

than 30 years from onset of shipyard employment had abnormal X-rays. This percentage is different from that of unexposed individuals at a $P < 0.02$ (two-sided) level of significance.

It is possible to compare the results of the prevalence of abnormal X-rays among different shipyard populations, 30 years or more from onset of employment. The finding here of 17% more X-ray abnormalities compared to controls among former shipyard workers, employed for an average of five years, is in agreement with studies of the effects of long-term shipyard employment. In a study of ship repair workers, employed for more than 20 years, 87% of the X-rays of those 30 or more years from onset of employment were abnormal (Selikoff, Nicholson, and Lilis, 1980). The percentages of abnormal X-rays in the two groups are approximately in the ratio of the periods of employment.

Evidence of malignancy

In any X-ray screening of a population of this size, it would not be unexpected that a chest malignancy would be identified. Such was the case with one individual in this study. He was referred to the chest service at Mount Sinai Hospital for follow-up diagnosis. His bronchogenic carcinoma was not operable, and while alive two years later, was in poor condition. Parenthetically, at examination his CEA level was 1.3 nanogram/ml and his sputum analysis showed moderate atypia, but no malignant cells present.

PULMONARY FUNCTION TESTS

Principal spirometric tests

Tables 22, 23, 24 and 25 show the mean values of forced vital capacity as a percent of that predicted ($100 \times \text{FVC}/\text{PFVC}$), the forced expiratory volume in 1 second as a percent of forced vital capacity ($100 \times \text{FEV}_1/\text{FVC}$), the forced expiratory volume in 1 second as a percent of that predicted ($100 \times \text{FEV}_1/\text{PFEV}_1$), and the maximal midexpiratory flow between 25% and 75% of forced vital capacity as a percent of that pre-