

Supplementary Material

Supplementary Table 1 Bone mineral density data of in overall and women patients with primary biliary cholangitis with or without osteoporosis

Variables	Overall patients (n = 268)			Women patients (n = 236)		
	Osteoporosis (n = 122)	No osteoporosis (n = 146)	P value	Osteoporosis (n = 111)	No osteoporosis (n = 125)	P value
Lumbar BMD (L1-L4), g/cm ²	0.710 ± 0.097	0.923 ± 0.092	< 0.001	0.707 ± 0.098	0.915 ± 0.088	< 0.001
T-score	-3.11 ± 0.87	-1.18 ± 0.81	< 0.001	-3.10 ± 0.88	-1.19 ± 0.80	< 0.001
Z-score	-1.73 ± 0.96	-0.28 ± 0.92	< 0.001	-1.65 ± 0.94	-0.24 ± 0.91	< 0.001
Femoral neck BMD, g/cm ²	0.561 ± 0.095	0.732 ± 0.095	< 0.001	0.559 ± 0.097	0.724 ± 0.091	< 0.001
T-score	-2.62 ± 0.85	-1.12 ± 0.81	< 0.001	-2.62 ± 0.87	-1.13 ± 0.82	< 0.001
Z-score	-1.33 ± 0.88	-0.22 ± 0.84	< 0.001	-1.31 ± 0.90	-0.23 ± 0.85	< 0.001

						0.001
Total hip BMD, g/cm ²	0.696 ± 0.166	0.857 ± 0.092	< 0.001	0.694 ± 0.171	0.845 ± 0.083	<
						0.001
T-score	-2.17 ± 0.91	-0.79 ± 0.70	< 0.001	-2.18 ± 0.93	-0.80 ± 0.70	<
						0.001
Z-score	-1.20 ± 0.93	-0.17 ± 0.75	< 0.001	-1.17 ± 0.95	-0.16 ± 0.76	<
						0.001

Data are presented as mean ± standard deviation. BMD: Bone mineral density.

Supplementary Table 2 Prevalence of osteoporosis in different subgroups for overall and women patients with primary biliary cholangitis

Group	Overall patients			Women patients		
	Number, events/total	Prevalence, %	<i>P</i> value	Number, events/total	Prevalence, %	<i>P</i> value
Total	122/268	45.5		111/236	47.0	
Sex			0.177			
Men	11/32	34.4				
Women	111/236	47.0				
Age group (year)			< 0.001			< 0.001
29-39	4/13	30.8		4/12	33.3	
40-49	9/53	17.0		8/51	15.7	
50-59	43/93	46.2		39/82	47.6	
60-69	44/77	57.1		40/65	61.5	
≥70	22/32	68.8		20/26	76.9	
<i>P</i> value for trend		< 0.001			< 0.001	
Cirrhosis status			< 0.001			< 0.001

Non-cirrhosis	25/107	23.4		20/92	21.7
Compensated	27/53	50.9		27/48	56.3
Decompensated	70/108	64.8		64/96	66.7
<i>P</i> value for trend		< 0.001			< 0.001
Histological stage			< 0.001		< 0.001
I	4/38	10.5		4/36	11.1
II	6/27	22.2		5/23	21.7
III	9/25	36.0		9/23	39.1
IV	39/73	53.4		38/68	55.9
<i>P</i> value for trend		< 0.001			< 0.001
BMI (kg/m ²)			< 0.001		0.002
< 18.5	14/18	77.8		12/16	75.0
18.5-23.9	87/174	50.0		79/152	52.0
24-27.9	17/61	27.9		16/53	30.2
≥28	4/15	26.7		4/15	26.7
<i>P</i> value for trend		< 0.001			< 0.001

Postmenopausal			< 0.001
status			
Yes	98/174	56.3	
No	13/62	21.0	

BMI: Body mass index; CI: Confidence interval.

Supplementary Table 3 Description of the characteristics of previous studies on prevalence of osteoporosis assessed by DEXA in patients with primary biliary cholangitis

Ref.	Year of publication	Country	Gender	No. PBC	Prevalence of osteoporosis	Histologic stage	BMD method
Menon <i>et al</i> ^[1]	2001	United States	F/M	176	19.9% (35/176)	Stage I-IV	DEXA
Boulton-Jones <i>et al</i> ^[2]	2004	United Kingdom	F/M	85	26.7% (12/45)	Stage I-IV	DEXA
Guañabens <i>et al</i> ^[3]	2005	Spain	F	142	32.4% (46/142)	Stage I-IV	DEXA
Floreani <i>et al</i> ^[4]	2005	Italy	F	35	14.2% (5/35)	Stage IV	DEXA
Guichelaar <i>et al</i> ^[5]	2006	United States	F/M	151	43.7% (66/151)	No	DPA/DEXA
Benetti <i>et al</i> ^[6]	2008	Italy	F	118	28.0% (33/118)	No	DEXA
Wariaghli <i>et al</i> ^[7]	2010	Morocco	F/M	33	51.5% (17/33)	No	DEXA
Guañabens <i>et al</i> ^[8]	2010	Spain	F	185	30.6% (55/175)	Stage I-IV	DEXA
Our study	2023	China	F/M	268	45.5% (122/268)	Stage I-IV	DEXA

BMD: Bone mineral density; DEXA: Dual-energy X-ray absorptiometry; DPA: Dual photon absorptiometry.

Reference

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