

LUNG CANCER IN ASBESTOS MINERS

discussions with the physicians in charge of the asbestos companies' programs and with clinicians, pathologists, representatives of City and Provincial health departments and of the Canadian Cancer Society, and other interested persons. It was found that morbidity data, although somewhat limited, were available from such sources as the hospitals in Montreal and Quebec City, and the 13 cancer detection centers in the Province. However, because of the high mortality in lung cancer, it seemed advisable to depend upon data relating to deaths. These we found to be obtainable at the vital statistics department of the Ministry of Health in Quebec City. From the preliminary survey, it was apparent that extensive and detailed information could be gathered with respect to both the persons employed in the asbestos mining industry and the mortality figures for the general population.

Following this exploratory survey, the initial effort was directed to the collection of data relating to all workers who had been processed through the clinic at Thetford Mines since its inception in 1947, and similar information regarding all workers at Asbestos, Que. Data from the clinical records included the age, family and personal medical histories, smoking habits, number of years of exposure, an estimate of weighted exposure, and the course of the individual's health status or the cause of his death.

From this information it was possible to formulate a "cohort" which could be well defined, should be representative of the whole group, and could be followed for a definite period of time. All of the available experience indicates that the development of asbestosis in less than five years of exposure must be somewhat rare. Accordingly, the cohort was defined as including every miner who had a total exposure of five or more years, and who was on the employment rolls in 1950. Office and other nonexposed personnel, regardless of length of employment, were not included. This

cohort was then followed by means of the annual physical examination records through a six-year interval, 1950 through 1955. All data regarding this group were then tabulated in order to determine the characteristics of the cohort. For those who survived the entire period, reference was made to the physical examination results and x-ray findings at the end of the period. Those who had died were tabulated separately, and the cause of death was corroborated by examination of the death certificates. A further search was made concerning those in the original cohort who remained unaccounted for when the living and the known dead had been tabulated. They represent men who had left employment through retirement or resignation. Eventually, all but a small number of these were accounted for as either living or dead, and in the latter event, the cause of death was substantiated in a similar manner, and the results added to the original list of deaths.

Death certificates for the Province of Quebec for the years 1952 to 1955, inclusive, were reviewed in the department of vital statistics of the Provincial Health Ministry, together with statistical summaries of the causes of deaths in the Province by counties. All cases in which death was certified as having been due to primary cancer of the lung were examined for such information as place of residence, occupation, date of death, hospital in which death occurred, and whether or not an autopsy was performed. Cases in which lung cancer was given as a cause of death, but in which it was not specified as to whether the cancer originated in the lung, were also reviewed in an effort to include all instances of primary carcinoma of the lung in the study.

The statistics for the Province of Quebec relate to population, total deaths from all causes, total deaths from cancer of all types, and deaths from lung cancer. These were collected and tabulated by counties and by sex for the years 1950 to 1955, inclusive.