

# Canada

### Registration area

Canada is the second largest country in the world, with an area of 9 984 670 km<sup>2</sup> extending from longitude 53° to 141° W and from latitude 42° to 83° N. It is bounded to the west by the Pacific Ocean and Alaska, to the north by the Arctic Ocean, to the east by the Atlantic Ocean and to the south by the USA.

In 1996, the population of Canada numbered over 29 600 000, of which 27% was under 20 years of age and 16% aged 65 or over. Most Canadians live in a corridor about 300 km wide along the southern border. Almost one third of the population is concentrated in the metropolitan areas of Toronto, Montreal and Vancouver.

Between 1991 and 1996, Canada attracted slightly more than 1 million immigrants (a higher proportion of its population than most other countries). Ontario (55%) has the largest immigrant population, followed by British Columbia (18%), Quebec (13%) and Alberta (8%).

Canada's population is diverse with respect to ethnic origin. In 1996, almost 36% reported more than one ethnic background. The largest groups with a single origin are: Canadian (36%); European (20%); UK (18%); French (15%); and, East and Southeast Asian (7%). English is spoken by 84% of the population and French by 31%. The major religions are Catholic (46%) and Protestant (36%). The aboriginal population of Canada (accounting for 3% of the total) includes those who identified with one or more aboriginal groups (North American Indian, Métis, and Inuit). Also included are those who did not identify with an aboriginal group but who reported that they were Registered/Treaty Indians or Band/First Nation members.

In 1996, there were 8.0 million Canadian men in the labour force distributed among the following major occupational groups: trade, transport and equipment operators (24%); sales and services (20%); management (11%); business, finance and administration (10%); and, processing, manufacturing and utilities (10%). The major occupations among the 6.8 million Canadian women in the labour force are: sales and services (31%); business, finance and administration (29%); social science, education and government (9%); health (8%); and, management (6%).

### Cancer care facilities

Health-care delivery, including cancer registration, is a provincial/territorial responsibility. For most provinces, centralized cancer care is provided through provincial cancer agencies that treat almost half of all registered cancer patients and house population-based cancer registries for the province. For the other provinces and territories, cancer care is organized through their respective provincial departments of health.

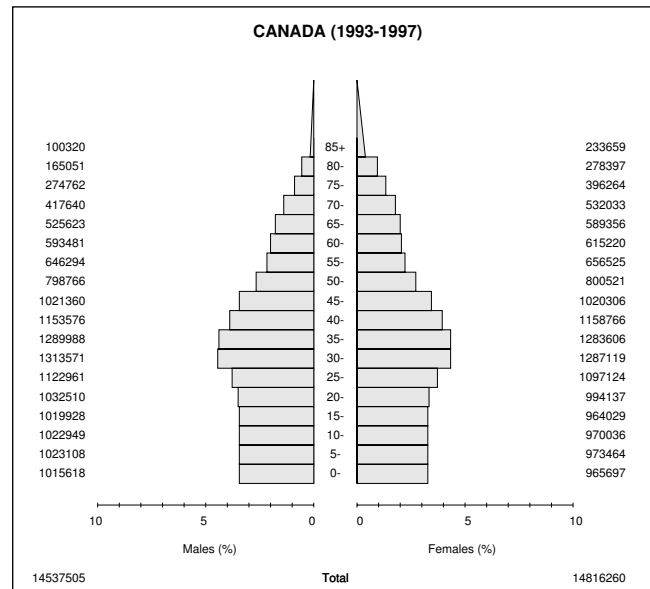
### Registry structure and methods

Statistics Canada, Canada's national statistical agency, has collected cancer incidence data since 1969. Starting with the 1992 data year, population-based cancer incidence data have been compiled by the Canadian Cancer Registry (CCR), replacing the event-oriented National Cancer Incidence Reporting System that existed from 1969 to 1991.

Information on new cancer patients and cancer tumours is reported to the CCR by the Provincial and Territorial Cancer Registries (PTCR) on computer diskette using standard record layouts and coding structures defined by the CCR. Records are loaded onto a patient-oriented SAS database and those failing edits (usually less than 1%) are rejected and returned to the cancer registry for verification or correction. An internal record linkage and a national death clearance of cancer tumours diagnosed since 1992 are done annually.

### Use of the data

The CCR provides national incidence and survival information required for cancer control. The annual publication, *Canadian Cancer Statistics*, includes estimates for the coming year as well as current incidence and mortality data. Data are also published annually by NAACCR in *Cancer Incidence in North America*. The data are used for a variety of analytical studies.



### Source of population

*Estimate:* Estimates of Population by Age and Sex for Canada, the Provinces and the Territories (1992-97). Postcensal estimates are obtained by the component method, using the most recent census of population (SDDS ID 3901) adjusted to July 1 and for net census undercount as the base population.

*Source:* Demography Division, STC Catalogue 91-213 (Annual Demographic Statistics).

### Notes on the data

† C44 does not include basal cell or squamous cell carcinoma.

## CANADA (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	2220	0.7	3.1	<b>2.3</b>	0.11	0.25	496	0.2	0.7	<b>0.4</b>	0.02	0.04	C00
Tongue	1926	0.6	2.6	<b>2.1</b>	0.15	0.26	966	0.3	1.3	<b>0.9</b>	0.06	0.10	C01-02
Mouth	2042	0.6	2.8	<b>2.3</b>	0.15	0.27	1231	0.4	1.7	<b>1.1</b>	0.07	0.13	C03-06
Salivary glands	830	0.3	1.1	<b>0.9</b>	0.05	0.09	634	0.2	0.9	<b>0.6</b>	0.04	0.06	C07-08
Tonsil	963	0.3	1.3	<b>1.1</b>	0.08	0.14	364	0.1	0.5	<b>0.4</b>	0.02	0.04	C09
Other oropharynx	327	0.1	0.4	<b>0.4</b>	0.02	0.05	119	0.0	0.2	<b>0.1</b>	0.01	0.01	C10
Nasopharynx	713	0.2	1.0	<b>0.8</b>	0.06	0.09	283	0.1	0.4	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	971	0.3	1.3	<b>1.1</b>	0.06	0.14	226	0.1	0.3	<b>0.2</b>	0.01	0.03	C12-13
Pharynx unspecified	438	0.1	0.6	<b>0.5</b>	0.03	0.06	169	0.1	0.2	<b>0.2</b>	0.01	0.02	C14
Oesophagus	4001	1.3	5.5	<b>4.2</b>	0.22	0.53	1708	0.6	2.3	<b>1.3</b>	0.06	0.15	C15
Stomach	9088	2.9	12.5	<b>9.2</b>	0.42	1.05	5269	1.9	7.1	<b>4.0</b>	0.18	0.44	C16
Small intestine	951	0.3	1.3	<b>1.0</b>	0.05	0.12	737	0.3	1.0	<b>0.6</b>	0.03	0.08	C17
Colon	25571	8.1	35.2	<b>25.9</b>	1.16	3.06	25928	9.1	35.0	<b>20.0</b>	0.93	2.29	C18
Rectum	14425	4.6	19.8	<b>15.1</b>	0.77	1.88	9628	3.4	13.0	<b>8.0</b>	0.44	0.94	C19-20
‡Anus	757	0.2	1.0	<b>0.8</b>	0.05	0.09	960	0.3	1.3	<b>0.8</b>	0.05	0.09	C21
Liver	3348	1.1	4.6	<b>3.6</b>	0.19	0.44	1530	0.5	2.1	<b>1.3</b>	0.06	0.14	C22
Gallbladder etc.	1743	0.6	2.4	<b>1.8</b>	0.07	0.20	2450	0.9	3.3	<b>1.8</b>	0.08	0.20	C23-24
Pancreas	7101	2.2	9.8	<b>7.3</b>	0.35	0.87	7385	2.6	10.0	<b>5.6</b>	0.25	0.65	C25
Nose, sinuses etc.	581	0.2	0.8	<b>0.6</b>	0.04	0.07	416	0.1	0.6	<b>0.4</b>	0.02	0.04	C30-31
Larynx	4945	1.6	6.8	<b>5.4</b>	0.34	0.71	1078	0.4	1.5	<b>1.1</b>	0.07	0.14	C32
Trachea, bronchus and lung	57123	18.0	78.6	<b>59.1</b>	2.81	7.54	34170	12.0	46.1	<b>30.8</b>	1.83	3.93	C33-34
Other thoracic organs	468	0.1	0.6	<b>0.5</b>	0.03	0.05	298	0.1	0.4	<b>0.3</b>	0.02	0.03	C37-38
Bone	826	0.3	1.1	<b>1.1</b>	0.07	0.09	693	0.2	0.9	<b>0.8</b>	0.05	0.07	C40-41
Melanoma of skin	7826	2.5	10.8	<b>8.5</b>	0.57	0.94	7434	2.6	10.0	<b>7.5</b>	0.54	0.77	C43
†Other skin	893		1.2	<b>0.9</b>	0.05	0.09	839		1.1	<b>0.7</b>	0.04	0.07	C44
Mesothelioma	1191	0.4	1.6	<b>1.3</b>	0.07	0.16	274	0.1	0.4	<b>0.2</b>	0.01	0.03	C45
Kaposi sarcoma	1093	0.3	1.5	<b>1.1</b>	0.09	0.10	60	0.0	0.1	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	1937	0.6	2.7	<b>2.2</b>	0.13	0.22	1591	0.6	2.1	<b>1.7</b>	0.10	0.16	C47+C49
Breast	566	0.2	0.8	<b>0.6</b>	0.03	0.07	81861	28.8	110.5	<b>78.5</b>	5.56	9.02	C50
Vulva							1518	0.5	2.0	<b>1.3</b>	0.07	0.13	C51
Vagina							541	0.2	0.7	<b>0.5</b>	0.03	0.05	C52
Cervix uteri							7137	2.5	9.6	<b>7.3</b>	0.55	0.72	C53
Corpus uteri							15226	5.4	20.6	<b>14.4</b>	0.99	1.81	C54
Uterus unspecified							493	0.2	0.7	<b>0.4</b>	0.02	0.04	C55
Ovary							11803	4.1	15.9	<b>11.4</b>	0.78	1.28	C56
Other female genital organs							574	0.2	0.8	<b>0.6</b>	0.04	0.07	C57
Placenta							40	0.0	0.1	<b>0.1</b>	0.00	0.00	C58
Penis	533	0.2	0.7	<b>0.6</b>	0.03	0.06							C60
Prostate	79609	25.1	109.5	<b>80.2</b>	2.98	10.43							C61
Testis	3551	1.1	4.9	<b>4.2</b>	0.31	0.32							C62
Other male genital organs	181	0.1	0.2	<b>0.2</b>	0.01	0.02							C63
Kidney	8715	2.8	12.0	<b>9.5</b>	0.57	1.13	5582	2.0	7.5	<b>5.2</b>	0.32	0.60	C64
Renal pelvis	523	0.2	0.7	<b>0.5</b>	0.02	0.07	290	0.1	0.4	<b>0.2</b>	0.01	0.03	C65
Ureter	440	0.1	0.6	<b>0.4</b>	0.02	0.06	223	0.1	0.3	<b>0.2</b>	0.01	0.02	C66
Bladder	19755	6.2	27.2	<b>19.9</b>	0.86	2.35	6803	2.4	9.2	<b>5.5</b>	0.28	0.63	C67
Other urinary organs	697	0.2	1.0	<b>0.7</b>	0.03	0.08	261	0.1	0.4	<b>0.2</b>	0.01	0.02	C68
Eye	709	0.2	1.0	<b>0.9</b>	0.05	0.09	566	0.2	0.8	<b>0.6</b>	0.04	0.06	C69
Brain, nervous system	5813	1.8	8.0	<b>6.9</b>	0.44	0.70	4658	1.6	6.3	<b>5.0</b>	0.31	0.49	C70-72
Thyroid	1900	0.6	2.6	<b>2.1</b>	0.15	0.22	5816	2.0	7.9	<b>6.4</b>	0.49	0.59	C73
Adrenal gland	245	0.1	0.3	<b>0.4</b>	0.02	0.03	274	0.1	0.4	<b>0.4</b>	0.02	0.03	C74
Other endocrine	144	0.0	0.2	<b>0.2</b>	0.01	0.02	109	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	2227	0.7	3.1	<b>2.8</b>	0.19	0.23	1788	0.6	2.4	<b>2.3</b>	0.15	0.18	C81
Non-Hodgkin lymphoma	12867	4.1	17.7	<b>13.9</b>	0.85	1.52	11017	3.9	14.9	<b>10.0</b>	0.61	1.13	C82-85, C96
Immunoproliferative diseases	203	0.1	0.3	<b>0.2</b>	0.01	0.02	112	0.0	0.2	<b>0.1</b>	0.00	0.01	C88
Multiple myeloma	3965	1.3	5.5	<b>4.0</b>	0.19	0.47	3395	1.2	4.6	<b>2.7</b>	0.13	0.31	C90
Lymphoid leukaemia	5126	1.6	7.1	<b>6.0</b>	0.29	0.59	3432	1.2	4.6	<b>3.5</b>	0.17	0.31	C91
Myeloid leukaemia	3660	1.2	5.0	<b>3.9</b>	0.21	0.41	2929	1.0	4.0	<b>2.8</b>	0.17	0.28	C92-94
Leukaemia unspecified	743	0.2	1.0	<b>0.7</b>	0.02	0.07	716	0.3	1.0	<b>0.5</b>	0.02	0.05	C95
Other and unspecified	11265	3.6	15.5	<b>11.3</b>	0.48	1.26	11218	3.9	15.1	<b>8.3</b>	0.36	0.88	O&U
All sites	317735		437.1	<b>331.2</b>	15.98	39.79	285318		385.1	<b>259.4</b>	16.20	29.46	ALL
All sites but C44	316842	100.0	435.9	<b>330.2</b>	15.94	39.69	284479	100.0	384.0	<b>258.7</b>	16.15	29.38	ALLbC44

‡Includes 120 cases of unknown age  
‡41.5% of cases are anorectal tumours

§Includes 68 cases of unknown age

†See note following population pyramid

# Canada, Alberta

### Registration area

Alberta is one of the prairie provinces in Canada. Its area is 66 688 km<sup>2</sup> and it lies between latitudes 49° and 60° °W. The Alberta Cancer Registry covers the population of the 17 Regional Health Authorities within the province of Alberta. Alberta has a multi-ethnic population; approximately half of the population is of British extraction, the remainder including German, Ukrainian, French, Indian and Chinese.

### Cancer care facilities

Cancer care is provided and administered by the Alberta Cancer Board in two major treatment centres, four associate and eight community cancer treatment centres throughout the province. The two major tertiary centres, the Cross Cancer Institute in Edmonton and the Tom Baker Cancer Centre in Calgary, provide radiotherapy, chemotherapy, and limited surgical procedures. The associate and community cancer centres provide chemotherapy services.

### Registry structure and methods

The Division of Epidemiology, Prevention, and Screening, which is part of the Alberta Cancer Board, maintains the Alberta Cancer Registry under the directorship of a medical epidemiologist. The Alberta Cancer Registry operates out of two centres and a satellite office. Calgary is responsible for the southern half of the province while Edmonton maintains data for the northern half. Two managers, one computer programmer/analyst, 14 health record technicians, and 2.4 clerical/secretary workers staff the registry in the province. The registry staff is involved in coding and abstracting, research projects, quality assurance activities, passive follow up activities with Alberta Vital Statistics and an on-going case ascertainment project with the Alberta Health Registration file.

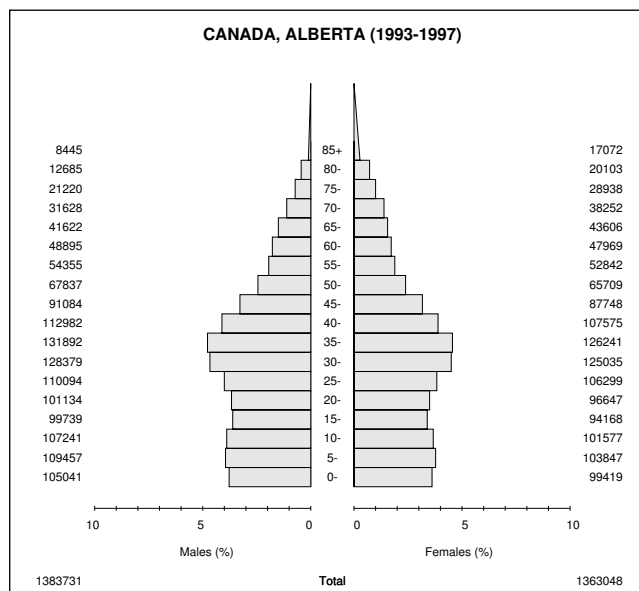
Provincial legislation mandates the registration of all reportable cancers from diagnostic facilities and medical practitioners within the province of Alberta. The Alberta Cancer Registry uses a passive case finding approach as reports such as pathology, cytology, scans, X-rays, operative reports, etc. with the mention of cancer are sent to the registry. In addition, Alberta Vital Statistics sends an electronic file each month of all individuals dying in the province which enables the registry to identify patients who have died from cancer or cancer patients dying from other causes.

The Alberta Cancer Registry has established and maintains routine quality assurance data reviews, both computerized and manual, of specific variables on a monthly, quarterly, and yearly

basis as required. Mechanisms have also been established to measure the quality of registry collected variables. These quality measures would indicate completeness as well as accuracy. For the 1995, 1996, and 1997 data, Alberta received the Gold Standard awarded by NAACCR for excellence, based on the completeness of the data, timely reporting and other recognized measures to judge cancer data quality.

### Use of the data

The Alberta Cancer Registry publishes or is involved in the development of several documents on cancer incidence and mortality in Alberta. Publications include the annual report, *A Regional Picture of Cancer in Alberta* (for the Regional Health Authorities), *A Snapshot of Cancer in Alberta*, and various monographs. The registry also responds to over 100 requests for information each year.



### Source of population

Statcan provided estimates of the populations for 1993, 1994, 1995 and 1996. The 1997 population is a census population.

## CANADA, ALBERTA (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	275	1.1	4.0	<b>3.4</b>	0.15	0.39	40	0.2	0.6	<b>0.4</b>	0.01	0.05	C00
Tongue	111	0.5	1.6	<b>1.4</b>	0.10	0.18	84	0.4	1.2	<b>0.9</b>	0.05	0.10	C01-02
Mouth	164	0.7	2.4	<b>2.2</b>	0.15	0.27	108	0.5	1.6	<b>1.3</b>	0.08	0.15	C03-06
Salivary glands	56	0.2	0.8	<b>0.7</b>	0.03	0.09	47	0.2	0.7	<b>0.6</b>	0.03	0.06	C07-08
Tonsil	66	0.3	1.0	<b>0.9</b>	0.07	0.11	21	0.1	0.3	<b>0.3</b>	0.02	0.04	C09
Other oropharynx	10	0.0	0.1	<b>0.1</b>	0.00	0.02	6	0.0	0.1	<b>0.1</b>	0.00	0.01	C10
Nasopharynx	64	0.3	0.9	<b>0.9</b>	0.07	0.09	20	0.1	0.3	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	55	0.2	0.8	<b>0.7</b>	0.04	0.09	15	0.1	0.2	<b>0.2</b>	0.01	0.03	C12-13
Pharynx unspecified	17	0.1	0.2	<b>0.2</b>	0.01	0.04	8	0.0	0.1	<b>0.1</b>	0.00	0.00	C14
Oesophagus	243	1.0	3.5	<b>3.1</b>	0.15	0.39	114	0.5	1.7	<b>1.1</b>	0.05	0.13	C15
Stomach	646	2.7	9.3	<b>8.1</b>	0.35	0.97	365	1.7	5.4	<b>3.6</b>	0.17	0.39	C16
Small intestine	78	0.3	1.1	<b>1.0</b>	0.05	0.11	52	0.2	0.8	<b>0.6</b>	0.03	0.07	C17
Colon	1737	7.1	25.1	<b>21.8</b>	0.94	2.51	1598	7.3	23.4	<b>16.1</b>	0.72	1.84	C18
Rectum	1175	4.8	17.0	<b>15.1</b>	0.77	1.85	715	3.2	10.5	<b>7.6</b>	0.40	0.88	C19-20
Anus	50	0.2	0.7	<b>0.6</b>	0.04	0.08	67	0.3	1.0	<b>0.7</b>	0.05	0.07	C21
Liver	280	1.2	4.0	<b>3.7</b>	0.21	0.44	128	0.6	1.9	<b>1.4</b>	0.07	0.16	C22
Gallbladder etc.	118	0.5	1.7	<b>1.4</b>	0.05	0.16	177	0.8	2.6	<b>1.8</b>	0.08	0.20	C23-24
Pancreas	582	2.4	8.4	<b>7.3</b>	0.33	0.85	646	2.9	9.5	<b>6.4</b>	0.26	0.72	C25
Nose, sinuses etc.	45	0.2	0.7	<b>0.6</b>	0.04	0.07	35	0.2	0.5	<b>0.4</b>	0.02	0.05	C30-31
Larynx	260	1.1	3.8	<b>3.5</b>	0.22	0.46	67	0.3	1.0	<b>0.8</b>	0.06	0.10	C32
Trachea, bronchus and lung	3730	15.3	53.9	<b>47.5</b>	2.04	6.02	2426	11.0	35.6	<b>28.7</b>	1.70	3.71	C33-34
Other thoracic organs	28	0.1	0.4	<b>0.4</b>	0.02	0.04	12	0.1	0.2	<b>0.2</b>	0.01	0.01	C37-38
Bone	65	0.3	0.9	<b>1.0</b>	0.06	0.08	54	0.2	0.8	<b>0.8</b>	0.05	0.07	C40-41
Melanoma of skin	781	3.2	11.3	<b>10.0</b>	0.70	1.09	801	3.6	11.8	<b>9.6</b>	0.70	0.95	C43
Other skin	97		1.4	<b>1.2</b>	0.06	0.14	85		1.2	<b>0.9</b>	0.05	0.09	C44
Mesothelioma	93	0.4	1.3	<b>1.3</b>	0.10	0.16	23	0.1	0.3	<b>0.2</b>	0.01	0.03	C45
Kaposi sarcoma	79	0.3	1.1	<b>0.9</b>	0.07	0.07	2	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	158	0.6	2.3	<b>2.1</b>	0.11	0.22	129	0.6	1.9	<b>1.6</b>	0.10	0.16	C47+C49
Breast	51	0.2	0.7	<b>0.6</b>	0.02	0.07	6523	29.6	95.7	<b>78.8</b>	5.60	9.09	C50
Vulva							124	0.6	1.8	<b>1.3</b>	0.08	0.15	C51
Vagina							44	0.2	0.6	<b>0.5</b>	0.03	0.05	C52
Cervix uteri							626	2.8	9.2	<b>7.3</b>	0.58	0.69	C53
Corpus uteri							1318	6.0	19.3	<b>16.2</b>	1.12	2.01	C54
Uterus unspecified							19	0.1	0.3	<b>0.2</b>	0.01	0.02	C55
Ovary							914	4.1	13.4	<b>10.9</b>	0.72	1.22	C56
Other female genital organs							37	0.2	0.5	<b>0.4</b>	0.02	0.05	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	51	0.2	0.7	<b>0.6</b>	0.04	0.07							C60
Prostate	6644	27.3	96.0	<b>84.6</b>	3.06	11.29							C61
Testis	365	1.5	5.3	<b>4.3</b>	0.32	0.33							C62
Other male genital organs	8	0.0	0.1	<b>0.1</b>	0.01	0.01							C63
Kidney	787	3.2	11.4	<b>10.4</b>	0.60	1.27	455	2.1	6.7	<b>5.5</b>	0.36	0.66	C64
Renal pelvis	45	0.2	0.7	<b>0.6</b>	0.03	0.07	41	0.2	0.6	<b>0.4</b>	0.02	0.05	C65
Ureter	29	0.1	0.4	<b>0.4</b>	0.02	0.06	19	0.1	0.3	<b>0.2</b>	0.01	0.02	C66
Bladder	1547	6.4	22.4	<b>19.7</b>	0.90	2.41	521	2.4	7.6	<b>5.6</b>	0.30	0.65	C67
Other urinary organs	25	0.1	0.4	<b>0.3</b>	0.00	0.05	13	0.1	0.2	<b>0.1</b>	0.00	0.01	C68
Eye	52	0.2	0.8	<b>0.7</b>	0.04	0.08	55	0.2	0.8	<b>0.8</b>	0.05	0.08	C69
Brain, nervous system	467	1.9	6.7	<b>6.3</b>	0.38	0.62	325	1.5	4.8	<b>4.2</b>	0.26	0.44	C70-72
Thyroid	155	0.6	2.2	<b>2.0</b>	0.14	0.21	512	2.3	7.5	<b>6.4</b>	0.49	0.62	C73
Adrenal gland	13	0.1	0.2	<b>0.2</b>	0.01	0.01	17	0.1	0.2	<b>0.2</b>	0.02	0.02	C74
Other endocrine	6	0.0	0.1	<b>0.1</b>	0.01	0.01	3	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	200	0.8	2.9	<b>2.7</b>	0.19	0.22	181	0.8	2.7	<b>2.5</b>	0.16	0.20	C81
Non-Hodgkin lymphoma	943	3.9	13.6	<b>12.0</b>	0.68	1.31	770	3.5	11.3	<b>8.9</b>	0.53	1.04	C82-85,C96
Immunoproliferative diseases	25	0.1	0.4	<b>0.3</b>	0.02	0.04	8	0.0	0.1	<b>0.1</b>	0.00	0.01	C88
Multiple myeloma	265	1.1	3.8	<b>3.3</b>	0.16	0.41	233	1.1	3.4	<b>2.5</b>	0.13	0.29	C90
Lymphoid leukaemia	453	1.9	6.5	<b>6.2</b>	0.32	0.65	274	1.2	4.0	<b>3.6</b>	0.20	0.36	C91
Myeloid leukaemia	335	1.4	4.8	<b>4.4</b>	0.21	0.46	250	1.1	3.7	<b>2.9</b>	0.17	0.30	C92-94
Leukaemia unspecified	30	0.1	0.4	<b>0.4</b>	0.02	0.04	26	0.1	0.4	<b>0.2</b>	0.01	0.01	C95
Other and unspecified	863	3.5	12.5	<b>10.8</b>	0.46	1.18	957	4.3	14.0	<b>9.5</b>	0.41	1.02	O&U
All sites	24422		353.0	<b>312.1</b>	14.55	37.84	22110		324.4	<b>255.8</b>	16.03	29.19	ALL
All sites but C44	24325	100.0	351.6	<b>310.9</b>	14.49	37.70	22025	100.0	323.2	<b>254.8</b>	15.98	29.10	ALLbC44

# Canada, British Columbia

### Registration area

The registry covers all of British Columbia (BC) (892 677 km<sup>2</sup>), the most westerly province of Canada, bordered by Alberta to the east and by the Pacific Ocean to the west. The province lies between latitudes 49° and 60° N and longitudes 120° and 130° W. A considerable portion is mountainous. Most of the population lives within 100 m of sea level and is concentrated in the southwest corner of the province, where the climate is the mildest in Canada.

British Columbia is a major receiving area for internal migration, within Canada and from abroad. Based on the 1991 census, 60% of British Columbians belonged to a single ethnic origin and 40% to more than one. 41.6% of single origin are British, 3.5% French, 27.6% other European, 19% Asian, 3.8% Aboriginal, 1.5% other origins and just over 3% reported 'Canadian' as their ethnic origin. Currently, most immigrants to BC come from Asia, in particular Hong Kong, China, Philippines, East India and Taiwan. The proportion of ethnic Chinese increased from 3.9% in 1986 to 5.6% in 1991, and they are now the second largest ethnic group in BC. The proportion of the population who belonged to an aboriginal ethnic group has also increased from 4.5% in 1986 to 5.2% in 1991.

According to 1991 Census data, the largest components of the working population are employed in the retail trade industry (13%) and manufacturing industries (11%). Eight in 10 members of the work force work in construction, mining, logging, transportation and fishing and are male. Females comprise over 60% of the labour force in the health, social service, finance, insurance and education industries.

### Registry structure and methods

The registry is part of a combined population-based registry and clinical database maintained by the BC Cancer Agency (BCCA). The BCCA is a provincial government agency responsible for cancer care, control and research in British Columbia.

The registry has monitored the impact of cancer on the BC population since 1969. For many years it was mandatory to report cancer cases; however, legislation passed in 1987 authorizes the registry to obtain relevant information without the provision for mandatory reporting.

The registry receives notification of 95% or more of the cancer cases diagnosed in the province by submission of pathology reports from hospital laboratories or following attendance at one of the four BCCA Cancer Centres, where about 61% of cancer cases are treated or seen at some time. The BCCA Cancer Centres operate all the radiotherapy treatment facilities and most of the chemotherapy services in the province. The registry receives listings of all deaths in the province from the BC Vital Statistics

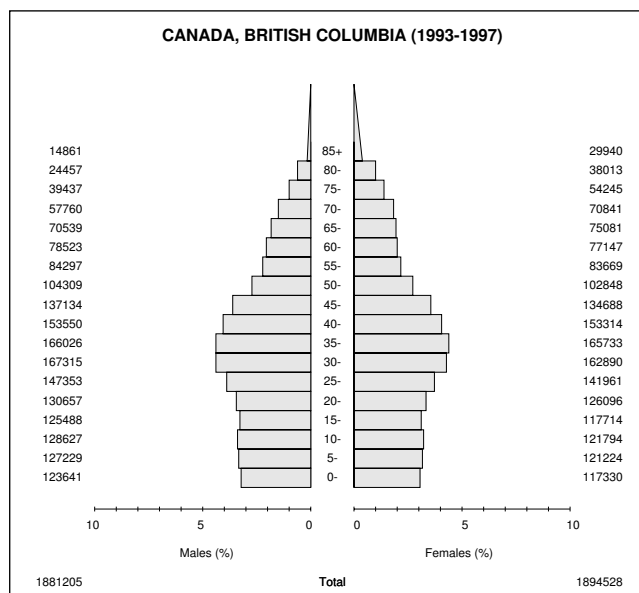
Agency. Follow-up is performed to obtain complete registration information and documentation on all cases.

The personnel consists of a director and a scientific director, one senior, one supervisor and eight health record technicians.

### Use of the data

The registry was originally set up to monitor cancer incidence and mortality in the province, but is now extensively used for health services planning and epidemiological research. Registry data are used as a source of cases for surveys and case-control studies and as outcome data for cohort studies of occupational groups. Registry statistics and estimates of future incidence trends have also been used in conjunction with clinic referral data for cancer services budgeting and facilities planning.

The BCCA operates the mammography and cervical cancer screening programmes, and the Hereditary Cancer Programme (counselling and genetic testing).



