



HOW TO CONTROL THE INFERIOR MESENTERIC ARTERY IN MINIMALLY INVASIVE COLORECTAL SURGERY: IS LIGASURE® SAFE?



Main Line Health

Marks Colorectal Surgical
Research Foundation

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BACKGROUND:

- Inferior Mesenteric Artery (IMA) control and ligation is a necessary step during many colorectal procedures
- Surgeons commonly utilize vascular clips or staplers to transect the IMA
- Many surgeons express doubt that the IMA can be controlled safely with the LigaSure® alone
- **Hypothesize that LigaSure® alone or combined with an Endoloop in high-risk patients provides a safe option for vascular control of the IMA**

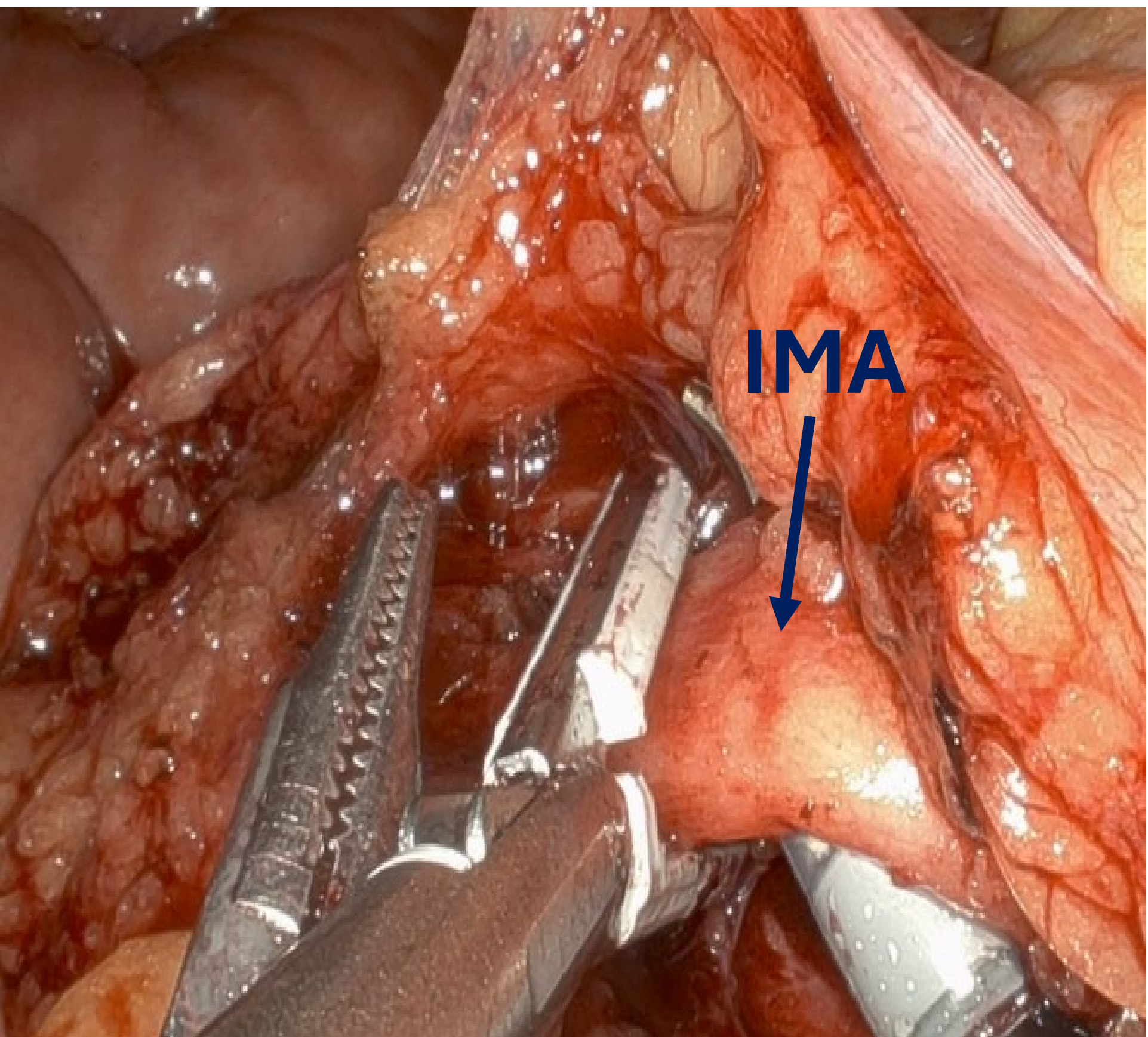
Perioperative Outcomes:

