STUDY PROTOCOL

Protocol for a hybrid systematic review of the barriers and facilitators to implementing lung cancer screening in community settings.

[version 1; peer review: 2 approved with reservations]

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Abstract

Background

Lung cancer remains a leading cause of cancer-related mortality, with early screening using low-dose computed tomography (LDCT) substantially improving survival. However, participation in screening programmes remains low, particularly among underserved populations. This review aims to identify barriers and facilitators to the implementation of lung cancer screening within a behavioural and implementation science framework, to inform strategies that enhance community-based screening uptake.

Methods

This hybrid systematic review will be conducted in two phases. First, existing systematic reviews on global LDCT-based lung cancer screening recruitment strategies will be identified and screened

Open Peer Review

Approval Status ? ?

	1	2
version 1 10 Feb 2025	? view	? view

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Any reports and responses or comments on the article can be found at the end of the article.

against eligibility criteria. Second, we will search databases for individual studies not covered by the identified reviews. Studies must focus on community-based lung cancer screening recruitment, with the primary outcome being barriers and facilitators to implementation in these settings. Two independent reviewers will perform screening, selection, bias assessment, and data extraction. A thematic synthesis will be conducted using the Consolidated Framework for Implementation Research (CFIR), with evidence strength assessed using GRADE and CERQual. This protocol adheres to the Joanna Briggs Institute (JBI) Reviewers' Manual and PRISMA-P guidelines.

Conclusion

The review will provide comprehensive insights into factors influencing the implementation of lung cancer screening in community settings, aiming to guide improvements in recruitment strategies and increase participation rates. Findings will be disseminated widely to researchers, healthcare practitioners, policymakers, and the public to support the effective implementation of lung cancer screening programmes.

Keywords
Lung neoplasms; Primary Health Care; Screening; Implementation Science; Systematic Review; Health Knowledge, Attitudes, Practice

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Introduction

Lung cancer remains a significant global health challenge due to its high incidence and mortality rates, accounting for approximately 1.8 million deaths annually worldwide[1]. In the UK, lung cancer is the leading cause of cancer-related deaths, contributing to 20% of all cancer mortalities[2]. The primary risk factor for lung cancer is tobacco smoking, responsible for around 85% of cases[3]. Disproportionately higher smoking rates in socioeconomically deprived communities contribute to poorer outcomes. Other contributing factors include passive smoke exposure, radon gas, occupational hazards, and genetic predispositions[4]. The poor prognosis of lung cancer is largely due to its aggressive nature and the late stage at which it is often diagnosed, resulting in a 5-year survival rate of only 19.4% across all stages. However, early detection can significantly improve survival, with a 5-year survival rate of around 56%[5]. The key advantage of lung cancer screening is its ability to identify asymptomatic cases, enabling earlier intervention[6].

Access to lung cancer screening

Low-dose computed tomography (LDCT) has emerged as an effective screening tool, supported by robust evidence from large randomised controlled trials (RCTs), including the National Lung Screening Trial (NLST) in the US[7] and the NELSON study in Europe[8], which demonstrated a reduction in lung cancer mortality . Building on these findings, many countries have begun to implement lung cancer screening programmes. The European SOLACE initiative aims to support EU member states in optimising LDCT screening under Europe's Beating Cancer Plan, providing frameworks to address health inequalities and ensure cost-effectiveness[9].

In 2022, the UK National Screening Committee recommended LDCT for lung cancer screening, based on evidence demonstrating reduced mortality. The comprehensive screening pathway, including identification, invitation, and participation, represents a significant step towards the nationwide implementation of targeted screening. While this initiative is clinically promising, challenges remain regarding its feasibility and implementation. The UK has led efforts to address these challenges through pilot programmes, clinical studies, and the NHS England Targeted Lung Health Check Programme[10].

