

## Supplementary Material

**Table S1.** Number of people with a composite event (AIDS, serious non AIDS and all-cause mortality), rates, 95% CI and relative rates in INR (defined as current CD4+ count lower than pre-cART level) and non-INR from fitting a Poisson regression analyses. Overall results and stratified by baseline CD4 count groups.

|            | No. events | PYFU  | Rate/<br>100PYFU | 95% CI      | Rate Ratio (95% CI)<br>p-value |                             |                             |
|------------|------------|-------|------------------|-------------|--------------------------------|-----------------------------|-----------------------------|
|            |            |       |                  |             | Unadjusted                     | Adjusted(1)                 | Adjusted(2)                 |
| <b>INR</b> |            |       |                  |             |                                |                             |                             |
|            |            |       |                  |             | <b>All patients</b>            |                             |                             |
| No         | 189        | 9713  | 1.95             | 1.69, 2.24  | 1.00                           | 1.00                        |                             |
| Yes        | 33         | 630.8 | 5.23             | 3.72, 7.36  | 2.68 (1.85, 3.89)<br><.001     | 3.02 (2.01, 4.55)<br><.001  | 1.96 (1.31, 2.93)<br>0.001  |
|            |            |       |                  |             | <b>CD4 count 0-200</b>         |                             |                             |
| No         | 95         | 3696  | 2.57             | 2.10, 3.14  |                                |                             |                             |
| Yes        | 6          | 66.08 | 9.08             | 4.08, 20.21 | 3.50 (1.50, 8.20)<br>0.004     | 3.00 (1.27, 7.07)<br>0.012  | 1.94 (0.81, 4.65)<br>0.139  |
|            |            |       |                  |             | <b>CD4 count 201-350</b>       |                             |                             |
| No         | 60         | 3298  | 1.82             | 1.41, 2.34  |                                |                             |                             |
| Yes        | 9          | 141.8 | 6.35             | 3.30, 12.20 | 3.44 (1.72, 6.91)<br><.001     | 2.36 (1.10, 5.05)<br>0.027  | 0.98 (0.41, 2.34)<br>0.964  |
|            |            |       |                  |             | <b>CD4 count 351-500</b>       |                             |                             |
| No         | 24         | 1750  | 1.37             | 0.92, 2.05  |                                |                             |                             |
| Yes        | 11         | 143.6 | 7.66             | 4.24, 13.83 | 5.61 (2.80, 11.22)<br><.001    | 7.73 (3.60, 16.60)<br><.001 | 7.86 (2.72, 22.67)<br><.001 |
|            |            |       |                  |             | <b>CD4 count &gt;500</b>       |                             |                             |
| No         | 12         | 995.7 | 1.2              | 0.68, 2.12  |                                |                             |                             |
| Yes        | 7          | 279.3 | 2.51             | 1.19, 5.26  | 2.08 (0.81, 5.31)<br>0.126     | 1.37 (0.47, 4.05)<br>0.563  | 1.62 (0.48, 5.43)<br>0.435  |

\*\*(1)Adjusted for gender, mode of HIV transmission, nationality, AIDS diagnosis prior to cART, Hepatitis co-infection status (at baseline), calendar year of starting cART, age, CD4, CD8 and viral load at starting cART and type of cART started

\*\*(2)Adjusted for gender, mode of HIV transmission, nationality, AIDS diagnosis prior to cART, Hepatitis co-infection status (at baseline), calendar year of starting cART, age, current CD4, CD8 and viral load at starting cART and type of cART started

**Table S2.** Number of people with a composite event (AIDS, serious non AIDS and all-cause mortality), rates, 95% CI and relative rates in INR (defined as current CD4+ count <150% pre-cART level) and non-INR from fitting a Poisson regression analyses. Overall results and stratified by baseline CD4 count groups.

