

# **Delaware Cancer Incidence and Mortality Rates**



**April 2005**

**Delaware Division of Public Health  
Department of Health and Social Services  
Dover, Delaware**

# Delaware Cancer Incidence and Mortality Rates Contents



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# Delaware Cancer Incidence and Mortality Rates Summary



Delaware Division of Public Health  
Delaware Health and Social Services

April 2005

This report updates Delaware's cancer incidence and mortality rates to the year 2002. Its purpose is to provide researchers and other interested people with a core set of statistics for further analysis of the major cancer sites.

All 2002 incidence rates are provisional, and may be adjusted for late reports in the future. The numbers in this report are age-adjusted five-year average annual rates per 100,000 population.

For the first time, this report shows the number of cancer deaths and cases that occurred to the Delaware Hispanic population (Table H-1). The technical notes include information about Hispanic cancer rates.

## **Incidence**

Using the U.S. 2000 population as the standard, Delaware's five-year average annual age-adjusted incidence rate was 500.0 per 100,000 during 1998-2002.

In the 1998-2002 time period, Delaware's cancer incidence rate was 4.1 percent higher than the estimated U.S. rate. In this same time period, the rate among Delaware Blacks was 2.2 percent higher than the estimated U.S. rate. U.S. rates are estimated by Surveillance Epidemiology and End Results – SEER, a program of the National Cancer Institute.

Between the 1990-1994 time period and 1998-2002, the Delaware cancer incidence rate decreased 4.9 percent, compared to a 2.7 percent decrease in the estimated U.S. rate. Among Blacks, the rate decreased 13.1 percent in Delaware, compared to 5.8 percent in the estimated U.S. rate.

The average annual rate from 1998-2002 was higher for men (588.1 compared to 437.9 for women), Blacks (531.2 compared to 496.1 for Whites) and in New Castle County (510.0 compared to 486.7 in Sussex and 468.0 in Kent).

For men, prostate (29.3 percent), lung (16.6 percent), and colorectal (11.4 percent) were the most commonly diagnosed cancers. For women, breast (29.9 percent), lung (13.6 percent), and colorectal (11.5 percent) were most common.

There were 200 Delaware cases of cancer reported with Hispanic ethnicity between 1998 and 2002. Of these, 25 were prostate, 23 were breast, 17 were lung, and 13 were colorectal, and 9 were cervical.

## **Mortality**

Using the U.S. 2000 population as the standard, Delaware's five-year average annual age-adjusted mortality rate was 211.6 per 100,000 during 1998-2002. The rates have fallen for the eighth consecutive time period.

In the 1998-2002 time period, Delaware's cancer mortality rate was 6.9 percent higher than the U.S. rate. In the same time period, the rate among Delaware Blacks was 1.4 percent higher than the U.S. rate.

Between the 1990-1994 time period and 1998-2002, the Delaware cancer mortality rate decreased 13.1 percent, compared to a 7.4 percent decrease in the U.S. rate. Among Blacks, the rate decreased 25.0 percent in Delaware, compared to 10.2 percent in the nation.

The average annual rate from 1998-2002 was higher for men (261.4 compared to 179.7 for women), Blacks (252.0 compared to 208.1 for Whites) and in Kent County (217.2 compared to 213.7 in New Castle and 205.1 in Sussex ).

For men, lung (31.9 percent), prostate (11.6 percent), and Colorectal (9.7 percent) were the most common cause of cancer deaths. For women, lung (26.0 percent), breast (15.8 percent), and colorectal (10.0 percent) were the most common cause of cancer deaths.

There were 79 Delaware cancer deaths reported with Hispanic ethnicity between 1998 and 2002. Of these, 18 were lung, 6 were breast, 3 were colorectal, 3 were prostate, and 3 were cervical.

**Table I-1  
Five-year Average Annual Age-adjusted Cancer Incidence Rates for Delaware and Each County \***

State	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	431.5	521.7	381.6	420.1	502.9	376.0	485.7	630.2	390.8
1981-85	446.2	541.1	395.1	433.9	521.0	389.3	494.7	639.9	400.8
1982-86	455.2	549.8	404.5	442.9	532.0	397.7	497.7	621.0	417.0
1983-87	462.4	561.0	410.3	450.2	545.0	402.6	503.4	617.9	429.9
1984-88	476.7	571.5	428.6	465.1	554.6	422.1	514.5	636.2	441.1
1985-89	482.7	589.6	428.6	471.2	572.5	423.5	527.6	662.6	442.7
1986-90	481.6	588.1	427.8	472.3	572.0	425.5	529.8	682.0	433.8
1987-91	494.0	608.9	434.9	486.3	592.2	434.6	542.3	719.3	436.9
1988-92	510.4	635.0	442.3	501.4	613.4	443.0	570.9	790.0	438.5
1989-93	516.5	652.9	438.5	505.9	627.8	438.5	589.8	838.2	439.1
1990-94	525.5	661.2	443.8	511.5	629.8	441.7	611.1	883.0	446.0
1991-95	532.6	670.1	446.8	518.8	640.0	444.2	619.2	885.0	456.7
1992-96	527.1	655.3	444.9	513.6	625.0	443.5	614.7	878.8	447.3
1993-97	520.0	635.6	445.8	508.8	610.9	444.6	592.9	816.5	450.4
1994-98	514.3	616.2	448.0	506.1	597.7	447.8	577.0	763.0	454.8
1995-99	508.0	598.0	449.0	504.0	586.9	451.0	555.7	711.4	451.0
1996-00	505.0	589.5	448.9	501.7	579.3	451.3	545.5	693.5	443.9
1997-01	506.1	593.6	446.9	502.4	584.8	447.8	537.7	670.0	445.8
1998-02 **	500.0	588.1	437.9	496.1	577.7	439.7	531.2	671.6	431.5
<b>Kent</b>	<b>All</b>			<b>White</b>			<b>Black</b>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	394.0	456.9	359.8	395.4	456.7	363.0	385.6	465.7	338.4
1981-85	419.1	485.4	384.4	420.2	484.5	386.8	411.2	494.7	371.5
1982-86	427.8	497.1	391.4	431.3	502.2	393.7	409.0	472.8	381.5
1983-87	439.2	525.4	393.6	443.8	531.9	397.4	411.4	477.1	382.9
1984-88	454.8	548.2	403.8	454.3	546.8	403.9	459.1	565.3	404.4
1985-89	451.5	557.0	393.0	446.2	550.1	389.6	485.2	608.1	414.0
1986-90	448.8	557.8	386.5	442.7	542.4	388.6	501.6	669.8	389.3
1987-91	454.9	569.6	389.3	447.9	553.5	390.3	507.0	675.0	395.2
1988-92	468.7	592.6	392.2	458.1	567.2	391.6	544.3	763.4	402.4
1989-93	473.8	612.5	386.7	465.4	591.1	387.0	533.9	762.2	385.2
1990-94	485.8	636.6	388.1	480.2	614.0	394.3	525.0	786.9	350.1
1991-95	496.3	663.6	385.4	492.7	646.8	391.6	529.6	791.3	351.4
1992-96	495.5	651.5	390.7	487.7	623.8	397.0	552.3	827.1	361.0
1993-97	489.2	624.6	400.3	487.1	606.8	410.8	515.5	748.7	347.1
1994-98	487.7	607.9	406.0	490.6	597.8	420.1	495.6	682.8	355.7
1995-99	489.1	584.0	426.6	491.2	579.0	436.1	508.2	634.1	411.9
1996-00	481.6	560.2	428.5	486.8	561.5	439.6	475.1	564.2	400.6
1997-01	477.9	559.7	422.1	485.2	571.6	429.3	444.2	497.5	393.9
1998-02 **	468.0	551.5	407.8	472.3	555.7	415.9	442.6	514.3	375.1

\* Adjusted to the 2000 United States Population

\*\* Provisional Data

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

Five-year Average Annual Age-adjusted Cancer Incidence Rates for Delaware and Each County\* (con't)

New Castle	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	439.3	526.0	394.3	425.8	504.2	387.4	523.0	678.5	420.6
1981-85	449.3	541.7	402.2	435.2	518.9	395.7	518.2	677.3	413.6
1982-86	458.0	550.5	411.2	443.6	527.7	405.0	517.8	668.2	416.8
1983-87	463.1	556.6	416.7	448.7	535.3	409.1	522.2	662.9	431.5
1984-88	475.8	566.0	434.0	462.9	546.0	427.6	521.8	656.0	441.1
1985-89	484.7	591.9	434.6	473.5	574.5	430.2	520.0	653.9	437.3
1986-90	486.9	594.9	438.2	476.4	577.3	435.2	532.6	679.3	443.8
1987-91	499.5	615.5	446.1	490.9	598.0	444.4	547.1	716.7	454.2
1988-92	518.6	644.6	456.5	509.0	622.2	456.8	575.3	785.3	454.0
1989-93	526.5	663.1	455.0	515.4	636.9	455.2	599.6	841.6	459.2
1990-94	531.8	666.3	455.8	517.9	633.5	454.8	629.3	906.0	469.9
1991-95	538.8	676.2	457.3	526.3	646.6	456.3	629.7	900.3	475.4
1992-96	532.1	659.1	454.5	520.5	632.0	454.1	619.9	874.1	467.3
1993-97	523.0	635.2	454.2	512.9	612.2	453.2	603.5	822.7	472.8
1994-98	516.5	616.0	454.9	508.7	598.4	454.2	589.3	779.8	473.6
1995-99	512.0	603.5	454.6	506.4	590.5	454.8	570.6	733.3	466.9
1996-00	510.0	597.0	454.5	503.6	583.1	454.2	571.4	731.9	467.0
1997-01	513.9	608.1	452.1	507.1	593.6	451.5	570.3	729.9	466.1
1998-02 **	510.0	607.8	444.0	504.7	594.8	445.0	560.0	718.8	455.5
Sussex	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	429.9	550.8	353.3	426.2	543.0	454.4	463.7	624.1	354.2
1981-85	450.7	571.5	377.6	446.2	563.8	464.0	490.2	643.3	392.8
1982-86	462.0	579.6	391.1	454.8	577.5	453.1	510.6	608.0	457.7
1983-87	470.2	590.7	398.8	461.9	590.2	446.4	518.2	601.3	468.9
1984-88	489.1	596.1	427.7	481.2	590.5	471.2	535.4	636.5	476.8
1985-89	495.5	603.1	434.9	482.5	585.6	466.2	582.9	728.8	487.4
1986-90	486.5	591.6	422.9	478.6	581.1	442.7	549.5	696.1	449.9
1987-91	498.9	612.0	428.3	492.4	595.8	444.5	551.8	757.3	416.3
1988-92	508.3	631.3	429.5	501.5	613.2	437.9	571.5	806.0	421.3
1989-93	508.2	643.2	418.4	496.8	618.2	418.1	602.1	880.1	422.4
1990-94	524.4	651.7	439.1	504.2	620.1	425.6	616.3	872.6	454.1
1991-95	530.5	645.1	451.7	505.8	606.2	436.7	654.8	911.6	486.9
1992-96	529.4	641.5	450.8	507.0	602.8	440.6	649.0	930.8	458.1
1993-97	527.5	636.5	450.8	508.0	604.5	440.8	623.5	855.1	465.9
1994-98	523.3	617.7	455.7	507.2	593.0	447.3	607.3	785.7	480.0
1995-99	508.2	591.6	447.7	504.1	579.8	450.6	548.2	716.7	431.1
1996-00	504.6	586.8	444.5	504.2	578.5	450.8	520.0	697.5	399.8
1997-01	500.6	576.8	445.5	499.5	571.3	447.9	510.1	649.3	419.9
1998-02 **	486.7	558.6	431.4	484.2	549.2	434.4	498.2	667.8	382.8