Equity challenges in implementation

Participation in lung cancer screening remains low, with disparities based on socioeconomic status, smoking history, and ethnicity. Studies show participation rates as low as 1.9% among eligible individuals[10]. Barriers include limited awareness of screening benefits, concerns about LDCT radiation, fear of diagnosis, and challenges in risk communication[10]. Additional obstacles include practical issues such as cost, travel, and time constraints, as well as healthcare system-level barriers like the need for shared decision-making by healthcare providers[11]. Socioeconomic disparities, cultural factors, and literacy issues further impede screening uptake, necessitating tailored, culturally sensitive interventions[12].

This hybrid systematic review aims to explore the barriers and facilitators to implementing lung cancer screening, emphasising equitable and informed participation as essential for successful screening uptake. Previous systematic reviews have highlighted the complexities involved, noting the variability of barriers and facilitators across different populations, healthcare systems, and settings[7,10,11]. This review will extend current evidence by using an implementation science approach to identify factors affecting screening participation.

The Lung Cancer Policy Network has developed an implementation toolkit to support screening initiatives (refer to extended data Table 1). While useful, a hybrid systematic review can enhance its application by incorporating up-to-date evidence and addressing specific contextual factors, ensuring a more tailored approach to community-based lung cancer screening.

Aims and objectives

This hybrid systematic review, guided by the Consolidated Framework for Implementation Research (CFIR), aims to identify factors influencing the implementation of lung cancer screening in community settings. The objectives are to:

1. Synthesise qualitative and quantitative evidence on barriers and facilitators to community-based lung cancer screening.

2. Identify elements that support or hinder screening programme implementation in various contexts.

3. Propose strategies to enhance screening participation in community settings.

Provide actionable, evidence-based recommendations to improve global lung cancer screening effectiveness and uptake.

Methods

Design

This hybrid systematic review will be conducted in two phases. Phase 1 involves a comprehensive search and extraction of relevant primary studies from previously published systematic reviews on lung cancer screening. Phase 2 aims to identify and include additional individual studies published outside the timeframe of Phase 1 reviews. This two-stage approach is designed to maximise existing evidence while minimising research waste and duplication. Both phases will consider quantitative, qualitative, and mixed-method reviews. The methodology aligns with the guidance of Doyle *et al.*[13–16], Cochrane guidelines for overviews of reviews (Box 1, Box 2), and the Joanna Briggs Institute (JBI) umbrella review standards (Box 3, Box 4))[17,18]. The development of this protocol also follows the PRISMA-P guidelines (Box 5)[19].

Protocol and registration

The protocol will be registered with PROSPERO, the international prospective register of systematic reviews[20].

Eligibility criteria

Eligibility criteria are informed by the SPIDER(s) framework, which addresses the Sample, Phenomenon of Interest, Design, Evaluation, Research Type, and Setting of included studies[21]. The added 'Setting' criterion is to ensure contextually relevant studies are included. Reviews or meta-analyses will be eligible if they:

1. Include adults involved in lung cancer screening (participants, families, caregivers, healthcare professionals, community health workers, service administrators, and policymakers).
2. Investigate recruitment and implementation strategies for lung cancer screening within community settings.
3. Use a systematic approach to identify barriers and facilitators of screening implementation
4. Apply quantitative, qualitative, or mixed-method approaches.
5. Assess recruitment strategies specific to community contexts.

Studies are limited to English-language systematic reviews and meta-analyses published in peer-reviewed journals. Exclusions include editorials, scoping reviews, expert opinions, and narrative reviews. The strategy for identifying systematic reviews and primary studies differs between Phase 1 and 2, as outlined in Table 2 (refer to extended data).

Sample. The review targets two key populations: (1) adults who are eligible or have participated in lung cancer screening programmes (including their families and caregivers) and (2) stakeholders responsible for implementing the screening (e.g., healthcare professionals, community health workers, administrators, and policymakers). The inclusion of both groups provides a comprehensive understanding of potential barriers and facilitators from multiple perspectives.

Phenomenon of interest. The review will focus on the implementation of lung cancer screening in community settings, examining processes such as recruitment, engagement, and participation. Key actions include initial contact and information dissemination, scheduling, reminder systems, educational interventions, counselling, tracking of screening outcomes, and referral pathways for positive results.

