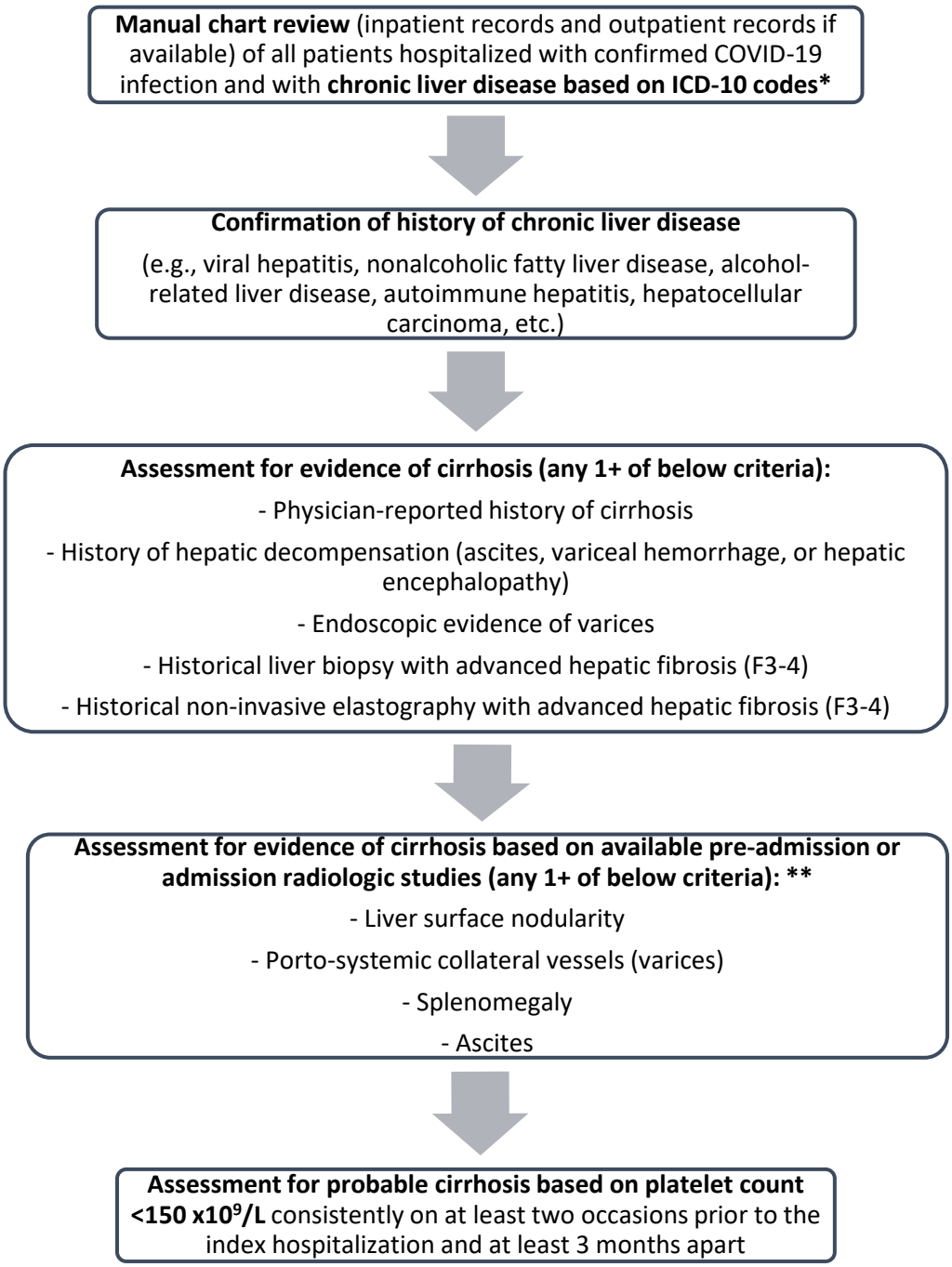
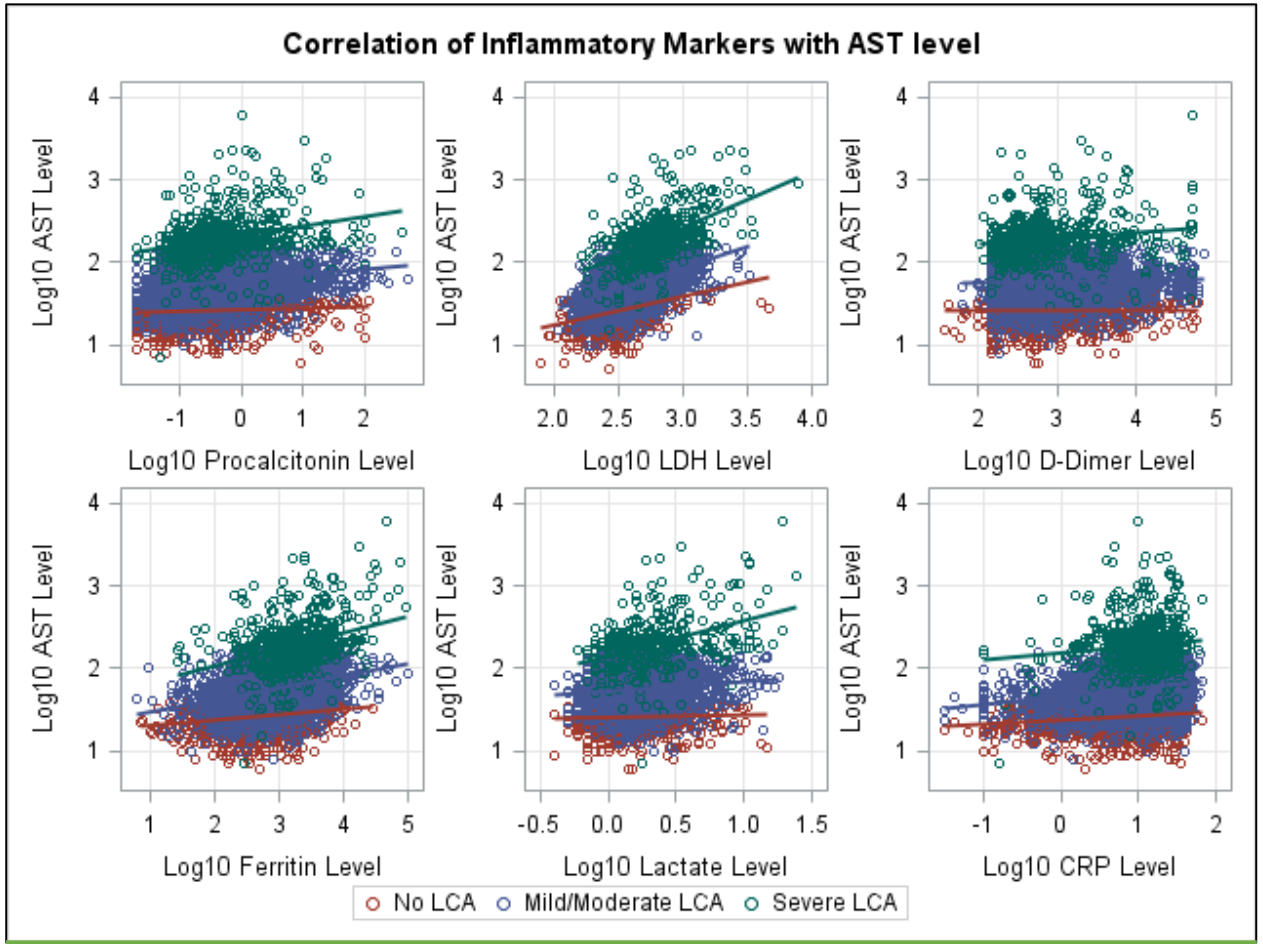
Supplementary Figure 1. Approach used to identify patients with chronic liver disease and cirrhosis.



