

United States Artificial Cornea and Corneal Implants Market By Type (Human Cornea, Artificial Cornea), By Transplant Type (Penetrating Keratoplasty, Endothelial Keratoplasty), By Disease Indication (Fuchs' Dystrophy, Keratoconus, Fungal Keratitis, Others), By End User (Hospitals, Ambulatory Care Centers, Others), By Region, Competition, Forecast and Opportunities, 2018-2028F

<https://marketpublishers.com/r/U6D1558AF398EN.html>

Date: October 2023

Pages: 78

Price: US\$ 3,500.00 (Single User License)

ID: U6D1558AF398EN

Abstracts

United States Artificial Cornea and Corneal Implants Market is anticipated to project steady growth in the forecast period. Artificial cornea and corneal implant are advanced surgical procedures aimed at replacing damaged segments of the cornea with healthy tissue obtained from donors. These procedures encompass a wide range of medical techniques, including penetrating and endothelial keratoplasty, which involve the transplantation of corneal stem cells. The implantation process utilizes hydrogel-based implants manufactured with recombinant collagen, which are inserted through a small incision in the patient's cornea. These procedures play a crucial role in the treatment of various corneal conditions, such as infectious keratitis, keratoconus, corneal ulcers, and Fuchs dystrophy. They are also essential for addressing anterior corneal pathologies like trachoma, infectious keratitis, ocular trauma, and chemical injuries. By improving eyesight, alleviating pain, restoring the proper shape of the cornea, and treating severe infections or damage, artificial cornea and corneal implants significantly enhance patients' quality of life.

Furthermore, these procedures offer a lifeline to individuals with corneal scarring and corneal diseases, enabling them to regain clear vision and effortlessly perform daily

activities. With their remarkable ability to restore vision and address a wide range of corneal conditions, artificial cornea and corneal implants are at the forefront of modern ophthalmology, providing hope and improving the lives of countless individuals.

Key Market Drivers

Technological Advancements in Corneal Implants

Advancements in technology have greatly improved the efficacy and availability of artificial cornea and corneal implants, significantly driving their demand in the United States. The integration of innovative materials and design techniques have resulted in implants that are more biocompatible, durable, and capable of restoring vision more effectively than ever before. Furthermore, breakthroughs in surgical procedures, including less invasive techniques and improved post-operative care, have enhanced patient outcomes and reduced complications. This has increased patient confidence in these procedures, leading to a rise in the number of individuals seeking such treatments. Technological advancements have also enabled the production of corneal implants that can be customized to a patient's specific needs, offering a higher degree of personalization and compatibility. With the projected growth in the prevalence of eye diseases and disorders in the U.S., the demand for artificial cornea and corneal implants is expected to continue to grow. Additionally, the increasing awareness of these solutions and their benefits, due in part to technological advancements in communication and information dissemination, is further driving the demand for these implants. Consequently, the United States is poised to witness an upsurge in the market for artificial cornea and corneal implants.

Increasing Prevalence of Geriatric Population

The aging population in the United States is expected to significantly boost the demand for artificial cornea and corneal implants. Age-related eye diseases such as glaucoma, cataracts, and macular degeneration often lead to corneal damage, necessitating the use of these medical devices. As the geriatric population continues to increase, the prevalence of these age-related eye conditions is also expected to rise, thereby fueling the demand for artificial cornea and corneal implants. Moreover, the elderly are more prone to injuries and accidents due to reduced visual acuity and impaired depth perception. These incidents can result in severe corneal damage that requires surgical intervention. Consequently, the need for artificial cornea and corneal implants becomes even more crucial in providing effective treatment and restoring visual function in this vulnerable population.

