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# Colorectal Cancer Health Disparities

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# Outline

What are health disparities?

What are inequality, inequity, and justice?

Disparities in colorectal cancer incidence  
between Black and White populations

Disparities in colorectal cancer mortality  
between Black and White populations

Why?

What to do?

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# Disparity (Merriam-Webster)

*Noun*

a noticeable and usually significant  
difference or dissimilarity

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# Health Disparity (National Institute Minority Health and Health Disparities)

*“A health disparity is a health difference that adversely affects disadvantaged populations in comparison to a reference population, based on one or more health outcomes”*

## Equality



The assumption is that **everyone benefits from the same supports**. This is equal treatment.

## Equity



**Everyone gets the supports they need** (this is the concept of "affirmative action"), thus producing equity.

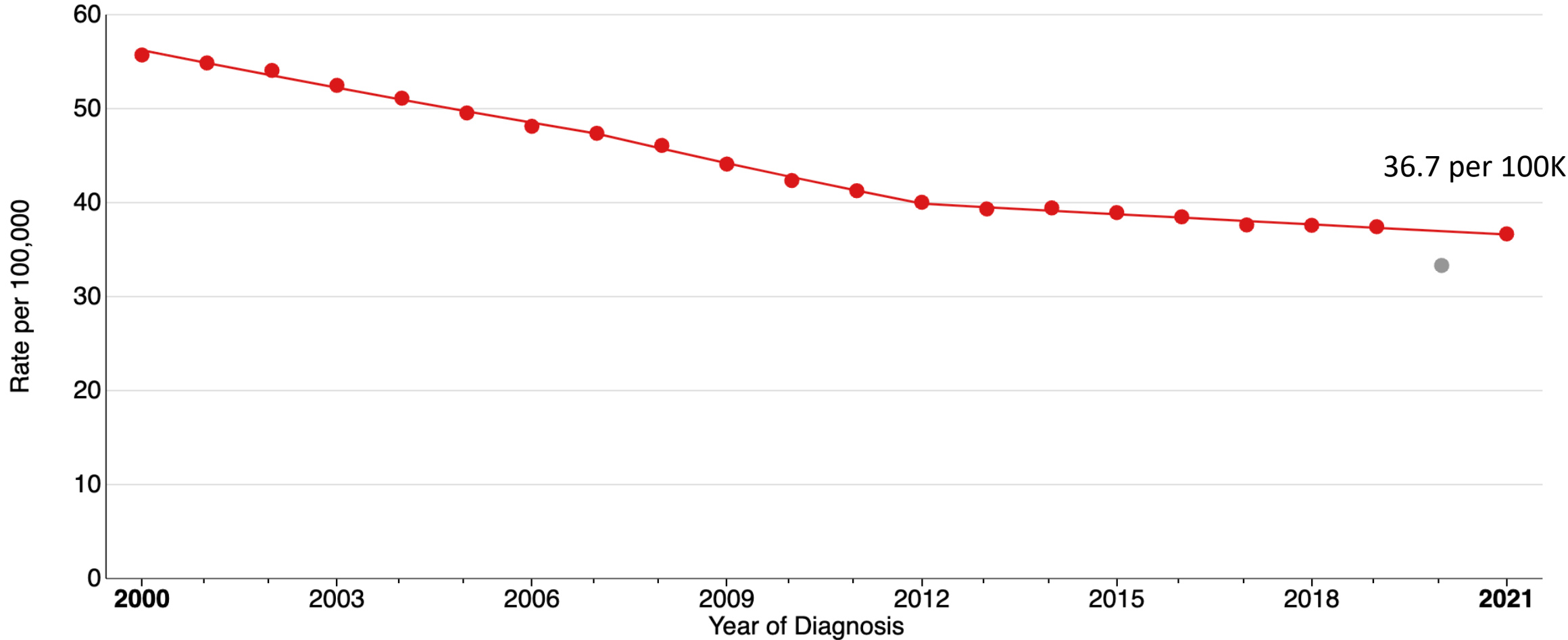
## Justice



All 3 can see the game without supports or accommodations because **the cause(s) of the inequity was addressed**. The systemic barrier has been removed.



