



The Northern Sweden Health and Disease Study

- Prospective blood samples and data from > 140 000 individuals in Västerbotten county

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Nordic Biobank Conference 2022

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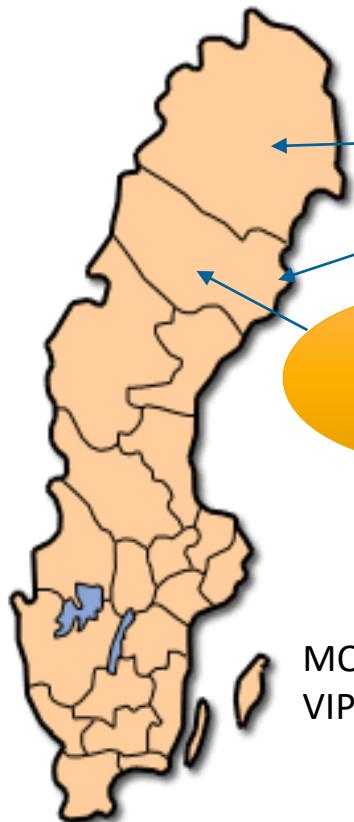
Northern Sweden health and disease study = NSHDS

Consists of:

- Västerbotten Intervention Program = VIP
- Northern Sweden MONitoring of trends and determinants in CAriovacular disease = MONICA
- Mammography Screening Project = MA