\* Adjusted to the 2000 United States Population

\*\* Provisional Data

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

Table I-2

## Five-year Average Annual Age-adjusted Lung Cancer Incidence Rates for Delaware and Each County\*

State	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	73.6	120.7	41.2	69.6	113.7	39.5	104.0	175.4	52.5
1981-85	76.8	124.2	44.6	73.0	117.6	42.8	104.3	172.8	55.8
1982-86	76.9	122.8	45.5	73.5	117.4	43.8	101.6	162.1	58.0
1983-87	78.3	122.3	48.7	75.6	116.9	48.4	96.3	157.9	51.5
1984-88	82.6	128.8	51.7	80.0	123.3	51.3	100.9	167.5	54.4
1985-89	82.7	129.1	51.6	79.6	123.0	51.0	104.1	171.6	57.1
1986-90	81.6	126.0	51.7	78.8	120.3	51.1	103.4	170.9	57.5
1987-91	83.4	126.9	54.2	80.4	120.4	53.5	107.0	179.7	60.3
1988-92	84.5	126.4	56.2	80.8	118.7	54.9	113.8	190.8	64.9
1989-93	83.5	123.9	56.2	79.3	115.4	54.8	115.8	192.9	65.9
1990-94	86.1	123.0	60.6	82.6	115.8	59.4	113.2	182.8	68.2
1991-95	87.6	121.1	64.1	84.0	114.0	62.9	115.4	180.1	72.6
1992-96	87.5	119.6	64.9	84.2	113.2	63.8	113.0	173.0	72.1
1993-97	88.3	119.7	65.9	85.8	114.7	65.1	109.2	162.0	73.1
1994-98	86.1	114.0	65.9	84.7	111.2	65.5	100.4	142.4	72.0
1995-99	83.9	111.4	64.1	83.0	109.4	63.9	95.3	134.6	68.9
1996-00	82.0	108.5	62.6	81.4	107.5	62.3	90.3	125.0	67.5
1997-01	79.6	104.8	61.2	79.3	103.7	61.4	86.5	119.6	63.7
1998-02**	75.7	97.6	59.6	75.9	97.0	60.1	79.6	107.7	60.2
<b>Kent</b>	<b>All</b>			<b>White</b>			<b>Black</b>		
	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
1980-84	63.0	96.2	39.0	63.8	97.7	39.8	61.5	99.8	***
1981-85	72.8	111.2	46.6	72.9	112.4	46.3	73.2	115.0	***
1982-86	67.8	103.7	44.2	68.2	104.2	44.4	68.8	110.9	***
1983-87	70.4	105.6	47.3	69.3	101.2	49.3	76.8	134.5	***
1984-88	76.2	116.1	49.1	73.4	108.3	50.4	94.1	167.3	***
1985-89	78.6	120.0	49.9	74.7	109.5	50.9	101.3	186.3	***
1986-90	74.7	113.9	46.6	71.5	104.6	48.0	95.6	175.1	***
1987-91	75.0	107.5	50.8	72.6	100.8	51.4	90.9	151.2	***
1988-92	77.7	115.1	49.7	75.5	109.3	49.6	94.4	158.8	***
1989-93	77.8	113.8	50.9	76.0	107.9	51.4	92.3	160.5	***
1990-94	78.8	111.9	53.2	79.1	109.8	55.2	81.9	133.4	***
1991-95	84.1	116.5	58.8	83.9	112.5	61.1	93.4	152.4	***
1992-96	86.8	117.9	62.5	85.6	110.4	66.0	104.3	176.5	49.7
1993-97	89.0	117.9	66.9	89.6	115.1	70.3	96.2	151.2	53.9
1994-98	88.6	113.6	69.6	91.6	115.6	73.3	82.8	114.9	58.5
1995-99	90.6	118.6	69.8	92.8	118.9	73.4	87.7	127.5	57.4
1996-00	86.6	112.0	67.8	89.8	114.9	71.5	75.7	104.2	53.5
1997-01	87.3	113.7	68.2	92.8	123.0	71.3	63.4	69.9	57.9
1998-02**	80.5	105.5	62.0	84.6	111.3	65.1	61.5	73.9	51.2

\* Adjusted to the 2000 United States Population

\*\* Provisional Data

\*\*\* Rates based on &lt; 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Five-year Average Annual Age-adjusted Lung Cancer Incidence Rates for Delaware and Each County<sup>\*</sup>**  
(con't)

New Castle	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	73.6	118.9	43.8	68.7	109.9	42.1	115.4	194.2	60.2
1981-85	75.7	120.2	46.3	71.3	111.9	45.0	111.1	187.4	58.0
1982-86	77.0	121.7	47.6	73.2	114.3	46.6	108.2	179.6	57.4
1983-87	77.8	121.7	49.2	74.9	115.2	49.5	100.1	170.6	49.9
1984-88	80.9	125.9	51.8	78.5	120.8	51.5	99.9	164.1	55.3
1985-89	80.8	127.9	50.3	78.7	124.2	49.5	96.8	153.9	58.0
1986-90	80.0	125.7	51.0	77.5	121.6	49.7	99.6	156.2	63.0
1987-91	82.0	128.2	53.0	78.7	122.0	51.2	108.7	178.2	67.5
1988-92	83.4	126.6	56.2	78.9	118.0	53.9	119.5	198.6	72.9
1989-93	82.5	124.2	56.6	77.2	114.3	54.2	122.7	203.2	74.5
1990-94	84.8	122.9	60.2	79.8	113.7	57.8	124.2	200.6	77.3
1991-95	86.2	121.5	62.9	81.5	113.3	60.4	123.9	191.2	81.3
1992-96	85.9	120.0	63.0	81.9	113.9	60.6	115.7	171.3	79.0
1993-97	86.6	119.2	64.0	83.2	114.0	61.9	113.2	164.0	79.4
1994-98	84.5	114.9	62.8	82.1	111.3	61.1	106.3	151.0	76.6
1995-99	81.6	110.3	61.0	79.4	107.1	59.4	100.6	143.5	73.1
1996-00	78.9	106.1	59.5	76.8	103.4	57.4	96.7	134.6	73.5
1997-01	75.7	100.9	57.3	73.5	97.1	56.2	94.4	133.5	68.3
1998-02**	72.1	92.8	56.9	71.1	91.4	56.0	83.5	107.2	67.1
Sussex	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	81.9	145.4	34.7	79.2	141.7	39.9	104.9	181.9	***
1981-85	83.7	146.6	37.3	80.3	142.7	40.3	107.0	176.8	56.6
1982-86	82.9	140.9	39.6	79.6	139.6	39.8	105.6	153.1	73.1
1983-87	85.0	136.7	47.2	82.6	136.3	49.7	98.7	140.8	68.6
1984-88	91.5	146.6	52.2	89.2	143.5	55.8	107.4	177.2	60.5
1985-89	90.4	138.9	56.5	85.7	130.2	59.4	126.6	211.4	65.3
1986-90	89.8	136.3	55.8	86.6	128.9	58.8	119.8	209.7	55.2
1987-91	91.6	136.8	58.2	89.2	129.0	61.7	113.7	212.3	46.5
1988-92	91.1	133.9	58.7	89.0	127.0	61.0	110.1	198.3	49.9
1989-93	89.2	130.9	56.7	86.3	123.2	57.4	114.4	199.8	54.2
1990-94	92.9	129.8	64.3	90.8	124.2	63.9	104.1	176.2	58.5
1991-95	92.7	122.7	70.1	89.8	115.9	69.6	108.1	176.6	63.3
1992-96	92.0	120.3	71.0	89.1	113.8	70.5	111.2	177.0	66.4
1993-97	92.1	121.8	70.2	89.6	116.2	69.8	107.8	170.0	66.7
1994-98	88.6	112.1	71.7	87.1	108.7	71.5	96.7	141.9	68.9
1995-99	86.1	110.1	68.6	86.0	109.6	69.0	85.3	116.4	64.9
1996-00	86.3	111.5	67.1	87.0	111.6	68.2	82.1	116.9	59.2
1997-01	84.0	107.9	66.1	84.4	107.2	67.1	81.5	123.9	54.2
1998-02**	80.1	102.0	63.5	80.4	100.4	65.1	81.5	137.0	44.9

\* Adjusted to the 2000 United States Population

\*\* Provisional Data

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.



**Table I-3**  
**Five-year Average Annual Age-adjusted ColoRectal Cancer Incidence Rates for Delaware and Each County**

State	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	70.5	83.0	63.0	72.4	85.6	64.4	54.0	59.2	52.5
1981-85	73.5	88.5	64.5	74.3	89.7	64.9	61.9	68.3	60.0
1982-86	75.9	92.0	65.9	76.0	92.6	65.8	67.8	71.0	66.6
1983-87	74.9	91.5	64.1	74.7	92.0	63.4	68.1	68.9	68.6
1984-88	77.4	93.2	66.8	77.2	92.8	66.7	71.6	80.3	67.0
1985-89	77.4	94.2	66.0	76.5	93.5	65.1	77.2	84.2	72.7
1986-90	73.1	88.6	62.9	72.5	88.3	62.2	75.1	85.0	69.1
1987-91	73.6	87.8	63.9	73.4	88.3	63.2	75.5	85.1	70.0
1988-92	71.9	87.0	61.8	71.5	86.8	61.3	76.4	92.7	66.1
1989-93	66.3	80.6	56.8	65.6	80.3	55.8	72.4	84.1	64.6
1990-94	64.1	78.2	54.3	63.5	78.2	53.3	67.6	79.1	60.1
1991-95	64.2	79.3	53.7	63.7	79.4	52.5	67.3	79.0	59.9
1992-96	61.1	75.2	51.1	60.4	74.8	50.3	64.4	79.5	54.7
1993-97	60.5	73.1	51.5	59.9	72.9	50.5	62.7	74.6	55.2
1994-98	62.0	73.6	53.0	61.3	73.5	51.9	65.0	77.1	56.6
1995-99	61.2	71.5	53.6	60.4	71.0	52.5	68.6	80.5	60.5
1996-00	61.1	71.5	53.1	60.1	70.8	52.0	69.3	80.4	59.7
1997-01	60.0	69.6	52.4	59.0	69.4	50.9	66.1	73.3	59.3
1998-02**	57.8	66.9	50.3	56.3	66.1	48.2	67.3	74.5	60.9
Kent	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	58.3	62.5	54.6	60.6	66.2	56.1	47.9	***	***
1981-85	58.8	66.0	52.9	60.3	69.7	53.0	49.5	***	***
1982-86	65.6	73.8	59.4	68.5	79.4	60.8	46.6	***	***
1983-87	67.5	80.0	59.5	71.4	85.2	62.5	40.0	***	***
1984-88	71.2	81.9	65.0	73.2	85.4	65.4	58.7	***	68.7
1985-89	70.8	86.3	62.1	70.7	86.2	61.2	71.6	***	72.7
1986-90	68.8	82.6	61.6	69.1	79.9	63.0	70.6	97.9	***
1987-91	64.3	74.0	58.9	63.3	70.8	58.2	73.8	94.2	67.1
1988-92	63.3	70.2	58.4	62.0	69.1	56.0	75.4	***	76.3
1989-93	57.2	64.5	51.8	56.9	65.9	49.8	60.7	***	63.8
1990-94	53.3	62.3	46.0	54.3	65.3	45.1	49.1	***	***
1991-95	54.2	68.9	43.8	55.2	72.9	42.4	49.2	***	***
1992-96	52.5	67.4	41.7	53.7	71.7	40.7	47.8	***	***
1993-97	54.3	68.8	44.2	54.6	70.3	43.5	53.8	64.8	***
1994-98	57.6	72.5	46.6	57.2	71.6	46.3	64.0	83.9	49.6
1995-99	60.4	74.2	50.7	58.2	72.1	48.6	76.4	88.0	67.3
1996-00	61.8	77.1	49.9	59.8	77.2	46.6	77.5	79.3	74.6
1997-01	63.9	79.6	52.0	61.3	79.8	47.6	79.6	80.5	77.5
1998-02**	64.0	80.5	52.0	61.8	80.3	48.8	77.8	79.4	74.9

\* Adjusted to the 2000 United States Population

\*\* Provisional Data

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Five-year Average Annual Age-adjusted ColoRectal Cancer Incidence Rates for Delaware and Each County<sup>\*</sup> (con't)**

