Gender Differences in Oral Cavity Cancers

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Introduction. Oral cavity and oropharyngeal cancer combined is the 6th most common malignancy globally causing over 150,000 deaths in 2020. Oral cavity cancer affects males with a 3:1 prevalence. An increased incidence was observed in women in regions of India, the United States, and the Asia-Pacific, without association with traditional tobacco or alcohol risk factors. This has not been described yet in Kansas.

Methods. The dataset included patients treated for head and neck cancer at The University of Kansas Department of Radiation Oncology from 2019-2024. Variables included gender, subsite, alcohol/tobacco use, race, and age at diagnosis. Data were collected through Epic and stored in REDCap®.

Results. 426 of the 591 (72.0%) head and neck cancers were in males. 45% of subsites in females were in the oral cavity while 51% in males were in the oropharynx. The female:male ratio at the oral cavity subsite was 3.30:1 and at the oropharynx subsite was 0.45:1. Variables of race, alcohol, and tobacco were statistically insignificant.

Conclusions. Head and neck cancers were more common in males. The oral cavity subsite had a female predominance, and the oropharynx subsite had a male predominance. The most common subsite in females was the oral cavity and in males was the oropharynx. No differences within race or risk factors were seen. Limitations include an incomplete data set and only using patients undergoing radiation treatment. Future studies could include patients undergoing non-radiation treatment, a more complete data set, and target specific factors such as HPV or PD-L1 expression.