

## Supplementary

**Appendix table 1. CEUS LI-RADS classification (version 2017)**

Classification	Arterial Phase Hyperenhancement (APHE) (Yes/No)	Washout <sup>a</sup> (Yes/No)
<b>LR-1</b>		
Any nodule size	Definitely benign arterial phase pattern <sup>b</sup>	No
<b>LR-2</b>		
<1 cm	Iso-enhancement	No
<b>LR-3</b>		
<1 cm	Yes, but not special APHE <sup>c</sup>	No
<2 cm	No	No or late and mild washout
≥2 cm	No	No
<b>LR-4</b>		
<1 cm	Yes, but not special APHE	Late and mild washout
≥1 cm	Yes, but not special APHE	No
≥2 cm	No	Late and mild washout
<b>LR-5</b>		
≥1 cm	Yes, but not special APHE	Late and mild washout
<b>LR-M</b>		
Any nodule size	Yes (rim-like)	Yes (early, <60 seconds OR marked within 120 seconds)
<b>LR-TIV</b>		
	Tissue enhancing in the vein	

LI-RADS: Liver Imaging Report and Data System, CEUS: Contrast-enhanced ultrasound, APHE: Arterial Phase Hyperenhancement

<sup>a</sup> Washout means hypo-enhancement in the portal and late phase

<sup>b</sup> benign arterial phase pattern such as cyst, hemangioma, focal fatty deposition/ sparing and so on.

<sup>c</sup> special APHE such as rim or peripheral discontinuous globular hyperenhancement in the arterial phase.