

On-line Table 1: Ovid MEDLINE in-process and other nonindexed citations and Ovid MEDLINE 1946 to present

No.	Searches	Results	Search Type
1	Spinal diseases/or intervertebral disc degeneration/or intervertebral disc displacement/or exp spondylolysis/	34,995	Advanced
2	Low back pain/di, pa, ra, ri, us [Diagnosis, Pathology, Radiography, Radionuclide Imaging, Ultrasonography]	3787	Advanced
3	Lumbar Vertebrae/or zygapophyseal Joint/	38,596	Advanced
4	Osteoarthritis/or osteoarthritis, spine/	27,988	Advanced
5	Osteoarthritis/and (3 or exp spinal diseases/)	1637	Advanced
6	Spinal diseases/di, pa, ra, ri, us or intervertebral disc degeneration/di, pa, ra, ri, us or intervertebral disc displacement/di, pa, ra, ri, us or exp spondylolysis/di, pa, ra, ri, us	17,168	Advanced
7	Lumbar vertebrae/pa or zygapophyseal Joint/pa	6324	Advanced
8	2 or 5 or Osteoarthritis, spine/pa, ra, ri, di or 6 or 7	25,604	Advanced
9	Diagnostic imaging/or exp magnetic resonance imaging/or exp radiography/or exp radionuclide imaging/or exp tomography/or exp ultrasonography/	1,162,485	Advanced
10	8 and 9	10,811	Advanced
11	Symptomatic*.mp. and 10 [mp = title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	546	Advanced
12	10 and Asymptomatic*.mp. [mp = title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	364	Advanced
13	12 and (Comparative study/or cross-sectional studies/or cohort studies/or retrospective*.mp. or prospective*.mp.) [mp = title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	134	Advanced
14	10 and Questionnaires/	133	Advanced
15	or/12-14	481	Advanced
16	15 and (Comparative study/or cross-sectional studies/or cohort studies/or retrospective*.mp. or prospective*.mp. or reproducibility of results/or "sensitivity and specificity"/)	219	Advanced
17	15 and Case-control study/	28	Advanced
18	16 or 17	232	Advanced
19	10 and Modic.mp. [mp = title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	117	Advanced
20	18 or 19	337	

On-line Table 2: EMBASE 1988 to 2014 week 16

No.	Searches	Results	Search Type
1	Spinal diseases/or intervertebral disc degeneration/or intervertebral disc displacement/or exp spondylolysis/	22,247	Advanced
2	Lumbar vertebrae/or zygapophyseal Joint/	11,470	Advanced
3	Osteoarthritis/or osteoarthritis, spine/	48,654	Advanced
4	Osteoarthritis/and (2 or exp spinal diseases/)	2766	Advanced
5	Diagnostic imaging/or exp magnetic resonance imaging/or exp radiography/or exp radionuclide imaging/or exp tomography/or exp ultrasonography/	1,727,168	Advanced
6	Exp spine disease/and exp degenerative disease/	8885	Advanced
7	Low back pain/	32,683	Advanced
8	or/1-4,6-7	108,803	Advanced
9	8 and Modic.mp. [mp = title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	243	Advanced
10	5 and 8	31,092	Advanced
11	9 or 10	31,135	Advanced
12	Asymptomatic disease/or asymptomatic.mp.	124,137	Advanced
13	11 and 12	1022	Advanced
14	Comparative study/or cross-sectional study/or case-control study/or cohort*.mp. or prospective*.mp. or retrospective*.mp. [mp = title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	196,7431	Advanced
15	13 and 14	296	Advanced
16	Limit 15 to human	278	Advanced
17	Remove duplicates from 16	276	
18	([Vertebral or spin*] adj2 [endplate or "end-plate"]),mp. [mp = title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	493	Advanced
19	14 and 18	115	Advanced
20	5 and 19	85	

On-line Table 3: Summary of included studies

Study, Journal, Year	Asymptomatic Patients		Symptomatic Patients	Age Range (yr) (Mean ± SD)	Imaging Modality	Population	Sciatica/Radicular Pain Included?	Selection	Comparability	Outcome
	Al-Saeed et al, <i>Asian Spine J</i> , 2012 ²¹	214	214	9	16–29	MRI	Young Arabs	Not specified	★★★	★
Bennett et al, <i>Skeletal Radiol</i> , 2006 ²²	4	9	46	15–20	MRI	Young gymnasts	Not specified	★★★	★	★★★
Boos et al, <i>Spine</i> , 1995 ²³	46	46	42	20–50	MRI	North American adults	Yes	★★★	★	★★★
Carragee et al, <i>Spine</i> , 2000 ⁴⁴	54	42	240	22–57	MRI	American adults	Not specified	★★★	★	★★★
Kovacs et al, <i>Neuroradiology</i> , 2014 ⁴⁵	64	240	197	(45)	MRI	Middle-aged Spaniards	Not specified	★★★	★	★★★
Paajanen et al, <i>Spine</i> , 1989 ⁵²	206	197	75	20–20	MRI	Young Finnish adults	Not specified	★★★	★	★★★
Paajanen et al, <i>Arch Orthop Trauma Surg</i> , 1997 ⁴⁶	34	108	108	18–49	MRI	Finnish teens, middle-aged adults	Not specified	★★★	★	★★★
Visuri et al, <i>Mil Med</i> , 2005 ³¹	90	51	30	18–26	MRI	Finnish conscripts	Not specified	★★★	★	★★★
Koyama et al, <i>Int J Sports Med</i> , 2013 ⁴⁷	53	30	70	(19.7 ± 1.0)	MRI	Young gymnasts	Not specified	★★★	★	★★★
Hancock, <i>Eur Spine J</i> , 2012 ⁴⁸	30	30	396	18–50	MRI	Australian adults	Yes	★★★	★	★★★
Kaneoka et al, <i>Am J Sports Med</i> , 2007 ⁴⁹	23	387	39	15–27 (19.6)	MRI	Elite swimmers	Not specified	★★★	★	★★★
Takatalo et al, <i>Spine</i> , 2012 ²⁴	167	39	396	18–21	MRI	Young Finnish adults	Not specified	★★★	★	★★★
Tertti et al, <i>Radiology</i> , 1991 ⁵⁰	39	396	396	15–15	MRI	Finnish teens	Yes	★★★	★	★★★
Takatalo et al, <i>Spine</i> , 2011 ⁵¹	169	396	396	18–21	MRI	Young Finnish adults	Not specified	★★★	★	★★★