COLORECTAL CANCER BURDEN SHIFTING TO YOUNGER INDIVIDUALS: A CLOSE LOOK AT WHAT THE MOST RECENT DATA TELLS US ABOUT CRC INCIDENCE, MORTALITY, AND SCREENING RATES

MAY 18, 2020
1:00 PM ET

@NCCRTnews

Purpose of Today's Webinar

- Learn what the most recent data from *Colorectal Cancer Statistics, 2020* tells us about colorectal cancer incidence, mortality, and screening rates.
- Understand how new findings indicate the burden of colorectal cancer is shifting to younger individuals.
- Q&A

CA CANCER J CLIN 2020;0:1–20

Colorectal Cancer Statistics, 2020

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[Correction added on March 14, 2020, after first online publication: The figure 3 legend inset AI/AN was inserted in the initial publication. It has been corrected.]

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Abstract: Colorectal cancer (CRC) is the second most common cause of cancer death in the United States. Every 3 years, the American Cancer Society provides an update of CRC occurrence based on incidence data (available through 2016) from population-based cancer registries and mortality data (through 2017) from the National Center for Health Statistics. In 2020, approximately 147,950 individuals will be diagnosed with CRC and 53,200 will die from the disease, including 17,930 cases and 3,640 deaths in individuals aged younger than 50 years. The incidence rate during 2012 through 2016 ranged from 30 (per 100,000 persons) in Asian/Pacific Islanders to 45.7 in blacks and 89 in Alaska Natives. Rapid declines in incidence among screening-aged individuals during the 2000s continued during 2011 through 2016 in those aged 65 years and older (by 3.3% annually) but reversed in those aged 50 to 64 years, among whom rates increased by 1% annually. Among individuals aged younger than 50 years, the incidence rate increased by approximately 2% annually for tumors in the proximal and distal colon, as well as the rectum, driven by trends in non-Hispanic whites. CRC death rates during 2008 through 2017 declined by 3% annually in individuals aged 65 years and older and by 0.6% annually in individuals aged 50 to 64 years while increasing by 1.3% annually in those aged younger than 50 years. Mortality declines among individuals aged 50 years and older were steepest among blacks, who also had the only decreasing trend among those aged younger than 50 years, and excluded American Indians/Alaska Natives, among whom rates remained stable. Progress against CRC can be accelerated by increasing access to guideline-recommended screening and high-quality treatment, particularly among Alaska Natives, and elucidating causes for rising incidence in young and middle-aged adults. CA Cancer J Clin 2020;0:1-20. © 2020 American Cancer Society.

Keywords: colon and rectum neoplasms, epidemiology, health disparities, screening and early detection

Introduction

Colorectal cancer (CRC) is the third most common cause of cancer death in both men and women in the United States, and ranks second when men and women are combined. However, more than one-half of all cases and deaths are attributable to modifiable risk factors, such as smoking, an unhealthy diet, high alcohol consumption, physical inactivity, and excess body weight, and thus potentially preventable.[1] CRC morbidity and mortality can also be mitigated through appropriate screening and surveillance.[2] In this article, we provide a comprehensive overview of current CRC statistics in the United States, including the estimated numbers of new cases and deaths in 2020 by age and incidence, survival, and mortality rates and trends by age and race/ethnicity based on incidence data through 2016 and mortality data through 2017. CRC screening prevalence in 2018 for adults aged 50 years and older is also presented nationally and by state.

Materials and Methods

Data Sources

Cancer incidence data in the United States are collected by the National Cancer Institute's (NCI's) Surveillance, Epidemiology, and End Results (SEER) program

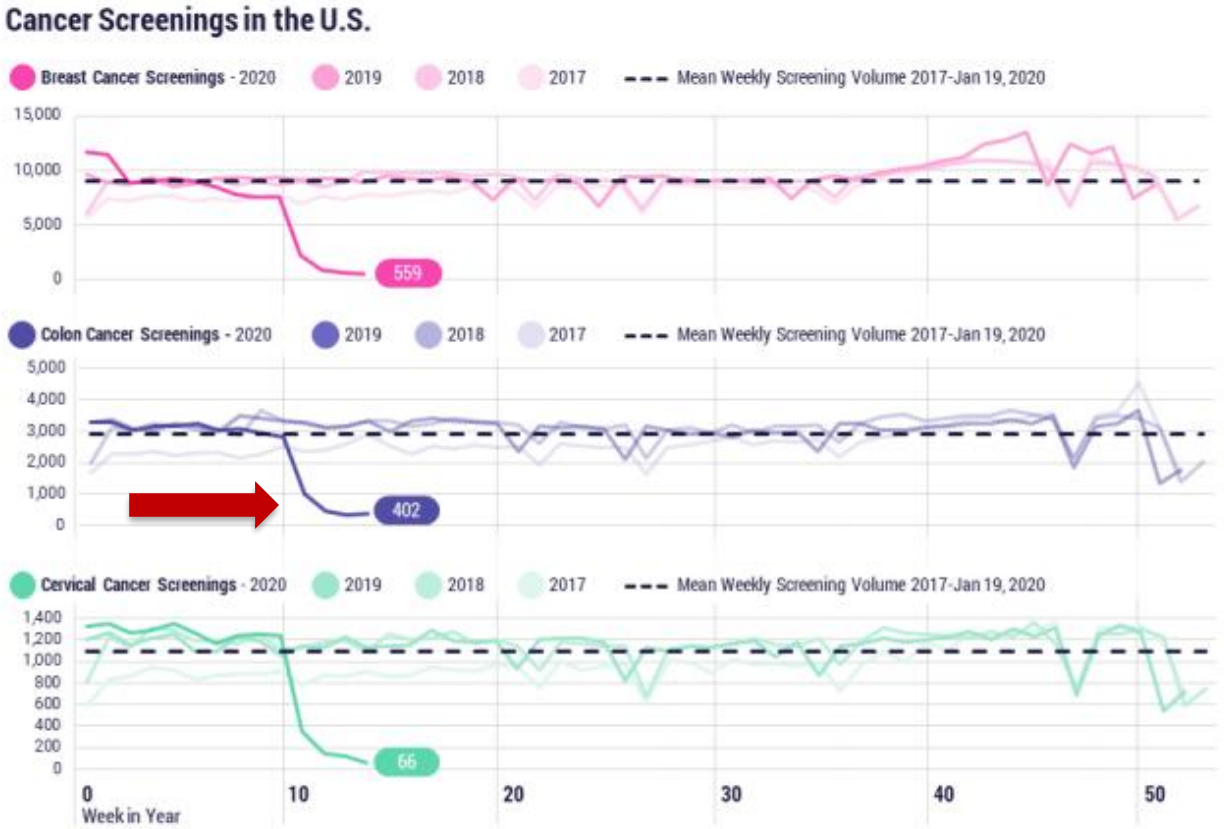
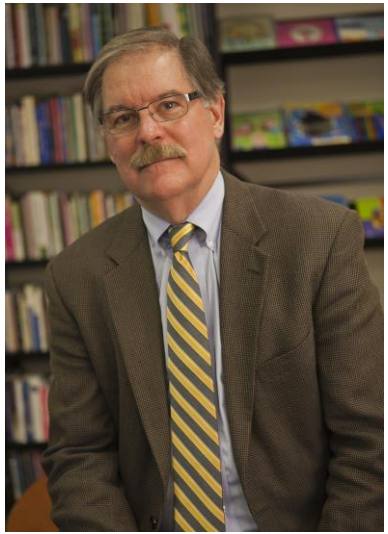


Figure 2. Weekly cancer screening volume vs. week in year for each kind of cancer screening.

https://ehrn.org/wp-content/uploads/Preventive-Cancer-Screenings-during-COVID-19-Pandemic.pdf

Presenters



Robert Smith, PHD

Senior Vice President, Cancer Screening

American Cancer Society, Inc.

Rebecca Siegel, MPH

Scientific Director, Surveillance Research

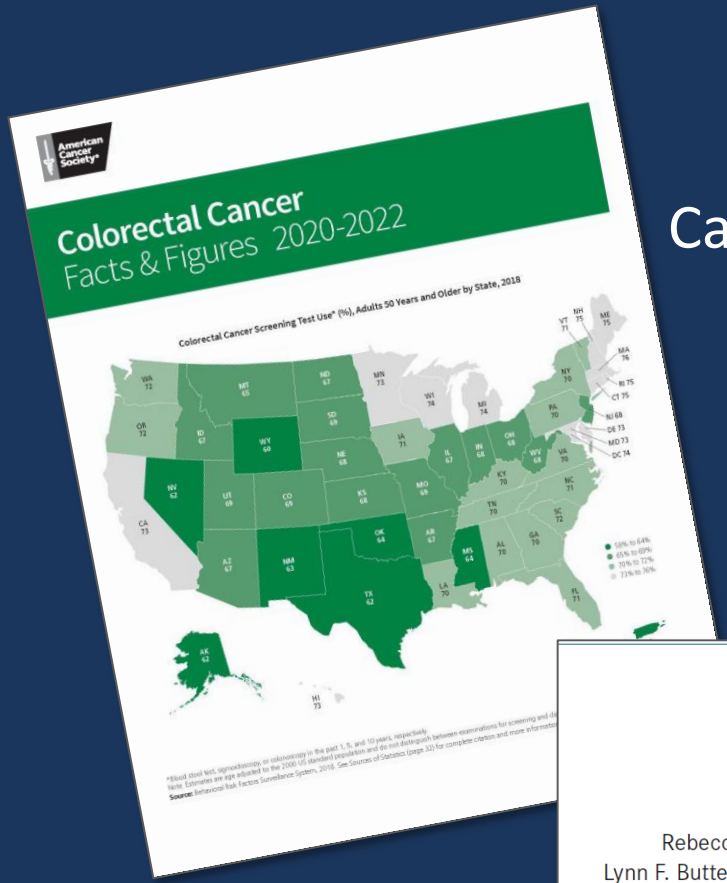
American Cancer Society, Inc.

Virtual Housekeeping

- **The event is being recorded.** The replay and slides will be made available on www.nccrt.org within a few days.
- **All participants are muted.**
- **Submit questions through the Q&A box at any time.** Use the chat box for general comments and technical questions only.
- **Please complete our evaluation.**

Colorectal Cancer Statistics 2020

Rebecca Siegel, MPH
Scientific Director, Surveillance Research
American Cancer Society
NCCRT webinar
May 18, 2020



Cancer.org/statistics

CA CANCER J CLIN 2020;0:1–20

Colorectal Cancer Statistics, 2020

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https://acsjournals.onlinelibrary.wiley.com/doi/full/10.3322/caac.21601

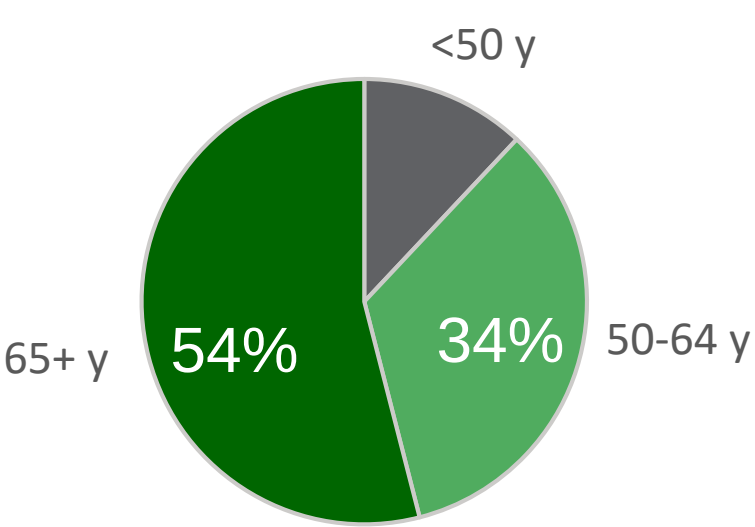
American Cancer Society

Data sources

- Incidence
  - Surveillance, Epidemiology, and End Results Program (SEER; NCI)
  - National Program of Cancer Registries (NPCR; CDC)
  - North American Association of Central Cancer Registries (NAACCR) → **95%**
- Mortality
  - National Center for Health Statistics (CDC)
- Screening
  - National Health Interview Survey (US Census Bureau)
  - Behavioral Risk Factor Surveillance Survey (CDC)

