Supplementary Material 2. Data Collection and Preparation

The same investigators who were involved in subject selection performed data collection as well. They retrieved clinical and pathologic data from the electronic medical record, and image data from the Picture Archiving and Communication System. The data retrieved from each participating institution were then sent to the central site (Severance Hospital). The data retrieved included the information about patient demographics, the cause of the chronic liver disease, alpha-fetoprotein serum level, Child-Pugh class, and pathologic diagnosis, and CT/MRI images in the Digital Imaging and Communications in Medicine (DICOM) format. The investigators also examined, if available, whether the hepatic lesion showed threshold growth or antecedent ultrasonography (US) visibility, which are major features incorporated in the Liver Imaging Reporting and Data System (LI-RADS) diagnostic algorithm (1).

After collecting all the relevant data from each participating institution, the data were processed in preparation for image analysis by two investigators from the central site who were not involved in either data collection or image analysis. They de-identified the DICOM images, sorted them in a random order, and assigned them new identification numbers. They also marked the location of each hepatic lesion on screen-captured images, by reviewing the CT/MRI images, pathology reports with or without gross specimen photographs, the location information provided by the participating sites. If a lesion was not delineated conspicuously, the most likely area was indicated on a screen-captured image based on the postoperative pathology and surgery findings; and the reviewers were asked to try to identify and evaluate the lesion for themselves. The deidentified and randomly sorted DICOM data, the pictorial records of lesion location, and DICOM viewer software (RadiAnt, Medixant, Poznań, Poland; Osirix, Pixmeo, Geneva, Switzerland) were stored on portable storage devices and sent to four different institutions for image analysis.

REFERENCE