*ICD-10 diagnostic codes used to screen for chronic liver disease were K70 (alcoholic liver disease), K71 (toxic liver disease), K73 (chronic hepatitis, not elsewhere classified), K74 (fibrosis and cirrhosis of liver), K75 (other inflammatory liver diseases), K76 (other diseases of liver), B18 (chronic viral hepatitis), and B19 (unspecified viral hepatitis).

**Patients with alternate explanations for radiologic findings (such as liver surface nodularity due to hepatic metastases, splenomegaly due to known hematologic disorder, or ascites due to peritoneal carcinomatosis) were not included as having cirrhosis unless they also fulfilled other criteria for cirrhosis.

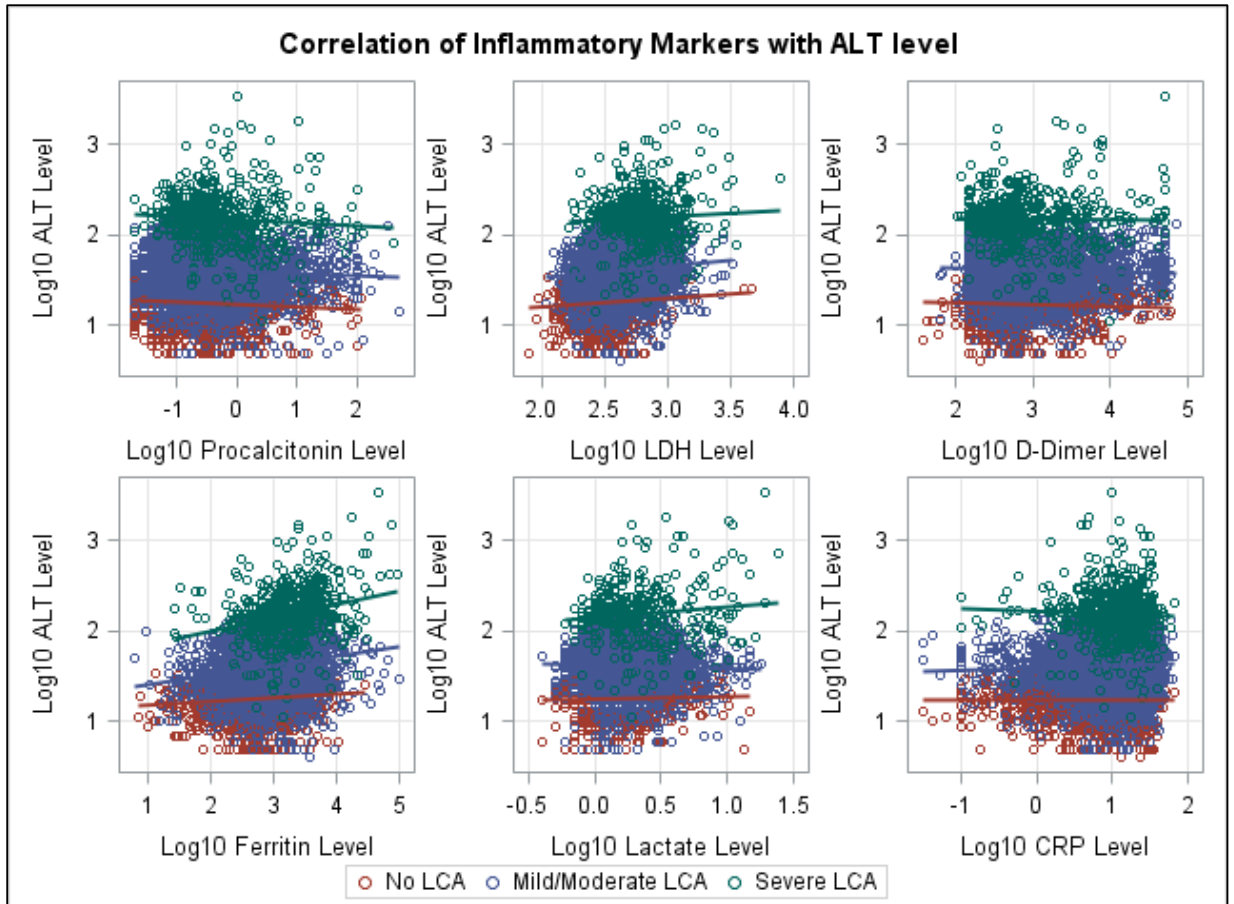
Supplementary Figure 2. Correlation of inflammatory markers with AST level in various degrees of LCA.



