+357 96 030922
info@marketpublishers.com

UAE Artificial Intelligence In Cancer Diagnostics Market By Component Type (Software, Hardware, and Services), By Diagnosis Type (Breast Cancer, Lung Cancer, Prostate Cancer, Colorectal Cancer, Brain Tumour, and Others), By End User (Hospitals, Surgical Centres & Medical Institutes, and Others), By Region, Competition, Forecast and Opportunities, 2020-2030F

https://marketpublishers.com/r/U4DAF14384F5EN.html
Date: January 2025
Pages: 82
Price: US$ 3,500.00 (Single User License)
ID: U4DAF14384F5EN

Abstracts

UAE Artificial Intelligence In Cancer Diagnostics Market was valued at USD 0.42 Million in 2024 and is expected to reach USD 0.94 Million with a CAGR of 14.34% through 2030. The UAE Artificial Intelligence in cancer diagnostics market is experiencing robust growth, driven by several key factors that are reshaping healthcare in the region. One of the primary drivers is the ss, particularly in oncology, as part of the UAE's broader push towards digital transformation in healthcare. AI-powered tools and algorithms are revolutionizing cancer diagnostics by enabling faster, more accurate detection and diagnosis, reducing human error, and improving patient outcomes.

The rising prevalence of cancer in the UAE and the Middle East, coupled with an aging population, has also spurred demand for advanced diagnostic technologies. Cancer is one of the leading causes of death in the UAE, making early detection crucial. AI systems, such as machine learning and deep learning, can analyze large datasets from medical imaging, pathology slides, and genetic information, providing clinicians with precise insights for early diagnosis. This helps in detecting cancer at its earliest stages when treatment is most effective.

+357 96 030922
info@marketpublishers.com

Key Market Drivers

Increasing Prevalence of Cancer

The rising incidence of cancer in the UAE has been a major driving force behind the growing demand for advanced diagnostic solutions. Cancer remains one of the leading causes of death in the UAE, with its prevalence steadily increasing due to factors such as an aging population, lifestyle changes, and environmental factors. Early detection plays a crucial role in improving survival rates and treatment outcomes. In the UAE, 25.4% of all cancer cases were diagnosed in patients under the age of 40, with this proportion ranging from 20% to 30% across both men and women, as well as in Emirati and non-Emirati patients. The highest frequency of cancer cases occurred in the 40–44 age group for the overall population, as well as for both Emirati and non-Emirati women. However, in non-Emirati men, the peak occurred in the younger 55–59 age group, while in Emirati men, it was seen in the older 70–74 age group. Of the 1,139 cases of breast cancer, 236 (20.7%) were diagnosed in patients younger than 40 years, with 17.4% of these cases occurring in Emiratis and 21.5% in non-Emiratis. 407 breast cancer cases (35.7%) were diagnosed in patients aged 40–49 years, with 25.2% of these cases in Emiratis and 38.2% in non-Emiratis.

Artificial intelligence-powered diagnostic tools, capable of analyzing large amounts of medical data such as imaging and genetic information, have revolutionized early detection. These tools offer enhanced precision, accuracy, and speed compared to traditional methods. By detecting cancer in its earliest stages, AI technology enables timely treatment, which is essential for improving patient outcomes and reducing healthcare costs associated with late-stage cancer. The demand for these AI-driven diagnostic solutions is expected to rise as the burden of cancer continues to increase in the UAE.

Government Initiatives and Investments

The UAE government has been actively promoting the integration of digital technologies into healthcare through initiatives such as the UAE Vision 2021 and the National Strategy for Artificial Intelligence. These initiatives emphasize the importance of adopting cutting-edge technologies like artificial intelligence to improve healthcare services. Through investments and partnerships, the government aims to improve the overall healthcare infrastructure, making it conducive to AI innovations in cancer diagnostics. Lunit announced its collaboration agreement with the Abu Dhabi Health Services Company (SEHA), which is part of Pure Health, the largest healthcare network

+357 96 030922
info@marketpublishers.com

in the UAE. The agreement was officially signed at Lunit's headquarters in Seoul on September 29, 2022. Under the terms of the agreement, Lunit and SEHA will move forward with a proof of concept (POC) for Lunit's AI-driven radiology solution suite, Lunit INSIGHT, at medical institutions across the Middle East. The POC will involve SEHA testing two of Lunit's AI tools: Lunit INSIGHT CXR for chest X-ray analysis and Lunit INSIGHT MMG for mammography analysis, both of which will undergo evaluation.

