

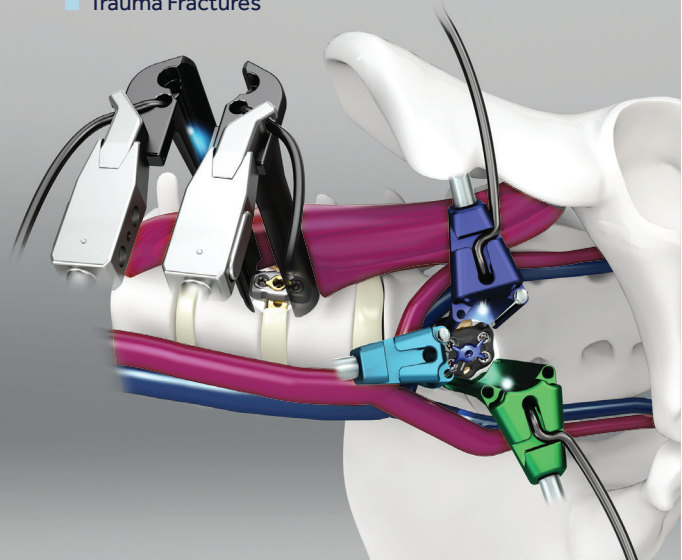
# MINIMALLY INVASIVE SURGERY: THE CLINICAL AND ECONOMIC IMPACT OF MIS PROCEDURES

COVID-19 was declared a pandemic on March 13th, 2020, where Canada saw its first case in early January 2020 and has since rapidly increased to 117,939 cases and 9,154 deaths in Canada as of August 2020 (Government of Canada). One of the impacts of COVID-19 is the cancellation of nearly 400,000 elective surgeries globally in the interest of minimizing community spread of the virus. MIS surgery may be an attractive alternative compared to traditional open surgery in shortening patient hospital stay and reducing blood loss as surgeons resume elective spine procedures after COVID-19.

Paper	Pathology	Studies Analyzed	MIS TLIF Compared to Open TLIF	
			Length of Stay (Days)	Blood Loss (ml)
Hammond 2019	TLIF Spine Procedure	MIS TLIF (n=1,285) Open TLIF (n=1,100)	↓ Mean Difference -1.87	↓ Mean Difference -320.36
Miller 2020	Single-Level Degenerative Lumbar Diseases	MIS TLIF (n=246) Open TLIF (n=250)	↓ Mean Difference -2.20	↓ Mean Difference -200
Qin 2018	Single-Level Spondylolisthesis Grades 1 and 2	MIS TLIF (n=182) Open TLIF (n=212)	↓ Mean Difference -2.15	↓ Mean Difference -281.75

## COMMON MINIMALLY INVASIVE PROCEDURES

- Tubular Discectomy/Decompression
- Tubular TLIF/ PLIF
- Cannulated / Fenestrated Pedicle Screw Placement
- Oblique Lateral Interbody Fusion (OLIF)
- Direct Lateral Interbody Fusion (DLIF)
- Trauma Fractures



“MIS can offer improved perioperative clinical outcomes with possible fewer complications, equivalent or improved intermediate patient reported outcomes, and decreased hospital costs by up to **49%**.”

Dr. Y. Raja Rampersaud  
University Health Network, Toronto

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Further, Together

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