



Continuing Medical Education
joimax® Training Program

joimax®
Endoscopic Spine Experts



EndoTrainer *Plus*

Simulator for endoscopic access to the lumbar spine in prone and lateral patient position

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With the joimax® EndoTrainer Plus, the transforaminal surgical technique TESSYS® and the interlaminar surgical technique iLESSYS® can be trained in prone or in lateral patient position. Under realistic conditions and constant monitoring via the integrated navigation software, the fluoroscopic technique can be learned.

The joimax® EndoTrainer Plus consists of a navigation camera, a laptop with application software, a torso-model and all accessories.

Advantages of the EndoTrainer *Plus* for the surgeon

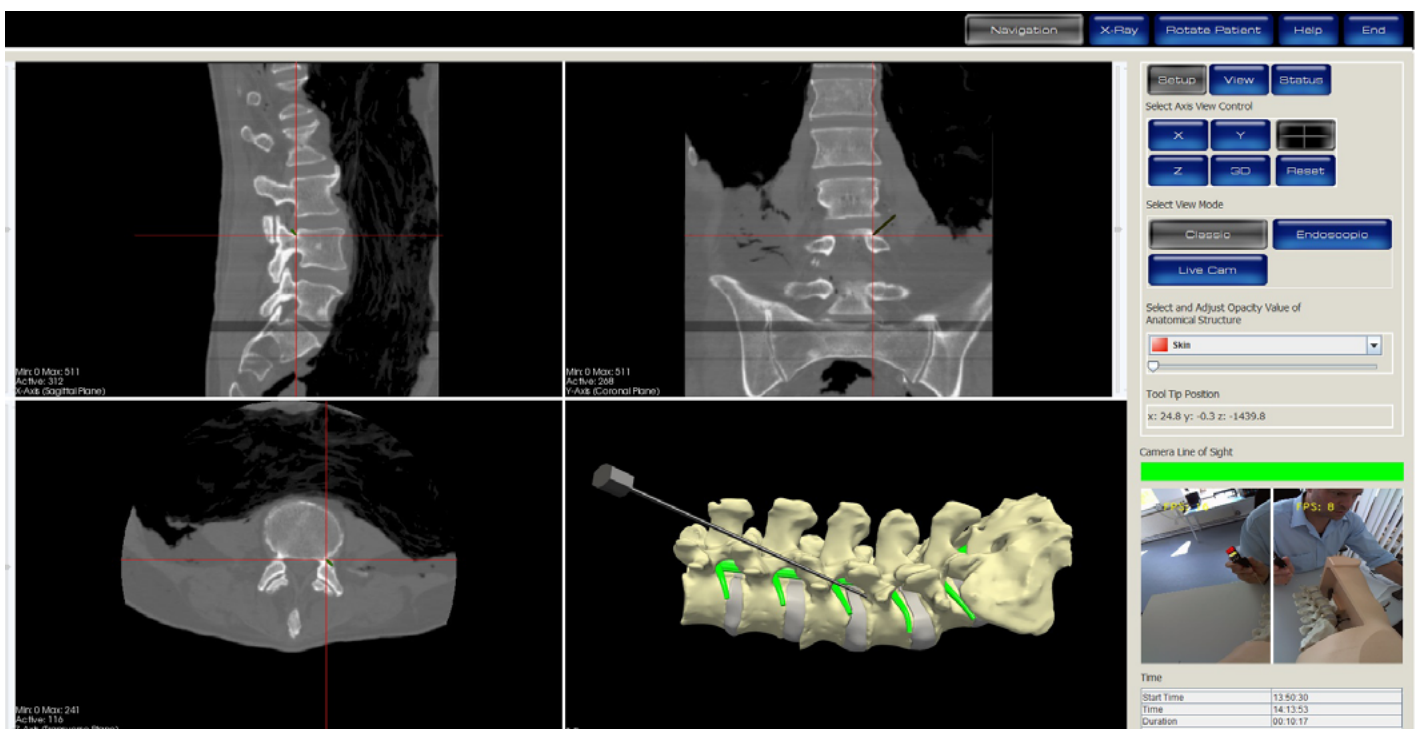
- Important tool to virtually learn the transforaminal and interlaminar endoscopic access to the lumbar spine
- Realistic sensory feedback for enhanced learning
- The entire OR team can be trained for endoscopic spine surgery



