

# Corneal Pachymetry Market Report: Trends, Forecast and Competitive Analysis to 2031

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## **Abstracts**

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Corneal Pachymetry Trends and Forecast

The future of the global corneal pachymetry market looks promising with opportunities in the hospital and clinic markets. The global corneal pachymetry market is expected to grow with a CAGR of 3.6% from 2025 to 2031. The major drivers for this market are the rising number of glaucoma cases, increased knowledge among medical professionals about the value of corneal thickness measurements in diagnosing various eye problems, as well as technical developments in portable glaucoma detection tools, and improvements in research and development.

Lucintel forecasts that, within the type category, the ultrasonic method is expected to witness the highest growth during the forecast period due to its precision and reliability in delivering accurate corneal thickness measurements.

Within the end-use category, hospitals will remain the largest segment due to the growing number of patients with glaucoma.

In terms of regions, North America is expected to witness the highest growth over the forecast period due to the significant prevalence of complications related to diabetes, alongside the increasing burden of conditions such as glaucoma, diabetic retinopathy, and refractive errors.

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report.

Emerging Trends in the Corneal Pachymetry Market

The corneal pachymetry market is a witness to some of the emerging trends that alter the face of ophthalmic diagnostics. Such emerging trends mirror a path of technological advancement, integration with other diagnostic modalities, and a growing emphasis on precision medicine that continues to raise the bar on the overall effectiveness of not only the measurement of corneal thickness but also of the care of the eye.

Integration with Optical Coherence Tomography: The integration of OCT further enhances corneal pachymetry by offering high-resolution cross-sectional pictures of the cornea. As such, the trend in assessing the thickness and structure of the cornea is quite accurate, with lots more detail for better diagnoses of such diseases as glaucoma and keratoconus.

Advancements in Non-Contact Pachymetry: The encouraging thing is that there has been some development regarding non-contact pachymetry technologies, which in turn constitutes a much more harmless and less invasive alternative for the patients reviewed to its contact counterpart methods. These advancements enhance patient experience and diagnostic accuracy, as they reduce the risk of infection and can provide rapid, precise measurements.

Development of Portable and Handheld Devices: The development of portable and handheld pachymetry devices is improving access to diagnostic tools across different care settings. Such devices are particularly useful in remote or underserved areas, facilitating greater convenience in the conduct of corneal pachymetry for early diagnosis and management of disorders affecting the cornea.

Improved Data Analytics and Software Integration: Improved data analytics and better integration of software enhance the interpretation of the results of pachymetry. Advanced algorithms in software analyze corneal thickness data more effectively and provide elaborate insight to support personalized treatment plans and better clinical decision-making.

Increased Emphasis on Early Detection and Prevention: Interest is currently centered on the use of principles for early detection and prevention of corneal diseases through routine pachymetry screenings. The current trend reflects a



paradigm shift toward proactive eye care in which, through early diagnosis and monitoring of the thickness of the cornea, one can prevent the progress of conditions and hence assure better outcomes for patients.

These emerging trends are, therefore, reordering the corneal pachymetry market in a way that ensures enhanced diagnosis accuracy, comfort for the patient, and wider access to modern technologies. Integration with OCT, making the devices non-contact and portable, drives innovation, while more data analytics and a focus on early detection reshape clinical practices. All these trends put together to move the field of corneal pachymetry forward to enable more effective and personalized solutions in eye care.

Recent Developments in the Corneal Pachymetry Market

Recent developments in the corneal pachymetry market have been indicative of technological advancement and the growing adoption of innovative solutions aimed at improving diagnostic accuracy and patient care. These recent developments reflect progress on fronts such as device capabilities, integration with other diagnostic technologies, and a growing emphasis on enhancing effectiveness in measuring corneal thickness.

Launch of High-Resolution OCT Devices: High-resolution OCT devices have greatly increased the precision of corneal pachymetry. Indeed, highly detailed cross-sectional images of the cornea are generated with such high-resolution OCT devices. This, in turn, enables better diagnosis of conditions such as glaucoma and keratoconus and, therefore, better treatment planning.

