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Percutaneous locoregional therapies for the treatment of liver metastases from uveal melanoma: A systematic review

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ADMINISTRATIVE INFORMATION

Support - No financial support.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 February 2025 and was last updated on 22 February 2025.

INTRODUCTION

Review question / Objective The "PICo" items formed the basis of the research question and included the following information: P (patients with diagnosis of uveal melanoma and with evidence of liver metastases on cross-sectional imaging), I (minimally invasive treatment of liver metastases from uveal melanoma), C (comparison between different interventional radiology procedures), O (effectiveness outcomes, overall survival, adverse effects and adverse effects limiting effectiveness of treatment), S (retrospective study, clinical trial phase III, randomized controlled phase III trial, prospective pilot study, retrospective cohort analysis, multicentric randomized trial, phase II trial reports, other prospective studies).

Condition being studied Patients with diagnosis of liver metastases from uveal melanoma and treated with percutaneous locoregional therapies.

METHODS

Participant or population Adult patients (aged 18 or older) with a histologically confirmed diagnosis of uveal melanoma and with detection of hepatic metastases determined by liver-directed cross-sectional imaging examination.

Intervention Minimally-invasive liver-directed therapies were included: radioembolization (selective internal radiation therapy – SIRT / transarterial radioembolization - TARE), transcatheter arterial chemoembolization (TACE), transarterial immunoembolization (TAIE), percutaneous hepatic perfusion (PHP) and thermal therapies.

Comparator N.A.

Study designs to be included Non-randomized studies (case control studies and cohort studies), randomized, prospective and retrospective studies.

Eligibility criteria Only human studies, articles written in English and those where the entire content was accessible were included in the study. Case report, case series, narrative or systematic review, meta-analysis and guidelines were considered as not eligible and were excluded. Exclusion criteria were also: articles written in other language than English and those whose entire content could not be accessed; articles that were not compatible with the aims of our research due to the use of not specific MeSH and keywords and recurring articles from the same authors on the same procedure.

Information sources The literature search included PubMed, Embase, Google Scholar, Cochrane Library and Medline databases.

Main outcome(s) Study outcomes parameters evaluated were: overall survival (OS), progression-free survival (PFS), overall response rate (ORR), and safety.

Quality assessment / Risk of bias analysis The Newcastle-Ottawa scale was used to assess the quality and risk of bias of non-randomized studies (case control studies and cohort studies). The risk of bias for randomized studies was evaluated using the Cochrane scale.

Strategy of data synthesis Data were analyzed by reading titles, abstracts, and full-texts of the article selected based on the inclusion and exclusion criteria through scientific databases.

Subgroup analysis Patients underwent minimally invasive liver-directed therapies.

Sensitivity analysis Define model and objectives using Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA)" guidelines. Identify key inputs through medical subject headings (MeSH) and keywords. Cochrane methods.

Language restriction English.

Country(ies) involved Italy.

Keywords Eye (A01.456.505.420); Uvea (A09.371.894); Eye neoplasms (C04.588.364); Uveal neoplasms (C04.588.364.978); Melanoma (C04.557.465.625.650.510); Radiology, Interventional (H02.403.740.675); Chemoembolization, Therapeutic (E02.520.360.150, E02.926.500.150).

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