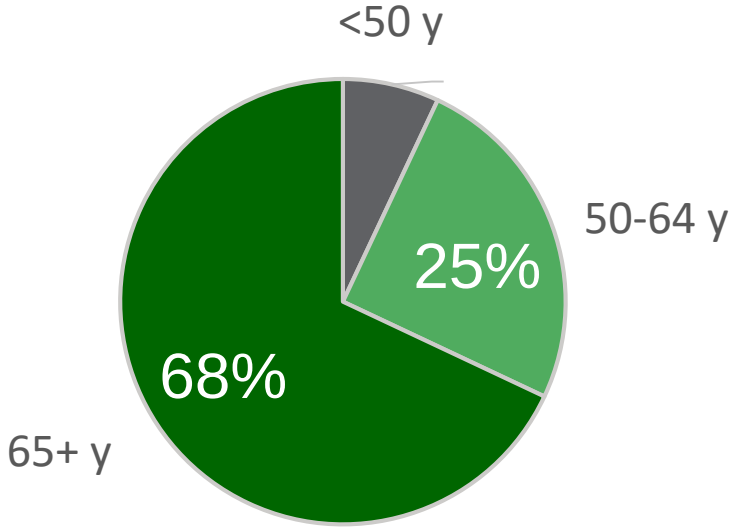
Estimated cases & deaths in 2020

147,950



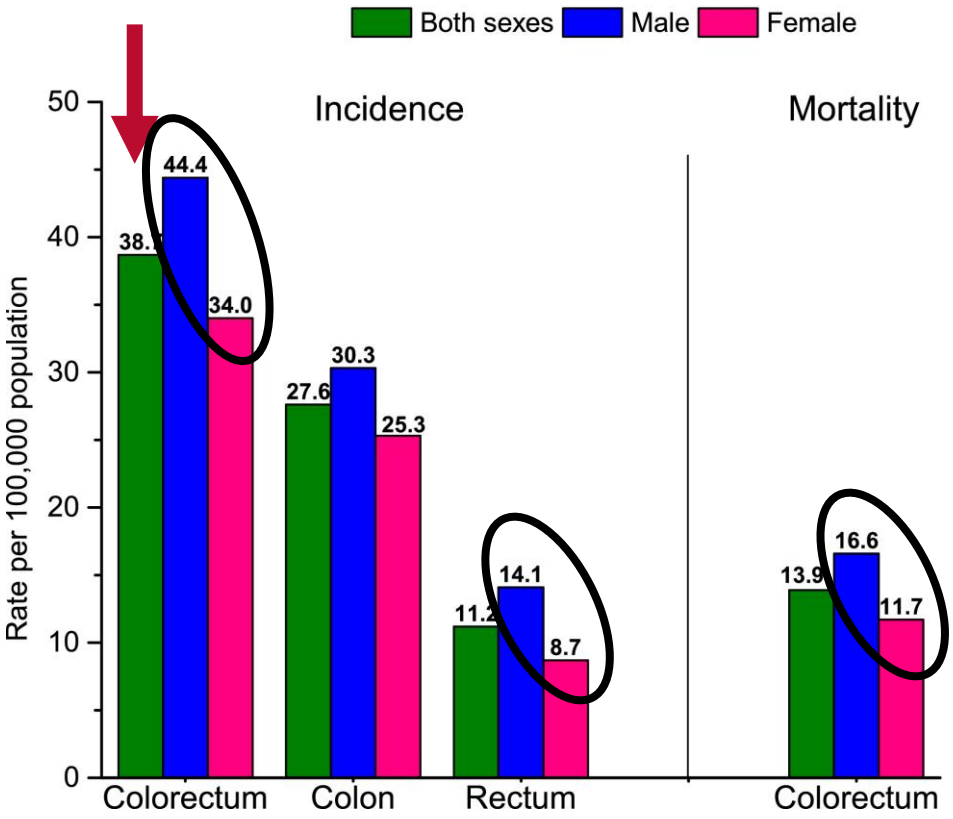
CASES

53,200

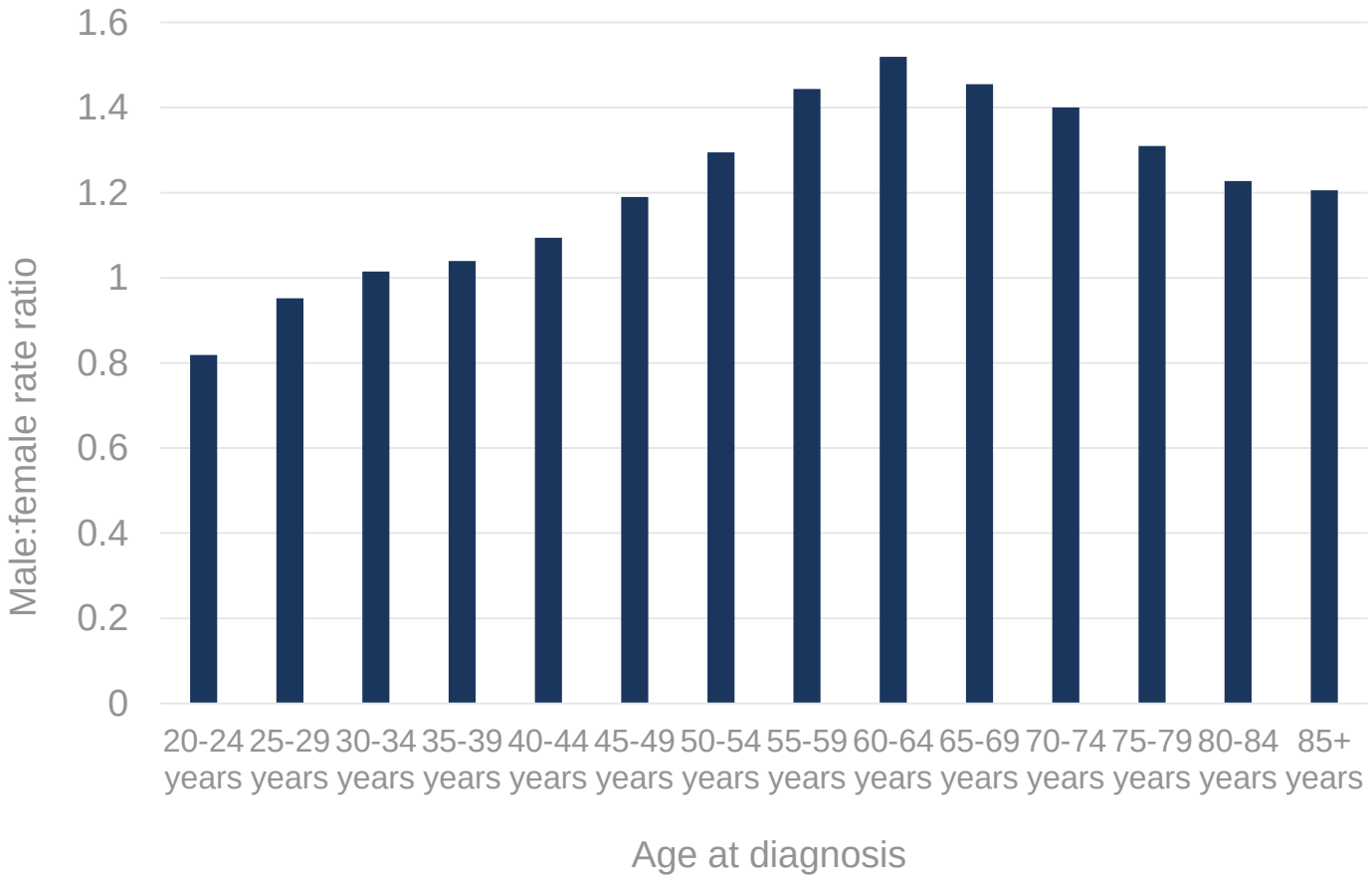


DEATHS

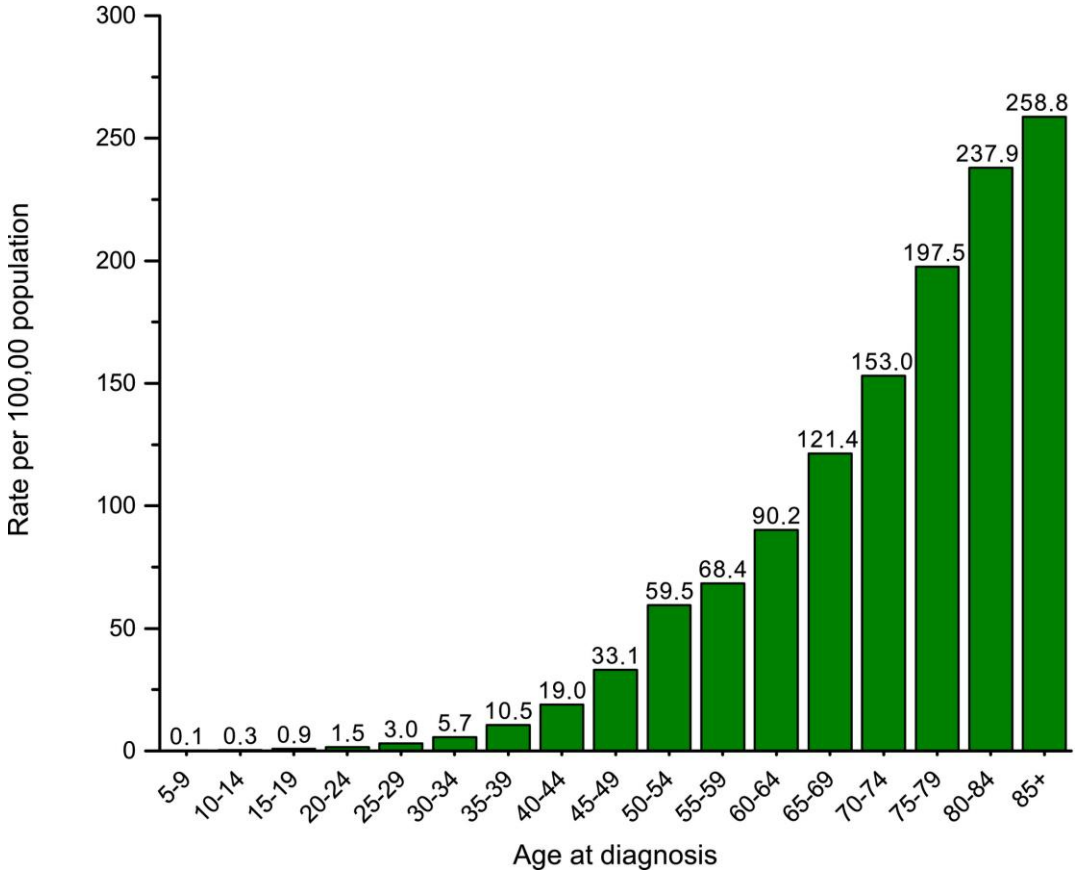
CRC incidence (2012-2016) & mortality rates (2013-2017)



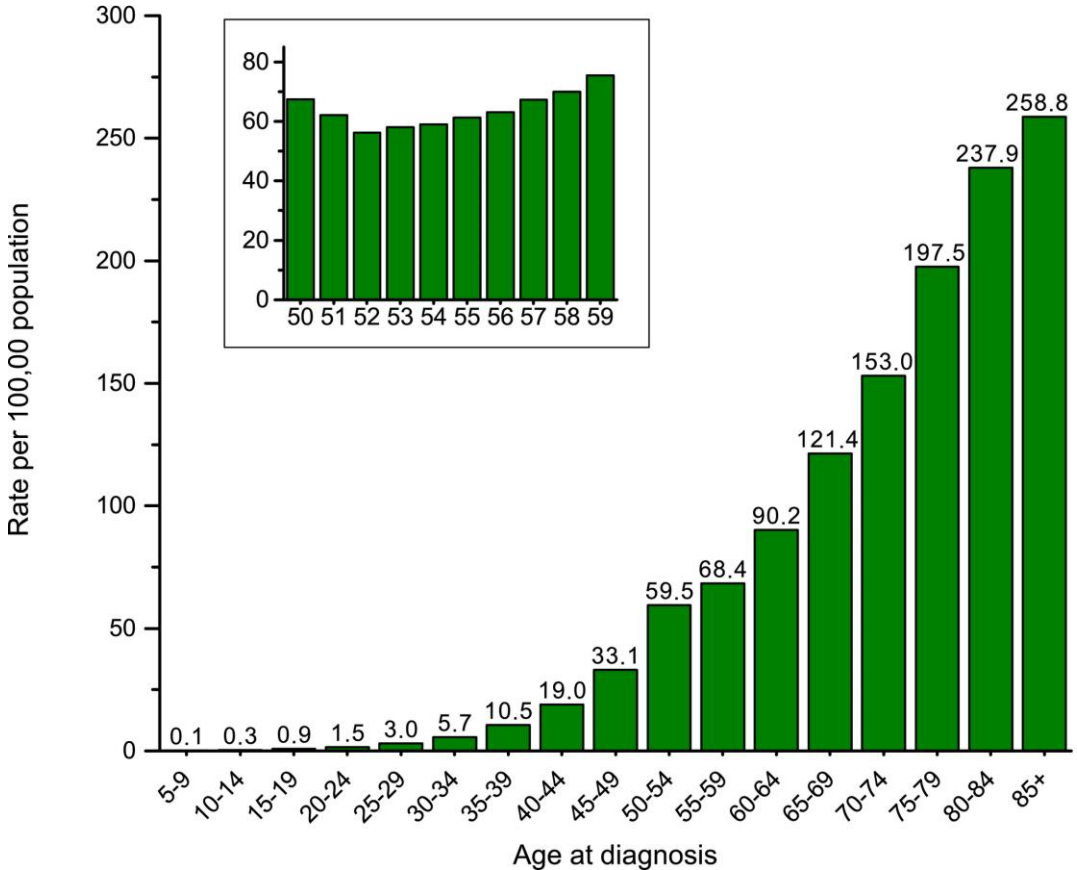
Sex differences in CRC incidence by age



Age-specific CRC incidence (2012-2016)



Age-specific CRC incidence (2012-2016)



