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Role of Robotics in surgery

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Editorial

Robotic surgery is the forms of surgical procedures that are completed via robotic systems. Robotically-assisted surgery was recognized to overwhelmed the limitations of pre-existing minimally-invasive surgical procedures and to improve the capabilities of surgeons performing open surgery. Within the last era, robotic-assisted surgery has developed with the ability of outspreading the benefits of minimally invasive surgery to virtually every surgical specialty while weakening patient illness and enlightening postoperative outcomes. Robotic surgery is often indicated as the new revolution, and it is one of the most spoken about topics in surgery today. However, the initiative to develop and acquire robotic devices has been largely motivated by the market. There is no hesitation that they will become a significant tool in the surgical armamentarium, but the level of their use is still developing.

In the situation of robotically-assisted minimally-invasive surgery, as an alternative of directly moving the instruments, the surgeon uses one of two approaches to manage the instruments. These consist of using a direct tele-manipulator or via computer control. A tele-manipulator is a remote manipulator that permits the surgeon to make the normal movements related with the surgery. The robotic arms carry out individual movements with end-effectors and manipulators to accomplish the actual surgery. In computer-controlled systems, the surgeon uses a computer to control the robotic arms and its end-effectors, still these systems can as well still use tele-manipulators used for their input. One benefit of using the computerized technique is that the surgeon does not have to be present, leading to the opportunity for remote surgery.

Robotic surgery permits the doctors to achieve the various types of complex procedures with more flexibility, accuracy and control than is likely with conventional techniques. These procedures are achieved through tiny incisions. It is also occasionally used in certain traditional open surgical procedures. Due to robotic use, the surgery is completed with accuracy, miniaturization, and smaller incisions; less pain, decreased blood loss and faster healing time.

Robotic surgery has been disapproved for its expenditure, with the average costs in 2007 ranging from \$5,607 to \$45,914 per patient. This procedure has not been approved for cancer surgery as of 2019 as the safety and practicality is unclear.