

Changes in Clinical Manifestations Due to AFLD Retyping Based on the New MAFLD Criteria: An Observational Study Based on the National Inpatient Sample Database

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Supplementary Table S1. Diagnostic Codes Used for Including and Excluding Patients

Diagnoses	ICD-10 Codes
Alcoholic fatty liver disease	K700
Hepatic cirrhosis	K7031, K7031, K717, K7460, K7469, P7881
Hepatic carcinoma	C220, C221, C227
Virus hepatitis	A5145, B0081, B150, B159, B160, B161, B162, B169, B170, B1710, B1711, B172, B178, B179, B180, B181, B182, B188, B189, B190, B1910, B1911, B1920, B1921, B199, B251, B2681, B581, B942
Toxic hepatitis	K712, K713, K714, K7150, K7151, K716
Autoimmune hepatitis	K754
Wilson's disease	E8301
Liver cancer	C220, C221, C222, C223, C224, C227, C228, C229
Pregnancy	Z331,Z332,Z333,Z3400,Z3401,Z3402,Z3403,Z3480,Z3481,Z3482,Z3483,Z3491,Z3492,Z3493,Z36,Z360,Z361,Z362,Z363,Z364,Z365,Z3681,Z3682,Z3683,Z3684,Z3685,Z3686,Z3687,Z3688,Z3689,Z368A,Z369,Z3A00,Z3A01,Z3A08,Z3A09,Z3A10,Z3A11,Z3A12,Z3A13,Z3A14,Z3A15,Z3A16,Z3A17,Z3A19,Z3A18,Z3A20,Z3A21,Z3A22,Z3A23,Z3A24,Z3A25,Z3A26,Z3A27,Z3A28,Z3A29,Z3A30,Z3A31,Z3A32,Z3A33,Z3A34,Z3A35,Z3A36,Z3A37,Z3A38,Z3A39,Z3A40,Z3A41,Z3A42,Z3A49,O000,O0000,O0001

ICD, International Classification of Disease.

Supplementary Table S2 Diagnostic Codes Used for Identifying Comorbidities

Diagnoses	ICD-10 Codes
Myocardial infarction	I2101, I2102, I2109, I2111, I2119, I2121, I2129, I213, I214, I219, I21A1, I21A9, I220, I221, I222, I228, I229, I252
Coronary atherosclerosis	I2583, I2584
Peripheral vascular disease	I700, I701, I70201, I70202, I70203, I70208, I70209, I70211, I70212, I70213, I70218, I70219, I70221, I70222, I70223, I70228, I70229, I70231, I70232, I70233, I70234, I70235, I70238, I70239, I70241, I70242, I70243, I70244, I70245, I70248, I70249, I7025, I70261, I70262, I70263, I70268, I70269, I70291, I70292, I70293, I70298, I70299, I70301, I70302, I70303, I70308, I70309, I70311, I70312, I70313, I70318, I70319, I70321, I70322, I70323, I70328, I70329, I70331, I70332, I70333, I70334, I70335, I70338, I70339, I70341, I70342, I70343, I70344, I70345, I70348, I70349, I7035, I70361, I70362, I70363, I70368, I70369, I70391, I70392, I70393, I70398, I70399, I70401, I70402, I70403, I70408, I70409, I70411, I70412, I70413, I70418, I70419, I70421, I70422, I70423, I70428, I70429, I70431, I70432, I70433, I70434, I70435, I70438, I70439, I70441, I70442, I70443, I70444, I70445, I70448, I70449, I7045, I70461, I70462, I70463, I70468, I70469, I70491, I70492, I70493, I70498, I70499, I70501, I70502, I70503, I70508, I70509, I70511, I70512, I70513, I70518, I70519, I70521, I70522, I70523, I70528, I70529, I70531, I70532, I70533, I70534, I70535, I70538, I70539, I70541, I70542, I70543, I70544, I70545, I70548, I70549, I7055, I70561, I70562, I70563, I70568, I70569, I70591, I70592, I70593, I70598, I70599, I70601, I70602, I70603, I70608, I70609, I70611, I70612, I70613, I70618, I70619, I70621, I70622, I70623, I70628, I70629, I70631, I70632, I70633, I70634, I70635, I70638, I70639, I70641, I70642, I70643, I70644, I70645, I70648, I70649, I7065, I70661, I70662, I70663, I70668, I70669, I70691, I70692, I70693, I70698, I70699, I70701, I70702, I70703, I70708, I70709, I70711, I70712, I70713, I70718, I70719, I70721, I70722, I70723, I70728, I70729, I70731, I70732, I70733, I70734, I70735, I70738, I70739, I70741, I70742, I70743, I70744, I70745, I70748, I70749, I7075, I70761, I70762, I70763, I70768, I70769, I70791, I70792, I70793, I70798, I70799, I708, I7090, I7091, I7092, I7100, I7101, I7102, I7103, I711, I712, I713, I714, I715, I716, I718, I719, I720, I721, I722, I723, I724, I725, I726, I728, I729, I7300, I7301, I731, I7381, I7389, I739, I7401, I7409, I7410, I7411, I7419, I742, I743, I744, I745, I748, I749, I770, I771, I772, I773, I774, I775, I776, I7770, I7771, I7772, I7773, I7774, I7775, I7776, I7777, I7779, I77810, I77811, I77812, I77819, I7789, I779

