+44 20 8123 2220
info@marketpublishers.com

Open System MRI Market - Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028 Segmented by Resolution (low-field scanner, mid-field scanner, and high-field scanner), By Application (neurology, gastroenterology, oncology, cardiology, and other applications), and By Region, Competition

https://marketpublishers.com/r/OD7B219AC3BCEN.html
Date: October 2023
Pages: 171
Price: US$ 4,900.00 (Single User License)
ID: OD7B219AC3BCEN

Abstracts

In 2022, the Global Open System MRI (Magnetic Resonance Imaging) Market reached a valuation of USD 1.35 billion and is poised to experience significant growth in the forecasted period, with an expected Compound Annual Growth Rate (CAGR) of 6.40% through 2028. An open system MRI scanner represents a type of MRI scanner designed to offer a less confining and more open experience for patients in comparison to traditional closed or tunnel-like MRI machines. These open MRI systems are particularly beneficial for patients who may suffer from claustrophobia or discomfort when undergoing scans in traditional closed MRI scanners.

Open MRI systems are characterized by their versatility, as they can comfortably accommodate patients of various sizes, including those who are larger or have mobility issues. The open design also allows for imaging in a range of positions, including sitting, standing, or lying down, depending on the specific needs of the patient. While open MRI systems enhance patient comfort and flexibility, they may have certain limitations in terms of image quality when compared to high-field closed MRI systems.

Open MRI systems find application across a wide spectrum of clinical scenarios, including but not limited to brain imaging, musculoskeletal imaging, abdominal imaging, and more.

+44 20 8123 2220
info@marketpublishers.com

Key Market Drivers

Advancements in MRI Technology

Increasing the magnetic field strength of MRI machines has led to improved signal-to-noise ratios and higher-resolution images. High-field MRI machines, such as 3 Tesla (3T) and 7 Tesla (7T) scanners, are now more widely available and provide superior image quality for various applications. The development of faster imaging techniques, such as parallel imaging and compressed sensing, has significantly reduced scan times. This is particularly beneficial for pediatric and claustrophobic patients and improves overall patient comfort. Functional MRI allows researchers and clinicians to visualize and study brain activity in real-time. It is widely used in neuroscience to map brain function and identify regions associated with specific tasks or conditions. Diffusion-Weighted Imaging (DWI) is essential for evaluating tissue microstructure, particularly in the brain. It is valuable for detecting and characterizing tumors, stroke, and other neurological conditions. Perfusion MRI measures blood flow in tissue, providing valuable information for assessing tissue viability in stroke, tumors, and vascular conditions. Magnetic Resonance Angiography (MRA) techniques have evolved to provide detailed images of blood vessels, aiding in the diagnosis of vascular diseases, such as aneurysms and stenosis. MR spectroscopy allows for the measurement of chemical concentrations in tissue. It is used to study brain metabolites and assess tissue health in various organs. The development of advanced radiofrequency coils and hardware components has improved signal sensitivity and overall image quality. These innovations have enabled the creation of specialized coils for specific applications and anatomical regions.

Techniques for motion correction and artifact reduction have become increasingly sophisticated, reducing image distortions caused by patient motion or other factors. In addition to traditional hydrogen-based imaging, MRI can now utilize other nuclei like carbon-13, fluorine-19, and sodium-23 for specialized applications, such as metabolic and cellular imaging. AI and machine learning algorithms are being integrated into MRI systems to automate image analysis, improve image reconstruction, and assist in disease detection and diagnosis. Quantitative MRI techniques provide precise measurements of tissue properties, such as T1 and T2 relaxation times. This is crucial for characterizing tissue and monitoring treatment response. Functional Connectivity MRI (fcMRI) is used to study the functional connectivity of different brain regions and networks. It has applications in understanding brain disorders and cognitive processes. Open MRI systems and wide-bore designs have been developed to accommodate claustrophobic and larger patients, improving patient comfort and accessibility.

+44 20 8123 2220
info@marketpublishers.com

Combining MRI with other imaging modalities, such as PET (Positron Emission Tomography) or CT (Computed Tomography), enables multimodal imaging, enhancing diagnostic capabilities and treatment planning. This factor will help in the development of the Global open system MRI Market.

