

schistosomiasis cancer: in individuals 30 to 40 years old). Cryptogenetic cancer of the urinary bladder affects persons more than 50 years old (in about 75 per cent of the cases).

Roentgen-cancer of the skin is another occupational malignancy which frequently involves persons of early middle age (Hesse: 28 to 56 years, average 41.66 years; Hunter: 35 to 50 years; Saunders and Montgomery: 27 to 67 years, average 49.5 years for occupational cancers; and Holthusen and Englmann; 10 to 70 years for therapeutic cancers). A remarkable shift in the age distribution of lung cancer has been noted during the past 60 years in the Schneeberg district, paralleling to some degree the changes which were introduced in the working conditions in these mines. While the average age of the miners dying from pulmonary malignancy, caused evidently by the respiratory contact with radioactive matter, was in 1876 between 40 to 50 years (72.22 per cent died before the age of 50 years), the average age has advanced in recent years to 55 years (range 37 to 69 years). A still more pronounced disregard of the theory of tissue senescence was exhibited by the osteogenic sarcomas observed in luminous dial workers, who were from 20 to 30 years old when they died from their occupational malignancy, entering the hazardous work usually at the age of 18 to 23 years.

The evidence presented supplies convincing proof that the occurrence of cancer during the more advanced periods of life is mainly fortuitous and unrelated to any simultaneously existing senile tissue changes. Cancer appears to be an exposition disease of long duration requiring, in the average individual and under ordinary conditions of exposure to some known or unknown, exogenous or endogenous, carcinogenic agent, a considerable number of years before it becomes manifest. The appearance of cancers at an early age merely indicates that the affected individuals are particularly reactive to some kind of carcinogenic agent, the agent is extraordinarily potent, or the exposure started at an inordinately early period of life. The manifestation age of cancer thus depends upon various factors, such as, age at onset of exposure, intensity and duration of exposure, potency of the carcinogenic agent, and individual susceptibility (Hieger; Seelig and Cooper; Bang; and Deelman). Additional factors of endogenous or exogenous and specific or nonspecific nature are doubtlessly able to accentuate and shorten the developmental precancerous phase (solar rays, photodynamic substances, arsenic, and mechanical and thermic trauma).

2. SEX

The great majority of occupational tumors involves male workers. This condition is attributable to the fact that many more men than women are employed in operations entailing a carcinogenic hazard. While the incidence of industrial or professional malignancy in women is very low, according to the data available, there can be no doubt that this recorded information does