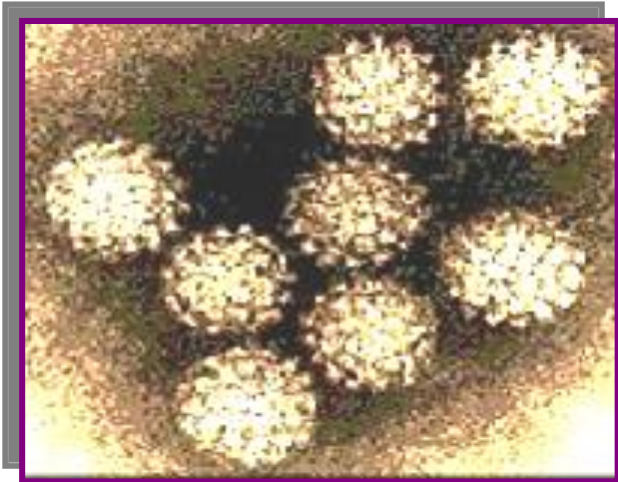


# 3-type HPV mRNA test in detection of CIN2+ in young women with normal cytology



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Norway

# Objective

- To estimate the increased detection rate of CIN2+ in women with normal Pap smear by re-screening normal slides which tests positive by a 3-type HPV mRNA test

