Cataract Surgery Devices Market to 2019

Advanced Intraocular Lenses (IOLs) and a Growing Patient Population in Emerging Countries Offer Significant Growth Potential
GBI Research Report Guidance

- The executive summary explains the key points determining the dynamics of the cataract surgery devices market. Competition in the industry and the key categories, segments and geographical regions are also outlined.

- Chapter three provides information on the disease overview, symptoms and treatment available for cataract removal.

- Chapter four provides information on the device overview. It also provides an overview on the following segments: intraocular lens, ophthalmic viscoelastic devices and phacoemulsification equipment. Lasers used in cataract surgery such as femtosecond lasers are not included.

- Chapter five provides information on the market size for the 2005–2012 historic period and the 2012–2019 forecast period. It also outlines market trends and dynamics, with comprehensive information on market drivers and restraints, and the competitive landscape.

- Chapter six provides information on the market size of the key market segments: IOLs, ophthalmic viscoelastic devices, and phacoemulsification equipment. The market sizes for the 2005–2012 historic period and the 2012–2019 forecast period are also discussed for each segment.

- Chapter seven provides information on the market size for the 2005–2012 historic period and the 2012–2019 forecast period for the US, Japan, Germany, the UK, France, Brazil, Italy, China, Canada, Australia, Spain and India, with cross-country analyses included.

- Chapter eight provides information on healthcare reimbursement system for the US, Japan, Germany, the UK, France, Brazil, Italy, China, Canada, Australia, Spain and India.

- Chapter nine discusses the distribution channels adopted by the manufacturers in the US, Japan, Germany, the UK, France, Brazil, Italy, China, Canada, Australia, Spain and India.

- Chapter 10 provides profiles of the leading cataract surgery device companies, outlining their products, features and benefits.

- Chapter 11 focuses on the pipeline products for a range of segments. The key pipeline products are profiled and discussed in detail alongside product approval and expected launch dates.

- Chapter 12 discusses the deals that took place in the cataract surgery devices industry between 2008 and 2012.
Executive Summary

The Cataract Surgery Devices Market is Forecast to Exceed $4.5 Billion by 2019

The following figure shows the revenue generated by the global cataract surgery devices market during the 2012–2019 period.

The global market for cataract surgery devices was valued at $XX billion in 2012, and is forecast to reach $XX billion by 2019, growing at a Compound Annual Growth Rate (CAGR) of XX%.

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2 Introduction

Cataract surgery devices are used during cataract surgery procedures. Cataract management is important because visual impairment due to cataracts will interfere with a person’s day to day activities such as driving, reading or watching television. The delay in cataract treatment may also increase the financial burden on a country’s economy. Cataract surgery devices are used to remove the hard cataract formed on the nucleus and replace the natural lens to restore the normal vision. The global cataract surgery devices market is expected to undergo significant growth due to the increase in the number of cataract surgeries. Cataract surgery is one of the most rapidly growing areas in the ophthalmic devices market. This report provides an in-depth analysis of the cataract surgery devices market and its segments on a global scale.

The cataract surgery devices market has been segmented to include Intraocular Lenses (IOLs), Ophthalmic Viscoelastic Devices (OVDs) and phacoemulsification equipment. The IOL segment is further segmented into foldable IOLs and Polymethylmethacrylate (PMMA) IOLs, while the OVD segment is further broken down into cohesive OVD and dispersive OVD.
5 Global Cataract Surgery Devices Market - Market Characterization

5.1 Cataract Surgery Devices Market, Revenue ($m), 2005–2012

The following figure shows the revenues generated by the global cataract surgery devices market from 2005 to 2012.

![Cataract Surgery Devices Market, Global, Revenue ($m), 2005–2012](image)

Source: GBI Research’s proprietary database [Accessed on April 14, 2013]; interviews with marketing managers and other industry experts

The following table shows the revenues generated by the global cataract surgery devices market from 2005 to 2012.

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Source: GBI Research’s proprietary database [Accessed on April 14, 2013]; interviews with marketing managers and other industry experts
5.3 Cataract Surgery Devices Market, Key Company Shares, 2012

The following figure shows the percentage market shares in 2012 for the key cataract surgery device companies.

