion of work hereunder; (2) cancel this Quotation as accepted and agreed to; and/or (3) assess penalties, late fees, and/or interest in an amount not to exceed the maximum amount permitted by the laws of the State of Oklahoma.

SCHEDULE: From time of award of contract to proceed.
(Standard) One (1) week for Pre-Qualification Test.
Three (3) weeks for delivery after receipt of Order.

INSTALLATION: Included

RETURN TRIP: Included

ATTENTION: This Quotation shall be valid for 30 days. Execution of this Quotation shall constitute acceptance of the terms and conditions cited herein and bind the parties and their respective successors, heirs, representatives, and assigns. The terms and conditions shall be governed by and interpreted in accordance with the laws of the State of Oklahoma, and any civil suit hereunder shall be instituted in the courts of Tulsa County, State of Oklahoma.

Pricing assumes material delivery during fiscal 2016

ACCEPTED:

__________________________________________
Tony Steffens
Sales Manager Medical Products
Braden Shielding Systems

9260 Broken Arrow Expressway, Tulsa, Oklahoma 74145 • Phone (918) 624-2888 • Fax (918) 624-2886
DIVIDER II

PROPOSAL DESCRIPTION
DIVIDER II. PROPOSAL DESCRIPTION

1. **Provide a complete detailed project description.**

St. Luke’s Center for Diagnostic Imaging, LLC ("CDI") seeks to replace its 13-year old 1.5T MRI machine with a 3T MRI machine. From a patient comfort perspective, the new unit will have a much larger bore (i.e., hole through which patients are imaged), allowing access to larger patients, as well as claustrophobic patients, thereby increasing the patient population that may be served, who may otherwise forego treatment. In addition, the new 3T MRI machine offers Quiet Suite technology, which drastically reduces the sound produced by the MRI machine, thereby increasing patient comfort throughout the imaging procedure, and reducing patient anxiety and fear of MRI imaging procedures. From an access perspective, the new MRI unit will significantly reduce scan times, which will not only allow CDI to scan more patients, but will also reduce the burden on patients being scanned. Further still, the new MRI unit will vastly improve the quality of patient imaging studies, resulting in better patient care and improved patient safety.

Perhaps most importantly, the new MRI unit will provide better image resolution and reduce breath hold times, resulting in improved imaging accuracy and patient outcomes. Further still, the new unit, unlike the current unit, can be utilized to perform certain advanced breast, prostate, and cardiac imaging studies that the current MRI unit cannot perform, thereby expanding the scope of services that can be offered to CDI’s patients. Equipment bid quotes are attached.

2. **Provide a listing with itemized costs of the medical equipment to be acquired.**

See Project Budget, Divider I, Item 3.

3. **Provide bid quotes for the proposed equipment.**

See attachments to Project Budget, Divider I, Item 3.
COMMUNITY NEED CRITERIA AND STANDARDS
DIVIDER III. COMMUNITY NEED CRITERIA AND STANDARDS

1. Describe the financial rationale for the proposed replacement equipment.

The new 3T MRI unit will replace CDI’s current 13-year old 1.5T MRI unit that has exceeded its useful life. The proposal to replace the 1.5T unit is not financially motivated, but, instead, CDI seeks to continue to provide its patients with the highest quality imaging services. The new unit will vastly improve imaging resolution, imaging time, and allow for new types of imaging studies, thereby improving the quality and types of services offered to CDI’s patients.

2. Document if the existing equipment has exceeded its useful life.

The existing 13-year old 1.5T unit has exceeded its useful life. More importantly, it is technologically inferior to the proposed 3T replacement unit.