# Cervix carcinoma

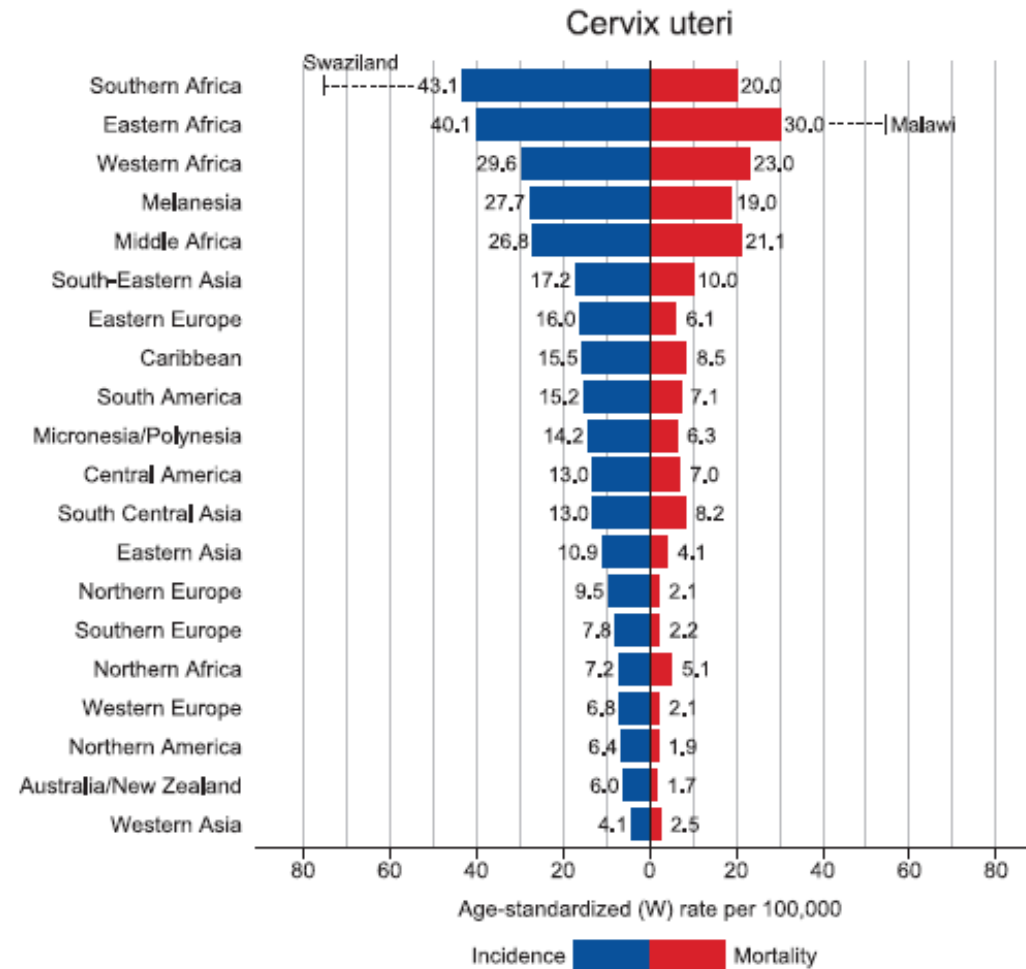