Furthermore, advances in medical technology have significantly improved the success rate of these implants. The development of innovative materials, such as biocompatible polymers and tissue-engineered corneas, has enhanced the durability and compatibility of these devices, resulting in better outcomes for patients. Additionally, the refinement of surgical techniques and post-operative care has contributed to the increased acceptance and success of artificial cornea and corneal implants among both patients and healthcare providers. Therefore, the growing geriatric population, coupled with increasing incidences of age-related eye disorders and the advancements in medical technology, is projected to propel the artificial cornea and corneal implant market in the United States. This surge in demand reflects the pressing need to address visual impairments and improve the quality of life for individuals affected by corneal diseases in an aging society.

Growing Incidences of Corneal Infections and Eye-Associated Disorders

The increasing prevalence of corneal infections and eye-associated disorders in the United States is poised to drive the demand for artificial cornea and corneal implants. Corneal infections, often caused by bacterial, viral, or fungal pathogens, can lead to corneal scarring, clouding, or even blindness if not promptly and effectively treated. Similarly, disorders such as keratoconus, corneal dystrophies, and Fuchs' endothelial dystrophy can significantly impact corneal health and visual acuity. With the rise in such conditions, the need for effective treatments, including corneal implants, is seemingly higher than ever. Artificial cornea and corneal implants, providing a promising alternative to corneal transplantation, can restore vision in patients suffering from severe corneal diseases. The United States, with its advanced healthcare infrastructure and high patient awareness, is expected to witness substantial demand for these advanced ocular solutions. Moreover, the growing geriatric population, often more susceptible to eye disorders, further propels this demand. Therefore, the heightened incidence of corneal infections and eye-related disorders is anticipated to be a significant factor augmenting the growth of the artificial cornea and corneal implant market in the United States.

Increasing Demand for Full-Thickness Corneal Transplantation

The escalating demand for full-thickness corneal transplantation in the United States is anticipated to spur the demand for artificial cornea and corneal implants, a trend fueled by several factors. One of the primary drivers is the rising prevalence of eye disorders such as keratoconus and Fuchs' dystrophy, as well as injuries that damage the cornea,

necessitating transplantation. These conditions can significantly impact the vision and quality of life of affected individuals, making the need for effective treatment options even more crucial. Furthermore, advancements in medical technology have played a pivotal role in improving the efficacy and safety of artificial cornea and corneal implant procedures. Cutting-edge techniques and innovative materials have led to enhanced outcomes, reducing the risk of complications and improving patient satisfaction. As a result, more patients and medical professionals are opting for these advanced solutions to restore vision and improve overall eye health.

Additionally, demographic shifts are also contributing to the increasing demand for artificial cornea and corneal implants. With an aging population, the prevalence of degenerative eye conditions that require corneal transplantation is on the rise. Age-related eye diseases, such as corneal dystrophies, become more common as individuals grow older, necessitating the need for effective treatment options to maintain visual function and quality of life.

Extended life expectancy, coupled with a growing emphasis on quality of life, has made vision enhancement procedures more desirable among individuals of all ages. With people living longer and seeking ways to enhance their overall well-being, the demand for procedures that can improve vision and restore independence is experiencing an upsurge. Artificial cornea and corneal implants offer hope and opportunities for individuals to regain visual acuity and participate fully in their daily activities. Given these dynamics and the increasing need for effective treatment options, the market for artificial cornea and corneal implants in the United States is expected to witness significant growth in the coming years. As advancements in technology and medical science continue to evolve, the potential for further improvements in outcomes and accessibility of these procedures is promising, paving the way for a brighter future for individuals in need of corneal transplantation.

Key Market Challenges

High Cost of Surgical Procedures and Ophthalmic Devices

The high cost of surgical procedures and ophthalmic devices is expected to serve as a significant deterrent to the demand for artificial cornea and corneal implants in the United States. Indeed, these surgeries and devices are typically priced beyond the reach of the average American, primarily due to the complex technology and specialized training required. Furthermore, the financial burden is often exacerbated by the lack of substantial insurance coverage, making these procedures unaffordable to a

large segment of the population. This high expense could result in patients opting for cheaper alternatives or foregoing the procedures entirely. The lack of accessibility due to cost is a substantial concern, as it could lead to an increase in untreated vision-related health conditions, potentially escalating public health issues. Therefore, the high cost associated with these surgical procedures and devices could significantly decrease their demand in the U.S market. Policymakers and health care providers must address these cost-related challenges to ensure that advancement in ophthalmic care can be accessible to all, irrespective of economic status.

