Table S1. Detailed description of the calculation of the posttreatment LSM-based risk stratification models

Model developed to estimate the probability of CSPH and to evaluate the risk of decompensation.

Reference: Semmler et al. J Hepatol 2022; 77:1573-1585 **Variables assessed**: LSM, platelet count	**Low risk group**: posttreatment LSM 12 < kPa and posttreatment platelet count > 150 x 109/L **High risk group**: posttreatment LSM > 25 kPa **Gray zone group**: subjects not fulfilling the criteria above

Models developed to assess the risk of HCC.

Reference: Semmler et al. J Hepatol 2022; 76:812-821 **Variables assessed**: Age, alcohol, LSM, and albumin	**Low-risk group** (0-3 points) **High-risk group** (4-9 points) – 3 points are assigned for age >−59 years, – 2 points for alcohol consumption above the threshold, – 2 points for follow-up LSM >−19 kPa – 2 points for follow-up albumin <42 g/L – 0 points if the respective criterion is not met
Reference: Pons et al. J Hepatol 2020; 72:472-480 **Variables assessed**: LSM and albumin	**Low-risk group**: – follow-up LSM <10 kPa – follow-up LSM 10–20 kPa + follow-up albumin ≥4.4 g/dl. **High-risk group**: – follow-up LSM ≥20 kPa – follow-up LSM 10–20 kPa + follow-up albumin <4.4 g/dl.
Reference: Alonso López et al. Hepatology 2020; 72:1924-1934. **Variables assessed**: Baseline LSM, 1-y delta LSM, albumin	**Low risk group** (0 points) **Intermediate, high, and very high-risk group** (1-3 points) – 1 point is assigned for baseline LSM basal > 17.3 – 1 point is assigned for 1-y delta LSM ≤ 25.5% – 1 point is assigned for Baseline albumin ≤ 4.2 g/L – 0 points if the respective criterion is not met

Table S2. Incidence rate ratio of mortality according to the severity of liver disease among 1300 HIV/HCV-coinfected patients with advanced fibrosis/cirrhosis and sustained viral response with direct-acting antivirals (Poisson regression) *

Event	Incidence rate ratio (95% Confidence interval)		
	Compensated cirrhosis vs. Advanced fibrosis	**Decompensated cirrhosis vs. Advanced fibrosis**	**Decompensated vs. Compensated cirrhosis**
Overall mortality	1.76 (0.95 - 3.26)	4.65 (2.38 - 9.09)	2.64 (1.62 - 4.28)
Liver-related mortality	6.35 (0.83 - 48.51)	24.19 (3.10 - 189.00)	3.81 (1.67 - 8.70)
Non-liver related non-AIDS-related mortality	1.38 (0.72 – 2.67)	3.02 (1.42 – 6.46)	2.20 (1.19 – 4.01)

*No AIDS-related mortality cases were identified in the entire cohort during the study period.

Table S3. Clinical events following DAA-induced SVR among HIV/HCV-coinfected patients with advanced fibrosis/cirrhosis*

	Advanced fibrosis (No.=384)	Compensated cirrhosis (No.=761)	Decompensated cirrhosis (No.=155)	Total (No.=1,300)
Liver-related events	4	37	45	86
Liver-decompensation	0	24	37	61
– Ascites	0	20	20	40
– Encephalopathy	0	9	14	23
– Variceal bleeding	0	7	14	21
Hepatocellular carcinoma	4	17	9	30
Liver transplantation	0	0	1	1
New AIDS-defining event	2	7	3	12
Esophageal candidiasis	0	2	0	2
HIV encephalopathy	0	1	0	1
Immunoblastic lymphoma or equivalent	0	0	1	1
Infection with other mycobacteria	0	1	0	1
Pneumocystis jirovecii pneumonia	1	0	0	1
Recurrent pneumonia	0	3	2	5
Wasting syndrome	1	0	0	1
Non-liver non-AIDS-related-events [a]				
Ischemic cardiovascular event	6	30	8	44
– Acute myocardial infarction	2	14	1	17
– Angina	1	6	3	10
– Stroke	3	10	4	17
– Peripheral artery disease	0	3	0	3
– Acute mesenteric ischemia	0	2	0	2
Heart failure	3	5	6	14
Chronic kidney disease [b]	8	18	2	27
Bone events	6	21	5	32
– Fractures	6	18	4	28
– Avascular necrosis	1	3	1	5
Diabetes mellitus	7	28	6	41
Non-liver non-AIDS-related cancer	10	34	5	49
– Unspecified	3	23	4	30
– Lung	1	6	0	7
– Skin (non-melanoma)	4	0	0	4
– Hodgkin lymphoma	0	1	0	1
– Urothelial carcinoma	0	2	0	2
– Breast	1	1	0	2
– Prostate	0	1	0	1
– Renal adenocarcinoma	1	0	0	1
– Blood malignancy	0	0	1	1

