

SUPPLEMENTARY APPENDIX FOR
Effects of statin medication on mortality risk
associated with type 2 diabetes in older persons
The population-based AGES-Reykjavik Study

Elin Olafsdottir,^{1,2} Thor Aspelund,^{1,3} Gunnar Sigurdsson,^{3,4} Bolli Thorsson,¹ Gudny Eiriksdottir,¹ Tamara B. Harris,⁵ Lenore L. Launer,⁵ Rafn Benediktsson,^{3,4} Vilmundur Gudnason³.

¹Icelandic Heart Association Research Institute, Kopavogur, Iceland

²Center of Public Health Sciences, University of Iceland, Reykjavik, Iceland

³Faculty of Medicine, University of Iceland, Reykjavik, Iceland

⁴Landspítali University Hospital, Reykjavik, Iceland

⁵Intramural Research Program, National Institute on Aging, Bethesda, MD, USA.

Corresponding author:

Professor Vilmundur Gudnason

Icelandic Heart Association Research Institute

Holtasmari 1

201 Kopavogur

Iceland

Icelandic Heart Association, telephone (+354) 535 1800, fax (+354) 535 1801

e-mail: v.gudnason@hjarta.is

Running title: Statins and mortality in T2D

Contents

eTable 1. Statin medication according to history of type 2 diabetes and coronary heart disease . The AGES-Reykjavik study from 2002-2006.

eTable 2. Percentage reduction in mortality hazard between statin users and non-statin users, stratified according to prevalent coronary heart disease.

eFigure 1. Mortality rate by diabetes status, use of glucose lowering and statin medication.

eFigure 2. Mortality rate by statin use and tertiles of HbA1c.

eFigure 3. Cardiovascular disease (CVD) mortality rate and all cause mortality rate with adjustment for CVD risk factors as well as adjustment for education level and physical activity.

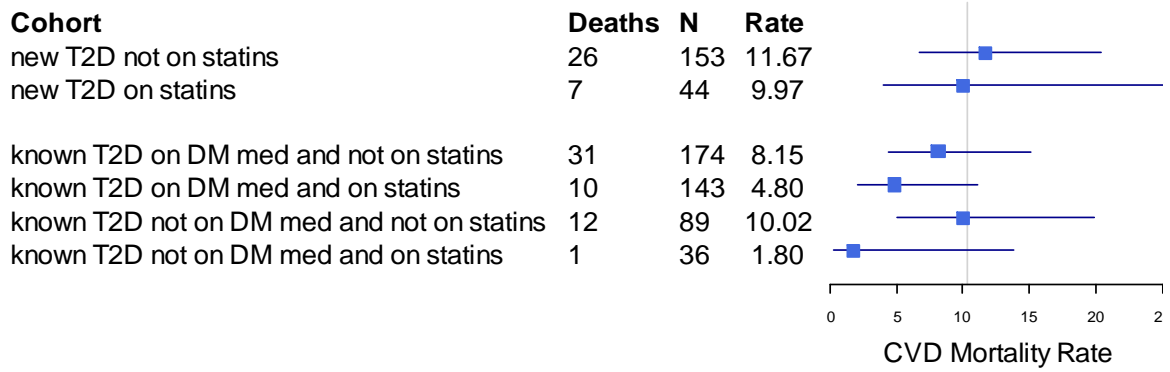
eTable 1. Statin medication (med) according to history of type 2 diabetes (T2D) and coronary heart disease (CHD). Not T2D are the non-diabetic individuals, T2D known are those with prevalent type 2 diabetes at baseline and T2D new were diagnosed at study entry. The AGES-Reykjavik study from 2002-2006.

Diabetes and CHD status	Men and women	Men and women	Men	Women
	n	% on statin med	% on statin med	% on statin med
Not T2D with prevalent CHD	647	75.8	76.0	75.6
Not T2D without CHD	3866	11.1	9.9	11.7
All T2D	639	35.1	35.8	33.8
T2D known with prevalent CHD	107	69.2	69.7	64.5
T2D known without CHD	335	31.6	27.8	35.5
T2D new with prevalent CHD	42	61.9	67.6	37.5
T2D new without CHD	155	11.6	6.3	17.1