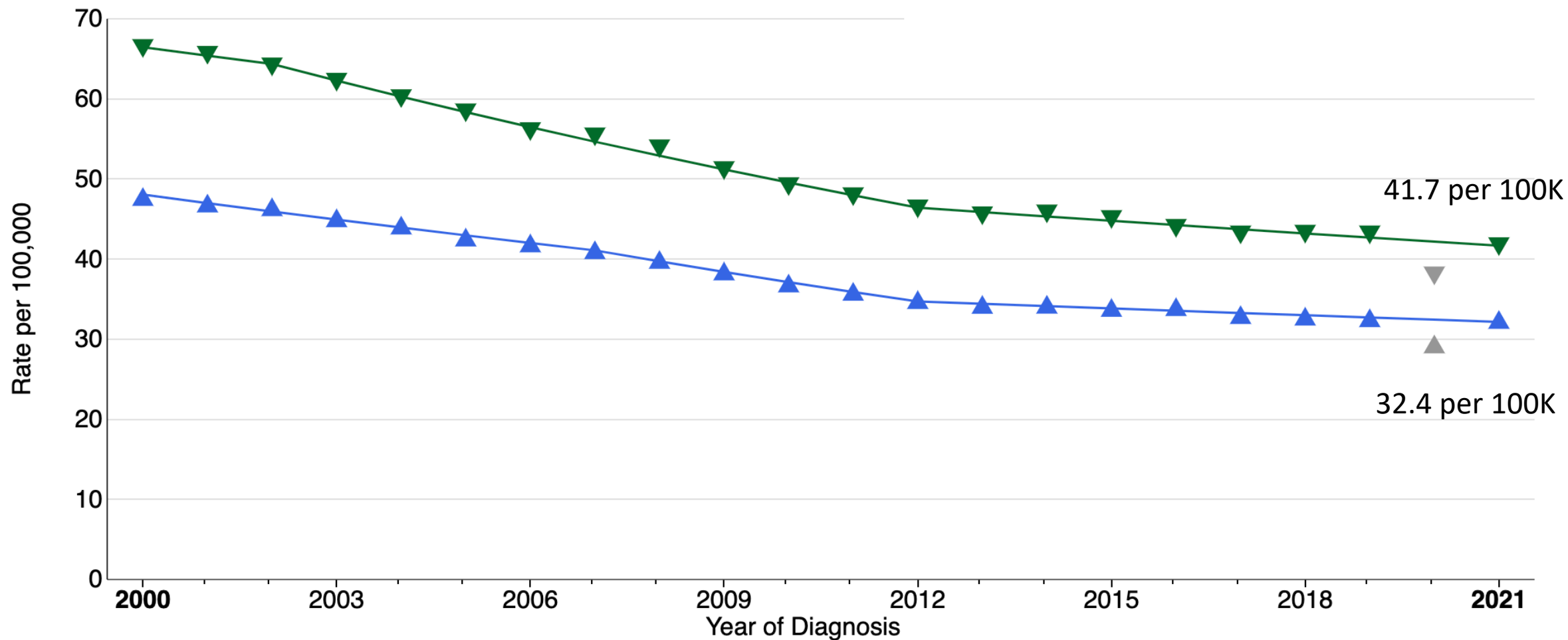
# Colorectal Cancer Age-Adjusted Incidence Rates, 2000-2021: All Races, both sexes



**Legend (Sex)**

- Both Sexes

# Colorectal Cancer Age-Adjusted Incidence Rates, 2000-2021: All Races, male and female

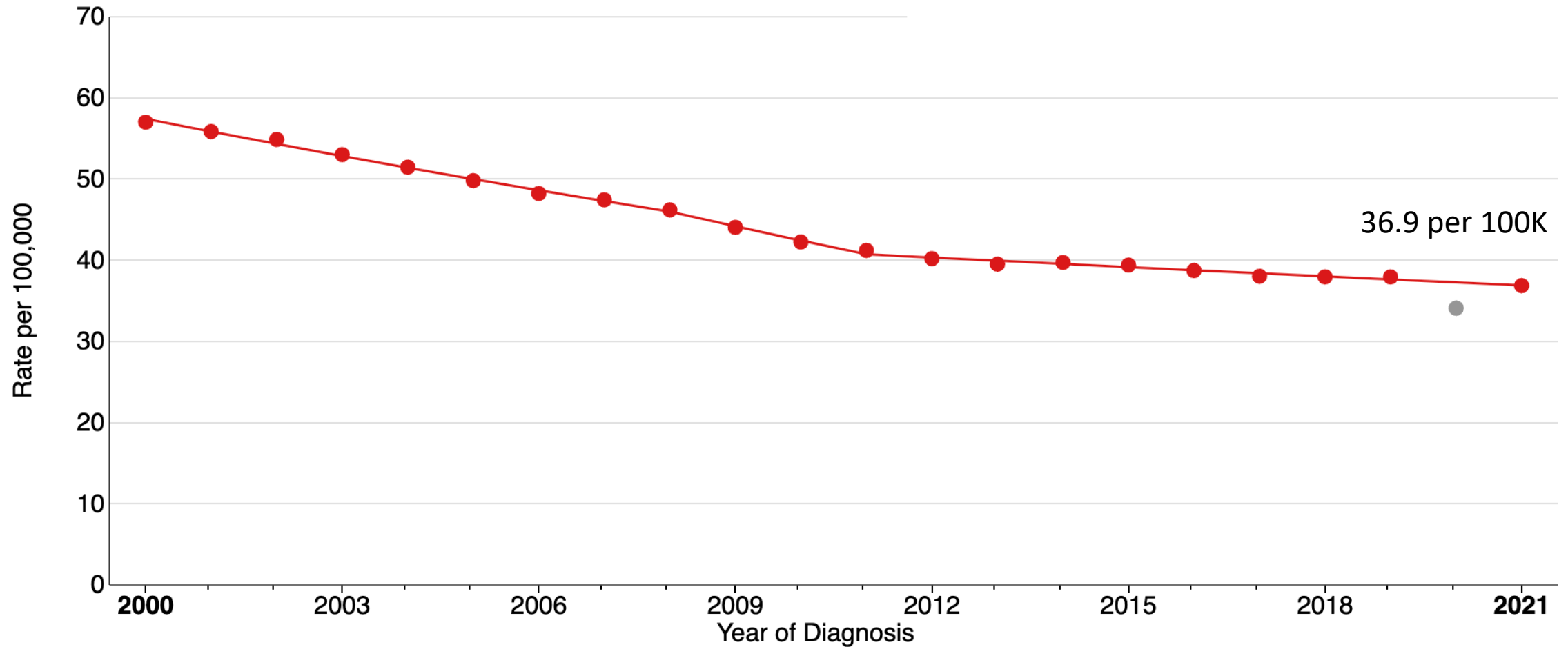


Legend  
(Sex)