*Columns show the number of patients with the event. a) Those with a history of a specific non-liver non-AIDS-related-events at baseline were excluded from the population at risk when considering the incidence of such events. b) One patient with advanced liver fibrosis underwent dialysis during follow-up.

Table S4. Performance of pretreatment LSM in predicting liver decompensation among 1,132 patients with cACLD using t-ROC curves for censored event times, applying IPCW estimators to address competing risks.

Time-months	Patients with decompensation	Survivors	Patients with competing events	Patients censored	AUC-1 (%)	AUC-2 (%)
6	4	1,112	4	12	82.7	82.7
12	11	1,077	13	31	87.1	87.0
18	14	1,045	21	52	84.3	84.2
24	15	993	34	90	85.3	85.2
30	17	912	39	164	82.8	82.5
36	20	802	45	265	83.0	82.7
42	20	465	53	594	81.7	84.4

Abbreviations: LSM, liver stiffness measurement; cACLD, compensated advanced chronic liver disease: t-ROC, time-dependent receiver operating characteristic; IPCW, inverse probability of censoring weighting; AUC, area under the curve.

Note: The AUCs are labeled with the suffixes "1" and "2" based on how participants with and without the event of interests are defined to construct ROC curves:

- AUC-1: Controls are participants who, at time t, have not experienced either the event of interest or the competitive event. They are event free.
- AUC-2: Controls are individuals who, at time t, have not had the event of interest but may have had the competing event.

By default, the curves used for this investigation and described in the manuscript are AUC-2

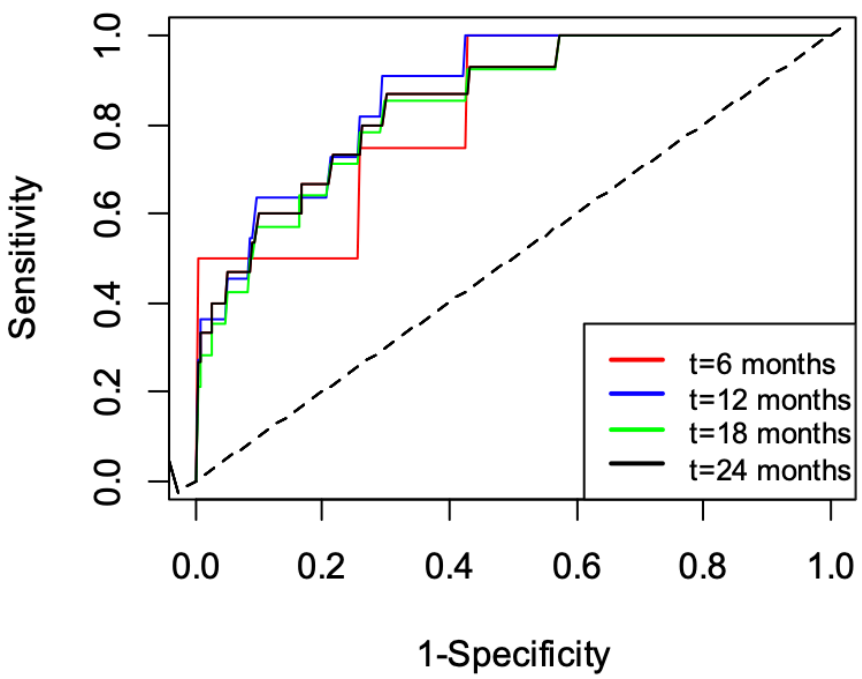
Table S5. Systematic exploration of various cut-off values for LSM to identify the highest LSM cut-off value associated with the maximum NPV over a 42-month follow-up period

