

**Supplementary Material 1.** Different scoring systems used to assess the severity of liver disease or failure in pretransplant patients are based on various parameters (bilirubin, albumin, ascites, prothrombin time, encephalopathy, sodium, creatinine, age, etc.).

The individual definitions and clinical parameters used in calculating the scores are as follows:

1. Child-Turcotte-Pugh (CTP) score.

| Measure                 | 1 point | 2 points   | 3 points           |
|-------------------------|---------|------------|--------------------|
| Total bilirubin (mg/dL) | <2      | 2–3        | >3                 |
| Serum albumin (g/dL)    | >3.5    | 2.8–3.5    | <2.8               |
| Prothrombin time (s)    | <4.0    | 4.0–6.0    | >6.0               |
| or INR                  | <1.7    | 1.7–2.3    | >2.3               |
| Ascites                 | None    | Mild       | Moderate to severe |
| Hepatic encephalopathy  | None    | Grade I–II | Grade III–IV       |

Classification: A, 3–6; B, 7–9; C, 10–15.

INR, international normalized ratio.

2. Modified CTP (mCTP): an additional point is assigned in patients whose serum bilirubin is >8 mg/dL, prothrombin time prolongation >11 seconds, or albumin <2.3 g/dL; accordingly, an mCTP score of 16–18 is defined as mCTP class D, which corresponds to severely decompensated cirrhosis.

3. Model for End-Stage Liver Disease (MELD) score:

$$\text{MELD} = 3.78 \times \ln[\text{serum bilirubin (mg/dL)}] + 11.2 \times \ln[\text{INR}] + 9.57 \times \ln[\text{serum creatinine (mg/dL)}] + 6.43$$

4. MELD-Na score:

$$\text{MELD-Na} = \text{MELD} + 1.32 \times (137 - \text{Na}) - [0.033 \times \text{MELD} \times (137 - \text{Na})]$$

Na+ <125 mmol/L will be set to 125, and values >137 mmol/L will be set to 137.

5. Integrated MELD (iMELD) score

$$\text{Original MELD score} + (\text{age} \times 0.3) - (0.7 \times \text{Na}) + 100$$

6. UK MELD (UKELD) score:

$$\text{UKELD} = (5.395 \times \ln \text{INR}) + (1.485 \times \ln \text{creatinine}) + (3.13 \times \ln \text{bilirubin}) - (81.565 \times \ln \text{Na}) + 435$$

UKELD score is used in recipient selection and prioritization in the UK.