Cerebrovascular disease

I6000, I6001, I6002, I6010, I6011, I6012, I602, I6020, I6021, I6022, I6030, I6031, I6032, I604, I6050, I6051, I6052, I606, I607, I608, I609, I610, I611, I612, I613, I614, I615, I616, I618, I619, I6200, I6201, I6202, I6203, I621, I629, I6300, I63011, I63012, I63013, I63019, I6302, I63031, I63032, I63033, I63039, I6309, I6310, I63111, I63112, I63113, I63119, I6312, I63131, I63132, I63133, I63139, I6319, I6320, I63211, I63212, I63213, I63219, I6322, I63231, I63232, I63233, I63239, I6329, I6330, I63311, I63312, I63313, I63319, I63321, I63322, I63323, I63329, I63331, I63332, I63333, I63339, I63341, I63342, I63343, I63349, I6339, I6340, I63411, I63412, I63413, I63419, I63421, I63422, I63423, I63429, I63431, I63432, I63433, I63439, I63441, I63442, I63443, I63449, I6349, I6350, I63511, I63512, I63513, I63519, I63521, I63522, I63523, I63529, I63531, I63532, I63533, I63539, I63541, I63542, I63543, I63549, I6359, I636, I638, I6381, I6389, I639, I6501, I6502, I6503, I6509, I651, I6521, I6522, I6523, I6529, I658, I659, I6601, I6602, I6603, I6609, I6611, I6612, I6613, I6619, I6621, I6622, I6623, I6629, I663, I668, I669, I670, I671, I672, I673, I674, I675, I676, I677, I6781, I6782, I6783, I67841, I67848, I67850, I67858, I6789, I679, I680, I682, I688, I6900, I6901, I69010, I69011, I69012, I69013, I69014, I69015, I69018, I69019, I69020, I69021, I69022, I69023, I69028, I69031, I69032, I69033, I69034, I69039, I69041, I69042, I69043, I69044, I69049, I69051, I69052, I69053, I69054, I69059, I69061, I69062, I69063, I69064, I69065, I69069, I69090, I69091, I69092, I69093, I69098, I6910, I6911, I69110, I69111, I69112, I69113, I69114, I69115, I69118, I69119, I69120, I69121, I69122, I69123, I69128, I69131, I69132, I69133, I69134, I69139, I69141, I69142, I69143, I69144, I69149, I69151, I69152, I69153, I69154, I69159, I69161, I69162, I69163, I69164,

