

COLORECTAL CANCER

Colorectal cancer affects 140,000 Americans annually, making it the fourth most frequently diagnosed cancer in the US. It is also the second leading cause of cancer death for American men and women. The lifetime risk of developing colorectal cancer, for the average American, is approximately 5 percent.

There are many known risk factors for developing colorectal cancer. The strongest is age, with incidence generally rising steadily after 50. Other factors are personal histories of colorectal polyps, a “Western” diet (high in fat and low in fiber) and family history. Though most colorectal cancers are unrelated to family history, there are several known heritable syndromes that likely account for 15 to 20 percent of diagnosed cases. Certain features of a diagnosed colorectal cancer may prompt consideration of genetic counseling to investigate a potential heritable cancer-predisposing syndrome in the family of the affected patient.

These cancers are almost uniformly adenocarcinomas arising from the lining of the colon and rectum, which typically evolve from pre-cancerous polyps. Approximately a quarter of US adults over 50 have at least one polyp. Screening for colorectal cancer has been shown to reduce the risk of dying from colon cancer, likely by allowing detection of colorectal cancer at its earliest stage – often while still a pre-cancerous polyp – when cure rates for the disease typically exceed 90 percent. Although screening tools like colonoscopies are widely used, many colorectal cancers still present at later stages, requiring aggressive treatment for an attempt at cure. However, improvement in screening and treatment technologies have collaborated to decrease both the incidence and mortality related to colorectal cancer over time, with recent studies showing survival rates climbing from approximately 50 percent in 1980, to 65 percent in 2006.

To assess our current practices of diagnosing and treating colorectal cancer, data from the most recently available year (2013) in our Tumor Registry at Carolinas HealthCare System was collected and analyzed.

Figure 1 demonstrates the AJCC stage distribution as a percentage of all cases diagnosed through Carolinas HealthCare System in 2013 (548 cases); these percentages are similar to what was seen from the years 2000 to 2011 in the same database (not shown).

Figure 2 displays the distribution of the number of these diagnoses in 2013 by age (along the X axis) and by gender.



Figure 3 shows the distribution of treatments administered on the 548 cases diagnosed in 2013 through CHS.

As would be expected given the stage distributions seen, nearly half of all patients (43 percent) were able to be treated with surgery alone. The next most common treatments administered were surgery followed by chemotherapy (23 percent), and equal percentages offered no treatment and a combination of surgery, chemotherapy and radiation.