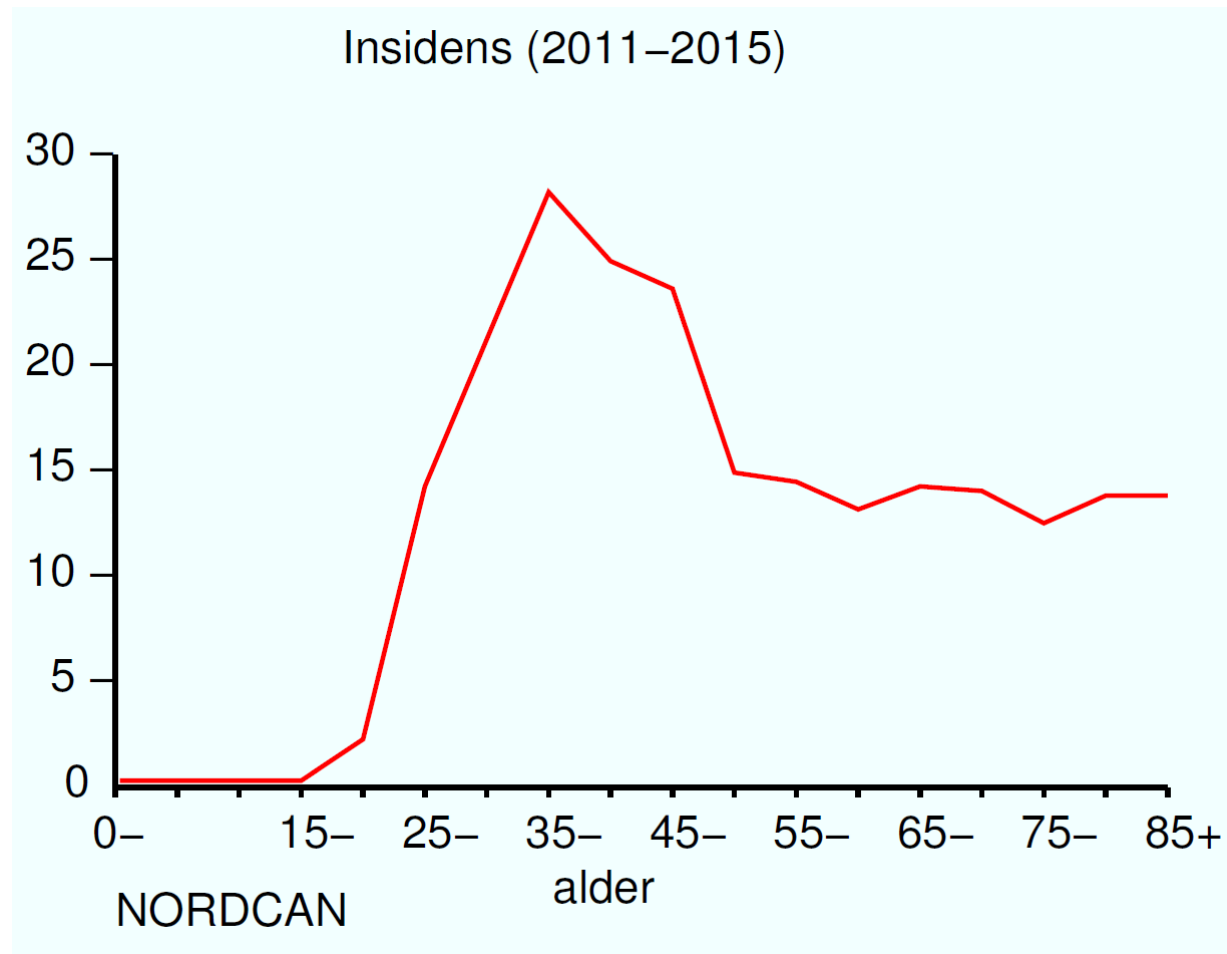
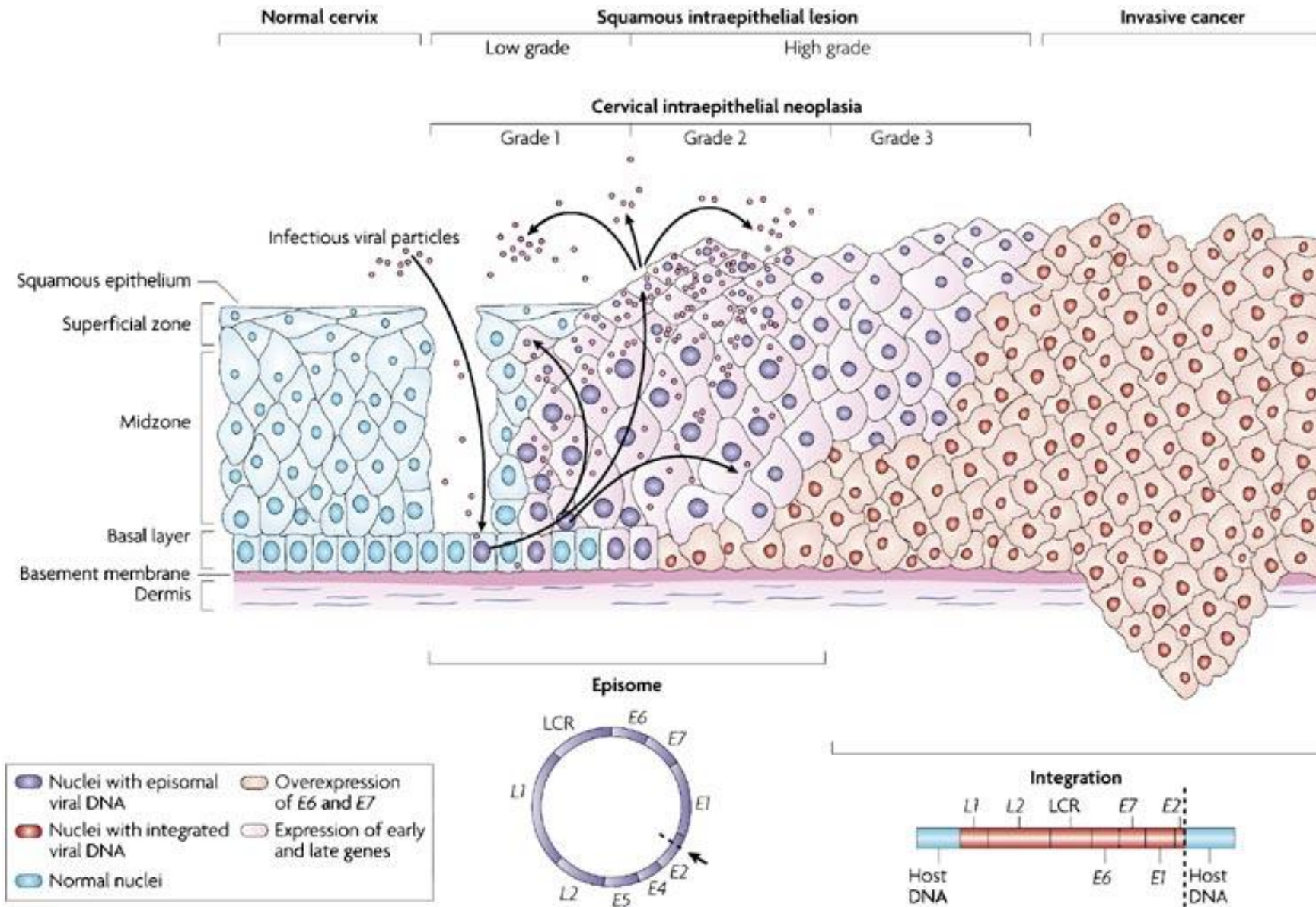
