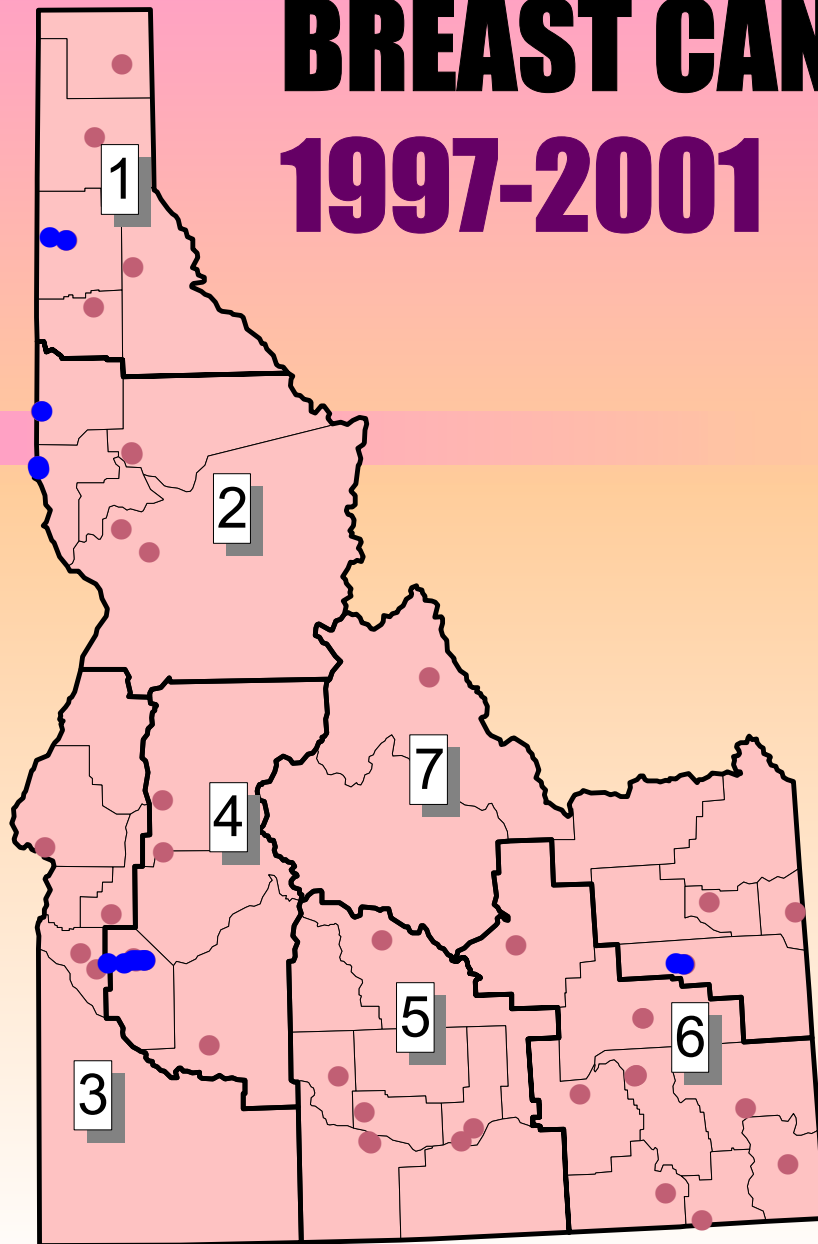



BREAST CANCER IN IDAHO

1997-2001



- Non-Hospital Mammography Facilities
- Idaho Hospitals
- Health Districts
- Idaho County Boundaries

- 
- This PowerPoint presentation was created as a collaborative effort among the Cancer Data Registry of Idaho/ Idaho Hospital Association, Women's Health Check, and the Idaho Breast and Cervical Cancer Alliance. It includes information on breast cancer:

- **Incidence**
- **Screening**
- **Staging**
- **Treatment**
- **Survival**
- **Mortality**
- **Lifetime Risks**

DEFINITIONS

Age-adjustment: a technique which permits comparison of incidence or mortality rates after removing the effect of differing age distributions among the compared population groups. An age-adjusted rate is the hypothetical rate that would be observed in a population group if the age distribution of the group were the same as the age distribution of the standard population. Age-adjusted rates presented used the 2000 U.S. standard, and are not comparable to rates age-adjusted to the 1970 U.S. standard.

AJCC: American Joint Commission on Cancer

BRFSS: the Behavioral Risk Factor Surveillance System is an ongoing surveillance program developed by the Centers for Disease Control and Prevention. It is designed to estimate the prevalence of risk factors among adults aged 18 and older for the major causes of death and disability in Idaho.

Cancer: a term that includes more than 100 different diseases, each characterized by the uncontrolled growth and spread of abnormal cells.

Incidence Rate: the number of new cancer cases divided by the population at risk.

DEFINITIONS (CONTINUED)

Mortality Rate: the number of cancer deaths divided by the population at risk.

Person-years: a measure of the size of a population over time, used as the denominator in cancer incidence and mortality rates. Person-years are calculated as the product of the number of persons in the population at risk and the number of years over which cases/deaths are counted.

SEER: part of the National Cancer Institute, the Surveillance, Epidemiology, and End Results (SEER) program consists of several population-based cancer registries throughout the U.S. SEER cancer statistics are designed to be representative of the U.S.

Staging: the practice of dividing cancer cases into groups according to stage arose from the fact that survival rates were higher for cases in which the disease was localized than for those in which the disease has extended beyond the organ or site of origin. There are several staging nomenclatures, including AJCC, SEER, and extent-of-disease.

AJCC Stage IIA: a tumor not more than 5 cm in greatest dimension, with lymph node involvement if not more than 2 cm, and no distant metastasis. This stage has a 5-year survival rate of almost 90%.

SEER Summary Stage: in-situ (noninvasive), localized (within organ), regional (extension to adjacent organs/tissues, or regional lymph nodes), and distant (extension to other organs or distant lymph nodes).

BREAST CANCER INCIDENCE

Female Breast Cancer in Idaho, 1997-2001, Invasive Cases Numbers of Cases, Age-adjusted and Crude Rates

Geography	Rates		Count	Female Population
	Adjusted	Crude		
Health District 1	145.4	160.0	699	436,791
Health District 2	133.7	147.1	359	244,033
Health District 3	114.8	117.1	549	468,793
Health District 4	142.5	128.2	1051	819,696
Health District 5	126.8	132.4	527	398,022
Health District 6	119.1	109.6	431	393,292
Health District 7	116.9	100.3	395	393,982
State of Idaho	130.5	127.3	4,015	3,154,609
SEER Whites 96-00	142.0	151.5	77,719	51,297,876
SEER All Races 96-00	137.1	138.2	92,088	66,644,730

Rates are per 100,000 person-years.

