

Supplementary Table 1. Demographic comparison of Cohort 1 and Cohort 2.

|                                    |                | Cohort<br>(n=100) | Cohort 1<br>(n=55) | Cohort 2<br>(n=55) | P value |
|------------------------------------|----------------|-------------------|--------------------|--------------------|---------|
| Age (years)                        | > 60           | 55 (55%)          | 32 (58.2%)         | 0.7375             |         |
|                                    | ≤60            | 45 (45%)          | 23 (41.8%)         |                    |         |
| Gender                             | Male           | 78 (78%)          | 50 (90.9%)         | <b>0.0426*</b>     |         |
|                                    | Female         | 22 (22%)          | 5 (9.1%)           |                    |         |
| Smoking                            | Yes            | 37 (37%)          | 29 (52.7%)         | 0.0581             |         |
|                                    | No             | 63 (63%)          | 26 (47.3%)         |                    |         |
| UICC TNM<br>staging 7th<br>edition | Stage I        | 60 (60%)          | 26 (47.3%)         | 0.1271             |         |
|                                    | Beyond Stage I | 40 (40%)          | 29 (52.7%)         |                    |         |
| HBV                                | Positive       | 78 (78%)          | 39 (70.9%)         | 0.3262             |         |
|                                    | Negative       | 22 (22%)          | 16 (29.1%)         |                    |         |
| <sup>1</sup> HCV                   | Positive       | 7 (7%)            | 4 (7.3%)           | 0.7921             |         |
|                                    | Negative       | 93 (93%)          | 51 (92.7%)         |                    |         |
| Alcoholic<br>consumption           | Yes            | 55 (55%)          | 28 (50.9%)         | 0.6251             |         |
|                                    | No             | 45 (45%)          | 27 (49.1%)         |                    |         |
| Bilirubin<br>(umol/L)              | > 20           | 5 (5%)            | 5 (9.1%)           | 0.3212             |         |
|                                    | ≤20            | 95 (95%)          | 50 (90.9%)         |                    |         |
| AST (U/L)                          | > 40           | 36 (36%)          | 20 (36.4%)         | 0.964              |         |
|                                    | ≤40            | 64 (64%)          | 35 (63.6%)         |                    |         |
| ALT (U/L)                          | ALT > 45       | 37 (37%)          | 14 (25.5%)         | 0.1433             |         |
|                                    | ALT≤45         | 63 (63%)          | 41 (74.5%)         |                    |         |
| AFP (ng/ml)                        | > 400 ng/ml    | 17 (17%)          | 10 (18.2%)         | 0.8527             |         |
|                                    | ≤400 ng/ml     | 83 (83%)          | 45 (81.8%)         |                    |         |
| <sup>2</sup> Child's<br>Score      | Grade A        | 99 (99%)          | 55 (100%)          | >0.9999            |         |
|                                    | Grade B        | 1 (1%)            | 0 (0%)             |                    |         |

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|                  |                |                                  |  |        |
|------------------|----------------|----------------------------------|--|--------|
| Liver cirrhosis  | Yes            | 17 (17%)                         | 14 (25.5%)                             | 0.208  |
| Tumor recurrence | No<br>(1 year) | 83 (83%)<br>21 (21%)<br>79 (79%) | 41 (74.5%)<br>14 (25.5%)<br>41 (74.5%) | 0.5257 |

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Chi-squared test except 1 and 2

1 Chi-square with Yates' correction

2 Fisher's exact test

Supplementary Table 2. Univariate and multivariate analysis of clinicopathologic parameters associated with disease-free survival

| <b>General Factors</b>               | Univariate analysis |             |         | Multivariate analysis |             |         |
|--------------------------------------|---------------------|-------------|---------|-----------------------|-------------|---------|
|                                      | HR                  | 95% CI      | P value | HR                    | 95% CI      | P value |
| Age(≤60 vs. >60)                     | 1.279               | 0.742-2.204 | 0.375   |                       |             |         |
| Sex (male vs. female)                | 1.111               | 0.583-2.117 | 0.749   |                       |             |         |
| HBV carrier (pres.vs. abs.)          | 0.814               | 0.435-1.522 | 0.519   |                       |             |         |
| AFP(ng/L)(≤400 vs. >400)             | 1.394               | 0.698-2.787 | 0.347   |                       |             |         |
| No. of nodules(≤1 vs. >1)            | 3.98                | 1.907-8.305 | 0.000   | 3.561                 | 1.450-8.740 | 0.006** |
| Tumor size(cm)(≤4 vs. >4)            | 1.383               | 0.726-2.635 | 0.324   |                       |             |         |
| Venous infiltration (pres. vs. abs.) | 1.627               | 0.945-2.801 | 0.079   |                       |             |         |
| UICC7 stage(I vs. II/III)            | 1.761               | 1.026-3.022 | 0.04*   | 1.409                 | 0.750-2.647 | 0.287   |
| Total bilirubin(umol/L)(≤20 vs. >20) | 1.761               | 0.634-4.889 | 0.277   |                       |             |         |
| AST(U/L)(≤40 vs. >40)                | 1.602               | 0.931-2.756 | 0.089   |                       |             |         |
| ALT(U/L)(≤45 vs. >45)                | 1.442               | 0.839-2.477 | 0.185   |                       |             |         |
| <b>Post-OT Cytokines</b>             |                     |             |         |                       |             |         |
| IFN-α                                | 2.412               | 1.403-4.15  | 0.001*  | 2.519                 | 1.334-4.759 | 0.004** |

|               |       |             |        |       |              |       |
|---------------|-------|-------------|--------|-------|--------------|-------|
| IL6           | 2.243 | 1.257-4.005 | 0.006* | 1.48  | 0.700-3.132  | 0.305 |
| CXCL10        | 2.187 | 1.246-3.839 | 0.006* | 1.707 | 0.951-3.064  | 0.073 |
| IL10          | 4.901 | 1.19-20.182 | 0.028* | 2.679 | 0.593-12.106 | 0.200 |
| MCP1          | 1.766 | 1.013-3.079 | 0.045* | 0.604 | 0.279-1.308  | 0.201 |
| TNF- $\alpha$ | 1.712 | 0.998-2.936 | 0.051  |       |              |       |
| GM-CSF        | 3.742 | 0.91-15.387 | 0.067  |       |              |       |
| IL8           | 1.583 | 0.815-3.076 | 0.176  |       |              |       |
| IFN- $\gamma$ | 1.79  | 0.764-4.193 | 0.18   |       |              |       |
| IL1 $\beta$   | 1.168 | 0.668-2.04  | 0.586  |       |              |       |

**Post-OT Liver**

**functions**

|                                 |       |             |       |       |             |       |
|---------------------------------|-------|-------------|-------|-------|-------------|-------|
| Total bilirubin                 | 2.056 | 1.189-3.555 | 0.01* | 1.856 | 1.062-3.244 | 0.03* |
| (umol/l) ( $\leq$ 120 vs > 120) |       |             |       |       |             |       |
| AST(U/L)( $\leq$ 201 vs. >201)  | 1.545 | 0.897-2.661 | 0.117 |       |             |       |
| ALT(U/L)( $\leq$ 119 vs. >119)  | 1.763 | 0.885-3.513 | 0.107 |       |             |       |

#ROC curve analysis was employed to determine the cut-off score.

Cox proportional hazards regression model. HR, hazard ratio; CI, confidence interval.

Significant predictive variables: \*p <0.05; \*\*P<0.01.