Advances in Non-Contact Pachymetry Technologies: Improvements in the techniques of non-contact pachymetry have recently improved the comfort of patients further and diagnostic efficiency. New devices provide fast, accurate measurements without needing contact with the cornea, and thus minimize risks of infection, and enhance patient comfort.

Integration with Scheimpflug Imaging Systems: It is now possible to view the general structure of the cornea in a wide view through Scheimpflug imaging systems combined with corneal pachymetry. Such an advancement in technology can facilitate highly detailed mapping of corneal thickness and curvature to further enable appropriate diagnosis and management of ocular



conditions.

Portable Pachymetry Devices: While portable pachymetry devices were in development, access to the diagnostics of the cornea also expanded, especially for the remote and less favored parts of the world. Offering flexibility and ease, therefore providing convenience, these machines are easier to use in many environments by healthcare providers.

Improvement in Analytical Functions: Advanced software algorithms that increase data analysis capability have improved the interpretation of the result of pachymetry. Such progress now allows for detailed information about the health of the cornea and will therefore enable more specific treatment plans and better clinical decisions.

These newer trends are promoting the growth of the corneal pachymetry market in advanced diagnostic precision, comfort, and accessibility for patients. High-resolution OCT devices, combined with non-contact technologies and their integration with the Scheimpflug imaging system, are considered to open up new frontiers in corneal diagnostics. Along with portability, the enhancement in analyzing data reinforces the effectiveness of corneal pachymetry for better patient care and management of ocular conditions.

Strategic Growth Opportunities for Corneal Pachymetry Market

The corneal pachymetry market has some strategic growth opportunities. Advancing technologies and an increasing load of ocular diseases have created a demand for better diagnostic tools. Understanding and capitalizing on such opportunities can increase market potential and meet emerging needs in eye care.

Expanding into Emerging Markets: In the process of expanding into emerging markets, growth opportunities will continue to thrive as demand increases for the latest and most medically advanced eye care technologies. The ever-growing demand to diagnose issues regarding the cornea can be covered through direct investments in these areas as a sure way of ensuring better accessibility of pachymetry tools within underdeveloped healthcare systems.

Integration with Advanced Imaging Technologies: The combination of corneal pachymetry with advanced imaging devices, such as OCT and Scheimpflug



systems, offers new options for enhanced diagnostics. This, therefore, could go a long way in enhancing further detailed assessments of the cornea and henceforth management of ocular health.

Development of Affordable and Portable Devices: Pachymetry devices need to be affordable, portable, and low in cost to make diagnostic tools accessible within all different health settings. Their functionality can easily turn them into an under-resourced setting asset; as such, they will play a role in the opening up of markets with their convenient, affordable solutions.

Emphasize Programs for Preventive Eye Care: More investment in the establishment of preventive eye care programs, including routine pachymetry screenings, will increase market growth. This can be viewed as complementary to the general trend of early healthcare interventions for better patient outcomes.

Integration of Advanced Data Analytics and AI: Therefore, the increased analytics of data and integration of AI in the solution for pachymetry would further open new vistas for risk profiling and customized treatment options. These technologies enhance diagnostic accuracy and support effective clinical decision-making.

These are the strategic growth opportunities shaping the market for corneal pachymetry by driving innovation, expanding access, and developing diagnostic capabilities. Expansions in emerging markets and integrations with advanced imaging modalities will continue to provide further market potential. Affordable and portable device development, emphasis on preventive care, and data analytics development underpin effective eye care solutions. Capitalizing on these opportunities will set up a dynamic and growing market that addresses the emerging needs of patients and improves outcomes.

Corneal Pachymetry Market Driver and Challenges

The corneal pachymetry market is driven and faces several challenges that determine the growth of the said market. These relate to, among others, technology advancements, economic conditions, and regulatory considerations. It is important to appreciate these drivers and challenges so that the stakeholders can successfully move with the market and leverage its growth opportunities.