Design and evaluation. The review will encompass empirical studies utilising various methodologies. In Phase 1, systematic reviews and meta-analyses will be included, with exclusions applying to protocols, scoping reviews, and non-systematic summaries. In Phase 2, primary studies that explore recruitment strategies for lung cancer screening in community settings will be assessed, with emphasis on identifying barriers and facilitators at the individual, healthcare service, and system levels.

Research type and setting. The review will incorporate quantitative, qualitative, and mixed-method studies. Grey literature will not be included due to the anticipated wealth of existing evidence. The setting criterion focuses on community-based screening, ensuring that studies from primary care and similar environments are eligible. Studies conducted in hospital-based environments, such as radiology departments, medical centres, or long-term care facilities, will be excluded. The rationale is based on evidence indicating the effectiveness of community-based recruitment strategies in increasing participation.

Search strategy

The two-phase search strategy, developed in collaboration with a healthcare librarian, will systematically explore databases starting from January 1, 2000, consistent with the emergence of LDCT as a screening modality. Phase 1 involves a comprehensive search for systematic reviews across databases, including The Cochrane Library, Embase, PubMed, PsycINFO, Scopus, and CINAHL, and will involve citation searching and reference list reviews. The time period from January 1, 2000, to October 1, 2023, reflects the evolving landscape of lung cancer screening. Phase 2 will involve an updated search for primary studies not covered in Phase 1, using a tailored search strategy for each database. Studies reporting on screening strategies will be included, with exclusions for narrative reviews, commentaries, conference abstracts, and recruitment surveys.

Screening and selection

Titles and abstracts will be screened by two independent reviewers, followed by full-text reviews to confirm eligibility. Discrepancies will be resolved by consensus or consultation with a third reviewer. The same process will be applied in both phases (Figure 1).

Data extraction and management

Two extraction tools will be developed: one based on the JBI instrument for umbrella reviews and another designed for primary studies. Key details to be extracted include review specifics (authors, publication year, aims), search details (databases, inclusion criteria, study numbers), and quality assessments. For individual studies, data extracted will include authorship, geographic location, study design, participant characteristics, recruitment strategies, and outcomes related to barriers and facilitators. Extraction will be piloted on three studies to ensure consistency and quality. Conflicts in data extraction will be resolved through discussion, with a third reviewer involved if necessary.

Quality assessment

We will evaluate the quality of the primary studies extracted from the eligible systematic reviews using the assessments provided in the reviews, where available. In the event that different tools are employed, we will integrate them by conducting the MMAT assessment[22] on all studies that lack this evaluation. We will independently analyse the risk of bias using the Mixed-method Appraisal Tool (MMAT) and two reviewers, if the quality of a research has not been evaluated in the review