### Source of population

Postcensal estimates based on the 1991 census. The populations for 1993-97 were estimated using the adjusted intercensal or postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada

## CANADA, BRITISH COLUMBIA (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	154	0.4	1.6	<b>1.1</b>	0.05	0.12	44	0.1	0.5	<b>0.3</b>	0.01	0.03	C00
Tongue	242	0.6	2.6	<b>2.0</b>	0.14	0.24	129	0.4	1.4	<b>0.9</b>	0.07	0.11	C01-02
Mouth	254	0.6	2.7	<b>2.1</b>	0.14	0.25	173	0.5	1.8	<b>1.1</b>	0.07	0.12	C03-06
Salivary glands	100	0.2	1.1	<b>0.8</b>	0.04	0.09	98	0.3	1.0	<b>0.7</b>	0.04	0.07	C07-08
Tonsil	127	0.3	1.4	<b>1.1</b>	0.08	0.13	64	0.2	0.7	<b>0.5</b>	0.04	0.06	C09
Other oropharynx	60	0.1	0.6	<b>0.5</b>	0.04	0.07	18	0.0	0.2	<b>0.1</b>	0.01	0.02	C10
Nasopharynx	133	0.3	1.4	<b>1.1</b>	0.08	0.11	67	0.2	0.7	<b>0.6</b>	0.05	0.05	C11
Hypopharynx	123	0.3	1.3	<b>1.0</b>	0.06	0.13	34	0.1	0.4	<b>0.2</b>	0.01	0.03	C12-13
Pharynx unspecified	52	0.1	0.6	<b>0.4</b>	0.02	0.05	15	0.0	0.2	<b>0.1</b>	0.01	0.01	C14
Oesophagus	620	1.5	6.6	<b>4.7</b>	0.23	0.61	245	0.7	2.6	<b>1.4</b>	0.08	0.15	C15
Stomach	1095	2.6	11.6	<b>8.0</b>	0.37	0.91	614	1.7	6.5	<b>3.5</b>	0.16	0.39	C16
Small intestine	94	0.2	1.0	<b>0.7</b>	0.04	0.08	72	0.2	0.8	<b>0.5</b>	0.02	0.06	C17
Colon	2934	6.9	31.2	<b>21.3</b>	0.87	2.55	2864	7.8	30.2	<b>16.5</b>	0.75	1.86	C18
Rectum	2030	4.8	21.6	<b>15.3</b>	0.73	1.91	1377	3.8	14.5	<b>8.5</b>	0.46	1.00	C19-20
Anus	95	0.2	1.0	<b>0.8</b>	0.05	0.09	121	0.3	1.3	<b>0.8</b>	0.05	0.10	C21
Liver	546	1.3	5.8	<b>4.4</b>	0.25	0.52	245	0.7	2.6	<b>1.4</b>	0.06	0.15	C22
Gallbladder etc.	221	0.5	2.3	<b>1.6</b>	0.06	0.19	264	0.7	2.8	<b>1.5</b>	0.06	0.17	C23-24
Pancreas	912	2.2	9.7	<b>6.7</b>	0.32	0.77	915	2.5	9.7	<b>5.2</b>	0.21	0.59	C25
Nose, sinuses etc.	74	0.2	0.8	<b>0.6</b>	0.03	0.05	55	0.2	0.6	<b>0.4</b>	0.03	0.04	C30-31
Larynx	516	1.2	5.5	<b>4.1</b>	0.24	0.55	115	0.3	1.2	<b>0.9</b>	0.07	0.11	C32
Trachea, bronchus and lung	6415	15.2	68.2	<b>47.8</b>	2.19	5.98	4787	13.1	50.5	<b>31.6</b>	1.74	3.99	C33-34
Other thoracic organs	43	0.1	0.5	<b>0.4</b>	0.03	0.04	27	0.1	0.3	<b>0.2</b>	0.01	0.03	C37-38
Bone	91	0.2	1.0	<b>0.9</b>	0.06	0.08	79	0.2	0.8	<b>0.8</b>	0.05	0.06	C40-41
Melanoma of skin	1361	3.2	14.5	<b>11.2</b>	0.76	1.25	1220	3.3	12.9	<b>9.7</b>	0.72	0.97	C43
Other skin	112		1.2	<b>0.9</b>	0.05	0.09	105		1.1	<b>0.7</b>	0.04	0.07	C44
Mesothelioma	189	0.4	2.0	<b>1.4</b>	0.08	0.18	23	0.1	0.2	<b>0.2</b>	0.01	0.02	C45
Kaposi sarcoma	249	0.6	2.6	<b>2.0</b>	0.16	0.17	11	0.0	0.1	<b>0.1</b>	0.00	0.01	C46
Connective and soft tissue	250	0.6	2.7	<b>2.2</b>	0.13	0.20	192	0.5	2.0	<b>1.5</b>	0.09	0.15	C47+C49
Breast	74	0.2	0.8	<b>0.6</b>	0.04	0.07	10905	29.8	115.1	<b>79.1</b>	5.46	9.10	C50
Vulva							211	0.6	2.2	<b>1.3</b>	0.07	0.13	C51
Vagina							62	0.2	0.7	<b>0.4</b>	0.03	0.04	C52
Cervix uteri							813	2.2	8.6	<b>6.4</b>	0.49	0.63	C53
Corpus uteri							1951	5.3	20.6	<b>14.2</b>	0.97	1.79	C54
Uterus unspecified							33	0.1	0.3	<b>0.1</b>	0.00	0.01	C55
Ovary							1549	4.2	16.4	<b>11.4</b>	0.76	1.29	C56
Other female genital organs							43	0.1	0.5	<b>0.3</b>	0.02	0.04	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	58	0.1	0.6	<b>0.5</b>	0.02	0.06							C60
Prostate	12544	29.6	133.4	<b>92.0</b>	3.51	12.15							C61
Testis	561	1.3	6.0	<b>5.0</b>	0.37	0.39							C62
Other male genital organs	19	0.0	0.2	<b>0.1</b>	0.00	0.02							C63
Kidney	1014	2.4	10.8	<b>8.2</b>	0.50	0.98	593	1.6	6.3	<b>4.3</b>	0.25	0.50	C64
Renal pelvis	75	0.2	0.8	<b>0.5</b>	0.02	0.07	36	0.1	0.4	<b>0.2</b>	0.01	0.03	C65
Ureter	58	0.1	0.6	<b>0.4</b>	0.01	0.04	34	0.1	0.4	<b>0.2</b>	0.01	0.03	C66
Bladder	2902	6.9	30.9	<b>21.1</b>	0.91	2.50	1041	2.8	11.0	<b>6.4</b>	0.32	0.77	C67
Other urinary organs	25	0.1	0.3	<b>0.2</b>	0.01	0.02	11	0.0	0.1	<b>0.1</b>	0.00	0.01	C68
Eye	82	0.2	0.9	<b>0.8</b>	0.05	0.08	54	0.1	0.6	<b>0.5</b>	0.03	0.04	C69
Brain, nervous system	720	1.7	7.7	<b>6.4</b>	0.42	0.66	508	1.4	5.4	<b>4.3</b>	0.27	0.42	C70-72
Thyroid	220	0.5	2.3	<b>1.9</b>	0.14	0.19	637	1.7	6.7	<b>5.4</b>	0.40	0.50	C73
Adrenal gland	17	0.0	0.2	<b>0.2</b>	0.01	0.02	23	0.1	0.2	<b>0.2</b>	0.01	0.01	C74
Other endocrine	18	0.0	0.2	<b>0.2</b>	0.01	0.01	6	0.0	0.1	<b>0.1</b>	0.00	0.00	C75
Hodgkin disease	252	0.6	2.7	<b>2.4</b>	0.17	0.19	198	0.5	2.1	<b>2.0</b>	0.13	0.15	C81
Non-Hodgkin lymphoma	1716	4.1	18.2	<b>13.6</b>	0.81	1.49	1327	3.6	14.0	<b>8.9</b>	0.49	1.03	C82-85,C96
Immunoproliferative diseases	34	0.1	0.4	<b>0.2</b>	0.01	0.03	12	0.0	0.1	<b>0.1</b>	0.00	0.01	C88
Multiple myeloma	511	1.2	5.4	<b>3.7</b>	0.17	0.45	419	1.1	4.4	<b>2.6</b>	0.13	0.32	C90
Lymphoid leukaemia	550	1.3	5.8	<b>5.0</b>	0.25	0.46	322	0.9	3.4	<b>2.9</b>	0.14	0.23	C91
Myeloid leukaemia	416	1.0	4.4	<b>3.3</b>	0.17	0.34	330	0.9	3.5	<b>2.5</b>	0.15	0.25	C92-94
Leukaemia unspecified	90	0.2	1.0	<b>0.6</b>	0.01	0.06	68	0.2	0.7	<b>0.3</b>	0.01	0.03	C95
Other and unspecified	1399	3.3	14.9	<b>10.0</b>	0.42	1.14	1558	4.3	16.4	<b>9.1</b>	0.42	0.97	O&U
All sites	42447		451.3	<b>321.9</b>	15.37	38.83	36717		387.6	<b>253.1</b>	15.54	28.74	ALL
All sites but C44	42335	100.0	450.1	<b>321.1</b>	15.32	38.74	36612	100.0	386.5	<b>252.4</b>	15.49	28.67	ALLbC44

# Canada, Manitoba

### Registration area

Manitoba is a province located in central Canada, bordered to the east by Ontario and Hudson Bay, to the west by Saskatchewan, to the north by Nunavut and the Northwest Territories and to the south by the American states of North Dakota and Minnesota. It lies between latitude 49° and 60° N and longitude 90° and 102° W. The altitude varies from sea level to 823 m and the province covers an area of 649 950 km<sup>2</sup>.

At the time of the 1996 census, 72% of the population was urban, with almost 60% living in the capital city of Winnipeg. Manitoba is ethnically diverse. Approximately 12% of all residents were aboriginal (native Americans 64.1%; Métis 35.6%; Inuits 0.3%). A similar number had immigrated from other countries. Of the 135 940 immigrants, 51.7% were born in Europe and 27.3% were born in Asia. The majority of Manitobans reported British (39.0%), French (13.4%) or other European (20.8%) heritage.

### Cancer care facilities

CancerCare Manitoba is a provincial cancer agency with a mandate to coordinate all aspects of cancer control in Manitoba. Direct patient care involves the provision of treatment services, including outpatient-based radiation therapy at two centres in the major urban centre (Winnipeg), chemotherapy and breast screening mammography. The cancer agency partners with other community care facilities to provide cancer services through the Community Cancer Programs Network, an innovative program for delivering cancer care – primarily chemotherapy – in local communities throughout the Province. Supportive activities include cancer-related consultation services for other health care providers and the development of standards for the delivery of cancer care in Manitoba, as well as the facilitation of cancer-related education, surveillance and research activities.

### Registry structure and methods

Manitoba has one of the longest standing cancer registries in the world. It was started in 1937, although it did not become fully population-based until 1956. The registry is located within the Department of Preventive Oncology and Epidemiology at CancerCare Manitoba. It is funded via CancerCare Manitoba by Manitoba Health, the provincial health department. The registry staff include the manager, five cancer registrars, a quality assurance technician, a coding supervisor, a breast tumour data manager, three clerks and a secretary. Four of the staff are Certified Tumor Registrars. Support for the registry is also provided by staff from the epidemiology section of the department (two epidemiologists, one statistician, one systems manager and three analysts).

Reporting of cancer has been mandated by law since 1956. Case-finding is passive and multiple sources of ascertainment are used. These include physician notifications, pathology and cytology

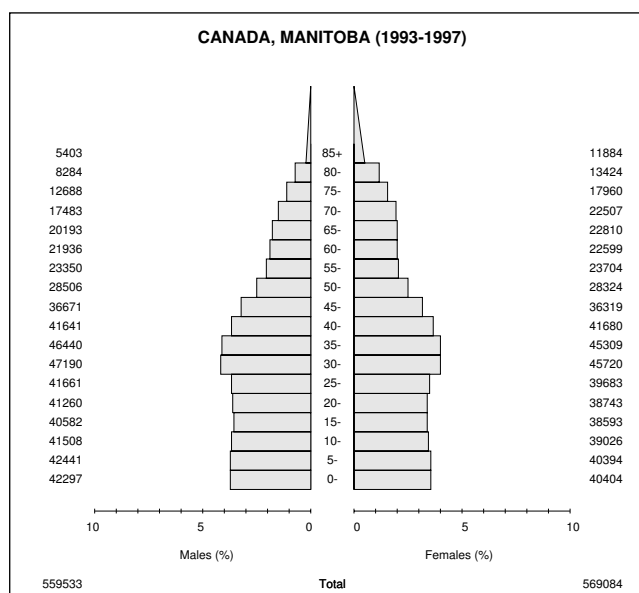
reports, and hospitalization, mortality and autopsy records. Cancer registrars collect, classify and maintain comprehensive information on cancer patients. Quality control is an important part of cancer registration in Manitoba, and the registry recently acquired Gold Certification by NAACCR.

### Interpreting the results

The cancer statistics presented in this volume may be influenced by diagnostic and early detection technologies. The most significant effect is expected to be increased breast cancer incidence resulting from the establishment of the provincial breast screening programme in 1995. Opportunistic screening for cervical, prostate and colorectal cancer occurs, but the magnitude of these practices – and therefore the effect on cancer incidence rates – are as yet unknown.

### Use of the data

The data are used to answer questions relating to the whole spectrum of cancer control in Manitoba. They are also used for surveillance, research, evaluation, planning and teaching purposes and to provide diagnostic confirmation and treatment-related information to health care providers.



### Source of population

Postcensal estimates based on the 1991 census. The populations for 1993–97 were estimated using the adjusted intercensal or postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada

## CANADA, MANITOBA (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	215	1.6	7.7	<b>5.4</b>	0.27	0.66	45	0.4	1.6	<b>0.7</b>	0.02	0.08	C00
Tongue	72	0.5	2.6	<b>2.2</b>	0.17	0.27	43	0.4	1.5	<b>0.9</b>	0.05	0.10	C01-02
Mouth	79	0.6	2.8	<b>2.2</b>	0.13	0.27	65	0.5	2.3	<b>1.2</b>	0.07	0.13	C03-06
Salivary glands	25	0.2	0.9	<b>0.7</b>	0.04	0.07	22	0.2	0.8	<b>0.5</b>	0.04	0.05	C07-08
Tonsil	35	0.3	1.3	<b>1.0</b>	0.07	0.14	13	0.1	0.5	<b>0.4</b>	0.03	0.04	C09
Other oropharynx	7	0.1	0.3	<b>0.2</b>	0.02	0.03	4	0.0	0.1	<b>0.1</b>	0.01	0.01	C10
Nasopharynx	31	0.2	1.1	<b>0.9</b>	0.05	0.10	6	0.0	0.2	<b>0.2</b>	0.02	0.02	C11
Hypopharynx	48	0.3	1.7	<b>1.4</b>	0.08	0.19	11	0.1	0.4	<b>0.3</b>	0.02	0.04	C12-13
Pharynx unspecified	10	0.1	0.4	<b>0.3</b>	0.01	0.04	8	0.1	0.3	<b>0.2</b>	0.02	0.02	C14
Oesophagus	160	1.2	5.7	<b>4.1</b>	0.24	0.50	68	0.6	2.4	<b>1.2</b>	0.06	0.12	C15
Stomach	384	2.8	13.7	<b>9.1</b>	0.44	1.00	221	1.8	7.8	<b>3.7</b>	0.15	0.42	C16
Small intestine	50	0.4	1.8	<b>1.2</b>	0.06	0.15	40	0.3	1.4	<b>0.7</b>	0.03	0.09	C17
Colon	1109	8.1	39.6	<b>27.0</b>	1.25	3.22	1149	9.4	40.4	<b>20.4</b>	0.89	2.36	C18
Rectum	636	4.6	22.7	<b>16.2</b>	0.84	2.00	386	3.2	13.6	<b>8.0</b>	0.44	0.95	C19-20
‡Anus	20	0.1	0.7	<b>0.5</b>	0.03	0.06	33	0.3	1.2	<b>0.7</b>	0.05	0.09	C21
Liver	116	0.8	4.1	<b>2.9</b>	0.14	0.36	59	0.5	2.1	<b>1.1</b>	0.06	0.12	C22
Gallbladder etc.	86	0.6	3.1	<b>2.0</b>	0.08	0.22	151	1.2	5.3	<b>2.6</b>	0.13	0.29	C23-24
Pancreas	299	2.2	10.7	<b>7.3</b>	0.35	0.85	311	2.6	10.9	<b>5.3</b>	0.24	0.58	C25
Nose, sinuses etc.	21	0.2	0.8	<b>0.6</b>	0.04	0.07	22	0.2	0.8	<b>0.5</b>	0.02	0.06	C30-31
Larynx	160	1.2	5.7	<b>4.2</b>	0.23	0.58	32	0.3	1.1	<b>0.7</b>	0.04	0.09	C32
Trachea, bronchus and lung	2258	16.4	80.7	<b>56.6</b>	2.66	7.23	1494	12.3	52.5	<b>33.8</b>	2.14	4.34	C33-34
Other thoracic organs	13	0.1	0.5	<b>0.4</b>	0.03	0.04	6	0.0	0.2	<b>0.1</b>	0.01	0.01	C37-38
Bone	27	0.2	1.0	<b>1.0</b>	0.07	0.08	25	0.2	0.9	<b>0.8</b>	0.05	0.06	C40-41
Melanoma of skin	299	2.2	10.7	<b>8.2</b>	0.53	0.89	307	2.5	10.8	<b>7.9</b>	0.58	0.80	C43
Other skin	49		1.8	<b>1.1</b>	0.04	0.12	60		2.1	<b>1.3</b>	0.09	0.14	C44
Mesothelioma	50	0.4	1.8	<b>1.2</b>	0.06	0.16	13	0.1	0.5	<b>0.3</b>	0.03	0.04	C45
Kaposi sarcoma	28	0.2	1.0	<b>0.8</b>	0.07	0.07	3	0.0	0.1	<b>0.1</b>	0.00	0.01	C46
Connective and soft tissue	78	0.6	2.8	<b>2.2</b>	0.12	0.22	55	0.5	1.9	<b>1.2</b>	0.07	0.11	C47+C49
Breast	23	0.2	0.8	<b>0.6</b>	0.03	0.06	3443	28.3	121.0	<b>84.1</b>	6.04	9.69	C50
Vulva							56	0.5	2.0	<b>1.0</b>	0.05	0.12	C51
Vagina							12	0.1	0.4	<b>0.3</b>	0.02	0.03	C52
Cervix uteri							298	2.4	10.5	<b>8.1</b>	0.61	0.78	C53
Corpus uteri							747	6.1	26.3	<b>17.9</b>	1.30	2.22	C54
Uterus unspecified							19	0.2	0.7	<b>0.3</b>	0.02	0.03	C55
Ovary							507	4.2	17.8	<b>12.6</b>	0.89	1.42	C56
Other female genital organs							22	0.2	0.8	<b>0.4</b>	0.01	0.04	C57
Placenta							1	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	21	0.2	0.8	<b>0.4</b>	0.02	0.03							C60
Prostate	3946	28.7	141.0	<b>96.0</b>	3.74	12.64							C61
Testis	132	1.0	4.7	<b>4.2</b>	0.31	0.32							C62
Other male genital organs	9	0.1	0.3	<b>0.2</b>	0.01	0.03							C63
Kidney	452	3.3	16.2	<b>11.9</b>	0.69	1.38	255	2.1	9.0	<b>5.7</b>	0.32	0.69	C64
Renal pelvis	32	0.2	1.1	<b>0.7</b>	0.03	0.09	17	0.1	0.6	<b>0.4</b>	0.03	0.03	C65
Ureter	19	0.1	0.7	<b>0.5</b>	0.02	0.06	17	0.1	0.6	<b>0.2</b>	0.00	0.03	C66
Bladder	878	6.4	31.4	<b>21.0</b>	0.92	2.45	312	2.6	11.0	<b>6.1</b>	0.33	0.71	C67
Other urinary organs	9	0.1	0.3	<b>0.2</b>	0.00	0.04	4	0.0	0.1	<b>0.1</b>	0.00	0.00	C68
Eye	29	0.2	1.0	<b>0.8</b>	0.05	0.09	28	0.2	1.0	<b>0.7</b>	0.04	0.07	C69
Brain, nervous system	211	1.5	7.5	<b>6.5</b>	0.42	0.63	185	1.5	6.5	<b>4.9</b>	0.30	0.48	C70-72
Thyroid	59	0.4	2.1	<b>1.7</b>	0.14	0.18	206	1.7	7.2	<b>5.9</b>	0.40	0.56	C73
Adrenal gland	8	0.1	0.3	<b>0.3</b>	0.02	0.02	13	0.1	0.5	<b>0.5</b>	0.03	0.04	C74
Other endocrine	2	0.0	0.1	<b>0.1</b>	0.01	0.01	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	77	0.6	2.8	<b>2.5</b>	0.19	0.23	58	0.5	2.0	<b>1.7</b>	0.10	0.14	C81
Non-Hodgkin lymphoma	573	4.2	20.5	<b>15.3</b>	0.91	1.70	514	4.2	18.1	<b>11.7</b>	0.71	1.31	C82-85,C96
Immunoproliferative diseases	13	0.1	0.5	<b>0.3</b>	0.01	0.04	10	0.1	0.4	<b>0.2</b>	0.01	0.02	C88
Multiple myeloma	180	1.3	6.4	<b>4.4</b>	0.22	0.53	124	1.0	4.4	<b>2.1</b>	0.08	0.23	C90
Lymphoid leukaemia	231	1.7	8.3	<b>6.6</b>	0.35	0.68	151	1.2	5.3	<b>3.6</b>	0.18	0.31	C91
Myeloid leukaemia	126	0.9	4.5	<b>3.0</b>	0.14	0.31	109	0.9	3.8	<b>2.8</b>	0.18	0.28	C92-94
Leukaemia unspecified	13	0.1	0.5	<b>0.2</b>	0.01	0.01	17	0.1	0.6	<b>0.2</b>	0.01	0.03	C95
Other and unspecified	381	2.8	13.6	<b>9.2</b>	0.42	1.08	452	3.7	15.9	<b>8.0</b>	0.36	0.84	O&U
All sites	13789		492.9	<b>347.6</b>	16.78	42.19	12230		429.8	<b>274.7</b>	17.38	31.28	ALL
All sites but C44	13740	100.0	491.1	<b>346.5</b>	16.74	42.07	12170	100.0	427.7	<b>273.3</b>	17.29	31.14	ALLbC44

‡35.0% of cases are anorectal tumours



# Canada, New Brunswick

**Registration area**

The New Brunswick Provincial Cancer Registry covers the entire Province of New Brunswick, which is located on the east coast of Canada. New Brunswick is bordered by the Provinces of Québec, Nova Scotia and the State of Maine with the St. Lawrence River to the north and the Bay of Fundy to the south. There are seven cities, none of which has more than 100 000 inhabitants.

At the 1996 census 48.8% of the population is urban and 51.2% rural, 64.1% English and 32.7% French with the remaining 3.2% bilingual or other languages, and 15.4% of the population are 65 years of age or older.

**Cancer care facilities**

Medical treatment of cancer focuses on surgery, medical oncology, radiation and supportive care. Since 1993, there have been two centres of expertise in radiation oncology in the province. As of 1995–96, chemotherapy was offered in 17 facilities on an outpatient basis and 12 hospitals on an inpatient basis. In addition, four hospitals had specialized medical oncology beds. With the opening of the second radiation oncology centre in 1993, access to services in their own language increased dramatically for the francophone population.

**Registry structure and methods**

The New Brunswick Provincial Cancer Registry has been a population-based registry since its inception. It was formed in 1995 to register all malignant diseases as well as selected benign cases in the province. The personnel consist of a Director and three full time employees plus assistance from the Provincial Epidemiology Service for Information Support as well as data analysis. The registry came under the direct jurisdiction of the Department of Health (now the Department of Health and Wellness) in 1992.

The sources used for reporting data on patients with cancer include pathology laboratories, radiation oncology centres, cytology and haematology laboratories, death certificates and autopsies. The reporting of cancer is voluntary. The registry receives death registrations with mention of cancer plus general death lists from the Provincial Vital Statistics Office.

Data from 1955 to 1971 were recorded on hand-punched cards and forwarded to Statistics Canada. From 1972 to 1984, data were forwarded on IBM key punch cards. Data from 1985 to 1988 were forwarded via magnetic tape. Data from 1989 onwards are now registered by computer and forwarded by diskette. The registry has its own information system (Cancer Registration Information System) and contains data from 1972 to the present with varied degrees of completeness.

The completeness of the registry is ensured by checking pathologies, utilizing further follow-up information, including autopsies, radiation oncologists, surgeons, consultations with

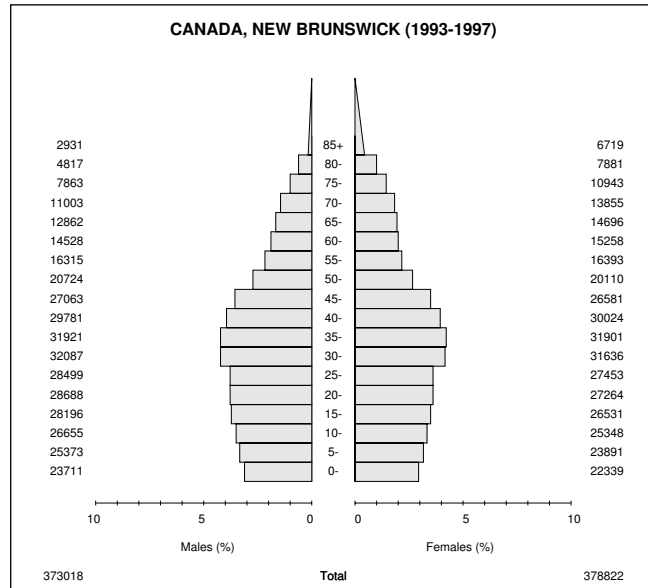
family doctors as well as edits in the program and record linkage and death clearance done at the national level. The registry maintains a patient record and a tumour record which permits the recording of multiple tumours for one person.

**Interpreting the results**

Organized breast cancer screening services were made available province-wide commencing in April 1995. Opportunistic screening for cervical cancer has been in existence for some time. There is at present no prostate cancer screening programme.

**Use of the data**

The data are used for trends, investigations, surveys and studies as well as for national and international comparisons.



**Source of population**

Postcensal estimates based on the 1991 census. The populations for 1993–97 were estimated using the adjusted intercensal or postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada.

**Notes on the data**

† C44 does not include basal cell or squamous cell carcinoma.