Age-adjusted rates use the 2000 U.S. standard.



BREAST CANCER INCIDENCE

- Breast cancer is the most common cancer among females. In Idaho, breast cancer accounted for 4,015 of 12,499 invasive cancer cases among females from 1997-2001.
- Age-adjusted incidence rates (2000 U.S. standard) differed by health district, ranging from 114.8 cases per 100,000 females in Health District 3 to 145.4 cases per 100,000 females in Health District 1.
- Geographical differences in breast cancer incidence rates are partially due to differences in breast cancer screening rates and individual risk factors, such as diet, obesity, sedentary life style, hormonal influences, use of alcohol and tobacco, and family history.
- Compared to SEER data, breast cancer incidence was significantly lower in Idaho from 1997-2001. The age-adjusted incidence of female breast cancer in Idaho was 4.8% lower than SEER data for all races, and 8.1% lower than SEER data for Whites.

BREAST CANCER INCIDENCE

Female Breast Cancer in Idaho, 1997-2001, Invasive Cases Age-specific Rates

Age Group	Idaho, 1997-2001			SEER, 1996-2000, Whites		
	Rate	Count	Pop	Rate	Count	Pop
00-04	0.0	0	231,196	0.0	0	3,302,677
05-09	0.0	0	235,635	0.0	0	3,432,729
10-14	0.0	0	247,512	0.0	1	3,397,807
15-19	0.7	2	274,317	0.2	5	3,346,694
20-24	0.4	1	227,555	1.1	35	3,119,230
25-29	6.5	13	199,325	7.5	264	3,527,179
30-34	26.0	51	195,919	24.4	948	3,883,118
35-39	53.7	124	230,950	60.5	2,584	4,274,283
40-44	95.4	228	238,964	122.7	5,109	4,163,195
45-49	178.4	393	220,334	203.3	7,608	3,742,489
50-54	245.4	450	183,374	272.1	8,618	3,166,735
55-59	293.7	434	147,776	346.0	8,295	2,397,348
60-64	370.5	451	121,736	398.8	7,750	1,943,568
65-69	428.5	437	101,984	453.8	8,351	1,840,058
70-74	522.3	488	93,442	499.8	8,992	1,799,160
75-79	464.4	391	84,199	521.7	8,450	1,619,735
80-84	505.1	314	62,162	496.9	5,887	1,184,811
85+	408.7	238	58,229	416.8	4,822	1,157,060

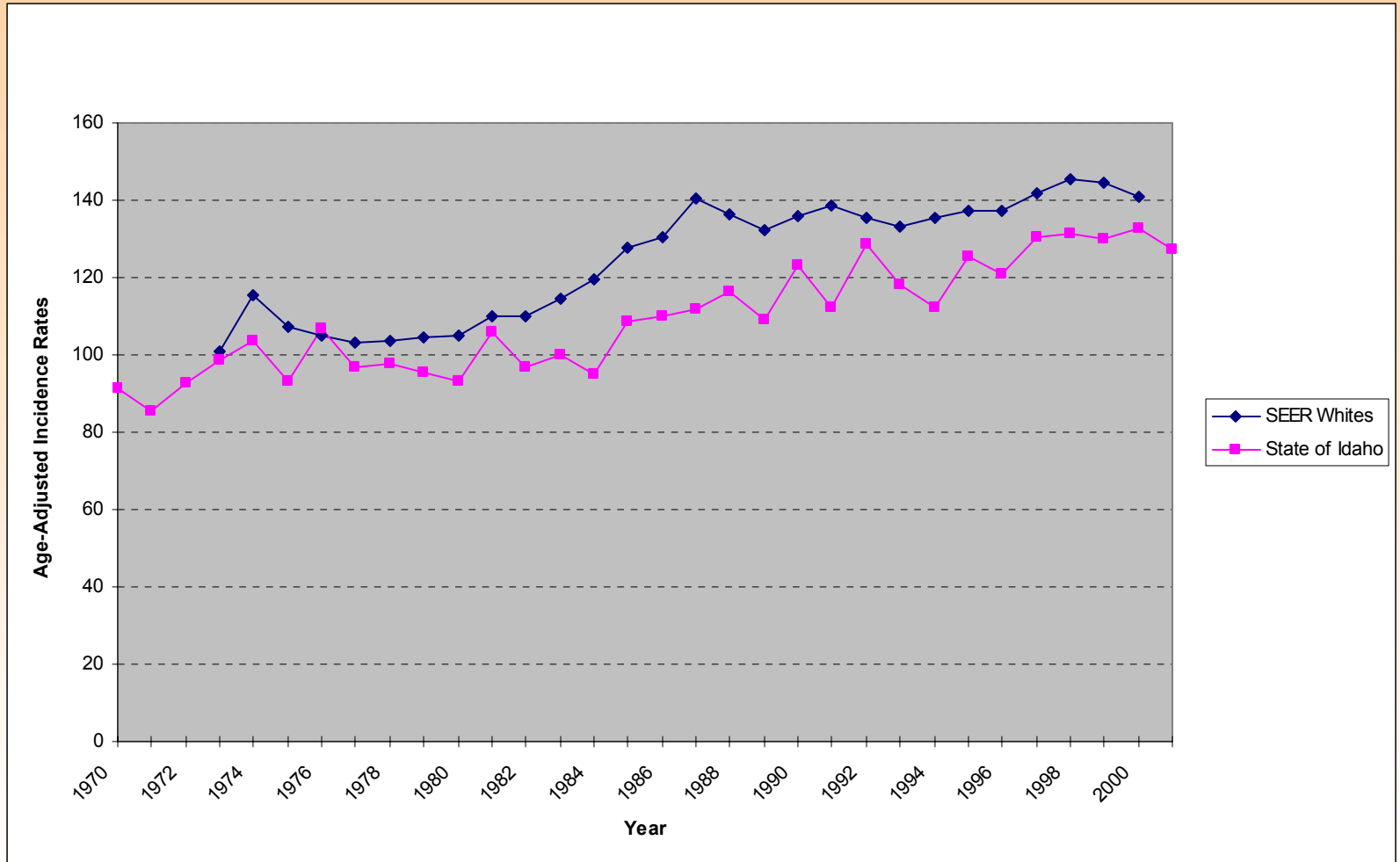
Rates are per 100,000 person-years.

