Statin Use Over 65 Years of Age and All-Cause Mortality: A 10-Year Follow-Up of 19 518 People

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OBJECTIVES: As life expectancy continues to rise, the burden of cardiovascular disease among older people is expected to increase, making cardiovascular prevention in older people an issue of growing interest and public health importance. We aimed to explore the long-term effects of adherence to statins on mortality and cardiovascular morbidity among older adults.

DESIGN: A historical population-based cohort study using routinely collected data.

SETTING: Clalit Health Services Northern District.

PARTICIPANTS: We followed members of Clalit Health Services aged 65 years or older who were eligible for primary cardiovascular prevention for a period of 10 years.

MEASUREMENTS: We fitted Cox regression models to assess the association between the adherence to statin therapy and all-cause mortality and cardiovascular morbidity, adjusting for cardiovascular risk factors and associated morbidity as time-updated variables.

RESULTS: The analysis included 19 518 older adults followed during 10 years (median = 9.7 y). All-cause mortality rates were 34% lower among those who had adhered to statin treatment, compared with those who had not (hazard ratio [HR] = .66; 95% confidence interval [CI] = .56-.79). Adherence to statins was also associated with fewer atherosclerotic cardiovascular disease events (HR = .80; 95% CI = .71-.81). The benefit of statin use did not diminish among beyond age 75 and was evident for both women and men.

CONCLUSION: Adherence to statins may be associated with reduced mortality and cardiovascular morbidity among older adults, regardless of age and sex. **J Am Geriatr Soc 67:2038-2044, 2019.**

Key words: hypercholesterolemia; older adults; all-cause mortality; cardiovascular events; primary prevention

Atherosclerotic cardiovascular diseases (ASCVDs) are the leading cause of disability and mortality worldwide. Cardiovascular risk increases with age, and more than 60% of attributed deaths occur after 75 years of age.[1] As life expectancy continues to rise, the burden of cardiovascular diseases among older people is expected to increase,[2] making cardiovascular prevention in older people an issue of growing interest and public health importance.[3] Cholesterol-lowering medications, a cornerstone of primary and secondary cardiovascular prevention, are endorsed by all major international guidelines.[4-7] Statins, the most commonly used of these medications, are safe and effective in lowering low-density lipoprotein cholesterol (LDL-C) levels, preventing cardiovascular events, and reducing mortality.[8,9] Some evidence supports the use of statins for secondary prevention among frail older patients,[10] as well as for the tolerability of statins among the oldest old.[11] However, people beyond the age of 75 are not routinely represented in randomized controlled trials, and there is little evidence to support the efficacy of statins in primary prevention in that age group.[8,12]

In real life, physicians frequently prescribe statins to older patients despite the paucity of evidence, and the use of statins among this age group is increasing.[13-15] One-third of Danish adults aged 56 to 85 years use statins,[15] and in the United States more than 60% of older people with hyperlipidemia take statins for primary prevention.[14] Adherence to statin treatment is consistently associated with lower levels of LDL-C and with fewer hospitalizations and ASCVD events.[16] However, less than 50% of those older than age 65 adhere to statin therapy during the first year, and

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adherence decreases with older age and in the following years.[17] Importantly, adherence to preventive therapy may also be a marker for engaging in other healthy behaviors, such as better diet or less smoking ("healthy adherer effect").[18]

Recent studies attempted to assess the efficacy of statins for primary prevention among older people with conflicting results and with various methodological limitations. The external validity of post hoc secondary analyses of trial data is limited[8,19,20]; observational analyses relied on self-report[21]; included only new users of statins (and would, therefore, be less applicable to the growing population of older prevalent statin users)[22,23]; or did not account for actual statin use or adherence beyond the baseline accrual period.[21,23] An ongoing randomized control trial, Statin Therapy for Reducing Events in the Elderly (STAREE) was launched in 2015, but results have not been published to date.[24]

Current guidelines reflect this knowledge gap and do not make clear recommendations regarding older people,[4-7] highlighting a growing need for data to support treatment decisions among older people. We aimed to explore the long-term effect of real-life statin use for primary prevention and adherence on mortality and cardiac morbidity among older people using data from a large not-for-profit health organization.