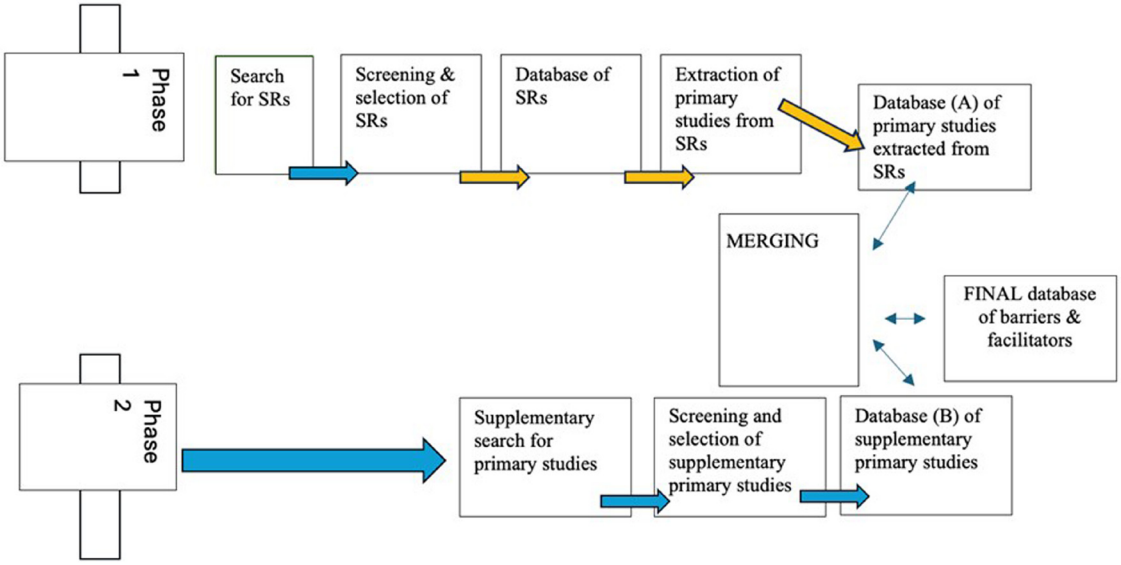

Figure 1. Illustrates a two-stage process for the identification of primary studies.

or if our own personal search finds the study not to be part of the systematic reviews[22]. While quality assessment will inform the interpretation of findings, studies will not be excluded solely based on quality. Sensitivity analyses will be conducted focusing on high-quality studies.

Data synthesis

Data will be synthesised thematically, guided by the Consolidated Framework for Implementation Research (CFIR)[23]. Identified facilitators and barriers will be categorised into CFIR's five domains: intervention characteristics, external environment, internal setting, characteristics of individuals involved, and the implementation process (refer to extended data Table 3). A mixed-method synthesis will integrate both qualitative and quantitative data, providing a comprehensive understanding of the factors influencing lung cancer screening uptake. Qualitative data will be coded and, where appropriate, translated into a numerical format for thematic weighting.

Confidence in cumulative evidence

The reliability of evidence will be evaluated using the GRADE and CERQual tools[24,25]. This assessment will cover methodological limitations, relevance, coherence, and adequacy, providing a clear indication of the quality and confidence of the findings.

Discussion

This systematic review will address a critical gap in lung cancer screening by consolidating existing evidence on barriers and facilitators to community-based screening implementation. By employing the Consolidated Framework for Implementation Research (CFIR), our review aims to systematically evaluate these factors across different contexts, providing a nuanced understanding of how to optimise screening participation and delivery in diverse community settings. The review's findings will be instrumental in informing targeted interventions and strategies to increase the uptake of lung cancer screening, contributing to more equitable and effective screening practices.

Potential limitations

While the review is designed to be comprehensive, there are certain limitations. First, restricting the search to English-language publications may introduce language bias, potentially overlooking insights from non-English studies. Existing research suggests that this could limit the applicability of findings, especially in multilingual communities or low-resource settings where language and culture significantly influence healthcare behaviours[26]. Nonetheless, given the practical challenges of translation and the predominance of high-quality scientific literature in English, the scope remains appropriate for our objectives.

Second, by excluding less rigorous study designs such as narrative reviews, editorials, and opinion pieces, the review may miss some relevant discussions and hypotheses that have not yet been substantiated through systematic research. However, prioritising systematic reviews and meta-analyses is a deliberate choice to ensure that our synthesis is grounded in the highest levels of evidence, which is vital for producing robust, actionable recommendations[27].

Lastly, there may be variability in how barriers and facilitators are conceptualised and reported across studies, given the diversity of settings and methodologies involved. This heterogeneity can pose challenges for data synthesis and may limit the generalisability of findings[28]. However, using CFIR as an organising framework will allow us to systematically categorise and interpret these diverse factors, providing a cohesive narrative of implementation challenges and enablers.

Implications and future directions

The review's findings will offer valuable guidance for healthcare practitioners, researchers, and policymakers to develop

and implement more effective lung cancer screening strategies in community settings. Specifically, by identifying and understanding barriers—such as limited knowledge about screening, concerns over radiation risks, and socioeconomic disparities—we can inform culturally sensitive and patient-centred interventions. Evidence from previous studies, including qualitative research on patient perceptions and healthcare provider attitudes, highlights the importance of addressing these multifaceted challenges to improve engagement and uptake[29].

