

# Cervical cancer screening in older women and whether self-sampling could be an optimal screening modality for this older age group

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# Disclosures

- Cobas 4800 HPV DNA test assays were provided by Roche Diagnostics, GmbH, Switzerland
- Have in other projects received: Cobas 4800 HPV DNA test assays from Roche Diagnostics, GmbH, Switzerland and Evalyn Brush devices from Axlab
- Has received honoraria from Roche Diagnostics and AstraZeneca for lectures



# Background

- Cervical cancer screening stops at the age of 60-65 in Europe and 65 in the USA
- High-risk human papillomavirus (HPV) test is replacing cytology as the primary cervical cancer screening test due to superior sensitivity
  - In most countries women  $\geq 65$  years have never had a HPV test
  - Reduced sensitivity of cytology among postmenopausal women
- Should these women be offered a catch-up HPV test to prevent cancer at older ages?
- Women who have been insufficiently screened at age 50-64 could benefit from continued screening after the age of 65
  - Could vaginal self-sampling be the optimal screening modality to reach older insufficiently screened women?
- Colposcopy and biopsy are challenging in older women due to nonvisible transformation zone
  - Resulting in lengthy follow-up and risk of missing disease

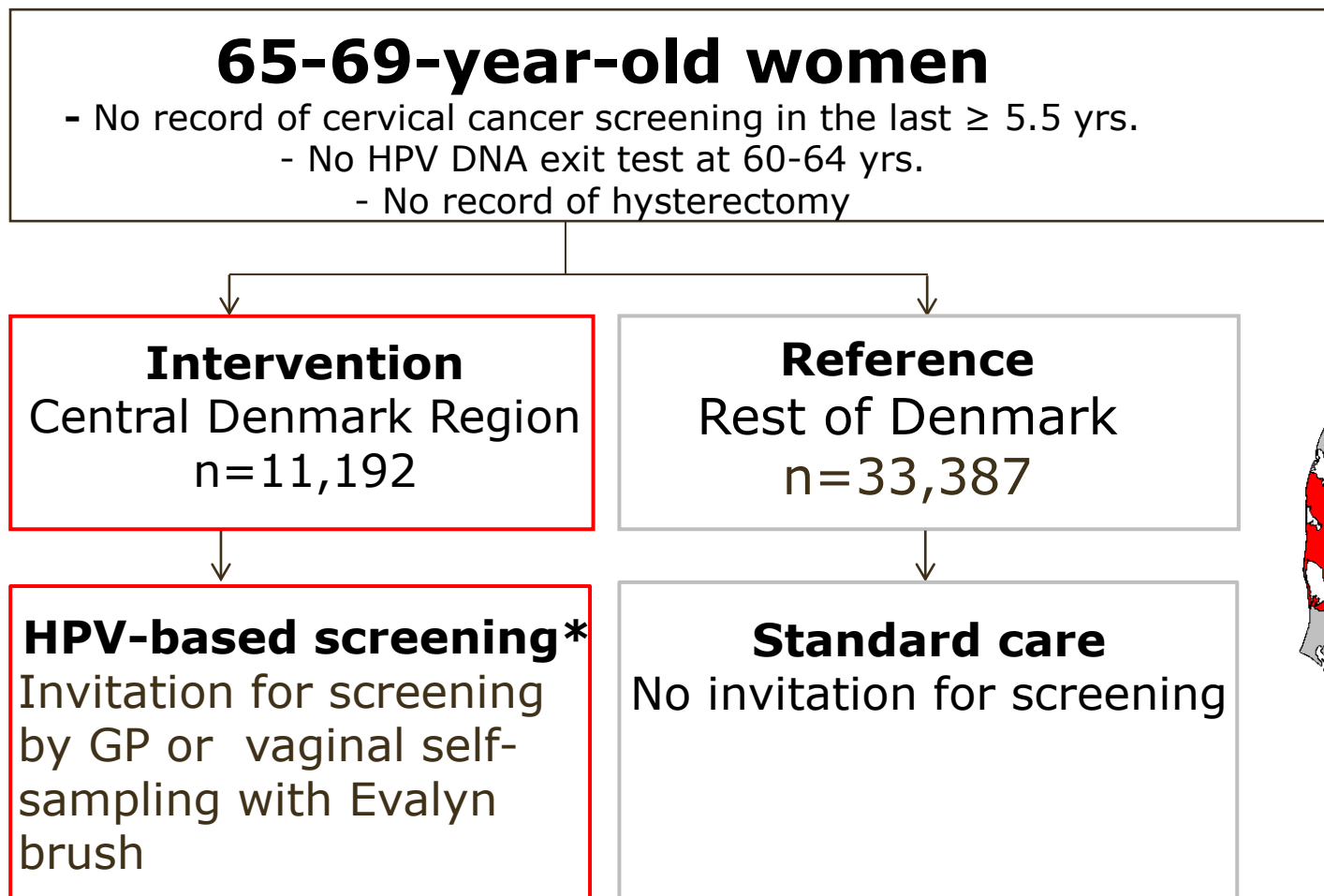


# Aims

- If a HPV catch-up screening intervention was associated with high screening uptake and higher CIN2+ detection as compared to women not offered screening?
- If insufficiently screened women were more likely to undergo vaginal self-sampling than sufficiently screened women?
- Estimate the benefit-harm ratio of the intervention as number of colposcopies needed to detect one CIN2+ case



# Method



\*) Cobas 4800 HPV DNA test



# Results

## Study population

	Intervention n= 11,192	Reference n= 33,387	
<b>Median age</b>	68.4	68.5	
<b>Screening history at age 50-64</b>			
Insufficiently screened ( $\leq 1$ cervical sample)	2,665 (23.8)	7,636 (22.9)	$p^* = 0.04$
Sufficiently screened ( $\geq 2$ cervical samples)	8,527 (76.9)	25,751 (77.1)	