The factors responsible for driving the corneal pachymetry market include:

1. Technological Advancement in Imaging: The market also benefits from technological advancements in various imaging technologies such as OCT and Scheimpflug systems that raise the accuracy and resolution of corneal evaluations for better diagnosis and management of ocular diseases.

2. Increasing Prevalence of Ocular Diseases: The rising prevalence of ocular disorders, such as glaucoma and keratoconus, adds to the demand for solutions for corneal pachymetry. With the greater prevalence of such conditions, early diagnosis and management will gain importance, thus accelerating demand for newer diagnostic solutions.

3. Rising Importance of Preventive Care in Ophthalmology: As a result of the growing focus on preventive eye care, routine corneal pachymetry screenings have become more common. A similar shift toward proactive healthcare promotes market growth via greater awareness of early diagnosis and treatment.

4. Growing Awareness about Eye Health: Increased community awareness regarding eye health and regular checkups is fueling demand for diagnostic corneal pachymetry technologies. Community awareness with campaigns and education increases demand for sophisticated diagnosis tools.

Challenges in the corneal pachymetry market are:

1. High cost of advanced technologies: One of the major bottlenecks in the diffusion of advanced technologies in corneal pachymetry is arguably the high cost associated with them. Most developing regions will not so easily adopt such expensive technologies. The high costs of initial investment and maintenance may also keep these tools beyond certain health workers.

2. Integration with Existing Systems: Integration of new devices for pachymetry into existing health systems is usually quite problematic. A variety of system integrations may not be smooth due to compatibility problems and, therefore, may not easily go hand-in-hand with advanced technologies.

3. Data Privacy and Security Concerns: There are huge data privacy and security concerns in the corneal pachymetry market. Since it is related to sensitive information of patients, this is considered insensitive, will result in erosion of trust, and may also attract



regulatory action under data protection laws.

The growth trajectory of the corneal pachymetry market is influenced by drivers and challenges. Drivers include advanced technology, an increase in the prevalence of ocular diseases, and care that is prevention-oriented while inhibiting factors include increased costs for the technologies, integration, and data privacy challenges. This presents a challenge in leveraging these drivers by stakeholders in achieving growth and moving the pace of the sector toward better diagnosis and patient outcomes in corneal pachymetry.

List of Corneal Pachymetry Companies

Companies in the market compete on the basis of product quality offered. Major players in this market focus on expanding their manufacturing facilities, R&D investments, infrastructural development, and leverage integration opportunities across the value chain. Through these strategies corneal pachymetry companies cater increasing demand, ensure competitive effectiveness, develop innovative products & technologies, reduce production costs, and expand their customer base. Some of the corneal pachymetry companies profiled in this report include-

**MicroMedical Devices** 

Sonomed Escalon

DGH Technology

**Tomey Corporation** 

Oculus VR

Optovue

NIDEK

Accutome

Konan Medical

MEDA



Corneal Pachymetry by Segment

The study includes a forecast for the global corneal pachymetry market by type, application, end use, and region.

Corneal Pachymetry Market by Type [Analysis by Value from 2019 to 2031]:

Ultrasonic Method

**Optical Method** 

Corneal Pachymetry Market by Application [Analysis by Value from 2019 to 2031]:

Glaucoma Diagnosis

**Refractive Surgery** 

Corneal Pachymetry Market by End Use [Analysis by Value from 2019 to 2031]:

Hospital

Clinic

Corneal Pachymetry Market by Region [Analysis by Value from 2019 to 2031]:

North America

Europe

Asia Pacific

The Rest of the World



Country Wise Outlook for the Corneal Pachymetry Market

The market for measuring corneal thickness for diagnosis and management of different ocular disorders is very global in nature. It is a rapidly developing market because of continuous technological innovations, an increasing burden of ocular diseases, and changing healthcare infrastructure. Recent developments within major countries like the United States, China, Germany, India, and Japan indicate better diagnostics, integrations with advanced imaging modalities, and increased adoptions within varied healthcare settings.

