

Summer Enrichment Program 2021

# The Ubiquity of Disparities Pertaining to Cervical Cancer in Black Women Compared to the General Massachusetts Population



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# Cervical Cancer

## What is Cancer?

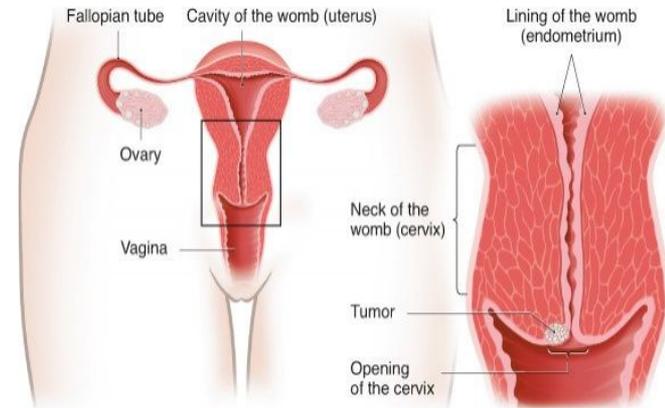
- Disease where cells grow uncontrollably and spreads throughout the body
  - **Cervical Cancer:** Tumors that grow and develop from abnormal cell changes in the cervix which starts in the lower uterus to the vagina.

## Who is At Risk?

- All Women
  - Ages 35-44; average diagnosed at age 50
  - Rare for ages younger than 20

## Prognosis

- 5-year survival rate for all people with cervical cancer is 66%
  - 5-year survival rate: white women (71%), black women (58%)



# What Is A Disparity?

“Health disparities are health differences that adversely affect socially disadvantaged groups. Health disparities are systematic, plausibly avoidable health differences according to race/ethnicity, skin color, religion, or nationality; socioeconomic resources or ...other characteristics associated with discrimination or marginalization” (Braveman et al. 2011).

# Disparities in Cervical Cancer

There is a disparity among Preventative Care, Diagnosis, and Treatment among Black women in cervical cancer compared to the general Massachusetts population.

## Massachusetts Department of Public Health:

- Demographics (MA)
  - The incidence rate of cervical cancer was **1.7** times higher among non-Hispanic Black women than non-Hispanic White women .
  - The mortality rate of cervical cancer was **1.8** times higher among non-Hispanic Black women than non-Hispanic White women.



# Socioeconomic Status



## INCOME

Cervical Cancer Screening - Less than \$25,000



Cervical Cancer Screening - \$25-\$49,999



Cervical Cancer Screening - \$50-\$74,999



Cervical Cancer Screening - \$75,000 or More



Percentage of women ages 21-44

Lower income = *Less likely get screened*

## EDUCATION

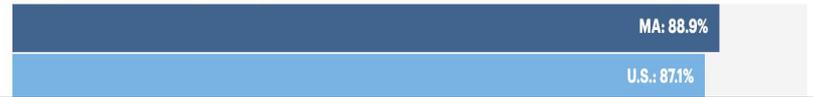
Cervical Cancer Screening - High School Grad



Cervical Cancer Screening - Some College



Cervical Cancer Screening - College Grad



Percentage of women ages 21-44

More Education = *More likely to get screened*

# Preventative Care

“Preventive care helps detect or prevent serious diseases and medical problems before they can become major”  
(Cigna et al. 2021).



## What Can Women Do to Prevent This?

- HPV Vaccine: The HPV vaccine protects against the types of HPV that most often cause cervical, vaginal, and vulvar cancers.
- Get regular Screening tests
  - Pap Test (Pap Smear)
  - HPV Test

## How to Lower Your Risks According to The CDC:

- Don't smoke
- Use condoms during sex
  - Condoms prevent STI's including HPV which is directly linked to Cervical Cancer
- Limit your number of sexual partners

# What is Screening?

“Cervical cancer screening is used to find changes in the cells of the cervix that could lead to cancer.”