	I69165, I69169, I69190, I69191, I69192, I69193, I69198, I6920, I6921, I69210, I69211, I69212, I69213, I69214, I69215, I69218, I69219, I69220, I69221, I69222, I69223, I69228, I69231, I69232, I69233, I69234, I69239, I69241, I69242, I69243, I69244, I69249, I69251, I69252, I69253, I69254, I69259, I69261, I69262, I69263, I69264, I69265, I69269, I69290, I69291, I69292, I69293, I69298, I6930, I6931, I69310, I69311, I69312, I69313, I69314, I69315, I69318, I69319, I69320, I69321, I69322, I69323, I69328, I69331, I69332, I69333, I69334, I69339, I69341, I69342, I69343, I69344, I69349, I69351, I69352, I69353, I69354, I69359, I69361, I69362, I69363, I69364, I69365, I69369, I69390, I69391, I69392, I69393, I69398, I6980, I6981, I69810, I69811, I69812, I69813, I69814, I69815, I69818, I69819, I69820, I69821, I69822, I69823, I69828, I69831, I69832, I69833, I69834, I69839, I69841, I69842, I69843, I69844, I69849, I69851, I69852, I69853, I69854, I69859, I69861, I69862, I69863, I69864, I69865, I69869, I69890, I69891, I69892, I69893, I69898, I6990, I6991, I69910, I69911, I69912, I69913, I69914, I69915, I69918, I69919, I69920, I69921, I69922, I69923, I69928, I69931, I69932, I69933, I69934, I69939, I69941, I69942, I69943, I69944, I69949, I69951, I69952, I69953, I69954, I69959, I69961, I69962, I69963, I69964, I69965, I69969, I69990, I69991, I69992, I69993, I69998, G450, G451, G452, G453, G454, G458, G459, G460, G461, G462, G463, G464, G465, G466, G467, G468
Arrhythmia	I470, I471, I472, I479, I480, I481, I4811, I4819, I482, I4820, I4821, I483, I484, I4891, I4892, I491, I492, I493, I4940, I4949, I495, I498, I499
Chronic obstructive pulmonary disease	J40, J410, J411, J418, J42, J430, J431, J432, J438, J439, J440, J441, J449, J4520, J4521, J4522, J4530, J4531, J4532, J4540, J4541, J4542, J4550, J4551, J4552, J45901, J45902, J45909, J45990, J45991, J45998, J470, J471, J479
Asthma	J4520, J4521, J4522, J4530, J4531, J4532, J4540, J4541, J4542, J4550, J4551, J4552, J45901, J45902, J45909, J45990, J45991, J45998
Chronic respiratory failure	J9610, J9611, J9612
Acute respiratory failure	J80, J95821, J95822, J9600, J9601, J9602
Acute hepatic failure	K7040, K7041, K7200, K7201
Chronic hepatic failure	K7210, K7211
Chronic kidney disease	N181, N182, N183, N1830, N1831, N1832, N184, N185, N186, N189, R880
Chronic kidney failure	N1830, N1831, N1832, N184, N185, N186

Acute kidney failure	N170, N171, N172, N178, N179, N19
Overweight	Z6825, Z6826, Z6827, Z6828, Z6829, E663, DE660A, E669O
Obesity (grade 1-3)	Z6830, Z6831, Z6832, Z6833, Z6834, DE660B, Z6835, Z6836, Z6837, Z6838, Z6839, DE660C, Z6841, Z6842, Z6843, Z6844, Z6845, E6601, E662, DE660E, DE660F, DE660G, DE660H
Hyperlipidemia	Hypercholesteremia E780, E7800, E7801 Hypertriglyceridemia E781 Hyperlipemia E782, E784, E7849, E785, E783, E7841
Hypertension	H35031, H35032, H35033, H35039, G932, I10, I110, I119, I120, I129, I130, I1310, I1311, I132, I150, I151, I152, I158, I159, I160, I161, I169, I674, R030, I973
Hyperglycemia	Prediabetes R7301, R7302, R7303 T1DM E108, E109, E1010, E1011, E1021, E1022, E1029, E10311, E10319, E10321, E103213, E103212, E103211, E103219, E10329, E103293, E103292, E103291, E103299, E10331, E103313, E103312, E103311, E103319, E10339, E103393, E103392, E103391, E103399, E10341, E103413, E103412, E103411, E103419, E10349, E103493, E103492, E103491, E103499, E10351, E103513, E103512, E103511, E103519, E103523, E103522, E103521, E103529, E103533, E103532, E103531, E103539, E103543, E103542, E103541, E103549, E103553, E103552, E103551, E103559, E10359, E103593, E103592, E103591, E103599, E1036, E1039, E1037X3, E1037X2, E1037X1, E1037X9, E1040, E1041, E1042, E1044, E1043, E1049, E1051, E1052, E1059, E10610, E10618, E10620, E10621, E10622, E10628, E10630, E10638, E10641, E10649, E1065, E1069 T2DM

