**Table S2.** Univariate and multivariate Cox regression analysis of factors affecting incomplete immune reconstitution in the study (n = 1609).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Univariable analysis | | Multivariable analysis | |
| Varibles | RR (95%Cl) | P-value | RR (95%Cl) | P-value |
| **Age at initial ART (years)** | |  |  |  |
| ≤34 | Ref |  | Ref |  |
| 35-50 | 0.55 (0.47 -0.64 ) | ＜0.001 | 0.85(0.64-1.12) | 0.251 |
| ＞50 | 0.87 (0.75 -1.02 ) | 0.086 | 1.58(1.18-2.11) | 0.002 |
| **Gender** |  |  |  |  |
| Male | Ref |  |  |  |
| Female | 0.72 (0.63 -0.82 ) | ＜0.001 |  |  |
| **Diagnosis treatment interval（Month）** | |  |  |  |
| ＜0.2 | Ref |  |  |  |
| 0.2-1.3 | 0.86 (0.68 -1.09 ) | 0.211 |  |  |
| ＞1.4 | 0.89 (0.71 -1.12 ) | 0.315 |  |  |
| **Marital status** |  |  |  |  |
| Married | Ref |  | Ref |  |
| Unmarried | 1.69 (1.46 -1.95 ) | ＜0.001 | 1.47(1.13-1.92) | 0.004 |
| Divorced or Widowed | 1.19 (0.99 -1.43 ) | 0.071 | 1.17(0.94-1.46) | 0.153 |
| Unclear | 0.79 (0.52 -1.20 ) | 0.263 | 0.95(0.56-1.61) | 0.842 |
| **Infection route** |  |  |  |  |
| Heterosexual | Ref |  | Ref |  |
| Homosexual | 2.06 (1.75 -2.43 ) | ＜0.001 | 1.95(1.52-2.5) | ＜0.001 |
| Intravenous drug use | 0.86 (0.69 -1.08 ) | 0.187 | 0.86(0.65-1.15) | 0.311 |
| Other/Unclear\* | 0.67 (0.56 -0.80 ) | ＜0.001 | 0.65(0.52-0.8) | ＜0.001 |
| **Baseline HBsAg** |  |  |  |  |
| Positive | Ref |  |  |  |
| Negative | 0.70 (0.52 -0.94 ) | 0.017 |  |  |
| **Cutrrent HBsAg** |  |  |  |  |
| Positive | Ref |  |  |  |
| Negative | 0.74 (0.55 -0.98 ) | 0.036 |  |  |
| **Baseline Anti-HCV** |  |  |  |  |
| Positive | Ref |  |  |  |
| Negative | 0.70 (0.55 -0.89 ) | 0.004 |  |  |
| **Current Anti-HCV** |  |  |  |  |
| Positive | Ref |  |  |  |
| Negative | 0.75 (0.60 -0.95 ) | 0.014 |  |  |
| **Initial antiretroviral regimen** | | | | |
| NNRITS | Ref |  | Ref |  |
| PIs | 1.05 (0.79 -1.39 ) | 0.758 | 1.31(0.94-1.83) | 0.111 |
| INSTIs | 4.55 (2.81 -7.36 ) | ＜0.001 | 5.19(3.04-8.88) | ＜0.001 |
| **Current antiretroviral regimen** | |  |  |  |
| NNRITS | Ref |  |  |  |
| PIs | 0.86 (0.74 -1.00 ) | 0.053 |  |  |
| INSTIs | 1.08 (0.91 -1.29 ) | 0.396 |  |  |
| **Regimen change** | | | | |
| No | Ref |  | Ref |  |
| Yes | 0.74 (0.66 -0.83 ) | ＜0.001 | 0.74(0.64-0.86) | ＜0.001 |
| **Baseline CD4 (cells/μL)** | | | | |
| ≤199 | Ref |  | Ref |  |
| 200-500 | 0.88 (0.78 -1.00 ) | 0.045 | 0.68(0.58-0.81) | ＜0.001 |
| ≥500 | 0.94 (0.73 -1.22 ) | 0.639 | 0.59(0.42-0.82) | 0.002 |
| **Baseline CD8 (cells/μL)** | | | | |
| ≤799 | Ref |  | Ref |  |
| 800-1000 | 1.03 (0.86 -1.23 ) | 0.741 | 0.88(0.7-1.09) | 0.240 |
| ≥1000 | 1.24 (1.10 -1.41 ) | 0.001 | 1.34(1.13-1.59) | 0.001 |
| **Baseline CD4/CD8** | | | | |
| ＜0.5 | Ref |  | Ref |  |
| ≥0.5 | 0.76 (0.62 -0.94 ) | 0.009 | 0.75(0.58-0.98) | 0.032 |

RR: relative risk, CI confidence interval: Ref, reference.

\*Others/Unclear included blood transfusion, mother to child transmission, and unknown.