

Frequently Asked Questions

Q: Why are the systems called da Vinci?

A. The name “da Vinci” pays homage to Leonardo da Vinci, the 15th century inventor, painter, philosopher and Renaissance man. Leonardo da Vinci is widely known for advancing the study of human anatomy. He was also intrigued by mechanics and automation, which eventually led to the design of the first known robot, “Leonardo’s Robot,” which was likely made around the year 1495.

Q: How is surgery performed with a da Vinci Surgical System and is it different than laparoscopy?

A. Both traditional laparoscopy and robotic-assisted surgery are forms of minimally-invasive surgery.

In traditional laparoscopic surgery, the surgeon performs the procedure holding rigid instruments and views the surgical area through an endoscopic camera that is projected onto a monitor. In use, the tools move in the opposite direction of the surgeon’s hands due to the pivot point design. The tools used in traditional laparoscopy have four degrees of movement.

With da Vinci Surgical Systems, the surgeon sits at a Surgeon Console while viewing a high-definition, 3D image of the target anatomy. The surgeon’s fingers grasp the master controls with their hands and wrists naturally positioned relative to their body.

Three or four robotic arms, which hold an endoscope (camera) and surgical instruments, carry out the surgeon’s commands. The System seamlessly translates the surgeon’s hand, wrist and finger movements into precise, real-time movement of the surgical instruments positioned inside the patient’s body. These instruments can bend and rotate far greater than both traditional lap instruments and the human wrist. Every surgical maneuver is under the direct control of the surgeon.

During a surgical procedure, the da Vinci Vision System displays high-definition, 3D imagery to the surgeon via the Surgeon Console and to the operating room staff via the Vision Cart.

Q: How common is robotic-assisted minimally invasive surgery?

A. Since 2000, da Vinci Surgical Systems have been used in more than 3 million minimally invasive procedures performed world-wide.

Q: Is the operating surgeon in the room? Can they operate remotely?

A. The surgeon performing the procedure is located at a console in the operating room in close proximity to the patient and surgical support staff. The da Vinci Surgical Systems could theoretically be used to operate over long distances. However, optimizing the system for remote or telesurgery applications is not a focus of the company’s product design and development efforts.

Q: Is robotic-assisted surgery safe?

A. Robotic-assisted surgery is an important surgical treatment option that is safe and offers many potential benefits for patients, surgeons and hospitals when used appropriately and with proper training.

The breadth of literature regarding da Vinci Surgery is extensive. More than 10,000 peer-reviewed studies and reports examining the use of the da Vinci Surgical System in various procedures have been published. Within this body of evidence, many benefits of robotic-assisted surgery for patients have been demonstrated including: less blood loss, fewer complications, shorter hospital stays, smaller incisions for minimal scarring, and faster recovery and return to daily life.