BREAST CANCER INCIDENCE

- Breast cancer incidence rates increase steadily with age, which is the single most important risk factor for breast cancer. A 60 year old woman's risk of developing breast cancer is about fifteen times higher than that of a 30 year old woman.
- Risk of developing invasive breast cancer by age:
 - By age 25 - 1 in 17,334
 - By age 35 - 1 in 604
 - By age 45 - 1 in 112
 - By age 55 - 1 in 34
 - By age 65 - 1 in 17
 - All ages - Between 1 in 7 and 1 in 8
- Among women aged 70-79, nearly 1 in 200 were diagnosed with breast cancer each year from 1997-2001.
- Age-specific breast cancer rates in Idaho, 1997-2001, were about the same or lower than SEER rates, 1996-2000, for most age groups.

BREAST CANCER INCIDENCE

Trends in Breast Cancer Incidence, 1970-2001



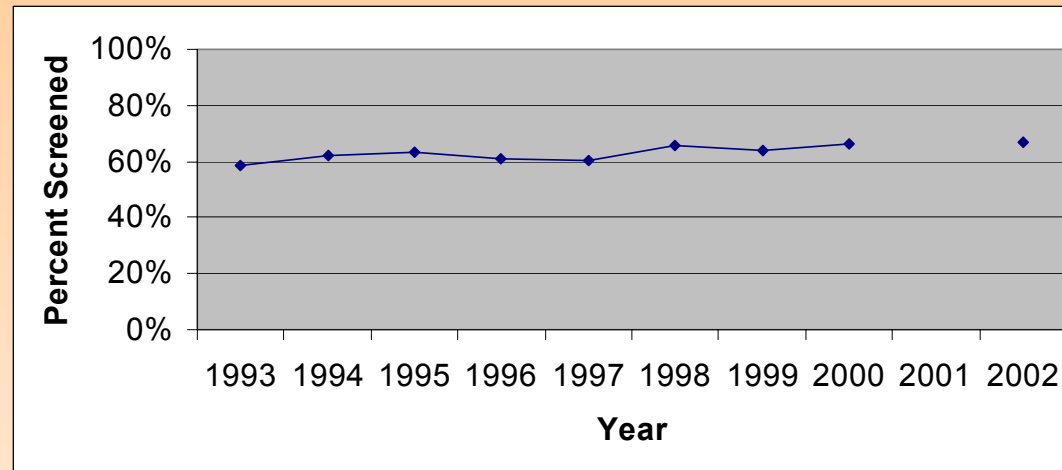


BREAST CANCER INCIDENCE

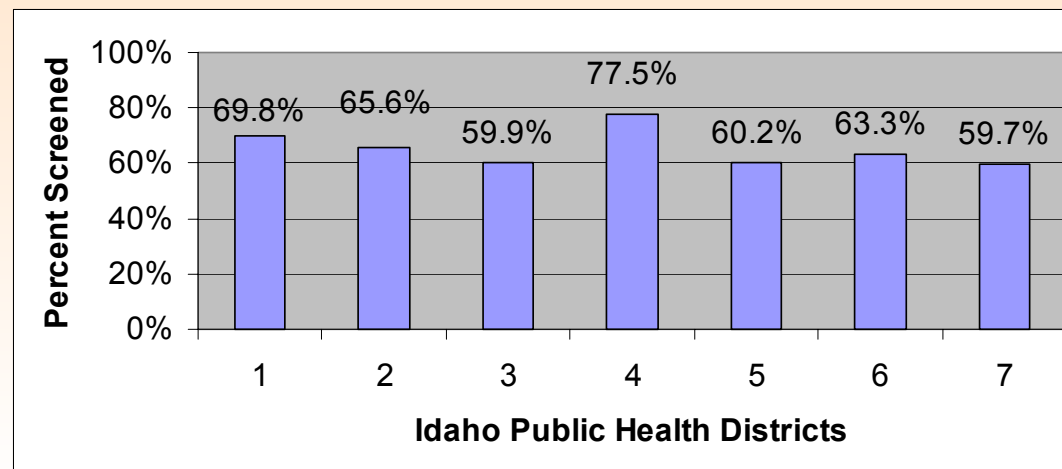
- From 1970-2001, female breast cancer incidence increased over 47% in Idaho, about 1.3% per year. From 1973-2000, female breast cancer incidence increased 32.0% in SEER regions, about 1.4% per year.
- The incidence trend for Idaho closely matches the trend for SEER regions, although breast cancer incidence is about 10% lower for female Idahoans than White females in SEER regions. Breast cancer incidence trends for health districts generally match the shape of the Idaho and SEER trends, but have considerable variability from one year to the next due to the smaller number of cases diagnosed per year.
- The increase in breast cancer incidence over time is partially related to screening, as geographic areas with higher screening utilization have higher incidence rates, and the increase in new breast cancer cases has been limited generally to in-situ and localized cases. Incidence rates of regional and distant-staged cases have not changed appreciably over time.

