



ADVANCED BREAST CANCER

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AGENDA

- What is Advanced Breast Cancer?
- Current Treatment Options for Advanced Breast Cancer
- Myths vs. Truths
- Disparity in Diagnosis and Treatment
- Solutions: How do we move forward?
- What the Future Holds

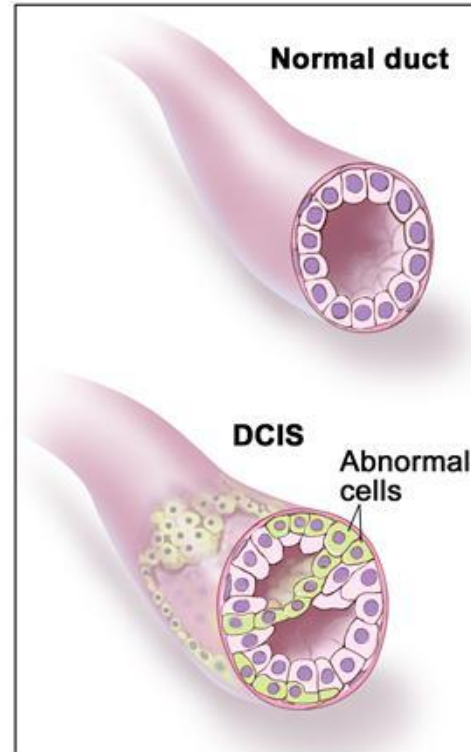
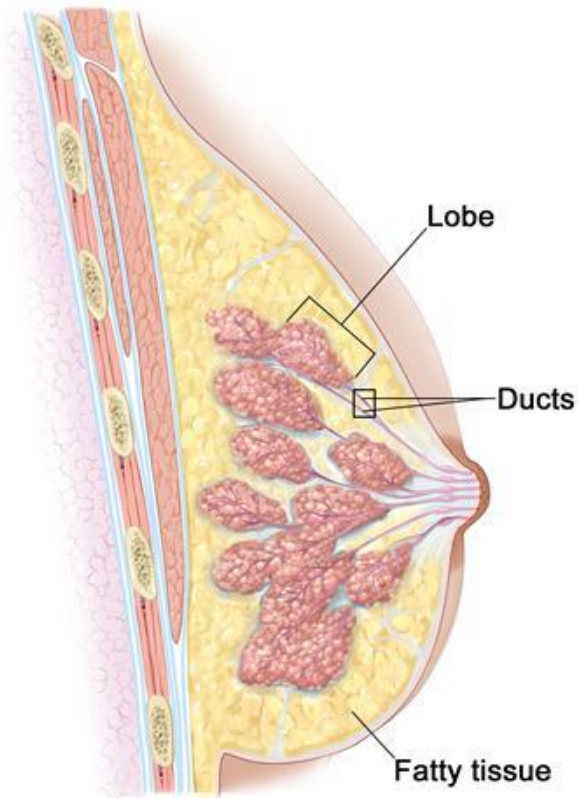


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WHAT IS ADVANCED BREAST CANCER?

STAGES OF DISEASE

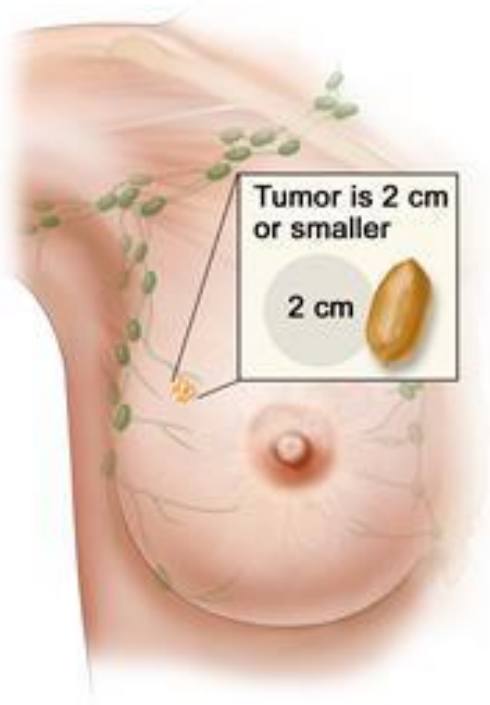
Ductal Carcinoma In Situ (DCIS)



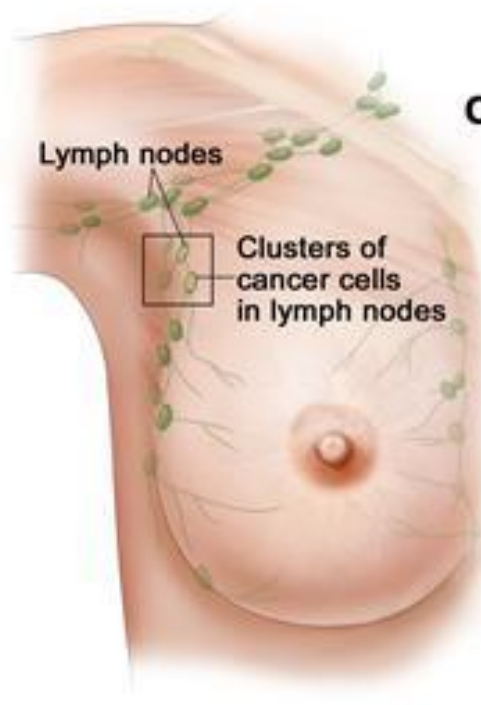
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STAGES OF DISEASE

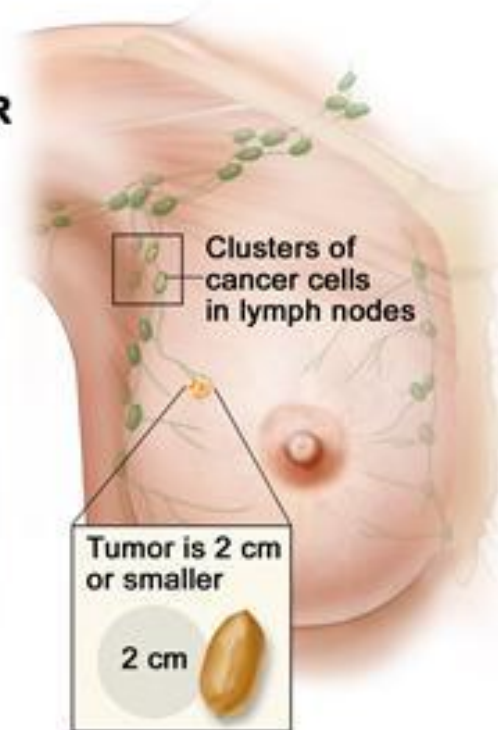
Stage IA Breast Cancer



Stage IB Breast Cancer

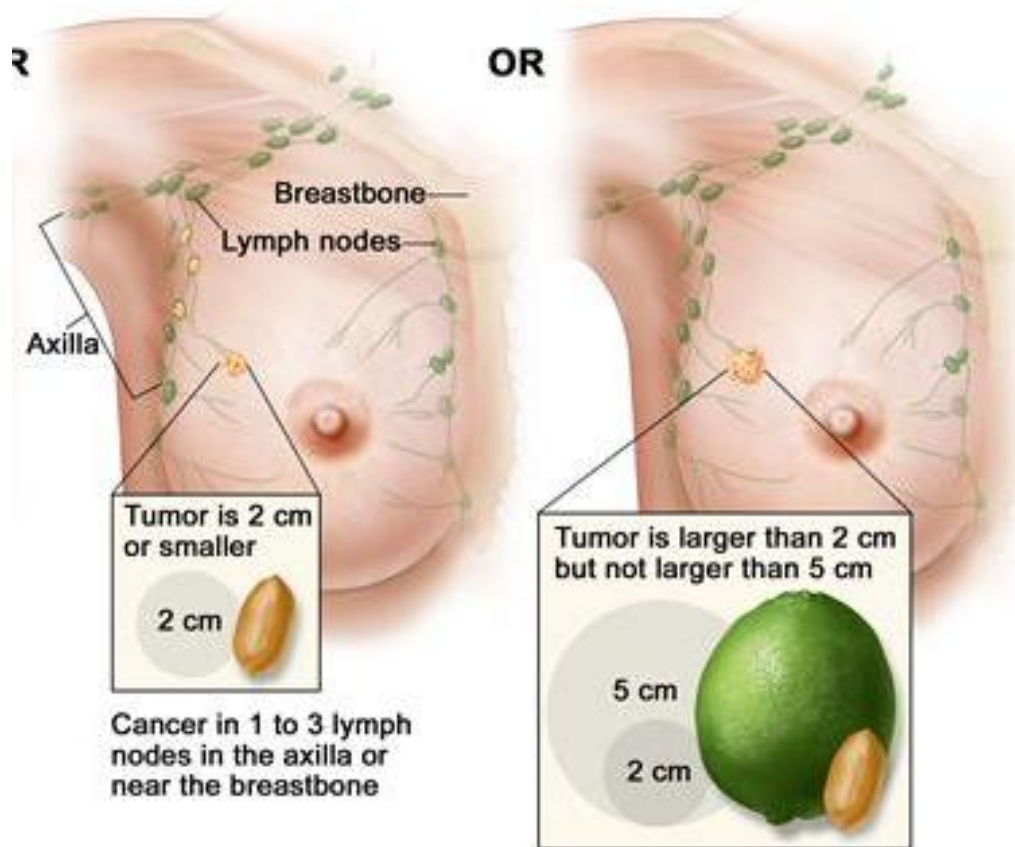


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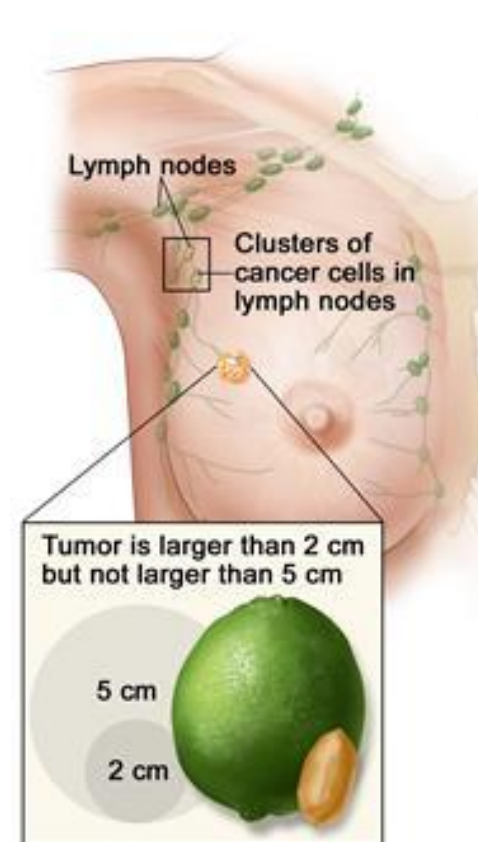


