

Supplementary Table 4. Baseline Characteristics Among Those Who Received Chemoembolization Vs Other Therapy as the First LRT, and the Type of Second Treatment

	Chemoembolization	Other LRT	<i>P</i>
N	15,984	8161	
Median age at listing, <i>y</i> (IQR)	60 (55–64)	60 (55–64)	.12
Sex, male, <i>n</i> (%)	12,284 (76.9)	6348 (77.8)	.11
Etiology of liver disease, <i>n</i> (%)			<.01
Alcohol	2354 (14.7)	1287 (15.8)	
Hepatitis B	1001 (6.3)	502 (6.2)	
Hepatitis C	8609 (53.9)	4349 (53.3)	
Metabolic	151 (0.9)	57 (0.7)	
NASH	1356 (8.5)	800 (9.8)	
Other or not specified	2513 (15.7)	1166 (14.3)	
Median initial biochemical MELD (IQR)	10 (8–13)	10 (8–13)	.04
Initial Child–Pugh class, <i>n</i> (%)			<.01
A	7139 (44.7)	3916 (48.0)	
B	6951 (43.5)	3298 (40.4)	
C	1886 (11.8)	946 (11.6)	
Median initial AFP level (IQR)	10 (5–38)	9 (5–29)	<.01
Median total tumor diameter, <i>cm</i> (initial) (IQR) ^a	3.3 (2.4–4.5)	3.0 (2.3–4.1)	<.01
Median largest tumor, <i>cm</i> (initial) (IQR) ^a	2.7 (2.2–3.6)	2.5 (2.1–3.3)	<.01
Number of lesions (initial), <i>n</i> (%)			<.01
0–1	12,225 (76.5)	6668 (81.7)	
2	2738 (17.1)	1130 (13.8)	
3	978 (6.1)	347 (4.3)	
≥4	43 (0.3)	16 (0.2)	
Initial tumor outside Milan criteria, <i>n</i> (%) ^b	1114 (7.0)	532 (6.5)	.20
Median waitlist time, <i>d</i> (IQR)	229 (111–420)	246 (123–439)	<.01
Wait time region of initial listing			<.01
SWR	3886 (24.3)	1871 (22.9)	
MWR	6938 (43.4)	3186 (39.0)	
LWR	5160 (32.3)	3104 (38.0)	
Number of LRT per patient, <i>n</i> (%)			<.01
1	10,553 (66.0)	5825 (71.4)	
2	3995 (25.0)	1750 (21.4)	
3	1066 (6.7)	434 (5.3)	
≥4	370 (2.3)	152 (1.9)	
Outcome, <i>n</i> (%)			<.01
Liver transplant	12,702 (79.5)	6377 (78.1)	
Waitlist dropout	2965 (18.5)	1456 (17.8)	
Still waiting/condition improved	317 (2.0)	328 (4.0)	
Type of second LRT			<.01
Chemoembolization	3592 (22.5)	1191 (14.6)	
Radioembolization	255 (1.6)	247 (3.0)	
Thermal ablation	1197 (7.5)	663 (8.1)	
Combination	74 (0.5)	70 (0.9)	
External beam radiation	151 (0.9)	52 (0.6)	
Other	162 (1.0)	113 (1.4)	
None	10,553 (66.0)	5825 (71.4)	

AFP, α -fetoprotein; IQR, interquartile range; LRT, locoregional therapy; LWR, long wait time region; MELD, model for end-stage liver disease; MWR, medium wait time region; NASH, nonalcoholic steatohepatitis; SWR, short wait time region.

^aLargest of either listing or original tumor size.

^bReported either at listing or the original tumor size.

Supplementary Table 5. Univariable and Multivariable Competing-Risk Analysis for Time From First to Second Treatment, With Death and Transplant Considered as Competing Risks (N = 23,962)

	Univariable sHR (95% CI)	Multivariable sHR (95% CI)
Initial total tumor diameter, <i>cm</i>	1.09 (1.07–1.10)	1.08 (1.07–1.09)
Initial tumor number (ref: 0–1)		
2	1.17 (1.10–1.24)	1.21 (1.14–1.29)
3	1.13 (1.03–1.25)	1.11 (1.00–1.23)
≥4	1.73 (1.22–2.45)	1.33 (0.95–1.87)
Initial AFP level (ref: ≤20)		
21–40	1.11 (1.03–1.19)	1.15 (1.07–1.24)
41–500	1.05 (0.99–1.11)	1.11 (1.04–1.17)
501–1000	0.89 (0.74–1.06)	1.04 (0.86–1.25)
≥1000	0.78 (0.64–0.94)	0.94 (0.78–1.14)
Child–Pugh class (ref: A)		
B	0.81 (0.77–0.85)	0.88 (0.84–0.92)
C	0.54 (0.49–0.59)	0.59 (0.54–0.64)
Region of initial listing (ref: SWR)		
MWR	1.39 (1.31–1.48)	1.46 (1.37–1.56)
LWR	1.69 (1.59–1.80)	1.89 (1.78–2.02)
Type of first LRT (ref: chemoembolization)		
Radioembolization	1.06 (0.97–1.17)	0.76 (0.69–0.84)
Thermal ablation	0.72 (0.68–0.77)	0.75 (0.71–0.80)
Combination	0.59 (0.51–0.67)	0.54 (0.48–0.62)
External beam radiation	0.80 (0.61–1.06)	0.67 (0.50–0.89)
Other	1.05 (0.92–1.21)	1.18 (1.03–1.35)
Listing era (ref: 2003–2006)		
2007–2010	1.61 (1.44–1.80)	1.60 (1.43–1.80)
2011–2014	2.51 (2.26–2.80)	2.63 (2.36–2.92)
2015–2018	3.03 (2.73–3.36)	3.39 (3.04–3.77)

AFP, α -fetoprotein; LRT, locoregional therapy; LWR, long wait time region; MWR, medium wait time region; sHR, subhazard ratio; SWR, short wait time region.

Bold values indicate statistical significance.