

Rachel's Environment & Health News

#550 - Cancer Trends

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U.S. cancer trends are increasingly bleak. There are two ways to judge cancer trends: by incidence rates and by death rates. Cancer incidence refers to the number of new cases of cancer per 100,000 population, age-adjusted. Similarly, the cancer death rate is the number of cancer deaths per 100,000 population, age-adjusted. The purpose of adjusting for age is to eliminate trends that might occur simply because the average age of the population is increasing. In other words, age-adjusting eliminates the argument, "Cancer only SEEMS to be getting worse because people are living longer."

Table 1 presents the latest U.S. cancer statistics from the National Cancer Institute, covering the period 1950 to 1992 (the last year for which published data are available).[1] As the table makes clear, there are four cancers for which the news is entirely good: both incidence and deaths are declining (cervix, stomach, rectum, and uterus).

There are also eight cancers for which the news is mixed: incidence is increasing while deaths are declining. These cancers are striking a larger proportion of Americans each year, yet surgery, chemotherapy, and radiation treatments are keeping more victims alive. These are the eight cancers that more people are having to learn to live with: cancers of the colon, larynx, testicles, bladder, and thyroid, Hodgkin's disease, leukemias, and all childhood cancers.

Then there are 11 cancers for which the news is all bad: incidence is rising, and so is the death rate. These 11 are: cancers of the ovaries, lung, skin, female breast, prostate, kidney, liver, non-Hodgkin's lymphomas, multiple myeloma, brain, and pancreas.

In the U.S., the incidence of all cancers has increased 54.3% during the past 45 years, and the death rate for all cancers has increased 9.6%. However, lung cancer --which is caused mainly by cigarettes-- dominates these increases. However, if lung cancer is excluded, the incidence of all cancers has still increased an impressive 40.8% during the past 45 years, but the death rate has declined 15.0% during the same period. This shows rather dramatically the extent to which more of us each year are "learning to live with cancer."

A recent review article by the staff of the National Cancer Institute (NCI) adds some perspective to these numbers.[2] Among men, prostate cancers account for two-thirds of the cancer incidence increase during the past 20 years. Notable increases have also occurred in non-Hodgkin's lymphomas and skin cancers (melanomas).

Among women, the major increases of the past 20 years occurred in cancers of the breast and lung, followed by non-Hodgkin's lymphomas and skin melanomas.

The NCI analysts found that, in general, the rising incidence of cancers in the U.S. is dominated by increases at older ages in breast, prostate, and lung.

Regarding breast cancer, the NCI analysts say that some, though not all, of the increase is accounted for by earlier detection. They point out that the biggest increase has occurred among estrogen-responsive tumors --that is to say, the kind of breast cancer that is increasing most rapidly is the kind that is influenced by the presence of estrogen, "suggesting that some of the changes are related to hormonal factors," the NCI analysts say.

Among men the biggest increase is found in prostate cancer --another cancer influenced by hormones. The NCI analysts say better diagnosis accounts for part, but not all, of the increase. They conclude, "it is possible that nutritional practices (e.g., increased consumption of fat and meat) have contributed to the upward trend."

These data hide significant differences between races. The highest incidence of cancer in the U.S. occurs among black men (557.2

cases per year among each 100,000 persons), followed by white men (464.0), then

white women (348.0), then black women (331.8).

The incidence of colon cancer is 20% higher among blacks than among whites.[3] The incidence of multiple myeloma is about 50% higher among blacks than among whites, and the incidence of prostate cancer is 71% higher among blacks. (Multiple myeloma is cancer of the immune system's cells in the bone marrow.) Lung cancer --caused mainly by cigarette smoking-- is 36% higher among blacks than among whites.[4]

Relative survival rates are poorer among blacks than among whites; generally, about 75% as many blacks as whites survive a particular cancer. Survival rates are thought to reflect socio-economic status. Thirty percent of blacks live in poverty vs. only 13% of whites.[4] Among blacks cancer tends to be at an advanced stage when it is first detected, compared to whites, which partially explains why black survival rates are poorer.

Much cancer is caused by "environmental factors," broadly defined to include food, drink, and habits such as smoking tobacco and basking in the sun.

Numerous studies have shown that environmental factors are far more important than genetic, inherited factors. Cancer rates differ from country to country. When people migrate from one country to another, within a generation or two their cancer rates have changed from those of their country of origin to those of their new homeland. For example, Japanese women living in Japan have a low rate of breast cancer; but Japanese women who move to the U.S. soon have U.S. rates of breast cancer.

These "migration studies" --of which there are now many in the literature[5]-- tell us that many cancers are preventable. Unfortunately, there is a great deal of money to be made treating cancer, and little money to be made preventing cancer. And so cancer prevention today gets about one penny out of every dollar spent on cancer research.

