**Comparison of radiography, CT, and MRI for the evaluation of spinal involvement in Morquio A**

<table>
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<th><strong>Strengths</strong></th>
<th><strong>Limitations</strong></th>
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| **Radiography**  | • Assess bone malformation  
                    • Assess spinal canal stenosis  
                    • Assess malalignment  
                    • Flexion-extension instability  
                    • Rapid  
                    • Inexpensive | • Poor soft tissue discrimination  
                    • Limited by overlapping structures  
                    • Ionising radiation  
                    • Limited to ossified structures |
| **CT**           | • Rapid (may obviate need for anaesthesia)  
                    • Multiplanar imaging of bony structures  
                    • Alternative method for assessing flexion-extension instability in difficult cases (recommend low radiation dose protocol)  
                    • Can assess some soft tissue components of canal stenosis and cord compression with appropriate filtering  
                    • Preoperative planning | • Suboptimal for visualising soft tissues and the spinal cord  
                    • Ionising radiation  
                    • More expensive and less accessible than plain film radiography |
| **MRI**          | • Multiplanar imaging  
                    • Ideal for soft tissue imaging  
                    • Preferred method for assessing spinal cord compression and myelomalacia  
                    • Flexion-extension imaging directly visualizes spinal cord  
                    • Demonstrate venous collaterals  
                    • Non-ionising radiation | • Long imaging times  
                    • May require anaesthesia  
                    • Metal and motion artifacts  
                    • Limited access  
                    • Expensive |

*Focus on area of interest only, with lowest possible dose technique to yield adequate signal-to-noise at bone algorithm displayed at bone window.*