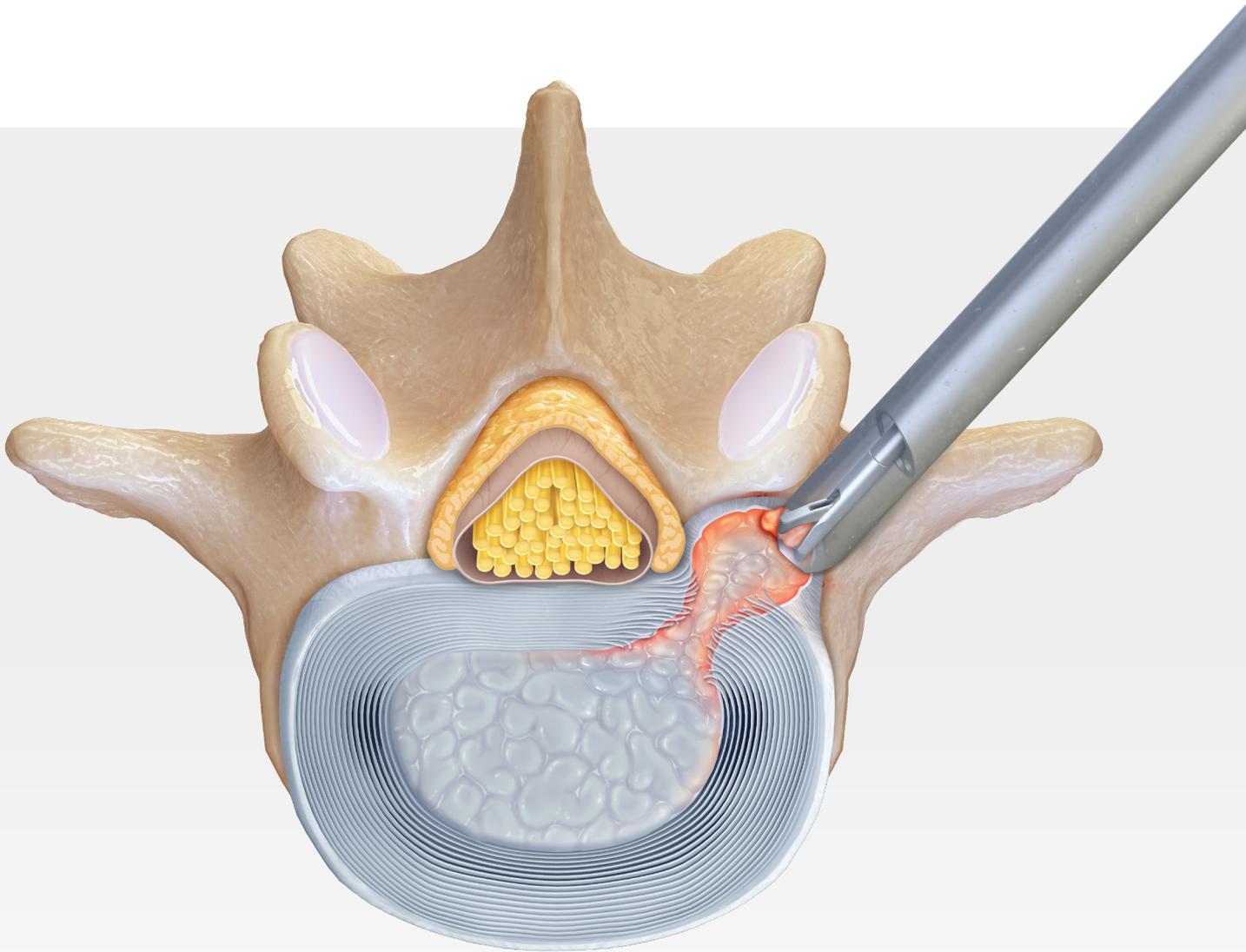


Lumbar Transforaminal Discectomy

Endoscopic Surgical Technique



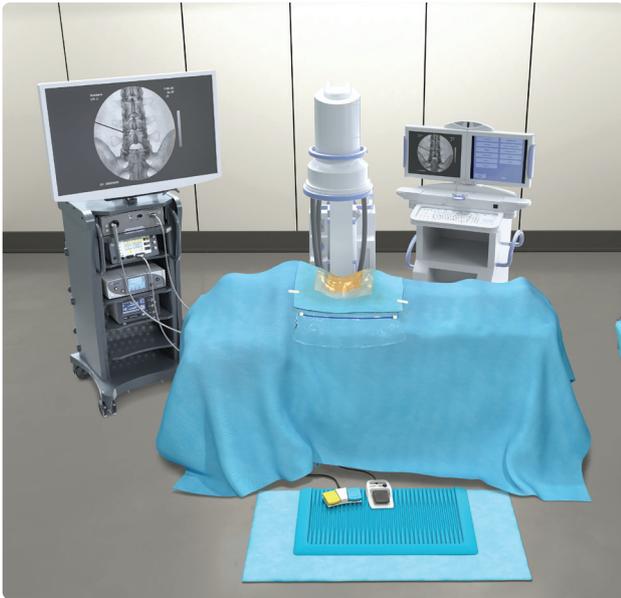
Endoscopic Approach to Lumbar Transforaminal Discectomy

Introduction

The endoscopic approach to lumbar transforaminal discectomy is an ultra-minimally invasive surgery during which an endoscope is used for access and visualization. In conjunction with ergonomic instruments, the Synergy imaging system provides innovative technology to treat this pathology.

