

# Letters

## Cancer Death Risk in Hospitalized Mental Patients

R. M. Roppel (Letters, 4 August, p. 398), in referring to Constance Holden's article on mind-cancer relationship (News and Comment, 23 June, p. 1363), points to "the series of reports which establish that mental patients die of cancer at a rate which is only a fraction of that observed in age- and sex-matched populations," citing Katz *et al.* (1) and Rassidakis *et al.* (2, 3) as the members of that series giving cancer mortality data. He conjectures that there exist data before 1967, his earliest reference. He is right. The earliest data I have seen are those of Buel (4), who reported 1893–1923 statistics. More important, however, is the fact that this issue has been addressed many times—for example, Scheffen (5) reviews ten studies, Perrin and Pierce (6) review those and 11 more, all done before 1959; I have dealt with the issue briefly (7, p. 88) and, with Howell, examined alternative hypotheses (8). Perhaps, except for omission of more recent epidemiological findings on nutrition, occupation, geography, and social factors, Scheffen's (5) and Perrin and Pierce's (6) reviews provide the best available analyses of the issue. But even they fail to deal with several potential methodological biases.

Those reviews deal with proportionate mortality and absolute mortality rates. In the former, percent of deaths due to cancer among mental patients and percent in a control group, usually the population, are compared; in the latter, absolute death rates in an age-adjusted or age-specific cancer patient group and those of a control group are compared. Use of proportionate mortality usually leads to error unless very special statistical conditions obtain. Perrin and Pierce examined a series of nine studies using proportionate mortality that drew the conclusion of reduced cancer mortality in mental patients, and another series of eight studies using absolute death rate, seven of which drew the opposite conclusion of increased cancer mortality. In the eighth, the author explains the lower cancer death rate among the patients by the difference between the population base rate which should have been used, that is, that of the Southern states, where most

of the patients were born and raised, and that of New York City, whose base rate was actually used (9). This explanation sounds reasonable. The North-South difference has persisted to the present (10). Of the nine studies, four had data permitting calculation of an absolute mortality rate. With that technique, those studies showed an excess cancer mortality. They also reviewed four other studies with no control groups. Thus, when the appropriate analysis was used for those data, in every study examined except one, where the reason for the exception is clear, cancer mortality was greater than the population value, not less.

Rassidakis *et al.* (2) used proportionate mortality without age adjustment in examining the data for two hospitals. In acknowledging the problem, they compared rates for "other common causes of death" in the case group with those in the population, finding the two equal, thus implying equality for death rates due to all causes, and consequent validity of the proportionate mortality method (else why cite the "other common causes of death"?). They chose "randomly" deaths from cardiovascular diseases, diabetes, and tuberculosis to show this. Unfortunately their choice did not include any of the very causes of death that make for bias in this method, for example, suicide, alcoholism, and cerebrovascular disease. In the second paper they did use age-specific death frequencies (3). However, no word is given on several matters that can influence relative risk findings profoundly: the proportion of autopsies in the case and population groups (11); cause-of-death coding; inclusion of patients with existing cancer on hospitalization; the criteria for cancer diagnosis (were brain tumors or sarcomas included?); the proportions of various categories of mental disease (12); and length of time in the hospital. Scheffen (5) discusses some of these matters compellingly.

Roppel cites Katz *et al.* (1) to show that after 10 years of hospitalization, cancer death rates for mental patients are lower than those for the population. Neither Katz *et al.* nor Roppel expand on the interesting fact that in patients below 64 years of age the male cohort showed this only after 14 years, and that in females, except for those older than

64, cancer death rate remained *above* the population rate no matter how long they were hospitalized.

These findings—the low mortality rates for some age-sex groups and the high rates for others, as well as most of the mortality data relating to the distribution of death rates for various cancer sites—can be explained on the basis of the methodological and statistical matters mentioned above, together with certain others that Howell and I cited (8), as well as the highly pertinent one of lowered total food intake mentioned by Katz *et al.* (1, 13).

It would be interesting to discover why the outcome of the absolute mortality study by Rassidakis *et al.* (3) differs from the findings of practically all of the studies analyzed by this more accurate method, namely that cancer mortality for mental patients is greater overall than in the population. This includes the findings by Katz *et al.* (1). It would further be interesting to find out why Katz *et al.* found no deaths from brain and nervous system cancer when the percentage of autopsied brain tumors ranged from 1.0 percent to 6.1 percent in 11 different studies (a twelfth was excluded for cause), with an average of 2.9 percent (11). Of 3365 patients in the study by Katz *et al.*, 98 would have had brain tumors. Of these, about half would have been undiagnosed clinically (11). It would be very odd if none of the discovered 50 or so brain tumors were listed as cause of death, even subtracting out the benign tumors. Scheffen's cautions may well be applicable here (5, 14).