3. Describe the effect the replacement unit would have on quality of care.

The quality of care will be significantly improved for patients served by CDI’s new 3T MRI unit. The high-field system provides exceptional detail and will allow CDI to perform several new types of imaging studies, including advanced breast, prostate, and cardiac imaging studies. Patients and physicians will benefit from faster image acquisition, improved image quality, and enhanced diagnostic accuracy. Further, the new unit will provide greater patient access with a 70 cm bore and 550 pound table limit (as opposed to 50 cm bore and 350 pound limit on the existing MRI unit), as well as Quiet Suite technology, which will greatly reduce the sound produced by the MRI unit, thereby reducing patient anxiety and fear associated with MRI imaging studies.

4. Document if the existing equipment is in constant need of repair.

The existing 1.5T MRI unit requires quarterly preventative maintenance and other maintenance in order to remain operational.

5. Document if the lease on the current equipment has expired.

Not applicable. CDI owns the equipment.

6. Describe the technological advances provided by the new unit.

The replacement MRI unit offers 3.0 Tesla (“3T”) magnet field strength and TrueForm Magnet and Gradient design; Total Imaging Matrix 4G (“TIM 4G”) technology; Dot Workflow (“DOT”) technology; Quiet Suite technology; and, a 70 cm bore.

The 3.0T MRI unit utilizes TrueForm Magnet and Gradient design, which is a magnet innovation that produces a cylindrically optimized homogeneity volume instead of the conventional elliptical volume. Because a cylinder more closely corresponds to the shape of the human body, the TrueForm technology reduces unusable edges on the images and better fat saturation coverage.
TIM 4G technology provides increased flexibility of the MRI scanner to meet the clinical need for increased throughput, multiple exams on a single patient, and advanced applications through coil technology. In particular, TIM 4G offers up to 204 coil elements that can be used in combination with up to 128 RF channels, allowing more flexibility in scanning diverse body regions. Further, the TIM 4G coils are lightweight, flexible, and utilize an innovative “open” design to improve patient comfort. TIM 4G’s dock-able table contains an integrated spine coil, and allows for the easy transport of immobile patients.

DOT technology provides predefined and adjustable exam strategies to adapt quickly to protocols based on the patient’s condition or clinical indications. DOT technology ensures that high quality exams can be easily reproduced while standards of care are customized to clinical practice, resulting in increased patient throughput.

Quiet Suite technology significantly reduces the sound produced through MRI imaging, thereby making the imaging experience less stressful and more comfortable for the patient.

One of the new unit’s key advantages is its 70 cm diameter open bore design, as well as the 550 pound weight limit. The current unit has a 50 cm bore and 350 pound weight limit. The new unit’s larger bore and increased load capacity will allow CDI to scan larger patients, as well as claustrophobic patients. Indeed, some claustrophobic patients must be sedated in order to be scanned, and if they are unable or unwilling to be sedated, these patients may display anxiety-related movements which reduce imaging accuracy. Further, the new unit will offer Illumination MoodLight, which can be set according to the patient preferences, as well as more “head-out” exams, both of which will help to reduce patient anxiety.

7. Describe how patient satisfaction would be improved.

Patients will benefit from increased image clarity and shorter exam times, which will improve patient comfort and safety. The new unit’s 70 cm open bore comfortably accommodates larger patients and patients with claustrophobic tendencies, which will likely reduce the need for sedation, and make imaging studies more comfortable for both populations of patients. The new system offers moodlighting, which can be set to the patient’s preference, coils that are lightweight and patient-friendly, and more “head-out” exams.

8. Describe how patient outcomes would be improved.

As previously discussed, patient outcomes would be improved in a number of ways.

- Improved resolution imaging will increase exam result accuracy and definitiveness, allowing for better patient care, treatment plans, and outcomes.
- Enhanced scan time, increased accuracy, and scanning flexibility.
• Ability to scan large patients and claustrophobic patients with less need for sedation, and accompanied reduction in anxiety-related patient movement.

• The new unit will reduce setup and scan times, and decrease downtime significantly, which will allow CDI to provide timely diagnosis, leading to more positive patient outcomes.

