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| **Table S1.** Comparative 3-year cumulative incident risk for SGTP versus Clear-New([1](#_ENREF_1)) | | | | |
|  | **3-yr CIR of ≥CIN2 (%)** | | | |
|  | **Pooled HPV persistent** | **SGTP** | **Clear-New** | **SGTP vs Clear-New** |
| **Sensitivity** | 90.2 (78.6-96.7) | 90.2 (78.6-96.7) | 0 (0-52.2) | Yes |
| **Specificity** | 57.6 (53.0-62.0) | 64.4 (59.7-69.0) | 84.5 (80.1-88.2) | Yes |
| **PPV** | 18.4 (16.4-20.6) | 23.1 (20.5-26.0) | 0 | Yes |
| **NPV** | 98.2 (96.0-99.2) | 98.2 (96.0-99.2) | 98.2 (96.0-99.2) | No |
| **PLR** | 2.1 (1.9-2.4) | 2.5 (2.2-3.0) | 0 | Yes |
| **NLR** | 0.17 (0.07-0.39) | 0.15 (0.07-0.35) | 1.18 (1.13-1.24) | Yes |
| **Abbreviations:** CIR, cumulative incident risk; SGTP, same-genotype persistence; ≥CIN3, cervical intraepithelial neoplasia grade 3 or worse; HPV, human papillomavirus; PPV, positive predictive value; NPV, negative predictive value; PLR, positive likelihood ratio; NLR, negative likelihood ratio | | | | |
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| **a**Yes indicates a statistically significant difference; No indicates no significant difference | | | | |

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| **Table S2.** Comparative 3-year CIR for SGTP versus Clear-New([2](#_ENREF_2)) | | | | |
|  | **3-yr CIR of ≥CIN3 (%)** | | | |
|  | **Pooled HPV persistent** | **SGTP** | **Clear-New** | **SGTP vs Clear-Newa** |
| **Sensitivity** | 90.7 (81.7-96.2) | 87.7 (76.3-94.9) | 72.0 (50.6-87.9) | Yes |
| **Specificity** | 72.1 (69.8-74.2) | 86.3 (84.4-88.1) | 81.4 (79.3-83.3) | Yes |
| **PPV** | 12.9 (11.7-14.1) | 21.0 (18.4-23.9) | 6.2 (4.8-8.0) | Yes |
| **NPV** | 99.4 (98.8-99.7) | 99.4 (98.8-99.7) | 99.4 (98.8-99.7) | No |
| **PLR** | 3.3 (2.9-3.6) | 6.4 (5.4-7.6) | 3.9 (3.0-5.0) | Yes |
| **NLR** | 0.13 (0.06-0.26) | 0.14 (0.07-0.28) | 0.34 (0.18-0.65) | Yes |
| **Abbreviations:** CIR, cumulative incident risk; SGTP, same-genotype persistence; ≥CIN3, cervical intraepithelial neoplasia grade 3 or worse; HPV, human papillomavirus; PPV, positive predictive value; NPV, negative predictive value; PLR, positive likelihood ratio; NLR, negative likelihood ratio | | | | |
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| **a**Yes indicates a statistically significant difference; No indicates no significant difference | | | | |

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| **Table S3.** Comparative 5-year CIR for SGTP versus Clear-New([3](#_ENREF_3)) | | | | | | | |
|  | **5-year ≥CIN3 risk** (%) | | | | |
| ***All cytology*** | | **Pooled HPV persistent** | **SGTP** | **Clear-New** | **SGTP vs Clear-Newa** | |
| Sensitivity | | 96.1 (86.6-99.5) | 95.4 (84.2-99.4) | 88.2 (63.6-98.6) | No | |
| PPV | | 9.6 (8.8-10.5) | 19.0 (16.7-21.5) | 3.0 (2.5-3.6) | Yes | |
| PLR | | 3.6 (3.2-3.9) | 7.8 (6.6-9.0) | 3.1 (2.6-3.8) | Yes | |
| ***Low-grade cytology*** | | | | | | | |
| Sensitivity | | 94.4 (72.7-99.9) | 66.7 (43.0-85.4) | 33.3 (14.6-57.0) | Yes | |
| PPV | | 12.1 (10.6-13.9) | 23.7 (17.3-31.6) | 5.1 (2.8-9.0) | Yes | |
| PLR | | 1.4 (1.2-1.7) | 2.7 (1.8-4.0) | 0.5 (0.3-0.9) | Yes | |
| ***NILM cytology*** | | | | | | | |
| Sensitivity | | 94.4 (72.7-99.9) | 73.7 (48.8-90.9) | 22.2 (6.4-47.6) | Yes | |
| PPV | | 4.9 (4.3-5.6) | 10.1 (7.6-13.4) | 1.1 (0.5-2.7) | Yes | |
| PLR | | 4.3 (3.7-5.0) | 8.8 (6.4-12.1) | 1.0 (0.4-2.3) | Yes | |
| **Abbreviations:** CIR, cumulative incident risk; SGTP, same-genotype persistence; ≥CIN3, cervical intraepithelial neoplasia grade 3 or worse; HPV, human papillomavirus; PPV, positive predictive value; PLR, positive likelihood ratio; NILM, negative for intraepithelial lesions or malignancies | | | | | | | |
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| **a**Yes indicates a statistically significant difference; No indicates no significant difference | | | | | | | |