▲ Female

▼ Male

# Colorectal Cancer Age-Adjusted Incidence Rates, 2000-2021: NHW, both sexes

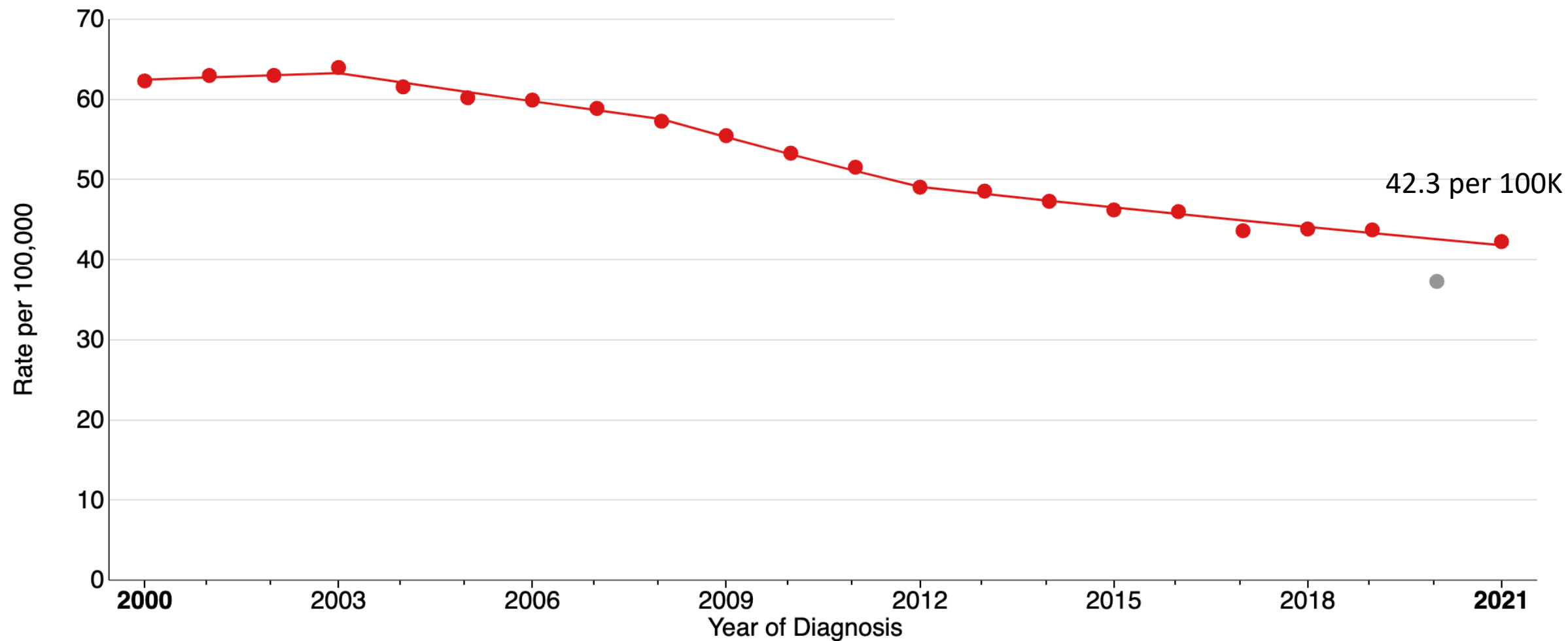


**Legend**  
(Sex)

● Both Sexes



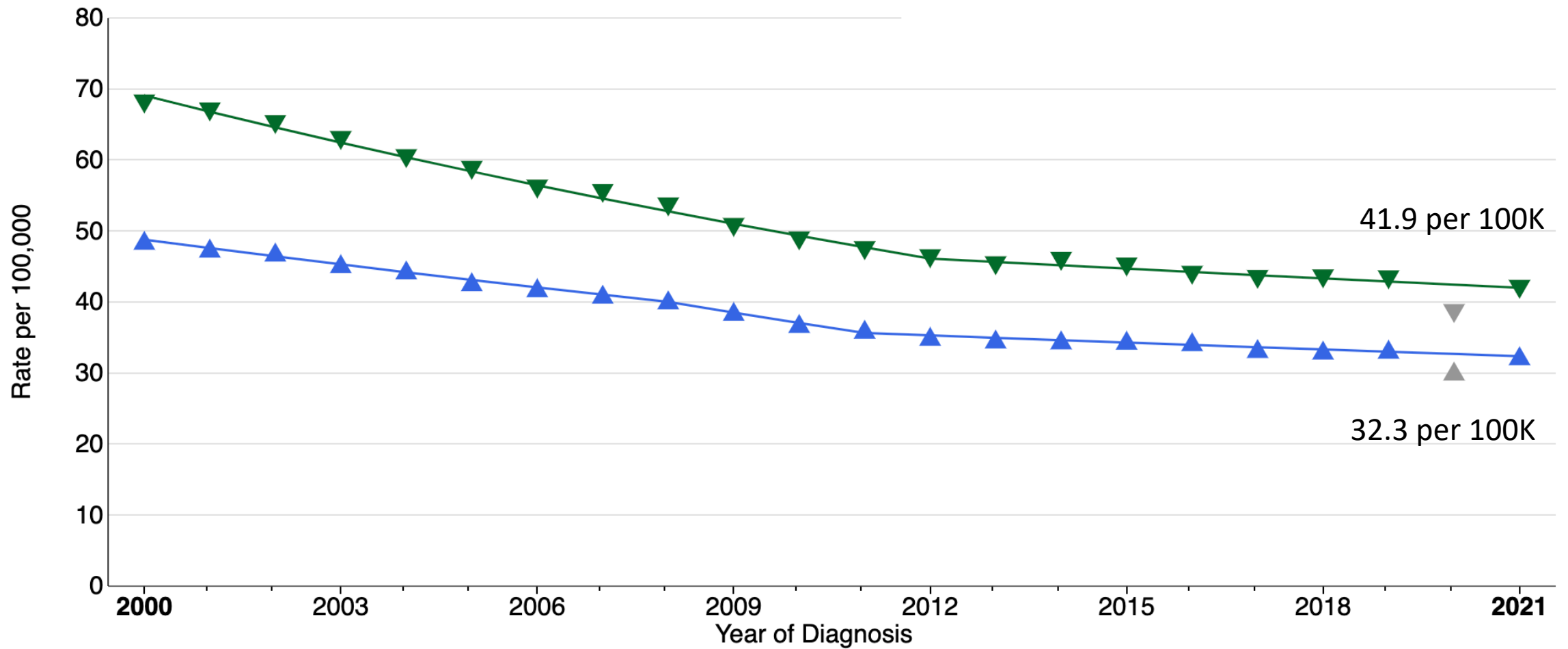
