

THE CANCER SITUATION IN THE STATE OF NEW YORK. VI

THE STATISTICS FOR THE FOUR-YEAR PERIOD
1925-1928

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In the endeavor still farther to prolong human life, two major problems present themselves to the medical profession. One of these is heart disease and the other is cancer. Both diseases are likely to end life prematurely and at a time when the abilities of the individual are at their maximum development. The American Society for the Control of Cancer has set for itself the task of endeavoring to reduce the constantly growing mortality from malignant disease.

The New York State Committee, carrying out the program of the National Society, inaugurated an educational program in 1926, intended to cover the fifty-four counties comprising its territory. One of the first necessities in the development of such a program is an understanding, as accurate as may be, of the amount of malignant disease existing in such a territory and its rate of increase. Fortunately, the New York State Department of Health maintains a competent statistical department, the publications of which furnish us with information which is as adequate as is possible with the present inaccurate method of recording the causes of death from the certificates written by attending physicians, the majority of which are not confirmed by autopsy findings. But whatever may be said about the accuracy of the method, it must be admitted that in all likelihood the errors are about the same from year to year, so that these figures may be taken as an indication of the trend of a given disease.

In New York State in 1900 the death rate from malignant disease was 66.7 per 100,000 population (U. S. Census Reports);

in 1928 it was 125.9 per 100,000 population. The active attack on the cancer problem was begun by The American Society for the Control of Cancer in 1921, after the physicians had returned from service in the World War. The present paper will review the statistical information available since the state-wide educational campaign of the New York State Committee was first undertaken.

Table I shows the total deaths and the death rate per 100,000 population since 1920, in the State of New York and in the State exclusive of New York City.

TABLE I
Deaths from Cancer in the State of New York from 1921 to 1928 Inclusive

Year	State of New York		State of New York Exclusive of New York City	
	Total Deaths	Rate	Total Deaths	Rate
1921	11,163	105.9	5,590	116.7
1922	11,706	109.9	5,761	119.7
1923	12,257	113.9	5,970	123.6
1924	12,791	116.0	6,234	119.9
1925	13,201	118.2	6,417	121.2
1926	13,613	120.3	6,580	122.0
1927	14,331	125.0	6,876	125.1
*1928	14,622	125.9	6,908	123.5

* Crude death rate for 1928, adjusted rates for the other years.

Table II shows the percentage increase of the total deaths and of the rate per 100,000 compared with the preceding year, from 1922 to 1928 inclusive.

TABLE II
*Percentage Increase or Decrease in Total Deaths and Rates per 100,000 over the
Preceding Year from 1922 to 1928 Inclusive*

Year	State of New York		State of New York Exclusive of New York City	
	Total Deaths	Rate	Total Deaths	Rate
1922	4.8%	3.7%	3.0%	2.5%
1923	4.7%	3.6%	3.6%	3.2%
1924	4.3%	1.8%	4.4%	-2.9%
1925	3.2%	1.8%	2.9%	1.0%
1926	3.1%	1.7%	2.5%	0.6%
1927	5.2%	3.9%	4.4%	2.5%
1928	2.0%	0.7%	0.4%	-1.2%

