Exposure assessment for retrospective follow-up studies of semiconductor- and storage device-manufacturing workers.

OBJECTIVE: This exposure assessment was conducted in the first large study of mortality and cancer incidence in semiconductor and storage device manufacturing.

METHODS: Unique combinations of division, department and job codes and names (DDj) from work history records were assigned to work groups and exposure categories. Agent exposure matrices assessed differences in potential exposures between groups. Changes in exposure over time were tracked by dividing the production history into manufacturing eras.

RESULTS: Nineteen work groups were developed to capture 310,351 unique DDJs from 1965-1999. Agent exposure matrices contrasted exposure potential to solvents, metals, and work in cleanrooms between groups, and three manufacturing eras were identified for each site.

CONCLUSIONS: The work groups, manufacturing eras and agent matrices have been used to classify workers in the study of cancer incidence and mortality.