## CANADA, NEW BRUNSWICK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	36	0.4	1.9	<b>1.4</b>	0.06	0.19	9	0.1	0.5	<b>0.3</b>	0.02	0.05	C00
Tongue	42	0.5	2.3	<b>1.7</b>	0.12	0.22	15	0.2	0.8	<b>0.5</b>	0.03	0.07	C01-02
Mouth	50	0.6	2.7	<b>2.1</b>	0.14	0.26	33	0.5	1.7	<b>1.1</b>	0.05	0.14	C03-06
Salivary glands	20	0.2	1.1	<b>0.9</b>	0.06	0.10	20	0.3	1.1	<b>0.8</b>	0.05	0.08	C07-08
Tonsil	24	0.3	1.3	<b>1.1</b>	0.07	0.15	8	0.1	0.4	<b>0.3</b>	0.02	0.03	C09
Other oropharynx	6	0.1	0.3	<b>0.3</b>	0.02	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	20	0.2	1.1	<b>0.9</b>	0.07	0.10	4	0.1	0.2	<b>0.1</b>	0.01	0.01	C11
Hypopharynx	24	0.3	1.3	<b>1.1</b>	0.06	0.16	1	0.0	0.1	<b>0.0</b>	0.01	0.01	C12-13
Pharynx unspecified	11	0.1	0.6	<b>0.5</b>	0.04	0.05	1	0.0	0.1	<b>0.0</b>	0.00	0.01	C14
Oesophagus	95	1.0	5.1	<b>3.8</b>	0.21	0.47	49	0.7	2.6	<b>1.3</b>	0.07	0.13	C15
Stomach	282	3.1	15.1	<b>10.6</b>	0.51	1.17	142	1.9	7.5	<b>4.2</b>	0.21	0.51	C16
Small intestine	34	0.4	1.8	<b>1.3</b>	0.07	0.12	19	0.3	1.0	<b>0.6</b>	0.03	0.07	C17
Colon	724	8.0	38.8	<b>28.4</b>	1.49	3.35	749	10.2	39.5	<b>22.3</b>	1.11	2.58	C18
Rectum	377	4.2	20.2	<b>15.0</b>	0.77	1.85	235	3.2	12.4	<b>6.9</b>	0.37	0.78	C19-20
‡Anus	14	0.2	0.8	<b>0.5</b>	0.02	0.06	15	0.2	0.8	<b>0.5</b>	0.02	0.07	C21
Liver	62	0.7	3.3	<b>2.5</b>	0.12	0.31	31	0.4	1.6	<b>1.0</b>	0.05	0.12	C22
Gallbladder etc.	32	0.4	1.7	<b>1.3</b>	0.06	0.17	53	0.7	2.8	<b>1.5</b>	0.07	0.16	C23-24
Pancreas	200	2.2	10.7	<b>7.7</b>	0.35	0.95	223	3.0	11.8	<b>6.1</b>	0.25	0.74	C25
Nose, sinuses etc.	8	0.1	0.4	<b>0.4</b>	0.04	0.04	8	0.1	0.4	<b>0.3</b>	0.02	0.03	C30-31
Larynx	152	1.7	8.1	<b>6.5</b>	0.43	0.83	38	0.5	2.0	<b>1.5</b>	0.12	0.19	C32
Trachea, bronchus and lung	1760	19.4	94.4	<b>69.1</b>	3.16	8.93	848	11.6	44.8	<b>29.4</b>	1.67	3.83	C33-34
Other thoracic organs	4	0.0	0.2	<b>0.2</b>	0.01	0.02	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C37-38
Bone	15	0.2	0.8	<b>0.7</b>	0.04	0.07	6	0.1	0.3	<b>0.3</b>	0.02	0.02	C40-41
Melanoma of skin	228	2.5	12.2	<b>9.6</b>	0.64	1.02	207	2.8	10.9	<b>8.2</b>	0.59	0.85	C43
†Other skin	37		2.0	<b>1.5</b>	0.09	0.13	21		1.1	<b>0.6</b>	0.03	0.05	C44
Mesothelioma	21	0.2	1.1	<b>0.8</b>	0.04	0.10	4	0.1	0.2	<b>0.1</b>	0.01	0.01	C45
Kaposi sarcoma	13	0.1	0.7	<b>0.5</b>	0.03	0.04	4	0.1	0.2	<b>0.1</b>	0.00	0.00	C46
Connective and soft tissue	37	0.4	2.0	<b>1.5</b>	0.09	0.13	45	0.6	2.4	<b>1.8</b>	0.11	0.18	C47+C49
Breast	19	0.2	1.0	<b>0.7</b>	0.03	0.07	2135	29.1	112.7	<b>78.6</b>	5.62	8.94	C50
Vulva							41	0.6	2.2	<b>1.3</b>	0.08	0.14	C51
Vagina							17	0.2	0.9	<b>0.6</b>	0.04	0.06	C52
Cervix uteri							169	2.3	8.9	<b>6.5</b>	0.46	0.63	C53
Corpus uteri							340	4.6	18.0	<b>12.1</b>	0.75	1.55	C54
Uterus unspecified							14	0.2	0.7	<b>0.4</b>	0.02	0.04	C55
Ovary							250	3.4	13.2	<b>9.5</b>	0.71	1.06	C56
Other female genital organs							9	0.1	0.5	<b>0.3</b>	0.02	0.03	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	17	0.2	0.9	<b>0.6</b>	0.03	0.05							C60
Prostate	2578	28.4	138.2	<b>97.6</b>	3.74	12.48							C61
Testis	61	0.7	3.3	<b>2.8</b>	0.20	0.22							C62
Other male genital organs	5	0.1	0.3	<b>0.2</b>	0.02	0.03							C63
Kidney	279	3.1	15.0	<b>12.0</b>	0.75	1.42	212	2.9	11.2	<b>7.7</b>	0.51	0.89	C64
Renal pelvis	26	0.3	1.4	<b>1.0</b>	0.04	0.14	9	0.1	0.5	<b>0.3</b>	0.02	0.02	C65
Ureter	14	0.2	0.8	<b>0.5</b>	0.02	0.06	5	0.1	0.3	<b>0.2</b>	0.01	0.03	C66
Bladder	568	6.3	30.5	<b>21.7</b>	1.05	2.51	197	2.7	10.4	<b>6.4</b>	0.38	0.72	C67
Other urinary organs	1	0.0	0.1	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.0</b>	0.01	0.01	C68
Eye	18	0.2	1.0	<b>0.8</b>	0.04	0.08	12	0.2	0.6	<b>0.6</b>	0.03	0.05	C69
Brain, nervous system	133	1.5	7.1	<b>6.1</b>	0.38	0.63	121	1.7	6.4	<b>5.0</b>	0.30	0.46	C70-72
Thyroid	39	0.4	2.1	<b>1.7</b>	0.12	0.18	134	1.8	7.1	<b>5.7</b>	0.44	0.52	C73
Adrenal gland	6	0.1	0.3	<b>0.4</b>	0.02	0.02	6	0.1	0.3	<b>0.2</b>	0.02	0.03	C74
Other endocrine	2	0.0	0.1	<b>0.2</b>	0.01	0.01	3	0.0	0.2	<b>0.2</b>	0.02	0.02	C75
Hodgkin disease	48	0.5	2.6	<b>2.3</b>	0.16	0.17	36	0.5	1.9	<b>1.7</b>	0.13	0.13	C81
Non-Hodgkin lymphoma	356	3.9	19.1	<b>14.7</b>	0.90	1.66	346	4.7	18.3	<b>12.1</b>	0.83	1.31	C82-85,C96
Immunoproliferative diseases	10	0.1	0.5	<b>0.4</b>	0.01	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	102	1.1	5.5	<b>4.1</b>	0.20	0.52	80	1.1	4.2	<b>2.6</b>	0.15	0.31	C90
Lymphoid leukaemia	124	1.4	6.6	<b>5.8</b>	0.31	0.53	73	1.0	3.9	<b>3.0</b>	0.15	0.29	C91
Myeloid leukaemia	85	0.9	4.6	<b>3.6</b>	0.23	0.38	74	1.0	3.9	<b>2.7</b>	0.16	0.24	C92-94
Leukaemia unspecified	17	0.2	0.9	<b>0.6</b>	0.01	0.05	18	0.2	1.0	<b>0.4</b>	0.01	0.03	C95
Other and unspecified	265	2.9	14.2	<b>10.2</b>	0.48	1.17	260	3.5	13.7	<b>7.4</b>	0.30	0.83	O&U
All sites	9101		488.0	<b>360.0</b>	17.56	43.44	7351		388.1	<b>255.6</b>	16.13	29.05	ALL
All sites but C44	9064	100.0	486.0	<b>358.6</b>	17.47	43.31	7330	100.0	387.0	<b>254.9</b>	16.09	29.00	ALLbC44

‡50.0% of cases are anorectal tumours

‡33.3% of cases are anorectal tumours

†See note following population pyramid

# Canada, Newfoundland

### Registration area

The registry covers the whole of the province of Newfoundland and Labrador, which lies on the east coast of Canada. The island of Newfoundland is surrounded by the Atlantic Ocean. Labrador is bounded by the Atlantic to the east and the province of Quebec to the west and south. The landmass of the province extends between 47 and 61° N and longitudes 52 and 76° W. The altitude varies from sea level to 1600 m in the interior of Labrador. The total area is 371 634 km<sup>2</sup>.

The population according to the 1991 census was 568 475 and in 1996 the population was 551 792. The decrease in population results from a large emigration of young people annually and correlates with a high rate of unemployment in the province. Predominant occupations include offshore oil, aquaculture, tourism and information technology.

### Registry structure and methods

The Provincial Cancer Registry was started by the Department of Radiotherapy of the St John's General Hospital in 1954. In 1974, the registry came under the jurisdiction of the Newfoundland Cancer Treatment and Research Foundation (NCTRF), which was given a mandate by a legislative act to deliver a cancer control program for the people of Newfoundland and Labrador.

The registry is located within the Dr H. Bliss Murphy Cancer Centre, and is funded by the Department of Health. There are Regional programmes in Corner Brook, Grand Falls-Windsor, St Anthony and Gander, and Regional Clinics at the Burin Peninsula Health Centre, Burin, Captain William Jackman Memorial Hospital, Labrador City and Melville Hospital, Happy Valley-Goose Bay. The registry is staffed by a full-time director, a manager, a part-time programmer analyst and three full time health record technicians.

The implementation of an Oncology Patient Information System (OPIS) was the initial step in the development of a surveillance system. OPIS collects information about all new cancer cases in the province. Every attempt is made to electronically collect all source data for cancer registrations by linking cancer registry files with hospital abstracts.

The registry is patient-oriented. For patients not referred to the Cancer Centre, arrangements have been made with the eight pathology laboratories across Newfoundland and Labrador to send the pathology report directly to the registry. Additional data may be obtained from acute care facilities throughout the island in an ASCII file format. Within NCTRF the registration clerk prepares a chart for cancer clinic patients including all pertinent documentation on the patient. When this is completed the health record technician in the cancer registry registers the patient in the Oncology Patient Information System (OPIS).

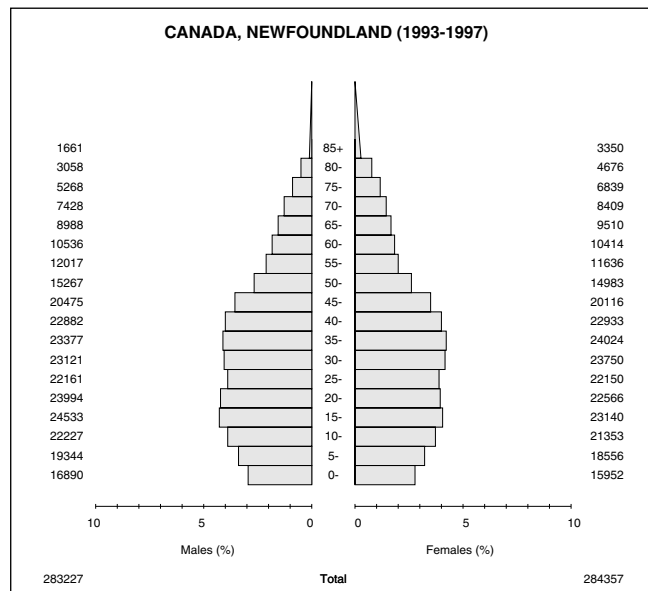
Follow-up is active with letters sent on the anniversary of the last patient contact to the family physician. Patients are followed until the time of death, with the exception of basal and squamous cell skin cancers which are followed for one year. TNM staging started in March 1999.

### Interpreting the results

It is not possible to estimate how many cancer cases remain undiagnosed; the registry is aware that there is a low percentage of radiologically diagnosed cases and has plans to rectify this.

### Use of the data

The registry prepares an annual report of cancer incidence, highlighting trends and changes. This report can be viewed on the registry web site [www.nctrf.nf.ca](http://www.nctrf.nf.ca)



### Source of population

Postcensal estimates based on the 1991 census. The populations for 1993-97 were estimated using the adjusted intercensal or postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada.

### Notes on the data

† C44 does not include basal cell carcinoma.

## CANADA, NEWFOUNDLAND (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	173	3.4	12.2	<b>9.8</b>	0.50	1.22	30	0.7	2.1	<b>1.4</b>	0.06	0.14	C00
Tongue	28	0.5	2.0	<b>1.7</b>	0.11	0.22	11	0.3	0.8	<b>0.5</b>	0.03	0.05	C01-02
Mouth	30	0.6	2.1	<b>1.8</b>	0.13	0.21	5	0.1	0.4	<b>0.2</b>	0.01	0.03	C03-06
Salivary glands	10	0.2	0.7	<b>0.5</b>	0.01	0.08	4	0.1	0.3	<b>0.2</b>	0.02	0.02	C07-08
Tonsil	13	0.3	0.9	<b>0.8</b>	0.06	0.09	5	0.1	0.4	<b>0.3</b>	0.02	0.05	C09
Other oropharynx	9	0.2	0.6	<b>0.6</b>	0.05	0.08	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	13	0.3	0.9	<b>0.8</b>	0.05	0.09	3	0.1	0.2	<b>0.2</b>	0.02	0.02	C11
Hypopharynx	22	0.4	1.6	<b>1.4</b>	0.05	0.20	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	6	0.1	0.4	<b>0.4</b>	0.02	0.05	3	0.1	0.2	<b>0.2</b>	0.01	0.02	C14
Oesophagus	63	1.2	4.4	<b>3.6</b>	0.20	0.40	23	0.5	1.6	<b>1.0</b>	0.02	0.13	C15
Stomach	292	5.7	20.6	<b>16.4</b>	0.71	2.02	163	3.8	11.5	<b>7.7</b>	0.35	0.95	C16
Small intestine	20	0.4	1.4	<b>1.1</b>	0.05	0.17	11	0.3	0.8	<b>0.6</b>	0.03	0.06	C17
Colon	582	11.3	41.1	<b>33.1</b>	1.76	3.99	510	11.9	35.9	<b>25.9</b>	1.32	3.23	C18
Rectum	287	5.6	20.3	<b>16.4</b>	0.81	2.10	175	4.1	12.3	<b>9.1</b>	0.51	1.14	C19-20
Anus	20	0.4	1.4	<b>1.3</b>	0.09	0.18	15	0.3	1.1	<b>0.7</b>	0.04	0.08	C21
Liver	31	0.6	2.2	<b>1.7</b>	0.07	0.19	14	0.3	1.0	<b>0.8</b>	0.06	0.08	C22
Gallbladder etc.	18	0.3	1.3	<b>0.9</b>	0.02	0.09	29	0.7	2.0	<b>1.5</b>	0.08	0.20	C23-24
Pancreas	70	1.4	4.9	<b>4.2</b>	0.24	0.57	57	1.3	4.0	<b>3.0</b>	0.17	0.41	C25
Nose, sinuses etc.	10	0.2	0.7	<b>0.5</b>	0.01	0.06	10	0.2	0.7	<b>0.6</b>	0.02	0.07	C30-31
Larynx	90	1.7	6.4	<b>5.5</b>	0.30	0.81	13	0.3	0.9	<b>0.7</b>	0.04	0.10	C32
Trachea, bronchus and lung	841	16.3	59.4	<b>50.2</b>	2.84	6.78	294	6.8	20.7	<b>16.9</b>	1.17	2.20	C33-34
Other thoracic organs	2	0.0	0.1	<b>0.1</b>	0.00	0.00	2	0.0	0.1	<b>0.1</b>	0.01	0.01	C37-38
Bone	14	0.3	1.0	<b>0.9</b>	0.04	0.08	6	0.1	0.4	<b>0.4</b>	0.02	0.02	C40-41
Melanoma of skin	95	1.8	6.7	<b>5.5</b>	0.40	0.53	123	2.9	8.7	<b>6.6</b>	0.45	0.63	C43
†Other skin	17		1.2	<b>0.9</b>	0.04	0.09	18		1.3	<b>0.9</b>	0.06	0.07	C44
Mesothelioma	7	0.1	0.5	<b>0.4</b>	0.01	0.04	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C45
Kaposi sarcoma	4	0.1	0.3	<b>0.2</b>	0.01	0.02	3	0.1	0.2	<b>0.2</b>	0.01	0.01	C46
Connective and soft tissue	29	0.6	2.0	<b>1.8</b>	0.11	0.23	22	0.5	1.5	<b>1.3</b>	0.09	0.12	C47+C49
Breast	11	0.2	0.8	<b>0.6</b>	0.05	0.09	1237	28.8	87.0	<b>68.3</b>	4.94	7.74	C50
Vulva							27	0.6	1.9	<b>1.4</b>	0.09	0.18	C51
Vagina							12	0.3	0.8	<b>0.6</b>	0.04	0.07	C52
Cervix uteri							163	3.8	11.5	<b>9.3</b>	0.74	0.90	C53
Corpus uteri							239	5.6	16.8	<b>13.6</b>	1.03	1.61	C54
Uterus unspecified							13	0.3	0.9	<b>0.6</b>	0.04	0.05	C55
Ovary							189	4.4	13.3	<b>10.8</b>	0.80	1.21	C56
Other female genital organs							8	0.2	0.6	<b>0.4</b>	0.01	0.06	C57
Placenta							1	0.0	0.1	<b>0.1</b>	0.00	0.00	C58
Penis	14	0.3	1.0	<b>0.8</b>	0.04	0.08							C60
Prostate	1075	20.9	75.9	<b>59.2</b>	2.02	7.71							C61
Testis	51	1.0	3.6	<b>3.2</b>	0.23	0.23							C62
Other male genital organs	3	0.1	0.2	<b>0.1</b>	0.00	0.00							C63
Kidney	146	2.8	10.3	<b>8.9</b>	0.55	1.12	108	2.5	7.6	<b>6.3</b>	0.41	0.75	C64
Renal pelvis	11	0.2	0.8	<b>0.6</b>	0.02	0.07	6	0.1	0.4	<b>0.3</b>	0.02	0.03	C65
Ureter	12	0.2	0.8	<b>0.7</b>	0.04	0.10	1	0.0	0.1	<b>0.1</b>	0.00	0.01	C66
Bladder	407	7.9	28.7	<b>22.6</b>	0.98	2.63	110	2.6	7.7	<b>5.2</b>	0.29	0.58	C67
Other urinary organs	2	0.0	0.1	<b>0.1</b>	0.00	0.01	3	0.1	0.2	<b>0.1</b>	0.00	0.01	C68
Eye	5	0.1	0.4	<b>0.3</b>	0.02	0.05	8	0.2	0.6	<b>0.5</b>	0.03	0.07	C69
Brain, nervous system	90	1.7	6.4	<b>5.9</b>	0.38	0.59	62	1.4	4.4	<b>4.0</b>	0.28	0.36	C70-72
Thyroid	35	0.7	2.5	<b>2.1</b>	0.12	0.21	106	2.5	7.5	<b>6.2</b>	0.48	0.61	C73
Adrenal gland	5	0.1	0.4	<b>0.4</b>	0.02	0.04	3	0.1	0.2	<b>0.2</b>	0.02	0.02	C74
Other endocrine	2	0.0	0.1	<b>0.1</b>	0.00	0.02	1	0.0	0.1	<b>0.1</b>	0.00	0.00	C75
Hodgkin disease	31	0.6	2.2	<b>2.0</b>	0.12	0.19	19	0.4	1.3	<b>1.1</b>	0.05	0.11	C81
Non-Hodgkin lymphoma	149	2.9	10.5	<b>8.8</b>	0.57	0.93	146	3.4	10.3	<b>8.2</b>	0.58	0.93	C82-85,C96
Immunoproliferative diseases	3	0.1	0.2	<b>0.2</b>	0.01	0.02	2	0.0	0.1	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	48	0.9	3.4	<b>2.7</b>	0.16	0.33	48	1.1	3.4	<b>2.3</b>	0.12	0.28	C90
Lymphoid leukaemia	48	0.9	3.4	<b>3.5</b>	0.22	0.33	33	0.8	2.3	<b>2.6</b>	0.16	0.22	C91
Myeloid leukaemia	41	0.8	2.9	<b>2.5</b>	0.14	0.25	47	1.1	3.3	<b>2.8</b>	0.17	0.30	C92-94
Leukaemia unspecified	3	0.1	0.2	<b>0.2</b>	0.01	0.01	2	0.0	0.1	<b>0.1</b>	0.00	0.01	C95
Other and unspecified	176	3.4	12.4	<b>10.3</b>	0.56	1.29	176	4.1	12.4	<b>9.6</b>	0.59	1.25	O&U
All sites	5164		364.7	<b>298.4</b>	14.98	36.91	4320		303.8	<b>235.9</b>	15.52	27.20	ALL
All sites but C44	5147	100.0	363.5	<b>297.5</b>	14.94	36.81	4302	100.0	302.6	<b>235.0</b>	15.46	27.13	ALLbC44

†See note following population pyramid

# Canada, Northwest Territories

### Registry background

The area covered by the registry is the largest in Canada, but it is the most sparsely populated. The Northwest Territories (NWT) comprises the area north of the 60th parallel, lying between the Yukon Territory and the Beaufort Sea to the west and the Hudson Bay, Davis Strait and Greenland to the east. The Arctic Ocean forms the northern border, which reaches as far as the 83rd parallel.

All forms of malignancy have been reportable in the Northwest Territories since late 1990. However, the very extensive circumpolar geographical area which constitutes this jurisdiction (comprising one-third of the land area of Canada) results in an additional reliance on diagnostic service and reporting and may also impact on completeness. It also should be noted that collection of cancer data had been initiated in the late 1950s.

In 1996 the population of NWT was about 66 575 persons, living or based in some 64 communities, half of which had populations of under 500 residents. There is a natural population increase of almost 3% annually, and one-third of the population is under 15 years of age. Health programmes and services were provided by seven health and/or hospital boards, reflecting eight official language groups in four ethnic categories (Dene, Inuit, Metis, and non-aboriginal). Two-thirds of the population are aboriginal people<sup>1</sup>.

### Cancer care facilities

Most formal health services and programmes in NWT are provided through community health centres, staffed by nurses, and visited by itinerant physicians. Three hospitals provide second line specialist services. However, most tertiary level services are offered from outside the jurisdiction. Cancer-enhancing behaviours include high smoking rates (up to 70% in certain subgroups) and changing dietary patterns.

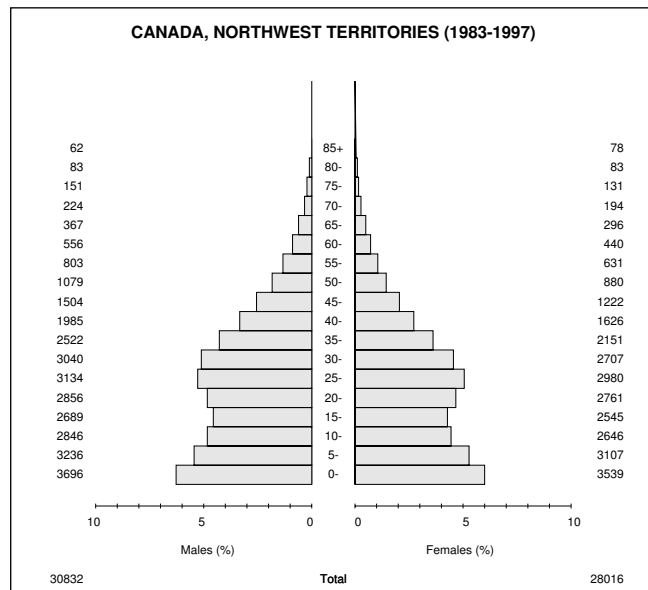
Cancer screening is comprehensive for breast and cervical cancer.

### Registry structure and methods

The NWT Cancer Registry is maintained by two registry staff within the Health Protection Unit, Population Health Division, Department of Health and Social Services, Government of the Northwest Territories.

Cancer has been reportable since 1990 under the Disease Registries Act. All cancers are registered using a form which must

be filled in by the treating physician at the time of diagnosis. Also, the contract with out-of-territory laboratories requires that a copy of pathology reports indicative of cancer be forwarded to the Registrar. Other sources of information result from an active search of vital statistics, discharge summaries and physicians' notes. The principal sources of information on cancer cases are the physicians' notes and the laboratory reports. Death certificates are retrieved from the Northwest Territories Vital Statistics office in Inuvik.



### Source of population

Estimates based on the 1986 and 1991 censuses. The populations for 1993-97 were estimated using the adjusted intercensal or postcensal estimates based on the 1986 and 1991 censuses, as provided by the Population Estimates Section, Demography Division, Statistics Canada.

### Notes on the data

† C44 does not include basal cell or squamous cell carcinoma.

<sup>1</sup> This describes the situation as it was in 1997. On 1 April 1999, the Northwest Territories was divided to create the new Nunavut Territory.

## CANADA, NORTHWEST TERRITORIES (1983-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	3	0.4	0.6	<b>1.5</b>	0.03	0.27	1	0.2	0.2	<b>0.4</b>	0.05	0.05	C00
Tongue	3	0.4	0.6	<b>1.0</b>	0.11	0.11	3	0.5	0.7	<b>0.8</b>	0.08	0.08	C01-02
Mouth	4	0.6	0.9	<b>1.3</b>	0.16	0.16	4	0.6	1.0	<b>1.9</b>	0.13	0.30	C03-06
Salivary glands	14	2.1	3.0	<b>4.0</b>	0.40	0.40	9	1.4	2.1	<b>3.8</b>	0.20	0.43	C07-08
Tonsil	1	0.1	0.2	<b>0.2</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	1	0.1	0.2	<b>0.5</b>	0.00	0.09	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	29	4.3	6.3	<b>9.2</b>	0.80	1.04	16	2.5	3.8	<b>6.0</b>	0.43	0.71	C11
Hypopharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	2	0.3	0.4	<b>0.9</b>	0.04	0.19	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	9	1.3	1.9	<b>4.1</b>	0.14	0.68	5	0.8	1.2	<b>2.5</b>	0.09	0.37	C15
Stomach	41	6.1	8.9	<b>16.3</b>	1.00	1.96	12	1.9	2.9	<b>4.1</b>	0.19	0.36	C16
Small intestine	2	0.3	0.4	<b>0.9</b>	0.04	0.19	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C17
Colon	38	5.6	8.2	<b>15.6</b>	0.62	1.88	44	6.8	10.5	<b>20.0</b>	0.91	1.93	C18
Rectum	44	6.5	9.5	<b>19.3</b>	1.11	2.58	26	4.0	6.2	<b>11.2</b>	0.71	1.17	C19-20
Anus	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.2	0.2	<b>0.3</b>	0.03	0.03	C21
Liver	17	2.5	3.7	<b>6.4</b>	0.16	0.49	3	0.5	0.7	<b>1.3</b>	0.09	0.09	C22
Gallbladder etc.	7	1.0	1.5	<b>2.3</b>	0.12	0.27	12	1.9	2.9	<b>5.9</b>	0.20	0.89	C23-24
Pancreas	19	2.8	4.1	<b>7.7</b>	0.49	0.88	17	2.6	4.0	<b>7.6</b>	0.51	1.03	C25
Nose, sinuses etc.	2	0.3	0.4	<b>0.6</b>	0.05	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C30-31
Larynx	7	1.0	1.5	<b>2.8</b>	0.22	0.31	1	0.2	0.2	<b>0.7</b>	0.00	0.17	C32
Trachea, bronchus and lung	196	29.1	42.4	<b>87.2</b>	4.82	12.14	145	22.6	34.5	<b>72.0</b>	4.73	9.10	C33-34
Other thoracic organs	1	0.1	0.2	<b>0.2</b>	0.01	0.01	1	0.2	0.2	<b>0.7</b>	0.00	0.11	C37-38
Bone	5	0.7	1.1	<b>1.2</b>	0.04	0.04	2	0.3	0.5	<b>0.4</b>	0.03	0.03	C40-41
Melanoma of skin	7	1.0	1.5	<b>1.6</b>	0.10	0.10	10	1.6	2.4	<b>3.6</b>	0.21	0.49	C43
†Other skin	34		7.4	<b>11.3</b>	0.88	1.21	15		3.6	<b>5.0</b>	0.43	0.54	C44
Mesothelioma	1	0.1	0.2	<b>0.3</b>	0.04	0.04	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C45
Kaposi sarcoma	4	0.6	0.9	<b>1.1</b>	0.05	0.05	1	0.2	0.2	<b>0.3</b>	0.03	0.03	C46
Connective and soft tissue	4	0.6	0.9	<b>1.1</b>	0.04	0.18	4	0.6	1.0	<b>0.7</b>	0.05	0.05	C47+C49
Breast	2	0.3	0.4	<b>0.9</b>	0.04	0.13	131	20.4	31.2	<b>51.6</b>	3.66	5.58	C50
Vulva							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C51
Vagina							1	0.2	0.2	<b>0.4</b>	0.05	0.05	C52
Cervix uteri							44	6.8	10.5	<b>12.8</b>	0.81	1.43	C53
Corpus uteri							10	1.6	2.4	<b>4.0</b>	0.41	0.41	C54
Uterus unspecified							3	0.5	0.7	<b>0.9</b>	0.03	0.03	C55
Ovary							26	4.0	6.2	<b>9.2</b>	0.71	0.99	C56
Other female genital organs							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C57
Placenta							3	0.5	0.7	<b>0.9</b>	0.08	0.08	C58
Penis	1	0.1	0.2	<b>0.3</b>	0.04	0.04							C60
Prostate	48	7.1	10.4	<b>23.0</b>	0.59	3.08							C61
Testis	19	2.8	4.1	<b>3.3</b>	0.27	0.27							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	24	3.6	5.2	<b>10.6</b>	0.57	1.17	17	2.6	4.0	<b>6.8</b>	0.58	0.75	C64
Renal pelvis	1	0.1	0.2	<b>0.3</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	17	2.5	3.7	<b>7.6</b>	0.48	0.90	4	0.6	1.0	<b>1.7</b>	0.02	0.25	C67
Other urinary organs	2	0.3	0.4	<b>0.9</b>	0.04	0.13	1	0.2	0.2	<b>0.5</b>	0.00	0.00	C68
Eye	1	0.1	0.2	<b>0.3</b>	0.03	0.03	3	0.5	0.7	<b>0.7</b>	0.05	0.05	C69
Brain, nervous system	15	2.2	3.2	<b>4.3</b>	0.28	0.52	11	1.7	2.6	<b>3.0</b>	0.15	0.32	C70-72
Thyroid	6	0.9	1.3	<b>2.1</b>	0.15	0.30	12	1.9	2.9	<b>2.8</b>	0.19	0.19	C73
Adrenal gland	1	0.1	0.2	<b>0.2</b>	0.01	0.01	1	0.2	0.2	<b>0.2</b>	0.01	0.01	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	3	0.4	0.6	<b>0.5</b>	0.03	0.03	4	0.6	1.0	<b>0.8</b>	0.05	0.05	C81
Non-Hodgkin lymphoma	28	4.2	6.1	<b>8.4</b>	0.51	0.84	19	3.0	4.5	<b>7.0</b>	0.42	0.76	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	7	1.0	1.5	<b>2.8</b>	0.14	0.23	4	0.6	1.0	<b>2.2</b>	0.05	0.28	C90
Lymphoid leukaemia	7	1.0	1.5	<b>1.9</b>	0.17	0.17	4	0.6	1.0	<b>0.9</b>	0.04	0.04	C91
Myeloid leukaemia	10	1.5	2.2	<b>2.6</b>	0.19	0.19	8	1.2	1.9	<b>2.6</b>	0.07	0.35	C92-94
Leukaemia unspecified	3	0.4	0.6	<b>1.0</b>	0.02	0.02	1	0.2	0.2	<b>0.4</b>	0.00	0.00	C95
Other and unspecified	18	2.7	3.9	<b>7.3</b>	0.21	0.78	19	3.0	4.5	<b>8.6</b>	0.42	0.82	O&U
All sites	708		153.1	<b>277.1</b>	15.32	34.26	658		156.6	<b>267.1</b>	16.88	30.39	ALL
All sites but C44	674	100.0	145.7	<b>265.8</b>	14.44	33.05	643	100.0	153.0	<b>262.1</b>	16.45	29.85	ALLbC44

†See note following population pyramid

# Canada, Nova Scotia

## Registration area

The registry covers the whole of the province of Nova Scotia, one of the three Maritime provinces of Canada, which lies to the south of the St Lawrence River, east of the Gulf of Maine and south of the provinces of New Brunswick and Prince Edward Island. Although joined to New Brunswick by a central peninsula to the north, it is separated from Prince Edward Island by the Northumberland Strait; to the south, west and east lies the Atlantic. Most of the province lies less than 200 m above sea level, the highest point being at 529 m in the Cape Breton peninsula. The province lies between longitudes 59 and 67° W and latitudes 43° and 47° N. It covers an area of 55 491 km<sup>2</sup>.

At the 1996 census, the total population of Nova Scotia was 931 000, of which 44% were of British origin, 6% French and 5% other European. A further 5% were of other single ethnic origins, while the remaining 40% were of multiple ethnic origin. At that time, the active labour force (440 000) of Nova Scotia was employed in the following categories of industry: wholesale and retail trade, 18%; manufacturing, 11%; primary industry (agriculture, fishing, forestry, mining), 7%; construction, 7%; transport 4%. The remainder were employed in occupations in the service industry, government, education or health-care sectors. Of the 1996 population, 54% lived in designated urban areas, 44% lived in rural non-farm residences and 2% on rural farms.

## Cancer care facilities

The origins of the Nova Scotia Cancer Registry (NSCR) date back to 1964, at which time it was administered by the Victoria General Hospital for the provincial Department of Health. In 1981, responsibility was transferred to the newly formed Cancer Treatment and Research Foundation of Nova Scotia which had a mandate for provincial cancer control. The provincial cancer programme has undergone substantive changes over time and was reconfigured to become Cancer Care Nova Scotia in 1998.