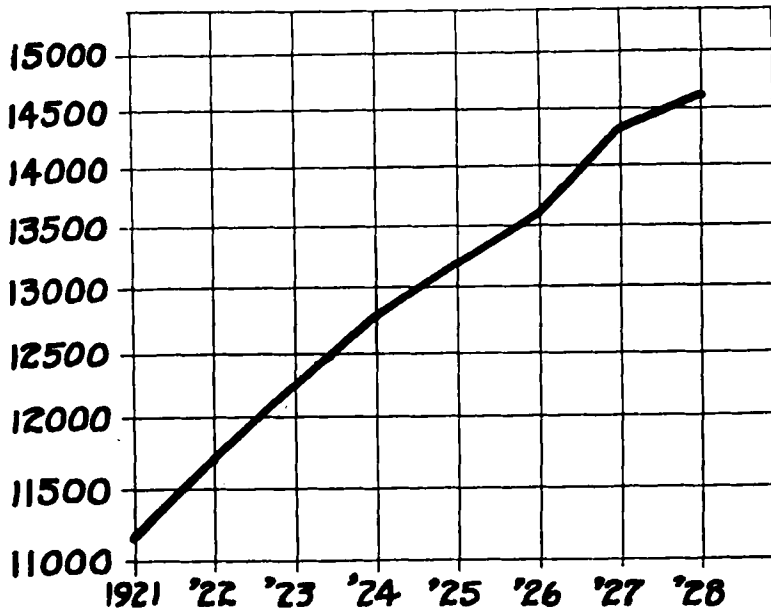


FIG. I. TOTAL DEATHS FROM CANCER IN THE STATE OF NEW YORK FROM 1921 TO 1928.

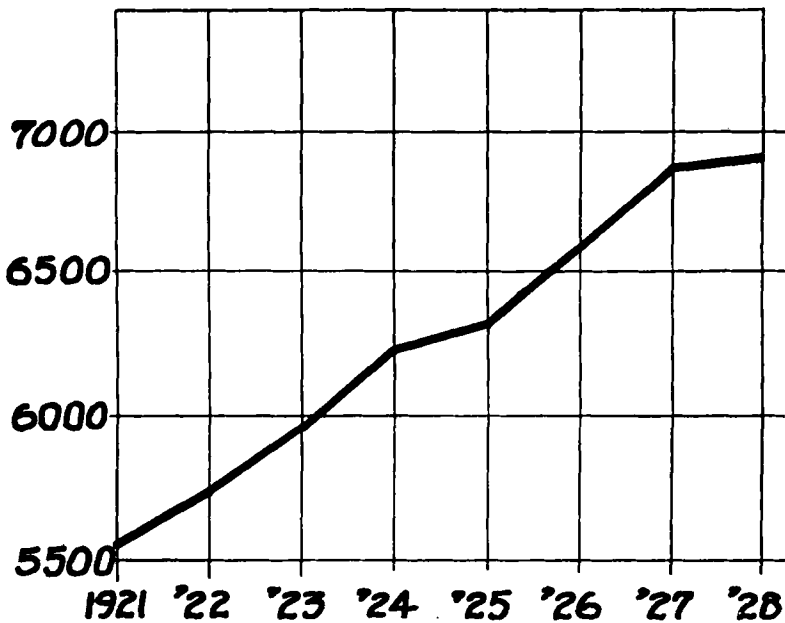


FIG. II. TOTAL DEATHS FROM CANCER IN THE STATE OF NEW YORK EXCLUSIVE OF NEW YORK CITY FROM 1921 TO 1928.

Figure I shows the tendency of the total deaths in the State, and Figure II the tendency of the total deaths in the State exclusive of New York City. Figure III shows the death rates in the State as a whole and in the State exclusive of New York City. The solid line represents the former and the broken line the latter.

