Introduction:

What inspired me to pursue this capstone project?

Breast Cancer is in my family and for us, we are fortunate that my cousin was able to have access to the medical treatment and her cancer is now in remission.

However, I realized that not a lot of women and families can share the same experience as my family in having a member survive breast cancer.

My primary goal of my capstone project is to continue to bring awareness to the importance of combating breast cancer deaths amongst our female population.

Currently, the best way to find breast cancer for most women is through a mammogram, according to the American Cancer Society (ACS).

The ACS recommends women aged 40 to 44 should get mammogram screenings at least one a year and annual screenings for women aged 45 to 49.

For this project, I wanted to look at the mortality rates of women by county within Tennessee and the number of FDA approve mammograph facilities and see if there is a correlation to having access to these facilities for possible screening.

So, for counties that have a higher death rate, how many FDA approve mammograph facilities are located within the county?

In addition, I also wanted to look at another additional factor, such as insurance, that could possibly play a contributing factor to a higher death rate.

Dataset:

Breast Cancer Death Rates by County are from the State Cancer Profile site.

The data compile looks at death rates by County during the 2016-2020 timeframe. However, the data set did have it some limitations due to data suppression. Data has been suppressed to ensure confidentiality and stability of rate estimates. Counts are suppressed if fewer than 16 records were reported in a specific area-sex-race category.

Due to the data suppression, it was quite difficulty to get a more defined looked at the death rates by races. Initially, I wanted to look and compare mortality rates amongst white, black, and brown women to highlight some of the healthcare disparities within our community, but due to how the data is suppressed, I am not able to paint that full picture for this project.

So, I had to switch gears and change my focus to look at mortality rates amongst all women in Tennessee.

The Insurance coverage was provided from the US Census Bureau and the location of FDA approved Mammograph facilities came from the FDA. Gov website.

Technologies: Python and Tableau

Analysis:

1. **Which counties had the highest BC death rates**
   1. Crockett County - 31.9
   2. Unicoi County - 31.7
   3. Scott County - 31.3
   4. Weakley County - 31.1
   5. Grundy County - 30.9
   6. Henderson County - 29.7
   7. Tipton County - 29.6
   8. Lauderdale County - 29.4
   9. Union County - 27.3
   10. Dickson County - 27.2
   11. Shelby County - 27
   12. Hickman County - 26.7
   13. Chester County - 26.6
   14. Morgan County - 26.5
   15. Cheatham County - 25.9

So in looking into these counties with the highest death rate, I wanted to see how many FDA Mammogram facilities are located within these counties?

1. Which counties had the lowest BC death rates
   1. Roane County -14.6
   2. Hardin County - 15
   3. Greene County - 15
   4. Carter County - 16
   5. Franklin County - 16.9
   6. Fayette County - 16.9
   7. Maury County - 17.4
   8. Robertson County - 17.7
   9. Henry County - 18.6
   10. Jefferson County -18.7
   11. Rhea County - 19
   12. Blount County - 19.1
   13. Knox County - 19.3
   14. Montgomery County - 19.4
   15. Cocke County - 19.4