## Additional file 1 - The final set of decision rules used to extract pathoanatomic findings from MRI narrative reports

Pathology	Expressions used in the narrative reports
Modic changes type 1	<ul> <li>Modic changes type 1</li> </ul>
,,	<ul> <li>Vertebral endplate signal change type 1</li> </ul>
	<ul><li>Endplate changes type 1</li></ul>
	<ul> <li>Increased signal intensity in the endplate</li> </ul>
Modic changes type 2	Modic changes type 2
	<ul> <li>Vertebral endplate signal change type 2</li> </ul>
	<ul> <li>Endplate changes type 2</li> </ul>
	<ul> <li>Fatty degeneration in the endplate</li> </ul>
Disc degeneration	<ul> <li>Light/moderate/severe degeneration</li> </ul>
	<ul> <li>Slight/moderate reduced disc height</li> </ul>
	<ul> <li>Collapsed disc space</li> </ul>
	<ul> <li>Reduced disc signal intensity</li> </ul>
	<ul><li>Spondylosis</li></ul>
	<ul> <li>Collapsed intervertebral space</li> </ul>
	Age related degeneration
Disc herniation	<ul><li>Herniation</li></ul>
	<ul><li>Extrusion</li></ul>
	<ul><li>Sequestration</li></ul>
	- Prolapse
Disc bulge	<ul> <li>General/broad-based/focal bulge</li> </ul>
	- Protrusion
	Prolapse-like protrusion
Nerve root compromise	Dislocation of nerve root
	– Entrapment
	<ul><li>Impression</li><li>Reduced space</li></ul>
	<ul><li>Reduced space</li><li>Compression</li></ul>
	- Compression - Compromise
	Affected nerve root
	<ul> <li>(NO nerve root compromise is registered if the</li> </ul>
	following expressions are used: 'touching', 'contact',
	'enhancement')
Foraminal stenosis	<ul> <li>Mild/moderate/severe/pronounced/absolute</li> </ul>
	foraminal stenosis
	<ul> <li>Reduced perineural fat signal</li> </ul>
	<ul> <li>No visible perineural fat</li> </ul>
	Reduced foraminal area
	<ul> <li>Formation of osteophytes in foramen</li> </ul>
Central stenosis	<ul> <li>Mild/moderate/severe/pronounced/absolute central</li> </ul>
	stenosis
	<ul> <li>Reduced fluid around nerve roots or medulla</li> </ul>
	<ul> <li>No visible fluid around nerve roots or medulla</li> </ul>

	<ul> <li>Reduced space in central canal</li> </ul>
	<ul> <li>Canal stenosis</li> </ul>
	<ul><li>Spinal stenosis</li></ul>
	<ul><li>Myelopathy</li></ul>
Facet joint arthrosis	<ul> <li>Mild/moderate/severe arthrosis</li> </ul>
	<ul> <li>Osteophytes in relation to facet joint</li> </ul>
	<ul> <li>Narrowing of joint space</li> </ul>
	<ul> <li>Cysts in relation to facet joint</li> </ul>
	<ul> <li>Degenerative changes</li> </ul>
	<ul> <li>Age related facet joint changes</li> </ul>
	– Ankylosis
	<ul><li>Spondylarthrosis</li></ul>
Uncovertebral arthrosis	<ul> <li>Mild/moderate/severe arthrosis</li> </ul>
	<ul> <li>Osteophytes in relation to uncovertebral joint</li> </ul>
Exclusion criteria	<ul><li>Subluxation</li></ul>
	– Cancer
	- Infection
	<ul> <li>Inflammatory arthritis</li> </ul>
	- Fracture
	<ul> <li>Previously surgery in cervical spine</li> </ul>
	<ul> <li>Other serious pathology</li> </ul>

<sup>\*</sup>The original document is in Danish and has been translated for this publication