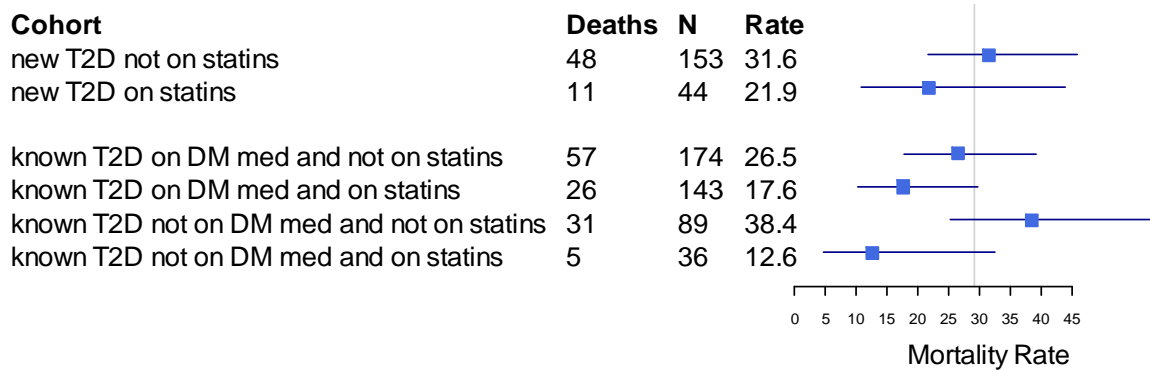
eTable 2. Percentage reduction in mortality hazard between statin users and non-statin users, stratified according to prevalent coronary heart disease (CHD). Reduction in both cardiovascular disease (CVD) mortality rate and all-cause mortality rates in persons with and without type 2 diabetes (T2D) is shown. The AGES-Reykjavik study from 2002-2006.

	Persons with T2D		Persons without T2D	
	% reduced hazard	95% CI in %	% reduced hazard	95% CI in %
CVD mortality				
With CHD	54	(14 to 75)	24	(-19 to 51)
Without CHD	48	(1 to 73)	14	(-32 to 44)
With and without CHD	50	(8 to 72)	16	(-24 to 43)
All-cause mortality				
With CHD	55	(31 to 71)	34	(10 to 52)
Without CHD	52	(26 to 69)	30	(8 to 46)
With and without CHD	53	(29 to 68)	30	(11 to 46)

a)

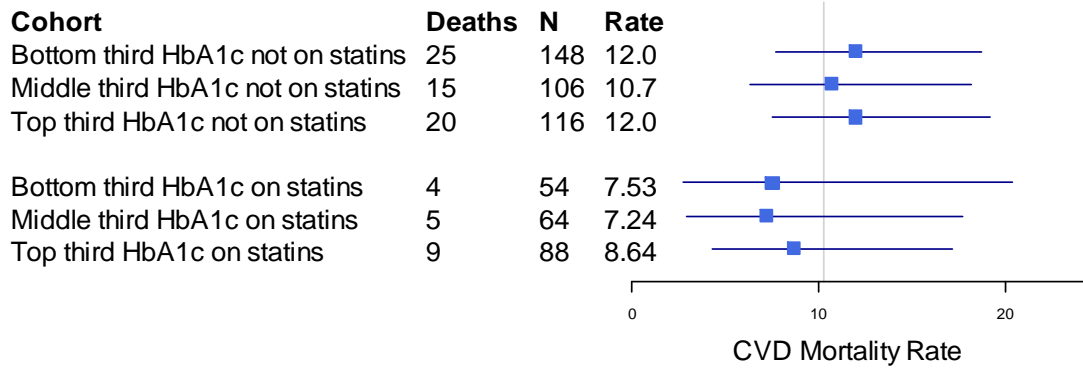


b)

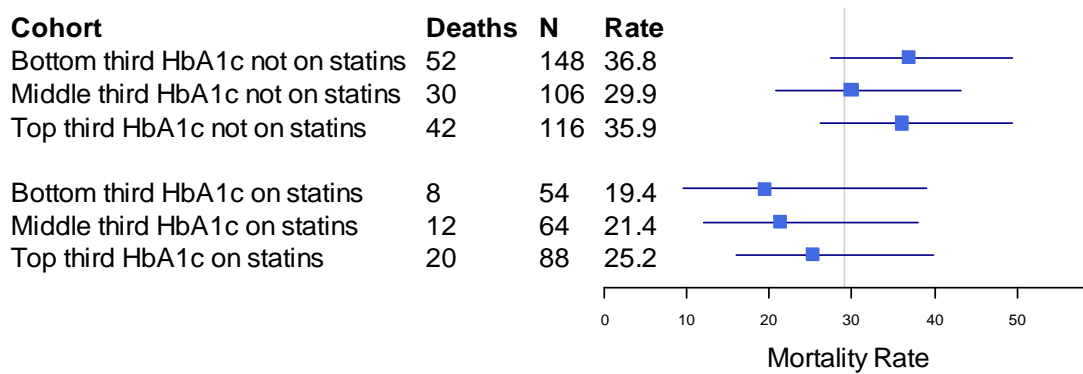


eFigure 1. Mortality rate by diabetes status; the use of glucose lowering (DM med) and statin medication. a) Cardiovascular disease (CVD) mortality rate and b) all-cause mortality rate per 1000 person years for subjects with diabetes diagnosed at study entry (new T2D) and prevalent type 2 diabetes (known T2D). Rates have been adjusted to age 75, sex and the mean levels of cardiovascular risk factors (cholesterol, HDL-cholesterol, systolic blood pressure, BMI, triglycerides, hypertensive medication and current smoking). Follow up was through 2009 (a median period of 5.3 years) for the AGES-Reykjavik study. The vertical lines represent the mortality rate of all T2D (N=639), see Figure 1 a) and b).

