

Department of Epidemiology and Biostatistics Biostatistics Seminar

Thursday, April 17, 2014
12:00pm - 1:00pm -- WG73

“Tumors of the Pituitary: Is Incidence Rising?”

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Abstract: The pituitary gland is an endocrine gland that is essential for proper functioning of several homeostatic mechanisms. Pituitary tumors are abnormal growths that develop in the pituitary gland. They are generally benign, slow growing tumors. The Central Brain Tumor Registry of the United States (CBTRUS) contains the larger aggregation of population-based data on the incidence of primary CNS tumors in the United States. These data were used to determine the incidence of tumors of the pituitary and associated trends between 2004 and 2009. Using incidence data from 49 population-based state cancer registries, 2004-2009, age-adjusted incidence rates per 100,000 population for tumors of the pituitary with ICD-O-3 histology codes 8040, 8140, 8146, 8260, 8270, 8271, 8272, 8280, 8281, 8290, 8300, 8310, 8323, 9492 (site C75.1 only), and 9582 were calculated by gender, race, Hispanic ethnicity, and age at diagnosis. Corresponding Annual Percent Change (APC) scores and 95% confidence intervals to characterize trends in incidence rates over time using Joinpoint were also calculated. Diagnostic confirmation by sub-region of the United States was also examined.

We found that the overall annual incidence rate increased from 2.52 in 2004 to 3.13 in 2009 with an associated time trend of APC = 4.25 (2.91, 5.61). When stratifying by age at diagnosis, the incidence of pituitary tumor is highest for those 65 to 74 years of age and lowest for those 15 to 24 years of age with corresponding overall age-adjusted rates of 6.39 and 1.56, respectively. In this large cohort of subjects with pituitary tumors reported between 2004 and 2009, the incidence of pituitary tumors is found to increase. The main question is: Is this increased incidence real?