The UAE's focus on transforming healthcare into a world-class system has led to the establishment of policies that encourage the adoption of AI in medical diagnostics. The establishment of AI-focused institutions and research centers has further accelerated the growth of AI-driven cancer diagnostic technologies. The government's proactive approach in supporting innovation in the healthcare sector is paving the way for a thriving UAE Artificial Intelligence In Cancer Diagnostics Market.

Technological Advancements in Artificial Intelligence

Artificial intelligence is rapidly advancing in the field of healthcare, with significant progress in machine learning, deep learning, and natural language processing technologies. These advancements are transforming how cancer is diagnosed and treated. AI systems can now analyze medical images, such as X-rays, CT scans, and MRIs, with a level of accuracy that rivals or even surpasses human radiologists. The ability of AI to detect early-stage cancer in medical imaging is crucial for saving lives. AI algorithms can predict cancer risk based on genetic and lifestyle data, which helps in identifying high-risk individuals who may benefit from preventive screenings. The ongoing progress in AI technology enhances its reliability and usefulness in cancer diagnostics, providing healthcare providers in the UAE with state-of-the-art tools to improve patient care.

Growth in Personalized Medicine

Personalized medicine, also known as precision medicine, is an emerging trend in the healthcare industry, and it is becoming a key factor in cancer diagnostics. Personalized medicine involves tailoring treatments based on individual genetic profiles, which allows for more effective and targeted therapies. Artificial intelligence plays a critical role in personalized medicine by analyzing vast amounts of data to identify the genetic mutations that contribute to cancer. AI tools help clinicians make informed decisions by suggesting individualized treatment plans based on the patient's genetic makeup, medical history, and lifestyle factors. In March 2023, Cleveland Clinic inaugurated a new cancer facility, the Fatima bint Mubarak Center, at Cleveland Clinic Abu Dhabi in the

+357 96 030922
info@marketpublishers.com

capital of the United Arab Emirates. This center is a key component of the organization's vision to provide world-class cancer care.

The increasing emphasis on personalized medicine in the UAE, driven by both healthcare providers and patients, has been a significant driver in the adoption of artificial intelligence technologies for cancer diagnostics. This trend is expected to continue as more diagnostic solutions leverage AI to provide precision treatment options.

Key Market Challenges

Data Privacy and Security Concerns

One of the major challenges in the adoption of artificial intelligence in cancer diagnostics in the UAE is ensuring the privacy and security of medical data. With the integration of AI technologies, vast amounts of sensitive health data are being generated and analyzed. This data often includes personal details, medical histories, imaging results, and genetic information, making it a target for cybercriminals. The UAE has strict data privacy regulations, and healthcare institutions need to ensure that they comply with local laws, such as the UAE's Data Protection Law and international standards like the General Data Protection Regulation (GDPR). Ensuring robust cybersecurity protocols and data encryption mechanisms is essential to build trust among patients and healthcare providers. Failure to address data privacy concerns could hinder the widespread adoption of AI-based diagnostic tools in the UAE’s healthcare sector.

High Initial Investment and Operational Costs

Another challenge faced by healthcare institutions and businesses in the UAE when adopting AI in cancer diagnostics is the high initial investment required to integrate these technologies into existing healthcare systems. AI-based diagnostic tools require advanced infrastructure, such as powerful computing systems and data storage solutions, which can be expensive to set up and maintain. The training and implementation of AI models demand highly skilled personnel, further increasing the operational costs. For smaller clinics or regional healthcare facilities, the cost of acquiring and maintaining AI technologies can be a significant barrier. While these investments can lead to long-term benefits in terms of efficiency, accuracy, and patient outcomes, the initial financial burden may deter some healthcare providers from integrating AI solutions into their practice, limiting the broader adoption of AI in cancer

+357 96 030922
info@marketpublishers.com

diagnostics.

