



CESSYS[®] *Ventral* **Cervical Endoscopic Surgical System**

**Ventral Access for Cervical
Disc Herniation and Recess Stenosis**

Indications for the CESSYS® *Ventral* procedure

The CESSYS® *Ventral* technique is indicated for the minimally invasive treatment of cervical disc herniations. This procedure is contraindicated in patients with associated cervical instability and central stenosis.

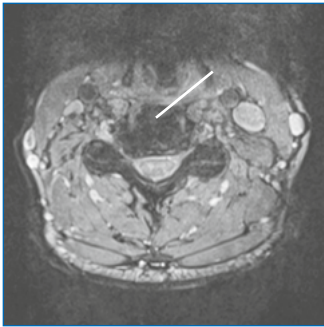
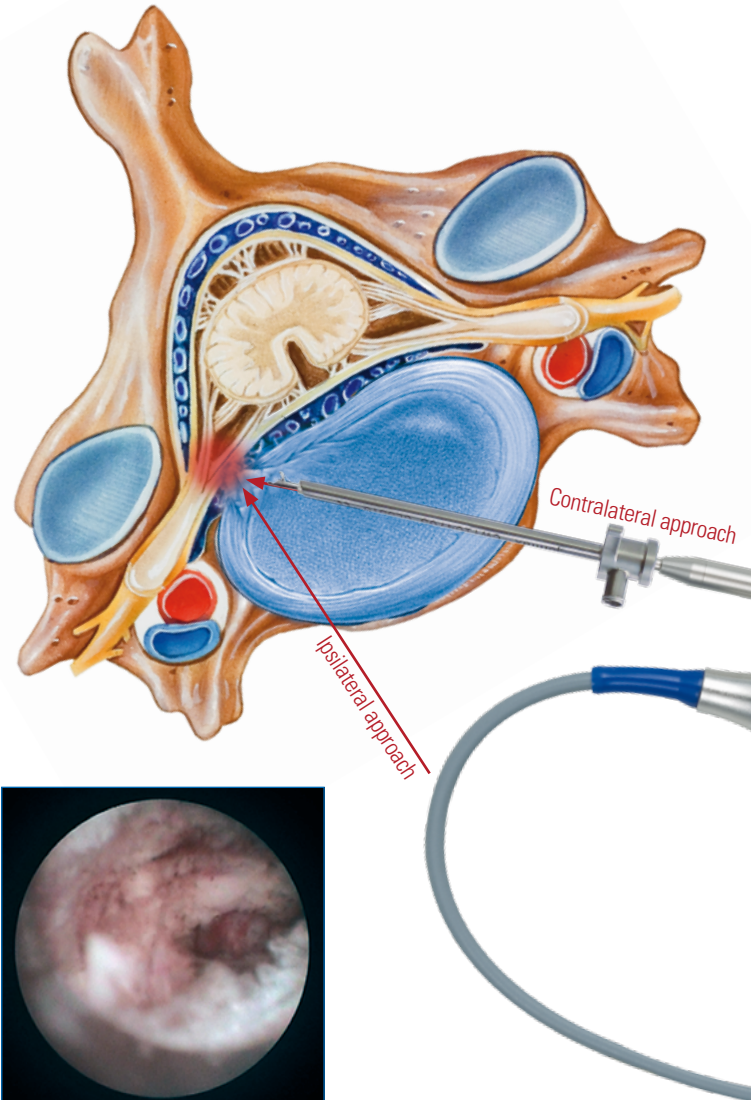
The endoscopic CESSYS® *Ventral* procedure uses a ventral, ipsi- or contralateral approach through the disc space, directly to the site of herniation. Under endoscopic visualization, the compressive disc material can be removed. The small diameter cannulas allow an atraumatic access and the removal of herniated disc material with specialized forceps. Additionally, a radiofrequency probe for tissue ablation and hemostasis is available.

