Supplementary Table 1: Operating Characteristics for multiple Anal HSIL Screening Strategies for WLHIV according to Age group

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ***SENS*** | | | ***SPEC*** | | | ***PPV*** | | | ***1-NPV***1 | | |
| **Screening Strategies** | **n** | **Estimate  (95% CI)** | ***p*-values**2 | **n** | **Estimate  (95% CI)** | ***p*-values**2 | **n** | **Estimate  (95% CI)** | ***p*-values**2 | **n** | **Estimate  (95% CI)** | ***p*-values**2 |
| **Single Screening Test** |  |  |  |  |  |  |  |  |  |  |  |  |
| Cytology  Age>45 years  Age<45 years | 47 13 | 79% (64%, 89%) 100% (75%, 100%) | 0.099 | 123 46 | 50% (40%, 59%) 50% (35%, 65%) | >0.999 | 99 36 | 37% (28%, 48%) 36% (21%, 54%) | >0.999 | 71 23 | 14% (7%, 24%) 0% (0%, 15%) | 0.112 |
| HPV-APTIMA  Age>45 years  Age<45 years | 47 13 | 74% (60%, 86%) 85% (55%, 98%) | 0.713 | 123 46 | 69% (60%, 77%) 61% (45%, 75%) | 0.360 | 73 29 | 48% (36%, 60%) 38% (21%, 58%) | 0.387 | 97 30 | 12% (7%, 21%) 7% (1%, 22%) | 0.517 |
| HPV-HC2  Age>45 years  Age<45 years | 47 13 | 74% (60%, 86%) 77% (46%, 95%) | >0.999 | 123 46 | 61% (52%, 70%) 61% (45%, 75%) | >0.999 | 83 28 | 42% (31%, 54%) 36% (19%, 56%) | 0.658 | 87 31 | 14% (7%, 23%) 10% (2%, 26%) | 0.756 |
| **Triage (Both screening tests positive)** |  |  |  |  |  |  |  |  |  |  |  |  |
| Abnormal Cytology *AND* |  |  |  |  |  |  |  |  |  |  |  |  |
| HPV-APTIMA+  Age>45 years  Age<45 years | 47 13 | 66% (51%, 79%) 85% (55%, 98%) | 0.308 | 123 46 | 78% (70%, 85%) 72% (57%, 84%) | 0.419 | 58 24 | 53% (40%, 67%) 46% (26%, 67%) | 0.630 | 112 35 | 14% (8%, 22%) 6% (1%, 19%) | 0.243 |
| HPV-HC2+  Age>45 years  Age<45 years | 47 13 | 62% (46%, 75%) 77% (46%, 95%) | 0.512 | 123 46 | 73% (64%, 81%) 74% (59%, 86%) | >0.999 | 62 22 | 47% (34%, 60%) 45% (24%, 68%) | >0.999 | 108 37 | 17% (10%, 25%) 98% (2%, 22%) | 0.282 |
| **Co-testing (One or more positive screening tests)** |  |  |  |  |  |  |  |  |  |  |  |  |
| Abnormal Cytology *OR* |  |  |  |  |  |  |  |  |  |  |  |  |
| HPV-APTIMA+   Age>45 years  Age<45 years | 47 13 | 87% (74%, 95%) 100% (75%, 100%) | 0.324 | 123 46 | 41% (32%, 50%) 39% (25%, 55%) | >0.999 | 114 41 | 36% (27%, 45%) 32% (18%, 48%) | 0.704 | 56 18 | 11% (4%, 22%) 0% (0%, 19%) | 0.326 |
| HPV-HC2+   Age>45 years  Age<45 years | 47 13 | 91% (80%, 98%) 100% (75%, 100%) | 0.568 | 123 46 | 37% (29%, 47%) 37% (23%, 52%) | >0.999 | 120 42 | 36% (27%, 45%) 31% (18%, 47%) | 0.707 | 50 17 | 8% (2%, 19%) 0% (0%, 20%) | 0.565 |

SENS=Sensitivity, SPEC=Specificity, PPV=Positive Predictive Value, NPV=Negative Predictive Value

1 1-NPV, or false omission rate

2 Fisher’s exact test comparing test characteristic according to age group.