Throughout the registry's history, there has been a legal requirement to register all newly diagnosed cases of cancer. The sources of cancer registration have expanded over the years from completed Nova Scotia Cancer Registry Forms (1964 to present), to include pathology reports (since 1982), an electronic link to the provincial cancer treatment centres (since 1981), and the Nova Scotia Vital Statistics Department. Deaths that occurred between 1969 and 1989 were added through a record linkage contract with Statistics Canada, and include deaths of former Nova Scotia residents who died elsewhere in Canada. Since 1989 death certification information for all provincial deaths has been added as part of an annual probabilistic record linkage process. Potential new cases from death certificate notification are followed back (since 1994) to determine their eligibility for registration.

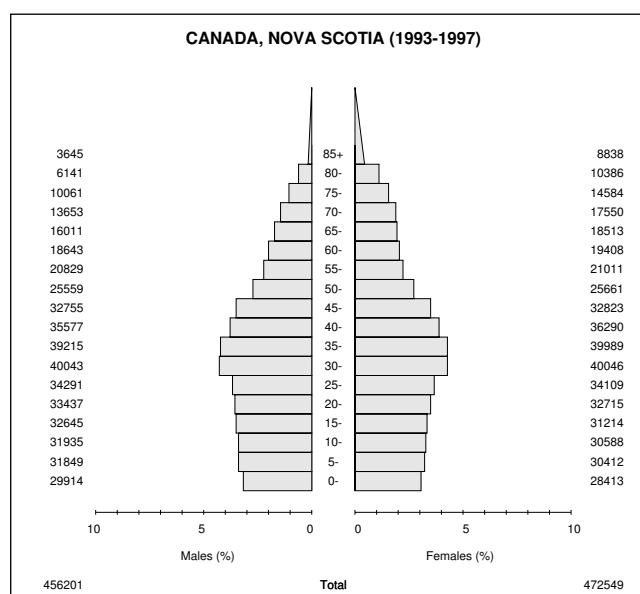
All residents of the province are covered by a provincially-funded comprehensive health insurance scheme. The plan's unique identity number aids considerably in the maintenance of an unduplicated patient index.

## Interpreting the results

The NSCR is active in the Canadian Council of Cancer Registries, and is a full member of the North American Association of Central Cancer Registries. The NSCR received its first certification from NAACCR for its 1998 data submission. Reliability trials performed cooperatively with the other Atlantic registries have served to enhance the consistency of the application of coding rules. During, and at the end of, each calendar year, a series of edit checks ensures the quality of the data, which are then sent to Statistics Canada to become part of the Canadian Cancer Registry.

## Use of the data

The province's cancer statistics are published regularly and given to users and to the providers of the information.



## Source of population

Postcensal estimates based on the 1991 census. The populations for 1993–97 were estimated using the adjusted intercensal or postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada.

## Notes on the data

† C44 does not include basal cell or squamous cell carcinoma.

## CANADA, NOVA SCOTIA (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	66	0.6	2.9	<b>1.9</b>	0.09	0.18	8	0.1	0.3	<b>0.2</b>	0.01	0.02	C00
Tongue	67	0.6	2.9	<b>2.2</b>	0.13	0.27	28	0.3	1.2	<b>0.7</b>	0.04	0.08	C01-02
Mouth	62	0.6	2.7	<b>2.1</b>	0.13	0.24	47	0.5	2.0	<b>1.1</b>	0.06	0.16	C03-06
Salivary glands	34	0.3	1.5	<b>1.1</b>	0.06	0.10	20	0.2	0.8	<b>0.6</b>	0.04	0.07	C07-08
Tonsil	28	0.2	1.2	<b>1.0</b>	0.07	0.13	9	0.1	0.4	<b>0.3</b>	0.02	0.04	C09
Other oropharynx	13	0.1	0.6	<b>0.4</b>	0.01	0.06	7	0.1	0.3	<b>0.2</b>	0.02	0.03	C10
Nasopharynx	18	0.2	0.8	<b>0.7</b>	0.04	0.08	6	0.1	0.3	<b>0.2</b>	0.01	0.02	C11
Hypopharynx	31	0.3	1.4	<b>1.0</b>	0.07	0.14	8	0.1	0.3	<b>0.2</b>	0.01	0.02	C12-13
Pharynx unspecified	12	0.1	0.5	<b>0.4</b>	0.04	0.05	6	0.1	0.3	<b>0.1</b>	0.01	0.02	C14
Oesophagus	144	1.3	6.3	<b>4.6</b>	0.29	0.55	54	0.5	2.3	<b>1.1</b>	0.07	0.11	C15
Stomach	333	3.0	14.6	<b>10.0</b>	0.46	1.12	172	1.7	7.3	<b>4.0</b>	0.20	0.48	C16
Small intestine	24	0.2	1.1	<b>0.8</b>	0.04	0.10	26	0.3	1.1	<b>0.8</b>	0.06	0.10	C17
Colon	965	8.6	42.3	<b>28.8</b>	1.24	3.38	1032	10.3	43.7	<b>22.8</b>	1.00	2.61	C18
Rectum	501	4.5	22.0	<b>15.8</b>	0.78	1.91	381	3.8	16.1	<b>9.3</b>	0.48	1.09	C19-20
‡Anus	17	0.2	0.7	<b>0.6</b>	0.02	0.07	37	0.4	1.6	<b>0.9</b>	0.06	0.10	C21
Liver	84	0.7	3.7	<b>2.6</b>	0.09	0.32	45	0.4	1.9	<b>1.0</b>	0.05	0.09	C22
Gallbladder etc.	57	0.5	2.5	<b>1.7</b>	0.07	0.20	62	0.6	2.6	<b>1.3</b>	0.06	0.15	C23-24
Pancreas	228	2.0	10.0	<b>7.0</b>	0.32	0.85	258	2.6	10.9	<b>5.9</b>	0.25	0.69	C25
Nose, sinuses etc.	14	0.1	0.6	<b>0.5</b>	0.04	0.04	11	0.1	0.5	<b>0.4</b>	0.01	0.04	C30-31
Larynx	162	1.4	7.1	<b>5.5</b>	0.37	0.73	34	0.3	1.4	<b>1.0</b>	0.07	0.14	C32
Trachea, bronchus and lung	2150	19.1	94.3	<b>67.6</b>	3.14	8.89	1282	12.8	54.3	<b>35.5</b>	2.08	4.64	C33-34
Other thoracic organs	12	0.1	0.5	<b>0.5</b>	0.03	0.04	8	0.1	0.3	<b>0.2</b>	0.02	0.03	C37-38
Bone	25	0.2	1.1	<b>1.0</b>	0.07	0.09	23	0.2	1.0	<b>0.9</b>	0.06	0.07	C40-41
Melanoma of skin	325	2.9	14.2	<b>11.1</b>	0.73	1.22	296	3.0	12.5	<b>9.0</b>	0.65	0.91	C43
†Other skin	33		1.4	<b>1.0</b>	0.04	0.12	29		1.2	<b>0.8</b>	0.03	0.08	C44
Mesothelioma	30	0.3	1.3	<b>0.9</b>	0.05	0.10	4	0.0	0.2	<b>0.1</b>	0.00	0.02	C45
Kaposi sarcoma	23	0.2	1.0	<b>0.8</b>	0.06	0.07	4	0.0	0.2	<b>0.1</b>	0.01	0.01	C46
Connective and soft tissue	77	0.7	3.4	<b>2.6</b>	0.13	0.28	49	0.5	2.1	<b>1.5</b>	0.08	0.14	C47+C49
Breast	26	0.2	1.1	<b>0.7</b>	0.02	0.09	2801	27.9	118.5	<b>81.3</b>	5.76	9.39	C50
Vulva							64	0.6	2.7	<b>1.6</b>	0.11	0.14	C51
Vagina							15	0.1	0.6	<b>0.4</b>	0.03	0.05	C52
Cervix uteri							278	2.8	11.8	<b>8.8</b>	0.68	0.89	C53
Corpus uteri							489	4.9	20.7	<b>14.1</b>	0.98	1.72	C54
Uterus unspecified							6	0.1	0.3	<b>0.2</b>	0.02	0.02	C55
Ovary							402	4.0	17.0	<b>11.8</b>	0.77	1.34	C56
Other female genital organs							9	0.1	0.4	<b>0.3</b>	0.02	0.04	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	25	0.2	1.1	<b>0.8</b>	0.04	0.12							C60
Prostate	2830	25.1	124.1	<b>85.2</b>	3.21	10.99							C61
Testis	116	1.0	5.1	<b>4.4</b>	0.33	0.35							C62
Other male genital organs	3	0.0	0.1	<b>0.1</b>	0.00	0.02							C63
Kidney	312	2.8	13.7	<b>10.4</b>	0.62	1.25	224	2.2	9.5	<b>6.3</b>	0.41	0.73	C64
Renal pelvis	25	0.2	1.1	<b>0.8</b>	0.04	0.12	11	0.1	0.5	<b>0.2</b>	0.00	0.02	C65
Ureter	27	0.2	1.2	<b>0.8</b>	0.03	0.12	9	0.1	0.4	<b>0.2</b>	0.01	0.02	C66
Bladder	792	7.0	34.7	<b>23.8</b>	1.04	2.75	300	3.0	12.7	<b>7.3</b>	0.39	0.86	C67
Other urinary organs	8	0.1	0.4	<b>0.3</b>	0.02	0.04	5	0.0	0.2	<b>0.1</b>	0.01	0.01	C68
Eye	24	0.2	1.1	<b>1.0</b>	0.05	0.08	12	0.1	0.5	<b>0.4</b>	0.02	0.03	C69
Brain, nervous system	188	1.7	8.2	<b>7.1</b>	0.48	0.71	138	1.4	5.8	<b>4.2</b>	0.27	0.42	C70-72
Thyroid	38	0.3	1.7	<b>1.3</b>	0.10	0.13	140	1.4	5.9	<b>4.7</b>	0.37	0.44	C73
Adrenal gland	5	0.0	0.2	<b>0.2</b>	0.02	0.02	12	0.1	0.5	<b>0.5</b>	0.02	0.02	C74
Other endocrine	2	0.0	0.1	<b>0.1</b>	0.01	0.01	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	63	0.6	2.8	<b>2.5</b>	0.15	0.22	51	0.5	2.2	<b>1.9</b>	0.12	0.15	C81
Non-Hodgkin lymphoma	399	3.5	17.5	<b>13.1</b>	0.82	1.39	349	3.5	14.8	<b>9.5</b>	0.61	1.04	C82-85,C96
Immunoproliferative diseases	4	0.0	0.2	<b>0.1</b>	0.01	0.02	4	0.0	0.2	<b>0.1</b>	0.01	0.02	C88
Multiple myeloma	138	1.2	6.0	<b>4.1</b>	0.19	0.48	92	0.9	3.9	<b>2.2</b>	0.11	0.27	C90
Lymphoid leukaemia	118	1.0	5.2	<b>4.7</b>	0.25	0.43	87	0.9	3.7	<b>3.2</b>	0.16	0.23	C91
Myeloid leukaemia	94	0.8	4.1	<b>3.1</b>	0.18	0.30	81	0.8	3.4	<b>2.3</b>	0.14	0.21	C92-94
Leukaemia unspecified	31	0.3	1.4	<b>1.0</b>	0.06	0.09	40	0.4	1.7	<b>1.1</b>	0.07	0.11	C95
Other and unspecified	486	4.3	21.3	<b>15.0</b>	0.68	1.76	491	4.9	20.8	<b>10.9</b>	0.49	1.20	O&U
All sites	11289		494.9	<b>355.0</b>	16.96	42.82	10057		425.6	<b>274.0</b>	17.03	31.35	ALL
All sites but C44	11256	100.0	493.5	<b>354.0</b>	16.92	42.70	10028	100.0	424.4	<b>273.2</b>	16.99	31.27	ALLbC44

‡Includes 18 cases of unknown age  
‡47.1% of cases are anorectal tumours

§Includes 17 cases of unknown age

†See note following population pyramid



# Canada, Ontario

### Registration area

The Ontario Cancer Registry is the largest patient-specific population-based cancer registry in Canada. Operated by Cancer Care Ontario (CCO) since 1964, it covers the entire province of Ontario (1.1 million km<sup>2</sup>). The population at the 1996 census was approximately 10.6 million people with 83.3% of the population living in urban areas. The racial composition of the population is: white 81.6%, Asian/Arab 10.8%, black 3.4%, aboriginal peoples 1.3% and other visible minorities 2.9%.

### Cancer care facilities

CCO is the principal adviser on cancer issues for the Provincial Government. CCO is responsible for long-term planning of the cancer care system, treatment of cancer patients and co-ordination of cancer prevention activities in Ontario. The organization sets direction and provides leadership in cancer surveillance, prevention, screening, research, treatment and supportive care. CCO also strives to ensure that patients across the province receive the same high quality of care, regardless of where they live.

CCO manages eight cancer treatment centres throughout Ontario, as well as the Ontario Breast Screening Programme, the Ontario Cancer Registry, the Ontario Cancer Genetics Network, the Aboriginal Cancer Care Programme and the Organized Cervical Screening Initiative. CCO provides most of the specialized cancer treatment in Ontario and has one of the largest radiation therapy programmes in the world.

### Registry structure and methods

The registry operates under Cancer Care Ontario. CCO's operating budget is approximately \$200 million annually, and it employs approximately 2400 employees including clinicians, scientists, technicians and other professionals.

The process of cancer registration in Ontario is passive, relying almost completely on records collected for other purposes. Close to 500 000 source records are submitted to the OCR each year. Since 1979 the OCR has relied on the same four major data sources: hospital discharge summaries which include a diagnosis of cancer; pathology reports with any mention of cancer; records of patients referred to CCO's eight Regional Cancer Centres or the Princess Margaret Hospital; and death certificates for all underlying causes of death.

While cancer is not a legally reportable disease in Ontario, the Cancer Act provides a legal mandate for Cancer Care Ontario to establish and maintain a cancer registry. Under the Cancer Act, any information about a registered case must be kept confidential and not be used or disclosed for any purpose other than for compiling statistics or carrying out medical or epidemiological research.

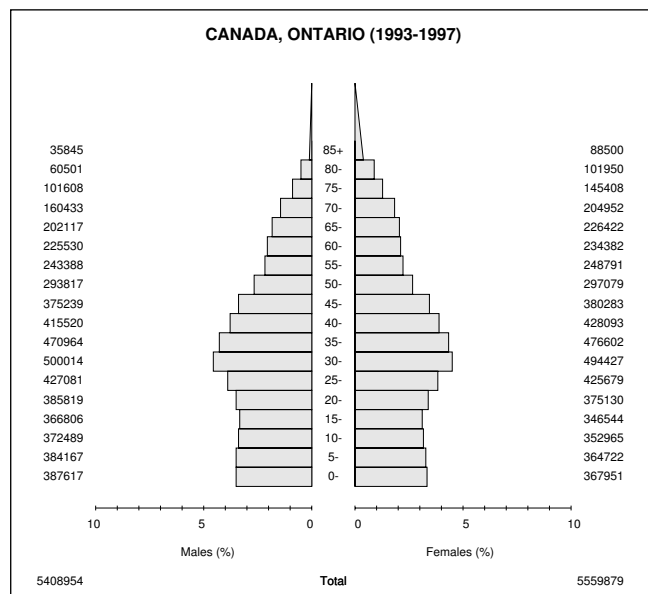
### Use of the data

The Ontario Cancer Registry is an invaluable resource for conducting epidemiological studies. The OCR is used to follow-up patients or individuals who may have been exposed to potential risk factors.

The OCR can also be used to help evaluate the efficacy of screening programmes. The Ontario Breast Screening Programme links its database to the OCR in order to confirm diagnoses of cancer in the screened population, identify interval cancers (cancers which occur between screening visits) and verify vital status.

Recently, use of the OCR has expanded to include health care utilization studies. The availability of data on utilization of hospitals and cancer clinics by cancer patients as well as treatment (e.g., surgical procedures) provides researchers with a useful tool in performing these studies.

Cancer Care Ontario produces projections on the number of new cancer cases expected in future years. These data are used to forecast radiotherapy and other patient treatment requirements.



### Source of population

Postcensal estimates based on the 1991 census. The populations for 1993-97 were estimated using the adjusted postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada.

### Notes on the data

† C44 not available.

## CANADA, ONTARIO (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	736	0.6	2.7	<b>2.0</b>	0.10	0.22	213	0.2	0.8	<b>0.4</b>	0.02	0.05	C00
Tongue	730	0.6	2.7	<b>2.2</b>	0.15	0.26	403	0.4	1.4	<b>1.0</b>	0.06	0.11	C01-02
Mouth	826	0.7	3.1	<b>2.4</b>	0.17	0.29	523	0.5	1.9	<b>1.2</b>	0.07	0.14	C03-06
Salivary glands	349	0.3	1.3	<b>1.0</b>	0.05	0.10	243	0.2	0.9	<b>0.6</b>	0.04	0.06	C07-08
Tonsil	382	0.3	1.4	<b>1.2</b>	0.08	0.15	149	0.1	0.5	<b>0.4</b>	0.03	0.05	C09
Other oropharynx	107	0.1	0.4	<b>0.3</b>	0.02	0.04	48	0.0	0.2	<b>0.1</b>	0.01	0.01	C10
Nasopharynx	274	0.2	1.0	<b>0.9</b>	0.06	0.09	119	0.1	0.4	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	355	0.3	1.3	<b>1.0</b>	0.06	0.14	94	0.1	0.3	<b>0.2</b>	0.01	0.03	C12-13
Pharynx unspecified	148	0.1	0.5	<b>0.4</b>	0.03	0.05	62	0.1	0.2	<b>0.2</b>	0.01	0.02	C14
Oesophagus	1581	1.3	5.8	<b>4.4</b>	0.23	0.55	728	0.7	2.6	<b>1.5</b>	0.06	0.17	C15
Stomach	3198	2.7	11.8	<b>8.7</b>	0.43	1.02	1839	1.7	6.6	<b>3.8</b>	0.17	0.42	C16
Small intestine	354	0.3	1.3	<b>1.0</b>	0.06	0.12	277	0.3	1.0	<b>0.6</b>	0.03	0.07	C17
Colon	10350	8.8	38.3	<b>28.0</b>	1.30	3.32	10318	9.5	37.1	<b>21.2</b>	1.00	2.44	C18
Rectum	4769	4.1	17.6	<b>13.4</b>	0.72	1.68	3104	2.9	11.2	<b>7.0</b>	0.39	0.83	C19-20
‡Anus	386	0.3	1.4	<b>1.1</b>	0.07	0.12	468	0.4	1.7	<b>1.1</b>	0.06	0.12	C21
Liver	1211	1.0	4.5	<b>3.5</b>	0.20	0.44	490	0.5	1.8	<b>1.1</b>	0.06	0.13	C22
Gallbladder etc.	672	0.6	2.5	<b>1.8</b>	0.08	0.22	881	0.8	3.2	<b>1.8</b>	0.08	0.20	C23-24
Pancreas	2494	2.1	9.2	<b>6.9</b>	0.34	0.82	2653	2.4	9.5	<b>5.4</b>	0.24	0.62	C25
Nose, sinuses etc.	225	0.2	0.8	<b>0.7</b>	0.04	0.08	168	0.2	0.6	<b>0.4</b>	0.02	0.04	C30-31
Larynx	1662	1.4	6.1	<b>4.8</b>	0.30	0.62	333	0.3	1.2	<b>0.8</b>	0.06	0.11	C32
Trachea, bronchus and lung	19681	16.7	72.8	<b>54.2</b>	2.59	6.92	12608	11.6	45.4	<b>29.8</b>	1.72	3.85	C33-34
Other thoracic organs	217	0.2	0.8	<b>0.7</b>	0.04	0.07	132	0.1	0.5	<b>0.3</b>	0.02	0.04	C37-38
Bone	324	0.3	1.2	<b>1.1</b>	0.07	0.10	291	0.3	1.0	<b>0.9</b>	0.06	0.08	C40-41
Melanoma of skin	3436	2.9	12.7	<b>9.9</b>	0.65	1.11	3139	2.9	11.3	<b>8.4</b>	0.61	0.87	C43
†Other skin													C44
Mesothelioma	388	0.3	1.4	<b>1.1</b>	0.06	0.14	83	0.1	0.3	<b>0.2</b>	0.01	0.03	C45
Kaposi sarcoma	190	0.2	0.7	<b>0.5</b>	0.04	0.05	8	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	796	0.7	2.9	<b>2.4</b>	0.14	0.24	649	0.6	2.3	<b>1.8</b>	0.12	0.17	C47+C49
Breast	201	0.2	0.7	<b>0.6</b>	0.03	0.07	30999	28.6	111.5	<b>79.1</b>	5.60	9.07	C50
Vulva							580	0.5	2.1	<b>1.3</b>	0.08	0.13	C51
Vagina							241	0.2	0.9	<b>0.6</b>	0.03	0.06	C52
Cervix uteri							2912	2.7	10.5	<b>7.9</b>	0.60	0.78	C53
Corpus uteri							5928	5.5	21.3	<b>14.9</b>	1.03	1.87	C54
Uterus unspecified							150	0.1	0.5	<b>0.3</b>	0.02	0.03	C55
Ovary							4566	4.2	16.4	<b>11.8</b>	0.80	1.33	C56
Other female genital organs							320	0.3	1.2	<b>0.9</b>	0.06	0.10	C57
Placenta							14	0.0	0.1	<b>0.0</b>	0.00	0.00	C58
Penis	211	0.2	0.8	<b>0.6</b>	0.03	0.07							C60
Prostate	30273	25.7	111.9	<b>81.0</b>	2.97	10.61							C61
Testis	1411	1.2	5.2	<b>4.4</b>	0.33	0.34							C62
Other male genital organs	100	0.1	0.4	<b>0.3</b>	0.01	0.03							C63
Kidney	3076	2.6	11.4	<b>9.0</b>	0.57	1.06	1965	1.8	7.1	<b>5.0</b>	0.31	0.57	C64
Renal pelvis	151	0.1	0.6	<b>0.4</b>	0.02	0.06	85	0.1	0.3	<b>0.2</b>	0.01	0.03	C65
Ureter	149	0.1	0.6	<b>0.4</b>	0.02	0.05	65	0.1	0.2	<b>0.1</b>	0.00	0.01	C66
Bladder	5959	5.1	22.0	<b>15.9</b>	0.66	1.85	2020	1.9	7.3	<b>4.1</b>	0.19	0.46	C67
Other urinary organs	555	0.5	2.1	<b>1.5</b>	0.06	0.17	169	0.2	0.6	<b>0.4</b>	0.02	0.04	C68
Eye	263	0.2	1.0	<b>0.9</b>	0.05	0.09	212	0.2	0.8	<b>0.6</b>	0.04	0.06	C69
Brain, nervous system	2207	1.9	8.2	<b>7.0</b>	0.45	0.71	1870	1.7	6.7	<b>5.4</b>	0.33	0.53	C70-72
Thyroid	844	0.7	3.1	<b>2.6</b>	0.18	0.26	2696	2.5	9.7	<b>7.9</b>	0.62	0.73	C73
Adrenal gland	99	0.1	0.4	<b>0.4</b>	0.02	0.03	98	0.1	0.4	<b>0.3</b>	0.02	0.03	C74
Other endocrine	74	0.1	0.3	<b>0.2</b>	0.02	0.02	63	0.1	0.2	<b>0.2</b>	0.01	0.02	C75
Hodgkin disease	878	0.7	3.2	<b>2.9</b>	0.20	0.24	709	0.7	2.6	<b>2.5</b>	0.16	0.18	C81
Non-Hodgkin lymphoma	5001	4.3	18.5	<b>14.5</b>	0.89	1.58	4313	4.0	15.5	<b>10.5</b>	0.65	1.19	C82-85,C96
Immunoproliferative diseases	70	0.1	0.3	<b>0.2</b>	0.01	0.02	52	0.0	0.2	<b>0.1</b>	0.01	0.01	C88
Multiple myeloma	1564	1.3	5.8	<b>4.2</b>	0.19	0.48	1347	1.2	4.8	<b>2.8</b>	0.14	0.33	C90
Lymphoid leukaemia	1958	1.7	7.2	<b>6.1</b>	0.29	0.60	1372	1.3	4.9	<b>3.8</b>	0.19	0.33	C91
Myeloid leukaemia	1555	1.3	5.7	<b>4.5</b>	0.23	0.46	1223	1.1	4.4	<b>3.1</b>	0.18	0.31	C92-94
Leukaemia unspecified	302	0.3	1.1	<b>0.8</b>	0.02	0.07	319	0.3	1.1	<b>0.6</b>	0.02	0.05	C95
Other and unspecified	4903	4.2	18.1	<b>13.1</b>	0.56	1.45	4251	3.9	15.3	<b>8.1</b>	0.33	0.84	O&U
All sites													ALL
All sites but C44	117645	100.0	435.0	<b>327.1</b>	15.90	39.28	108562	100.0	390.5	<b>262.8</b>	16.44	29.80	ALLbC44

‡Includes 101 cases of unknown age  
‡52.6% of cases are anorectal tumours

§Includes 49 cases of unknown age  
‡35.0% of cases are anorectal tumours

†See note following population pyramid

# Canada, Prince Edward Island

### Registration area

The Prince Edward Island Cancer Registry covers all of Prince Edward Island, the smallest province of Canada, which is situated to the southwest of the Gulf of St. Lawrence, lying between longitudes 62° and 65° W and latitudes 46° and 48° N. It covers an area of 5660 km<sup>2</sup>, all at an altitude of less than 100 m above sea level.

According to the 1996 census approximately 40% of the population live in urban areas while 60% live in rural areas. Prince Edward Island has a relatively stable and homogeneous population with low migration rates (less than 2%). The province's ethnic population is predominantly from the British Isles and France. The major religions are Roman Catholic and Protestant Christian denominations. The primary industries are agriculture, tourism and fishing. There is no heavy industry.

### Cancer care facilities

Hospital organization and practice are based on a comprehensive government organized health insurance scheme. There are no private hospitals.

The registry is part of the Prince Edward Island Cancer Treatment Centre at the Queen Elizabeth Hospital, the largest hospital on Prince Edward Island.

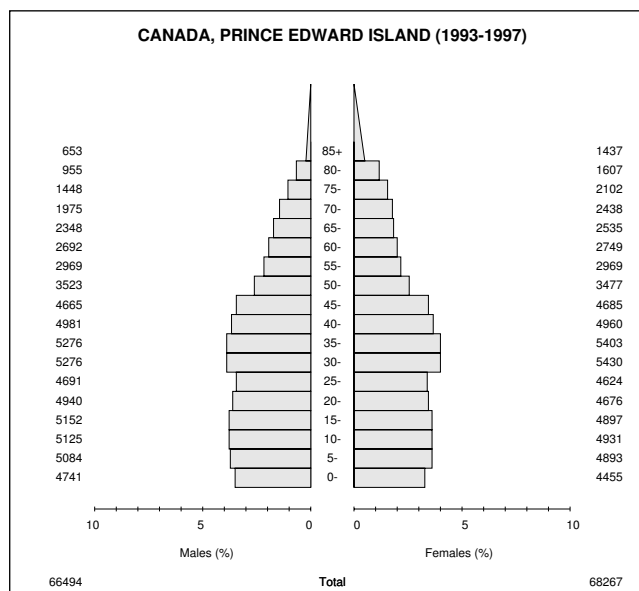
### Registry structure and methods

Participation in the national reporting system commenced in 1969. The personnel consists of the director of the clinic (a medical oncologist) and a health records technician.

The main source of data for the registry is pathology reports with a diagnosis of cancer, copies of which are sent to the registry from the two provincial laboratories. The registry also receives pathology reports from its two closest neighbouring provinces and electronic reports of Prince Edward Island residents diagnosed and/or treated in the other Canadian provinces. Death certificates as the only source of information comprise a small number of the registrations and this proportion has fallen considerably over a 15-year period. The methods of collection are entirely voluntary. Legislation exists in the Public Health Act for the collection of all malignant neoplasms. The registry assesses completeness and quality of its data to be very high, due in part to the small size of the province which makes follow-back information on registrations more accessible.

A new database system and software for the cancer registry and cancer treatment centre is currently under negotiation. This new system will enable increased flexibility of ad hoc reporting,

searches and expanded use for data on Prince Edward Island. These changes will allow importation of pathology and cytology laboratory data electronically from the Laboratory Case Management System used in the provincial laboratories. These changes will eliminate the paper pathology report as well as the duplication of data entry between the laboratory, cancer registry, and cancer treatment centre. All the requirements of reporting to the Canadian Cancer Registry (CCR) will be upheld.



### Source of population

Postcensal estimates based on the 1991 census. The populations for 1993-97 were estimated using the adjusted intercensal or postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada.

### Notes on the data

† C44 does not include basal cell or squamous cell carcinoma.