Inflammatory Markers	No LCA (N=3096) Correlation Coefficient R [95% CI]	Mold to Moderate LCA (N=6,933) Correlation Coefficient R [95% CI]	Severe LCA (N=827) Correlation Coefficient R [95% CI]
Procalcitonin [ng/mL]	0.08 [0.03, 0.11]	0.19 [0.17, 0.20]	0.27 [0.19, 0.35]
LDH [U/L]	0.40 [0.36, 0.44]	0.49 [0.46, 0.51]	0.54 [0.48, 0.60]
D-dimer [ng/mL]	-0.002 [-0.04, 0.04]	0.05 [0.02, 0.08]	0.14 [0.06, 0.22]
Ferritin [µg/L]	0.21 [0.17, 0.25]	0.33 [0.30, 0.35]	0.34 [0.27, 0.41]
Lactate [mmol/L]	0.07 [0.01, 0.12]	0.13 [0.09, 0.17]	0.39 [0.30, 0.47]
CRP [mg/L]	0.19 [0.15, 0.23]	0.20 [0.18, 0.23]	0.12 [0.04, 0.19]

*Pearson's correlation coefficients [*r*] with [Fisher's z Transformation] along with 95 % confidence intervals [CI] and significance levels [*P* values] were computed to express the of linear association between measures. We defined correlation coefficients as “weak” if r=0.10 to 0.39, “moderate” if r=0.4-0.69, “strong” if *r* =0.70 to 0.89 and as “very strong” if *r* > 0.9.