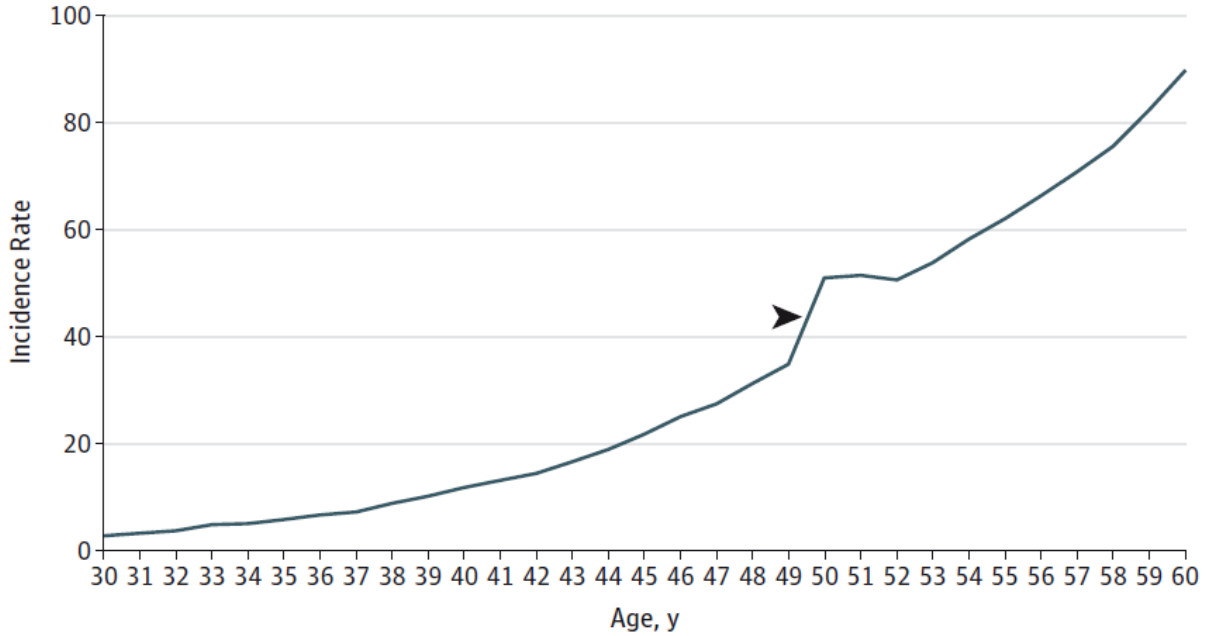
Original Investigation | Gastroenterology and Hepatology

Trends in Incidence of Early-Onset Colorectal Cancer in the United States Among Those Approaching Screening Age

Wesal H. Abualkhair, MD, MS; Meijiao Zhou, PhD; Dennis Ahnen, MD; Qingzhao Yu, PhD; Xiao-Cheng Wu, MD, MPH; Jordan J. Karlitz, MD

JAMA Netw Open. 2020;3(1):e1920407. doi:10.1001/jamanetworkopen.2019.20407

Figure 1. Colorectal Cancer Incidence Rates per 100 000 Population in 1-Year Age Increments in the US Surveillance, Epidemiology, and End Results 18 Registries Among Patients Aged 30 to 60 Years, 2000-2015



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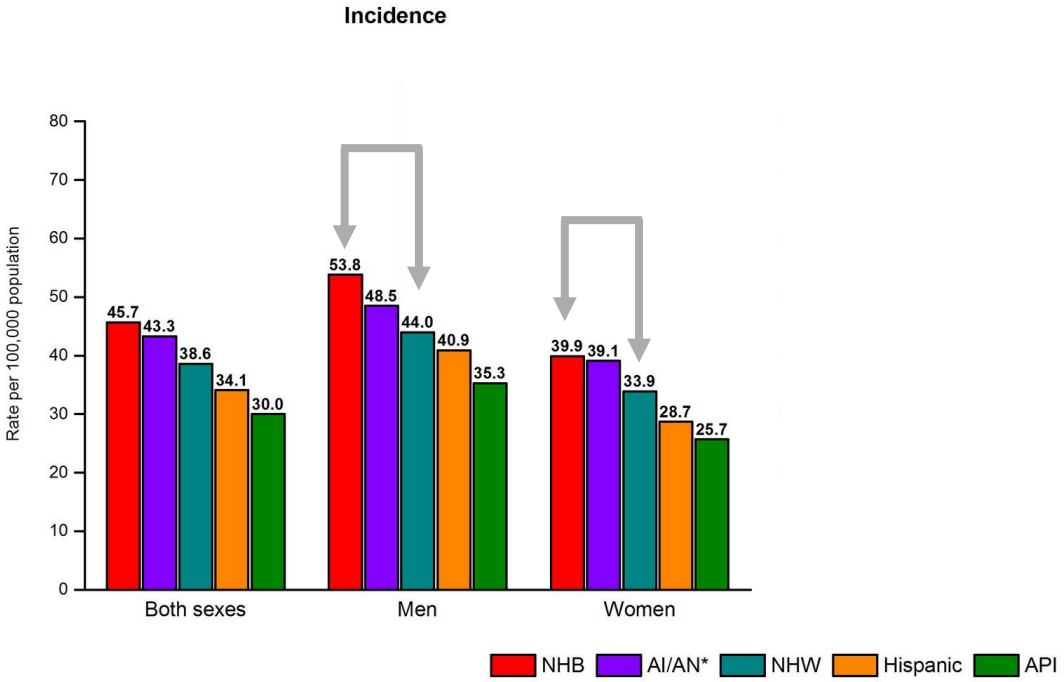
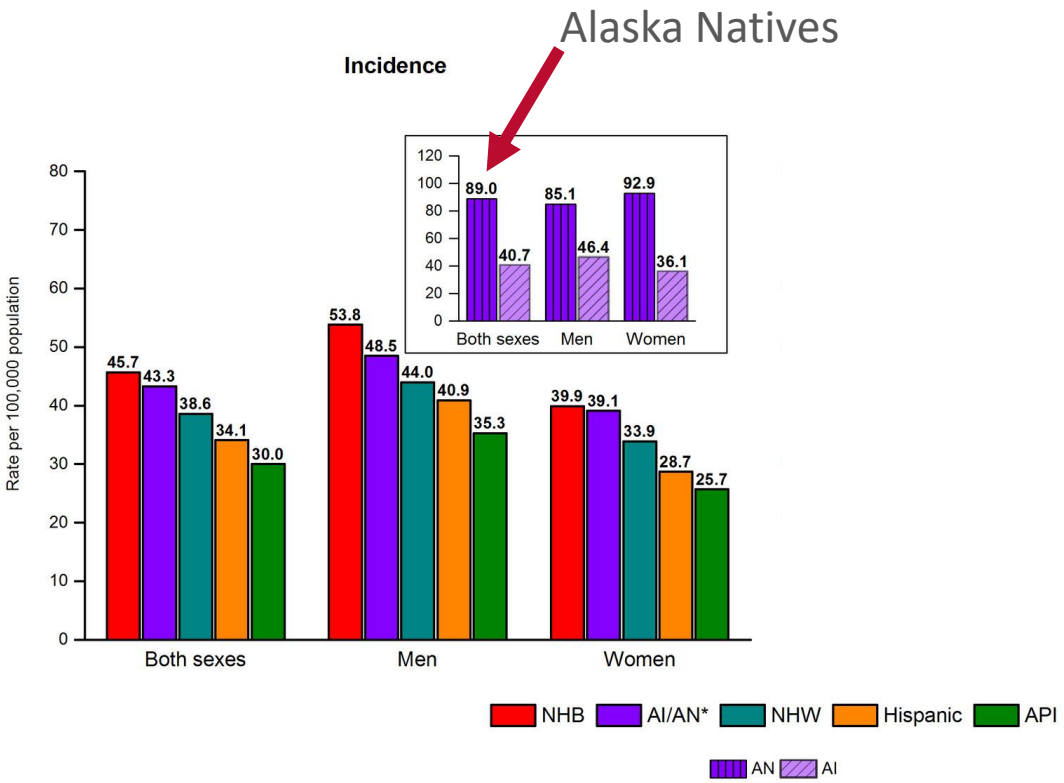
CRC occurrence by race/ethnicity