9. Describe what impact the new unit would have on utilization.

The new MRI unit will improve utilization in three ways. First, the reduced downtime will reduce or eliminate the number of cancelled and rescheduled exams. Second, faster scan times will allow CDI to add more patients to its schedule. Third, due to its 70 cm open bore, CDI will be able to scan patients who, due to their size or claustrophobia, cannot be scanned on the existing equipment. Fourth, the new unit will allow CDI to perform additional MRI imaging studies (advanced breast, prostate, and cardiac imaging studies), which will allow CDI to schedule additional imaging services.

10. Describe any new capabilities that the new unit would provide.

The new MRI unit will provide several new scanning capabilities, including:

• Breast MRI
  o New studies not available on current scanner.
  o Current options are limited to biopsy; however, the new MRI unit will allow for clinical imaging.
  o Allows for a range of services, from clinical imaging to biopsy guidance.
  o Offers a wide variety of coils for use in Breast MRI, which enables flexible and superior image quality.

• Prostate MRI
  o New studies not available on current scanner.
  o Current options are limited to PSA testing; however, the new MRI unit will allow for clinical imaging.
  o Offers a wide variety of spine and body coils for use alone, or in combination with an endorectal coil, which enables flexible and superior image quality.

• Cardiac MRI
  o New studies not available on current scanner.
  o Allows for a range of cardiac applications, from morphology and ventricular function to tissue characterization.
  o DOT technology engine helps simplify cardiac localization.

11. By what percent will this replacement increase patient charges?

The purchase of this system will not increase CDI’s patient charges.
FINANCIAL FEASIBILITY REVIEW CRITERIA AND STANDARDS
DIVIDER IV. FINANCIAL FEASIBILITY REVIEW CRITERIA AND STANDARDS

1. Document that sufficient financing is available by providing a letter from a financial institution or an auditors statement indicating that sufficient funds are available.

   See attached.

2. Provide Service-Specific Revenues and Expenses (Form MO 580-1865) projected through three (3) full years beyond project completion.

   See attached.

3. Document how patient charges are derived.

   Patient charges were derived based on Medicare reimbursement principles, as well as CDI’s actual cost of providing the service and understanding of the market.

4. Document responsiveness to the needs of the medically indigent.

   CDI provides charity care pursuant to St. Luke’s Hospital Financial Assistance Policy, which is attached.
August 19, 2016

Re: St. Luke’s Center for Diagnostic Imaging, LLC

To whom it may concern,

Please use this letter as verification that Center for Diagnostic Imaging intends to reach out to several financing sources with the purpose of securing financing for a new MR within St. Luke’s Center for Diagnostic Imaging, LLC. Due to the history of past financing projects, we are confident that such financing can be secured. However, with respect to the purchase of the MR, if financing isn’t available Center for Diagnostic Imaging is willing to use excess cash to purchase the unit.

Please call me at 952-513-6844 if you have any questions on the information in this package.

Sincerely,

Ryan Raschke
Chief Financial Officer
Historical Financial Data for Latest Three Years plus Projections Through Three Years Beyond Project Completion

(Use an individual form for each affected service with a sufficient number of copies of this form to cover entire period, and fill in the years in the appropriate blanks.)