FIGURE 1: STAGE AT PRESENTATION

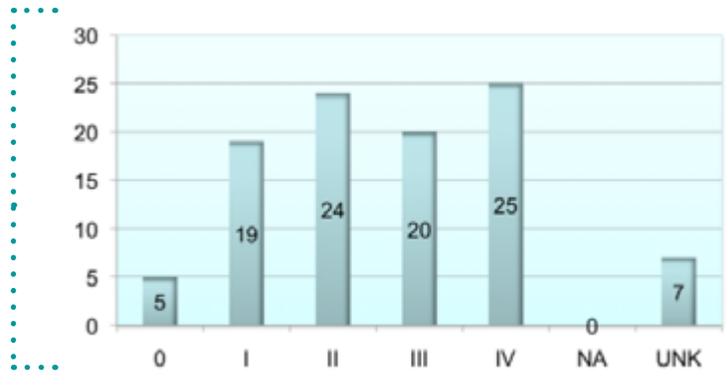


FIGURE 2: AGE AND GENDER DISTRIBUTION

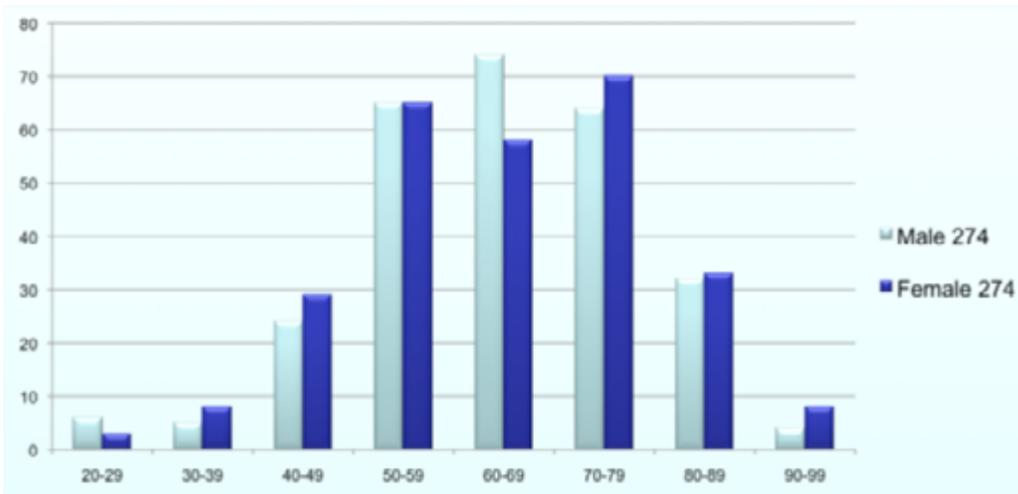
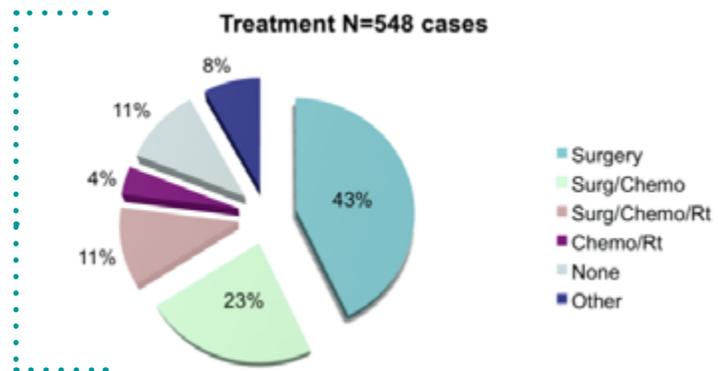


FIGURE 3: TREATMENT DELIVERED



To assess compliance with quality measures, Carolinas HealthCare System analyzed our outcomes through the Cancer Quality Improvement Program (CQIP) database, which reports annual quality and outcomes data to more than 1,500 cancer programs accredited by the American College of Surgeons (ACS) Commission on Cancer (CoC) using the National Cancer Data Base (NCDB). The three current measures of interest are: (1) consideration or delivery of adjuvant chemotherapy for stage III colon cancer, (2) removal of at least 12 lymph nodes during surgery for colon cancer, and (3) consideration or administration of radiation therapy for stage III rectal cancer. We collected data from the most recently available period (2008 to 2013).

Figure 4 shows our rates of chemotherapy compliance, which slightly exceed national data and surpass the CoC threshold of 90 percent.

Figure 5 shows our rates of nodal resection compliance, which track national data and surpass the CoC threshold of 80 percent for the majority of years analyzed.

Figure 6 shows our rates of radiotherapy compliance, which slightly exceed national data; no CoC threshold is defined for this measure.