|                          | No. events | PYFU  | Rate/<br>100PYFU | 95% CI      | Unadjusted                 | Rate Ratio (95% CI)<br>p-value | Adjusted(1)                | Adjusted(2) |
|--------------------------|------------|-------|------------------|-------------|----------------------------|--------------------------------|----------------------------|-------------|
| <b>INR</b>               |            |       |                  |             |                            |                                |                            |             |
| No                       | 150        | 7803  | 1.92             | 1.64, 2.26  | 1.00                       | 1.00                           |                            |             |
| Yes                      | 72         | 2541  | 2.83             | 2.25, 3.57  | 1.47 (1.11, 1.95)<br>0.007 | 1.81 (1.29, 2.54)<br><.001     | 1.28 (0.94, 1.75)<br>0.118 |             |
| <b>All patients</b>      |            |       |                  |             |                            |                                |                            |             |
| No                       | 88         | 3542  | 2.48             | 2.02, 3.06  | 2.36 (1.33, 4.19)          | 1.98 (1.05, 3.75)              |                            |             |
| Yes                      | 13         | 220.1 | 5.91             | 3.43, 10.17 | 0.003                      | 0.036                          | 1.33 (0.69, 2.54)<br>0.392 |             |
| <b>CD4 count 0-200</b>   |            |       |                  |             |                            |                                |                            |             |
| No                       | 42         | 2661  | 1.58             | 1.17, 2.14  | 2.18 (1.34, 3.53)          | 1.88 (1.12, 3.15)              |                            |             |
| Yes                      | 27         | 778.8 | 3.47             | 2.38, 5.06  | 0.002                      | 0.017                          | 0.75 (0.38, 1.48)<br>0.412 |             |
| <b>CD4 count 201-350</b> |            |       |                  |             |                            |                                |                            |             |
| No                       | 18         | 1178  | 1.53             | 0.96, 2.42  | 1.56 (0.81, 3.01)          | 1.95 (0.97, 3.92)              |                            |             |
| Yes                      | 17         | 714.9 | 2.38             | 1.48, 3.83  | 0.187                      | 0.062                          | 0.93 (0.34, 2.53)<br>0.884 |             |
| <b>CD4 count 351-500</b> |            |       |                  |             |                            |                                |                            |             |
| No                       | 4          | 445.8 | 0.9              | 0.34, 2.39  | 2.03 (0.67, 6.16)          | 1.63 (0.48, 5.51)              |                            |             |
| Yes                      | 15         | 829.3 | 1.81             | 1.09, 3.00  | 0.212                      | 0.428                          | 1.84 (0.46, 7.38)<br>0.392 |             |
| <b>CD4 count &gt;500</b> |            |       |                  |             |                            |                                |                            |             |

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\*\*(2)Adjusted for gender, mode of HIV transmission, nationality, AIDS diagnosis prior to cART, Hepatitis co-infection status (at baseline), calendar year of starting cART, age, current CD4, CD8 and viral load at starting cART and type of cART started

**Table S3.** Number of people with serious non AIDS event or death, rates, 95% CI and relative rates in INR (defined as current CD4+ count lower than pre-cART level) and non-INR from fitting a Poisson regression analyses. Overall results and stratified by baseline CD4 count groups.

|            | No.<br>events | PYFU  | Rate/<br>100PYFU | 95% CI      | Rate Ratio (95% CI)         |                             |                             |
|------------|---------------|-------|------------------|-------------|-----------------------------|-----------------------------|-----------------------------|
|            |               |       |                  |             | Unadjusted                  | Adjusted(1)                 | Adjusted(2)                 |
| <b>INR</b> |               |       |                  |             |                             |                             |                             |
|            |               |       |                  |             | <b>All patients</b>         |                             |                             |
| No         | 161           | 9791  | 1.64             | 1.41, 1.92  | 1.00                        | 1.00                        | 1.00                        |
| Yes        | 25            | 642.8 | 3.89             | 2.63, 5.76  | 2.36 (1.55, 3.61)<br><.001  | 2.44 (1.53, 3.89)<br><.001  | 1.73 (1.09, 2.73)<br>0.019  |
|            |               |       |                  |             | <b>CD4 count 0-200</b>      |                             |                             |
| No         | 75            | 3740  | 2.01             | 1.60, 2.51  | 1.00                        | 1.00                        | 1.00                        |
| Yes        | 4             | 72.17 | 5.54             | 2.08, 14.77 | 2.75 (0.98, 7.75)<br>0.055  | 2.39 (0.85, 6.72)<br>0.100  | 1.67 (0.58, 4.83)<br>0.341  |
|            |               |       |                  |             | <b>CD4 count 201-350</b>    |                             |                             |
| No         | 55            | 3324  | 1.65             | 1.27, 2.16  | 1.00                        | 1.00                        | 1.00                        |
| Yes        | 6             | 145.3 | 4.13             | 1.85, 9.19  | 2.48 (1.06, 5.78)<br>0.036  | 1.55 (0.61, 3.96)<br>0.357  | 0.67 (0.24, 1.89)<br>0.447  |
|            |               |       |                  |             | <b>CD4 count 351-500</b>    |                             |                             |
| No         | 21            | 1762  | 1.19             | 0.78, 1.83  | 1.00                        | 1.00                        | 1.00                        |
| Yes        | 9             | 144.6 | 6.22             | 3.24, 11.96 | 5.24 (2.45, 11.20)<br><.001 | 7.97 (3.45, 18.38)<br><.001 | 7.73 (2.44, 24.43)<br><.001 |
|            |               |       |                  |             | <b>CD4 count &gt;500</b>    |                             |                             |
| No         | 11            | 999.2 | 1.1              | 0.61, 1.99  | 1.00                        | 1.00                        | 1.00                        |
| Yes        | 6             | 280.8 | 2.14             | 0.96, 4.76  | 1.94 (0.71, 5.29)<br>0.195  | 1.30 (0.41, 4.16)<br>0.657  | 1.54 (0.42, 5.56)<br>0.512  |

