

Ed Van
R. Levitt

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Cancer Deaths Held Work-Related

FEDERAL HEALTH investigators say the brain cancer deaths of 18 workers at a Texas petrochemical plant apparently were work-related, but plant officials claim more investigation is needed to prove the chemical-cancer link. "A preliminary estimate reveals a plant-wide excess brain cancer risk twice that expected among 6,800 white males at the plant since 1941," investigators said after reviewing deaths at a Union Carbide petrochemical plant in Texas City, Texas, between 1956 and 1980. Dr. Victor Alexander of the Occupational Safety and Health Administration released the results of investigations by federal health sleuths at the opening session of a three-day New York Academy of Sciences workshop on brain tumors in the chemical industry.

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Petrochemical Tumors: Industry Rebuts Linkage

Chemical industry researchers last week rebutted assertions by government and union experts that there may be a link between petrochemicals and brain cancers reported in workers involved in petrochemical manufacture.

Describing a case control study of brain tumor deaths among workers at Dow's Freeport, Tex., petrochemical complex, Gregory G. Bond, a company epidemiologist asserted there is no apparent association between having held a job assignment in any particular department or process area and subsequent death from brain tumor.

"While there is a weak association with employment in a magnesium production department, this does not suggest any chemical agent which could be causally related," he said.

Dr. Bond said, however, that there was

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a "striking" association between tumor deaths and employment of the deceased workers who were first hired between 1940 and 1946.

But he added that "while it is generally assumed that hygienic conditions within the chemical industry in the early 1940's were quite different than they are presently, the lack of a common documented work experience among the cases did not allow us to implicate a particular process area or chemical."

Dr. Bond presented his findings to a seminar on brain tumors in the chemical industry held under the auspices of the New York Academy of Sciences last week.

Among other experimental brain carcinogens cited at the meeting were: vinyl chloride, acrylonitrile, diethyl and dimethyl sulfates, and propylene imine.

Participants in the seminar last week sharply disputed the methodologies used to assess the relationship, if any between petrochemical plant environments and brain cancer.

One example of a methodological difference is the use of proportionate mortality ratio (PMR) as opposed to the use of standardized mortality ratio (SMR) analysis. According to Gulf Science & Technology's Chi-Pang Wen, PMR inflates the estimated risk of cancer when the study group has a lower mortality rate for all causes of death.

Dr. Weng described a study of 19,352 workers at a "full service" Texas refinery. The study found, he said, that deaths from malignant tumors of all kinds were no more than would be expected in the general population.

The thirty brain cancers that were reported for the whole group were also no more than would be expected from the experience of the general population, he said.

Similar conclusions were reached in a study of brain cancer in the duPont Company carried out by Bruce W. Karrh and Sidney Pell, both corporate medical experts.