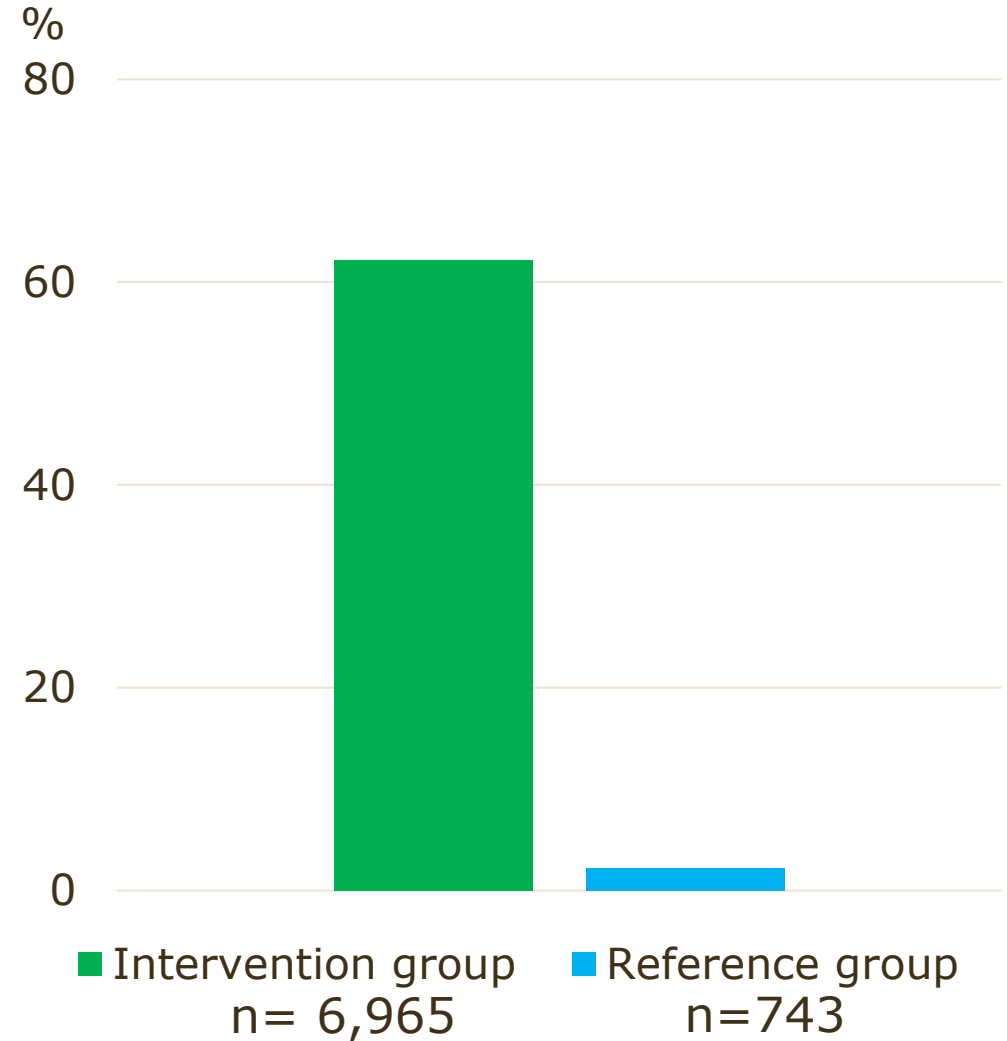
\*) chi square test



# Results Uptake\*

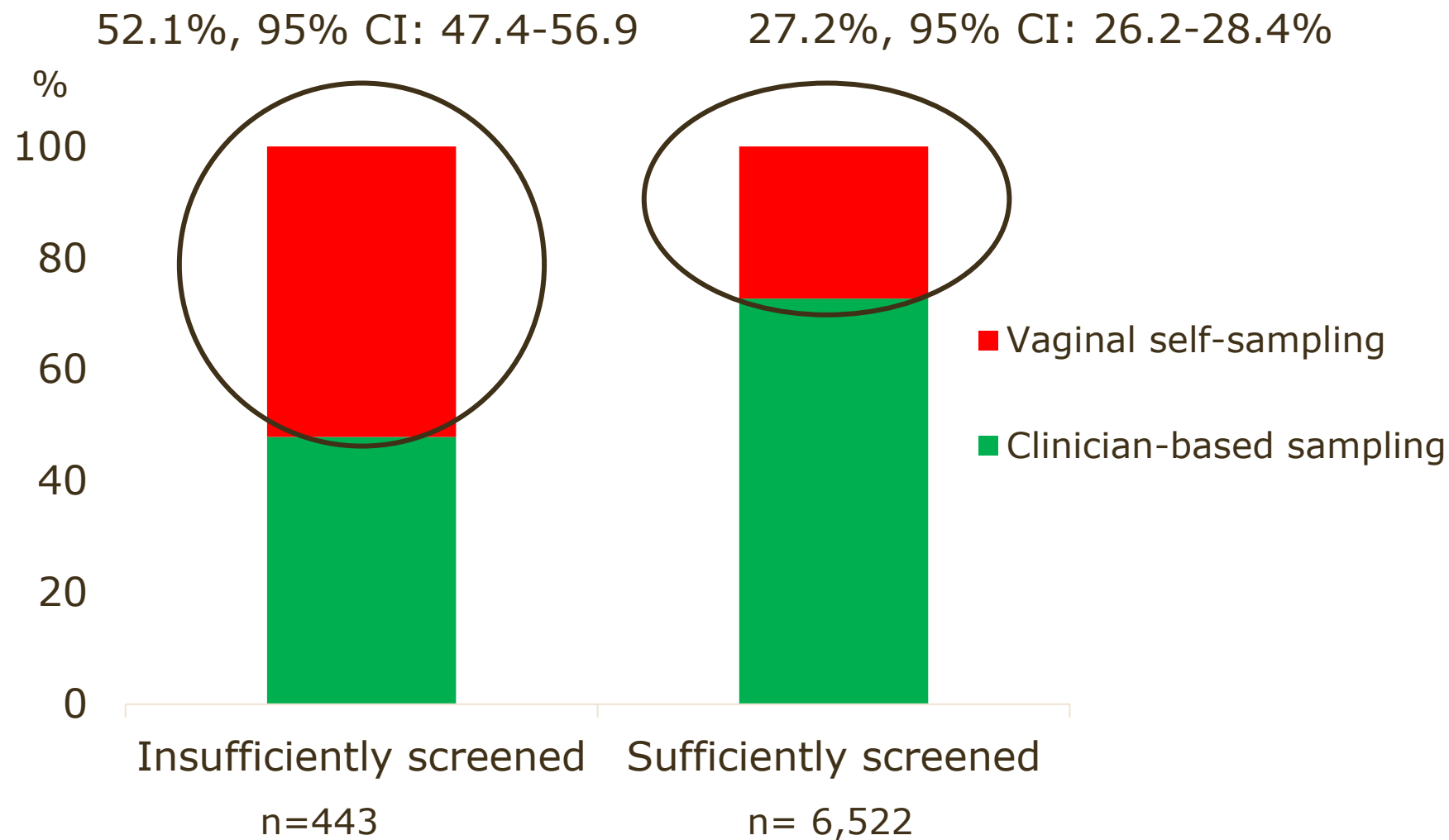
- Intervention group
  - 62.2%, 95% CI: 61.3-63.1%
  - Clinician-based sampling was preferred over vaginal self-sampling (71.1% vs 28.9%,  $p < 0.001$ )
- Reference group
  - 2.2%, 95% CI: 2.1-2.4%