Key Market Trends

Improvement in Diagnostic Accuracy and Efficiency

Artificial intelligence is revolutionizing diagnostic accuracy, particularly in the detection of cancer. Traditional diagnostic methods, although effective, often rely on subjective interpretations of medical images, such as X-rays and MRIs, which may lead to errors or delays. AI-based diagnostic tools, however, can analyze large volumes of data in a fraction of the time it takes for a human radiologist to make an assessment. These AI systems are capable of detecting minute patterns and irregularities that may be missed by the human eye, thus reducing diagnostic errors and improving the speed of detection. The accuracy and efficiency of AI-driven cancer diagnostics are leading to earlier diagnoses, allowing for quicker intervention and treatment. This is particularly critical in the UAE where there is an increasing focus on enhancing the quality of healthcare services. As healthcare providers in the UAE strive for more accurate, timely, and efficient diagnostics, the adoption of AI technologies is expected to continue rising, significantly impacting the healthcare industry's ability to manage cancer. In September 2021, the gastroenterology team at Sheikh Shakhbout Medical City (SSMC) in Abu Dhabi, one of the UAE's leading hospitals for complex care and a joint venture between Mayo Clinic and the Abu Dhabi Health Services Company (SEHA), has unveiled an advanced AI system for gastrointestinal endoscopy that greatly improves the detection of pre-cancerous colon polyps. The system, known as GI Genius, is FDA-approved and also cleared for use in the UAE. This AI-driven technology is designed to assist in colonoscopy procedures and will be implemented at SSMC's Gastroenterology Division, which is headed by Dr. Michael Wallace. Dr. Wallace, a Professor of Medicine and Director of Procedural Innovation at Mayo Clinic in the U.S., had the opportunity to work with the technology for two years during its trial in Europe and was also the principal investigator for a U.S. randomized controlled study with the FDA.

Rise of Telemedicine and Remote Diagnostics

With the growing need for remote healthcare services, telemedicine and remote diagnostics are becoming increasingly important. The COVID-19 pandemic accelerated the adoption of telemedicine, and this trend continues to grow in the UAE. Artificial intelligence in cancer diagnostics supports telemedicine by enabling remote interpretation of diagnostic results, such as imaging and lab tests, in a more efficient and accurate manner. Healthcare providers can consult AI-driven systems to receive

+357 96 030922
info@marketpublishers.com

diagnostic recommendations, which can then be shared with patients via telehealth platforms. This is particularly beneficial in a country like the UAE, where patients may not always have easy access to specialized medical facilities, especially in remote areas. AI tools allow for the rapid delivery of diagnostic results, enabling patients to receive timely care without needing to travel long distances to healthcare centers. As the demand for telemedicine services continues to grow, AI-powered diagnostics will play an essential role in delivering accessible, reliable, and efficient cancer diagnosis across the UAE.

Segmental Insights

Component Type Insights

Based on the Component Type, software was the dominant segment. This is primarily due to the increasing reliance on advanced algorithms and machine learning models that can analyze large volumes of medical data, such as medical images, lab results, and patient histories, to detect and diagnose cancer with high accuracy. Software solutions, including AI-powered diagnostic tools, play a central role in transforming how healthcare providers in the UAE detect and treat cancer. These AI systems utilize pattern recognition, deep learning, and natural language processing to interpret medical data more efficiently than traditional methods.

The UAE has made significant strides in adopting AI-powered software solutions in healthcare, particularly in cancer diagnostics, as the country aims to become a leader in the use of cutting-edge technology to improve healthcare outcomes. Software plays a pivotal role in enabling rapid image processing for medical imaging techniques like X-rays, MRIs, and CT scans, which are used extensively for cancer diagnosis. AI algorithms can analyze these images with greater precision, detecting early signs of cancer that may be overlooked by human doctors, and helping clinicians make better-informed decisions. The ability of AI software to perform tasks quickly, with high accuracy, and without fatigue, significantly enhances the diagnostic process in cancer care.

Diagnosis Type Insights

Based on the Diagnosis Type, breast cancer was the most dominant segment. This is primarily due to the high incidence rate of breast cancer in the region, particularly among women, making it a major focus of the healthcare system. As a result, artificial intelligence (AI) technologies are being increasingly adopted for breast cancer detection

+357 96 030922
info@marketpublishers.com

and diagnosis, as AI systems offer significant improvements in early detection, diagnostic accuracy, and treatment planning.

