Esophageal Cancer in South Carolina

Where We Are

There are two major types of esophageal cancer: squamous cell carcinoma (SCCE) and adenocarcinoma (ADE). SCCE is caused largely by cigarette smoking and alcohol drinking and ADE is more strongly associated with gastro-esophageal reflux disease (GERD), which also is related to poor diet and obesity. Blacks in South Carolina have some of the highest rates of SCCE seen anywhere, and it remains unclear why rates are so high. Blacks' use of tobacco products is lower than that of Whites. However, Blacks are much more likely to use mentholated tobacco products (e.g., Newport® and Kool® cigarettes) and we have shown that menthol increases the rate at which tobacco carcinogens are delivered through esophageal tissue and into the cell nucleus, where they can damage DNA (leading to SCCE). As obesity has increased in SC, so have the rates of ADE, especially among Whites. It is not clear why rates are not increasing in Blacks, because they also have a very high rate of obesity.

South Carolina Statistics

- Esophageal cancer is the **17th** most common cancer diagnosed overall.
- It is the **12th** most commonly diagnosed cancer in men and **20th** most in women.
- It ranks **8th** for cancer death rates overall
- It is the **6th** leading cause of cancer death in men, and **16th** leading cause of cancer death in women.
- Men have a **five** times higher rate of new cases and death rate from this disease than women.
- Blacks are diagnosed with and die at a **two** times higher rate from this disease than Whites.

"Esophageal cancer represents a set of rare, though very deadly cancers. Rates of squamous cell cancers, which occur mainly in the part of the esophagus nearest the mouth, remain very high in African Americans. By contrast, rates of adenocarcinoma (which appear in the portion nearest the stomach) are rising at alarming rates in European Americans."

"While the actual cause of the racial disparity is not known, work done at USC has shown that menthol in cigarettes may help to explain some of the racial disparities in squamous cell cancers, especially in Black men."

James R. Hebert, Sc.D.
University of South Carolina Cancer Prevention & Control Program

Call to Action!

South Carolinians:

- Do not use tobacco in any form; if you have not tried tobacco products, do not start; if you currently use tobacco, quit; this is especially important if you use tobacco products containing menthol.
- Advocate for a large increase in the cigarette tax.
- Support efforts to make your community smoke-free.
- Prevent children and adults from being exposed to secondhand smoke in homes and cars.
- Prevent children and adolescents from starting to smoke cigarettes.
- Promote smoking cessation among smokers.
- Encourage your elected officials to increase the cigarette tax.
- Maintain a healthy body weight.*
- Minimize alcohol consumption.*
- Eat a healthy diet including fruits** and vegetables** (especially green, leafy ones).

Legislators: *in addition to the above*

- Support a significant cigarette tax increase.
- Support smoke-free workplace legislation.

Clinicians and Hospital or Medical Facility Administrators:

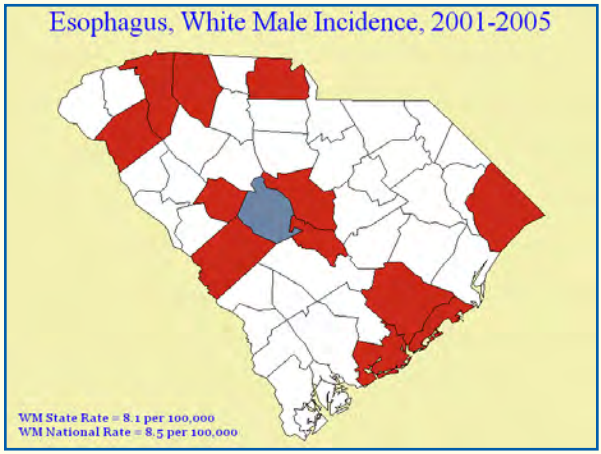
- Encourage participation in clinical trials and trials of innovative screening protocols.
- Assure that your cancer cases are reported to the hospital or central cancer registry.