- › Depth stop and cannula holder allow for improved control of the endoscope and cannula
- › WishBone™ handle combines ergonomics, efficiency, and control
- › Synergy integration and imaging optimize visualization
- › Premium instruments are available with a ceramic coating

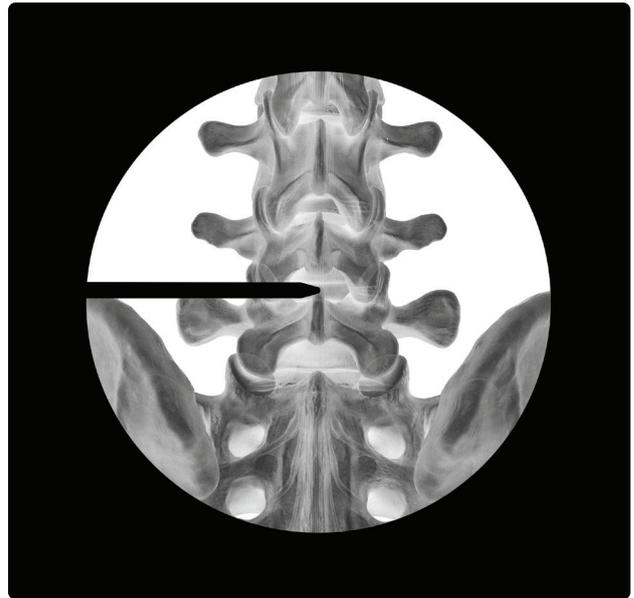




1

Patient Positioning and OR Setup

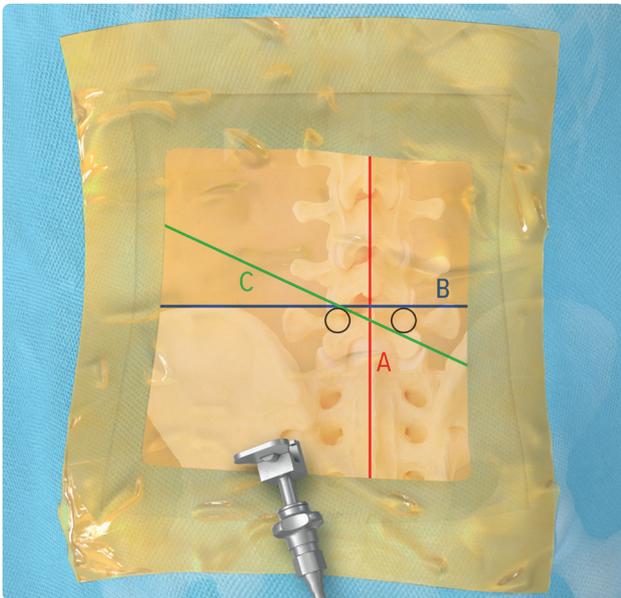
With the patient prone and their arms extended, position the C-arm across from the surgeon with the video monitor at the head and the C-arm monitor at the foot of the bed.