# Colorectal Cancer Age-Adjusted Incidence Rates, 2000-2021: NHB, both sexes



Legend  
(Sex)

● Both Sexes

# Colorectal Cancer Age-Adjusted Incidence Rates, 2000-2021: NHW, Male and Female

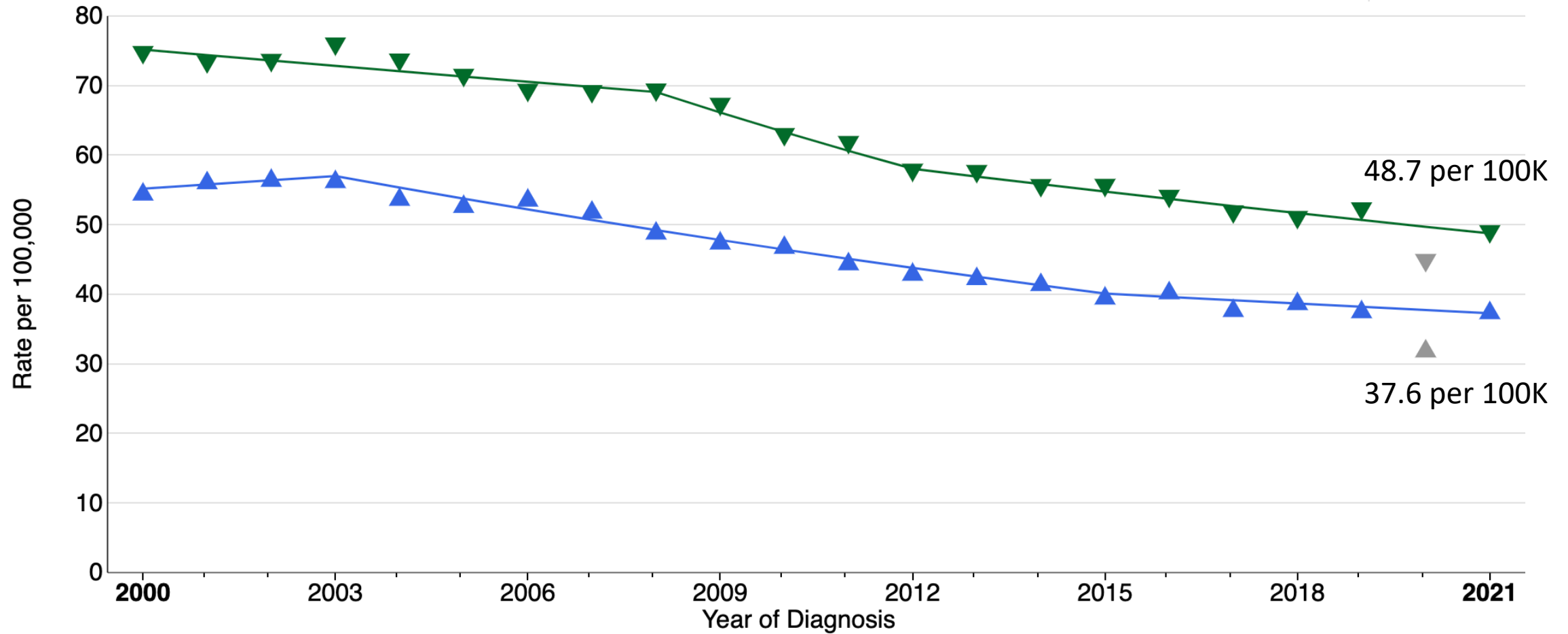


Legend  
(Sex)

