



# Wisconsin Cancer Data Bulletin

Wisconsin Department of Health Services  
Information from the Wisconsin Cancer Reporting System

## *In Situ* Breast Cancer Trends in Wisconsin, 1995-2006

### Introduction

This report provides baseline descriptive data about the incidence of *in situ* breast cancer among Wisconsin females. The first report from the Wisconsin Cancer Reporting System to analyze data on *in situ* breast cancer, it presents data from the most recent 12-year period for which data are available: 1995-2006. Tables presenting proportions (percentages) include data by year of diagnosis, age at diagnosis and major race groups. Incidence rate trends are presented for Wisconsin and compared to U.S. data for the same period.

This bulletin was prepared in response to the current interest in premalignant breast cancer diagnoses in Wisconsin, and in response to the recent changes in certain mammography screening guidelines for asymptomatic women.

### Definitions

*In situ* – A Latin term that means ‘in place’ and refers to cancer in the earliest stage. In general, a cancer that is diagnosed at an *in situ* stage indicates that abnormal cancer cells are present but have not spread beyond the wall of the tissues where they developed. *In situ* cancer is sometimes referred to as non-invasive or pre-cancerous and is also classified as stage zero. All types of *in situ* breast cancer, lobular and ductal, are included in this report.

Invasive – Malignant cancer or tumor that has invaded tissue or surrounding organs.

Age-adjusted rates – Incidence rates adjusted to account for the different age distributions between populations. In this report the rates are age-adjusted using the 2000 U.S. standard population. The age-specific rates in Wisconsin are weighted by the proportionate age distribution of the standard U.S. population.

Cancer incidence – The number of new cancer cases that occur during a specified period for a population at risk for developing the disease, expressed as the number of cases or as a rate per 100,000 population.

- The percent of all female breast cancers diagnosed as *in situ* cancers in Wisconsin increased approximately 78 percent from 1995 to 2006 (Table 1).
- During 1995-2006, breast cancer was more often diagnosed at the *in situ* stage among women ages 40-49 and 50-59 (Table 2).

**Table 1. *In Situ* Breast Cancer Trends in Wisconsin, 1995-2006**

<b>Year of diagnosis</b>	<b><i>In situ</i> cancers</b>	<b>Percent <i>in situ</i></b>	<b>Total cancers*</b>
1995	458	11.3%	4,056
1996	460	11.4%	4,040
1997	609	13.8%	4,416
1998	559	12.4%	4,504
1999	648	13.7%	4,721
2000	599	12.7%	4,723
2001	717	14.6%	4,897
2002	737	15.8%	4,666
2003	733	16.3%	4,491
2004	973	20.4%	4,768
2005	875	18.8%	4,648
2006	929	20.1%	4,633
<b>Total</b>	<b>8,297</b>	<b>15.2%</b>	<b>54,563</b>

\*Total cancers include *in situ* and invasive breast cancer.

**Table 2. *In Situ* Breast Cancer, Percent and Number by Age at Diagnosis in Wisconsin, 1995-2006**

<b>Year</b>	<b>Age at diagnosis</b>									
	<b>Under 40</b>		<b>40-49</b>		<b>50-59</b>		<b>60-69</b>		<b>70+</b>	
	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>N</b>
1995	8.4	19	12.6	80	13.7	102	12.0	108	9.6	149
1996	8.8	20	14.3	91	14.5	109	11.8	103	8.8	137
1997	2.8	30	19.2	142	16.4	145	13.1	122	10.4	170
1998	12.2	29	16.9	115	16.7	158	12.7	123	8.0	134
1999	1.9	27	18.3	147	17.5	173	13.3	128	10.0	173
2000	6.3	12	19.2	156	15.4	155	12.1	125	9.0	151
2001	1.3	25	20.1	158	15.5	176	15.4	156	11.6	202
2002	0.9	24	18.9	138	20.5	220	15.8	157	12.0	198
2003	1.8	24	20.8	161	19.4	209	17.1	168	11.8	171
2004	6.8	32	23.2	205	24.5	269	20.7	221	16.0	246
2005	1.4	23	21.4	167	22.2	254	20.8	213	14.5	218
2006	2.3	25	28.0	236	22.1	260	20.4	202	14.5	206
<b>Total</b>	<b>11.2%</b>	<b>290</b>	<b>19.7%</b>	<b>1,796</b>	<b>18.5%</b>	<b>2,230</b>	<b>15.6%</b>	<b>1,826</b>	<b>11.3%</b>	<b>2,155</b>

- For all time periods shown (Table 3), African American women had slightly higher proportions of breast cancer diagnosed at the *in situ* stage, compared to white women.
- For years 2003-2006 (Table 4) shows that African American women had the highest proportion of *in situ* breast cancers at ages 60-69, while white women had the highest proportion at ages 40-49.

