

**Supplementary Table 1.** Characteristics of nine patients who received nivolumab treatment

| Patient No. | Age | Gender | Etiology | Cirrhosis | AFP      | Best response | Final response |
|-------------|-----|--------|----------|-----------|----------|---------------|----------------|
| 1           | 60  | M      | NBNC     | No        | 3,699    | PD            | PD             |
| 2           | 55  | M      | HBV      | No        | 2.5      | PR            | PD             |
| 3           | 57  | M      | HBV      | No        | 2.0      | PD            | PD             |
| 4           | 52  | M      | HBV      | No        | 8,993    | SD            | PD             |
| 5           | 65  | M      | HBV      | Yes       | 329.2    | SD            | PD             |
| 6           | 72  | F      | HBV      | No        | >120,000 | SD            | SD             |
| 7           | 65  | M      | HBV      | Yes       | 2,253.0  | PD            | PD             |
| 8           | 77  | M      | HBV      | No        | 476.5    | PR            | SD             |
| 9           | 51  | M      | HBV      | Yes       | >120,000 | PD            | PD             |

AFP, alpha-fetoprotein; M, male; NBNC, non-B non-C; PD, progressive disease; HBV, hepatitis B; PR, partial response; SD, stable disease; F, female.