

Supplementary Materials

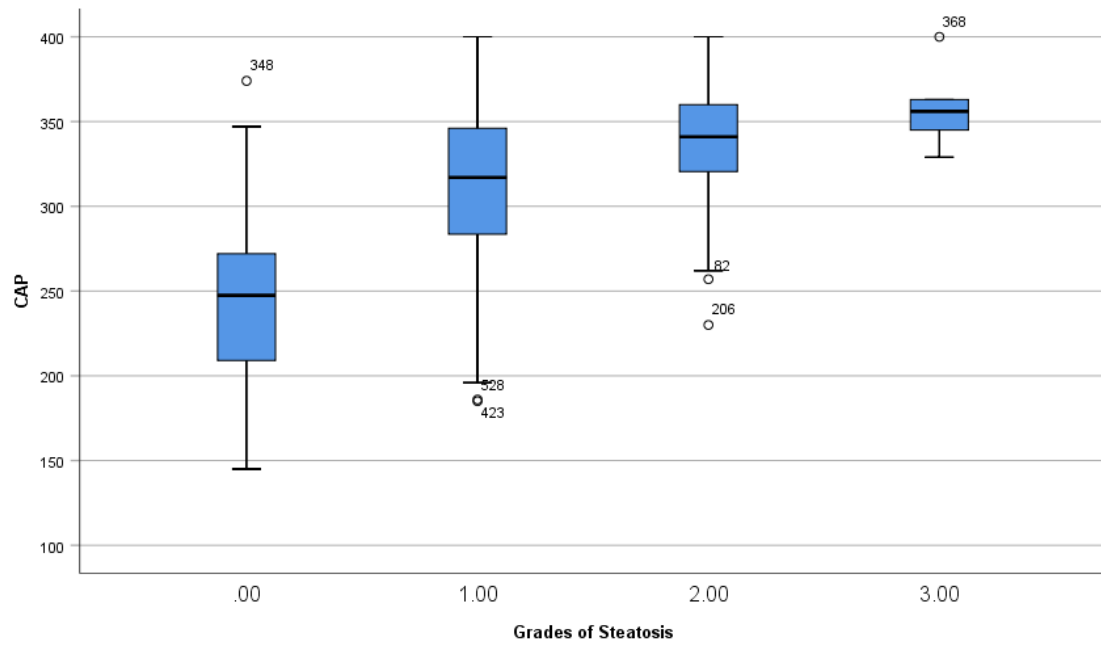
Controlled attenuation parameter factors and steatosis grading in metabolic dysfunction-associated steatotic liver disease

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Supplementary Figure 1. Box plot of CAP distribution for various grades of steatosis.

Supplementary Table 1. Training set patient characteristics

	Training set (<i>n</i> = 619)	Overweight group (<i>n</i> = 418)	Normal-weight group (<i>n</i> = 201)	Value	<i>P</i>
Age, year	43.66 ± 13.21	42.17 ± 12.81	46.75 ± 13.53	<i>t</i> = 4.086	< 0.001
Male sex	424, 68.49%	307, 73.34%	117, 58.21%	X = -20.606	< 0.001
BMI, kg/m ²	27.11 ± 4.30	29.01 ± 3.91	23.16 ± 1.37	<i>t</i> = 14.602	< 0.001
Waist-hip Ratio	0.97 ± 0.54	1.00 ± 0.64	0.90 ± 0.12	<i>t</i> = -1.329	0.185
Diabetes	36, 5.82%	26, 6.22%	10, 4.98%	X = 1.126	0.289
Hypertension	145, 23.42%	103, 24.64%	42, 20.90%	X = 0.409	0.523
TC, mmol/L	1.88 ± 1.15	1.98 ± 1.21	1.68 ± 0.99	<i>t</i> = -2.731	0.007
TG, mmol/L	5.14 ± 1.07	5.17 ± 1.00	5.08 ± 1.19	<i>t</i> = -0.848	0.397
HDL, mmolL	1.19 ± 0.29	1.15 ± 0.64	1.27 ± 0.30	<i>t</i> = 4.384	< 0.001
LDL, mmolL	4.25 ± 17.24	3.91 ± 13.38	4.99 ± 23.38	<i>t</i> = 0.640	0.532
ALT, UL	68.07 ± 55.55	77.03 ± 58.92	49.04 ± 41.78	<i>t</i> = -5.810	< 0.001

