INPLASY PROTOCOL

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Conflicts of interest:
None declared.

The clinical prognostic value of lncRNA LINC01133 in Chinese patients with cancer: a meta-analysis

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Review question / Objective: **Despite improvement in expounding the molecular mechanism of long noncoding RNAs (lncRNAs) in malignant tumors, efforts to find clinically relevant prognosis-associated lncRNAs are necessary. However, the clinical prognostic significance of LINC01133 in tumors is not fully understood.**
Condition being studied: **Inclusion criteria were as follows: (1) the study included a rigorous pathological diagnosis of the associated tumor; (2) Prognostic characteristics and survival curve analysis of different expression levels of LINC01133 in patients with malignant tumor; (3) Complete information is provided concerning the association between different expression levels of LINC01133 and clinicopathological data of malignant tumors. (3) Studies that can visualize hazard risk (HR) and 95% confidence intervals (CI) or be able to evaluate relevant data through computation.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 June 2021 and was last updated on 23 June 2021 (registration number INPLASY202160087).

INTRODUCTION

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METHODS

Search strategy: The search strategies are as follows, including: (((clinicalpathological feature) OR (((prognosis) OR (overall survival)) OR (clinicalpathological characteristics))) OR (("Neoplasms/mortality"[Mesh] OR "Neoplasms/pathogenicity"[Mesh] OR "Neoplasms/pathology"[Mesh] OR "Neoplasms/statistics and numerical data"[Mesh] OR "Neoplasms/surgery"[Mesh] OR "Neoplasms/therapy"[Mesh]))) AND ((LINC01133) OR ((("long non-coding RNA LINC01133, human" [Supplementary Concept]))) AND "RNA, Long Noncoding"[Mesh])).

Participant or population: The study included a rigorous pathological diagnosis of the associated tumor (1229).

Intervention: Inapplicability.

Comparator: Inapplicability.

Study designs to be included: RCT.

Eligibility criteria: (1) the study included a rigorous pathological diagnosis of the associated tumor; (2) Prognostic characteristics and survival curve analysis of different expression levels of LINC01133 in patients with malignant tumor; (3) Complete information is provided concerning the association between different expression levels of LINC01133 and clinicopathological data of malignant tumors. (3) Studies that can visualize hazard risk (HR) and 95% confidence intervals (CI) or be able to evaluate relevant data through computation.

Information sources: Electronic databases.

Main outcome(s): The merged results of this meta-analysis suggest that LINC01133 overexpression may have a predictive effect on prognosis of digestive cancers, especially in colorectal cancer, indicating that LINC01133 is expected to be a target for digestive tumor prognostic monitoring and provide a new therapeutic strategy for biologically targeted therapy.

Quality assessment / Risk of bias analysis: The publication bias of the meta-analysis was evaluated using Begg's test. The results demonstrated that this meta-analysis did no exist significant publication bias for OS (P=0.858). In addition, sensitivity analysis was applied to test the stability of the pooled results.

Strategy of data synthesis: Hazard Ratio or odds ratio was combined using Review Manager (RevMan) 5.3 software. Publication bias and sensitivity analysis was estimated using Stata 14 software. Q test and I2 were performed to estimate the heterogeneity of results. When I250%), the pooled results selected the random-effects model for data analysis. LINC01133 was significantly correlated with poor prognosis when the results revealing HR>1. Conversely, high LINC01133 expression indicated a good prognosis when HR<1.

Subgroup analysis: We conducted a subgroup-analysis to analyze the merged effect on digestive tumors. The results indicated that LINC01133 have a certain effect of predicting good prognosis for digestive tumors (HR=0.5, 95%CI: 0.28–0.92, P=0.03), especially in colorectal cancer (HR=0.53, 95%CI: 0.35–0.80, P=0.003). In addition, elevated LINC01133 expression was obviously and negatively associated with TNM stage of tumors (III/IV vs. I/II, Odd Ratio (OR)=0.44, 95%CI=0.23–0.84, P=0.01), lymphatic metastasis (Positive vs. Negative, OR=0.30, 95%CI=0.19–0.48, P<0.001) and smoking status (Ever vs. Never, OR=0.44, 95%CI=0.25–0.79, P=0.006) in Chinese cancer patients.

Sensitivity analysis: **The sensitivity analysis illustrated that eliminating any single study did not significantly change the combined HR, suggesting the results were stable and reliable.**

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

Keywords: **Overall survival; Hazard Ratio; Prognosis; LINC01133; Cancer.**

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Author 2 - Jie Wang.
Author 3 - Hao Hua.
Author 4 - Qin Yang.