### THE NIA BIOMARKER NETWORK ANNUAL MEETING COLUMBUS, OH, April 17, 2024



# BIOMARKERS IN SHARE

Release of blood biomarker data assayed from DBS collected in 2015

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## **SHARE: Quick facts**





















#### SHARE countries participating in the DBS collection in 2015



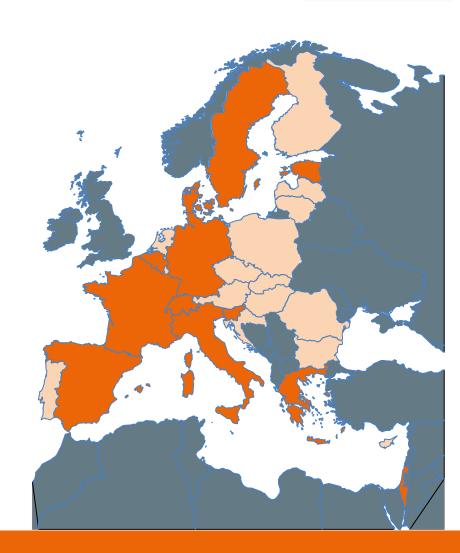


Respondents from 12 countries donated blood for DBS:

Belgium, Denmark, Estonia, France, Germany, Greece, Israel, Italy, Slovenia, Spain, Sweden, Switzerland

Ca. 27,200 samples were collected

Ca. 23,000 samples were analyzed for one to seven blood biomarkers



# Selected and analyzed blood biomarkers





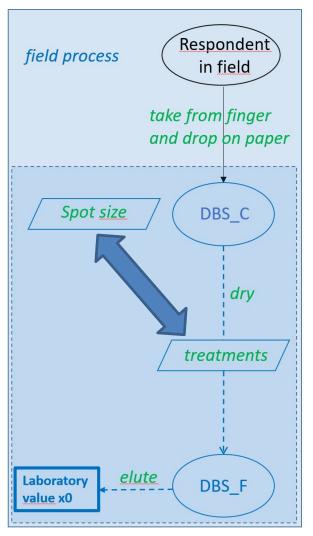
#### Routine blood biomarker data to be released now:

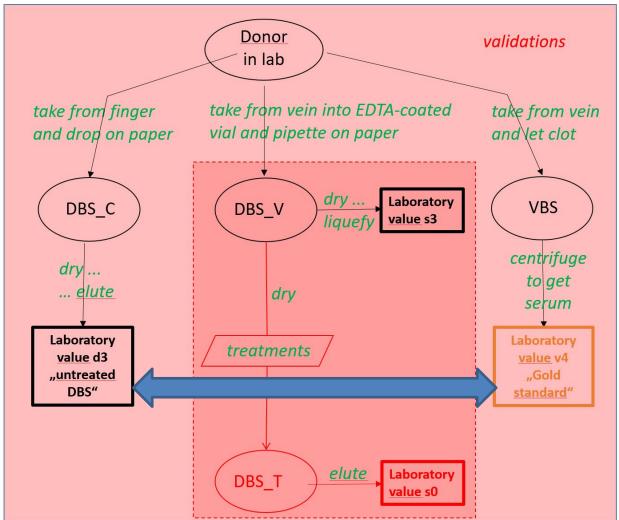
```
(Diabetes)
HbA1c
        glycated Hemoglobin
        total Hemoglobin (Anemia, Frailty, ...)
THB
                            (CVD)
CHO
        total Cholesterol
        HDL-Cholesterol (CVD)
HDL
TRG
        Triglycerides
                        (CVD)
        C-reactive protein (general inflammation, CVD, ...)
CRP
                        (kidney function, CVD, ...)
CYC
        Cystatin C
```

Analyses of the above blood biomarkers, were executed at the Department of Laboratory Medicine and Pathology, University of Washington, Seattle, WA, USA

### Fieldwork biases and their corrections







## Correction steps and data release







Storage correction

Corrections for small spot sizes

Corrections for fieldwork environment

4.
Corrections
for
blood type

Raw data from the lab for CysC, TC and TRG in Batch 2

Machine correction for A1c in Batch 2

Spot-size
adjust-ment
based on
photo-grap
hic
measure-m
ent

Purge from fieldwork effects by using the validation experiments

Blood type conversion from capillary blood into gold standard equivalents

Final data for SHARE users

## Results





		<u>THB</u>	<u>HDL</u>	CHO	<u>CRP</u>	<u>CYC</u>	<u>TRG</u>	<u>A1c</u>
Sweden	North	15.04***	73.18***	232.8***	3.01***	1.02***	227.5	6.01***
Estonia		14.69**	67.25***	223.0***	3.26**	0.98***	208.7***	6.01***
Denmark		14.96***	71.79***	226.9***	3.59	1.00***	206.2***	5.90***
Belgium		14.95***	69.56***	221.9***	3.40	1.00***	223.8***	5.98***
Germany		14.76	67.49	224.3	3.55	0.99	232.1	6.07
France		14.93*	69.79***	226.4*	3.16	0.98	236.7	6.00
Switzerland		14.95***	72.02***	232.2***	2.98***	1.02***	244.6***	5.99***
Slovenia		14.84	66.67***	221.6***	3.38	1.00*	235.2	6.16***
Italy		14.56***	64.10***	217.2***	3.32	0.99	222.0***	6.08
Spain		14.23***	62.21***	215.2***	3.58	0.96***	214.8***	6.21***
Greece	<b>↓</b>	13.93***	61.81***	219.9***	2.78***	0.95***	221.5**	6.28***
Israel	South	14.14***	61.28***	204.2***	3.14**	0.93***	212.6***	6.10***

Controlled for age and sex differences, reference country is Germany, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



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# THANK YOU!

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