

# Studio di mortalità in una coorte di lavoratori addetti alla produzione di acido solforico<sup>1,2</sup>

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## KEY WORDS

Sulphuric acid; cancerogens; mortality

## SUMMARY

«*Mortality study in a cohort of workers employed in a plant producing sulphuric acid*». **Background:** In 1992, the International Agency for Research on Cancer (IARC) classified sulphuric acid mists as human carcinogen, based primarily on human data showing increased risk for larynx cancer. Uncertainties still exist about other respiratory cancers. **Objectives:** We carried out a historical mortality study among workers of a plant producing sulphuric acid in Tuscany, Italy. **Methods:** We reconstructed a cohort of 1372 male and 37 female workers with at least one year of employment at the plant in the period 1962-97; 46% of the workers had previously been working in pyrite mines in the area where rocks have a high silica content. Environmental measurements of sulphuric acid and sulphur dioxide from the 1970's were generally below the TLVs. Mortality was investigated as of August 2000; Standardized Mortality Ratios (SMR) were calculated using Tuscany reference rates. **Results:** Overall mortality was below expectation (SMR 77). In labourers, larynx cancer deaths were 4 vs 3.1 expected (SMR 130, 95% CI 35-333), while mortality from lung cancer was below expectation (27/32.8, SMR 82, 95% CI 54-120). An excess of myeloid leukaemia was observed mainly in workers without previous experience in mines (3/0.6, SMR 523, 95% CI 108-1527). Mortality from silicosis, but not from lung cancer, was remarkably high among workers with previous employment in mines. **Conclusions:** Among workers employed in sulphuric acid production, with or without previous experience in mines, we did not observe increased mortality from larynx or lung cancer. The increased mortality from myeloid leukaemia cannot be attributed to any of the exposures documented in the study plant and requires further investigation.