Advantages of cervical endoscopic nucleotomy

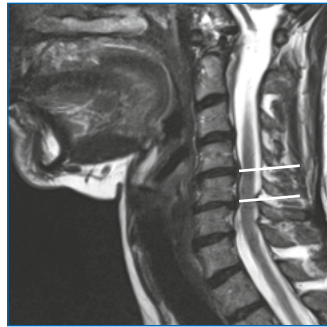
- The intervention is minimally invasive, very gentle and can be carried out under monitored anesthesia care (MAC)
- By preserving the disc, the natural structure of the segment is preserved
- No laminotomy required
- Small incision and minimal scarring
- No spinal cord manipulation due to a ventral approach
- Short recovery period
- Minimal blood loss

As comfortable as possible for the patient

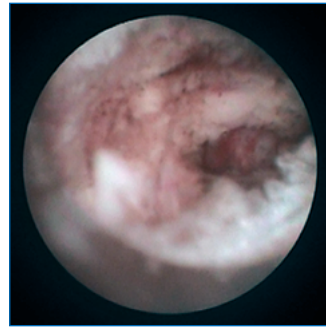
The patients may choose: The intervention can be carried out either under general anesthesia or MAC. MAC is generally associated with less anesthesia risks. Additionally, it offers the advantage of immediate patient feedback if there is any contact with the neural structures. The intervention is carried out in a supine position.



Lateral herniation – axial MRI



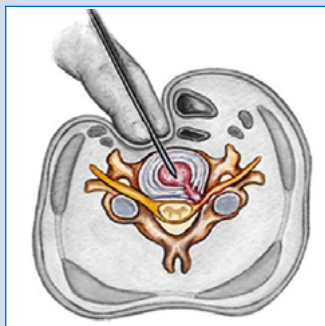
Lateral herniation – sagittal MRI



Endoscopic view of the free nerve root



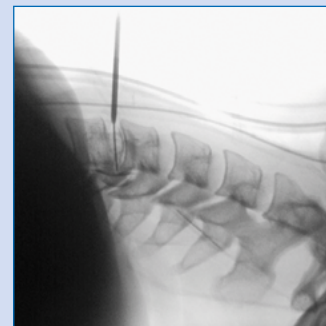
1. Patient positioning and cranial fixation.



2. Insertion of the needle into the disc.



3. Needle positioning under fluoroscopic control.



4. Soft tissue dilation with the guiding rod over the wire.

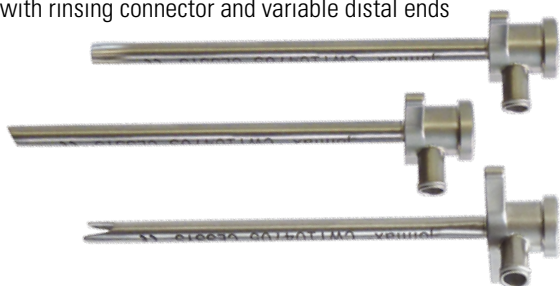
Instrument set – precise and durable

The CESSYS® Ventral instrument tray contains all necessary instruments for minimally invasive access. A variety of instruments is included for sequential soft tissue dilation, access through the annulus and removal of herniated disc material. Depending on the position of the herniation, three distal end variations of the working cannula are available. The tray can also accommodate the joimax® CESSYS® Cervical Hybrid Scope*.

The single-cable connection of the video/camera unit to the endoscope provides less bulk and therefore, lightweight handling of the endoscope. This patented, hybrid cable technology enables the surgeon to gently maneuver the endoscope throughout the procedure. The 1.2 mm diameter optic with 40.000 pixel optic bundle, provides excellent HD quality imaging in combination with the joimax® C-Camsource® Camera System.