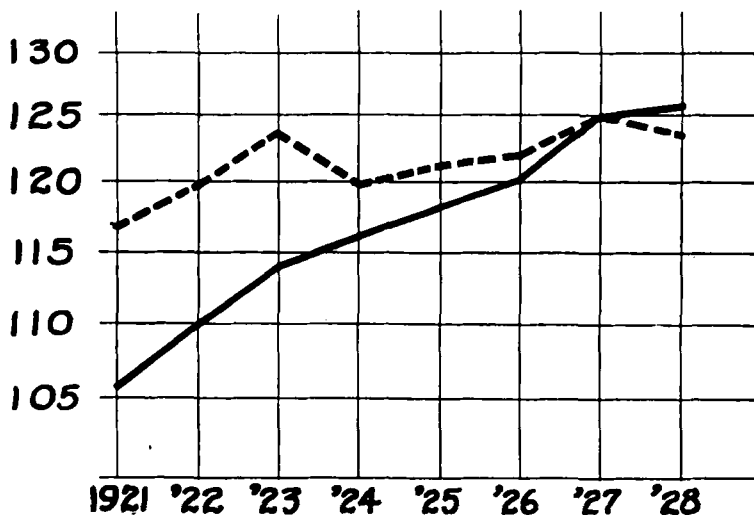
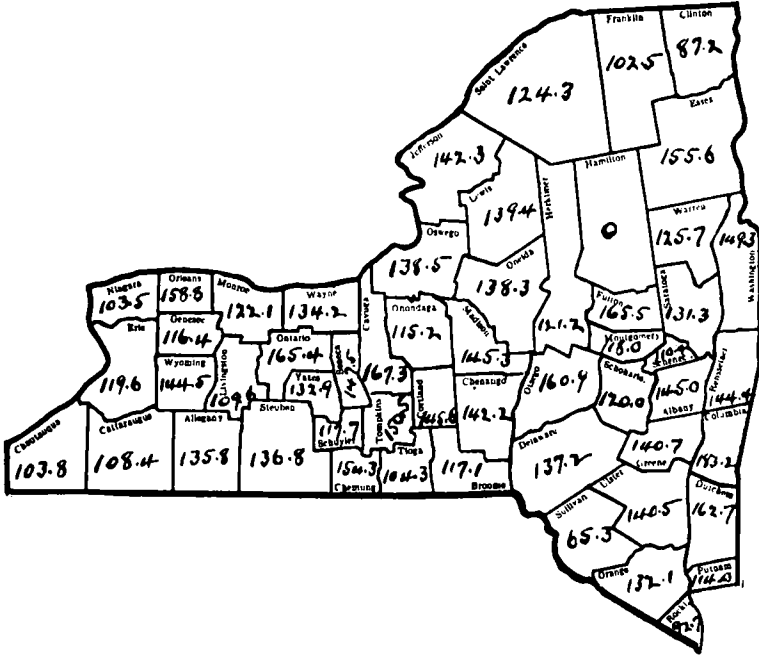


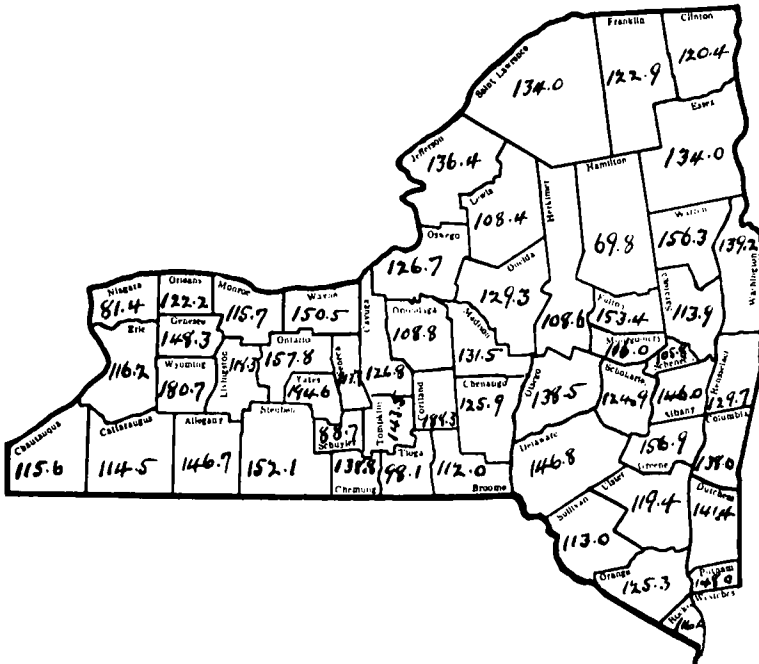
FIG. III. THE DEATH RATES PER 100,000 POPULATION IN THE STATE OF NEW YORK (SOLID LINE) AND IN THE STATE OF NEW YORK EXCLUSIVE OF NEW YORK CITY (BROKEN LINE) FROM 1921 TO 1928.

The statistics of the New York State Department of Health for 1928 were published by the Department as the usual supplement to the *Vital Statistics Review* in March (9: 206). Among the "outstanding facts" is the following statement: "The increase in the cancer death rate," from 125.0 in 1927 to 125.9 in 1928, "was the smallest in ten years."