![Cataract Surgery Devices Market, Global, Key Company Shares (%), 2012](image)

Source: GBI Research’s proprietary database [Accessed on April 14, 2013]; interviews with marketing managers and other industry experts

The following table shows the 2012 market shares for key cataract surgery devices companies.

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<th>Company name</th>
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<td>Carl Zeiss</td>
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<td>STAAR Surgical Company</td>
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<tr>
<td>Others</td>
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<td><strong>Total</strong></td>
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Source: GBI Research’s proprietary database [Accessed on April 14, 2013]; interviews with marketing managers and other industry experts
13 Appendix

13.1 Definitions

13.1.1 Cataract Surgery Devices

Cataract surgery refers to the removal of the natural lens of the eye that has developed an opacification and its replacement with an artificial IOL to restore transparency. The most common procedure is ECCE. This category includes IOLs, OVDs, and phacoemulsification equipment. Lasers used in cataract surgery such as femtosecond lasers are not included.

13.1.1.1 Intraocular Lenses

An IOL is an artificial lens made of plastic, silicone, acrylic or other material that is implanted inside the eye during cataract surgery. IOLs included in this category are foldable (phakic) IOLs and PMMA IOLs.

Foldable Intraocular Lenses

Foldable IOLs are made up of hydrophilic acrylic and hydrophobic acrylic materials designed for small-incision cataract surgeries. They are further classified into the following sub-segments according to the type of eye defect:

- Monofocal Intraocular Lenses
  Monofocal IOLs are IOLs with one point of focus, either for myopia (nearsightedness) or hyperopia (farsightedness). One unit refers to one monofocal foldable IOL.

- Multifocal Intraocular Lenses
  Multifocal IOLs are IOLs with one or more point of focus, myopia (nearsightedness) and for hyperopia (farsightedness). One unit refers to one multifocal foldable IOL.

- Toric Intraocular Lenses
  Toric IOLs are used to treat astigmatism, which refers to when light rays do not come to a single focal point on the retina but focus on the retina, in front of it and behind it. One unit refers to one toric foldable IOL.

Polymethylmethacrylate Intraocular Lenses

PMMA lenses are traditional IOLs consisting of PMMA IOLs. They remain the preferred choice for patients with a history of uveitis, for patients with diabetic retinopathy requiring vitrectomy, or those at high risk of retinal detachment. One unit refers to one PMMA IOL hydrocolloids.

13.1.1.2 Ophthalmic Viscoelastic Devices

OVDs are essential tools in ocular surgery, especially in anterior segment surgery. They are the viscoelastic materials used to maintain space in the eye during surgery. Typically, OVDs are pre-packaged in a syringe and are applied using a small tube. The essential properties of OVDs are tied to their physicochemical and rheological properties. A range of types of OVDs available in the market, include higher-viscosity cohesive OVDs and lower-viscosity dispersive OVDs. This segment does not include OVDs with both cohesive and dispersive viscoelastic properties.

Cohesive Ophthalmic Viscoelastic Devices

Cohesive OVDs are high-viscosity materials which help to maintain and preserve space during eye surgery and displace and stabilize tissues. One unit refers to one tube of 0.5ml cohesive OVD.

Dispersive Ophthalmic Viscoelastic Devices

Dispersive OVDs are low-viscosity materials which remain in the eye adjacent to the corneal endothelium, providing potential protection during phacoemulsification. One unit refers to one tube of 0.5ml dispersive OVD.
13.1.1.3 Phacoemulsification Equipment

Phacoemulsification equipment is designed for cataract surgery procedures, in which an ultrasonic wave is transmitted through a tiny probe that has been inserted through an incision into the cloudy lens, causing the cataract to break up. The cataract is then removed. In general, the insertion of an IOL immediately follows phacoemulsification. This includes only the console of the phacoemulsification system and excludes accessories such as tubing kits, peristaltic pumps, aspiration tips, vitrectors, irrigation sleeves, and foot pedals. One unit refers to one console of phacoemulsification equipment.

