



north carolina
cancer partnership

Breast Cancer White Paper

DRAFT

Breast Cancer Overview

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North Carolina Breast Cancer Incidence & Mortality Rate

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Breast Cancer Overview

Breast Cancer is determined by the presence of abnormal cells in at least one breast. Abnormal cells arise from a series of errors during cell division. The specific reason of the error is unknown. These cells, which are abnormal, eventually proliferate into a mass called a tumor. Tumors found in the body may be either benign (not harmful) or malignant (harmful). Cancerous tumors can develop in one or both breasts. Although rare, there have been few cases of men developing breast cancer. There are over 180,000 new cases of breast cancer in the United States in both men and women. It still remains the number one cancer killer for women.

From 2001-2005, the median age at death for cancer of the breast was 69 years of age⁴. Approximately 0.0% died under age 20; 1.0% between 20 and 34; 6.4% between 35 and 44; 15.3% between 45 and 54; 19.6% between 55 and 64; 20.1% between 65 and 74; 22.9% between 75 and 84; and 14.7% 85+ years of age. The Estimated number of new Breast Cancer Cases in the United States amount to 1,990 for men and 182,460 for women. In 2004, North Carolina mortality rates in 2004, the incidence for Breast Cancer in North Carolina was 6,760 and the number of deaths amounted to 1,280.

North Carolina Cancer Incidence Rates through 2006

	Incidence	Rate
North Carolina	200,142	475.9

North Carolina Cancer Mortality Rates through 2006

	Mortality	Rate
North Carolina	82,648	194.9

North Carolina Breast Cancer Mortality Rates through 2004

	Incidence	Incidence Rate
North Carolina	6,760	0.125

North Carolina Breast Cancer Mortality Rates through 2004

	Deaths	Mortality Rate
North Carolina	1,280	

Risk Factors

Risk Factors of developing Breast Cancer are include being of the female gender, Age, Genetic Susceptibility, Family History, Changes in Other genes, Personal History of Breast Cancer, Race, having Dense Breast Tissue, Certain Benign Breast Conditions, late onset of Menstrual periods, and Earlier Breast Radiation.

Screening & Early Detection

The most prominent and sure way of screening and detecting breast cancer early is getting regular mammograms. Other methods include a Breast Self Exam, Clinical Breast Exam, MRI, and Genetic Testing.

There are a host of clinical trial and support groups for Breast Cancer. These groups along with research scientists are working diligently towards discovering a cure for this disease.

Clear Definition

Breasts are made up of lobules, ducts, and stroma. Lobules are milk producing glands; ducts are tiny tubes that carry the milk from the lobules to the nipple; and stroma is fatty tissue and connective tissue which surround the ducts, lobules, blood vessels, and lymphatic vessels. Breast Cancer is determined by the presence of abnormal cells in at least one breast. Abnormal cells arise from a series of errors during cell division. The specific reason of the error is unknown. These cells, which are abnormal, eventually proliferate into a mass called a tumor. Tumors found in the body may be either benign (not harmful) or malignant (harmful). Cancerous tumors can develop in one or both breasts. Although rare, there have been few cases of men developing breast cancer.

Most breast cancers begin in the cells that line the ducts (*ductal* cancers). Others begin in the cells that line the lobules (*lobular* cancers), and a small number of cancers begin in other tissues. A major body system that is important to understand when trying to understand breast cancer is the lymphatic system. The lymph system spreads and transports fluids throughout the entire body. The lymphatic system has three parts: lymph nodes, lymph vessels, and lymph. Lymph nodes are small bean shaped collections of immune system cells. Lymph vessels are structurally similar to small veins and they carry clear fluid (lymph) away from the breast. Lymph contains tissue fluid, waste products, and immune system cells.

There are over 180,000 new cases of breast cancer in the United States in both men and women. It still remains the number one cancer killer for women.

Burden – Including Disparities

National

United States Mortality Rates

From 2001-2005, the median age at death for cancer of the breast was 69 years of age⁴. Approximately 0.0% died under age 20; 1.0% between 20 and 34; 6.4% between 35 and 44; 15.3% between 45 and 54; 19.6% between 55 and 64; 20.1% between 65 and 74; 22.9% between 75 and 84; and 14.7% 85+ years of age.