METHODS

Setting and Data Sources

Israel operates a national health insurance scheme; residents may elect their healthcare provider and are assigned to a personal family physician.[25] In the northern region of Israel, more than 70% of the residents are members of Clalit Health Service (CHS). CHS operates an integrated electronic medical and administrative file, based on the *International Classification of Diseases*, *9th Revision*. CHS also maintains a central register for chronic conditions. Diagnoses are based on reports of family physicians, community-based specialists, and hospital discharge letters. Diagnoses are cross-validated against medication possession records and laboratory data through an automated disease-specific process.[26-29] Members may fill their prescriptions at CHS-affiliated pharmacies at subsidized prices, facilitating the near-complete recording of medication possession.[30-33] Direct linkage to the Israel Ministry of Internal Affairs, using a unique national personal identification number, updates eligibility for exemption from copayments due to financial hardship or chronic disability and dates of death.

Study Population and Follow-Up

We included all members of the Northern District of CHS who were aged 65 years or older on January 1, 2004, and were eligible for primary cardiovascular prevention (ie, those without a prior record of ischemic heart disease or stroke; Supplement S1). We used the data from the subsequent 2 years to ascertain baseline statin use and clinical characteristics. All participants entered the cohort on January 1, 2007, and they were followed up until the first of (1) date of death (any cause) or (2) end of the study period (December 31, 2016).

Baseline Characteristics

Baseline sociodemographic data included the date of birth, sex, ethnicity (Jewish or Arab), marital status, and eligibility for exemption from social security copayments. We included clinical information based on the date of inclusion in the CHS chronic disease register for the following conditions: smoking, obesity, hypertension, hyperlipidemia, diabetes, ischemic heart disease, cerebrovascular disease, peripheral vascular disease, carotid artery disease, valvular heart disease, chronic renal failure, and malignancy (Supplement S1). We considered diagnoses dates before cohort entry as baseline information and modeled subsequent entries (ie, after cohort entry) as time-updated variables.

Statin Use

We retrieved the date, dose, and number of pills dispensed for all filled statin prescriptions between January 1, 2004, and December 31, 2016, using the World Health Organization Anatomical and Therapeutical Codes (Atorvastatin C10AA05, pravastatin C10AA03, rosuvastatin C10AA07, and simvastatin C10AA01). We considered those who had claimed any statin prescription during the baseline period (2004-2006) as "statin users." We expressed all statin prescriptions in terms of daily defined doses (DDDs) (1 DDD = atorvastatin 20 mg = pravastatin 30 mg = rosuvastatin 10 mg = simvastatin 30 mg).[34] We subsequently calculated the proportion of days covered (PDC) by statins for each participant by dividing the total amount of pills claimed by the total number of follow-up days (starting at cohort entry).[35] Because we used 1 DDD as the reference point, it was possible to achieve more than 100% adherence if participants were on higher intensity regimens (eg, a daily dose of 40 mg atorvastatin is equivalent to 2 DDDs). To capture changing patterns of statin use, we calculated participants' PDC for each calendar year separately (ie, the proportion of days covered by a statin between cohort entry and the last day of each calendar year, or the date of death if the participant had died during that specific year). Those who had claimed enough DDDs to cover 80% or more of their cumulative follow-up days at the end of each calendar year were considered adherent with statin therapy.[36,37] We modeled the cumulative adherence as a time-updated variable.

Study Outcomes

The primary outcome of the study was all-cause mortality. The secondary outcome was a "hard" ASCVD event, defined as the first occurrence of a fatal or nonfatal myocardial infarction or stroke.[6] The specific cause of death is not registered in the CHS database, but cardiovascular disease and malignancies are the two leading causes of death among older people in Israel, accounting for approximately one-half of all deaths, higher than any other specific cause by order of magnitude.[38] Therefore, to approximate cardiovascular-specific mortality we excluded from the analysis patients with any malignancy (censored on their date of malignancy diagnosis), an approach previously used to explore ASCVD events in Israel.[39,40]