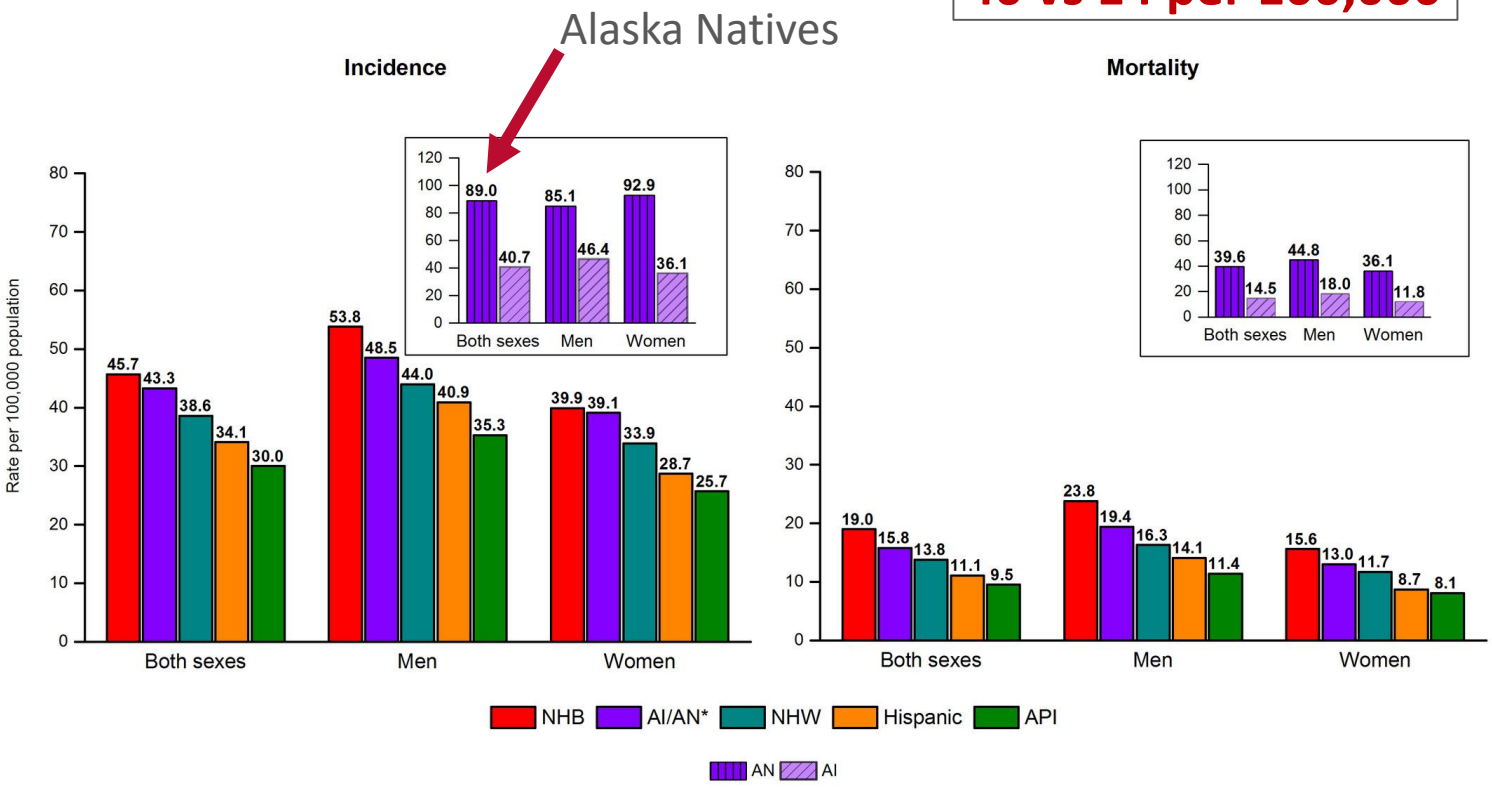


CRC occurrence by race/ethnicity

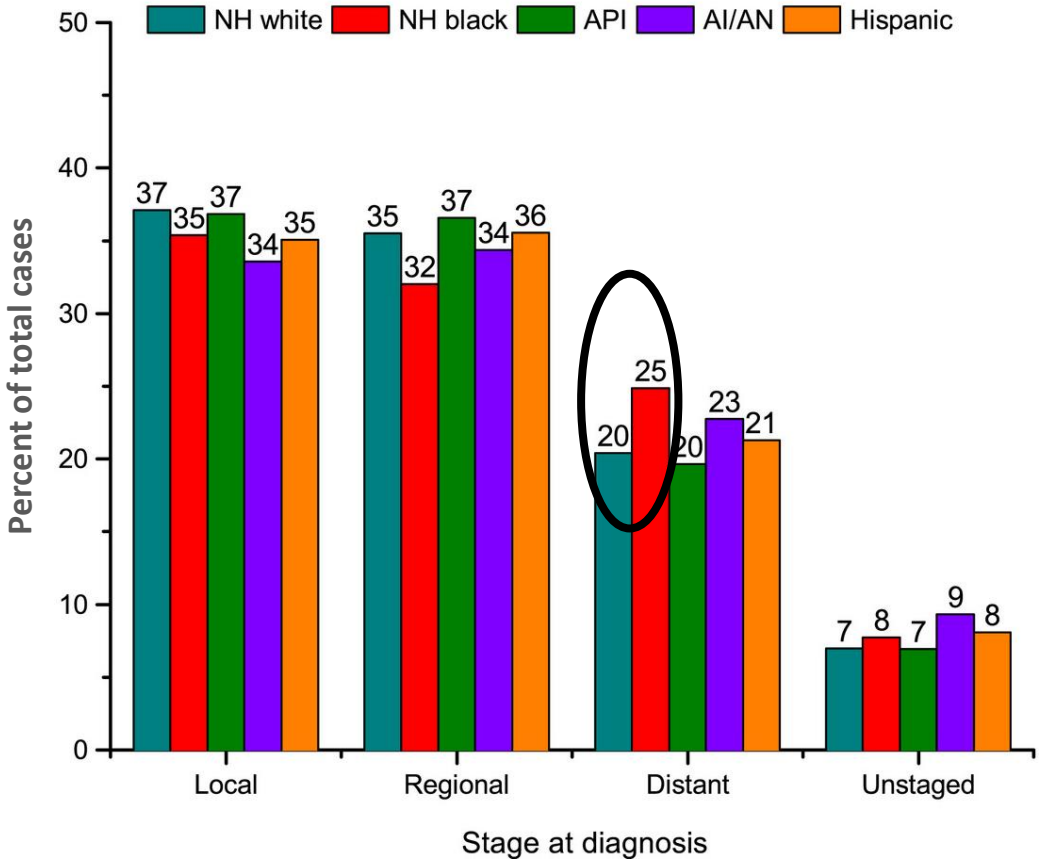


CRC occurrence by race/ethnicity

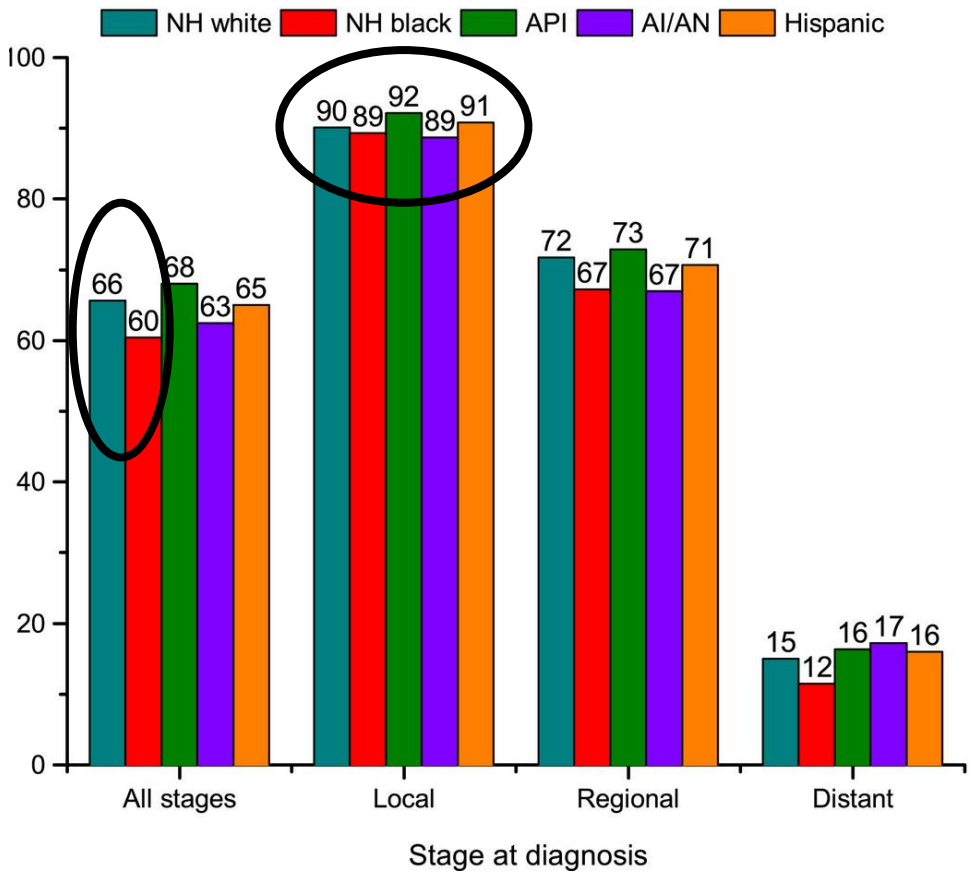
40 vs 14 per 100,000



CRC stage distribution (%) by race/ethnicity, 2012-2016



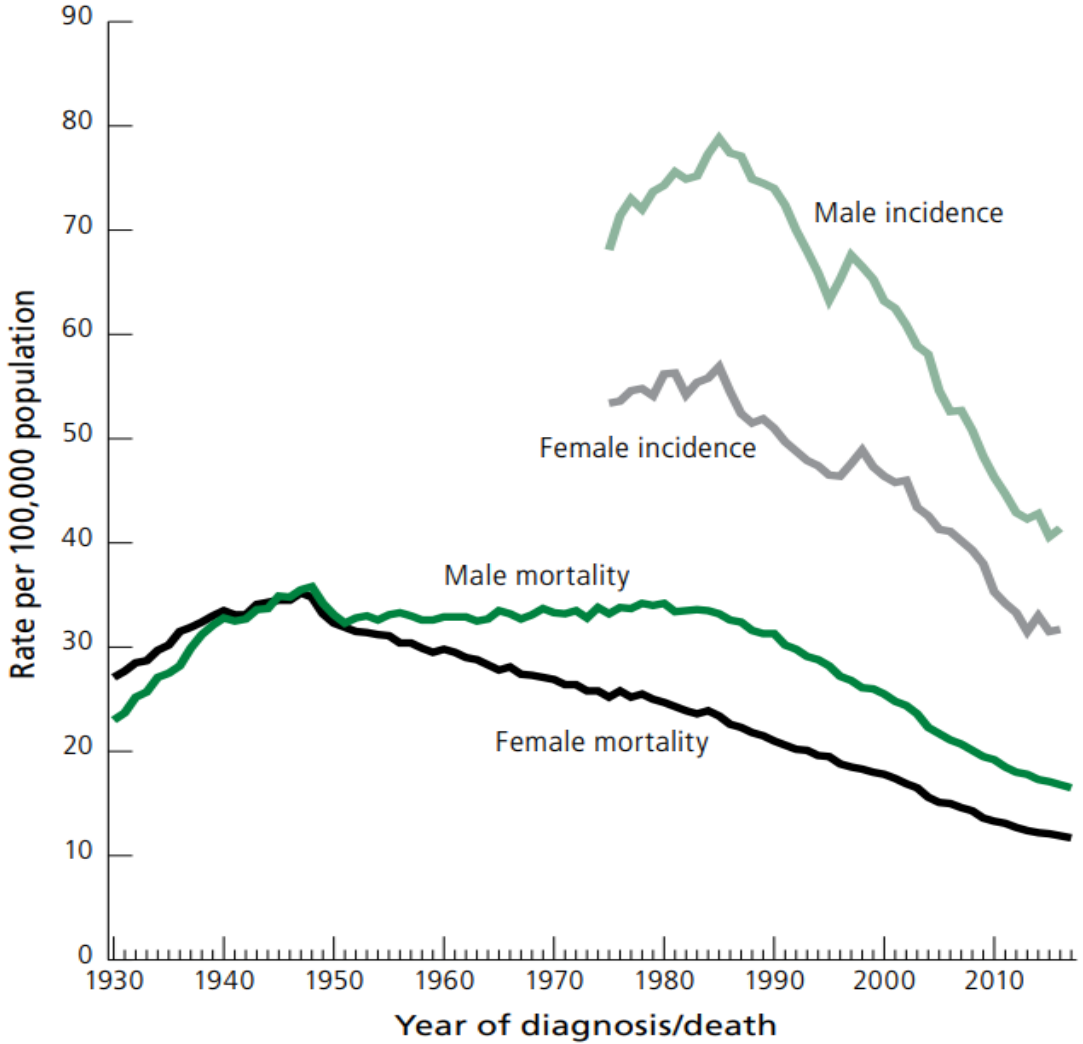
CRC 5-yr survival (%) by race/ethnicity, 2009-2015



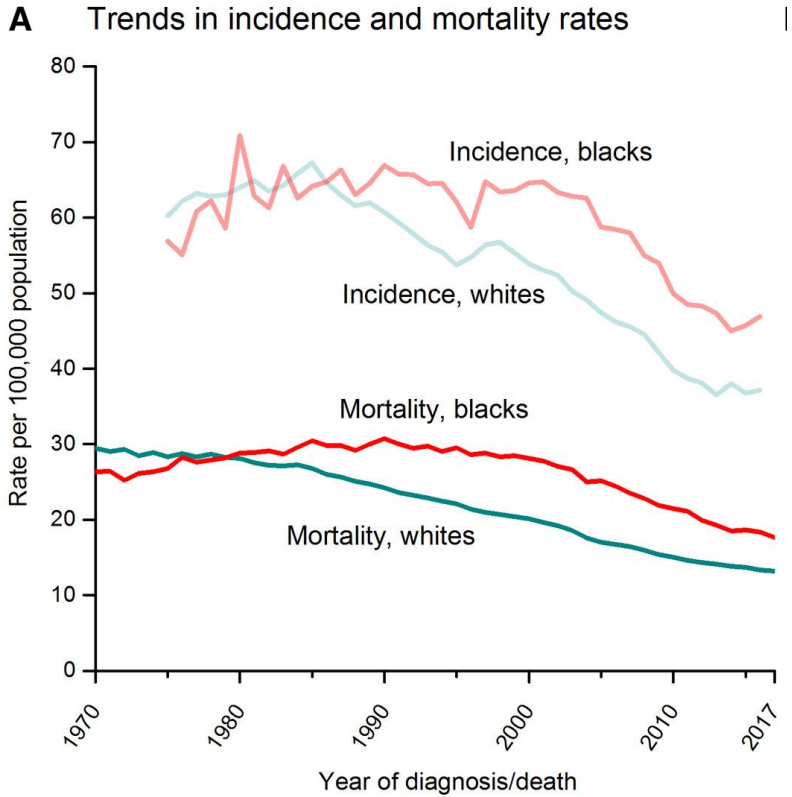
Overall CRC incidence & mortality in the U.S.

