

## BREAST CANCER STAGE AT DIAGNOSIS

The stage at which breast cancer is diagnosed has an enormous impact on 5-year survival rates. Cancer stages include *in situ* (cancer is confined to the [site](#) of [origin](#) – duct or lobule – without [invasion](#) of neighboring [tissues](#)), *local* (cancer has invaded fatty tissue, but is confined to the breast), *regional* (cancer has spread to tissue or lymph nodes surrounding the breast), and *distant* (cancer has metastasized to distant organs). Chances for 5-year survival post-diagnosis are decreased when cancer is found at a later stage or when larger tumors are discovered.

- In the affiliate service area, **about 70% of breast cancer cases are diagnosed in an early stage** (in situ or local) and local stage is by far the most common (see Table 5). Edgecombe and Franklin have the lowest percentage of cases diagnosed at an early stage.

*Observations:* The **proportion of cases diagnosed at early and late stages is potentially influenced by a number of factors at the county-level**, including level of awareness about the need for regular screening, and availability and accessibility of screening, diagnosis, and treatment services.

- High rates of early diagnosis in a county may be reflective of successful BCCCP outreach efforts, high levels of insured-status (private health insurance reminds women to get regular screenings), or the accessibility of screening and treatment facilities.
- High rates of late diagnosis may indicate high rates of poverty (women are unable to prioritize or pay for breast healthcare), absence of educational outreach programs, or lack of screening and treatment facilities.
- **Counties or demographic groups with high rates of late diagnosis need more resources for early detection to improve chances for 5-year survival.**

**Table 5:** Female breast cancer stage at diagnosis (5-year) for affiliate service area counties

COUNTY	IN SITU		LOCAL		REGIONAL		DISTANT	
	Cases	%	Cases	%	Cases	%	Cases	%
Caswell	<5	-	28	<b>70</b>	12	30	<5	-
Chatham	31	15.7	117	59.4	43	21.8	6	3
Durham	159	19.4	439	53.7	177	21.6	43	5.3
Edgecombe	29	15.1	96	50	57	29.7	10	5.2
Franklin	21	16.7	61	48.4	38	30.2	6	4.8
Granville	29	19.9	71	48.6	35	24	11	<b>7.5</b>
Harnett	38	17.4	121	55.5	53	24.3	6	2.8
Johnston	49	14.4	188	55.3	89	26.2	14	4.1
Nash	40	10.4	243	63.1	87	22.6	15	3.9
Orange	98	20.2	266	54.8	107	22.1	14	2.9
Person	35	<b>25.7</b>	67	49.2	34	25	<5	-
Vance	<5	-	72	66.1	37	<b>33.9</b>	<5	-
Wake	359	17	1139	53.8	550	26	64	3

NC	4842	16.3	16274	55	7473	25	1155	4
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\* Statistics based on counts less than 10 are unstable. Use with caution.      \*\*For a bar graph of this data, refer to Appendix A

**SOURCE**

NC Central Cancer Registry. (2003). 5-year Breast Cancer Diagnosis by stage (1996-2000).