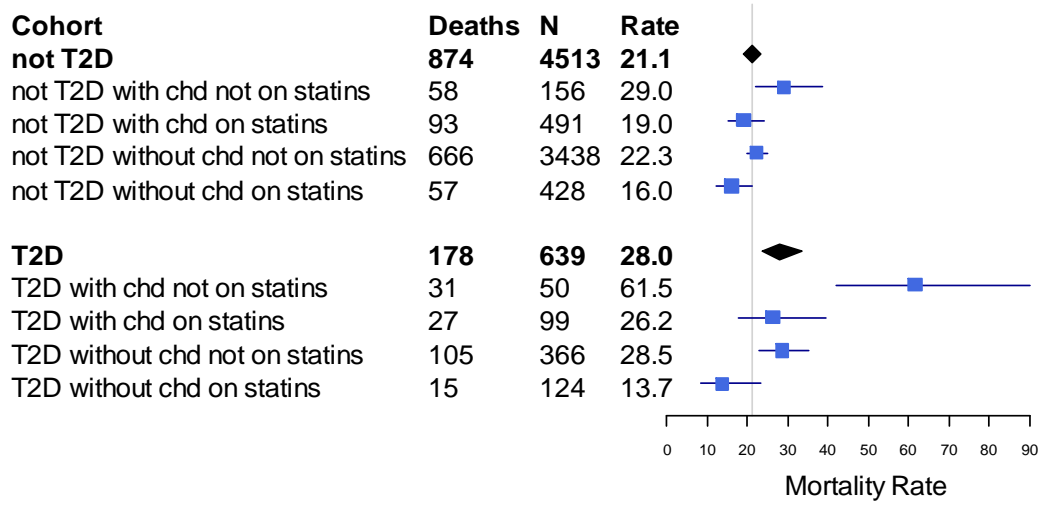
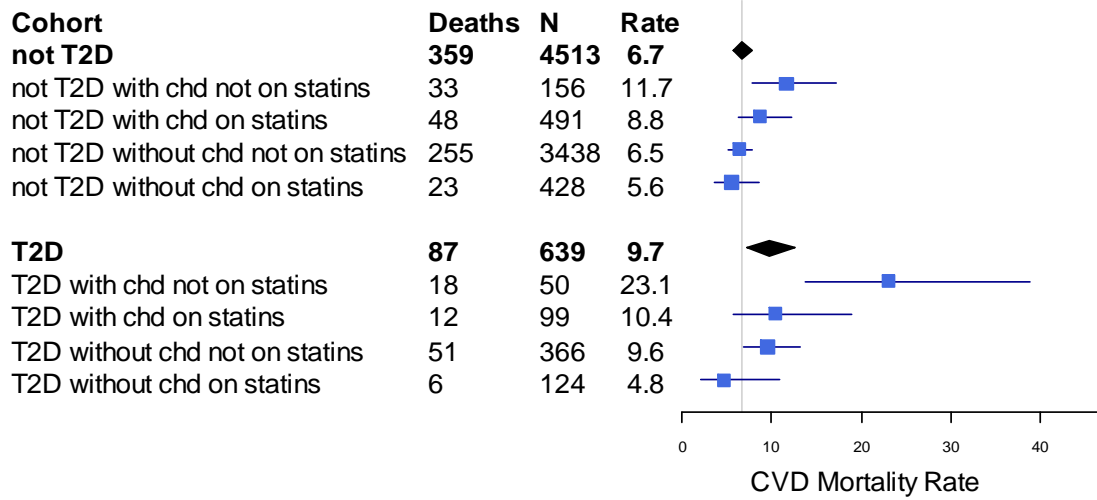
a)



b)



eFigure 2. Mortality rate by statin use and tertiles of HbA1c. a) Cardiovascular disease (CVD) mortality rate and b) all cause mortality rate per 1000 person years for subjects with type 2 diabetes (T2D) according to statin use and tertiles of HbA1c. Rates have been adjusted to age 75, sex and the mean levels of cardiovascular risk factors (cholesterol, HDL-cholesterol, systolic blood pressure, BMI, triglycerides, hypertensive medication and current smoking). Follow up was through 2009 (a median period of 5.3 years) for the AGES-Reykjavik study. The vertical lines represent the mortality rate of all T2D (N=639), see Figure 1 a) and b).



eFigure 3. a) Cardiovascular disease (CVD) mortality rate and b) all cause mortality rate per 1000 person years for subjects without type 2 diabetes (not T2D) and with type 2 diabetes (T2D) according to statin use and prevalent coronary heart disease (chd). Rates have been adjusted to age 75, sex and the mean levels of cardiovascular risk factors (cholesterol, HDL-cholesterol, systolic blood pressure, BMI, triglycerides, hypertensive medication, current smoking) as well as education level and physical activity. Follow up was through 2009 (a median period of 5.3 years) for the AGES-Reykjavik study. The vertical lines represent the mortality rate of all without diabetes (not T2D, N=4513)