\*) within 365 days



# Results

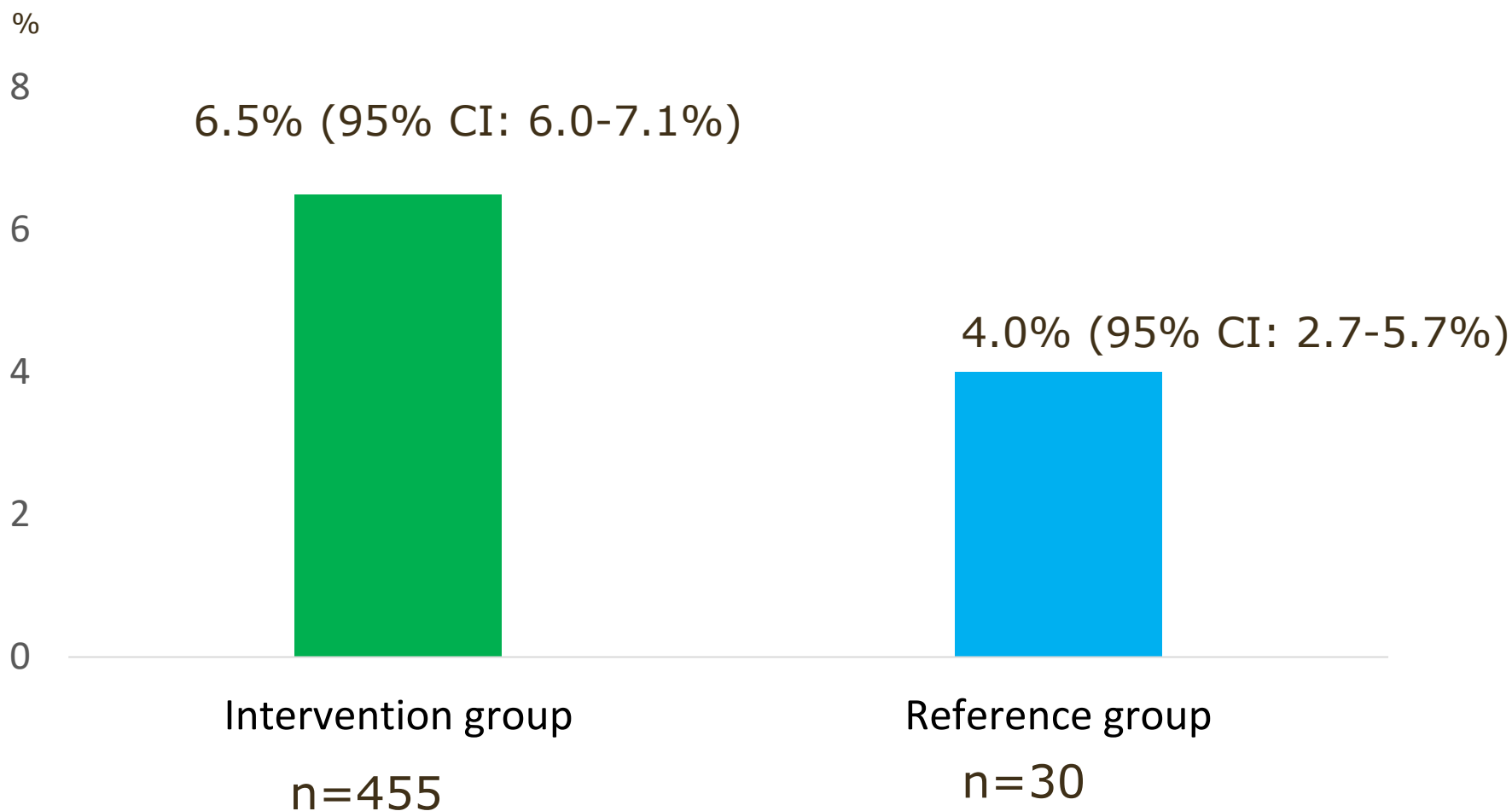
## Uptake- screening modality and history





