

***Analysis of Lung Cancer Risk Factors (C34.9) Based on Inpatient
Medical Records at Persahabatan General Hospital Jakarta***
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ABSTRACT

Lung cancer cases coded as ICD-10 C34.9 at Persahabatan Central General Hospital, Jakarta, ranked first among the ten leading inpatient diseases. The number of cases increased from 643 in 2022 to 1,122 in 2024, accompanied by an increase in mortality from 11 cases in 2023 to 28 cases in 2024. This condition highlights the need to utilize medical record data to identify factors associated with the occurrence of lung cancer. This study aimed to analyze the associations between age, sex, smoking history, exposure to air pollution, asbestos exposure, and hereditary factors with the incidence of lung cancer among hospitalized patients. This study employed an analytic quantitative approach with a case-control design. Data were obtained through observation of electronic medical records of inpatients from January to June 2025. The sample consisted of 160 case records and 160 control records selected using simple random sampling based on the Krejcie and Morgan formula. Data were analyzed using univariate and bivariate analyses with the Chi-square test. The results showed that most patients were aged ≥ 40 years (93.8%), male (66.3%), had a history of smoking (77.5%), had asbestos exposure (35.6%), and had a family history of cancer (15.6%). Bivariate analysis showed significant associations between lung cancer incidence and age ≥ 40 years ($p=0.027$; $OR=2.518$), male sex ($p=0.005$; $OR=1.963$), smoking history ($p=0.001$; $OR=3.444$), asbestos exposure ($p=0.001$; $OR=3.471$), and family history of cancer ($p=0.001$; $OR=7.222$), whereas exposure to air pollution was not statistically significant ($p=0.058$). Based on these findings, it is recommended that routine health education be provided to hospital visitors regarding the risks of lung cancer associated with age ≥ 40 years, male sex, smoking history, asbestos exposure, and family history of cancer. In addition, educational posters should be developed in both printed and digital formats.

Keywords: *Case Control, Lung Cancer, Medical Records, Risk Factors*