

to present a striking experimental demonstration of carcinogenesis from a traumatically displaced part of the mammary glands, this conclusion can be accepted only with a certain reservation, as it is necessary to consider in this connection the existence of a genetic predisposition to mammary cancer, so frequently met in mice.

Many claims of allegedly traumatic cancers of the breast can be dismissed readily by considering the factors of time, intensity, and location of trauma, and the average growth rate of tumor present. In recognizing a traumatic contributory factor in the genesis of a mammary carcinoma the injury sustained must be sufficiently strong to cause structural changes and hemorrhages in the breast evidenced by the appearance of pain, swelling, and discoloration in the allegedly traumatized part of the breast. The interval between the injury and the manifestation of the neoplasm as well as its size and extent noted at that occasion must be properly correlated with the average growth rate characteristic for the different types of mammary carcinoma. It is not conceivable that a scirrhous carcinoma grows so rapidly that it becomes manifest within a few weeks after the trauma. Adherence to the overlying skin usually does not take place for some months, except in very malignant cancers (Ewing). Generally metastatic lymph nodes in the axilla are not observed in breast cancers of lesser malignancy before the lapse of one year. However, exceptions to these observations are not uncommon. Very small primary tumors of the breast, which are scarcely detectable by physical examination, may produce extensive metastases. The time of actual onset of these neoplasms, before the explosive type of metastization occurs leading to their discovery, is difficult to gauge. While the critical considerations advanced by Ewing are doubtlessly of great value in passing upon traumatic claims, it must be realized that their significance is of circumstantial nature. That in rare cases a traumatic origin of breast cancer must be conceded or appears very probable is admitted even by Ewing as well as Schultz-Brauns.

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