declines have slowed from

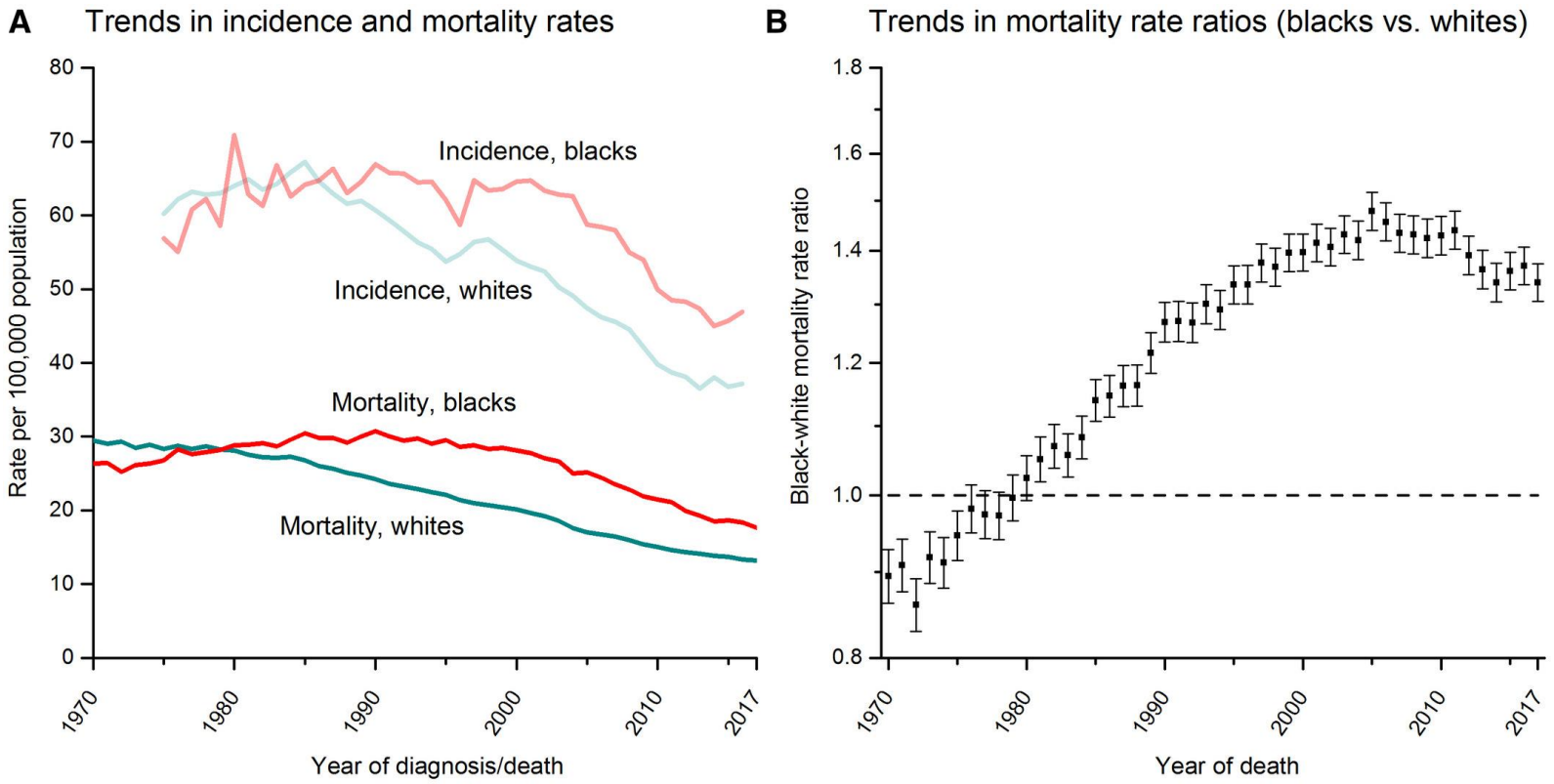
3%-4% to 1.5%



CRC incidence & mortality by race, 1970-2017

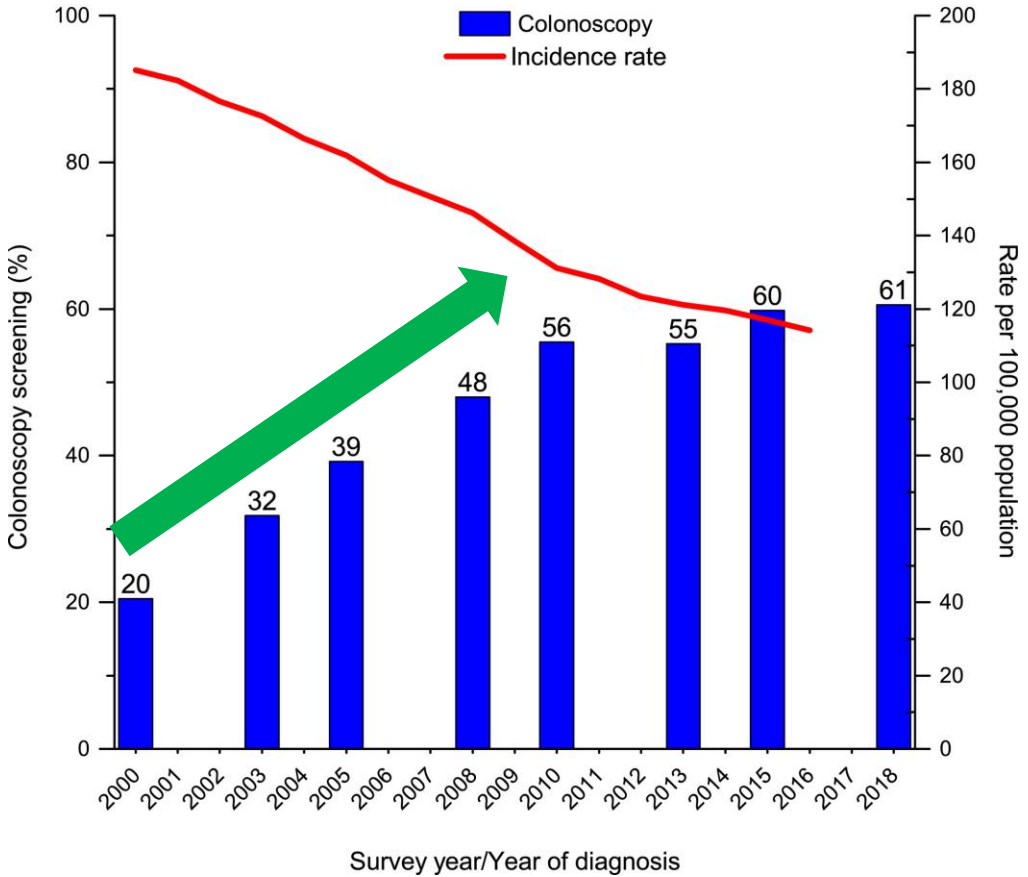


CRC incidence & mortality by race, 1970-2017



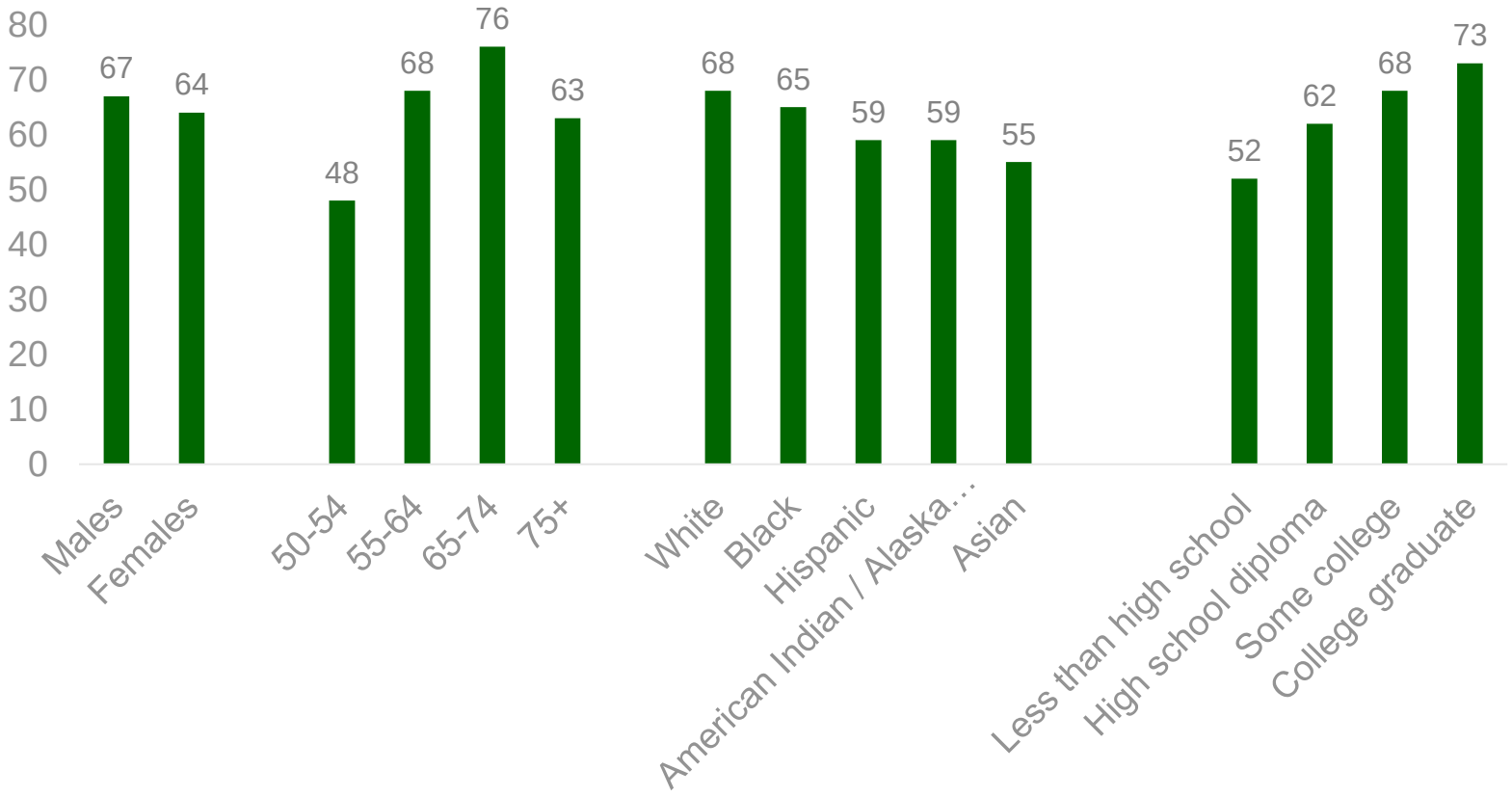
American Cancer Society

CRC incidence & colonoscopy use in ages 50+ since 2000

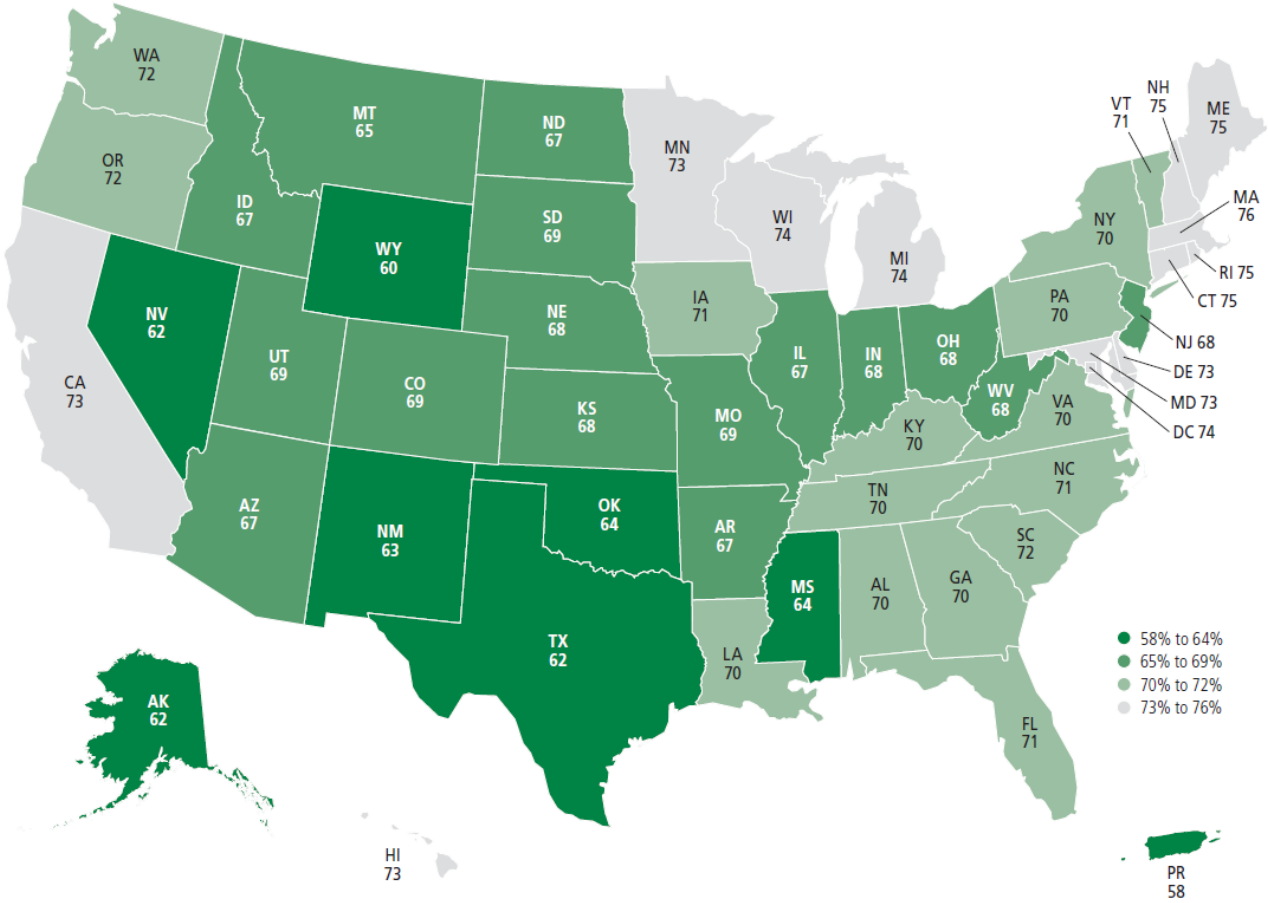


American Cancer Society

Variation in up-to-date CRC screening (50+ y), 2018



Up-to-date CRC screening (50+ y) by state, 2018



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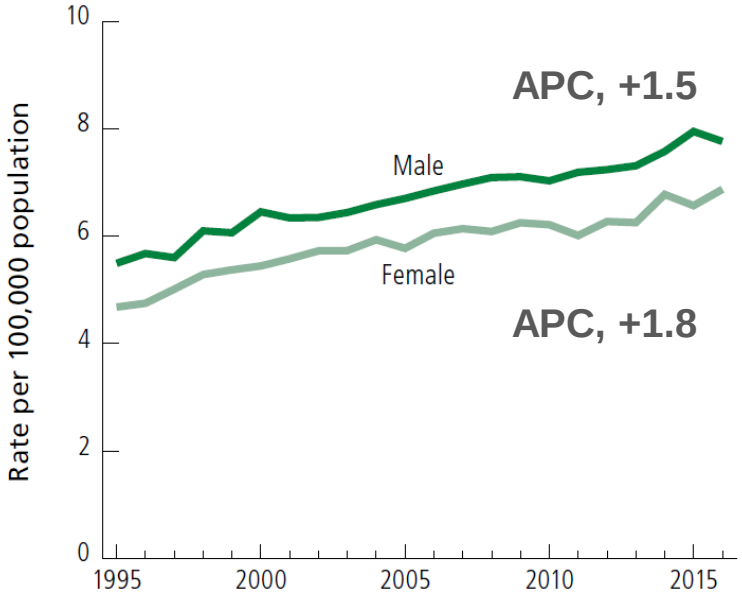
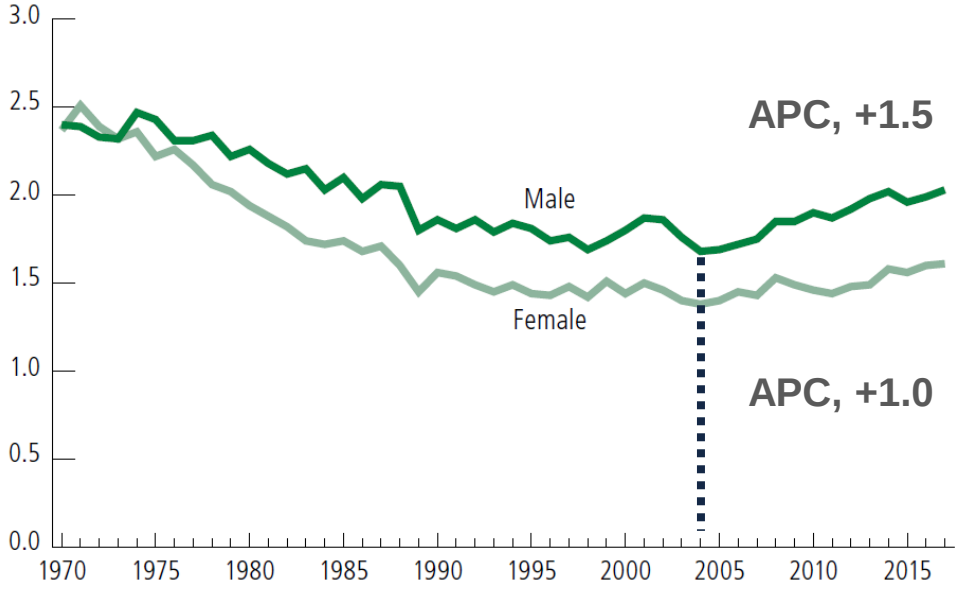
CRC incidence & mortality age <50 yr

INCIDENCE



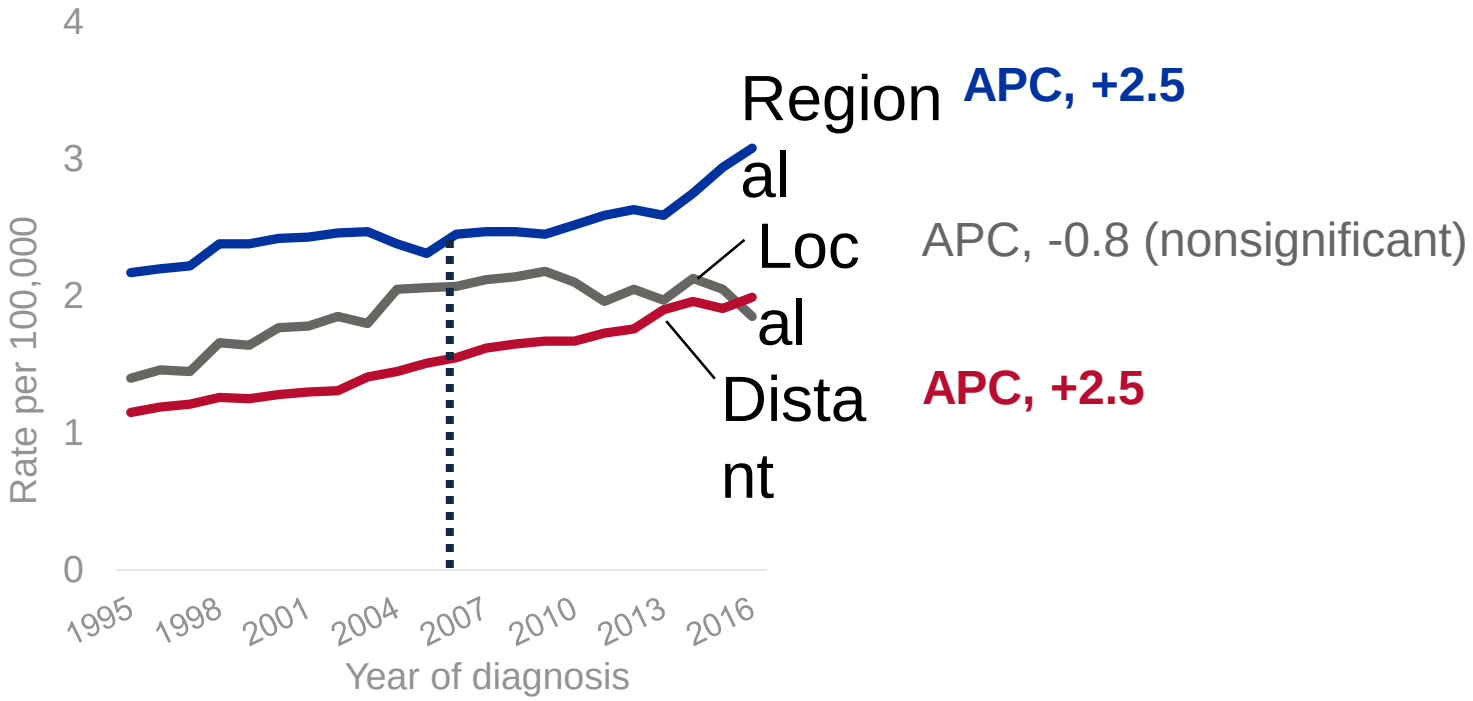
MORTALITY