United States: The corneal pachymetry market in the US is still developing, with the introduction of high-resolution OCT devices and improved performance of pachymetry software. Non-contact pachymeters have been introduced, with ongoing integration into existing diagnostic platforms. Advances continue to improve the accuracy of the measurement of the thickness of the cornea and, thus, enable diagnosis of conditions like glaucoma and keratoconus, providing specific treatment alternatives.

China: The market for Corneal Pachymetry has been growing/evolving rapidly in China. Increasing awareness about ocular health, coupled with favorable governmental policies and programs regarding healthcare, has increased the acceptance of advanced pachymetry technologies. Increased access to highprecision, low-cost pachymeters further enhances access to advanced diagnostic capabilities both in urban and rural settings, ultimately improving the diagnosis and treatment of corneal disorders throughout the country.

Germany: Germany tends to combine corneal pachymetry with advanced imaging methods such as OCT and Scheimpflug imaging. The result has been a higher degree of accuracy in diagnostics and the ability to make more substantial diagnoses of the condition of the eyes. The focus of firms is on those developments that can give very high-resolution maps and thickness profiles of the cornea. These are in steady usage for better management of ocular diseases and diagnosis before surgery.

India: Due to the increasing prevalence of ocular diseases supported by the improvement and establishment of new medical technologies, the growth of the corneal pachymetry market is being facilitated. With the development of portable and reasonably priced pachymetry devices, such diagnostic tools are increasingly available in an ever-broader range of healthcare settings. These are



also very important in setting higher standards for the early diagnosis and treatment of corneal diseases in urban and rural settings.

Japan: The Japanese contribution in the area of Corneal Pachymetry is highly innovative and seems to focus on the integration of pachymetry data with other ophthalmic diagnostic methods along with improved software that provides superior analysis of the data. High-precision pachymeters and innovative algorithms for the analysis of corneal thickness have come to give way to detailed diagnostics and personalized treatment. These are the emergence of Japan into current leading-edge ophthalmic care technology.

Features of the Global Corneal Pachymetry Market

Market Size Estimates: Corneal pachymetry market size estimation in terms of value (\$B).

Trend and Forecast Analysis: Market trends (2019 to 2024) and forecast (2025 to 2031) by various segments and regions.

Segmentation Analysis: Corneal pachymetry market size by type, application, end use, and region in terms of value (\$B).

Regional Analysis: Corneal pachymetry market breakdown by North America, Europe, Asia Pacific, and Rest of the World.

Growth Opportunities: Analysis of growth opportunities in different type, application, end use, and regions for the corneal pachymetry market.

Strategic Analysis: This includes M&A, new product development, and competitive landscape of the corneal pachymetry market.

Analysis of competitive intensity of the industry based on Porter's Five Forces model.

If you are looking to expand your business in this market or adjacent markets, then contact us. We have done hundreds of strategic consulting projects in market entry, opportunity screening, due diligence, supply chain analysis, M & A, and more.

This report answers following 11 key questions:



Q.1. What are some of the most promising, high-growth opportunities for the corneal pachymetry market by type (ultrasonic method and optical method), application (glaucoma diagnosis and refractive surgery), end use (hospital and clinic), and region (North America, Europe, Asia Pacific, and the Rest of the World)?

Q.2. Which segments will grow at a faster pace and why?

Q.3. Which region will grow at a faster pace and why?

Q.4. What are the key factors affecting market dynamics? What are the key challenges and business risks in this market?

Q.5. What are the business risks and competitive threats in this market?

Q.6. What are the emerging trends in this market and the reasons behind them?

Q.7. What are some of the changing demands of customers in the market?

Q.8. What are the new developments in the market? Which companies are leading these developments?

Q.9. Who are the major players in this market? What strategic initiatives are key players pursuing for business growth?

Q.10. What are some of the competing products in this market and how big of a threat do they pose for loss of market share by material or product substitution?

Q.11. What M&A activity has occurred in the last 5 years and what has its impact been on the industry?



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