

**Article title:** \*\*Blinded for review\*\*

**Journal name:** Abdominal Radiology

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## ELECTRONIC SUPPLEMENTARY MATERIAL

### Supplemental Table 1 Reasons for exclusion from the study

<b>Reason</b>	<b>N</b>	<b>%</b>
More than 2 lesions	229	39%
Incomplete follow-up	53	9%
Incomplete pretreatment imaging	119	20%
Previous embolization	39	7%
Metastatic HCC at time of presentation	11	2%
Previous liver resection	103	18%
Second active malignancy	5	1%
Progression of disease at first follow-up	16	3%
SIRT	1	0%
Embolization for reason other than HCC	6	1%
<b>TOTAL</b>	<b>582</b>	

Abbreviations: HCC, hepatocellular carcinoma; SIRT; selective internal radiation therapy

**Supplemental Table 2** Pre-treatment variable associations with overall survival by reader (time 0 = date of first embolization)

Variable	R1			R2		
	N (# Events)	HR (95% CI)	p-value	N (# Events)	HR (95% CI)	p-value
PreTx size	85 (54)	1.10 (1.03-1.17)	<b>0.007</b>	85 (54)	1.08 (1.01-1.15)	<b>0.02</b>
PreTx L1 APHE*				85 (54)		0.09
Present				79 (52)	Ref.	
Not present				6 (2)	0.29 (0.07-1.22)	
PreTx L1 WO	85 (54)		0.56	85 (54)		0.75
Present	82 (51)	Ref.		78 (48)	Ref.	
Not present	3 (3)	0.70 (0.21-2.34)		7 (6)	0.87 (0.37-2.07)	
PreTx L1 capsule	85 (54)		0.81	85 (54)		0.21
Not present	60 (40)	Ref.		55 (32)	Ref.	
Present	25 (14)	1.08 (0.58-2.01)		30 (22)	1.42 (0.82-2.46)	
PreTx L1 TG	80 (51)		0.61	58 (38)		0.28
Not present	73 (46)	Ref.		54 (35)	Ref.	
Present	7 (5)	0.78 (0.31-1.98)		4 (3)	0.52 (0.16-1.72)	
PreTx L1 LI-RADS category	85 (54)		<b>0.004</b>	85 (54)		<b>0.01</b>
LR- 5	72 (42)	Ref.		68 (42)	Ref.	
LR-M	4 (4)	0.96 (0.33-2.81)				
LR-TIV	9 (8)	3.69 (1.69-8.05)		10 (8)	2.27 (1.05-4.92)	
LR-4				7 (4)	0.31 (0.09-1.04)	
PreTx L2 LI-RADS category	14 (8)		0.91	14 (8)		0.51
LR-5	11 (6)	Ref.		10 (5)	Ref.	
LR-3 or 4	3 (2)	1.10 (0.20-5.89)		4 (3)	1.66 (0.36-7.60)	

\* There was no variation in this variable for R1. 85 patients had values of 'present'.

Abbreviations: APHE, nonrim-like enhancement in the arterial phase; HR, Hazard Ratio; LI-RADS, Liver Reporting & Data System; L1, lesion 1; L2 lesion 2; LR, LI-RADS; TG, threshold growth; Tx, treatment; WO, was

**Supplemental Table 3** Clinical variable associations with overall survival (baseline set to first embolization date)

Variable	N (# Events)	HR (95% CI)	p-value
Age at diagnosis	85 (54)	1.01 (0.97–1.05)	0.60
Sex	85 (54)		0.16
Male	68 (45)	Ref.	
Female	17 (9)	0.59 (0.29–1.22)	
AFP*	85 (54)	1.66 (1.28–2.17)	<b>&lt;0.001</b>
Bilirubin	85 (54)	1.31 (0.90–1.91)	0.16
Albumin	85 (54)	0.74 (0.50–1.10)	0.14
INR	85 (54)	1.21 (0.43–3.43)	0.72
Child score	85 (54)		0.13
0	50 (28)	Ref.	
1	19 (13)	1.33 (0.69–2.58)	
2	14 (11)	1.32 (0.65–2.68)	
3	2 (2)	5.66 (1.27–25.11)	
ECOG	85 (54)		0.40
0	55 (33)	Ref.	
1	25 (19)	1.52 (0.86–2.69)	
2	2 (1)	1.32 (0.18–9.72)	
3	3 (1)	0.46 (0.06–3.41)	
BCLC stage	85 (54)		0.27
B1	39 (25)	Ref.	
A0	5 (3)	0.72 (0.22–2.40)	
C2	15 (6)	0.47 (0.19–1.14)	
D3	26 (20)	1.14 (0.62–2.08)	

\*AFP was logarithmically transformed

Abbreviations: AFP, alpha-fetoprotein; BCLC, Barcelona Clinic Liver Cancer; ECOG, Eastern Cooperative Oncology Group; HCC, hepatocellular carcinoma; INR, international normalized ratio