FIGURE 4: CHEMOTHERAPY COMPLIANCE

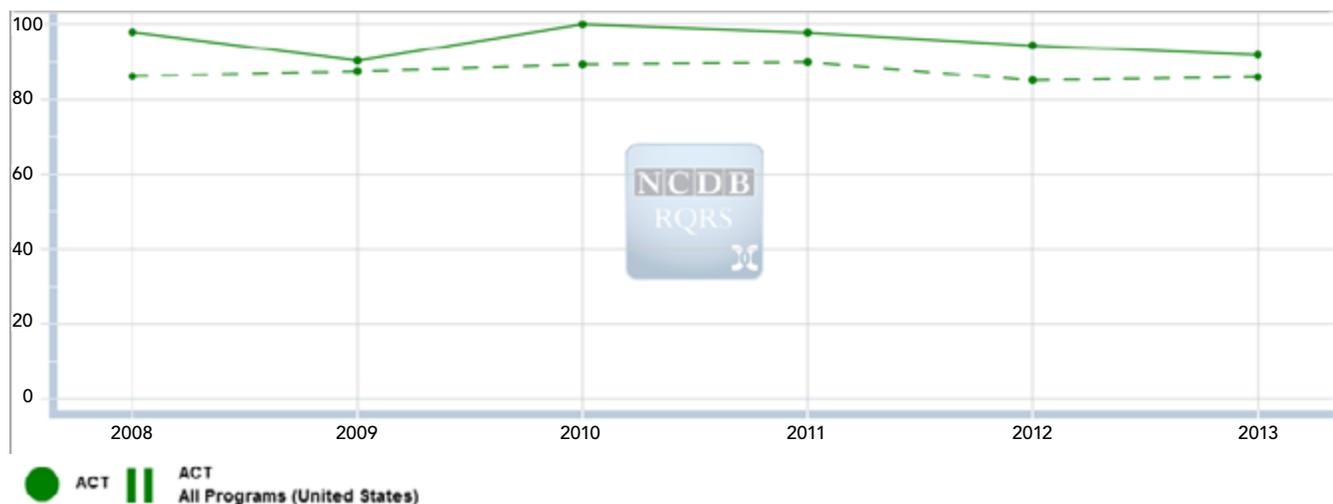
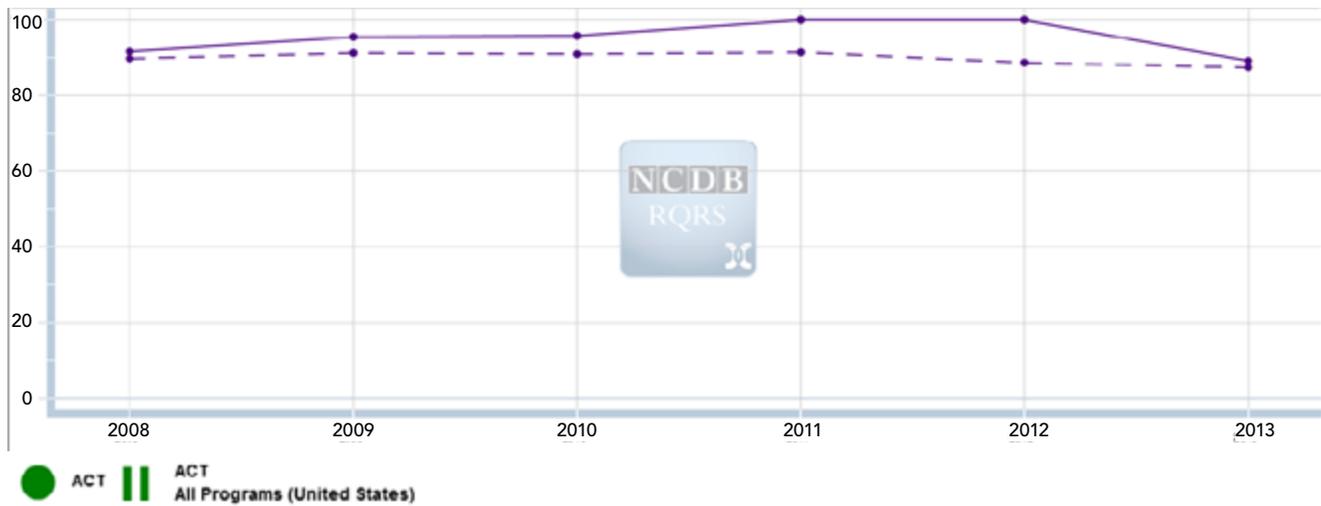