▲ Female

▼ Male

# Colorectal Cancer Age-Adjusted Incidence Rates, 2000-2021: NHB, Male and Female



Legend  
(Sex)

▲ Female

▼ Male

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# 2021 incidence rates per 100K with percent change

	NHW	NHB	Percent Difference
Male	41.9	48.7	+16.2%
Female	32.3	37.6	+16.8%

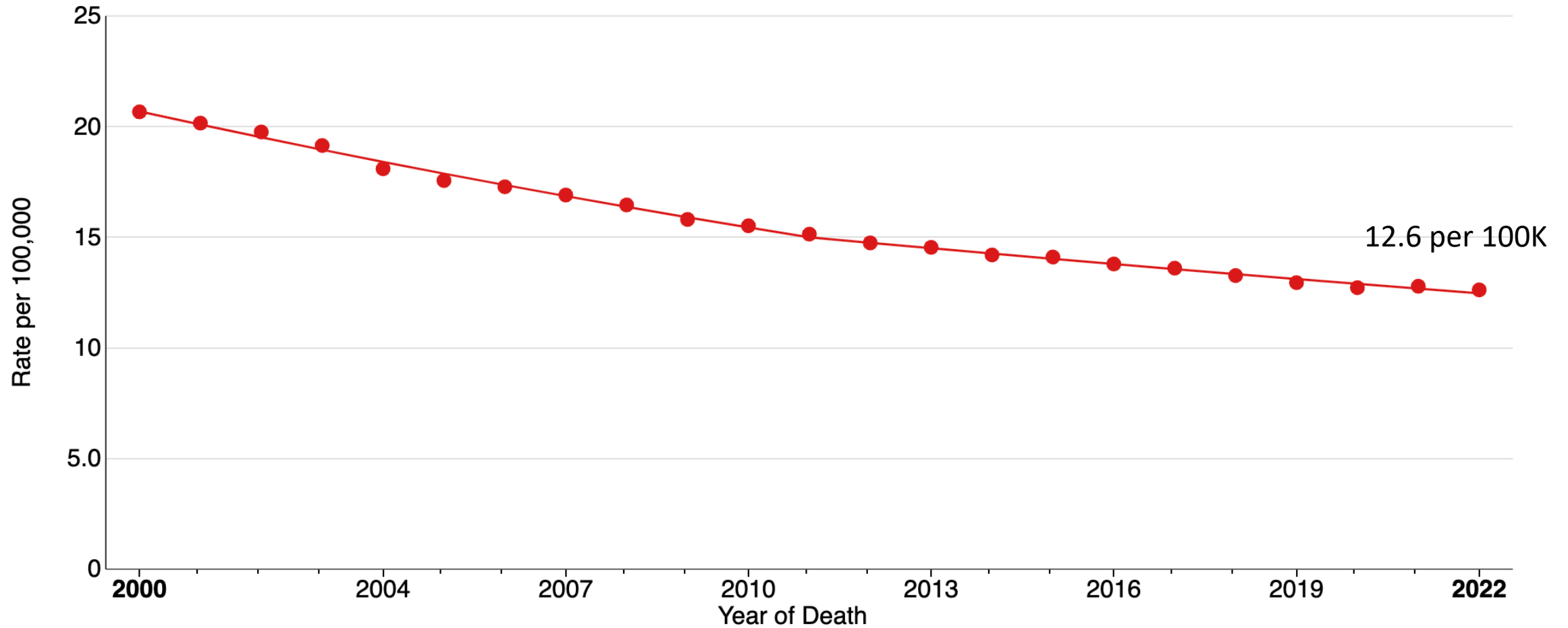
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# 2021 incidence rates per 100K with percent change