## CANADA, PRINCE EDWARD ISLAND (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	8	0.5	2.4	<b>1.8</b>	0.11	0.20	2	0.1	0.6	<b>0.2</b>	0.00	0.04	C00
Tongue	9	0.5	2.7	<b>2.4</b>	0.18	0.32	4	0.3	1.2	<b>0.8</b>	0.07	0.11	C01-02
Mouth	9	0.5	2.7	<b>2.1</b>	0.14	0.27	4	0.3	1.2	<b>0.6</b>	0.03	0.07	C03-06
Salivary glands	5	0.3	1.5	<b>0.9</b>	0.00	0.09	1	0.1	0.3	<b>0.3</b>	0.02	0.02	C07-08
Tonsil	3	0.2	0.9	<b>0.6</b>	0.05	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	1	0.1	0.3	<b>0.2</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	3	0.2	0.9	<b>0.8</b>	0.08	0.08	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C11
Hypopharynx	4	0.2	1.2	<b>1.0</b>	0.00	0.18	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	3	0.2	0.9	<b>0.8</b>	0.04	0.13	3	0.2	0.9	<b>0.4</b>	0.00	0.08	C14
Oesophagus	27	1.6	8.1	<b>5.6</b>	0.22	0.73	12	0.9	3.5	<b>2.1</b>	0.18	0.22	C15
Stomach	43	2.6	12.9	<b>9.5</b>	0.63	1.15	25	1.8	7.3	<b>4.3</b>	0.30	0.45	C16
Small intestine	4	0.2	1.2	<b>0.8</b>	0.03	0.13	5	0.4	1.5	<b>1.0</b>	0.03	0.15	C17
Colon	136	8.2	40.9	<b>27.3</b>	1.20	3.09	183	13.2	53.6	<b>28.5</b>	1.16	3.59	C18
Rectum	69	4.2	20.8	<b>15.7</b>	0.89	1.88	54	3.9	15.8	<b>9.7</b>	0.62	1.02	C19-20
Anus	1	0.1	0.3	<b>0.3</b>	0.03	0.03	3	0.2	0.9	<b>0.5</b>	0.02	0.06	C21
Liver	4	0.2	1.2	<b>1.0</b>	0.09	0.14	5	0.4	1.5	<b>1.2</b>	0.04	0.09	C22
Gallbladder etc.	5	0.3	1.5	<b>1.2</b>	0.09	0.19	12	0.9	3.5	<b>2.0</b>	0.14	0.26	C23-24
Pancreas	43	2.6	12.9	<b>8.3</b>	0.25	1.11	38	2.7	11.1	<b>5.6</b>	0.23	0.72	C25
Nose, sinuses etc.	1	0.1	0.3	<b>0.1</b>	0.00	0.00	2	0.1	0.6	<b>0.4</b>	0.03	0.03	C30-31
Larynx	26	1.6	7.8	<b>6.2</b>	0.40	0.88	2	0.1	0.6	<b>0.4</b>	0.00	0.08	C32
Trachea, bronchus and lung	299	18.1	89.9	<b>63.3</b>	3.01	7.97	192	13.9	56.2	<b>38.3</b>	2.57	4.82	C33-34
Other thoracic organs	3	0.2	0.9	<b>0.8</b>	0.04	0.04	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C37-38
Bone	3	0.2	0.9	<b>0.7</b>	0.05	0.10	5	0.4	1.5	<b>1.4</b>	0.09	0.13	C40-41
Melanoma of skin	43	2.6	12.9	<b>10.4</b>	0.68	1.23	44	3.2	12.9	<b>9.5</b>	0.60	1.00	C43
†Other skin	5		1.5	<b>0.9</b>	0.00	0.14	7		2.1	<b>1.5</b>	0.06	0.14	C44
Mesothelioma	5	0.3	1.5	<b>1.2</b>	0.07	0.16	1	0.1	0.3	<b>0.1</b>	0.00	0.00	C45
Kaposi sarcoma	3	0.2	0.9	<b>0.7</b>	0.04	0.08	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	3	0.2	0.9	<b>0.7</b>	0.02	0.07	6	0.4	1.8	<b>1.5</b>	0.06	0.10	C47+C49
Breast	2	0.1	0.6	<b>0.5</b>	0.04	0.04	367	26.5	107.5	<b>76.7</b>	5.69	8.74	C50
Vulva							12	0.9	3.5	<b>2.0</b>	0.13	0.17	C51
Vagina							5	0.4	1.5	<b>0.4</b>	0.00	0.04	C52
Cervix uteri							37	2.7	10.8	<b>8.8</b>	0.75	0.87	C53
Corpus uteri							77	5.6	22.6	<b>14.6</b>	1.02	1.59	C54
Uterus unspecified							1	0.1	0.3	<b>0.1</b>	0.00	0.00	C55
Ovary							47	3.4	13.8	<b>10.2</b>	0.73	1.09	C56
Other female genital organs							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C57
Placenta							1	0.1	0.3	<b>0.3</b>	0.02	0.02	C58
Penis	4	0.2	1.2	<b>1.0</b>	0.10	0.10							C60
Prostate	518	31.3	155.8	<b>108.5</b>	4.23	14.57							C61
Testis	11	0.7	3.3	<b>2.9</b>	0.23	0.23							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	53	3.2	15.9	<b>11.9</b>	0.73	1.43	34	2.5	10.0	<b>7.1</b>	0.52	0.84	C64
Renal pelvis	3	0.2	0.9	<b>0.7</b>	0.03	0.08	2	0.1	0.6	<b>0.3</b>	0.00	0.04	C65
Ureter	4	0.2	1.2	<b>0.9</b>	0.07	0.12	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	88	5.3	26.5	<b>17.5</b>	0.89	2.02	28	2.0	8.2	<b>4.4</b>	0.19	0.51	C67
Other urinary organs	1	0.1	0.3	<b>0.3</b>	0.00	0.04	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	2	0.1	0.6	<b>0.6</b>	0.06	0.06	7	0.5	2.1	<b>1.9</b>	0.04	0.16	C69
Brain, nervous system	17	1.0	5.1	<b>4.4</b>	0.25	0.38	16	1.2	4.7	<b>3.9</b>	0.28	0.40	C70-72
Thyroid	7	0.4	2.1	<b>1.8</b>	0.17	0.22	19	1.4	5.6	<b>5.1</b>	0.35	0.39	C73
Adrenal gland	1	0.1	0.3	<b>0.4</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	7	0.4	2.1	<b>1.9</b>	0.12	0.16	4	0.3	1.2	<b>0.9</b>	0.07	0.07	C81
Non-Hodgkin lymphoma	61	3.7	18.3	<b>14.3</b>	0.87	1.57	43	3.1	12.6	<b>8.7</b>	0.67	0.86	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	25	1.5	7.5	<b>5.5</b>	0.26	0.68	10	0.7	2.9	<b>2.2</b>	0.19	0.27	C90
Lymphoid leukaemia	16	1.0	4.8	<b>4.0</b>	0.26	0.49	9	0.7	2.6	<b>2.4</b>	0.20	0.20	C91
Myeloid leukaemia	14	0.8	4.2	<b>3.2</b>	0.19	0.33	18	1.3	5.3	<b>3.3</b>	0.15	0.43	C92-94
Leukaemia unspecified	1	0.1	0.3	<b>0.2</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C95
Other and unspecified	57	3.4	17.1	<b>11.2</b>	0.52	1.23	43	3.1	12.6	<b>6.0</b>	0.37	0.57	O&U
All sites	1660		499.3	<b>356.9</b>	17.38	44.17	1390		407.2	<b>269.6</b>	17.63	30.48	ALL
All sites but C44	1655	100.0	497.8	<b>356.0</b>	17.38	44.03	1383	100.0	405.2	<b>268.1</b>	17.57	30.34	ALLbC44

†See note following population pyramid

# Canada, Quebec

**Registration area**

The Quebec Cancer Registry covers the population of a vast territory of 1 667 926 km<sup>2</sup>, of which only 2.3% serves as urban or agricultural land. Nearly 80% of the 7.3 million inhabitants of Quebec live in an urban environment.

80% of the population is French mother tongue, and 15% are English mother tongue. 80% of the population is Catholic and 6% Protestant. Life expectancy at birth is 75 years for men and 81 for women. Nearly 12% of the population were over age 65 at the 1996 census, and it is projected that this will rise to 16% in 2016.

**Cancer care facilities**

In Quebec, the health services are available to the whole population through a comprehensive public system financed by the State since 1970. Cancer cases are notified and coded following hospitalization or day-surgery in one of the 150 hospital centres offering general and short-term specialized care. The majority of the cancer cases notified come from around 20 of these hospital centres. Ten establishments have radiotherapy services.

**Registry structure and methods**

The Quebec Cancer Registry is maintained by the Public Health Department of the Ministry of Health and Social Services of Quebec. The full-time personnel comprises an analyst who uses the data bank and three medical records clerks. An analyst and an epidemiologist who work part-time complete the personnel.

Notification of cancer is not legally mandatory. The cases are found in records of short-term hospitalization and one-day treatment centres. Data on extent of disease, stage and treatment are not collected. The death certificates are not used to complete data at the moment.

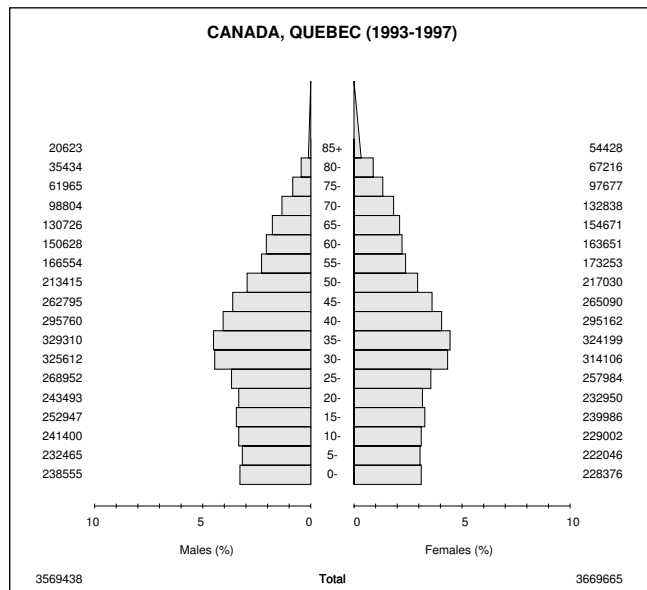
**Interpretation of results**

The diagnoses go through a number of validity checks. The IARC/IACR rules are used for multiple cancers. Efforts must be made to diversify the reporting sources in order to ensure completeness. The registry estimates that around 90% of histopathologically confirmed cancer diagnoses (excluding non-melanoma skin cancer) are notified. The priorities for the future are to set up a linkage with the death files in order to confirm deaths of registered cases and add death certificate only notifications, and to obtain laboratory reports to find the cases diagnosed and treated in outpatient departments and physicians' clinics which have never required hospitalization or surgery.

**Use of the data**

The Quebec Cancer Registry prepares an annual report on cancer incidence and mortality in the province. The report includes statistics describing particular features in the data and a technical description of the registry, and is available on the internet at: [www.msss.gouv.qc.ca/f/statistiques/index.htm](http://www.msss.gouv.qc.ca/f/statistiques/index.htm)

Special reports on survival and projections of trends are also produced periodically.



**Source of population**

Postcensal estimates based on the 1991 census. The populations for 1993–97 were estimated using the adjusted intercensal or postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada.

**Notes on the data**

+ The editors were unable to verify these data.

## +CANADA, QUEBEC (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	337	0.4	1.9	<b>1.4</b>	0.06	0.15	65	0.1	0.4	<b>0.2</b>	0.01	0.02	C00
Tongue	577	0.7	3.2	<b>2.6</b>	0.17	0.32	212	0.3	1.2	<b>0.8</b>	0.05	0.09	C01-02
Mouth	523	0.7	2.9	<b>2.3</b>	0.16	0.28	231	0.3	1.3	<b>0.9</b>	0.05	0.10	C03-06
Salivary glands	200	0.3	1.1	<b>0.9</b>	0.05	0.10	148	0.2	0.8	<b>0.6</b>	0.04	0.06	C07-08
Tonsil	261	0.3	1.5	<b>1.2</b>	0.09	0.14	81	0.1	0.4	<b>0.3</b>	0.02	0.04	C09
Other oropharynx	105	0.1	0.6	<b>0.5</b>	0.03	0.06	32	0.0	0.2	<b>0.1</b>	0.01	0.02	C10
Nasopharynx	132	0.2	0.7	<b>0.6</b>	0.03	0.07	47	0.1	0.3	<b>0.2</b>	0.01	0.02	C11
Hypopharynx	272	0.3	1.5	<b>1.2</b>	0.07	0.16	57	0.1	0.3	<b>0.2</b>	0.01	0.03	C12-13
Pharynx unspecified	161	0.2	0.9	<b>0.7</b>	0.05	0.10	58	0.1	0.3	<b>0.2</b>	0.01	0.03	C14
Oesophagus	900	1.1	5.0	<b>3.9</b>	0.20	0.52	353	0.5	1.9	<b>1.1</b>	0.05	0.13	C15
Stomach	2488	3.1	13.9	<b>10.4</b>	0.45	1.16	1529	2.1	8.3	<b>4.5</b>	0.21	0.48	C16
Small intestine	250	0.3	1.4	<b>1.1</b>	0.05	0.12	207	0.3	1.1	<b>0.7</b>	0.04	0.08	C17
Colon	6047	7.6	33.9	<b>25.5</b>	1.09	2.97	6610	9.2	36.0	<b>20.2</b>	0.94	2.31	C18
Rectum	3985	5.0	22.3	<b>17.2</b>	0.87	2.16	2824	3.9	15.4	<b>9.1</b>	0.50	1.06	C19-20
‡Anus	144	0.2	0.8	<b>0.6</b>	0.04	0.08	178	0.2	1.0	<b>0.6</b>	0.04	0.07	C21
Liver	918	1.2	5.1	<b>4.0</b>	0.20	0.50	465	0.6	2.5	<b>1.5</b>	0.06	0.17	C22
Gallbladder etc.	458	0.6	2.6	<b>1.9</b>	0.08	0.21	719	1.0	3.9	<b>2.1</b>	0.08	0.23	C23-24
Pancreas	2001	2.5	11.2	<b>8.6</b>	0.42	1.02	1980	2.8	10.8	<b>6.0</b>	0.27	0.71	C25
Nose, sinuses etc.	159	0.2	0.9	<b>0.7</b>	0.05	0.08	91	0.1	0.5	<b>0.4</b>	0.02	0.04	C30-31
Larynx	1779	2.2	10.0	<b>8.0</b>	0.52	1.02	423	0.6	2.3	<b>1.6</b>	0.12	0.21	C32
Trachea, bronchus and lung	18051	22.8	101.1	<b>77.4</b>	3.68	9.81	9089	12.7	49.5	<b>32.7</b>	2.07	4.08	C33-34
Other thoracic organs	137	0.2	0.8	<b>0.6</b>	0.03	0.06	95	0.1	0.5	<b>0.4</b>	0.02	0.03	C37-38
Bone	229	0.3	1.3	<b>1.2</b>	0.07	0.10	175	0.2	1.0	<b>0.9</b>	0.05	0.07	C40-41
Melanoma of skin	982	1.2	5.5	<b>4.4</b>	0.29	0.48	1020	1.4	5.6	<b>4.1</b>	0.29	0.41	C43
Other skin	441		2.5	<b>1.9</b>	0.09	0.19	422		2.3	<b>1.4</b>	0.08	0.14	C44
Mesothelioma	378	0.5	2.1	<b>1.6</b>	0.09	0.22	115	0.2	0.6	<b>0.4</b>	0.02	0.05	C45
Kaposi sarcoma	493	0.6	2.8	<b>2.1</b>	0.17	0.17	22	0.0	0.1	<b>0.1</b>	0.01	0.01	C46
Connective and soft tissue	444	0.6	2.5	<b>2.1</b>	0.12	0.19	394	0.5	2.1	<b>1.7</b>	0.11	0.15	C47+C49
Breast	144	0.2	0.8	<b>0.6</b>	0.03	0.09	20528	28.6	111.9	<b>77.1</b>	5.51	8.87	C50
Vulva							345	0.5	1.9	<b>1.1</b>	0.06	0.11	C51
Vagina							122	0.2	0.7	<b>0.4</b>	0.02	0.05	C52
Cervix uteri							1597	2.2	8.7	<b>6.3</b>	0.47	0.64	C53
Corpus uteri							3628	5.1	19.8	<b>13.3</b>	0.87	1.69	C54
Uterus unspecified							227	0.3	1.2	<b>0.7</b>	0.04	0.08	C55
Ovary							2895	4.0	15.8	<b>11.0</b>	0.75	1.22	C56
Other female genital organs							116	0.2	0.6	<b>0.4</b>	0.03	0.05	C57
Placenta							20	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	107	0.1	0.6	<b>0.5</b>	0.02	0.05							C60
Prostate	15674	19.8	87.8	<b>66.7</b>	2.55	8.31							C61
Testis	702	0.9	3.9	<b>3.5</b>	0.25	0.25							C62
Other male genital organs	30	0.0	0.2	<b>0.1</b>	0.01	0.01							C63
Kidney	2249	2.8	12.6	<b>10.0</b>	0.57	1.18	1515	2.1	8.3	<b>5.4</b>	0.32	0.60	C64
Renal pelvis	124	0.2	0.7	<b>0.5</b>	0.02	0.06	69	0.1	0.4	<b>0.2</b>	0.01	0.03	C65
Ureter	109	0.1	0.6	<b>0.5</b>	0.02	0.06	62	0.1	0.3	<b>0.2</b>	0.01	0.02	C66
Bladder	5800	7.3	32.5	<b>24.6</b>	1.07	2.91	1993	2.8	10.9	<b>6.4</b>	0.33	0.74	C67
Other urinary organs	68	0.1	0.4	<b>0.3</b>	0.01	0.03	50	0.1	0.3	<b>0.1</b>	0.01	0.02	C68
Eye	195	0.2	1.1	<b>1.0</b>	0.05	0.10	140	0.2	0.8	<b>0.6</b>	0.03	0.06	C69
Brain, nervous system	1579	2.0	8.8	<b>7.5</b>	0.47	0.78	1281	1.8	7.0	<b>5.3</b>	0.32	0.53	C70-72
Thyroid	433	0.5	2.4	<b>2.0</b>	0.14	0.20	1215	1.7	6.6	<b>5.3</b>	0.40	0.49	C73
Adrenal gland	84	0.1	0.5	<b>0.6</b>	0.03	0.04	99	0.1	0.5	<b>0.6</b>	0.03	0.04	C74
Other endocrine	35	0.0	0.2	<b>0.2</b>	0.01	0.02	29	0.0	0.2	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	590	0.7	3.3	<b>3.0</b>	0.21	0.26	459	0.6	2.5	<b>2.3</b>	0.15	0.19	C81
Non-Hodgkin lymphoma	3223	4.1	18.1	<b>14.3</b>	0.88	1.54	2811	3.9	15.3	<b>9.9</b>	0.60	1.10	C82-85,C96
Immunoproliferative diseases	21	0.0	0.1	<b>0.1</b>	0.00	0.01	8	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	1002	1.3	5.6	<b>4.2</b>	0.19	0.47	922	1.3	5.0	<b>2.8</b>	0.13	0.31	C90
Lymphoid leukaemia	1337	1.7	7.5	<b>6.5</b>	0.27	0.60	943	1.3	5.1	<b>3.7</b>	0.16	0.32	C91
Myeloid leukaemia	819	1.0	4.6	<b>3.7</b>	0.19	0.39	680	0.9	3.7	<b>2.5</b>	0.15	0.26	C92-94
Leukaemia unspecified	243	0.3	1.4	<b>1.1</b>	0.04	0.11	215	0.3	1.2	<b>0.7</b>	0.03	0.08	C95
Other and unspecified	2339	2.9	13.1	<b>9.9</b>	0.41	1.07	2593	3.6	14.1	<b>7.8</b>	0.35	0.80	O&U
All sites	79759		446.9	<b>345.7</b>	16.67	40.99	72204		393.5	<b>257.6</b>	16.01	29.16	ALL
All sites but C44	79318	100.0	444.4	<b>343.8</b>	16.58	40.80	71782	100.0	391.2	<b>256.2</b>	15.92	29.02	ALLbC44

‡34.7% of cases are anorectal tumours

# Canada, Saskatchewan

## Registration area

The registry covers all of Saskatchewan, which lies between Alberta to the west, Manitoba to the east, the Northwest Territories to the north and the USA to the south, between latitudes 49° and 60° N and longitudes 102° and 110° W. Most of the province lies at altitudes of 300 m or above, and the majority of the population live in the southern half of the province. The total registration area covers 651 903 km<sup>2</sup>.

At the 1996 census, the population was 990 237 and consisted of 489 425 males and 500 815 females, some 31% of whom were under 20 years of age.

English is the main language of 91% of the population, while French is used by 1% and native Indian languages by approximately 2%.

In 1996, approximately 64% of the population resided in urban areas, with 42% living in the two largest cities (Regina and Saskatoon) and 36% of the total population residing in rural areas. There were 117 350 residents declaring themselves to be of aboriginal ethnic origin or 12% of the total population. Of these, 32% live on reservations and the remaining 68% live off the reserve.

Agriculture is a primary occupation with approximately 24% of the male workforce involved; sales, service and construction account for a further 27% of the workforce. 57% of women are employed in clerical and sales and service occupations.

## Cancer care facilities

The Saskatchewan Cancer Commission Act of 1930 authorized a commission to establish a cancer control programme in Saskatchewan. In 1932, comprehensive diagnostic and treatment services for cancer for all residents of the province were established. Registration dates from this time. In 1944, the costs of these services and of hospitalization were transferred from the patient to the Provincial Department of Health. In 1979, the Saskatchewan Cancer Foundation Act was passed establishing a Foundation to replace the Cancer Commission. The Foundation conducts a programme for the diagnosis, prevention and treatment of cancer. The Foundation maintains two service outlets – the Allan Blair Memorial Clinic in Regina and the Saskatoon Cancer Clinic. The clinics provide diagnosis, radiotherapy, chemotherapy and follow-up services. Registry services are an integral part of each clinic. The provincial screening programme for breast cancer was established in 1990.

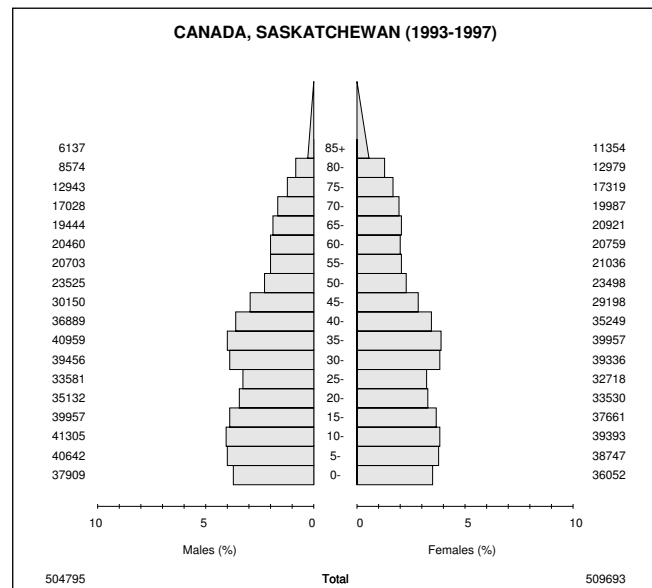
## Registry structure and methods

The province is covered by a universal comprehensive health insurance plan. To be eligible for cancer payments under this plan, physicians are required to report all new cancer diagnoses to the registry. To complement this, copies of all malignant pathology

reports are sent to the appropriate cancer clinic. These two notifications cover approximately 98% of all new cases diagnosed within the province. Further cases (1–2%) are discovered through death certificates which are received on a bi-weekly basis from the Vital Statistics branch of Saskatchewan Health.

The registry is patient-oriented. Complete computerized information is available on all cancers diagnosed since 1967. In total there are currently about 179 575 patients on the database and about 232 800 case records. The growth rate of the file is about 8500 cases per year including all non-melanoma skin cancer.

Follow-up is active. Each case diagnosed (excluding non-melanoma skin and *in situ* cancers) is reviewed at least once a year either through a clinical examination or by letter to the referring/family physician for a minimum of ten years. Information on deaths within Saskatchewan is received directly from the vital statistics office every two weeks and matched against the active file. The rate of follow-up (excluding non-melanoma skin cancers) is currently 98.4% of all active cases.



## Source of population

Postcensal estimates based on the 1991 census. The populations for 1993–97 were estimated using the adjusted intercensal or postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada.

## Notes on the data

† C44 does not include basal cell or squamous cell carcinoma.

## CANADA, SASKATCHEWAN (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	218	1.8	8.6	<b>5.5</b>	0.23	0.64	37	0.4	1.5	<b>0.7</b>	0.02	0.07	C00
Tongue	45	0.4	1.8	<b>1.3</b>	0.08	0.16	35	0.4	1.4	<b>0.8</b>	0.05	0.09	C01-02
Mouth	40	0.3	1.6	<b>1.2</b>	0.07	0.15	36	0.4	1.4	<b>0.8</b>	0.05	0.10	C03-06
Salivary glands	26	0.2	1.0	<b>0.6</b>	0.03	0.06	26	0.3	1.0	<b>0.5</b>	0.03	0.05	C07-08
Tonsil	22	0.2	0.9	<b>0.7</b>	0.05	0.08	14	0.1	0.5	<b>0.4</b>	0.03	0.06	C09
Other oropharynx	9	0.1	0.4	<b>0.3</b>	0.02	0.03	4	0.0	0.2	<b>0.1</b>	0.00	0.01	C10
Nasopharynx	10	0.1	0.4	<b>0.4</b>	0.03	0.05	5	0.1	0.2	<b>0.1</b>	0.01	0.02	C11
Hypopharynx	36	0.3	1.4	<b>1.0</b>	0.05	0.13	6	0.1	0.2	<b>0.2</b>	0.01	0.03	C12-13
Pharynx unspecified	16	0.1	0.6	<b>0.5</b>	0.03	0.08	5	0.1	0.2	<b>0.1</b>	0.01	0.01	C14
Oesophagus	156	1.3	6.2	<b>4.2</b>	0.27	0.49	59	0.6	2.3	<b>1.2</b>	0.06	0.16	C15
Stomach	313	2.6	12.4	<b>7.6</b>	0.35	0.88	194	2.0	7.6	<b>3.8</b>	0.21	0.42	C16
Small intestine	43	0.4	1.7	<b>1.1</b>	0.05	0.14	27	0.3	1.1	<b>0.6</b>	0.03	0.07	C17
Colon	956	8.0	37.9	<b>24.5</b>	1.15	3.04	884	9.0	34.7	<b>17.5</b>	0.89	1.93	C18
Rectum	570	4.8	22.6	<b>14.8</b>	0.75	1.84	361	3.7	14.2	<b>8.2</b>	0.46	1.03	C19-20
Anus	10	0.1	0.4	<b>0.3</b>	0.02	0.03	21	0.2	0.8	<b>0.5</b>	0.03	0.06	C21
Liver	88	0.7	3.5	<b>2.4</b>	0.12	0.26	44	0.4	1.7	<b>0.9</b>	0.05	0.09	C22
Gallbladder etc.	75	0.6	3.0	<b>1.9</b>	0.11	0.23	95	1.0	3.7	<b>1.6</b>	0.07	0.17	C23-24
Pancreas	261	2.2	10.3	<b>6.7</b>	0.34	0.83	295	3.0	11.6	<b>5.6</b>	0.25	0.68	C25
Nose, sinuses etc.	24	0.2	1.0	<b>0.7</b>	0.04	0.08	14	0.1	0.5	<b>0.3</b>	0.02	0.03	C30-31
Larynx	131	1.1	5.2	<b>3.7</b>	0.18	0.51	20	0.2	0.8	<b>0.6</b>	0.05	0.08	C32
Trachea, bronchus and lung	1833	15.4	72.6	<b>47.9</b>	2.37	6.14	1070	10.8	42.0	<b>27.0</b>	1.67	3.56	C33-34
Other thoracic organs	9	0.1	0.4	<b>0.3</b>	0.03	0.03	14	0.1	0.5	<b>0.4</b>	0.02	0.05	C37-38
Bone	30	0.3	1.2	<b>1.1</b>	0.08	0.09	28	0.3	1.1	<b>1.0</b>	0.07	0.08	C40-41
Melanoma of skin	269	2.3	10.7	<b>8.5</b>	0.62	0.86	269	2.7	10.6	<b>7.9</b>	0.56	0.80	C43
†Other skin	38		1.5	<b>1.0</b>	0.05	0.10	39		1.5	<b>1.0</b>	0.07	0.10	C44
Mesothelioma	29	0.2	1.1	<b>0.9</b>	0.06	0.12	7	0.1	0.3	<b>0.1</b>	0.00	0.01	C45
Kaposi sarcoma	10	0.1	0.4	<b>0.3</b>	0.02	0.02	2	0.0	0.1	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	63	0.5	2.5	<b>1.8</b>	0.12	0.18	47	0.5	1.8	<b>1.4</b>	0.10	0.13	C47+C49
Breast	13	0.1	0.5	<b>0.3</b>	0.02	0.03	2821	28.6	110.7	<b>76.4</b>	5.43	8.89	C50
Vulva							56	0.6	2.2	<b>1.1</b>	0.05	0.12	C51
Vagina							11	0.1	0.4	<b>0.2</b>	0.02	0.02	C52
Cervix uteri							226	2.3	8.9	<b>7.2</b>	0.58	0.68	C53
Corpus uteri							500	5.1	19.6	<b>13.6</b>	0.94	1.63	C54
Uterus unspecified							10	0.1	0.4	<b>0.2</b>	0.02	0.03	C55
Ovary							462	4.7	18.1	<b>12.3</b>	0.83	1.38	C56
Other female genital organs							9	0.1	0.4	<b>0.3</b>	0.02	0.04	C57
Placenta							2	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	25	0.2	1.0	<b>0.7</b>	0.04	0.08							C60
Prostate	3473	29.1	137.6	<b>82.9</b>	2.83	11.06							C61
Testis	132	1.1	5.2	<b>4.9</b>	0.37	0.39							C62
Other male genital organs	4	0.0	0.2	<b>0.1</b>	0.01	0.02							C63
Kidney	331	2.8	13.1	<b>9.8</b>	0.61	1.13	215	2.2	8.4	<b>5.7</b>	0.33	0.68	C64
Renal pelvis	31	0.3	1.2	<b>0.8</b>	0.04	0.09	14	0.1	0.5	<b>0.3</b>	0.02	0.03	C65
Ureter	19	0.2	0.8	<b>0.5</b>	0.02	0.06	11	0.1	0.4	<b>0.2</b>	0.00	0.02	C66
Bladder	801	6.7	31.7	<b>19.7</b>	0.87	2.37	278	2.8	10.9	<b>6.5</b>	0.39	0.77	C67
Other urinary organs	2	0.0	0.1	<b>0.0</b>	0.00	0.00	4	0.0	0.2	<b>0.1</b>	0.00	0.01	C68
Eye	38	0.3	1.5	<b>1.1</b>	0.06	0.16	35	0.4	1.4	<b>1.1</b>	0.08	0.11	C69
Brain, nervous system	195	1.6	7.7	<b>6.7</b>	0.45	0.69	142	1.4	5.6	<b>4.7</b>	0.31	0.46	C70-72
Thyroid	62	0.5	2.5	<b>1.8</b>	0.12	0.19	144	1.5	5.7	<b>4.7</b>	0.35	0.44	C73
Adrenal gland	7	0.1	0.3	<b>0.3</b>	0.01	0.01	3	0.0	0.1	<b>0.2</b>	0.01	0.01	C74
Other endocrine	3	0.0	0.1	<b>0.1</b>	0.01	0.01	2	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	78	0.7	3.1	<b>2.9</b>	0.19	0.23	70	0.7	2.7	<b>2.6</b>	0.17	0.22	C81
Non-Hodgkin lymphoma	423	3.5	16.8	<b>12.3</b>	0.75	1.39	390	4.0	15.3	<b>9.8</b>	0.61	1.17	C82-85,C96
Immunoproliferative diseases	23	0.2	0.9	<b>0.5</b>	0.02	0.06	16	0.2	0.6	<b>0.3</b>	0.00	0.03	C88
Multiple myeloma	127	1.1	5.0	<b>3.4</b>	0.19	0.40	115	1.2	4.5	<b>2.4</b>	0.11	0.31	C90
Lymphoid leukaemia	283	2.4	11.2	<b>8.6</b>	0.50	0.89	167	1.7	6.6	<b>4.5</b>	0.23	0.44	C91
Myeloid leukaemia	168	1.4	6.7	<b>4.6</b>	0.27	0.49	114	1.2	4.5	<b>2.9</b>	0.17	0.29	C92-94
Leukaemia unspecified	11	0.1	0.4	<b>0.3</b>	0.01	0.02	10	0.1	0.4	<b>0.2</b>	0.01	0.02	C95
Other and unspecified	384	3.2	15.2	<b>9.4</b>	0.43	1.00	424	4.3	16.6	<b>8.0</b>	0.34	0.88	O&U
All sites	11963		474.0	<b>313.2</b>	15.15	38.05	9909		388.8	<b>249.3</b>	15.89	28.56	ALL
All sites but C44	11925	100.0	472.5	<b>312.1</b>	15.10	37.94	9870	100.0	387.3	<b>248.3</b>	15.82	28.46	ALLbC44

†Includes 1 case of unknown age

§Includes 2 cases of unknown age

†See note following population pyramid



# Canada, Yukon

### Registry background

Located in the north-western corner of Canada, the Yukon Territory borders Canada's Northwest Territories to the east, the province of British Columbia to the south., and the State of Alaska to west. The Yukon represents 5% of Canada's total land area (483 450 km<sup>2</sup>), making it the eighth largest of Canada's ten provinces and three territories.

