

Hesse; Gutzeit). Such claims (Bordier) may not have considered that the skin does not become increasingly tolerant to roentgen-rays upon continued exposure, but, on the contrary, rapidly more susceptible to their action, which is cumulative (Dohan and Kienböck; Groedel and Lossen).

Constitutional conditions, however, doubtlessly cause variations in individual reactivity to roentgen-rays (Dohan and Kienböck). As an illustration of such individual differences in sensitivity, Fuss cited an observation in connection with the effects produced in three workers engaged in the same type of work under apparently identical conditions. One of these men developed after 6 months of exposure a severe chronic roentgen-dermatitis which ultimately necessitated the amputation of one finger, while the other two technicians showed only minor cutaneous reactions. It may be pointed out that such marked discrepancies in the reactivity of several workers to this or any other occupational carcinogenic agent often are based not so much on constitutional differences, but on variations in working and living habits which sometimes entail considerable differences in the degree of exposure.

XIII. PROGNOSIS

The ultimate prognosis of chronic roentgen- and radium-dermatitis and cancer depends upon various factors (Dible and Morison). It appears to be essential for a good prognosis of chronic roentgen-dermatitis that any further contact with roentgen-rays and radioactive substances shall be eliminated as soon as the first symptoms of a chronic dermatitis are noticed. While there is slight prospect that the changes, once produced, may recede after a prolonged period, they may be kept at least stationary by avoiding any additional contact with the actinic agent. If exposure to the injurious rays ceases early enough, cancer development may not ensue in spite of the presence of burns (Rowntree). Gütig asserted that the timely cessation of exposure may cause a lowering in the degree of malignancy of a tumor which may develop ultimately after a long period of latency (Saunders and Montgomery); Gütig pointed out in this connection that almost all those individuals who continued their professional work after the production of malignant lesions died with a metastasizing carcinoma. The early removal of the precancerous hyperkeratoses and cancers may offer, on the other hand, a relatively fair prognosis, provided that any further contact with the rays is avoided. However, the ultimate prognosis of chronic roentgen-dermatitis and carcinoma remains always uncertain, because of the multiple or even diffuse character of the cutaneous changes, the notoriously long latency period of the malignant manifestations, and the occurrence of late recurrences (Schümann).

In conformity with the factors controlling the ultimate outcome of cancers in general, also that of roentgen-cancers of the skin depends upon their relative tendency to produce metastases in the regionary lymph nodes and in remote organs as well as upon the presence of such secondary deposits at the time