

**Title: Expert Consensus-Based Criteria for Identifying Lumbar Facet Joint Pain in Primary Care: Development
Using Factor Analysis and a Modified Delphi Method**

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Supplementary Table 1A. Factor loadings and communality of each diagnostic item (Two-factor model)

Diagnostic items	Factor number		
	1	2	h^2
Numbness or paresthesia in the leg	0.88	0.24	0.81
Leg pain	0.81	0.18	0.68
Neurological abnormalities	0.78	-0.07	0.62
Intervertebral disc herniation on MRI	0.77	0.13	0.60
Positive straight leg raise test	0.66	-0.41	0.64
Positive femoral nerve stretch test	0.66	-0.36	0.59
Numbness or paresthesia in the groin	0.65	0.17	0.43
STIR high-intensity in the vertebral body on MRI	0.62	-0.08	0.40
Modic changes in the vertebral body on MRI	0.61	0.13	0.38
High-intensity zone in the intervertebral disc on MRI	0.60	-0.13	0.39
One-point tenderness in the paravertebral area	0.16	0.70	0.50
Pain exacerbated by lumbar extension	-0.10	0.67	0.47
Pain exacerbated by lumbar rotation	-0.09	0.64	0.43
Unilateral pain	0.20	0.57	0.35

Supplementary Table 1B. Factor contribution and variance explained (Two-factor model)

	Factor number	
	1	2
Variance explained	5.1	2.2
Proportion of variance explained	37%	15%
Cumulative proportion of variance explained	37%	52%

Supplementary Table 1C. Correlation coefficients between factors (Two-factor model)

	Factor number	
	1	2
1	-	-0.05
2		-

Supplementary Table 2A. Factor loadings and communality of each diagnostic item (Three-factor model)

Diagnostic items	Factor number			h^2
	1	2	3	
Neurological abnormalities	0.94	-0.11	-0.08	0.82
Numbness or paresthesia in the groin	0.87	-0.21	0.18	0.67
Numbness or paresthesia in the leg	0.86	0.10	0.24	0.86
Leg pain	0.83	0.05	0.18	0.75
Positive femoral nerve stretch test	0.66	0.05	-0.37	0.63
Positive straight leg raise test	0.64	0.09	-0.42	0.66
High-intensity zone in the intervertebral disc on MRI	0.00	0.90	-0.14	0.83
STIR high-intensity in the vertebral body on MRI	0.08	0.82	-0.09	0.74
Lumbar compression fracture on X-ray	-0.35	0.78	0.00	0.51
Modic changes in the vertebral body on MRI	0.10	0.76	0.15	0.66
Intervertebral disc herniation on MRI	0.35	0.62	0.14	0.71
One-point tenderness in the paravertebral area	0.15	0.01	0.69	0.5
Pain exacerbated by lumbar extension	-0.07	-0.06	0.67	0.46
Pain exacerbated by lumbar rotation	-0.05	-0.07	0.63	0.41
Unilateral pain	0.10	0.13	0.57	0.35

Supplementary Table 2B. Factor contribution and variance explained (Three-factor model)

	Factor number		
	1	2	3
Variance explained	4.2	3.2	2.2
Proportion of variance explained	28%	21%	14%
Cumulative proportion of variance explained	28%	49%	64%

Supplementary Table 2C. Correlation coefficients between factors (Three-factor model)

	Factor number		
	1	2	3
1	-	0.42	-0.05
3		-	-0.02
2			-

Supplementary Table 3A. Factor loadings and communality of each diagnostic item (Five-factor model)

Diagnostic items	Factor number					h^2
	1	2	3	4	5	
Numbness or paresthesia in the leg	0.94	0.22	0.00	-0.17	0.04	0.94
Neurological abnormalities	0.89	-0.09	0.16	0.08	-0.03	0.88
Leg pain	0.84	0.13	-0.14	0.02	-0.01	0.78
Numbness or paresthesia in the groin	0.78	-0.12	0.02	0.15	0.19	0.66
Modic changes in the vertebral body on MRI	0.20	0.79	0.13	-0.15	0.09	0.69
High-intensity zone in the intervertebral disc on MRI	0.04	0.79	0.08	0.09	-0.17	0.77
Lumbar compression fracture on X-ray	-0.37	0.77	0.11	0.13	0.05	0.62
STIR high-intensity in the vertebral body on MRI	0.11	0.75	0.02	0.09	-0.16	0.73
Intervertebral disc herniation on MRI	0.42	0.64	-0.05	0.01	0.01	0.74
Pain exacerbated by lumbar flexion	-0.18	0.22	0.92	0.07	0.20	0.80
Pain improved by lumbar extension	0.02	0.08	0.80	-0.09	-0.03	0.65
Pain exacerbated by lumbar extension	0.10	0.01	-0.56	-0.07	0.40	0.61
Pain exacerbated in the face-washing posture	0.21	-0.02	0.54	-0.12	0.11	0.34
Costovertebral angle tenderness	-0.17	0.09	-0.10	0.70	0.26	0.50
Positive femoral nerve stretch test	0.38	-0.11	0.03	0.67	-0.14	0.78
Positive red flags	-0.06	0.16	-0.15	0.67	0.01	0.52
Positive straight leg raise test	0.36	-0.07	0.12	0.61	-0.18	0.75
Positive Patrick's test	0.08	-0.03	0.04	0.58	-0.01	0.37
One-point tenderness at the facet joint under fluoroscopy	-0.03	-0.10	0.16	0.09	0.81	0.62
One-point tenderness in the paravertebral area	0.23	0.11	-0.15	-0.02	0.72	0.62
Facet joint effusion on MRI	-0.04	-0.10	0.28	0.07	0.66	0.43
Pain exacerbated by lumbar rotation	0.03	0.01	-0.21	-0.03	0.54	0.40

Supplementary Table 3B. Factor contribution and variance explained (Five-factor model)

	Factor number				
	1	2	3	4	5
Variance explained	4.0	3.2	2.4	2.4	2.3
Proportion of variance explained	18%	14%	11%	11%	11%
Cumulative proportion of variance explained	18%	32%	43%	54%	64%

Supplementary Table 3C. Correlation coefficients between factors (Five-factor model)

Factor number				
1	2	3	4	5

1	-	0.27	0.16	0.31	-0.11
3		-	-0.01	0.33	-0.08
4			-	0.14	-0.28
5				-	-0.19
2					-