

HIV and cervical cancer are intersecting epidemics in many low-resource settings, yet there are few accurate estimates of the scope of this public health challenge. To understand disease prevalence and risk factors for cervical intraepithelial neoplasia 2 or greater (CIN2+), we conducted a cross-sectional study of women undergoing cervical cancer screening as part of routine HIV care in Kisumu, Kenya. Women were offered screening with visual inspection with acetic acid, followed by confirmation with colposcopy and biopsy as needed. Univariable and multivariable analyses were carried out to determine clinical and demographic predictors of prevalent CIN2+. Among 3,241 women screened, 287 (9%) had an initial diagnosis of biopsy-confirmed CIN2+. On multivariable analysis, combined oral contraceptives remained significantly associated with detection of CIN2+ among women on HAART (AOR 1.84, CI 1.20-2.82), and not on HAART (AOR 1.72, 95% CI 1.08-2.73), while use of a progesterone implant was associated with increased detection of CIN2+ (AOR 9.43, 95% CI 2.85-31.20) only among women not on HAART. CD4+ nadir over 500 cells/mm³ was associated with reduced detection of CIN2+ (AOR 0.61, CI 0.38, 0.97) in the overall group, but current CD4+ was only associated with reduced detection of CIN2+ among women not on HAART (AOR 0.42, CI 0.22, 0.80). In conclusion, a history of less severe immunosuppression appeared to reduce the risk of CIN2+ detection, but current CD4+ count was significant only in non-HAART users. The association of CIN2+ with hormonal contraception should be explored more in prospective studies designed to better control for confounding factors