# Results

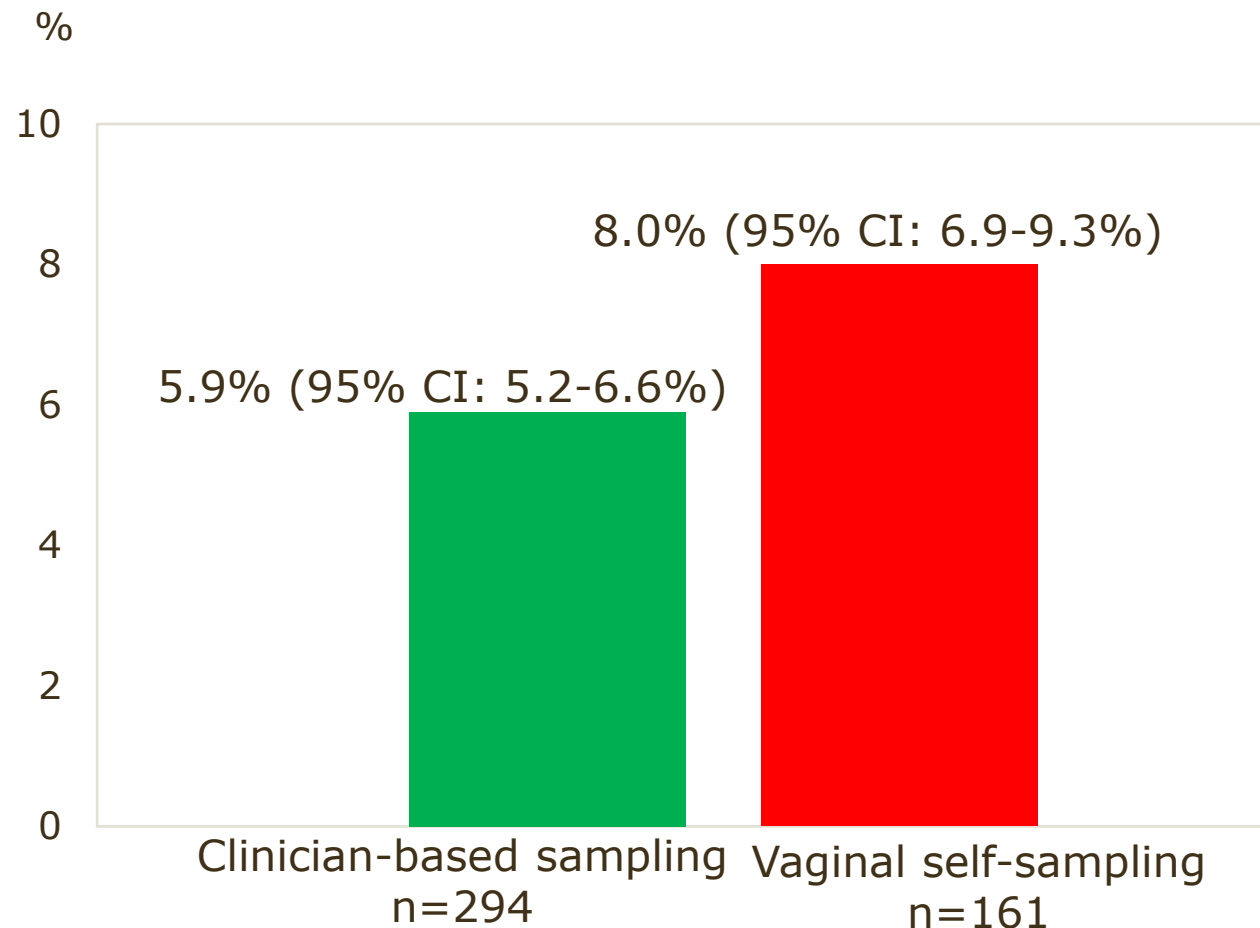
## HPV DNA prevalence



# Results

## HPV DNA prevalence- screening modality

- Compliance to follow-up\*
  - 99.4% (95% CI: 96.6-100%)



\*) cervical cytology triage at the GP for onward referral



# Results- CIN2+ detection

	Intervention	Reference
<b>Eligible women</b>	11,192	33,387
<b>Women with histology*</b>	357	75
<b>Worst histology result</b>		
<b>CIN2+</b>	44	11
<b>Per 1,000 eligible women (95% CI)</b>		
<b>CIN2+</b>	3.9 (2.9-5.3)	0.3 (0.2-0.6)
<b>Benefit-harm ratio</b>		
<b>Number of colposcopies performed</b>	511 <sup>#</sup>	111 <sup>#</sup>
<b>Number of colposcopies performed per CIN2+ case (95% CI)</b>	11.6 (8.5-15.8)	10.1 (5.4-18.8)



\*) biopsy, ECC or cone biopsy, #) Some women had > 1 biopsy during follow-up; thus the number of colposcopies performed was higher than the number of women with histology CIN2+: CIN2, CIN3/AIS, CIN and cancer

# Take-home messages

- The HPV catch-up intervention resulted in:
  - High screening uptake (62.2%)
  - Higher CIN2+ detection as compared to no screening intervention (3.9 vs 0.3 per 1,000 eligible women)
  - To detect one CIN2+ case in the intervention and reference groups, comparable numbers of colposcopies were required (11.6 vs 10.1, respectively)
- Vaginal self-sampling could be the optimal screening modality for women aged 65 and above
  - Reaching older insufficiently screened women at risk of cervical cancer
  - High compliance to follow-up was achievable
  - Favorable cost
- Longer follow-up is needed to observe if the intervention translate into fewer cervical cancers and deaths in screened women
- Choice of the future screening strategy for this older age group should be based on the availability of resources and attitudes to cervical cancer risk in each country



# Thank you for your attention

## The project was made in collaboration with:

### Co-authors:

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- 
- The staff at Department of Pathology, Randers Regional Hospital, Denmark
  - The staff at Department of Public Health Programmes, Randers Regional Hospital, Denmark

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# Results

## Uptake- screening modality