The Northern Sweden Health and Disease Study

NORDIC Biobank Conference



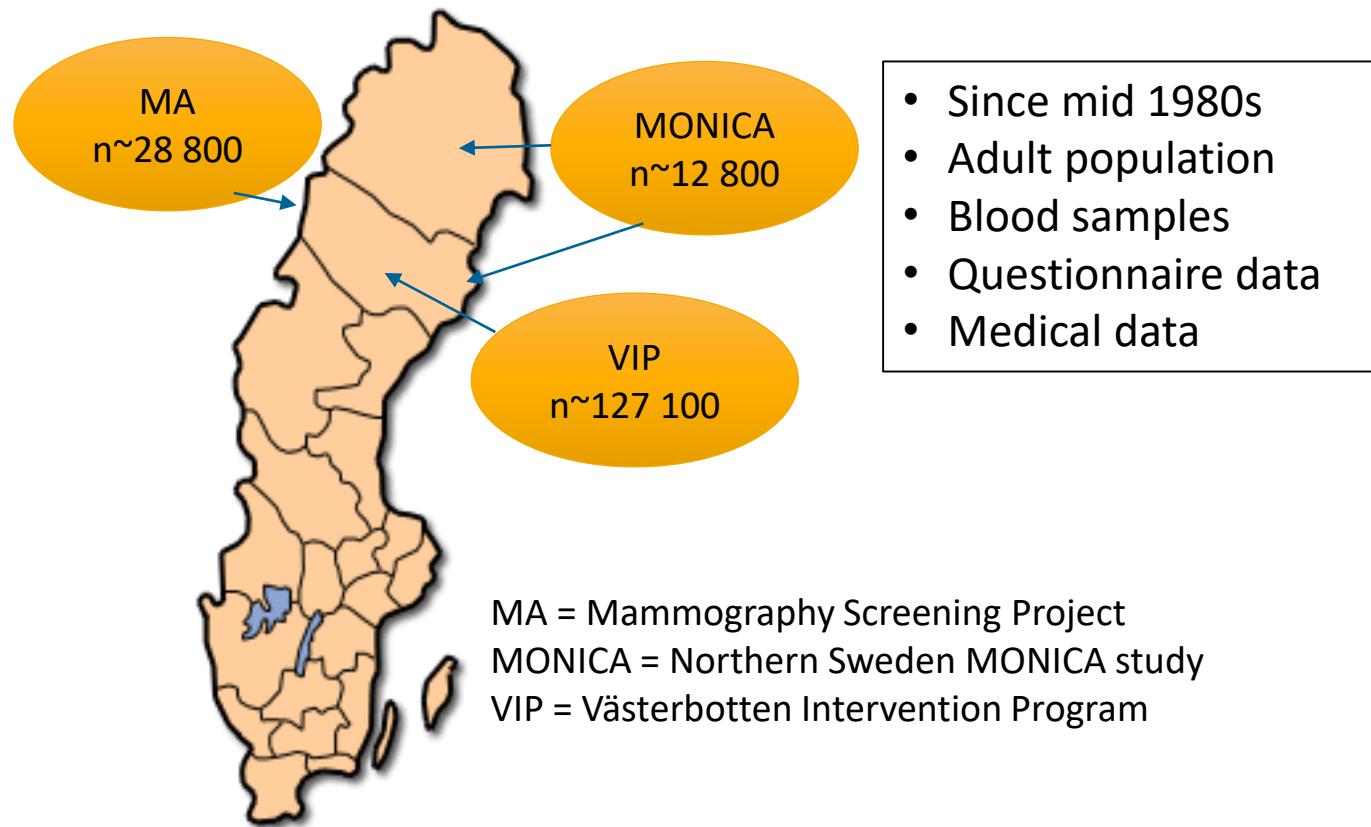
MONICA
 $n \sim 12\,800$

VIP
 $n \sim 127\,100$

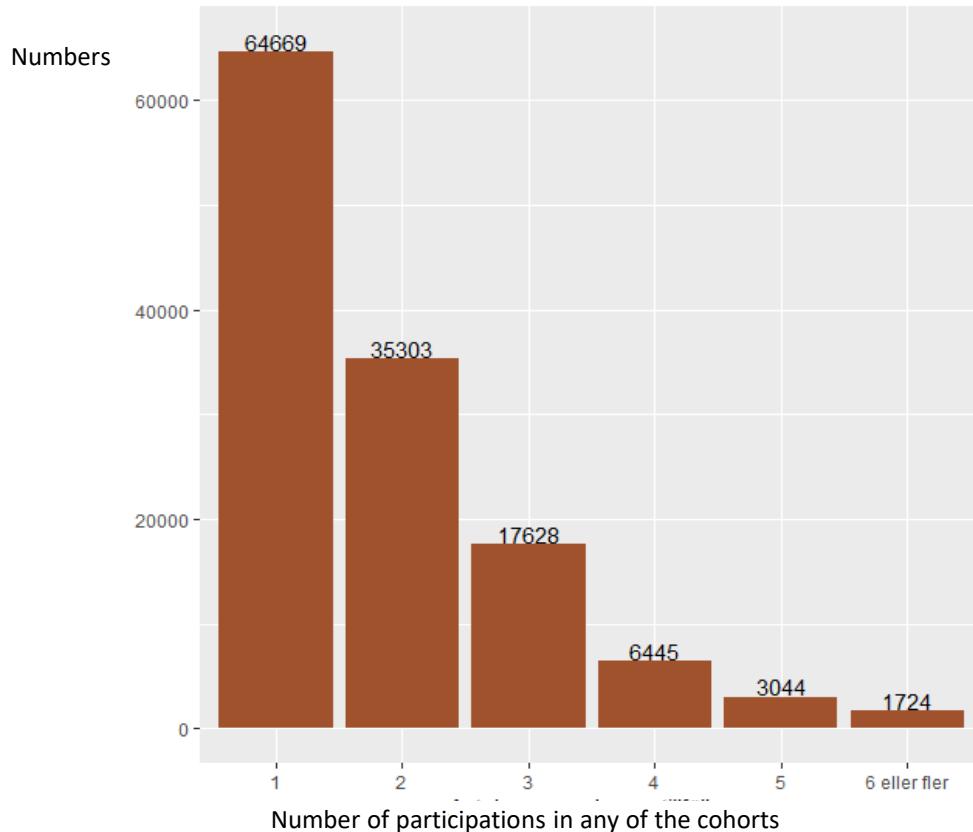
- Since mid 1980s
- Adult population
- Blood samples
- Questionnaire data
- Medical data

