HPV prevalence and HPV-related dysplasia in elderly women

Ruth S. Hermansson1,2,3*, Matts Olovsson1, Annika K. Lindström1,3,4

1 Department of Women’s and Children’s Health, Uppsala University, Uppsala, Sweden
2 Department of Oncology, Faculty of Medicine and Health, Örebro University, Örebro, Sweden
3 Center for Clinical Research Dalarna, Uppsala University, Uppsala, Sweden
4 Clinical Research Center, Faculty of Medicine and Health, Örebro University, Örebro, Sweden

Background
In Sweden, where screening ends at the age of 60, about 30% of the cervical cancer cases occur in women older than 60. During the past century the average life expectancy in Sweden has risen from 55 to 84 years and many women over 65 are healthy, continue to work, and have an active sex life. There is limited knowledge regarding women older than 60, concerning the prevalence of HPV and its association with dysplasia.

Methods
From September 2013 until June 2015, 1051 women aged 60–89 years (mean 68 years) were sampled for an HPV test when attending an outpatient gynecology clinic. Women with positive results had a second HPV test and liquid based cytology (LBC), after 3.5 months on average. Those with a positive second HPV test were examined by colposcopy, and biopsy and a sample for LBC was obtained.

Aim
The aim of the present study was to investigate the prevalence of HPV and cervical dysplasia in women of 60 years and above.

Results
HPV
The prevalence of HPV was 4.1%, (95%CI 3.0–5.5, n = 43) at the first test, and at the second test 2.6% remained positive (95%CI 1.7–3.8, n = 27).

Histology
The majority of women positive in both HPV tests, had dysplasia in histology, 81.5% (22/27) (4 CIN 2–0.4%, 18 CIN 1–1.7%). HPV-related dysplasia was found in 2.1%, (95%CI 1.3–3.2, n = 22) of the 1051 women.

Cytology
Four of the 22 women with positive HPV tests also had abnormal cytology, one ASCUS and three CIN 1.

No cancer or glandular dysplasia was detected.

Conclusion
A significant proportion of elderly women were found to have a persistent cervical HPV infection. Among them there was a high prevalence of CIN diagnosed by histology. The HPV test showed high sensitivity and specificity in detecting CIN in elderly women, while cytology showed extremely low sensitivity.

Flow chart showing study design, HPV and dysplasia occurrence (n = 1051).