

Pioneering Precision and Accessibility in Healthcare

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Innovations Driving Diagnostic Excellence and Therapeutic Efficiency



The medical laboratory market in the Middle East and Africa (MEA) is poised for significant growth, with projections indicating it will reach USD473.84 million by 2029, driven by a strong Compound Annual Growth Rate (CAGR) of 12.6%. This growth is supported by increasing healthcare demands in the region, fueled by a rising prevalence of chronic and non-communicable diseases, population growth.

Laboratories play a pivotal role in the healthcare ecosystem by offering essential diagnostic and testing services that are critical for disease identification, monitoring, and guiding treatment decisions. Underlining the importance of laboratories in improving patient outcomes in the region, these solutions enable healthcare providers to deliver precise and effective care. Bringing together medical laboratory professionals and industry leaders, Medlab Middle East, from 9-11 February 2026, explored the future of laboratory science and its transformative potential in healthcare.

On its 25th edition, the event highlighted the latest advancements in laboratory technology and innovation, offering a platform for global leaders, pioneers, and experts to showcase groundbreaking discoveries and cutting-edge solutions. By fostering invaluable networking opportunities, Medlab Middle East not only connected stakeholders but also emphasized the critical role of laboratory technologies in diagnosing and treating diseases.

A number of industry giants, including Philips, GE HealthCare, Siemens Healthineers, Draegerwerk, United Imaging, and Samsung Electronics, participated at the event, further elevating its status. By spotlighting transformative technologies and

solutions, the event reinforced the growing significance of laboratories in addressing healthcare challenges in the MEA region and beyond. The convergence of global expertise, innovative technologies, and educational opportunities at Medlab Middle East positioned it as a vital hub for shaping the future of laboratory-driven healthcare and ensuring its continued impact on patient care and medical progress.

Health practitioners can gain a deeper understanding of patients' health by enhancing access to healthdata and empowering individuals to take control of their well-being. The advances enable faster, more precise, and more personalized diagnoses and treatments, while lowering costs, improving accessibility, and ultimately improving patient outcomes. Healthcare technology has advanced significantly in recent years, improving detection and treatment of diseases. Additionally, Artificial Intelligence (AI) and machine learning have played a pivotal role in medical lab technology by integrating data analytics and predictive algorithms to support better diagnoses and elevate patient care quality.

At the WHX exhibition held at the Dubai Exhibition Centre in Feb 2026, the latest innovations from global leaders were showcased, with some highlights being:

GE Healthcare highlighted integrated imaging, ultrasound, and patient care solutions, focusing on how their technologies streamline workflows and improve clinical outcomes. In addition, the display demonstrated how these advanced systems are used in real-world scenarios to support better patient management and operational efficiency.

Siemens Healthineers showcased AI-enabled imaging platforms and digital health tools, emphasizing their role in advancing medical diagnostics and patient care. They demonstrated how these tools can enhance accuracy, reduce diagnostic time, and support clinicians in making informed decisions.

Philips on the other hand, featured digital health technologies, with representatives delivering talks on product innovation and the integration of advanced solutions into healthcare systems. The expertise provided insights into how tools and technologies can be employed to address current healthcare challenges, such as improving accessibility and personalizing care.

Samsung Electronics debuted its new ultrasound systems, specifically emphasizing the R20 model as a breakthrough in portable and high-performance imaging technology. The exhibitors highlighted compact designs, superior image quality, and potential applications in both urban and rural healthcare settings.

United Imaging presented advanced medical imaging and radiotherapy equipment, demonstrating their commitment to providing cutting-edge tools for diverse medical applications. They also shared case studies and examples of how their equipment has been successfully deployed in various healthcare environments to improve treatment precision.

Draegerwerk also participated, though specific details of their showcase were not elaborated in the provided context. However, their presence indicated a focus on supporting critical care and monitoring solutions within the broader medical technology landscape.

Event spotlight was on **Siemens Healthineers'** AI-enabled imaging tools and digital health tools, emphasizing their role in medical diagnostics, with the introduction of a novel device in advanced magnetic extraction technology that overcomes the limitations of traditional PCR methods.

Siemens Healthineers leads in healthcare innovation with global imaging expertise, a dominant position in radiation oncology through Varian with over 60% market share, and advancements in image guidance and diagnostics within Advanced Therapies. The company focuses on improving patient outcomes, providing innovative diagnostic solutions, and driving precision therapy, which contributes €6.8 billion and supports precision medicine advancement.

