INPLASY PROTOCOL

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None declared.

Effect of OIP5-AS1 on clinicopathological characteristics and prognosis of cancer patients: a meta-analysis

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Review question / Objective: **According to recent studies, long non-coding RNA (lncRNAs) i.e., OPA-interacting protein 5 antisense RNA 1 (OIP5-AS1) has an important role in various carcinomas. However, its role in the cancer is contradictory. Therefore, we aimed to evaluate the link between OIP5-AS1 and cancer patients' clinicopathological characteristics and prognosis to better understand OIP5-AS1's role in cancer.**
Condition being studied: **Reported studies have revealed that long non-coding RNA (lncRNAs) are considerably involved in crucial physiological events in several carcinomas, it can inhibit or promote the occurrence and development of tumors by changing the sequence and spatial structure, modulating epigenetic, regulating the expression level and interacting with binding proteins. However, the mechanism of cancer regulation via lncRNAs was incompletely understood. Hence, clarifying the application value of lncRNAs in preclinical and clinical disease diagnosis and treatment was therefore the prime objective in the field of cancer research at the time.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 October 2022 and was last updated on 29 October 2022 (registration number INPLASY2022100118).

INTRODUCTION

Review question / Objective: **According to recent studies, long non-coding RNA (lncRNAs) i.e., OPA-interacting protein 5 antisense RNA 1 (OIP5-AS1) has an important role in various carcinomas. However, its role in the cancer is contradictory. Therefore, we aimed to evaluate the link between OIP5-AS1 and cancer patients' clinicopathological characteristics and prognosis to better understand OIP5-AS1's role in cancer.**

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METHODS

Search strategy: PUBMED, PMC, WEB OF SCIENCE, and other network databases were employed to perform a systematic search for collecting appropriate studies up to September 2022. The underlined keywords were utilized in variable combinations to each database according to specific retrieval requirements:("long noncoding RNA" OR "lncRNA" AND "OIP5-AS1" OR "opa-interacting protein 5 antisense transcript 1") AND ("cancer" OR "tumor" OR "neoplasm" OR "carcinoma") AND ("prognosis" OR "Prognostic" OR "survival" OR "outcome"). Furthermore, two of our authors independently evaluated reference lists of relevant literature to guaranteeaccuracy.

Participant or population: Participants received a pathological diagnosis of cancer and received reasonable and effective therapeutic measures will be included.

Intervention: All participants were separated into cohorts, based on their OIP5-AS1 levels, and survival analysis was completed on both cohorts.

Comparator: All participants were separated into cohorts, based on their OIP5-AS1 levels, and survival analysis was completed on both cohorts.

Study designs to be included: Case-control studies will be included.

Eligibility criteria: The only condition for included articles was that all of the following inclusion criteria were met: 1) Studied the patients with pathologically diagnosed cancer; 2) Studies with scientific design and implementation; 3) Examining OIP5-AS1 expression in cancer patients; 4) Grouping patients according to OIP5-AS1 expression level; 5) Case-control studies that investigated at OIP5-AS1's prognostic significance and had enough data to calculate hazard ratios (HRs) and 95% confidence intervals (CIs) for overall survival (OS). Short reviews, abstracts, reviews, conference papers, cell and animal articles, and bioinformatics analyses were also excluded.

Information sources: The two authors individually collected study information (author, year, study area, sample size, sample source, cut-off value, etc.) as well as general patient information (age, sex, cancer type, tumor volume, TNM stage, lymph node (LN) metastasis, histological grade, etc.) and resolved differences through discussion. To generate the final chart, a third author reviewed and addressed the remaining issues.

Main outcome(s): OIP5-AS1 was found a possible prognostic marker in cancer patients, and an elevated expression of OIP5-AS1 was linked with the large size of the tumor, lymph node metastases, and advanced TNM stage that led to the poor OS in patients suffering from cancer.

Quality assessment / Risk of bias analysis: The Newcastle-Ottawa Quality Assessment Scale (NOS) was utilized to determine the quality of the studies that were involved which showed consistency with the previously reported prognostic meta-analyses. Begg's and Egger's tests were utilized to determine publication bias.

Strategy of data synthesis: STATA 14.0 (Stata Corporation) software was utilized to conduct statistical evaluations. HRs and corresponding 95% CIs were pooled to estimate the link between OIP5-AS1 expression and the OS, similarly, odds ratios (ORs) and corresponding 95% CI were joined to evaluate the link between

OIP5-AS1 expression and the clinicopathological characteristics.

Subgroup analysis: **Subgroup analysis was performed by cancer type sample size and cutoff value.**

Sensitivity analysis: **To assess the study's stability, a sensitivity analysis was carried out by sequentially omitting individual study.**

Language restriction: **English.**

Country(ies) involved: **China.**

Keywords: **OIP5-AS1; cancer; prognosis; biomarker; meta-analysis.**

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