Statistical Analysis

We presented the baseline characteristics by age group and by statin use at cohort entry. To assess the association

between statin use and mortality and ASCVD, we fitted Cox regression models. We first considered potential covariates for inclusion in the regression models based on a literature review. We then applied a backward deletion change-in-estimate method for final model selection (simultaneously addressing multicollinearity and bias based on the calculated reduction of mean squared error of effect estimates).[41] First, we fitted a crude model, adjusting for age (using current age as a time scale) and sex. Subsequently, we fitted a minimally adjusted model, additionally adjusted for calendar period (2007-2011 vs 2012-2016), ethnicity, eligibility for social security waiver, and marital status. Finally, we fitted a fully adjusted model: also adjusted for time-updated smoking status, obesity, hypertension, hyperlipidemia, diabetes, cerebrovascular accidents, ischemic heart disease, carotid artery disease, peripheral vascular disease, congestive heart failure, cardiomyopathy, valvulopathy, chronic renal failure, and malignancy. To assess for interactions, we conducted stratified analyses by age and sex.

We conducted several sensitivity analyses to evaluate the robustness of some of our assumptions: (1) To explore potential bias by defining adherence as PDC of 80% or higher, we repeated the analysis, categorizing the PDC into narrower use bands (<20%, 20%-49%, 50%-79%, 80%-99%, 100%-119%, 120%-149%, and ≥150%); (2) we excluded from the analysis patients with diabetes (ie, diabetes as a "cardiovascular disease equivalent"); (3) we excluded from the analysis patients with renal failure, as defined in the CHD chronic disease register; (4) we defined adherence by the absolute number of pills dispensed (regardless of strength or dose) divided by follow-up days number of pills instead of DDDs; and (5) we repeated the analysis including only those who were statin users at baseline.

All *P* values reported are based on likelihood-ratio tests. The 95% confidence intervals were reported where appropriate. Statistical analysis was performed using Stata v.15.0 IC (StataCorp LP, College Station, TX). Ethical approval was obtained from the CHS institutional ethics review board (0058-16COM).

RESULTS

There were 37 230 members aged 65 years or older in the northern district of CHS on January 1, 2004. After excluding those with preexisting ASCVD and those who had died before cohort entry (January 1, 2007), 19 518 older CHS members remained eligible for primary prevention and were included in our analyses (Figure 1). At baseline, 5270 (27%) of the cohort members were statin users. Statin users had lower LDL-C levels compared with nonusers: mean = 113 (standard deviation [SD] ±32) mg/dl and 120 (SD ±33) mg/dl, respectively; $P < .0001$. Statin users were less likely to have a waiver from social security payments and more likely than nonusers to have cardiovascular risk factors, regardless of their age. Smoking, obesity, and diabetes were more common among those younger than 75 years; diagnoses of hypertension and hyperlipidemia were slightly more common in those older than 75 years (Table 1).

