Medical Imaging Markets: MRI (Magnetic Resonance Imaging) and Ultrasound

Description: This report analyzes the current and potential world market for medical MRI and ultrasound systems. This report generally reviews the nature and direction of research, as well as future markets for two key areas of imaging technology: Ultrasound and MRI.

the report includes the following as part of its market coverage:
Current Market Size and Forecast for MRI Systems
Market Size and Forecasts for MRI Procedures
Installed Base of MRI Systems (Open, Closed, Low to Mid Field, High Field)
Estimated Cost of MRI Systems (Open, Closed, Low Field, Mid Field, High Field)

Regional Breakdown - US, Europe, Asia, and ROW
Major Trends Driving Growth
Review of Products on the Market
Profiles of Key Companies.

The information presented in Medical Imaging Markets: MRI (Magnetic Resonance Imaging) and Ultrasound is the result of data gathered from company product literature and other corporate brochures and documents, as well as information found in the scientific and trade press. In addition, interviews were conducted with company executives, clinicians and researchers.

Companies Profiled

This report profiles the following companies: In the MRI market: Analogic, GE Healthcare, Hitachi Medical Systems, Philips, Fonar, Siemens and Toshiba, among others.

In the ultrasound market: companies profiled include Aloka, Analogic, Esaote, GE Healthcare, Hitachi Medical Systems, Philips, Shimadzu, Siemens, SonoSite, and Toshiba, among others.

MRI: Applications Drive Growth

The market for MRI continues to grow despite the recession. With its ability to image both anatomically and functionally, MRI has found its way into surgical planning and navigation as well as diffusion and perfusion imaging. It is being combined with other modalities to achieve new heights of image clarity. For instance, once considered unreliable in imaging cartilage, it is being considered for assessing chondral damage and repair. Three dimensional (3D) MRI is sensitive enough to replace arthroscopy.

MRI has been propelled by improved image quality facilitated by higher field strength magnets and the development of new techniques for evaluating specific portions of the complex structures in the brain. More than two decades ago, when clinical MRI was in its early stages, it had serious limitations. The standard pulse sequence at that time was conventional spin echo (CSE). While a very robust method of imaging, and to this date still the gold standard for image contrast in MRI, it suffered from excessively long scan times. Many thought that MRI would never be suitable for cardiac, vascular, very high spatial resolution or true dynamic imaging. But as MRI gained clinical acceptance, the demand for the ability to image those areas that were previously deemed impossible has increased, with a strong emphasis on reducing the acquisition times. The quest for faster imaging has been the impetus for the development of new sequences, improved coil design and significant hardware advances.

This demand has led to new applications and markets for the modality. Most of these significant hurdles have been overcome. With the advent of Gradient Echo, Fast Spin Echo and Echo Planar sequences, scan times have been reduced dramatically, making cardiac imaging possible. Over the last few years, cardiac MRI has received new emphasis - diversifying from structural and simple qualitative functional imaging.
Now myocardial contractility and cardiac volumes may be measured with great accuracy. To further add to the cardiac imaging repertoire, intravenous gadolinium contrast agents, in conjunction with sequences designed to assess myocardial perfusion and degree of viability, are becoming commonplace. This application has significantly impacted patient management in cases of myocardial infarction in which revascularization is being considered. Where previously a full cardiac workup would have required visits to both echo cardiology and nuclear medicine, all the information can be obtained in a single visit to the MRI department. The detail and accuracy of the cardiac MRI exam is such that it is now considered the gold standard for cardiac imaging.

Ultrasound Enjoys Popularity and Ubiquity in Healthcare Practice

Ultrasound continues to be a low-cost and effective imaging technology that can help radiologists and others gather significant clinical data about patients. Ultrasound is well suited to many patients. No other imaging option gives patients a real-time look at their anatomy or openly encourages discussions with physicians about their symptoms and the evidence of disease on the monitor. Ultrasound is safe, patient-friendly and inexpensive. The adoption of this modality by hospitals and other healthcare institutions has generated new market opportunities for manufacturers of ultrasound systems and components suppliers. Ultrasound imaging systems have become commonplace in many offices of cardiologists, obstetricians, surgeons, and urologists, among other specialists.

