An HPV-associated cancer is a specific cellular type of cancer that is diagnosed in a part of the body where HPV (Human Papilloma Virus) is often found. These parts of the body include the cervix, vagina, vulva, penis, anus, rectum, and oropharynx (back of the throat, including the base of the tongue and tonsils). According to the CDC, each year there are about 34,800 new cancer cases caused by HPV in the United States.

Vulvar and Vaginal cancers are considered as rare cancers. About 70% of these cancers are caused by HPV. It is estimated that 259 females in North Carolina will be diagnosed with Vaginal and Vulvar cancer and 58 females will die of Vaginal and Vulvar cancer in 2020.

From 2013 to 2017, the age-adjusted incidence rate for Vaginal and Vulvar cancer in North Carolina was 3.7 per 100,000 persons per year. Hispanic females have the highest incidence rate for Vaginal and Vulvar cancer (Figure 2).

From 2013 to 2017, Hispanic females had the highest percentage of cases of Vaginal and Vulvar cancer (Figure 3).

The percentage of cases of Vaginal and Vulvar cancer from 2013 to 2017 is displayed by age group in Figure 1. About 7.2 percent of Vaginal and Vulvar cancer cases were diagnosed in people younger than 45.

The age-adjusted mortality rate of Vaginal and Vulvar cancer from 2013 to 2017 was 0.8 per 100,000 people per year. When comparing Vaginal and Vulvar cancer rates by race and ethnicity, Hispanic females have the highest mortality rate (Figure 6).

From 2013 to 2017, Vaginal and Vulvar cancer mortality rates have been stable for white and minority females (Figure 7).

**Data Sources and Methods**

Data on North Carolina cases were obtained from the North Carolina Central Cancer Registry (CCR). Hospitals are the primary source of data. The CCR supplements hospital data with reports from physicians who diagnose cases in a non-hospital setting. The CCR also collects data from pathology laboratories and freestanding treatment centers. Data on cancer deaths were obtained from Statistical Services in the State Center for Health Statistics. Population data from the National Center for Health Statistics were used in the denominators of the rates, which are expressed per 100,000 people. Rates were age-adjusted using the 2000 United States Census data. To examine trends, three-year overlapping rates were used to improve stability over time. Stage at diagnosis was defined according to Surveillance, Epidemiology, and End Results Summary Stage guidelines as in situ, localized, regional, and unknown/NA. For further information about the North Carolina CCR, visit www.schs.state.nc.us/units/ccr/.

* According to the National Cancer Institute (NCI), *many cancer registries, such as NCI’s Surveillance, Epidemiology, and End Results Program (SEER) use summary staging. This system is used for all types of cancer. It groups cancer cases into five main categories: In situ—Abnormal cells are present only in the layer of cells in which they developed. Localized—Cancer is limited to the organ in which it began, without evidence of spread. Regional—Cancer has spread beyond the primary site to nearby lymph nodes or organs and tissues. Distant—Cancer has spread from the primary site to distant organs or distant lymph nodes. Unknown—There is not enough information to determine the stage.* Additional information on staging can be found at https://www.cancer.gov/about-cancer/diagnosis-staging/staging.