STAGES OF DISEASE

Stage IIA Breast Cancer

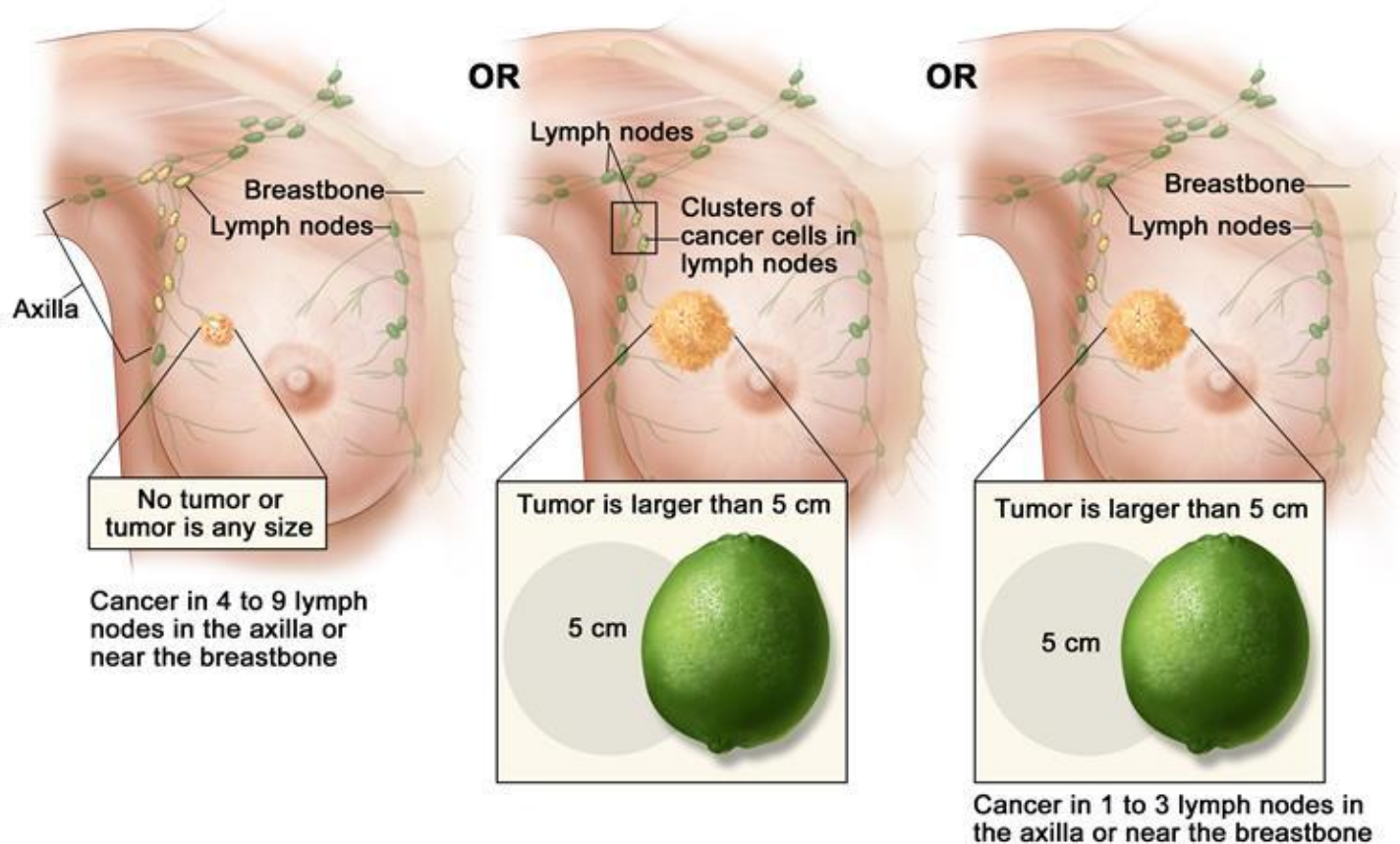


Stage IIB



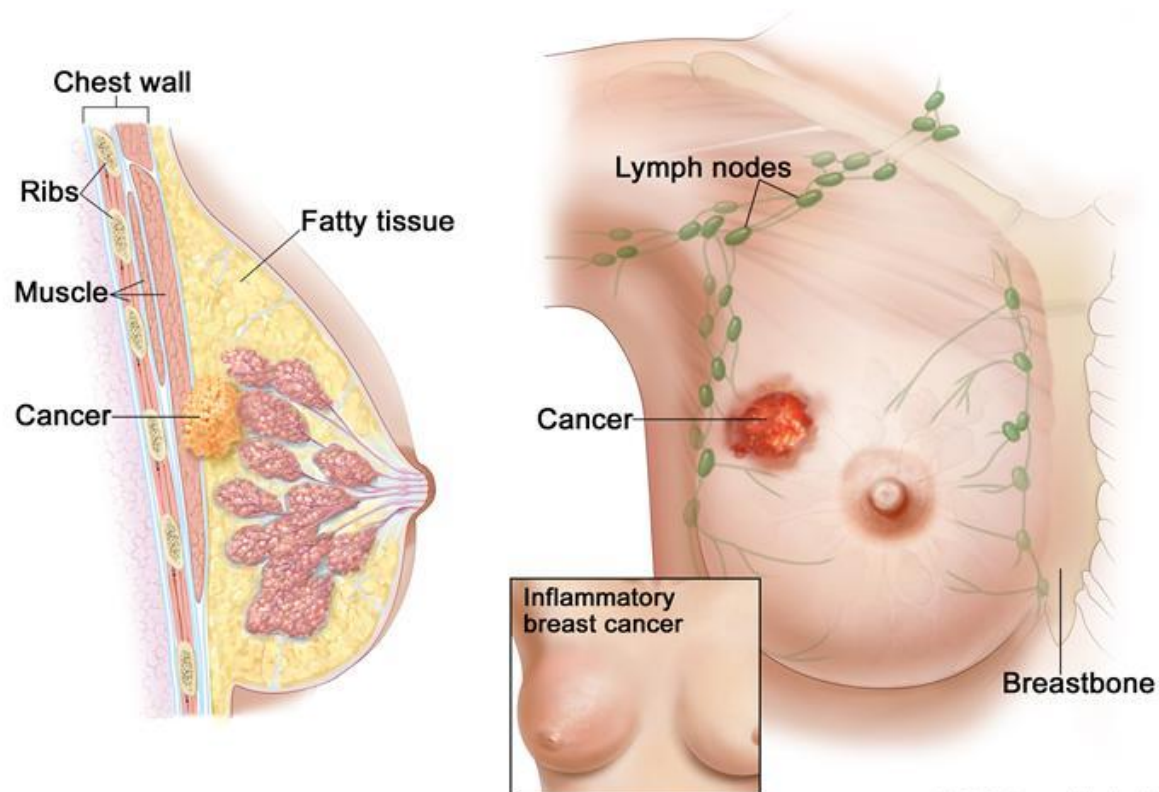
STAGES OF DISEASE

Stage IIIA Breast Cancer



STAGES OF DISEASE

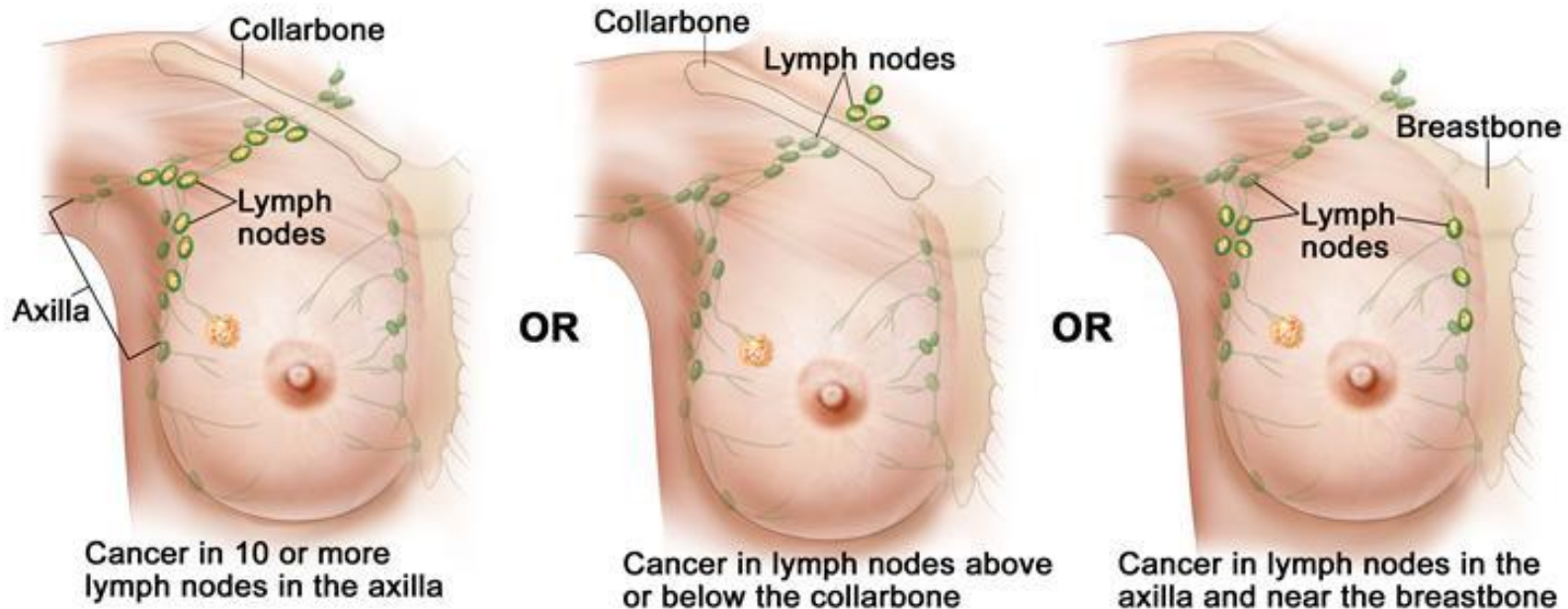
Stage IIIB Breast Cancer



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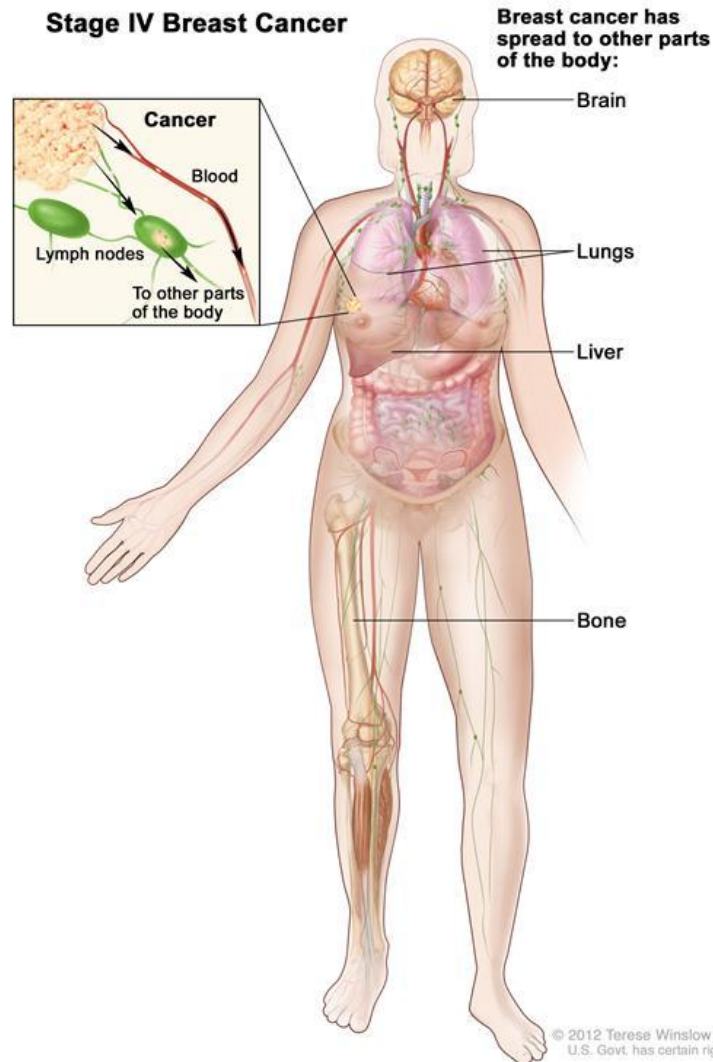
STAGES OF DISEASE

Stage IIIC Breast Cancer



No tumor or tumor is any size

STAGES OF DISEASE



ADVANCED BREAST CANCER

- Advanced Breast Cancer may include Stage III and IV disease
- For the purposes of this talk, we will discuss only Stage IV disease



METASTATIC BREAST CANCER

- The breast cancer cells have moved to other organs outside of the breast
- The metastatic sites still have cancer cells which look and behave like breast cancer
- Common sites of spread: bone, lung, liver, brain



METASTATIC BREAST CANCER

- Some people are diagnosed with breast cancer initially, at the time they first learn they have breast cancer
- Others develop metastatic breast cancer after having completed therapy



METASTATIC BREAST CANCER

- Metastatic Breast Cancer is not curable, though it may be kept under control with medicines
- Depending on the type of Stage IV breast cancer, patients may live anywhere from weeks to more than 15 years.
- Average survival is 2 years



SYMPTOMS OF METASTATIC BREAST CANCER

○ Bone Metastases

- Bone pain
- Elevated alkaline phosphatase on blood work
- Weight loss, increased fatigue

○ Liver Metastases

- Turning yellow
- Easy bruising and bleeding
- Increased liver function tests on blood work

○ Lung Metastases

- Cough
- Shortness of breath

○ No Symptoms at all!





CURRENT TREATMENT OPTIONS FOR ADVANCED BREAST CANCER

TREATMENT OPTIONS

- Chemotherapy
- Endocrine Therapy
- Radiation Therapy
- Targeted Therapy
- Surgery
- Bisphosphonates



CHEMOTHERAPY

- More is not better – no clear advantage to combination chemotherapy
- Single agent chemotherapy is preferred
- Chemotherapy is usually used for ER negative disease, or high disease burden
 - Adriamycin, Doxil
 - Docetaxel/Taxotere
 - Paclitaxel/Taxol
 - Capecitabine/Xeloda
 - Gemcitabine/Gemzar
 - Vinorelbine/Navelbine
 - Ixabepilone/Ixempra
 - Eribulin/Halaven
 - Carboplatin, Cisplatin



ENDOCRINE THERAPY

- Used only for Estrogen Receptor/Progesterone Receptor positive patients
- Most effective in strongly ER/PR+ patients
- Bone predominant disease
- Does not elicit a fast response
- May control disease for many years with minimal toxicity