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| **Table S4.** CIR ≥CIN3 by genotype from three studies([4-6](#_ENREF_4)) | | | | | |
| **HPV result** | **3-year ≥CIN3 CIRa (%)** | **5-year ≥CIN3 CIRa (%)** | **5-year ≥CIN3 riskb (%)** | **8-year ≥CIN3 CIRa (%)** | **12-year ≥CIN3 absolute riskC (%)** |
| **16** | 28 | 37 | 32.1 | 55 | 47.4 |
| **33** | 20 | 22 | 23.1 | 33 | 32e |
| **18** | 2 | 25 | 30.8 | 32 | 26e |
| **52** | 7 | 12 | 30.8 | 27 | 24e |
| **51** | 8 | 10 | 33d | 15 | 23e |
| **35** | 8 | 8 | 50d | 29 | 11e |
| **58** | 8 | 8 | 5 | 8 | 31e |
| **45** | 10 | 14 | 20 | 21 | 5e |
| **31** | 11 | 17 | 15.4 | 31 | 22e |
| **39** | 5 | 7 | 0d | 7 | 22e |
| **68** | 9 | 9 | 0d | 9 | 0d |
| **59** | 0 | 11 | 50d | 11 | 0d |
| **56** | 3 | 3 | 11.1D | 3 | 0 |
| **HPV+** |  |  |  |  | 6 |
| **HPV-** |  |  |  |  | 2.3 |
| **Abbreviations:** CIR, cumulative incident risk; CIN3, cervical intraepithelial neoplasia grade 3 or worse | | | | | |
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| **a**following persistent infection; cases of mixed infection excluded from analysis([5](#_ENREF_5))  **b**following persistent infection; with NILM cytology (only), cases of mixed infection excluded from analysis([4](#_ENREF_4))  **c**following persistent infection; mixed infections were assigned by hierarchical method based on rank of single type infections([6](#_ENREF_6))  **d**fewer than 10 cases of same-genotype persistence  **e**value interpolated from histogram Figure 2([4](#_ENREF_4)) | | | | | |

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| **Table S5.** Hazard ratio (HR) compared to non-oncogenic types, for ≥CIN2 | | |
| HPV genotype | ≥CIN2 HR (95% CI)a | ≥CIN2 HR (95% CI)b |
| 16 | 26.8 (10.0-71.9) | 23.0 (8.6–62.0) |
| 33 | 25.0 (9.0-69.7) | 31.2 (10.2–95.3) |
| 31 | 9.8 (3.2-30.4) | 16.4 (5.1–52.9) |
| 18 | 6.0 (1.8-20.0) | 16.7 (5.4–51.5) |
| 45 | 6.9 (1.5-30.7) | 9.1 (2.2–37.5) |
| Other 9 oncogenic GTs | 3.7 (1.3-10.4) | 5.6 (2.1–15.0) |
| Non-oncogenic GTs | 1 | 1 |
| **Abbreviations:** HR, hazard ratio; ≥CIN2, cervical intraepithelial neoplasia grade 2 or worse; GTs, genotypes | | |
|  | | |
| **a**Multivariate analysis([7](#_ENREF_7))  **b**Mixed infection: same risk assigned to all genotypes([8](#_ENREF_8)) | | |

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