



A Cross-Sectional Evaluation of Guideline-Adherent Screening Eligibility Among Zimbabwean Patients Diagnosed with Lung Cancer

Tinashe Adrian Mazhindu¹, Anna Mary Nyakabau¹, Webster Kadzatsa¹

Department of Oncology, Medical Physics & Imaging Sciences, Faculty of Medicine & Health Sciences, University of Zimbabwe, Harare Email: atmazhindu@gmail.com

INTRODUCTION & AIM

Lung cancer screening enables earlier detection at more treatable stages, reducing mortality and healthcare costs. For high-risk individuals—identified by age and smoking history—it offers timely, effective treatment options. However, current screening criteria, mainly from the US and Europe, may not suit African populations due to differing demographics, risk factors, and life expectancy. This study assessed Zimbabwean cancer patients' eligibility for lung cancer screening using four established criteria

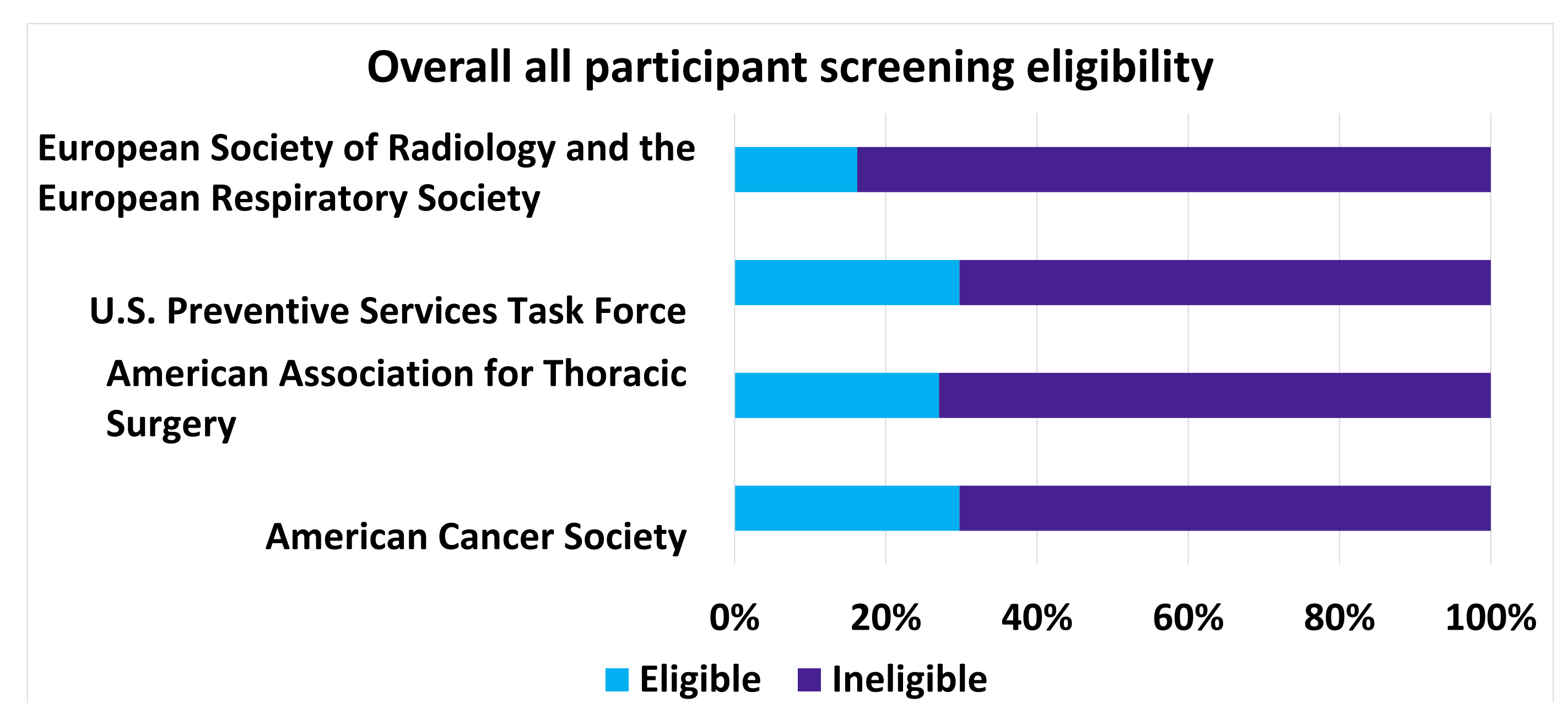
METHOD

This cross-sectional study reviewed all lung cancer cases treated at Parirenyatwa Hospital in Harare, Zimbabwe over five years. We assessed each patient's eligibility for lung cancer screening one year prior to diagnosis using American Cancer Society (ACS), American Association for Thoracic Surgery (AATS), U.S. Preventive Services Task Force (USPSTF) and European Society of Radiology (ESR) criteria

