Cancer remains one of the leading causes of morbidity and mortality in the US, with significant disparities observed across different racial and ethnic groups. Cancer incidence among the African American population in Louisiana has raised critical public health concerns, particularly regarding disparities between genders and across different parishes. African Americans, already burdened with higher cancer rates compared to other racial and ethnic groups, face additional challenges in Louisiana, which ranks fourth in cancer incidence among U.S. states. From 2016 to 2020, the African American population in Louisiana experienced higher average annual cancer rates compared to their white counterparts, with an incidence rate of 486.3 cases per 100,000 people, according to the LSU Health, New Orleans. These disparities highlight the urgent need to investigate the underlying factors contributing to this elevated cancer burden. Our study aims to investigate the top five most commonly diagnosed cancers in Louisiana’s African American population during the 2016–2020 period, with a focus on gender-based differences and geographical distribution across parishes. By exploring the variation in cancer trends, we seek to identify the cancers of greatest concern for African American population, as well as the regions most affected by these diagnoses. This will be accomplished through the analysis of Louisiana cancer data from 2016-2020, released by LSU Health, New Orleans, which covers cancer cases by site, race, sex, and parish. Python will be used for data analysis, with the Pandas library facilitating data manipulation and cleaning, and Seaborn and Matplotlib employed for visualizations. For the African American population, Iberville Parish had the highest average annual cancer incidence rate, with 780.5 cases per 100,000 individuals from 2016 to 2020. Among cancer types, the digestive system was the most prevalent for both males and females, accounting for 21.8% of the total cancer incidence. For males, cancers of the male genital system were the most common, representing 34.9% of the total cancer incidence in African American males. For females, breast cancer was the most prevalent, comprising 31.8% of the total cancer incidence among African American females. Our research will also analyze some underlying factors contributing to the high cancer rates in the African-American population, including access to healthcare, socioeconomic conditions, and environmental influences. We hope that our findings will help create better public health strategies and improve access to healthcare for African American communities in Louisiana.