

**Table S1. Waitlist Patient and Tumor Characteristics in NAFLD or obesity-associated HCC**

	<u>Total</u> <u>(n = 603)</u>	<u>NAFLD+</u> <u>obesity-HCC</u> <u>(n = 218)</u>	<u>Non-NAFLD+</u> <u>non-obese-HCC</u> <u>(n = 385)</u>	<u>P</u> <u>value</u>
<b>Median Age (IQR)</b>	<u>59 (54-63)</u>	<u>59 (54-64)</u>	<u>59 (54-62)</u>	<u>0.73</u>
<b>Female gender (%)</b>	<u>150 (24.9)</u>	<u>67 (30.7)</u>	<u>83 (21.6)</u>	<u>0.01</u>
<b>Race/ethnicity (%)</b>				<u>&lt;0.001</u>
Caucasian	<u>266 (44.1)</u>	<u>106 (48.6)</u>	<u>160 (41.6)</u>	
Asian	<u>160 (26.5)</u>	<u>22 (10.1)</u>	<u>138 (35.8)</u>	
Hispanic	<u>113 (18.7)</u>	<u>60 (27.5)</u>	<u>53 (13.8)</u>	
Black	<u>42 (7.0)</u>	<u>17 (7.8)</u>	<u>25 (6.5)</u>	
<b>Blood type (%)</b>				<u>0.83</u>
A	<u>208 (34.5)</u>	<u>78 (35.8)</u>	<u>130 (33.8)</u>	
B	<u>88 (14.6)</u>	<u>29 (13.3)</u>	<u>59 (15.3)</u>	
O	<u>283 (46.9)</u>	<u>101 (46.3)</u>	<u>182 (47.3)</u>	
AB	<u>24 (4.0)</u>	<u>10 (4.6)</u>	<u>14 (3.6)</u>	
<b>Obesity (BMI ≥30)</b>	<u>205 (34.1)</u>	<u>205 (94.5)</u>	<u>0 (0)</u>	<u>&lt;0.001</u>
<25	<u>174 (28.9)</u>	<u>2 (0.9)</u>	<u>172 (44.7)</u>	<u>&lt;0.001</u>
25-29.9	<u>223 (37.0)</u>	<u>10 (4.6)</u>	<u>213 (55.3)</u>	
30-34.0	<u>135 (22.4)</u>	<u>135 (62.2)</u>	<u>0 (0)</u>	
≥35	<u>70 (11.6)</u>	<u>70 (32.3)</u>	<u>0 (0)</u>	
<b>Diabetes Mellitus</b>	<u>181 (30.0)</u>	<u>77 (35.3)</u>	<u>104 (27.0)</u>	<u>0.03</u>
Insulin-dependent	<u>68 (11.3)</u>	<u>28 (12.8)</u>	<u>40 (10.4)</u>	<u>0.36</u>
Median A1c (IQR)	<u>6.9 (6.0-7.4)</u>	<u>6.8 (5.7-7.2)</u>	<u>7.1 (6.2-7.6)</u>	<u>0.11</u>
<b>Hyperlipidemia</b>	<u>75 (12.4)</u>	<u>36 (16.5)</u>	<u>39 (10.1)</u>	<u>0.02</u>
On statin	<u>43 (7.1)</u>	<u>24 (11.0)</u>	<u>19 (4.9)</u>	<u>0.01</u>
<b>Median MELD-Na (IQR)</b>	<u>10 (8-14)</u>	<u>12 (9-14)</u>	<u>10 (8-13)</u>	<u>&lt;0.001</u>
<b>Median AFP (ng/ml) (IQR)</b>	<u>13 (6-59)</u>	<u>11 (5-51)</u>	<u>14 (6-65)</u>	<u>0.36</u>
<b>Tumor burden at listing (%)</b>				<u>0.19</u>
1 lesion 2-3cm	<u>277 (45.9)</u>	<u>94 (43.1)</u>	<u>183 (47.5)</u>	
1 lesion 3.1-5cm	<u>165 (27.4)</u>	<u>70 (32.1)</u>	<u>95 (24.7)</u>	
2 lesions	<u>121 (20.1)</u>	<u>43 (19.7)</u>	<u>78 (20.3)</u>	
3 lesions	<u>40 (6.6)</u>	<u>11 (5.0)</u>	<u>29 (7.5)</u>	
<b>Number of LRT (%)</b>				<u>0.03</u>
0-1	<u>246 (40.7)</u>	<u>98 (45.0)</u>	<u>148 (38.4)</u>	
2-3	<u>266 (44.1)</u>	<u>93 (42.7)</u>	<u>173 (44.9)</u>	
>3	<u>91 (15.1)</u>	<u>27 (12.4)</u>	<u>64 (16.6)</u>	

