



Advanced Practitioner
Society for Hematology
and Oncology

APSHO AP Academy



Healthcare Disparities in Colorectal Cancer

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Disclosures

- Kristen O'Hagan has no relevant financial relationships to disclose
- Lisania Milli has no relevant financial relationships to disclose

Learning Objectives

- Articulate the impact of colorectal cancer (CRC) in Black individuals in terms of mortality
- Identify the disparities in CRC in screening, diagnosis, and treatment
- Describe the advanced practitioner role in screening and the impact on racial and ethnic survival disparities

Outline

- Overall incidence
- Outcomes by race
- Disparities
- Current and future direction
- Role of the AP

CRC Incidence

CRC is the third most common cancer in the United States

- Second most common cancer in cancer-related deaths overall
- Leading cause in men younger than age 50

More than one-half of all cases and deaths attributed to modifiable risk factors (smoking, unhealthy diet, high alcohol consumption, physical inactivity and excess body weight)

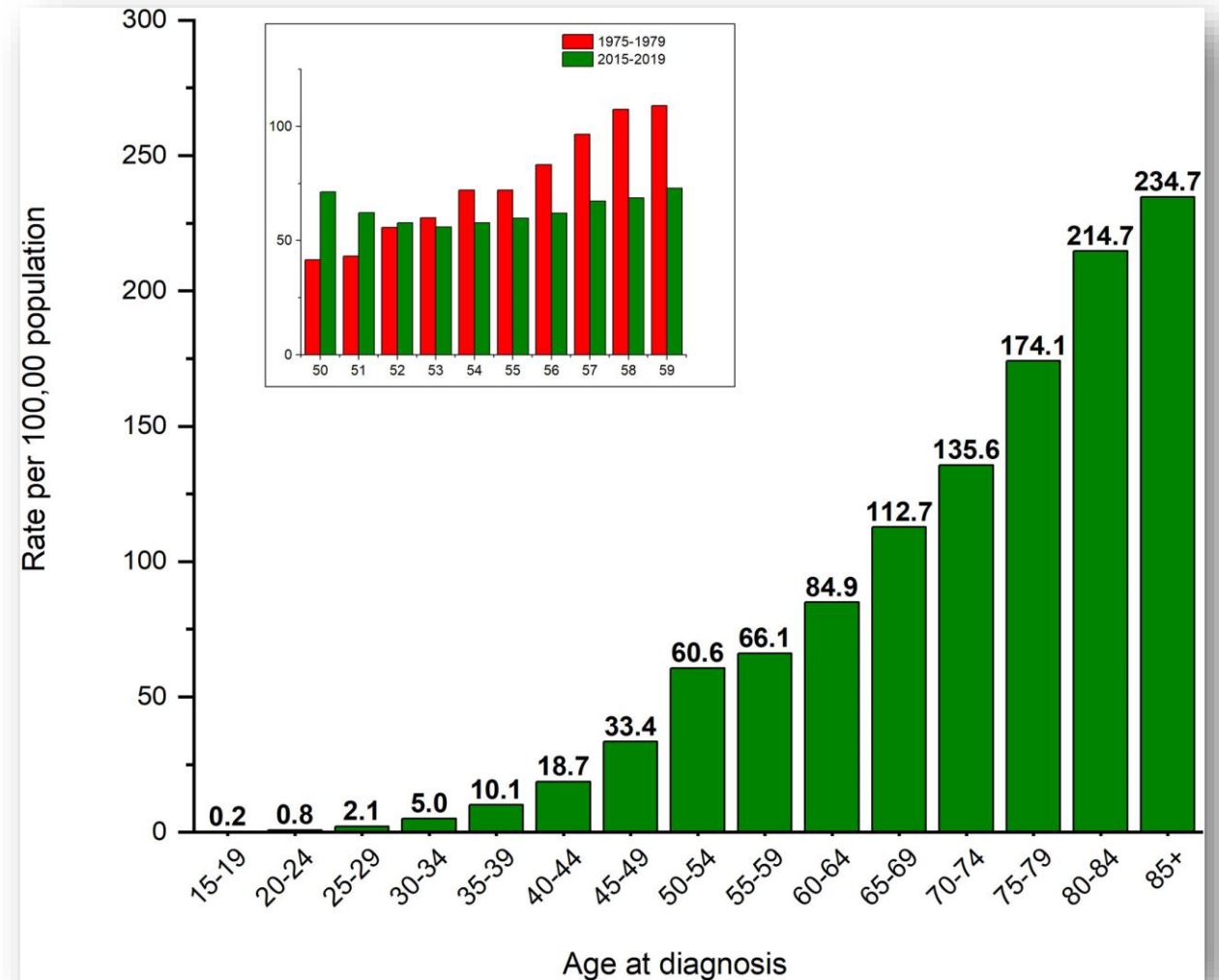
Majority of cases occur in people age 65 and older, 13% in individuals younger than age 50

