



University of Pittsburgh
Graduate School of Public Health

August 7, 1981

Dr. Susan Austin
Union Carbide Corporation
Medical Department
270 Park Avenue
New York, NY 10017

Dear Susan:

I have looked at your latest draft of the mortality study of petrol chemical workers. I think it is pretty good. My specific comments are as follows:

1. You should indicate clearly when you talk about significance that you mean statistical significance.
2. When you give expected number of deaths give the number that appear in the tables rather than rounding them.
3. Be sure that in each paragraph that deals with a specific table you discuss the same elements discussed earlier in similar tables. On page 9 something should be said about benign and unspecific neoplasm since these are clearly in excess.
4. Be sure when you present a contrast in the table, as in Tables 3, 4 and 5, that the discussion deals with that contrast. For example on Table 3 less than 6 months should be contrasted with 6 months or more, etc.
5. I think your discussion sounds a bit biased. If you believe that latency is necessary to produce brain cancer, for example, there is no point in emphasizing the overall excesses. On the other hand, you did not discuss the fact that had it not been for an unusual experience at Texas City the study would have never been done. Thus the study was pretty certain to find an excess. Consider how many plants are in operation and the probability that at least one would have an excess of brain cancer by chance alone. I don't think the brain cancers at Texas City that were the reason for the study can be used in the conclusions. I could only be proven wrong if the case

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control study r v als some common exposure, or if brain cancer shows up in a number of other chemical plants. Given 40 chemical plants, how ver, at any one time one should show a statistically significant excess and on a statistically significant deficit for any select d cause of death.

I hope these comments will be helpful. Best regards.

Sincerely,



Philip E. Enterline
Professor and Chairman
Dept. of Biostatistics

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