

# TRENDS IN COLORECTAL CANCER INCIDENCE RATES IN GEORGIA BETWEEN 2000-2012

Subhendu De, Wonsuk Yoo

Institute of Public and Preventative Health (IPPH), Georgia Regents University  
On Summer Public Health Scholars Program (SPHSP)

## ABSTRACT

### Background

Colorectal cancer (CRC) incidence rates and mortality have been decreasing in the United States. Currently, states in the South have the smallest reduction in CRC mortality. The trends of CRC incidence rates in Georgia in comparison to the United States have not been investigated.

### Methods

We analyzed age-adjusted incidence rates of CRC in Georgia and the United States from 2000 to 2012 using data from Surveillance, Epidemiology, and End Results (SEER) 18 registries. Age-adjusted incidence rates (95% Confidence Interval) were calculated as cases per 100,000 to the 2000 US Standard population. CRC incidence rates were calculated for groupings based on age at time of diagnosis, race, sex, and geographic location within Georgia.

### Results

Incidence rates were higher in males compared to females in Georgia. In Georgians age 50-64, incidence rates were higher compared to the US, while those age 65+ displayed lower incidence rates. Black Georgians over 50 exhibited higher incidence rates of CRC and lower rates of decrease in incidence compared to other races in Georgia. White and black Georgians age 50-64 displayed higher incidence rates compared to the US, while Asian/Pacific Islanders Georgians displayed lower incidence rates. Greater incidence rates of CRC in rural and Greater Georgia were seen across all races when compared to overall rates in Georgia.

### Conclusion

Efforts should be made to address disparities in Georgia based on race and geographic location. Increased screening by colonoscopy, reduction of colorectal cancer (CRC) is one of the major public health interventions in the United States, with estimates of 132,700 new cases and 49,700 deaths occurring in 2015.

Overall incidence rates have been decreasing since the 1980s due to increased use of screening procedures and removal of pre-cancerous polyps.

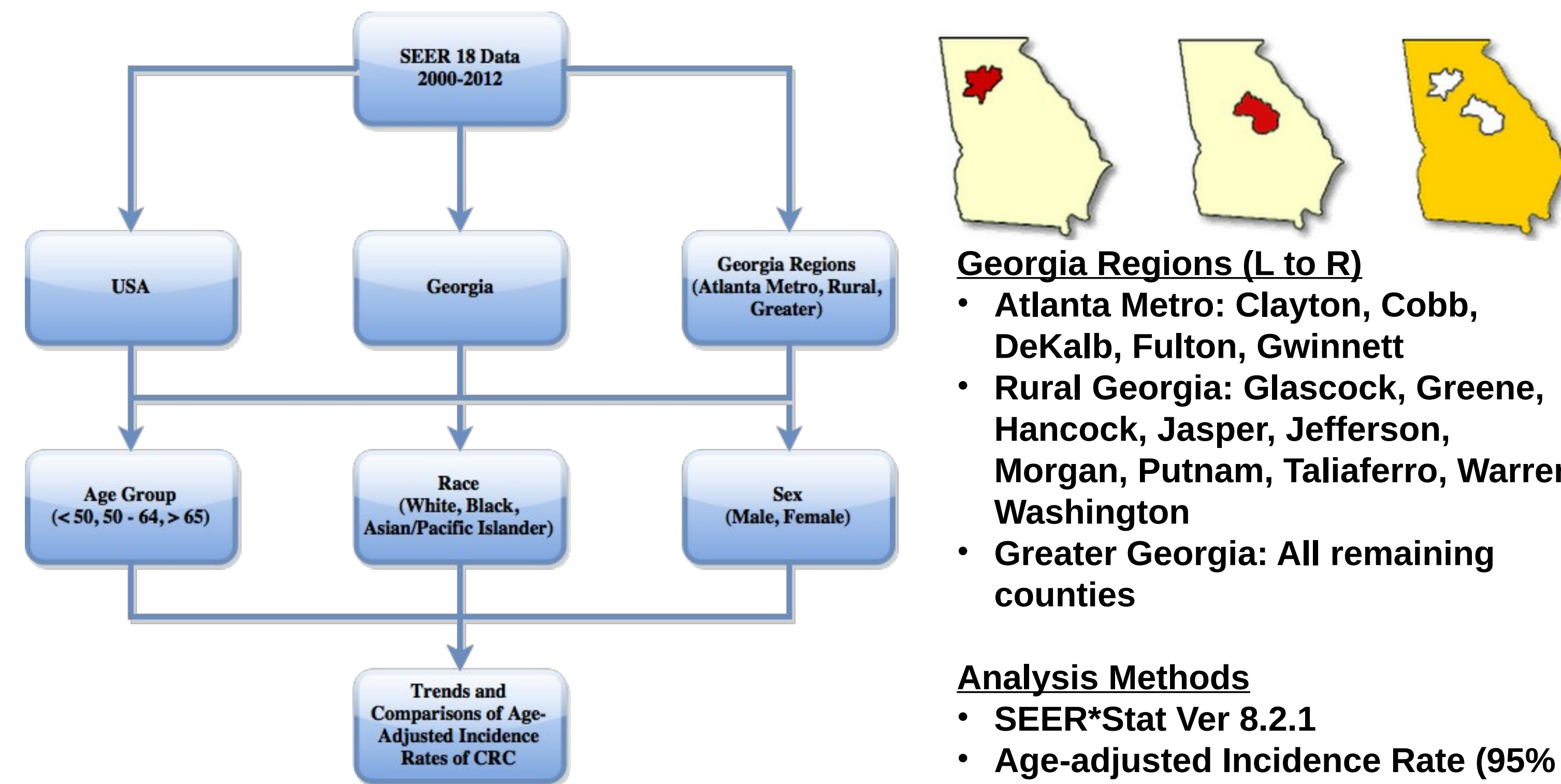
Risk factors for CRC include lifestyle factors such as diet, obesity, and smoking, and family history. Overall, the Southern United States, including Georgia, suffer from higher incidence and mortality rates from CRC.