13.2 Acronyms

- ADA: American Diabetes Association
- AIHW: Australian Institute of Health and Welfare
- AMO: Advanced Medical Optics
- ARMD: Aging Related Macular Degeneration
- ASC: Ambulatory Surgery Center
- BUPA: British United Provident Association
- CAGR: Compound Annual Growth Rate
- CDC: Center for Disease Control and Prevention
- CMS: Centers for Medicare and Medicaid Services
- cPs: Centipoise
- CSR: Cataract Surgery Rate
- ECCE: Extra Capsular Cataract Extraction
- EUS: European Union Five
- FDA: Food and Drug Administration
- IDF: International Diabetes Federation
- IOL: Intraocular Lens
- MHLW: Ministry of Health, Labour and Welfare (Japan)
- NGO: Non Government Organization
- NHS: National Health Service
- OVD: Ophthalmic Viscoelastic Devices
- OECD: Organization for Economic Co-operation and Development
- PMDA: Pharmaceutical and Medical Device Agency
- PMMA: Polymethylmethacrylate
- SUS: Sistema Único de Saúde (Unified Health System)
- UV: Ultraviolet
13.3 Sources


Appendix


13.4 Research Methodology

GBI Research’s dedicated research and analysis teams consist of qualified professionals with experience in marketing, market research, consultancy (with a background in the medical devices industry) and advanced statistical expertise.

GBI Research adheres to the codes of practice of the Market Research Society (www.mrs.org.uk) and the Strategic and Competitive Intelligence Professionals (www.scip.org).

All GBI Research databases are continuously updated and revised. The following research methodology is followed for all databases and reports.

13.4.1 Secondary Research

The research process begins with exhaustive secondary research of internal and external sources to provide qualitative and quantitative information relating to each market.

The secondary research sources that are typically referred to include, but are not limited to:

• Company websites, annual reports, financial reports, broker reports, investor presentations and US Securities and Exchanges Commission (SEC) filings
• Industry trade journals, scientific journals and other technical literature
• Internal and external proprietary databases
• Relevant patent and regulatory databases
• National government documents, statistical databases and market reports
• Procedure registries
• News articles, press releases and web-casts specific to the companies operating in the market

13.4.2 Primary Research

GBI Research conducts hundreds of primary interviews a year with industry participants and commentators in order to validate its data and analysis. A typical research interview fulfills the following functions:

• Provides first-hand information on the market size, market trends, growth trends, competitive landscape and future outlook
• Helps in validating and strengthening the secondary research findings
• Further develops the analysis team’s expertise and market understanding

Primary research involves telephone and email interviews as well as face-to-face interviews for each market, category, segment and sub-segment across geographies.

The participants who typically take part in such a process include, but are not limited to:

• Industry participants: CEOs, VPs, marketing/product managers, market intelligence managers and national sales managers
• Hospital stores, laboratories, pharmacies, distributors and paramedics
• Outside experts: investment bankers, valuation experts, research analysts specializing in specific medical equipment markets
• Key opinion leaders: physicians and surgeons specializing in different therapeutic areas corresponding to different kinds of medical equipment
13.4.3 Models
Where no hard data is available, GBI Research uses modeling and estimates in order to produce comprehensive data sets. The following rigorous methodology is adopted:

Available hard data is cross-referenced with the following data types to produce estimates:
- Demographic data: population, split by segment
- Macro-economic indicators: gross domestic product, inflation rate
- Healthcare indicators: health expenditure, physician’s base, healthcare infrastructure and facilities
- Selected epidemiological and procedure statistics

Data is then cross-checked by the expert panel. All data and assumptions relating to modeling are stored and are available to clients on request.

13.4.4 Forecasts
GBI Research uses proprietary forecast models. The following four factors are utilized in the forecast models:
- Historic growth rates
- Macro indicators such as population trends and healthcare spending
- Forecast epidemiological data
- Qualitative trend information and assumptions

Data is then cross-checked by the expert panel. All data and assumptions relating to modeling are stored and are available to clients on request.

13.4.5 Expert Panels
GBI Research uses a panel of experts to cross-verify its databases and forecasts.

GBI Research’s expert panel includes marketing managers, product specialists, international sales managers from medical device companies, academics from research universities, KOLs from hospitals, consultants from venture capital firms and distributors/suppliers of medical equipment and supplies.

Historic data and forecasts are relayed to GBI Research’s expert panel for feedback and adjusted in accordance with this feedback.
13.6 Disclaimer

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