

S.Table 2. The details and characteristics of each patient enrolled in Cohort 1.

| Patient ID | Gen der | Age | Number | Tumour thrombus | AFP (ng/ml) | ALT (U/L) | AST (U/L) | ALB (g/L) | TBIL (umol/L) | Tumor Diameter (cm) | Tumor encapsulation | Ascites | Tumor Disease Anatomic Site | HBsAg (IU/ml) | HBsAb (IU/ml) | HBcAg (IU/ml) | HBcAb (IU/ml) | HBcAb (IU/ml) | HBV | Date surgery | Overall Survival | Recurrence | American Joint Committee on Cancer Publication Version Type | HCV | TNM Stage | Lymph Node metastasis | Distant metastasis | Sample Type | Tumors grow to hepatic vessels | Tumors grow to nearby organs | Peritumoral tissue | Intratumoral tissue |
|------------|---------|-----|----------|-----------------|-------------|-----------|-----------|-----------|---------------|---------------------|---------------------|---------|-----------------------------|---------------|---------------|---------------|---------------|---------------|-----|--------------|------------------|------------|---|-----|-----------|-----------------------|--------------------|-------------|--------------------------------|------------------------------|--------------------|---------------------|
| 2301046 | M | 76 | 1 | N | 3.01 | 1186 | 1455 | 36.2 | 15.6 | 5 | Y | N | Liver | >250 | 0 | 0.44 | 0.02 | 11.3 | Y | 20140106 | N | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2306987 | M | 65 | 1 | N | 3.25 | 759 | 515 | 37.4 | 26.5 | 4.5 | N | N | Liver | >250 | 0.13 | 0.41 | 0.01 | 12.25 | Y | 20140114 | Y | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2301958 | M | 46 | 5 | Y | 3.9 | 405 | 313 | 45.5 | 51.9 | 6.5 | N | N | Liver | 19.14 | 0.44 | 0.44 | 0.03 | 11.37 | Y | 20140117 | N | Y | 7th | N | 3 | N | N | Primary | N | N | Available | Available |
| 2307503 | M | 44 | multiple | N | 1.33 | 703 | 437 | 49.7 | 19.8 | 8 | Y | N | Liver | 115.91 | 0.42 | 0.15 | 0.01 | 11.5 | Y | 20140121 | N | Y | 7th | N | 4 | Y | N | Primary | N | N | Available | Available |
| 2313665 | M | 58 | multiple | Y | 2.58 | 846 | 880 | 44.5 | 15.7 | 6 | N | N | Liver | 0.01 | 14.94 | 0.45 | 0.99 | 7.89 | Y | 20140226 | Y | N | 7th | N | 3 | N | N | Primary | N | N | Available | Available |
| 2313803 | F | 59 | 1 | N | 62.58 | 983 | 1086 | 37.3 | 25.2 | 3 | Y | N | Liver | 0.52 | 1.99 | 0.5 | 0.07 | 11.19 | Y | 20140228 | Y | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2310397 | M | 63 | 1 | N | 1082 | 214 | 275 | 34.1 | 16.2 | 3.5 | Y | N | Liver | 21.05 | 2.96 | 0.42 | 0.02 | 11.5 | Y | 20140321 | Y | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2311180 | M | 57 | 1 | N | 420.8 | 991 | 774 | 42.3 | 42.4 | 6 | Y | N | Liver | >250 | 0.26 | 217.11 | 18.72 | 9.39 | Y | 20140404 | Y | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2310890 | M | 61 | 1 | Y | >1210 | 598 | 748 | 37.3 | 29 | 7.5 | N | N | Liver | >250 | 0 | 0.08 | 0.79 | 9.64 | Y | 20140408 | N | Y | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2310622 | M | 35 | 2 | Y | 134.7 | 1816 | 1284 | 38.7 | 19.1 | 5 | Y | N | Liver | 53.06 | 5.54 | 0.7 | 0.08 | 10.64 | Y | 20140411 | Y | Y | 7th | N | 3 | N | N | Primary | N | N | Available | Available |
| 2302432 | M | 62 | | | | | | | | | | | Liver | | | | | | | 20140414 | N | Y | 7th | | | | | Primary | | | NA | Available |
