

**Table S1** Data collected

Demographic data
Gender
ASA score
Diabetes
History of hepatectomy
Age
BMI
HBP
Hypercholesterolemia
Prognostic factors of HCC
Alcohol consumption
Metabolic syndrome
Tobacco consumption
HCC diagnosis
Symptoms at diagnosis
Fortuitus discovery
Discovery by screening
Preoperative jaundice
Alteration in general health status
Preoperative biopsy
Tumoral biopsy
Non-tumoral biopsy
Preoperative treatment
Transarterial chemoembolization
Sorafenib
Radiotherapy
Biliary drainage
Portal embolization
Preoperative biological analysis
AFP
Creatininemia
INR
PR
Platelets
MELD
Serum bilirubin level
Surgery
Surgery duration
Laparoscopic approach
Laparotomic approach
Conversion to laparotomy
Anatomic resection

**Table S1** (continued)

**Table S1** (continued)

Demographic data
Tumoral effraction
Number of resected segments
Pedicular clamping
Clamping duration
Vascular exclusion of the liver
Blood loss
Blood transfusion
Number of packed red blood cells
Procedures associated with surgery
Postoperative complications
Surgical complication
Biliary fistula
Hemorrhage
Medical complication
Liver failure
Dindo-Clavien score
Length of hospitalization
Treatment for complication
Anatomopathological analysis of the tumor
Number of HCCs
Maximal size of HCC
HCC differentiation
R status
Satellite nodules
Peritumoral capsule
Microvascular invasion
Macrovascular invasion
Perineural invasion
Anatomopathological analysis of the non-tumoral liver
Normal (A0, F0: “equivalent” METAVIR grading score)
Fibrosis (“equivalent” METAVIR grading score)
Steatosis
Steatohepatitis
Follow-up
Recurrence
Localization of recurrence
Treatment of recurrence
Death

ASA, American Society of Anesthesiologists; BMI, body mass index; HBP, high blood pressure; HCC, hepatocellular carcinoma; AFP, alpha-fetoprotein; INR, international normalized ratio; PR, prothrombin ratio; MELD, model for end-stage liver disease.