It will be noticed that the death rate in the State, exclusive of New York City for this year is lower than the rate for the entire State, the first time that this has happened since 1920. The rate in the city in 1928 was 128.2, so that the rate for the State exclusive of New York City, 123.5, is materially less than that for the State as a whole. The population of New York City is estimated as 6,017,547; that of the remainder of the State as



MAP SHOWING THE DEATH RATES BY COUNTIES FOR 1927.

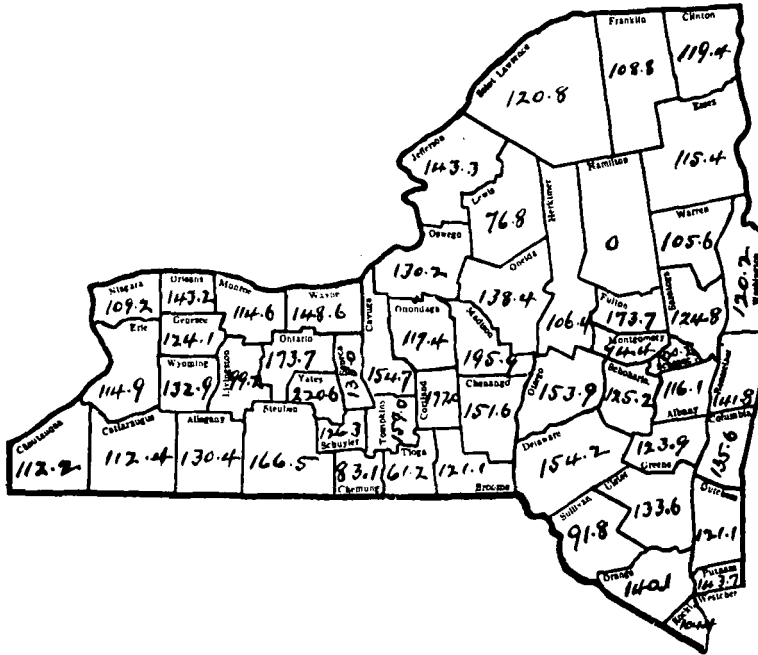


MAP SHOWING THE DEATH RATES BY COUNTIES FOR 1926.

TABLE III
*Record of Cancer Deaths in New York State, Exclusive of Greater New York,
 Long Island and Westchester County, during 1925-1928*