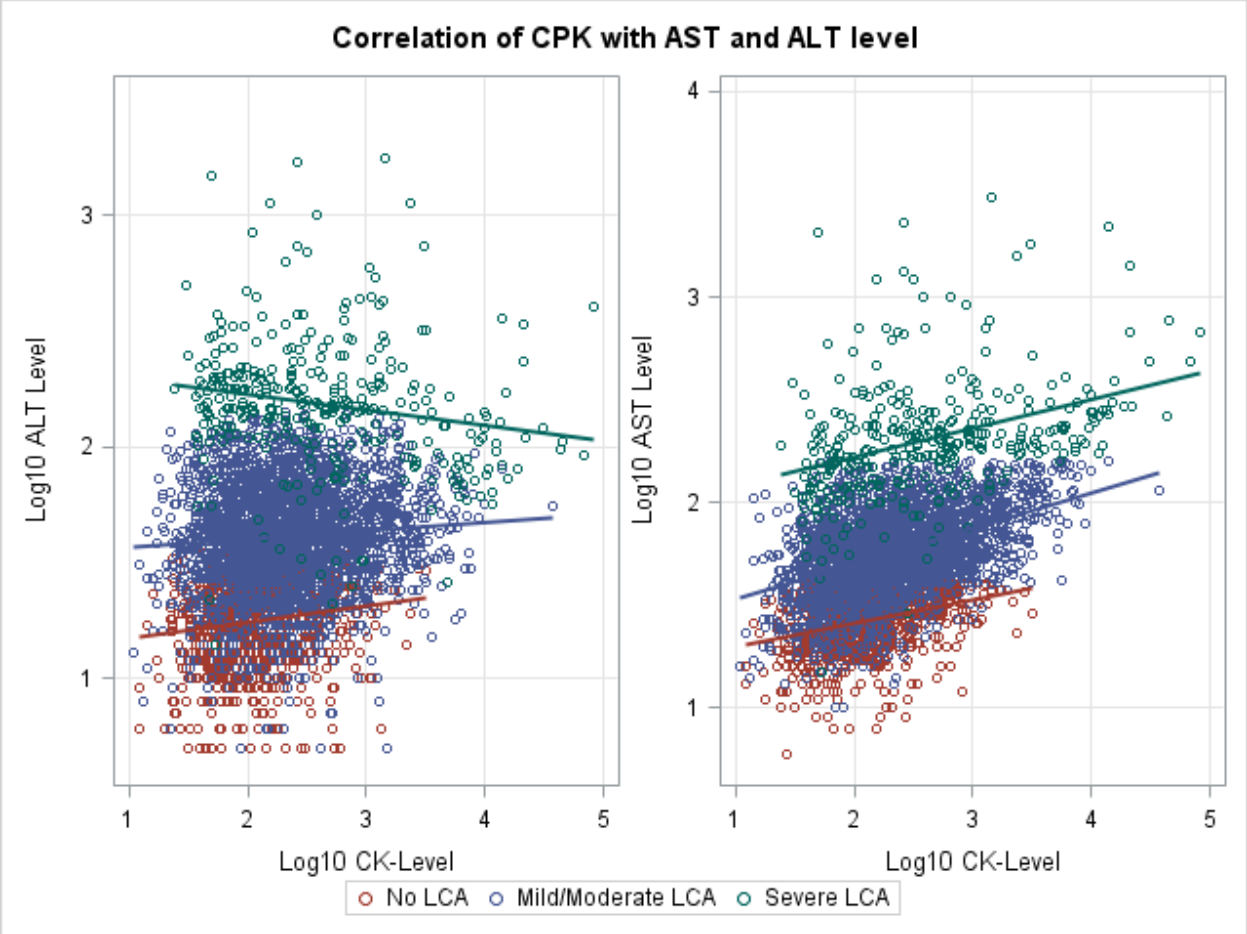
Figure 3. Correlation of inflammatory markers with ALT level in various degrees of LCA.



	No LCA (N=3096)	Mold to Moderate LCA (N=6,933)	Severe LCA (N=827)
Inflammatory Markers	Correlation Coefficient R [95% CI]	Correlation Coefficient R [95% CI]	Correlation Coefficient R [95% CI]
Procalcitonin [ng/mL]	-0.09 [-0.13, -0.05]	-0.07 [-0.09, 0.04]	-0.09 [-0.16, -0.01]
LDH [U/L]	0.10 [0.06, 0.14]	0.10 [0.07, 0.13]	0.06 [-0.01, 0.15]
D-dimer [ng/mL]	-0.05 [-0.09, -0.001]	-0.05 [-0.07, -0.02]	-0.007 [-0.09, 0.08]
Ferritin [µg/L]	0.10 [0.05, 0.15]	0.20 [0.17, 0.23]	0.26 [0.18, 0.33]
Lactate [mmol/L]	0.03 [-0.02, 0.09]	-0.04 [-0.07, -0.06]	0.10 [0.001, 0.20]
CRP [mg/L]	0.007 [-0.03, 0.05]	0.04 [0.01, 0.06]	-0.03 [-0.11, 0.04]

*Pearson's correlation coefficients [*r*] with [Fisher's z Transformation] along with 95 % confidence intervals [CI] and significance levels [*P* values] were computed to express the of linear association between measures. We defined correlation coefficients as “weak” if r=0.10 to 0.39, “moderate” if r=0.4-0.69, “strong” if *r* =0.70 to 0.89 and as “very strong” if *r* > 0.9.

