

Incidenza di patologie neoplastiche nei lavoratori del complesso petrolchimico di Porto Torres, 1990-2006

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KEY WORDS

Petrochemical workers; cohort study; lymphoemopoietic cancers

SUMMARY

«*Cancer incidence among petrochemical workers in the Porto Torres industrial area, 1990-2006*». **Background:** Various epidemiological studies explored cancer mortality and incidence among petrochemical workers. We followed up cancer incidence in a cohort of 5350 male petrochemical workers in the industrial area of Porto Torres (Sardinia, Italy). **Material and Methods:** The follow-up covered the period from 01/01/1990, when completeness of the cohort was certain and reference rates by the local Cancer Registry became available, up to 31/12/2006. Cohort members were subjects employed for six months or more in one of the chemical plants of the industrial area, alive as at 01/01/1990. Overall, a total of 81,392 person-years at risk were accumulated. The standardized incidence ratio (sir), as the ratio of observed to expected events, and its 95% confidence interval (CI) were calculated for all cancers and selected cancer sites, in the total cohort and in sub-cohorts of workers in plants where exposure to chemical agents evaluated in the IARC Monographs might have occurred. **Results:** An increase in risk for all cancers was observed in the total cohort (596 cases; sir=1.09; 95% CI 1.00-1.18), and it was highest for non-Hodgkin lymphoma (NHL, 26 cases: sir=1.78; 95% CI 1.22-2.62). Risk for haemolymphatic cancer was highest in the sub-cohort of workers employed for 10 years or more, with a latency period of 20 years or longer, and among those employed in the manufacture and polymerization of vinyl chloride (VCM; all cancers, 51 cases: sir=1.43; 95% CI 1.08-1.88; NHL, 4 cases: sir=4.06; 95% CI 1.64-10.0). Risk of haemolymphatic cancer was not significantly elevated in the sub-cohort potentially exposed to benzene. An excess risk of bladder cancer (RR=1.46; 95% CI 1.09-1.96), but not of pleural cancer, was observed in the sub-cohort potentially exposed to asbestos. No significant increase in cancer risk was observed among workers potentially exposed to acrylonitrile, butadiene, or styrene. **Conclusions:** Our follow-up study of petrochemical workers showed an increase in risk for all cancers, and particularly NHL, apparently concentrated among workers potentially exposed to VCM.