2

Targeting

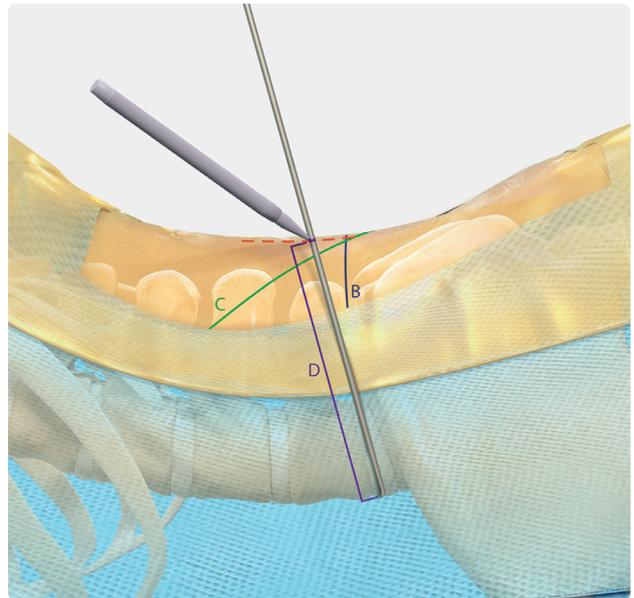
Use AP and lateral views to target and confirm the correct level is being treated.



3

AP Targeting

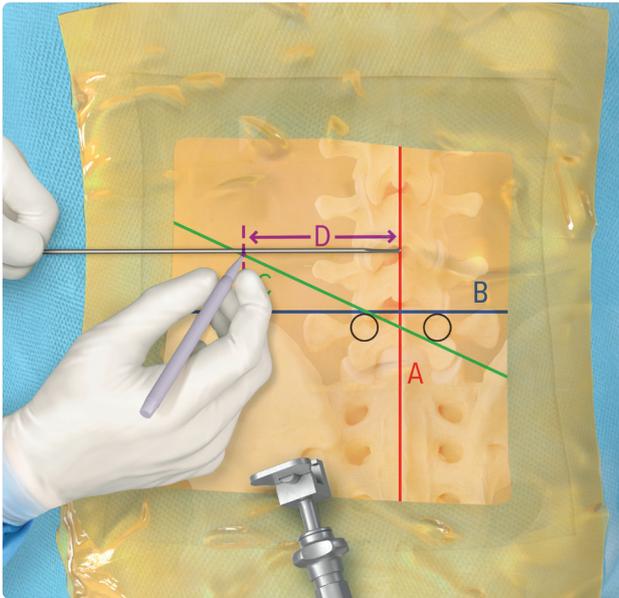
Mark the midline (A). Mark a line on the skin through the center of the disc space (B). Mark a line along the bottom of the contralateral pedicle to the top of the ipsilateral pedicle (C).



4

Lateral Targeting

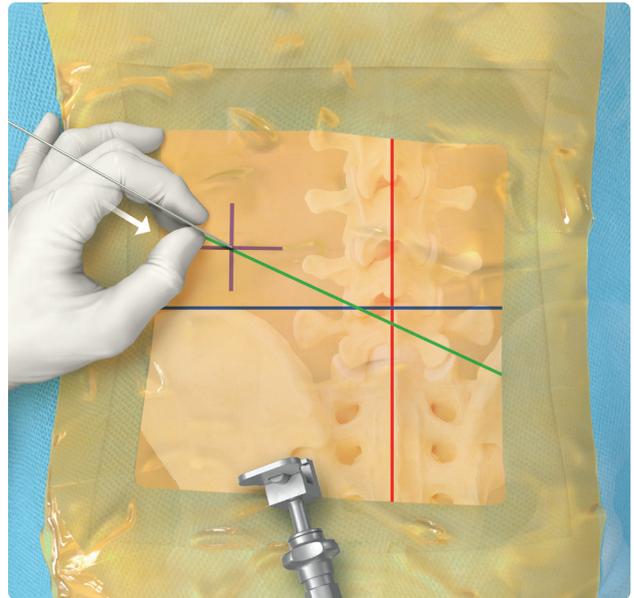
Place an instrument vertically with its tip at the front of the disc space in line with the end plates. Mark a line on the instrument at the level of the dorsal skin surface (D).