Estimated New Cases of Breast in the United States 2008

Both	Men	Women
184,450	1,990	182,460

Estimated Deaths caused by Breast Cancer in the United States 2008

Both	Men	Women
40,930	450	40,480

State

North Carolina Cancer Incidence Rates through 2006

	Incidence	Rate
North Carolina	200,142	475.9

North Carolina Cancer Mortality Rates through 2006

	Mortality	Rate
North Carolina	82,648	194.9

North Carolina Breast Cancer Mortality Rates through 2004

	Incidence	Incidence Rate
North Carolina	6,760	0.125

North Carolina Breast Cancer Mortality Rates through 2004

	Deaths	Mortality Rate
North Carolina	1,280	

Regional

2001-2006 Breast Cancer Incidence and Mortality Rates by North Carolina Counties

County	Incidence (average total)	Mortality (average per 100,000)
Asheville Region		
<i>Avery</i>	69	12
<i>Buncombe</i>	933	181
<i>Cherokee</i>	93	25
<i>Clay</i>	46	10
<i>Graham</i>	15	8
<i>Haywood</i>	262	57
<i>Henderson</i>	474	89
<i>Jackson</i>	112	33
<i>Macon</i>	162	31
<i>Madison</i>	86	23
<i>McDowell</i>	167	26
<i>Mitchell</i>	71	10
<i>Polk</i>	101	19
<i>Rutherford</i>	284	54
<i>Swain</i>	39	11
<i>Transylvania</i>	149	25
<i>Yancey</i>	89	17
Other Counties		
<i>Alamance</i>	577	98
<i>Alexander</i>	106	19
<i>Alleghany</i>	42	9
<i>Ashe</i>	90	19
<i>Burke</i>	242	80
<i>Catawba</i>	651	116
<i>Caldwell</i>	338	48
<i>Caswell</i>	60	27
<i>Davidson</i>	475	109
<i>Davie</i>	139	26
<i>Forsyth</i>	1,473	234
<i>Guilford</i>	1,818	303
<i>Iredell</i>	504	93

<i>Randolph</i>	484	97
<i>Rockingham</i>	430	80
<i>Rowan</i>	491	84
<i>Stokes</i>	183	37
<i>Surry</i>	323	80
<i>Watauga</i>	166	23
<i>Wilkes</i>	251	46
<i>Yadkin</i>	159	25
<i>Anson</i>	80	21
<i>Cabarrus</i>	519	91
<i>Cleveland</i>	503	80
<i>Gaston</i>	762	131
<i>Lincoln</i>	239	30
<i>Mecklenburg</i>	2,685	470
<i>Montgomery</i>	101	21
<i>Richmond</i>	162	37
<i>Stanly</i>	260	52
<i>Union</i>	367	82
<i>Chatbam</i>	205	37
<i>Durham</i>	933	142
<i>Franklin</i>	190	27
<i>Granville</i>	176	39
<i>Johnston</i>	425	74
<i>Lee</i>	226	28
<i>Orange</i>	536	77
<i>Person</i>	143	24
<i>Vance</i>	174	28
<i>Wake</i>	2,523	334
<i>Warren</i>	80	23
<i>Bladen</i>	106	44
<i>Brunswick</i>	360	67
<i>Columbus</i>	221	43
<i>Cumberland</i>	929	201
<i>Harnett</i>	252	66
<i>Hoke</i>	72	16
<i>Moore</i>	460	74
<i>New Hanover</i>	809	150
<i>Pender</i>	176	37
<i>Robeson</i>	409	85
<i>Sampson</i>	204	57
<i>Scotland</i>	135	34
<i>Beaufort</i>	222	43
<i>Bertie</i>	79	24
<i>Camden</i>	27	5

<i>Carteret</i>	316	58
<i>Chowan</i>	60	13
<i>Craven</i>	421	70
<i>Currituck</i>	42	9
<i>Dare</i>	97	33
<i>Duplin</i>	169	45
<i>Edgecombe</i>	258	61
<i>Gates</i>	27	8
<i>Greene</i>	59	18
<i>Halifax</i>	249	58
<i>Hertford</i>	116	30
<i>Hyde</i>	28	5
<i>Jones</i>	44	6
<i>Lenoir</i>	327	65
<i>Martin</i>	109	22
<i>Nash</i>	426	76
<i>Northampton</i>	81	24
<i>Onslow</i>	398	63
<i>Pamlico</i>	72	13
<i>Pasquotank</i>	138	40
<i>Perquimans</i>	60	16
<i>Pitt</i>	593	98
<i>Tyrrell</i>	12	6
<i>Washington</i>	62	15
<i>Wayne</i>	400	102
<i>Wilson</i>	328	78