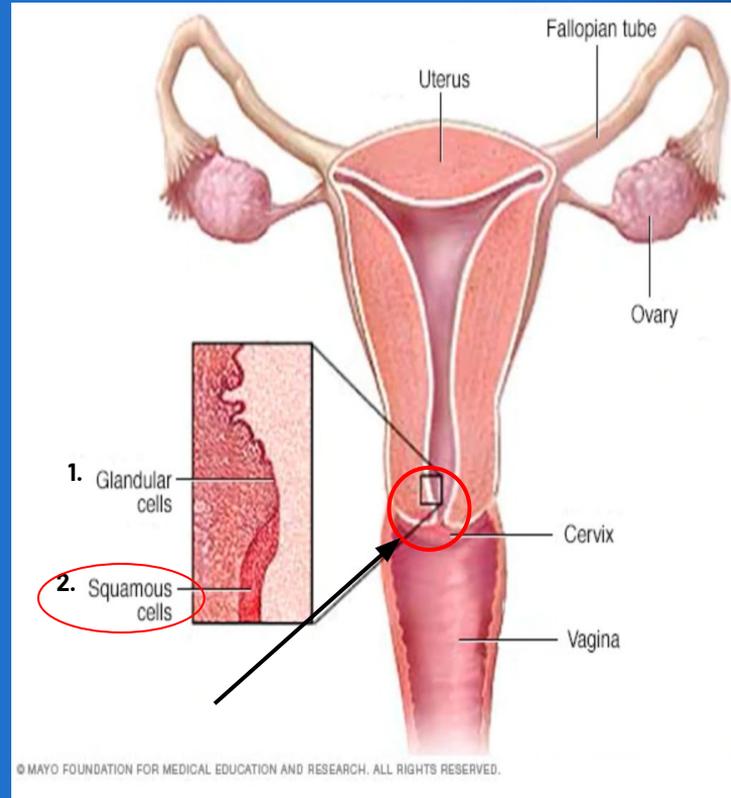
-The American College of Obstetricians and Gynecologists

## Pap Test (Pap Smear)

- Ages 21-65 every 3 years
- Cells are scraped from cervix and studied:
- Abnormal cells = repeat test after 6 months

## HPV Papillomavirus (HPV)

- Ages 30+ every 5 years
- Cause of most cervical cancer
- Tested for most common high-risk HPV (HPV 16/18)
- Reasoning: Abnormal Pap Test



# Racial Disparities Within Screening

## RACE/ETHNICITY

### Cervical Cancer Screening - Black



### Cervical Cancer Screening - Hispanic



### Cervical Cancer Screening - White

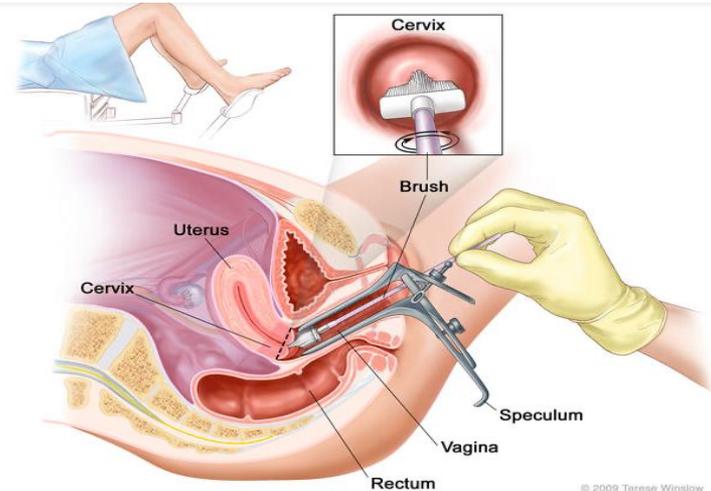


Percentage of women ages 21-44

Though Black women are getting screened they are still getting **diagnosed** at **later** stages compared to White women.

