

Supplementary Figure S1. ASCVD Risk Estimator



## ASCVD Risk Estimator Plus

Estimate Risk

Therapy Impact

Advice

**8.1%**  
Intermediate

**Current 10-Year  
ASCVD Risk\*\***

Lifetime ASCVD Risk: **50%** Optimal ASCVD Risk: **2.6%**

App should be used for primary prevention patients (those without ASCVD) only.

Current Age ⓘ \*

52

Age must be between 20-79

Sex \*

✓ Male

Female

Race \*

White

African American

✓ Other

▲ See the Estimate Warning below

**Note:** These estimates may *underestimate* the 10-year and lifetime risk for persons from some race/ethnic groups, especially American Indians, some Asian Americans (e.g., of south Asian ancestry), and some Hispanics (e.g., Puerto Ricans), and may *overestimate* the risk for others, including some Asian Americans (e.g., of east Asian ancestry) and some Hispanics (e.g., Mexican Americans). Because the primary use of these risk estimates is to facilitate the very important discussion regarding risk reduction through lifestyle change, the imprecision introduced is small enough to justify proceeding with lifestyle change counseling informed by these results.

Systolic Blood Pressure (mm Hg) \*

135

Value must be between 90-200

Diastolic Blood Pressure (mm Hg) \*

85

Value must be between 60-130

Total Cholesterol (mg/dL) \*

210

Value must be between 130 - 320

HDL Cholesterol (mg/dL) \*

35

Value must be between 20 - 100

LDL Cholesterol (mg/dL) ⓘ ○

163

Value must be between 30-300

History of Diabetes? \*

Yes

✓ No

Smoker? ⓘ \*

Current ⓘ

✓ Former ⓘ

Never ⓘ

How long ago did patient quit smoking? \*

Less than 6 months ago

On Hypertension Treatment? \*

✓ Yes

No

On a Statin? ⓘ ○

Yes

✓ No

On Aspirin Therapy? ⓘ ○

Yes

✓ No

Supplementary Table S1: Changes in Lipid indices and ASCVD risk score according to 25(OH) vitamin D improvement tertiles.

	Baseline	End of study	% change	Baseline	End of study	% change	Baseline	End of study	% change	p <sup>t</sup>
Parameters	Tertile 1			Tertile 2			Tertile 3			
All Subjects										
Total 25 (OH) Vit D	38.3 ± 7.1	54.0 ± 6.1	41	32.8 ± 11.1	58.5 ± 11.2	78	26.4 ± 10.1	77.4 ± 18.6	193	<0.01
Total Cholesterol	4.9 ± 1	4.8 ± 1.1	-3	5.3 ± 1.4	5.4 ± 1.5	2	5.0 ± 1.2	5.1 ± 1.2	0.2	0.10
Triglycerides (mmol/l)\$	1.8	1.7 (1.3,2.3)	-4	1.5 (1.2,2.4)	1.7 (1.2,1)	10	1.4 (0.9,2)	1.4 (1.1,2)	1	0.30
HDL-Cholesterol	1 ± 0.4	1.1 ± 0.3	4	0.96 ± 0.4	1.11 ± 0.5	16	1.03 ± 0.4	1.19 ± 0.4	16	0.03
LDL-Cholesterol	2.9 ± 1	2.8 ± 1.1	-4	3.4 ± 1.3	3.4 ± 1.3	-0.3	3.3 ± 1	3.2 ± 1	-4	0.05
Glucose (mmol/l)\$	5.6	5.8 (5.2,7)	3	5.6 (5.2,6.3)	5.6 (5.1,6)	0.2	6.0 (5.1,6.4)	5.8 (5.1,6.5)	-3	0.67
ASCVD risk score (%) \$	6.3	5.8 (3.5,8.6)	-8	7.3	5.6	-24	4.2 (1.5,8.7)	2.4 (0.8,6)	-44	0.02
Males										
Total 25 (OH) Vit D	39.7 ± 5.5	54.0 ± 4.7	36	33.5 ± 10.9	57.0 ± 10.5	70	30.7 ± 9.3	72.3 ± 17.5	135	<0.01
Total Cholesterol	4.6 ± 0.9	4.8 ± 1.3	4	5.0 ± 1.3	5.2 ± 1.2	3	5.7 ± 1.3	5.6 ± 1.6	-1	0.19
Triglycerides (mmol/l)\$	1.6	1.9 (1.4,2.3)	15	1.5 (1.2,4)	1.6 (1,2)	12	1.9 (1.3,2.6)	1.6 (1.2,2.6)	-18	0.55
HDL-Cholesterol	1 ± 0.3	1 ± 0.3	2	0.87 ± 0.4	0.97 ± 0.3	12	1.06 ± 0.3	1.15 ± 0.3	8	0.04
LDL-Cholesterol	2.7 ± 0.9	2.7 ± 1.1	1	3.0 ± 1	3.2 ± 1.2	7	3.7 ± 1.2	3.6 ± 1.5	-2	0.10
Glucose (mmol/l)\$	5.7	5.8 (5.4,6.8)	3	5.7 (5.2,6.4)	5.8 (5.6,6.1)	2	5.9 (5.4,6.4)	5.9 (5.5,6.6)	1	0.79
ASCVD risk score (%) \$	7.2 (5,9.7)	7.5	4	9.9	6.6	-33	9.9	7.7	-22	0.02
Females										
Total 25 (OH) Vit D	37.1 ± 7.8	54.8 ± 7.5	48	28.9 ± 13.2	58.4 ± 13.2	102	25.7 ± 10.2	81.6 ± 17.7	217	<0.01
Total Cholesterol	5.1 ± 1	4.7 ± 0.9	-8	5.5 ± 1.5	5.4 ± 1.5	-2	4.8 ± 1.2	4.9 ± 1.1	2	0.13
Triglycerides (mmol/l)\$	2.0	1.5 (1.1,2.3)	-26	1.4 (1.2,1.8)	1.7 (1.2,3)	24	1.4 (0.8,2.1)	1.3 (0.9,1.8)	-3	0.59
HDL-Cholesterol	0.96 ± 0.5	1.04 ± 0.3	8	1.18 ± 0.4	1.27 ± 0.5	8	0.97 ± 0.3	1.28 ± 0.4	32	0.02
LDL-Cholesterol	3.2 ± 0.8	2.9 ± 0.9	-8	3.7 ± 1.3	3.3 ± 1.3	-9	3.2 ± 0.9	3.0 ± 0.7	-5	0.38
Glucose (mmol/l)\$	5.8	5.8 (5.2,7.1)	1	5.5 (4.9,6.2)	5.4 (4.6,6)	-2	6.0 (4.9,6.4)	5.5 (4.6,6.3)	-8	0.14
ASCVD risk score (%) \$	2.9	1.5 (0.8,5.6)	-48	1.6 (0.9,3.6)	1.45	-9	4.05	1.3 (0.8,4.6)	-68	0.27

**Note:** Data presented Mean±SD for continuous normal variables (#); and medians (25th percentile, 75th percentile) for continuous non-normal variables (\$). % change is calculated by difference in mean or median levels/ baseline mean or median level \*100. P<sup>t</sup> represents differences (trend) in percent changes in each variable in the three vitamin D improvement tertiles and was calculated by ANOVA. p<0.05 is taken as significant.