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of Utilization:*</td>
<td>15,795</td>
<td>14,188</td>
<td>16,473</td>
</tr>
<tr>
<td>Revenue:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Charge**</td>
<td>$2,060</td>
<td>$1,983</td>
<td>$1,714</td>
</tr>
<tr>
<td>Gross Revenue</td>
<td>$32,536,121</td>
<td>$28,135,372</td>
<td>$28,239,829</td>
</tr>
<tr>
<td>Revenue Deductions</td>
<td>25,554,683</td>
<td>21,708,626</td>
<td>22,047,776</td>
</tr>
<tr>
<td>Operating Revenue</td>
<td>6,981,438</td>
<td>6,426,746</td>
<td>6,192,053</td>
</tr>
<tr>
<td>Other Revenue</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL REVENUE</td>
<td>$6,981,438</td>
<td>$6,426,746</td>
<td>$6,192,053</td>
</tr>
<tr>
<td>Expenses:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Expense</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>1,496,869</td>
<td>1,449,425</td>
<td>1,488,556</td>
</tr>
<tr>
<td>Fees</td>
<td>594,465</td>
<td>564,937</td>
<td>569,789</td>
</tr>
<tr>
<td>Supplies</td>
<td>252,748</td>
<td>205,309</td>
<td>196,007</td>
</tr>
<tr>
<td>Other</td>
<td>890,424</td>
<td>900,113</td>
<td>1,034,704</td>
</tr>
<tr>
<td>TOTAL DIRECT</td>
<td>$3,234,506</td>
<td>$3,119,784</td>
<td>$3,289,056</td>
</tr>
<tr>
<td>Indirect Expense</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>409,962</td>
<td>407,197</td>
<td>355,691</td>
</tr>
<tr>
<td>Interest***</td>
<td>17,310</td>
<td>28,369</td>
<td>29,118</td>
</tr>
<tr>
<td>Overhead****</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL INDIRECT</td>
<td>$427,272</td>
<td>$435,566</td>
<td>$384,809</td>
</tr>
<tr>
<td>TOTAL EXPENSE</td>
<td>$3,661,778</td>
<td>$3,555,350</td>
<td>$3,673,865</td>
</tr>
<tr>
<td>NET INCOME (LOSS):</td>
<td>$3,319,660</td>
<td>$2,871,396</td>
<td>$2,518,188</td>
</tr>
</tbody>
</table>

* Utilization will be measured in "patient days" for licensed beds, "procedures" for equipment, or other appropriate units of measure specific to the service affected.

** Indicate how the average charge/procedure was calculated.

*** Only on long term debt, not construction.

**** Indicate how overhead was calculated.
## Certificate of Need Program

### SERVICE-SPECIFIC REVENUES AND EXPENSES

#### Historical Financial Data for Latest Three Years plus Projections Through Three Years Beyond Project Completion

(Use an individual form for each affected service with a sufficient number of copies of this form to cover entire period, and fill in the years in the appropriate blanks.)

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amount of Utilization:</strong></td>
<td>17,048</td>
<td>17,389</td>
<td>17,736</td>
</tr>
<tr>
<td><strong>Revenue:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average Charge</strong></td>
<td>$2,012</td>
<td>$2,012</td>
<td>$2,012</td>
</tr>
<tr>
<td><strong>Gross Revenue</strong></td>
<td>$34,298,963</td>
<td>$34,985,103</td>
<td>$35,683,236</td>
</tr>
<tr>
<td><strong>Revenue Deductions</strong></td>
<td>27,278,437</td>
<td>27,823,400</td>
<td>28,379,868</td>
</tr>
<tr>
<td><strong>Operating Revenue</strong></td>
<td>7,020,526</td>
<td>7,161,703</td>
<td>7,303,368</td>
</tr>
<tr>
<td><strong>Other Revenue</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL REVENUE</strong></td>
<td>$7,020,526</td>
<td>$7,161,703</td>
<td>$7,303,368</td>
</tr>
<tr>
<td><strong>Expenses:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Direct Expense</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Salaries</strong></td>
<td>1,313,694</td>
<td>1,339,968</td>
<td>1,366,767</td>
</tr>
<tr>
<td><strong>Fees</strong></td>
<td>629,178</td>
<td>641,762</td>
<td>654,597</td>
</tr>
<tr>
<td><strong>Supplies</strong></td>
<td>282,996</td>
<td>288,656</td>
<td>294,429</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>1,010,866</td>
<td>1,031,083</td>
<td>1,051,705</td>
</tr>
<tr>
<td><strong>TOTAL DIRECT</strong></td>
<td>$3,236,734</td>
<td>$3,301,469</td>
<td>$3,367,498</td>
</tr>
<tr>
<td><strong>Indirect Expense</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Depreciation</strong></td>
<td>519,321</td>
<td>519,321</td>
<td>519,321</td>
</tr>
<tr>
<td><strong>Interest</strong>*</td>
<td>19,987</td>
<td>19,987</td>
<td>19,987</td>
</tr>
<tr>
<td><strong>Overhead</strong>**</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL INDIRECT</strong></td>
<td>$539,308</td>
<td>$539,308</td>
<td>$539,308</td>
</tr>
<tr>
<td><strong>TOTAL EXPENSE</strong></td>
<td>$3,776,042</td>
<td>$3,840,777</td>
<td>$3,906,806</td>
</tr>
<tr>
<td><strong>NET INCOME (LOSS):</strong></td>
<td>$3,244,484</td>
<td>$3,320,926</td>
<td>$3,396,562</td>
</tr>
</tbody>
</table>

