

## SUPPLEMENTARY MATERIAL

### Gadoxetic acid-enhanced MRI acquisition

Liver MRI exams were performed on 3.0-T scanners (Skyra, Magnetom Verio, Magnetom Trio, and Biograph mMR, Siemens Healthineers, Erlangen, Germany; Ingenia or Ingenia CX, Philips Healthcare, Best, The Netherlands; Discovery 750W, GE Healthcare, Milwaukee, WI) or 1.5-T scanners (Signa HDxt 1.5T, GE Healthcare, Milwaukee, WI).

The routine liver MRI protocol at our institution includes the following sequences: a respiratory-triggered T2-weighted fast spin-echo sequence, a half-Fourier acquisition single-shot turbo spin-echo sequence, diffusion-weighted imaging, breath-hold T1-weighted gradient-echo in and out-of-phase sequences, and breath-hold T1-weighted fat-suppressed 3D gradient-echo sequences for precontrast and post-contrast imaging, including the arterial phase, portal venous phase, transitional phase, and hepatobiliary phase. MRI scan parameters are described in Supplementary Table 1. For dynamic phase imaging, after obtaining precontrast images, a standard dose (0.025 mmol/kg) of gadoxetic acid (Primovist, Bayer, Berlin, Germany) was injected intravenously at a rate of 1.0 mL/sec using a power injector, followed by a 20-mL saline flush. Using a real-time magnetic resonance fluoroscopic monitoring system, arterial phase images were acquired 7–8 sec after contrast material arrival at the distal thoracic aorta. Portal venous phase, transitional phase, and hepatobiliary phase images were obtained approximately 60 sec, 3 min, and 20 min, respectively, after beginning the injection of contrast medium.