New Castle	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	76.0	89.4	68.6	78.5	92.2	70.6	57.6	68.0	53.8
1981-85	78.5	94.5	69.4	79.7	95.6	70.3	66.6	78.5	62.2
1982-86	80.0	97.3	69.6	80.0	97.2	69.5	73.7	80.6	71.1
1983-87	77.7	94.9	66.6	77.2	95.2	65.6	73.6	73.0	75.1
1984-88	78.3	97.0	66.4	78.0	96.7	66.0	73.7	82.1	69.1
1985-89	77.4	96.2	65.0	76.4	96.4	63.5	76.6	76.2	75.3
1986-90	72.7	90.3	62.0	71.8	90.9	60.4	74.6	74.4	73.7
1987-91	73.7	91.0	62.7	73.5	92.4	61.4	76.0	78.6	74.4
1988-92	71.7	89.7	60.7	71.0	89.6	59.7	78.5	92.0	69.5
1989-93	67.2	84.3	56.5	65.8	83.1	55.1	78.2	92.6	68.7
1990-94	65.0	81.6	54.5	63.9	80.5	53.3	75.4	93.4	65.0
1991-95	64.6	81.5	53.5	63.8	80.6	52.5	72.8	92.6	62.0
1992-96	61.0	75.8	51.2	60.0	74.1	50.5	68.7	91.5	55.2
1993-97	60.0	72.8	51.3	59.1	72.0	50.1	65.5	80.4	56.5
1994-98	60.7	70.7	53.1	60.2	70.7	52.0	64.5	76.0	56.8
1995-99	59.9	68.7	53.3	58.8	67.8	51.9	69.9	82.2	61.3
1996-00	60.0	68.8	53.0	58.3	67.3	51.5	72.9	83.3	62.1
1997-01	58.3	66.6	51.7	57.0	66.0	50.0	68.1	73.8	61.2
1998-02**	56.4	64.9	49.5	54.6	63.9	47.0	68.8	75.3	63.1
Sussex	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	62.4	79.8	50.9	63.6	82.9	70.4	49.1	***	***
1981-85	68.1	86.5	56.8	68.9	89.2	74.9	58.3	***	55.1
1982-86	69.8	88.6	58.4	69.6	89.9	73.4	68.7	77.0	63.1
1983-87	70.2	87.7	58.1	69.0	87.7	70.2	74.8	81.0	69.9
1984-88	77.4	89.0	68.1	77.0	87.7	81.8	77.1	94.0	64.0
1985-89	80.5	91.9	70.9	80.2	90.4	81.3	83.7	102.6	69.7
1986-90	76.8	88.0	66.3	76.7	87.5	72.0	83.0	99.8	69.7
1987-91	79.6	88.6	70.9	79.7	88.5	74.7	80.0	95.3	67.5
1988-92	77.5	90.6	67.2	78.0	89.9	70.2	75.8	105.9	54.5
1989-93	69.3	80.3	60.8	69.5	80.8	61.4	68.2	82.9	57.7
1990-94	68.0	79.0	58.9	67.5	79.4	57.9	62.1	68.6	56.1
1991-95	69.1	79.1	60.6	67.8	79.0	58.7	68.8	70.7	64.6
1992-96	66.2	77.9	56.9	65.2	77.2	55.7	66.4	75.6	59.3
1993-97	65.7	75.9	57.4	64.9	76.1	55.9	62.1	64.7	59.8
1994-98	67.4	80.1	56.8	66.1	79.7	54.9	69.0	73.4	63.7
1995-99	64.8	75.6	56.5	65.2	76.4	56.3	61.0	69.0	57.2
1996-00	63.0	73.7	55.0	64.2	74.5	56.2	52.7	71.1	41.6
1997-01	61.0	69.9	53.8	61.8	71.0	54.2	49.9	63.8	40.4
1998-02**	56.7	63.6	50.5	56.4	63.1	50.2	55.0	70.0	43.2

\* Adjusted to the 2000 United States Population

\*\* Provisional Data

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Table I-4**  
**Five-year Average Annual Age-adjusted Female Breast Cancer Incidence Rates for Delaware and Each County\***

State	All Females	White Females	Black Females	New Castle	All Females	White Females	Black Females
1980-84	107.1	107.4	95.8	1980-84	109.7	110.1	101.3
1981-85	111.9	111.8	100.5	1981-85	113.5	113.6	102.8
1982-86	115.5	115.4	105.2	1982-86	117.5	118.2	103.4
1983-87	119.6	118.6	117.9	1983-87	124.2	124.3	117.6
1984-88	125.5	124.9	121.1	1984-88	129.5	130.0	119.2
1985-89	129.8	130.3	121.1	1985-89	134.5	136.2	118.9
1986-90	133.8	134.8	125.1	1986-90	139.5	141.0	127.3
1987-91	136.9	138.1	128.6	1987-91	144.0	145.5	133.1
1988-92	137.4	139.5	124.0	1988-92	145.0	148.0	124.8
1989-93	137.9	140.2	123.4	1989-93	146.7	150.3	125.1
1990-94	138.2	139.6	125.2	1990-94	145.5	148.4	127.8
1991-95	136.7	138.6	122.4	1991-95	143.3	147.4	120.1
1992-96	136.4	138.9	120.1	1992-96	142.4	147.3	118.4
1993-97	138.0	140.2	123.5	1993-97	143.1	146.4	128.7
1994-98	137.6	139.3	127.1	1994-98	141.4	143.7	132.5
1995-99	137.0	138.7	127.6	1995-99	139.2	140.6	133.3
1996-00	136.8	138.9	124.4	1996-00	138.2	140.0	130.8
1997-01	135.7	137.3	125.3	1997-01	138.0	139.0	134.4
1998-02**	131.1	132.8	118.7	1998-02**	134.0	135.2	130.5

  

Kent	All Females	White Females	Black Females	Sussex	All Females	White Females	Black Females
1980-84	113.6	114.9	100.2	1980-84	91.6	116.1	83.3
1981-85	118.1	120.9	95.4	1981-85	100.7	120.2	103.8
1982-86	114.2	115.5	100.4	1982-86	109.8	125.3	119.1
1983-87	108.4	107.6	109.0	1983-87	113.0	122.8	130.9
1984-88	116.6	114.2	124.3	1984-88	119.7	130.4	125.0
1985-89	118.7	116.0	126.3	1985-89	123.6	132.9	120.4
1986-90	125.3	124.1	132.1	1986-90	122.0	129.4	110.4
1987-91	125.2	125.8	124.3	1987-91	122.4	126.8	115.7
1988-92	127.9	128.5	128.0	1988-92	119.5	121.5	115.2
1989-93	124.0	127.7	108.7	1989-93	119.6	117.4	131.6
1990-94	123.1	129.8	94.8	1990-94	126.3	118.2	149.4
1991-95	121.2	127.5	98.5	1991-95	126.6	118.5	157.7
1992-96	127.0	130.1	119.3	1992-96	123.7	119.2	130.6
1993-97	129.5	136.0	107.4	1993-97	127.6	124.1	125.6
1994-98	129.4	135.2	112.2	1994-98	130.9	128.8	122.9
1995-99	135.8	138.6	131.5	1995-99	129.4	131.9	103.3
1996-00	136.6	139.7	124.7	1996-00	130.9	133.2	101.4
1997-01	129.8	133.7	109.2	1997-01	131.8	133.4	106.7
1998-02**	122.9	127.3	95.7	1998-02**	124.6	126.5	94.5

\* Adjusted to the 2000 United States Population

\*\* Provisional Data

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Table I-5**  
**Five-year Average Annual Age-adjusted Cervical Cancer Incidence Rates for Delaware and Each County\***

State	All Females	White Females	Black Females	New Castle	All Females	White Females	Black Females
1980-84	12.7	11.1	23.0	1980-84	11.7	10.1	23.2
1981-85	13.1	11.2	24.7	1981-85	11.7	9.5	25.5
1982-86	13.8	11.4	27.8	1982-86	12.5	9.9	28.3
1983-87	13.7	11.2	28.5	1983-87	12.5	9.7	29.2
1984-88	15.1	12.6	29.1	1984-88	13.5	10.6	30.7
1985-89	14.4	12.5	27.0	1985-89	12.4	10.2	27.1
1986-90	13.0	11.9	21.6	1986-90	11.7	10.3	22.3
1987-91	14.0	13.1	21.3	1987-91	12.8	11.7	22.3
1988-92	14.7	13.8	20.6	1988-92	13.3	12.1	21.8
1989-93	13.7	12.7	20.6	1989-93	12.8	11.6	20.8
1990-94	13.4	12.2	20.2	1990-94	12.3	11.1	19.7
1991-95	12.5	11.1	20.8	1991-95	11.6	10.4	19.7
1992-96	11.3	9.7	20.3	1992-96	10.2	8.8	18.8
1993-97	11.2	9.6	20.0	1993-97	9.7	9.0	15.4
1994-98	11.6	10.3	19.6	1994-98	10.3	9.4	16.5
1995-99	10.9	9.9	17.2	1995-99	9.8	8.9	15.1
1996-00	11.5	10.7	16.2	1996-00	9.9	9.1	14.1
1997-01	11.2	10.9	13.7	1997-01	9.2	8.8	11.8
1998-02**	10.0	9.9	12.4	1998-02**	8.6	8.0	12.5
Kent	All Females	White Females	Black Females	Sussex	All Females	White Females	Black Females
1980-84	16.9	15.8	***	1980-84	12.7	13.6	***
1981-85	17.5	15.6	***	1981-85	14.2	16.0	***
1982-86	16.9	13.9	***	1982-86	15.6	16.6	***
1983-87	14.4	11.4	***	1983-87	16.9	17.7	***
1984-88	14.8	11.7	***	1984-88	20.4	22.1	***
1985-89	15.4	11.8	***	1985-89	20.3	22.2	***
1986-90	12.7	10.3	***	1986-90	18.0	19.5	***
1987-91	11.9	9.4	***	1987-91	19.5	21.4	***
1988-92	11.5	***	***	1988-92	21.9	23.8	***
1989-93	9.1	***	***	1989-93	20.4	20.7	***
1990-94	9.7	***	***	1990-94	20.1	19.6	***
1991-95	9.2	***	***	1991-95	17.8	16.5	***
1992-96	9.0	***	***	1992-96	16.7	14.6	***
1993-97	10.8	8.2	***	1993-97	15.6	12.3	***
1994-98	11.8	10.1	***	1994-98	15.2	12.8	***
1995-99	9.7	9.0	***	1995-99	15.0	12.8	***
1996-00	11.3	11.6	***	1996-00	16.2	14.4	***
1997-01	12.0	13.1	***	1997-01	15.9	14.9	***
1998-02**	11.0	12.3	***	1998-02**	13.6	13.5	***

\* Adjusted to the 2000 United States Population

\*\* Provisional Data

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Table I-6**  
**Five-year Average Annual Age-adjusted Prostate Cancer Incidence Rates for Delaware and Each County\***

<b>State</b>	<b>All Male</b>	<b>White Male</b>	<b>Black Male</b>	<b>New Castle</b>	<b>All Male</b>	<b>White Male</b>	<b>Black Male</b>
1980-84	83.9	74.9	148.4	1980-84	78.1	69.9	141.8
1981-85	87.8	79.3	143.4	1981-85	79.7	72.2	129.5
1982-86	91.0	83.9	138.1	1982-86	84.5	78.0	130.4
1983-87	98.7	92.7	138.9	1983-87	89.5	82.9	137.6
1984-88	103.5	98.6	137.3	1984-88	97.3	91.7	139.8
1985-89	114.8	111.6	137.2	1985-89	112.0	107.4	145.3
1986-90	122.2	120.1	142.2	1986-90	122.3	118.9	152.2
1987-91	144.1	140.2	175.6	1987-91	139.3	135.1	173.9
1988-92	170.5	163.2	225.9	1988-92	167.3	161.6	210.0
1989-93	193.7	183.2	273.2	1989-93	191.1	182.3	254.9
1990-94	206.3	189.4	326.4	1990-94	200.9	186.8	301.8
1991-95	219.2	200.7	350.2	1991-95	213.5	198.2	325.5
1992-96	211.1	191.4	349.6	1992-96	207.2	189.9	335.0
1993-97	194.0	176.8	312.6	1993-97	190.4	174.9	305.5
1994-98	180.7	164.5	290.8	1994-98	179.8	165.0	288.9
1995-99	172.8	159.8	264.6	1995-99	177.3	163.9	272.2
1996-00	162.8	150.1	253.0	1996-00	171.1	157.4	268.0
1997-01	167.8	154.8	249.6	1997-01	183.4	169.7	271.3
1998-02**	172.6	158.9	259.6	1998-02**	195.4	181.3	287.3
<b>Kent</b>	<b>All Male</b>	<b>White Male</b>	<b>Black Male</b>	<b>Sussex</b>	<b>All Male</b>	<b>White Male</b>	<b>Black Male</b>
1980-84	89.1	79.5	142.3	1980-84	94.9	86.0	170.7
1981-85	95.1	86.9	143.3	1981-85	103.6	94.5	180.4
1982-86	94.9	88.4	132.1	1982-86	104.5	98.0	161.6
1983-87	112.3	108.9	130.2	1983-87	113.1	109.7	146.1
1984-88	120.2	115.9	146.1	1984-88	107.8	106.9	118.9
1985-89	127.4	129.8	122.7	1985-89	113.6	112.4	121.7
1986-90	140.2	140.5	149.0	1986-90	110.3	111.6	102.2
1987-91	179.3	175.6	204.4	1987-91	131.4	129.3	149.5
1988-92	202.6	190.9	272.4	1988-92	155.2	148.1	218.3
1989-93	226.2	213.3	302.0	1989-93	175.7	163.4	285.8
1990-94	245.6	225.1	369.4	1990-94	190.2	170.0	340.6
1991-95	255.7	232.8	394.6	1991-95	205.5	183.4	366.2
1992-96	237.0	212.4	371.6	1992-96	202.0	181.1	361.1
1993-97	206.1	185.5	322.7	1993-97	193.2	175.3	317.3
1994-98	182.4	162.2	296.3	1994-98	180.8	165.0	290.3
1995-99	158.1	141.9	245.5	1995-99	170.1	160.5	254.7
1996-00	139.7	127.0	204.7	1996-00	157.0	147.0	249.6
1997-01	131.1	116.1	198.9	1997-01	153.8	144.3	228.6
1998-02**	138.3	123.9	199.0	1998-02**	141.4	131.7	223.8