5

Incision Marking

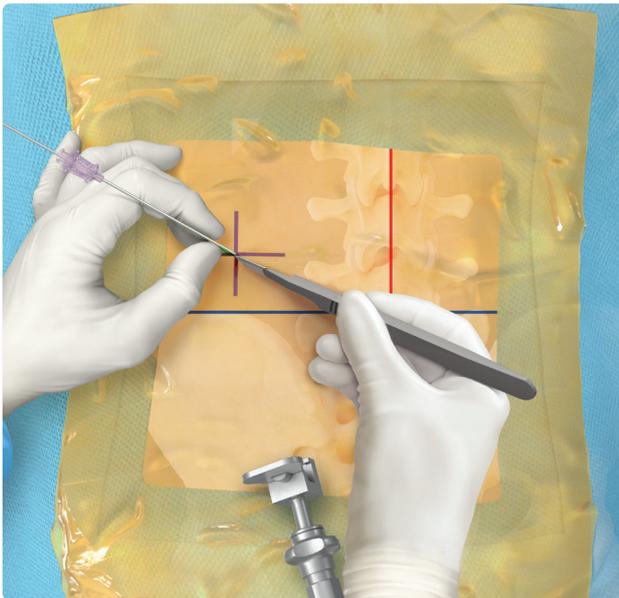
With the instrument tip on the midline, mark the distance (D) from the midline to the line on the instrument at the intersection of the oblique pedicle line (C). This is the incision point.



6

Needle Placement

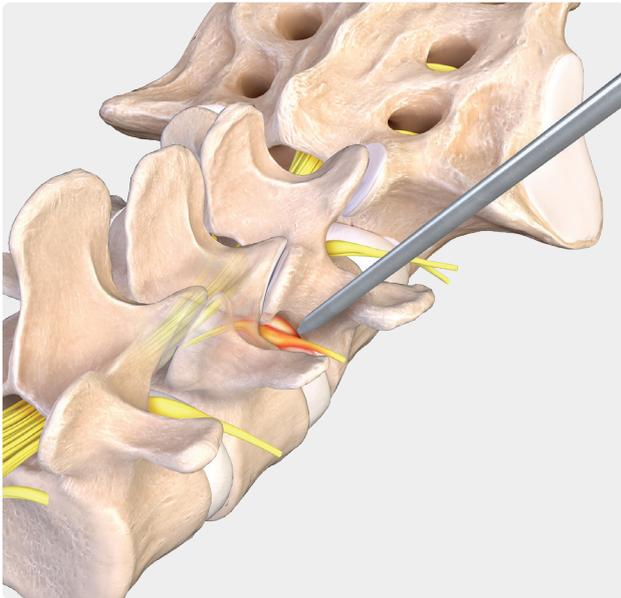
Insert the needle at the incision point using AP and lateral views to avoid neural structures. Target Kambin's triangle at the intersection of the inferior level's superior articular process (SAP), pedicle, and the back of the inferior level's vertebral body, making sure to not cross the medial border of the pedicle with the needle on an AP view.