NHW year 2000 = 48.6 per 100K

	NHW	NHB	Percent Difference
Male	41.9	48.7	+16.2%
Female	32.3	37.6	+16.8%

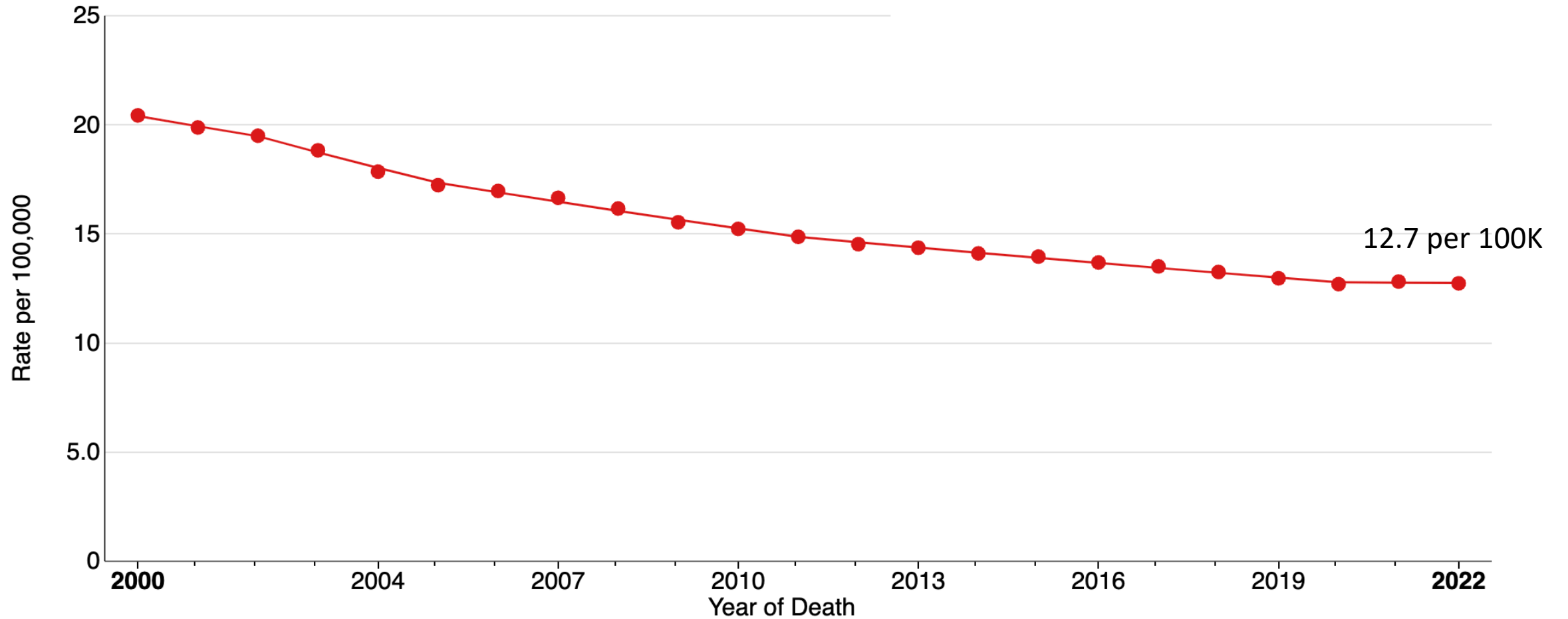
# Colorectal Cancer US Mortality, 2000-2022: All Races, both sexes



**Legend**  
(Sex)

● Both Sexes

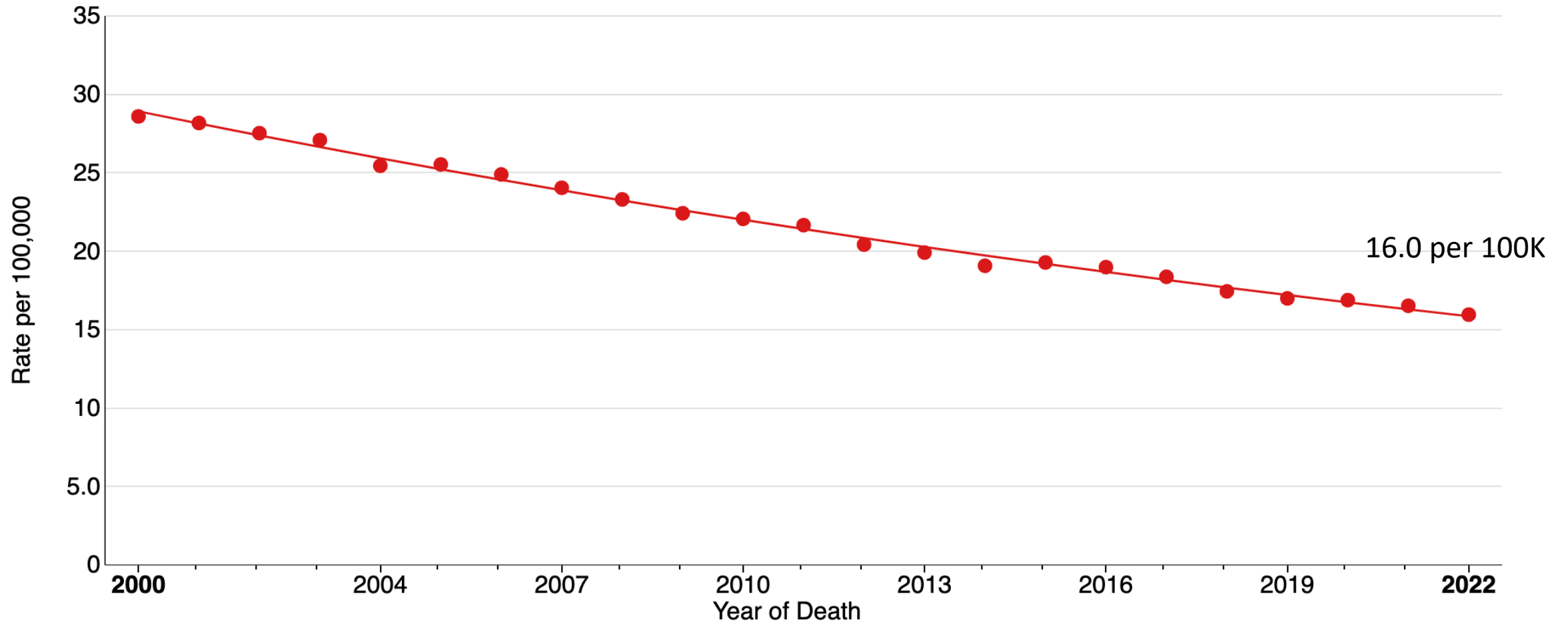
# Colorectal Cancer US Mortality, 2000-2022: NHW, both sexes