BREAST CANCER SCREENING

Mammogram During Past 2 Years, Women Aged 40 and Older



Mammogram During Past 2 Years, 2002, Women Aged 40 and Older





BREAST CANCER SCREENING

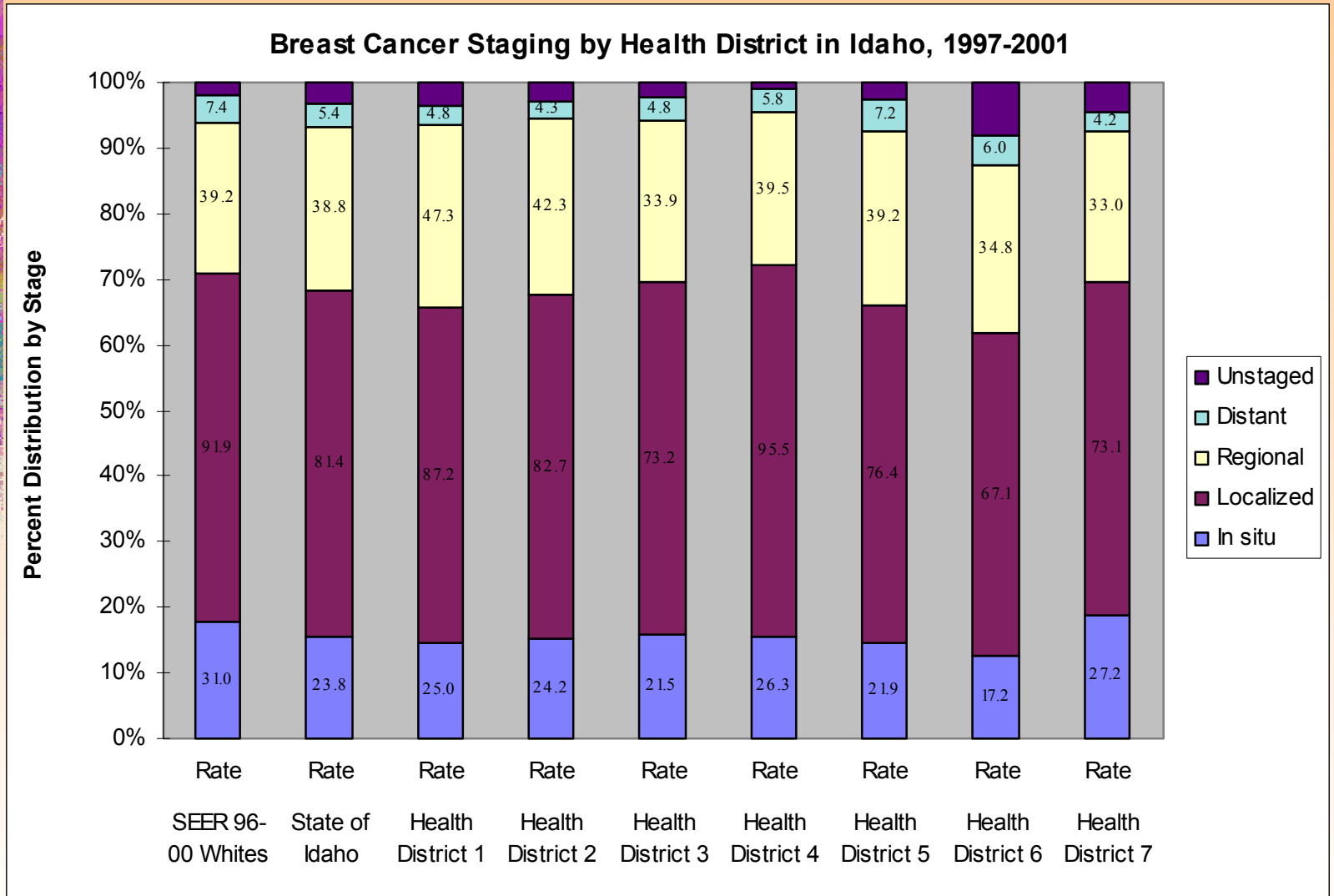
- Statewide 2002
 - Approximately 14 percent of Idaho women aged 40 and older have never had a mammogram.
 - Overall, timely mammography screening could prevent approximately 15%–30% of all deaths from breast cancer among women over the age of 40.
 - In 2002, the proportion of Idaho women aged 50 and older who have had a mammogram AND clinical breast exam within the previous 2 years was 66.0%.
 - In 2002, 67.0 percent of Idaho women aged 40 years and older had received a mammogram within the previous 2 years. The Health People 2010 Target is 70 percent.



BREAST CANCER SCREENING

- Among Public Health Districts
 - Breast cancer screening rates vary among Idaho's public health districts, ranging from a low of 59.7% in Health District Seven to 77.5% in the Central Health District.
- **Healthy People 2010 Objective 3-13**
 - **Increase the proportion of women aged 40 years and older who have received a mammogram within the preceding 2 years.**
 - **Target: 70 percent.**

BREAST CANCER STAGING



BREAST CANCER STAGING

- Early detection through breast self-exams and mammography can help identify breast cancers at earlier stages and improve long-term prognosis and survival time.
- The above table shows the distribution of female breast cancer cases by SEER general summary stage. The height of the colored sections of the bars shows the percent distribution by stage for SEER Whites, 1996-2000, and Idaho and the public health districts, 1997-2001. The numbers in the bars are stage-specific age-adjusted breast cancer incidence rates.
- In both Idaho and SEER regions, approximately 70 percent of breast cancers are diagnosed at the “local” or “in situ” stage, before the cancer has spread to other tissues or organs of the body, and 30 percent are diagnosed at the “regional” or “distant” stage, after the cancer has already spread to surrounding tissues, and/or lymph nodes or has metastasized to other organs of the body.



BREAST CANCER STAGING

- The percentage of late staged cases has decreased over time since the 1970s, for all age groups and for both white non-Hispanic women and women of other race/ethnic groups.
- Hispanic women in Idaho are significantly more likely to be diagnosed with late stage breast cancers. In Idaho, 1997-2001, 47% of Hispanic women and 29% of non-Hispanic women were diagnosed with late stage breast cancers. In SEER regions, 1996-2000, 34% of Hispanic women and 28% of non-Hispanic women were diagnosed with late stage breast cancers.

BREAST CANCER STAGING

Percentage Early/Late Stage by Insurance Status Idaho Females Aged Under 65 Years