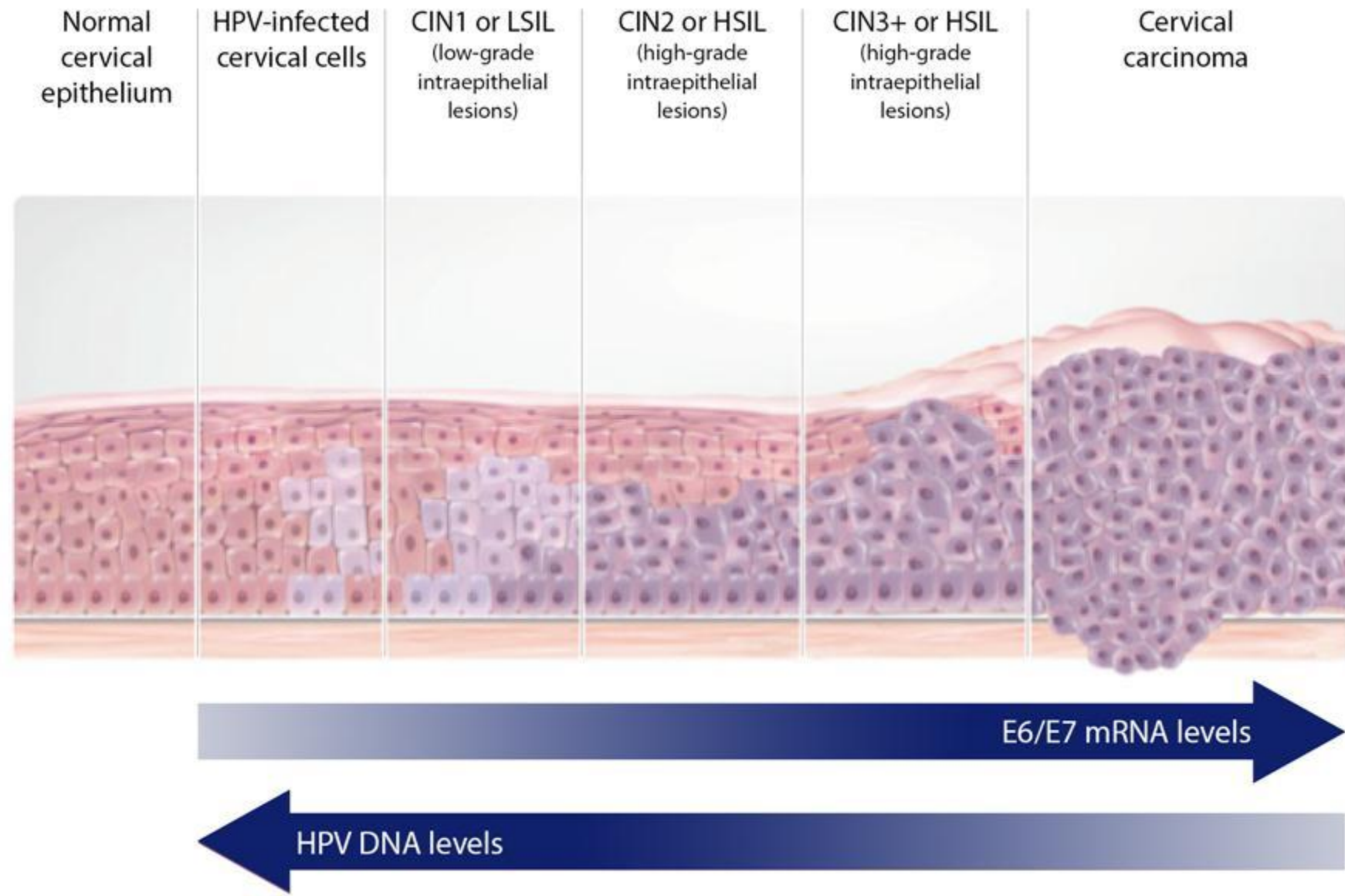