7

Incision

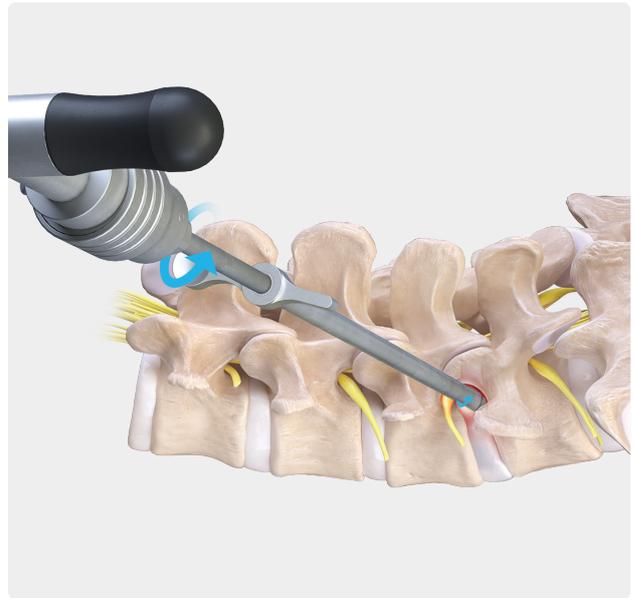
Remove the stylet, insert the guidewire, and make an incision through the skin and fascia to accommodate the outer diameter of the dilators and working cannula.



8a

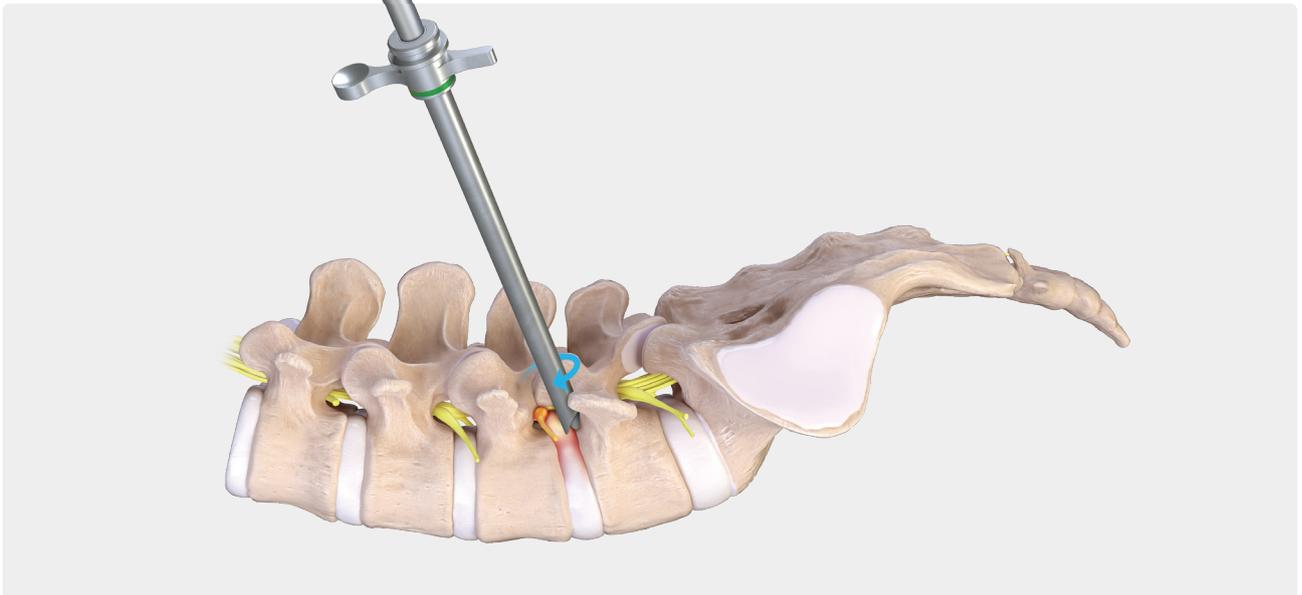
Dilating

Place the sequential dilators over the guidewire while rotating.



