Note to the Editor

An abstract of a paper by Hanhart on the “Surprisingly Slight Importance of Heredity in Cancer as Indicated by Very Frequent Freedom from the Disease among Progeny of 121 Cancerous Married Couples in Canton Glarus”* has recently appeared in Cancer Research (5:189. March 1945). Some comment on the method of analysis employed and the conclusions drawn by the author seems advisable.

In the records of Canton Glarus, Switzerland, the author found 141 instances in which both husband and wife had had cancer. He excluded from these 13 childless couples, and 7 couples all of whose offspring were still under 40 years of age at the time of study. The remaining 121 marital couples had 590 children, of whom 359 were over 40 years old. Offspring who had died of causes other than cancer previous to the time of study were apparently not considered, but the data presented do not permit accurate conclusions on this point. Among the 359 offspring over 40 years old, 41 cases of cancer had already occurred; among the 286 over 50 years old there were 38 cancer cases, or 13.3 per cent. This percentage is compared with the total expectancy of acquiring cancer among males over 45 years old in the city of Zurich, a figure stated to be 21 per cent on the authority of Schinz and Senti (Zürich. Statistischen Nachrichten, 3. 1932). This latter paper is not available to the present writer; one would like to know whether the percentage given is the expectancy of developing cancer or of dying of it (the German word used is “Krebserwartung”—cancer expectation) and whether the mortality rates were resident or recorded, since the latter, in a hospital center such as Zurich, would be considerably higher than the true ones.

Even if one accepts 21 per cent as the normal expectancy in Switzerland of developing cancer from 45 years on, what Hanhart is comparing with it is the accumulated cancer mortality (incidence?) among persons who have already attained various ages over 50, which is a quite different matter. For example, according to the cancer mortality rates for upstate New York, 1939 to 1941, by the time age 50 is reached slightly less than 1 per cent (0.92 per cent) of males will have died of cancer but the expectancy of dying of cancer from age 50 on, for males, is 12.3 per cent. These two probabilities, in the upstate New York statistics, do not equal each other in either sex until the age group 75 to 79 years is reached, and one would expect the Swiss data to be similar.

It is possible that Hanhart’s figure for accumulated cancer incidence (or is it mortality?) among these offspring of cancerous parents is too high because he has failed to count all that were born to these parents. On the other hand, if it is correct it would suggest a higher cancer incidence than normal. At any rate, the analysis as presented is insufficient to determine whether the cancer incidence among these offspring differs from what would be expected, and does not permit any conclusion on this point. Hanhart neglects entirely the fact that the offspring alive at the time of his study had about 15 years more of life (estimated approximately from Swiss life tables) and about half the total average risk of developing cancer yet to go through.

Of 121 marital couples, both of whom died of cancer, in 33 pairs, or 27.3 per cent, both had cancer of the stomach. The average age of these cancerous spouses is given as 66 years. For the years 1911 to 1920 the cancer deaths in the 60 to 69 years age group in Switzerland show 45.7 per cent attributed to stomach cancer in males and 39.7 per cent in females. The product of these probabilities is 18.1 per cent, which is significantly less than the 27.3 per cent concurrence found. This suggests marital association for site of cancer, a possibility which, though not discussed by the author, may merit further consideration by him.

Even more striking is the fact that where both parents had stomach cancer, out of 15 offspring over 40 years of age who developed a malignant tumor the site was also the stomach in 11, or approximately three-fourths. This is stated by the author to be a smaller incidence of stomach cancer than expected! On the contrary, it points strongly to organ selection for localization of cancer in families in which stomach cancer occurred in the parents. This observation would agree with those of Waaler, Wassink, and Deelman.

It is regrettable that basic data as interesting as these, no doubt gathered at considerable labor and expense, should have received analysis insufficient to test the points at issue or to support the conclusions advanced.

MORTON L. LEVIN, M. D.

Note to the Editor

Morton L. Levin

_Cancer Res_ 1945;5:547.

Updated version
Access the most recent version of this article at:
http://cancerres.aacrjournals.org/content/5/9/547.citation

E-mail alerts
Sign up to receive free email-alerts related to this article or journal.

Reprints and Subscriptions
To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at pubs@aacr.org.

Permissions
To request permission to re-use all or part of this article, contact the AACR Publications Department at permissions@aacr.org.