

HotPort for Minimally Invasive Surgery

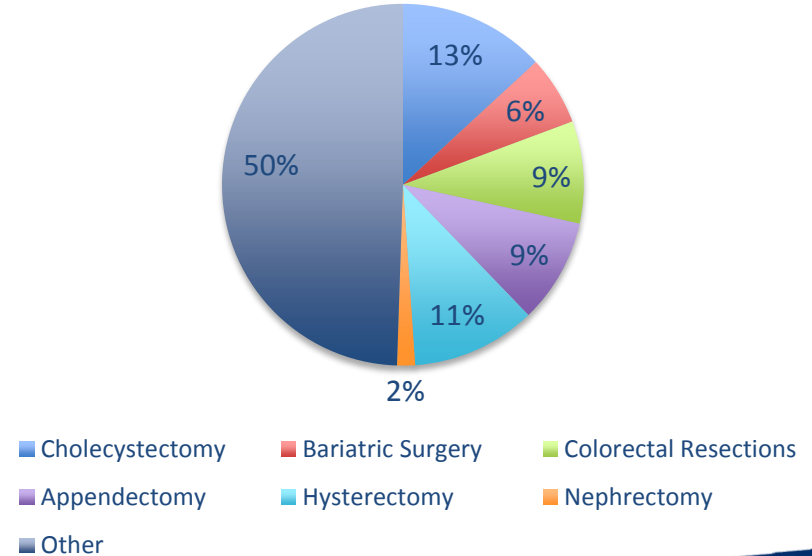


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Minimally Invasive Surgery

- 3.5 million laparoscopic surgeries performed annually in the US¹
- 1.2 million video-assisted thoracoscopic surgeries performed annually in the US^{2,3}
 - 51% sublobar resections
 - 40% lobectomy
 - 5% thymectomy and mediastinal tumors
 - 4% pneumonectomy
- 563,000 robotic minimally invasive surgeries are performed annually in the US⁴
 - 44% gynecology
 - 33% general surgery
 - 19% urology
- The global trocar market is estimated to be \$800 million per year

3.5 Million Laparoscopic Procedures Performed in the US Annually^{1,5-7}



1. Laparoscopic Device Market. iData Research. 2013 – 2017.
2. Minimally Invasive Thoracic Surgery Market Analysis By Type. Grand View Research. 2017.
3. Valenzuela F. et al. Impact of major video-assisted thoracoscopic surgery on care quality. *J Thorac Dis.* 2017.
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5. Weiss A and Elixhauser A. Trends in operating Room Procedures in US Hospitals, 2001-2011. Healthcare Cost and Utilization Project. 2014.
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7. Liu Y and Jiang Y. Nephrectomy – Procedures. *Clinical Pain Advisor.* 2017.

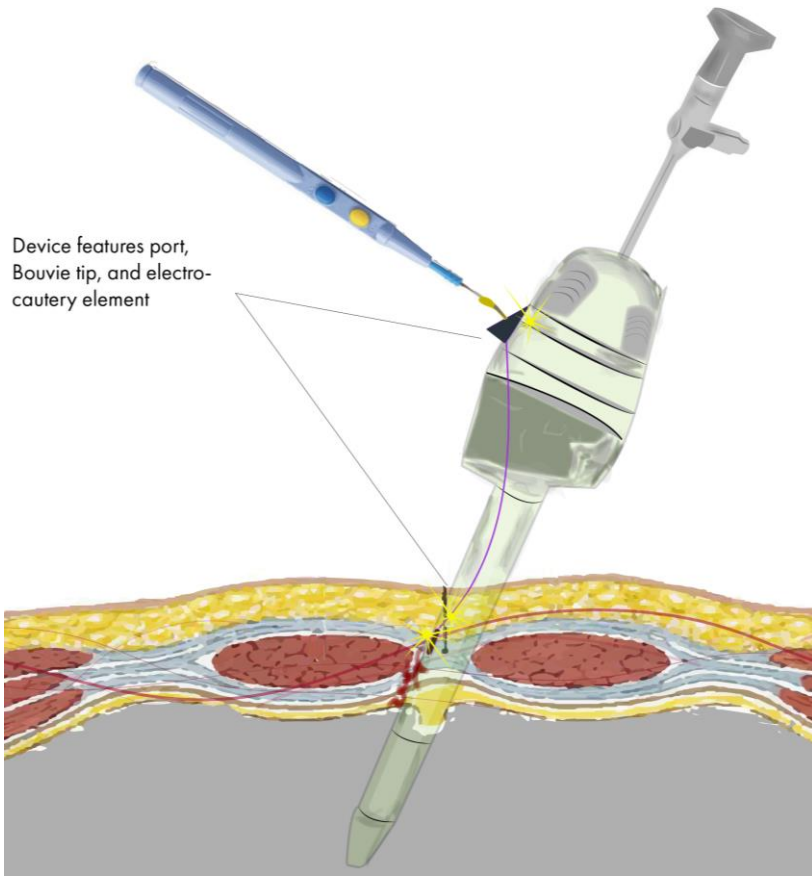
Vessel injuries during minimally invasive procedures may lead to serious complications

- Hemorrhage due to vessel injury is one of the most serious complications of minimally invasive surgery and the most likely to result in death, especially when diagnosis is delayed¹
- As many as 1.9% of patients suffer from bleeding complications during video-assisted thoracoscopic surgeries²
- Approximately 4% of patients suffer from bleeding complications during laparoscopic surgeries³
 - 2.3% intraoperative bleeding complications
 - 1.8% postoperative bleeding complications
- 86% of patients that experience intraoperative bleeding suffer from internal bleeding, which is often difficult to see and repair during the procedure³
- Approximately 50% of internal bleeds require further surgical intervention³

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2. Lochowski M and Kozak J. Video-assisted thoracic surgery complications. *Videosurgery*. 2014
3. Schafer M, Lauper M, and Krahenbuhl L. A nation's experience of bleeding complications during laparoscopy. *AJS*. 2000.

HotPort

Device features port,
Bovie tip, and electro-
cautery element



- ✓ Multi-channel surgical port that can be utilized for a variety of minimally invasive surgical procedures including
 - ✓ Laparoscopic surgery
 - ✓ Video-assisted thoracoscopic surgery
 - ✓ Robotic surgery
- ✓ Efficiently visualize and cauterize problematic wounds near the insertion site
- ✓ Reduce risk of post-surgical complications

Intellectual Property

- UVA TechID: AILAWADI-PORT (2016-120)
 - Title: Port apparatus and sheath device for electrocautery and related methods thereof
 - International patent application no. PCT/US2017/036741 filed June 9, 2017

