

Maturing clinical evidence

Recent global meta-analysis covering period 2010-2022

Results are based on The COMPARE Study - a meta-analysis of peer-reviewed literature for robotic-assisted procedures completed with the da Vinci[®] Surgical System

[The COMPARE Study: Comparing Perioperative Outcomes of Oncologic Minimally Invasive Laparoscopic, Da Vinci Robotic, and Open Procedures: A Systematic Review and meta-analysis of The Evidence.](#)

Ricciardi R, Seshadri-Kreaden U, Yankovsky A, Dahl D, Auchincloss H, Patel NM, Hebert AE, Wright V. *Ann Surg.* 2024 Oct 22. doi: 10.1097/SLA.0000000000006572. PMID: 39435549

Maturing clinical evidence

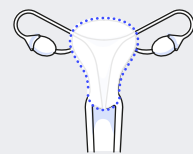
Recent global meta-analysis covering:

- 12 years
- 22 countries
- 7 surgical procedures

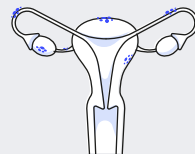
These results are from peer-reviewed COMPARE Study¹.

¹[The COMPARE Study: Comparing Perioperative Outcomes of Oncologic Minimally Invasive Laparoscopic, Da Vinci Robotic, and Open Procedures: A Systematic Review and meta-analysis of The Evidence.](#)

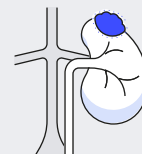
Ricciardi R, Seshadri-Kreaden U, Yankovsky A, Dahl D, Auchincloss H, Patel NM, Hebert AE, Wright V. *Ann Surg.* 2024 Oct 22.



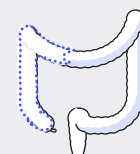
Hysterectomy for cervical cancer and endometrial cancer



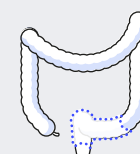
Partial Nephrectomy



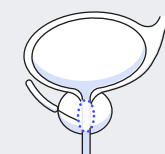
Right Colectomy



LAR/TME



Prostatectomy



Lobectomy

Outcomes measured

Conversions

Blood transfusions

30-day complications

Length of stay

30-day mortality

30-day readmissions

30-day reoperations

Operative time

Procedure specific 230 publications from 7 procedures

1,194,559 patients who underwent da Vinci RAS

1,095,936 patients who underwent laparoscopic surgery or VATS

1,625,320 patients who underwent open surgery

Year 2010 - 2022

Including:

- 34 Randomized Controlled Trials (RCT)
- 74 Prospective cohort studies
- 122 Large database studies

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Clinical value of robotic-assisted surgery

These results are from peer-reviewed COMPARE Study¹.

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Outcomes that favor RAS

	vs. Lap	vs. Open
Conversions	56% less likely	NA
Blood transfusions	21% less likely	75% less likely
30-day complications	10% less likely	44% less likely
Length of stay	0.5 days shorter	1.9 days shorter
30-day mortality	14% less likely	46% less likely
30-day readmissions	9% less likely	29% less likely
30-day reoperations		11% less likely

Comparable outcomes

30-day reoperations	comparable
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Outcomes that favor lap/open

Operative time	17.7 min longer	40.9 min longer
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Outcomes that favor RAS

	vs. Lap	vs. Open
Conversions	5.7% vs. 11.6%	NA
Blood transfusions	5.1% vs. 5.9%	3.6% vs. 11.2%
30-day complications	25.4% vs. 26.5%	17.9% vs. 25.2%
Length of stay	4.6 vs. 5.1 days	4.0 vs. 5.8 days
30-day mortality	1.18% vs. 1.39%	0.93% vs. 1.49%
30-day readmissions	6.5% vs. 7.2%	5.8% vs. 7.9%
30-day reoperations		3.6% vs. 4.2%

Comparable outcomes

30-day reoperations	comparable
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Outcomes that favor lap/open

Operative time	211.4 vs 193.7 mins	213.9 vs 173.0 mins
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Appendix

Glossary

Glossary

95% CI	95% confidence interval	OR	odds ratio
EBL	estimated blood loss	RAS	robotic-assisted surgery
HTA	health technology assessment	RCT	randomized controlled trial
I²	test statistic for heterogeneity	RD	risk difference
LNY	lymph node yield	SMD	standardized mean difference
LOE	level of evidence	VATS	video-assisted thoracic surgery
LOS	length of hospital stay	WMD	weighted mean difference

Disclosures

Important Safety Information

(US) Serious complications may occur in any surgery, including da Vinci surgery, up to and including death. Serious risks include, but are not limited to, injury to tissues and organs and conversion to other surgical techniques which could result in a longer operative time and/or increased complications. For summary of the risks associated with surgery refer to www.intuitive.com/safety.

Da Vinci Xi®/da Vinci X® system precaution statement

The demonstration of safety and effectiveness for the representative specific procedures did not include evaluation of outcomes related to the treatment of cancer (overall survival, disease-free survival, local recurrence), except for radical prostatectomy which was evaluated for overall survival, or treatment of the patient's underlying disease/condition. Device usage in all surgical procedures should be guided by the clinical judgment of an adequately trained surgeon.

(EU) Medical devices, CE 2460, refer to Instructions For Use for further information.

For product intended use and/or indications for use, risks, cautions, and warnings and full prescribing information, refer to the associated user manual(s) or visit <https://manuals.intuitivesurgical.com/market>.

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Individual outcomes may depend on a number of factors, including but not limited to patient characteristics, disease characteristics, and/or surgeon experience.

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