**S6 Table. Model outcomes: sensitivity analysis FL1 assuming that the annual cost of 1st-line therapy is US$55.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Strategy** | **No 2nd-l.** | **Clinical** | **CD4 monitoring** | **POC-VL monitoring** | **Lab-VL monitoring** |
| **1.1** | **2.1** | **3.1** | **3.2** | **3.3** | **3.4** | **3.5** | **4.1** | **4.2** | **4.3** | **5.1** | **5.2** | **5.3** |
| **Life-years** |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  Healthy life-years left | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 |
|  Life-years on 1st-line ART | 14.3 | 13.7 | 13.3 | 13.3 | 13.2 | 13.2 | 13.6 | 12.7 | 12.7 | 12.5 | 12.8 | 12.7 | 12.7 |
|  Life-years on 2nd-line ART | 0.0 | 0.8 | 1.3 | 1.2 | 1.3 | 1.3 | 0.9 | 1.8 | 1.9 | 2.0 | 1.8 | 1.9 | 1.9 |
|  Life-years without symptoms | 13.6 | 13.8 | 13.8 | 13.8 | 13.8 | 13.8 | 13.8 | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 |
|  Life-years with symptoms | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
|  Life-years lost to HIV | 5.2 | 5.1 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.9 | 5.0 | 5.0 | 5.0 | 4.9 |
|  Disability-weighted life-years  | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
|  ***DALYs lost to HIV*** | ***7.3*** | ***7.2*** | ***7.1*** | ***7.1*** | ***7.1*** | ***7.1*** | ***7.1*** | ***7.1*** | ***7.1*** | ***7.1*** | ***7.1*** | ***7.1*** | ***7.1*** |
| **Costs** |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  Cost of 1st-line ART | 789 | 752 | 730 | 729 | 725 | 725 | 748 | 700 | 697 | 688 | 702 | 698 | 697 |
|  Cost of 2nd-line ART | 0 | 211 | 351 | 341 | 363 | 365 | 259 | 507 | 534 | 563 | 499 | 521 | 530 |
|  Cost of diagnostic tests | 0 | 0 | 71 | 36 | 72 | 143 | 156 | 73 | 147 | 292 | 107 | 216 | 431 |
|  ***Total costs*** | ***1419*** | ***963*** | ***1151*** | ***1107*** | ***1160*** | ***1232*** | ***1162*** | ***1280*** | ***1378*** | ***1543*** | ***1308*** | ***1435*** | ***1658*** |
| **Cost-effectiveness** |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  ***CER compared to 1.1*** | ***l/e*** | ***1989*** | ***2158*** | ***2311*** | ***2596*** | ***3345*** | ***2090*** | ***2478*** | ***2632*** | ***4226*** | ***2724*** | ***3204*** | ***3914*** |
|  ***ICER*** | ***l/e*** | ***1989*** | ***w/d*** | ***w/d*** | ***s/d*** | ***s/d*** | ***2187*** | ***w/d*** | ***4789*** | ***s/d*** | ***s/d*** | ***s/d*** | ***s/d*** |

Please see Table 2 of the main text for a detailed description of all monitoring strategies.

POC-VL, point-of-care viral load; lab-VL, laboratory-based viral load; ART, antiretroviral therapy; DALY, disability-adjusted life-year; CER, cost-effectiveness ratio; ICER, incremental cost-effectiveness ratio; l/e, least expensive and least effective strategy; w/d, weakly dominated; s/d, strongly dominated. All costs are given in US$ and cost-effectiveness ratios in US$ per DALY averted.