* Utilization will be measured in "patient days" for licensed beds, "procedures" for equipment, or other appropriate units of measure specific to the service affected.

** Indicate how the average charge/procedure was calculated.

*** Only on long term debt, not construction.

**** Indicate how overhead was calculated.
ST. LUKE’S HOSPITAL
WEBSITE FINANCIAL ASSISTANCE POLICY

St. Luke's Hospital provides care to patients consistent with its mission and values. Financial Assistance is available to who reside in the community we serve and who are uninsured or underinsured and do not have adequate financial resources to pay for necessary healthcare services provided. St. Luke’s Hospital will use its best efforts to provide financial assistance fairly and consistently, balancing our patients' needs for financial assistance with St. Luke’s Hospital’s broader fiscal responsibility, and taking into consideration each patient's specific needs. Information gathered to determine whether or not a patient qualifies for Financial Assistance is kept confidential and is limited to only those directly involved with the determination process and is considered "protected health information" under HIPAA.

Payments expected from uninsured patients are in line with those that have been negotiated with insurance companies. Financial Assistance provided by St. Luke’s Hospital is not a substitute for personal responsibility. All patients seen at St. Luke’s Hospital are expected to contribute to the cost of their care, based upon their individual ability to pay.

Financial Assistance Applications

Patients may request an application for financial assistance through Social Services, Patient Billing, or any St. Luke’s employee who, if unable to directly assist the patient, can direct them to the appropriate personnel. Applications are available in the hospital, at all registration areas and the cashier’s office as well as on-line via the hospital website: http://www.stlukes-stl.com/pay/faq-assistance-financial.html

Completed applications are processed within fourteen (14) days of receipt and a letter of determination is mailed to all patients who apply. Patients are asked to comply with providing supporting documentation to assist in the determination process. A patient’s failure to provide all requested information may result in a delay of determination. Only one application is necessary and consideration will be taken for multiple accounts for the patient/guarantor. If a patient qualifies for a partial reduction in their account balance, but is not able to pay their remaining balance in full, an interest free payment plan is available so that patients can pay through monthly installments.

St. Luke’s Hospital reaches out to self-pay and underinsured patients in a number of ways, including raising patient awareness of Medicaid health insurance. By assisting our patients with the application process, St. Luke’s Hospital helps patients obtain the benefits for which they qualify. A Financial Counselor may contact you during your stay in the hospital or after you are discharged to assist you in the application process.

Financial Assistance Determination:

Financial Assistance is based on a sliding scale, taking into consideration the following: Federal Poverty Guidelines, income, assets, family size, medical needs and catastrophic costs. Financial assistance ranges between 25% - 100% and is available to all patients regardless of whether or not they have health insurance. Patients who have health insurance may qualify for assistance on their remaining balance (coinsurance/deductibles) after insurance pays.

All other resources must be applied first, including applicable health insurance coverage, payment from third party payors and payments from Medicaid, Medicaid HMO plans, or other government sponsored programs.

Financial assistance is available to all hospital patients including inpatients, outpatients and those receiving services at one of our off-site or affiliate locations.

