

**Supplementary Table 1.** Diagnostic performance of MFI for detecting segmental congestion in patients with LDLT and the subgroup with MHV territory reconstruction, using CEUS as the reference standard

|                          | Total (n=63)     | Subgroup with reconstruction of MHV territory (n=36) |
|--------------------------|------------------|--|
| Sensitivity (95% CI) (%) | 64.3 (46.0–82.6) | 69.2 (44.3–94.2)                                     |
| Specificity (95% CI) (%) | 85.7 (73.9–97.6) | 82.6 (66.4–98.9)                                     |
| PPV (95% CI) (%)         | 78.3 (61.2–95.4) | 69.2 (44.3–94.2)                                     |
| NPV (95% CI) (%)         | 75.0 (61.5–88.5) | 82.6 (66.4–98.9)                                     |
| Accuracy (95% CI) (%)    | 76.2 (65.4–87.0) | 77.8 (63.8–91.7)                                     |

MFI, micro-flow imaging; LDLT, living donor liver transplantation; MHV, middle hepatic vein; CEUS, contrast-enhanced ultrasonography; CI, confidence interval; PPV, positive predictive value; NPV, negative predictive value.

**Supplementary Table 2.** Comparison of early post-transplant laboratory values for patients who underwent LDLT with or without segmental congestion, based on each modality

|                         | Preop | POD 1  | POD 3  | POD 5  | POD 7  | POD 9  | P-value |
|-------------------------|-------|--------|--------|--------|--------|--------|---------|
| Based on CT             |       |        |        |        |        |        |         |
| AST (IU/L)              |       |        |        |        |        |        |         |
| Segmental congestion    | 48.10 | 282.32 | 111.75 | 56.15  | 49.05  | 48.13  | 0.050   |
| No segmental congestion | 48.82 | 279.59 | 109.83 | 56.22  | 48.86  | 47.49  |         |
| ALT (IU/L)              |       |        |        |        |        |        |         |
| Segmental congestion    | 30.98 | 295.47 | 246.90 | 167.62 | 148.72 | 158.05 | 0.068   |
| No segmental congestion | 31.35 | 291.41 | 243.03 | 165.29 | 147.46 | 155.63 |         |
| Total bilirubin (mg/dL) |       |        |        |        |        |        |         |
| Segmental congestion    | 3.75  | 3.49   | 2.34   | 2.26   | 2.09   | 2.11   | 0.069   |
| No segmental congestion | 3.82  | 3.45   | 2.29   | 2.21   | 2.05   | 2.05   |         |
| Based on CEUS           |       |        |        |        |        |        |         |
| AST (IU/L)              |       |        |        |        |        |        |         |
| Segmental congestion    | 48.83 | 279.59 | 109.83 | 56.22  | 48.86  | 47.49  | 0.050   |
| No segmental congestion | 49.26 | 259.42 | 108.33 | 54.65  | 49.81  | 48.82  |         |
| ALT (IU/L)              |       |        |        |        |        |        |         |
| Segmental congestion    | 31.35 | 291.41 | 243.01 | 165.29 | 147.46 | 155.63 | 0.455   |
| No segmental congestion | 31.88 | 273.12 | 237.12 | 160.67 | 147.19 | 159.28 |         |
| Total bilirubin (mg/dL) |       |        |        |        |        |        |         |
| Segmental congestion    | 3.82  | 3.45   | 2.29   | 2.21   | 2.05   | 2.05   | 0.648   |
| No segmental congestion | 4.00  | 3.57   | 2.39   | 2.31   | 2.16   | 2.18   |         |
| Based on MFI            |       |        |        |        |        |        |         |
| AST (IU/L)              |       |        |        |        |        |        |         |
| Segmental congestion    | 48.45 | 274.27 | 111.12 | 56.60  | 48.55  | 47.28  | 0.397   |
| No segmental congestion | 48.46 | 257.85 | 107.11 | 54.71  | 49.10  | 48.15  |         |
| ALT (IU/L)              |       |        |        |        |        |        |         |
| Segmental congestion    | 30.72 | 282.95 | 241.40 | 164.65 | 143.48 | 150.65 | 0.361   |
| No segmental congestion | 31.32 | 268.90 | 232.64 | 158.76 | 145.42 | 156.64 |         |
| Total bilirubin (mg/dL) |       |        |        |        |        |        |         |
| Segmental congestion    | 3.79  | 3.47   | 2.34   | 2.26   | 2.08   | 2.11   | 0.162   |
| No segmental congestion | 3.93  | 3.53   | 2.36   | 2.28   | 2.14   | 2.14   |         |

Values were calculated as averages of several assessments of each patient at specified time points.

LDLT, living donor liver transplantation; Preop, preoperative; POD, postoperative day; CT, computed tomography; AST, aspartate aminotransferase; ALT, alanine aminotransferase; CEUS, contrast-enhanced ultrasonography; MFI, microvascular flow image.