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MAR 30 1982
T. E. LAWRENCE

UNION CARBIDE CORPORATION OLD RIDGEBURY ROAD, DANBURY, CT 06817

To (Name)	R. W. Holland, M.D.	Date	March 29, 1982
Division		Originating Dept.	HS & EA
Location	So. Chas.	Area	Epidemiology
Area		Subject	North Charleston Cancer Study
Copy to	J. B. Browning T. E. Lawrence T. A. Lincoln, M.D.		

Dear Rubin,

I am writing in response to your request that Corporate Epidemiology review and comment on the study performed by the Department of Health of the State of West Virginia entitled "North Charleston Cancer, Mortality, 1970-79."

In general, I feel that any formal study of a sample of only ten deaths from such a small population is inappropriate. In this study, the problem of a small sample size is compounded by use of crude, unverified population estimates and proportionate mortality rather than population based mortality rates. The ten observed and 5.36 expected deaths reported in this study is of borderline statistical significance to begin with which reduces to even less significance when the many methodological problems are considered.

The distribution by cause of the ten cancer deaths is unremarkable. Cancers of the respiratory and digestive system are leading causes of cancer mortality in both males and females and represent seventy percent of the sample. Including cancers of the breast, the most common form of cancer in women, accounts for 90% of the deaths. Therefore, it would appear that this sample reflects a typical distribution of cancer deaths rather than one which suggests a special problem.

Finally, failure to consider and report certain risk factors for those ten cases is a major shortcoming. How many of these people lived in the N. Charleston area for at least 20 years? How many were smokers; what were their occupations? Without this information this study is simply an uninformative exercise in statistical methodology and sheds little light on the question of excess risk attributable to air pollutants.

Because of the high level of sensitivity that this type of study generates, I think we should communicate our concerns regarding the methods used in this study to the Department of Health and offer them our assistance and support in any future attempts to resolve this problem. If I can be of assistance, please contact me.

Sincerely,

SG Austin

Susan G. Austin, Sc.D.
Corporate Director of Epidemiology

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