

Study finds robotic-assisted surgery for gallbladder cancer as effective as traditional surgery

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Each year, approximately 2,000 people die annually of gallbladder cancer (GBC) in the U.S., with only one in five cases diagnosed at an

early stage. With GBC rated as the first biliary tract cancer and the 17th most deadly cancer worldwide, pressing attention for proper management of the disease must be addressed.

For patients diagnosed, surgery is the most promising curative treatment. While there has been increasing adoption of minimally invasive surgical techniques in gastrointestinal malignancies, including utilization of laparoscopic and robotic surgery, there are reservations about utilizing minimally invasive surgery for gallbladder cancer.

A new study by researchers at Boston University Chobanian & Avedisian School of Medicine has found that robotic-assisted surgery for GBC is as effective as traditional open and laparoscopic methods, with added benefits in precision and quicker post-operative recovery.

"Our study demonstrates the viability of robotic surgery for gallbladder cancer treatment, a field where minimally invasive approaches have been cautiously adopted due to concerns over oncologic efficacy and technical challenges," says corresponding author Eduardo Vega, MD, assistant professor of surgery at the school.

The researchers conducted a systematic review of the literature focusing on comparing patient outcomes following robotic, open, and laparoscopic surgeries. This involved analyzing studies that reported on oncological results and perioperative benefits, such as operation time, [blood loss](#), and recovery period.

According to the researchers, there has been reluctance to utilize robotic surgery for GBC due to fears of dissemination of the tumor via tumor manipulation, bile spillage and [technical challenges](#), including liver resection and adequate removal of lymph nodes.

"Since its early use, robotic surgery has advanced in ways that provide

surgeons technical advantages over laparoscopic surgery, improving dexterity and visualization of the surgical field. Additionally, robotic assistance has eased the process of detailed dissection around [blood vessels](#) as well as knot tying and suturing, and provides [high-definition](#), three-dimensional vision, allowing the surgeon to perform under improved ergonomics," said Vega.

The researchers believe these findings are significant since they suggest robotic surgery is a safer and potentially less painful option for gallbladder cancer treatment, with a faster recovery time. Clinically, it could lead to the adoption of [robotic surgery](#) as a standard care option for [gallbladder cancer](#), improving patient outcomes and potentially reducing [health care costs](#) due to shorter hospital stays," he added.

The paper is [published](#) in *The American Journal of Surgery*.

More information: Sebastian Mellado et al, Innovations in surgery for gallbladder cancer: A review of robotic surgery as a feasible and safe option, *The American Journal of Surgery* (2024). [DOI: 10.1016/j.amjsurg.2024.02.022](#)

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