Legend  
(Sex)

● Both Sexes

# Colorectal Cancer US Mortality, 2000-2022: NHB, both sexes

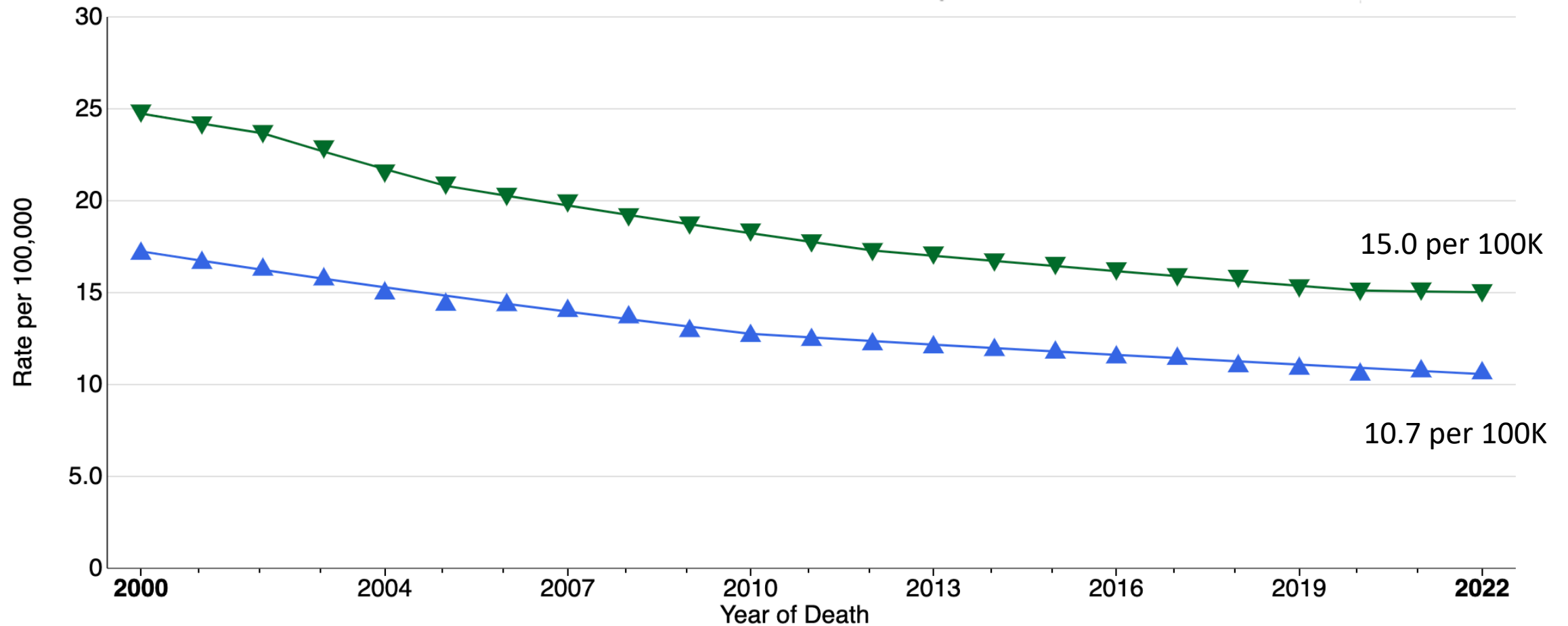


**Legend**  
(Sex)

● Both Sexes



# Colorectal Cancer US Mortality, 2000-2022: NHW, Male and Female

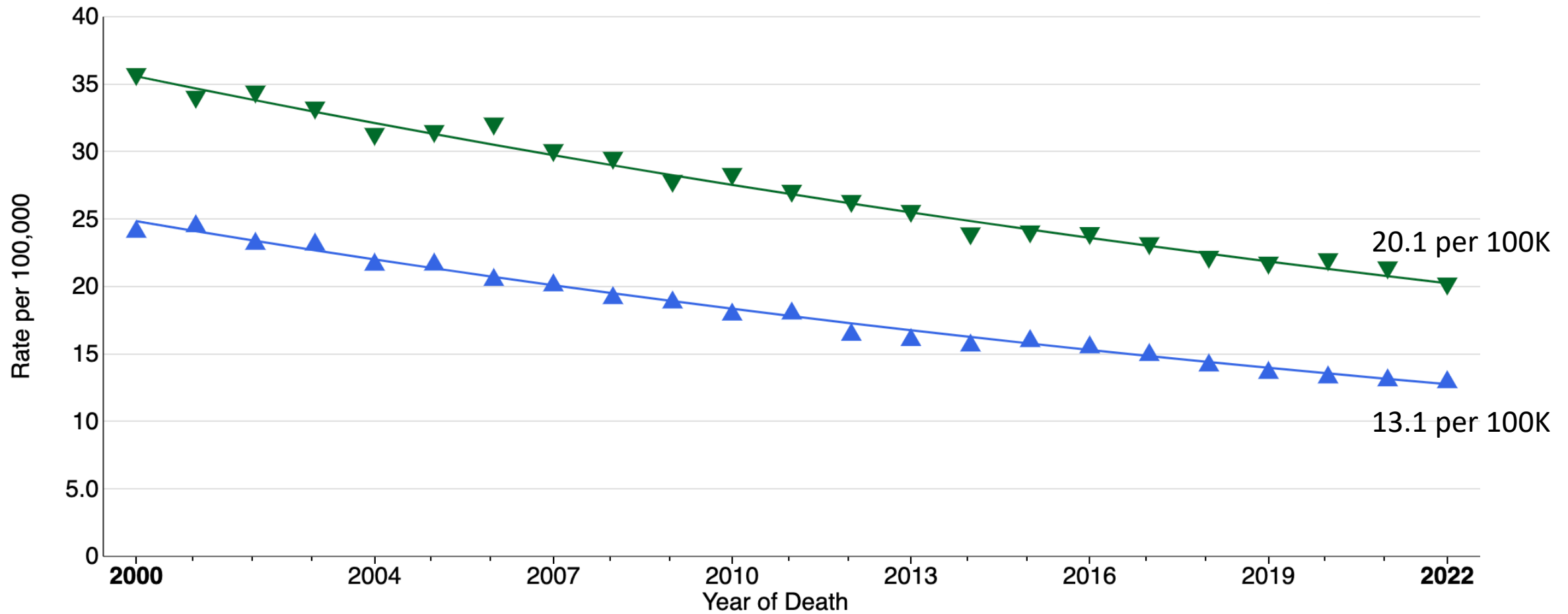


Legend  
(Sex)

▲ Female

▼ Male

# Colorectal Cancer US Mortality, 2000-2022: NHB, Male and Female



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# 2022 US mortality with percent change

**NHW year 2000 =17.2 per 100K**

	NHW	NHB	Percent Difference
Male	15.0	20.1	+34%
Female	10.7	13.1	+29%

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# Why?

- I. Screening
- II. Stage and  
Presentation
- III. Treatment
- IV. Other

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# Screening

- High risk of no screening in **uninsured** and **low income**
- Black patients with first degree relative **less likely to undergo high-risk screening**, or receive appropriate **intervals**
- Black patients more likely to undergo colonoscopy with **low ADR endoscopists**
- Black patients **1.5 times higher odds of not receiving an appropriate physician recommendation** to undergo screening
- Black patients **less likely to receive appropriate follow-up** after abnormal exam
- **38% less likely to have appropriate surveillance** after treatment of CRC

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# Stage at Presentation (%)

- Stage at diagnosis accounts for 20% of observed differences in mortality
- Also, stage for stage higher mortality for Black patients compared to White patients

Stage	NHW	NHB
Localized	36.4	34.7
Regional	35.7	32.1
Distant	20.9	25.5
Unstaged	7.0	7.8

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# Treatment

- RCT of FOLFOX vs FOLFIRI (Southwest Oncology Group): **no difference** in overall survival at 7 years between Black and White patients
  - **Chemotherapy works equally well in both groups**
  - **Differences in OS likely attributable to other disparities outside of efficacy of chemotherapy**
