

# Effectiveness of cervical screening after age 60 according to screening history: nationwide cohort study

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## Associated documentation

Codebook\_1028-001.pdf (97.71 KB)

## Citation

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## Creator/Principal investigator(s)

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## Description

The relatively high incidence of cervical cancer in women at older ages is an issue in countries performing cervical screening for decades. Controversy remains on when and how to cease screening. Existing population-based studies on effectiveness of cervical screening at older ages have not considered women's screening history. We performed a nationwide cohort study to investigate the incidence of cervical cancer after age 60 and its association with cervical screening at ages 61-65, stratified by screening history at ages 51-60.

Using the Total Population Register, we identified women born between January 1919 and December 1945, resident in Sweden since age 51. According to the year that each county started the electronic record of cervical screening and women's resident county, we further identified 569,132 women that have cervical screening record available since age 51. Women's screening records, cervical cancer occurrence, and level of education were retrieved from the Swedish National Cervical Screening Registry, the National Cancer Register, and LISA (Longitudinal integration database for health insurance and labour market studies) respectively. We presented the cumulative incidence of cervical cancer from age 61-80 by using competing risk regression models, and compared the hazard ratio of cervical cancer by screening status at ages 61-65 from Cox models, adjusted for birth cohort and level of education, conditioning on screening history in their 50s.

We find that Cervical screening at ages 61-65 is associated with a statistically significant reduction of subsequent cervical cancer risk for women unscreened, or screened with abnormalities, in their 50s. In women screened negative in their 50s, the risk for future cancer is not sizeable, and the risk reduction associated with continued screening appears limited. These findings should inform the current debate regarding age and criteria to discontinue cervical screening.

Purpose:

In order to provide evidence for age and criteria to discontinue cervical screening, we use this data to investigate the impact of cervical screening at ages 61-65 on cervical cancer incidence and stage at ages 61-80, stratifying by screening history at ages 51-60.

This data comprises women born between January 1919 and December 1945, resident in Sweden since age 51, and having cervical screening record available since age 51.

It contains the following variables:

- Seq\_nr: sequence number indicating each individual woman, from 1 to 569,132.
  - Edu\_cat: level of education in three categories: 1=low (less than high school); 2=high school; 3=university exam and above; . =missing. Data are retrieved from LISA (Longitudinal integration database for health insurance and labour market studies).
  - Birth\_cat: five categories of birth-year: 1=1919-1925; 2=1926-1930; 3=1931-1935; 4=1936-1940; 5=1941-1945.
  - Scr\_51\_60: Screening history at ages 51-60, in five categories: 1=adequately screened, negative; 2=inadequately screened, negative; 3=unscreened; 4=having low-grade abnormality; 5=having high-grade abnormality. Data are retrieved from the Swedish National Cervical Screening Registry.
  - Age\_first\_scr\_6165: age at having the first screening test at ages 61-65. (Missing value indicates there is no screening test at ages 61-65). Data are retrieved from the Swedish National Cervical Screening Registry.
  - Orgscr\_county: If in the county that had more than 40% women being screened at ages 61-65: 0=no; 1=yes.
  - Age\_entry: age when entering the cohort, which is 61 for all women.
  - Age\_exit: age when the follow-up is finished.
  - Cx\_fail: the event of finishing follow-up: 1=having cervical cancer; 2=competing events (death or having total hysterectomy); 3=censoring (emigration, turning age 81, or 2011-12-31). The information is retrieved from the Swedish National Cancer Registry (cervical cancer), Cause of Death Register (death), Patient Register (hysterectomy), and Migration Register (emigration).
- The dataset also includes three variables created by Swedish National Dataservice (SND-study, SND-dataset, SND-version).

## Language

[English](#)

## Unit of analysis

[Group](#)

[Individual](#)

## Population

Women resident in Sweden since age 51 whose cervical screening records are available since age 51

## Time Method

[Longitudinal](#)

## Sampling procedure

[Total universe/Complete enumeration](#)

## Time period(s) investigated

1970-01-01 - 2011-12-31

## Variables

12

## Number of individuals/objects

569132

## Data format / data structure

[Numeric](#)

## Data collection 1

- Time period(s) for data collection: 1991 - 2013
- Source of the data: Registers/Records/Accounts: Administrative, Registers/Records/Accounts: Medical/Clinical, Registers/Records/Accounts

## Geographic spread

Geographic location: [Sweden](#)

Geographic description: National study

## Responsible department/unit

Department of Medical Epidemiology and Biostatistics

## Funding 1

- Funding agency: Swedish Research Council

## Funding 2

- Funding agency: Swedish Foundation for Strategic Research, SSF
- Funding agency's reference number: KF10-0046

## Funding 3

- Funding agency: The Swedish Cancer Society

## Ethics Review

Stockholm - Ref. 2011/921-32

## Research area

[Medical and health sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Health](#) (CESSDA Topic Classification)

## Keywords

[Cervical screening](#), [Cervical cancer](#), [Cervical cancer prevention](#), [Older age](#)

## Publications

Effectiveness of cervical screening after age 60 according to screening history: nationwide cohort study, 2017

If you have published anything based on these data, [please notify us](#) with a reference to your publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

## Accessibility level

Access to data through SND

Access to data is restricted

### **Use of data**

[Things to consider when using data shared through SND](#)

### **Versions**

Version 1.0. 2017-08-28

### **Download metadata**

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

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