Furthermore, understanding facilitators like supportive policies, effective communication strategies, and the involvement of community health workers can guide the development of interventions that are more tailored and responsive to specific community needs. The review's emphasis on a range of contexts will provide insights applicable to varied healthcare systems, from highly resourced environments to those facing significant logistical challenges in screening implementation[29]. These insights will help bridge gaps in participation and ensure that lung cancer screening is both equitable and accessible, particularly for underserved populations.

Integration with current evidence

The potential of LDCT screening to reduce lung cancer mortality has been well-documented in trials such as the National Lung Screening Trial (NLST) and the NELSON study, leading to the endorsement of screening programmes in several countries[7,30]. However, real-world implementation faces considerable challenges, as low participation rates and inequities in access persist. Previous systematic reviews have explored barriers at the individual and system levels, but a comprehensive review through an implementation science lens is crucial for translating research into practice effectively[8].

Our review will build upon the existing literature by specifically addressing the complexities of community-based screening. The CFIR-guided thematic synthesis will allow for a structured analysis of how intervention characteristics, outer and inner settings, individual factors, and implementation processes interact to affect lung cancer screening uptake. This approach is expected to reveal critical leverage points for enhancing programme design, training healthcare professionals, and developing policy initiatives.

Future research and practice

While this review will provide a foundational understanding of the barriers and facilitators to community-based lung cancer screening, further research will be necessary to translate these insights into effective strategies. For instance, implementation studies that tailor interventions to specific community contexts are needed to evaluate their real-world effectiveness and feasibility[31]. Additionally, as emerging technologies and evidence evolve, there will be an ongoing need to refine and update screening strategies to maintain their relevance and impact.

Overall, this review will contribute to the advancement of lung cancer screening by providing actionable, evidence-based recommendations. These insights can inform the design of equitable and sustainable screening programmes that are responsive to the needs of diverse communities, ultimately improving early detection and outcomes in lung cancer care.

Conclusion

The proposed systematic review will offer a comprehensive understanding of the multifaceted factors influencing lung cancer screening uptake in community settings. By synthesising evidence on barriers and facilitators within an implementation science framework, the review aims to support the development of interventions that are effective, equitable, and context-specific, ultimately enhancing the reach and impact of lung cancer screening programmes globally.

Patient and Public Involvement

Irish Lung Cancer Community (ILCC)

Ethics

Ethical approval and consent were not required.

Data availability

No data are associated with this article. This article is a research protocol, and as such, does not include any associated datasets. Datasets generated during the research will be made permanently available in an open-access repository, the Open Science Framework, ensuring they are accessible to the public and other researchers.

Extended data

Open Science Framework: Protocol for a Hybrid Systematic Review of Barriers and Facilitators to Implementing Lung Cancer Screening in Community Settings, https://doi.org/10.17605/OSF.IO/DKGZY[32].

This project contains the following extended data:

<Appendix_Synonyms> List of synonyms associated with research parameters

<Box_1_Cochrane_Reviews_Protocol> Components of a Cochrane Overview of Reviews Protocol

<Box_2_Cochrane_Review_Synopsis> Elements of a Cochrane Review Synopsis

<Box_3_JBI_Ciritical_Appraisal_Checklist> JBI Critical Appraisal Checklist for Systematic Reviews and Research Syntheses

<Box_4_JBI_Data_Extraction_Form> JBI Data Extraction Form for Systematic Reviews and Research Syntheses

<Box_5_PRISMA-P_Checklist> PRISMA-P Checklist

<Table_1_Stategies_to_Overcome_Barriers_in_Lung_Cancer_Screening> Strategies to Overcome Barriers in Lung Cancer Screening