- Black patients **less likely to undergo surgery for resectable cancers**, receive **adjuvant chemotherapy**, or **receive radiation** for rectal cancer
  - Reasoning is complex including patient factors, comorbidities, social determinants, and structural racism
- Black patients **more likely to receive care at lower quality hospitals** less likely to adhere to standard of care
  - Low volume surgeons, **positive CRM** (rectal cancer), **less common sphincter preservation** (rectal cancer), lower **lymph node harvest**
- Differences in treatment may only explain a small amount of disparities

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# Underlying factors

- Geographic differences
- Health behaviors
- Health attitudes/beliefs
- Social determinants of health
- Health system factors
- Access to insurance
- Community support and cultural norms around invasive exams and preventative health
- Competing responsibilities (family, work, children, etc.)



# What can we do? (a lot)

## *Research/interventions (example ideas)*

- Use of AI to improve ADR across different demographic groups
- EMR optimization to ensure physician recommendation for CRC screening
- Patient navigators to ensure appropriate follow up after abnormal colonoscopy for demographic groups

## *Advocacy*

- Be a witness
- Work within your institutions (educational programs, health plan, hospital leadership, etc.) to prioritize health equity where possible with symposia, programs, scholarships, invited lectureships
- Elevate and support colleagues and mentees doing this work
- Collaborate with community members
- Listen

**All this, of course, in addition to the high-quality clinical care that we all strive for every day**

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# Thank you



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*UPMC Division of Colon and Rectal Surgery*

*UPMC Division of Gastroenterology*

*Joy Merusi*

*Kim Sainiak*