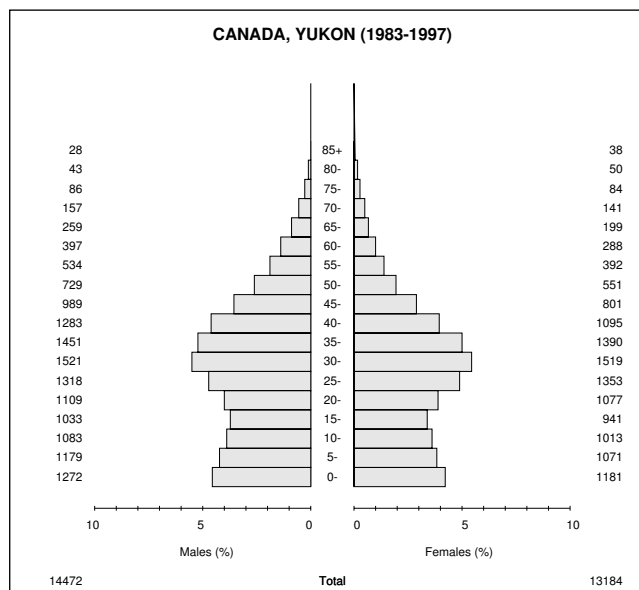
With a population of 30 766 in 1996, the Yukon is Canada's least populated province or territory. Whitehorse, the territorial capital, is home to over 70% of the population. Twelve of Yukon's 16 communities have a population of under 500 people. Between 1991 and 1996, the population of Yukon increased by 10.7%. The largest percentage increase (39.6%) was in the 45–49 year old age group. In 1996, 4.4% of the Yukon's population was 65 years or older while in 1992, 3.9% of the population was 65 years or older. Despite the small population and high number of small communities, all communities but one are accessible by road. One quarter of the population is of aboriginal origin (mainly Athapaskan and Tlinkit).

### Cancer care facilities

Health programmes and services in the Yukon are provided through nine health centres, four nursing stations and two hospitals. Many Yukon residents are sent outside the territory for diagnosis and treatment of cancer due to a lack of resident specialized services. As a result, diagnosis and reporting of cancer incidence and mortality in Yukon residents occur in other provinces (primarily in British Columbia) as well as in the Yukon.

### Registry structure and methods

Formed in 1994, the Yukon Cancer Registry includes historical data back to the mid-1980s. The British Columbia Cancer Agency maintains the Yukon Registry along with its own provincial data.



### Source of population

Postcensal estimates based on the 1991 census. The populations for 1993–97 were estimated using the adjusted intercensal or postcensal estimates based on the 1991 census, as provided by the Population Estimates Section, Demography Division, Statistics Canada.

## CANADA, YUKON (1983-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	4	0.9	1.8	<b>2.0</b>	0.13	0.13	4	1.1	2.0	<b>3.1</b>	0.00	0.17	C00
Tongue	3	0.7	1.4	<b>2.0</b>	0.05	0.30	1	0.3	0.5	<b>0.5</b>	0.04	0.04	C01-02
Mouth	7	1.6	3.2	<b>4.1</b>	0.27	0.61	4	1.1	2.0	<b>3.2</b>	0.26	0.43	C03-06
Salivary glands	1	0.2	0.5	<b>0.5</b>	0.05	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C07-08
Tonsil	2	0.4	0.9	<b>1.4</b>	0.08	0.08	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	1	0.2	0.5	<b>0.5</b>	0.05	0.05	1	0.3	0.5	<b>0.6</b>	0.06	0.06	C10
Nasopharynx	1	0.2	0.5	<b>0.4</b>	0.03	0.03	1	0.3	0.5	<b>0.5</b>	0.04	0.04	C11
Hypopharynx	1	0.2	0.5	<b>0.8</b>	0.00	0.13	1	0.3	0.5	<b>0.8</b>	0.00	0.00	C12-13
Pharynx unspecified	2	0.4	0.9	<b>1.6</b>	0.00	0.34	1	0.3	0.5	<b>0.5</b>	0.04	0.04	C14
Oesophagus	11	2.4	5.1	<b>7.2</b>	0.47	0.89	3	0.8	1.5	<b>2.5</b>	0.23	0.23	C15
Stomach	8	1.8	3.7	<b>4.6</b>	0.22	0.77	4	1.1	2.0	<b>2.8</b>	0.07	0.48	C16
Small intestine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.3	0.5	<b>0.9</b>	0.00	0.24	C17
Colon	22	4.9	10.1	<b>14.7</b>	0.41	1.94	10	2.8	5.1	<b>6.4</b>	0.37	0.78	C18
Rectum	27	6.0	12.4	<b>19.8</b>	0.33	2.42	14	3.9	7.1	<b>10.2</b>	0.65	0.82	C19-20
Anus	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.3	0.5	<b>0.7</b>	0.09	0.09	C21
Liver	3	0.7	1.4	<b>1.5</b>	0.06	0.06	2	0.6	1.0	<b>1.6</b>	0.14	0.14	C22
Gallbladder etc.	2	0.4	0.9	<b>1.5</b>	0.08	0.08	4	1.1	2.0	<b>3.0</b>	0.17	0.34	C23-24
Pancreas	7	1.6	3.2	<b>4.6</b>	0.27	0.82	2	0.6	1.0	<b>1.8</b>	0.00	0.17	C25
Nose, sinuses etc.	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C30-31
Larynx	6	1.3	2.8	<b>3.9</b>	0.26	0.60	1	0.3	0.5	<b>0.7</b>	0.09	0.09	C32
Trachea, bronchus and lung	96	21.3	44.2	<b>59.8</b>	3.55	7.86	48	13.3	24.3	<b>35.7</b>	2.11	4.77	C33-34
Other thoracic organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C37-38
Bone	3	0.7	1.4	<b>1.0</b>	0.09	0.09	1	0.3	0.5	<b>0.7</b>	0.09	0.09	C40-41
Melanoma of skin	9	2.0	4.1	<b>3.9</b>	0.30	0.30	9	2.5	4.6	<b>4.1</b>	0.25	0.48	C43
Other skin	42		19.3	<b>23.3</b>	1.59	2.40	27		13.7	<b>15.3</b>	1.22	1.56	C44
Mesothelioma	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C45
Kaposi sarcoma	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	2	0.4	0.9	<b>1.2</b>	0.03	0.03	3	0.8	1.5	<b>0.9</b>	0.07	0.07	C47+C49
Breast	3	0.7	1.4	<b>2.3</b>	0.00	0.26	104	28.9	52.6	<b>62.8</b>	4.46	7.05	C50
Vulva							2	0.6	1.0	<b>1.1</b>	0.10	0.10	C51
Vagina							1	0.3	0.5	<b>0.3</b>	0.02	0.02	C52
Cervix uteri							22	6.1	11.1	<b>11.2</b>	0.53	1.41	C53
Corpus uteri							17	4.7	8.6	<b>13.6</b>	0.91	1.82	C54
Uterus unspecified							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C55
Ovary							24	6.7	12.1	<b>14.3</b>	0.74	1.65	C56
Other female genital organs							1	0.3	0.5	<b>0.5</b>	0.04	0.04	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	1	0.2	0.5	<b>0.5</b>	0.05	0.05							C60
Prostate	82	18.2	37.8	<b>60.4</b>	2.19	7.69							C61
Testis	18	4.0	8.3	<b>6.1</b>	0.47	0.47							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	13	2.9	6.0	<b>8.5</b>	0.49	0.96	4	1.1	2.0	<b>3.1</b>	0.26	0.26	C64
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	29	6.4	13.4	<b>17.9</b>	0.72	2.51	3	0.8	1.5	<b>2.4</b>	0.09	0.25	C67
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	2	0.4	0.9	<b>0.8</b>	0.09	0.09	1	0.3	0.5	<b>0.6</b>	0.06	0.06	C69
Brain, nervous system	15	3.3	6.9	<b>6.7</b>	0.58	0.58	6	1.7	3.0	<b>3.1</b>	0.14	0.31	C70-72
Thyroid	5	1.1	2.3	<b>2.3</b>	0.25	0.25	8	2.2	4.0	<b>3.2</b>	0.29	0.29	C73
Adrenal gland	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	5	1.1	2.3	<b>3.1</b>	0.05	0.27	6	1.7	3.0	<b>2.7</b>	0.17	0.17	C81
Non-Hodgkin lymphoma	14	3.1	6.4	<b>7.7</b>	0.46	1.14	9	2.5	4.6	<b>6.3</b>	0.34	0.98	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	5	1.1	2.3	<b>2.8</b>	0.11	0.45	6	1.7	3.0	<b>4.5</b>	0.43	0.67	C90
Lymphoid leukaemia	16	3.5	7.4	<b>9.4</b>	0.67	1.31	4	1.1	2.0	<b>2.8</b>	0.21	0.21	C91
Myeloid leukaemia	6	1.3	2.8	<b>2.8</b>	0.31	0.31	1	0.3	0.5	<b>0.4</b>	0.03	0.03	C92-94
Leukaemia unspecified	2	0.4	0.9	<b>1.2</b>	0.05	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C95
Other and unspecified	17	3.8	7.8	<b>11.7</b>	0.43	0.90	25	6.9	12.6	<b>19.8</b>	0.88	2.10	O&U
All sites	493		227.1	<b>304.4</b>	15.24	37.27	387		195.7	<b>249.1</b>	15.72	28.53	ALL
All sites but C44	451	100.0	207.8	<b>281.2</b>	13.64	34.87	360	100.0	182.0	<b>233.8</b>	14.50	26.97	ALLbC44

# USA, California, Los Angeles County

## Registration area

Los Angeles County is an urban area covering more than 10 000 km<sup>2</sup> and has the largest population of any county in the USA, with nearly nine million residents in the 2000 census. Among these residents are more than two million self-declared Latinos including more than three million Mexicans, 38 000 Puerto Ricans, 38 000 Cubans and sizeable populations representing various Central and South American countries. There are nearly one million blacks in the county and between 100 000 and 300 000 each of Japanese, Chinese, Koreans and Filipinos. Other major southeast Asian groups include Vietnamese, Cambodians and Thais. The principal religious groups include Catholics, Protestants, Jews, Mormons, Buddhists and Seventh-day Adventists. There is wide variation in socioeconomic as well as sociocultural characteristics in the county.

## Registry structure and methods

The Cancer Surveillance Program (CSP) of Los Angeles County was started at the University of Southern California in 1970 as part of an epidemiology and biostatistics programme. It was designed explicitly for etiological research. Complete ascertainment began in 1972. In June 1987, the CSP became one of the ten regional registries of the California Cancer Registry, a population-based cancer registry for the state of California. This registry was established by California law in 1985 and places the obligation for identifying and abstracting cancer cases on those facilities where cancer is diagnosed and/or treated.

The CSP combines elements of an active and a passive surveillance system. Under the active surveillance component, the CSP personnel systematically screen pathology and other relevant files at all hospitals and free-standing pathology laboratories, as well as some treatment facilities, to obtain pathology reports for each cancer patient diagnosed or treated. For passive surveillance, each hospital or other reporting facility completes a full abstract, including stage and treatment information on every cancer patient diagnosed and/or treated in that facility. For each cancer patient, 190 data items including disease or medical variables, demographics and administrative descriptors are coded and computerized. Occupation and industry of employment are available for most patients of working age. Data regarding race, nationality, birthplace, religion, residential area, social security number, surname and first name are collected to allow classification of the patients with regard to ethnicity, religion and socioeconomic and migrant status.

The responsibility for completing reporting at some hospitals is contracted back to the CSP; currently about 11% of all hospital reports in Los Angeles County are so reported. All of the completed abstracts are record-linked by the CSP to the pathology reports obtained under active surveillance to ensure that one abstract is completed on each histologically verified cancer case.

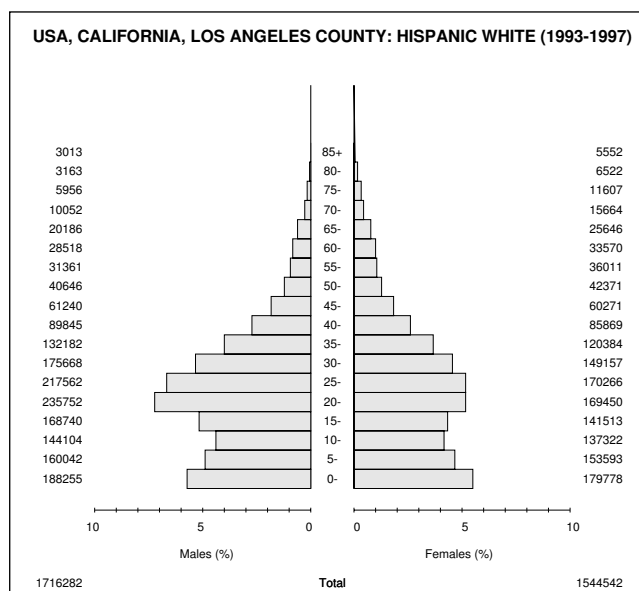
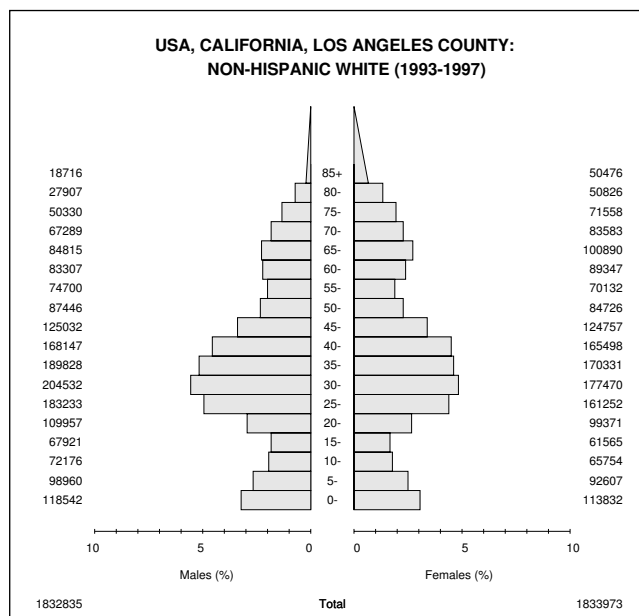
Before 1992, linkage with the State of California death tapes was the only means of passive follow-up. However, beginning with 1992 diagnoses, the CSP instituted complete follow-up as a function of its new affiliation with the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) Program. Follow-up data are collected by record linkages with multiple sources as well as incorporating active follow-up information provided by hospitals.

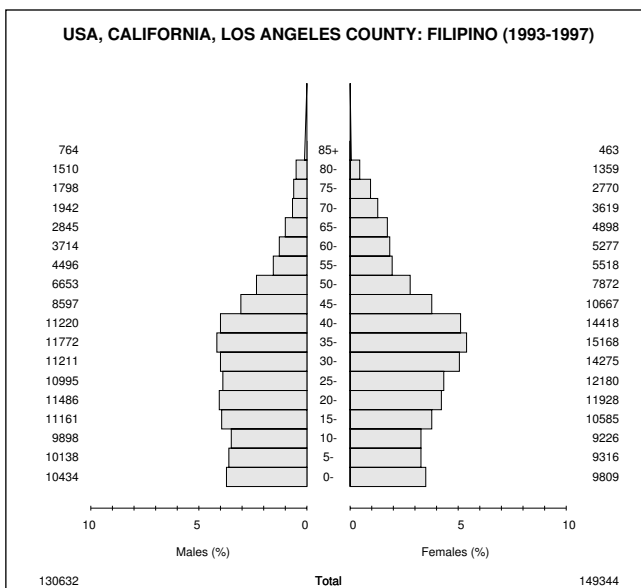
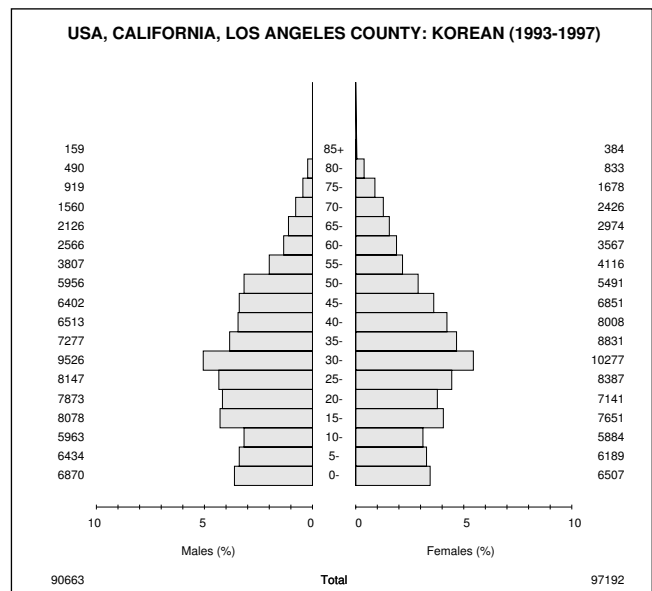
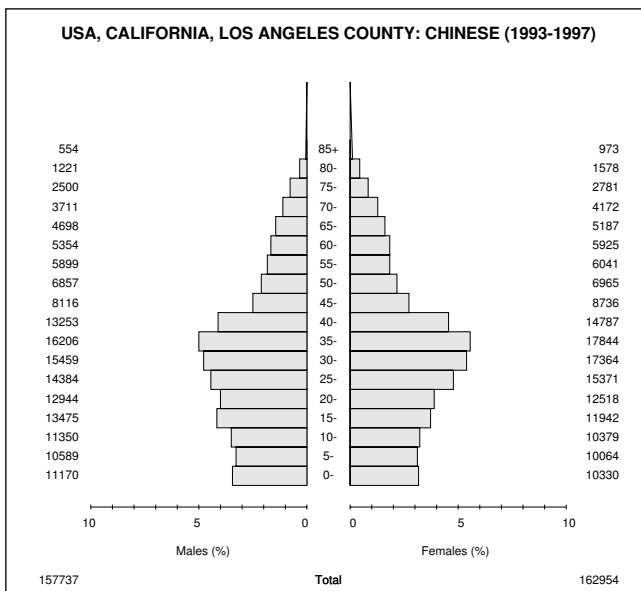
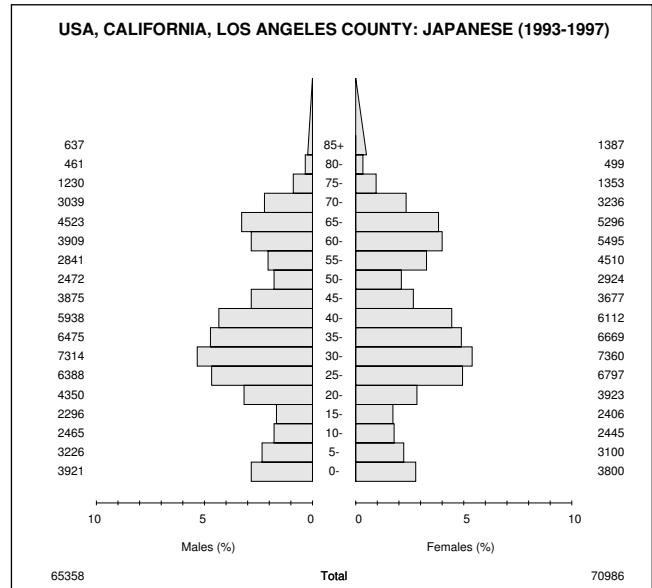
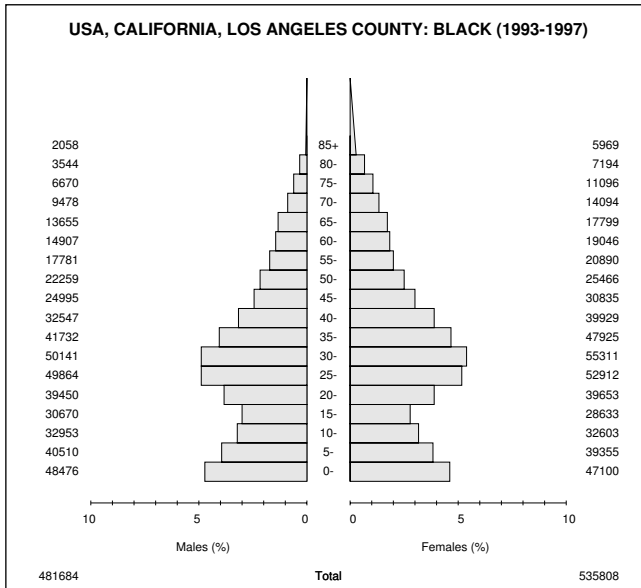
Manual and computerized record linkages are performed separately with a variety of external data sources, using a sophisticated probabilistic methodology. Multiple primaries are

noted by a tumour sequence number. Each data item is checked as an allowable code, and selected interfield checks are performed.

## Use of the data

The data are used extensively for research studies by many researchers throughout the world. The CSP also prepares an annual report of cancer incidence and mortality in Los Angeles County.





**Source of population**

Annual post-censal estimated populations. Population estimates for each year were obtained from applying the County's age-sex-race-year-specific annual population growth rate from 1990 to 1997, estimated by the California Department of Finance on the basis of the County's 1990 population census results, which were matched to the reclassified racial/ethnic groupings used by the registry.

**Notes on the data**

† C44 does not include basal cell or squamous cell carcinoma except for skin of anus.

# USA, CALIFORNIA, LOS ANGELES COUNTY: NON-HISPANIC WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	177	0.3	1.9	<b>1.2</b>	0.07	0.13	74	0.1	0.8	<b>0.4</b>	0.02	0.05	C00
Tongue	394	0.7	4.3	<b>3.0</b>	0.20	0.38	229	0.5	2.5	<b>1.4</b>	0.10	0.17	C01-02
Mouth	360	0.7	3.9	<b>2.7</b>	0.19	0.33	298	0.6	3.2	<b>1.6</b>	0.09	0.19	C03-06
Salivary glands	162	0.3	1.8	<b>1.1</b>	0.05	0.11	113	0.2	1.2	<b>0.7</b>	0.05	0.07	C07-08
Tonsil	185	0.3	2.0	<b>1.5</b>	0.12	0.17	68	0.1	0.7	<b>0.5</b>	0.03	0.06	C09
Other oropharynx	53	0.1	0.6	<b>0.4</b>	0.02	0.05	27	0.1	0.3	<b>0.1</b>	0.00	0.02	C10
Nasopharynx	66	0.1	0.7	<b>0.5</b>	0.04	0.06	35	0.1	0.4	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	136	0.3	1.5	<b>1.0</b>	0.07	0.14	45	0.1	0.5	<b>0.3</b>	0.02	0.04	C12-13
Pharynx unspecified	45	0.1	0.5	<b>0.4</b>	0.03	0.05	18	0.0	0.2	<b>0.1</b>	0.01	0.02	C14
Oesophagus	600	1.1	6.5	<b>4.3</b>	0.27	0.52	257	0.5	2.8	<b>1.2</b>	0.06	0.15	C15
Stomach	1120	2.1	12.2	<b>7.3</b>	0.35	0.83	669	1.3	7.3	<b>3.1</b>	0.16	0.35	C16
Small intestine	153	0.3	1.7	<b>1.0</b>	0.06	0.10	124	0.2	1.4	<b>0.8</b>	0.06	0.09	C17
Colon	3859	7.1	42.1	<b>24.5</b>	1.08	2.75	4259	8.5	46.4	<b>19.2</b>	0.88	2.15	C18
Rectum	1660	3.1	18.1	<b>11.4</b>	0.63	1.36	1397	2.8	15.2	<b>7.2</b>	0.42	0.83	C19-20
Anus	155	0.3	1.7	<b>1.2</b>	0.10	0.15	197	0.4	2.1	<b>1.1</b>	0.06	0.12	C21
Liver	536	1.0	5.8	<b>3.9</b>	0.22	0.47	301	0.6	3.3	<b>1.6</b>	0.09	0.18	C22
Gallbladder etc.	214	0.4	2.3	<b>1.4</b>	0.07	0.16	319	0.6	3.5	<b>1.4</b>	0.07	0.16	C23-24
Pancreas	1154	2.1	12.6	<b>7.7</b>	0.39	0.88	1278	2.5	13.9	<b>5.8</b>	0.26	0.66	C25
Nose, sinuses etc.	91	0.2	1.0	<b>0.7</b>	0.04	0.08	70	0.1	0.8	<b>0.4</b>	0.03	0.05	C30-31
Larynx	720	1.3	7.9	<b>5.5</b>	0.37	0.70	207	0.4	2.3	<b>1.3</b>	0.09	0.18	C32
Trachea, bronchus and lung	7389	13.7	80.6	<b>50.2</b>	2.60	6.32	6769	13.4	73.8	<b>37.6</b>	2.19	4.81	C33-34
Other thoracic organs	45	0.1	0.5	<b>0.4</b>	0.03	0.04	27	0.1	0.3	<b>0.2</b>	0.01	0.02	C37-38
Bone	107	0.2	1.2	<b>1.1</b>	0.07	0.09	100	0.2	1.1	<b>1.0</b>	0.07	0.08	C40-41
Melanoma of skin	2394	4.4	26.1	<b>18.3</b>	1.26	2.00	1737	3.4	18.9	<b>13.1</b>	0.98	1.34	C43
†Other skin	257		2.8	<b>1.7</b>	0.08	0.18	218		2.4	<b>1.3</b>	0.08	0.12	C44
Mesothelioma	192	0.4	2.1	<b>1.2</b>	0.04	0.14	56	0.1	0.6	<b>0.3</b>	0.02	0.03	C45
Kaposi sarcoma	1125	2.1	12.3	<b>8.4</b>	0.68	0.72	37	0.1	0.4	<b>0.2</b>	0.01	0.02	C46
Connective and soft tissue	421	0.8	4.6	<b>3.4</b>	0.19	0.31	294	0.6	3.2	<b>2.1</b>	0.13	0.19	C47+C49
Breast	135	0.2	1.5	<b>1.0</b>	0.06	0.11	15291	30.4	166.8	<b>103.9</b>	7.76	12.04	C50
Vulva							281	0.6	3.1	<b>1.5</b>	0.09	0.16	C51
Vagina							98	0.2	1.1	<b>0.5</b>	0.04	0.06	C52
Cervix uteri							920	1.8	10.0	<b>7.3</b>	0.59	0.72	C53
Corpus uteri							3157	6.3	34.4	<b>20.3</b>	1.44	2.51	C54
Uterus unspecified							39	0.1	0.4	<b>0.2</b>	0.01	0.02	C55
Ovary							2109	4.2	23.0	<b>14.5</b>	1.07	1.64	C56
Other female genital organs							85	0.2	0.9	<b>0.5</b>	0.04	0.06	C57
Placenta							8	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	82	0.2	0.9	<b>0.6</b>	0.03	0.06							C60
Prostate	16475	30.5	179.8	<b>110.1</b>	5.07	14.67							C61
Testis	644	1.2	7.0	<b>5.7</b>	0.42	0.44							C62
Other male genital organs	30	0.1	0.3	<b>0.3</b>	0.02	0.03							C63
Kidney	1129	2.1	12.3	<b>8.4</b>	0.53	0.98	638	1.3	7.0	<b>4.4</b>	0.30	0.50	C64
Renal pelvis	166	0.3	1.8	<b>1.1</b>	0.05	0.11	106	0.2	1.2	<b>0.5</b>	0.02	0.05	C65
Ureter	68	0.1	0.7	<b>0.4</b>	0.02	0.06	47	0.1	0.5	<b>0.2</b>	0.01	0.02	C66
Bladder	3783	7.0	41.3	<b>24.6</b>	1.14	2.91	1266	2.5	13.8	<b>6.1</b>	0.30	0.72	C67
Other urinary organs	55	0.1	0.6	<b>0.3</b>	0.01	0.03	27	0.1	0.3	<b>0.1</b>	0.01	0.02	C68
Eye	134	0.2	1.5	<b>1.1</b>	0.06	0.11	100	0.2	1.1	<b>0.8</b>	0.05	0.07	C69
Brain, nervous system	772	1.4	8.4	<b>7.0</b>	0.45	0.69	636	1.3	6.9	<b>5.3</b>	0.34	0.49	C70-72
Thyroid	362	0.7	4.0	<b>2.9</b>	0.23	0.31	906	1.8	9.9	<b>7.6</b>	0.60	0.71	C73
Adrenal gland	27	0.0	0.3	<b>0.3</b>	0.01	0.02	30	0.1	0.3	<b>0.3</b>	0.02	0.03	C74
Other endocrine	14	0.0	0.2	<b>0.2</b>	0.01	0.01	6	0.0	0.1	<b>0.0</b>	0.00	0.01	C75
Hodgkin disease	359	0.7	3.9	<b>3.4</b>	0.24	0.28	263	0.5	2.9	<b>2.9</b>	0.19	0.22	C81
Non-Hodgkin lymphoma	2617	4.8	28.6	<b>19.5</b>	1.28	2.00	1801	3.6	19.6	<b>10.3</b>	0.63	1.18	C82-85,C96
Immunoproliferative diseases	52	0.1	0.6	<b>0.3</b>	0.02	0.04	30	0.1	0.3	<b>0.1</b>	0.00	0.02	C88
Multiple myeloma	580	1.1	6.3	<b>3.9</b>	0.21	0.45	516	1.0	5.6	<b>2.6</b>	0.14	0.32	C90
Lymphoid leukaemia	755	1.4	8.2	<b>6.4</b>	0.35	0.59	549	1.1	6.0	<b>4.0</b>	0.22	0.36	C91
Myeloid leukaemia	696	1.3	7.6	<b>5.0</b>	0.27	0.49	575	1.1	6.3	<b>3.6</b>	0.22	0.35	C92-94
Leukaemia unspecified	82	0.2	0.9	<b>0.5</b>	0.02	0.04	63	0.1	0.7	<b>0.3</b>	0.01	0.03	C95
Other and unspecified	1571	2.9	17.1	<b>10.5</b>	0.53	1.15	1824	3.6	19.9	<b>8.8</b>	0.44	1.00	O&U
All sites	54358		593.2	<b>378.9</b>	20.34	44.83	50594		551.7	<b>311.0</b>	20.55	35.47	ALL
All sites but C44	54101	100.0	590.4	<b>377.2</b>	20.25	44.65	50376	100.0	549.4	<b>309.7</b>	20.48	35.34	ALLbC44