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\*\*(2)Adjusted for gender, mode of HIV transmission, nationality, AIDS diagnosis prior to cART, Hepatitis co-infection status (at baseline), calendar year of starting cART, age, current CD4, CD8 and viral load at starting cART and type of cART started

**Table S4.** Number of people with serious non AIDS event or death, rates, 95% CI and relative rates in INR (defined as current CD4+ count <150% pre-cART level) and non-INR from fitting a Poisson regression analyses. Overall results and stratified by baseline CD4 count groups.

|            | No. events | PYFU  | Rate/<br>100PYFU | 95% CI     | Rate Ratio (95% CI)        |                            | p-value                    |  |
|------------|------------|-------|------------------|------------|----------------------------|----------------------------|----------------------------|--|
|            |            |       |                  |            | Unadjusted                 | Adjusted(1)                |                            |  |
| <b>INR</b> |            |       |                  |            |                            |                            |                            |  |
|            |            |       |                  |            | <b>All patients</b>        |                            |                            |  |
| No         | 127        | 7872  | 1.61             | 1.36, 1.92 | 1.00                       | 1.00                       | 1.00                       |  |
| Yes        | 59         | 2561  | 2.30             | 1.79, 2.97 | 1.43 (1.05, 1.94)<br>0.024 | 1.63 (1.13, 2.35)<br>0.010 | 1.24 (0.88, 1.74)<br>0.222 |  |
|            |            |       |                  |            | <b>CD4 count 0-200</b>     |                            |                            |  |
| No         | 71         | 3583  | 1.98             | 1.57, 2.50 | 1.00                       | 1.00                       | 1.00                       |  |
| Yes        | 8          | 229.0 | 3.49             | 1.75, 6.99 | 1.75 (0.85, 3.60)<br>0.126 | 1.41 (0.64, 3.10)<br>0.391 | 1.02 (0.46, 2.27)<br>0.968 |  |
|            |            |       |                  |            | <b>CD4 count 201-350</b>   |                            |                            |  |
| No         | 38         | 2685  | 1.42             | 1.03, 1.94 | 1.00                       | 1.00                       | 1.00                       |  |
| Yes        | 23         | 783.9 | 2.93             | 1.95, 4.42 | 2.06 (1.23, 3.46)<br>0.006 | 1.71 (0.98, 2.98)<br>0.058 | 0.81 (0.39, 1.67)<br>0.564 |  |
|            |            |       |                  |            | <b>CD4 count 351-500</b>   |                            |                            |  |
| No         | 15         | 1189  | 1.26             | 0.76, 2.09 | 1.00                       | 1.00                       | 1.00                       |  |
| Yes        | 15         | 717.3 | 2.09             | 1.26, 3.47 | 1.66 (0.81, 3.38)<br>0.164 | 2.26 (1.07, 4.80)<br>0.034 | 1.23 (0.42, 3.66)<br>0.704 |  |
|            |            |       |                  |            | <b>CD4 count &gt;500</b>   |                            |                            |  |
| No         | 4          | 446.8 | 0.9              | 0.34, 2.39 | 1.00                       | 1.00                       | 1.00                       |  |
| Yes        | 13         | 833.1 | 1.56             | 0.91, 2.69 | 1.75 (0.57, 5.38)<br>0.330 | 1.42 (0.41, 4.89)<br>0.582 | 1.56 (0.37, 6.66)<br>0.547 |  |

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\*\*(2)Adjusted for gender, mode of HIV transmission, nationality, AIDS diagnosis prior to cART, Hepatitis co-infection status (at baseline), calendar year of starting cART, age, current CD4, CD8 and viral load at starting cART and type of cART started