 - Aromatase Inhibitors
 - Tamoxifen
 - Faslodex
 - High dose estrogen



RADIATION THERAPY

- Used for local control only
- Pain control (e.g. bone metastases)
- To control bleeding
- Treatment of brain metastases



TARGETED THERAPY

- HER2+ disease
 - Trastuzumab/Herceptin
 - Lapatinib/Tykerb
 - Pertuzumab/Perjeta
 - Neratinib
- Refractory ER+ disease
 - Everolimus/Affinitor
- Others
 - Bevacuzumab/Avastin generally not used in breast cancer any more
 - PARP inhibitors?



SURGERY

- May be a role for palliative mastectomy
 - Pain
 - Bleeding, ulceration
- Retrospective trials show survival benefit
- Ongoing prospective trial
- Resection of solitary brain met
- Compression fracture of the spine



BISPHOSPHONATES, RANK LIGAND INHIBITORS

- For treatment of bone metastases
- Prevents fractures
- Controls bony disease
- Risks:
 - Low calcium
 - Osteonecrosis of the jaw



CLINICAL TRIALS

- Save lives!!
- Treatments are based on sound pre-clinical data
- Gives patients access to new drugs
- The only way new drugs can come to market
- Will hopefully one day lead to cure!



SO I HAVE METASTATIC BREAST CANCER. NOW WHAT?

- TALK TO YOUR DOCTOR!!
 - Learn about your type of cancer
 - Learn about your prognosis
 - Learn about available treatment options, pros and cons of each
 - Consider clinical trials
- ONLY RECEIVE REPUTED INFORMATION
 - Avoid random websites
 - Don't get caught up in the "I have a friend who...." game
- SEEK SUPPORT
 - Breast Cancer support groups
 - Friends and Family
 - Accept help



METASTATIC BREAST CANCER

- Focus on quality of life, not quantity of life
 - Determine what is important to you
 - Discuss this with your doctor
 - Treatment options should be guided by quality of life
- Make your wishes known to your doctor and family
 - Living will
 - Arrangements for children

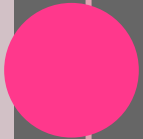
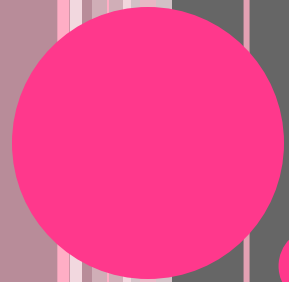


METASTATIC BREAST CANCER

If the fear of cancer keeps you from moving forward, enjoying life, being with loved ones, laughing, then the cancer won, even if it never comes back. But if you reclaim your life, then even if the cancer comes back, it didn't win, because YOU, the PERSON, survived.

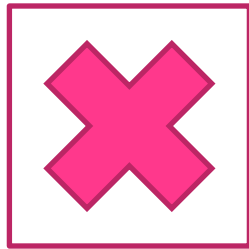
--Lisa Weissmann, M.D





MYTHS VS. TRUTHS

MYTHS VS. TRUTHS



MYTH

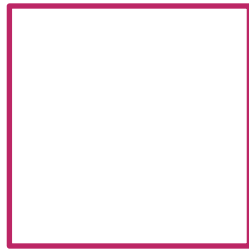


TRUTH

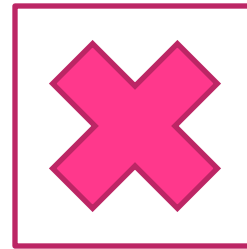
Breast Cancer is more common in African American women than it is in Caucasian women.