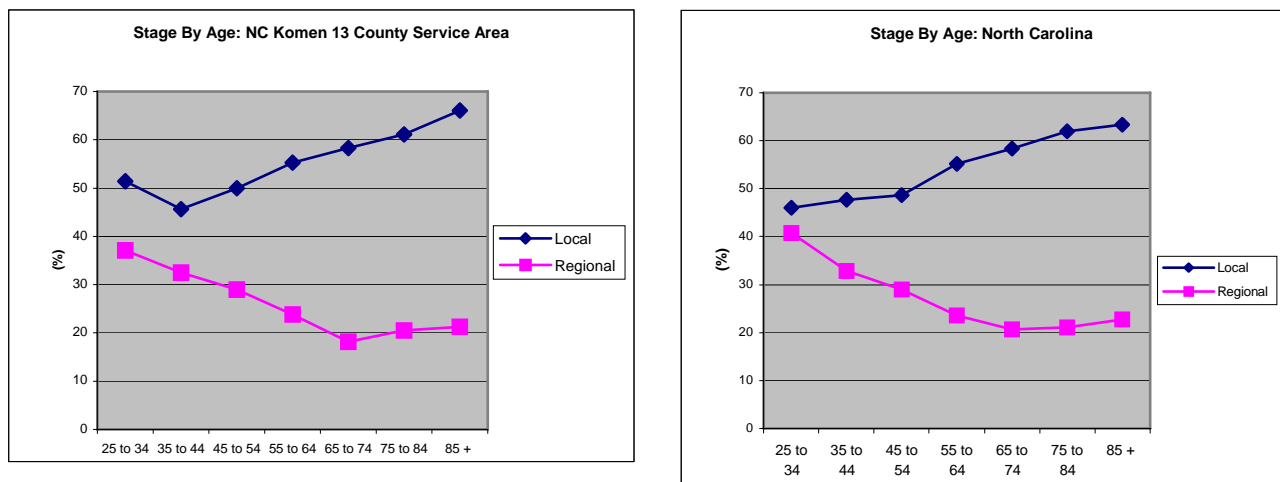
**A. Differences by Age Group**

Breast cancer stage at diagnosis by age follows similar trends for both North Carolina and the affiliate service area.

- Although younger women are less likely to have breast cancer, cases that do occur in younger age groups are more likely to be diagnosed at a later stage compared with cases in older women (see Figure 4).

*Observations:* The rate of later-stage diagnosis in younger women suggests that programs should focus on early detection and prevention of breast cancer in women age 40+, but should also **target women less than 40 years old** so that breast cancer cases in younger women will be detected earlier.

**Figure 4:** Female breast cancer stage at diagnosis by age (5-year) for affiliate service area counties



**B. Differences by Race/Ethnicity Group**

One possible underlying reason for the discrepancy in breast cancer mortality rates of Caucasian women and Minority women is differences in the stage at which breast cancer is diagnosed. In particular, **Minority women may be at a higher risk for dying of breast cancer because they are more likely to be diagnosed at later stages in which treatment is more difficult and prognoses are often worse** (see Figure 5 and Figure 6).

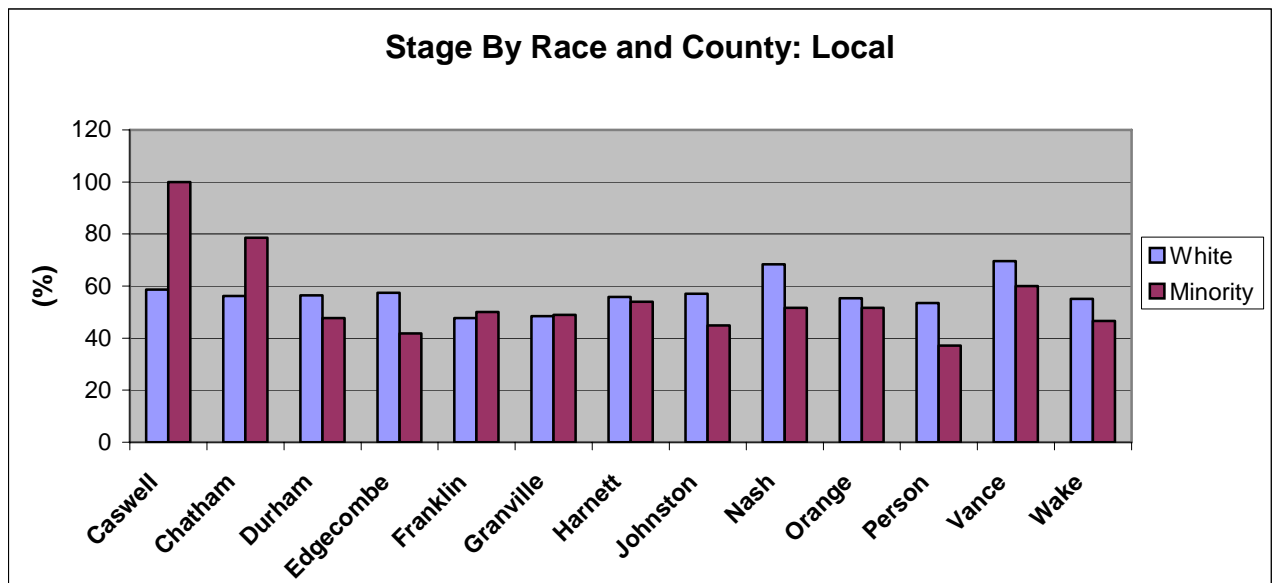
In North Carolina, the number of Caucasian women and Minority women who are diagnosed at in situ stage is similar. However in most affiliate counties, **compared with Caucasian women, Minority women are less likely to be diagnosed at local stage, and more likely to be diagnosed at regional or distant stage.**

- Chatham and Franklin are the only counties in which Caucasian women are more likely to be diagnosed at a more advanced stage.