**Table 3. *In Situ* Breast Cancer by Race, Wisconsin, 1995-2006**

	<u>Year of diagnosis</u>	<u><i>In situ</i> cancers</u>	<u><i>In situ</i> percent</u>	<u>Total cancers*</u>
<b>African American</b>				
	1995-1998	64	13.5%	473
	1999-2002	110	16.8%	656
	2003-2006	148	22.5%	658
<b>White</b>				
	1995-1998	1,983	12.2%	16,321
	1999-2002	2,537	14.0%	18,053
	2003-2006	3,295	18.7%	17,597
<b>Wisconsin Total **</b>	<b>1995-2006</b>	<b>8,297</b>	<b>15.2%</b>	<b>54,563</b>

\* Total cancers include *in situ* and invasive breast cancers for specified years and race.

\*\*Wisconsin Total includes all races in Wisconsin for years 1995-2006.

**Table 4. *In Situ* Breast Cancer by Race, Age Group and Year of Diagnosis, Wisconsin, 1995-2006**

	<u>Age at diagnosis</u>							
	<u>40-49</u>		<u>50-59</u>		<u>60-69</u>		<u>70+</u>	
	<u><i>In situ</i> Percent</u>	<u>Total Cancers</u>	<u><i>In situ</i> Percent</u>	<u>Total Cancers</u>	<u><i>In situ</i> Percent</u>	<u>Total Cancers</u>	<u><i>In situ</i> Percent</u>	<u>Total Cancers</u>
<b>African American</b>								
1995-1998	17.4%	121	16.4%	110	14.3%	84	11.1%	99
1999-2002	19.0%	163	18.5%	168	18.0%	122	16.3%	135
2003-2006	21.5%	130	25.9%	205	29.6%	142	12.8%	117
<b>White</b>								
1995-1998	15.7%	2,522	15.3%	3,150	12.3%	3,529	9.2%	6,264
1999-2002	18.9%	2,903	17.1%	3,953	14.0%	3,809	10.5%	6,616
2003-2006	23.6%	3,072	21.8%	4,219	19.3%	3,858	14.3%	5,735

\* Total includes *in situ* and invasive breast cancers.

For years 1995-2006, age-adjusted rates of *in situ* breast cancer were lower in Wisconsin than in the U.S. as a whole (Table 5).

**Table 5. Age-adjusted Rates of *In Situ* Breast Cancer, Wisconsin and U.S., 1995-2006**

	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>Total*</u>
Wis.	17.2	17.1	22.3	20.4	23.2	21.2	24.7	25.0	24.6	32.2	28.3	29.8	24.0
U.S.	24.7	25.4	28.3	32.8	32.7	32.8	33.6	33.8	32.1	32.7	32.1	32.5	31.2

\*Total rates include years 1995-2006.

Note: Rates are per 100,000 female population and are age-adjusted to the 2000 U.S. standard population.

### ***In Situ* Breast Cancer Summary**

In 2006, *in situ* or pre-invasive breast cancers represented approximately 20 percent of all newly diagnosed breast cancers in Wisconsin. Wisconsin age-adjusted incidence rates for *in situ* breast cancer increased steadily through 2004, and then decreased slightly in 2005-2006. Age-adjusted incidence rates of *in situ* breast cancer in Wisconsin were lower than U.S. rates for all years examined in this bulletin. Generally the trend toward higher rates of *in situ* breast cancer reflects improved compliance with standard screening recommendations. Future studies might examine mammography patterns among different racial and ethnic groups, trends in ductal and lobular *in situ* cancers, and treatment of *in situ* cancers, among other more detailed analyses.

### **Data Sources**

Wisconsin Cancer Reporting System (WCRS):

WCRS is part of the Division of Public Health, Wisconsin Department of Health Services. WCRS collects all newly diagnosed cancer cases for Wisconsin residents from hospitals, clinics, physician offices, and out-of-state registries and selected Minnesota hospitals. This bulletin and other WCRS reports are available at <http://dhs.wisconsin.gov/wcrs/>.

Surveillance, Epidemiology and End Results (SEER):

National data on cancer incidence are from the National Cancer Institute's SEER Program. The SEER incidence rate data in this report are from nine SEER registries, and accessed using SEER\*Stat software version 6.5.2 ([www.seer.cancer.gov/seerstat](http://www.seer.cancer.gov/seerstat)).

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