Table S1 Univariate and multivariate OR of risk factor for the sarcopenia

Characteristics	Univariable		Multivariable	
	OR (95% CI)	P value	OR (95% CI)	P value
Age	1.05 (1.02–1.11)	0.01	1.02 (0.97–1.08)	0.42
Male	0.41 (0.14–1.20)	0.10	0.07 (0.01–0.37)	<0.01
BMI	0.67 (0.55–0.78)	<0.01	0.71 (0.54–0.91)	<0.01
Laboratory parameters				
ALP	1.00 (1.00–1.00)	0.78	1.00 (1.00–1.00)	0.36
GGT	1.00 (1.00–1.00)	0.70		
ALT	1.00 (1.00–1.01)	0.85		
AST	1.00 (1.00–1.01)	0.75		
TBIL	1.00 (0.99–1.00)	0.63		
Albumin	1.02 (0.96–1.08)	0.57		
Leukocyte	0.90 (0.73–1.10)	0.30		
Thrombocyte	1.00 (0.99–1.00)	0.53		
INR	0.36 (0.06–1.94)	0.24		
Co-morbidities				
AIH	0.59 (0.23–1.50)	0.26	0.84 (0.19–4.01)	0.82
PSC	NA			
Hypercholesteremia	0.46 (0.16–1.32)	0.15		
Sjogren syndrome	2.37 (0.85–7.69)	0.12		
Other immune diseases	3.33 (0.83–22.4)	0.13		
MELD score	0.96 (0.87–1.07)	0.46		
Liver cirrhosis	1.38 (0.59–3.21)	0.45		
Radiographic analysis				
L3 SMI				
L3 SMD				
IMAC				
SATI	0.95 (0.93–0.97)	<0.01	0.92 (0.87–0.97)	<0.01
VATI	0.97 (0.95–0.99)	<0.01	1.00 (0.96–1.04)	0.97
VSR	0.66 (0.28–1.57)	0.35		
Mean liver density	1.02 (0.96–1.08)	0.48		
Myosteatosis	3.06 (1.39–7.05)	<0.01	20.00 (4.67–119.00)	<0.01
Sarcopenic obesity	NA			

OR, odds ratio; CI, confidence interval; BMI, body mass index; ALP, alkaline phosphatase; GGT, gamma-glutamyl transferase; ALT, alanine aminotransferase; AST, aspartate aminotransferase; TBIL, total bilirubin; INR, international normalized ratio; AIH, autoimmune hepatitis; PSC, primary sclerosing cholangitis; MELD, Model for End-Stage Liver Disease; L3, third lumbar vertebra; SMI, skeletal muscle index; SMD, skeletal muscle density; IMAC, intramuscular adipose tissue content; SATI, subcutaneous adipose tissue index; VATI, visceral adipose tissue index; VSR, visceral fat to subcutaneous fat ratio.

Table S2 Univariate and multivariate OR of risk factor for the myosteatosis

Characteristics	Univariable		Multivariable	
	OR (95% CI)	P value	OR (95% CI)	P value
Age	1.08 (1.04–1.13)	<0.01	1.08 (1.03–1.15)	<0.01
Male	1.81 (0.62–5.42)	0.28	6.05 (0.99–47.16)	0.06
BMI	1.00 (0.99–1.00)	0.97	0.88 (0.72–1.06)	0.18
Laboratory parameters				
ALP	1.00 (0.99–1.00)	0.14		
GGT	1.00 (1.00–1.00)	0.28		
ALT	0.99 (0.97–1.00)	0.04	0.99 (0.97–1.00)	0.21
AST	0.99 (0.97–1.00)	0.01		
TBIL	1.00 (0.99–1.00)	0.43		
Albumin	1.06 (1.00–1.13)	0.05	1.00 (0.92–1.10)	0.94
Leukocyte	1.20 (0.98–1.49)	0.08		
Thrombocyte	1.00 (1.00–1.01)	0.67		
INR	2.02 (0.38–11.72)	0.41		
Co-morbidities				
AIH	0.29 (0.09–0.79)	0.02	0.49 (0.11–2.00)	0.34
PSC	0.42 (0.02–3.39)	0.46		
Hypercholesteremia	0.42 (0.13–1.21)	0.12		
Sjogren syndrome	1.38 (0.54–3.52)	0.50		
Other immune diseases	1.33 (0.39–4.53)	0.64		
MELD score	0.98 (0.87–1.08)	0.66		
Liver cirrhosis	0.85 (0.37–1.96)	0.69		
Radiographic analysis				
L3 SMI				
L3 SMD				
IMAC				
SATI	1.02 (1.00–1.04)	0.05	1.08 (1.04–1.14)	<0.01
VATI	1.03 (1.01–1.05)	<0.01	1.03 (0.99–1.07)	0.19
VSR	3.19 (1.3–8.72)	0.02		
Mean liver density	0.95 (0.90–1.01)	0.11		
Sarcopenic	3.06 (1.39–7.05)	0.01	18.45 (4.09–113.02)	<0.01
Sarcopenic obesity	13.33 (3.50–87.69)	<0.01		

