

The Effect of Statins on Incidence and Prognosis of Bladder Cancer: A Systematic Review and Meta-Analysis

Supplementary material

Supplementary Table S1. PICOS criteria for inclusion and exclusion of studies

Parameter	Inclusion Criteria	Exclusion Criteria
Population	All patients receiving statins (age >18 years)	Patients not receiving statins
Intervention	Administration of statins, alone or in conjunction with background treatment	Other interventions
Comparator	Placebo, controls, or any other intervention	Does not apply
Outcome	Effect on bladder cancer (incidence or prognosis)	Other outcomes or lack of data regarding effects of statins on bladder cancer.
Study Design	Randomized control trials, case-control, and cohort studies, published in English	Other study designs Published in any other language than English

Supplementary Table S2. Excluded studies with reasons

First Author	Year	Reason of Exclusion
Ford I [12]	2007	UBC data not reported separately.
Tseng CH [13]	2011	No data for statin use.
Atmaca [14]	2014	Does not meet study design inclusion criteria.
Ozgur BC [15]	2014	Does not meet study design inclusion criteria.
Fujimoto M [16]	2015	No data for UBC.
Berger SV [17]	2016	No data for UBC.
Hu YB [18]	2018	No data for UBC.
Roy S [19]	2018	Statin use not reported. Insufficient data for UBC patients.
Giugliano RP [20]	2020	Comparator does not meet criteria.
Bedimo RJ [21]	2021	No data for UBC.
Okada S [22]	2021	No data for UBC.
Marrone MT [23]	2021	UBC data not reported separately.
Yeh JJ [24]	2021	UBC and kidney cancer data reported jointly. No distinct data for UBC reported.
Ahn J [25]	2022	UBC and kidney cancer data reported jointly. No distinct data for UBC reported.
Stepien K [26]	2022	No data for UBC.

First Author	Year	Study Design	Statin	Statin group (n)	Bladder cancer in statin group (n)	Control group (n)	Bladder cancer in control group (n)
Randomized Controlled Trials							
Clearfield M [27]	2001	RCT	Lovastatin vs Placebo	499	1	498	0
Strandberg TE[28]	2004	RCT	Simvastatin vs Placebo	2221	19	2223	17
Heart Protection Study Collaborative Group [29]	2005	RCT	Simvastatin vs Placebo	10269	74	10267	90
Rossebø AB [30]	2008	RCT	Simvastatin-Ezetimibe vs Placebo	943	7	929	7
Cohort Studies							
Sato S [36]	2006	Cohort	Pravastatin vs No statin	179	3	84	0
Farwell WR [37]	2008	Cohort	Any statin vs No statin	37248	326	25594	258
Karp I [39]	2008	Cohort	Any statin [†] vs No statin	11338	22	18738	73
Haukka J [40]	2010	Cohort	Any statin vs No statin	472481	944	472781	845
Jacobs EJ [41]	2011	Cohort	Any statin vs No statin	23563§	405§	104305	633
Halámková Jana [42]	2022	Cohort	Any statin vs No statin	52	6	304	11
List of studies included in the meta-analysis with extracted population data.							
† Statins include atorvastatin, fluvastatin, lovastatin, simvastatin.							
§ Population used included only current users.							