

**PREDICTABILITY.**  
**PRECISION.**  
**VISIBILITY.**



**Mazor™ Core Technology**  
for Robotic-Guided Spine Surgery

**Medtronic**  
Further. Together

Pedicle screw placement is a common spinal surgical procedure but it remains **technically demanding**. The anatomical proximity to the central nervous system and main blood vessel structures means that inaccuracy of pedicle screws may result in **serious morbidity, complications, and revision surgery**.<sup>1</sup> Mazor X Stealth Edition™ delivers predictability of planning, precision of robotics-guidance, and the visibility of navigation in open, minimally invasive, or percutaneous procedures. Mazor Core Technology delivers high rates of pedicle screw accuracy and enables a minimally invasive approach to spine surgery, which has well-established benefits including less tissue trauma, blood loss, postoperative pain, and convalescence.<sup>2,4-6</sup>

## MIS and Mazor Core Technology Benefits

### SURGEON

- Improved Patient Outcomes<sup>†2,10</sup>
- Optimized Screw Placement Accuracy<sup>‡2,7-9</sup>
- Predictability and Consistency of Spinal Surgery Through Planning<sup>‡3</sup>

### HOSPITALS

- Improved Outcomes,<sup>†‡</sup> Including Length of Stay,<sup>2,10</sup> and a Lower Rate of Infection<sup>†6</sup>
- Patients Report High Levels of Satisfaction with the Procedure<sup>†11</sup>

### PATIENTS

- Promotes Faster Recovery<sup>†2,10</sup>
- Reduces Postoperative Pain<sup>†11</sup>
- Significant Improvement from Preoperative Status<sup>†‡4,5,11</sup>

† Demonstrated benefit of MIS

‡ Demonstrated benefit of Mazor Core Technology

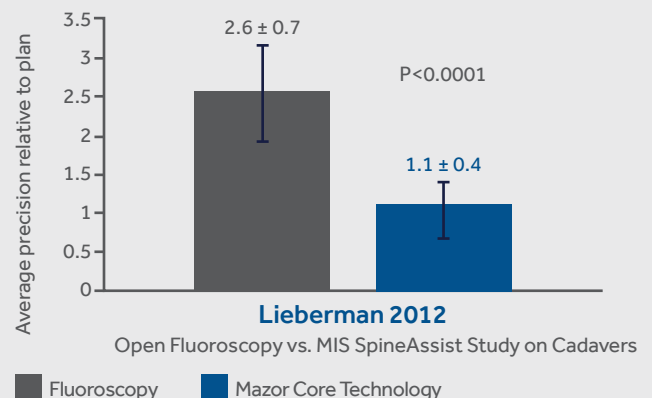
## ROBOTIC WORKFLOW



## ROBOTIC-GUIDED SPINAL INSTRUMENTATION HAS A HIGH LEVEL OF ACCURACY WITH ENHANCED REPRODUCIBILITY AND PREDICTABILITY.

A significant reduction in deviation from preoperative planning was seen with Mazor Core Technology as compared to fluoroscopy.<sup>3</sup>

Better spinal instrumentation accuracy and consistency with Mazor Core Technology.<sup>3</sup>



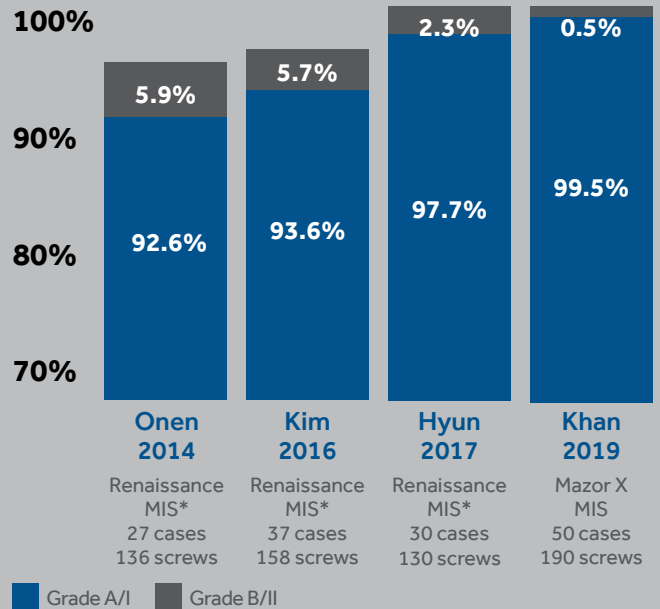
## Achieving Accurate Screw Placement

Up to **100%**  
screw placement accuracy.<sup>2,7-9</sup>

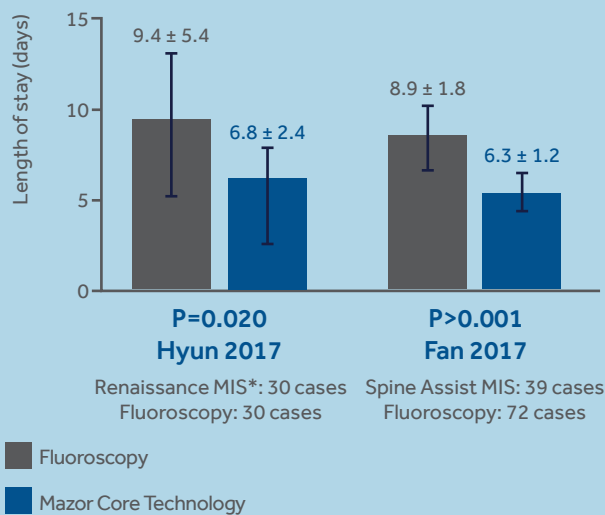
## LESS FACET JOINT VIOLATION<sup>7</sup>

0/74 screws violated the proximal facet joint in PLIF with Renaissance™ Guidance System vs. 13/82 in open PLIF.<sup>7</sup>

High level of screw placement accuracy achieved with Mazor Core Technology using Gertzbein-Robbins Grade A + B or Ravi Grade I + II classifications.<sup>2,7-9</sup>



Shorter length of stay with Mazor Core Technology<sup>2,10</sup>



## Length of Stay

Shorter length of stay for MIS enabled by Mazor Core Technology

**2.6 days less**

than open freehand procedures enabled by fluoroscopy.<sup>2,10</sup>

## SIGNIFICANT REDUCTION IN TIME SPENT PLACING PEDICLE SCREWS<sup>8</sup>

Time to place screws was significantly reduced from a mean of 6.7 ± 0.9 minutes in navigated procedures to 3.7 ± 1.8 minutes with Mazor X System.<sup>TM 8</sup>

\*Previous generations of the Mazor robot are not licensed in accordance with Canadian Law.

## MINIMALLY INVASIVE PLIF PATIENT-REPORTED OUTCOMES WITH MAZOR CORE TECHNOLOGY

- Significant improvement of leg and back pain at the final follow-up<sup>11</sup>
- Mean ODI improved from severe to minimal disability after surgery<sup>11</sup>
- 89.1% of patients would choose to undergo the same treatment again<sup>11</sup>
- 78.2% of patients reported the ability to work at the final follow-up<sup>11</sup>

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The evidence reported here refers to various Mazor robot generations that share Mazor Core Technology.

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