



#1654: Application of Serum Tumor Markers Combined with CT in Diagnosing Stage IA Lung Cancer: A Retrospective Study

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INTRODUCTION

This study aims to evaluate the value of common serum tumor markers and their combination with chest thin-section CT in the diagnosis of stage IA lung cancer.

METHODS

Retrospective analysis of 335 stage IA lung cancer and 176 benign nodule patients at Anhui Chest Hospital (Jan 2019–Jan 2025). All underwent preoperative testing for CEA, SCCA, NSE, CA125, and CYFRA21-1, plus chest thin-slice CT. Pathology was the gold standard.

DISCUSSION AND CONCLUSION

Individual serum tumor markers have limited diagnostic value in stage IA lung cancer, but combined detection improves positivity, especially in specific histologic types and CT features. However, the diagnostic benefit of combining markers with CT remains modest.

REFERENCES & ACKNOWLEDGEMENTS

Hereby, the authors would like to express their sincere gratitude to all patients who participated in this study. We also thank Anhui Chest Hospital and the Anhui Provincial Health Commission for their support. This study was funded by the Scientific Research Project of Anhui Provincial Health Commission (Grant No.: AHWJ2024BAg30003).

RESULTS

Retrospective analysis of 335 stage IA lung cancer and 176 benign nodule patients at Anhui Chest Hospital (Jan 2019–Jan 2025). All underwent preoperative testing for CEA, SCCA, NSE, CA125, and CYFRA21-1, plus chest thin-slice CT. Pathology was the gold standard.

Results: Individual marker positivity rates in lung cancer ranged from 4.87% to 21.25%, vs. 0.00% to 11.87% in benign group. Only SCCA positivity was significantly higher in lung cancer (11.25% vs. 0.00%, $P=0.018$); other markers showed no significant differences (all $P>0.05$). The five-marker combined positivity rate was significantly higher in lung cancer (38.23% vs. 17.12%, $P=0.003$). Subgroup analysis showed higher positivity in squamous vs. adenocarcinoma (48.43% vs. 37.89%, $P=0.039$), in poorly/moderately vs. well-differentiated tumors (45.54%, 41.45% vs. 23.56%, $P=0.036$), in non-wall-attached vs. wall-attached adenocarcinoma (41.78% vs. 24.54%, $P=0.002$), and in solid vs. subsolid nodules (56.43% vs. 34.56%, $P=0.039$). Positivity rates increased across IA1, IA2, and IA3 subgroups (31.65%, 45.98%, 63.87%; $P=0.006$). Combined detection sensitivity and specificity for stage IA lung cancer were 73.00% and 54.60%, with an AUC of 0.512.

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