Appendix

Traditional imaging feature of substantial necrosis

The feature of substantial necrosis was evaluated by two independent radiologists (reader 1 [S.Q.H] and reader 2 [Y.J.X]), with 6 and 5 years of experience in abdominal imaging. These two radiologists were blinded to clinical and pathologic findings when getting through the evaluation. Occasional inconsistencies were discussed to reach a consensus. The detailed evaluation criteria of substantial necrosis are showed below: (I) Images on MRI: a central area of high-signal intensity on fat-suppressed turbo spin-echo T2-weighted images without enhancement on postcontrast T1-weighted images and involving at least 20% of the tumor area at the level of the largest cross-sectional diameter (21); (II) Images on enhanced CT: a hypoattenuated central area on the nonenhanced images without enhancement during the postcontrast phases, involving more than 20% of the lesion area at the largest cross-sectional level (26); (III) substantial necrosis was evaluated on MRI images when patients underwent MRI examinations, or on enhanced CT images without MRI examinations.

Table S1 TLRs of each subtype for moderately and poorly differentiated HCC

Characteristics		Non-MTM-HCC	MTM-HCC	P value
Tumor differentiation				
Moderate	Case	40 (55.6)	32 (44.4)	
(N=72)	TLR	1.6 (1.35–2.15)	2.55 (2.08–3.36)	<0.001
Poorly	Case	7 (63.6)	4 (36.4)	
(N=11)	TLR	1.91 (1.59–3.15)	5.01 (2.10–7.01)	<0.001

Note: Abnormally distributed continuous variables are represented as median (interquartile range, IQR); categorical variables are represented as the number of cases (percentage, %); HCC-hepatocellular carcinoma, MTM-macrotrabecular massive, TLR-tumor-to-liver ratio.