Availability of Alternative Treatments

The availability of alternative treatments in the United States is projected to decrease the demand for Artificial Cornea and Corneal Implants. A growing number of patients are gravitating towards these alternatives due to the reduced risk of complications and the cost-effectiveness they offer. Notably, vision correction procedures like LASIK and Photorefractive Keratectomy (PRK) are gaining traction, thanks to their non-invasive nature and quicker recovery times. In addition, ongoing research and advancements in bioengineering have led to the development of biosynthetic corneas that can self-regenerate, offering patients a more natural solution. The use of contact lenses and spectacles has also been instrumental in reducing the need for surgical interventions. Furthermore, with the advent of stem cell therapy, the possibility of regenerating damaged corneal tissue is no longer a distant dream, making it an attractive option for patients. All these factors combined, coupled with an increasing awareness and acceptance of these alternative treatments, are poised to negatively impact the demand for artificial cornea and corneal implants in the United States.

Key Market Trends

Rise In the Adoption of Minimally Invasive (MI) Corneal Transplantation Methods

The recent surge in the adoption of Minimally Invasive (MI) corneal transplantation methods in the United States is expected to propel the demand for Artificial Cornea and Corneal Implants. With MI methods, the risk associated with corneal transplant surgeries has considerably reduced, leading to their increased acceptance among eye care professionals and patients. These methods are gaining traction due to their precision, reduced recovery time, and lesser complications post-surgery, which aligns with the patient's quest for efficient and safer treatment options. Furthermore, these procedures allow the selective replacement of the diseased corneal layer rather than the entire cornea, preserving the structural integrity and stability of the eye. This

approach significantly enhances the success rate of corneal implants, stimulating demand within the market. Additionally, rising awareness about these advanced surgical techniques, coupled with an aging population susceptible to eye disorders, further fuels the need for Artificial Cornea and Corneal Implants. The convergence of these factors is therefore expected to drive growth in the Artificial Cornea and Corneal Implants market in the United States.

Government Initiatives to Lessen Visual Impairment

Government initiatives aimed at reducing visual impairment are expected to significantly boost the demand for artificial cornea and corneal implants in the United States. As the government invests more in healthcare infrastructure and advanced medical technology, this will inevitably lead to an increase in accessibility and affordability of such advanced procedures for visually impaired individuals. In turn, this increased accessibility and affordability will drive up demand. Furthermore, government programs focused on raising awareness about the benefits and success rates of corneal transplants can also play a pivotal role in increasing demand. As people become more knowledgeable about these options, they are more likely to consider and opt for these implants. Also, government-funded research and development could lead to improvements in the artificial corneas themselves, making them safer and more effective. This, again, would significantly increase their demand. These government initiatives collectively contribute to a more conducive environment for the growth of the artificial cornea and corneal implant market, making it more likely for visually impaired individuals to seek this form of treatment.

Segmental Insights

Type Insights

Based on the Type, the Artificial Cornea segment is anticipated to exhibit dominance over the Human Cornea segment. This is primarily due to remarkable technological advancements, such as the development of bioengineered materials and sophisticated surgical techniques, which have significantly enhanced the accessibility and success rates of artificial cornea transplantations. The ability to tailor the properties of artificial corneas to match the specific needs of patients has revolutionized the landscape of corneal transplantation, providing a ray of hope for individuals suffering from corneal diseases or injuries. With the potential to offer improved vision and a better quality of life, artificial corneas represent a promising breakthrough in the field of ophthalmology, paving the way for a brighter future for patients in need of corneal transplants.

