

'J-shape' gradients in which Q2 or Q3 had the lowest mortality were observed. For women aged 60-74 years, increasing trends of mortality were observed in more deprived groups (Q3-Q5). Men over 75 years showed noticeably decreasing trends in mortality, while women showed no decrease. Absolute inequalities in women were smaller than those in men, but relative inequalities showed widening trends for all age groups.

Conclusions: We identified widening area-level gaps in all age groups and stable/increasing trends in lung cancer mortality of the 60-74 year age group.

Key messages: It is important to monitor mortality trends and their gaps of lung cancer mortality among deprivation groups to identify vulnerable subpopulations in order to help tackle the health inequalities.

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Trends in area-level socioeconomic inequalities of lung cancer mortality by age group in Japan: 1995-2014

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Background: During the long-term economic recession, health inequalities have been concerned in Japan. Among cancer mortality rates, the widest socioeconomic inequalities of municipal mortality was observed in lung cancer. Our aim was to examine the trends in the inequality by sex and age group.

Methods: We used the areal deprivation index (ADI) to determine area-level socio-economic position at the municipality level. We calculated age-standardised lung cancer mortality rate by sex, age group (<60/60-74/75+) and ADI quintile group using the vital statistics data. Joinpoint regression models were applied to estimate the average annual percentage changes for the last five years. We also calculated absolute index and relative index of inequalities.

Results: Among men, a clear socioeconomic gradient in lung cancer mortality was observed for all age groups, but among women,