As far as we know, there is a shortage of published literatures to investigate the trends of CRC incidence rates in Georgia.

### Specific Aims

1. Identify trends in CRC incidence rates in Georgia compared to the United States
2. Identify differences in CRC incidence rates in Georgia based on age, race, and gender
3. Identify differences in CRC incidence rates based on geographic location in Georgia

## METHODS



## RESULTS

Figure 1. Trends of Age-Adjusted Incidence Rate of CRC Based on Sex in US and GA, 2000-2012

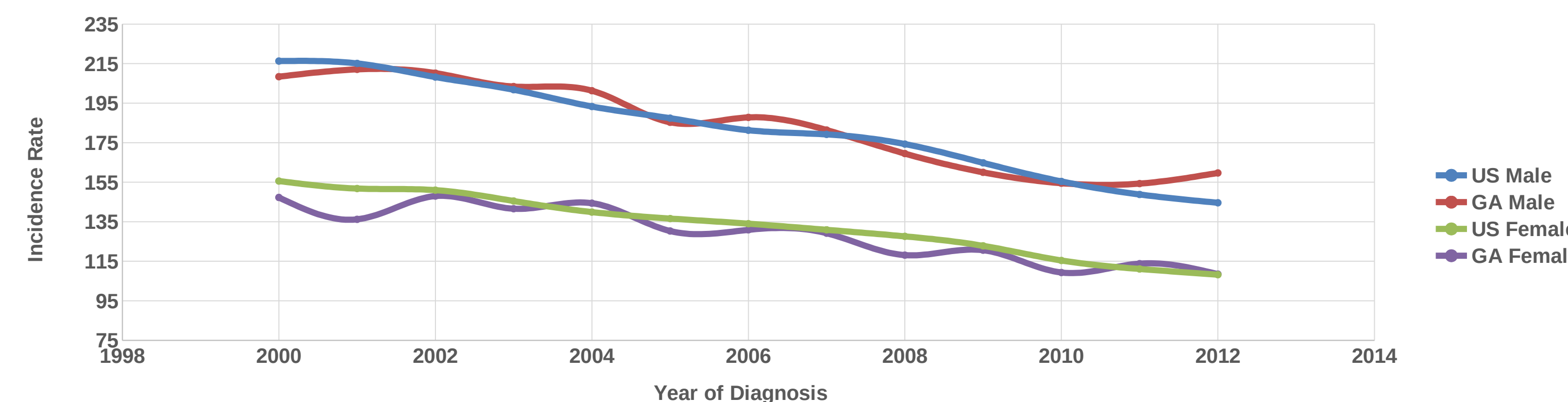
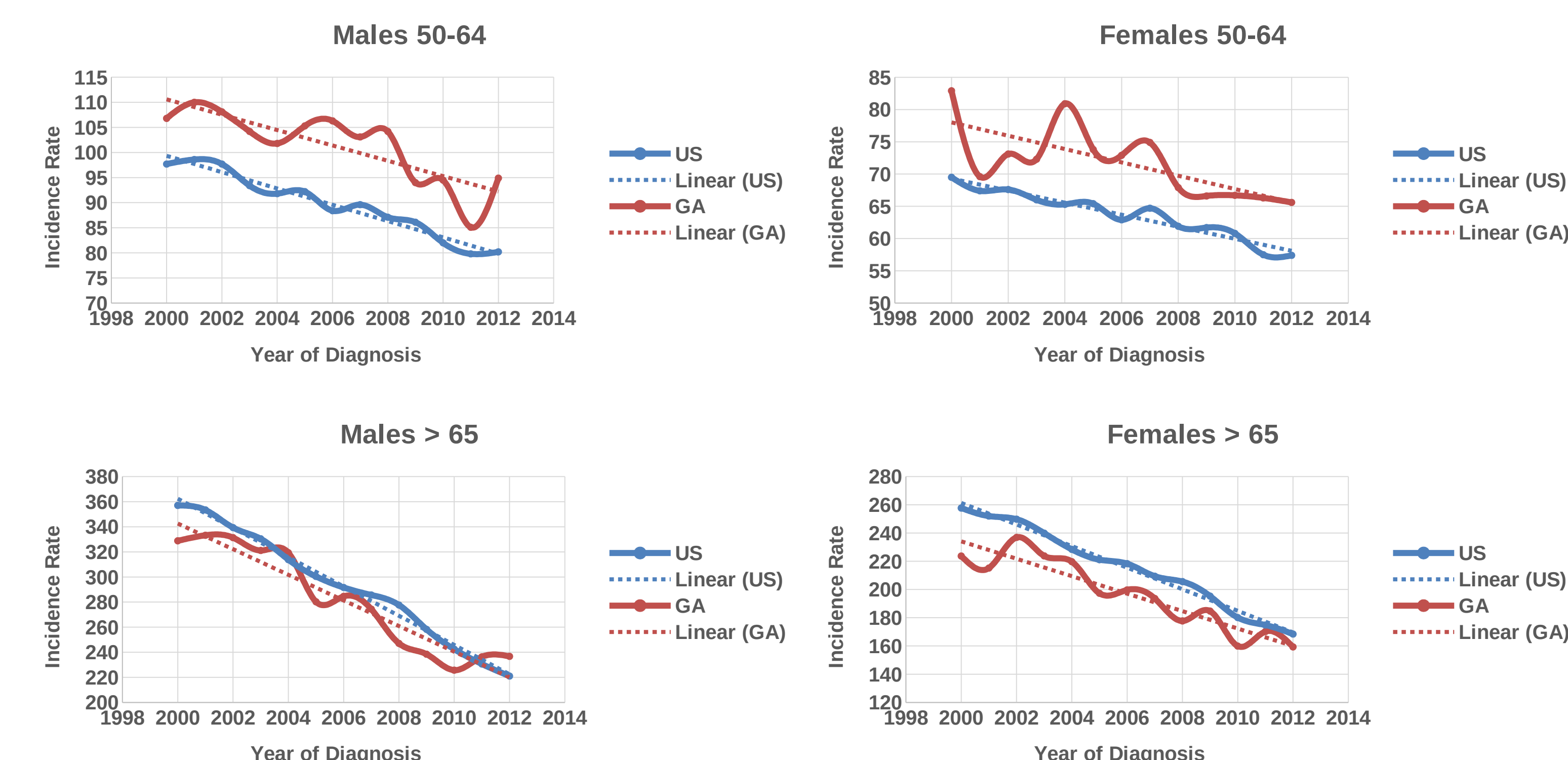