FIGURE 15. Bar Chart of Region-Specific Incidence and Mortality Age-Standardized Rates for Cancers of the Cervix in 2018. Rates are shown in descending order of the world (W) age-standardized rate, and the highest national age-standardized rates for incidence and mortality are superimposed. Source: GLOBOCAN 2018.

# Cervix carcinoma in Norway

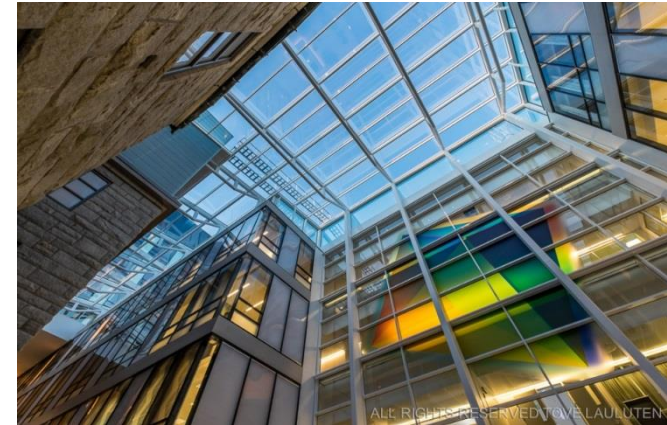
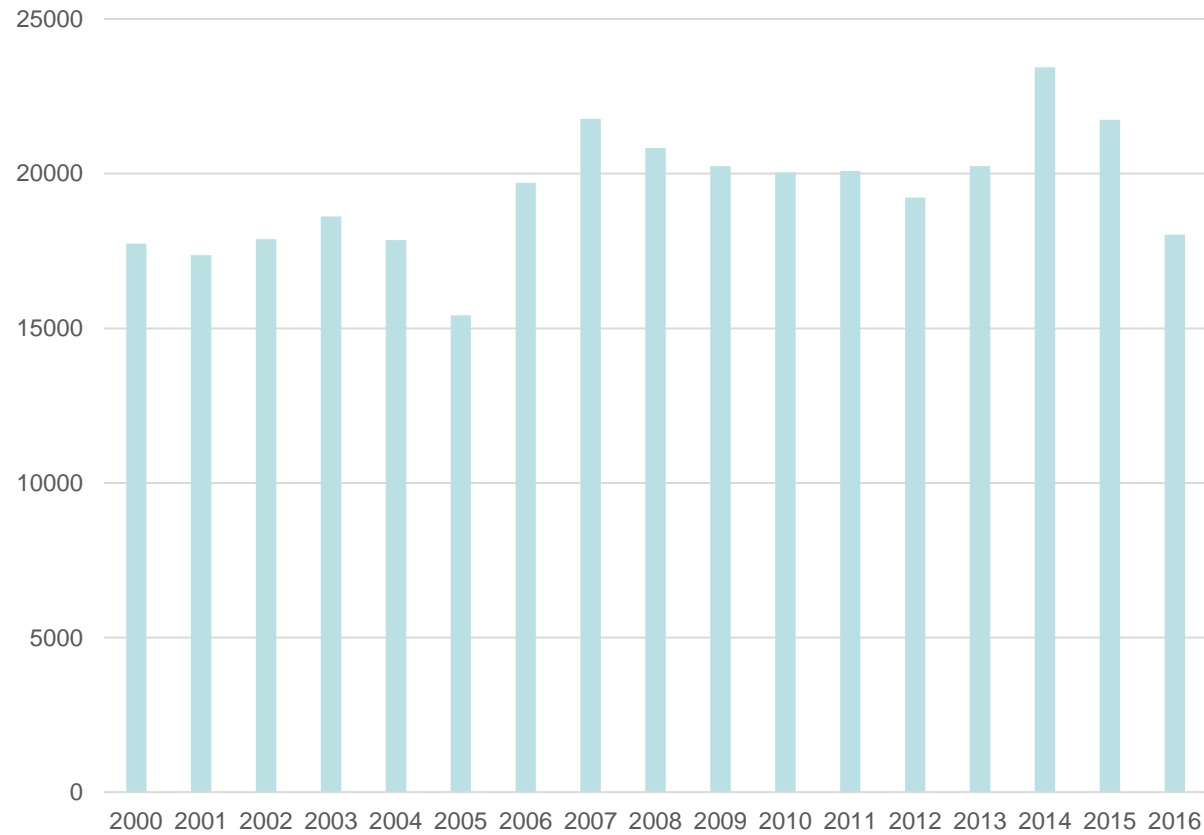






