

Approximately 630 million people are infected with Human Papillomavirus (HPV) worldwide with six million new cases every year. With over 200 different types identified, HPV is the most common sexually transmitted infection contributing to multiple adverse health outcomes including cervical cancer. In our study, we develop a stochastic model which describes the transmission of HPV infection in both men and women. We separate the women into the age groups of 12-19, 20-29, 30-65, 65+ and observe the rates of progression to disease, pre-cancerous cells, cancer and death in women. Our studies show that the 12-19 age group progresses to infection with HPV at the lowest rate, while the number of woman presenting with Low-Grade Squamous Intraepithelial Lesion (LSIL) peaks during the ages of 30-65 and women progressing to oncogenic HPV types peak at the age of 65+.