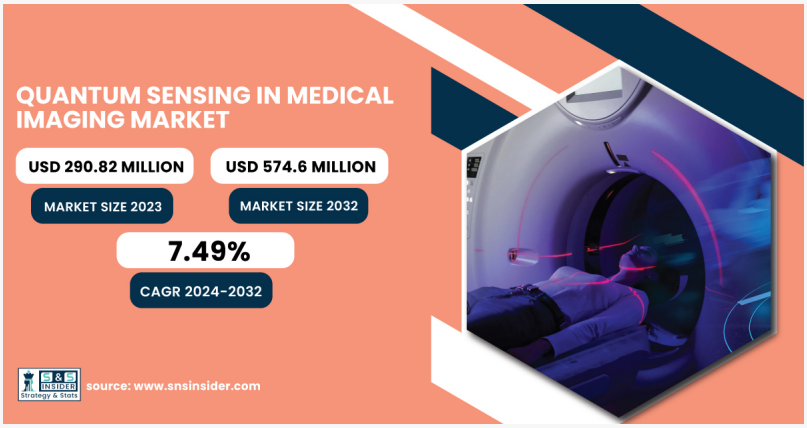
Quantum Sensing in Medical Imaging Market to Reach USD 574.6M by 2032 | SNS Insider

Quantum Sensing in Medical Imaging Market Set for Significant Growth Amid Advancements in Imaging Technologies



Quantum Sensing in Medical Imaging Market

AUSTIN, TX, UNITED STATES, February 24, 2025 /EINPresswire.com/ -- According to Research by SNS Insider, The Quantum Sensing in Medical Imaging Market was valued at USD 290.82 million in 2023 and is expected to reach USD 574.6 million by 2032, witnessing substantial growth at a rate of 7.49% from 2024 to 2032. This growth is primarily driven by increasing demand for high-precision imaging technologies, rising adoption of quantum sensors, and continuous advancements in diagnostic imaging applications.

“Quantum sensing is set to revolutionize medical imaging by offering unprecedented precision and efficiency,” said a leading industry expert from SNS Insider. “This upward trajectory presents significant opportunities for investors, healthcare providers, and innovators looking to leverage next-generation diagnostic tools.”

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Key Players in Quantum Sensing in Medical Imaging Market
- IBM (IBM Quantum Imaging, IBM Quantum Sensors for MRI)
- Google (Alphabet Inc.) (Quantum Enhanced MRI Technology, Quantum Imaging Solutions for Oncology)
- Honeywell (Quantum Magnetometers for MRI, Quantum Sensors for PET Imaging)
- Microsoft (Azure Quantum for Medical Imaging, Quantum Computing for MRI Diagnostics)
- D-Wave Systems (Quantum Machine Learning for Medical Imaging, D-Wave Quantum Imaging Solutions)
- Bosch Healthcare Solutions (Quantum Sensor-based MRI, Quantum Sensors for PET Scanners)

 Qnami (Quantum Sensing Solutions for Bio-imaging, Quantum Imaging Tools for Cancer Detection)
 Oxford Instruments (Quantum Sensors for Biomedical Imaging, High-Sensitivity Quantum Magnetic Imaging Devices)
 Siemens Healthineers (Quantum-Enhanced MRI Scanners, Quantum PET Imaging Solutions)
 GE Healthcare (Quantum Sensors for Diagnostic Imaging, Quantum-enhanced MRI Technologies)
 Quantum Surgical (Quantum Sensing in Image-guided Surgery, Quantum Imaging Solutions for Targeted Treatment)
 Toshiba Medical Systems (Quantum Sensors for CT Imaging, Quantum MRI Imaging Devices)
 Medtronic (Quantum Imaging Sensors for Neurological Applications, Advanced Quantum Sensors for Cardiac Imaging)
 Xanadu Quantum Technologies (Quantum Imaging for Cancer Detection, Quantum Sensing Solutions for Brain Imaging)
 Fujifilm Healthcare (Quantum-enhanced X-ray Imaging, Quantum Sensors for Digital Mammography)
 Photonis (Quantum Photon Detectors for Imaging, Quantum Sensing Solutions for Advanced Imaging)
 Southwest Research Institute (Quantum Imaging Systems for Neuroimaging, Quantum Sensors for Multi-modal Imaging Applications)
 Arxspan (Quantum Sensing Technology for MRI, Quantum Imaging Solutions for Biomedical Applications)
 ID Quantique (Quantum Photonic Sensors for Medical Imaging, Quantum Imaging Solutions for Radiation Therapy)
 Qontrol (Quantum Sensing Technology for Bio-imaging, Quantum-enhanced Microscopy and Imaging Devices)

Segmentation Analysis

By Type of Sensing Technology, in 2023, the quantum sensors segment dominated the quantum sensing in the medical imaging market, holding a significant share.

Because of its greater sensitivity and accuracy in the detection of faint changes in physiology. Quantum sensors are increasingly finding applications in high-resolution imaging methods, making disease detection and monitoring more efficient.

The most rapidly growing subcategory in this group is magnetometers. The demand for magnetometers in medical imaging is rising due to their capability to detect very weak magnetic fields produced by neural and cardiovascular functions. Their use in functional brain imaging and the detection of early diseases has driven their swift adoption, positioning them as a key technology for future medical diagnostics.

By End-User, Hospitals emerged as the dominant end-user segment in 2023, accounting for

around 61% of the market share.

Hospitals are the major adopters of quantum sensing technologies because of their sophisticated diagnostic facilities, heavy patient flow, and increasing demand for accurate imaging solutions. The incorporation of quantum sensing technologies in hospital-based imaging units has resulted in enhanced diagnostic accuracy and improved patient care.

Diagnostic imaging centers, at the same time, are growing at the most rapid rate. With an ever-increasing need for specialized image services, individual diagnostic centers are increasingly using quantum sensing technologies to make their services cost-effective and efficient. Technological improvements in compact diagnostic devices along with the push toward outpatient diagnostic services are the most significant drivers here.

Magnetic Resonance Imaging (MRI) was the leading application of quantum sensing in medical imaging in 2023, holding the largest share of the market.

The use of quantum sensors in MRI technology enhances resolution and reduces scanning time, further facilitating patient diagnosis and treatment planning. The rising prevalence of neurological disorders and musculoskeletal diseases has similarly increased the utilization of quantum-enhanced MRI.

On the contrary, optical imaging is the fastest-growing application segment. With the increased focus on non-invasive diagnostics, quantum sensor-based optical imaging technologies are gaining traction. Their ability to image soft tissue in real-time at the cellular level in high resolution is driving their rapid incorporation in medical diagnostics, particularly oncology and neurology.

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Regional Analysis: in 2023, North America led the quantum sensing in the medical imaging market, capturing 58% of the global market share.

This leadership is due to the region's high healthcare infrastructure, massive investment in medical imaging research, and early embrace of cutting-edge technologies. Having the best imaging technology vendors and a rising emphasis on precision diagnostics also contribute further to North America's leadership in the market.

The Asia-Pacific region is expected to experience maximum growth in the forecast year. Increased healthcare spending, increasing prevalence of chronic diseases, and expanding access to advanced imaging technologies are driving the need for quantum sensing technologies in the Asia-Pacific region. China, Japan, and India are some of those countries experiencing fast development in medical research and diagnostic capabilities, driving the region's rapid market

growth.

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