Supplementary Figure 4. Correlation of CPK with AST and ALT level.



		No LCA [n=3,096]		Mild to moderate LCA [n=6,933]		Severe LCA [n=827]	
Inflammatory Markers	**With Variable**	Correlation Coefficient R [95% CI]	P-value	Correlation Coefficient R [95% CI]	P-value	Correlation Coefficient R [95% CI]	P-value
CPK	AST	0.31 [0.26, 0.37]	<0.001	0.45 [0.42, 0.48]	<0.001	0.37 [0.27, 0.46]	<0.001
CPK	ALT	0.15 [0.08, 0.21]	<0.001	0.08 [0.04, 0.11]	<0.001	-0.17 [-0.28, -0.07]	0.0012

Supplementary Table 1: Frequencies of individual liver test elevations in the various LCA groups.

	Bilirubin <1 X ULN	Bilirubin 1-4 x ULN	Bilirubin >4 X ULN
Normal(n=3,096)	3096(100)	0(0)	0(0)
Mild to moderate (n=6,933)	6499(93.74)	434(6.26)	0(0)
Severe (n=827)	718(86.82)	93(11.25)	16(1.93)
	ALT <1 X ULN	**ALT 1-4 x ULN**	**ALT >4 X ULN**
Normal(n=3,096)	3096(100)	0(0)	0(0)
Mild to moderate (n=6,933)	1881(271.13)	5052(72.87)	0(0)
Severe (n=827)	20(2.42)	216(26.12)	591(71.46)
	AST <1 X ULN	**AST 1-4 x ULN**	**AST >4 X ULN**
Normal(n=3,096)	3096(100)	0(0)	0(0)
Mild to moderate (n=6,933)	1345(19.40)	5588(80.60)	0(0)
Severe (n=827)	13(1.57)	270(32.65)	544(65.78)
	ALP <1 X ULN	**ALP 1-4 x ULN**	**ALP >4 X ULN**
Normal(n=3,096)	3096(100)	0(0)	0(0)
Mild to moderate (n=6,933)	5816(83.89)	1117(16.11)	0(0)
Severe (n=827)	511(61.79)	276(33.37)	40(4.84)

Supplementary Table 2. Evaluation of various LCA models predicting in patient mortality using logistic regression analysis.

	Model Prediction at 1 week			Overall Model Prediction		
ROC Model	**Area**	**95% Wald Confidence Limits**		**Area**	**95% Wald Confidence Limits**	
		LCL	**UCL**		**LCL**	**UCL**
AST	0.6359	0.6179	0.6540	0.5945	0.5814	0.6076
ALT	0.4799	0.4612	0.4987	0.4793	0.4660	0.4926
Bilirubin	0.5739	0.5551	0.5927	0.5521	0.5387	0.5656
ALP	0.5607	0.5419	0.5795	0.5404	0.5270	0.5539
AST-ALT	0.7407	0.7242	0.7573	0.6750	0.6625	0.6875
AST-BILI	0.6386	0.6206	0.6565	0.5951	0.5820	0.6083
AST-ALP	0.6403	0.6222	0.6585	0.5967	0.5836	0.6099
ALT-BILI	0.5657	0.5466	0.5848	0.5480	0.5344	0.5616
ALT-ALP	0.5459	0.5268	0.5650	0.5350	0.5215	0.5485
BILI-ALP	0.5863	0.5674	0.6052	0.5592	0.5456	0.5727
AST-ALT-ALP	0.7474	0.7313	0.7634	0.6806	0.6683	0.6930
AST-ALT-BILI	0.7459	0.7297	0.7622	0.6806	0.6682	0.6929
AST-BILI-ALP	0.6439	0.6259	0.6619	0.5992	0.5860	0.6124
AST-ALP-BILI-ALT	**0.7521**	0.7361	0.7680	**0.6860**	0.6738	0.6983