

the submucosa, which often shows during more advanced stages a more or less dense lymphoid infiltration and increased vascularity. The tumor cells may vary markedly in type and arrangement. In the majority of tumors of this type, there is a definite resemblance to transitional epithelial cells. The cells grow in rather large, well circumscribed pegs. In other instances the cells are larger and paler staining and show a tendency to undergo liquefaction necrosis, thus producing pseudoglandular and pseudocystoglandular formations, which give the tumor an adenoid appearance. Spinous cell tumors are rare.

Neoplasms with true glandular structure are exceptional. They are usually composed of infiltratively growing tubules lined with high cuboid, low stratified hyperchromatic epithelium. More immature forms are still less frequent.

There occur also tumors of a completely undifferentiated type. The cells are round or oval and grow in large ill-defined masses, which are diffusely infiltrative. Tumors of this type have often a sarcomatoid appearance.

The malignant tumors occasionally observed in kidneys and renal pelves are of either papillary or large nodular structure and usually destroy large parts of the involved kidneys. They metastasize readily and are often very anaplastic.

Among the specimens obtained from human bladders, one of adenocarcinoma of the prostate gland and one of malignant dysontogenetic tumor of the floor of the bladder were included. While Oppenheimer (1926) considered the possibility that carcinoma of the prostate also might result from exposure to aromatic amines, Engel (1937) recently pointed out that such an assumption is unjustified, because carcinoma of the prostate is not more frequent among dye workers than in the general population. Statistical studies, made by Henry, Kennaway and Kennaway, on the death certificates of various groups of industrial workers with an excessive mortality from bladder cancer, showed that cancer of the prostate gland was not associated with these occupations, since only some of the groups had a high mortality rate from cancer of this organ, while others had a low one.

An occupational etiological relation of the dysontogenetic tumor could be construed only if activation of an embryonic tissue anlage by the occupational carcinogenic agent is assumed. This appears to be unlikely.

The histological examination of sections from human and canine tumors with special staining methods did not give any evidence in support of a virus etiology, as inclusion bodies in the tumor cells, especially those with the balloon-like distended cytoplasm, could not be demonstrated.

The various lesions described were distributed among the 125 human specimens studied in the following manner: chronic cystitis in 2; mucous polyps in 8; leukoplakia plus papilloma in 1; papilloma in 34; papilloma plus carcinoma in 10; papillary carcinoma in 23; solid, nodular carcinoma in 33; adenocarcinoma in 1; carcinoma of the renal pelvis in 1; dysontogenetic tumor in