County	1925		1926		1927		1928	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Albany	229	116.1	291	146.0	292	145.0	307	150.9
Allegany	48	130.4	54	146.7	50	135.8	40	108.7
Broome	156	121.1	146	112.0	168	117.1	169	114.6
Cattaraugus	85	112.4	87	114.5	81	108.4	86	114.4
Cayuga	99	154.7	83	126.8	110	167.3	101	153.2
Chautauqua	136	112.2	141	115.6	138	103.8	130	96.0
Chemung	60	83.1	102	138.8	115	154.3	83	109.6
Chenango	51	151.6	43	125.9	51	142.2	59	164.0
Clinton	53	119.4	56	120.4	41	87.2	42	90.6
Columbia	58	135.6	60	138.0	81	183.2	62	138.0
Cortland	55	177.0	59	188.3	46	145.6	52	163.2
Delaware	67	154.2	64	146.8	60	137.2	51	116.2
Dutchess	110	121.1	122	141.4	166	162.7	155	149.4
Erie	764	114.9	799	116.2	857	119.6	840	115.4
Essex	34	115.4	42	134.0	50	155.6	41	127.5
Franklin	53	108.8	58	122.9	48	102.5	53	112.1
Fulton	80	173.7	71	153.4	77	165.5	69	147.5
Genesee	54	124.1	66	148.3	53	116.4	59	126.8
Greene	35	123.9	45	156.9	41	140.7	46	155.5
Hamilton	0	0	3	69.8	0	0	4	91.0
Herkimer	71	106.4	73	108.6	82	121.2	89	130.6
Jefferson	123	143.3	118	136.4	124	142.3	118	134.4
Lewis	19	76.8	27	108.4	35	139.4	23	91.0
Livingston	37	99.2	46	118.3	44	109.6	47	115.9
Madison	80	195.9	54	131.5	60	145.3	60	144.5
Monroe	450	114.6	459	115.7	498	122.1	546	131.5
Montgomery	58	94.4	72	116.0	74	118.0	82	129.4
Niagara	146	109.2	111	81.4	144	103.5	125	88.1
Oneida	262	138.4	245	129.3	279	138.3	272	132.9
Onondaga	314	117.4	296	108.8	319	115.2	364	129.3
Ontario	96	173.7	88	157.8	93	165.4	97	171.0
Orange	170	140.1	151	125.3	170	132.1	198	152.4
Orleans	44	143.2	38	122.2	50	158.8	51	160.0
Oswego	93	130.2	91	126.7	100	138.5	88	121.2
Otsego	73	153.9	66	138.5	77	160.9	56	116.5
Putnam	18	143.7	19	148.0	15	114.0	18	133.7
Rensselaer	168	141.8	155	129.7	174	144.4	180	148.2
Rockland	59	104.4	73	116.0	56	92.7	62	99.1
St. Lawrence	105	120.8	119	134.0	116	124.3	130	138.1
Saratoga	82	124.8	76	113.9	89	131.3	57	82.9
Schenectady	117	100.2	125	105.8	132	110.4	136	112.5
Schoharie	27	125.2	27	124.9	26	120.0	28	128.9
Schuyler	17	126.3	12	88.7	16	117.7	15	109.8
Seneca	30	138.0	21	113.7	38	147.5	52	201.1
Steuben	131	166.5	120	152.1	114	136.8	103	122.9
Sullivan	37	91.8	47	113.0	28	65.3	35	79.2
Tioga	16	61.2	26	98.1	28	104.3	30	110.3
Tompkins	63	159.0	58	143.5	62	150.5	63	150.0
Ulster	111	133.6	101	119.4	121	140.5	132	150.7
Warren	36	105.6	54	156.3	44	125.7	56	158.0
Washington	56	120.2	65	139.2	71	149.3	57	119.1
Wayne	77	148.6	79	150.5	71	134.2	71	132.8
Wyoming	41	132.9	56	180.7	45	144.5	41	131.0
Yates	39	220.6	33	184.6	24	132.9	26	142.4
Total	5,493	119.8	5,613	121.2	5,944	123.8	5,958	123.5

It appears to me, making all allowances for the fact that the 1928 figures are crude death rates, that the figures for the State exclusive of New York City show a definite improvement.



MAP SHOWING THE DEATH RATES BY COUNTIES FOR 1925.

Table III shows the total deaths and the rate per 100,000 for the years 1925, 1926, 1927 and 1928 for the 54 counties comprising the territory in which the New York State Committee is carrying on its program. The distribution of the rates by counties is shown on the maps.

The counties showing the highest death rates are: 1925, Yates (220.6); 1926, Cortland (188.3); 1927, Columbia, (183.2); 1928, Seneca, (201.1). In a previous paper¹ I have pointed out that those counties in which there are medical schools and in which the profession is awake to the cancer problem in which the cancer is being looked for, treated and discussed, the rates are usually lower than the average for the State at large, excluding New York City. The rates in these counties are:

	1925	1926	1927	1928
Albany	116.1	146.0	145.0	150.9
Onondaga	117.4	108.8	115.2	129.3
Monroe	114.6	115.7	122.1	131.5
Erie	114.9	116.2	119.6	115.4
State at large	119.8	121.2	123.8	123.5

The high rate in Albany county is difficult to account for. It is definitely higher than that in the other counties.

