

22nd International Conference on
Neurology and Neurophysiology

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23rd International Conference on
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**Roberto Cartolari***Regional Hospital of Bellinzona and Valleys San Giovanni, Switzerland***The degenerative lumbar spine: from healthy to early pathology**

The degenerative lumbar spine is one of the greatest causes of absence of work in the Western society and the costs for low back pain (LBP) are increasing. An early diagnosis of spine injury could be of great importance in the management of the disease. The advantages in diagnostic imaging allow us to visualize any component of the spine in many ways and through different points of view with low or no invasive methods. This lecture will point on the early changes that happen on spine and how to diagnose them. Starting from a finite elements (FE) “non pathological” functional model of the lumbar spine an examination of the findings in plane radiograms and in CT and MRI examinations in pediatric and younger patients, correlated with clinical pictures will be made. Early changes in lumbar spine biomechanics can often be seen in plain radiograms and confirmed with MRI examinations in orthostatism or with orthostatic simulation.

Biography

Roberto Cartolari has the Degree in Medicine and Surgery, University of Modena, 1980, board on Radiology, University of Modena in 1984, board on Neurology, University of Siena in 1994. He patented the device, “Axial Loader” and development of neuroradiological imaging techniques known as Axial Loaded - Computed Tomography - AL-CT and Axial Loaded Magnetic Resonance - AL-MR for the in vivo biomechanical study of the spine in 1992. He is currently the Senior Radiologist at the Radiology Service, Ospedale S Giovanni – EOC Bellinzona, Switzerland. He has authored and co-authored several scientific publications, abstracts and reports in national and international journals. He also collaborated on several chapters on international treaties of Neuroradiology. His main interests are diagnostic and spinal non-vascular interventional neuroradiology with special reference to CT and MRI, biomedical applications of virtual reality and biomechanics of the spine and joints. He is an Ordinary Member of the Italian Association of Neuroradiology – AINR; Full Member of the European Society of Neuroradiology – ESNR.

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