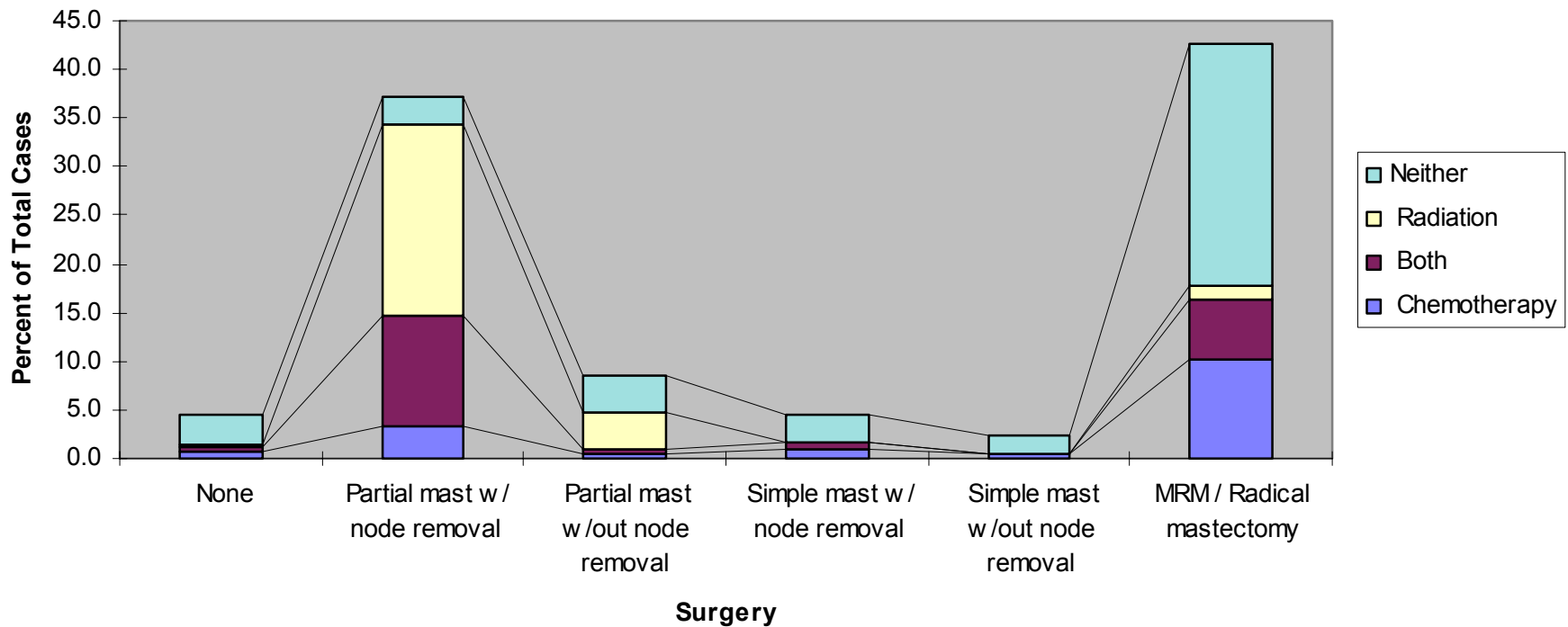
SEER Summary Stage	Insurance Status			
	Private Insurance	Medicare/ Other Federal	Medicaid	Uninsured
In Situ/Localized	67.8	78.4	52.9	48.1
Regional/Distant	31.6	21.6	47.1	48.1
Total Cases	1994	171	102	129

Percentages may not sum to 100% due to missing/unknown stage information.

Among Idaho female breast cancer cases aged under 65 years, stage at diagnosis was statistically significantly related to insurance status ($p < .001$). Uninsured women and women with Medicaid were significantly more likely to have late stage diagnoses compared with women with private insurance or Medicare. This same pattern holds for age groups under 50 and 50-64. For women aged 65 and older, over 90% have Medicare or private insurance, and about 25% of these cases have late stage diagnoses.

BREAST CANCER TREATMENT

Use of Chemotherapy and Radiation Therapy by Type of Breast Cancer Surgery, 1997-2001



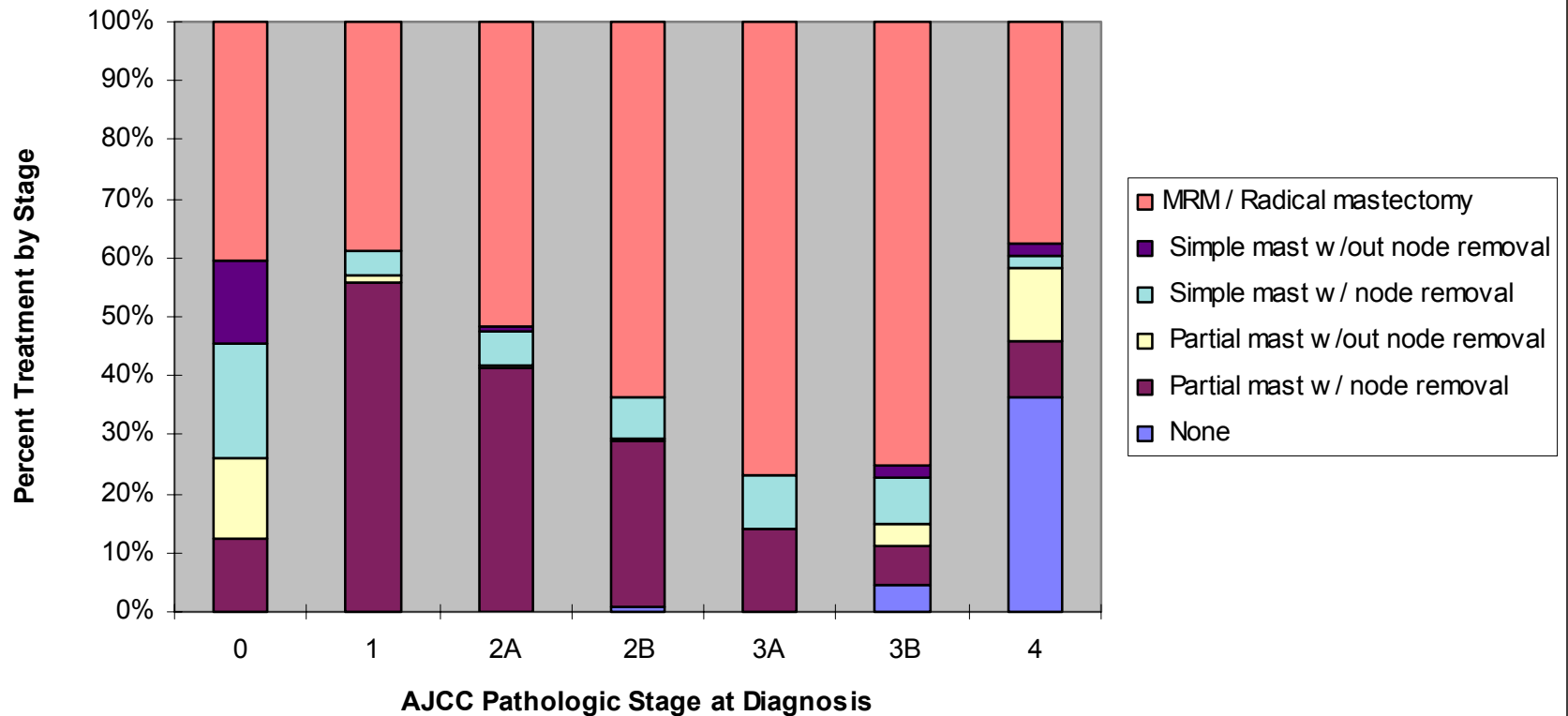


BREAST CANCER TREATMENT

- Treatment for breast cancer may include a combination of surgery, radiation, and chemotherapy. Surgeries for breast cancer include:
 - partial mastectomy, with (37.3% of total cases) and without lymph node removal (8.5%)
 - simple mastectomy, with (4.5%) and without lymph node removal (2.4%), and
 - radical or modified radical mastectomy (42.7%).
- The most common treatment for Idaho resident cases diagnosed from 1997-2001 was partial mastectomy with lymph node removal in combination with radiation or radiation and chemotherapy (31.1% of total cases). The next most common treatment combination was radical/modified radical mastectomy with neither radiation nor chemotherapy (25.0% of total cases).
- ***Note: CDRI chemotherapy statistics are likely under-estimates due to reporting limitations.***

