

INPLASY PROTOCOL

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

Conflicts of interest:
None declared.

CT-based radiomics for prediction of lymph node metastasis in lung cancer A protocol for systematic review and meta-analysis

Zheng, X¹.

Review question / Objective: We will conduct this study by means of meta-analysis to better predict and judge the lymph node metastasis of lung cancer patients.

Condition being studied: The study will include only relevant randomized controlled trials of lymph node metastases in all lung cancer patients.

Information sources: We systematically searched electronic databases, including PubMed, Embase. Any eligible studies were searched by Cancer, Radiomics, Lung Cancer, Lymph Node Metastases, CT-Based Lung Cancer Screening, Lung Cancer Prediction. Reference lists of included studies were also manually searched to identify any relevant articles. Both English and Chinese Articles are considered eligible.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 March 2022 and was last updated on 30 March 2022 (registration number INPLASY202230167).

INTRODUCTION

Review question / Objective: We will conduct this study by means of meta-analysis to better predict and judge the

lymph node metastasis of lung cancer patients.

Condition being studied: The study will include only relevant randomized

controlled trials of lymph node metastases in all lung cancer patients.

METHODS

Participant or population: The patients in this study should have lung cancer with lymph node metastases.

Intervention: This study compared SMI with pathology for diagnosing lung cancer.

Comparator: This study compared SMI with pathology for diagnosing lung cancer.

Study designs to be included: The study will include only relevant randomized controlled trials of lymph node metastases in all lung cancer patients.

Eligibility criteria: The study will include only relevant randomized controlled trials of lymph node metastases in all lung cancer patients.

Information sources: We systematically searched electronic databases, including PubMed, Embase. Any eligible studies were searched by Cancer, Radiomics, Lung Cancer, Lymph Node Metastases, CT-Based Lung Cancer Screening, Lung Cancer Prediction. Reference lists of included studies were also manually searched to identify any relevant articles. Both English and Chinese Articles are considered eligible.

Main outcome(s): Main outcome is metastasis and mortality. Additional outcomes include sensitivity, specificity, positive and negative likelihood ratio, and the area under the curve of the summary receiver operating characteristic.

Quality assessment / Risk of bias analysis: Two researchers will use SPSS software for data extraction. The following items will be listed in the spreadsheet: author's name, year of publication, study design, details of experimental and control groups, number of participants in each group, location and characteristics of lymph node metastases, outcomes of treatment, and adverse effects. If the spreadsheets of 2

researchers do not match, the third researcher makes the final decision.

Strategy of data synthesis: Extracted data will be synthesized using Review Manager software version 5.4 distributed by Cochrane Collaborative. We calculated summary statistics for sensitivity, specificity, positive and negative likelihood ratios, and diagnostic odds ratios and their 95% confidence intervals. To account for heterogeneity, a random-effects model will be used, as the review will include studies conducted in different countries, regardless of age, sex, or ethnicity.

Subgroup analysis: Subgroup analysis is not required here.

Sensitivity analysis: Sensitivity analysis is not required here.

Country(ies) involved: China.

Keywords: lung cancer; lymph node metastasis; meta-analysis; CT; radiomics.

Contributions of each author:
Author 1 - xiushan zheng.