Medical Xpress

Researchers develop priorities for interventions to address health disparities in lung nodule management

March 15 2023

Key Focus Areas			Lung Nodule Care Pathway	Top research questions
Patient	Clinician	System		
		• Lung nodule tracking • Nodule management algorithms and risk models	Radiology report of nodule and recommendation	• What is the optimal method to track lung nodule follow-up?
			↓	
• Outreach to patients	• Clinician specialty and years since training	• Lung nodules detected in high-risk settings • Communication strategies	Result communication to clinician	• How can we track patients with incidental lung nodules found in settings more prone to loss to follow-up?
			↓	
• Health literacy and numeracy • Language barriers • SDOH • Co-morbidities • Patient values	• Communication strategies • Information transmission and retention • Effect of implicit bias • Effect of gender and race concordance	• Patient educational materials on lung nodules • Result communication	Communication of results from clinician to patient	• How do SDOH influence lung nodule evaluation? Clinician interactions? • What are the optimal approaches to addressing communication and language barriers? • What are the strategies and/or interventions to improve patient/clinician communication? • What are the strategies and/or interventions to improve accuracy of information transmission and retention?
			↓	
• Immigration status and documentation status	• Hospital or clinic setting	• Multidisciplinary teams • E-consult or telehealth tumor boards • Access to diagnostic testing capabilities	Order follow-up testing	• Do patient navigators or culturally enriched multi-disciplinary teams impact disparities in lung nodule management?
			↓	
• Patient navigation		• Lung nodule tracking • Resource allocation strategies	Testing is scheduled	• What types of allocation strategies ensure that resources are allocated to individuals with the highest risk of delay in lung nodule follow-up?
			↓	
• Community health workers • Appointment-level interventions		• Transportation assistance	Patient completes testing	• What appointment-level interventions are most effective at improving disparities in timely lung nodule evaluation?

Cascade-of-care framework for identifying potential areas for intervention to reduce disparities in lung nodule evaluation. This figure shows each step of a patient's path from lung nodule detection through completion of recommended follow-up. Delays of care could potentially be introduced at each step. Interventions to mitigate disparities in lung nodule evaluation might target each of these discrete steps at the patient, clinician, and/or system level. SDOH = social determinants of health. Credit: *American Journal of Respiratory and Critical Care Medicine* (2023). DOI: 10.1164/rccm.202212-2216ST

Lung nodules are commonly found on diagnostic and screening computed tomography (CT) scans of the chest. Approximately five percent of individuals with lung nodules will ultimately receive diagnoses of lung cancer the leading cause of cancer death in men and women in the US and globally. Furthermore, lung cancer survival strongly depends on the stage of the cancer at diagnosis thus timely evaluation of lung nodules is key to achieving good long-term outcomes.

Health disparities in lung nodule follow-up and treatment are a major concern. Both Black and Latino patients have a higher risk of delayed follow-up for lung nodules. Delayed follow-up of lung nodules could result in higher levels of malignancy, disproportionately affecting the health of communities with higher lung cancer rates and contribute to health disparities in lung cancer stage and survival.

Led by researchers from Boston University Chobanian & Avedisian School of Medicine, a new American Thoracic Society (ATS) research statement summarizes the existing evidence, identifies research gaps and utilized a formal consensus development process to prioritize future research questions to mitigate health disparities in lung nodule evaluation including: considerations regarding research methodology and interventions at the patient, clinician, and health-system levels.

"This statement offers a research agenda to inform investigators and funding agencies on the considerations to generate high-priority, high-quality research on interventions to mitigate inequities in the evaluation of lung nodules," explains lead author Katrina Steiling, MD, MSc, assistant professor of medicine and chair of the ATS research committee.

Using a formal consensus development process, the committee identified several areas in which further research would significantly affect decision-making regarding resources, and strategies to address disparities

in lung nodule management. Regarding research methodology, committee members gave their highest ratings to questions better defining the disparities in lung nodule management.

Within the patient domain, research questions related to how social determinants of health influence lung nodule evaluation and affect clinician interactions received the highest ratings. For the clinician domain, the need for studies to evaluate strategies to improve patient–clinician communication to reduce disparities in lung nodule evaluation was ranked highest.

Finally, in the health systems domain, committee members indicated that research on the effectiveness of specific interventions such as patient navigators and culturally trained multidisciplinary teams in reducing disparities was the highest priority.

The findings appear in the *American Journal of Respiratory and Critical Care Medicine*.

More information: Katrina Steiling et al, Research Priorities for Interventions to Address Health Disparities in Lung Nodule Management: An Official American Thoracic Society Research Statement, *American Journal of Respiratory and Critical Care Medicine* (2023). DOI: 10.1164/rccm.202212-2216ST

Provided by Boston University School of Medicine