NAFLD or obesity-HCC, patients with hepatocellular carcinoma due to non-alcoholic fatty liver disease and/or patients with HCC and obesity; other HCC, patients with HCC without NAFLD or obesity; HCV, Hepatitis C virus; HBV, Hepatitis B virus; BMI, body-mass index; MELD-Na, Model for end-stage liver disease with sodium; AFP, alpha fetoprotein; LRT, local regional treatment;

Table S2. Outcomes on Liver Transplant Waitlist in NAFLD or obesity-associated HCC

	Overall (n = 603)	NAFLD+ obesity-HCC (n = 218)	Non-NAFLD+ non-obese-HCC (n = 385)	← P value
<b>Waitlist Outcome (%)</b>				<b>0.61</b>
Liver transplant	409 (67.8)	153 (70.2)	256 (66.5)	
Waitlist dropout*	144 (23.9)	50 (22.9)	94 (24.4)	
Other dropout	45 (7.5)	13 (6.0)	32 (8.3)	
Active on waitlist	5 (0.8)	2 (0.9)	3 (0.8)	
<b>Median time to dropout, months (IQR)</b>	<b>7.4 (3.6-12.4)</b>	<b>6.9 (3.5-11.6)</b>	<b>7.6 (3.7-12.5)</b>	<b>0.13</b>
<b>Median time to transplant, months (IQR)</b>	<b>10.7 (6.6-15.8)</b>	<b>10.4 (6.5-15.6)</b>	<b>10.9 (6.7-15.9)</b>	<b>0.67</b>
<b>Median survival from listing, months (IQR)</b>	<b>50.3 (18.6-90.8)</b>	<b>52.2 (22.6-90.1)</b>	<b>49.7 (18.2-87.3)</b>	<b>0.47</b>
<b>Median AFP (IQR)</b>				
At transplant	7 (4-26)	7 (4-19)	8 (4-29)	<b>0.90</b>
<b>Pathologic stage on explant (%)</b>				<b>0.09</b>
No viable tumor	165 (40.6)	52 (34.4)	113 (44.3)	
Within Milan	177 (43.6)	78 (51.7)	99 (38.8)	
Outside Milan	57 (14.0)	20 (13.2)	37 (14.5)	
Invasion of large vessels	1 (0.2)	0 (0.0)	1 (0.4)	
Metastatic disease	6 (1.5)	1 (0.7)	5 (2.0)	
<b>Explant grade of differentiation (%)</b>				<b>0.03</b>
Complete necrosis	166 (40.7)	52 (34.0)	114 (44.7)	
Well-differentiated	84 (20.6)	39 (25.5)	45 (17.6)	
Moderate differentiated	133 (32.6)	48 (31.4)	85 (33.3)	
Poorly differentiated	25 (6.1)	14 (9.2)	11 (4.3)	
<b>Microvascular invasion on explant (%)</b>	<b>18 (4.4)</b>	<b>10 (6.5)</b>	<b>8 (3.1)</b>	<b>0.11</b>

\*Defined as dropout due to liver-related death (16 NAFLD or obesity-HCC patients, 22 other-HCC patients) and HCC progression (34 NAFLD or obesity-HCC patients, 72 other-HCC patients) NAFLD or obesity-HCC, patients with hepatocellular carcinoma due to non-alcoholic fatty liver disease and/or patients with HCC and obesity; other HCC, patients with HCC without NAFLD or obesity; AFP, alpha fetoprotein.

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