§Includes 46 cases of unknown age

§Includes 20 cases of unknown age

†See note following population pyramid

## USA, CALIFORNIA, LOS ANGELES COUNTY: HISPANIC WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	24	0.2	0.3	<b>0.6</b>	0.02	0.07	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	62	0.5	0.7	<b>1.6</b>	0.08	0.20	28	0.2	0.4	<b>0.5</b>	0.02	0.06	C01-02
Mouth	70	0.6	0.8	<b>2.0</b>	0.09	0.28	43	0.3	0.6	<b>0.8</b>	0.04	0.06	C03-06
Salivary glands	40	0.3	0.5	<b>0.9</b>	0.03	0.11	36	0.3	0.5	<b>0.6</b>	0.04	0.06	C07-08
Tonsil	52	0.4	0.6	<b>1.4</b>	0.10	0.17	15	0.1	0.2	<b>0.3</b>	0.02	0.04	C09
Other oropharynx	9	0.1	0.1	<b>0.2</b>	0.02	0.03	4	0.0	0.1	<b>0.1</b>	0.00	0.02	C10
Nasopharynx	21	0.2	0.2	<b>0.5</b>	0.03	0.05	13	0.1	0.2	<b>0.2</b>	0.02	0.02	C11
Hypopharynx	32	0.3	0.4	<b>0.9</b>	0.06	0.12	7	0.1	0.1	<b>0.2</b>	0.01	0.02	C12-13
Pharynx unspecified	6	0.0	0.1	<b>0.2</b>	0.01	0.02	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	162	1.3	1.9	<b>4.8</b>	0.20	0.61	36	0.3	0.5	<b>0.8</b>	0.02	0.10	C15
Stomach	517	4.1	6.0	<b>14.4</b>	0.51	1.69	399	3.2	5.2	<b>7.5</b>	0.31	0.75	C16
Small intestine	45	0.4	0.5	<b>1.1</b>	0.06	0.13	30	0.2	0.4	<b>0.6</b>	0.04	0.07	C17
Colon	726	5.7	8.5	<b>21.0</b>	0.75	2.67	683	5.5	8.8	<b>13.7</b>	0.57	1.46	C18
Rectum	445	3.5	5.2	<b>12.6</b>	0.55	1.51	284	2.3	3.7	<b>5.8</b>	0.26	0.71	C19-20
‡Anus	24	0.2	0.3	<b>0.6</b>	0.04	0.07	37	0.3	0.5	<b>0.8</b>	0.04	0.10	C21
Liver	378	3.0	4.4	<b>10.6</b>	0.54	1.29	186	1.5	2.4	<b>3.8</b>	0.14	0.44	C22
Gallbladder etc.	112	0.9	1.3	<b>3.2</b>	0.14	0.36	244	2.0	3.2	<b>5.2</b>	0.21	0.64	C23-24
Pancreas	279	2.2	3.3	<b>8.1</b>	0.31	0.94	293	2.4	3.8	<b>5.9</b>	0.22	0.67	C25
Nose, sinuses etc.	27	0.2	0.3	<b>0.6</b>	0.03	0.06	21	0.2	0.3	<b>0.4</b>	0.03	0.05	C30-31
Larynx	175	1.4	2.0	<b>4.9</b>	0.22	0.63	27	0.2	0.3	<b>0.5</b>	0.03	0.07	C32
Trachea, bronchus and lung	1137	9.0	13.2	<b>34.6</b>	1.09	4.39	742	6.0	9.6	<b>15.5</b>	0.65	1.87	C33-34
Other thoracic organs	43	0.3	0.5	<b>0.5</b>	0.04	0.04	6	0.0	0.1	<b>0.1</b>	0.01	0.01	C37-38
Bone	62	0.5	0.7	<b>0.8</b>	0.05	0.07	51	0.4	0.7	<b>0.7</b>	0.05	0.06	C40-41
Melanoma of skin	133	1.0	1.5	<b>3.1</b>	0.14	0.42	168	1.4	2.2	<b>2.8</b>	0.18	0.32	C43
†Other skin	33		0.4	<b>0.6</b>	0.02	0.06	50		0.6	<b>0.8</b>	0.05	0.07	C44
Mesothelioma	36	0.3	0.4	<b>1.1</b>	0.03	0.15	10	0.1	0.1	<b>0.2</b>	0.01	0.03	C45
Kaposi sarcoma	580	4.6	6.8	<b>6.6</b>	0.52	0.60	12	0.1	0.2	<b>0.2</b>	0.01	0.01	C46
Connective and soft tissue	132	1.0	1.5	<b>2.4</b>	0.13	0.23	124	1.0	1.6	<b>2.0</b>	0.11	0.18	C47+C49
Breast	14	0.1	0.2	<b>0.4</b>	0.02	0.02	3227	26.2	41.8	<b>62.5</b>	4.13	7.36	C50
Vulva							61	0.5	0.8	<b>1.2</b>	0.04	0.13	C51
Vagina							34	0.3	0.4	<b>0.7</b>	0.04	0.08	C52
Cervix uteri							1199	9.7	15.5	<b>19.5</b>	1.48	2.05	C53
Corpus uteri							660	5.4	8.5	<b>13.3</b>	0.88	1.64	C54
Uterus unspecified							10	0.1	0.1	<b>0.2</b>	0.01	0.02	C55
Ovary							630	5.1	8.2	<b>11.5</b>	0.73	1.32	C56
Other female genital organs							25	0.2	0.3	<b>0.5</b>	0.03	0.05	C57
Placenta							21	0.2	0.3	<b>0.2</b>	0.02	0.02	C58
Penis	33	0.3	0.4	<b>0.8</b>	0.03	0.05							C60
Prostate	3482	27.4	40.6	<b>111.6</b>	2.90	15.09							C61
Testis	331	2.6	3.9	<b>3.1</b>	0.22	0.24							C62
Other male genital organs	16	0.1	0.2	<b>0.3</b>	0.02	0.04							C63
Kidney	348	2.7	4.1	<b>9.3</b>	0.52	1.19	281	2.3	3.6	<b>5.5</b>	0.28	0.67	C64
Renal pelvis	33	0.3	0.4	<b>1.0</b>	0.03	0.08	22	0.2	0.3	<b>0.5</b>	0.01	0.05	C65
Ureter	13	0.1	0.2	<b>0.4</b>	0.00	0.03	5	0.0	0.1	<b>0.1</b>	0.00	0.01	C66
Bladder	413	3.3	4.8	<b>12.4</b>	0.43	1.44	151	1.2	2.0	<b>2.9</b>	0.09	0.25	C67
Other urinary organs	12	0.1	0.1	<b>0.3</b>	0.02	0.05	5	0.0	0.1	<b>0.1</b>	0.01	0.01	C68
Eye	38	0.3	0.4	<b>0.7</b>	0.03	0.05	28	0.2	0.4	<b>0.4</b>	0.02	0.04	C69
Brain, nervous system	284	2.2	3.3	<b>5.0</b>	0.30	0.54	259	2.1	3.4	<b>4.2</b>	0.27	0.38	C70-72
Thyroid	108	0.9	1.3	<b>2.1</b>	0.13	0.25	525	4.3	6.8	<b>7.7</b>	0.54	0.74	C73
Adrenal gland	16	0.1	0.2	<b>0.3</b>	0.01	0.01	11	0.1	0.1	<b>0.2</b>	0.01	0.01	C74
Other endocrine	14	0.1	0.2	<b>0.2</b>	0.01	0.02	6	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	165	1.3	1.9	<b>2.3</b>	0.15	0.21	105	0.9	1.4	<b>1.6</b>	0.10	0.16	C81
Non-Hodgkin lymphoma	841	6.6	9.8	<b>16.4</b>	0.90	1.80	545	4.4	7.1	<b>10.5</b>	0.51	1.25	C82-85,C96
Immunoproliferative diseases	5	0.0	0.1	<b>0.2</b>	0.00	0.02	4	0.0	0.1	<b>0.1</b>	0.00	0.01	C88
Multiple myeloma	199	1.6	2.3	<b>5.6</b>	0.23	0.64	156	1.3	2.0	<b>3.3</b>	0.17	0.39	C90
Lymphoid leukaemia	338	2.7	3.9	<b>5.3</b>	0.27	0.44	239	1.9	3.1	<b>3.6</b>	0.19	0.26	C91
Myeloid leukaemia	276	2.2	3.2	<b>5.3</b>	0.29	0.56	170	1.4	2.2	<b>2.8</b>	0.18	0.29	C92-94
Leukaemia unspecified	18	0.1	0.2	<b>0.4</b>	0.01	0.06	24	0.2	0.3	<b>0.4</b>	0.01	0.03	C95
Other and unspecified	376	3.0	4.4	<b>10.5</b>	0.41	1.16	414	3.4	5.4	<b>8.1</b>	0.35	0.86	O&U
All sites	12735		148.4	<b>333.7</b>	12.70	40.94	12368		160.2	<b>231.8</b>	13.19	25.97	ALL
All sites but C44	12702	100.0	148.0	<b>333.1</b>	12.68	40.89	12318	100.0	159.5	<b>231.0</b>	13.14	25.90	ALLbC44

‡Includes 3 cases of unknown age  
‡41.7% of cases are anorectal tumours

§Includes 3 cases of unknown age

†See note following population pyramid

## USA, CALIFORNIA, LOS ANGELES COUNTY: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	5	0.0	0.2	<b>0.2</b>	0.01	0.01	5	0.1	0.2	<b>0.2</b>	0.01	0.02	C00
Tongue	84	0.8	3.5	<b>3.5</b>	0.26	0.38	30	0.3	1.1	<b>1.0</b>	0.09	0.11	C01-02
Mouth	77	0.7	3.2	<b>3.3</b>	0.23	0.40	47	0.5	1.8	<b>1.6</b>	0.12	0.18	C03-06
Salivary glands	21	0.2	0.9	<b>0.9</b>	0.07	0.10	26	0.3	1.0	<b>0.8</b>	0.04	0.08	C07-08
Tonsil	44	0.4	1.8	<b>1.8</b>	0.14	0.20	17	0.2	0.6	<b>0.6</b>	0.03	0.08	C09
Other oropharynx	24	0.2	1.0	<b>1.1</b>	0.08	0.15	7	0.1	0.3	<b>0.2</b>	0.01	0.03	C10
Nasopharynx	22	0.2	0.9	<b>0.9</b>	0.06	0.09	10	0.1	0.4	<b>0.3</b>	0.01	0.03	C11
Hypopharynx	54	0.5	2.2	<b>2.4</b>	0.14	0.33	11	0.1	0.4	<b>0.4</b>	0.03	0.05	C12-13
Pharynx unspecified	13	0.1	0.5	<b>0.5</b>	0.03	0.07	2	0.0	0.1	<b>0.1</b>	0.00	0.01	C14
Oesophagus	190	1.8	7.9	<b>8.3</b>	0.51	1.06	100	1.1	3.7	<b>3.3</b>	0.23	0.38	C15
Stomach	270	2.5	11.2	<b>11.1</b>	0.55	1.29	221	2.5	8.2	<b>5.7</b>	0.25	0.65	C16
Small intestine	44	0.4	1.8	<b>1.8</b>	0.08	0.23	33	0.4	1.2	<b>0.9</b>	0.04	0.09	C17
Colon	709	6.6	29.4	<b>29.6</b>	1.53	3.47	912	10.3	34.0	<b>25.7</b>	1.35	3.02	C18
Rectum	311	2.9	12.9	<b>13.4</b>	0.85	1.65	250	2.8	9.3	<b>7.2</b>	0.42	0.86	C19-20
Anus	36	0.3	1.5	<b>1.5</b>	0.10	0.18	29	0.3	1.1	<b>1.0</b>	0.08	0.11	C21
Liver	150	1.4	6.2	<b>6.5</b>	0.43	0.75	72	0.8	2.7	<b>2.0</b>	0.09	0.21	C22
Gallbladder etc.	37	0.3	1.5	<b>1.5</b>	0.06	0.15	61	0.7	2.3	<b>1.6</b>	0.07	0.18	C23-24
Pancreas	228	2.1	9.5	<b>9.5</b>	0.49	1.11	346	3.9	12.9	<b>9.5</b>	0.44	1.12	C25
Nose, sinuses etc.	15	0.1	0.6	<b>0.6</b>	0.02	0.08	15	0.2	0.6	<b>0.5</b>	0.03	0.04	C30-31
Larynx	197	1.8	8.2	<b>8.7</b>	0.62	1.10	58	0.7	2.2	<b>2.1</b>	0.18	0.28	C32
Trachea, bronchus and lung	1854	17.2	77.0	<b>80.2</b>	4.79	10.33	1138	12.8	42.5	<b>35.6</b>	2.10	4.75	C33-34
Other thoracic organs	10	0.1	0.4	<b>0.4</b>	0.03	0.03	9	0.1	0.3	<b>0.3</b>	0.02	0.03	C37-38
Bone	25	0.2	1.0	<b>1.1</b>	0.07	0.11	31	0.3	1.2	<b>1.0</b>	0.07	0.07	C40-41
Melanoma of skin	22	0.2	0.9	<b>0.8</b>	0.05	0.07	35	0.4	1.3	<b>1.0</b>	0.07	0.11	C43
†Other skin	22		0.9	<b>0.9</b>	0.06	0.07	31		1.2	<b>1.0</b>	0.08	0.09	C44
Mesothelioma	19	0.2	0.8	<b>0.8</b>	0.03	0.08	7	0.1	0.3	<b>0.2</b>	0.00	0.03	C45
Kaposi sarcoma	244	2.3	10.1	<b>8.0</b>	0.65	0.68	13	0.1	0.5	<b>0.4</b>	0.02	0.03	C46
Connective and soft tissue	68	0.6	2.8	<b>2.9</b>	0.18	0.30	74	0.8	2.8	<b>2.5</b>	0.17	0.21	C47+C49
Breast	35	0.3	1.5	<b>1.5</b>	0.08	0.18	2580	29.0	96.3	<b>82.3</b>	6.17	9.30	C50
Vulva							42	0.5	1.6	<b>1.3</b>	0.10	0.15	C51
Vagina							23	0.3	0.9	<b>0.6</b>	0.04	0.05	C52
Cervix uteri							332	3.7	12.4	<b>10.4</b>	0.83	1.06	C53
Corpus uteri							425	4.8	15.9	<b>13.5</b>	0.92	1.72	C54
Uterus unspecified							11	0.1	0.4	<b>0.3</b>	0.02	0.03	C55
Ovary							280	3.1	10.5	<b>8.8</b>	0.61	0.93	C56
Other female genital organs							7	0.1	0.3	<b>0.2</b>	0.01	0.03	C57
Placenta							5	0.1	0.2	<b>0.2</b>	0.01	0.01	C58
Penis	11	0.1	0.5	<b>0.5</b>	0.03	0.04							C60
Prostate	4105	38.1	170.4	<b>176.3</b>	8.67	23.63							C61
Testis	41	0.4	1.7	<b>1.4</b>	0.11	0.11							C62
Other male genital organs	5	0.0	0.2	<b>0.2</b>	0.00	0.02							C63
Kidney	242	2.2	10.0	<b>10.5</b>	0.75	1.30	153	1.7	5.7	<b>4.9</b>	0.31	0.56	C64
Renal pelvis	10	0.1	0.4	<b>0.4</b>	0.03	0.06	16	0.2	0.6	<b>0.4</b>	0.02	0.04	C65
Ureter	5	0.0	0.2	<b>0.2</b>	0.01	0.01	3	0.0	0.1	<b>0.1</b>	0.00	0.01	C66
Bladder	284	2.6	11.8	<b>12.0</b>	0.60	1.28	162	1.8	6.0	<b>4.2</b>	0.15	0.50	C67
Other urinary organs	12	0.1	0.5	<b>0.5</b>	0.03	0.09	15	0.2	0.6	<b>0.5</b>	0.04	0.06	C68
Eye	6	0.1	0.2	<b>0.3</b>	0.01	0.02	7	0.1	0.3	<b>0.3</b>	0.02	0.02	C69
Brain, nervous system	110	1.0	4.6	<b>4.8</b>	0.29	0.46	82	0.9	3.1	<b>3.0</b>	0.20	0.28	C70-72
Thyroid	31	0.3	1.3	<b>1.3</b>	0.09	0.14	108	1.2	4.0	<b>3.5</b>	0.27	0.36	C73
Adrenal gland	8	0.1	0.3	<b>0.4</b>	0.02	0.03	8	0.1	0.3	<b>0.3</b>	0.02	0.02	C74
Other endocrine	6	0.1	0.2	<b>0.2</b>	0.02	0.03	5	0.1	0.2	<b>0.2</b>	0.02	0.02	C75
Hodgkin disease	55	0.5	2.3	<b>2.1</b>	0.16	0.17	55	0.6	2.1	<b>2.0</b>	0.13	0.16	C81
Non-Hodgkin lymphoma	335	3.1	13.9	<b>13.1</b>	0.91	1.40	237	2.7	8.8	<b>7.2</b>	0.49	0.75	C82-85,C96
Immunoproliferative diseases	3	0.0	0.1	<b>0.1</b>	0.00	0.00	4	0.0	0.1	<b>0.1</b>	0.01	0.01	C88
Multiple myeloma	166	1.5	6.9	<b>7.1</b>	0.39	0.89	221	2.5	8.2	<b>6.4</b>	0.34	0.77	C90
Lymphoid leukaemia	93	0.9	3.9	<b>4.1</b>	0.22	0.40	84	0.9	3.1	<b>2.7</b>	0.13	0.26	C91
Myeloid leukaemia	93	0.9	3.9	<b>3.9</b>	0.24	0.37	94	1.1	3.5	<b>2.8</b>	0.15	0.28	C92-94
Leukaemia unspecified	10	0.1	0.4	<b>0.4</b>	0.01	0.04	20	0.2	0.7	<b>0.5</b>	0.01	0.05	C95
Other and unspecified	325	3.0	13.5	<b>13.6</b>	0.72	1.49	353	4.0	13.2	<b>10.2</b>	0.59	1.20	O&U
All sites	10786		447.8	<b>457.0</b>	25.48	56.65	8922		333.0	<b>273.2</b>	17.64	31.45	ALL
All sites but C44	10764	100.0	446.9	<b>456.1</b>	25.43	56.58	8891	100.0	331.9	<b>272.2</b>	17.56	31.36	ALLbC44

‡Includes 4 cases of unknown age

§Includes 3 cases of unknown age

†See note following population pyramid

## USA, CALIFORNIA, LOS ANGELES COUNTY: CHINESE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	1	0.1	0.1	<b>0.1</b>	0.01	0.01	1	0.1	0.1	<b>0.1</b>	0.02	0.02	C00
Tongue	6	0.4	0.8	<b>0.7</b>	0.06	0.06	12	0.8	1.5	<b>1.2</b>	0.07	0.09	C01-02
Mouth	3	0.2	0.4	<b>0.5</b>	0.00	0.03	4	0.3	0.5	<b>0.4</b>	0.01	0.05	C03-06
Salivary glands	5	0.3	0.6	<b>0.5</b>	0.03	0.03	5	0.3	0.6	<b>0.5</b>	0.01	0.05	C07-08
Tonsil	2	0.1	0.3	<b>0.2</b>	0.01	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	64	3.9	8.1	<b>7.6</b>	0.64	0.75	23	1.5	2.8	<b>2.4</b>	0.19	0.23	C11
Hypopharynx	3	0.2	0.4	<b>0.4</b>	0.04	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	24	1.5	3.0	<b>2.9</b>	0.18	0.43	5	0.3	0.6	<b>0.4</b>	0.01	0.04	C15
Stomach	127	7.7	16.1	<b>14.5</b>	0.30	1.32	96	6.2	11.8	<b>9.7</b>	0.49	0.96	C16
Small intestine	10	0.6	1.3	<b>1.0</b>	0.06	0.11	2	0.1	0.2	<b>0.2</b>	0.02	0.02	C17
Colon	173	10.5	21.9	<b>19.9</b>	0.69	2.07	156	10.1	19.1	<b>15.0</b>	0.52	1.52	C18
Rectum	95	5.8	12.0	<b>10.7</b>	0.49	1.15	67	4.3	8.2	<b>7.2</b>	0.43	0.69	C19-20
‡Anus	4	0.2	0.5	<b>0.5</b>	0.03	0.03	4	0.3	0.5	<b>0.5</b>	0.01	0.06	C21
Liver	137	8.3	17.4	<b>16.2</b>	0.93	1.98	51	3.3	6.3	<b>5.0</b>	0.12	0.66	C22
Gallbladder etc.	23	1.4	2.9	<b>2.6</b>	0.04	0.43	19	1.2	2.3	<b>1.9</b>	0.02	0.22	C23-24
Pancreas	42	2.5	5.3	<b>4.9</b>	0.18	0.48	32	2.1	3.9	<b>3.1</b>	0.08	0.37	C25
Nose, sinuses etc.	7	0.4	0.9	<b>0.7</b>	0.02	0.09	5	0.3	0.6	<b>0.7</b>	0.04	0.09	C30-31
Larynx	15	0.9	1.9	<b>1.9</b>	0.08	0.19	2	0.1	0.2	<b>0.2</b>	0.01	0.01	C32
Trachea, bronchus and lung	222	13.4	28.1	<b>25.8</b>	0.90	3.01	158	10.2	19.4	<b>15.5</b>	0.53	1.61	C33-34
Other thoracic organs	4	0.2	0.5	<b>0.4</b>	0.02	0.05	1	0.1	0.1	<b>0.1</b>	0.00	0.02	C37-38
Bone	2	0.1	0.3	<b>0.2</b>	0.01	0.01	2	0.1	0.2	<b>0.2</b>	0.02	0.02	C40-41
Melanoma of skin	3	0.2	0.4	<b>0.3</b>	0.00	0.05	3	0.2	0.4	<b>0.3</b>	0.01	0.05	C43
†Other skin	8		1.0	<b>1.0</b>	0.07	0.09	2		0.2	<b>0.2</b>	0.01	0.03	C44
Mesothelioma	1	0.1	0.1	<b>0.1</b>	0.01	0.01	1	0.1	0.1	<b>0.1</b>	0.00	0.02	C45
Kaposi sarcoma	4	0.2	0.5	<b>0.3</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	13	0.8	1.6	<b>1.9</b>	0.10	0.13	6	0.4	0.7	<b>0.7</b>	0.03	0.07	C47+C49
Breast	3	0.2	0.4	<b>0.4</b>	0.01	0.03	392	25.3	48.1	<b>42.6</b>	3.30	4.54	C50
Vulva							5	0.3	0.6	<b>0.4</b>	0.01	0.05	C51
Vagina							7	0.5	0.9	<b>0.9</b>	0.07	0.09	C52
Cervix uteri							55	3.6	6.8	<b>5.6</b>	0.34	0.55	C53
Corpus uteri							66	4.3	8.1	<b>7.4</b>	0.45	0.90	C54
Uterus unspecified							1	0.1	0.1	<b>0.1</b>	0.01	0.01	C55
Ovary							85	5.5	10.4	<b>9.0</b>	0.60	0.90	C56
Other female genital organs							2	0.1	0.2	<b>0.2</b>	0.01	0.01	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	1	0.1	0.1	<b>0.2</b>	0.00	0.00							C60
Prostate	296	17.9	37.5	<b>33.4</b>	0.69	3.76							C61
Testis	11	0.7	1.4	<b>1.0</b>	0.08	0.08							C62
Other male genital organs	2	0.1	0.3	<b>0.3</b>	0.01	0.04							C63
Kidney	30	1.8	3.8	<b>3.5</b>	0.13	0.45	18	1.2	2.2	<b>2.0</b>	0.14	0.23	C64
Renal pelvis	6	0.4	0.8	<b>0.6</b>	0.01	0.07	6	0.4	0.7	<b>0.6</b>	0.02	0.08	C65
Ureter	3	0.2	0.4	<b>0.4</b>	0.03	0.03	3	0.2	0.4	<b>0.3</b>	0.00	0.04	C66
Bladder	82	5.0	10.4	<b>9.1</b>	0.31	1.00	34	2.2	4.2	<b>3.4</b>	0.13	0.43	C67
Other urinary organs	2	0.1	0.3	<b>0.3</b>	0.03	0.03	2	0.1	0.2	<b>0.3</b>	0.01	0.03	C68
Eye	3	0.2	0.4	<b>0.6</b>	0.02	0.04	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C69
Brain, nervous system	27	1.6	3.4	<b>3.5</b>	0.17	0.23	16	1.0	2.0	<b>1.9</b>	0.09	0.16	C70-72
Thyroid	16	1.0	2.0	<b>1.7</b>	0.12	0.15	59	3.8	7.2	<b>6.1</b>	0.42	0.66	C73
Adrenal gland	0	0.0	0.0	<b>0.0</b>	0.00	0.00	2	0.1	0.2	<b>0.2</b>	0.02	0.02	C74
Other endocrine	1	0.1	0.1	<b>0.1</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	7	0.4	0.9	<b>0.7</b>	0.05	0.05	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C81
Non-Hodgkin lymphoma	68	4.1	8.6	<b>8.6</b>	0.46	0.88	50	3.2	6.1	<b>5.2</b>	0.26	0.64	C82-85,C96
Immunoproliferative diseases	2	0.1	0.3	<b>0.2</b>	0.01	0.01	1	0.1	0.1	<b>0.1</b>	0.00	0.02	C88
Multiple myeloma	15	0.9	1.9	<b>1.7</b>	0.08	0.18	7	0.5	0.9	<b>0.7</b>	0.05	0.10	C90
Lymphoid leukaemia	19	1.2	2.4	<b>3.0</b>	0.11	0.26	9	0.6	1.1	<b>1.2</b>	0.05	0.10	C91
Myeloid leukaemia	28	1.7	3.6	<b>3.1</b>	0.16	0.30	20	1.3	2.5	<b>2.0</b>	0.09	0.23	C92-94
Leukaemia unspecified	3	0.2	0.4	<b>0.4</b>	0.03	0.03	5	0.3	0.6	<b>0.4</b>	0.00	0.04	C95
Other and unspecified	37	2.2	4.7	<b>4.5</b>	0.10	0.33	47	3.0	5.8	<b>4.8</b>	0.24	0.57	O&U
All sites	1660		210.5	<b>193.1</b>	7.54	20.58	1551		190.4	<b>161.5</b>	8.98	17.32	ALL
All sites but C44	1652	100.0	209.5	<b>192.1</b>	7.47	20.49	1549	100.0	190.1	<b>161.3</b>	8.97	17.30	ALLbC44