\* Adjusted to the 2000 United States Population

\*\* Provisional Data

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

Table M-1

## Five-year Average Annual Age-adjusted Cancer Mortality Rates for Delaware and Each County\*

State	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	235.0	309.3	191.3	226.2	295.0	186.6	313.5	434.4	234.3
1981-85	237.1	317.5	189.4	227.3	303.1	182.6	320.1	440.5	244.4
1982-86	236.0	315.7	188.9	225.6	300.2	181.6	321.5	445.4	245.2
1983-87	237.0	321.4	187.9	226.5	306.0	180.5	323.8	451.4	246.0
1984-88	239.5	324.3	190.4	229.1	309.0	183.2	322.6	453.8	242.9
1985-89	240.3	327.3	191.0	228.8	310.9	183.2	330.9	463.4	247.9
1986-90	242.4	328.1	193.9	230.8	311.0	186.8	334.1	469.3	248.6
1987-91	242.6	326.6	194.2	230.0	307.8	186.0	343.4	482.8	256.4
1988-92	243.6	324.6	196.8	231.4	304.0	190.2	339.3	493.1	246.4
1989-93	243.1	324.1	195.8	230.3	301.4	189.5	346.5	511.1	247.8
1990-94	243.4	320.9	196.3	232.5	301.7	190.4	336.0	486.4	247.0
1991-95	240.8	314.6	195.5	230.1	296.0	189.8	331.3	477.8	243.5
1992-96	239.6	314.4	194.5	228.9	296.3	188.1	331.0	473.7	247.9
1993-97	236.1	306.2	193.3	225.4	289.9	186.1	328.5	453.1	253.8
1994-98	231.3	295.4	192.0	222.7	283.0	185.6	308.6	413.3	247.5
1995-99	228.4	288.8	191.8	219.6	276.1	185.4	305.0	410.4	244.4
1996-00	221.8	276.1	188.5	214.8	266.5	182.7	286.2	374.9	235.4
1997-01	218.8	268.4	187.6	213.9	261.8	183.4	267.5	343.8	223.3
1998-02	211.6	261.4	179.7	208.1	255.8	176.9	252.0	331.7	207.2
<b>Kent</b>	<b>All</b>			<b>White</b>			<b>Black</b>		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	200.2	252.2	167.4	198.6	242.8	171.0	230.9	339.8	159.4
1981-85	212.1	276.2	171.1	209.6	269.7	170.2	242.6	343.0	185.8
1982-86	211.9	277.1	172.7	212.1	275.8	172.7	222.5	307.6	177.6
1983-87	222.3	300.1	178.7	222.1	293.9	182.0	237.0	357.9	172.5
1984-88	229.9	309.8	182.6	228.7	302.0	186.2	246.5	376.5	167.3
1985-89	242.8	327.7	194.9	240.9	321.3	197.0	265.5	390.0	188.4
1986-90	245.2	320.2	202.7	242.1	313.8	202.6	280.4	382.7	214.2
1987-91	246.0	313.9	205.8	241.0	305.8	203.4	292.3	387.7	231.5
1988-92	242.5	303.1	205.0	237.1	293.6	202.5	291.2	385.1	231.2
1989-93	236.5	294.7	201.7	228.4	277.4	199.6	306.3	424.0	232.1
1990-94	230.4	294.1	190.5	225.6	281.3	190.4	277.9	391.2	208.1
1991-95	231.3	303.8	186.1	228.9	290.9	190.1	265.0	402.2	180.6
1992-96	231.7	311.4	182.3	225.1	291.2	184.2	295.2	452.5	195.5
1993-97	222.7	295.7	177.1	217.6	278.9	179.1	273.4	407.8	188.6
1994-98	223.0	291.9	179.0	221.4	284.9	180.1	253.4	348.5	193.9
1995-99	229.3	301.8	183.2	225.4	293.9	180.8	269.8	362.6	212.4
1996-00	221.0	282.6	181.4	216.1	275.5	177.2	259.6	333.9	211.3
1997-01	221.9	281.9	183.1	221.5	282.5	182.1	233.2	284.4	197.1
1998-02	217.2	278.1	177.2	215.4	276.7	175.6	238.4	293.9	196.5

\* Adjusted to the 2000 United States Population

\*\*\* Rates based on &lt; 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Five-year Average Annual Age-adjusted Cancer Mortality Rates for Delaware and Each County\* (con't)**

New Castle	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	239.8	313.0	198.8	229.7	298.3	192.6	338.5	457.2	262.2
1981-85	239.2	316.6	195.5	228.0	300.9	188.1	341.4	463.3	263.6
1982-86	241.8	322.4	196.3	229.6	303.0	189.2	349.7	497.1	257.5
1983-87	241.6	324.0	195.0	229.8	306.3	187.5	344.8	485.3	257.6
1984-88	243.8	326.5	198.3	232.0	309.2	190.5	343.1	482.0	258.5
1985-89	240.6	324.2	194.8	227.8	305.8	186.2	345.5	484.5	260.4
1986-90	243.1	328.2	197.2	230.9	310.3	189.5	342.6	480.1	258.1
1987-91	243.1	326.9	197.2	229.9	307.7	188.4	349.8	491.8	265.2
1988-92	245.2	329.6	199.8	232.0	307.0	192.4	349.8	520.3	254.3
1989-93	243.3	327.5	196.7	229.9	304.1	189.6	352.0	525.3	254.8
1990-94	246.2	326.9	199.5	233.9	305.8	192.1	350.2	512.9	261.0
1991-95	243.0	318.5	198.5	229.9	296.7	190.6	351.3	510.7	262.9
1992-96	241.1	317.3	196.7	229.0	299.3	187.8	340.6	481.0	266.2
1993-97	238.4	309.5	195.7	226.7	293.8	186.5	336.7	456.8	268.9
1994-98	235.6	301.3	196.6	225.5	287.6	188.3	323.3	437.9	262.3
1995-99	231.0	293.2	194.6	221.1	279.2	187.1	313.0	427.2	251.5
1996-00	224.3	280.3	191.0	217.5	271.2	185.2	287.0	381.0	237.0
1997-01	221.0	271.3	190.5	215.3	263.1	186.0	275.5	364.0	228.1
1998-02	213.7	263.6	183.4	209.4	257.0	179.5	257.1	343.2	214.9
Sussex	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	246.3	342.8	185.5	240.0	331.7	244.0	312.8	446.8	219.9
1981-85	249.9	352.8	184.5	242.8	342.9	226.5	322.0	450.8	241.0
1982-86	237.4	327.9	178.3	227.7	318.2	206.3	320.9	413.6	267.8
1983-87	235.0	331.9	173.1	223.3	320.6	190.7	335.0	434.6	277.6
1984-88	234.4	331.5	172.2	224.2	321.2	184.5	322.3	442.8	257.2
1985-89	238.5	338.0	176.6	225.8	323.0	183.6	339.5	474.4	255.7
1986-90	239.3	336.0	178.5	225.2	315.5	181.3	353.4	517.9	247.4
1987-91	239.8	337.0	177.8	224.8	313.6	175.4	364.9	546.5	247.0
1988-92	240.0	326.8	183.7	227.0	304.7	180.8	345.1	518.3	231.6
1989-93	247.9	336.3	190.4	233.9	311.8	185.0	364.6	553.3	240.5
1990-94	244.9	324.0	191.8	233.9	305.7	186.0	341.8	492.6	241.6
1991-95	241.7	311.9	194.0	232.2	298.2	187.8	328.5	448.7	244.2
1992-96	241.2	308.9	197.0	230.8	292.3	191.5	335.3	470.7	242.9
1993-97	239.9	305.9	197.9	227.5	288.6	189.4	355.7	481.0	270.3
1994-98	226.3	283.9	189.4	217.0	272.1	182.1	316.8	408.6	254.5
1995-99	222.5	271.3	191.8	213.2	259.1	184.7	315.0	406.6	256.8
1996-00	217.7	263.8	188.5	208.7	251.6	181.6	312.9	401.2	260.1
1997-01	213.5	255.5	185.4	208.4	249.6	180.3	276.5	344.5	237.0
1998-02	205.1	248.5	174.5	203.4	244.7	173.8	246.0	334.4	193.3

\* Adjusted to the 2000 United States Population

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

Table M-2

## Five-year Average Annual Age-adjusted Lung Cancer Mortality Rates for Delaware and Each County\*

State	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	61.2	103.0	33.0	57.7	98.1	30.9	89.7	145.3	48.8
1981-85	62.9	105.4	34.2	59.5	101.4	31.5	89.5	140.9	53.0
1982-86	61.9	103.0	34.2	58.1	97.5	31.6	91.9	147.6	52.6
1983-87	62.1	103.4	34.4	58.8	98.6	32.4	87.5	141.8	49.1
1984-88	65.0	108.1	36.3	62.2	103.8	35.0	86.0	142.7	46.2
1985-89	65.3	107.3	37.5	62.1	101.8	36.1	90.1	150.5	48.4
1986-90	66.8	108.3	39.7	63.5	102.1	38.6	92.7	156.3	49.1
1987-91	68.3	108.9	41.4	64.9	103.2	39.8	95.0	156.3	54.0
1988-92	69.6	108.0	44.3	66.3	101.3	43.1	95.8	161.7	53.7
1989-93	69.6	104.9	45.9	65.7	97.4	44.4	100.2	166.4	58.6
1990-94	71.1	105.5	47.4	68.0	99.1	46.3	96.7	159.6	56.6
1991-95	70.6	102.7	48.4	67.7	96.6	47.6	95.0	155.9	55.8
1992-96	70.4	100.3	50.2	68.0	95.1	49.7	91.6	145.5	57.2
1993-97	69.7	98.0	50.1	67.3	93.5	49.1	91.6	138.6	61.1
1994-98	68.4	96.5	49.5	67.2	94.0	49.0	82.3	121.5	57.4
1995-99	67.3	93.6	49.6	65.9	90.7	49.0	81.2	120.8	56.9
1996-00	65.3	90.0	48.2	64.6	88.5	47.8	75.6	109.8	54.3
1997-01	64.1	86.5	48.3	63.6	85.3	48.1	72.8	103.5	52.9
1998-02	62.1	83.5	46.7	61.9	82.4	47.1	68.2	99.1	48.1
<b>Kent</b>	<b>All</b>			<b>White</b>			<b>Black</b>		
	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
1980-84	49.9	80.5	28.0	48.2	79.9	25.9	64.1	92.9	***
1981-85	53.5	85.7	30.0	51.3	84.9	26.8	68.7	100.4	***
1982-86	54.3	85.1	31.9	53.2	85.4	29.4	63.8	92.0	***
1983-87	55.8	94.2	28.5	56.0	95.0	28.5	55.7	93.8	***
1984-88	60.1	101.7	30.0	60.4	101.2	31.5	59.0	109.7	***
1985-89	63.6	102.2	35.8	63.4	100.7	37.1	66.9	119.8	***
1986-90	65.1	99.8	40.7	64.7	98.4	41.7	73.1	116.7	***
1987-91	67.3	102.1	42.2	66.8	100.5	42.9	76.3	119.7	***
1988-92	69.6	103.7	44.9	69.3	101.6	46.3	77.0	126.0	***
1989-93	68.1	99.6	45.7	64.8	92.9	44.4	95.2	151.6	56.9
1990-94	72.0	109.1	45.0	70.8	105.8	45.1	85.5	138.8	***
1991-95	73.9	113.8	45.0	72.8	109.1	45.7	86.8	151.2	***
1992-96	73.8	112.2	46.2	72.2	106.9	46.6	91.8	154.8	49.9
1993-97	71.0	104.3	47.2	69.4	99.0	47.5	88.2	144.6	51.4
1994-98	70.6	102.9	48.3	71.8	102.6	49.9	71.6	111.4	46.3
1995-99	67.7	95.3	48.7	68.1	94.2	49.4	71.1	107.1	48.1
1996-00	67.4	95.6	47.8	69.6	98.0	49.7	60.5	89.7	40.8
1997-01	71.3	97.9	53.3	74.7	102.7	56.2	57.9	77.3	43.2
1998-02	70.4	97.1	51.6	74.4	102.8	55.0	55.7	72.9	***

\* Adjusted to the 2000 United States Population

\*\*\* Rates based on &lt; 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.