36% localized stage in women vs 31% in men

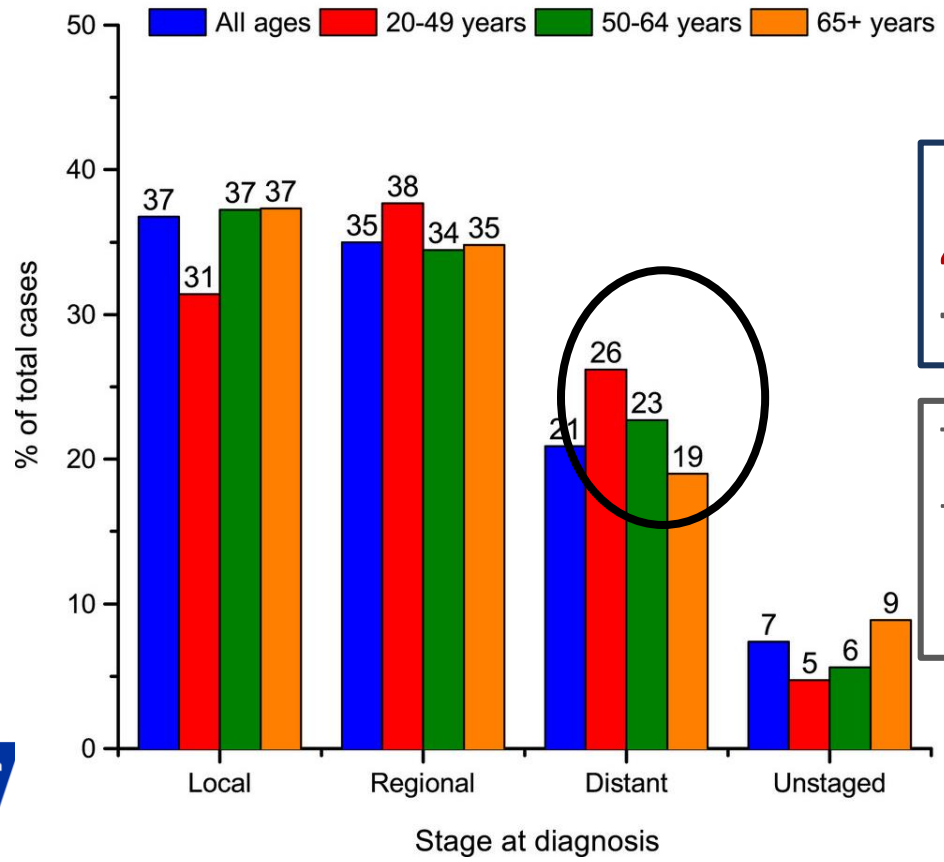
APC = annual percent change

CRC incidence age <50 yr by stage at diagnosis



APC = annual % change **Bold**=statistically significant

CRC stage distribution (%) by age, 2012-2016



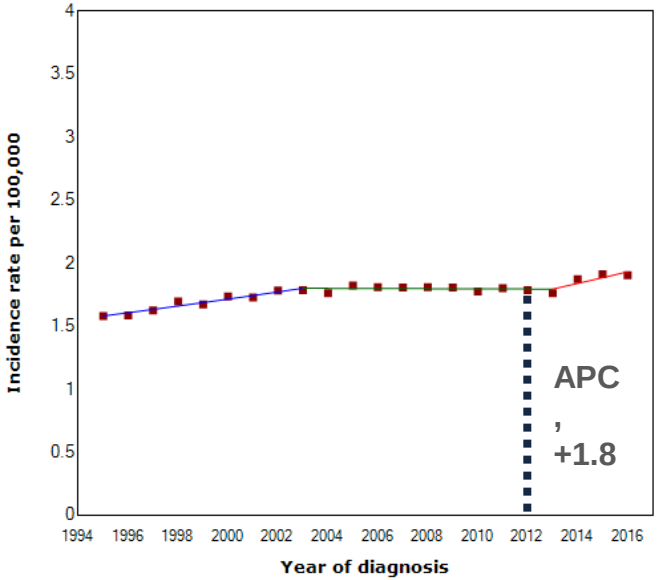
Risk of advanced stage <50 **40%** higher **after accounting for screening**

Time from symptoms to tx:

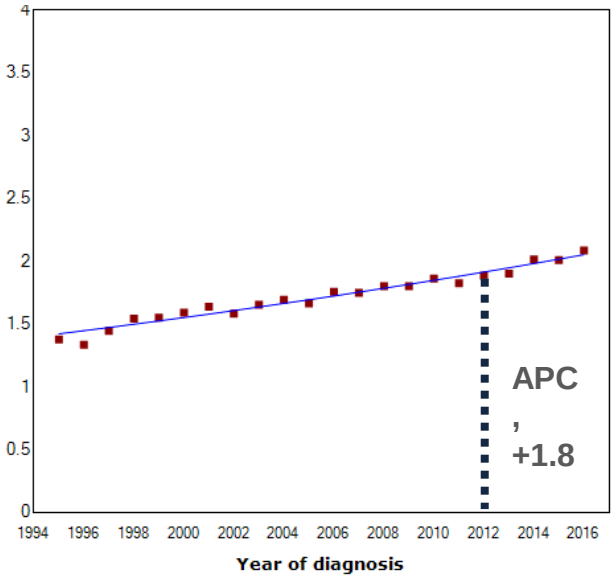
217 d vs **29.5 d**

CRC incidence age <50 yr by tumor subsite

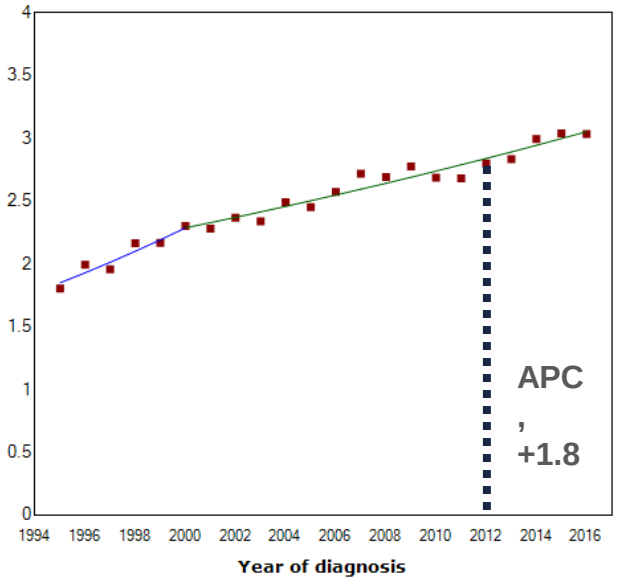
Proximal colon



Distal colon



Rectum

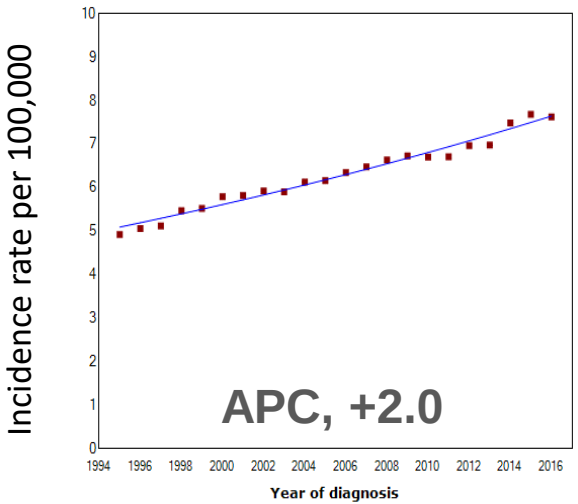


APC = annual percent change

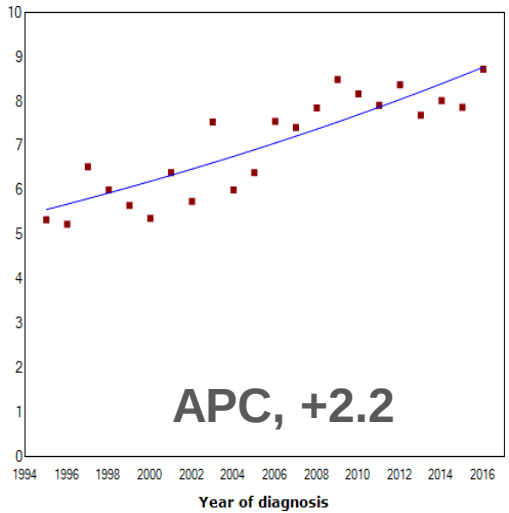
Source: Siegel et al. March 2020, CA A Cancer Journal for