- 43% of diagnoses before age 50 – considered early onset disease

Large proportion of CRC incidence and mortality is preventable through regular screenings, surveillance, and high-quality treatment

Siegel RL, et al. CA Cancer J Clin. 2023;73:233-254; American Cancer Society website. Colorectal Cancer Facts & Figures 2020-2022.

Colorectal Cancer Statistics, 2023



Siegel RL, et al. CA Cancer J Clin. 2023;73:233-254.

Early-Onset CRC

- In contrast to decreasing incidence in older adults, rates have been increasing in adults age 20–39 since 1980s and in those age 40–54 since 1990s
- Early-onset CRC incidence rose in every racial and ethnic group
- Incidence increasing in many high-income countries; reasons unclear
 - Likely contributors: obesity and reduced dietary quality
- Though patients with germline mutation have increased CRC risk (eg, Lynch syndrome) and are more likely to develop early disease, most cases before age 50 are sporadic
 - More likely to be women and with advanced disease
 - Common symptoms: hematochezia and abdominal pain because of left-sided tumors

Siegel RL, et al. *CA Cancer J Clin*. 2023;73:233-254.

Outcomes by Race

- The Black population has the highest incidence and mortality rates of CRC of any ethnic group in the United States
- Most common cancer in Alaska Native people; highest rates in the world
- Mortality increasing 2% annually in Alaska Native people
 - Potential contributing factors: vitamin D deficiency due to low sun exposure, smoking, obesity, diet high in smoked fish and marine mammals, low in fiber, fruits and vegetables, perhaps H. pylori infection
- Individuals from lowest socioeconomic status are 40% more likely to be diagnosed with CRC (smoking, obesity, and lack of screening)

Siegel RL, et al. *CA Cancer J Clin.* 2023;73:233-254; American Cancer Society website. Colorectal Cancer Facts & Figures 2020-2022; Augustus GJ, et al. *Am J Pathol.* 2018;188:291-303; Carethers JM, et al. *Gastroenterology.* 2020;158:354-367; Bailey ZD, et al. *Lancet.* 2017;389:1453-1463.

Outcomes by Race

- Stage at diagnosis plays the largest role in racial and ethnic survival disparities
 - Black individuals are most likely to be diagnosed with metastatic CRC (24% vs 21% of non-Hispanic Whites and 19% of Asian American PI individuals)
- Later stage diagnosis reflects lower prevalence and quality of screening.
 - Black individuals are less likely to receive both timely follow-up of a positive stool test and high-quality colonoscopy
- Recent study of patients in the National Cancer Database (after accounting for stage, histology, and comorbidities), Black patients were 21% less likely to receive surgery for colon cancer and 28% less likely to receive surgery for rectal cancer

Ellis L, et al. *J Clin Oncol*. 2018;36:25-33; Fedewa SA, et al. *Ann Intern Med*. 2017;166:857-866; Laiyemo AO, et al. *J Natl Cancer Inst*. 2010;102:538-546; Bliton JN, et al. *Cancer Epidemiol Biomarkers Prev*. 2021;30:529-538.

Geographic Disparities

- CRC incidence and mortality rates are lowest in the West and highest in Appalachia and parts of the South and Midwest
 - Rates range from 27.0 (per 100,000) in Utah to 46.5 in Mississippi for incidence
 - 10.3 in Connecticut and 10.6 in Utah to 17.6 in Mississippi for mortality
- Geographic patterns are generally similar for Black and White individuals, particularly for mortality, highlighting the importance of socioeconomic status over race in cancer disparities

Siegel RL, et al. *CA Cancer J Clin.* 2023;73:233-254.