County

2002-2006 Cancer Mortality Rates by County for Selected Sites

County	Average # of death per year	Average Annual death rate per 100,000
Chatham County	37	20.5
Wake County	334	21.5
Stanly County	52	28.1
Wilson County	78	34.1
Craven County	70	26.9
Lee County	28	16.5
Caldwell County	48	19.1
Guilford County	303	24.2
North Carolina		
Anson County	21	26.2
Carteret County	58	26.3
Johnston County	74	21.5
Yadkin County	25	21.1
Gaston County	131	22.7
Watauga County	23	20.7
Mecklenburg	470	26.4

County		
Alamance County	98	22.6
Forsyth County	234	25.0
Stokes County	37	26.9
Union County	82	23.8
Cabarrus County	91	23.5
Catawba County	116	26.0
Buncombe County	181	23.8
Davidson County	109	23.9
Onslow County	63	23.6
United States		
Ashe County	19	19.6
Beaufort County	43	27.3
Wilkes County	46	20.1
Rowan County	84	20.5
New Hanover County	150	29.0
Macon County	31	23.2
Rutherford County	54	24.8
Moore County	74	21.4
Rockingham County	80	25.4
Brunswick County	67	22.9
Lincoln County	30	15.4
Surry County	80	31.5
Cherokee County	25	26.2
Randolph County	97	24.2
Henderson County	89	23.0
Haywood County	57	26.7
Davie County	26	21.2
Iredell County	93	23.8
Transylvania County	25	21.8
Burke County	80	27.4

Dimensions (including optimal standards)

Risk Factors

Gender: Simply being a woman puts a person at risk for developing breast cancer. Men are also capable of developing the disease however; it is 100 times more common in women than in men.

Age: The chances of women developing breast cancer increase as they get older. Most invasive breast cancers occur in women who are over the age of 55.

Genetic Susceptibility: 5 to 10 percent of breast cancer cases are caused by genetic mutations. The most common genetic mutations are seen in the BRCA 1 and BRCA 2 genes. Women with these genetic mutations have an 80% chance of developing breast cancer. (www.cancer.org)

Family History: The risk of breast cancer is the highest for women who have close blood relatives who developed the disease. Relatives can be maternal or paternal. Although having a mother, sister or daughter with breast cancer doubles a woman’s risk; 70-80% of breast cancer cases begin in women who do not have family history of the disease. (www.cancer.org)

Changes in Other genes

There are other mutated genes that have been found to lead to breast cancer. These genes do not impart the same level of breast cancer as the BRCA 1 and 2 genes:

ATM: This gene normally helps to repair damaged DNA. People with mutations of this gene are likely to develop high rates breast cancer.

CHEK2: The mutated chek gene increases breast cancer risk twofold. Women who carry this gene and have a family history of breast cancer have a greatly increased risk.

p53: Is a tumor suppressor gene, and if mutated, it can cause breast cancer to develop as well as other cancers such as leukemia, brain tumors, and sarcoma. This is a rare cause of breast cancer.

PTEN: The PTEN gene normally helps regulate cell growth. Mutations in this gene that are inherited can cause Cowden syndrome. Cowden syndrome is a rare disorder where people at an increased risk for developing benign and malignant tumors; as well as growths in the digestive track, thyroid, uterus, and ovaries.