| 2342234 | M | 66 | 1 | N | 20.66 | 960 | 951 | 39.5 | 12.9 | 6 | Y | N | Liver | >250 | 0.08 | 0.37 | 0.02 | 10.89 | Y | 20140418 | Y | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2316945 | M | 76 | 1 | Y | >1210 | 663 | 774 | 36.5 | 20.5 | 8.5 | N | N | Liver | 18.37 | 7.37 | 0.36 | 0.03 | 11.87 | Y | 20140429 | N | Y | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2344239 | M | 48 | multiple | N | 1.78 | 1170 | 866 | 36 | 27.5 | 8 | Y | N | Liver | 2.62 | 1.13 | 0.42 | 0.03 | 11.83 | Y | 20140515 | Y | N | 7th | N | 3 | N | N | Primary | N | N | Available | Available |
| 2450242 | M | 54 | 2 | Y | 36.64 | 126 | 86 | 38.6 | 15.6 | 6 | N | N | Liver | >250 | 7.99 | 20.61 | 3.19 | 11.09 | Y | 20140620 | N | Y | 7th | N | 3 | N | N | Primary | N | N | Available | Available |
| 2352870 | M | 49 | 1 | N | >1210 | 2723 | 2959 | 39.9 | 31.2 | 6 | N | N | Liver | >250 | 0.41 | 0.36 | 0.03 | 12.35 | Y | 20140821 | | | 7th | N | 1 | N | N | Primary | N | N | Available | NA |
| 2336376 | M | 62 | 1 | Y | 4.67 | 767 | 1450 | 31.2 | 28.9 | 10 | Y | N | Liver | 95.34 | 6.25 | 60.21 | 3.59 | 13.9 | Y | 20140902 | N | Y | 7th | N | 1 | N | N | Primary | N | N | NA | Available |
| 2605990 | M | 48 | 1 | Y | >1210 | 24 | 49 | 41.1 | 15.8 | 9 | Y | Y | Liver | >250 | 0.39 | 0.31 | 0.01 | 8.8 | Y | 20150610 | Y | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2533382 | M | 52 | 1 | N | 12.41 | 38 | 54 | 36.4 | 23.5 | 5 | Y | N | Liver | >250 | 0.49 | 0.38 | 0.02 | 8.87 | Y | 20150612 | Y | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 2502141 | F | 65 | 1 | ns | 17.5 | 1.14 | 62.5 | 43.3 | 12.7 | 3 | N | N | Liver | 0.03 | 0 | 0.684 | 20.8 | 0.15 | Y | 20150123 | N | Y | 7th | | 1 | N | N | Primary | N | N | Available | Available |
| 3470116 | M | 51 | multiple | N | 701.82 | 20 | 23 | 37.1 | 15.6 | 5.5 | N | N | Liver | >250 | 0 | 0.46 | 2.01 | 0.08 | Y | 20190115 | Y | N | 7th | N | 2 | N | N | Primary | N | Y | Available | Available |
| 3470121 | M | 66 | 1 | N | 31.91 | 14 | 24 | 42.4 | 13.3 | 8 | Y | N | Liver | >130 | <2.0 | 0.09 | 0 | 0.01 | Y | 20190121 | Y | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 3470213 | F | 49 | 1 | Y | 1.93 | 26 | 44 | 33.9 | 13.4 | 6 | Y | N | Liver | >130 | <2.0 | 0.15 | 0.3 | 0.01 | Y | 20190213 | Y | N | 7th | N | 1 | N | N | Primary | N | N | Available | Available |
| 3470214 | M | 43 | 2 | Y | 6.57 | 46 | 61 | 38.1 | 11.1 | 18 | N | N | Liver | 209.17 | 5.18 | 0.34 | 0.01 | 9.33 | Y | 20190214 | Y | N | 7th | N | 3 | Y | N | Primary | N | N | Available | Available |
| 34702191 | F | 28 | 2 | N | 1119 | 38 | 108 | 46.6 | 22.2 | 17 | Y | N | Liver | 1349.7 | 0.65 | 0.1 | 0.02 | 100.7 | Y | 20190219 | Y | N | 7th | N | 3 | N | N | Primary | N | N | Available | Available |
| 34702192 | M | 41 | 1 | N | 2.74 | 20 | 17 | 40.5 | 14.3 | 9 | Y | N | Liver | 0 | 65.5 | 0.42 | 2.14 | 1.37 | N | 20190219 | Y | N | 7th | N | | N | N | Primary | Y | N | Available | Available |
| 3470227 | F | 55 | 1 | N | 0.99 | 18 | 20 | 45.8 | 12 | 10 | Y | Y | Liver | 0 | 6.73 | 0.44 | 0.77 | 1.64 | N | 20190227 | Y | N | 7th | N | | N | N | Primary | Y | N | Available | Available |
| 3470305 | M | 56 | 1 | N | 6.68 | 38 | 55 | 39.6 | 25.5 | 7.5 | N | N | Liver | 0 | 8.270 | 0.39 | 0.58 | 7.49 | N | 20190305 | Y | N | 7th | N | 1 | N | N | Primary | Y | Y | Available | Available |