**Five-year Average Annual Age-adjusted Lung Cancer Mortality Rates for Delaware and Each County\***  
(con't)

New Castle	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	62.4	104.5	35.5	58.2	98.1	33.1	100.5	163.7	56.8
1981-85	62.9	104.6	36.1	59.0	99.1	33.7	97.0	154.9	57.3
1982-86	63.2	105.0	36.2	58.5	97.1	34.1	102.6	172.2	54.3
1983-87	63.4	105.5	36.3	59.4	99.0	34.3	97.0	161.2	53.1
1984-88	65.4	108.3	38.2	62.2	103.3	36.9	91.8	151.0	50.6
1985-89	64.3	106.2	37.8	61.0	100.7	36.4	91.3	150.2	51.0
1986-90	65.8	107.7	39.5	62.4	102.1	38.1	92.8	154.3	52.5
1987-91	66.7	107.9	41.0	63.0	102.2	38.7	96.0	157.0	57.6
1988-92	67.6	105.1	44.6	64.0	98.3	42.8	95.7	161.4	57.2
1989-93	67.5	102.6	45.3	63.3	94.5	43.5	99.3	168.3	58.8
1990-94	69.6	103.9	47.1	65.9	96.5	45.5	99.2	167.8	58.7
1991-95	68.8	99.8	48.2	65.0	92.6	46.8	98.3	159.5	60.3
1992-96	68.4	96.5	49.8	65.4	91.2	48.3	93.5	142.4	63.7
1993-97	67.9	95.2	49.1	65.1	91.0	47.2	92.7	134.4	65.5
1994-98	67.2	93.9	49.1	65.4	91.6	47.7	85.4	121.0	63.3
1995-99	66.0	91.9	48.6	63.8	88.5	47.0	85.7	126.2	61.9
1996-00	63.2	87.3	46.5	61.9	85.5	45.2	77.8	111.6	57.8
1997-01	61.1	83.3	45.6	59.8	81.5	44.4	75.4	106.4	56.7
1998-02	59.4	79.7	44.9	58.4	78.2	44.0	70.5	97.6	53.9
Sussex	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	65.9	116.9	29.0	64.5	115.1	35.5	77.8	137.0	***
1981-85	70.3	124.0	30.9	69.2	124.3	34.8	80.7	131.7	***
1982-86	64.5	112.4	29.5	62.1	111.5	29.5	81.4	121.2	53.0
1983-87	63.6	106.7	33.0	60.5	104.2	33.1	84.3	126.8	54.0
1984-88	67.8	114.9	34.6	65.0	111.7	34.7	89.4	148.8	52.5
1985-89	69.6	116.2	37.0	65.0	109.0	36.5	105.7	182.0	56.3
1986-90	71.0	117.4	38.8	65.8	106.8	39.5	110.3	202.7	46.6
1987-91	73.1	117.9	41.1	69.0	109.6	41.3	107.5	193.5	50.2
1988-92	74.3	118.6	41.9	70.1	109.7	41.9	109.8	198.3	50.4
1989-93	75.3	114.5	46.7	72.1	107.6	46.2	104.9	176.7	57.0
1990-94	74.2	107.6	49.0	71.7	102.1	48.5	96.6	157.6	55.2
1991-95	72.9	103.0	50.6	71.2	99.0	50.7	89.8	147.9	50.1
1992-96	73.7	102.7	53.9	72.3	97.5	55.3	86.0	146.8	***
1993-97	73.9	101.9	55.1	71.9	97.3	55.1	92.0	143.8	55.9
1994-98	70.7	99.2	51.6	69.2	95.5	51.9	83.7	132.7	49.5
1995-99	70.8	97.2	53.4	70.1	94.6	54.1	77.0	117.9	49.6
1996-00	69.7	93.9	52.9	68.4	90.7	53.1	83.8	126.1	55.9
1997-01	67.0	87.5	51.9	66.0	85.1	51.9	78.2	121.5	50.0
1998-02	63.6	84.2	48.4	63.2	81.5	49.6	71.3	127.6	***

\* Adjusted to the 2000 United States Population

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Table M-3**  
**Five-year Average Annual Age-adjusted ColoRectal Cancer Mortality Rates for Delaware and Each County**

State	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	31.8	37.3	28.9	31.7	36.2	29.0	34.3	46.4	28.2
1981-85	31.6	38.5	28.0	31.6	37.9	28.0	33.6	44.0	29.0
1982-86	30.6	37.2	27.1	30.5	36.3	27.0	33.5	45.2	28.3
1983-87	30.2	38.0	26.0	29.8	37.2	25.5	35.0	45.4	31.1
1984-88	29.9	37.5	25.5	29.8	37.0	25.3	33.4	44.2	28.4
1985-89	29.1	36.7	24.7	28.9	37.0	24.3	32.8	37.3	29.7
1986-90	29.6	36.6	25.3	29.4	36.8	25.0	32.8	36.7	30.4
1987-91	29.7	37.0	25.4	29.5	37.4	24.9	33.3	34.8	32.1
1988-92	28.8	35.7	24.5	28.4	35.8	23.9	32.7	34.4	30.6
1989-93	27.1	34.9	22.1	26.5	34.4	21.5	33.0	39.1	28.3
1990-94	26.8	32.7	22.8	26.1	32.4	21.9	32.7	35.0	30.8
1991-95	25.6	31.4	21.7	25.0	31.0	21.0	30.4	35.0	27.0
1992-96	24.4	30.7	20.1	23.5	30.1	18.9	31.9	36.1	28.8
1993-97	24.2	29.3	20.6	23.2	28.7	19.3	32.5	35.3	30.3
1994-98	24.0	27.6	21.4	23.2	27.3	20.3	30.6	30.4	30.2
1995-99	23.5	28.2	20.2	22.6	27.9	19.0	30.6	30.8	29.7
1996-00	22.3	26.5	19.4	21.2	25.8	18.0	32.0	32.0	31.1
1997-01	22.1	25.4	19.5	21.1	24.7	18.5	31.0	32.4	29.0
1998-02	21.0	25.3	18.0	20.1	24.6	16.9	29.0	33.4	26.0
Kent	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	25.3	29.6	21.9	25.1	28.6	21.7	***	***	***
1981-85	27.3	34.8	22.3	28.3	33.5	24.1	***	***	***
1982-86	27.7	34.6	23.1	28.4	33.2	24.5	***	***	***
1983-87	29.1	36.3	25.4	29.9	34.6	27.2	***	***	***
1984-88	31.4	33.4	30.3	31.9	32.3	31.4	***	***	***
1985-89	33.2	32.8	34.5	33.3	31.1	35.4	***	***	***
1986-90	32.9	29.4	36.0	32.6	27.5	36.4	38.5	***	***
1987-91	33.3	29.9	36.4	33.3	28.3	36.9	36.8	***	***
1988-92	30.4	26.5	32.2	29.9	25.8	31.7	37.1	***	***
1989-93	28.4	29.9	27.2	28.2	29.1	27.5	32.7	***	***
1990-94	25.6	30.2	22.8	25.9	30.6	23.1	***	***	***
1991-95	24.0	29.5	21.0	24.6	30.9	21.1	***	***	***
1992-96	24.6	29.7	22.1	24.4	30.8	21.4	***	***	***
1993-97	23.3	26.9	22.1	24.0	28.8	22.0	***	***	***
1994-98	23.3	23.5	24.2	23.8	25.3	23.7	***	***	***
1995-99	23.0	25.4	22.0	22.7	26.5	20.7	26.4	***	***
1996-00	20.6	22.3	19.7	19.7	23.2	17.4	27.6	***	***
1997-01	18.4	21.0	16.6	17.3	20.9	14.6	25.2	***	***
1998-02	18.3	22.3	15.8	16.6	21.5	13.3	27.9	***	***

\* Adjusted to the 2000 United States Population

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Five-year Average Annual Age-adjusted ColoRectal Cancer Mortality Rates for Delaware and Each County\* (con't)**

New Castle	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	34.2	40.1	31.4	34.0	38.6	31.6	38.4	55.2	29.8
1981-85	33.0	39.6	30.1	32.8	39.2	29.8	37.2	46.1	33.8
1982-86	32.3	38.9	29.3	32.0	38.0	28.9	37.2	49.0	32.6
1983-87	30.9	39.2	26.6	30.6	38.6	26.0	36.3	47.2	32.5
1984-88	30.2	39.2	25.3	30.1	38.8	25.0	35.4	46.0	30.9
1985-89	28.1	36.8	23.0	27.9	37.9	22.2	31.6	30.5	31.7
1986-90	28.6	37.4	23.3	28.6	38.4	22.8	30.3	29.9	30.2
1987-91	28.7	38.1	23.0	28.7	39.5	22.3	30.7	27.0	31.7
1988-92	28.3	36.8	23.4	28.0	37.6	22.7	32.4	30.6	32.0
1989-93	26.4	35.4	20.8	25.7	35.6	19.9	32.9	35.2	30.2
1990-94	27.0	33.2	22.7	26.0	32.9	21.3	36.4	36.7	35.2
1991-95	26.1	32.7	21.7	25.1	31.7	20.7	35.0	42.1	30.3
1992-96	24.9	32.7	19.7	23.6	31.5	18.3	34.9	42.8	30.3
1993-97	24.5	31.8	19.3	23.0	30.6	17.6	36.5	41.9	32.3
1994-98	24.3	29.8	20.3	23.1	28.8	18.9	34.0	37.0	31.3
1995-99	23.9	30.5	19.4	22.8	29.7	18.1	32.6	35.8	29.6
1996-00	22.9	28.5	19.0	21.5	27.4	17.6	34.4	37.1	30.8
1997-01	22.8	25.7	20.4	21.7	24.7	19.5	33.1	35.3	29.6
1998-02	21.5	25.1	19.0	20.8	24.5	18.2	28.8	33.6	25.4
Sussex	All			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1980-84	29.8	35.5	26.3	30.3	35.8	38.3	***	***	***
1981-85	30.9	39.3	25.9	31.1	39.5	34.9	***	***	***
1982-86	28.2	35.6	23.2	28.2	35.4	30.2	***	***	***
1983-87	28.9	35.8	24.6	27.8	35.3	29.1	38.5	***	***
1984-88	27.6	35.6	22.4	27.3	35.1	27.0	***	***	***
1985-89	29.1	39.0	22.8	28.6	38.2	26.5	34.7	***	***
1986-90	29.8	39.2	23.8	29.2	38.1	26.1	36.7	***	***
1987-91	30.2	39.1	24.8	29.2	37.5	25.7	39.5	***	***
1988-92	29.1	39.8	22.3	28.4	37.8	23.0	32.1	***	***
1989-93	28.4	37.5	22.2	27.2	34.9	22.2	35.0	***	***
1990-94	27.0	33.2	22.9	26.6	32.4	22.4	28.5	***	***
1991-95	25.1	28.9	22.1	24.8	28.7	21.7	***	***	***
1992-96	23.1	25.9	20.2	22.4	25.7	19.2	26.8	***	***
1993-97	24.1	24.2	23.1	23.2	23.5	22.2	32.0	***	***
1994-98	23.6	24.4	22.6	23.1	24.6	21.8	28.3	***	***
1995-99	23.0	24.4	21.3	22.4	24.3	20.3	29.1	***	***
1996-00	22.3	24.4	20.7	21.4	23.8	19.6	30.4	***	***
1997-01	22.8	27.4	19.4	22.0	26.7	18.6	32.0	***	***
1998-02	21.6	27.9	16.9	20.8	27.0	16.2	31.9	***	***

\* Adjusted to the 2000 United States Population

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Table M-4**  
**Five-year Average Annual Age-adjusted Female Breast Cancer Mortality Rates for Delaware and Each County\***