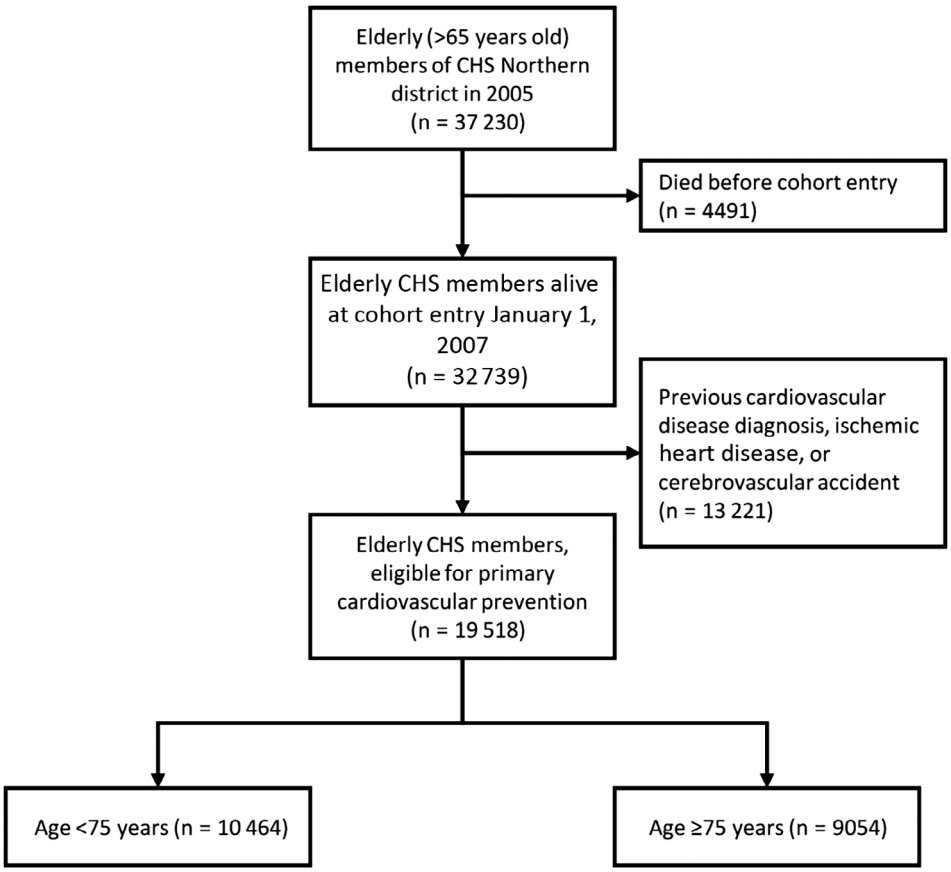

Figure 1. Study population.

Table 1. Baseline Characteristics by Age Group at Cohort Entry

		<75 y of age		>75 y of age	
	All ages N = 19 518	Statin users N = 2925	Nonusers N = 7539	Statin users N = 2345	Nonusers N = 6709
Age, y, median (IQR)	74.00 (70.2-79.7)	70.93 (69.0-72.7)	70.45 (69.0-72.3)	79.84 (77.0-83.4)	80.31 (77.0-84.0)
Age, y					
<75	10 464 (53.6)	2925 (100.0)	7539 (100.0)		
75-84	7272 (37.3)			1962 (83.7)	5310 (79.2)
≥85	1782 (9.1)			383 (16.3)	1399 (20.9)
Sex, male	7373 (37.8)	1068 (36.5)	3085 (40.9)	722 (30.8)	2498 (37.2)
Ethnicity, Arabs	4315 (22.1)	1099 (37.6)	1414 (18.8)	623 (26.6)	1179 (17.6)
Waiver from social security payments	8678 (44.5)	984 (33.6)	3712 (49.2)	706 (30.1)	3276 (48.8)
Married	6120 (31.4)	1274 (43.6)	3207 (42.5)	425 (18.1)	1214 (18.1)
Smoking[a]	3154 (16.2)	622 (21.3)	1379 (18.3)	328 (14.0)	825 (12.3)
Obesity[a]	3121 (60.0)	610 (20.9)	1307 (17.3)	355 (15.1)	849 (12.7)
Hypertension[a]	10,473 (53.7)	1669 (57.1)	3594 (47.7)	1475 (62.9)	3735 (55.7)
Hyperlipidemia[a]	8724 (44.7)	2253 (77.0)	2846 (37.8)	1608 (68.6)	2017 (30.1)
Diabetes mellitus[a]	4637 (23.7)	1103 (37.7)	1467 (19.5)	727 (31.0)	1340 (20.0)
Peripheral vascular disease[a]	606 (3.1)	98 (3.4)	204 (2.7)	90 (3.8)	214 (4.0)
Carotid artery disease[a]	212 (1.1)	29 (1.0)	63 (.8)	43 (1.8)	77 (1.2)
Congestive heart failure [a]	519 (2.7)	41 (1.4)	102 (1.4)	87 (3.7)	289 (4.3)
Cardiomyopathy[a]	125 (.6)	12 (.4)	58 (.8)	21 (.9)	34 (.5)
Valvular heart disease[a]	440 (2.3)	58 (2.0)	126 (1.7)	81 (3.5)	175 (2.6)
Chronic renal failure[a]	855 (4.4)	119 (4.1)	216 (2.8)	138 (5.9)	382 (5.7)
Malignancy[a]	2319 (11.9)	312 (10. 7)	827 (11.0)	313 (13.4)	867 (12.9)
LDL[b] in 2004, or closest value, mg/dl					
Low, ≤100	6075 (31.1)	1191 (40.7)	2099 (27.8)	894 (38.1)	1891 (29.0)
Intermediate, 101-130	6790 (34.8)	959 (32.8)	2668 (35.4)	802 (34.2)	2361 (36.0)
Borderline high, 131-160	4410 (22.6)	496 (17.0)	1865 (24.7)	428 (18.3)	1621 (24.2)
High, 161-190	1474 (7.6)	203 (6.9)	587 (7.8)	159 (6.8)	525 (7.8)
Very high, >190	424 (2.2)	74 (2.5)	164 (2.2)	53 (2.3)	133 (2.0)
Missing	345 (1.8)	2 (.1)	156 (2.1)	9 (.4)	178 (2.7)

Abbreviations: CHS, Clalit Health Services; IQR, interquartile range; LDL, low-density lipoprotein.