# Diagnosis

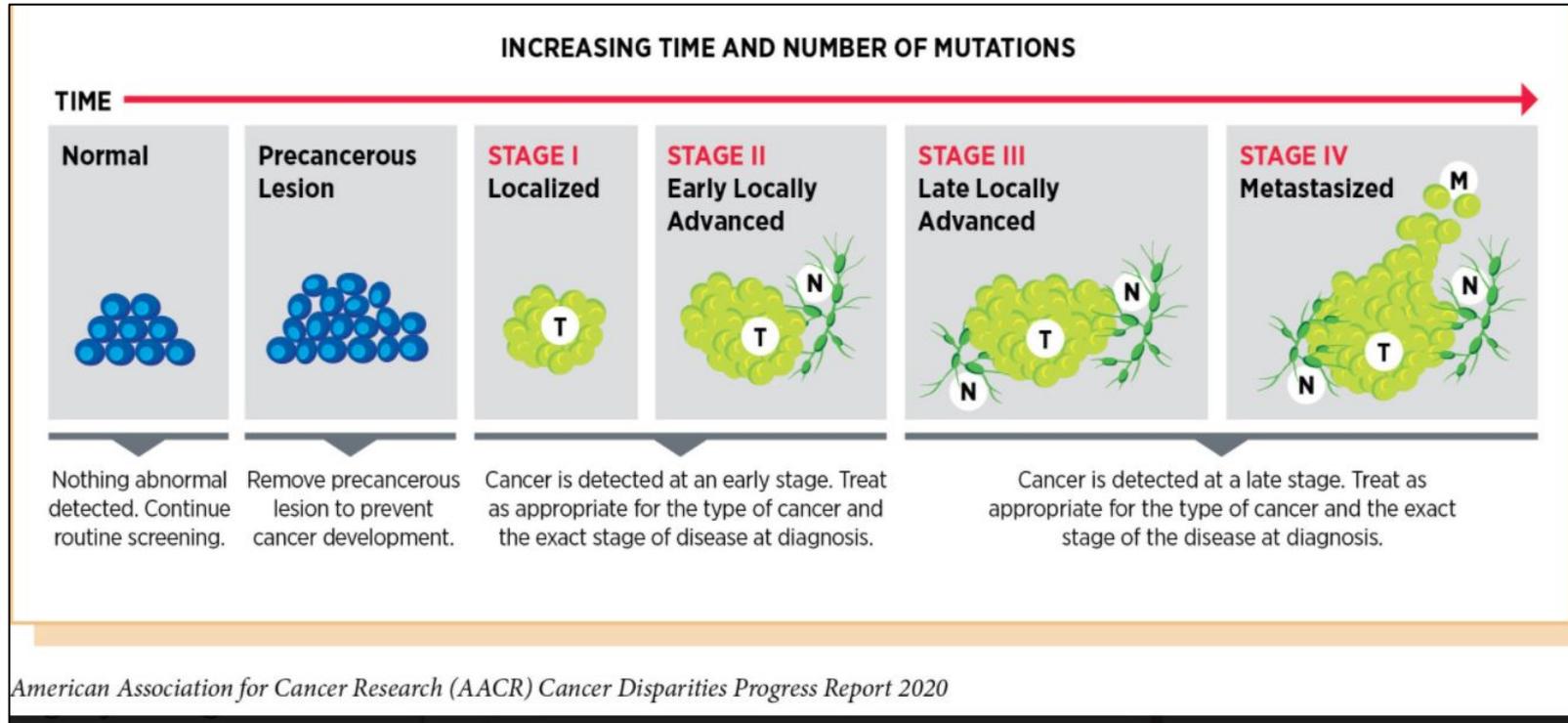
- **What ways do they Diagnose?**
  - Pap Smears, HPV tests, Colposcopies, Bimanual pelvic examination, and biopsies
  
- **What do they look for?**
  - Early signs of Cervical Cancer
    - Asymptomatic
  
- **Signs and Symptoms**
  - Abnormal vaginal bleeding
  - Increased vaginal discharge
  - Bleeding after going through menopause
  - Pain during sex
  - Pelvic pain



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Pap test. A speculum is inserted into the vagina to widen it. Then, a brush is inserted into the vagina to collect cells from the cervix. The cells are checked under a microscope for signs of disease.