**Table S2** Prognostic factors of overall survival (univariate analysis)

	Hazard ratio (95% CI)	P
<b>Demographic data</b>		
Gender female	1.105 (0.759, 0.759)	0.606
BMI	0.981 (0.946, 0.946)	0.295
Diabetes	0.812 (0.555, 0.555)	0.276
Dyslipidemia	0.89 (0.584, 0.584)	0.584
High blood pressure	1.05 (0.755, 0.755)	0.771
<b>ASA score</b>		
2	1.064 (0.662, 0.662)	0.798
3	1.084 (0.653, 0.653)	0.755
4	1.811 (0.244, 0.244)	0.561
<b>Risk factors of HCC</b>		
Alcohol consumption	1.113 (0.791, 0.791)	0.542
Metabolic syndrome	0.792 (0.532, 0.532)	0.240
Tobacco consumption	1.615 (1.131, 1.131)	0.008*
<b>HCC diagnosis</b>		
Symptoms at diagnosis	1.336 (0.955, 0.955)	0.090
Incidental discovery	0.927 (0.662, 0.662)	0.659
Screening	0.469 (0.149, 0.149)	0.142
Preoperative jaundice	2.062 (0.656, 0.656)	0.267
Alteration in general health status	1.319 (0.842, 0.842)	0.241
<b>Preoperative biopsy</b>		
Tumoral biopsy	0.713 (0.495, 0.495)	0.073
Non-tumoral biopsy	0.902 (0.601, 0.601)	0.618
<b>Preoperative treatment</b>		
Transarterial chemoembolization	0.95 (0.556, 0.556)	0.849
Sorafenib	0.778 (0.192, 0.192)	0.713
Biliary drainage	0 (0, 0)	0.279
Portal vein embolization	0.998 (0.628, 0.628)	0.993
<b>Preoperative biological analysis</b>		
AFP	1 (1, 1)	0.028*
MELD	1.016 (0.943, 0.943)	0.686
PR	0.992 (0.98, 0.98)	0.196
Platelets	1.002 (1, 1)	0.037*
Serum bilirubin level	1.002 (0.993, 0.993)	0.663
<b>Surgery</b>		
Surgery duration	1.002 (1, 1)	0.019*
<b>Surgical technique</b>		
Laparoscopic approach	0.624 (0.408, 0.408)	0.022*
Conversion to laparotomy	0.844 (0.395, 0.395)	0.655
Open approach	1.62 (1.037, 1.037)	0.025*
Anatomic resection	1.232 (0.832, 0.832)	0.288
Capsular effraction	1.409 (0.572, 0.572)	0.478
Number of resected segments	1.131 (0.996, 0.996)	0.057
Pedicular clamping	1.5 (1.059, 1.059)	0.021*
Clamping duration	1.009 (0.998, 0.998)	0.108
Vascular exclusion of the liver	3.34 (1.556, 1.556)	0.009*
Blood loss	1 (1, 1)	0.306
Blood transfusion	2.222 (1.483, 1.483)	<0.001*
Number of packed red blood cells	1.257 (1.125, 1.125)	<0.001*
<b>Procedures associated with surgery</b>		
Thermoablation	0.731 (0.181, 0.181)	0.644
Bilio-enteric anastomosis	0.504 (0.07, 0.07)	0.441
Vascular resection	4.045 (1.874, 1.874)	0.003*
Digestive resection	2.013 (0.496, 0.496)	0.379
Diaphragm resection	1.508 (0.553, 0.553)	0.450
Veinous thrombectomy	2.109 (0.52, 0.52)	0.351
<b>Postoperative complications</b>		
Surgical complication	1.571 (1.102, 1.102)	0.016
Biliary fistula	2.315 (1.467, 1.467)	0.001*
Hemorrhage	2.241 (0.912, 0.912)	0.117
Medical complication	1.977 (1.391, 1.391)	<0.001*
Liver failure	3.218 (1.634, 1.634)	0.004
Reoperation	3.54 (2.122, 2.122)	<0.001*
<b>Dindo-Clavien score ≤ POD 90</b>		
Dindo-Clavien 1	1.044 (0.638, 0.638)	0.864
Dindo-Clavien 2	2.282 (1.44, 1.44)	<0.001*
Dindo-Clavien 3	1.203 (0.288, 0.288)	0.8
Dindo-Clavien 4	2.307 (0.706, 0.706)	0.167
Dindo-Clavien 5	31.521 (16, 16)	<0.001*
Length of hospitalization	1.033 (1.021, 1.021)	<0.001*

\*, P<0.05. CI, confidence interval; HCC, hepatocellular carcinoma; AFP, alpha-fetoprotein; BMI, body mass index; ASA, American Society of Anesthesiologists; PR, prothrombin ratio; MELD, model for end-stage liver disease; POD, postoperative day.