Figure 2. Trends of Age-Adjusted Incidence Rate of CRC Based on Age in US and GA, 2000-2012



## RESULTS

Figure 3. Trends of Age-Adjusted Incidence Rate of CRC Based on Race in GA, 2000-2012

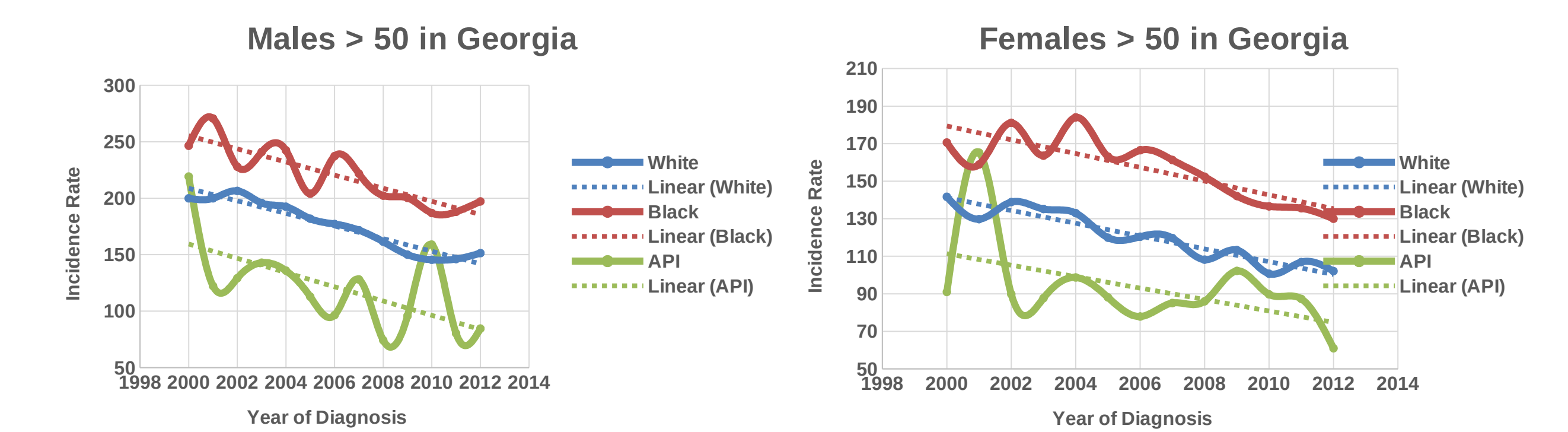


Figure 4. Comparison of Age-Adjusted Incidence Rate of CRC Based on Age and Race in US and GA