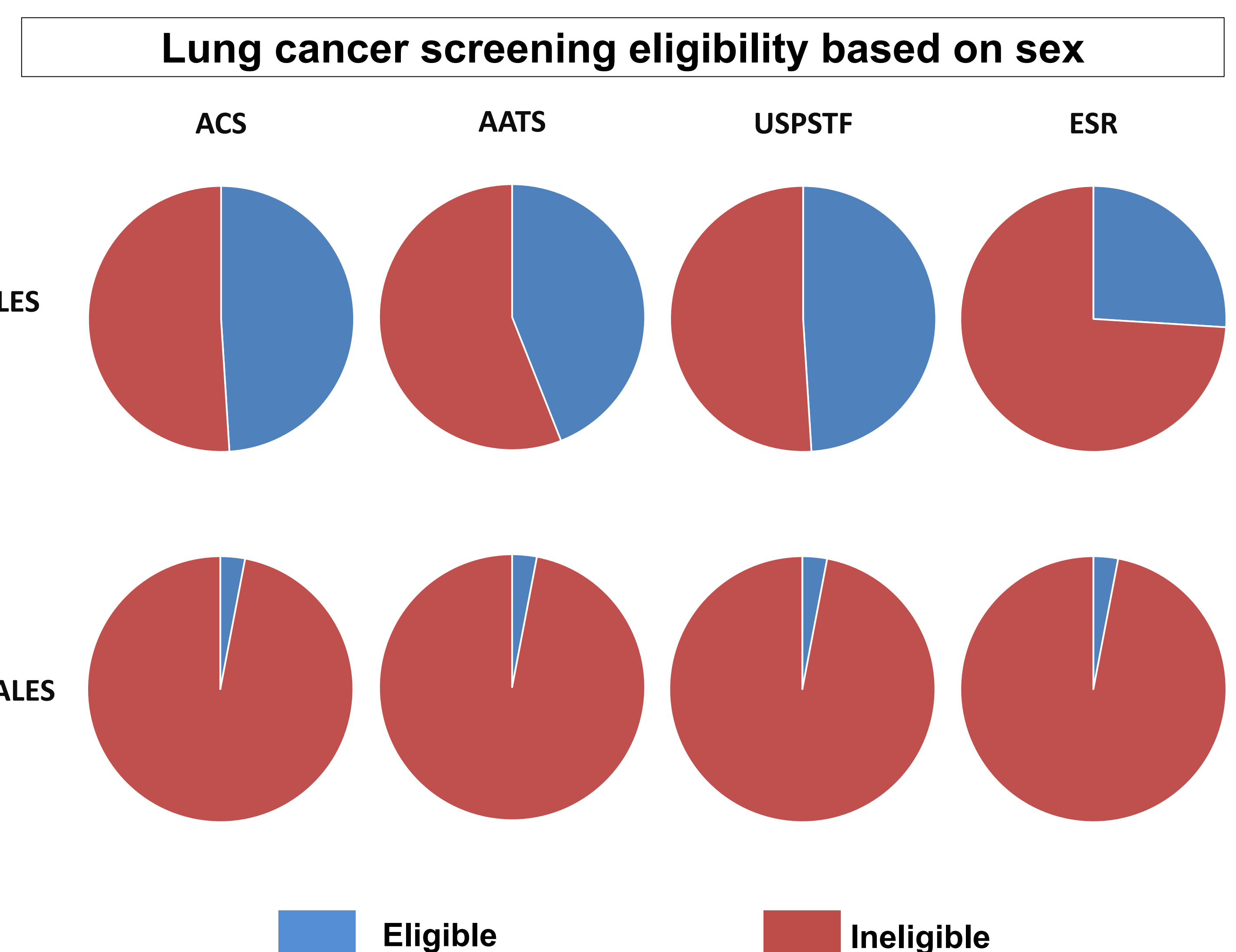
RESULTS & DISCUSSION

A total of 30 female and 43 male lung patients were reviewed and had median age of 65 years (IQR52-71) and 61 years (IQR54-69), respectively. A history of smoking was present in 81% of males and only 3% of females with a median pack-year history of 28 (IQR15-40). Histologically non-small cell carcinoma comprised 97% in females and 94% males and 77% had distant metastases.

Characteristic		Male	Female	Odds ratio, 95% CI, p-value
Age	Median (IQR)	61 (54-69)	65 (52-71)	0.973
	Residence			
	Urban	24 (56)	17 (57)	1.05; 0.39-2.8; 0.92
	Rural	11 (44)	13 (43)	
Smoking	Yes	35 (81)	1 (3)	126; 15-1074; <0.0001
	No	8 (19)	29 (97)	
Smokers >20 pack yrs	Yes	24 (69)	1 (100%)	-
	No	11 (31)	0	
History of TB	Yes	26 (61)	13 (43)	2; 0.78-5.15; 0.15
	No	17 (40)	17 (57)	
HIV status known	Yes	27 (63)	22 (73)	0.7; 0.25-1.97; 0.5
	No	14 (33)	8 (27)	
HIV status	Positive	8 (19)	6 (20)	1.12; 0.32-3.92; 0.86
	Negative	19 (44)	16 (53)	
	Unknown	14 (33)	8 (27)	



Based on the ACS, AATS, USPSTF and ESR criteria 30%, 27%, 30% and 16% of the lung cancer patients were eligible for screening. The varied significantly between males and females- ACS 49% vs 3% (OR 0.04, 95% CI 0.005-0.3, P= 0.0018); AATS 44% vs 3% (OR 0.04, 95% CI 0.005-0.3, P= 0.0032); USPSTF 49% vs 3% (OR 0.04, 95% CI 0.005-0.3 P= 0.0018 and ESR 26% vs 3% (OR 0.1, 95% CI 0.01- 0.8, P=0.03).



CONCLUSIONS

The majority of lung cancer patients in Zimbabwe would not have qualified for screening under the current guidelines. This is partly a result of very low smoking rates among women and potentially other risk factors such as environmental exposures or genetic predispositions that require further investigation.

FUTURE WORK/ REFERENCES/ACKNOWLEDGMENT

This study is part of the Hope for Lungs project of the Jointed Hands Welfare Organization, Zimbabwe under the Multinational Lung Cancer Control Program of the Bristol Myers Squibb Foundation

References

Mazhindu TA, Ndlovu N, Matsikidze E, Chibonda S, Kadzatsa W. Pulmonary Tuberculosis: A Comorbidity or Misdiagnosis of Primary Lung Cancer in Africa? Proceedings. 2024; 100(1):2. <https://doi.org/10.3390/proceedings2024100002>