Personal History of Breast Cancer: A woman who developed breast cancer in one breast has a higher chance of developing breast cancer again in the other breast, or in a different part the same breast. This is difference from reoccurrence. (www.cancer.org)

Race: White women are more likely to develop breast cancer than African American women, but African American women are more likely to die from the disease because African American women have faster growing tumors. Asian, Hispanic, and American Indian women have a lower risk of getting breast cancer. (www.cancer.org)

Incidence Rates & Deaths for Breast Cancer by Race and Ethnicity, United States 2001-2005
All rates are per 100,000

Incidence Rate	African American	White	Asian American & Pacific Islander	American Indian & Alaska Native	Hispanic/Latino
Male					
Female	6,188	27,342	n/a	212	415

(Continued) All rates are per 100,000

Deaths	African American	White	Asia American & Pacific Islander	American Indian & Alaska Native	Hispanic/Latino
Male					
Female	33.5	24.4	12.6	17.1	15.8

Dense Breast Tissue: Dense breast tissue means there is more glandular tissue and less fatty tissue. Women with denser breast tissue have a higher risk of breast cancer. Dense breast tissue can also make it harder for doctors to spot problems on mammograms. (www.cancer.org)

Certain Benign Breast Conditions

Non-proliferative regions do not seem to affect breast cancer risk majorly. They include:

- fibrocystic disease (fibrosis and/or cysts)
- mild hyperplasia (an abnormal overgrowth of cells)
- adenosis (non-sclerosing, or non-hardening of tissue)
- simple fibroadenoma
- phyllodes tumor (benign)
- a single papilloma
- fat necrosis
- mastitis
- duct ectasia
- other benign tumors (lipoma, hamartoma, hemangioma, neurofibroma)

Proliferative regions without atypia: These conditions include excessive growth in the lobules and ducts of the breast tissue, and the cells no longer appear normal. These condition raises breast cancer risk 4 to 5 times as they have a stronger effect on breast cancer. They include:

- atypical ductal hyperplasia (ADH)
- atypical lobular hyperplasia (ALH)

Women having a family history of breast cancer along with hyperplasia or atypical hyperplasia have an increased risk in developing breast cancer.

Menstrual periods: Women who began having menstrual periods before the age of 12 or experienced menopause after the age of 55 have an increased chance of developing breast cancer. This is because they have had more menstrual periods and as a result have been exposed to more of the hormones estrogen and progesterone.

Earlier Breast Radiation: People who have had exposure to chest radiation at an earlier stage in their life have an increased risk of developing breast cancer.

Treatment with DES: In the past, some pregnant women were given the drug DES (diethylstilbestrol) because it was thought to lower their chances of losing the baby (miscarriage). Recent studies have shown that these women (and their daughters who were exposed to DES while in the womb), have a slightly increased risk of getting breast cancer.

Screening & Early Detection

The most prominent and sure way of screening and detecting breast cancer early is getting regular mammograms. A **mammogram** is an x-ray exam of the breast, used to evaluate and detect changes in the breast tissue. Mammograms are usually only given to women ages 40 and over because women younger than forty have denser breast than older women, making it harder to detect abnormalities. The largest benefit is for women ages 50 – 69 because regular mammograms have been found to detect breast cancer and cut the number of deaths by up to one-third in this age group. Other alarming symptoms that may occur in patients include:

- A lump, lumpiness or thickening. Younger women (before menopause) should be alarmed if this is not related to their normal monthly cycle and remains after the monthly cycle. Women of all ages should be alarmed if this is a new change in only one breast.
- Changes in nipple shape, crusting, a sore, or an ulcer; also redness or in-drawing of the nipple.
- Bloody discharge from nipple that occurs without squeezing.
- Changes in the skin of the breast, such as puckering or dimpling of the skin; unusual redness or other color change.

Breast Self Exam

For women who are in their early 20's a Breast self exam (BSE) is the recommended screening method that is used to detect breast cancer. It is recommended that women perform self breast exams monthly about 7-10 days after their menstruation cycle. Women who perform BSE should have their technique reviewed by a medical professional to ensure it is being performed correctly. BSE allows women to become familiar with their breast which enables them to recognize changes such as those mentioned earlier.

Clinical Breast Exam

A clinical breast exam is a compliment to mammograms and can be used by women as an opportunity to discuss changes in their breast with their nurse, physician, or another health care professional.

MRI

Women who have a family history of breast cancer are usually considered to be at a 20% risk or higher of developing the disease. These women should begin having Magnetic Resonance Images MRI screenings annually along with mammograms. An MRI is an imaging technique that is mostly used in radiation to view structures and functions inside of the body. MRI's usually detect any problems that may be missed by the breast self exam and clinical breast exam.