MYTHS VS. TRUTHS



MYTH

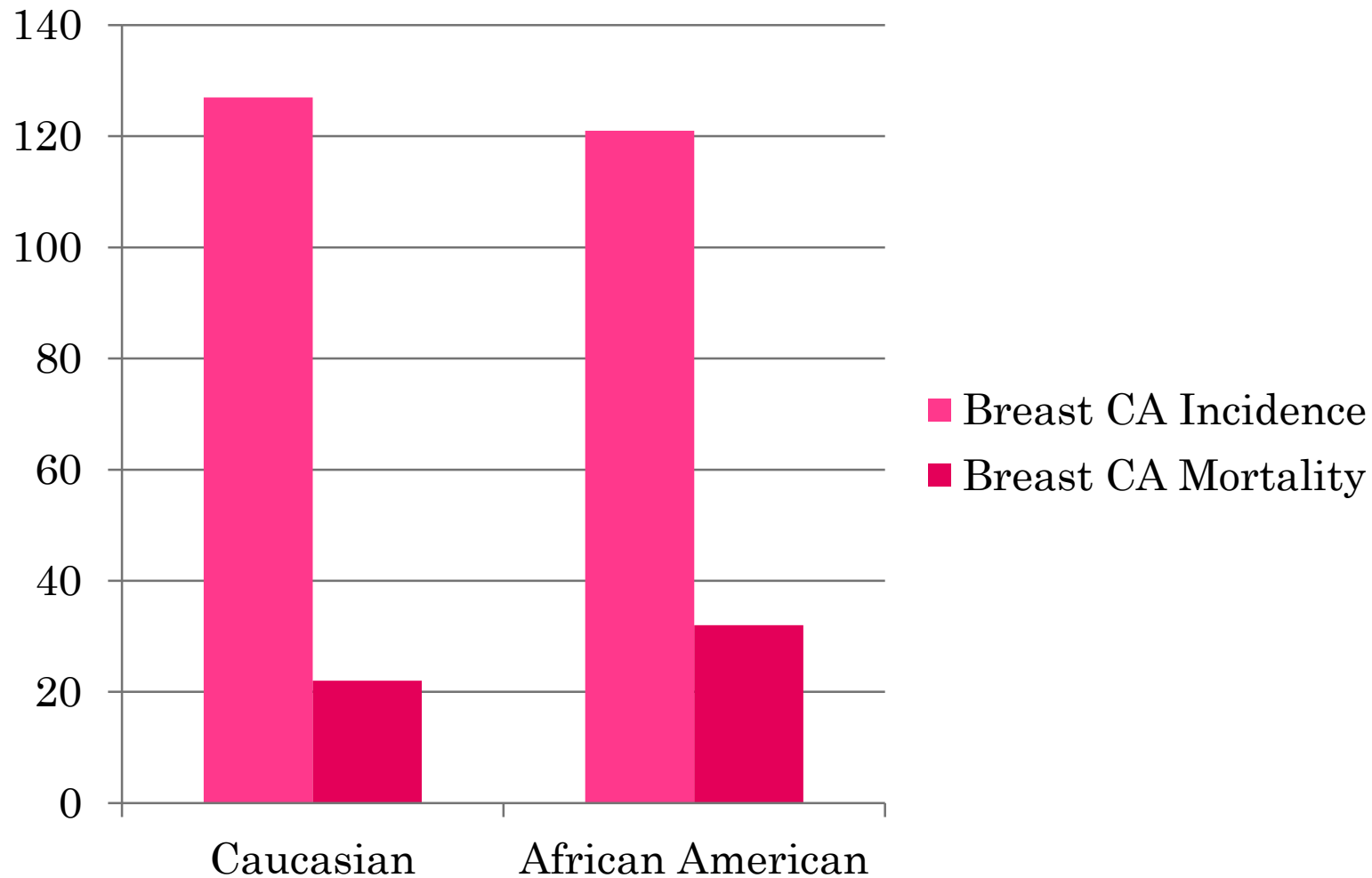


TRUTH

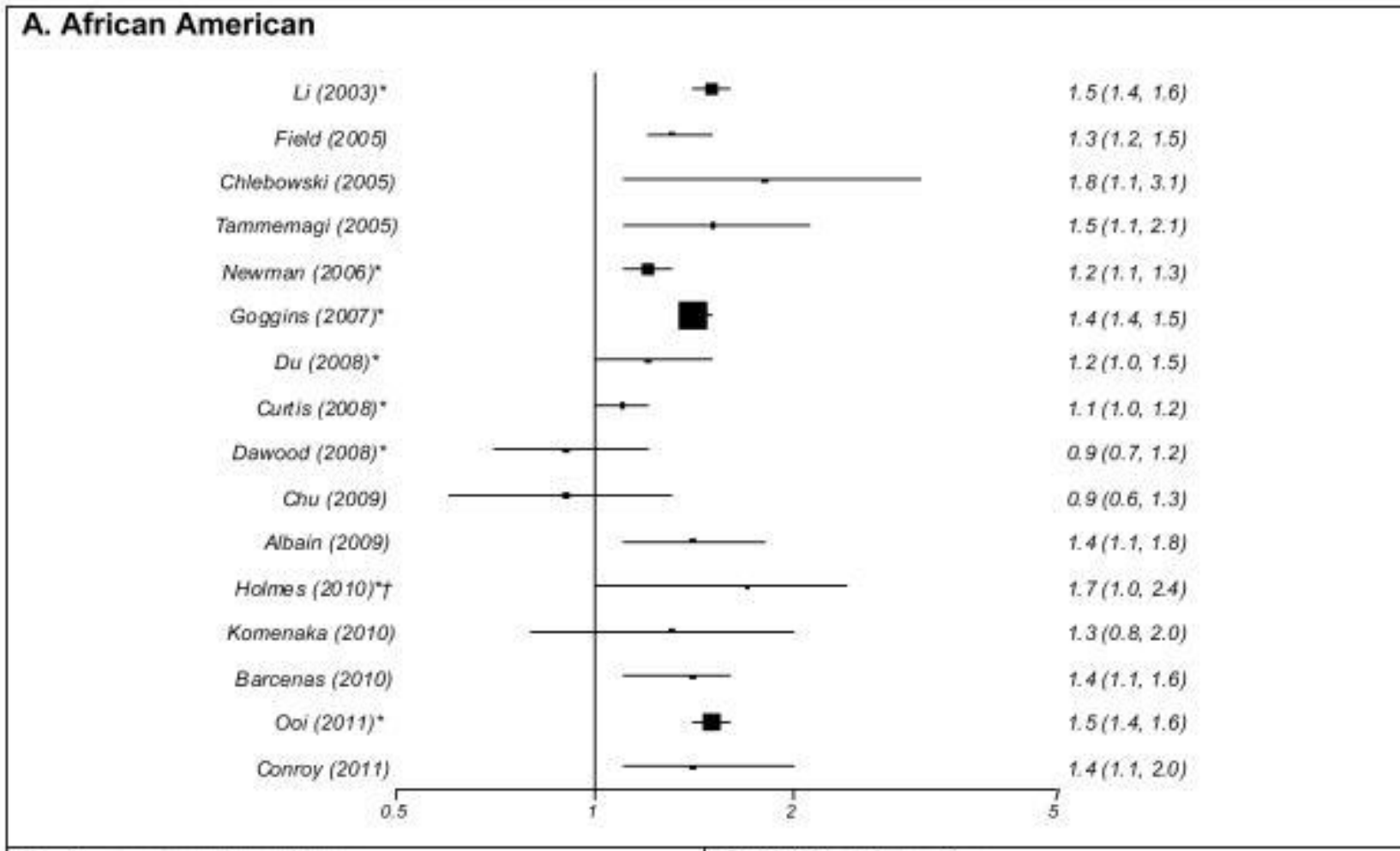
African American women are more likely to die of breast cancer than Caucasian women are.



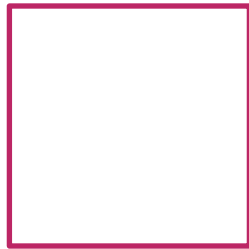
BREAST CANCER INCIDENCE AND MORTALITY



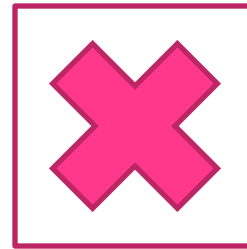
HIGHER BREAST CANCER MORTALITY



MYTHS VS. TRUTHS



MYTH

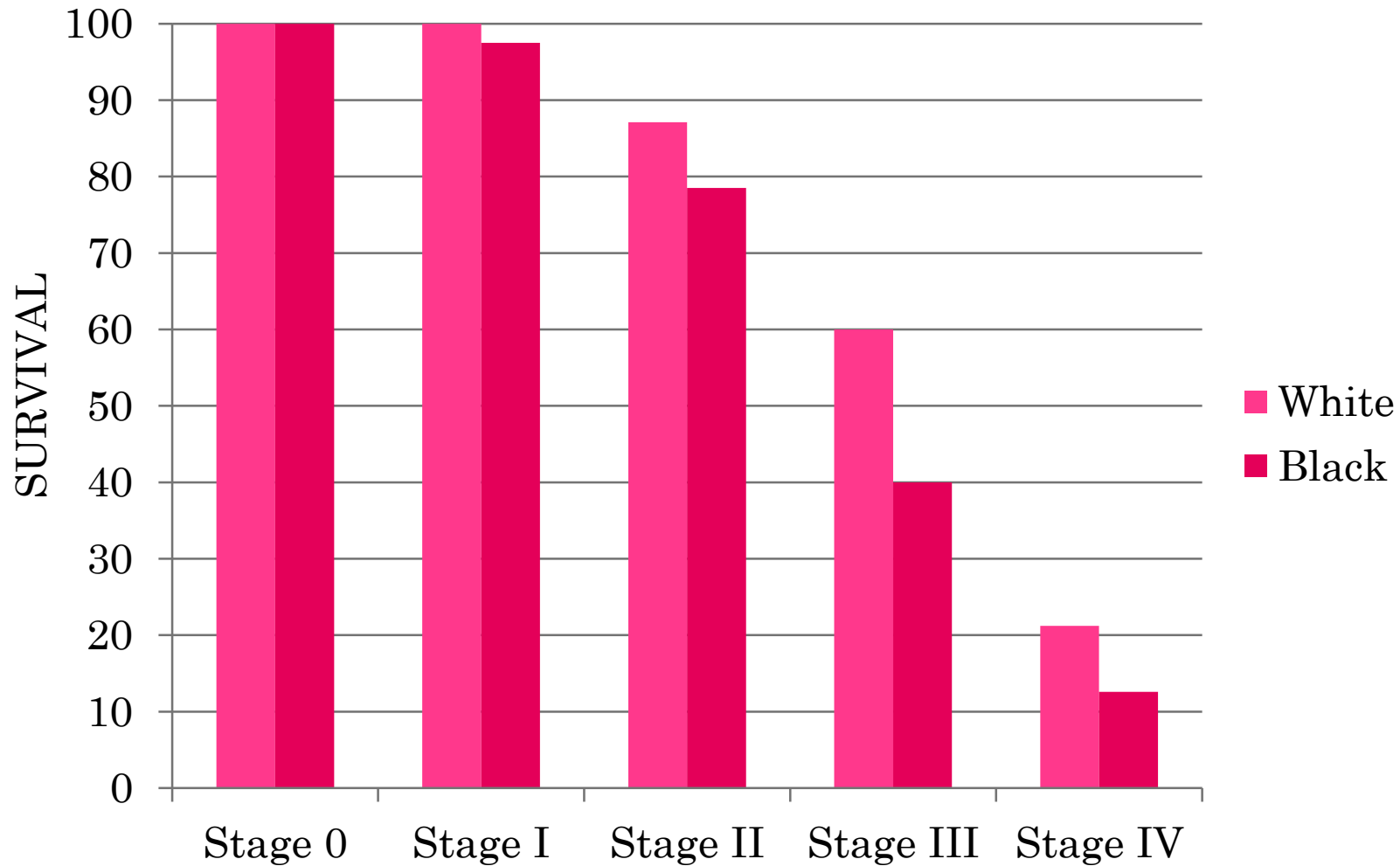


TRUTH

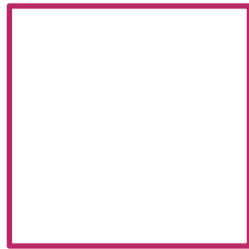
Stage at diagnosis is the most important predictor of overall survival



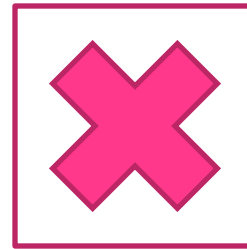
STAGE IS IMPORTANT!