CRC incidence age <50 yr by race/ethnicity

NH White

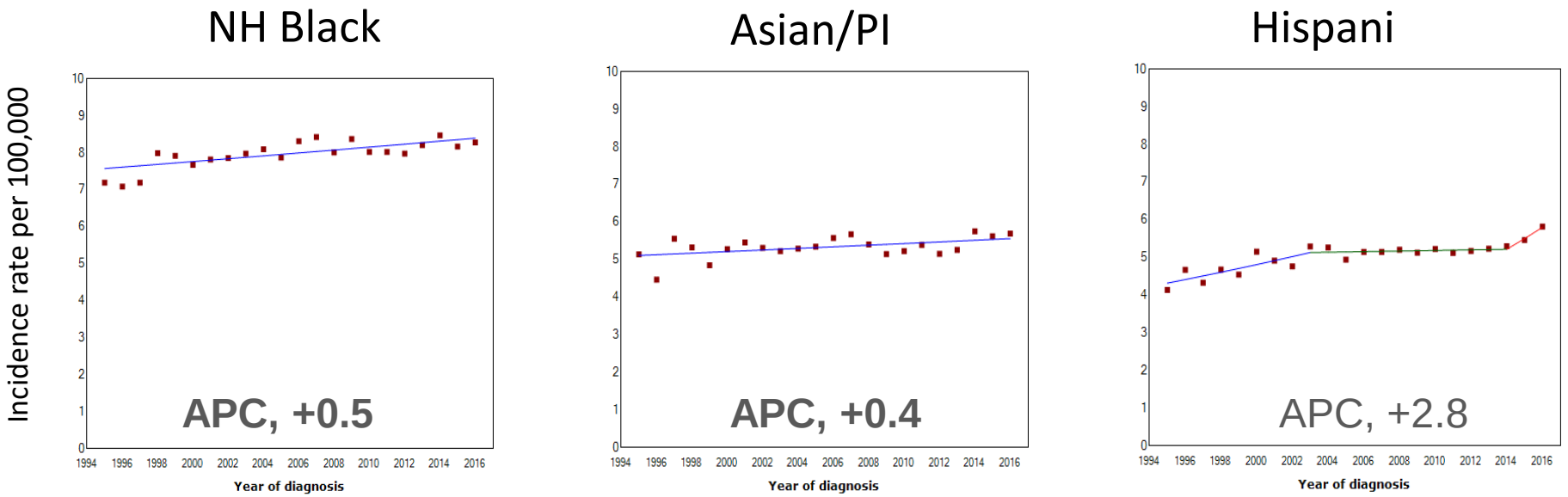


Am Indian/Alaska Nat



APC = annual % change **Bold**=statistically significant

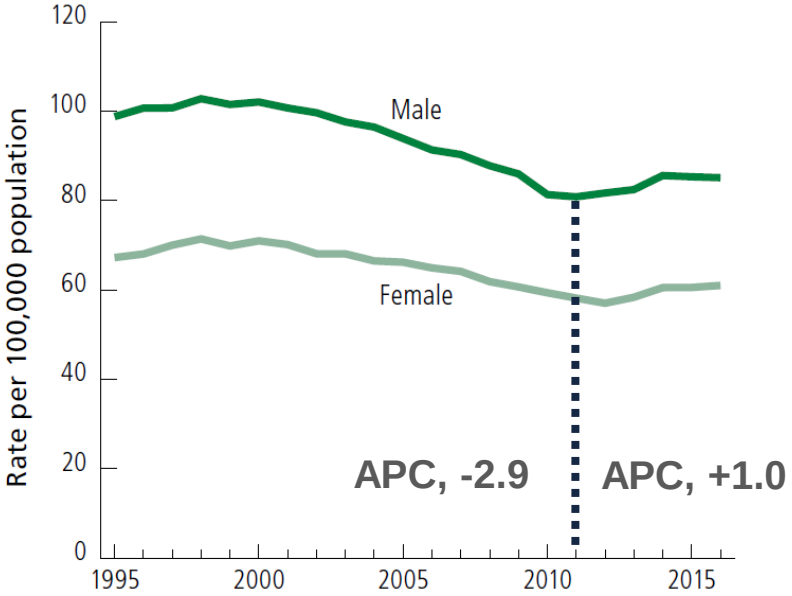
CRC incidence age <50 yr by race/ethnicity



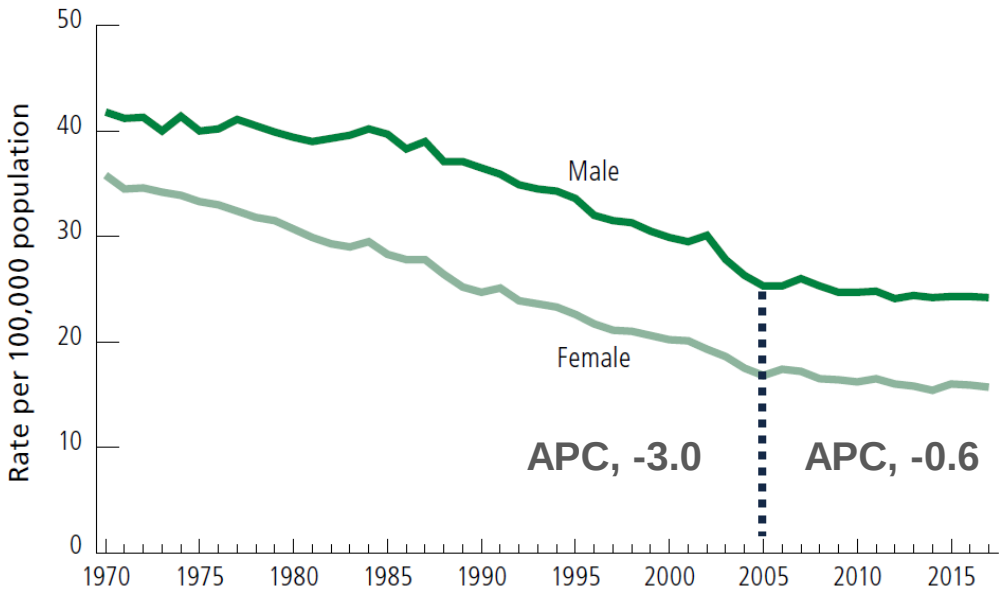
APC = annual % change **Bold**=statistically significant

