HPV DNA in Abnormal Cervicovaginal Cytology with Histopathology

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Objectives:
1. To describe the HPV DNA findings in cases of abnormal cervical cytology confirmed by tissue biopsy.  
2. To determine if cytology, HPV DNA test, or co-testing would be most useful in cervical cancer screening.

Methodology:
- 130 abnormal cytology cases (conventional smears [CS] and liquid based cytology [LBC]) with HPV DNA and subsequent tissue biopsy (2008 to 2018)  
- Risk of detecting a lesion (RODL) was determined for each method of collection and compared with additional HPV DNA results

Results:
- RODL of ASCUS is 48% in CS and 56% in LBC.  
- RODL of ASCUS with positive HPV DNA is 71% in CS and 56% in LBC.  
- RODL of LSIL is 89% in CS and 78% in LBC.  
- RODL of LSIL with positive HPV DNA is 88% in CS and 75% in LBC.  
- Subsequent positive HPV-DNA in ASCUS increased RODL from 51% to 63%.  
- Subsequent positive HPV-DNA in LSIL did not change the RODL as much from 83% to 81%.

Conclusion:
- A positive HPV DNA test after an ASCUS cytodiagnosis increased RODL compared to cytodiagnosis alone.  
- A positive HPV DNA test after an SIL/M cytodiagnosis increased RODL compared to cytodiagnosis alone.  
- More data needed to include the negative for intraepithelial lesion/malignancy cytodiagnosis with HPV DNA test and subsequent histodiagnosis to make a definite conclusion on the value of cytology and HPV DNA testing alone versus co-testing.

Figure: RODL in ASCUS and LSIL using cytology alone and co-testing