<Table_2_Inclusion_Criteria> Criteria for Inclusion and Exclusion

<Table_3_CFIR_Domains_of_Relevance> Categorisation of Facilitators and Barriers According to CFIR's Five Domains of Relevance

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Open Peer Review

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Version 1

Reviewer Report 19 March 2025

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Summary
This study protocol outlines a hybrid systematic review to assess barriers and facilitators to lung cancer screening (LCS) in community settings. The review will employ an implementation science approach using the Consolidated Framework for Implementation Research (CFIR) and assess the strength of evidence with GRADE and CERQual. The methodology is divided into two phases:

1. **Phase 1**: Identifying and screening existing systematic reviews on LCS implementation.
2. **Phase 2**: Conducting a new search for primary studies not covered in previous reviews.

Key outcomes include a thematic synthesis of barriers and facilitators to LCS, an assessment of the quality of evidence, and the development of strategies to improve LCS participation in community settings.

Evaluation and Recommendations

1. Is the rationale for, and objectives of, the study clearly described? Yes, but some clarifications are needed.
   - The background is well-articulated, detailing the disparities in LCS uptake and the need for implementation science approaches.
   - The rationale for the study is compelling, linking low participation in LCS to socio-economic disparities, health literacy, and system-level barriers.
   - However, it would be helpful to explicitly define what is meant by "community settings"; e.g., does it include primary care clinics, federally qualified health centers, or mobile screening units? This would strengthen the scope of the study.
2. Is the study design appropriate for the research question? Yes
   - The hybrid systematic review approach is well justified, as it combines existing evidence with new findings.
   - The use of CFIR is a strength, as it allows for a structured assessment of implementation barriers and facilitators.

- However, the study might benefit from discussing how it will handle potential biases in existing systematic reviews (e.g., differences in study quality or methodologies).
- Consider adding a brief discussion on how variations in the quality of included systematic reviews will be addressed.

3. Are sufficient details of the methods provided to allow replication by others? Yes, but some areas require further elaboration.

The methodology is well-structured and follows PRISMA-P and JBI guidelines. However, the following aspects need improvement:

- **Definition of "community settings":** While the protocol mentions excluding hospital-based settings, it is unclear how integrated healthcare systems (where primary care and specialty services co-exist) will be handled.
- **Discuss how differences in health system structures** (e.g., national screening programs vs. private insurance models) will be accounted for in the analysis.
- **Timeframe for searches:** The study limits Phase 1 systematic reviews to those published before October 1, 2023. This cutoff seems arbitrary. Given that the study is being conducted in 2025, should the search period be extended to include recent literature?
- **Conflict resolution in data synthesis:** The protocol states that conflicts in data extraction will be resolved through discussion or a third reviewer, but it does not specify how disagreements in data synthesis will be handled.

Minor Issues & Suggested Improvements

- **Figure 1:** The bi-directional arrows in the study flowchart should be explained. Does the bidirectionality reflect an iterative process?
- **Consideration of Socioeconomic Context:** Will findings be stratified by urban vs. rural settings, income levels, or uninsured populations? Addressing contextual factors may improve the generalizability of the results.
- **Reference Updates:** Some background references (e.g., Global Cancer Statistics 2018) should be updated to include more recent epidemiological data.

Is the rationale for, and objectives of, the study clearly described?

Partly

Is the study design appropriate for the research question?

Yes

Are sufficient details of the methods provided to allow replication by others?

Partly

Are the datasets clearly presented in a useable and accessible format?

Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Lung Cancer Screening program implementation in Safety-net systems, Shared Decision Making

I confirm that I have read this submission and believe that I have an appropriate level of

expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

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The Manuscript: Protocol for a hybrid systematic review of the barriers and facilitators to implementing lung cancer screening in community settings.
Thank you for the opportunity to review this important work. This manuscript is a protocol to identify barriers and facilitators to the implementation of lung cancer screening within a behavioral and implementation science framework to inform strategies to improve uptake in community-based settings. The protocol's methods are hybrid and in two phases. The first phase will be to review existing systematic reviews. The second phase will search databases for studies not covered in the first phase. Finally, a thematic synthesis using Consolidated Framework for Implementation Research (CFIR) with evidence strength assessed using GRADE and CERQual will be conducted.
This work is intended to answer important questions related to why lung cancer screening rates remain lower than optimal and what can be done to raise screening rates within community settings.