Transplant Type Insights

Based on the Transplant Type, Endothelial Keratoplasty is anticipated to overshadow Penetrating Keratoplasty in the field of corneal transplantation due to several procedural advantages. Firstly, it involves a smaller incision size, which not only reduces the risk of complications but also promotes faster healing for patients. This smaller incision size allows for more precise graft placement and minimizes the chances of induced astigmatism. Additionally, Endothelial Keratoplasty offers the advantage of selective graft replacement, allowing surgeons to target and replace only the damaged endothelial layer of the cornea. This targeted approach reduces the risk of graft rejection and enhances long-term graft survival. Moreover, the use of advanced imaging technologies, such as anterior segment optical coherence tomography (AS-OCT), has revolutionized the evaluation and selection of suitable candidates for Endothelial Keratoplasty. These technological advancements have further contributed to the growing dominance of Endothelial Keratoplasty in corneal transplantation. With its superior outcomes and patient satisfaction rates, it is no surprise that the future of corneal transplantation in the United States is leaning more towards the widespread adoption of Endothelial Keratoplasty as the preferred surgical technique.

Regional Insights

The West Coast region is projected to dominate the United States Artificial Cornea and Corneal Implants Market. This dominance can be attributed to various factors, including the region's substantial investment in cutting-edge medical research and development. California's vibrant ecosystem of leading biotechnology firms, along with the presence of renowned ophthalmology research institutions, further contribute to its competitive advantage in this field. The continuous collaboration between academia, industry, and healthcare professionals also plays a crucial role in driving innovation and pushing the boundaries of corneal healthcare solutions.

Furthermore, California's favorable climate and diverse population provide an ideal environment for conducting clinical trials and gathering valuable patient data. This enables researchers and healthcare providers to gain insights into the effectiveness of artificial cornea and corneal implant technologies across different demographics and conditions. Additionally, the state's robust regulatory framework ensures the safety and efficacy of these advanced medical interventions. With its rich resources, expertise, and a strong commitment to advancing vision care, the West Coast region is poised to lead the way in advancing artificial cornea and corneal implant technologies. This will

ultimately result in improved patient outcomes and a brighter future for those in need of corneal healthcare solutions.

Key Market Players

Roche Diagnostics Corporation

Regeneron Pharmaceuticals, Inc.

Alcon Inc.

CorneaGen Inc.

Bausch Health Companies Inc.

Bayer USA

Addition Technology Inc.

Report Scope:

In this report, the United States Artificial Cornea and Corneal Implants Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

United States Artificial Cornea and Corneal Implants Market, By Type:

Human Cornea

Artificial Cornea

United States Artificial Cornea and Corneal Implants Market, By Transplant Type:

Penetrating Keratoplasty

Endothelial Keratoplasty

United States Artificial Cornea and Corneal Implants Market, By Disease

Indication:

Fuchs' Dystrophy

Keratoconus

Fungal Keratitis

Others

United States Artificial Cornea and Corneal Implants Market, By End User:

Hospitals

Ambulatory Care Centers

Others

United States Artificial Cornea and Corneal Implants Market, By Region:

Northeast Region

Midwest Region

West Region

South Region

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the United States Artificial Cornea and Corneal Implants Market.

Available Customizations:

United States Artificial Cornea and Corneal Implants Market report with the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

United States Artificial Cornea and Corneal Implants Market By Type (Human Cornea, Artificial Cornea), By Tran...

Company Information

Detailed analysis and profiling of additional market players (up to five).

Contents

1. PRODUCT OVERVIEW

- 1.1. Market Definition
- 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
 - 1.2.3. Key Market Segmentations

2. RESEARCH METHODOLOGY

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Key Industry Partners
- 2.4. Major Association and Secondary Sources
- 2.5. Forecasting Methodology
- 2.6. Data Triangulation & Validation
- 2.7. Assumptions and Limitations

3. EXECUTIVE SUMMARY

- 3.1. Overview of the Market
- 3.2. Overview of Key Market Segmentations
- 3.3. Overview of Key Market Players
- 3.4. Overview of Key Regions/Countries
- 3.5. Overview of Market Drivers, Challenges, Trends

