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Digital Breast Tomosynthesis Market - A Global and Regional Analysis: Focus on End User, Regional, and Country - Analysis and Forecast, 2026-2036

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Abstracts

The global digital breast tomosynthesis market, initially valued at $925.7 million in 2025, is projected to witness substantial growth, reaching $2,894.6 million by 2036, marking a remarkable compound annual growth rate (CAGR) of 10.99% over the period from 2026 to 2036.

The digital breast tomosynthesis (DBT) market is gaining momentum as healthcare systems seek more accurate and reliable breast imaging solutions to improve early cancer detection and diagnostic confidence. DBT, often referred to as 3D mammography, enhances conventional imaging by generating layered, cross-sectional views of breast tissue, allowing radiologists to better visualize lesions that may be obscured in standard 2D images. As breast cancer screening programs expand and awareness increases globally, DBT is being increasingly integrated into hospital radiology departments, cancer centers, and advanced diagnostic facilities, particularly in settings where improved sensitivity and specificity are critical.

Ongoing advancements in DBT technology are transforming breast imaging workflows by combining high-resolution 3D imaging with features such as synthesized 2D images, improved dose optimization, and streamlined acquisition processes. These innovations help reduce recall rates, enhance lesion characterization, and improve workflow efficiency in high-volume screening and diagnostic environments. Additionally, the integration of AI-assisted image analysis and advanced visualization tools is further strengthening DBT's clinical value by supporting radiologists in faster and more consistent interpretation.

While adoption is accelerating in developed healthcare markets with established

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screening infrastructure, growth in emerging regions remains more selective due to higher system costs, infrastructure requirements, and workforce limitations. However, as healthcare systems increasingly prioritize early detection and precision diagnostics, and as technology becomes more accessible, DBT is expected to play an expanding role in breast imaging pathways, positioning it as a key advancement within the broader mammography market.

Market Introduction

The digital breast tomosynthesis (DBT) market is witnessing strong growth as healthcare providers increasingly shift toward more advanced and precise breast imaging technologies for both screening and diagnostic applications. Commonly known as 3D mammography, DBT enhances conventional digital mammography by acquiring multiple low-dose images from different angles to generate a layered, three-dimensional view of breast tissue. This approach significantly improves lesion detection and reduces the masking effect of overlapping tissue, making it particularly valuable in screening programs, diagnostic assessments, and imaging of women with dense breasts. As the global burden of breast cancer continues to rise, DBT is gaining strategic importance as a tool that enhances detection accuracy while supporting more confident and timely clinical decision-making.

Technological advancements are further reinforcing DBT’s role across hospitals, specialized breast imaging centers, and organized screening pathways. Modern systems incorporate features such as synthesized 2D imaging, optimized radiation dose, faster acquisition times, AI-enabled workflow support, and integrated biopsy capabilities, all of which improve both clinical outcomes and operational efficiency. These innovations help reduce recall rates, enhance interpretation accuracy, and streamline workflows in high-volume imaging environments. While adoption in some regions remains constrained by high capital costs, reimbursement challenges, infrastructure limitations, and the continued reliance on conventional mammography or ultrasound, the growing focus on early detection, dense-breast evaluation, and precision imaging is expected to drive sustained global expansion of the DBT market.

Industrial Impact

The global digital breast tomosynthesis (DBT) market is creating a strong impact on the breast imaging industry by accelerating the shift from conventional 2D mammography toward more advanced, layered, and clinically informative breast imaging platforms. DBT is increasingly being integrated into breast screening, diagnostic assessment,

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dense-breast evaluation, and image-guided intervention workflows, making it an important technology across hospitals, breast care centers, diagnostic imaging networks, and oncology-focused facilities. Leading manufacturers are strengthening DBT platforms with capabilities such as synthesized 2D imaging, low-dose acquisition, faster scan times, biopsy guidance, AI-assisted reading support, and improved workflow automation. These advancements are helping providers enhance lesion visibility, reduce the effect of tissue overlap, and improve confidence in breast image interpretation, which is raising the strategic importance of DBT within modern breast care delivery.

From an industry perspective, the expansion of the DBT market is reshaping product development priorities, competitive positioning, and capital investment patterns across the medical imaging sector. Healthcare providers are increasingly assessing DBT systems not only for imaging performance, but also for reading efficiency, interoperability, patient comfort, upgrade flexibility, and compatibility with advanced applications such as tomosynthesis-guided biopsy and intelligent decision-support tools. This is encouraging manufacturers to deliver more integrated, scalable, and workflow-oriented breast imaging platforms that can support both high-volume screening services and complex diagnostic pathways. At the same time, the growing focus on early cancer detection, dense-breast imaging, and replacement of older mammography systems is supporting continued market momentum. By improving diagnostic capability, strengthening breast imaging infrastructure, and enabling a more advanced standard of breast care, DBT is contributing to the ongoing transformation of the global women's health imaging industry.