So long as we continue to bathe ourselves in carcinogens in air, water, and food, and in chemicals that degrade our immune systems, more of us each passing year will have to learn to live with cancer. Present policies are exceedingly expensive (estimated at \$72.5 billion in 1985) and don't make much sense from a public health viewpoint, but they make eminently good sense from the viewpoint of the cancer industry --those who cause it and those who sell services that ameliorate its effects. The cancer industry is robust and healthy; by comparison, the proponents of prevention are sickly, weak and pallid.

--Peter Montague (National Writers Union, UAW Local 1981/AFL-CIO)

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[1] Source: C.L. Kosary and others, editors, SEER CANCER STATISTICS REVIEW 1973-1992 [National Institutes of Health Publication No. 96-2789] (Bethesda, Md.: National Cancer Institute, 1995), Table I-3, pg. 17. NIH says historical data for non-whites are not considered reliable spanning the period 1950-1992 so historical data are only given for whites.

[2] Susan S. Devesa and others, "Recent Cancer Trends in the United States," JOURNAL OF THE NATIONAL CANCER INSTITUTE Vol. 87, No. 3 (February 1, 1995), pgs. 175-182.

[3] Lynn A. Gloeckler Ries and others, "Cancer incidence, mortality, and patient survival in the United States," in David Schottenfeld and Joseph F. Fraumeni, Jr., editors, CANCER EPIDEMIOLOGY AND PREVENTION [SECOND EDITION] (New York: Oxford

University Press, 1996), pgs. 168- 191.

[4] John W. Horm and others, "Cancer incidence, mortality, and survival among racial and ethnic minority groups in the United States," in David Schottenfeld and Joseph F. Fraumeni, Jr., editors, CANCER EPIDEMIOLOGY AND PREVENTION [SECOND EDITION] (New York: Oxford University Press, 1996), pgs. 192-235.

[5] David B. Thomas and Margaret K. Karagas, "Migrant studies," in David Schottenfeld and Joseph F. Fraumeni, Jr., editors, CANCER EPIDEMIOLOGY AND PREVENTION [SECOND EDITION] (New York: Oxford University Press, 1996), pgs. 236-254.

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TABLE 1

U.S. Cancer Incidence and Deaths in 1992, and the Percent Change in Age- Adjusted Rates of Incidence and Death per 100,000 U.S. Population, 1950- 1992. . . ----ALL RACES-----

-----WHITES-----	Cancer	Incidence	Deaths	Percent	Percent
type in 1992	in 1992	change in	change in	incidence,	deaths,
		1950-1992	1950-1992	(estimated)	
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-----	stomach	24,400	13,630		
-74.8	-77.6	cervix	13,500	4,641	-76.6
		-74.5	rectum	45,000	7,785
-21.3	-66.9	colon	111,000	49,204	+21.6
		-15.0	larynx	12,500	3,966
+50.9	-7.4	testicles	6,300	355	+113.6
		-69.6	bladder	51,600	10,705
+57.1	-34.8	Hodgkin's disease	7,400	1,639	+17.3
		-67.8	childhood		
cancers	7,800	1,679	+4.9	-62.4	leukemias
		28,200	19,417	+8.7	-2.1
thyroid	12,500	1,111	+115.3	-49.5	ovaries
		21,000	13,181	+5.2	+2.5
lung	168,000	145,801	+267.4	+264.0	skin melanomas
		32,000	6,568		
+393.3	+155.0	breast (female)	180,000	43,063	+55.9
		+0.2	prostate		
132,000	34,238	+266.4	+20.7	kidney	26,500
		10,427	+120.6	+37.2	
liver	15,400	9,554	+107.3	+22.8	non- Hodgkin's lymphomas
		41,000			
20,058	+183.6	+123.1	multiple myeloma	12,500	9,247
		+235.8			
+194.0	brain	16,900	11,941	+85.2	+50.4
		pancreas	28,300	26,070	
+13.6	+17.8	. All types ex-	962,000	374,747	+40.8
		-15.0	cluding		
lung	. All types	1,130,000	520,548	+54.3	+9.6

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Descriptor terms: cancer statistics; lung cancer; brain cancer; multiple myeloma; pancreatic cancer; non-hodgkin's lymphomas; liver cancer; kidney cancer; prostate cancer; breast cancer; skin cancer; melanoma; ovarian cancer; thyroid cancer; hormones; leukemia; childhood cancer; hodgkin's disease; bladder cancer; testicular cancer; laryngeal cancer; colon cancer; rectal cancer; cervical cancer; stomach cancer; african-americans; blacks; national cancer institute;