# INPLASY

## Prognostic and predictive role of circulating tumor DNA detection in patients with muscle invasive bladder cancer: a systematic review and meta-analysis

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## ADMINISTRATIVE INFORMATION

## INTRODUCTION

Review question / Objective The purpose of this study is to investigate the prognostic and predictive role of circulating tumor DNA in people with muscle invasive bladder cancer.

Condition being studied Prostate cancer.

## METHODS

Participant or population Patients with muscle invasive bladder cancer.

Intervention Positive ctDNA state.

Comparator Negative ctDNA state.

Study designs to be included Prospective and retrospective cohort studies.

Eligibility criteria The inclusion criteria: (I) patients are diagnosed with MIBC; (II) hazard ratios (HRs), corresponding 95% confidence intervals (CIs) for ctDNA state and survival outcomes are reported; (III) the language of publication is English. The exclusion criteria: (I) non-conforming article types, such as case reports, reviews and conference abstracts; (II) no results of interest in the article.

Information sources PubMed, Embase and the Cochrane Library.

Main outcome(s) OS, PFS, RFS.

Quality assessment / Risk of bias analysis Newcastle-Ottawa Quality Assessment Scale (NOS).

Strategy of data synthesis 95% CI of HR to evaluate the association between ctDNA state and survival outcomes using Review Manager software

(RevMan, version 5.4, CochraneCollaboration), Quantify heterogeneity levels using Cochran's Q-test and $I^2$-square index. 0%-25%, 25%-50%, and 50%-75% respectively represent low, moderate, and considerable heterogeneity.

**Subgroup analysis** Divide into two subgroups based on sample acquisition time, before and after treatment.

**Sensitivity analysis** Sensitivity analysis is conducted by one by one elimination method to detect the stability of meta-analysis using STATA (version 17; StataCorp LLC, University of Texas Station, USA).

**Country(ies) involved** China.

**Keywords** muscle invasive bladder cancer; circulating tumor DNA; prognosis; systematic review; meta-analysis.

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