New applications, such as the use of ultrasound in administering emergency medicine, along with new hand-held portable systems are helping to further fuel the medical marketplace for the technology. In addition, ultrasound systems attract users simply because of their emphasis on user-friendliness, compactness and mobility.

Contents:

CHAPTER ONE: EXECUTIVE SUMMARY
1.1 MRI
1.2 Ultrasound
1.3 Key Challenges and Opportunities
1.3.1 MRI
1.3.1.1 Streamlining Operations
1.3.2 Ultrasound
1.3.2.1 Optimizing Resolution
1.4 World Market Growth
1.4.1 MRI
1.4.2 Ultrasound
1.5 Methodology

CHAPTER TWO: OVERVIEW
2.1 Key Applications
2.1.1 MRI
2.1.1.1 Angiography
2.1.1.2 Cardiac
2.1.1.3 Black Blood MRI
2.1.1.4 Whole Body
2.1.1.5 Head
2.1.1.6 Spine
2.1.1.7 Breast
2.1.2 Ultrasound
2.1.2.1 Obstetrics and Gynecology
2.1.2.2 Breast
2.1.2.3 Abdominal
2.1.2.4 Skeletal
2.1.2.5 Prostate

CHAPTER THREE: INTRODUCTION
3.1 MRI
3.1.1 History and Perspective
3.1.2 Imaging Techniques
3.1.2.1 Dynamic Contrast-Enhanced MRI
3.1.2.2 Diffusion Tensor Imaging
3.1.2.3 T2-weighted gradient-echo MRI
3.1.2.4 Functional MRI
3.1.3 Closed and Open Systems
3.1.4 Various Designs
3.1.4.1 1.5T
3.1.4.2 3T
3.1.4.3 7T
3.1.5 Competing Modalities
3.1.5.1 Computed Tomography
3.1.5.2 The X-Ray
3.1.5.3 Ultrasound
3.2 Ultrasound
3.2.1 History and Perspective
3.2.2 Basic System Components
3.2.3 Advanced Techniques
3.2.3.1 Elastography
3.2.4 Competing Modalities
3.2.4.1 Magnetic Resonance Imaging
3.2.4.2 Radiography
3.3 Imaging Biomarkers
3.3.1 Optimizing Drug Development
3.4 Key Challenges and Issues
3.4.1 MRI
3.4.1.1 Better Coil Design
3.4.1.2 Optimizing Magnets
3.4.1.3 Improving Throughput, Patient Friendliness
3.4.1.4 Costs and Reimbursement
3.4.1.4.1 Equipment Utilization Factor
3.4.1.5 Good Manufacturing Practices
3.4.2 Ultrasound
3.4.2.1 Contrast Agents
3.4.2.2 Patient Size

CHAPTER FOUR: RESEARCH EFFORTS
4.1 Acute Appendicitis
4.2 Stress Echocardiogram and Contrast
4.3 Ultrasound Mammography
4.4 New Magnetics
4.5 Liver Diagnoses
4.6 Magnetic Resonance Elastography
4.7 Cardiovascular MRI
4.8 MR Arthrography

CHAPTER FIVE: MARKETS
5.1 Market Drivers
5.2 MRI
5.2.1 Head, Neck, Brain Scanning
5.2.2 Heart-Cardio Scanning
5.2.3 Breast Scan
5.2.4 Geographic Analysis and Forecast
5.3 Ultrasound
5.3.1 Market Growth Area
5.3.2 Geographic Analysis and Forecasts

CHAPTER SIX: CORPORATE PROFILES
6.1 MRI
6.1.1 Advanced Imaging Research Inc.
6.1.2 American Magnetics Inc.
6.1.3 Analogic Corp.
6.1.4 B. E. Peterson Inc.
6.1.5 Biophan Technologies Inc.
6.1.6 Doty Scientific Inc.
6.1.7 Esaote SpA
6.1.8 Fonar Corp.
6.1.9 GE Healthcare
6.1.10 Hitachi Medical Systems America Inc.
6.1.11 Hologic Inc.
6.1.12 IMRIS
6.1.13 InnerVision MRI Ltd.
6.1.14 Invivo Corp.
6.1.15 MagneVu
6.1.16 Medrad Inc.
6.1.17 MetPlas
6.1.18 Millenium Technology Inc.
6.1.19 MR Instruments Inc.
6.1.20 ONI Medical Systems Inc.
6.1.21 Paramed Medical Systems Inc.
6.1.22 Philips Healthcare
6.1.23 Resonance Research Inc.
6.1.24 Siemens Healthcare
6.1.25 Time Medical
6.1.26 Toshiba America Medical Systems