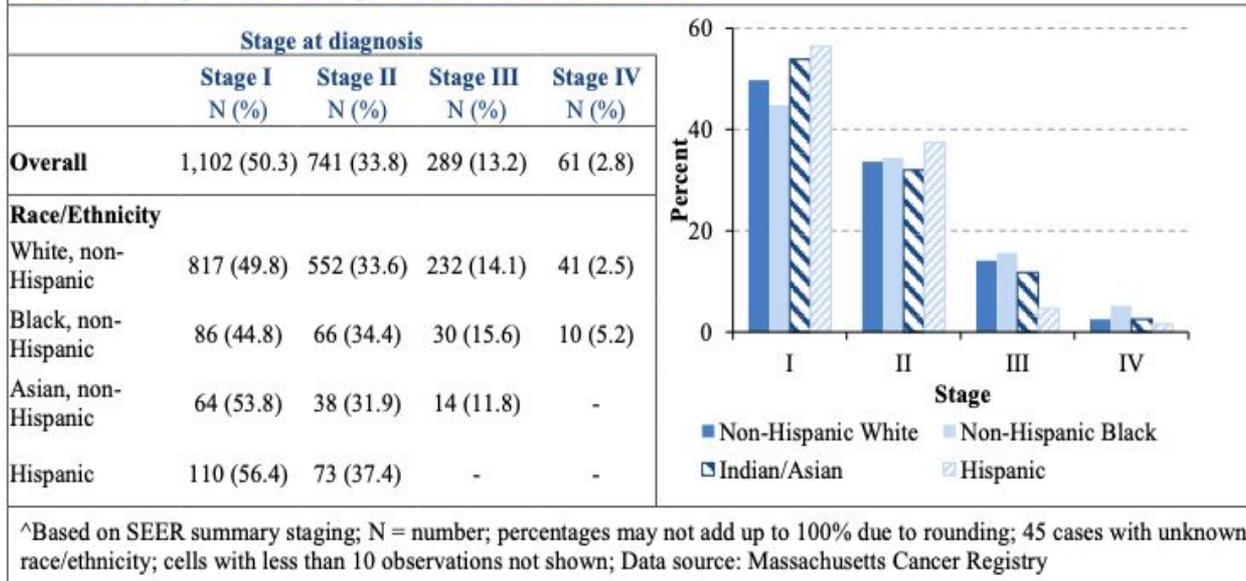
# Stages of Cancer



# Racial Disparities Within Diagnosis

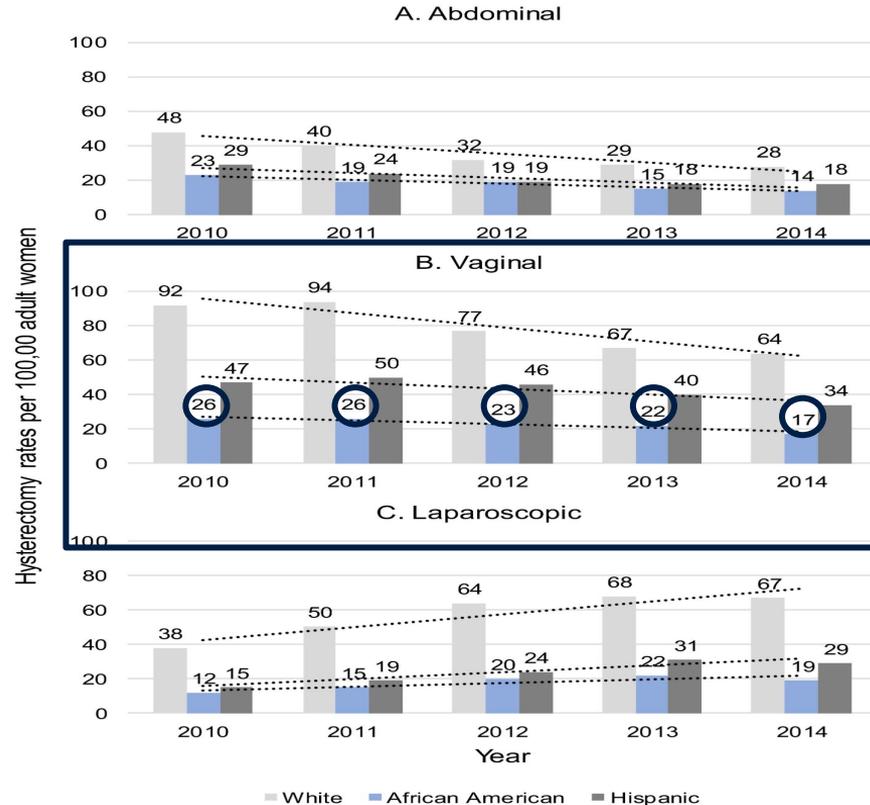
## PATTERNS OF CERVICAL CANCER BY STAGE AT DIAGNOSIS

Figure 4. Number and percentage distribution among cervical cancer cases by stage at diagnosis<sup>^</sup> overall and by race/ethnicity, Massachusetts, 2004-2014



- Black women have an incidence rate of 8.3% where as white women have an incidence rate of 7.3%
- Black, non-Hispanic women were less likely to be diagnosed with stage I or II disease when compared with white, non-Hispanic women(79.2% vs 83.4% respectively)

