

INPLASY PROTOCOL

Comparison between preoperative hook-wire and liquid material localization for pulmonary nodules: a meta-analysis

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Review Stage at time of this submission: Preliminary searches.

Conflicts of interest:
None declared.

Review question / Objective: This meta-analysis was developed to compare the relative safety and efficacy of preoperative computed tomography-guided hook-wire and liquid material localization for pulmonary nodules.

Condition being studied: Pulmonary nodules (PNs) are commonly detected during the computed tomography (CT) screening of lung cancers. At present, various localization materials, such as hook-wire, coil, radio-label, localization needle, and liquid materials have been used in preoperative PN localization.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 May 2023 and was last updated on 22 May 2023 (registration number INPLASY202350082).

INTRODUCTION

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during the computed tomography (CT) screening of lung cancers. At present, various localization materials, such as hook-wire, coil, radio-label, localization needle, and liquid materials have been used in preoperative PN localization.

METHODS

Search strategy: (((hook wire) AND (((glue) OR (lipiodol)) OR (blood)) OR (indocyanine

green)) OR (blue))) AND (nodule)) AND ((lung) OR (pulmonary)).

Participant or population: Patients with PNs.

Intervention: Hook-wire localization.

Comparator: Liquid material localization.

Study designs to be included: Studies eligible for inclusion met the following criteria:(a) Types of studies: comparative studies;(b) Diseases: patients with PNs;(c) Types of interventions: preoperative hook-wire versus liquid material localization;(d) Languages: not limited.

Eligibility criteria: Studies eligible for inclusion met the following criteria:(a) Types of studies: comparative studies;(b) Diseases: patients with PNs;(c) Types of interventions: preoperative hook-wire versus liquid material localization;(d) Languages: not limited.

Information sources: PubMed, Web of science, and Wanfang.

Main outcome(s): Successful localization rate.

Quality assessment / Risk of bias analysis: The Cochrane risk-of-bias tool and Newcastle-Ottawa scale.

Strategy of data synthesis: For the categorical data, pooled odds ratios (ORs) with 95% confidence intervals (CIs) were calculated, while measurement data were assessed using pooled mean differences (MD) values with 95% CIs. The I² statistic and Q test were used to assess heterogeneity, with an I² > 50% being considered indicative of significant heterogeneity.

Subgroup analysis: Yes.

Sensitivity analysis: Yes.

Country(ies) involved: China.

Keywords: Localization, Hook-wire, Liquid, Pulmonary nodule.

Contributions of each author:

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