All values are N (%), unless specifically stated otherwise.

[a]Chronic diagnoses in the CHS chronic disease register before January 1, 2007.

[b]Values are given for the last laboratory test performed in 2004 (if performed) or the closest one performed afterward.

Cohort participants contributed 141 400 person-years for analysis: median = 9.7; interquartile range = 4.4-10.0 years. One-quarter of statin users younger than 75 years and 13% of those older than 75 years fully adhered to statin therapy throughout the follow-up (ie, had claimed enough doses of a statin to cover ≥80% of their follow-up). Adherence rates were somewhat higher when calculated by summing the absolute number of pills claimed, regardless of their dose or strength (43% of those younger than 75 years and 29% of those older had adhered to therapy). Over the 10 years of follow-up, 5151 (26%) of the participants had died, and 37% had an ASCVD (fatal or nonfatal) event. Supplementary Table S1 shows age-group-specific data on follow-up, statin use, and crude mortality and ASCVD rates among statin users and nonusers.

We explored the crude and the adjusted association between adherence to statins and mortality and ASCVD (Figure 2, Supplementary Table S2) After adjusting to age, sex, sociodemographic characteristics, time-updated cardiovascular risk, and time-updated cardiovascular morbidity, adherence to statins was associated with lower all-cause mortality (hazard ratio [HR] = .66; 95% confidence interval [CI] = .56-.79; $P < .0001$) and with lower ASCVD rates (HR = .80; 95% CI = .71-.90; $P < .0001$). The associations remained robust in stratified analyses regardless of age group or sex. The association between statin adherence and reduced all-cause mortality was stronger among those older than 75 years compared with those younger (HR = .56; 95% CI = .44-.71 vs HR = .80; 95% CI = .64-1.00; P[interaction] = .046). Similarly, the association between adherence to statins and reduced ASCVD rates was also stronger among those older than 75 years (P[interaction] = .012). There was no statistical evidence for a differential effect of sex on the association between statin adherence and mortality or ASCVD (P[interaction] = .558 for mortality, and P[interaction] = .927 for ASCVD) (Supplementary Table S2).

Adherence to statins remained associated with lower rates of all-cause mortality when we defined adherence in narrower bands of statin use (P[trend] < .0001 with increased PDC), as well as when we used the pooled number of pills instead of DDDs to define cumulative adherence.

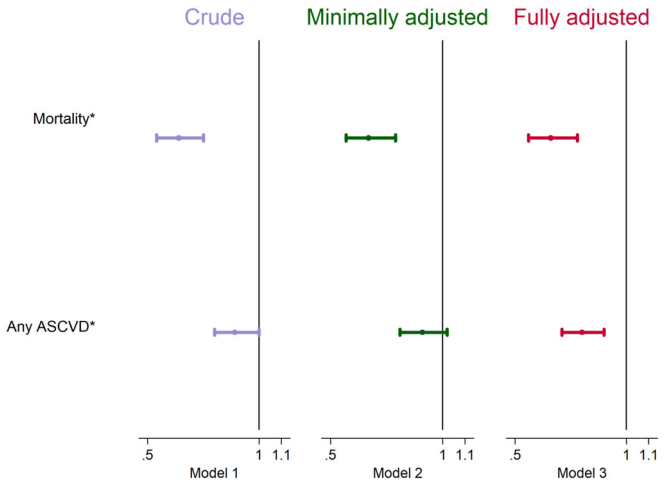

Figure 2. Association between statin adherence*, all-cause mortality, and atherosclerotic cardiovascular disease (ASCVD)**.