The correct positioning of the needle

Placing the needle is fundamental for a successful endoscopic spine surgery! Through repeated practice of the needle positioning, the surgeon receives experience of the TESSYS®

and the iLESSYS® procedure. Through this system, the user receives feedback of the needle tip position via fluoroscopy and live image.



Real tactile feedback

Synthetic materials, which are very similar to human skin, muscles and osseous spine, are used in the torso model.

The user receives a realistic tactile feedback while placing the needle, dilating and reaming the intervertebral foramen, and introducing the instruments.



Live cam window

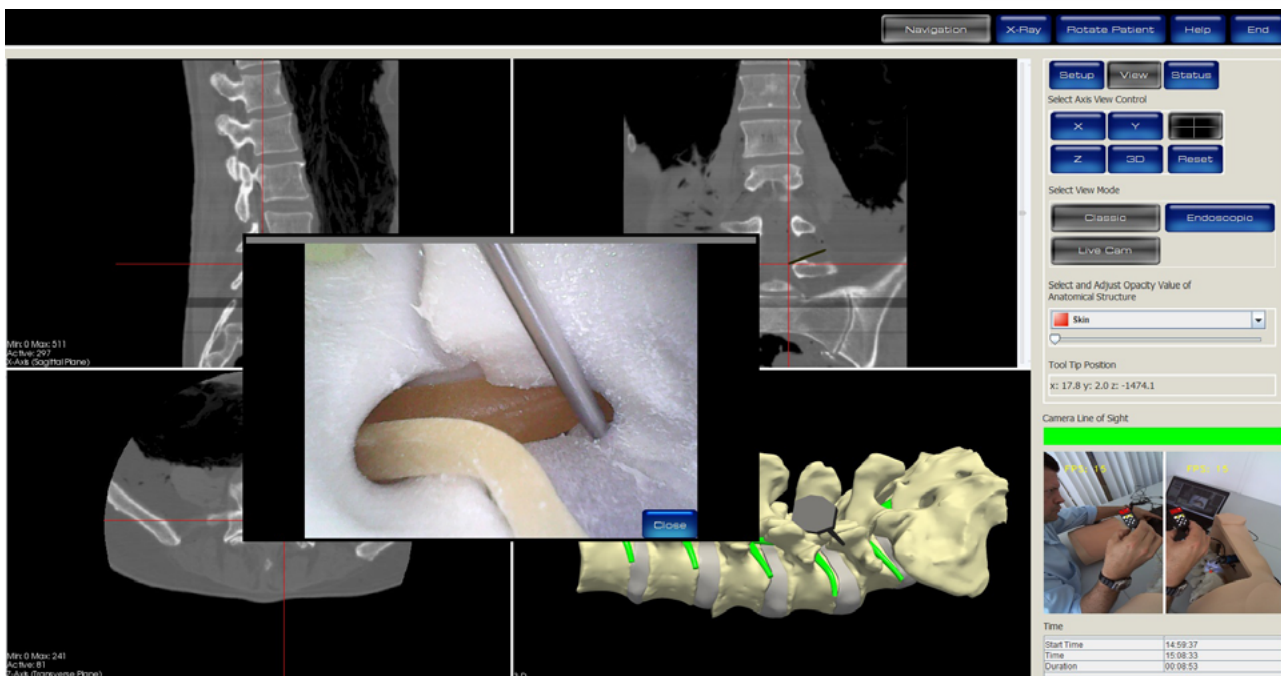
For viewing the position of the inserted needle/rod tip.

Control window

Selection of the views, as well as further menu adjustments, are done via the control window.

