

A STEP AHEAD WITH KNOWLEDGE

# *Breast Cancer*

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Presented by  
UCR Future Physicians Leaders Students



# *Presentation Summary*

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## OUTLINE OF TOPICS

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breast  
cancer?

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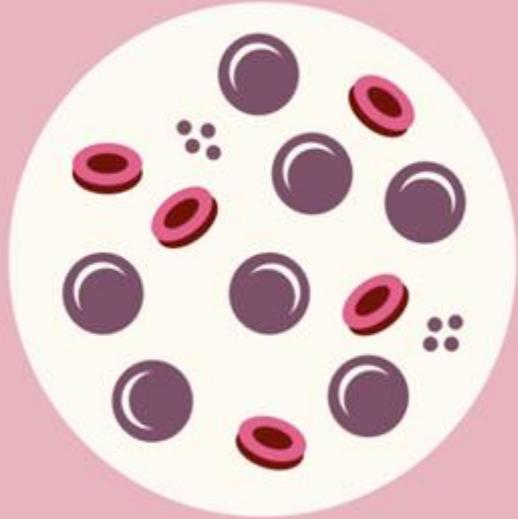
Epigenetics

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# *What is Breast Cancer?*

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Breast cancer is a type of cancer that begins in the breast. Cancer begins when cells begin to **grow out of control**. Although breast cancer is **most common among women**, it can also **occur in men**.

# *Why is this Important?*

## COMMON MISCONCEPTIONS

### Myths

- Men don't get breast cancer
- I'm too young to get breast cancer
- If I don't have family history I won't get it



### Facts

- 1 in 1,249 men have a lifetime risk of breast cancer
- Many women under 40 are diagnosed with breast cancer
- Most people diagnosed with breast cancer don't have a family history

# Breast Cancer in the Inland Empire



1 IN 8 WOMEN WILL  
DEVELOP BREAST CANCER



DEATH  
RATES



**99.3%**  
SURVIVAL RATE  
--  
EARLY DETECTION  
SAVES LIVES

SAN BERNARDINO IS  
THE **HIGHEST**  
PRIORITY AREA FOR  
BREAST CANCER  
PROGRAMS IN THE IE



# Risk Factors



## ALCOHOL

Consuming alcohol, especially in excess of two drinks a day



## OBESITY

Obesity is commonly tied to a poor diet and a lifestyle that lacks exercise



## ESTROGEN

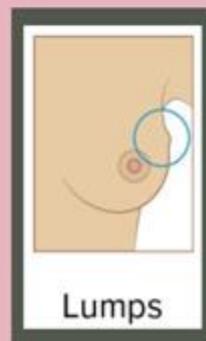
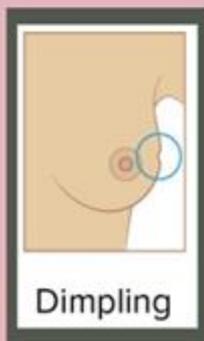
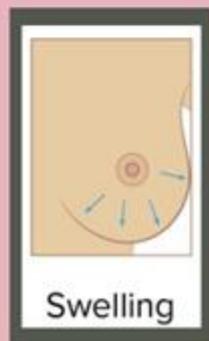
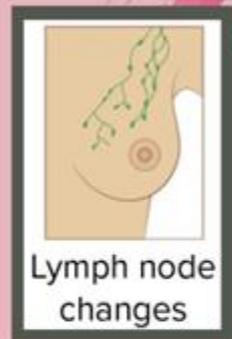
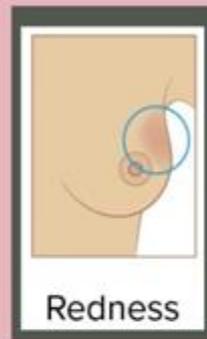
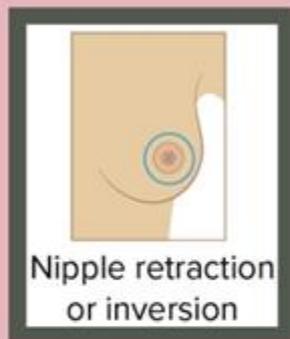
Menstruating before age 11. Menopause after age 55. Birth of first child after 30



## GENETICS

Family history and the genetics passed down can play a role in breast cancer

# Signs and Symptoms



# How is it Diagnosed?

## MAMMOGRAM

- X-Ray; Best way to find breast cancer early.
- Regularly can lower risk of dying from breast cancer.