6.2 Ultrasound
6.2.1 Aloka
6.2.2 American Medical Design
6.2.3 Analogic Corp.
6.2.4 Biomedicom
6.2.5 Dynamic Imaging Ltd.
6.2.6 Echoson SA
6.2.7 Elpol Sp Zoo
6.2.8 Esaote SpA
6.2.9 GE Healthcare
6.2.10 Hitachi Medical Systems America Inc.
6.2.11 LJB Development Inc.
6.2.12 Medison America Inc.
6.2.13 MySono.com
6.2.14 Paradigm Medical Industries
6.2.15 Philips Medical Systems
6.2.16 Shimadzu Corp.
6.2.17 Siemens Healthcare
6.2.18 SonoSite Inc.
6.2.19 Spectromed
6.2.20 Telemed
6.2.21 Terason Ultrasound
6.2.22 TomTec Imaging Systems GmbH
6.2.23 Toshiba America Medical Systems
6.2.24 Ultrasonix Medical Corp.
6.2.25 Verathon Inc.
6.2.26 Volcano Corp.
6.2.27 Zonare Medical Systems Inc.

LIST OF EXHIBITS
CHAPTER ONE: EXECUTIVE SUMMARY
Exhibit 2: World Market Summary: Medical Ultrasound Systems, 2008-2012, Revenues (in billions)

CHAPTER TWO: OVERVIEW
Exhibit 3: MRI Indications
Exhibit 4: Head MRI Indications
Exhibit 5: Applications for Medical Ultrasound

CHAPTER FIVE: MARKETS
Exhibit 6: Worldwide Medical MRI Installed Base Units, 2008
Exhibit 7: Worldwide Medical MRI System Prices Estimated Cost per Unit
Exhibit 8: MRI Market Trends
Exhibit 9: Key Players’ Percentage Share, Worldwide Medical MRI Equipment Market
Exhibit 10: Key Players’ Percentage Share - Worldwide Medical MRI Equipment Market
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct and select the format(s) you require.

- **Product Name:** Medical Imaging Markets: MRI (Magnetic Resonance Imaging) and Ultrasound
- **Web Address:** [http://www.researchandmarkets.com/reports/2860842/](http://www.researchandmarkets.com/reports/2860842/)
- **Office Code:** SCD2SINT

Product Formats
Please select the product formats and quantity you require:

<table>
<thead>
<tr>
<th>Product Format</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic (PDF) - Single User</td>
<td></td>
<td>USD 3500</td>
</tr>
<tr>
<td>Hard Copy</td>
<td></td>
<td>USD 3900 + USD 57 Shipping/Handling</td>
</tr>
<tr>
<td>Electronic (PDF) - Enterprisewide</td>
<td></td>
<td>USD 7000</td>
</tr>
</tbody>
</table>

* Shipping/Handling is only charged once per order.

Contact Information
Please enter all the information below in **BLOCK CAPITALS**

- **Title:** [ ] Mr [ ] Mrs [ ] Dr [ ] Miss [ ] Ms [ ] Prof
- **First Name:** ____________________________
- **Last Name:** ____________________________
- **Email Address:** *
- **Job Title:** ____________________________
- **Organisation:** _________________________
- **Address:** _____________________________
- **City:** ________________________________
- **Postal / Zip Code:** _____________________
- **Country:** _____________________________
- **Phone Number:** _________________________
- **Fax Number:** __________________________

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:

Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:

Account number 833 130 83
Sort code 98-53-30
Swift code ULSBIE2D
IBAN number IE78ULSB98533083310383
Bank Address Ulster Bank,
27-35 Main Street,
Blackrock,
Co. Dublin,
Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: _______________________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:

(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World