E1100, E1101, E1111, E1110, E1122, E1121, E1129, E11311, E11319, E11321, E113213, E113212, E113211, E113219, E11329, E113293, E113292, E113291, E113299, E11331, E113313, E113312, E113311, E113319, E11339, E113393, E113392, E113391, E113399, E11341, E113413, E113412, E113411, E113419, E11349, E113493, E113492, E113491, E113499, E11351, E113513, E113512, E113511, E113519, E113523, E113522, E113521, E113529, E113533, E113532, E113531, E113539, E113543, E113542, E113541, E113549, E113553, E113552, E113551, E113559, E11359, E113593, E113592, E113591, E113599, E1136, E1139, E1144, E1143, E1141, E1140, E1142, E1149, E1152, E1151, E1159, E11620, E11621, E11622, E11628, E11610, E11618, E11630, E11638, E1137X3, E1137X2, E1137X1, E1137X9, E11641, E11649, E1165, E1169, E118, E119

ICD, International Classification of Diseases; T1DM, Type 1 diabetes mellitus; T2DM, Type 2 diabetes mellitus.

Supplementary Table S3. Differences in the risk of comorbidities between AFLD&MAFLD and single AFLD.

Variables	Univariable model		Multivariable model	
	OR (95% CI)	<i>P-value</i>	OR (95% CI)	<i>P-value</i>
Myocardial infarction				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	2.10 (1.50-2.95)	<0.001	1.51 (1.06-2.16)	0.022
Coronary atherosclerosis				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	2.64 (2.27-3.06)	<0.001	1.99(1.70-2.35)	<0.001
Cerebrovascular disease				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.55(1.03-2.35)	0.034	1.22(0.80-1.86)	0.365
Arrhythmia				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.37(1.20-1.56)	<0.001	1.33(1.16-1.52)	<0.001
Asthma				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.40(1.17-1.68)	<0.001	1.40(1.17-1.68)	<0.001
COPD				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.49 (1.32-1.68)	<0.001	1.19 (1.02-1.38)	0.023
CKD				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.61(1.31-1.97)	<0.001	1.36(1.06-1.74)	0.014
Peripheral vascular disease				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.82(1.23-2.71)	0.002	1.26(0.83-1.89)	0.209

Adjusted for age, sex, race, smoking habit, and other comorbidities correspondingly.

Abbreviation: AFLD, alcoholic fatty liver disease; AFLD&MAFLD, alcoholic fatty liver disease and metabolic-associated fatty liver disease (dual-etiology fatty liver disease); COPD, chronic obstructive pulmonary disease; CKD, chronic kidney disease; OR, odds ratio.

Supplementary Table S4. Differences in the risk of organ failures between AFLD&MAFLD and single AFLD.

Variables	Univariable model		Multivariable model	
	OR (95% CI)	<i>P-value</i>	AORs (95% CI)	<i>P-value</i>
Acute heart failure				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.89 (1.49-2.40)	<0.001	1.62(1.03-2.53)	0.036
Chronic heart failure				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.50(1.15-1.95)	0.002	1.62(1.21-2.18)	0.001
Acute respiratory failure				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.19 (1.01-1.40)	0.004	1.09 (0.91-1.31)	0.361
Chronic respiratory failure				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	2.18 (1.17-4.05)	0.012	1.88(0.94-3.73)	0.074
Acute kidney failure				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.55 (1.38-1.74)	<0.001	1.22 (1.07-1.39)	<0.001
Chronic kidney failure				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.98(1.34-2.91)	<0.001	1.65(1.09-2.51)	0.018
Acute hepatic failure				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	1.48(1.02-2.15)	0.038	1.27(0.867-1.873)	0.218
Chronic hepatic failure				
AFLD	1 (Reference)		1 (Reference)	
AFLD&MAFLD	3.25(0.97-10.93)	0.057	2.34(0.65-8.38)	0.191

Adjusted for age, sex, race, comorbidities, smoking habit, and other organ failures correspondingly.

Abbreviation: AFLD, alcoholic fatty liver disease; AFLD&MAFLD, alcoholic fatty liver disease and metabolic-associated fatty liver disease (dual-etiology fatty liver disease); OR, odds ratio.