Market Segmentation

Segmentation 1: By End User

- Hospitals and Ambulatory Surgical Centers
- Diagnostics Center
- Other End User

Hospitals and Ambulatory Surgical Centers Segment to Dominate the Digital Breast Tomosynthesis Market (by End User)

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Hospitals and ambulatory surgical centers (ASCs) dominate the digital breast tomosynthesis (DBT) market because they function as integrated care hubs where screening, diagnosis, and intervention are closely linked. DBT is widely used beyond screening, including diagnostic workups, dense-breast evaluation, pre-biopsy imaging, and follow-up assessments. These facilities enable seamless patient flow from imaging to advanced diagnostics and procedures, such as biopsy, within the same network, making them the most practical and high-value adopters of DBT systems. Their dominance is also driven by stronger infrastructure and financial capacity to support advanced imaging technologies. DBT systems require higher capital investment, specialized staff, and integration with IT and radiology workflows, which hospitals and ASCs are better equipped to manage. Additionally, the shift toward outpatient and minimally invasive breast care is increasing the role of ASCs, where DBT can be combined with same-day diagnostic and interventional procedures. High patient volumes and multi-use applications across the care pathway improve system utilization and return on investment, reinforcing their leadership in the DBT market.

Segmentation 2: By Region

- North America
  - U.S.
  - Canada
- Europe
  - U.K.
  - Germany
  - France
  - Italy
  - Spain
  - Rest-of-Europe
- Asia-Pacific

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China

Japan

India

Australia

South Korea

Rest-of-Asia-Pacific

Latin America

Brazil

Mexico

Rest-of- Latin America

Middle East and Africa

North America to Dominate the Digital Breast Tomosynthesis Market (by Region)

North America dominates the digital breast tomosynthesis (DBT) market due to its strong combination of large-scale screening volumes, established reimbursement frameworks, advanced installed base, and high provider readiness. The region benefits from a well-structured and recurring screening ecosystem, particularly in the U.S., where guidelines support routine screening for women aged 40–74 using both digital mammography and DBT. Canada further reinforces this demand through organized screening programs across provinces and territories, ensuring a consistent and predictable imaging pipeline. In addition, favorable reimbursement policies, especially in the U.S., where screening mammography and DBT are supported through established payment pathways, reduce financial barriers for patients and strengthen the business case for providers to adopt and expand DBT usage.

Another key factor is the widespread adoption of DBT across the region, with a majority

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of U.S. mammography facilities already equipped with at least one DBT unit, driving not only new installations but also replacement cycles and network-wide standardization. This is supported by a high breast cancer burden and sustained public health focus on early detection, which continues to prioritize investment in advanced imaging technologies. Furthermore, North America's mature healthcare infrastructure, including certified imaging facilities and integrated screening programs, enables faster absorption and scaling of advanced modalities like DBT. As a result, the region maintains a leading position, driven by both technological maturity and strong systemic support for breast imaging.

Demand – Drivers, Challenges, and Opportunities

Market Drivers

Superior Detection Capability and Reduced Callback Rates Driving the Adoption of Digital Breast Tomosynthesis: Digital breast tomosynthesis (DBT) is increasingly being adopted due to its superior lesion detection capability and lower recall rates compared to conventional 2D mammography. By providing three-dimensional visualization of breast tissue, DBT improves cancer detection—particularly in women with dense breasts while reducing false positives, unnecessary callbacks, and associated patient anxiety and healthcare costs. For example, a 10-year Yale/New Haven Health study summarized by RSNA in September 2024 reported that DBT achieved a higher cancer detection rate than digital mammography (5.3% vs. 4.0%), along with a lower recall rate (7.2% vs. 10.6%) and fewer advanced cancers at diagnosis (32.7% vs. 43.6%).

Similarly, a JAMA Oncology study published in May 2025 analyzing over 200,000 women with a family history of breast cancer found that DBT significantly reduced recall rates and improved specificity compared to digital mammography, with an adjusted recall reduction of 1.51 percentage points. The study also highlighted stronger performance in women with dense breast tissue, showing improved detection of early-stage invasive cancers with favorable prognostic features and a reduction in advanced cancer incidence. Collectively, these findings reinforce DBT's clinical advantage, supporting its growing integration into breast cancer screening and diagnostic pathways.

Market Challenges

High Cost of DBT Systems: The high cost of digital breast tomosynthesis (DBT) systems remains a key constraint on market expansion, limiting adoption across both

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advanced and emerging healthcare settings. Although DBT offers clear clinical benefits, its upfront capital cost typically ranges from around $90,000 for basic configurations to over $300,000 for advanced, AI-enabled systems, posing a significant barrier, particularly for small and mid-sized facilities with constrained budgets.

This challenge is further intensified by the total cost of ownership, which can rise to approximately $350,000–$700,000 over an 8-year lifecycle due to ongoing expenses such as maintenance, software upgrades, and component replacements. As a result, healthcare providers often extend equipment replacement cycles and delay transitioning from 2D mammography to DBT, especially in cost-sensitive markets. Additionally, high capital requirements restrict broader access in low- and middle-income countries and limit adoption in community-based settings even within developed regions, ultimately slowing large-scale penetration of DBT despite strong clinical demand.