Increasing Aging Population

As people age, they are more susceptible to a range of medical conditions that often require diagnostic imaging. These conditions may include cardiovascular diseases, musculoskeletal issues, neurodegenerative disorders, and various types of cancer. Open system MRI is particularly beneficial for older adults who may have mobility issues or experience discomfort in traditional closed MRI machines. Cancer is more common among older individuals. MRI is a valuable tool for cancer screening, staging, and monitoring treatment response. It is often used to detect and assess tumors in various parts of the body, including the breast, prostate, and brain. Conditions such as Alzheimer's disease, Parkinson's disease, and stroke are more prevalent in the elderly population. MRI plays a crucial role in diagnosing and monitoring these neurological disorders, providing detailed images of brain structures and abnormalities. Aging often leads to musculoskeletal problems, including joint issues, fractures, and degenerative spine conditions. Open system MRI is helpful for assessing these conditions, providing orthopedic specialists with the necessary information for treatment planning. Heart disease and vascular conditions become more common with age.

Cardiac MRI, which can be performed in open systems, helps diagnose and evaluate heart-related issues, such as coronary artery disease, heart valve problems, and cardiomyopathies. Open system MRI machines are better suited for older adults who may experience anxiety or claustrophobia in traditional closed machines. Enhanced patient comfort in open MRI systems can lead to higher compliance with medical imaging recommendations. As individuals age, there is a growing emphasis on early disease detection and preventive healthcare. MRI is a valuable tool for early diagnosis, helping healthcare providers identify conditions at an earlier, more treatable stage. Many countries have expanded healthcare access for older adults through government programs like Medicare. This increased access to healthcare services, including diagnostic imaging, contributes to higher MRI utilization among the elderly. Improved healthcare and medical advancements have led to longer life expectancies. As a result, the aging population continues to grow, further driving the demand for medical services, including diagnostic imaging. Aging-related research and clinical studies often require MRI for data collection and analysis. This contributes to the ongoing demand for MRI services in older populations. This factor will pace up the demand of the Global open

system MRI Market.

Growing Awareness and Early Diagnosis

Early diagnosis is essential for effectively treating and managing various medical conditions. Open MRI systems are preferred for some patients, including those who experience claustrophobia or anxiety, making them more likely to undergo recommended diagnostic imaging. As a result, patients are more inclined to seek early medical evaluation and diagnosis when open MRI options are available. Open MRI systems offer a more open and less restrictive environment compared to traditional closed MRI machines. This improved comfort can lead to higher patient acceptance and compliance with recommended screenings and diagnostic tests, including routine health check-ups and early disease screenings. Children, in particular, benefit from open MRI systems because they are less likely to feel anxious or claustrophobic during the procedure. Parents are more willing to have their children undergo MRI scans when open systems are available, facilitating early diagnosis and treatment of pediatric conditions. Growing awareness campaigns and health education initiatives help individuals understand the importance of preventive healthcare and early disease detection. Patients are more likely to proactively seek MRI screenings when they are informed about the benefits of early diagnosis. Ongoing advancements in MRI technology have led to faster scan times and improved image quality. These improvements make MRI more accessible and reduce the time and discomfort associated with the procedure, encouraging individuals to opt for early diagnostic imaging. Healthcare providers play a critical role in encouraging patients to undergo necessary diagnostic imaging tests. When open MRI systems are available, healthcare providers may be more inclined to recommend MRI scans, knowing that patients are more likely to comply due to the improved patient experience.

The shift toward preventive healthcare and wellness check-ups encourages individuals to undergo regular screenings, including MRI, to detect potential health issues before they become more serious or difficult to treat. Early detection of cancer through MRI is vital for improving survival rates and treatment outcomes. Patients who are aware of the benefits of early cancer screening are more likely to undergo MRI examinations. For individuals with chronic diseases such as multiple sclerosis, rheumatoid arthritis, or Crohn's disease, open MRI systems can be preferred due to their comfort and accessibility. Regular MRI monitoring is essential for managing these conditions effectively. Open MRI systems are also beneficial for patients with mental health conditions who may experience anxiety or panic attacks in enclosed spaces. These patients are more likely to seek mental health-related MRI evaluations when open MRI

options are available. The healthcare industry's shift toward patient-centered care puts a strong emphasis on patient comfort and choice. Open MRI systems align with this approach by providing patients with more comfortable imaging options. Open MRI systems can sometimes reduce the need for sedation in patients who may otherwise be unable to tolerate a closed MRI. This contributes to early diagnosis by eliminating the need for sedation-related delays. This factor will accelerate the demand of the Global open system MRI Market.