Additional functions

- Tactile feedback through utilization of close to natural materials
- Live viewing via navigation window
- View selections via the control window
- Optical warning system while approximation to the spinal cord
- Virtual rotatable 3D spine
- Real image of the needle position via Mini Live Cam
- Snapshot function simulates a C-arm exposure in all different sections/levels of the lumbar spine

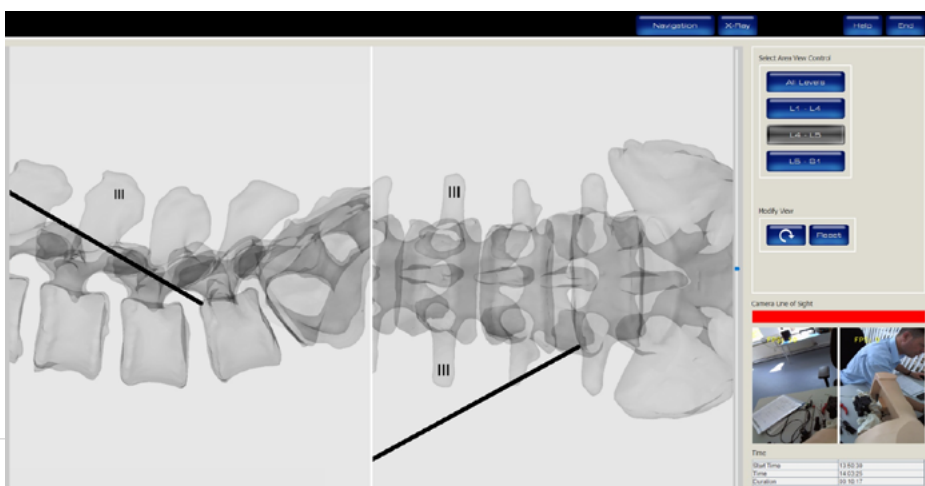
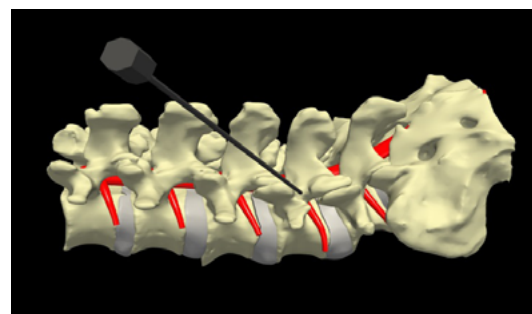


3D spine

Virtual rotatable spine and transparent viewable torso allows a full 360° overview.

Optical warning system

Assistance in the danger zone: If the access instruments are getting too close to the spinal cord, the color display of the dura changes from **Green** to **Yellow**, while touching the dura it changes to **Red**.



Snapshot function

While activating the x-ray button, a snapshot is simulated which displays the actual position of the needle via C-Arm image, selecting between the levels of L1-L3, L4/L5 or L5/S1.

Field of Application

- Alternative and complementary to human specimen
- Quick and easy visualization of TESSYS® and iLESSYS® surgical techniques
- Part of training in human specimen workshop
- Practice and training for surgeons, e.g. right before surgery
- Education of OR team, sales and application specialists
- Demonstration at congresses and workshops

EndoTrainer Plus consists of:

- Navigation camera
- Laptop with navigation software
- Torso with changable position in prone, lateral left and lateral right
- Real spine model plus replaceable tissue insert
- Mini Live Cam for displaying the real needle position
- joimax® Instrument set, consisting of navigation pointer, needle, guiding rod, reamer and working tube
- Calibration tools for easy set up

Order information

REF	Description
ETSS80PSET	joimax® EndoTrainer Simulator Plus contains:
ETSS80P	EndoTrainer Simulator Plus (torso, camera, laptop, calibration tools)
ETIST01	joimax® Instrument set
ETFS6342181C	joimax® EndoTrainer Foraminoscope
ETSMS80	Spine model Schumann
ETTPS80	Torso Cover
ETCA80P	EndoTrainer transport case



joined minimal access

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