

**Summary of Investigation into the Occurrence of Cancer
Bastrop, Bell, Brazos, Burleson, Falls, Lee, Milam,
Robertson, Travis, and Williamson Counties, Texas
1993–2002
August 8, 2005**

Background:

A presentation to the Community Advisory Panel to Alcoa Rockdale Operations (CAPARO) regarding cancer incidence and mortality in Texas prompted the Texas Cancer Registry (TCR) Branch of the Texas Department of State Health Services (DSHS) to examine the occurrence of cancer in Bastrop, Bell, Brazos, Burleson, Falls, Lee, Milam, Robertson, Travis, and Williamson Counties. The TCR evaluated 1995–2002 incidence data and 1993–2002 mortality data for cancers of the lung and bronchus, colon and rectum, male bladder, female breast, prostate, corpus and uterus, non-Hodgkin's lymphoma, larynx, stomach, pancreas, and kidney and renal pelvis. The cancers include the leading cancers in Texas, as well as lung, bladder, and stomach cancers have been associated in the scientific literature with miners exposed to lignite. Pancreatic, laryngeal, and kidney cancers have been associated with workers exposed to aluminum smelters. Incidence data are the best indicator of the occurrence of cancer in an area because they show how many cancers were diagnosed each year. Cancer mortality data are used as a supplemental measure and are complete for the entire state through 2002. The rest of this report examines the investigative methods the TCR used, the results of the investigation, recommendations, and general information on cancer risk factors.

Methodology:

According to the National Cancer Institute, a cancer cluster is a greater than expected number of cancers among people who live or work in the same area and who develop or die from the same cancer within a short time of each other. The cancer cluster investigation is the primary tool used by the TCR to investigate the possibility of excess cancer in a community. The cancer cluster investigation cannot determine that cancer was associated with or caused by environmental or other risk factors. Instead, the cancer cluster investigation is specifically intended to address the question "Is there an excess of cancer in the area or population of concern?"

The TCR follows guidelines recommended by the Centers for Disease Control and Prevention for investigating cancer clusters¹ and often works with the DSHS Environmental and Injury Epidemiology and Toxicology Branch, as well as other state and federal agencies. In order to determine if an excess of cancer is occurring and if further study is recommended, biologic and epidemiologic evidence are considered. Such evidence may include documented exposures; the toxicity of the exposures; plausible routes by which exposures can reach people (ingesting, touching, breathing); the actual amount of exposure to the people which can lead to absorption in the body; the time from exposure to development of cancer; the statistical significance of the findings; the magnitude of the effect observed; risk factors; and the consistency of the findings over time. The occurrence of rare cancers or unlikely cancers in certain age groups may also indicate a cluster needing further study.

