

**ASSESSMENT OF RISK FROM EXPOSURE
TO DIESEL ENGINE EMISSIONS**

Prepared by

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CONCLUSIONS

No relationship between measures of diesel exposure and lung cancer mortality is demonstrated in this study. However, there are many limitations in using the data on markers of diesel exposure collected by Woskie *et al.* (1988a) and Hammond *et al.* (1988) to estimate exposures in the cohort of railroad workers studied by Garshick *et al.* (1988). These limitations are potentially of sufficient magnitude to obscure any relationship between exposure to DE and lung cancer that may exist in the cohort.



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Dear Dr. Chen:

We would like to further summarize the work we have done to investigate a possible exposure-response relationship between diesel exhaust and lung cancer in the retrospective cohort database (1). Dr. Kenny Crump has also raised several excellent issues that we wish to discuss.

In summary, there appears to be an effect of diesel exposure on lung cancer mortality. The additional work carried out under this contact did provide additional insight into the data base previously reported but fundamentally did not alter conclusions of previous reports. Furthermore, because of weaknesses in exposure ascertainment that includes lack of knowledge of the exact dates of when exposure actually occurred, lack of knowledge of the changing intensities of exposure, and exposure indices that likely do not reflect true differences between exposed and unexposed groups, the nature of the exposure-response relationship could not be found in this study. Plans are in progress to follow-up this mortality study with a study designed to provide at least 10 more years of follow-up information.

Sincerely yours,

Eric Garshick, M.D.