4. VOICE OF CUSTOMER

5. UNITED STATES ARTIFICIAL CORNEA AND CORNEAL IMPLANTS MARKET OUTLOOK

- 5.1. Market Size & Forecast
 - 5.1.1. By Value
- 5.2. Market Share & Forecast
 - 5.2.1. By Type (Human Cornea, Artificial Cornea)
 - 5.2.2. By Transplant Type (Penetrating Keratoplasty, Endothelial Keratoplasty)

5.2.3. By Disease Indication (Fuchs' Dystrophy, Keratoconus, Fungal Keratitis, Others)

5.2.4. By End User (Hospitals, Ambulatory Care Centers, Others)

5.2.5. By Region

5.2.6. By Company (2022)

5.3. Market Map

6. NORTH-EAST ARTIFICIAL CORNEA AND CORNEAL IMPLANTS MARKET OUTLOOK

6.1. Market Size & Forecast

6.1.1. By Value

6.2. Market Share & Forecast

6.2.1. By Type

6.2.2. By Transplant Type

6.2.3. By Disease Indication

6.2.4. By End User

7. MID-WEST ARTIFICIAL CORNEA AND CORNEAL IMPLANTS MARKET OUTLOOK

7.1. Market Size & Forecast

7.1.1. By Value

7.2. Market Share & Forecast

7.2.1. By Type

7.2.2. By Transplant Type

7.2.3. By Disease Indication

7.2.4. By End User

8. WEST ARTIFICIAL CORNEA AND CORNEAL IMPLANTS MARKET OUTLOOK

8.1. Market Size & Forecast

8.1.1. By Value

8.2. Market Share & Forecast

8.2.1. By Type

8.2.2. By Transplant Type

8.2.3. By Disease Indication

8.2.4. By End User

9. SOUTH ARTIFICIAL CORNEA AND CORNEAL IMPLANTS MARKET OUTLOOK

9.1. Market Size & Forecast

9.1.1. By Value

9.2. Market Share & Forecast

9.2.1. By Type

9.2.2. By Transplant Type

9.2.3. By Disease Indication

9.2.4. By End User

10. MARKET DYNAMICS

10.1. Drivers

10.2. Challenges

11. MARKET TRENDS & DEVELOPMENTS

11.1. Recent Development

11.2. Mergers & Acquisitions

11.3. Product Launches

12. POLICY & REGULATORY LANDSCAPE

13. UNITED STATES ECONOMIC PROFILE

14. UNITED STATES ARTIFICIAL CORNEA AND CORNEAL IMPLANTS MARKET: SWOT ANALYSIS

15. PORTER'S FIVE FORCES ANALYSIS

15.1. Competition in the Industry

15.2. Potential of New Entrants

15.3. Power of Suppliers

15.4. Power of Customers

15.5. Threat of Substitute Products

16. COMPETITIVE LANDSCAPE

16.1. Roche Diagnostics Corporation

16.1.1. Business Overview

16.1.2. Product Offerings

16.1.3. Recent Developments

16.1.4. Financials (As Reported)

16.1.5. Key Personnel

16.2. Regeneron Pharmaceuticals, Inc.

16.3. Alcon Inc.

16.4. CorneaGen Inc.

16.5. Bausch Health Companies Inc.

16.6. Bayer USA

16.7. Addition Technology Inc.

17. STRATEGIC RECOMMENDATIONS

18. ABOUT US & DISCLAIMER

I would like to order

Product name: United States Artificial Cornea and Corneal Implants Market By Type (Human Cornea, Artificial Cornea), By Transplant Type (Penetrating Keratoplasty, Endothelial Keratoplasty), By Disease Indication (Fuchs' Dystrophy, Keratoconus, Fungal Keratitis, Others), By End User (Hospitals, Ambulatory Care Centers, Others), By Region, Competition, Forecast and Opportunities, 2018-2028F

Product link: <https://marketpublishers.com/r/U6D1558AF398EN.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/U6D1558AF398EN.html>