Simulatory

Simulation Reimagined

SYNspine™

Portfolio

April 2025

SYNspine - Lifelike Training Without A Cadaver

- Designed for surgical training
  - Procedural & psychomotor skills training
  - Visio-motor & attitudinal skills
- Enables deliberate practice
- Real life high fidelity haptics
- Real instrumentation and imaging
- X-ray-free navigation system
- Variety of models and pathologies

Biomimetic simulator
- Reusable base
- Disposable cartridge

X-Ray Free Navigation System

Our Solution

Reusable Base

Includes water suction port

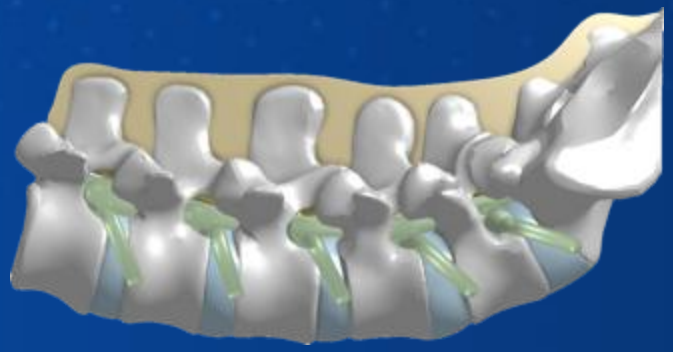