Concerns:

1. Reference 1 is from 2018 which seems a little old. This one is a bit newer with updated rates. (Chhikara et al., (2023)) [Ref-1]
2. Figure 1 – has bi-directional arrows from Merging to three other boxes. It's not clear why the arrows are bi-directional from the Database (A), Database (B), and final boxes; is this intentional? If so, authors should indicate as much and provide explanation in their plan.
3. From the paper (p.4), "Studies conducted in hospital-based environments, such as radiology departments, medical centres, or long-term care facilities, will be excluded." This drew attention to the absence of an early definition of (1) which aspect of the screening continuum the protocol proposes to examine, and (2) an operating definition of how that selection aligns with what the authors intend by "community settings."

Re: continuum, see [Ref-2] - (Rendle KA, et al., (2020)).
Per *phenomenon of interest*, it appears the emphasis will be "recruitment, engagement, and participation." But effective uptake surely includes the transition from the primary care setting to the radiology provider and post-imaging return to PCP. The effectiveness of lung cancer screening is not the one-time imaging, but rather completion of a screen plus abnormal result follow-up vs

return for 2nd annual screen.

Similarly, then we were curious about medical centers that provide primary care to a large proportion of their community. Can the authors clarify how those distinctions will be handled? What about medical centers differentiates them from community settings to the point that they should be excluded?
An important structural consideration might be the nature of the healthcare organization- is primary and specialty care provided within the same organization, with potential for common EHR- this would suggest that determinants of uptake might differ by organizational context and thus influence or be influenced by recruitment/engagement/participation.

1. Unless the study has started, why stop the first phase of identifying systematic reviews on October 1, 2023? This seems like an arbitrary cut-off; a more common index period would be five- or ten-years.
2. What are the search dates for phase 2?
3. Conflicts in data extraction and management is discussed but what about conflicts in Data synthesis? How will conflicts be handled? How will consensus be reached?
4. Reliability of evidence is mentioned in the *Confidence in cumulative evidence* paragraph, but additional detail and exposition seems warranted. Will you determine a level of evidence overall or for individual studies? Will final results be presented with levels of certainty or evidence? (Akin to national guideline recommendations, such as USPSTF, A and B level recommendations. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation-topics/uspstf-a-and-b-recommendations)
5. Consider whether the team has addressed scope of Limitations. How will differences in different countries health systems be reconciled, for example – organized screening programs of a national health system versus opportunistic screening permitted by private insurance? Differences in payor systems could dramatically change the factors related to screening rates. Additionally, differences between and within countries socioeconomic standings could bias results towards some interventions causing misleading interpretations. Will evidence be stratified based on context? Rural, urban, under-resourced, uninsured, etc.? Contextual factors at the organizational, regional and national level will influence implementation factors as well as intervention(s) effectiveness. Further elaboration would aid the reader.

References

1. Chhikara, B. S., & Parang, K.: Global Cancer Statistics 2022: the trends projection analysis. *chemical Biology Letters*. 2023, 10 (1), 451.
2. Rendle KA, Burnett-Hartman AN, Neslund-Dudas C, Greenlee RT, et al.: Evaluating Lung Cancer Screening Across Diverse Healthcare Systems: A Process Model from the Lung PROSPR Consortium.*Cancer Prev Res (Phila)*. 2020; **13** (2): 129-136 PubMed Abstract | Publisher Full Text

Is the rationale for, and objectives of, the study clearly described?

Yes

Is the study design appropriate for the research question?

Yes

Are sufficient details of the methods provided to allow replication by others?
Yes

Are the datasets clearly presented in a useable and accessible format?
Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Lung cancer screening, health services research

We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however we have significant reservations, as outlined above.