Key Market Challenges

Market Saturation

In regions with mature healthcare markets, including many developed countries, there is already a significant installed base of medical imaging equipment, including MRI systems. Hospitals and healthcare facilities in these areas may already have enough MRI machines to meet the current demand for diagnostic imaging. In saturated markets, the primary growth opportunity for MRI manufacturers may come from replacing older MRI systems rather than installing new ones. Hospitals and imaging centers replace outdated equipment to access newer technology and maintain high-quality patient care. The presence of numerous MRI systems in saturated markets may limit opportunities for expanding the market further. Healthcare providers may be less inclined to invest in additional MRI machines unless there is a clear need for increased capacity or advanced features. With a limited number of new installations, competition among MRI manufacturers can become intense. Manufacturers must compete for replacement contracts, and this competition can lead to pressure on pricing and profit margins. While some regions may experience market saturation, other regions, particularly in emerging economies, may still present growth opportunities. MRI manufacturers may focus their expansion efforts on these regions.

Maintenance and Service Costs

MRI machines are complex and expensive pieces of medical equipment. The initial acquisition cost is substantial, and this can strain the budget of healthcare providers. While the initial purchase is a one-time expense, it's essential to factor in ongoing maintenance and service costs over the lifespan of the MRI system. MRI systems require regular preventive maintenance to ensure they function correctly and produce accurate imaging results. Routine maintenance activities include calibration, system checks, and software updates. These maintenance tasks are critical for preventing issues and ensuring patient safety. Like all machinery, MRI systems can experience

unexpected breakdowns or malfunctions. Unscheduled repairs can be costly and result in downtime, impacting patient scheduling and the overall efficiency of the healthcare facility. MRI maintenance and repair require specialized knowledge and skills. Healthcare facilities must invest in training and certifying technicians to perform maintenance and repairs effectively. This training incurs costs and time commitments. MRI systems are composed of numerous intricate parts and components, including magnets, coils, and electronics. Replacing or repairing these components can be expensive, and the availability of specialized parts may affect service timelines and costs. Many healthcare providers enter service contracts with MRI manufacturers or third-party service providers to cover routine maintenance and repairs. These contracts can vary widely in terms of coverage and cost. High-quality service contracts can be expensive but provide peace of mind. When an MRI system is out of service for maintenance or repairs, it can result in patient appointment cancellations and rescheduling, potentially affecting patient care and satisfaction. Minimizing downtime is a priority for healthcare providers.

Key Market Trends

Wide-Bore Open MRI

Wide-bore open MRI systems feature a larger and more spacious bore (the tunnel-like part of the machine where the patient lies) compared to traditional closed MRI machines. This design reduces feelings of claustrophobia and anxiety in patients, enhancing their overall comfort during the imaging procedure. The wider bore of these MRI systems can comfortably accommodate a broader range of patients, including those who are larger in size, have mobility issues, or experience discomfort in traditional closed MRI machines. This inclusivity is essential for providing equitable healthcare services. Wide-bore open MRI systems are particularly well-suited for imaging pediatric and geriatric patients who may have difficulty remaining still during the scan. The more open design allows parents or caregivers to be present during pediatric scans, helping to reduce anxiety in young patients. The spacious environment of wide-bore open MRI systems makes them ideal for musculoskeletal imaging. Patients can be imaged in weight-bearing positions or with extended limbs, enabling better visualization of orthopedic conditions and injuries. The wide-bore design offers an unrestricted field of view for patients, allowing them to see around them during the scan. This feature can be comforting for patients who may feel anxious when enclosed in a traditional MRI machine. Modern wide-bore open MRI systems are equipped with advanced imaging technologies that deliver high-quality images. These systems can provide diagnostically valuable images while still prioritizing patient comfort. Wide-bore open MRI systems are

+44 20 8123 2220
info@marketpublishers.com

suitable for a wide range of clinical applications, including neuroimaging, body imaging, breast imaging, and cardiovascular imaging.

Segmental Insights

Resolution Insights

In 2022, the Global Open System MRI Market largest share was dominated by High-Field Scanner segment in the forecast period and is predicted to continue expanding over the coming years. High-field MRI scanners typically produce superior image quality compared to lower-field scanners. This is particularly important in medical imaging, where the clarity and detail of the images are crucial for accurate diagnosis and treatment planning. High-field scanners provide sharper and more detailed images, making them preferred for a wide range of clinical applications. High-field MRI scanners are versatile and can be used for a wide range of clinical applications, including neurological imaging, musculoskeletal imaging, cardiovascular imaging, and more. Their ability to provide detailed images across various medical specialties makes them the preferred choice for many healthcare providers. The increasing demand for MRI services in healthcare facilities worldwide drives the preference for high-field scanners. Hospitals and clinics often choose high-field MRI systems to meet patient needs and stay competitive in the healthcare market.

