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North Carolina Central Cancer Registry
Updated Report
May 6, 2013

This report is updated based on cases reported to the North Carolina Central Cancer Registry (CCR) as of 04/30/2013, diagnosed during 1990 – 2012, address at the time of diagnosis in North Carolina and diagnosis codes as reflected in the pathology and medical reports reported from the hospitals and facilities. Further, cases diagnosed out of the country but may be receiving treatment in facilities in North Carolina are not included as they are not required to be reported. The CCR does not have real time data because it takes hospitals at least six months after the diagnosis of a malignancy to submit cancer diagnosis reports. The reason for this is that, per General Statute 130A-209, CCR requires facilities to report complete first course of treatment data and many cases have an extended period of first course treatment. The patient may have surgery, followed by multiple courses of chemotherapy, followed by radiation therapy. In order to obtain complete and accurate data from the facilities there is a lag time of at least six months. For some cases, CCR receives multiple reports from different facilities, which are reviewed and consolidated on an ongoing basis. CCR continues to receive reports from the hospitals for cases diagnosed in 2011, 2012 and prior years and will start processing reports for cases diagnosed in 2013 after June 2013.

In order to evaluate the overall cancer risk in Wake County, all of the cases of cancer reported to the CCR from 1990 to 2012 were identified. During this time a total of 56,503 cancer cases were diagnosed in Wake County. Across the county, the four major cancers - female breast, colon/rectum, prostate, and lung - comprised 56% of the 56,503 cases. Pediatric cancers comprised 1% of the total number of cases and 79% of the cases were age 50 or older, when cancer diagnoses are quite common. During this period, it is noted that the number of diagnosed cases have gradually increased for all cancer types but the cases are not concentrated in a short period of time.

Further, we looked at the 2006-2010 age-adjusted cancer rates for Wake County and compared it with the state rates and found that the cancer rates for Wake County for female breast and prostate cancers were relatively higher than the state rate, while the rates for colorectal and lung/bronchus cancers were relatively lower than the state rate.

Since concern was expressed over diagnosis of Ewing's sarcoma, in order to evaluate the risk of this cancer in Wake County, all of the cases of cancer in our database diagnosed and reported as Ewing's sarcoma based on histology code 9260 from 1990 to 2012 were identified. During this period, out of the 316 cases diagnosed in the state, 23 cases were diagnosed in Wake County. These cases were spread out and not concentrated in any year. For the five year period from 2008-2012, there were 92 cases diagnosed in the state and 11 out of these cases were diagnosed in Wake County.

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We also evaluated Ewing's sarcoma family of tumors (ESFT) in North Carolina and Wake County based on the definition from the National Cancer Institute¹ and our cancer registrars (i.e., histology codes: 9260, 9364, 9365, 9473). Using this definition, between 1990 and 2012, there were 514 cases of Ewing's sarcoma family of tumors diagnosed in North Carolina and 37 in Wake County. According to the National Cancer Institute's website, the annual age-adjusted incidence rate for Ewing's sarcoma is about 3 per million in the United States.² The 2010 age-adjusted rate of Ewing's sarcoma in North Carolina was similar to the national rate. Between 1990 and 2012, there were 1,849 cases in North Carolina and 117 cases in Wake County diagnosed with a primary site code of C41 (cancers of the bone, joints and articular cartilage of other and unspecified sites) along with the histology codes for Ewing's sarcoma.

In addition, we also examined the geographical distribution according to addresses the requester provided and found that there were fewer than five cases in the neighborhood, based on the diagnosis and the address at the time of diagnosis reported from the reporting facility. Between 2008 and 2012, most of the Ewing's sarcoma cases based on histology code 9260, occurred in the following counties of North Carolina: Wake (11; 12%), Guilford (6; 7%), and fewer than five cases in the following counties: Mecklenburg, Alamance, Cumberland, and Durham. The rest of the cases were spread out over the state. Overall, we did not observe any excess of cancer during this period or this particular type of cancer, although we agree the number of cases identified in the requester's school is cause for additional inquiry.

The CCR will collaborate with staff in the Office of Environmental Epidemiology (OEE) section and Wake County Health Department to investigate further.

References:

1. Denise R. Lewis and Lynn A. Gloeckler Ries. Chapter 10-Cancers of the Bone and Joint: SEER Survival Monograph. National Cancer Institute. Web address: http://seer.cancer.gov/publications/survival/surv_bone_joint.pdf Accessed: May 03, 2013.
2. Ewing Sarcoma Treatment-General Information. National Cancer Institute. Web address: <http://www.cancer.gov/cancertopics/pdq/treatment/ewings/HealthProfessional/page1#Reference1.14> Accessed: May 03, 2013.