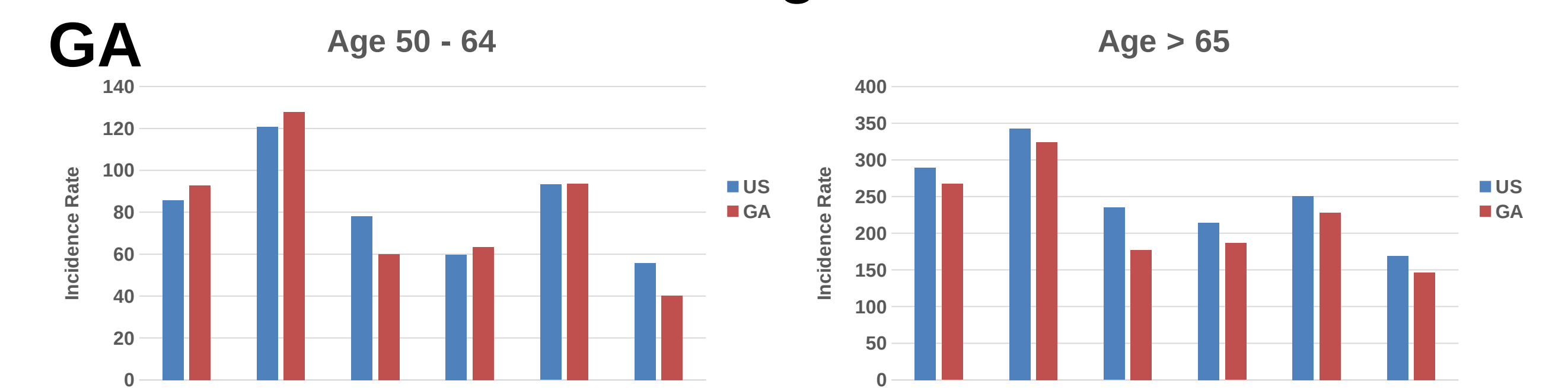
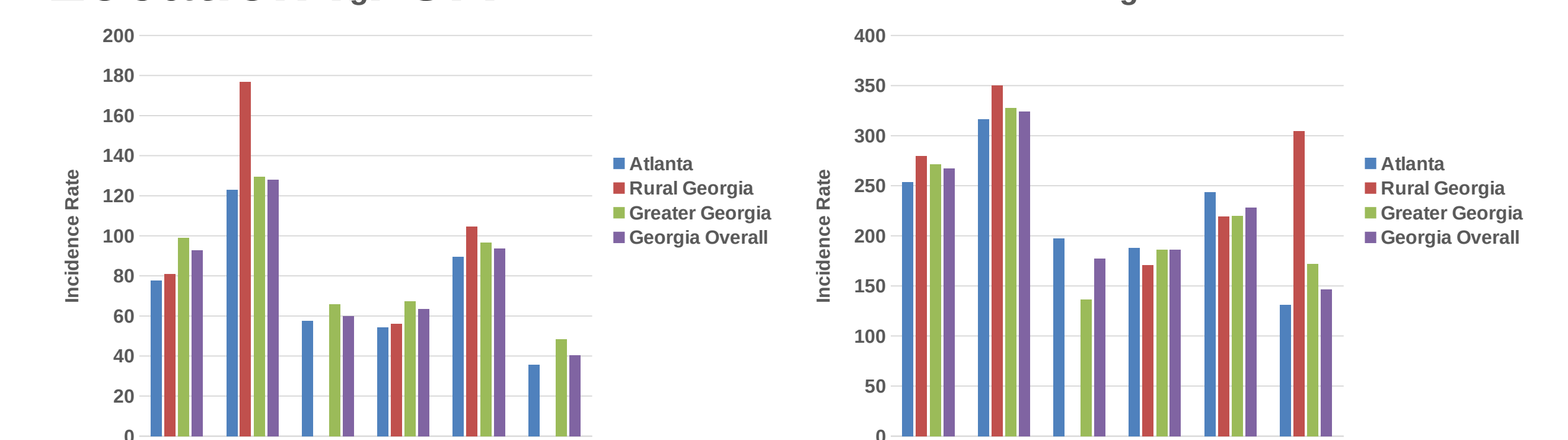


Figure 5. Comparison of Age-Adjusted Incidence Rate of CRC Based on Race and Geographic Location in GA



## CONCLUSIONS

- CRC incidence rates in Georgia are decreasing. Georgians age 50-64 have higher incidence rates compared to the US population, while Georgians age 65+ have lower incidence rates.
- In Georgians over 50, incidence rates in all demographics are decreasing. Black Georgians of both sexes have higher incidence rates compared to other races in Georgia.
- Within Georgians age 50 – 64, white and blacks have higher incidence rates compared to the US population, while Asian/Pacific Islanders have lower rates.
- White and black Georgians over 50 living in rural or Greater Georgia have higher incidence rates compared to the Georgia average.
- Numerous factors such as obesity rates, diet, access to preventive care and primary care physicians, and knowledge about screening can be implicated in the disparities seen within Georgia.