BREAST CANCER TREATMENT

Breast Cancer Treatment by Stage at Diagnosis, 1997-2001





BREAST CANCER TREATMENT

- Type of surgery differed depending on stage of cancer at time of diagnosis. Radical/modified radical mastectomy was performed for about 39% of AJCC pathologic stage 1 cases, and about 77% of stage IIIA cases. The use of radical/modified radical mastectomy generally increased with increasing stage. For stage IV cases, other surgeries were often performed with a focus on palliative outcomes.
- Type of surgery can also be divided into breast-conserving surgery and mastectomy. Breast-conserving surgery is partial mastectomy, and includes lumpectomy or excisional biopsy, wedge resection, and quadrantectomy. Mastectomy refers to total (simple) mastectomy, modified radical mastectomy, radical mastectomy, and extended radical mastectomy.

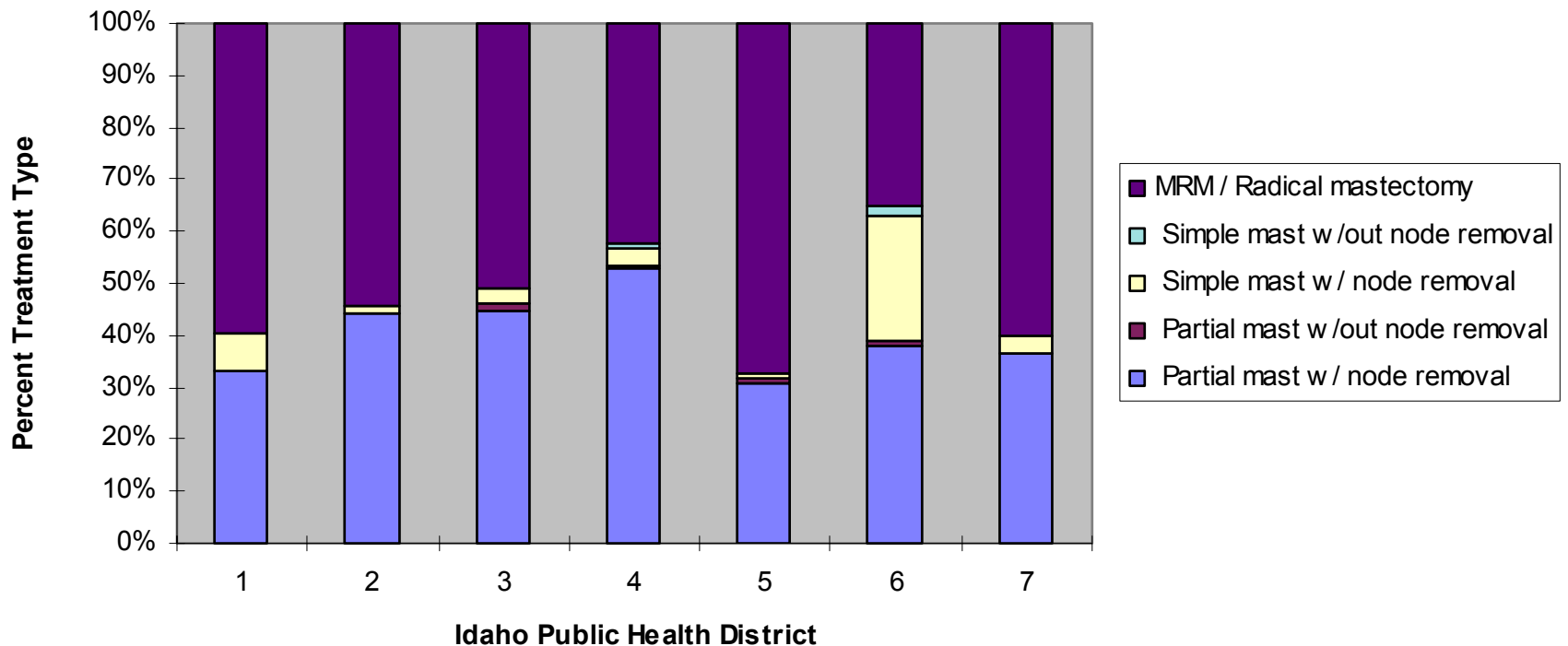


BREAST CANCER TREATMENT

- The use of breast-conserving surgery was highest for AJCC stage I cases (57.2%).
- Data from the National Cancer Data Base, a program of the American College of Surgeons, showed that 58.0% of AJCC stage 0 and I patients, and 36.2% of AJCC stage II (A and B) patients were treated with partial mastectomy (with or without axillary node dissection) during 1995.

BREAST CANCER TREATMENT

Type of Treatment for AJCC Path. Stage IIA Breast Cancer by Health District, 1997-2001





BREAST CANCER TREATMENT

- Type of surgery differed by health district in Idaho. For AJCC pathologic stage IIA cases, breast-conserving surgery was most likely to be performed in Health District 4 (53.3% of cases), and least likely to be performed in Health Districts 1 (33.1% of cases) and 5 (31.7% of cases).
- From 1995-1999, approximately 83% of stage IIA cases in SEER regions were treated with breast-conserving surgery.
- SEER data show similar stage-specific treatment patterns between Blacks and Whites. For stage IIA cases, 82.1% of Whites and 87.0% of Blacks were treated with breast-conserving surgery.

