**Supplementary Table 1. Univariate and multivariate analyses results for baseline ETV with MR bias field correction**

| **Variables** | **Comparison** | **Univariate model** | |  | **Multivariate model** | |
| --- | --- | --- | --- | --- | --- | --- |
| **Hazard ratio (95% CI)** | ***p*** | **Hazard ratio (95% CI)** | ***p*** |
| Age in years | Increase by 1 | 1.01 (0.99, 1.03) | 0.47 |  | 1.00 (0.97, 1.02) | 0.81 |
| Baseline ETV in cm3 | ≥415 vs. <415 | 2.00 (1.23, 3.26) | 0.01 |  | 1.46 (0.83, 2.59) | 0.19 |
| Sex | Female vs. male | 0.72 (0.42, 1.25) | 0.24 |  | 0.72 (0.41, 1.27) | 0.26 |
| Ethnicity | White vs. other | 1.76 (1.04, 2.99) | 0.04 |  | 1.59 (0.85, 2.96) | 0.15 |
| Child-Pugh class | A vs. B or C | 0.42 (0.26, 0.68) | <0.001 |  | 0.42 (0.25, 0.69) | <0.001 |
| Barcelona Clinic Liver Cancer stage | B vs. C or D | 0.51 (0.31, 0.86) | 0.01 |  | 0.53 (0.31, 0.91) | 0.02 |
| TACE type | Lipiodol vs. drug- eluting beads TACE | 1.16 (0.71, 1.90) | 0.55 |  | 1.00 (0.60, 1.66) | 0.99 |

**Main findings:**

* Patients with Child-Pugh class “A” had a lower mortality rate than those with Child-Pugh Class “B” or “C”, by 58%.
* Patients with Barcelona Clinic Liver Cancer stage “B” had a lower mortality rate than those with Barcelona Clinic Liver Cancer stage “C” or “D”, by 47%.

| **Suppl. Table 2. Univariate and multivariate analyses results for ETV% with MR bias field correction.** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | | **Univariate model** | | **Multivariate model** | |
| **Variable** | **Comparison** | **Hazard ratio** | ***p*** | **Hazard ratio** | ***p*** |
| Age | Increase by 1 | 1.01 (0.99, 1.03) | 0.47 | 1.00 (0.97, 1.02) | 0.82 |
| ETV% | ≥41% vs. <41% | 0.58 (0.37, 0.93) | 0.02 | 0.41 (0.25, 0.69) | <0.001 |
| Sex | Female vs. male | 0.72 (0.42, 1.25) | 0.24 | 0.74 (0.42, 1.32) | 0.31 |
| Ethnicity | White vs. other | 1.76 (1.04, 2.99) | 0.04 | 2.30 (1.31, 4.05) | 0.004 |
| Child-Pugh class | A vs. B or C | 0.42 (0.26, 0.68) | <0.001 | 0.30 (0.17, 0.51) | <0.001 |
| Barcelona Clinic Liver Cancer stage | B vs. C or D | 0.51 (0.31, 0.86) | 0.01 | 0.58 (0.34, 0.99) | 0.045 |
| TACE type | Lipiodol® vs. drug-eluting beads TACE | 1.16 (0.71, 1.90) | 0.55 | 0.82 (0.49, 1.39) | 0.47 |

**Main findings:**

* The mortality rate for patients with reduction on relative tumor size greater than 41.4% were 58% lower than those with reduction less than 41.4%
* Patients with Child-Pugh class “A” had a lower mortality rate than those with Child-Pugh class “B” or “C”, by 70%.
* Patients with Barcelona Clinic Liver Cancer stage “B” had a lower mortality rate than those with Barcelona Clinic Liver Cancer stage “C” or “D”, by 42%.