Genetic Testing

Genetic testing can be done in efforts to find mutations in the BRCA 1 and 2, ATM, PTEN, p53, and CHEK2 genes. Pros and Cons for genetic testing need to be considered carefully.

Care and Treatment

Treatment of Breast Cancer must take into consideration the size of the tumor, the stage of progression, and patient preference. Treatment methods may involve one or all of the following:

Lumpectomy-surgical removal of a tumor with clear margins

Mastectomy is the surgical removal of the breast along with the removal of axillary lymph nodes. The removal of axillary (armpit) lymph nodes assists with finding accurate information on the stage of the disease.

Radiation therapy is when a beam is aimed at the tumor to kill some or all of the cancer cells, causing the tumor to shrink.

Chemotherapy is medicine which is given either intravenously or orally, that can stop the growth of and kill cancer cells all over the body by getting into the bloodstream. This is what makes chemotherapy a systemic therapy.

Targeted therapy is a new form of treatment which is administered orally and or intravenously to target abnormalities that are found in tumors or cancer cells. Targeted therapies do not affect normal cells therefore they have fewer side effects. Examples of targeted therapy include bevaizumab (Avastin), or erlotinib (Tarceva).

Hormone therapy- Tamoxifen, aromatase inhibitors.

Clinical Trials

Clinical trials are studies in which people volunteer to test new drugs or procedures. These studies are necessary for developing new treatment for diseases such as breast cancer. Doctors are not privy of the outcome of clinical trials. Perhaps this is the reason that patients either neglect the option of participating in clinical trials, or use the clinical trial option as a last resort. Most public reports given by the media only capitalize on the negative aspects and outcomes of clinical trials. Despite this unfortunate truth, there are thousands of patients who are helped each year because they chose to partake in a clinical trial. Clinical trials are given in four phases: Phase 1-Is the treatment safe; Phase 2- Does the treatment work; Phase 3- Is it better than what's already available; and Phase 4; What else do we need to know. Between phase 3 and phase 4, if the experiment is going well, there is usually a submission to the FDA for approval called a New Drug Application (NDA).

The following information can be viewed short hand below.

Randomized Phase 3 Study of Conventional Whole Breast Irradiation

Radiation therapy uses high-energy x-rays to kill tumor cells. Giving radiation therapy in different ways may kill any tumor cells that remain after surgery. It is not yet known whether whole breast radiation therapy is more effective than partial breast radiation therapy in treating breast cancer.

This randomized phase III trial is studying whole breast radiation therapy to see how well it works compared to partial breast radiation therapy in treating women who have undergone surgery for ductal carcinoma in situ or stage I or stage II breast cancer.

Eligibility criteria include the following:

At least 18 years old

Has undergone surgery to remove the tumor

No Paget's disease of the nipple

Any estrogen receptor or progesterone receptor status

No previous biological therapy, chemotherapy, or radiation therapy for this cancer

No previous radiation therapy to the breast or chest

For more information about the eligibility criteria for this trial, refer to the Health Professional version.

Final eligibility for a clinical trial is determined by the health professionals conducting the trial.

Daughters and Mothers Against Breast Cancer

Women who are overweight have a greater chance of developing breast cancer as they get older. They are also at greater risk of developing more aggressive cancer. Researchers want to study 3 different home-based diet and exercise weight loss programs to find out the effect of the programs on body weight, quality of life, and other health-related factors.

Primary Aim: To explore the feasibility and acceptability of two distinctly different tailored, home-based diet and exercise interventions (one that relies on a partner-assisted, team-based approach that emphasizes the mother-daughter bond and one that is delivered to each independently) vs. standardized materials (attention control).

Secondary Aim: To explore potential effects (and variation) noted among each of the three intervention arms from baseline to 6 and 12- month follow-up on the following endpoints: BMI, energy intake and nutrient density of the diet, exercise [min/week and metabolic equivalents (METs)], self-efficacy to adhere to an energy restricted, plant-based, low saturated fat diet and increased exercise, blood pressure, health-related quality of life (HRQOL), social support (in general and as specifically related to healthful dietary and exercise behavior), and characteristics of the mother-daughter bond (e.g., strength).

