CANCER INCIDENCE AND STAGING AMONG AMERICAN INDIANS IN OKLAHOMA, 2005-2009
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Introduction: Cancer is a serious cause of morbidity and mortality in the US and in Oklahoma. Disparities exist in incidence of cancer between American Indians and Alaska Natives (AI/ANs) and whites. The purpose of this study is to describe cancer among AI/ANs in Oklahoma.

Methods: Age-adjusted incidence rates obtained from OK2SHARE are presented for all cancer sites combined and for the most common cancer sites among AI/AN populations. These were compared to the rates of the white populations in Oklahoma from 2005 to 2009. Percentages of late stage cancers for breast, colorectal, and melanoma cancers are also presented.

Results: When accounting for misclassification, AI/ANs had a significantly higher overall cancer incidence rate than whites (629.8/100,000 vs. 503.3/100,000) with a rate ratio of 1.25 (95% CI: 1.22, 1.28). Females had an increased rate ratio between AI/ANs and whites at 1.31 (95% CI: 1.27, 1.35) compared to males at 1.19 (95% CI: 1.15, 1.23).

The percentage of late stage breast cancer from 2007 to 2009 was 31.0% for whites and 34.2% for AI/ANs, although the difference was not significant. For colorectal cancer, the percentage of late stage was also not significantly different between whites and AI/ANs, at 54.9% and 58.2%, respectively. There was a significant disparity in the percentage of late stage melanoma cancers between 2005 and 2009, with 14.0% late stage melanoma for whites and 20.0% for AI/ANs (p-value: 0.03).

Among 36 specific sites, 21 had rate ratios that were higher among AI/ANs compared to whites. Prostate cancer was the most commonly diagnosed cancer among both AI/ANs and whites. The rate ratio was significantly different at 1.10 (95% CI: 1.01, 1.16), with AI/ANs having a significantly higher incidence rate. Colorectal cancer also displayed a significantly higher rate among AI/ANs with a rate ratio of 1.50 (95% CI: 1.37, 1.58). Other primary sites demonstrating large disparities between the two populations included: kidney and renal pelvis (RR: 1.90, 95% CI: 1.70, 2.10), liver and bile duct (RR: 2.21, 95% CI: 1.84, 2.58), stomach (RR: 2.02, 95% CI: 1.63, 2.41) and gallbladder (RR: 3.40, 95% CI: 2.20, 4.60).

Discussion: Overall, we see disparities between AI/ANs and whites in Oklahoma similar to or greater than those seen in the US overall. Incidence rates were higher and stage at diagnosis was often worse for AI/ANs compared to whites. While the age-adjusted incidence rate was lower in females compared to males in both whites and AI/ANs, the rate was higher in AI/ANs compared to whites for both genders, with females having a higher rate ratio suggesting there is a larger racial disparity among females. AI/ANs had a significantly higher rate ratio for breast, colon and rectal, cervix uteri, kidney and renal pelvis, leukemia, lung and bronchus, non-Hodgkin lymphoma, prostate, and pancreatic cancer. AI/ANs had a significantly lower rate ratio than whites for bladder and melanomas of the skin.