8b

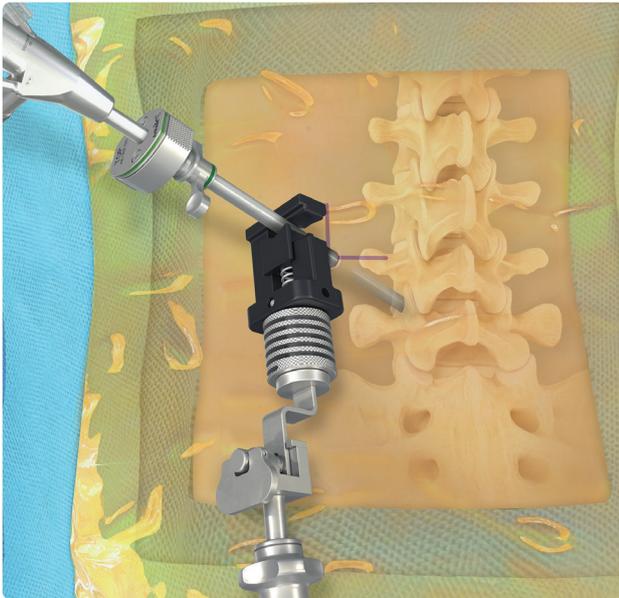
Based on surgeon preference, trephines and rasps may be used to remove soft tissue and bone, enlarging the foramen to accommodate the diameter of the working cannula and endoscope.



9

Docking

Insert the cannula over the dilators or switching stick while maintaining the opening of the bevel cranial toward the exiting nerve root. Rotate the cannula clockwise for left-sided approaches and counterclockwise for right-sided approaches, protecting the exiting nerve root with the long side of the cannula.



10

Cannula Holder and Depth Stop

With the rigid arm attached to the bed via a bed rail adapter connect the cannula holder to the cannula. Attach the light cord, camera, irrigation, and depth stop to the endoscope. Following removal of the switching stick or dilators, insert the endoscope into the cannula.



11

Decompression

Use endoscopic tools like graspers and the FlexTip RF probe to remove excess tissue, provide visualization, coagulate blood vessels, access the disc pathology, and decompress the affected elements.



12

Assess

Use a ball-tip probe along with direct visualization to ensure all fragments have been removed and the discectomy and decompression are complete prior to removing the cannula.



13

Complete Procedure

Remove the endoscope and cannula, close the incision, and apply JumpStart® antimicrobial wound dressing over the incision site.

Ordering Information

Spine endoscope case	AR-S1000-C3
Spine endoscope case, large	AR-S1000-C1
Cannula holder	AR-S3420-CH
Switching stick, 7 mm × 225 mm	AR-S3020-070-225
Spine endoscope, 7 mm × 181 mm, 30°	AR-S3350-7030-181
Cannula w/ elevator tip, 8 mm × 178 mm	AR-S3420-080-178ET
Guidewire, nitinol, 0.8 mm × 400 mm	AR-S4000-008-400
Dilator, 2.5 mm × 230 mm	AR-S6524-025-230
Dilator, 4.1 mm × 220 mm	AR-S6524-041-185
Dilator, 5.1 mm × 210 mm	AR-S6524-051-170
Dilator, 6 mm × 200 mm	AR-S6524-060-160
Dilator, 7.1 mm × 190 mm	AR-S6524-071-185
Trephine handle	AR-S7700-000-000H
Trephine, 3.55 mm × 350 mm	AR-S7705-035-350
Trephine, 5.1 mm × 225 mm	AR-S7705-051-225
Trephine, 6.6 mm × 225 mm	AR-S7705-066-225
Trephine, 7.6 mm × 225 mm	AR-S7705-076-225
Rod pusher, 2.5 mm	AR-S6524-025-230P
Rod pusher, 4 mm	AR-S6524-040-230P
Rod pusher, 5 mm	AR-S6524-050-230P
Cup forceps, up angle, 2.5 mm × 330 mm, WB	AR-S7110-025U-330W
Cup forceps, 3 mm × 330 mm, WB	AR-S7110-030-330W
Cup forceps, 2.5 mm × 330 mm, WB	AR-S7110-025-330W
Scissor punch, 2.5 mm × 330 mm, WB	AR-S7116-025-330W
Scissor punch, up angle, 2.5 mm × 330 mm, WB	AR-S7116-025U-330W
Kerrison/ball-tip probe, handle, WB	AR-S7400-000-000W
Ball-tip probe, shaft, flexible, 1.8 mm × 330 mm	AR-S7405-018-330
FlexTip RF probe, 35 cm	AR-S9805-0035
Spine Access Kit, disposable	AR-S4000K-S

See product catalog for full product listings. Instruments dependent on surgeon preferences and pathology.

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