Disparities in Screening

- Screening – inadequate availability of endoscopy services in Alaska
 - Lowest CRC screening prevalence in the United States
- Black patients are less likely to receive timely follow-up of positive stool test and high-quality colonoscopy
 - Increased development of right-sided tumors associated with lower survival
- Treatment – Black patients less likely to have surgery for both colon and rectal cancer

Siegel RL, et al. *CA Cancer J Clin.* 2023;73:233-254.

Colonoscopy and Screening

- Recommended age to begin at age 45 for individuals at average risk (2018 by ACS; 2021 by USPSTF)
 - Uptake remains low in certain groups (living in the United States <10 years, uninsured, less than high school education, by certain states)
- Colonoscopy screening caused steep declines in incidence among adults aged 50 and older after Medicare expanded coverage to all beneficiaries in 2001
- Despite COVID, CRC screening remained steady because 16% decline in colonoscopy was counterbalanced by 7% increase in stool testing

Siegel RL, et al. *CA Cancer J Clin.* 2023;73:233-254.

Lynch Syndrome (LS)

- Most common cause of inherited CRC and endometrial cancers
- LS, caused by a germline mutation in one of the DNA mismatch repair (MMR) genes (MSH2, MLH1, MSH6, PMS2, EPCAM)
- Population incidence: approximately 1 in 279
- It is estimated that less than 1.2% of individuals with LS have been identified in the general population
 - Individuals are grossly underdiagnosed

Carethers JM. *Adv Cancer Res.* 2021;151:197-229; Bhattacharya P, McHugh TW. *Lynch Syndrome.* StatPearls.

Genomic Testing/Mutations

- Identifying patients with LS is clinically important – 80% lifetime risk of CRC and 60% of endometrial cancer, and other cancers
- Obtaining a thorough family history is vital as it will provide an opportunity for family members to be tested (cascade testing)
- Black patients are significantly less likely to be referred to genetic counseling and less likely to attend these appointments
 - Genetic testing guides management with those with clinically actionable mutations

Dharwadkar P, et al. *Clin Gastroenterol Hepatol*. 2022;20:353-361.e3; Muessig KR, et al. *Hered Cancer Clin Pract*. 2022;20:7.

Transgender and Gender Diverse (TGD) Population and LS

- There are no clinical guidelines specific for TGD individuals with LS
- Cumulative incidence to develop CRC is up to 56%, with risk varying by MMR and sex assigned at birth
- Recent data suggest that TGD patients are often unaware and less likely to complete CRC screenings compared to cisgender population
- No published management guidelines exist for TGD individuals with LS

Hodan R, et al. *Fam Cancer*. Published online June 21, 2023.

TGD and LS

- For transgender females with genetic syndromes predisposing them to colon cancer (such as LS), the use of sigmoid colon for neovaginal creation is contraindicated
 - Some patients learn of their genetic predisposition after gender affirming surgery
 - These patients with LS will need additional CRC screening with pelvic exams and colposcopy
- For transgender males, gynecologic screenings for endometrial cancer could be offered at the time of colonoscopy sedation to minimize pelvic exam anxiety

Hodan R, et al. *Fam Cancer*. Published online June 21, 2023.

Resources for TGD Individuals With LS

The Gay, Lesbian, Bisexual and Transgender (GLBT) Health Access Project, a collaborative, community-based program funded by the Massachusetts Department of Public Health

National LGBTQIA+ Education Center, a program of the Fenway Institute

The World Professional Association for Transgender Health (WPATH), formerly known as the Harry Benjamin International Gender Dysphoria Association (HBIGDA)

Differences in Healthcare Access, Utilization, and Treatment

Black individuals are more likely to...

Be uninsured

Have a fatalistic attitude toward medical illness

Experience stigma

Exhibit fear and denial related to a cancer diagnosis

Have an aversion to healthcare treatments such as surgery

Mistrust the healthcare system

Have misperceptions about cancer that ultimately interfere with treatment

Tammana VS, et al. *World J Gastroenterol.* 2014;20:869-876.

