CoLumbo
By Smart Soft Healthcare

INCEPTO

AI-powered solution for **interpretation of lumbar MRI**.

CoLumbo™ is an artificial intelligence augmented Radiology solution for MRI of the spine. It automatically analysis the main anatomical structures of the spine, detects 7 pathologies and produces measurements. It integratres automatically into the radiologist's usual reading environments, PACS or review stations.

CoLumbo™ provides, for lumbar MRI, the following measurements:

- Disk herniation (without sequestration)
- Disk bulging
- Central spinal stenosis
- Nerve root impingement
- Reduced vertebral height
- Reduced disk height
- Increased aortic diameter
- Spondylolisthesis

Functionalities :
- **Detection and characterization of lesions on spine :** CoLumbo™ automatically detects and characterizes 7 spine pathologies.
- **Automatic production of a structured and pre-filled report** directly available in PACS or your review station.

Key Benefits
■ Save time. Accelerated interpretation of examinations and benefit from AI assistance directly in your usual reading environment.
■ Confirm your diagnoses. Increase practitioner confidence in their diagnosis and reduce the number of missed diagnoses on spine MRI.
■ Structured communication with patients and correspondents, thanks to a synthetic colour summary diagram and a compartmentalized report structured in compartments.

Development and validation

✓ **CoLumbo™** bases its performance on algorithmic models trained from multicentre databases of 1500 human annotated patients

✓ Publication : Nils Christian Lehnen & al, Detection of Degenerative Changes on MR Images of the Lumbar Spine with a Convolutional Neural Network: A Feasibility Study, 19 may 2021.

✓ **CE marked**