## MRI

- Magnet and radio waves to take pictures
- Used w/ mammogram for high-risk patients.

## ULTRASOUND

- A machine that uses sound waves.
- Makes detailed pictures (sonograms) of areas inside the breast.

## BIOPSY

- Removes tissue or fluid from the breast looked at under a microscope to determine more testing.



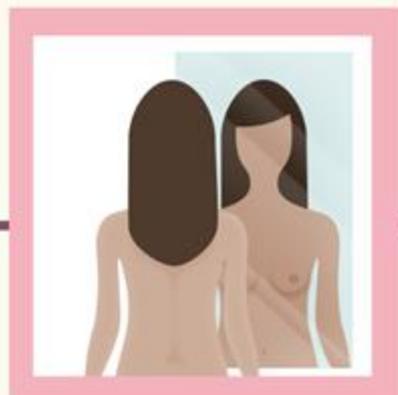
# *Self-Breast Exam*



ONCE A  
MONTH



IN THE  
SHOWER



IN FRONT  
OF A  
MIRROR



LYING  
DOWN

# Epigenetics and Cancer

## What is a gene?

- The instructions that make up you!

## What are Epigenetics?

- The process of controlling genes
- Influenced by the environment
- Reversible



# Reversing Bad Epigenetics

## AVOID



- Blocks gene expression
- Interfere with estrogen pathways
- Interfere's with "folate" levels
- Cause "oxidative stress"

HOJJAT, M., RAHMANI, S., KHAN, F. ET AL. ENVIRONMENTAL TOXICANTS, INCIDENCE OF DEGENERATIVE DISEASES, AND THERAPIES FROM THE EPIGENETIC POINT OF VIEW, ARCH TOXICOL 91, 2577-2597 (2017). [HTTPS://DOI-ORG.LIBPROXY.CALBAPTIST.EDU/10.1007/S00204-017-1979-9](https://doi.org/10.1007/s00204-017-1979-9)

## EXERCISE



- Exercise can improve your body's machinery
  - Your body produces "metabolites"

MCGEE, S. L., & HARGREAVES, M. (2019). EPIGENETICS AND EXERCISE. TRENDS IN ENDOCRINOLOGY & METABOLISM, 30(9), 636-645. [HTTPS://DOI-ORG.LIBPROXY.CALBAPTIST.EDU/10.1016/J.TEM.2019.06.002](https://doi.org/10.1016/j.tem.2019.06.002)

## NUTRITION

- Macronutrients
- Micronutrients
  - Sulfur-based foods
  - Antioxidants
  - Foods with "folate"



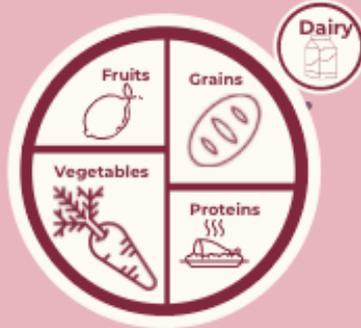
VARELA-REY, M., WOODHOO, A., MARTINEZ-CHANTAR, M. L., MATO, J. M., & LU, S. C. (2013). ALCOHOL, DNA METHYLATION, AND CANCER. ALCOHOL RESEARCH - CURRENT REVIEWS, 35(1), 25-35.

# Nutrition Care

Healthy eating habits are essential  
during and after treatment

## ANTIOXIDANTS

Antioxidants such as vitamin C, E,  
and carotenoids help protect cells  
from damage



"My Plate"- Suggested Servings



Other helpful foods

- Soy foods
- Fresh foods

# *Possible Health Outcomes for Epigenetics*

## Positives

- Improved Quality of life
- Improved health
- Improved Health for your children



## Negative

- Shorten life cycle
- Increased risk of cancer
- Increased medical expenses



# *Resources*

\*ALL SITES IN RIVERSIDE & SAN BERNARDINO

## AMERICAN CANCER SOCIETY

Offers FREE rides to  
and from treatment

## THE NATIONAL BREAST AND CERVICAL CANCER EARLY DETECTION PROGRAM

Breast Screening for  
uninsured women

## GOODRX

Online low-cost  
prescription source

# *Resources*

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## ABCD BREAST CANCER SUPPORT

Support for patients,  
families, and friends.

## BREAST & CERVICAL CANCER TREATMENT PROGRAM

Breast cancer  
treatment - income  
based

## CANCER SUPPORT COMMUNITY

Information, support,  
online chat



Questions?