



Published in final edited form as:

JAMA Oncol. 2020 January 01; 6(1): 156. doi:10.1001/jamaoncol.2019.4598.

Defining Equity in Eligibility for Cancer Screening

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Aldrich et al¹ report that according to current US lung cancer screening criteria (USPSTF), a lower proportion of current- and former-smoking lung cancer cases may be classified as eligible for screening among African-Americans (32%) than whites (56%). This report is important in highlighting the issue of equity in how cancer screening is offered across racial and ethnic groups, but also prompts the question of how to define equity in the specific context of screening eligibility.

The central question is whether screening eligibility criteria should be modified to capture an equal proportion of future cancer cases across racial and ethnic groups. A key consideration is that any screening program has benefits, but also harms, which can include surveillance scans, invasive diagnostic procedures, and overdiagnosis.² The benefit of lung screening, in terms of lung cancer deaths prevented, is largest among people with highest baseline risk for lung cancer death (>6 per 1000 screening participants), but nearly negligible among those with lowest risk (<0.2 per 1000).³ In contrast, while harms are also lower among low-risk people, they are still tangible.³

In recommending that lung screening be extended to African-Americans with 20 to 29 pack-years of smoking, Aldrich et al. rightly consider that lung cancer risk is higher in African Americans than whites, independent of smoking and other risk factors. However, it is unclear what proportion of African Americans with 20 to 29 pack-years would have sufficiently high risk that lung screening would be of net benefit. Inevitably, while many such individuals would have high anticipated benefit from screening, our concern is that a non-negligible proportion would experience harms with little benefit.

When two people have the same individualized, anticipated screening benefit – which outweighs the potential harms – both should be eligible, irrespective of race. Similarly, two people for whom the harms outweigh the benefits should both be ineligible. Rather than defining race-specific criteria for lung screening, we therefore argue that a better way is to use a validated risk prediction model, and corresponding risk threshold, that accounts for the differences in risk experienced by African-Americans and other races/ethnicities.⁴ Ultimately, the larger challenge will be to ensure equity not only in eligibility criteria, but throughout the process of screening initiation and cancer diagnosis, treatment, and survivorship.

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Acknowledgments

Funding

This work was supported by the INTEGRAL Program (NCI U19 CA203654).

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