

INTRODUCTION

Granulomatous lesions can be found in various diseases, ranging from infections to cancer. Granulomatous lesions in cancer are caused by an immune response to cancer antigens. Granulomatous lesions can also occur as a result of tuberculosis (TB) infection.

Indonesia has the second-highest TB rate in the world. The finding of chronic granulomatous lesions in patients with lung cancer presents a challenge in diagnosis and management. This study reports a series of cases of chronic granulomatous lesions in lung cancer patients.

METHODS

This retrospective observational study reviewed patients based on histopathological results at the National Respiratory Center, Persahabatan Hospital, between 2022 and 2025. The study population included patients with histopathological findings of granulomatous inflammation. There were 16 patients between 2022 and 2025 with biopsy results showing the coexistence of granuloma and lung cancer. Data including age, gender, histologic type of lung cancer, stage of lung cancer, and results of TB examination were collected.

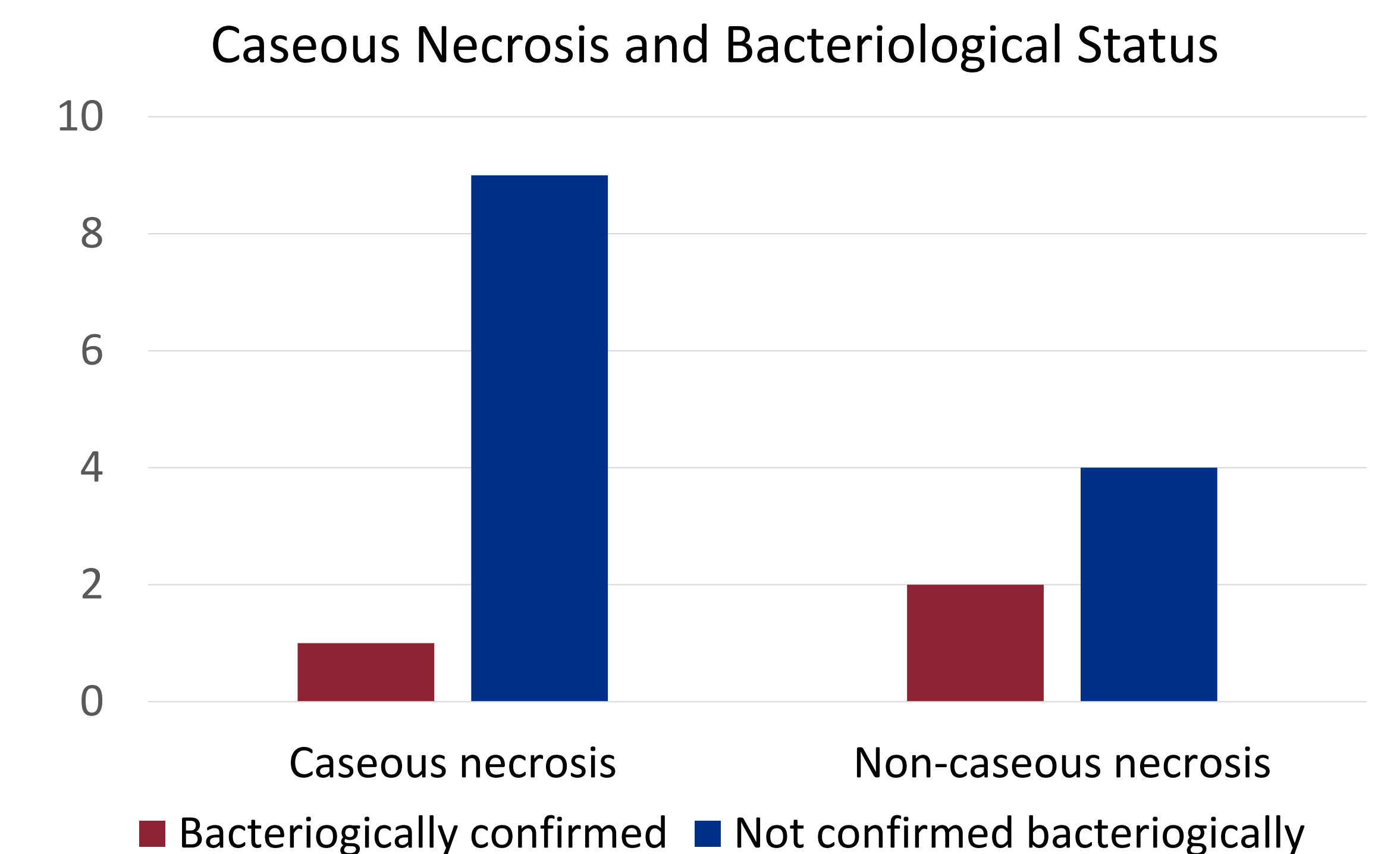
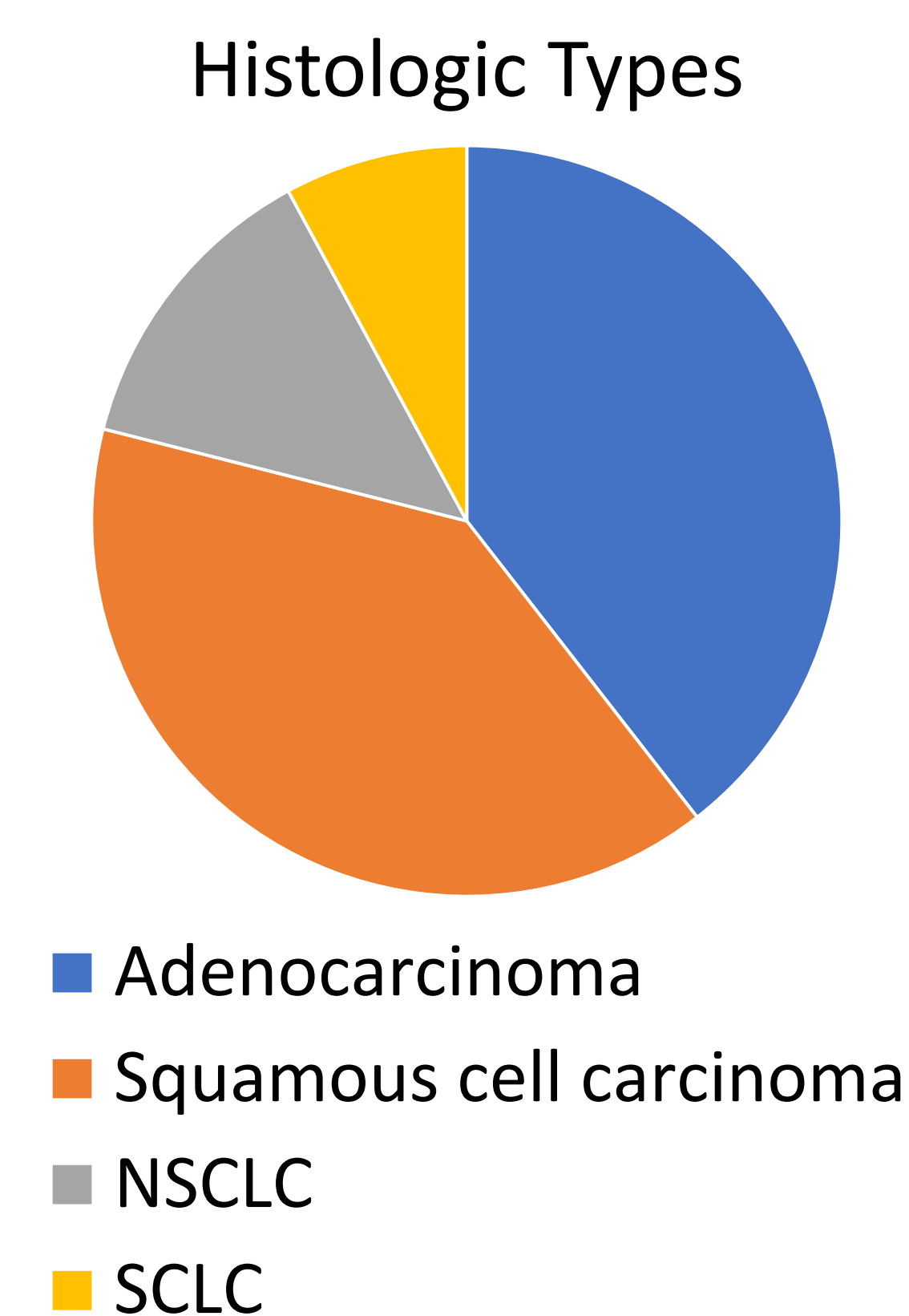
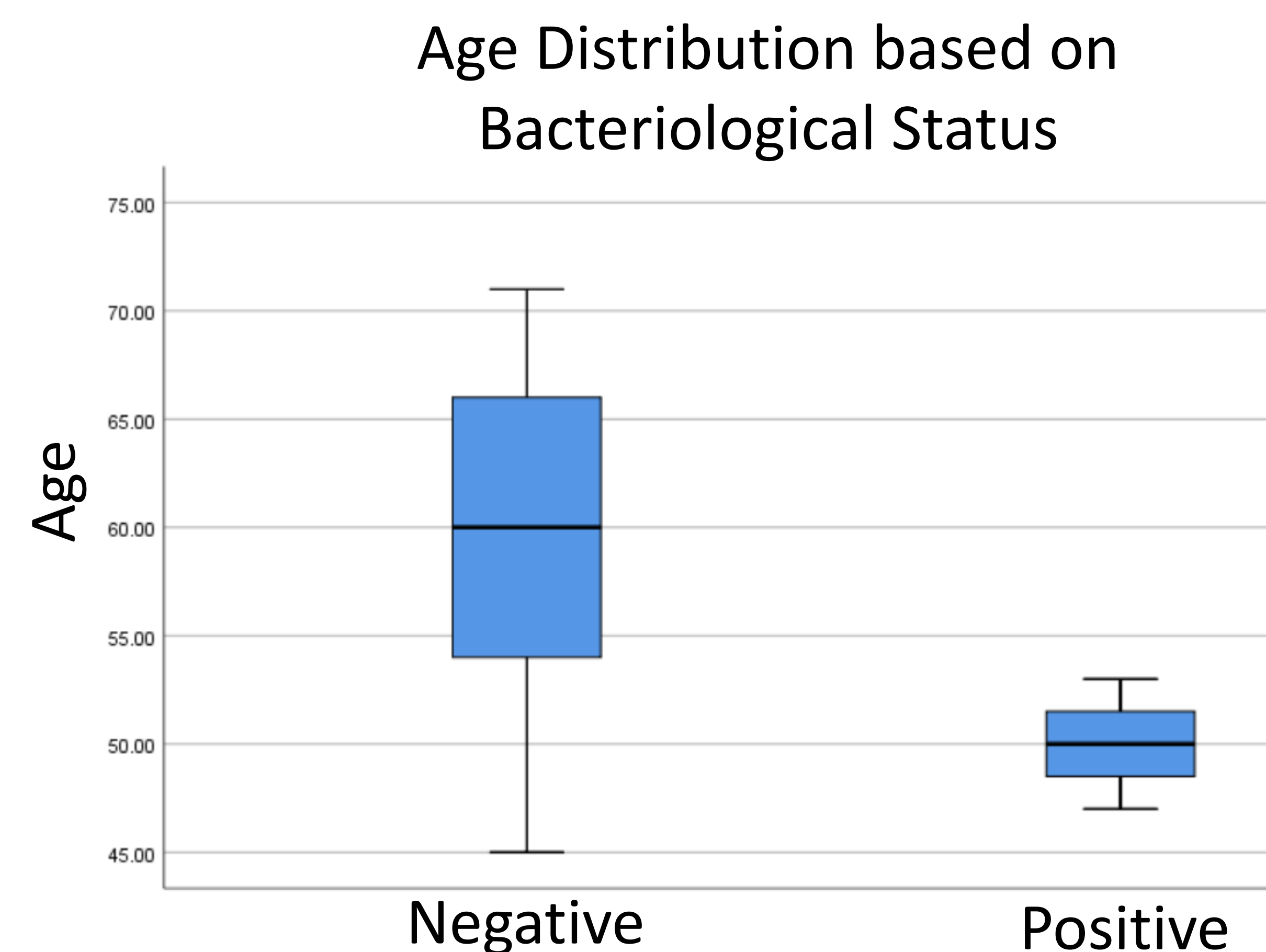
REFERENCES & ACKNOWLEDGEMENTS