AST, UL	39.74 ± 29.38	43.10 ± 31.71	32.73 ± 22.29	$t = -3.996$	< 0.001
ALP, UL	78.95 ± 23.76	78.32 ± 22.39	80.24 ± 26.41	$t = 0.891$	0.373
GGT, UL	63.81 ± 62.23	65.14 ± 50.96	61.05 ± 80.90	$t = -0.729$	0.466
CAP, dB/m	308.82 ± 49.85	317.88 ± 44.95	289.20 ± 54.26	$t = -6.527$	< 0.001
PDFF, %	21.40 ± 14.98	23.73 ± 15.27	15.92 ± 12.77	$t = -5.549$	< 0.001

Data are expressed as numbers (%) unless otherwise indicated. Continuous variables are presented as mean ± standard deviation (SD). HDL: High-density lipoprotein; LDL: low-density lipoprotein; ALT: alanine aminotransferase; AST: aspartate aminotransferase; ALP: alkaline phosphatase; GGT: gamma-glutamyl transferase.

Supplementary Table 2. Training set and validation set patient characteristics

	Training Set ($n = 619$)	Validation Set ($n = 139$)	Value	P
Age, year	43.66 ± 13.21	45.08 ± 11.84	$t = -1.16$	0.244
Male sex	424, 68.49%	89, 64.03%	$X = 1.036$	0.309
BMI, kg/m ²	27.11 ± 4.30	27.14 ± 4.10	$t = -0.08$	0.936
Diabetes	36, 5.82%	7, 5.04%	$X = 0.078$	0.780
Hypertension	145, 23.42%	35, 25.18%	$X = 0.213$	0.645
TC, mmol/L	1.88 ± 1.15	1.91 ± 1.12	$t = -0.22$	0.824
TG, mmol/L	5.14 ± 1.07	5.18 ± 1.02	$t = -0.41$	0.686
HDL, mmol/L	1.19 ± 0.29	1.23 ± 0.35	$t = -1.42$	0.156
LDL, mmol/L	4.25 ± 17.24	3.16 ± 0.88	$t = 0.72$	0.474
ALT, UL	68.07 ± 55.55	63.15 ± 52.30	$t = 0.93$	0.351
AST, UL	39.74 ± 29.38	37.83 ± 32.24	$t = 0.67$	0.506
ALP, UL	78.95 ± 23.76	79.45 ± 23.78	$t = -0.22$	0.826
GGT, UL	63.81 ± 62.23	63.96 ± 64.77	$t = -0.02$	0.981
CAP, dB/m	308.82 ± 49.85	309.70 ± 48.21	$t = -0.19$	0.852
PDFF, %	21.40 ± 14.98	0.16 ± 0.10	$t = 5.34$	< 0.001

Supplementary Table 3. Model fit and statistical tests for multiple regression analysis

Cohort	R	R-squared (R ²)	Adjusted R-squared	SE	Durbin-Watson
Normal-weight group	0.460	0.211	0.185	48.504	2.010
Overweight group	0.336	0.113	0.106	46.142	2.024

Supplementary Table 4. Cohort CAP group *t*-test

Cohort	Grades of steatosis	Levin's variance equality test		Mean equal <i>t</i> -test	
		F	P	<i>t</i>	P
Total cohort	S0 vs. S1	0.560	0.813	-10.928	< 0.001
	S1 vs. S2	13.332	< 0.001	-5.621	< 0.001
	S2 vs. S3	0.424	0.517	-1.393	0.167
Normal-weight group	S0 vs. S1	0.002	0.968	-9.246	< 0.001
	S1 vs. S2	4.921	0.028	-2.905	0.004
Overweight group	S0 vs. S1	0.772	0.380s	-5.583	< 0.001
	S1 vs. S2	7.976	0.005	-3.454	0.001
	S2 vs. S3	0.515	0.476	-1.270	0.209

Supplementary Table 5. Results of CAP in the diagnosis of fatty liver degeneration ($\geq$ S1) in recent years

	AUROC	Cut-off, dB/m	Sensitivity	Specificity
Beyers <i>et al.</i> (20) (<i>n</i> = 581, 2021)	0.95	268.5	0.89	1
Ferraioli <i>et al.</i> (21) (<i>n</i> = 72, 2021)	0.85	273	0.80	0.83
Petroff <i>et al.</i> (22) (<i>n</i> = 1277, 2021)	0.80	294	0.79	0.84