					NPV for different LSM cut-offs - kPa				
Time-months	Patients with decompensation	Survivors	Patients with competing events	Patients censored	> 12.0	>12.5	>13.0	>13.5	>14
6	4	1,112	4	12	100%	100%	100%	100%	100%
12	11	1,077	13	31	100%	100%	100%	100%	99.8%
18	14	1,045	21	52	100%	100%	100%	100%	99.8%
24	15	993	34	90	100%	100%	100%	100%	99.8%
30	17	912	39	164	100%	100%	100%	100%	99.8%
36	20	802	45	265	100%	100%	100%	100%	99.8%
42	20	465	53	594	100%	100%	100%	100%	99.8%

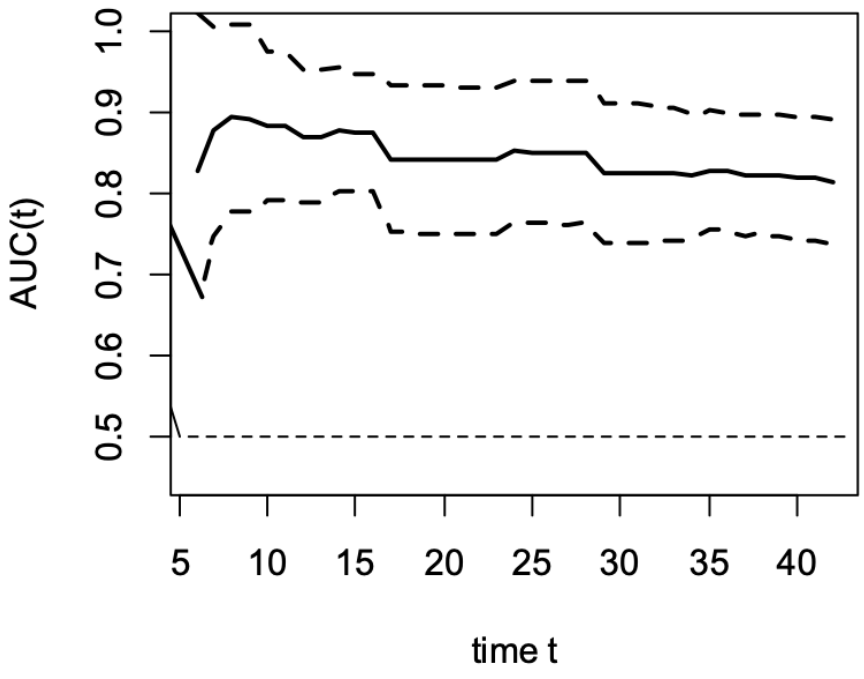
Abbreviations: LSM, liver stiffness measurement; cACLD, compensated advanced chronic liver disease: t-ROC, time-dependent receiver operating characteristic; IPCW, inverse probability of censoring weighting; AUC, area under the curve.

Figure S1. Graphical representation of the utility of LSM as a predictive tool for decompensation among 1,132 patients with cACLD over 42 weeks post-therapy assessed using t-ROC curves and applying IPCW estimators to address competing risks.

A. t-ROC curves



B Dynamic curve for each time T (months)



Abbreviations: LSM, liver stiffness measurement; cACLD, compensated advanced chronic liver disease: t-ROC, time-dependent receiver operating characteristic; IPCW, inverse probability of censoring weighting; AUC, area under the curve.