Market Opportunities

Shift from Age-Based to Risk-Stratified, Personalized Screening: The global shift from age-based breast cancer screening toward risk-stratified, personalized screening models presents a significant growth opportunity for digital breast tomosynthesis (DBT). This transition is redefining mammography from a routine, age-driven test into a more targeted tool for risk assessment and clinical decision-making. Healthcare systems are increasingly incorporating factors such as breast density, family history, genetic risk, and prior findings into screening pathways, supported by evolving clinical guidelines and regulatory emphasis on breast density notification. As a result, screening is becoming more individualized, moving away from uniform protocols toward tailored imaging strategies.

Importantly, this evolution strengthens rather than replaces the role of DBT. Personalized screening still relies on mammographic imaging as a core component but demands higher diagnostic accuracy, particularly for women with dense breasts or moderate risk profiles. This is driving preference for advanced imaging technologies like DBT over conventional 2D systems. Large-scale studies such as the WISDOM and MyPeBS trials further reinforce this shift, demonstrating how risk-based approaches can alter screening pathways and support broader real-world adoption. Consequently, DBT is increasingly positioned as a key enabler of precision breast imaging within next-generation screening frameworks.

How can this report add value to an organization?

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Growth/Marketing Strategy: Market growth is driven by strategic partnerships, hospital and clinic network expansions, and alignment with national and regional breast cancer screening initiatives. OEMs are targeting hospitals, specialized breast centers, and diagnostic chains, while also entering emerging economies where unmet demand for advanced imaging is high. Mobile and retrofit DBT solutions help broaden adoption, particularly in areas with limited infrastructure, supporting both screening and diagnostic workflows.

Competitive Strategy: The DBT market is highly competitive, with OEMs differentiating through high-resolution imaging, AI-enabled diagnostic tools, and workflow efficiency. Success increasingly depends on providing integrated solutions that combine hardware, software, and analytics to reduce radiologist workload and improve diagnostic confidence. Key competitive advantages are clinical accuracy, operational reliability, interoperability with PACS and EMR systems, and the ability to manage high-volume, multi-modality breast imaging pathways.

Methodology

Key Considerations and Assumptions in Market Engineering and Validation

Years from 2024 to 2036 have been considered for the global market size estimation, 2025 has been considered as the base year, and 2026 to 2036 as the forecast period.

The scope of the report is based on comprehensive inputs from industry experts across various sectors, including hospitals, diagnostic laboratories, imaging centers, and research institutions.

The market contribution of DBT systems is anticipated to grow substantially in the future, with projections based on historical analysis of available solutions.

Revenues from companies have been sourced from their annual reports for FY2024 and FY2025. For private companies, revenue estimates are derived from primary research inputs, funding history, market collaborations, and operational performance.

The market has been mapped based on the existing DBT systems. Key companies with significant offerings in this field have been identified and profiled in this report.

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Primary Research

The primary sources involve industry experts and key stakeholders across the healthcare and radiography ecosystem, including DBT manufacturers (OEMs), medical device companies, radiology service providers, and healthcare institutions. Stakeholders such as hospitals, imaging centers, and screening programs have been consulted to validate adoption trends, system-level integration, and clinical utility specific to DBT systems. Respondents, including CEOs, vice presidents, product and marketing directors, and technology and innovation leaders, have been interviewed to obtain and verify both qualitative and quantitative insights for this research study.

The key data points taken from the primary sources include:

- validation and triangulation of all the numbers and graphs
- validation of report segmentations and key qualitative findings
- understanding the competitive landscape and business model
- current and proposed production values of a product by market players
- validation of the numbers of different segments of the market in focus
- percentage split of individual markets for regional analysis

Secondary Research

Open Sources

- Certified publications, articles from recognized authors, white papers, directories, and major databases, among others
- Annual reports, SEC filings, and investors' presentations of the leading market players
- Company websites and a detailed study of their product portfolio

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Gold standard magazines, journals, white papers, press releases, and news articles

Paid databases

The key data points taken from the secondary sources include:

segmentations and percentage shares

data for market value

key industry trends of the top players in the market

qualitative insights into various aspects of the market, key trends, and emerging areas of innovation

quantitative data for mathematical and statistical calculations

Key Market Players and Competition Synopsis

The companies profiled have been selected based on inputs gathered from an analysis of company coverage, product portfolio, and market penetration.

Some prominent names established in this market are:

Allengers

DMS Group

FUJIFILM Corporation

GE Healthcare

Genoray Co., Ltd.

Hologic, Inc.

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IMS Giotto S.p.A.

Metaltronica S.p.A.

Planmed Oy

Siemens Healthineers

Shanghai United Imaging Healthcare Co., Ltd.

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