HPV MRNA IS MORE SPECIFIC THAN HPV DNA IN TRIAGE OF WOMEN WITH MINOR CERVICAL LESIONS

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Objectives. In Norway, repeat cytology and HPV testing is used in delayed triage of women with minor cytological lesions. The objective of this study was to evaluate HPV DNA and HPV mRNA testing "head-to-head" in triage of women with repeated ASC-US / LSIL.
Methods. Repeat cytology, HPV DNA testing (Roche Cobas 4800), and HPV mRNA testing (NorChip PreTect HPV-Proofer) were used to follow up 575 women aged 25–69 years with ASC-US / LSIL in primary screening. A total of 206 women (35.8%) were DNA+ and 107 (18.6%) were mRNA+. Repeated ASC-US / LSIL was found in 249 women (43.3%), of whom 120 (48.2%) were DNA+ and 57 (22.9%) were mRNA+. We received biopsies from 75.8% (91/120) of the DNA+ and 73.7% (42/57) of the mRNA+ cases. The positive predictive values for CIN2+ were 22.0% (20/91) for DNA+ and 33.3% (14/42) for mRNA+. Of the 258 women with normal repeat cytology (NILM), 38 (14.7%) were DNA+ and 16 (6.2%) were mRNA+
Conclusions. HPV mRNA is more specific than HPV DNA in triage of women with repeated ASC-US / LSIL. Within 9 months of triage, only 91 of 120 DNA+ women and 42 of 57 mRNA+ women had met for colposcopy and biopsy. The referral rate for colposcopy after repeated ASC-US / LSIL was double for DNA+ relative to mRNA+ cases, winning 6 more cases of CIN2+. The need for follow-ups in NILM patients was more than doubled for DNA+ cases relative to mRNA+ cases. Compliance with required follow-ups for HPV+ NILM cases was low. Compared with the mRNA-test, the use of DNA-tests in triage created additional work for gynaecologists and laboratories, as well as unnecessary psychological stress for the patients. As long as repeated ASC-US / LSIL with negative mRNA are followed by a new cytology after 12 months, very few cases of CIN2+ captured by DNA at triage will be lost. It may be worthwhile considering the trade-off between sensitivity and specificity when designing screening algorithms.