OR, odds ratio; CI, confidence interval; BMI, body mass index; ALP, alkaline phosphatase; GGT, gamma-glutamyl transferase; ALT, alanine aminotransferase; AST, aspartate aminotransferase; TBIL, total bilirubin; INR, international normalized ratio; AIH, autoimmune hepatitis; PSC, primary sclerosing cholangitis; MELD, Model for End-Stage Liver Disease; L3, third lumbar vertebra; SMI, skeletal muscle index; SMD, skeletal muscle density; IMAC, intramuscular adipose tissue content; SATI, subcutaneous adipose tissue index; VATI, visceral adipose tissue index; VSR, visceral fat to subcutaneous fat ratio.

Table S3 Univariate and multivariate OR of risk factor for the sarcopenic obesity

Characteristics	Univariable		Multivariable	
	OR (95% CI)	P value	OR (95% CI)	P value
Age	1.07 (1.02–1.13)	<0.01	1.06 (0.97–1.17)	0.200
Male	1.43 (0.30–5.18)	0.61	0.25 (0.02–2.15)	0.23
BMI	1.10 (0.94–1.28)	0.22	0.96 (0.73–1.25)	0.79
Laboratory parameters				
ALP	1.00 (0.99–1.00)	0.22	1.00 (9.86–1.00)	0.52
GGT	1.00 (1.00–1.00)	0.89		
ALT	0.99 (0.97–1.00)	0.42		
AST	0.98 (0.95–1.00)	0.06		
TBIL	0.96 (0.90–1.00)	0.09		
Albumin	1.10 (1.01–1.21)	0.04		
Leukocyte	1.43 (1.09–1.92)	0.01	1.31 (0.92–2.01)	0.17
Thrombocyte	1.00 (1.00–1.01)	0.21		
INR	0.25 (0.01–3.33)	0.38		
Co-morbidities				
AIH	0.50 (0.08–1.97)	0.38		
PSC	NA			
Hypercholesteremia	0.65 (0.09–2.86)	0.061		
Sjogren syndrome	0.91 (0.20–3.15)	0.90		
Other immune diseases	1.20 (0.17–5.15)	0.83		
MELD score	0.74 (0.52–0.95)	0.05		
Liver cirrhosis	0.58 (0.20–1.83)	0.32		
Radiographic analysis				
L3 SMI				
L3 SMD				
IMAC				
SATI	1.03 (1.00–1.05)	0.05	1.02 (0.96–1.01)	0.55
VATI	1.07 (1.04–1.10)	<0.01	1.05 (1.01–1.11)	0.02
VSR	8.70 (2.8–31.95)	<0.01		
Mean liver density	0.97 (0.90–1.05)	0.53		
Sarcopenic	NA			
Myosteatosis	13.33 (3.5–87.69)	<0.01	8.46 (1.50–79.29)	0.03

OR, odds ratio; CI, confidence interval; BMI, body mass index; ALP, alkaline phosphatase; GGT, gamma-glutamyl transferase; ALT, alanine aminotransferase; AST, aspartate aminotransferase; TBIL, total bilirubin; INR, international normalized ratio; AIH, autoimmune hepatitis; PSC, primary sclerosing cholangitis; MELD, Model for End-Stage Liver Disease; L3, third lumbar vertebra; SMI, skeletal muscle index; SMD, skeletal muscle density; IMAC, intramuscular adipose tissue content; SATI, subcutaneous adipose tissue index; VATI, visceral adipose tissue index; VSR, visceral fat to subcutaneous fat ratio.