

They occur, moreover, in the peribronchial lymph nodes, within the walls of the sinuses, and embedded in fibrous areas. In the alveoli they are surrounded by phagocytic, mononuclear cells and foreign body giant cells massed especially around the larger bodies. The interstitial tissue shows a diffuse fibrous thickening and scarring. The asbestosis is, thus, an indurative, interstitial, diffuse fibrosis of the lung increasing in degree from the apex to the base.

*Asbestosis and Carcinoma of the Lung.* It is only in very recent years that serious consideration has been given to the possibility of a cancerigenic action of asbestosis upon the lungs. In an analysis of 18,280 death certificates for cancer of the lung and larynx in males from England and Wales from 1921 to 1932, Kennaway and Kennaway did not find any cases of lung cancer in asbestos workers. Since 1935, an appreciable number of cases of asbestosis associated with carcinoma of the lung, have been reported from England, Germany, and the United States (Lynch and Smith; Lynch; Gloyne; Wood; Horning; Nordmann; and Egbert and Geiger). The incidence of lung cancer among workers in whom an asbestosis was found at autopsy is relatively high, ranging from 17 per cent (Nordmann: 2 out of 17 cases) to 20 per cent (Wood: 2 or possibly 3 out of 12 cases). Teleky noted that there exists a minimum of 39 and a maximum of 78 autopsies in fatalities from asbestosis, the records not being clear in this respect. Teleky only knows of 6 cases of pulmonary cancer with asbestosis, and feels that this ratio is high in comparison to the number of necropsies. Koelsch mentioned the occurrence of 12 cases [Lynch (3); Egbert and Geiger (1); Gloyne (2); Dominici (2); Baader (1); Nordmann (2); Wood (3); and Horning (1)]. Lynch and Smith found among 35 autopsies with asbestosis 2 cases of pulmonary malignancy (six per cent), whereas there was an incidence of only 0.3 per cent of this type of neoplasia among approximately 2,300 autopsies of the general population. The period of occupational exposure to asbestos dust ranged for five cases from 7 to 21 years, but in an additional case only a year and a half. In several instances the lung tumor became manifest several years (10 to 12) after cessation of the work in asbestos. Fifteen to twenty-one years elapsed (average, 18 years) between the first exposure to asbestos and the death from asbestosis with carcinoma of the lung. The age at death depended upon the age of the individual at the time of the first exposure. The workers dying in the more advanced age groups entered an occupation with an asbestos hazard later in life, while those who died at an early age started to work in asbestos plants when still young. There was no evidence of a so-called old age predisposition, as two of these cases died at the age of 35 years and a third was 41 years old.

The majority of neoplasms were cornified squamous-cell carcinomas. Only one case was an adenocarcinoma, and a second was an anaplastic, round-cell carcinoma. The latest case reported by Lynch and Smith showed squamous cellular and glandular carcinomatous structures. This numerical distribution between the different histologic types of carcinomas varies distinctly from