

Transrectal Ultrasound Market Forecasts to 2032 – Global Analysis By Product (Systems and Transducers), Technology (2D Ultrasound, 3D/4D Ultrasound, Doppler Ultrasound and Contrast-Enhanced Ultrasound (CEUS)), Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Transrectal Ultrasound Market is accounted for \$263.9 million in 2025 and is expected to reach \$402.1 million by 2032, growing at a CAGR of 6.2% during the forecast period. Transrectal ultrasound (TRUS), a medical imaging method, primarily examines the prostate gland. A tiny ultrasound probe is inserted into the rectum to create detailed images using sound waves. TRUS helps diagnose prostate disorders, direct biopsies, and assess anomalies like enlargement or tumors. It is a widely used, safe, and minimally invasive method for identifying urological conditions, including prostate cancer.

According to data published by the American Cancer Society, approximately 288,300 men in the U.S. were estimated to be diagnosed with prostate cancer by the end of 2024

Market Dynamics:

Driver:

Increasing prevalence of prostate cancer

One major factor propelling the transrectal ultrasound (TRUS) industry is the increasing

incidence of prostate cancer worldwide. Because TRUS allows for precise lesion localization and early identification, it is essential in the diagnosis of prostate cancer. Demand has also gone up because new imaging technologies, like real-time elastography and MRI-US fusion biopsies, have made diagnosis more accurate. The market is also growing as a result of enhanced healthcare infrastructure in emerging nations and government financing for prostate cancer research. When taken as a whole, these elements make TRUS a vital instrument for combating the rising incidence of prostate cancer.

Restraint:

Availability of alternative imaging techniques

The availability of substitute imaging modalities, such as multiparametric MRI (mpMRI), constrains the TRUS market. Multiparametric MRI (mpMRI) is often the preferred option due to its enhanced visibility of prostate lesions and its ability to reduce the detection of tumors that are not clinically significant. Also, when used with targeted biopsy methods, mpMRI has been found to be more accurate in diagnosing compared to regular TRUS-guided biopsies. TRUS's potential for expansion is constrained by the growing use of these cutting-edge imaging techniques, particularly in areas with established healthcare systems.

Opportunity:

Integration with targeted biopsy techniques

Combining TRUS with targeted biopsy methods like MRI-US fusion biopsies presents a significant opportunity for growth. By facilitating real-time imaging and accurate targeting of worrisome lesions, this combination improves the detection accuracy of prostate cancer. Furthermore, improvements in micro-ultrasound technology provide imaging with higher resolution, which enhances diagnostic results even more. These developments are propelling a change from traditional diagnostic techniques to more sophisticated ones, opening up new market potential prospects.

Threat:

Cost and reimbursement issues

The high expenses of sophisticated TRUS systems and restrictive reimbursement

guidelines threaten the market's expansion. The cost of these gadgets continues to be a problem for healthcare practitioners in many areas, especially in poor nations. Furthermore, strict regulatory requirements and product recalls triggered by safety concerns may hinder market expansion.

Covid-19 Impact:

The COVID-19 epidemic negatively impacted the transrectal ultrasound market by causing disruptions in healthcare services. Prostate cancer diagnostic procedures decreased as a result of strict social distancing measures and fewer hospital visits. The pandemic's drop in demand was also due to worries about ultrasound technology spreading infections. Nonetheless, the industry is anticipated to regain momentum and show steady development in the post-pandemic phase as healthcare institutions recover and implement improved safety measures.

The hospitals segment is expected to be the largest during the forecast period

The hospitals segment is expected to account for the largest market share during the forecast period because of their sophisticated infrastructure and abundance of qualified personnel. Patients choose hospital-based diagnoses and treatments due to the rising incidence of prostate-related illnesses. Additionally, hospitals frequently have access to state-of-the-art imaging technologies such as MRI fusion capabilities or high-resolution TRUS systems with real-time elastography. Both public and private hospitals, catering to various patient demands, guarantee their dominant position in this market segment.

The 3D/4D ultrasound segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the 3D/4D ultrasound segment is predicted to witness the highest growth rate. This is due to its enhanced imaging capabilities, which enable accurate observation of prostate architecture. These cutting-edge devices provide real-time images with improved quality and accuracy, facilitating better diagnosis. Their combination with focused biopsy procedures further enhances clinical results. The development of imaging technology and the increasing need for novel approaches to prostate cancer diagnostics are the main drivers of this market's explosive expansion.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest

market share because of its established healthcare system and high incidence of prostate cancer. Considerable funds are allocated to research and development initiatives to enhance diagnostic technologies in the region. Strong market demand is also a result of attractive reimbursement regulations and high awareness of early-stage disease identification. Major industry companies guarantee access to cutting-edge TRUS systems in hospitals and diagnostic facilities, which is fueling the growth in the region.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. This is due to the increasing awareness of early prostate disease diagnosis and the rising healthcare costs in countries such as China and India. As age-related prostate disorders become more common, the region's growing geriatric population base increases demand for TRUS equipment. Furthermore, government programs encouraging the adoption of medical technology and improvements to healthcare infrastructure are driving market expansion throughout Asia Pacific.

Key players in the market

Some of the key players in Transrectal Ultrasound Market include Echo-Son SA, Esaote SpA, Exact Imaging, Fujifilm Holdings Corporation, GE Healthcare, KOELIS, Koninklijke Philips N.V., Siemens Healthineers AG, Sonablate Corp, The Prometheus Group, EDAP TMS SA, Strata Imaging, HALO Medical Technologies, Telemed Medical Systems, BK Medical, and Bracco Imaging S.p.A.

Key Developments:

In November 2024, EDAP TMS SA announced positive clinical results regarding its robotic High-Intensity Focused Ultrasound (HIFU) treatment for deep infiltrating endometriosis at the 2024 AAGL Global Congress. A study presented by Professor Gil Dubernard compared the outcomes of HIFU therapy to traditional surgical methods, revealing that patients undergoing HIFU experienced significantly reduced moderate and severe postoperative complications, shorter hospital stays, and improved overall health. The study analyzed data from 120 patients and found that HIFU could serve as a less invasive alternative to surgery, addressing a condition with limited treatment options. The company is working on further evaluations and plans to discuss these findings with the FDA as it advances its Phase 3 trial for HIFU treatment.

In September 2024, Koelis, SAS, a global leader and innovator in prostate care, announced the release of a new, compact 3D transducer for transperineal fusion biopsy and treatment. Koelis is now compatible with both the market leading high-level disinfection systems (Trophon® and Astra®VR).

In March 2024, GE HealthCare (Nasdaq: GEHC) announced the launch of Prostate Volume Assist (PVA) urology-based artificial intelligence (AI) software feature. As a global leader in ultrasound-guided solutions in urology, this AI-based software feature is designed to support clinicians in prostate imaging, biopsies and guiding treatment. This new feature assists urologists by offering a solution that improves workflow and quickly captures prostate volume. The added functionality with PVA can determine calculations and measurements of the organ with an automated, one-click process.

Product Covered:

Systems

Transducers

Technologies Covered:

2D Ultrasound

3D/4D Ultrasound

Doppler Ultrasound

Contrast-Enhanced Ultrasound (CEUS)

Applications Covered:

Prostate Cancer

Benign Prostatic Hyperplasia (BPH)

Male Infertility Diagnosis

Other Applications

End Users Covered:

Hospitals

Diagnostic Imaging Centers

Urology Clinics

Ambulatory Surgical Centers (ASCs)

Academic & Research Institutes

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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