# Pathology Department Nordland Central Hospital

Number of cases cervix cytology



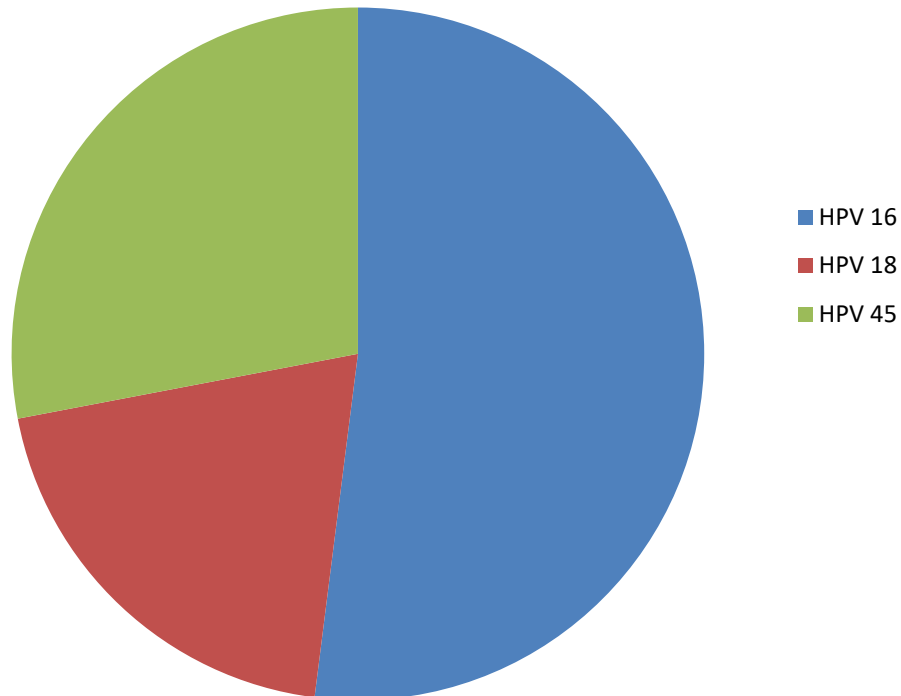
# Methods

- In 2014-2017, 2 382 women <40 years with normal cytology at Nordlandssykehuset-Bodo, Norway, were HPV-tested using a 3-type HPV E6/E7 mRNA test (PreTect SEE; direct genotyping 16, 18 and 45)
- Index cytology from women with a positive HPV mRNA test were re-screened
- Women with revised cytological diagnoses were followed-up according national guidelines until August 2018
- We used histologically confirmed CIN2+ as study endpoint



# Results

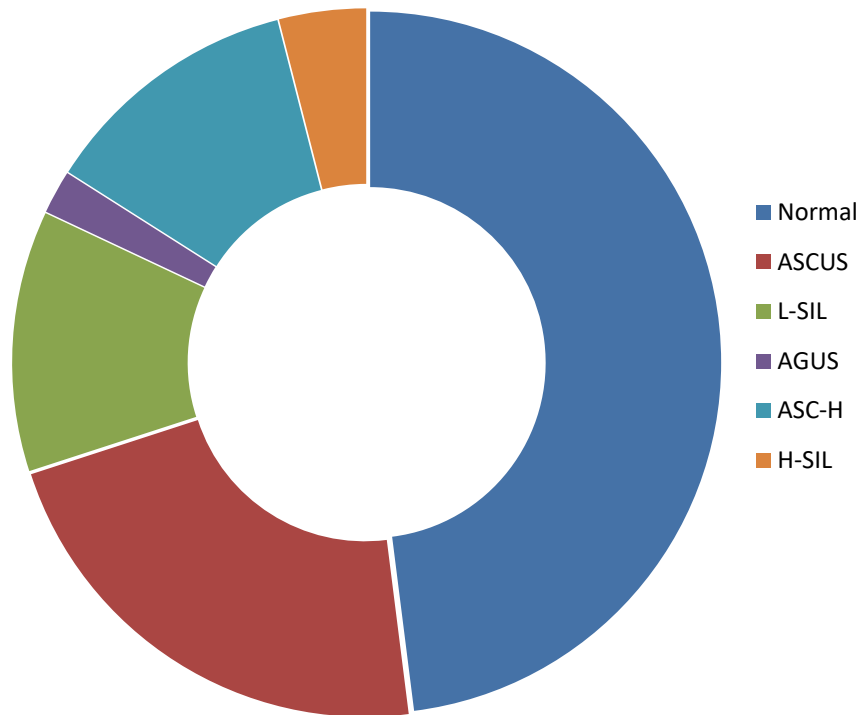
50 of 2382 were HPV+ (2.1%)  
HPV types were:



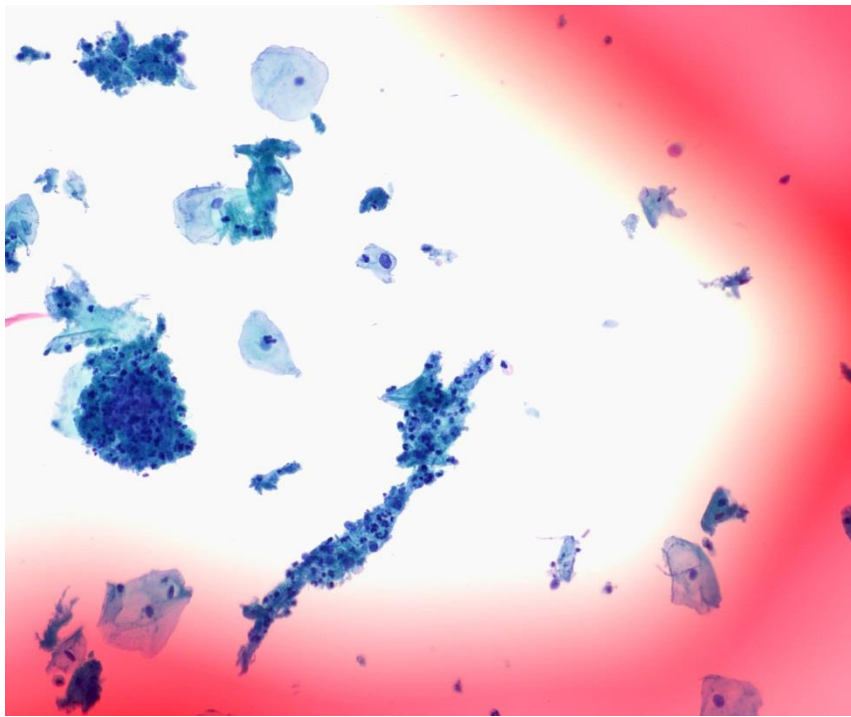
<i>HPV-subtypes</i>	
HPV 16	26
HPV 18	10
HPV 45	14
<b>Total</b>	<b>50</b>

# Results

## Re-screening diagnosis of HPV+ cases



Diagnosis after re-screening <i>Bethesda system</i>		
Normal	24	
ASC-US	11	
LSIL	6	
AGUS	1	
ASC-H	6	
HSIL	2	
<b>Total</b>	<b>50</b>	