FIGURE 5: SURGICAL COMPLIANCE

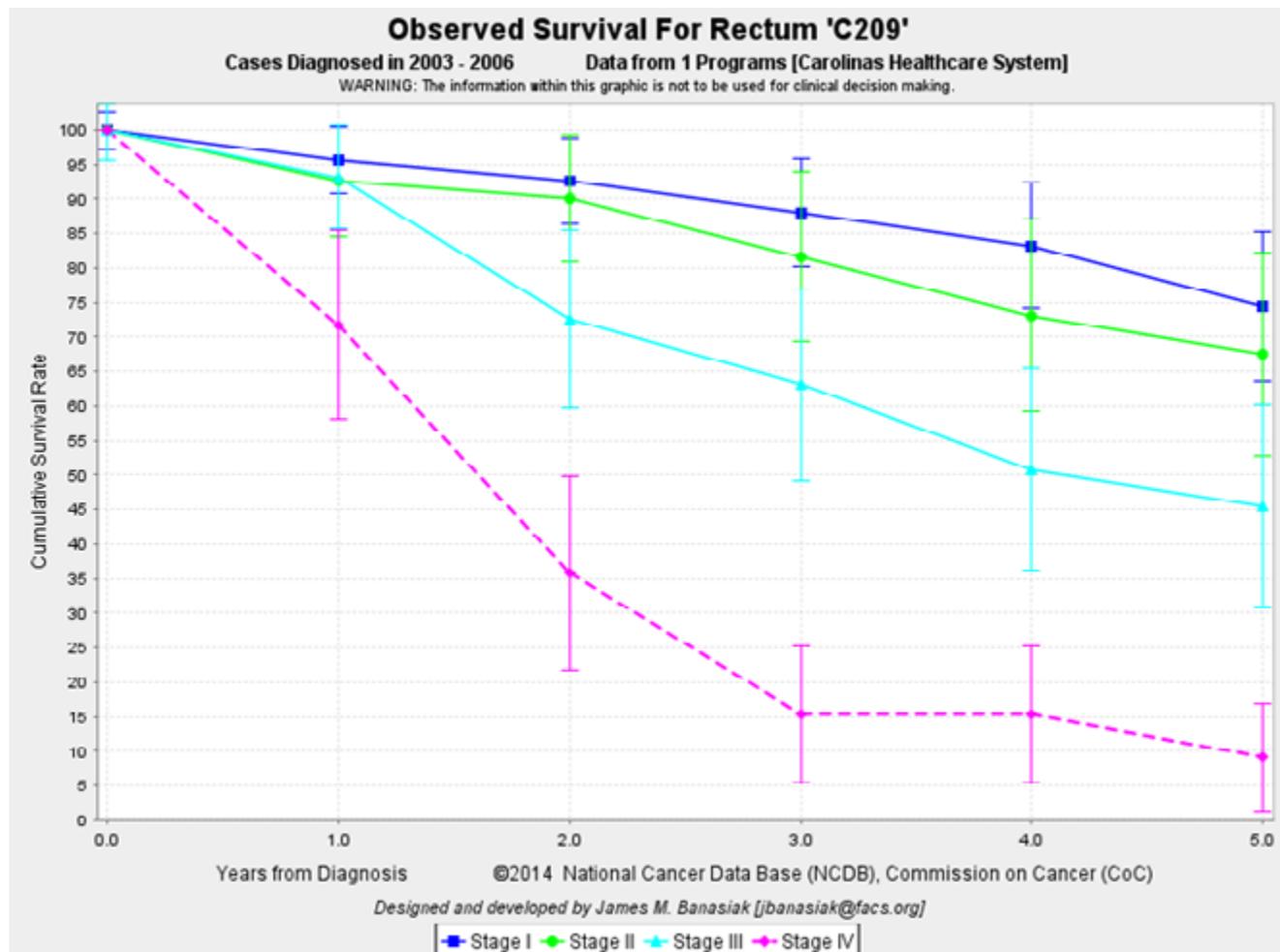


FIGURE 6: RADIATION COMPLIANCE



To assess our outcomes treating colorectal cancer, Carolinas HealthCare System compiled our data from the NCD B for patients treated in Carolinas HealthCare System between 2003 through 2006. Figure 7 shows survival curves by stage, which are largely as expected for this disease.

FIGURE 7: SURVIVAL OUTCOMES



SUMMARY

Though colorectal cancer remains a major health problem in the US, decreasing incidence and mortality rates reflect the significant investments made in research establishing our current effective screening and treatment strategies. However, survival rates for advanced-stage patients remain poor, reminding us that continued research is necessary. Carolinas HealthCare System is committed to working to lessen the impact of this disease on our community, and will continue to support research and healthcare initiatives to improve outcomes for these patients.



Carolinas HealthCare System