Application Insights

In 2022, the Global Open System MRI Market largest share was dominated by Cardiology segment in the forecast period and is predicted to continue expanding over the coming years. Cardiovascular diseases are a leading cause of mortality and morbidity globally. The demand for cardiovascular imaging techniques, including cardiac MRI, has been increasing due to the need for accurate diagnosis, monitoring, and treatment planning for heart-related conditions. MRI is a non-invasive imaging modality known for its high spatial and contrast resolution. It provides detailed images of the heart's structure and function, making it an essential tool for diagnosing various cardiac conditions such as myocardial infarctions, cardiomyopathies, and valvular diseases. Over the years, there have been significant advancements in cardiac MRI technology, including faster imaging techniques, improved image quality, and enhanced post-processing capabilities. These advancements have made cardiac MRI more accessible and valuable in clinical practice.

Regional Insights

+44 20 8123 2220
info@marketpublishers.com

The North America region dominates the Global Open System MRI Market in 2022. This is due to the rise in heart and brain conditions. In addition, the region's high prevalence of cardiovascular (CVD) and brain illnesses is fueling market expansion in the area. The expansion of the market under consideration is anticipated to be fueled by the increase in MRI diagnostic procedures in the United States. For instance, a July 2022 Mayo Clinic article reported a 40% increase in MRI diagnostic operations in April 2022 compared to the same month the year prior. As a result, the rise in diagnostic procedures is probably what will spur the most market expansion in the region. The introduction of new items is another factor fueling the expansion of this industry in the area. For instance, in November 2021, Fujifilm Healthcare America Health Corporation unveiled the Velocity MRI System.

Key Market Players

GE Healthcare

Hitachi Medical Corporation

Philips Healthcare

Siemens Healthcare

ESAOTE SA

Canon Medical Systems Corporation

Hologic Inc.

Nordion Inc.

Onex Corporation (Carestream Health)

Shimadzu Corporation

Toshiba Corporation

Barco N.V.

+44 20 8123 2220
info@marketpublishers.com

Report Scope:

In this report, the Global Open System MRI Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Open System MRI Market, By Resolution:

Low-field scanner

Mid-field scanner

High-field scanner

Open System MRI Market, By Application:

Neurology

Gastroenterology

Oncology

Cardiology

Other applications

Global Open System MRI Market, By region:

North America

United States

Canada

Mexico

Asia-Pacific

China

+44 20 8123 2220
info@marketpublishers.com

India

South Korea

Australia

Japan

Europe

Germany

France

United Kingdom

Spain

Italy

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

+44 20 8123 2220
info@marketpublishers.com

Company Profiles: Detailed analysis of the major companies present in the Global Open System MRI Market.

Available Customizations:

Global Open System MRI Market report with the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

+44 20 8123 2220
info@marketpublishers.com

Contents

+44 20 8123 2220
info@marketpublishers.com

7. ASIA PACIFIC OPEN SYSTEM MRI MARKET OUTLOOK

+44 20 8123 2220
info@marketpublishers.com

8. EUROPE OPEN SYSTEM MRI MARKET OUTLOOK

+44 20 8123 2220
info@marketpublishers.com

9. NORTH AMERICA OPEN SYSTEM MRI MARKET OUTLOOK

10. SOUTH AMERICA OPEN SYSTEM MRI MARKET OUTLOOK

+44 20 8123 2220
info@marketpublishers.com

11. MIDDLE EAST AND AFRICA OPEN SYSTEM MRI MARKET OUTLOOK

+44 20 8123 2220
info@marketpublishers.com

+44 20 8123 2220
info@marketpublishers.com

+44 20 8123 2220
info@marketpublishers.com

I would like to order

Product name: Open System MRI Market - Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028 Segmented by Resolution (low-field scanner, mid-field scanner, and high-field scanner), By Application (neurology, gastroenterology, oncology, cardiology, and other applications), and By Region, Competition

Product link: https://marketpublishers.com/r/OD7B219AC3BCEN.html

Price: US$ 4,900.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/OD7B219AC3BCEN.html

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

**All fields are required

Custumer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at https://marketpublishers.com/docs/terms.html

+44 20 8123 2220
info@marketpublishers.com

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970