



# Risk of Progression of Cervical Intraepithelial Neoplasia Grade 2 by HPV Vaccination Status

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## Background

In most countries, cervical intraepithelial neoplasia grade 2 (CIN2) is treated with a cone biopsy, but in Denmark women of reproductive age are recommended active surveillance since a cone biopsy is associated with preterm birth. Yet, some women with CIN2 will progress to CIN3 or cancer (CIN3+) and the challenge is to identify these women.

HPV-vaccinated women are less likely to develop cervical cancer, but to our knowledge, the effect of HPV vaccination on risk of progression of CIN2 has not yet been investigated.



**We hypothesize a lower risk of progression of CIN2 among HPV-vaccinated women compared to unvaccinated women due to infection with less oncogenic HPV types.**

## Aim

To investigate whether HPV-vaccinated women diagnosed with CIN2 are less likely to progress to CIN3+ compared to unvaccinated women.

## Perspectives

Investigation of the influence of HPV vaccination status on risk of progression of CIN2 will provide clinicians with important information that may be useful in clinical counselling.

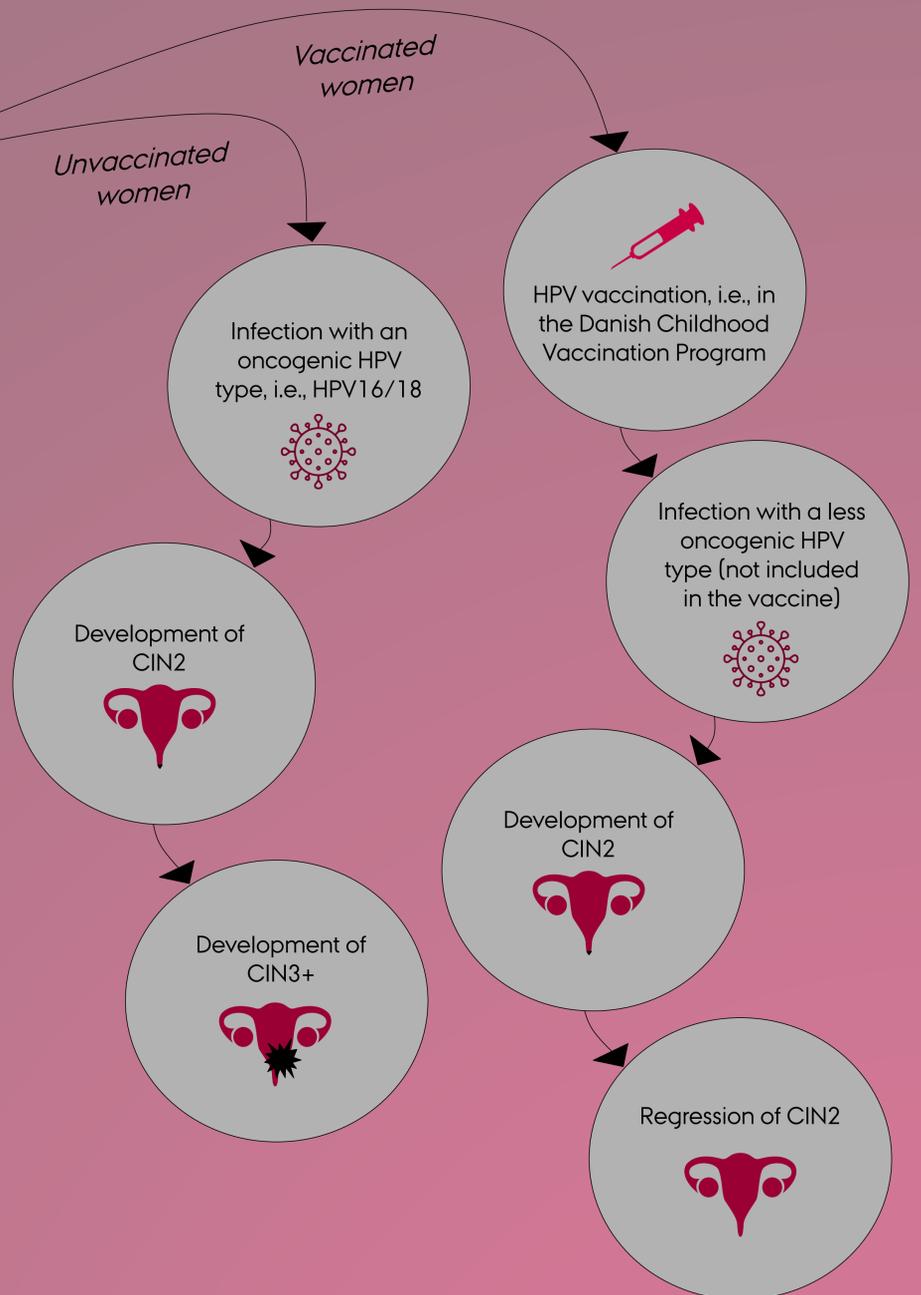
Moreover, the study may contribute to:



**Improve shared decision-making  
Obtain more knowledge about the clinical effects of HPV vaccination  
Avoid overtreatment**

## Methods

By using several health registers, we will conduct a **nationwide population-based cohort study in Denmark** of all women diagnosed with CIN2 between 2010-2020. Information on all subsequent cervical samples, HPV vaccination, socioeconomic status, and other important covariates will be retrieved, and by using statistical analysis, we will estimate the hazard of progression to CIN3+ by HPV vaccination status.



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