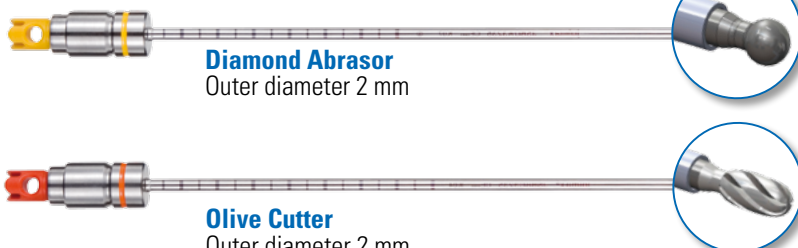
CESSYS® Working Tubes

with rinsing connector and variable distal ends



Shrill® Shaver Blades

For the removal of bony structures under endoscopic view



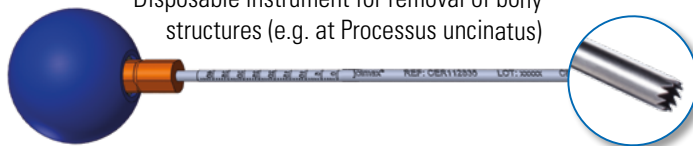
CESSYS® Biopsy Forceps

- Outer diameter 2 mm
- Working length 215 mm



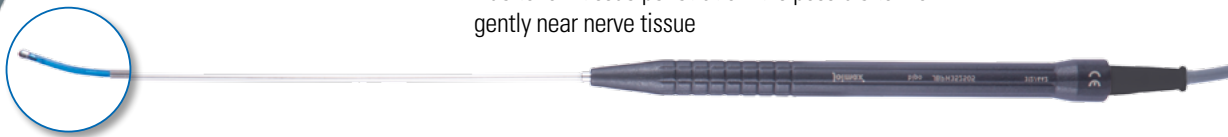
CESSYS® Cervical Reamer

Disposable instrument for removal of bony structures (e.g. at Processus uncinatus)

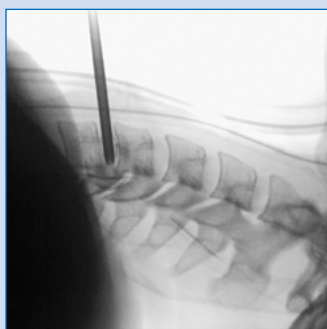


Legato®/Vaporflex®

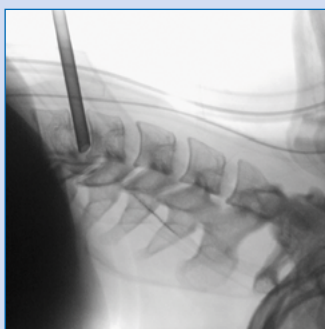
- Secure and reliable bipolar RF-technology
- Soft tissue can be shrunk and coagulated with the Legato® and Vaporflex® bipolar probes
- Due to low tissue penetration it is possible to work gently near nerve tissue



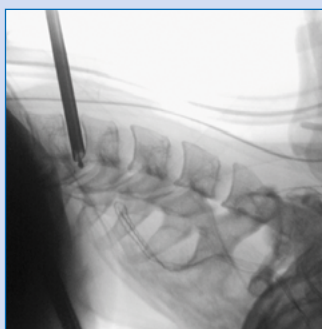
*Combination of rigid and flexible endoscope parts in proven joimax® Combo single-cable technology.



5. Guiding rod in place.



6. Introduction of the working cannula.

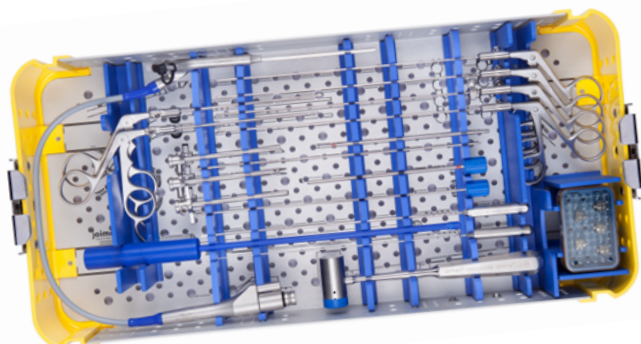


7. Removal of herniated material with forceps through the CESSYS® Cervical Hybrid Scope.



Cervical Endoscopic Surgical System

With the cervical endoscopy system an anteriolateral, minimally invasive approach to the cervical spine is now possible.



