



P1.042: Annual Low-Dose CT for Lung Cancer Screening Among High-Risk Smokers in a Tuberculosis-Endemic Country

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IASLC 2026 World
Conference on Lung Cancer

SEPTEMBER 12 - 15, 2026
SEOUL, REPUBLIC OF KOREA

INTRODUCTION

- Lung cancer is the leading cause of cancer related mortality
- Annual screening with low-dose computed tomography (LDCT) chest reduces lung cancer mortality among high-risk smokers
- High prevalence of tuberculosis (TB) potentially leads to increased false positives
- We conducted a prospective screening study to evaluate the feasibility and outcomes in a TB endemic setting

METHODS

- Subjects: age 45–75 years with significant smoking exposure (smoking index >400; current or quit for <15 yrs)
- Subjects underwent annual LDCT scans at baseline (T0) and subsequent annual rounds (T1, T2)
- Imaging was reported using Lung-RADS v2022 criteria
- Outcomes: positive screen rate (Lung-RADS 3–4), lung cancer detection rate, and the impact of post TB sequelae on positive screen rate

DISCUSSION AND CONCLUSION

Actionable Take Away Message

- Lung cancer screening using LDCT chest is feasible in TB endemic countries like India
- Presence of post-TB sequelae was not associated with positive screen detection rate
- Requirement of multidisciplinary/tertiary care for suspicious nodule management

Future Direction for Research

- Utility of annual follow up screen (especially second annual) in resource limited settings to be further explored—adoption of single LDCT vs prolonged screening intervals

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RESULTS

- A total of 394 subjects underwent T0 scan (96.4% males, mean {SD} age, 61.5 {7.5} years, mean {SD} smoking index, 620 {220.6})
- 8 lung cancers diagnosed (stage I - 06; stage III - 01; stage IV - 01) at baseline scan
- Radiological sequelae of prior tuberculosis were seen in 22.3 % of the subjects who underwent baseline screen; this was not significantly associated with false positive screening results (chi 2; p=0.95)

Lung RADS	T0 (n=394)	T1 (n=163)	T2 (n=63)
1	257 (65.2%)	82 (50.3%)	32 (50.8%)
2	93 (23.6%)	69 (42.3%)	31 (49.2%)
3	17 (4.3%)	4 (2.5%)	0
4A	14 (3.6%)	4 (2.5%)	0
4B	8 (2.0%)	2 (1.2%)	0
4X	5 (1.3%)	2 (1.2%)	0
Subjects with positive screen <i>n [%; 95% CI]</i>	44 [11.2%; 8.4–14.7%]	12 [7.4%; 4.3–12.4%]	0
Lung Cancer Rate <i>n [%; 95% CI]</i>	8 [2.0%; 1.0%–4.0%]	0	0

- Of the 163 subjects who underwent first annual scan (T1), no lung cancers were detected; one patient underwent wedge resection for a PET avid nodule which turned benign; and one patient was diagnosed with tuberculosis
- No positive screens were detected in the 63 subjects who underwent second annual follow up scan (n=63)