Disparities in Treatment

- Black individuals with CRC less likely than White individuals to receive treatment with surgery, radiation, or chemotherapy
- Black patients incurred statistically significant greater costs in every phase of care, compared to White patients for colon cancer
- Cultural and personal beliefs, though difficult to measure, may substantially impact health outcomes

Tramontano AC, et al. *PLoS One*. 2020;15:e0231599.

Disparities in Treatment

- Patients may not seek out appropriate care when a language barrier exists
- Black, Asian, and Hispanic patients with cancer are more likely to have lower-quality communication as measured by access to clear information on treatment pros and cons and prognosis
- Insurance status has the largest effect on differences in stage at diagnosis and receipt of surgery

Tramontano AC, et al. *PLoS One*. 2020;15:e0231599; Leech MM, et al. *Ann Surg Oncol*. 2022;29:3630-3639.

Disparities in Nutrition and Diet

- Food and diet are critical risk factors for CRC
- Food environment consists of the physical, economic, political, and sociocultural contexts in which consumers interact with the food system to attain, prepare, and consume food
 - Availability, affordability, cost, and sustainability impact diet patterns
- Diet patterns are linked to obesity, coronary artery disease, and diabetes
- Multiple studies have suggested that high consumption of processed and red meats and a low consumption of whole grains and dairy products are associated with increased risk of CRC
- Black individuals have more diet-attributable cancer cases than White individuals; Black individuals have a higher number of diet-attributable cancer burden for most cancer types, increased for CRC

Carethers JM. *Adv Cancer Res.* 2021;151:197-229; Masdor NA, et al. *Nutrients.* 2022;14:3954.

Future Directions

- Research is needed to explain causes for rising CRC incidence and to advance treatment options for tumor subtypes without effective therapies
- Targeted nutrition interventions can potentially reduce diet-attributable cancer disparities in CRC
- Public health policy is needed to improve the availability, affordability, and accessibility of healthy foods in low-income and racial/ethnic minority communities
- Public health policy to improve insurance, affordability, and access to care is associated with earlier presentation and improved surgical outcomes

Wang L, et al. *Am J Public Health*. 2021;111:2008-2018.

Possible Solutions/Policy Changes

- Improve diet and lifestyle choices
- Decrease obesity
- Increase physical activity
- Increase CRC screening rates
- Earlier age of screening
- Increase use of colonoscopy
- Similar treatments for CRC
- Community outreach
- Patient navigation
- Universal healthcare access

Adapted from Tammana VS, et al. *World J Gastroenterol.* 2014;20:869-876.

Role of the AP

- Educate and advocate for your patients
- APs play an important role in recommending screening, as stage at diagnosis plays the largest role in racial and ethnic survival disparities
- APs could have a direct impact on educating and counseling patients on modifiable risk factors such as nutritional intake, smoking cessation, and physical activity
- Become involved in health policy – urge leaders to reform policy to improve social determinants of race, insurance status, geographic access to care; these all play an important role in improving equity of cancer care in the United States

Summary of Key Points

- CRC is the second leading cause of cancer death for men age 50 and younger
- CRC in Black individuals is more likely to be diagnosed at later stages and less likely to have potentially curative treatment such as surgery
- Large proportion of CRC incidence and mortality is preventable through regular screenings, surveillance, and high-quality treatment
- There is a need for equitable access to high-quality healthcare, especially in rural and other low-resource areas such as Alaska

Thank you!

You may now proceed to the post-test questions

Pre-Post Test Question # 1

What race, ethnicity, and sex have the highest colorectal cancer mortality?

- A. Non-Hispanic White men
- B. Non-Hispanic Asian men
- C. **Non-Hispanic Black men**
- D. Hispanic females

Pre/Post Test Question #2

Which statement about colorectal cancer is **false**?

- A. Most cases of early onset colorectal cancer (CRC; age <50) are sporadic
- B. Smoking, obesity, and lack of screening are all risk factors for CRC
- C. **CRC incidence is decreasing in many high-income countries**

Pre/Post Test Question #3

Which statement about the role of the advanced practitioner (AP) is correct?

- A. When ensuring equitable access to and use of disease prevention, detection and treatment, colorectal cancer could be prevented
- B. The goal of screening is to prevent colorectal cancer
- C. The AP has a vital role in recommending colonoscopy as a means of preventing colorectal cancer
- D. **All of the above**