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 **Long-Term Health Experience of Jet Engine Manufacturing Workers: I. Mortality From Central Nervous System Neoplasms.**

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OBJECTIVE:: In response to an unusual occurrence of glioblastoma at one jet engine manufacturing facility located in North Haven (NH), Connecticut (CT), we examined mortality rates from central nervous system (CNS) neoplasms at NH and seven other company facilities. METHODS:: Subjects were 223,894 workers ever employed in one or more of the company's eight CT manufacturing facilities from 1952 to 2001. Vital status was determined through 2004 for 99% of subjects and cause of death for 95% of 68,701 deaths. We computed standardized mortality ratios (SMRs) based on US and CT state rates and modeled internal relative risks (RRs). RESULTS:: State comparisons revealed overall deficits in deaths from all CNS neoplasms (606 deaths, SMR = 0.84, confidence interval [CI] = 0.78 to 0.91), including all malignant (462 deaths, SMR = 0.87, CI = 0.79 to 0.95), all benign (23 deaths, SMR = 0.65, CI = 0.41 to 0.98), and all unspecified (121 deaths, SMR = 0.79, CI = 0.65 to 0.94). Not statistically significant excesses in deaths from all malignant brain neoplasms were found among subjects who worked only at NH (49 deaths, SMR = 1.11, CI = 0.82 to 1.47) or partly at NH (24 deaths, SMR = 1.04, CI = 0.67 to 1.55) compared with deficits in non-NH plant groups. In the combined NH plant groups, we found not statistically significant higher risks of malignant brain neoplasms for salaried workers, older hires and the most recent time period, but no association with duration of employment or time since first employment. CONCLUSIONS:: Total cohort mortality rates for malignant, benign or unspecified CNS neoplasms were not elevated relative to the US and CT general populations. The malignant brain neoplasm excesses in certain subgroups of workers from NH may reflect external occupational factors, nonoccupational factors or workplace factors unique to NH that were not measured in the current study. We will explore reasons for the NH excesses and examine specific types of brain neoplasms (eg, glioblastoma) in our companion cancer incidence, case-control and exposure assessment studies.

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