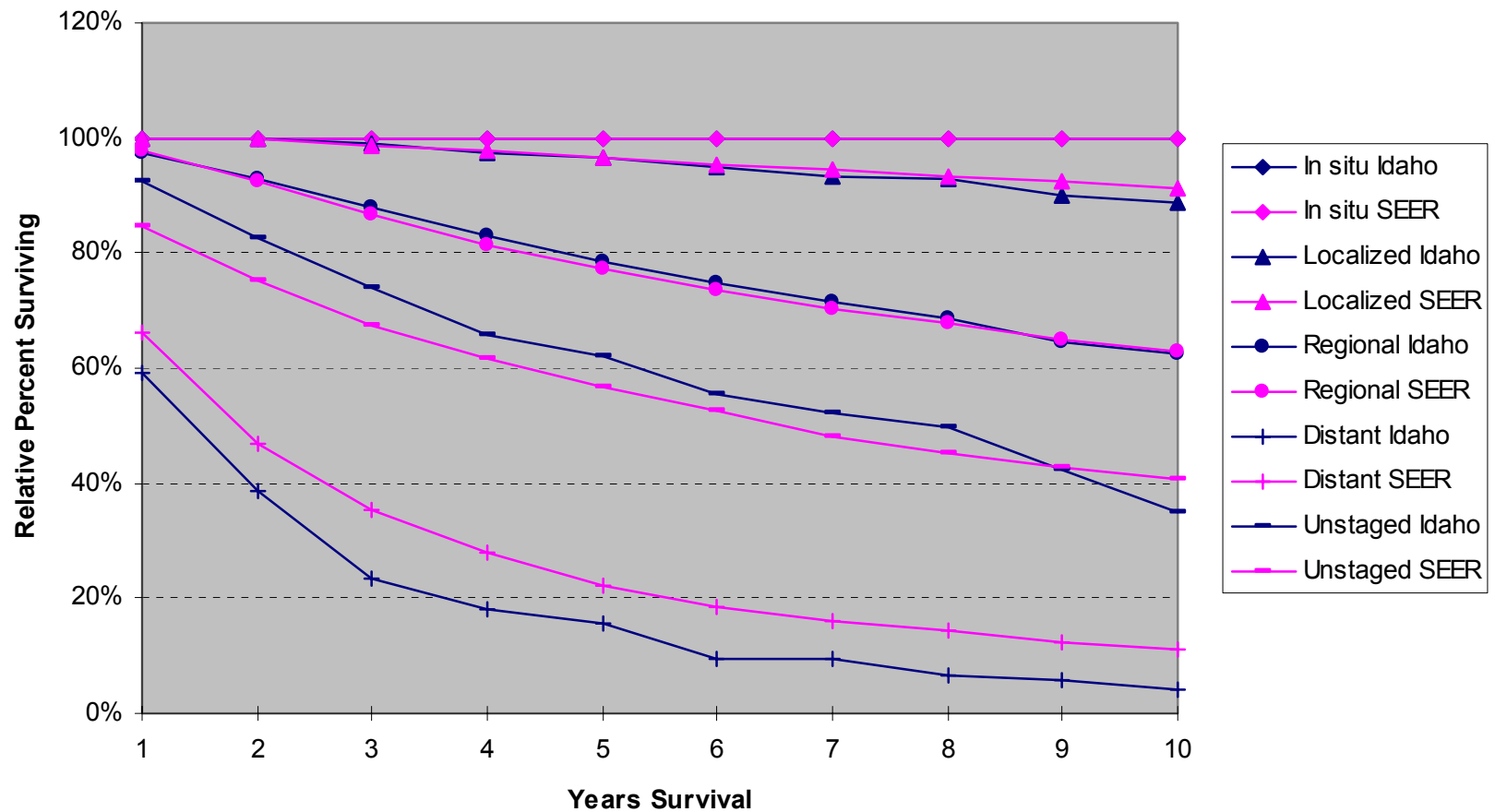


BREAST CANCER TREATMENT

- Treatment lag time was defined as the number of days between the date of diagnosis and any type of treatment.
- For 1997-2001 Idaho female invasive breast cancer cases, lag times were as follows:
 - 44.8% were 7 days or less.
 - 63.8% were 2 weeks or less.
 - 78.4% were 3 weeks or less.
 - 89.5% were 1 month or less.
 - 98.5% were 2 months or less