# Racial Disparities Within Treatment



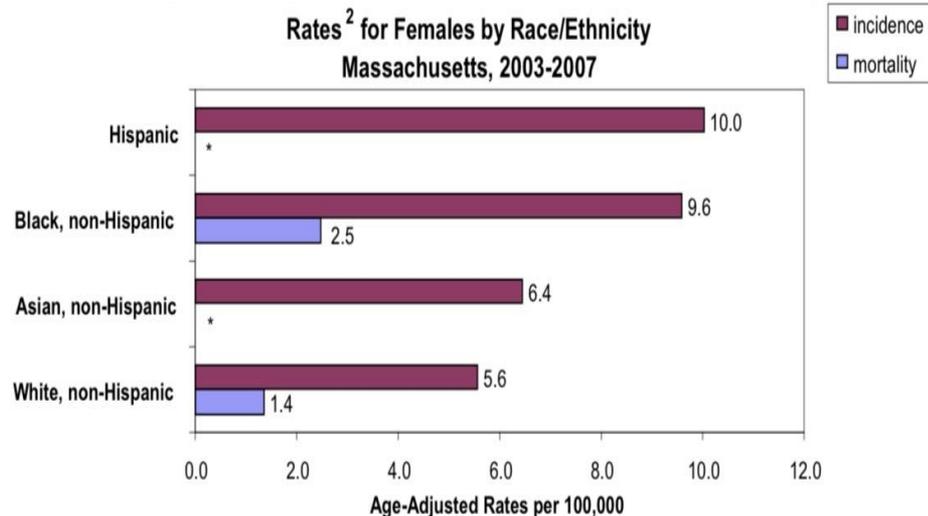
- Surgery: Hysterectomy procedure
  - 2nd most common procedure in U.S.
  - This is the **removal** of the **uterus / womb**
  - Cultural barriers/ Gap of knowledge
- Radiation Therapy + Chemotherapy:
  - **Concurrent chemoradiation**

# Malpractice

“Medical *malpractice* occurs when a hospital, doctor or other health care professional, through a negligent act or omission, causes an injury to a patient” (Nolan et al.2015).

- Malpractice in 2016:** “I had an abnormal pap smear and they wanted to freeze my cervix, so I left that provider. They told me that they would watch me but I didn't trust him, he waited until my warts turned into cancer.”- Cervical Cancer Survivor

Average Annual Age-Adjusted <sup>1</sup> Cervical Cancer Incidence and Mortality Rates <sup>2</sup> for Females by Race/Ethnicity Massachusetts, 2003-2007



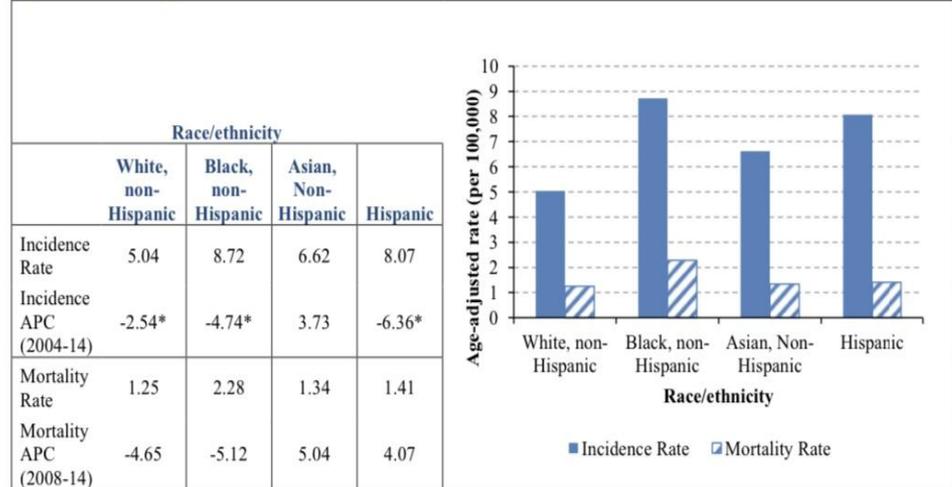
# Malpractice Cont.

**Incidence:** The incident cases of cervical cancer are the number of people who are newly diagnosed with the disease during a specific time period.

**Mortality:** The number of deaths is the number of people who died due to cervical cancer during a specific time period.

## PATTERNS IN CERVICAL CANCER INCIDENCE AND MORTALITY BY RACE/ETHNICITY

Figure 3. Age-adjusted incidence (2004-2014) and mortality (2008-2014) rates<sup>^</sup> of cervical cancer by race/ethnicity, Massachusetts



<sup>^</sup>per 100,000 and age-standardized to the 2000 U.S. population; \*indicates a statistically significant trend (p<0.05); APC = Annual Percent Change; 45 cases with unknown race/ethnicity; Data source: Massachusetts Cancer Registry and Massachusetts Registry of Vital Records and Statistics

# Conclusion & Why This Matters

Black women compared to the general population do not receive the same amount of care/treatment in terms of cervical cancer.

Structural Racism

Socioeconomic  
Resources

Gap of  
Knowledge

Discrimination  
within Healthcare

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Any Questions?