State	All Females	White Females	Black Females	New Castle	All Females	White Females	Black Females
1980-84	37.0	37.0	38.6	1980-84	38.2	37.8	44.9
1981-85	36.6	36.1	41.1	1981-85	38.8	38.2	45.9
1982-86	37.6	36.5	45.7	1982-86	38.2	36.9	50.3
1983-87	37.1	35.4	48.4	1983-87	38.6	35.9	57.1
1984-88	39.5	37.6	50.7	1984-88	41.3	38.5	60.1
1985-89	38.9	36.8	51.9	1985-89	40.8	38.0	58.4
1986-90	40.5	38.5	52.8	1986-90	42.3	39.7	58.1
1987-91	39.0	37.3	49.4	1987-91	41.7	39.7	52.8
1988-92	39.3	38.6	43.6	1988-92	41.5	41.1	43.0
1989-93	37.0	36.4	41.6	1989-93	39.0	39.1	38.3
1990-94	35.9	35.8	37.3	1990-94	38.7	39.0	36.6
1991-95	34.1	34.1	35.0	1991-95	36.0	36.2	35.0
1992-96	33.6	33.2	37.1	1992-96	35.2	35.3	35.5
1993-97	32.6	31.8	36.6	1993-97	33.4	33.1	34.3
1994-98	32.4	31.8	36.1	1994-98	33.2	32.5	37.0
1995-99	31.7	30.6	38.1	1995-99	31.8	31.1	35.9
1996-00	31.4	29.8	39.9	1996-00	32.2	31.3	37.3
1997-01	30.2	29.0	35.8	1997-01	30.5	29.5	35.4
1998-02	28.3	27.0	36.0	1998-02	29.3	28.0	37.1
Kent	All Females	White Females	Black Females	Sussex	All Females	White Females	Black Females
1980-84	37.2	40.9	***	1980-84	33.8	43.2	***
1981-85	34.2	35.8	***	1981-85	32.1	37.5	***
1982-86	37.9	40.4	***	1982-86	35.8	39.9	***
1983-87	38.8	41.6	***	1983-87	31.5	33.6	***
1984-88	40.4	43.5	***	1984-88	33.4	34.7	***
1985-89	38.2	39.7	***	1985-89	34.1	34.2	***
1986-90	41.7	42.3	***	1986-90	34.8	35.3	***
1987-91	38.1	37.8	***	1987-91	32.2	31.7	***
1988-92	38.0	37.4	***	1988-92	34.6	34.2	***
1989-93	36.7	35.6	***	1989-93	32.5	30.5	47.6
1990-94	32.8	32.9	***	1990-94	30.4	28.8	***
1991-95	30.3	32.0	***	1991-95	31.6	29.6	46.9
1992-96	30.6	31.8	***	1992-96	31.1	28.2	53.0
1993-97	29.4	31.0	***	1993-97	32.0	28.1	58.2
1994-98	29.9	32.3	***	1994-98	31.7	28.9	49.2
1995-99	30.7	31.7	***	1995-99	31.8	28.2	57.1
1996-00	31.2	31.6	***	1996-00	29.9	25.1	62.7
1997-01	29.2	30.8	***	1997-01	30.7	26.8	55.4
1998-02	27.6	27.7	***	1998-02	27.0	24.6	43.1

\* Adjusted to the 2000 United States Population

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Table M-5**  
**Five-year Average Annual Age-adjusted Cervical Cancer Mortality Rates for Delaware and Each County\***

State	All Females	White Females	Black Females	New Castle	All Females	White Females	Black Females
1980-84	5.3	4.5	12.1	1980-84	3.9	3.2	***
1981-85	4.7	4.0	***	1981-85	3.3	2.8	***
1982-86	4.4	3.3	11.9	1982-86	3.5	2.7	***
1983-87	4.1	3.1	10.4	1983-87	3.5	2.8	***
1984-88	4.3	3.3	***	1984-88	4.0	3.3	***
1985-89	4.1	3.1	***	1985-89	4.2	3.2	***
1986-90	4.5	3.4	10.7	1986-90	4.5	3.5	***
1987-91	4.2	3.4	9.4	1987-91	4.2	3.1	***
1988-92	4.3	3.5	***	1988-92	3.7	2.9	***
1989-93	4.5	3.8	9.4	1989-93	4.2	3.3	***
1990-94	4.5	3.8	9.3	1990-94	4.0	3.1	***
1991-95	4.2	3.5	8.4	1991-95	3.8	3.0	***
1992-96	4.4	3.7	9.7	1992-96	4.1	3.1	***
1993-97	4.7	4.0	10.0	1993-97	4.9	3.8	12.7
1994-98	4.7	3.9	10.3	1994-98	4.6	3.7	***
1995-99	4.8	4.3	8.9	1995-99	4.9	4.4	***
1996-00	4.5	4.0	8.1	1996-00	4.6	4.1	***
1997-01	4.5	4.1	7.0	1997-01	4.2	3.8	***
1998-02	4.2	3.9	6.6	1998-02	3.6	3.3	***
Kent	All Females	White Females	Black Females	Sussex	All Females	White Females	Black Females
1980-84	***	***	***	1980-84	8.0	11.5	***
1981-85	***	***	***	1981-85	7.3	***	***
1982-86	***	***	***	1982-86	6.2	***	***
1983-87	***	***	***	1983-87	***	***	***
1984-88	***	***	***	1984-88	***	***	***
1985-89	***	***	***	1985-89	***	***	***
1986-90	***	***	***	1986-90	***	***	***
1987-91	***	***	***	1987-91	***	***	***
1988-92	***	***	***	1988-92	***	***	***
1989-93	***	***	***	1989-93	***	***	***
1990-94	***	***	***	1990-94	***	***	***
1991-95	***	***	***	1991-95	5.8	***	***
1992-96	***	***	***	1992-96	5.6	***	***
1993-97	***	***	***	1993-97	5.3	***	***
1994-98	***	***	***	1994-98	5.3	***	***
1995-99	***	***	***	1995-99	5.4	***	***
1996-00	***	***	***	1996-00	4.4	***	***
1997-01	***	***	***	1997-01	5.3	5.1	***
1998-02	***	***	***	1998-02	5.7	5.5	***

\* Adjusted to the 2000 United States Population

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Table M-6**  
**Five-year Average Annual Age-adjusted Prostate Cancer Mortality Rates for Delaware and Each County\***

State	All Males	White Males	Black Males	New Castle	All Male	White Male	Black Male
1980-84	37.7	33.3	73.5	1980-84	37.9	34.8	67.9
1981-85	39.6	34.9	75.6	1981-85	37.5	34.2	66.9
1982-86	41.0	36.6	74.5	1982-86	38.2	34.8	68.1
1983-87	42.6	38.5	75.3	1983-87	38.3	34.5	70.2
1984-88	42.7	38.6	75.3	1984-88	39.1	35.3	71.2
1985-89	45.3	41.1	76.3	1985-89	40.4	35.5	81.8
1986-90	45.6	41.3	80.1	1986-90	42.8	37.2	91.2
1987-91	42.9	37.8	84.4	1987-91	40.2	33.6	98.4
1988-92	44.5	38.4	94.3	1988-92	44.7	36.7	115.1
1989-93	44.3	38.2	95.3	1989-93	45.6	37.6	116.8
1990-94	43.6	37.7	93.9	1990-94	45.8	38.8	109.3
1991-95	41.5	35.5	93.7	1991-95	44.7	37.6	110.1
1992-96	45.0	38.0	105.6	1992-96	49.5	42.4	117.7
1993-97	42.6	36.4	96.5	1993-97	46.5	40.3	105.8
1994-98	41.1	34.7	98.8	1994-98	45.1	38.6	110.0
1995-99	39.2	32.6	99.9	1995-99	43.1	36.6	106.8
1996-00	35.8	30.2	85.6	1996-00	38.1	33.1	87.2
1997-01	32.9	28.8	70.0	1997-01	35.1	31.1	72.8
1998-02	30.4	26.6	64.3	1998-02	32.3	28.7	65.7
<b>Kent</b>	<b>All Males</b>	<b>White Males</b>	<b>Black Males</b>	<b>Sussex</b>	<b>All Male</b>	<b>White Male</b>	<b>Black Male</b>
1980-84	31.0	26.4	***	1980-84	42.2	35.1	***
1981-85	34.4	29.7	***	1981-85	48.8	41.0	***
1982-86	39.0	35.0	***	1982-86	49.4	42.7	***
1983-87	49.3	43.7	***	1983-87	49.1	45.7	***
1984-88	51.0	46.5	***	1984-88	45.7	41.8	***
1985-89	58.1	55.0	***	1985-89	48.2	46.0	***
1986-90	55.9	55.6	***	1986-90	44.7	41.7	***
1987-91	53.2	53.4	***	1987-91	42.0	37.7	74.9
1988-92	48.0	46.9	***	1988-92	41.1	36.9	75.4
1989-93	43.9	41.9	***	1989-93	41.0	36.9	74.7
1990-94	39.5	34.4	***	1990-94	40.7	36.9	73.5
1991-95	37.2	30.2	***	1991-95	36.4	33.5	***
1992-96	37.3	26.9	95.8	1992-96	38.9	34.2	83.2
1993-97	33.2	23.8	85.9	1993-97	39.4	34.4	81.0
1994-98	31.4	23.3	***	1994-98	37.8	31.9	92.3
1995-99	31.8	23.4	82.0	1995-99	35.0	28.7	101.6
1996-00	28.3	19.7	80.2	1996-00	35.0	29.4	91.3
1997-01	28.4	20.8	73.9	1997-01	30.5	27.8	***
1998-02	27.5	20.7	69.1	1998-02	27.4	25.1	***

\* Adjusted to the 2000 United States Population

\*\*\* Rates based on < 20 events over 5-year period do not satisfy standards of accuracy and reliability and are suppressed.

**Table H-1  
Hispanic Deaths and Cases, Selected Cancers, Delaware: 1998-2002**

<b>Type of Cancer</b>	<b>Cases</b>	<b>Deaths</b>	<b>Type of Cancer</b>	<b>Cases</b>	<b>Deaths</b>
Bladder	4	0	Non-Hodgkin's	10	5
Brain & CNS	9	4	Oral Cavity	8	1
Breast	23	6	Ovary	4	1
Cervix	9	3	Pancreas	1	3
Colorectal	13	3	Prostate	25	3
Hodg. Lymph.	7	2	Soft Tissue	2	1
Kidney	3	0	Stomach	4	3
Larynx	5	2	Testis	7	0
Leukemia	7	6	Thyroid	8	0
Liver	3	4	Uterus	11	5
Lung/Bronchus	17	18	Unknown	3	1
Melanoma	2	0	All Other	14	8
Myeloma	1	0	Total	200	79

**Table UI-1**  
**Age-adjusted SEER Cancer Incidence Rates\***

All	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1980-84	427.5	514.3	378.6	430.2	515.0	385.3	475.5	631.5	370.7
1981-85	433.6	519.3	385.6	436.9	520.6	392.9	479.7	637.1	375.0
1982-86	438.8	524.8	390.7	442.5	526.9	397.9	483.9	638.9	381.8
1983-87	447.6	535.2	398.1	452.0	538.2	405.9	490.9	647.6	388.6
1984-88	454.1	542.9	403.8	459.1	546.9	411.8	494.4	650.1	393.1
1985-89	459.7	551.2	407.0	465.4	556.1	415.7	495.4	653.4	393.1
1986-90	466.3	563.6	409.4	472.5	569.3	418.3	501.9	664.9	397.0
1987-91	476.5	583.4	412.6	483.4	589.5	422.1	513.0	689.3	400.1
1988-92	485.0	602.2	412.9	491.6	608.2	422.1	526.2	717.4	403.7
1989-93	490.8	614.9	412.7	496.9	619.1	421.9	538.8	749.0	403.5
1990-94	493.9	619.3	413.6	499.2	621.7	422.7	551.4	772.8	408.1
1991-95	492.7	614.8	413.4	497.6	615.6	422.8	555.1	781.2	407.3
1992-96	487.7	601.4	413.2	492.2	600.9	422.6	552.6	772.4	407.6
1993-97	482.6	584.6	415.6	487.3	583.2	425.9	545.9	756.8	406.6
1994-98	481.1	574.1	420.3	486.7	573.8	431.4	538.2	735.9	407.9
1995-99	481.9	571.5	423.2	488.2	571.8	435.1	533.7	722.7	409.4
1996-00	482.8	571.8	424.0	490.2	573.2	436.8	529.5	714.3	408.0
1997-01	483.1	571.1	424.3	491.6	573.4	438.3	522.7	704.3	402.8
1998-02	480.5	567.2	422.0	489.2	569.9	435.7	519.5	693.1	404.2