**Table S3** Prognostic factors of disease recurrence (univariate analysis)

	Hazard ratio (95% CI)	P
<b>Demographic data</b>		
Gender female	1.156 (0.877, 0.877)	0.309
BMI	0.987 (0.961, 0.961)	0.322
Diabetes	0.823 (0.628, 0.628)	0.154
Dyslipidemia	0.893 (0.666, 0.666)	0.443
High blood pressure	1.18 (0.923, 0.923)	0.184
<b>ASA score</b>		
2	0.948 (0.673, 0.673)	0.759
3	0.933 (0.648, 0.648)	0.709
4	0.786 (0.108, 0.108)	0.812
<b>Risk factors of HCC</b>		
Alcohol consumption	1.026 (0.799, 0.799)	0.838
Metabolic syndrome	0.723 (0.544, 0.544)	0.022*
Tobacco consumption	0.962 (0.74, 0.74)	0.774
<b>HCC diagnosis</b>		
Symptoms at diagnosis	1.367 (1.07, 1.07)	0.012*
Incidental discovery	0.886 (0.694, 0.694)	0.332
Screening	0.721 (0.393, 0.393)	0.266
Preoperative jaundice	1.843 (0.686, 0.686)	0.270
Alteration in general health status	1.265 (0.909, 0.909)	0.175
<b>Preoperative biopsy</b>		
Tumoral biopsy	0.82 (0.627, 0.627)	0.152
Non-tumoral biopsy	0.854 (0.643, 0.643)	0.274
<b>Preoperative treatment</b>		
Transarterial chemoembolization	0.855 (0.562, 0.562)	0.456
Sorafenib	0.844 (0.314, 0.314)	0.730
Biliary drainage	5.302 (1.296, 1.296)	0.066
Portal vein embolization	1.133 (0.812, 0.812)	0.470
<b>Preoperative biological analysis</b>		
AFP	1 (1, 1)	0.003*
MELD	1.057 (1.003, 1.003)	0.051
PR	0.986 (0.977, 0.977)	0.002*
Platelets	1.003 (1.002, 1.002)	<0.001*
Serum bilirubin level	1.003 (0.997, 0.997)	0.335
<b>Surgery</b>		
Surgery duration	1.002 (1, 1)	0.039*
<b>Surgical technique</b>		
Laparoscopic approach	0.636 (0.473, 0.473)	0.002*
Conversion to laparotomy	0.919 (0.554, 0.554)	0.741
Open approach	1.51 (1.111, 1.111)	0.006*
Anatomic resection	1.103 (0.833, 0.833)	0.490
Capsular effraction	2.455 (1.332, 1.332)	0.011
Number of resected segments	1.221 (1.11, 1.11)	<0.001*
Pedicular clamping	1.283 (0.997, 0.997)	0.051
Clamping duration	1.005 (0.998, 0.998)	0.188
Vascular exclusion of the liver	3.416 (1.809, 1.809)	0.001*
Blood loss	1 (1, 1)	0.016*
Blood transfusion	2.056 (1.52, 1.52)	<0.001*
Number of packed red blood cells	1.216 (1.119, 1.119)	<0.001*
<b>Procedures associated with surgery</b>		
Thermoablation	0.348 (0.086, 0.086)	0.073
Bilio-enteric anastomosis	0.598 (0.149, 0.149)	0.429
Vascular resection	3.389 (1.89, 1.89)	<0.001*
Digestive resection	3.476 (1.289, 1.289)	0.04*
Diaphragm resection	1.977 (1.077, 1.077)	0.046*
Veinous thrombectomy	1.352 (0.432, 0.432)	0.621
<b>Postoperative complications</b>		
Surgical complication	1.498 (1.154, 1.154)	0.003*
Biliary fistula	1.831 (1.256, 1.256)	0.004*
Hemorrhage	1.441 (0.678, 0.678)	0.369
Medical complication	1.576 (1.225, 1.225)	<0.001*
Liver failure	2.393 (1.394, 1.394)	0.005
Reoperation	2.447 (1.63, 1.63)	<0.001*
<b>Dindo-Clavien score ≤ POD 90</b>		
Dindo-Clavien 1	1.205 (0.863, 0.863)	0.273
Dindo-Clavien 2	1.548 (1.099, 1.099)	0.012
Dindo-Clavien 3	1.158 (0.422, 0.422)	0.776
Dindo-Clavien 4	1.626 (0.653, 0.653)	0.297
Dindo-Clavien 5	8.914 (5.03, 5.03)	<0.001*
Length of hospitalization	1.022 (1.014, 1.014)	<0.001*
<b>Anatomopathological analysis of the tumor</b>		
Number of lesions	1.235 (1.141, 1.141)	<0.001*
Maximal tumor size	1.001 (1.001, 1.001)	0.003*
<b>Tumor differentiation</b>		
Moderate	1.033 (0.68, 0.68)	0.879
Well	0.628 (0.396, 0.396)	0.048*
<b>R status</b>		
R1	2.322 (1.68, 1.68)	<0.001*
R2	2.217 (0.55, 0.55)	0.263
Satellite nodules	2.42 (1.869, 1.869)	<0.001*
Peritumoral capsule	0.905 (0.691, 0.691)	0.467
Microvascular invasion	2.267 (1.741, 1.741)	<0.001*
Macrovascular invasion	1.598 (0.977, 0.977)	0.081
Perineural invasion	4.574 (1.655, 1.655)	0.017*
<b>Anatomopathological analysis of the non-tumoral liver</b>		
Normal (A0, F0)	1.116 (0.853, 0.853)	0.426
<b>Fibrosis</b>		
F1	0.863 (0.646, 0.646)	0.318
F2	0.949 (0.701, 0.701)	0.733
Steatosis	0.733 (0.573, 0.573)	0.014*
Steatohepatitis	0.719 (0.433, 0.433)	0.184

\*, P<0.05. CI, confidence interval; HCC, hepatocellular carcinoma; AFP, alpha-fetoprotein; BMI, body mass index; ASA, American Society of Anesthesiologists; PR, prothrombin ratio; MELD, model for end-stage liver disease; POD, postoperative day.