Q-Spine, the next step in MRI spine analysis

The Benefits of Q-Spine

- **Simplifies the analysis** of WB versus recumbent MRI by semiautomatic segmentation of the Lumbar-spine
- **Numerical quantification** of the relative changes
- **Reliable and coherent measures** by taking out the “human factor”
- **The possibility to evaluate the patient follow-up** with numerical evidence
- **Generation of a pdf report** which can be attached to the medical report

Q-Spine is a support tool for **Visualization and Quantification** of relative biomechanical changes of the spine comparing Weight-Bearing and Recumbent MRI examination.

Q-Spine provides a valuable support in evaluating biomechanical modifications
Q-Spine, another first by Esaote World Leader in Dedicated MRI

Q-Spine, how it works

- Q-Spine functionality is based on the semiautomatic segmentation of the spine structures (vertebral bodies, spinal canal, foramina) both in Recumbent and Weight-Bearing.
- The reconstructed volumes are used to perform automated measures of biomechanical modifications between Recumbent and Weight-Bearing positions.
- The following parameters are calculated: Vertebral wedging, Listhesis index, Intervertebral translation, Intervertebral angle, Spine section, Spine thickness, Spine curvature and Vertebral collapse.
- Additionally, Q-Spine comprises virtual navigation inside the spinal canal.

Q-Spine, visualization and reporting

Q-Spine compares the two MRI exams both as an image as also numerical. The later facilitates the comparison between Recumbent vs. Weight-Bearing for a better planning of surgical intervention.

Q-Spine, why it works so well

Using an extensive statistical evaluation process, a tailored segmentation algorithm for Fast Spin Echo T2 images from Esaote’s G-scan Brio systems has been developed to speed up the Q-Spine segmentation algorithm and reduce operator fine tuning.