

engineers (900%), gardeners (800%), fishermen (600%), and roofers (500%).

No plausible explanation of this type, on the other hand, could be proposed by Haagensen for the excessive frequency of cutaneous malignancy among janitors, sextons, clergymen, blacksmiths, painters, glaziers, and varnishers, as none of these groups showed an equally extraordinary susceptibility in the English statistics. It is remarkable that occupational groups, such as petroleum workers, and gas house workers, who are notoriously exposed to irritative and carcinogenic agents exhibited in the statistics of Haagensen only a minor or negligible excess of skin cancer (250% and 150%, respectively).

Weiss, reviewing 100,000 cancer deaths which occurred in Baden during a period of 50 years, and analyzing those 12,354 cases which were observed during the ten years preceding 1932 as to the influence of an occupational factor, found the highest liability for contracting cancer in the following occupations: smiths, flour millers, shoemakers, carpenters, brewers, artists, chimney sweeps.

While the number of statistical studies on this subject is much larger, no additional information would be obtained by citing such data. Inasmuch as the basic evidence upon which these investigations are based is taken from death certificates, the conclusions arrived at do not deserve too much trust. The best that can be said for them is that they provide in some respects presumptive and confirmatory evidence, while being unreliable and misleading in others as to the presence or absence of causal interrelationships between general or local cancerigenesis and occupational factors.

A considerable number of sources of potential errors were mentioned above, but the most serious factor depreciating the value of these studies is the use of the death certificates, in which the cause of death is recorded in most instances either on the basis of clinical medical evidence, or, which is worse, on data supplied by lay persons, such as undertakers, coroners, etc. It is a well known and often established fact that the recognition of cancerous growths in such material is often missed (20 to 40 per cent), as is evident from comparisons of the clinical diagnoses with the findings of post-mortem examinations, especially regarding to the cancers of internal organs, inaccessible to direct observation (Wells, Lubarsch, Wolff, and others).

The degree of discrepancy existing between the number of cancers recorded on death certificates and that actually present must have been more marked in former decades than during more recent ones. The reasons for this lie in the appreciable increase of the number of autopsies during this period, as well as in the fact that malignant diseases have lost more and more of the character which caused people to surround these disorders with a sort of "social" silence, and which sometimes induced physicians to falsify the diagnoses recorded in death certificates, in order to spare the feelings of the relatives.