Inclusion Criteria:

1. Approved for contact by oncology care physician (MOTHERS)
2. DCIS or Stage I-III Breast Cancer (MOTHERS)
3. Have a biological daughter at least 21 years old (MOTHERS)
4. Body Mass Index between 25 - 40 (MOTHERS & DAUGHTERS)
5. English Speaking & Writing (MOTHERS & DAUGHTERS)
6. 5th grade or higher educational level (MOTHERS & DAUGHTERS)
7. Willingness to be randomized into the standardized or tailored intervention arms and to undergo baseline and follow-up assessments (MOTHERS & DAUGHTERS)
8. Must be at least 21 years of age (MOTHERS & DAUGHTERS)
9. Must reside within the United States, Puerto Rico or Guam and therefore able to participate in home visits made by Examination Management Services, Inc. (MOTHERS & DAUGHTERS)

Exclusion Criteria:

1. Evidence of progressive breast cancer or 2nd primaries (MOTHERS)
2. Pre-existing medical condition(s) that preclude adherence to an unsupervised exercise program or to a diet high in fruits and vegetables, such as the following: untreated stage 3 hypertension; severe orthopedic conditions; scheduled for a hip or knee replacement within 6 months; paralysis; end-stage renal disease; dementia; unstable angina; heart attack, congestive heart failure or pulmonary conditions that have required hospitalization or oxygen within 6 months (MOTHERS & DAUGHTERS)
3. Currently exercising 30+ minutes/day for 5+ days/week (<150 minutes per week) (MOTHERS & DAUGHTERS)
4. Currently enrolled in a weight loss program (MOTHERS & DAUGHTERS)
5. Residing in institutionalized settings, e.g., living in assisted or skilled nursing facilities, and therefore not able to make independent choices about their lifestyle behaviors and participate fully in the intervention (MOTHERS AND DAUGHTERS).
6. Currently pregnant (MOTHERS & DAUGHTERS)
7. A previous diagnosis of breast cancer (DAUGHTERS)

1. A Couples Approach to enhancing breast cancer Survivorship

The purpose of the proposed study is to evaluate the efficacy of a new couple-based intervention for women with recently diagnosed, early stage breast cancer and their spouses or male partners. This cancer-focused relationship enhancement intervention adapts well-validated cognitive-behavioral interventions to teach patients and partners specific relationship skills, such as problem-solving skills, communication, and

maximizing positive interactions that can be used in addressing breast cancer. The purpose of the proposed study is to evaluate the efficacy of a new couple-based intervention for women with recently diagnosed, early stage breast cancer and their spouses or male partners.

Inclusion Criteria:

- Diagnosed with early stage breast cancer within last year
- No history of breast cancer, or other cancers in last 5 years (except skin cancer)
- Living together in a committed heterosexual relationship read and speak English
- Agree to participate

Exclusion Criteria:

- Stage 3b and above breast cancer
- Notable psychopathology, including severe depression with suicidality

2. Shorter Course of Radiation Therapy

Women with low-risk, early stage breast cancer who received a shorter, more intense course of radiation therapy after lumpectomy (breast-conserving surgery) had the same risk of disease recurrence in the breast as women, who received a longer, more standard course of radiation therapy. Cosmetic outcomes were also equivalent.

Organization(s)	Location	Phone	Website	Trial Start/End(est.)	Description
National Surgical Adjuvant Breast and Bowel Project Radiation Therapy Oncology Group Southwest Oncology Group	Rex Cancer Center at Rex Hospital Raleigh, NC	919-784-7209		3/21/05-6/1/2015	A Randomized Phase III Study of Conventional Whole Breast Irradiation (WBI) Versus Partial Breast Irradiation (PBI) for Women with Stage 0, I, or II Breast Cancer
Duke Comprehensive Cancer Center	Durham, NC		Link to the current ClinicalTrials.gov record.	8/27/08-	Behavioral Study/ prevention
Duke Comprehensive Cancer Center Lineberger Comprehensive Cancer Center at University of North Carolina - Chapel Hill	Durham, NC Chapel Hill, NC	919-416-3436 919-962-5082	laura.porter@duke.edu don_baucom@unc.edu Link to the current ClinicalTrials.gov record.	9/15/08-	Behavioral study, Educational/Counseling/Training

