

TEV E PATOLOGIE CARDIOVASCOLARI

STATIN THERAPY FOR THE PREVENTION OF VENOUS THROMBOEMBOLISM IN CANCER PATIENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS.

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Background and Aims: Venous thromboembolism (VTE) in cancer patients might produce severe clinical consequences such as anticancer therapies delay, hospitalization, and increased risk of both thrombotic recurrence and bleeding during anticoagulant therapy; moreover, in these patients, VTE is the second leading cause of death after cancer itself, reducing overall survival rates. If previous studies already suggested a potential role of statins in preventing VTE in the general population, there is still paucity of evidence concerning statins' effect in the prevention of cancer-associated thrombosis. This systematic review and meta-analysis aims at filling this gap, by evaluating statins' role in VTE prevention in cancer patients.

Methods: We systematically searched PubMed, Embase and Cochrane Library from inception to May 2024, for randomized controlled trials (RCTs) and observational studies including patients treated with statins (compared to either

placebo or non-statin treatment), reporting on the incidence of VTE during follow-up. Information on study characteristics and incidence of VTE were extracted. Estimates were pooled using random-effects meta-analysis.

Results: We identified 111 potential studies, 12 were included in the analysis, 2 RCTs and 10 observational studies, for a total of 186.726 patients. Statins were associated with a 30% reduction of the risk of VTE (RR: 0.70; 95%CI: 0.50-0.87), compared to no statin treatment (**Fig. 1**). A significant heterogeneity was found among the included studies ($I^2 = 70$).

Conclusions: According to our preliminary results, treatment with statins in cancer patients seems to reduce the incidence of VTE events. High quality prospective studies are strongly needed in order to better establish statins' role in this subset of patients.

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