MONICA = Northern Sweden MONICA study
VIP = Västerbotten Intervention Program

The Northern Sweden Health and Disease Study



NSHDS; Numbers of repeated samples



2020-05-31

NSHDS; Blood samples in the biobank

- 10 tubes with 1.6-1.8 mL per individual



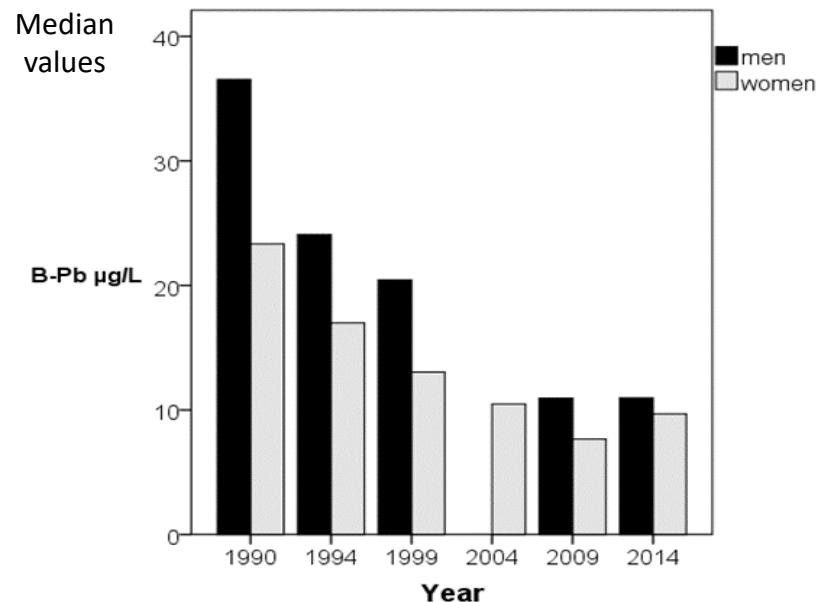
Ways to use NSHDS

Ways to use NSHDS

Time trends

Ways to use NSHDS

Time trend of lead in blood 1990-2014 (45-60 year olds)



Ways to use NSHDS

Case-control or case-cohort studies

By linkage to disease or patient registers!

Ways to use NSHDS

Case-control or case-cohort studies

Examples of diseases studied within NSHDS:

- Myocardial infarction
- Stroke
- Type 2 diabetes
- End stage renal disease
- Hip fractures
- Aortic stenosis
- Colorectal cancer

New perspectives

New studies performed on the adult population in Västerbotten can use biobanked samples from NSHDS!

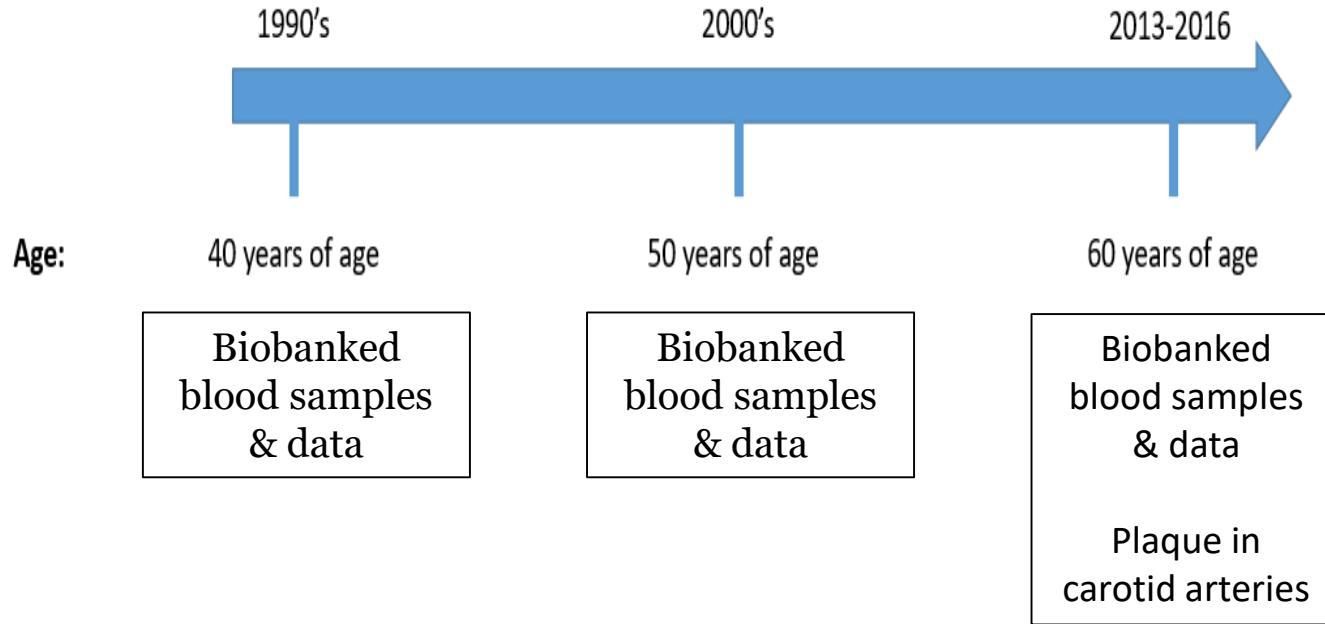
New perspectives

Example;