\* Adjusted to the 2000 United States Population

**Table UI-2**  
**Age-adjusted SEER Lung Cancer Incidence Rates\***

Lung	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1980-84	63.0	100.3	36.3	62.3	98.7	36.8	85.8	149.2	39.1
1981-85	63.8	100.0	37.9	63.2	98.5	38.5	86.4	148.8	40.7
1982-86	64.5	100.0	39.3	63.9	98.3	40.0	88.5	151.5	43.0
1983-87	65.4	100.2	40.8	64.9	98.5	41.6	89.4	152.0	44.5
1984-88	66.4	100.0	42.5	66.0	98.6	43.3	89.7	150.7	46.2
1985-89	66.8	99.2	43.8	66.6	98.0	44.8	88.9	147.4	47.5
1986-90	67.5	98.9	45.3	67.5	97.8	46.5	88.3	144.9	48.7
1987-91	68.2	98.5	46.8	68.2	97.6	48.0	88.4	142.7	50.3
1988-92	68.5	97.6	47.9	68.4	96.4	49.1	90.2	143.8	52.8
1989-93	68.4	96.7	48.5	68.3	95.3	49.7	89.8	141.9	53.7
1990-94	68.3	95.3	49.4	68.2	93.9	50.6	89.4	139.6	54.6
1991-95	68.1	93.8	49.9	68.0	92.3	51.3	89.2	139.9	54.2
1992-96	67.5	92.0	50.3	67.6	90.4	51.8	87.3	136.4	53.8
1993-97	66.9	89.8	50.8	67.2	88.4	52.5	84.9	132.4	52.8
1994-98	66.9	88.6	51.5	67.3	87.2	53.4	85.1	131.4	53.8
1995-99	66.6	87.3	51.8	67.0	85.8	53.9	84.4	129.4	54.2
1996-00	65.9	85.6	52.0	66.5	84.3	54.0	83.1	124.3	55.5
1997-01	65.2	83.9	51.8	65.9	82.8	53.9	82.1	121.3	55.7
1998-02	64.3	82.2	51.5	65.0	81.3	53.4	81.7	117.5	57.6

\* Adjusted to the 2000 United States Population



**Table UI-3**  
Age-adjusted SEER ColoRectal Cancer Incidence Rates\*

ColoRectal	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1980-84	63.8	75.7	55.8	64.4	76.7	56.3	64.6	73.3	58.9
1981-85	64.3	76.6	56.0	65.1	77.7	56.6	63.3	72.3	57.4
1982-86	64.3	77.0	55.6	65.0	78.2	56.2	63.6	72.2	57.9
1983-87	64.3	77.5	55.3	64.9	78.6	55.7	64.6	73.9	58.5
1984-88	63.9	77.4	54.5	64.4	78.4	54.8	63.9	73.2	57.7
1985-89	63.2	76.9	53.8	63.6	77.6	54.0	64.3	75.0	57.0
1986-90	62.1	75.9	52.6	62.3	76.6	52.6	64.9	75.2	58.1
1987-91	61.2	74.9	51.6	61.2	75.4	51.5	65.1	75.9	58.0
1988-92	60.2	73.5	50.9	60.2	73.9	50.8	65.0	76.1	57.7
1989-93	59.3	72.2	50.2	59.2	72.4	50.0	65.2	77.2	57.4
1990-94	58.1	70.4	49.3	57.9	70.6	48.9	65.2	76.3	57.9
1991-95	56.8	68.3	48.4	56.5	68.3	48.0	64.2	75.6	56.8
1992-96	55.8	66.8	47.7	55.6	66.8	47.3	62.8	73.6	55.7
1993-97	55.5	66.4	47.5	55.3	66.3	47.2	62.4	73.3	55.3
1994-98	55.5	66.0	47.7	55.3	66.0	47.4	62.1	72.5	55.5
1995-99	55.4	65.9	47.7	55.2	65.8	47.4	61.9	71.9	55.5
1996-00	55.3	65.8	47.6	55.2	65.7	47.3	62.2	72.3	55.7
1997-01	54.9	65.1	47.4	54.7	64.8	47.0	63.1	73.6	56.3
1998-02	54.0	63.4	46.9	53.6	63.0	46.4	62.6	72.9	56.2

\* Adjusted to the 2000 United States Population

**Table UI-4**  
Age-adjusted SEER Breast Cancer Incidence Rates\*

	All Races		
	All Females	White Females	Black Females
1980-84	108.3	111.8	96.5
1981-85	112.7	116.3	100.9
1982-86	116.8	120.4	105.0
1983-87	122.4	126.5	108.1
1984-88	126.5	130.9	111.2
1985-89	128.7	133.4	111.9
1986-90	130.2	135.1	113.2
1987-91	131.6	136.7	113.6
1988-92	131.1	135.8	116.4
1989-93	130.7	135.2	116.6
1990-94	131.4	135.8	119.9
1991-95	131.5	136.0	120.9
1992-96	131.5	135.9	122.2
1993-97	132.6	137.2	122.3
1994-98	134.9	139.8	122.8
1995-99	136.9	141.9	123.3
1996-00	137.5	142.9	121.7
1997-01	138.1	143.9	119.6
1998-02	137.2	143.1	118.8

\* Adjusted to the 2000 United States Population

**Table UI-5**  
Age-adjusted SEER Cervical Cancer Incidence Rates\*

	All Races		
	All Females	White Females	Black Females
1980-84	11.0	9.9	21.8
1981-85	10.6	9.5	20.9
1982-86	10.6	9.6	19.8
1983-87	10.5	9.5	19.2
1984-88	10.5	9.5	19.2
1985-89	10.5	9.5	18.1
1986-90	10.6	9.6	17.6
1987-91	10.4	9.5	17.2
1988-92	10.4	9.6	16.3
1989-93	10.2	9.6	15.2
1990-94	9.9	9.3	14.9
1991-95	9.6	8.9	14.3
1992-96	9.5	8.8	13.8
1993-97	9.3	8.6	13.8
1994-98	9.2	8.4	13.6
1995-99	9.0	8.2	13.5
1996-00	8.7	8.1	12.8
1997-01	8.4	7.9	12.2
1998-02	8.0	7.6	11.6

**Table UI-6**  
**Age-adjusted SEER Prostate Cancer**  
**Incidence Rates\***

	<b>All</b>	<b>White</b>	<b>Black</b>
	<b>Males</b>	<b>Males</b>	<b>Males</b>
1980-84	109.2	108.1	168.0
1981-85	111.1	110.1	169.8
1982-86	113.1	112.3	171.0
1983-87	118.2	117.7	175.2
1984-88	123.4	123.3	179.2
1985-89	130.1	130.5	181.7
1986-90	141.2	142.0	192.2
1987-91	160.3	161.5	216.2
1988-92	181.0	182.1	243.7
1989-93	195.3	195.2	274.1
1990-94	202.3	200.8	297.9
1991-95	201.8	199.0	309.2
1992-96	192.6	188.5	307.6
1993-97	179.7	174.6	297.9
1994-98	171.7	166.9	285.4
1995-99	172.0	167.4	280.3
1996-00	174.3	169.9	281.5
1997-01	176.8	172.8	277.7
1998-02	177.5	173.5	277.2

\* Adjusted to the 2000 United States Population

**Table UM-1**  
**Age-adjusted U.S. Cancer Mortality Rates\***

All	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1980-84	208.4	272.6	167.6	204.5	265.9	166.1	261.1	364.9	191.2
1981-85	209.2	273.5	168.6	205.3	266.5	167.2	263.4	369.7	192.6
1982-86	210.3	274.8	169.8	206.3	267.6	168.3	266.0	373.8	194.9
1983-87	211.0	275.4	170.6	206.9	268.2	169.0	268.1	377.4	196.8
1984-88	211.7	276.0	171.4	207.6	268.6	169.9	269.7	380.4	198.3
1985-89	212.4	276.7	172.2	208.3	269.1	170.7	271.2	383.9	199.3
1986-90	213.1	277.5	172.9	208.9	269.8	171.3	273.5	388.1	201.1
1987-91	213.8	278.1	173.7	209.5	270.3	172.0	275.4	391.5	202.8
1988-92	214.1	278.2	174.2	209.7	270.3	172.5	276.1	392.7	204.0
1989-93	214.2	278.0	174.7	209.9	269.9	172.9	277.2	394.9	205.2
1990-94	213.7	276.7	174.6	209.4	268.8	172.9	276.5	392.8	205.8
1991-95	212.7	274.4	174.4	208.6	266.8	172.6	274.5	388.8	205.6
1992-96	211.1	271.3	173.5	207.1	264.0	171.9	271.8	384.4	204.3
1993-97	209.1	267.7	172.5	205.3	260.5	170.8	269.2	379.2	203.7
1994-98	206.6	263.2	170.9	203.0	256.4	169.4	264.9	370.5	202.1
1995-99	204.4	259.3	169.5	201.0	252.9	168.0	261.3	363.3	200.8
1996-00	202.1	255.3	168.2	199.0	249.2	166.9	257.0	355.7	198.5
1997-01	199.9	251.3	166.8	197.0	245.7	165.6	252.7	347.4	196.7
1998-02	197.9	247.6	165.5	195.3	242.6	164.5	248.4	339.4	194.4

\* Adjusted to the 2000 United States Population

**Table UM-2**  
**Age-adjusted U.S. Lung Cancer Mortality Rates\***

Lung	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1980-84	51.3	86.4	26.5	50.6	84.7	26.7	62.2	111.9	26.5
1981-85	52.3	87.1	27.8	51.6	85.4	28.0	63.5	114.1	27.5
1982-86	53.3	87.9	29.1	52.6	86.1	29.4	64.8	116.0	28.7
1983-87	54.3	88.5	30.3	53.6	86.7	30.6	66.0	117.9	30.0
1984-88	55.2	89.1	31.5	54.5	87.2	31.9	67.1	119.7	30.9
1985-89	56.1	89.4	32.9	55.5	87.5	33.3	68.3	121.1	32.3
1986-90	57.0	89.9	34.2	56.4	87.8	34.6	69.6	122.6	33.7
1987-91	57.8	90.0	35.4	57.2	88.0	35.9	70.5	123.5	34.9
1988-92	58.3	89.6	36.6	57.7	87.5	37.1	71.1	123.4	36.1
1989-93	58.8	89.2	37.6	58.2	87.1	38.2	71.4	123.3	37.0
1990-94	58.9	88.4	38.4	58.4	86.3	39.0	71.3	122.1	37.7
1991-95	58.8	87.1	39.1	58.3	85.1	39.7	70.7	120.3	38.2
1992-96	58.6	85.7	39.7	58.2	83.8	40.3	70.1	118.2	38.6
1993-97	58.3	84.4	40.1	58.0	82.6	40.8	69.4	116.0	38.9
1994-98	57.9	82.8	40.4	57.6	81.2	41.1	68.5	113.1	39.5
1995-99	57.3	81.1	40.5	57.1	79.6	41.3	67.5	110.1	39.8
1996-00	56.7	79.5	40.7	56.6	78.1	41.5	66.4	107.1	40.0
1997-01	56.2	77.9	40.8	56.2	76.7	41.6	65.2	104.3	39.9
1998-02	55.7	76.4	40.9	55.8	75.3	41.9	64.1	101.4	39.9

\* Adjusted to the 2000 United States Population

**Table UM-3**  
**Age-adjusted U.S. ColoRectal Cancer Mortality Rates\***

ColoRectal	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1980-84	27.4	33.2	23.8	27.4	33.3	23.6	29.0	33.4	26.1
1981-85	27.2	33.0	23.5	27.2	33.1	23.3	29.4	33.6	26.5
1982-86	26.9	32.8	23.2	26.9	32.8	23.0	29.5	34.1	26.5
1983-87	26.7	32.6	22.8	26.6	32.6	22.6	29.7	34.4	26.6
1984-88	26.3	32.2	22.5	26.2	32.1	22.2	29.8	34.7	26.6
1985-89	25.9	31.7	22.0	25.7	31.6	21.7	29.9	35.1	26.6
1986-90	25.4	31.3	21.5	25.2	31.1	21.2	29.9	35.8	26.3
1987-91	25.0	30.8	21.1	24.7	30.6	20.7	30.0	35.8	26.3
1988-92	24.5	30.3	20.7	24.2	30.1	20.3	29.9	36.1	26.1
1989-93	24.1	29.8	20.4	23.7	29.5	19.9	30.0	36.4	26.1
1990-94	23.7	29.3	20.0	23.3	29.0	19.5	29.8	36.2	25.9
1991-95	23.3	28.7	19.7	22.9	28.3	19.2	29.6	36.0	25.7
1992-96	22.9	28.1	19.3	22.4	27.7	18.8	29.3	35.7	25.3
1993-97	22.4	27.5	19.0	22.0	27.1	18.5	29.1	35.5	25.2
1994-98	22.0	26.9	18.6	21.5	26.4	18.1	28.8	35.1	25.0
1995-99	21.6	26.3	18.3	21.1	25.9	17.8	28.7	34.9	24.9
1996-00	21.2	25.8	18.0	20.7	25.3	17.5	28.5	34.6	24.6
1997-01	20.9	25.3	17.7	20.3	24.8	17.1	28.3	34.3	24.5
1998-02	20.5	24.8	17.4	20.0	24.3	16.8	27.9	34.0	24.1