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Survivorship

5 Year Survival Rate by Stage for all Ethnicities

Stage 0 -Atypical cells have not spread outside of ducts or lobules	100% survival rate
Stage I - cancer no larger than 2cm; has not spread to surrounding lymph nodes	98% survival rate
Stage II A - tumor is less than 2 cm and has spread to 3 auxiliary underarm lymph nodes; or tumor is larger than 2 cm but less than 5cm. Stage II B - tumor growth between 2cm-5cm and spread to 3 auxiliary under arm lymph nodes; or tumor is larger than 5 cm but has not spread to surrounding lymph nodes	88% survival rate
Stage IIIA -tumor larger than 2 cm but less than 5cm and has spread to 9 auxiliary underarm lymph nodes	56% survival rate
Stage IIIB -the cancer has spread to tissues near breast including skin, chest wall, ribs, muscles, or lymph nodes in chest wall or above the collar bone	49% survival rate
Stage IV -Cancer has spread to other organs, tissues, such as liver, lungs, brain, skeletal system, or lymph nodes near the collar bone.	16% survival rate

*The five-year relative survival rate for breast cancer among African American women from 1996-2002 was 77% compared to a 90% rate in white women. Of all breast cancers diagnosed in African American women 52% are diagnosed at a local stage compared to 62% in white women. Studies have documented that reason being is unequal receipt of prompt, high quality treatment for African American women than compared to white women.

*The five-year breast cancer survival rate for American Indian women is lower than all other ethnic and racial groups living in the United States. For Native Hawaiian women, the survival rate is higher than for American Indian and African American women, but lower than for White women. The five-year survival is 49% for American Indians. (Breast health online, 2001)

A. Complementary Medicine

Additional methods of screening

Bone Scan

An amount of low-level radio active material is injected into a vein. The material settles in the areas of bone changes throughout the entire skeleton. A special camera detects the radio activity and creates an image of the skeleton. The areas of “bone changes” on the picture may suggest the presence of metastatic cancer, although arthritis or other bone diseases can also cause the same pattern. To distinguish between these conditions, cancer care team may use other imaging tests such as simple x-rays or CT or MRI scans.

CT guided Needle Biopsy

A radiologist advances a biopsy needle through the skin and toward the location of the mass. CT scans are repeated until the doctors are sure that the needle is within the mass. A fine needle biopsy sample (tiny fragment of tissue) or a core needle biopsy sample (a thin cylinder of tissue about ½-inch long and less than 1/8-inch in diameter) is then removed and sent to be looked at under a microscope.

Ultra Sound

Ultrasound tests use of sound waves and their echoes to produce a picture of internal organs or masses. A small microphone-like instrument called a transducer sends out sound waves and picks up the echoes as they bounce off body tissues. The echoes are converted by a computer into a black and white image that is shown on a computer screen. Abdominal ultrasound is used to look for tumors in your liver or other abdominal organs.

B. Special Populations/Other Considerations

Ethnic/ Racial Minorities

- African-American

Breast cancer is the most common form of cancer found in African American Women. An estimated 19,010 cases were expected to occur in 2007. Among younger African American women (under the age of 40) the incidence rate higher than it is in white women. However, the overall incidence rate for African American women is about 12% lower than is white women. During the 1980s breast cancer rates increased rapidly among African American women due to the uses of the mammography. Since the early 1990s, breast cancer rates have stabilized among African American women over the age of 50. An estimated 5,830 deaths were expected to occur in 2007. It is the second most common cause of cancer death in African American women following lung cancer. From 2000-2003, African American women had a 36% higher death rate than white women. Factors that contributed to higher death rates were little access to early detection & screening methods, limited access to healthcare, and socioeconomic status.

- Native America

The breast cancer incidence rate varies among Native American women depending on the region. Native American women living in Arizona, New Mexico, and Alaska, has been found to have lower incidence rates than African American and White women. In the year 2001, 32 out of every 100,000 American Indian women and 79 out of every 100,000 Alaska Native women are diagnosed with breast cancer. The breast cancer mortality rate for Native American women is lower than for White and African American women and Latinas. About 9 out of 100,000 American Indian women and 13 out of 100,000 Alaska Native women will die of breast cancer. Unfortunately, it is believed that there is an underestimation of incidence and mortality rates among this population due to the misclassification of ethnic groups in health statistics. (Breast health online, 2001)