	Overall	Normal Risk	High-risk	p-value
Mean EBL [mL] (range)	146 (0-5300)	112 (0-1500)	182 (0-5300)	.27
Transfusion (%)	1	0.5	3	.001
Conversion (%)	0.1	0	0.2	.08
Postoperative Bleeding (%)	0.36	0.3	0.5	.59
Reoperation (%)	0.1	0.1	0.25	.52

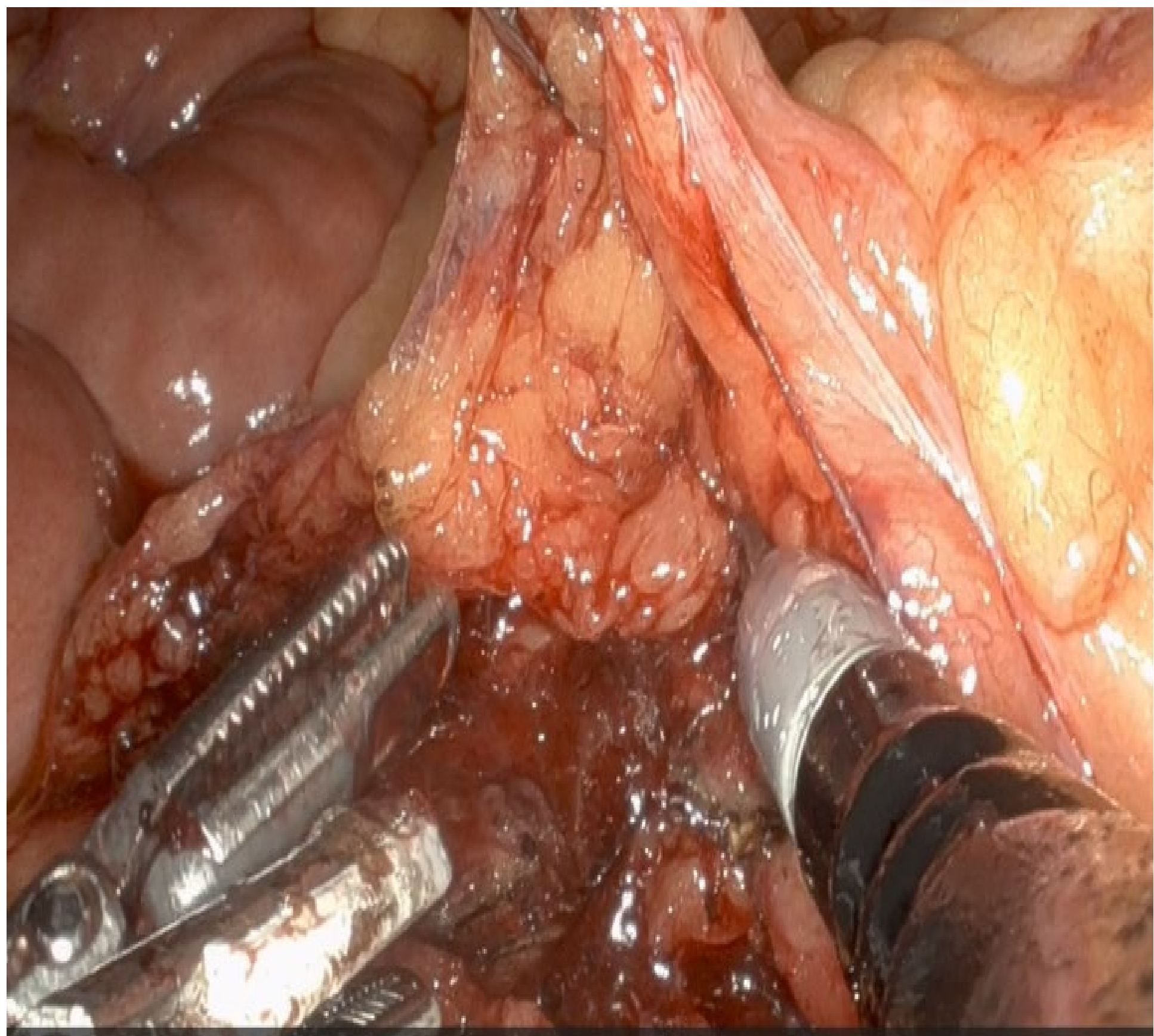


METHODS:

- Between June 2006 – January 2025, we identified 1380 sequential cases involving IMA ligation
- Patients were categorized as normal vs. high-risk for arterial calcification
- High-risk patients routinely had an Endoloop applied after transection of the IMA with LigaSure®



Before ligation



After ligation

Demographics:

Women (%)	51
Mean Age [years] (range)	61.3 (17-94)
Mean BMI [kg/m ²] (range)	29.0 (13.6-53.7)
High Risk (%)	29

DISCUSSION:

- IMA control can safely be obtained with the LigaSure® in MIS colorectal procedures
- Addition of Endoloop in high-risk patients allows for safe control of the IMA with calcifications