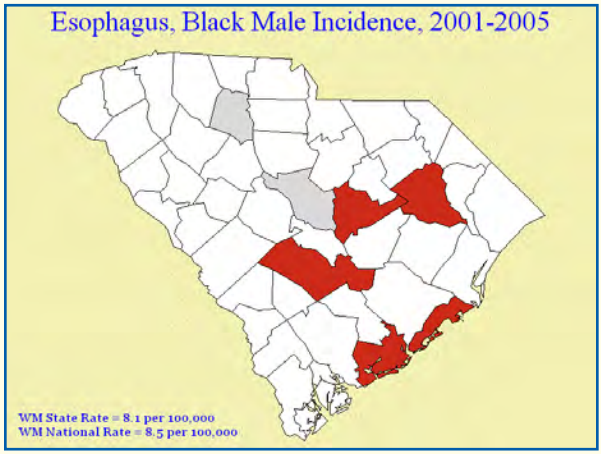
** AICR nutrition, physical activity panel risk factor conclusions were convincing*

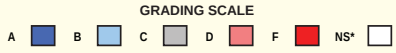
*** AICR nutrition, physical activity panel risk factor conclusions were probable*

"There has been a notable decrease in smoking rates over the past 5 years among adults as well as high school students. There is much work left to be done, but the trends are in the right direction."

Anthony J. Alberg, Ph.D., M.P.H.
Hollings Cancer Center, Medical University of South Carolina



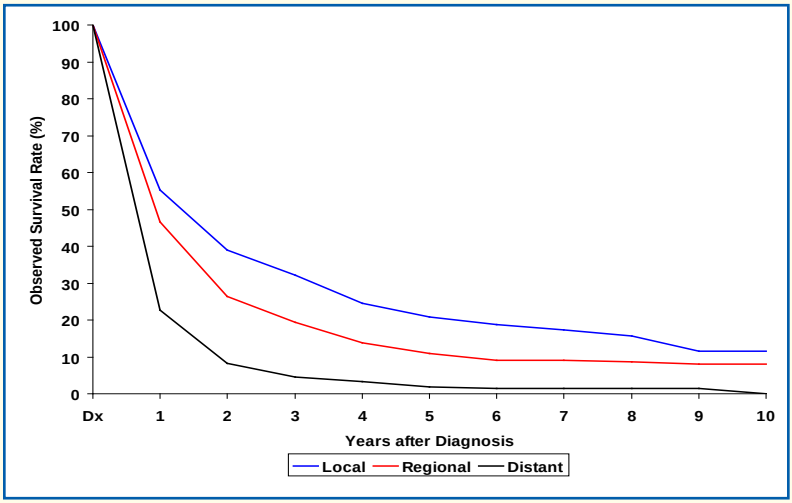




** Counties that are not shaded have fewer than 20 cases/deaths of cancer over the 5 year period (2001-2005). Working with small numbers can lead to instability in the calculated age-adjusted rates for mortality and incidence. As a result statistics for these counties are not displayed.*

- **White Males:** Of the twelve counties with sufficient numbers of cases to rate, 11 rated worst in the state: Aiken, Anderson, Berkeley, Calhoun, Charleston, Greenville, Horry, Richland, Saluda, Spartanburg, and York (Grade F). Lexington County rated best, Grade A.

- **Black Males:** Of the six counties with sufficient numbers of esophageal cancer cases to rate, four were worst in the state: Charleston, Florence, Orangeburg, and Sumter (Grade F). Richland and Union Counties were no different from the state and nation, Grade C.



Esophageal Cancer Observed Survival Rate (%) by SEER Stage at Diagnosis and Race, South Carolina, 1996-2005

Note: excludes in situ cancers and children (ages 0-19) *Source: South Carolina Central Cancer Registry*

For S.C. citizens diagnosed with esophageal cancer, five-year survival is dismal for all stages of disease at diagnosis, ranging from 21% for localized disease to 2% for distant disease. Overall five-year survival; i.e., for all stages, is 11%.

South Carolina Success

MUSC Reaches Milestone: In 2009, the Medical University of South Carolina (MUSC) Hollings Cancer Center attained National Cancer Institute (NCI) designation, a distinction held by only 63 other cancer centers in the U.S. The Hollings Cancer Center (HCC) is the only institution in South Carolina with this prestigious status. NCI designation is accompanied by more than $7 million in funding to sustain and grow research efforts. Designation also holds the potential to spur South Carolina's economy by attracting public and private funding for new endeavors.

MUSC
HOLLINGS CANCER CENTER
A National Cancer Institute Designated Cancer Center

"The NCI designation for the MUSC Hollings Cancer Center is recognition of excellence in cancer research. The discoveries made here will leave the laboratories and reach the patients, both in our state and throughout the world."

U.S. Representative Henry Brown