

### Supplementary materials

Table S1: First liver surgery characteristics among R patients

Parameters	Group R (n=25)	
Type of liver resection (n, %)		
Segmentectomy	13	52%
Bisegmentectomy	2	8%
Single wedge	7	28%
Double wedge	2	8%
Triple wedge	1	4%
Surgical approach (n, %)		
Laparoscopy	6	24%
Open	19	76%
Total operative time (minutes) (mean, SD)	192.2±38.8	
Associated surgeries (n, %)	8	32%
Clavien-Dindo (n, %)		
1	21	84%
2	2	8%
3a	1	4%
3b	1	4%
Hospitalization (days)(mean, SD) (median)	7.5±3.4 (7)	
Tumor differentiation (G) (n, %)		
1	3	12%
2	12	48%
3	7	28%
4	2	8%
Not detectable	1	4%

Table S2: Baseline characteristics: SLT-LR vs SLT-RFA

Parameters	SLT-LR (n=25)	SLT-RFA (n=20)	P
Age (mean, SD) (median)	57.7±8.2 (60)	58.2±6.6 (59,5)	0.826
Sex (n, %)			
Male	22 88%	17 85%	0.768
Female	3 12%	3 15%	
Preoperative BMI (kg/m <sup>2</sup> ) (mean, SD) (median)	26.2±4.2 (26)	26.2±5.3 (26)	1.000
ASA score (n, %)			
1	1 4%	0 0%	0.321
2	2 8%	1 5%	
3	20 80%	13 65%	
4	2 8%	6 30%	
Smoker (n, %)	10 40%	6 30%	0.486
Non smoker (n, %)	15 60%	14 70%	
Ex Alcoholic (n, %)	18 72%	8 40%	<b>0.031</b>
Non Alcoholic (n, %)	7 28%	12 60%	
Comorbidities. (n %)			
Diabetes	9 36%	7 35%	0.944
Hypertension	14 56%	8 40%	0.172
Cardiovascular disease	0 0%	0 0%	0.871
Respiratory disease	0 0%	1 5%	0.871
Previous neoplasia	2 8%	0 0%	0.688
Underlying liver disease (n, %)			
HBV	5 20%	1 5%	0.141
HBV + HDV	1 4%	1 5%	0.871
HCV	14 56%	13 65%	0.540
Alcohol	4 16%	3 15%	0.926
NASH	1 4%	2 10%	0.422
Other	0 0%	0 0%	0.871
Child-Pugh Score No (n, %)			
A	24 96%	11 55%	<b>0.011</b>
B	1 4%	7 35%	
C	0 0%	2 10%	
MELD Score (media, DS)	9.2±2.5	12±5	<b>0.019</b>
Alpha-fetoprotein (ng/ml) (mean, SD)	52.2±115.6	22±48	0.28

Albumin (gr/dl) (mean, SD)	3.7±0.6	3.4±0.6	0.102
Hemoglobin (gr/dl) (mean, SD)	12.8±1.9	11.6±2.2	0.056
Bilirubin (mg/dl) (mean, SD)	0.93±0.6	1.77±2	0.053
PT - INR (mean, SD)	1.16±0.12	1.37±0.28	<b>0.001</b>
Creatinine (mg/dl) (mean, SD)	0.9±0.2	0.84±0.2	0.322
Milan criteria (n, %)			
In	22 88%	17 85%	0.946
Out	3 12%	3 15%	
Up to 7 (n, %)			0.911
In	23 92%	19 95%	
Out	2 8%	1 5%	
Number of nodules (mean, SD)	2±0.9	1.8±0.9	0.462
Size of largest nodule (mm) (mean, SD)	22.1±10	24.3±10.7	0.481
Bridging (TACE) (n, (%))	18 72%	13 65%	0.614
Neo-adjuvant therapy (sorafenib) n, (%)	6 24%	2 10%	0.222
First recurrence's mean time (months) (mean, SD) (median)	19.3±20.5 (8)	10.9±11.4 (7)	0.108
Interval between curative intent treatment and LT (months) (mean, SD)	26.2±19.9	18.7±16.6	0,184
Interval between last radiologic treatment and LT (months) (mean, SD)	3.2±2.9	5.5±4.9	0.057

Table S3: Perioperative outcomes SLT-LR vs SLT-RFA

Parameters	Group SLT-LR (n=25)	Group SLT-RFA (n=20)	P
Time await in list (days) (mean, SD) (median)	83±85 (42)	109±125 (65)	0.412
Associated surgeries (n, %)	1 4%	1 5%	0.871
Operative time (minutes) (mean, SD) (median)	479.6±86.9 (480)	473.7±86.8 (465)	0.821
Intraoperative complications (n, %)	2 8%	2 10%	
Cardiac arrest	2 8%	0 0%	0.814
Bleeding	1 4%	0 0%	0.688
Absence of arterial pulse	0 0%	2 10%	0.871
			0.422
Intraoperative transfusion (n, %)	17 68%	17 85%	0.187
Postoperative complications (n, %)	12 48%	12 60%	0.422
Anemia	5 20%	8 40%	0.141
Infection	5 20%	6 30%	0.437
Pleural effusion	2 8%	0 0%	0.688
Postoperative transfusion (n, %) (mean, SD)	5 20% 1.2±3.6	10 50% 3.1±5.6	<b>0.034</b> 0.175
Postoperative complications (Clavien-Dindo)			
None	0 0%	0 0%	0.796
Minor (1-3a)	19 76%	13 65%	
Major (3b-5)	6 24%	7 35%	
Hospitalization, (days) (mean, SD) (median)	7.3±4.3 (7)	15.3±21.7 (8.5)	0.07