MYTHS VS. TRUTHS



MYTH

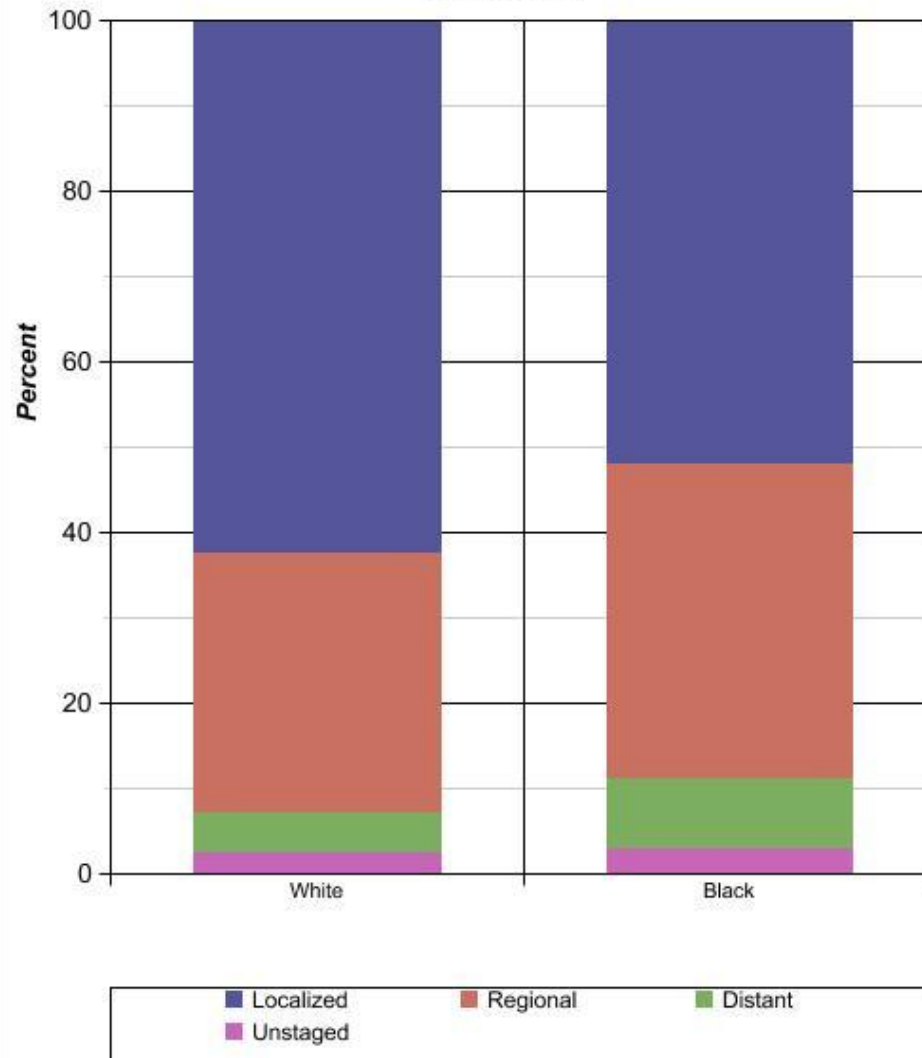


TRUTH

African American women tend to be diagnosed with breast cancer at more advanced stages.



**Stage Distribution (SEER Summary Stage 2000)
By Race/Ethnicity
Female Breast, All Ages, Female
2000-2009**



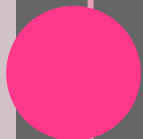
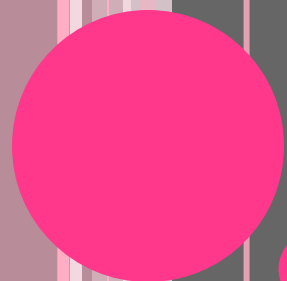
Cancer sites include invasive cases only unless otherwise noted.
Incidence source: SEER 18 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey and Georgia excluding ATL/RG).

TO SUMMARIZE...

- Breast Cancer is more common in White women than in Black women
- But Black women die more often of breast cancer than White women
- Black women are diagnosed with breast cancer at more advanced stage

WHY??





DISPARITIES IN CARE

DISPARITIES IN CARE CAUSING MORE ABC IN BLACK WOMEN

- More aggressive cancer biology
- Decreased access to care
- Social Issues
- Treatment Differences

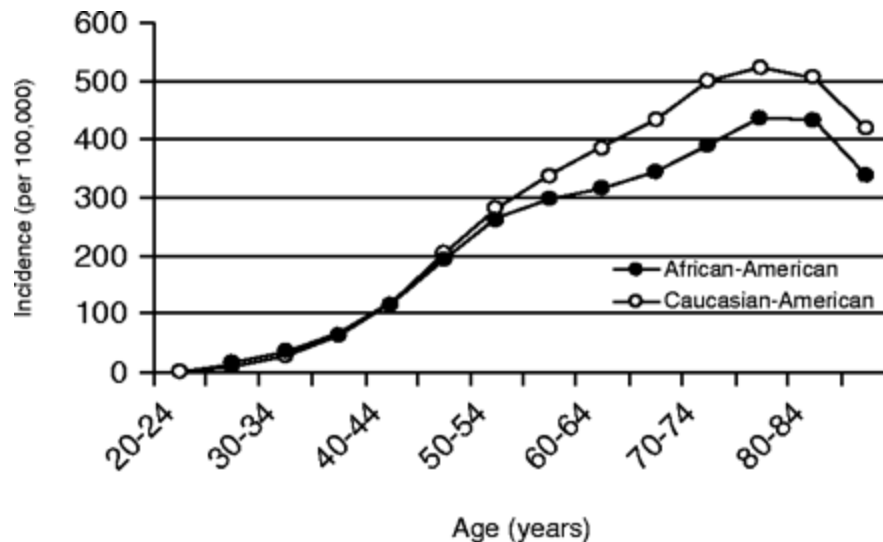


MORE AGGRESSIVE CANCER BIOLOGY

- Younger age of onset
- Higher grade cancers
- More Estrogen Receptor negative cancers
- More triple negative cancers
- These same factors are seen in African women



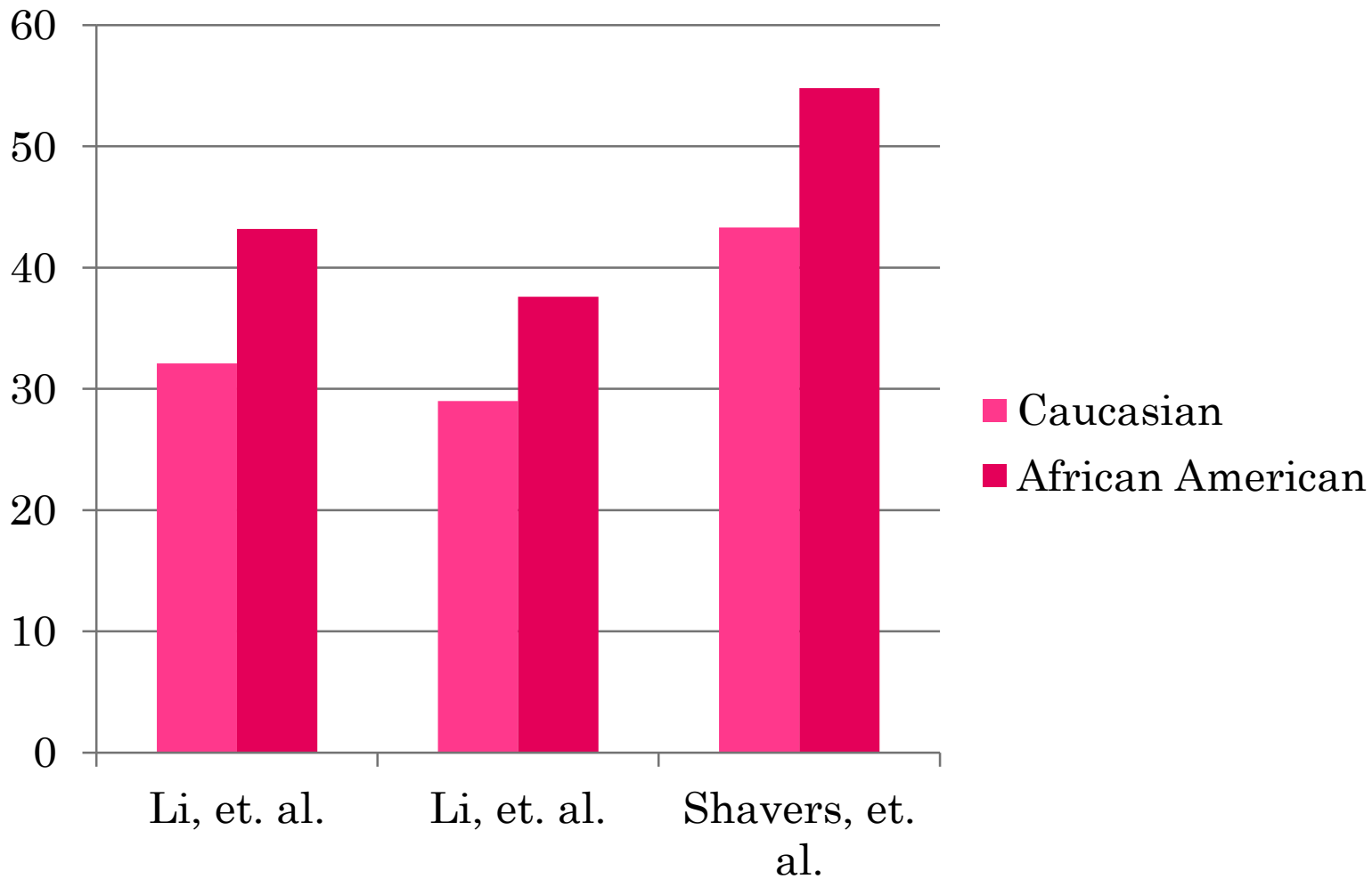
YOUNGER AGE OF ONSET



- African American women <45 years old have higher incidence of breast cancer than Caucasian women in the same age group
- 20% of Caucasian patients are younger than 50
- 30-40% of AA patients are younger than 50