Hazard ratios were estimated from a Cox regression model with current age as the underlying time scale with 95% confidence intervals in brackets. *P* values are <.0001 and derived from likelihood-ratio tests unless specifically specified otherwise (a- *P* = .082).

*Adherence was categorized as proportion of days covered (PDC) more than 80%. PDC was calculated for each participant by dividing the total amount of medication claimed from the pharmacy (expressed in multiples of the World Health Organization daily defined doses) by the total number of follow-up days. Cumulative PDC was calculated for each calendar year separately and modeled as a time-updated variable.

**ASCVD was defined as the first occurrence of ischemic heart disease or stroke (captured in the Clalit Health Services [CHS] chronic disease register) or all-cause mortality, after excluding patients who had a registered malignancy diagnosis (censured on the date of diagnosis). Because malignancy and cardiovascular disease are the leading causes of death among older people, this provides an approximation of cardiovascular mortality.

Model 1: Crude; adjusted for age (as the underlying time scale) and sex.

Model 2: Minimally adjusted; additionally adjusted for calendar period (2007-2011 vs 2012-2016), ethnicity, eligibility for social security waiver, and marital status.

Model 3: Fully adjusted; additionally adjusted for smoking status, obesity, hypertension, hyperlipidemia, diabetes, cerebrovascular accidents, ischemic heart disease, carotid artery disease, peripheral vascular disease, congestive heart failure, cardiomyopathy, valvulopathy, chronic renal failure, and malignancy.

All additional diagnoses in this model were obtained from the CHS chronic disease register, and they were modeled as time-updated variables.

The findings remained robust when we excluded patients with diabetes and renal failure from the analyses. Finally, the results remained similar when the analysis was limited to those who had used statins at baseline (Supplementary Tables S3-S7).

DISCUSSION

Summary

We followed a population-based cohort of 19 518 older adults without preexisting cardiovascular disease for a median of 9.7 years. All-cause mortality rates were 34% lower among those who had adhered to statin treatment compared with those who had not. Adherence to statins was also associated with fewer ASCVD events. The benefit associated with statin adherence did not diminish beyond age 75 and was evident regardless of sex. The findings remained robust through various predefined sensitivity analyses.

Comparisons with the Existing Literature

Prospective evidence supporting the efficacy of statins for primary prevention among older adults is scarce[3,8,42]; recent observational studies attempted to address this gap with conflicting results. In a cohort of 1130 American male physicians who used statins, there were fewer deaths (HR = .82) and cardiovascular events (HR = .86) over a median follow-up of 7.1 years compared with a matched cohort of nonusers.[21] There was no evidence for benefit among those older than 76 years, but this conclusion was based on few participants and did not reach statistical significance. This study was based on self-reports of a specific patient population, implying limited internal and external validity. In another study of routinely collected data from Spain, the authors followed 7500 new users of statins (excluding 39 000 current statin users) and concluded that statins were only beneficial for primary prevention among older patients with diabetes.[23] Adherence to statins decreases substantially with time and age,[17] but the authors of both these studies were not able to account for statin use beyond the baseline that likely biased their results toward the null. Finally, a French population-based study matched 3700 older new users of statins with nonusers, excluding five times as many prevalent statin users. Adherence to statins was modestly associated (HR = .93) with a reduced composite end point of all-cause mortality or an acute coronary syndrome among a subgroup of those with a modifiable cardiovascular risk factor, but the authors could not fully account for risk factors such as smoking, obesity, and hypertension.[22] Both the Spanish and French cohorts included only new statin users, that is, those whose physicians deemed fit for a new treatment at an advanced age. Their results may therefore inform decisions on treatment initiation but are probably less applicable to the real-life setting where the continuation of statins in considered. The overall adherence to statins of cohort participants was low (28% among those <75 y and 25% among those >75 y) but consistent with previous observational studies.[17]

Strengths and Limitations

The strengths of our study include its considerable sample size and the comprehensiveness of the available data. The CHS chronic disease register is continuously updated, independent of any study outcomes,[26] and ongoing organizational measures are in place to assure high-quality standardized care.[43] We were therefore able to account for the relevant comorbidities and risk factors in an unbiased, time-updated manner. We used medication claims, a robust proxy measure for actual use, to quantify the changing patterns of statin adherence. We may have slightly overestimated actual use, but it is unlikely that patients consistently purchased medications without taking them over the entire 10-year period. Our main analysis focused on adherence as a dichotomous variable (ie,

>80% PDC), but secondary analyses were also consistent with a dose-response association between level of statin adherence mortality, providing further support for a causal association (Supplementary Tables S4 and S5).