# BC16981-14

## Born 1989, negative history

PreTect mRNA HPV16+



Rescreened to LSIL Oct. 2014



LSIL Cobas DNA HPV16+ Oct. 2015



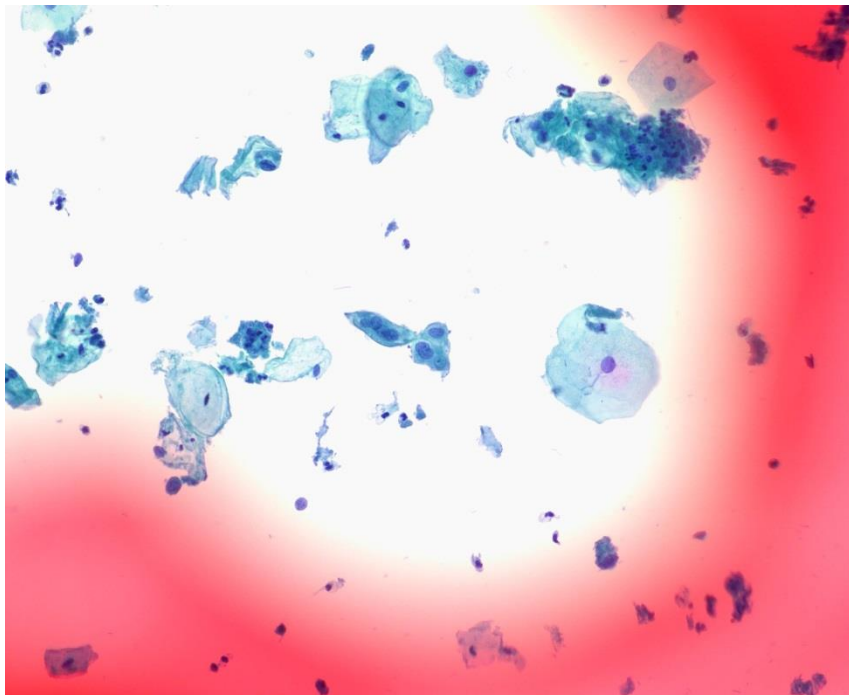
Biopsi HSIL Jan. 2016

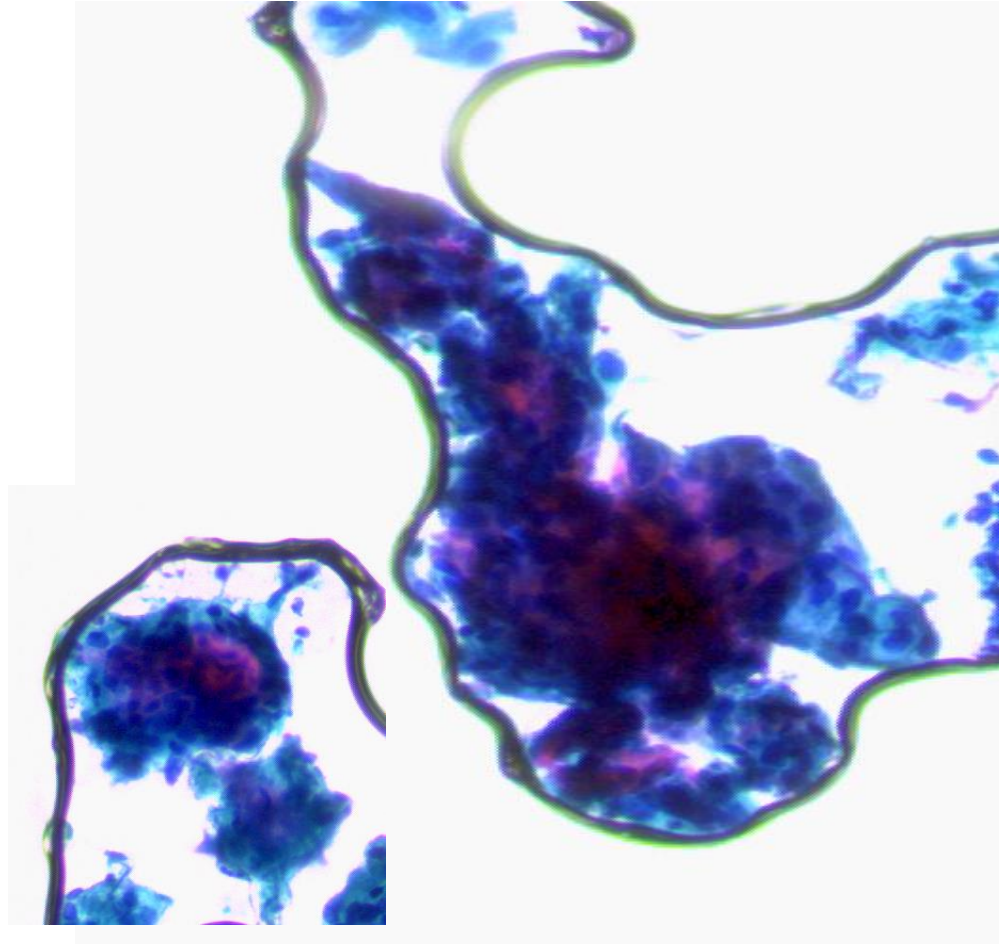


Conus HSIL Mars 2016



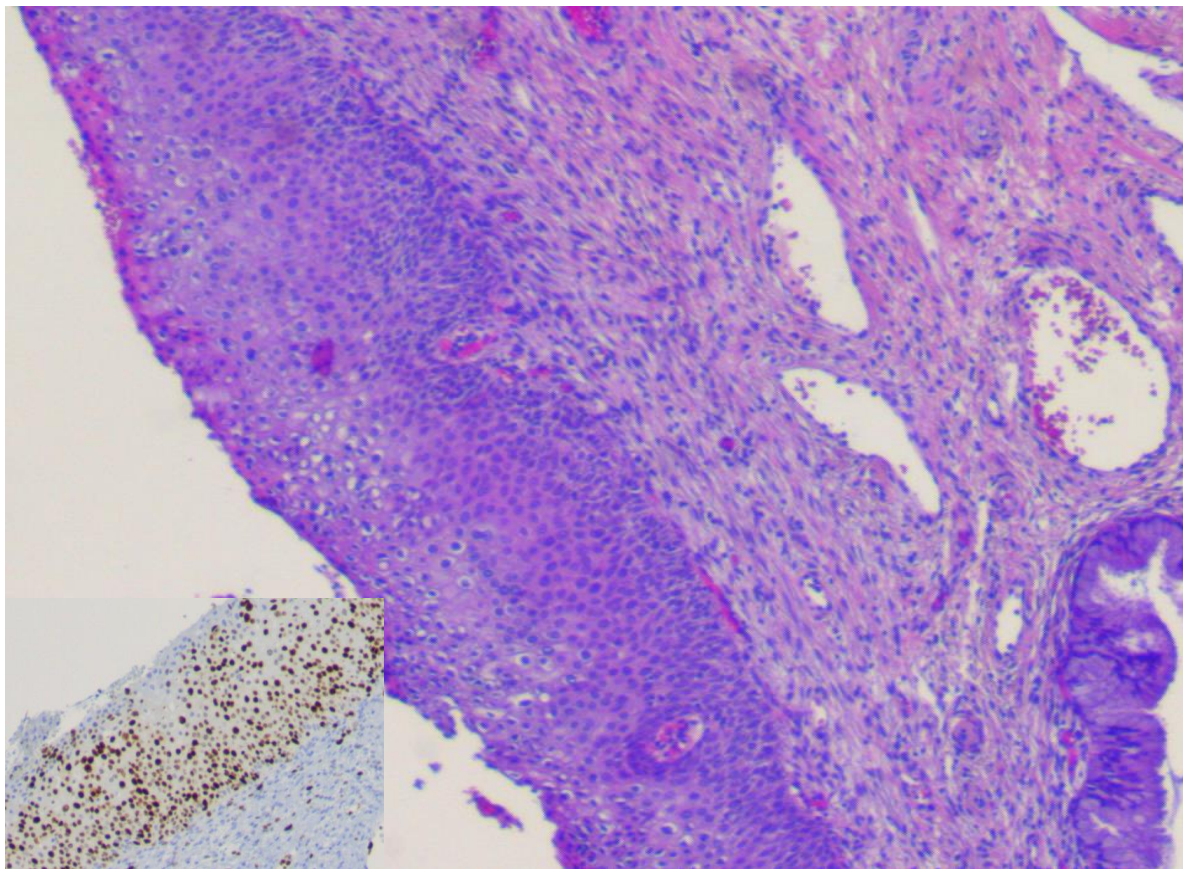
Normal cyt, Cobas DNA HPV negativ Sept. 2016





