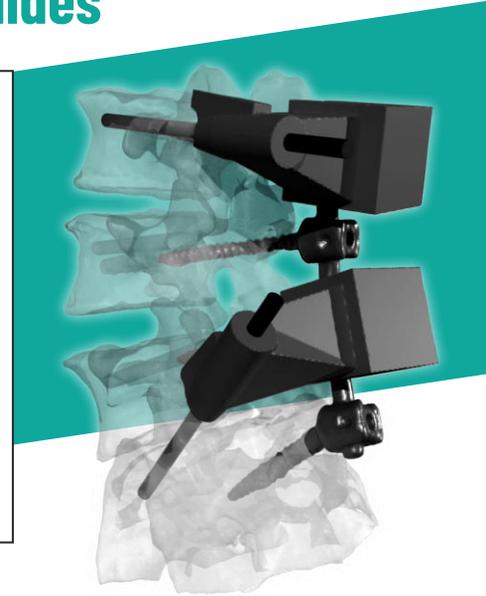


## Malposition of the left side pedicle screws. Replacement using 3D guides

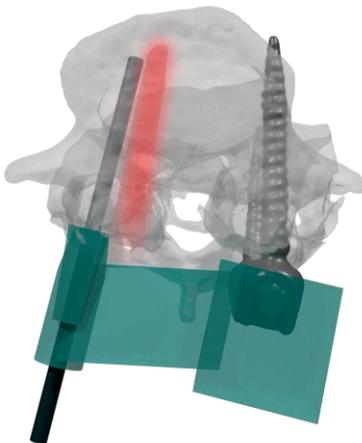
**Lumbar degenerative disease** is a term used by physicians to describe the natural degeneration of the lumbar spine overtime.

It includes conditions such as **spondylosis** (degeneration of the spinal discs as in osteoarthritis), **spinal stenosis** (narrowing of the spinal canal and the openings through which nerve roots exit) and **spondylolisthesis** (forward sliding of the vertebrae).

In those cases where surgery is required, the use of **TOR JIG® S** system enables an easy and fast pedicle screws placement.



<b>Surgeon</b>	Dr. Antonio Luis Mostaza Saavedra
<b>Hospital</b>	Complejo Asistencial Universitario de León
<b>Patient</b>	Woman with canal stenosis and multilevel spondyloarthritis, decompression and transpedicular arthrodesis L3-S1. She presented with sciatica and excruciating pain in her left lower extremity
<b>Pathology</b>	Malposition of left side pedicle screws
<b>Treatment</b>	Relocation and screws replacement using guides L3-S1
<b>System used</b>	<b>TOR JIG® S</b> : Anatomical biomodel and 4 personalized replacement surgical guides



**TOR JIG® S**

**Personalized surgical guides system for pedicle screws placement**

## Surgical planning

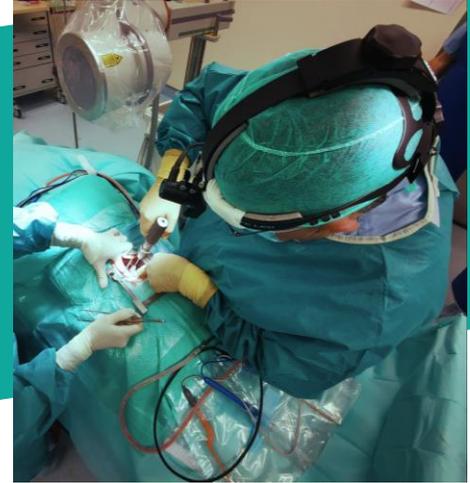
- Screws position and orientation are marked according to the surgeon's prescription.
- 3D anatomical model is made.
- Personalized surgical guides are designed for each case. Finally, the biomodel and the guides are 3D printed.

## Surgical process

In the CT scan after a previous surgery, it was identified that several pedicle screws on the left side were not correctly positioned, so it was decided to perform a new surgery to replace them.

In order to ensure that this new intervention is successful, the decision is made to use **TOR JIG® S**.

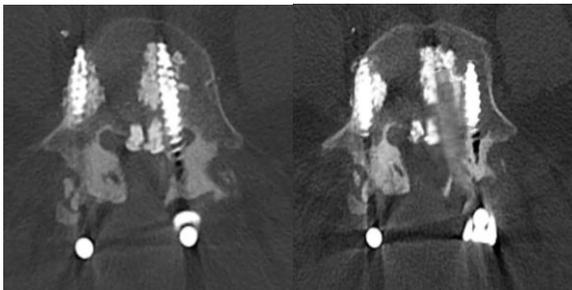
In these cases, surgical guides are simply snapped into place and are perfectly positioned when resting on the opposite side screw



## Performance

The use of guides in cases of reintervention is essential. In a replacement, it is sometimes necessary to mark an unusual drilling position and personalized surgical guides allow the screws to be placed more securely in the prescribed location and orientation. .

The surgery was a complete success. The patient confirmed that the pain had completely disappeared.



Preoperative CT



Postoperative monitoring

Information about the device. Custom Made Medical Device: Device made to be used on a patient by a practitioner for the surgical treatment of a pathology, being an invasive surgical product, transient use class IIa. Rule 6, Annex VIII, MDR.