- Asian American

Breast cancer rates among Asian American women increase with successive generations. Women of the Asian Pacific Islander ancestry have experienced a 15% increase in incidence of invasive breast cancer 1988 and 1997. Breast cancer detection among Asian America

women tends to occur at a later stage than in White women. Although breast cancer is most common among Chinese, Filipina, Hawaiian, and Japanese and Korean Women; it can affect all Asian women. (Asian American Minority health, 2008)

- Hispanic/Latino

Hispanic women have been found to develop more aggressive breast cancers than non-Hispanic white women. These findings hold even when Hispanic women have the same access to health care as white women; such as regular check-ups and mammograms. When compared to non-Hispanic white women, Hispanic women are younger at the age of the first breast cancer diagnosis, have a 2.7 times more likely chance of developing stage IV breast cancer, have a 2.25 times more poorly differentiated tumors (meaning poorer prognosis), have a twofold risk of larger tumors, and have a twofold higher risk of estrogen-negative cancer, meaning that the cancer will not respond to the most effective cancer drugs. (WebMD, 2008) The findings of breast cancer characteristics within this population suggest that biological differences may exist in breast cancer by ethnicity. (Breast cancer Latinas, 2008)

Groups with Lifestyle Related Concerns

- GLBT and LGBT

Traditionally Underserved

- Blind
- Deaf
- Physically Disabled
- Mentally Handicapped
- Uninsured/ Indigent Men
- Illiterate

II. Inventory of North Carolina and other U.S. Resources (Counties)

A. Prevention: groups and organizations that provide services intended to protect against disease by preventing it from occurring, reducing the risk of its occurrence aka "primary prevention."

Name of Organization	County	Contact Name	Address	City, State Zip	Phone & Fax	E-mail Address
Native American Women's Health Education Resource Center			P.O. Box 572 Lake Andes, SD 57356	Lake Andes, SD	(605) 487-7072	http://www.breasthealthonline.org/cgi-bin/mwf/topic_show.pl?tid=8478

E. Survivorship & Support

Name of Organization	County	Contact Name	Address	City, State Zip	Phone	E-mail Address/ Website
Sisters Network Triangle, Inc. (for African American women)	Durham	Valorie C. Worthy	10 Willow Bridge Dr. Durham, NC 27707	Durham, NC	919-490-1571 919-493-6714fax	sisterstriangle@aol.com
Sisters Network Piedmont Carolinas		Tracy Cook-Brewton	3319 Deerwood Drive Gastonia, NC 28054	Gastonia, NC	704-747-3319 704-865-2227fax	sisnetnc@bellsouth.net
Sisters Network Southeastern, NC		Irene Stuart	109 Short Drive Lumberton, NC 28360	Lumberton, NC	910 738-3175 910-272-8311-fax	sistersnetsenc@aol.com

III. Recommendations

A. What Needs to Be Done

B. Where Does It Need to Be Done

C. Who Needs to Do It

D. How Does It Get Done, Including Policies

E. Target Populations, Special Considerations, Different Approaches

F. What Are Our Measurements

G. How Long Will It Take

H. How Much Will It Cost

IV. Other

A. Reference Materials

<http://www.cancer.gov/cancertopics/wyntk/breast>

<http://www.schs.state.nc.us/SCHS/CCR/incidence/2005/5yearRatesbyRaceEth.pdf>

<http://www.schs.state.nc.us/SCHS/CCR/FactsFigures2004.pdf>

<http://www.cancer.gov/search/ViewClinicalTrials.aspx?cdrid=595217&version=patient&protocolsearchid=5437235>

http://seer.cancer.gov/csr/1975_2005/results_single/sect_01_table.01.pdf

http://www.cancer.org/docroot/CRI/content/CRI_2_4_2X_What_are_the_risk_factors_for_breast_cancer_5.asp

<http://www.sistersnetworkinc.org/cancer-education.asp>

http://www.breasthealthonline.org/cgi-bin/mvfl/topic_show.pl?tid=8478

NC Central Cancer Registry

<http://www.4woman.gov/minority/asianamerican/bc.cfm>

http://www.consumeraffairs.com/news04/2007/04/breast_cancer_latinas.html

B. National Organizations

C. What's Being Done in Other States

D. Potential External Resources

E. Relationship to Other Cancers/Issues