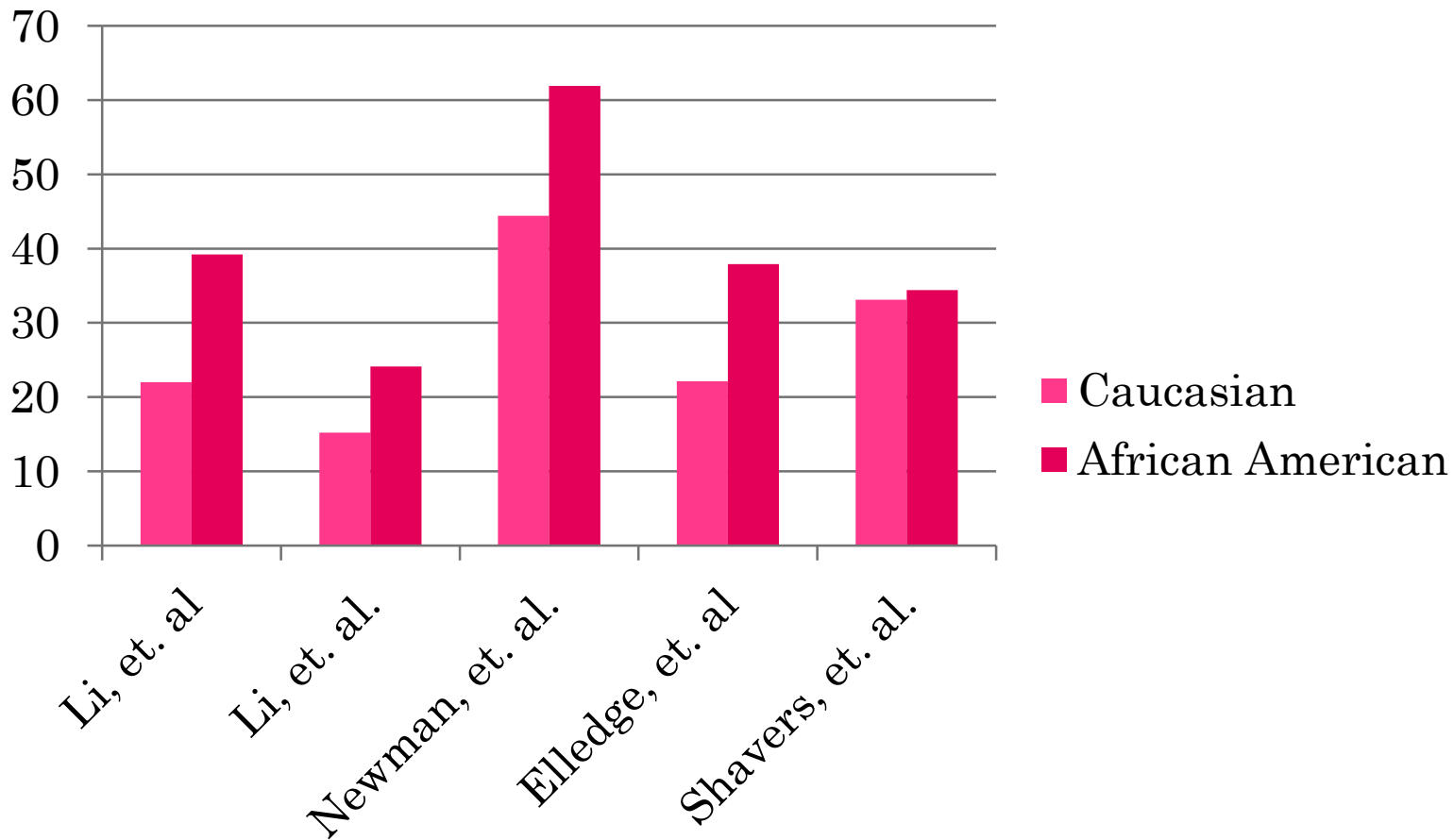


HIGHER GRADE TUMORS IN AA WOMEN



MORE ESTROGEN RECEPTOR NEGATIVE CANCERS IN AA WOMEN

ER Negativity Rates



DISPARITIES IN CARE CAUSING MORE ABC IN BLACK WOMEN

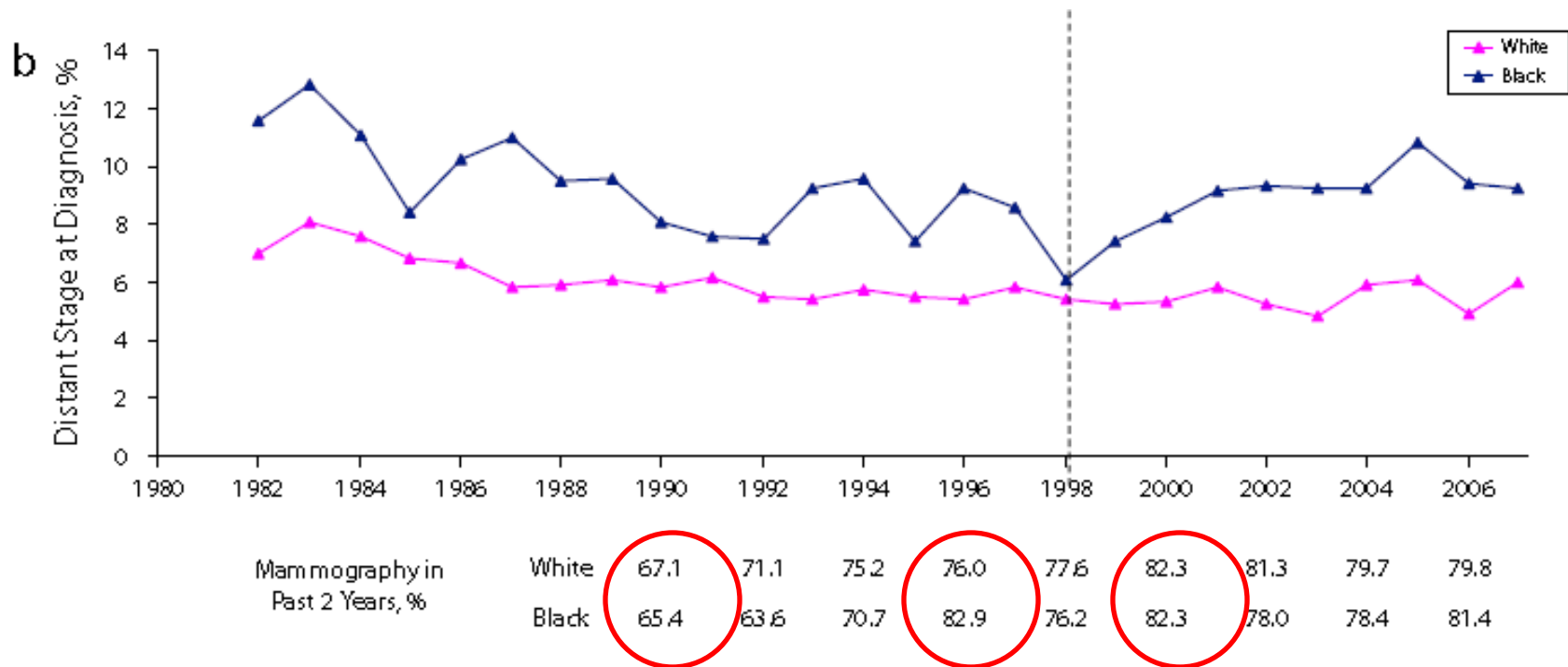
- More aggressive cancer biology
- Decreased access to (high quality) care
- Social Issues
- Treatment Differences



DECREASED ACCESS TO HIGH QUALITY CARE

- Black women are less likely than White women to:
 - Have insurance
 - Have their MMG done at an academic center
 - Have their MMG read by an exclusive breast radiologist
 - Have digital mammography
 - Have easy access to transportation
 - Be able to miss work, arrange for child care





- Both Black and White women had less mammograms after 1998.
- Yet, Black women experienced sharper increase in distant diagnoses.
- Black women have more aggressive tumors
 - Triple negative
 - Higher grade
- Thus, they may have been more affected by decrease in mammography

DISPARITIES IN CARE CAUSING MORE ABC IN BLACK WOMEN

- More aggressive cancer biology
- Decreased access to (high quality) care
- Socio-Economic Issues
- Treatment Differences



SOCIO-ECONOMIC ISSUES

- Increased Poverty
- Increased Obesity
- Less Physical Activity



INCREASED POVERTY, LESS ACCESS

TABLE 1 Most Recent Available Data on Socioeconomic Characteristics and Medical Care Access, by Race and Ethnicity

Racial/Ethnic Group	% With Income Below Poverty Level*†	% Graduated High School ‡	% Under Age 65 With No Health Care Coverage§	With No Regular Source of Medical Care§
White (non-Hispanic)	8.0	85.5	11.9	13.9
African American	24.1	72.3	19.2	16.7
Hispanic-Latino	21.8	52.4	34.8	30.8
American Indian/Alaskan Native†	27.1	70.9	33.4	15.9
Pacific Islander	—	78.3	—	—
Asian	10.1	80.4	17.1	18.5
Asian/Pacific Islander	10.3	—	—	—

