

**S1 Table.** Significantly different factors between the patients with future metastases and non-metastases among patients without initial metastases

|                        | Future<br>non-metastases<br>(n=113) | Future<br>metastases<br>(n=20) | p-value      |
|------------------------|-------------------------------------|--------------------------------|--------------|
| Age, years             | 60.4 ± 10.3                         | 64.7 ± 12.1                    | 0.128        |
| Male gender            | 17 (85.0)                           | 86 (76.1)                      | 0.557        |
| Child-Pugh Class       |                                     |                                | 0.594        |
| A                      | 95 (84.0)                           | 20 (100)                       |              |
| B                      | 18 (16.0)                           | 0 (0.0)                        |              |
| AFP, ng/mL             | 47522.5 ± 177857.9                  | 2147.8 ± 12151.8               | 0.268        |
| PIVKA-II, mAU          | 28294.0 ± 82364.5                   | 5969.7 ± 20316.4               | 0.242        |
| PVTT                   | 12 (10.6)                           | 6 (30.0)                       | <b>0.048</b> |
| Stage (mUICC)          |                                     |                                | 0.120        |
| I                      | 1 (5.0)                             | 27 (23.9)                      |              |
| II                     | 7 (35.0)                            | 46 (40.7)                      |              |
| III                    | 9 (45.0)                            | 32 (28.3)                      |              |
| IVA                    | 3 (15.0)                            | 8 (7.1)                        |              |
| Largest tumor size, cm | 5.1 ± 4.7                           | 11.5 ± 5.1                     | <b>0.007</b> |
| Tumor number           |                                     |                                |              |
| Single                 | 71 (62.8)                           | 13 (65.0)                      |              |
| Multiple               | 42 (37.2)                           | 7 (35.0)                       |              |
| Systolic WBV, cP       | 4.5 ± 0.8                           | 4.1 ± 0.8                      | 0.058        |
| Diastolic WBV, cP      | 13.0 ± 2.9                          | 14.4 ± 3.0                     | <b>0.048</b> |

Data are given as n (%) or mean ± SD. AFP, alpha-fetoprotein; PIVKA-II, proteins induced by vitamin K antagonist-II; PVTT, portal vein tumor thrombosis; mUICC, modified international union against cancer; WBV, whole blood viscosity.