## **BH15214-14 ASC-H**

Biopsy (697-15) and conus (BH 3755-15) HSIL

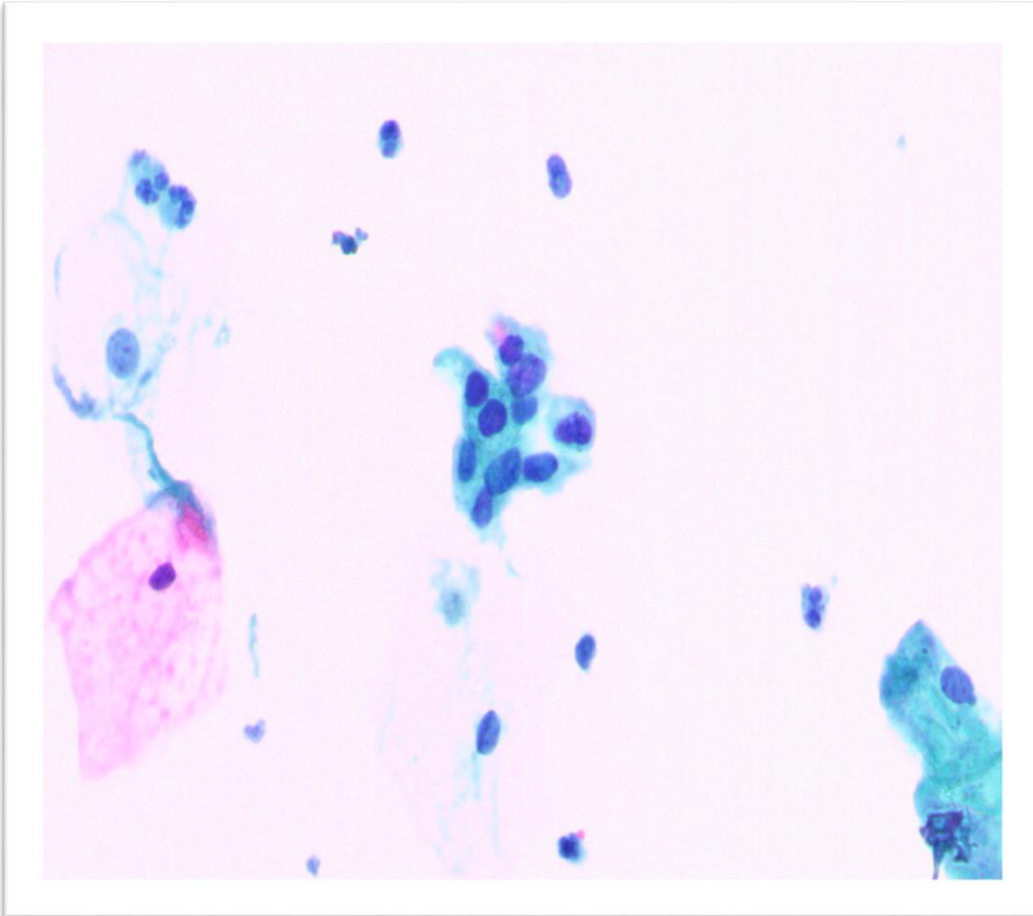


**conus (BH 3755-15) CIN3**

Inset Ki67

**BC19609-14**

**Born 1984**



Earlier normal cytology in 2007,  
2010 (H) og 2012 (A)



mRNA 16+ (normal—HSIL)



Biopsi Feb 2015 HSIL



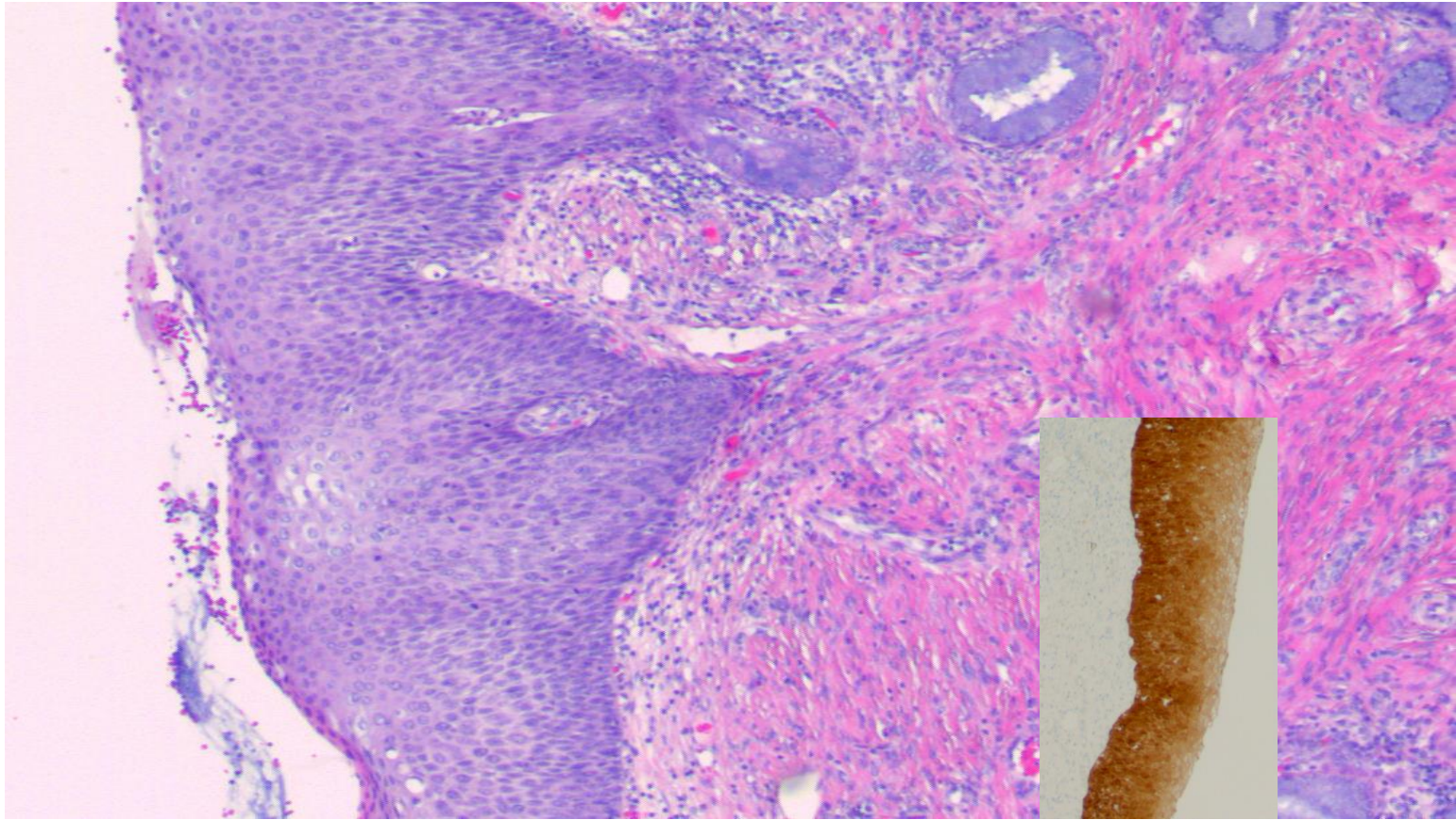
Cyt. Sept 2015 HSIL HPV 16+  
(Cobas-DNA)



Biopsi Okt. 2015 HSIL



Conus Dec. 2015 HSIL (CIN3)



**BH17986-15 HSIL**

Inset P16

# Conclusion

- By testing women <40 years with normal cytology with a specific 3-type HPV mRNA test, an increase in screening program sensitivity can be achieved without an excessive workload
- The volume of rescreened smears is low (2.1%)
- The PPV for CIN2+ is high (56.6%)
- When more women with CIN2+ are detected and treated in the first screening round, less women will develop cervical cancer before next screening round



Sveinung Sørbye, Ramona Maurseth, Hiba Mohamed, Mikkel Fostervold

**THANK YOU**