Medical Imaging backed by New Generation of Photon Counting CT Technology

The new generation of photon counting CT (Computed Tomography) technology is revolutionizing medical imaging by transforming diagnostics through enhanced accuracy, improved patient safety, and increased accessibility in healthcare. It provides high diagnostic confidence with a single scan, often eliminating the need for subsequent MRI or PET scans and streamlining patient pathways. Additionally, it improves patient safety by reducing radiation and making it safer for vulnerable patients, while enhancing operational efficiency through AI and automation.

Spectral imaging with photon-counting CT improves diagnosis and treatment by providing functional insights in addition to structural views through X-ray energy analysis. This enables assessments such as lung perfusion defects and tumor physiology while reducing the need for PET CT or MRI. It offers significant advancements in cardiology by precisely visualizing coronary artery calcifications and vessel occlusions, in pulmonology by revealing previously invisible lung structures for better diagnoses and treatment plans, and in neurology by minimizing metal artifacts to enhance tissue and

stent visibility. The transformative impact of photon-counting technology was showcased with the NAEOTOM Alpha class at WHX 2026 in Dubai.

Jesús Fernández León, Global Head of CT Marketing at Siemens Healthineers, underscores the significance of this innovation. He explains “The launch of the NAEOTOM Alpha in 2021 marked a significant milestone, later expanded into the NAEOTOM Alpha class in 2024. Key developments include the acquisition of detector manufacturer Acrorad, the installation of second-generation prototypes, and the groundbreaking of a photon-counting detector factory”.

Photon-counting CT has been adopted in nearly 300 systems across over 40 countries, used to scan almost 3 million patients. It reduces radiation and contrast doses to improve patient safety, enhances operational efficiency through AI and automation, and provides functional insights in addition to structural views, supporting better diagnoses in cardiology, pulmonology, and neurology. Siemens Healthineers has developed this technology over 20 years, with innovations such as the NAEOTOM Alpha class, and aims for wider adoption by 2040, potentially establishing it as a standard for CT scanning.

Redefining MRI technology through helium-free approaches and AI-automation

Early MRI machines were bulky and required large amounts of liquid helium. The advent of dry magnet technology has transformed the field by enabling the use of minimal helium (as little as 0.7 liters), simplifying installation, and allowing deployment in remote areas without compromising image quality or performance. Siemens Healthineers' advancements in MRI scanners utilize dry magnet technology, artificial intelligence, and intelligent software to achieve full automation, accessibility, and adaptability, elevating MRI systems in both clinical and industrial settings. DryCool technology exemplifies this focus on helium-free solutions, with sealed-for-life magnet designs that eliminate quench pipes, enhance uptime with AutoResponse features, and ensure reliable performance across various settings.

Anne Becker, Senior Global Product Marketing Manager for MRI systems, highlights the goal to “expand global reach and efficiency” in medical imaging through innovative and adaptable MRI technologies. This is demonstrated by the DryCool system, which supports these objectives by providing helium-free operation, streamlined installation, and consistent performance across diverse environments.

Building on the focus of DryCool technology and Siemens' efforts to enhance MRI accessibility, operational efficiency supports remote scanning to address technician shortages and improve workflows. AI integration further enhances image quality, speed, and reduces noise, enabling faster scans such as ankle scans in three minutes without compromising quality. These advancements, driven by dry magnet technology, AI, and intelligent software, aim to make MRI systems fully automated and widely available, improving efficiency and accessibility in medical imaging.

Siemens' MRI advancements include faster, more detailed scans for MSK, neuro, liver, and prostate, while 1.5T systems emphasize sustainability, patient comfort, and upgradeable features such as gradient strength, bore size, and channel configuration for flexible solutions.

AI-powered angiography innovation to improve image-guided therapy:

Siemens Healthineers has launched a new portfolio of eight AI-powered angiography systems featuring Optic AI, which reduces radiation dose and enhances visual clarity in image-guided therapy, democratizing access to advanced image-guided therapy while enhancing patient safety and precision. The Eight new systems (including Artist Studio, Artist I Explore, Artist Icon, and the flagship Artist I Envision) integrate AI extensively into product design and solutions to enhance capabilities.

Louise McKenna, Senior Vice President Head of Global Sales and Marketing for Advanced Therapies, says “The core goal is to make advanced therapeutic care accessible globally for cardiovascular diseases, stroke, and interventional oncology. The novel angiography systems share a unified platform and user interface with access to AI applications, eliminating the need for retraining and enhancing efficiency, speed, and precision in interventional procedures.”

Siemens Healthineers continues to develop medical technologies and expand its global presence, contributing to healthcare systems by focusing on accessibility, accuracy, and efficiency. Its AI efforts aim to enhance navigation, precision, and speed in therapeutic processes, with clinician control central to optimizing dose and image quality for informed decision-making.

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