

Figure S1 Comparison of Pfirmann score and TEPS between males and females within the OP group. (A) Pfirmann score; (B) TEPS. OP, osteoporosis; TEPS, total endplate damage score; L1-S1, the average Pfirmann score or average TEPS at the L1/2-L5/S1 segments. **, $P \leq 0.01$.

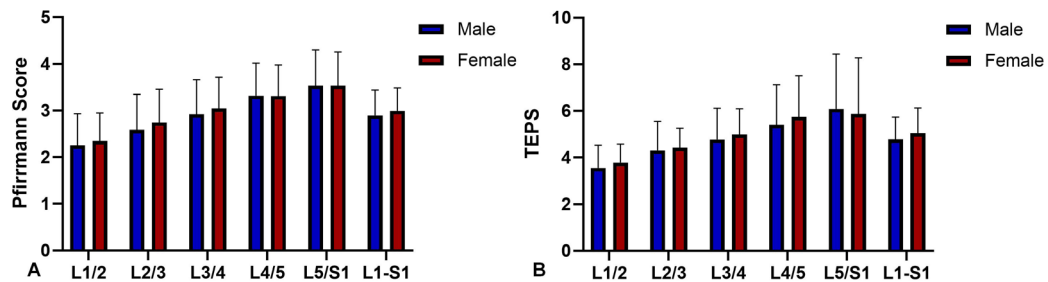


Figure S2 Comparison of Pfirmann score and TEPS between males and females within the control group. (A) Pfirmann score; (B) TEPS. TEPS, total endplate damage score; L1-S1, the average Pfirmann score or average TEPS at the L1/2-L5/S1 segments.

Table S1 Demographic characteristics of OP groups

Demographics	OP group		
	Female (n=98)	Male (n=52)	P value
Age (years)	61.04±6.73	62.67±6.69	0.103
Height (cm)	160.70±6.98	155.67±6.68	<0.001***
Weight (kg)	58.78±10.06	56.89±8.57	0.232
BMI (kg/m ²)	22.66±3.24	23.54±3.50	0.136
BMD (g/cm ²)	0.79±0.15	0.75±0.08	0.042*
OSTS			0.833
1	10	4	
2	66	36	
3	15	10	
4	7	2	

Values are given as mean ± SD. *, $P \leq 0.05$; ***, $P \leq 0.001$. OP, osteoporosis; BMD, bone mineral density; BMI, body mass index; OSTs, osteophyte score; SD, standard deviation.

Table S2 Demographic characteristics of control groups

Demographics	Control group		P value
	Female (n=90)	Male (n=60)	
Age (years)	58.12±6.85	61.96±7.11	0.077
Height (cm)	161.60±7.96	160.64±9.07	0.624
Weight (kg)	60.68±8.89	65.43±14.17	0.107
BMI (kg/m ²)	23.26±3.20	24.93±3.36	0.126
BMD (g/cm ²)	1.10±0.16	1.09±0.16	0.676
OSTS			0.10
1	19	7	
2	54	44	
3	14	7	
4	3	2	

Values are given as mean ± SD. BMD, bone mineral density; BMI, body mass index; OSTs, osteophyte score; SD, standard deviation.

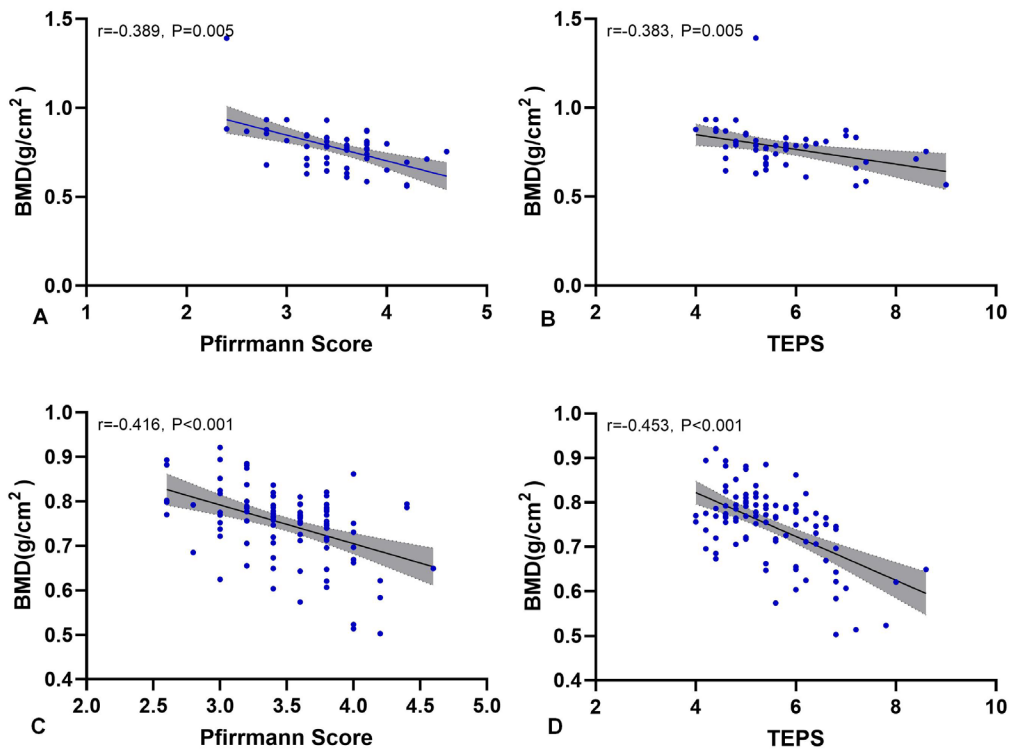


Figure S3 The correlation between BMD and intervertebral disc parameters in both male and female patients within the OP group. (A) Pfirrmann score for male patients; (B) TEPS for male patients; (C) Pfirrmann score for female patients; (D) TEPS for female patients. OP, osteoporosis; BMD, bone mineral density; TEPS, total endplate damage score.

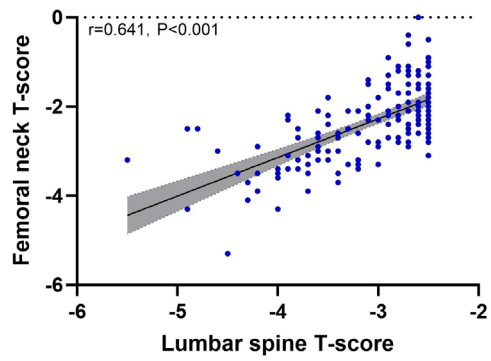


Figure S4 The correlation between lumbar spine T-score and femoral neck T-score.