Among the hypotheses listed by Roppel, perhaps this one should be explored intensively: "There are also the possibilities of actual exclusion between psychoses and cancer on the basis of some factor in the hospital environment . . .," but I suggest that "factor" should be plural, and that he should add past environmental history of patients and methodological controls and hospital practices. Although he says he knows of no evidence to favor any hypothesis over any other, there is considerable evidence for the quoted hypothesis, with the noted additions.

Roppel supports the holistic view espoused by Holden's article; I join him in his support.

BERNARD H. FOX

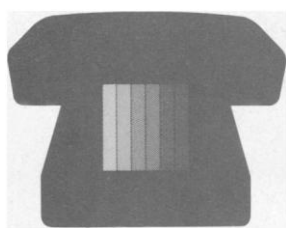
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## References and Notes

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2. N. C. Rassidakis, M. Kelepouris, S. Fox, *Int. Ment. Health Res. Newslett.* 13 (No. 2), 6 (1971).

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6. G. M. Perrin and I. R. Pierce, *Psychosom. Med.* 21, 397 (1959).
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10. T. J. Mason and F. W. McKay, *U.S. Cancer Mortality by County: 1950-1969* (Government Printing Office, Washington, D.C., 1974).
11. M. Klotz, *Psychiatr. Q.* 31, 669 (1957).
12. H. M. Babigian, E. A. Gardner, H. C. Miles, J. Romano, *Am. J. Psychiatry* 121, 895 (1965); M. Kramer, *ibid.* 125 (No. 10, Suppl.) (1969).
13. J. W. Berg, in *Persons at High Risk of Cancer*, J. F. Fraumeni, Jr., Ed. (Academic Press, New York, 1975), p. 213.
14. Robert Patton, one of the coauthors of the Katz *et al.* paper (1), told me that in most New York State mental hospitals during those years, 20 to 30 percent of deaths were autopsied, and in some as many as 50 percent.

## International Cancer Congress: AAAS Clearinghouse

The AAAS Clearinghouse on Persecuted Foreign Scientists serves as a conduit for information about and advocacy on behalf of members of the scientific community in foreign countries whose human rights and/or scientific freedoms have been violated. The Clearinghouse is a project of the Committee on Scientific Freedom and Responsibility, established in 1976 by the AAAS, and is chartered to maintain an awareness of actions of foreign governments which circumvent scientific freedom.

The National Academy of Sciences (NAS) has requested the Clearinghouse to assist participants in the International Cancer Congress, to be held in Buenos Aires, Argentina, from 5 to 11 October 1978, who wish to express their human rights concerns while in Argentina. The human rights problem in Argentina has been a concern of both NAS and the AAAS for some time. Christian Anfinson and Robert Perry visited Argentina in mid-March of 1978 as representatives of the NAS to report on the state of science and human rights. In their report, issued 24 April 1978, they conclude that "the situation for science is adversely affected by the state of human rights in Argentina. Concern for personal safety, the continued practice of arbitrary dismissal from scientific posts, the substantial number of scientists who have disappeared and about whom the governmental authorities profess no knowledge, are clear violations of human rights." Further, Emilio Q. Daddario visited Argentina in December 1977, as president of AAAS, and in his report stated that "the preemptive actions of the state security forces have, with a few

exceptions, made a shambles of scientific freedom in Argentina."

In view of the existence of a pattern of human rights violations affecting scientists in Argentina, an international boycott of the Congress has been initiated, and a counter-congress in Paris is planned to coincide with the Congress in Argentina. It is the position of the AAAS and NAS that participation in the International Cancer Congress should be a matter of individual choice. While we respect the concerns of our fellow scientists who are planning to boycott the Congress, we feel an alternative to the boycott is the act of participating in the Congress and using the opportunity to make representations to Argentine authorities on behalf of scientists whose human rights have been abridged. Some may choose a boycott, others may wish to go and express their human rights concerns, while still others will choose to participate and not be involved in the issue of human rights. Naturally, it is for you to determine what course to pursue.

It is not our purpose to provoke a confrontation with the Argentine authorities or to censure their actions. Rather, our purpose is to express the depth of U.S. scientists' concern for the loss of human rights and scientific freedom in Argentina and to explore new openings for moderating and restoring conditions under which scientists and scholars could return to work without fear of arbitrary arrest or dismissal. Furthermore, we seek to petition for identification of those individuals who are still imprisoned without charge and of those who have disappeared, and for the reinstatement of constitutional rights of due process.

Should you desire to express your human rights concerns while in Argentina, our Clearinghouse office is available to assist you in several ways. First, we can supply background information on the situation in Argentina, including the on-site visit reports issued by NAS and the AAAS. Further, we are in the process of arranging for groups of Congress attendees to visit with Argentine officials and private human rights groups in order that their concerns might be expressed during the meeting in Buenos Aires.

We welcome any comments or suggestions. Please do not hesitate to write, or phone the Clearinghouse office at 202-467-5237.

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