INPLASY

Risk of extracutaneous second primary cancer in patients with nonmelanoma skin cancer: a systematic review and meta-analysis

INPLASY2024110090

doi: 10.37766/inplasy2024.11.0090

Received: 20 November 2024

Published: 20 November 2024

Liu, RL.

Corresponding author:
Ruolin Liu

912270620@qq.com

Author Affiliation:
Chengdu Second People's Hospital.

ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - The review has not yet started.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2024110090

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 November 2024 and was last updated on 20 November 2024.

INTRODUCTION

Review question / Objective The risk of second primary cancers (SPCs) in patients with non-melanoma skin cancer (NMSC) remains underexplored in last decade. This study aims to assess the SPC risk in NMSC patients through a systematic review and meta-analysis.

Condition being studied The risk of second primary cancers (SPCs) in patients with non-melanoma skin cancer (NMSC) remains underexplored in last decade. This study aims to assess the SPC risk in NMSC patients through a systematic review and meta-analysis.

METHODS

Participant or population Patients with nonmelanoma skin cancer.

Intervention Second primary cancers in patients with non-melanoma skin cancer.

Comparator General population developing corresponding primary cancers.

Study designs to be included Population-based studies.

Eligibility criteria Studies were considered potentially relevant if they (1) reported the incidence of SPCs in NMSC survivors, (2) reported SIR (or population-based relative risks) and its 95% confidence interval (CI) were accessible, (3) were population-based study. Studies were excluded if they: (1) reported non-NMSC survivors, (2) not reported SIR (or population-based relative risks) and its 95% CI, (3) were cases, commentary or review.

Information sources Electronic databases.

Main outcome(s) Pooled SIR and 95%CI of site-specific second primary cancers in NMSC survivors.

Quality assessment / Risk of bias analysis We visually examined funnel plots and performed Begg and Egger's test for meta-analyses to detect publishing bias.

Strategy of data synthesis We used the random-effects model by DerSimonian and Laird to calculate all the pooled SIR and associated 95% confidential interval (CI) as effect measure for all results, considering the inherent heterogeneity among the included studies. The Q test was used to evaluate the heterogeneity of results in all investigations, and the I2 statistic was utilized for quantification. The P-value 50% was deemed significantly heterogeneous.

Subgroup analysis Subgroup analyses were conducted for each kind of SPC according to gender and specific type of NMSC.

Sensitivity analysis Sensitivity analysis was done by excluding each study from the meta-analysis.

Country(ies) involved China.

Keywords second primary cancer; nonmelanoma skin cancer; basal cell carcinoma; squamous cell carcinoma; merkel cell carcinoma.

Contributions of each author

Author 1 - Ruolin Liu.
Email: 912270620@qq.com