Determinations for eligibility for full or partial charity will remain valid for twelve months from the date of the charity determination for all necessary hospital services and will be applied to current episodes of care and unpaid balances.

There are instances when a patient may appear eligible for financial assistance, but there is no application on file due to lack of supporting documentation. Often, there is adequate information provided by the patient or through other
sources, which would provide sufficient evidence to provide the patient with financial assistance. St. Luke’s Hospital may use outside agencies in determining estimated income amounts for the basis of determining charity care eligibility.

Nothing in this policy will prohibit St. Luke’s Hospital from offering reduced or more favorable financial assistance to an uninsured patient based upon individual circumstances.

Click here (insert link) to review a list of physicians who are covered under St. Luke’s Hospital’s Financial Assistance policy. Click here (insert link) to review a list of physicians on St. Luke’s Medical staff who are not covered under St. Luke’s Hospital’s Financial Assistance policy.

Uninsured Patients Billing Practices

The first statement sent to an uninsured patient will reflect the expected payment that is in line with those offered to insurance companies (medically necessary services only). In addition, uninsured patients who pay their balance within thirty (30) days are also eligible for a prompt pay reduction.

When sending a bill to a patient, the following statement will be included:

- Financial Assistance may also be available to those who have an inability to pay because they are uninsured or lack other financial resources. An application must be completed to determine eligibility. Please contact our Customer Service Department for more information.

Collection Practices:

St. Luke’s Hospital management has developed policies and procedures for internal and external collection practices that take into account the extent to which the patient qualifies for charity, a patient’s good faith effort to apply for a governmental program or for charity from St. Luke’s Hospital, and a patient’s good faith effort to comply with his or her payment agreements with St. Luke’s Hospital. For patients who qualify for financial assistance and who are cooperating in good faith to resolve their hospital bills, St. Luke’s Hospital may offer extended payment plans, will not impose wage garnishments or force a foreclosure on primary residences, will not impose actions that force bankruptcy and will not send unpaid bills to outside collection agencies.

St. Luke’s Hospital adheres to the laws of the Fair Debt Collection Practices Act and the Association of Credit and Collection Professional’s Code of Ethics and Professional Responsibility and patients are treated with dignity, respect and in line with our mission and values.

Notification:

Patients are informed about our Financial Assistance process in a number of ways:

- Financial counselors and Social workers are available to patients during their stay.
- Patient Financial Services attempts to contact scheduled patients prior to services to provide patients with their expected amounts due and discuss payment/discount options.
- Discussions about financial assistance occur when speaking to patients on the phone about their account balances.
- Information regarding our Financial Assistance Policy is located on our website, our billing statements as well as our registration booklets/brochures.
- St. Luke’s Pediatric Care Center is a mission-based agency of St. Luke’s Hospital that provides health care to children in St. Louis City and County in a private practice setting where care is available for uninsured and low income children.
- St. Luke’s Hospital partners with Volunteers in Medicine in our primary service area and People’s Health Clinic in our secondary service area which addresses the healthcare needs for those with low income. Information about our financial assistance policy is communicated to members of our community through
advertisements that are mailed to approximately 68,000 homes which promote classes and events that we offer in the community. Signs informing patients about our Financial Assistance Policy are posted in all registration areas and off-site locations (approximately 50 locations). Patients can also find our policy and application information on all billing statements as well as our website.

St. Luke’s Financial Assistance Policy is subject to change from time to time without notice.
THE ATTACHED ADVERTISEMENT WAS PUBLISHED
In The St. Louis Post-Dispatch and online STLToday.com on the following dates:
August 5, 2016

Cynthia L. Alderton
COMPANY REPRESENTATIVE

SWORN TO AND SUBSCRIBED BEFORE ME
THIS August 5, 2016.

NOTARY PUBLIC, CITY OF ST. LOUIS

AFFIDAVIT CHARGE $5.00 EACH