Disposable Cartridges

Compact & easily shipped

Cervical Models

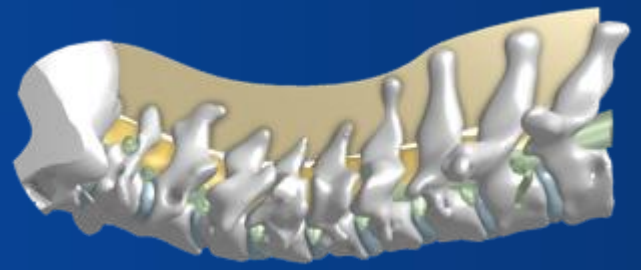
Lumbar Models

Product Portfolio

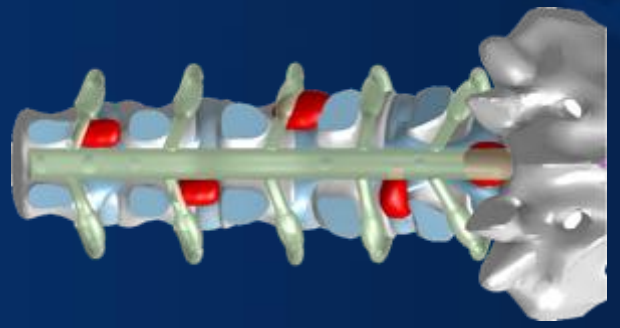


Lumbar Neutral Lordosis L1-S1

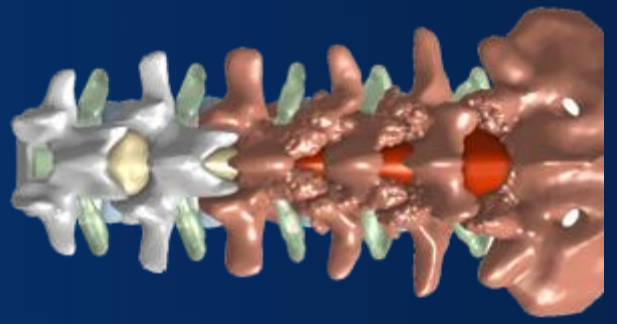
Lumbar Reduced Lordosis L1-S1



Cervical
O-T2



Lumbar Disc Herniations
L1-S1

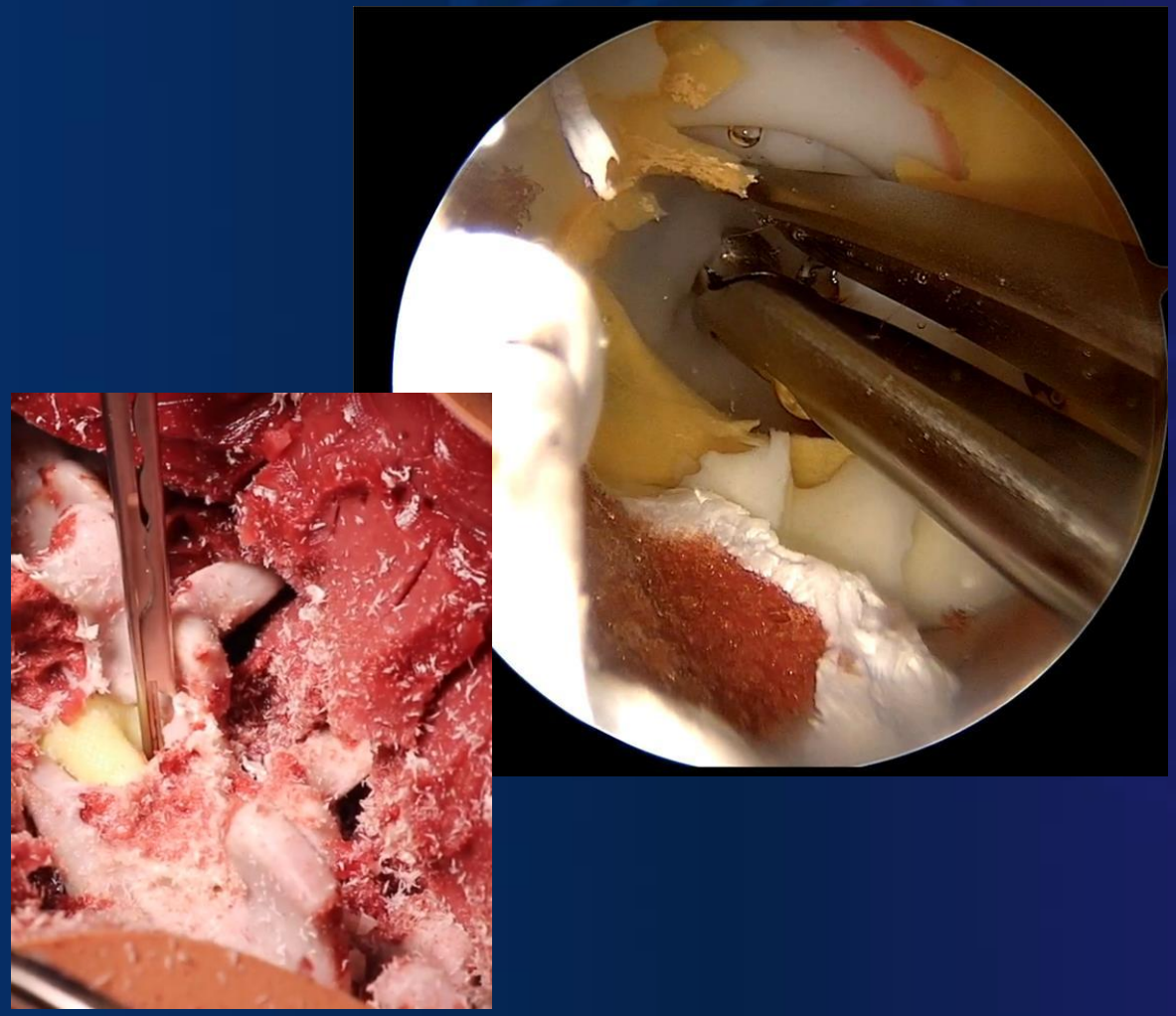


Lumbar Stenosis
L3-S1

Broad Capabilities at High Fidelity

Support wide range of approaches:

- Endoscopy
- Tubular retraction
- Percutaneous screws
- Open procedures, etc.