BREAST CANCER SURVIVAL

Breast Cancer Survival, 1987-2001



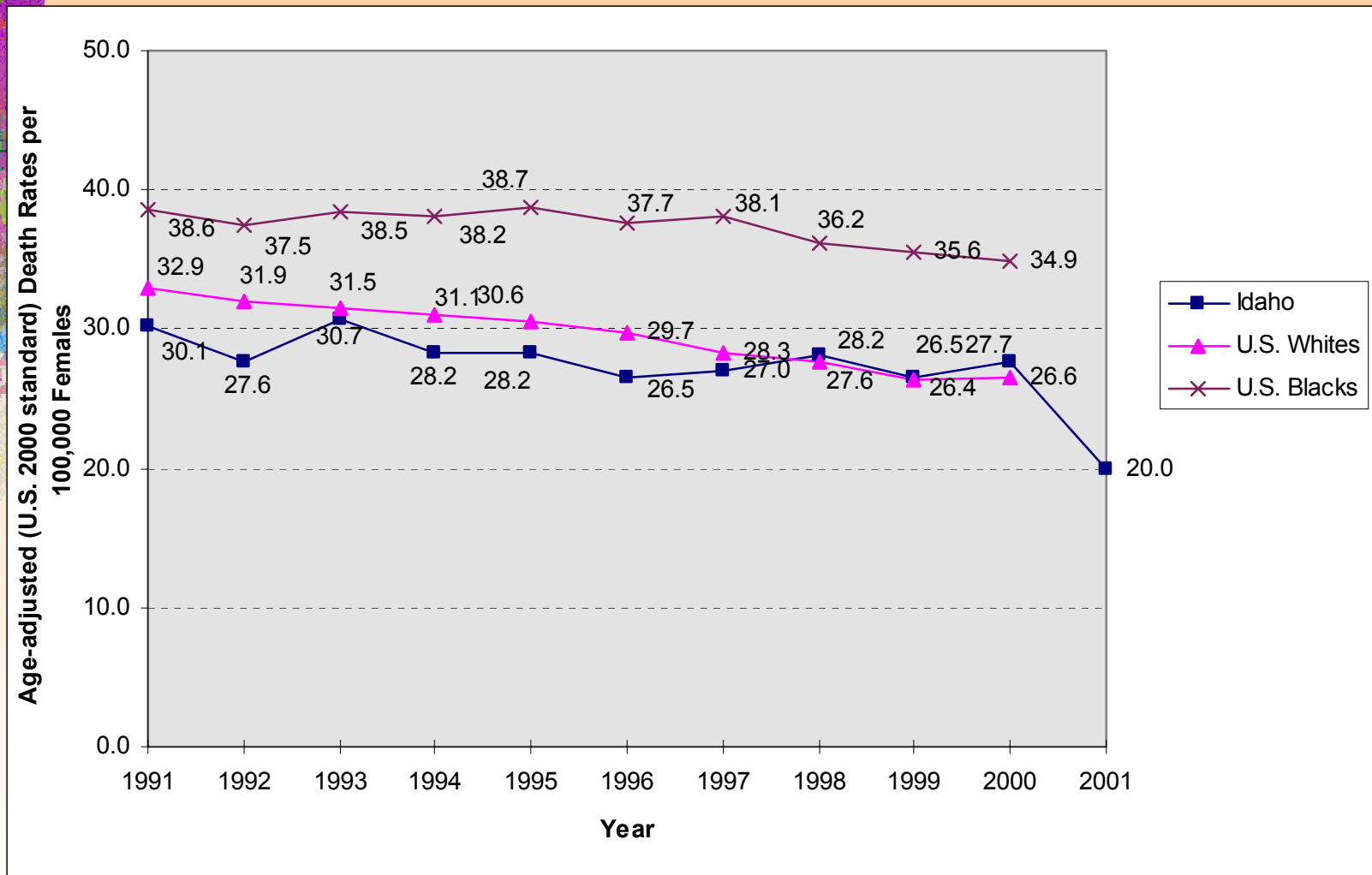


BREAST CANCER SURVIVAL

- Survival rates from all causes of death were estimated using the life table method. For survival analyses, death certificate only cases, autopsy only cases, and persons with other primary cancers were excluded. Relative survival statistics show the probability of surviving, compared with a general group of females from the U.S. with the same ages as the cases at time of diagnosis.
- Survival rates differed significantly by stage of diagnosis, showing the importance of early detection in improving the chances of survival. Five-year relative survival rates for Idaho resident females diagnosed with breast cancer were 100% for in situ cases, 96% for localized cases, 78% for regional cases, and 15% for distant cases. Stage-specific survival rates were quite similar between Idaho resident females and females residing in SEER regions.

BREAST CANCER MORTALITY

Breast Cancer Mortality in Idaho, 1991-2001





BREAST CANCER MORTALITY

- From 1997-2001, there were 805 breast cancer deaths among female Idahoans. Among the leading cancer deaths, breast cancer is second only to lung cancer, accounting for 17% of all female cancer deaths in Idaho, 1997-2001.
- The majority of female breast cancer deaths (87%) occurred in women over the age of 50.
- In Idaho, breast cancer is the second leading cause of death among women aged 35-54 (diseases of the heart is the leading cause). In this age group, 1997-2001, breast cancer accounted for 181 (30%) of 596 total cancer deaths, more than twice as many as any other type of cancer.
- **Healthy People 2010 Objective 3-3**
 - **Reduce the breast cancer death rate.**
 - **Target: 22.3 deaths per 100,000 females.**
 - **U.S. Baseline: 27.0 breast cancer deaths per 100,000 females occurred in 1998 (AAR 2000 standard).**

BREAST CANCER LIFETIME RISKS

Risks of Developing and Dying from Breast Cancer

If your current age is:	Then your risk of <u>developing breast cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 252	1 in 58	1 in 23	1 in 13	1 in 8.7	1 in 7.1
40		1 in 74	1 in 25	1 in 13	1 in 8.9	1 in 7.2
50			1 in 37	1 in 16	1 in 9.9	1 in 7.7
60				1 in 26	1 in 13	1 in 9.2
70					1 in 21	1 in 12
80						1 in 21*

If your current age is:	Then your risk of <u>dying from breast cancer</u> by a particular age is:					
	By age 40	By age 50	By age 60	By age 70	By age 80	Ever
30	1 in 2250	1 in 424	1 in 142	1 in 76	1 in 47	1 in 32
40		1 in 518	1 in 151	1 in 78	1 in 48	1 in 33
50			1 in 209	1 in 90	1 in 52	1 in 34
60				1 in 152	1 in 66	1 in 39
70					1 in 104	1 in 47
80						1 in 65*

Note: *Risks for ages 75 and over are not precise - best estimates are shown.



BREAST CANCER LIFETIME RISKS

- Lifetime risks of developing and dying from breast cancer were estimated with DEVCAN software using Idaho data. Risks of developing and dying from breast cancer increase with age.
- A 40 year old woman has a greater than 1 in 8 risk of ever developing breast cancer, higher than for any other cancer.
- A 40 year old woman has a 1 in 33 risk of dying from breast cancer, second only to the risk of dying from lung cancer.

Population Description

At the time of the writing of this report, the U.S. Bureau of the Census⁷ had released 2001 population estimates for the state of Idaho and Idaho counties, but not the detailed age by sex by county estimates required for rate calculations in this text. The Census population estimate for the state of Idaho on July 1, 2001 was 1,321,006. County estimates by age and sex for 2001 were developed by the Bureau of Health Policy and Vital Statistics by applying April 1, 2000 Census age and sex proportions to the July 1, 2001 county total population estimates from the U.S. Bureau of the Census. The sum of rounded estimates by age and sex do not sum to Idaho total estimates provided by the Census Bureau. Idaho is comprised of 44 counties grouped into seven health districts. The composition of the health districts, as well as their population estimates by gender as used in this report, are shown below:

<u>Health District</u>	<u>Counties</u>	<u>Male</u>	<u>Female</u>
District 1	Benewah, Bonner, Boundary, Kootenai, Shoshone	90,654	91,481
District 2	Clearwater, Latah, Lewis, Idaho, Nez Perce	50,313	48,846
District 3	Adams, Canyon, Gem, Owyhee, Payette, Washington	99,869	100,687
District 4	Ada, Boise, Elmore, Valley	180,280	175,934
District 5	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, Twin Falls	82,068	81,495
District 6	Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, Power	78,327	79,197
District 7	Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, Teton	80,662	81,157

For information on breast cancer screening, including free mammography through the Women's Health Check Program, contact:

Idaho Department of Health and Welfare
Bureau of Health Promotion
450 West State Street, 6th Floor
PO Box 83720
Boise, ID 83720-0036
Phone: 208.334.5805
Fax: 208.334.6573
Web: www.bhp-whc.state.id.us



No or low-cost, annual Pap tests and mammograms for qualifying women over 50
BE SECURE, BE SURE
800-926-2588

For information on Idaho-specific breast cancer incidence, staging, treatment, and survival, contact:

Cancer Data Registry of Idaho
PO Box 1278
Boise, ID 83701-1278
Phone: 208.338.5100 x213
Fax: 208.338.7800
Web: www.idcancer.org



C A N C E R D A T A
R E G I S T R Y O F I D A H O

For general cancer information, contact:

American Cancer Society
2676 S. Vista Ave.
Boise, ID 83705
Phone: 1-800-ACS-2345
Fax: 208.343.9922
Web: www.cancer.org



For information about breast cancer clinical trials, contact:

National Cancer Institute
Phone: 1-800-4-CANCER
Web: cancertrials.nci.nih.gov