The lowest rates were: 1925, Tioga (61.2); 1926, Niagara (81.4); 1927, Sullivan, (65.3); 1928, Sullivan, (79.2). The rates in Hamilton county, as I have formerly pointed out,¹ are excep-

TABLE IV (a)
Death Rates from Cancer in Places Having a Population of over 10,000: 1927

City or Village	Population (Est. as of July 1, 1927)	Cancer (all forms)	
		Recorded	Resident
New York City	5,970,782	124.9	124.8
Buffalo *	547,817	127.2	116.3
Rochester *	323,095	126.9	117.3
<i>Places 100,000-250,000</i>	536,782	132.5	124.4
Albany	119,542	183.2	165.6
Syracuse *	196,645	125.1	117.0
Utica *	101,767	143.5	126.8
<i>Places 50,000-100,000</i>	357,746	119.9	111.5
Binghamton *	71,122	133.6	135.0
Niagara Falls	66,644	78.0	82.5
Schenectady	94,349	118.7	101.7
Troy	72,304	178.4	148.0
<i>Places 25,000-50,000</i>	398,290	147.9	134.3
Amsterdam	35,928	136.4	114.1
Auburn *	34,286	157.5	148.7
Elmira *	48,101	151.8	141.4
Jamestown	45,144	126.3	117.4
Kingston	28,642	199.0	150.1
Newburgh	30,439	128.1	124.8
Poughkeepsie	35,928	189.3	186.5
Rome *	29,199	205.5	147.3
Watertown	33,433	173.5	128.6

¹ New York State Journal of Medicine, March 15, 1928.

TABLE IV (b)

City or Village	Population (Est. as of July 1, 1927)	Cancer (all forms)	
		Recorded	Resident
<i>Places 10,000-25,000</i>	642,507	127.2	119.4
Batavia	16,431	140.0	97.4
Beacon *	10,860	92.1	128.9
Cohoes	23,483	115.0	136.3
Corning	15,722	127.2	120.8
Cortland	14,104	219.8	156.0
Dunkirk	20,134	59.6	69.5
Endicott	16,713	83.8	83.8
Fulton	12,571	111.4	103.4
Geneva	16,393	158.6	128.1
Glens Falls	18,318	152.9	120.1
Gloversville	22,123	180.8	176.3
Herkimer	11,086	99.2	108.2
Hornell	16,076	161.7	130.6
Hudson *	11,353	246.6	185.0
Ilion	10,525	142.5	152.0
Ithaca	19,696	177.7	162.5
Johnson City	12,162	205.6	123.3
Johnstown	10,712	158.7	168.0
Lackawanna *	20,487	24.0	43.2
Little Falls	12,428	120.7	128.7
Lockport	21,818	174.2	174.2
Middletown *	18,638	118.0	112.7
North Tonawanda	18,077	44.3	55.3
Ogdensburg *	15,662	172.4	108.5
Olean	21,650	83.1	78.5
Oneida	10,700	158.9	130.8
Oneonta	12,240	171.6	130.7
Oswego	22,369	134.1	125.2
Plattsburg	11,799	152.6	135.6
Port Jervis	10,636	178.6	169.2
Rensselaer	11,614	86.1	94.7
Rockville Center	11,875	126.3	101.1
Saratoga Spa	14,154	226.1	169.6
Tonawanda	11,763	68.0	85.0
Watervliet	16,191	61.8	98.8

* Populations and recorded rates are exclusive of institutional districts.

N. B. Death-rates per 100,000 population.

tional: None in 1925 and 1927 and 69.8 in 1926 and 91.0 in 1928. This county is situated on the western slope of the Adirondack Mountains and has a very small population (4,397 in 1928).

Through the courtesy of the Director of Vital Statistics of the New York State Department of Health, I am able to publish the accompanying table of crude and corrected death rates in the urban communities for 1927. In that year the rate in the State, exclusive of New York City, was 123.8 per 100,000.

This study seems to indicate:

(1) That cancer is increasing in the State of New York, exclusive of New York City, but not in a constant ratio. In fact, in the last year the increase was definitely lower than that of the year before.

(2) If there are 7,000 deaths from cancer annually in New York State, there must be about 21,000 cases of cancer in the State all the time, assuming that the average life of the cancer patient is three years.

(3) As a rule, in those communities in which cancer is looked upon as a problem capable of solution, or at least of improvement, the death rate tends to be lower than in those communities in which this is not the case.

(4) Educational activities are called for both for the profession and the laity throughout the State particularly in the rural communities.

(5) If we are able to get the physician and the layman to look upon cancer as a problem to be solved, instead of as a hopeless situation, further improvement may be expected.