Dagaonkar RS, Choong CV, Asmat AB, Ahmed DBA, Chopra A, Lim AYH, et al. Significance of coexistent granulomatous inflammation and lung cancer. *J Clin Pathol*. 2017;70(4):337-41.

Yakar F, Yakar A, Büyükpınarbaşı N, Erelel M. Does every necrotizing granulomatous inflammation identified by NSCLC resection material require treatment? *Med Sci Monit*. 2016;22:1218-22.

RESULTS

- This study included 16 patients with biopsy results showing the coexistence of granuloma and lung cancer.
- The average patient age was 58.0 ± 8.0 years, with the majority being male (81.25%). Bacteriologically positive patients were younger compared to bacteriologically negative patients, although this was not statistically significant ($p = 0.08$).
- The most common histological types in this study were adenocarcinoma and squamous cell carcinoma (37.5% each).
- Almost all patients (15 of 16 patients) were classified as stage 4.
- Bronchoscopy played a crucial role in bacteriological confirmation of TB. Bacteriological results were positive in three patients, and all samples were from bronchial lavages.
- Caseous necrosis in tissue samples does not correlate with bacteriological status ($p = 0,518$)
- Anti-tuberculosis drugs were administered to four patients, although one patient was not bacteriologically confirmed.



DISCUSSION AND CONCLUSION

This study reported that granulomatous lesions can also be found in lung cancer patients. Granulomatous lesions in lung cancer may complicate diagnosis, especially in a country with a high burden of TB. Bacteriological evidence remains the primary diagnostic criterion in TB, ensuring appropriate anti-tuberculosis therapy for lung cancer patients.

Based on these data, the role of bronchoscopy is emphasized, as all bacteriological confirmations were obtained from bronchial lavage samples. These data encourage the use of bronchoscopy as a standard procedure for lung cancer patients, especially in Indonesia.