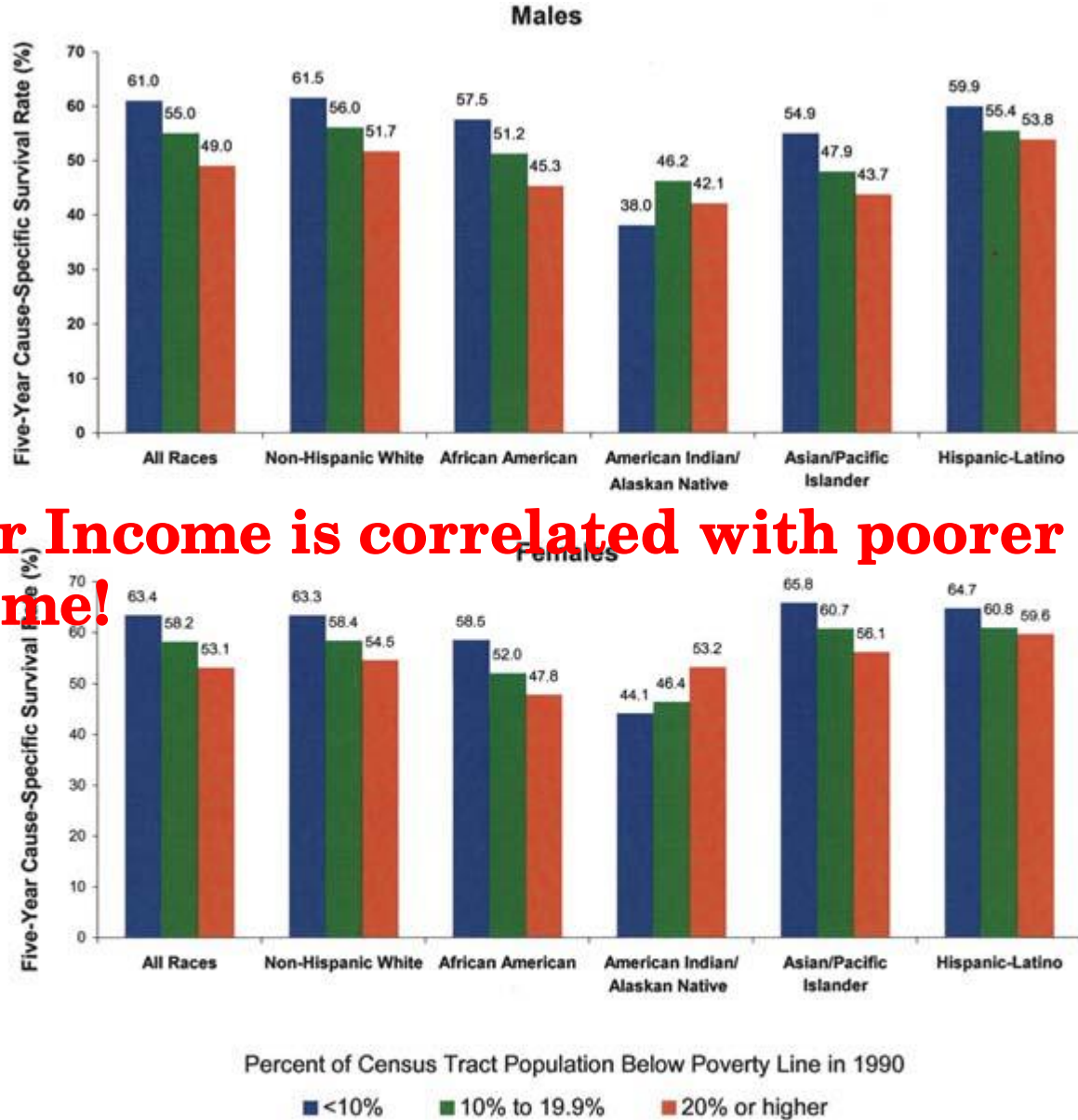
*Source: Poverty rate as of 2002 for White (non-Hispanic), African-American, Hispanic-Latino, Asian, and Asian/Pacific Islander populations. Poverty in the United States, 2002, US Census Bureau, September 2003.

†Source: Poverty rate as of 1999 to 2000 for American Indian/Alaskan Native population. Poverty in the United States, 2000. US Census Bureau, September 2001.

‡ Source: Educational Attainment, 2000. Census 2000 Brief, US Census Bureau, August 2000.

§ Source: Health, United States, 2003 With Chartbook on Trends in the Health of Americans, Hyattsville, Maryland, 2003.





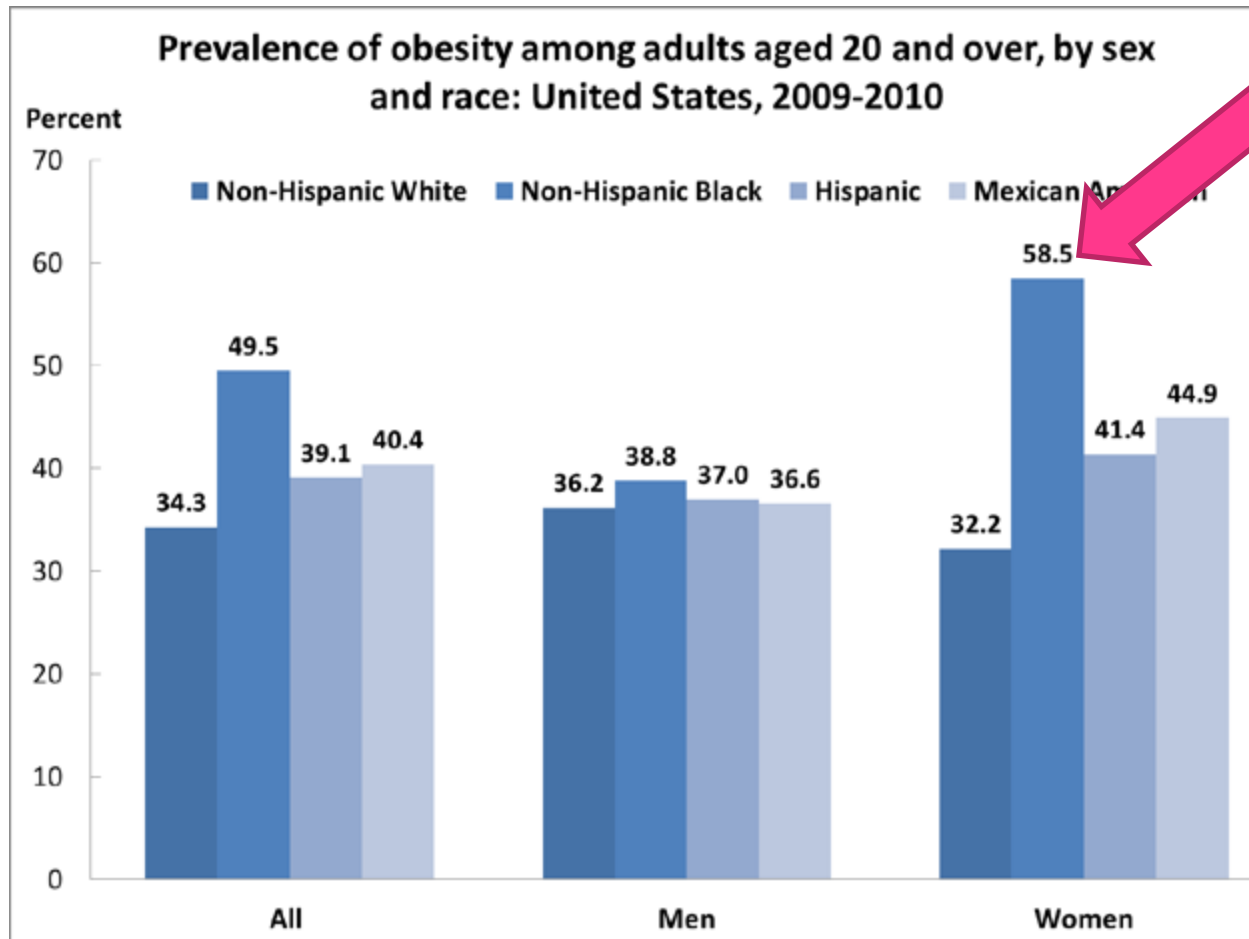
○ Lower Income is correlated with poorer outcome!

FIGURE 2 SEER Cancer (All Sites Combined) Survival Among Men and Women, 1988-1994 Patient Cohort.

*Survival rates are cause-specific, and represent the probability of escaping death due to the underlying cancer in the absence of other causes of death.