Breast cancer is one of the leading causes of cancer-related deaths in women worldwide, and the UAE is no exception. With a growing emphasis on preventive healthcare, AI-powered solutions are playing a vital role in enhancing early detection through imaging techniques like mammography, ultrasound, and magnetic resonance imaging (MRI). AI algorithms analyze these images with high precision, identifying subtle signs of abnormalities such as tumors, calcifications, or architectural distortions in breast tissue that may be overlooked by human radiologists. This increased sensitivity and accuracy significantly improve early detection, which is crucial for effective treatment outcomes. The implementation of AI in breast cancer diagnostics is also advancing in the UAE due to the country’s commitment to embracing cutting-edge technology in healthcare. AI systems assist radiologists in interpreting imaging data quickly and accurately, reducing the workload and potential for human error. AI tools can help prioritize cases, flagging suspicious findings and providing a second opinion, thereby reducing diagnostic delays. This is particularly beneficial for busy healthcare facilities where radiologists may be handling high volumes of imaging data daily. The growing awareness and proactive approach to breast cancer in the UAE, including regular screening programs and public health initiatives, further support the increased use of AI technology in diagnosing the disease. The UAE government has invested heavily in the healthcare infrastructure and technology to address the rising incidence of breast cancer, leading to a favorable environment for the widespread adoption of AI-driven diagnostic tools.

Regional Insights

In the UAE Artificial Intelligence in Cancer Diagnostics Market, Dubai stands out as the dominant region. This is due to a combination of factors such as its advanced healthcare infrastructure, the presence of leading hospitals and medical centers, and the UAE's commitment to becoming a global leader in adopting cutting-edge technologies like artificial intelligence in healthcare. Dubai's well-established reputation as a hub for medical innovation and its strategic investments in healthcare technology contribute significantly to its dominance in this market.

Dubai has been at the forefront of embracing technological advancements across various sectors, including healthcare. The city's hospitals and healthcare facilities are equipped with state-of-the-art diagnostic tools, and AI is increasingly being integrated into cancer diagnostic systems. The region’s healthcare ecosystem has been quick to

+357 96 030922
info@marketpublishers.com

adopt AI technologies, particularly in oncology, due to their potential to improve early detection and accuracy in diagnosing various types of cancer. With AI-powered diagnostic tools, radiologists in Dubai can analyze medical imaging data such as mammograms, CT scans, and MRIs with higher precision, allowing for earlier and more accurate detection of cancer.

Key Market Players

- Prognica Labs
- Detectiome
- American Hospital Dubai
- AstraZeneca FZ LLC
- Cleveland Clinic Abu Dhabi LLC
- Sheikh Shakhbout Medical City
- Al Zahra Hospital Dubai
- Gulf International Cancer Center
- SEHA- Abu Dhabi Health Services Co.
- Mediclinic City Hospital Comprehensive Cancer Centre

Report Scope:

In this report, the UAE Artificial Intelligence In Cancer Diagnostics Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

- UAE Artificial Intelligence In Cancer Diagnostics Market, By Component Type:
  - Software

+357 96 030922
info@marketpublishers.com

Hardware

Services

UAE Artificial Intelligence In Cancer Diagnostics Market, By Diagnosis Type:

Breast Cancer

Lung Cancer

Prostate Cancer

Colorectal Cancer

Brain Tumour

Others

UAE Artificial Intelligence In Cancer Diagnostics Market, By End User:

Hospitals

Surgical Centres & Medical Institutes

Others

UAE Artificial Intelligence In Cancer Diagnostics Market, By Region:

Abu Dhabi

Dubai

Sharjah

Rest of UAE

Competitive Landscape

+357 96 030922
info@marketpublishers.com

Company Profiles: Detailed analysis of the major companies present in the UAE Artificial Intelligence In Cancer Diagnostics Market.

Available Customizations:

UAE Artificial Intelligence In Cancer Diagnostics Market report with the given market data, TechSci 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).

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

15. STRATEGIC RECOMMENDATIONS

16. ABOUT US & DISCLAIMER

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: UAE Artificial Intelligence In Cancer Diagnostics Market By Component Type (Software, Hardware, and Services), By Diagnosis Type (Breast Cancer, Lung Cancer, Prostate Cancer, Colorectal Cancer, Brain Tumour, and Others), By End User (Hospitals, Surgical Centres & Medical Institutes, and Others), By Region, Competition, Forecast and Opportunities, 2020-2030F

Product link: https://marketpublishers.com/r/U4DAF14384F5EN.html

Price: US$ 3,500.00 (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/U4DAF14384F5EN.html