VIPVIZA

Previous VIP participants (2013-2016) were further examined with ultrasound of carotid arteries to examine presence of plaque.

VIPVIZA



Reference VIPVIZA:

Näslund U et al. VIPVIZA trial group. Visualization of asymptomatic atherosclerotic disease for optimum cardiovascular prevention (VIPVIZA): a pragmatic, open-label, randomised controlled trial. Lancet. 2019 Jan 12;393(10167):133-142.

New perspectives

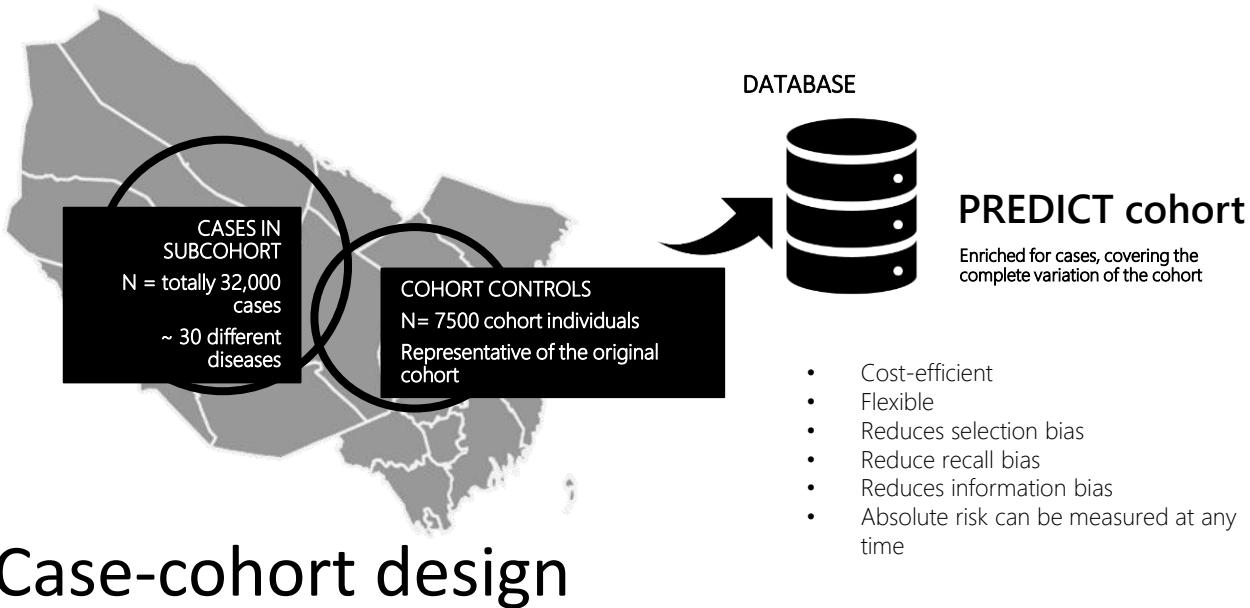
Studies on Covid-19 using biobanked samples from NSHDS

Ongoing:

Comparing proteins in biobanked samples from participants developing severe versus mild Covid-19

New perspectives

PREDICT



- Cost-efficient
- Flexible
- Reduces selection bias
- Reduce recall bias
- Reduces information bias
- Absolute risk can be measured at any time

NSHDS - strengths

- High quality samples from 1986 and onwards
- Repeated samples
- Blood samples before disease onset
- Biobanked samples for participants in new studies
- Medical data and extensive questionnaire data

Applying for use of blood samples and/or data from NSHDS

The Biobank Research Unit:

<https://www.umu.se/enheten-for-biobanksforskning/>

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Thank you!