Conclusions Differences previously reported in NC and SC asbestos textile cohorts do not appear to be related to the use of different analytical methods or inclusion criteria.

68 LUNG CANCER MORTALITY IN A COMBINED COHORT OF NORTH CAROLINA AND SOUTH CAROLINA ASBESTOS TEXTILE WORKERS

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Objectives Prior studies of asbestos textile workers in two US cohorts (North Carolina (NC) and South Carolina (SC)) found increased risk of lung cancer mortality with exposure to chrysotile asbestos. The risk, however, appeared to increase more steeply in SC, possibly due to differences in statistical methods and/or cohort definitions. The objective of this study was to investigate the exposure-disease relationship in a combined cohort, using equivalent inclusion criteria and analysis.

Methods Workers were included after 30 days of employment in a production job during qualifying years, and vital status ascertained through 2003 (2001 for SC). Standardised mortality ratios (SMR) were estimated using national and state-specific rates. Associations of lung cancer mortality with cumulative fibre exposures (measured by phase contrast microscopy, lagged 10 years) were estimated by Poisson regression with adjustment for age, sex, race, birth cohort, decade of follow-up, and plant.

Results The cohort included 6136 workers, contributing 218 631 person-years of observation and 3356 deaths. Mortality from all causes and all cancers, especially lung cancer (SMR 1.93, 95% CI 1.73 to 2.15) was significantly higher than expected. The relative rate for lung cancer was 1.11 (95% CI 1.06 to 1.16) at 100 fibre-years/ml compared with 0 fibre-years/ml. Stratification showed different effects in SC (RR 1.65, 95% CI 1.42 to 1.92) than in NC (RR 1.12, 95% CI 1.06 to 1.19).