Addison’s disease associated with advanced HIV may explain the high mortality

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# Table 1: Profile of patients

| Variable | N | N = 4311 |
| --- | --- | --- |
| **Age at enrolment** | 430 | 36 (31, 42) |
| **gender** | 429 |  |
| Females |  | 218 (50.8%) |
| Males |  | 211 (49.2%) |
| **Ethnicity** | 428 |  |
| Asian |  | 1 (0.2%) |
| Black African |  | 357 (83.4%) |
| Coloured |  | 68 (15.9%) |
| White |  | 2 (0.5%) |
| **Duration of current illness** | 400 | 14 (14, 21) |
| **Opportunistic infection present** | 428 | 424 (99.1%) |
| **log10 viral load** | 97 | 4.54 (3.16, 5.35) |
| **Total CD4 count** | 428 | 31 (14, 60) |
| **Sodium** | 408 | 134.0 (130.0, 137.0) |
| **Potassium** | 409 | 4.10 (3.60, 4.60) |
| **Haemoglobin** | 426 | 8.70 (7.40, 10.30) |
| **White cell count** | 423 | 5.3 (3.5, 8.0) |
| **Lymphocyte count** | 93 | 0.8 (0.4, 1.8) |
| **Neutrophils** | 93 | 3 (1, 8) |
| **Addisons disease** | 318 | 30 (9.4%) |
| 1Median (IQR); n (%) | | |

# Table 2: comparing Addisons status with other variables

| Variable | N | no, N = 2881 | yes, N = 301 | p-value2 |
| --- | --- | --- | --- | --- |
| **Age at enrolment** | 318 | 36 (31, 42) | 36 (31, 43) | 0.9 |
| **gender** | 318 |  |  | >0.9 |
| Females |  | 151 (52.4%) | 16 (53.3%) |  |
| Males |  | 137 (47.6%) | 14 (46.7%) |  |
| **Ethnicity** | 317 |  |  | 0.5 |
| Black African |  | 235 (81.9%) | 26 (86.7%) |  |
| Other |  | 52 (18.1%) | 4 (13.3%) |  |
| **Duration of current illness** | 300 | 14 (14, 30) | 14 (14, 21) | 0.4 |
| **Opportunistic infection present** | 317 |  |  |  |
| Yes |  | 287 (100.0%) | 30 (100.0%) |  |
| **log10 viral load** | 65 | 4.71 (3.27, 5.37) | 5.04 (4.79, 5.17) | 0.6 |
| **Total CD4 count** | 317 | 31 (14, 56) | 26 (12, 56) | 0.6 |
| **Sodium** | 303 | 133.0 (130.0, 137.0) | 135.0 (131.0, 137.0) | 0.10 |
| **Potassium** | 304 | 4.10 (3.65, 4.60) | 3.90 (3.30, 4.60) | 0.4 |
| **Haemoglobin** | 317 | 8.80 (7.40, 10.40) | 8.30 (7.62, 10.37) | >0.9 |
| **White cell count** | 316 | 5.7 (3.9, 8.2) | 5.1 (2.9, 8.2) | 0.5 |
| **Lymphocyte count** | 62 | 0.7 (0.4, 1.6) | 0.9 (0.6, 1.3) | 0.3 |
| **Neutrophils** | 61 | 3 (1, 7) | 7 (1, 15) | 0.7 |
| 1Median (IQR); n (%) | | | | |
| 2Wilcoxon rank sum test; Pearson's Chi-squared test | | | | |

# Table 3: Bivariate table (without imputed data)

| Characteristic | N | HR1 | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| Age\_at\_enrolment | 430 | 1.02 | 0.99, 1.05 | 0.2 |
| gender | 429 | 0.78 | 0.45, 1.34 | 0.4 |
| Ethnicity | 428 | 0.89 | 0.42, 1.88 | 0.8 |
| Duration\_of\_current\_illness | 400 | 1.00 | 0.99, 1.01 | 0.6 |
| Log10\_viralload | 97 | 1.57 | 1.00, 2.47 | 0.049 |
| Total\_CD4\_count | 428 | 0.99 | 0.98, 1.00 | 0.2 |
| Sodium | 408 | 0.99 | 0.95, 1.04 | 0.7 |
| Potassium | 409 | 0.85 | 0.63, 1.15 | 0.3 |
| Haemoglobin | 426 | 1.00 | 0.97, 1.02 | 0.8 |
| White\_cell\_count | 423 | 1.00 | 1.00, 1.00 | 0.8 |
| Lymphocyte\_count | 93 | 0.86 | 0.68, 1.09 | 0.2 |
| Neutrophils | 93 | 0.99 | 0.96, 1.02 | 0.5 |
| Addisons\_disease | 318 | 1.18 | 0.47, 2.97 | 0.7 |
| 1HR = Hazard Ratio, CI = Confidence Interval | | | | |

# Table 3: Bivariate table with imputed data

| Characteristic | N | HR1 | 95% CI1 | p-value |
| --- | --- | --- | --- | --- |
| Age\_at\_enrolment | 431 | 1.02 | 0.99, 1.05 | 0.2 |
| gender | 431 | 0.77 | 0.45, 1.33 | 0.3 |
| Ethnicity | 431 | 0.88 | 0.41, 1.86 | 0.7 |
| Duration\_of\_current\_illness | 431 | 1.00 | 0.99, 1.01 | 0.7 |
| Log10\_viralload | 431 | 1.51 | 1.22, 1.87 | <0.001 |
| Total\_CD4\_count | 431 | 0.99 | 0.98, 1.00 | 0.2 |
| Sodium | 431 | 0.99 | 0.95, 1.03 | 0.6 |
| Potassium | 431 | 0.86 | 0.65, 1.14 | 0.3 |
| Haemoglobin | 431 | 1.00 | 0.97, 1.02 | 0.8 |
| White\_cell\_count | 431 | 1.00 | 1.00, 1.00 | 0.8 |
| Lymphocyte\_count | 431 | 0.95 | 0.90, 1.00 | 0.068 |
| Neutrophils | 431 | 0.98 | 0.96, 0.99 | 0.010 |
| Addisons\_disease | 431 | 0.95 | 0.38, 2.38 | >0.9 |
| 1HR = Hazard Ratio, CI = Confidence Interval | | | | |

# Table 4: Multivariate table (generated with imputed data)

The rule of thumb for MV models such as this on you need at least 10 people per outcome. We have 53 people with the outcome, yet we have 6 variables adjusted for in the model (using stepwise regression). I suggest we remove one variable from the list that you think may not be biologically contributing in the relationship.

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Adj.HR | 95%CI | P value |
| Addison's disease | 0.565 | (0.21813, 1.46569) | 0.240693729 |
| Log10 Viral load | 1.774 | (1.41225, 2.22899) | 8.44E-07 |
| Neutrophils | 0.974 | (0.95467, 0.99279) | 0.007263384 |
| Lymphocyte count | 0.924 | (0.87072, 0.98059) | 0.009145005 |
| Potassium | 0.862 | (0.65495, 1.13395) | 0.288136069 |