**Supplemental Table S5. OS and PFS per AFP cutoffs by baseline characteristics**

|  |  |  |
| --- | --- | --- |
|  | OSHR (95% CI); *p*an=141b | PFS perIRF-assessed RECIST 1.1HR (95% CI); *p*an=115b |
| ≥75% AFP decrease | ≤10% AFP increase | ≥75% AFP decrease | ≤10% AFP increase |
| AFP |  |  |  |  |
| Non-responder | Ref |  |  |  |
| Responder | 0.35 (0.18–0.66) *p* = 0.001 | 0.33(0.20–0.54)*p* < 0.001  | 0.43(0.25–0.74)*p* = 0.003 | 0.33(0.18–0.60)*p* < 0.001 |
| Baseline AFP | 1.00(0.99-1.00)*p* = 0.467 | 1.00(0.99-1.00)*p* = 0.884 | 1.00(0.99-1.00)*p* = 0.279 | 1.00(0.99-1.00)*p* = 0.074 |
| Sex |  |  |  |  |
| Female | Ref |  |  |  |
| Male | 1.52(0.82–2.79)*p* = 0.181 | 1.72(0.93–3.17)*p* = 0.084 | 1.16(0.64–2.09)*p* = 0.625 | 1.24(0.69–2.24)*p* = 0.471 |
| Race |  |  |  |  |
| Asian | Ref |  |  |  |
| White | 0.97(0.52–1.80)*p* = 0.913 | 1.25(0.67–2.32)*p* = 0.478 | 0.89(0.50–1.59)*p* = 0.697 | 1.01(0.57–1.80)*p* = 0.970 |
| Other | 0.82(0.10–6.67)*p* = 0.855 | 1.92(0.24–15.49)*p* = 0.542 | 1.78(0.17–18.57)*p* = 0.628 | 4.87(0.46–51.31)*p* = 0.187 |
| Unknown | 0.91(0.32–2.54)*p* = 0.854 | 1.10(0.38–3.15)*p* = 0.866 | 2.10(0.74–5.92)*p* = 0.162 | 1.72(0.58–5.07)*p* = 0.326 |
| ECOG PS |  |  |  |  |
| 0 | Ref |  |  |  |
| 1 | 1.0(0.60–1.67)*p* = 0.995 | 0.85(0.51–1.44)*p* = 0.55 | 1.51(0.86–2.65)*p* = 0.149 | 1.28(0.74–2.22)*p* = 0.377 |
| Child-Pugh class |  |  |  |  |
| A5 | Ref |  |  |  |
| A6 | 2.45(1.51–3.97)*p* < 0.001 | 2.68(1.62–4.43)*p* < 0.001 | 1.60(0.92–2.78)*p* = 0.093 | 1.60(0.91–2.80)*p* =0.101 |
| Etiology |  |  |  |  |
| HBV | Ref |  |  |  |
| HCV | 0.71(0.35–1.45)*p* = 0.349 | 0.64(0.31–1.31)*p* = 0.220 | 0.68(0.35–1.34)*p* = 0.268 | 0.64(0.32–1.26)*p* = 0.197 |
| Non-viral | 1.82(0.93–3.57)*p* = 0.082 | 1.46(0.74–2.87)*p* = 0.271 | 1.91(0.98–3.74)*p* = 0.058 | 1.50(0.76–2.96)*p* = 0.238 |
| BCLC stage |  |  |  |  |
| A1/A4 | Ref |  |  |  |
| B | 1.54(0.39–6.11)*p* = 0.541 | 0.86(0.21–3.52)*p* = 0.833 | 2.49(0.66–9.41)*p* = 0.179 | 1.63(0.43–6.12)*p* = 0.472 |
| C | 4.27(1.09–16.76)*p* = 0.038 | 3.28(0.83–12.92)*p* = 0.090 | 2.69(0.69–10.52)*p* = 0.155 | 2.21(0.57–8.60)*p* = 0.253 |
| Extrahepatic spread (Yes) | 0.49(0.23–1.06)*p* = 0.070 | 0.47(0.22–1.01)*p* = 0.054 | 0.70(0.32–1.41)*p* = 0.290 | 0.54(0.26–1.13)*p* = 0.102 |
| Time from initial diagnosis  | 1.00(0.99–1.01)*p* = 0.500 | 1.00(0.99–1.01)*p* = 0.588 | 1.00(0.99–1.01)*p* = 0.923 | 1.00(0.99–1.01)*p* = 0.790 |
| Prior locoregional therapy (Yes) | 0.96(0.55–1.68)*p* = 0.890 | 0.81(0.46–1.43)*p* = 0.472 | 0.95(0.55–1.67)*p* = 0.868 | 0.71(0.40–1.28)*p* = 0.257 |
| Number of metastatic sites | 1.07(0.65–1.77)*p* = 0.780 | 1.17(0.72–1.92)*p* = 0.522 | 1.17(0.70–1.95)*p* = 0.553 | 1.21(0.73–2.00)*p* = 0.470 |

AFP–alpha-fetoprotein; IRF–independent review facility; OS–overall survival; PFS–progression-free survival; RECIST 1.1–Response Evaluation Criteria in Solid Tumors version 1.1.

a Estimated using a Cox proportional hazards model

b N is lower than primary analysis due to missing data across confounder variables