CRC incidence & mortality age 50-64 yr

INCIDENCE



MORTALITY

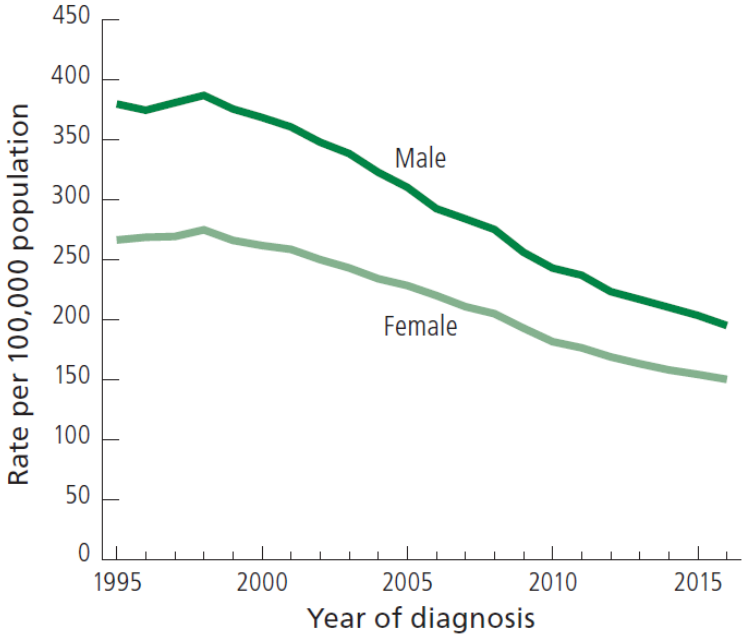


American Cancer Society

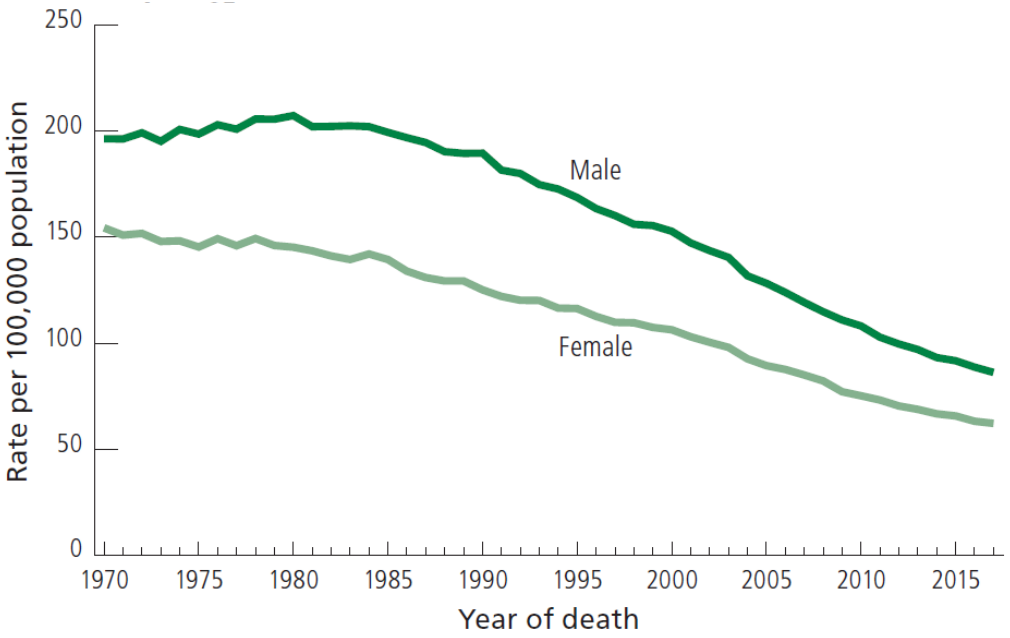
APC = annual percent change

CRC incidence & mortality age 65+ yr

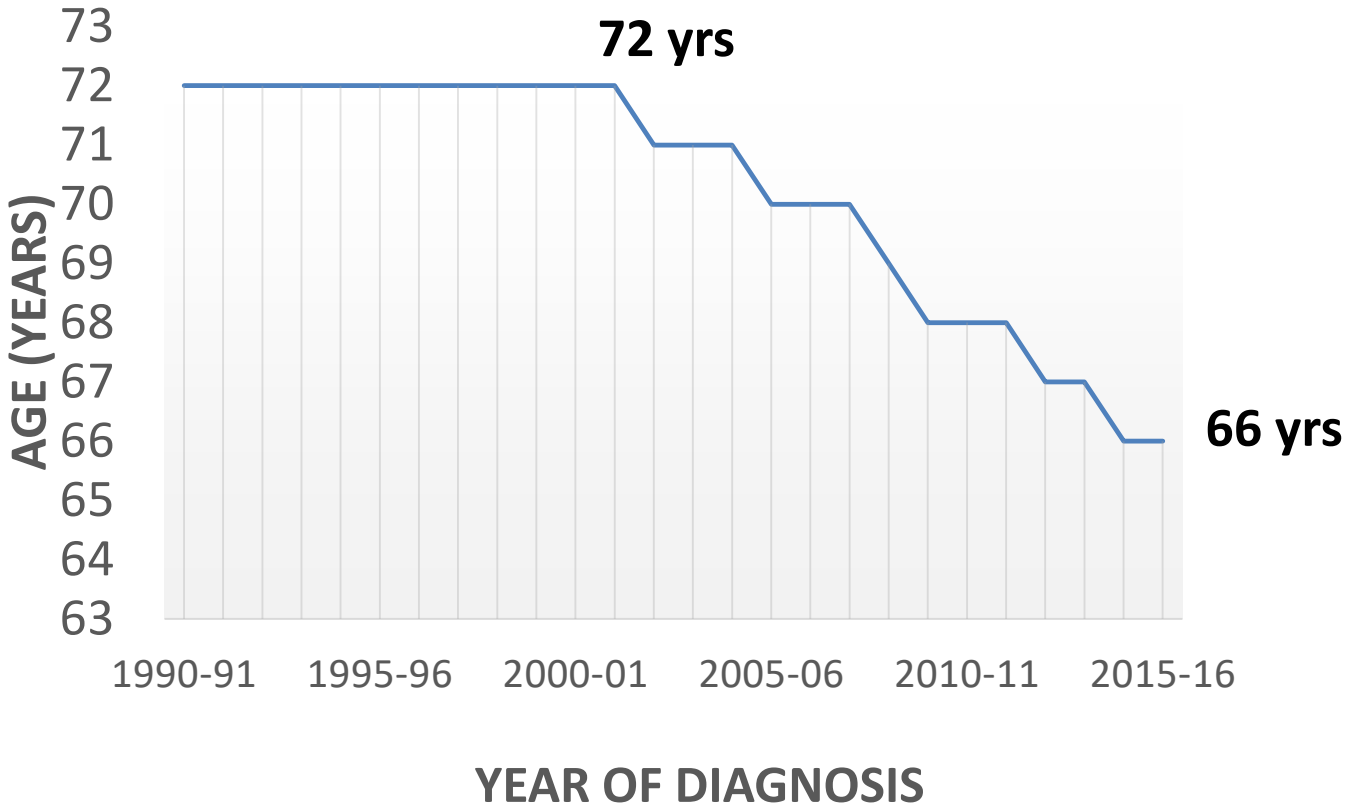
INCIDENCE



MORTALITY



Median age at CRC diagnosis, 1990-2016

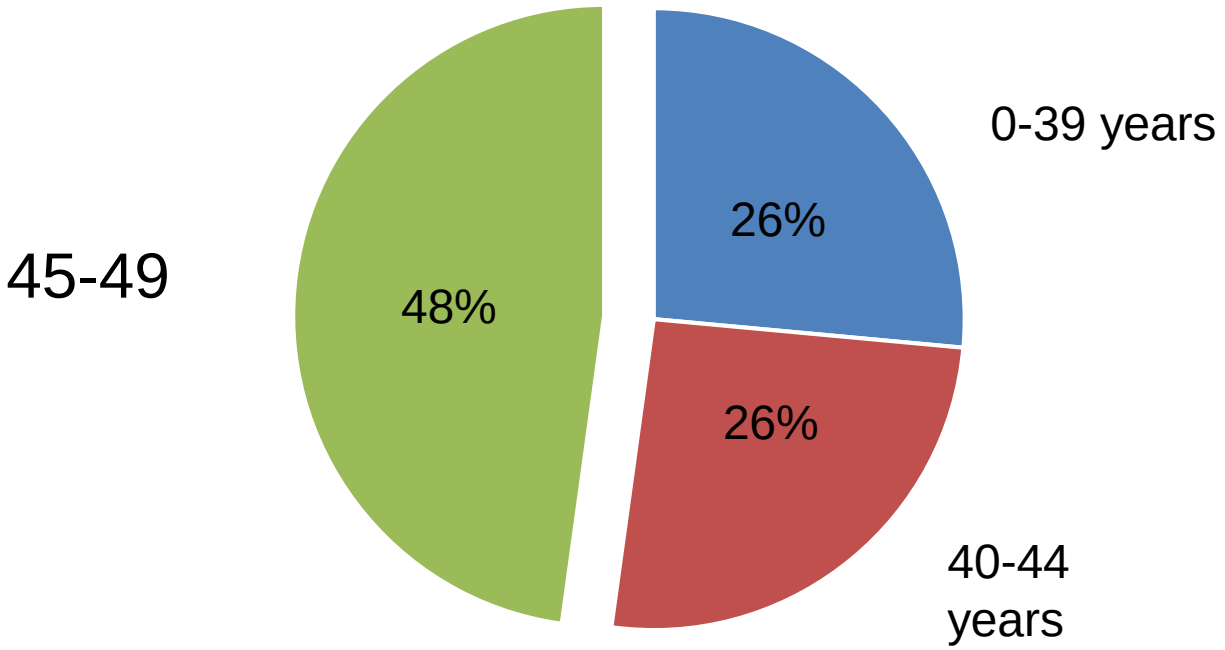


CRC < 50 y in 2020

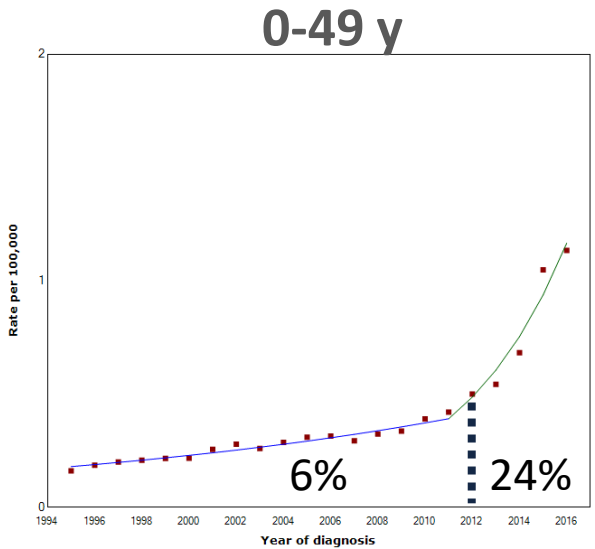
- 17,930 new cases
  =49 per day

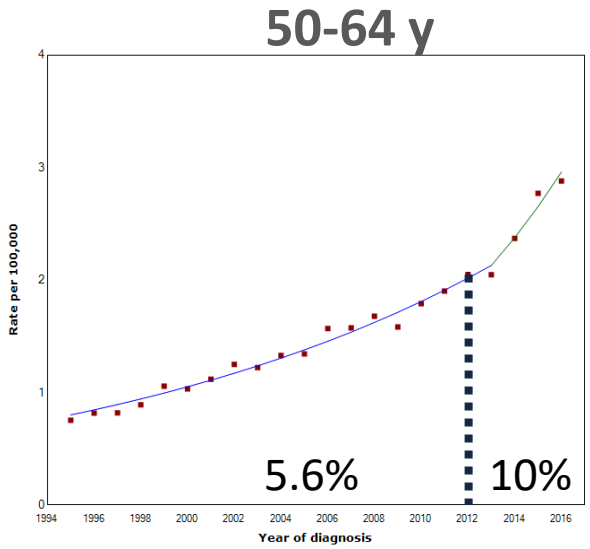
- 3,640 deaths
  =10 per day

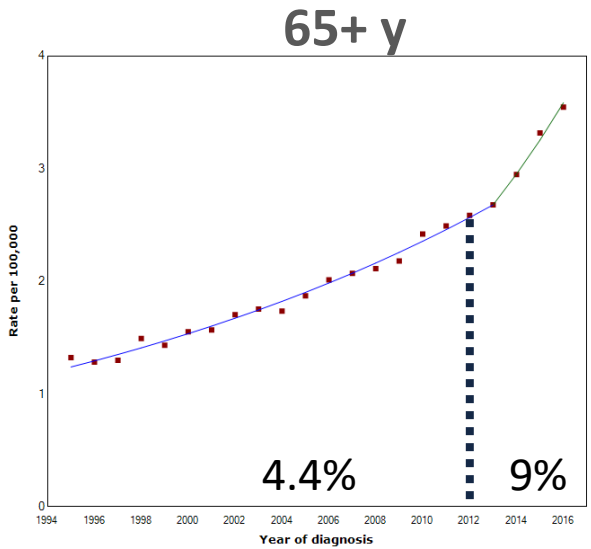
CRC age distribution <50 yr



Trends in incidence rates for appendiceal cancer by age, 1995-2016







Annual % change during 1995-2012 and 2012-2016

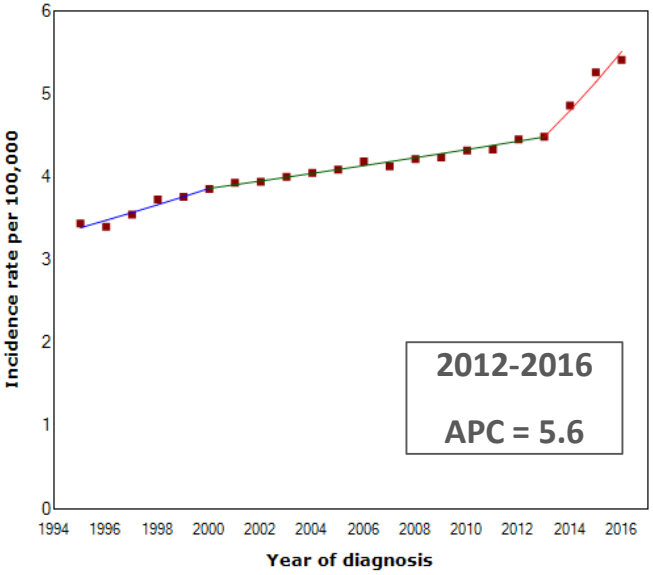
Influence of appendix on CRC incidence trends 2012 to 2016

	APC including appendix	APC excluding appendix
0-49 y	**4.3**	**2.2**
50-64 y	**1.3**	**1.0**
65+ y	**-3.2**	**-3.3**
All ages	-0.8	**-1.5**

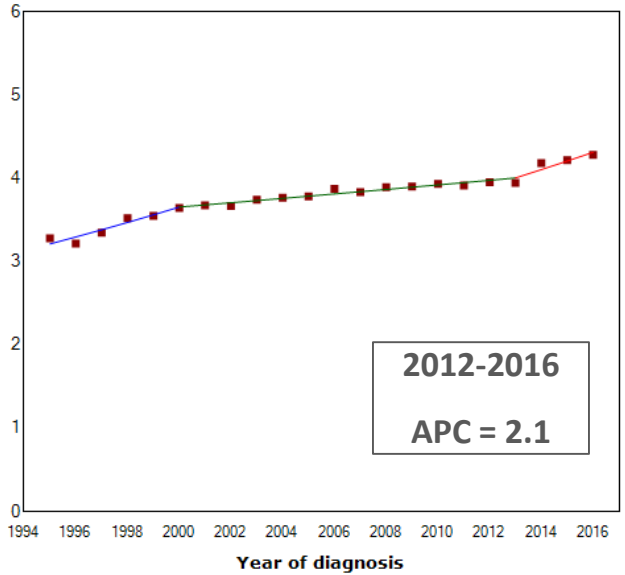
APC=annual percent change BOLD=statistically significant

Influence of appendix on rates of early-onset CRC

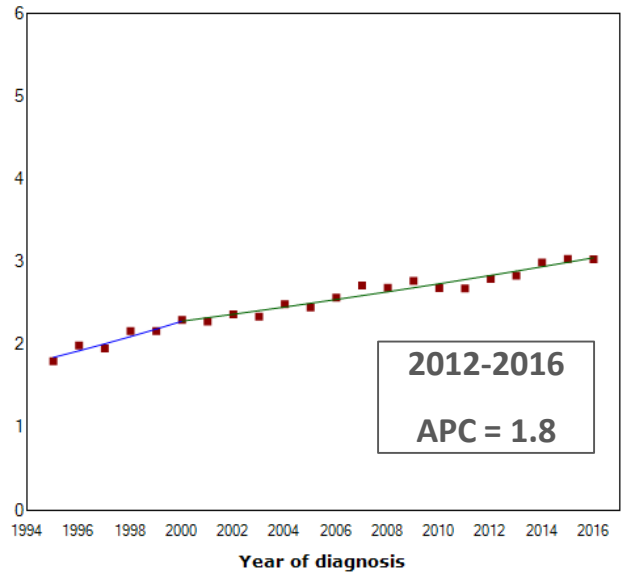
Colon including appendix



Colon excluding appendix



Rectum



American Cancer Society

Summary

- CRC burden is highest in Alaska Natives & blacks
- Declining incidence confined to 65+
- Median age at diagnosis is 66 y, down from 72 in 2001-02
- Increases in incidence <50 confined to advanced disease
  - 49 new cases and 10 deaths per day in 2020
  - 7 in 10 with regional/distant spread
- Future rates/trends of CRC will exclude appendiceal tumors

Opportunities

- Encourage healthy lifestyles – 50% of cases due to behavioral factors
  - Health body weight
  - Physical activity
  - Healthy diet
  - No smoking/heavy alcohol
- Improve access to high-quality care/risk-based screening
  - Screening at 45 is cost-effective! Improve 45-54 uptake
  - Fam risk at 40 – better family-history taking followed w/action
- Reduce delays in diagnosis before 50
  - **General public:** Increase awareness of symptoms/increased risk/destigmatize
  - **PCPs:** increase awareness of increased risk – zebras abound
- More holistic tx

Collaborators

Cancer registry staff worldwide

Kim Miller

Stacey Fedewa

Ahmedin Jemal

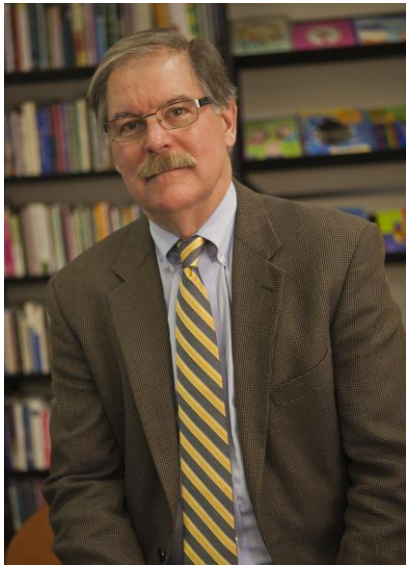
Lynn Butterly

Joe Anderson

Andrea Cercek

Thank you!

Please submit your questions in the Q&A box.



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Thank You!

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