\* Adjusted to the 2000 United States Population

**Table UM-4**  
**Age-adjusted U.S. Breast Cancer Mortality Rates\***

	All Races		
	All Females	White Females	Black Females
1980-84	32.2	32.3	33.5
1981-85	32.4	32.5	34.1
1982-86	32.6	32.7	34.7
1983-87	32.7	32.7	35.3
1984-88	32.9	32.9	36.1
1985-89	33.0	33.0	36.3
1986-90	33.0	33.0	36.9
1987-91	33.0	32.9	37.5
1988-92	32.8	32.6	37.6
1989-93	32.4	32.2	37.6
1990-94	31.9	31.7	37.8
1991-95	31.4	31.1	37.9
1992-96	30.8	30.4	37.6
1993-97	30.1	29.7	37.7
1994-98	29.3	28.9	37.2
1995-99	28.5	27.9	36.7
1996-00	27.7	27.2	35.9
1997-01	27.0	26.4	35.4
1998-02	26.4	25.9	34.7

\* Adjusted to the 2000 United States Population

**Table UM-5**  
**Age-adjusted U.S. Cervical Cancer Mortality Rates\***

	All Races		
	All Females	White Females	Black Females
1980-84	4.2	3.6	9.9
1981-85	4.0	3.5	9.6
1982-86	3.9	3.4	9.4
1983-87	3.8	3.3	9.1
1984-88	3.7	3.2	8.8
1985-89	3.7	3.1	8.6
1986-90	3.7	3.1	8.4
1987-91	3.6	3.1	8.1
1988-92	3.6	3.1	8.1
1989-93	3.5	3.0	8.0
1990-94	3.5	3.0	7.6
1991-95	3.4	2.9	7.4
1992-96	3.3	2.9	7.1
1993-97	3.3	2.9	6.8
1994-98	3.2	2.8	6.5
1995-99	3.1	2.7	6.2
1996-00	3.0	2.7	5.9
1997-01	2.9	2.6	5.6
1998-02	2.8	2.5	5.3

**Table UM-6**  
**Age-adjusted U.S. Prostate Cancer**  
**Mortality Rates\***

	<b>All</b>	<b>White</b>	<b>Black</b>
	<b>Males</b>	<b>Males</b>	<b>Males</b>
1980-84	33.5	31.2	63.7
1981-85	33.7	31.3	64.8
1982-86	34.0	31.6	65.5
1983-87	34.4	31.9	66.8
1984-88	34.8	32.3	67.8
1985-89	35.4	32.9	69.0
1986-90	36.3	33.7	71.1
1987-91	37.2	34.5	73.3
1988-92	38.0	35.3	75.5
1989-93	38.7	35.9	77.9
1990-94	39.0	36.1	79.6
1991-95	38.7	35.8	79.6
1992-96	38.1	35.1	79.7
1993-97	37.1	34.1	78.6
1994-98	35.7	32.8	76.8
1995-99	34.3	31.5	74.8
1996-00	32.9	30.2	72.9
1997-01	31.6	28.9	70.5
1998-02	30.3	27.8	68.2

\* Adjusted to the 2000 United States Population

# **Delaware Cancer Incidence and Mortality Rates Technical Notes**

## **Delaware Population**

Populations used for rate calculations come from the Delaware Population Consortium (DPC), in their September 23, 2003 (Version 2003.0) estimate. More information about DPC can be found at the following web site:  
<http://www.cadsr.udel.edu/demography/consortium.htm>

## **Estimated U.S. Incidence Rates**

The Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute is an authoritative source of information on cancer incidence and survival in the United States. Case ascertainment for SEER began on January 1, 1973. The SEER Program currently collects and publishes cancer incidence and survival data from 11 population-based cancer registries and three supplemental registries covering approximately 26 percent of the US population. Because no complete registry of cancer incidence exists for the nation, as it does for mortality data, SEER incidence rates are usually used to estimate U.S. cancer incidence rates. For further information, see:  
[http://seer.cancer.gov/csr/1975\\_2000/results\\_merged/sect\\_01\\_overview.pdf](http://seer.cancer.gov/csr/1975_2000/results_merged/sect_01_overview.pdf).

## **U.S. Mortality Rates**

The SEER Program annually obtains from the National Center for Health Statistics a public-use file containing information on all deaths occurring in the US by calendar year. Information on each death includes age at death, sex, geographic area of residence, and underlying and contributing causes of death. For this publication, only the underlying cause of death is used in the calculation of mortality rates. For further information, see:  
[http://seer.cancer.gov/csr/1975\\_2000/results\\_merged/sect\\_01\\_overview.pdf](http://seer.cancer.gov/csr/1975_2000/results_merged/sect_01_overview.pdf).

## **International Classification of Disease Coding**

From 1980 to 2000, the International Classification of Diseases for Oncology second edition (ICD-O-2) was used by hospitals and cancer registries as the standard for classifying cancers by site. Beginning in 2001, ICD-O-3 became the new standard. To assure that cancer incidence rates could be fairly compared throughout the years in this report, all rates are based on ICD-O-3). All SEER incidence rates are also based on ICD-O-3.

Similarly, ICD-9 was the standard to assign cause of death prior to 1999, and ICD-10 was the standard from 1999 to present. Rates in this report from 1999-

2001 were converted to ICD-9 to allow a fair comparison over all years reported. This is the same procedure used by SEER for U.S. mortality rates included in this report. For further information, see: <http://seer.cancer.gov/tools/conversion/>.

## **Age-Adjustment**

Age-adjustment is a commonly used statistical procedure that permits a fair comparison of incidence or mortality rates over time, or in geographic areas or populations that have different age distributions. Since an older population would be expected to have a higher cancer rate than a younger population, age-adjustment is used to make comparisons of rates without the influence of age. All rates in the tables in this report are calculated by the direct method of age-adjustment. This method applies the age-specific rates of a study group, to the age distribution of a standard population. The result is the rate that would theoretically occur if the study population had the same age structure as the standard. In this publication, all rates are adjusted to the U.S. States population in 2000, as provided by the U.S. Census Bureau.

## **Suppression of Rates**

Rates are suppressed in the tables when there are less than 20 events occurring in the study time period for which a rate is being calculated. Rates based on a small number of events would be subject to random variation and too statistically unreliable for presentation. Review of the literature indicates that a wide variety of methods are used to determine the number of events below which rates are suppressed. Less than twenty events is consistent with the Annual Delaware's Vital Statistics Reports and the National Center for Health Statistics. For further information, see: [http://www.cdc.gov/nchs/data/nvsr/nvsr52/nvsr52\\_03.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr52/nvsr52_03.pdf) (pp 112 - 115).

## **Hispanic Cancer Rates**

The Division of Public Health desires to present cancer rates for racial ethnic groups in addition to Delaware's white and Black populations. To explore this possibility, an attempt was made to calculate rates for Delawareans with Hispanic ethnicity. However, this report includes only cancer deaths and cases for the Hispanic population in Delaware (Table H-1). Rates were not calculated because of several methodological issues that would prevent the rates from being fairly compared with similar data for the white and Black populations. Because cancer rates are calculated by dividing the number of cancer cases (numerator) by a population (denominator), the rates can be heavily influenced by changes or uncertainties in either. Specific issues that suggest that Hispanic cancer rates would be subject to misinterpretation are listed below.

- *Uncertain estimate of Delaware's Hispanic population.* Estimates of the Delaware population are derived by a census performed every 10 years by the U.S. Census Bureau. The Delaware Population Consortium (DPC) uses the census to estimate the Delaware population between census years. In 1997, the DPC began releasing studies on special topics of interest, including Hispanic population estimates. Because the estimates are calculated from mortality, fertility, labor-force, and migration statistics, and because these statistics are based on a small population of Hispanics, DPC urged that Hispanic population estimates presented in their studies be utilized with caution (Delaware Population Consortium. *Delawareans of Hispanic Origin, 1991 - 1998*. Population Study Series. PS-00-01, April 2000). For these reasons also, the estimates are not included in DPC's annual Delaware population projection. In less populated areas, such as small states, and especially in subsets of the population (for example for one sex or one county), even a small inaccuracy can result in a substantial error in the cancer rate.
- *Inaccurate recording of Hispanic ethnicity on death certificates.* Race and Hispanic origin are treated as distinct concepts and reported separately on death certificates and to the Delaware Cancer Registry, in accordance with guidelines from the Federal Office of Management and Budget. To assess the completeness of the reporting of Hispanic ethnicity, an expected number of cancer cases and deaths in the Hispanic population was calculated and compared to the actual (observed) reports. Because the Hispanic population is younger than the Delaware population as a whole, and because cancer rates increase with age, the expected values were age-adjusted to assure comparability. There were 79 deaths from cancer actually reported on death certificates between 1998 and 2001, but 122 expected. Similarly, 200 cases were actually reported to the registry, but 367 expected. Although this analysis is a cursory attempt to estimate the degree of under-reporting of Hispanic ethnicity, it demonstrates the possibility of significant inaccurate Hispanic cancer rates.\*
- *Small number of cases or deaths, and small population sizes.* An incidence or mortality rate is actually an estimate. The reliability of the estimate can be measured by calculating a confidence interval. A small confidence interval suggests that the rate is a good estimate and a wide confidence interval suggests that the rate should be interpreted with caution. If the confidence

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\* This analysis assumes that the risk of cancer in the Hispanic population, for any particular age, is the same as the Delaware population as a whole. The indirect method of age-adjustment was used to calculate the expected number of cases and deaths in the Hispanic population. The indirect method applies the age-specific rates of a standard population (Delaware's 1998-2002 rates) to the age distribution of the study (Hispanic) population in order to estimate the expected deaths or cases in the study population. Indirect adjustment is used in when the number of deaths or cases in each age group in the study population is too small to calculate stable age-specific rates. The rest of this report uses the direct method of age-adjustment, which is explained elsewhere in these technical notes.



intervals of two rates do not overlap, the rates are considered to be statistically different. Both the size of the numerator (number of cases or deaths) and the denominator (the population) determine the width of the confidence interval.

To illustrate the impact of these statistical concepts on calculation of Hispanic cancer rates, five year average annual age-adjusted cancer rates were compared for three race/ethnic group, along with their 95 percent confidence intervals. A 95 percent confidence interval suggests that there is a 95 percent probability that the actual rate is within that interval.

As shown in the table below, the small numerators and denominators for the Hispanic population produce large confidence intervals as compared to those of the White and Black Delaware population.

<b>Cancer Cases, Population, and Age-Adjusted Cancer Incidence Rates, Delaware: 1998-2002</b>					
				<b>95% Confidence Interval</b>	
	<b>Average Annual Cases (1998-2002)</b>	<b>Average Annual Population (1998-2002)</b>	<b>Annual Average Rate per 100,000</b>	<b>Lower</b>	<b>Upper</b>
Hispanic	40	36,917	267.6	230.5	304.6
White	3355	593,826	496.1	488.6	503.6
Black	580	156,698	531.2	511.8	550.5
<b>Cancer Deaths, Population, and Age-Adjusted Cancer Mortality Rates, Delaware: 1998-2002</b>					
				<b>95% Confidence Interval</b>	
	<b>Average Annual Deaths (1998-2002)</b>	<b>Average Annual Population (1998-2002)</b>	<b>Annual Average Rate per 100,000</b>	<b>Lower</b>	<b>Upper</b>
<b>Hispanic</b>	79	36,917	148.3	117.4	184.8
<b>White</b>	7074	593,826	208.1	203.2	212.9
<b>Black</b>	1264	156,698	252.0	238.1	265.9

For Hispanics, the population is estimated by U.S. Census Bureau. For whites and Blacks, the population is provided by the Delaware Population Consortium.