We studied prevalent statin users, reflecting an increasingly common clinical scenario; this approach is necessary and valid when it is not feasible to follow up from treatment initiation.[44] Most statin users fail to adhere to their treatment, and usage patterns vary considerably over time (ie, patients may alternate between periods of statin use and cessation).[17] To account for changing treatment patterns, we modeled statin use as the cumulative, annually updated, proportion of standard doses claimed (DDDs). Our results did not differ substantially through several sensitivity analyses, providing reassuring evidence for their robustness.

People who adhere to preventive treatments generally tend to follow other healthy lifestyles and screening recommendations. This "healthy user/adherer" effect may result in overestimation of the effect of statins on mortality if other health behaviors cannot be accounted for.[18] We were also not able to adjust directly for frailty or physical activity that may have further confounded our results. These limitations, however, were mitigated by the availability of rich prospectively collected data. We adjusted for multiple comorbidities that may serve as a proxy for general frailty[45] and for socioeconomic status that is firmly linked with health behaviors.[46] Furthermore, the results remained robust after adjusting for available lifestyle variables (ie, obesity and smoking). Although residual confounding may remain, these results provide evidence against substantial healthy user bias.

We adjusted for clinical ASCVD components (ie, peripheral artery disease and carotid artery disease) rather than exclude those with a preexisting diagnosis. Our analysis therefore included some individuals not strictly eligible for "primary prevention." Finally, the cause of death is not captured in the CHS register. We therefore relied on a proxy measure to assess the cardiovascular-specific mortality component of ASCVD events (ie, noncancer deaths). However, the CHS registers are independently and prospectively updated, and any misclassification of deaths was therefore not likely to be associated systematically with statin use (ie, nondifferential bias, likely to have biased our results toward the null but not to change the direction of the effect).

Interpretation and Clinical Implications

Increasing numbers of older patients take statins, but the evidence base for informed decisions lags behind. Our study provides reassuring evidence in favor of statin continuation among women and men after the age of 75 years. Prolongation of life and prevention of cardiovascular events are meaningful and intuitive outcomes but may not be the sole consideration for making an informed decision at advanced ages. We could not address important patient-oriented outcomes such as quality of life and adverse events, and our results should therefore be interpreted with caution. Nevertheless, studies like ours provide much needed evidence, assisting clinicians in engaging their patients in a meaningful shared-decision process.

In conclusion, we found that adherence to statins was associated with reduced all-cause mortality and fewer ASCVD events among a large population-based cohort of older adults, supporting the continuation of statin use among older people. These findings should be duplicated in different settings and highlight the need for a prospective interventional trial in an older population.

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Conflict of Interest: None declared.

Author Contributions: Sophia Eilat-Tsanani contributed to the conception and design of the study, the data acquisition, analysis, and interpretation. Elad Mor contributed to the conception of the study, to the interpretation of the results, and reviewed the manuscript. Yochai Schonmann contributed to the conception and design of the study, performed the statistical analyses, and contributed to the interpretation of the results. He drafted the manuscript together with Sophia Eilat-Tsanani.

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SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article.

Supplement S1: Appendix.

Supplementary Table S1. Summary of Follow-Up and Crude Outcomes.

Supplementary Table S2. Association Between Statin Adherence,* All-Cause Mortality, and Atherosclerotic Cardiovascular Disease (ASCVD)**.

Supplementary Table S3. Stratified Analyses. Association Between Statin Adherence, *All-Cause Mortality, and Atherosclerotic Cardiovascular Disease (ASCVD), **Stratified by Age and Sex.

Supplementary Table S4. Sensitivity Analyses – Association Between Statin Adherence* and All-Cause Mortality.

Supplementary Table S5. Primary and Secondary Analyses by Statin Use Categories.

Supplementary Table S6. Primary and Secondary Analyses, Statin Use Summarized in Number of Pills (Not DDDs).

Supplementary Table S7. Analyses Restricted to Prevalent Statin Users at Cohort Entry.