The aim of this study was to describe the temporal trend and the spatial distribution of mortality from tracheal, bronchial, and lung cancer in Brazil from 1979 to 2004.

**Methods** Mortality data by gender and geographic region were obtained from the Mortality Database created by the Ministry of Health in 1975. Demographic data were collected from the national censuses, from population counts, and from population estimates made in non-census years. Mortality rates were standardised according to the direct method, and the trends were analysed by gender and geographic region using the Prais-Winsten method for generalised linear regression.

**Results** Lung cancer mortality accounted for approximately 12% of the overall neoplasia-related mortality during the period. There was a trend towards an increase for both genders and in all regions, except for the male population in the southeast region, whose rates remained steady between 1979 and 2004. The highest rates were observed in the south and southeast regions. However, the northeast region was the one that presented the greatest increase, followed by the central-west and north regions. In all regions, the increase in mortality rates was higher in women.

**Conclusion** The increase in lung cancer mortality in Brazil between 1979 and 2004 requires public measures that can minimise exposure to risk factors, mainly tobacco, and allow greater access to healthcare facilities for diagnosis and treatment.