

ese men there was a slight excess risk of lung cancer (SMR = 1.15) and spiratory tuberculosis (SMR = 1.14). Since exposures of 20 fibers/cm<sup>3</sup> e an order of magnitude higher than that experienced now (dust levdlr the past few years have been maintained at less than 2 fibers/cm<sup>3</sup>), ners working a lifetime under the present dust levels are not expected present any significant health problems relative to those in other ning industries.

McDonald *et al.* (1980) have also studied the health statistics of cohort of 440 women who also worked in the Quebec chrysotile asbestos nes and mills. Of the 84 who have died, there was one death due to ng cancer and one due to mesothelioma.

*Crocidolite exposure.* There is persuasive data, much already sur- yed, which shows that crocidolite asbestos is much more hazardous than rysotile, anthophyllite, and amosite. Of the mining populations of e world only those in the crocidolite mining area of the Cape Province : South Africa and at Wittenoon Gorge, Western Australia, have a sta- istically significant increase in mortality due to mesothelioma. Also, :sothelioma deaths have been reported among the residents of these areas o are not employed in the mines or mills. For example, Webster (1978) :ports that the South African Asbestos Tumour Reference Panel placed 712 :ses of mesothelioma on the register, which included all the known cases lnce 1956. Of these, occupational and environmental background was :stablished for 420 cases. Actual mining exposure accounted for 139 of he 420 cases, of which 120 were in connection with Cape crocidolite ining and two with Transvaal crocidolite mining. There were only four esothelioma cases in those associated with amosite mining, and two of hese had been exposed to Cape crocidolite as well. In the chrysotile ining industry there was only one case — a miner from Rhodesia. Of the 00 environmental cases (those not employed in any occupation where :bestos is used), 93 had been exposed to Cape crocidolite, two to Trans- al crocidolite, and one possibly to amosite.

Additional prevalence studies in the Cape Province (Talant *et al.*,

rticular occupational or lifestyle hazard. SMR's are useful to compare :rtal mortality as well as mortality related to a particular disease or :cident provided a proper control cohort can be chosen.

1981) discovered 65 active cases of mesothelioma in people who had pre- sented themselves for medical examination. Fifteen of these cases ap- peared in two groups, numbering 755 and 947 individuals, who were once employed in the crocidolite mines. An additional thirty-eight mesothe- lioma cases appeared in a survey of certain patients at the St. Michael's Hospital in Kuruman, Cope Province, who were not responding to treatment for suspected pulmonary tuberculosis. Fourteen of these mesothelioma patients were known to have worked in the crocidolite asbestos mines. Lastly, 12 of the 65 cases appeared in a medical survey of 53 females who, in the past, had hand-cobbed crocidolite asbestos.

In contrast to the prevalence of mesothelioma in the Cape Province, this disease is very rare in the Transvaal, where all of the world's amosite is mined. Wagner *et al.* (1960), in regard to their initial dis- covery of the association of crocidolite asbestos with mesothelioma, state (p. 260) "the tumour (referring to mesothelioma) is rarely en- countered elsewhere in South Africa. During the past five years, with the exception of the present series (in Cape Province), no neoplasm of this nature has been diagnosed amongst 10,000 lungs examined at the Pneumoconiosis Bureau in Johannesburg, or in the Pathology Department of the South African Institute for Medical Research. Higginson and Octtle (1957) did not observe a single case in their survey of malignant tumours occurring in the Bantu and Cape Coloured population of Johannesburg and the North Eastern Transvaal."

The incidence of mesothelioma in Zimbabwe (Rhodesia), a country which is a major producer of chrysotile but mines no other form of asbestos, is very low. In a communication to Mostert and Meintjes (1979), the Secretary of the Rhodesia Pneumoconiosis Board stated that no cases of mesothelioma were reported in the mining industry. It is of interest to note that two cases of mesothelioma were reported in the Rhodesian railway industry, a locomotive engineer and a storeman. The locomotives were insulated with crocidolite asbestos to which these two men were exposed (Mostert and Meintjes, 1979). Cochrane and Webster (1978) report 12 cases of mesothelioma in men employed as insulators in the locomotive workshops of the South African Railways.

The prevalence of mesothelioma among the miners of Wittenoon Gorge has been discussed (Table 5, Study VI). The town of Wittenoon, the