Flexible imaging:

- Excellent X-ray/CT image quality
- Convenient X-ray free navigation system

Excellent training experience

- Quick & easy setup
- Use nearly any instrumentation
- Integrated fluid handling
- Affordable price

How SYNspine Stands Out

- **Compatible with Open Approaches**
- **Compatible with Minimal Invasive Technologies**
  - ***Endoscopy (Monoportal & Biportal)***
  - ***Percutaneous Pedicle Screw Fixation***
  - ***Tubular Retractor Systems***
- **Compatible with Bipolar Radiofrequency (RF) Ablation**
  - *Making it relevant compared to other, non-compatible silicone models in the competition*
- **Portability**
  - *Designed to be easily transportable, allowing for flexible use in various locations without logistical challenges*
- **Simple to Use**
  - *The SYNspine is straightforward and user-friendly, requiring minimal technology and setup, which adds significant value*
- **Instruments & Imaging Compatibility**
  - *Surgeons or reps can use their own instruments and X-ray systems with the SYNspine, allowing them to practice with tools they are already familiar with*
- **X-Ray-Free Navigation**
  - *Eliminates the need for fluoroscopy, ensuring that the simulator can be used even if imaging equipment like a C-arm is unavailable*
  - *Reduces the risk of disruptions during training sessions, making it more reliable*

Range of Tissue Types

Vertebrae

- Hard cortex & porous cancellous
- Strong visual and haptic differentiation
- X-ray & power tools supported

Pathologies: stenosis, osteophytes

Ligaments

- Directionally stiff
- Realistic tearing
- RF ablation supported

Pathologies: hypertrophy

Discs

- Stiff annulus, gelatinous nucleus
- Discectomy, cages & balloons supported
- RF ablation supported

Pathologies: herniations

Range of Tissue Types

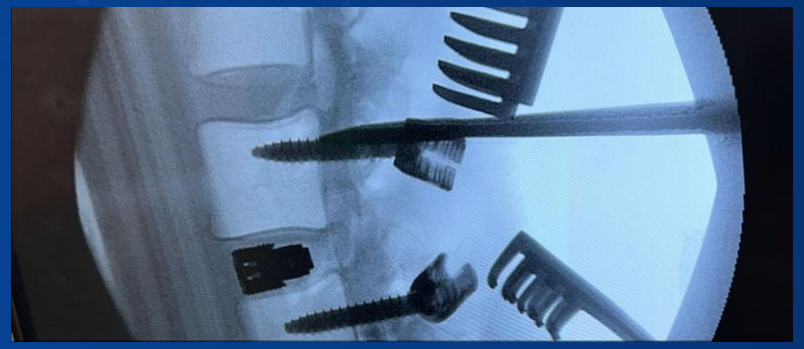
Spinal Cord & Nerves

- Dura with visual & haptic differentiation, CSF
- Nerve roots with ganglions
- Epidural fat

Skin & Muscles

- Selection of skin colors
- Muscle & ligaments can be RF ablated

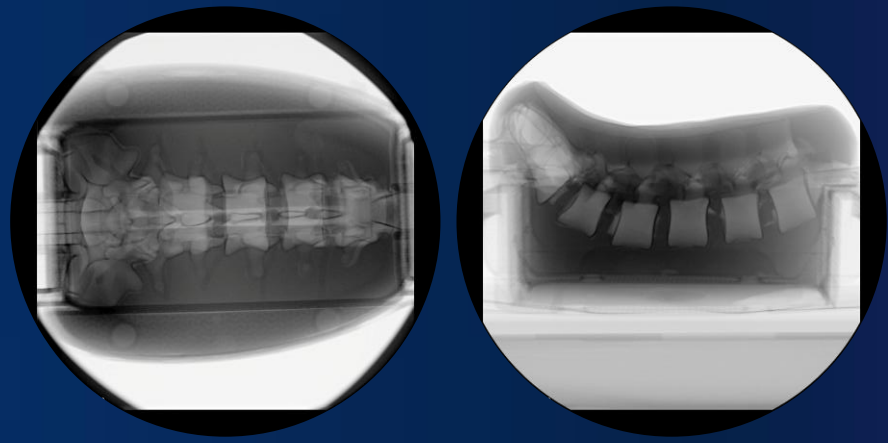
Compatibility - Imaging, Navigation & Robotics



