Supplementary Table 1. Univariate analysis of risk factors related to OS and recurrence of HCC patients

| Variable                  | OS          | DFS         |
|---------------------------|-------------|-------------|
|                           | HR 95% CI p value | HR 95% CI p value |
| Gender                    |             |             |
| female                    | 1           | 1           |
| male                      | 1.00 0.64-1.57 .999 | 1.01 0.62-1.66 .964 |
| Age, years                |             |             |
| ≤50                       | 1           | 1           |
| >50                       | 1.29 0.95-1.74 .103 | 1.27 0.90-1.78 .170 |
| HBsAg                     |             |             |
| negative                  | 1           | 1           |
| positive                  | 1.46 0.98-2.19 .062 | 1.19 0.78-1.81 .429 |
| AFP, ng/mL                |             |             |
| ≤20                       | 1           | 1           |
| >20                       | 1.82 1.29-2.55 .001 | 1.27 0.89-1.81 .190 |
| GGT, U/L                  |             |             |
| ≤50                       | 1           | 1           |
| >50                       | 1.55 1.13-2.13 .007 | 1.66 1.16-2.37 0.005 |
| ALT, U/L                  |             |             |
| ≤40                       | 1           | 1           |
| >40                       | 1.22 0.66-2.56 .517 | 1.81 0.84-3.87 .128 |
| Liver cirrhosis           |             |             |
| no                        | 1           | 1           |
| yes                       | 1.63 1.05-2.54 .030 | 1.70 1.04-2.80 .036 |
| Tumor size, cm            |             |             |
| ≤5                        | 1           | 1           |
| >5                        | 1.95 1.44-2.65 <.001 | 1.21 0.86-1.70 0.286 |
| Tumor number              |             |             |
| single                    | 1           | 1           |
| multiple                  | 1.74 1.23-2.44 .002 | 1.89 1.28-2.78 .001 |
| Tumor capsule             |             |             |
| yes                       | 1           | 1           |
| no                        | 1.74 1.28-2.35 <.001 | 1.49 1.06-2.10 .021 |
| Tumor differentiation     |             |             |
| I-II                      | 1           | 1           |
| III-IV                    | 1.33 0.97-1.83 .075 | 1.21 0.84-1.74 .307 |
|                |   |       |       |       |       |
|----------------|---|-------|-------|-------|-------|
| Vascular invasion |   |       |       |       |       |
| no             | 1 | 1     |       |       |       |
| yes            | 2.50 | 1.81-3.45 | <.001 | 1.72 | 1.17-2.63 | 0.006 |
| RECK expression |   |       |       |       |       |
| Negative       | 1 |       |       |       |       |
| Positive       | 0.60 | 0.38-0.96 | .033 | 0.53 | 0.31-0.90 | .019 |
| PD-L1 expression |   |       |       |       |       |
| Negative       | 1 |       |       |       |       |
| Positive       | 1.50 | 1.09-2.04 | .012 | 1.07 | 0.74-1.54 | .740 |

OS: Overall survival; DFS: disease free survival; HR: Hazard Ratio;
CI: Confidence Interval; GGT: γ-glutamyltransferase; AFP: a-fetoprotein;