

# TENNESSEE

Tennessee Cancer Registry (TCR); Sumeda Abeykoon (TCR Intern);  
Dr. Martin Whiteside

## Greene County Cancer Cluster Investigation

# NATIONAL PROGRAM OF CANCER REGISTRIES SUCCESS STORY

**SUMMARY:** Over the last few years, the TCR has hosted a number of interns that have enabled the TCR to complete requested cancer cluster investigations despite the severe limitation of qualified epidemiologic staff to complete such investigations. The TCR collaborated with the Northeast TN Department of Health Regional Office on a potential cluster investigation reported to them by a concerned citizen. The concern was related to a U.S. Nitrogen facility located in the county. We performed our analysis at the census tract level. We used the chi-square statistical procedure, calculated age-adjusted rates and performed hot spot analysis using Arc-GIS. Chi-square statistical analyses yielded no significant findings between adjacent census tracts or to Greene County as a whole or Sullivan County. Calculation of age-adjusted rates yielded only two statistically significant results: one involving higher rates of lung cancer for the referent tract compared to Sullivan County and the second for higher rates of bladder cancer in the referent tract versus another census tract. All other analyses were not statistically significant. Hot spot analysis yielded only one hot spot located in southwestern Sullivan County. Conclusively, these results do not support the presence of a cancer cluster in the census tract of the U.S. Nitrogen facility. This was a successful collaboration between the TN Department of Health's central office and the Northeast TN Regional Office.

**CHALLENGE:** The main challenges are two-fold: insufficient epidemiologic staff at the TCR and training an intern in the public health practice of performing a cluster investigation.

**SOLUTION:** The solution to the first challenge of insufficient staff is to collaborate with academic centers locally to host interns. In this case, the TCR hosted a master's level biostatistics student needing to complete a course practicum. A solution to the second challenge of training an intern is having a standardized assortment of training materials already on-hand to provide to the intern for training purposes. These materials are very extensive and usually take the intern one to two weeks to completely digest.

**RESULTS:** Interns are a good resource for completing important projects in low-resource environments, while at the same time allowing the intern to complete course requirements and apply didactic information in a practical setting.

**SUSTAINING SUCCESS:** TCR staff will continue to partner with local academic centers allowing students to complete internships at the TN Department of Health's TCR. Therefore, the TCR will host at least one intern per year that will enable the TCR to complete at least one important project that would otherwise be difficult given current staffing levels.

