

## Medical Robotics and Computer Assisted Surgery Market Overview

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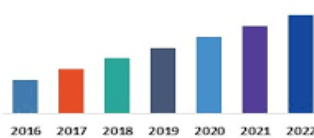
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Modernization and changes in the lifestyle have prompted the pervasiveness of various types of disorders like cardiovascular issues, neural disorders, tumor and many more. The reason might be hereditary, acute or chronic, however, in extraordinary conditions; surgical help gives an open door for offering the person a new and better life. Subsequently, there is a need for the unbeatable evolution in the field of surgery to treat the affected victims. The rise in surgery cases, together with the advancement in sophisticated techniques of new treatment etiquette, has made interest for more automated products. Automation relies upon incorporation of a few devices into clinically useful frameworks. Coordinated frameworks help to make medications quick and practical. According to the European Union statistics, the most prevalent surgery called cataract surgery is performed 4.2 million times in the European member countries whereas in Cyprus it is found to be only 300 times per 100,000 inhabitants. The recent trends in the field of surgery were found to be the cosmetic surgery with the greatest growth in the last ten years. It has found to gain great importance from both developed and underdeveloped countries.

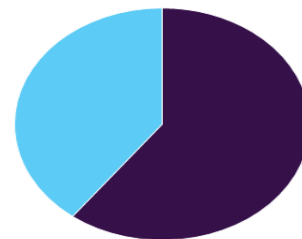
U.S. Surgical Procedure Market, Value 2016-2022 (\$Million)



Source: IndustryARC Analysis, Expert Insights

Many companies such as Allergan PLC, Cutera Inc, Lumenis Ltd and Cynosure Inc. currently hold string position in the market by expanding their footprint through networking with healthcare organizations and invest in the research and development of medical technology. It is predictable that the worldwide surgery market will reach a volume of approximately 2.2 bn procedures by 2023. It stood at about 1.3 bn in 2014 and is expected to exhibit a steady CAGR throughout the duration period of 2015 to 2023. Recent statistics show that there are about 290 associations related to surgery in European countries, nearly 60 in the United Kingdom. The Medical Robotics and Computer Assisted Surgery Market is anticipated to gain \$20.5 billion by 2022. It is a technologically advanced surgical, rehabilitation, and assistive solution used mainly during complex surgical procedures, physical complications, and hospital automation, respectively. It is mainly segmented into surgical, non-invasive radiosurgery, rehabilitation and pharmacy automation robots. The surgical robotics system includes surgical arms, surgeons console, and monitoring systems & software. The surgical robotic systems market achieved prominence in the recent years, owing to fast technological advancements, increasing investments in R&D, and its extensive application in critical surgeries such as orthopedic, cardiac, and neurosurgery. Moreover, a wide scope of applications in different surgeries, increasing demand for advanced medical facilities, and rising incidence of diseases, such as cancer and obesity, majorly supplement the growth of the global surgical

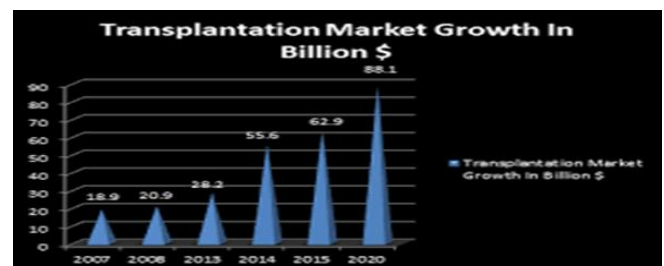
robotic systems market. In case of rehabilitation robots, the medical robotics and computer-assisted surgery market gained admiration because of the rising aging population prone to the physical disabilities and growing need of automated-assistive rehabilitation solutions.



■ Tissue transplantation ■ Organ transplantation

The global stem cell therapy market is segmented into allogeneic and autologous stem cell therapy. In addition, based on the therapeutic applications, the global stem cell therapy market is divided into eye diseases, metabolic diseases, GIT diseases, musculoskeletal disorders, immune system diseases, CNS diseases, CVS diseases, wounds and injuries, and others. The market is estimated to grow at a CAGR of 39.5% from 2015 to 2020, to reach \$330 million by 2020. Over the past 25 years, lung transplantation has become a viable treatment option for patients with a variety of end-stage lung diseases. In 2007 more than 1,400 lung transplants occurred in the United States. Another 2,000 Americans remain on lung transplantation waiting lists, while 90 more are waiting for transplantation of both a heart and lung. There are currently about 123,193 people waiting for lifesaving organ transplants in the U.S. Of these, 101,662 are waiting for kidney transplants. The median wait time for an individual's kidney transplantation is 3.6 years and can vary depending on health, compatibility and availability of organs. 17,105 kidney transplants took place in the US in 2014.

A total of 29000 whole pancreas transplantation and 1500 islet transplantation's have been performed worldwide until today.



Every year, more than 1,500 people die waiting for a donated liver to become available. The number of centers increased from 59 to 116 and the number of liver transplants performed in the US more than doubled from 1,713 to 4,487; the waiting list grows every year.