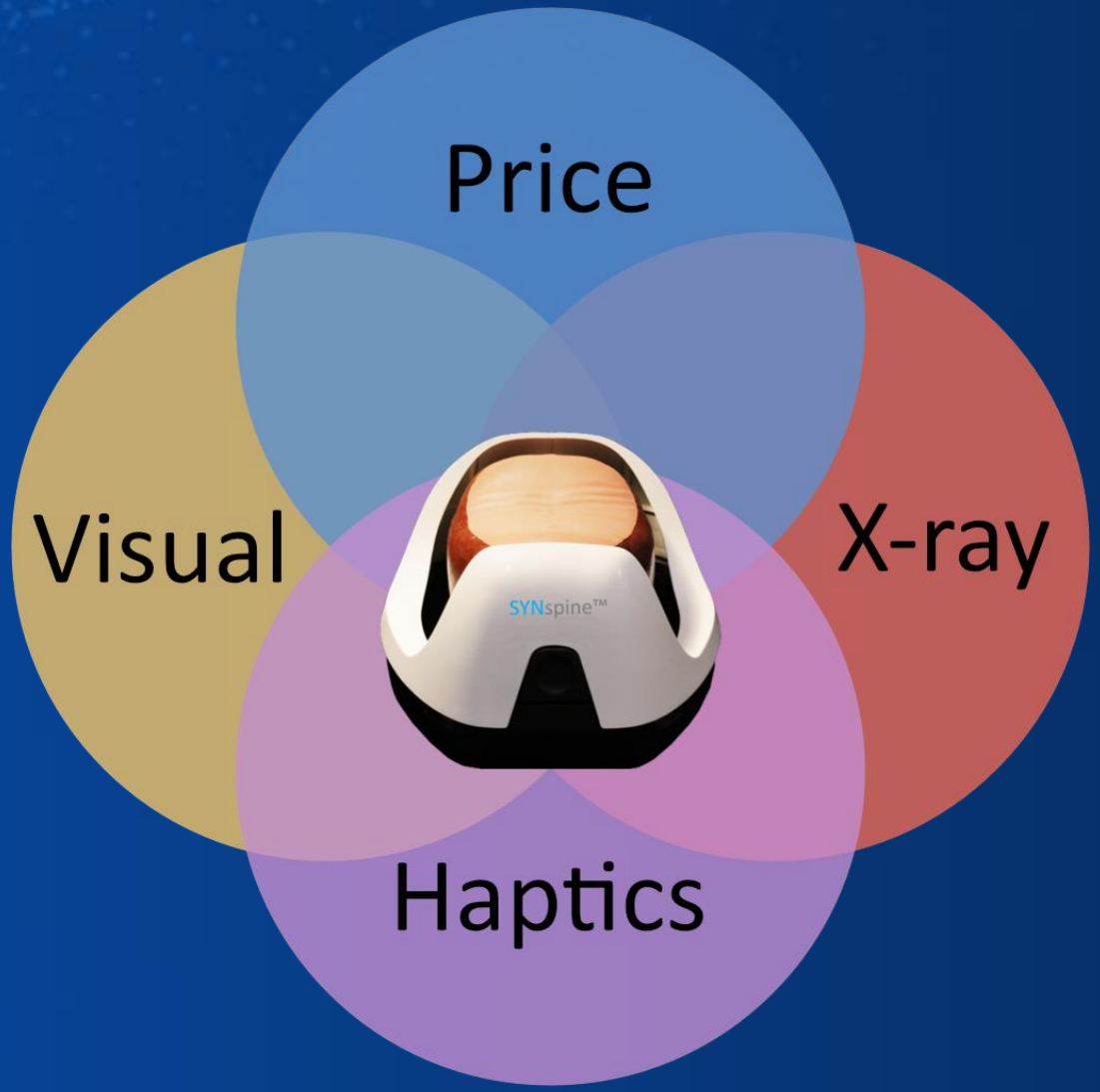
2D X-Ray
C-arm

3D X-Ray
O-arm

Navigation



2D Fluoroscopy



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