REF	Description
CESSYSANT	CESSYS® Cervical Endoscopic Surgical System
CH402100C	CESSYS® Cervical Hybrid Scope, Combo

Cervical Hybrid Endoscope specifications

- Outer diameter 3.9 mm/2.6 mm
- Working channel/length Ø 2.1 mm/100 mm
- Rinsing channel Ø 1.2 mm
- Optic Ø 1.2 mm/40.000 pixel
- Optic angle 9°
- Angle of view 95° ± 5°

Working Tubes

- Outer diameter 4.8 mm
- Working length 100 mm

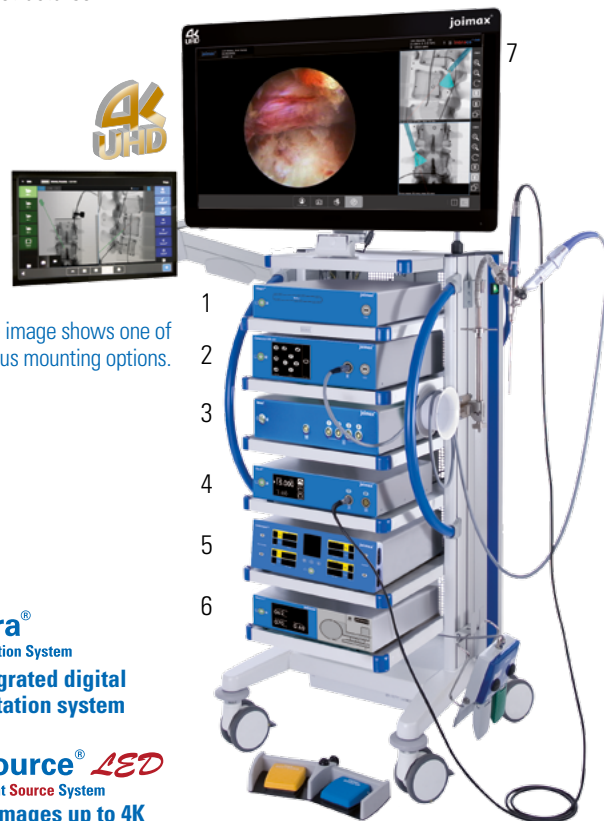
REF	Description
JSM120	joimax® Endovapor® Dual High Frequency System
JBPH352505	Legato® hand piece, 3.5 m cable for Endovapor®
JSDC25012	joimax® Shrill® System
BHR4137	Ball Handle for Reamer

Disposables

REF	Description
JMSN18GW11	joimax® 18G Needle + 0.8 mm Guide Wire Set
JBPP27020	Legato® Probe 270, bipolar, Ball Tip 2.0 mm
CER112835	CESSYS® Cervical Reamer (packaging unit 5)
JSBDA252019	Diamond Abrasor, Ball Tip, for bone resection, without gage
JSBOC252019	Olive Cutter, Olive Tip, for bone resection, without protection

joimax® Endoscopic Tower | Generation 4

The expert solution for spinal surgery and neurosurgery. All devices work in unison with one another and are specifically designed for the treatment of sensitive structures.



The image shows one of various mounting options.

- Vitegra®**
Visual Integration System
Fully integrated digital documentation system
- Camsource® LED**
Camera & Light Source System
Brilliant images up to 4K
- Intracs® em**
Integrated Navigation Tracking & Control System
Simple and safe electromagnetic navigation
- Shrill®**
Shaver Drill System
Multi-functional drill and resection system
- Endovapor® 2**
Multi Radio Frequency System
Combines variety of different electro-surgical modes and effects
- Versicon®**
Versatile Irrigation Control
Multi-range irrigation pump
- JFMS 2620 | 3220 | 4K31**
High definition medical displays FHD and 4K UHD

joined minimal access

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