- Late diagnosis rates (regional or distant stage) for Caucasian women are noticeably higher than the state rate for this group in Franklin, Johnston, and Vance.
- Late diagnosis rates (regional or distant stage) for Minority women are higher than the state rate for this group in Edgecombe.

*Observations:* The disparity in breast cancer stage at diagnosis between Caucasian and Minority women in the service area provides an explanation for previously reported differences in mortality rates: Minority women are more likely to be diagnosed at a later cancer stage, thus they are more likely to die from breast cancer. **All education and outreach programs in the service area targeting Minority women must emphasize the importance of early detection and make breast cancer screening more accessible.**

**Figure 5:** Female breast cancer diagnosis at local stage by race/ethnicity (5-year) for affiliate service area counties



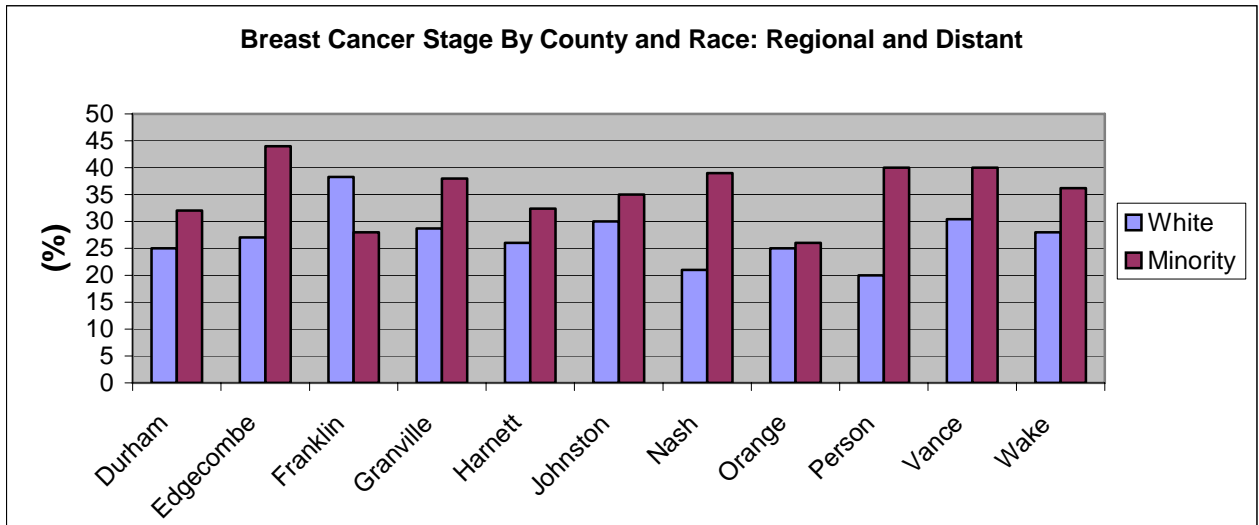
\* “Minority” includes African American, Hispanic, Asian, Native American, and other women. Rates based on counts less than 10 are unstable. Use with caution.

\*\*To see exact stage at diagnosis data by race for all counties, refer to table in Appendix A.

**SOURCE**

NC Central Cancer Registry. (2003). 5-Year Breast Cancer Stage at Diagnosis (1996–2000).

**Figure 6:** Female breast cancer diagnosis at regional and distant stage by race/ethnicity for affiliate service area counties



\*Caswell and Chatham Counties have been omitted in Figure 6 due to insufficient data.

\*\* "Minority" includes African American, Hispanic, Asian, Native American, and other women. Rates based on counts less than 10 are unstable. Use with caution.

\*\*\*To see exact stage at diagnosis data by race for all counties, refer to table in Appendix A.

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NC Central Cancer Registry. (2003). 5-Year Breast Cancer Stage at Diagnosis (1996–2000).