Source: Singh GK, Miller BA, Hankey BF, Edwards BK.¹⁷

OBESITY IS MORE COMMON IN BLACK WOMEN



RACE AND OBESITY INTERPLAY

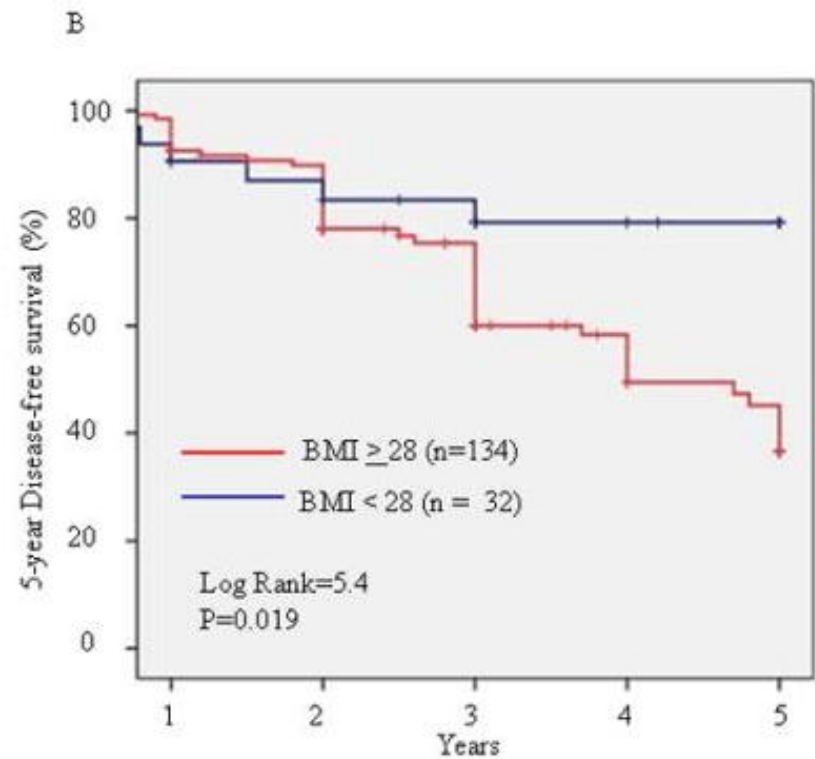
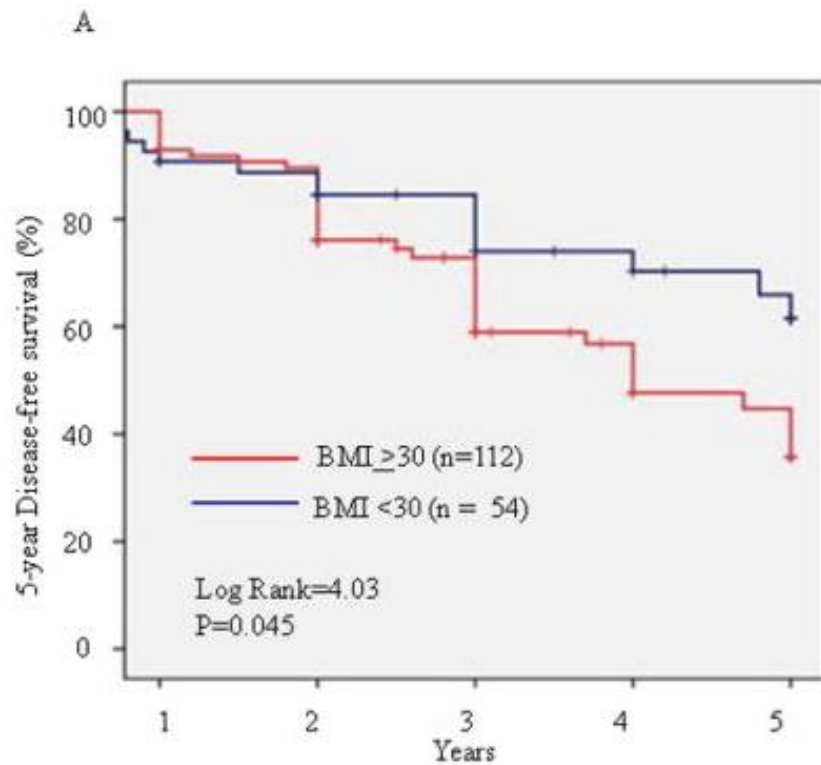
Table 5

Odds Ratios and 95% CI's for the Association between Breast Cancer, BMI, and Menopausal Status (Univariate analysis)

	<u>Premenopausal</u>			<i>P</i> -Value	<u>Postmenopausal</u>			<i>P</i> -Value
	Cases	Control	OR (95% CI)		Cases	Control	OR (95% CI)	
	N	N			N	N		
<u>BMI status</u>								
<i>Total</i>								
Normal	14	12	1.0		13	33	1.0	
Over weight	29	29	1.1 (0.5 – 2.3)	0.825	37	40	2.3 (1.1 – 5.1)	0.032
Obesity	53	37	1.7 (0.8 – 3.4)	0.174	91	81	2.9 (1.4 – 5.8)	0.004
<i>African-American</i>								
Normal	8	4	1.0		6	23	1.0	
Over weight	6	6	0.5 (0.1 – 2.6)	0.410	16	22	2.8 (0.9 – 8.4)	0.069
Obesity	21	9	1.2 (0.3 – 4.9)	0.833	56	45	4.8 (1.8 – 12.7)	0.002
<i>Hispanic</i>								
Normal	6	8	1.0		7	10	1.0	
Over weight	23	23	1.3 (0.4 – 3.6)	0.640	21	18	1.7 (0.5 – 5.3)	0.385
Obesity	32	28	1.5 (0.5 – 4.9)	0.482	35	36	1.4 (0.5 – 4.1)	0.548

HIGHER BMI CORRELATES WITH WORSE OUTCOME

Figure 2



DISPARITIES IN CARE CAUSING MORE ABC IN BLACK WOMEN

- More aggressive cancer biology
- Decreased access to care
- Social Issues
- Treatment Differences



TREATMENT DIFFERENCES

- White women are more likely to start treatment within 30 days of diagnosis than AA women
- AA women are less likely to have post-lumpectomy radiation
- AA women are less likely to have sentinel lymph node biopsies (uncontrolled for stage)
- AA women are less likely to participate in clinical trials



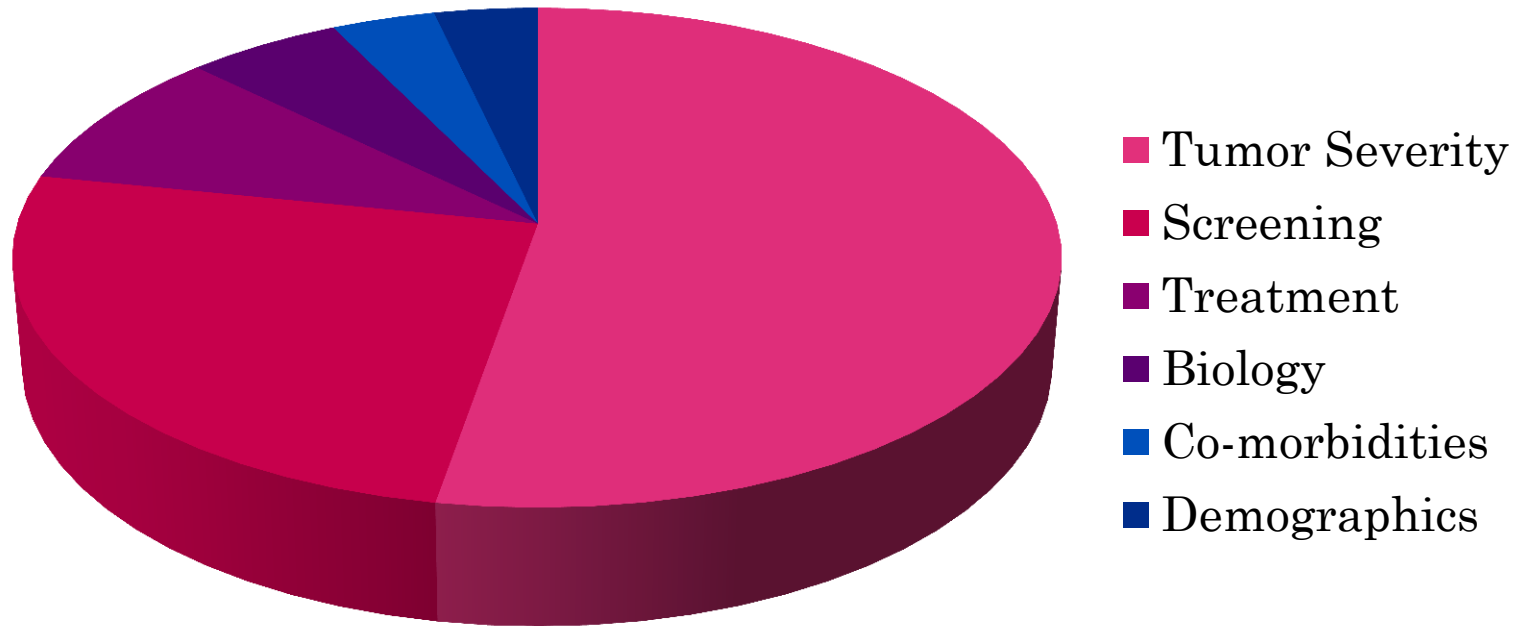
HOW IMPORTANT ARE EACH OF THESE FACTORS?

- Many factors play a role in disparities in care:
 - Tumor Severity (29%)
 - Screening (14%)
 - Treatment (5%)
 - Biology (3%)
 - Co-morbidities (2%)
 - Demographics (2%)
- Race did not play a role in mortality among stage IV patients



DISPARITIES IN BREAST CANCER CARE

Variables



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SOLUTIONS: HOW DO WE MOVE FORWARD?

SO HOW DO WE FIX THIS?

THIS IS WHAT WE DID AT BAYLOR:

- Reduced waiting time for mammogram from 6 months in 1999 to 2 weeks now at Smith Clinic
- Outsourced radiation treatments, which cut down waiting time from months to weeks
- The Breast Oncology clinic which serves the Ben Taub patients is the first sub-specialized oncology clinic in the county
- We offer a high risk and prevention clinic for county patients, as well as a survivorship clinic
- Genetic counseling services



SO HOW DO WE FIX THIS?

THIS IS WHAT WE DID AT BAYLOR:

- Many high quality clinical trials are available, and 63% enrolled patients are minorities, compared to 10% nationwide.
- All clinical trials are open at Baylor Clinic and Smith Clinic
- Dedicated staff
- Grant funding from multiple foundations
- Outreach to patients via educational pamphlets, events, walks/races, and one-on-one
- Correcting misconceptions about “experimental therapy”



SO WHAT CAN I DO?

- Maintain healthy body weight
 - BMI 20-25
- Exercise regularly
 - Walking 3 hours/week
- Avoid excessive alcohol
 - <3 alcoholic drinks/week
- Get your annual mammogram
 - Encourage all your loved ones to do the same!
- Be active in your health care
 - Seek out the best care
 - Don't be afraid to ask your doctor questions
- Get help when you need it!





WHAT THE FUTURE HOLDS

WHAT DOES THE FUTURE HOLD?

- American Cancer Society 2015 Challenge Goals
- US Dept Health and Human Services Healthy People 2010 Initiative
- NCI's Center to Reduce Health Care Disparities
- CDC's National Breast and Cervical Cancer Early Detection Program
- CDC's Racial and Ethnic Approaches to Community Health (REACH) program



QUESTIONS / COMMENTS

**Thank you for having
me!**