§Includes 1 case of unknown age

§Includes 1 case of unknown age

‡75.0% of cases are anorectal tumours

†See note following population pyramid



## USA, CALIFORNIA, LOS ANGELES COUNTY: FILIPINO (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74	
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	7	0.4	1.1	<b>1.1</b>	0.09	0.09	5	0.3	0.7	<b>0.6</b>	0.03	0.09	C01-02
Mouth	2	0.1	0.3	<b>0.3</b>	0.02	0.02	4	0.2	0.5	<b>0.4</b>	0.02	0.04	C03-06
Salivary glands	5	0.3	0.8	<b>0.8</b>	0.08	0.08	2	0.1	0.3	<b>0.2</b>	0.02	0.02	C07-08
Tonsil	2	0.1	0.3	<b>0.2</b>	0.02	0.02	3	0.2	0.4	<b>0.3</b>	0.02	0.05	C09
Other oropharynx	2	0.1	0.3	<b>0.4</b>	0.03	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	26	1.6	4.0	<b>3.7</b>	0.27	0.39	15	0.9	2.0	<b>1.6</b>	0.11	0.13	C11
Hypopharynx	3	0.2	0.5	<b>0.5</b>	0.01	0.08	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	1	0.1	0.2	<b>0.2</b>	0.00	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	10	0.6	1.5	<b>1.2</b>	0.01	0.08	1	0.1	0.1	<b>0.1</b>	0.00	0.02	C15
Stomach	49	2.9	7.5	<b>7.4</b>	0.30	0.92	32	1.8	4.3	<b>3.7</b>	0.13	0.40	C16
Small intestine	10	0.6	1.5	<b>1.5</b>	0.10	0.13	4	0.2	0.5	<b>0.6</b>	0.03	0.05	C17
Colon	101	6.0	15.5	<b>17.2</b>	0.90	2.42	99	5.6	13.3	<b>11.6</b>	0.52	1.10	C18
Rectum	65	3.9	10.0	<b>11.2</b>	0.54	1.55	41	2.3	5.5	<b>4.8</b>	0.30	0.49	C19-20
‡Anus	2	0.1	0.3	<b>0.4</b>	0.00	0.09	3	0.2	0.4	<b>0.4</b>	0.00	0.02	C21
Liver	72	4.3	11.0	<b>10.9</b>	0.45	1.35	21	1.2	2.8	<b>2.4</b>	0.12	0.19	C22
Gallbladder etc.	9	0.5	1.4	<b>1.4</b>	0.04	0.21	16	0.9	2.1	<b>2.0</b>	0.07	0.18	C23-24
Pancreas	35	2.1	5.4	<b>5.4</b>	0.19	0.73	36	2.0	4.8	<b>3.9</b>	0.16	0.48	C25
Nose, sinuses etc.	4	0.2	0.6	<b>0.6</b>	0.03	0.08	2	0.1	0.3	<b>0.2</b>	0.01	0.03	C30-31
Larynx	19	1.1	2.9	<b>2.9</b>	0.09	0.33	1	0.1	0.1	<b>0.1</b>	0.00	0.03	C32
Trachea, bronchus and lung	293	17.5	44.9	<b>50.0</b>	2.00	7.35	107	6.1	14.3	<b>12.4</b>	0.73	1.31	C33-34
Other thoracic organs	8	0.5	1.2	<b>1.3</b>	0.08	0.18	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C37-38
Bone	8	0.5	1.2	<b>1.3</b>	0.06	0.11	4	0.2	0.5	<b>0.5</b>	0.03	0.05	C40-41
Melanoma of skin	4	0.2	0.6	<b>0.7</b>	0.02	0.11	4	0.2	0.5	<b>0.4</b>	0.02	0.05	C43
†Other skin	2		0.3	<b>0.4</b>	0.03	0.08	2		0.3	<b>0.2</b>	0.01	0.03	C44
Mesothelioma	6	0.4	0.9	<b>1.2</b>	0.01	0.24	1	0.1	0.1	<b>0.1</b>	0.00	0.00	C45
Kaposi sarcoma	14	0.8	2.1	<b>1.7</b>	0.14	0.14	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	9	0.5	1.4	<b>1.5</b>	0.08	0.13	13	0.7	1.7	<b>1.8</b>	0.13	0.16	C47+C49
Breast	2	0.1	0.3	<b>0.4</b>	0.02	0.07	650	37.0	87.0	<b>74.8</b>	6.03	7.95	C50
Vulva							2	0.1	0.3	<b>0.2</b>	0.00	0.03	C51
Vagina							2	0.1	0.3	<b>0.3</b>	0.00	0.00	C52
Cervix uteri							89	5.1	11.9	<b>10.0</b>	0.71	1.13	C53
Corpus uteri							120	6.8	16.1	<b>14.2</b>	1.22	1.65	C54
Uterus unspecified							1	0.1	0.1	<b>0.1</b>	0.00	0.03	C55
Ovary							96	5.5	12.9	<b>11.4</b>	0.92	1.20	C56
Other female genital organs							1	0.1	0.1	<b>0.1</b>	0.00	0.03	C57
Placenta							1	0.1	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	1	0.1	0.2	<b>0.1</b>	0.01	0.01							C60
Prostate	544	32.5	83.3	<b>89.2</b>	2.02	13.06							C61
Testis	6	0.4	0.9	<b>0.8</b>	0.05	0.05							C62
Other male genital organs	2	0.1	0.3	<b>0.3</b>	0.00	0.04							C63
Kidney	38	2.3	5.8	<b>6.2</b>	0.40	0.73	23	1.3	3.1	<b>2.5</b>	0.14	0.27	C64
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.1	0.1	<b>0.1</b>	0.00	0.02	C65
Ureter	1	0.1	0.2	<b>0.2</b>	0.00	0.05	1	0.1	0.1	<b>0.1</b>	0.00	0.00	C66
Bladder	41	2.5	6.3	<b>6.4</b>	0.15	0.86	10	0.6	1.3	<b>1.1</b>	0.02	0.08	C67
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	3	0.2	0.5	<b>0.6</b>	0.03	0.03	1	0.1	0.1	<b>0.1</b>	0.00	0.03	C69
Brain, nervous system	16	1.0	2.4	<b>2.5</b>	0.14	0.30	19	1.1	2.5	<b>2.6</b>	0.12	0.24	C70-72
Thyroid	33	2.0	5.1	<b>5.0</b>	0.26	0.59	117	6.7	15.7	<b>12.1</b>	0.86	1.13	C73
Adrenal gland	1	0.1	0.2	<b>0.1</b>	0.00	0.00	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C74
Other endocrine	1	0.1	0.2	<b>0.2</b>	0.01	0.01	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	6	0.4	0.9	<b>0.7</b>	0.03	0.08	7	0.4	0.9	<b>0.8</b>	0.07	0.07	C81
Non-Hodgkin lymphoma	88	5.3	13.5	<b>12.8</b>	0.69	1.47	71	4.0	9.5	<b>8.7</b>	0.40	0.95	C82-85,C96
Immunoproliferative diseases	3	0.2	0.5	<b>0.5</b>	0.03	0.08	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C88
Multiple myeloma	23	1.4	3.5	<b>3.3</b>	0.13	0.31	20	1.1	2.7	<b>2.3</b>	0.08	0.32	C90
Lymphoid leukaemia	22	1.3	3.4	<b>3.7</b>	0.21	0.34	8	0.5	1.1	<b>1.3</b>	0.10	0.12	C91
Myeloid leukaemia	28	1.7	4.3	<b>4.2</b>	0.18	0.51	31	1.8	4.2	<b>3.9</b>	0.17	0.35	C92-94
Leukaemia unspecified	4	0.2	0.6	<b>0.6</b>	0.03	0.03	5	0.3	0.7	<b>0.4</b>	0.01	0.03	C95
Other and unspecified	44	2.6	6.7	<b>6.6</b>	0.24	0.67	64	3.6	8.6	<b>7.8</b>	0.34	0.81	O&U
All sites	1675		256.4	<b>269.7</b>	10.20	36.29	1760		235.7	<b>203.9</b>	13.67	21.40	ALL
All sites but C44	1673	100.0	256.1	<b>269.3</b>	10.17	36.21	1758	100.0	235.4	<b>203.6</b>	13.66	21.37	ALLbC44

§Includes 1 case of unknown age

‡50.0% of cases are anorectal tumours

‡33.3% of cases are anorectal tumours

†See note following population pyramid

## USA, CALIFORNIA, LOS ANGELES COUNTY: JAPANESE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	9	0.7	2.8	<b>1.8</b>	0.11	0.27	8	0.6	2.3	<b>1.3</b>	0.06	0.08	C01-02
Mouth	4	0.3	1.2	<b>0.7</b>	0.05	0.08	7	0.6	2.0	<b>1.0</b>	0.02	0.04	C03-06
Salivary glands	2	0.1	0.6	<b>0.3</b>	0.01	0.04	4	0.3	1.1	<b>1.0</b>	0.08	0.08	C07-08
Tonsil	3	0.2	0.9	<b>0.7</b>	0.07	0.09	2	0.2	0.6	<b>0.3</b>	0.02	0.05	C09
Other oropharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	3	0.2	0.9	<b>0.6</b>	0.03	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C11
Hypopharynx	2	0.1	0.6	<b>0.4</b>	0.03	0.05	1	0.1	0.3	<b>0.1</b>	0.00	0.02	C12-13
Pharynx unspecified	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	31	2.3	9.5	<b>7.0</b>	0.58	0.76	3	0.2	0.8	<b>0.5</b>	0.02	0.02	C15
Stomach	115	8.4	35.2	<b>21.8</b>	0.95	2.02	75	5.9	21.1	<b>11.9</b>	0.44	1.07	C16
Small intestine	4	0.3	1.2	<b>0.6</b>	0.00	0.06	2	0.2	0.6	<b>0.5</b>	0.03	0.05	C17
Colon	153	11.1	46.8	<b>27.7</b>	1.17	3.00	155	12.3	43.7	<b>21.8</b>	0.75	2.14	C18
Rectum	100	7.3	30.6	<b>20.3</b>	1.25	2.27	63	5.0	17.7	<b>10.3</b>	0.49	1.09	C19-20
‡Anus	0	0.0	0.0	<b>0.0</b>	0.00	0.00	5	0.4	1.4	<b>0.7</b>	0.01	0.07	C21
Liver	30	2.2	9.2	<b>5.5</b>	0.24	0.71	30	2.4	8.5	<b>4.3</b>	0.16	0.57	C22
Gallbladder etc.	11	0.8	3.4	<b>2.2</b>	0.10	0.16	16	1.3	4.5	<b>2.3</b>	0.07	0.19	C23-24
Pancreas	35	2.5	10.7	<b>6.7</b>	0.32	0.55	34	2.7	9.6	<b>4.9</b>	0.17	0.37	C25
Nose, sinuses etc.	1	0.1	0.3	<b>0.1</b>	0.00	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C30-31
Larynx	15	1.1	4.6	<b>2.8</b>	0.13	0.32	1	0.1	0.3	<b>0.1</b>	0.00	0.02	C32
Trachea, bronchus and lung	157	11.4	48.0	<b>27.3</b>	0.97	3.03	109	8.6	30.7	<b>16.3</b>	0.72	1.98	C33-34
Other thoracic organs	2	0.1	0.6	<b>0.6</b>	0.06	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C37-38
Bone	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.1	0.3	<b>0.3</b>	0.03	0.03	C40-41
Melanoma of skin	6	0.4	1.8	<b>1.3</b>	0.09	0.17	5	0.4	1.4	<b>0.8</b>	0.07	0.10	C43
†Other skin	3		0.9	<b>0.6</b>	0.03	0.07	1		0.3	<b>0.2</b>	0.00	0.00	C44
Mesothelioma	3	0.2	0.9	<b>0.4</b>	0.00	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C45
Kaposi sarcoma	7	0.5	2.1	<b>1.8</b>	0.15	0.15	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	4	0.3	1.2	<b>0.8</b>	0.03	0.06	3	0.2	0.8	<b>0.5</b>	0.02	0.02	C47+C49
Breast	2	0.1	0.6	<b>0.3</b>	0.00	0.06	408	32.3	115.0	<b>76.2</b>	5.61	8.05	C50
Vulva							3	0.2	0.8	<b>0.4</b>	0.01	0.01	C51
Vagina							1	0.1	0.3	<b>0.2</b>	0.01	0.01	C52
Cervix uteri							29	2.3	8.2	<b>5.1</b>	0.38	0.56	C53
Corpus uteri							75	5.9	21.1	<b>13.2</b>	0.92	1.44	C54
Uterus unspecified							1	0.1	0.3	<b>0.1</b>	0.02	0.02	C55
Ovary							56	4.4	15.8	<b>9.7</b>	0.68	1.02	C56
Other female genital organs							1	0.1	0.3	<b>0.1</b>	0.00	0.03	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C60
Prostate	403	29.3	123.3	<b>64.7</b>	1.45	7.49							C61
Testis	11	0.8	3.4	<b>2.3</b>	0.19	0.21							C62
Other male genital organs	2	0.1	0.6	<b>0.3</b>	0.03	0.05							C63
Kidney	34	2.5	10.4	<b>7.9</b>	0.59	0.88	6	0.5	1.7	<b>0.9</b>	0.04	0.04	C64
Renal pelvis	4	0.3	1.2	<b>0.8</b>	0.05	0.08	2	0.2	0.6	<b>0.3</b>	0.02	0.02	C65
Ureter	2	0.1	0.6	<b>0.3</b>	0.00	0.03	1	0.1	0.3	<b>0.2</b>	0.00	0.00	C66
Bladder	67	4.9	20.5	<b>12.4</b>	0.53	1.23	27	2.1	7.6	<b>3.7</b>	0.15	0.42	C67
Other urinary organs	1	0.1	0.3	<b>0.2</b>	0.03	0.03	3	0.2	0.8	<b>0.4</b>	0.02	0.07	C68
Eye	1	0.1	0.3	<b>0.6</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C69
Brain, nervous system	5	0.4	1.5	<b>1.0</b>	0.06	0.08	9	0.7	2.5	<b>2.0</b>	0.13	0.16	C70-72
Thyroid	9	0.7	2.8	<b>1.6</b>	0.05	0.15	21	1.7	5.9	<b>4.8</b>	0.33	0.43	C73
Adrenal gland	1	0.1	0.3	<b>0.6</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	2	0.1	0.6	<b>0.3</b>	0.00	0.04	2	0.2	0.6	<b>0.7</b>	0.05	0.05	C81
Non-Hodgkin lymphoma	50	3.6	15.3	<b>10.0</b>	0.47	1.01	38	3.0	10.7	<b>6.3</b>	0.42	0.64	C82-85,C96
Immunoproliferative diseases	1	0.1	0.3	<b>0.2</b>	0.03	0.03	1	0.1	0.3	<b>0.2</b>	0.01	0.01	C88
Multiple myeloma	16	1.2	4.9	<b>2.9</b>	0.11	0.30	5	0.4	1.4	<b>0.8</b>	0.03	0.03	C90
Lymphoid leukaemia	7	0.5	2.1	<b>1.2</b>	0.03	0.11	3	0.2	0.8	<b>1.0</b>	0.05	0.05	C91
Myeloid leukaemia	22	1.6	6.7	<b>4.8</b>	0.23	0.32	17	1.3	4.8	<b>4.0</b>	0.31	0.39	C92-94
Leukaemia unspecified	5	0.4	1.5	<b>0.9</b>	0.03	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C95
Other and unspecified	33	2.4	10.1	<b>6.2</b>	0.27	0.59	32	2.5	9.0	<b>4.3</b>	0.25	0.55	O&U
All sites	1378		421.7	<b>251.6</b>	10.52	26.86	1266		356.7	<b>213.8</b>	12.62	21.99	ALL
All sites but C44	1375	100.0	420.8	<b>251.0</b>	10.49	26.79	1265	100.0	356.4	<b>213.6</b>	12.62	21.99	ALLbC44

§Includes 1 case of unknown age

‡40.0% of cases are anorectal tumours

†See note following population pyramid

## USA, CALIFORNIA, LOS ANGELES COUNTY: KOREAN (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	7	0.8	1.5	<b>1.6</b>	0.10	0.17	2	0.2	0.4	<b>0.4</b>	0.02	0.06	C01-02
Mouth	3	0.3	0.7	<b>0.7</b>	0.01	0.14	6	0.7	1.2	<b>1.0</b>	0.04	0.11	C03-06
Salivary glands	3	0.3	0.7	<b>0.7</b>	0.07	0.07	3	0.3	0.6	<b>0.5</b>	0.03	0.03	C07-08
Tonsil	9	1.0	2.0	<b>2.3</b>	0.19	0.32	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	6	0.6	1.3	<b>1.1</b>	0.10	0.10	3	0.3	0.6	<b>0.5</b>	0.02	0.06	C11
Hypopharynx	3	0.3	0.7	<b>0.8</b>	0.08	0.08	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	12	1.3	2.6	<b>3.3</b>	0.08	0.37	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C15
Stomach	174	18.7	38.4	<b>43.4</b>	1.94	4.91	106	12.1	21.8	<b>18.2</b>	0.71	1.67	C16
Small intestine	5	0.5	1.1	<b>1.0</b>	0.08	0.13	2	0.2	0.4	<b>0.3</b>	0.01	0.01	C17
Colon	78	8.4	17.2	<b>20.0</b>	0.66	2.15	65	7.4	13.4	<b>11.0</b>	0.52	1.31	C18
Rectum	51	5.5	11.3	<b>12.8</b>	0.67	1.50	39	4.4	8.0	<b>6.7</b>	0.36	0.73	C19-20
‡Anus	2	0.2	0.4	<b>0.5</b>	0.03	0.07	1	0.1	0.2	<b>0.2</b>	0.03	0.03	C21
Liver	89	9.6	19.6	<b>20.7</b>	1.34	2.42	58	6.6	11.9	<b>10.4</b>	0.59	1.23	C22
Gallbladder etc.	27	2.9	6.0	<b>7.3</b>	0.33	0.71	18	2.1	3.7	<b>2.8</b>	0.14	0.29	C23-24
Pancreas	30	3.2	6.6	<b>7.9</b>	0.39	0.80	25	2.8	5.1	<b>4.1</b>	0.17	0.38	C25
Nose, sinuses etc.	3	0.3	0.7	<b>0.7</b>	0.03	0.07	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C30-31
Larynx	14	1.5	3.1	<b>3.5</b>	0.17	0.34	1	0.1	0.2	<b>0.2</b>	0.00	0.04	C32
Trachea, bronchus and lung	142	15.3	31.3	<b>35.8</b>	1.36	4.26	61	6.9	12.6	<b>10.6</b>	0.50	1.11	C33-34
Other thoracic organs	5	0.5	1.1	<b>0.8</b>	0.06	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C37-38
Bone	3	0.3	0.7	<b>0.7</b>	0.04	0.04	4	0.5	0.8	<b>1.0</b>	0.04	0.04	C40-41
Melanoma of skin	3	0.3	0.7	<b>0.6</b>	0.01	0.01	5	0.6	1.0	<b>0.8</b>	0.05	0.08	C43
†Other skin	4		0.9	<b>1.2</b>	0.04	0.04	0		0.0	<b>0.0</b>	0.00	0.00	C44
Mesothelioma	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.1	0.2	<b>0.2</b>	0.00	0.04	C45
Kaposi sarcoma	3	0.3	0.7	<b>0.6</b>	0.03	0.09	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	3	0.3	0.7	<b>0.5</b>	0.04	0.04	3	0.3	0.6	<b>0.5</b>	0.05	0.05	C47+C49
Breast	1	0.1	0.2	<b>0.3</b>	0.00	0.05	163	18.6	33.5	<b>28.4</b>	2.43	3.16	C50
Vulva							1	0.1	0.2	<b>0.2</b>	0.01	0.01	C51
Vagina							2	0.2	0.4	<b>0.4</b>	0.02	0.06	C52
Cervix uteri							83	9.5	17.1	<b>14.5</b>	1.16	1.56	C53
Corpus uteri							20	2.3	4.1	<b>3.4</b>	0.27	0.36	C54
Uterus unspecified							1	0.1	0.2	<b>0.2</b>	0.02	0.02	C55
Ovary							41	4.7	8.4	<b>7.3</b>	0.53	0.79	C56
Other female genital organs							1	0.1	0.2	<b>0.2</b>	0.03	0.03	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis													C60
Prostate	80	8.6	17.6	<b>22.0</b>	0.72	2.21							C61
Testis	3	0.3	0.7	<b>0.6</b>	0.04	0.04							C62
Other male genital organs	1	0.1	0.2	<b>0.2</b>	0.00	0.00							C63
Kidney	14	1.5	3.1	<b>3.6</b>	0.31	0.48	13	1.5	2.7	<b>2.6</b>	0.12	0.31	C64
Renal pelvis	1	0.1	0.2	<b>0.2</b>	0.00	0.00	4	0.5	0.8	<b>0.5</b>	0.00	0.04	C65
Ureter	1	0.1	0.2	<b>0.2</b>	0.00	0.00	2	0.2	0.4	<b>0.3</b>	0.00	0.03	C66
Bladder	53	5.7	11.7	<b>14.0</b>	0.63	1.29	14	1.6	2.9	<b>2.6</b>	0.17	0.34	C67
Other urinary organs	1	0.1	0.2	<b>0.3</b>	0.00	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.1	0.2	<b>0.4</b>	0.02	0.02	C69
Brain, nervous system	15	1.6	3.3	<b>3.2</b>	0.24	0.24	10	1.1	2.1	<b>2.1</b>	0.12	0.20	C70-72
Thyroid	8	0.9	1.8	<b>1.9</b>	0.07	0.24	39	4.4	8.0	<b>6.3</b>	0.43	0.63	C73
Adrenal gland	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	0	0.0	0.0	<b>0.0</b>	0.00	0.00	2	0.2	0.4	<b>0.4</b>	0.02	0.02	C81
Non-Hodgkin lymphoma	25	2.7	5.5	<b>6.2</b>	0.28	0.67	19	2.2	3.9	<b>3.5</b>	0.14	0.44	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	7	0.8	1.5	<b>2.0</b>	0.12	0.28	9	1.0	1.9	<b>1.7</b>	0.16	0.20	C90
Lymphoid leukaemia	4	0.4	0.9	<b>1.0</b>	0.05	0.05	7	0.8	1.4	<b>1.8</b>	0.09	0.09	C91
Myeloid leukaemia	11	1.2	2.4	<b>2.6</b>	0.09	0.20	10	1.1	2.1	<b>2.1</b>	0.12	0.22	C92-94
Leukaemia unspecified	1	0.1	0.2	<b>0.3</b>	0.00	0.06	3	0.3	0.6	<b>0.6</b>	0.00	0.08	C95
Other and unspecified	28	3.0	6.2	<b>7.6</b>	0.28	0.70	30	3.4	6.2	<b>5.3</b>	0.20	0.39	O&U
All sites	933		205.8	<b>234.9</b>	10.67	25.47	878		180.7	<b>153.9</b>	9.32	16.28	ALL
All sites but C44	929	100.0	204.9	<b>233.7</b>	10.63	25.43	878	100.0	180.7	<b>153.9</b>	9.32	16.28	ALLbC44

§Includes 1 case of unknown age

§Includes 1 case of unknown age

‡100.0% of cases are anorectal tumours

†See note following population pyramid



# USA, California, San Francisco Bay Area

## **Registration area**

The San Francisco Bay Area Registry records cancer diagnosed in residents of five counties (Alameda, Contra Costa, Marin, San Francisco, and San Mateo) in the state of California, USA. These counties form a Metropolitan Statistical Area as defined by the US Bureau of the Census, which estimated 3 855 860 residents to be living in this region in 1995. Compared to the rest of the USA, this mostly urban region is noteworthy for its racial and ethnic diversity, with substantial Hispanic, African-American, and Asian-American populations.

## **Cancer care facilities**

Health care services in this region, including cancer screening, diagnosis and treatment, are provided mostly by private hospitals and physicians, but also by publicly funded hospitals, clinics, and public health entities. At least 56 hospitals and more than 2000 physicians treat cancer patients, and two major academic cancer centres, Stanford University Medical Center and the University of California, San Francisco Medical Center, are located in the region. A significant proportion of residents receive managed health care services through health maintenance organizations, one of the largest being the not-for-profit Kaiser Permanente system, which contributes about 30% of cancer reports to the registry. In addition, there are eight free-standing radiation centres, 30 surgery centres and 69 pathology laboratories involved in cancer diagnosis and treatment.

## **Registry structure and methods**

The San Francisco Bay Area Registry is operated by the Northern California Cancer Center (NCCC), which was founded in 1974 as a consortium centre for cancer research in Northern California. The registry has been part of the Surveillance, Epidemiology and End Results (SEER) Program, funded by the National Cancer Institute, since 1973 and has been contributing data to the California Cancer Registry since 1988. The NCCC also operates an additional population-based registry covering four adjacent counties immediately south of the Bay Area which has been participating in the SEER Program since 1992 and in the California Cancer Registry since 1988. The San Francisco Bay Area Registry contains at least 440 000 records and processes about 29 000 cancer abstracts annually. The registry collects data not only on cancer incidence but also on diagnostic procedures, cancer characteristics (including stage and grade), treatment, and survival. In addition, nearly 16 000 patients are followed both actively and passively for vital status to monitor survival. Active follow-up includes letters to physicians and telephone calls to patients. Passive follow-up involves methods such as computer

linkages to vital statistics, medical, voter, and credit records. Through these means, the registry has obtained current follow-up information for over 95% of patients.

Cancer has been a reportable disease by California State law since 1987. This law mandates that hospitals report to their regional registry all cases diagnosed in their facilities and that physicians report cancers not diagnosed at a hospital. Over 90% of cancer reports are received electronically from hospitals. The registry supports a hospital-based computer software program that allows each hospital to collect and store their registry-reportable data in electronic files. The software also edits the data and allows it to be submitted to the registry in electronic format. As cancer cases in California are increasingly diagnosed and/or treated in outpatient settings, registry staff now routinely review the records of outpatient radiation centres and surgery centres as well as all non-hospital-based pathology laboratories in the area to identify cases not yet reported to the registry by hospitals and physicians. Regardless of the reporting source, all registry data are visually edited for completeness and accuracy and then checked again by computer edit for allowable codes and compatibility between different data fields. Each patient is given a unique identification number and multiple primaries noted with a multiple sequence number.

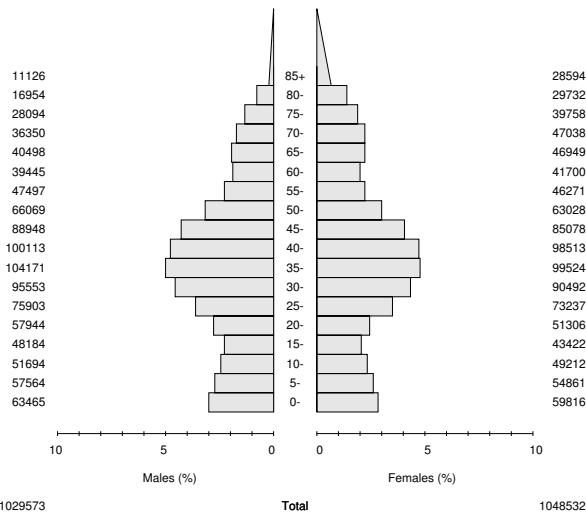
## **Interpreting the results**

The registry attempts to identify cases who reside in the Bay Area but who are diagnosed or treated elsewhere by sharing cases with all California regional registries as well as registries in some neighbouring states. Finally, the registry is linked to the State of California vital statistics records semi-annually to identify persons with cancer mentioned on the death certificate but not already reported to the registry. Based on these activities, it is estimated that over 98% of cases are identified and reported to the registry.

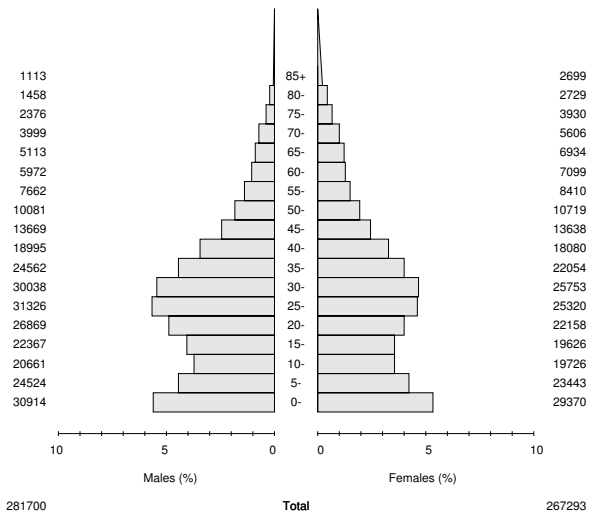
## **Use of the data**

Registry data are used primarily for investigating trends in cancer incidence, survival, tumour characteristics and treatment in the region, thus providing a helpful resource for public health workers, the news media, and hospitals in monitoring cancer in the area. In addition, registry data are being used increasingly for studies of treatment patterns, survival factors, quality of care and surveillance of groups with unique cancer risks (e.g., racial/ethnic groups, persons with HIV). The large, diverse population served by the registry has made it an important resource for analytical epidemiological studies, cancer control studies, and health care planning.

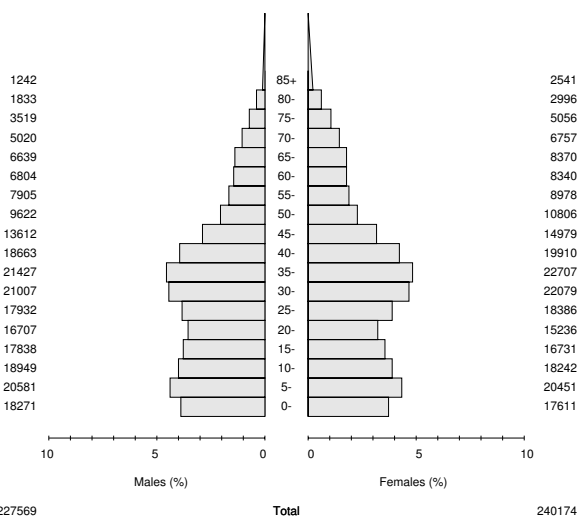
**USA, CALIFORNIA, SAN FRANCISCO BAY AREA:  
NON-HISPANIC WHITE (1993-1997)**



**USA, CALIFORNIA, SAN FRANCISCO BAY AREA:  
HISPANIC WHITE (1993-1997)**



**USA, CALIFORNIA, SAN FRANCISCO BAY AREA: BLACK (1993-1997)**



**Source of population**

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

**Notes on the data**

† C44 does not include basal cell or squamous cell carcinoma.

# USA, CALIFORNIA, SAN FRANCISCO BAY AREA: NON-HISPANIC WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	137	0.4	2.7	<b>1.7</b>	0.10	0.20	47	0.2	0.9	<b>0.4</b>	0.02	0.04	C00
Tongue	262	0.9	5.1	<b>3.6</b>	0.27	0.44	119	0.4	2.3	<b>1.2</b>	0.08	0.16	C01-02
Mouth	194	0.6	3.8	<b>2.5</b>	0.16	0.30	183	0.6	3.5	<b>1.9</b>	0.13	0.22	C03-06
Salivary glands	88	0.3	1.7	<b>1.2</b>	0.06	0.14	65	0.2	1.2	<b>0.8</b>	0.06	0.09	C07-08
Tonsil	129	0.4	2.5	<b>1.7</b>	0.13	0.20	55	0.2	1.0	<b>0.6</b>	0.03	0.07	C09
Other oropharynx	27	0.1	0.5	<b>0.4</b>	0.02	0.05	15	0.1	0.3	<b>0.2</b>	0.01	0.02	C10
Nasopharynx	27	0.1	0.5	<b>0.4</b>	0.03	0.05	18	0.1	0.3	<b>0.2</b>	0.02	0.03	C11
Hypopharynx	107	0.3	2.1	<b>1.4</b>	0.10	0.16	39	0.1	0.7	<b>0.5</b>	0.03	0.07	C12-13
Pharynx unspecified	22	0.1	0.4	<b>0.3</b>	0.02	0.03	19	0.1	0.4	<b>0.2</b>	0.01	0.03	C14
Oesophagus	380	1.2	7.4	<b>4.9</b>	0.28	0.66	194	0.7	3.7	<b>1.7</b>	0.09	0.19	C15
Stomach	572	1.9	11.1	<b>6.8</b>	0.35	0.79	323	1.1	6.2	<b>2.4</b>	0.10	0.26	C16
Small intestine	90	0.3	1.7	<b>1.2</b>	0.08	0.14	96	0.3	1.8	<b>0.9</b>	0.05	0.12	C17
Colon	2246	7.3	43.6	<b>26.1</b>	1.24	3.00	2411	8.3	46.0	<b>19.7</b>	0.92	2.25	C18
Rectum	952	3.1	18.5	<b>11.8</b>	0.65	1.43	809	2.8	15.4	<b>7.4</b>	0.42	0.85	C19-20
Anus	106	0.3	2.1	<b>1.4</b>	0.11	0.18	95	0.3	1.8	<b>1.0</b>	0.07	0.12	C21
Liver	381	1.2	7.4	<b>4.8</b>	0.28	0.60	142	0.5	2.7	<b>1.3</b>	0.07	0.16	C22
Gallbladder etc.	108	0.4	2.1	<b>1.3</b>	0.06	0.15	132	0.5	2.5	<b>1.1</b>	0.06	0.13	C23-24
Pancreas	616	2.0	12.0	<b>7.4</b>	0.37	0.90	701	2.4	13.4	<b>5.6</b>	0.25	0.65	C25
Nose, sinuses etc.	46	0.1	0.9	<b>0.6</b>	0.03	0.06	42	0.1	0.8	<b>0.4</b>	0.03	0.04	C30-31
Larynx	370	1.2	7.2	<b>5.0</b>	0.29	0.65	102	0.4	1.9	<b>1.1</b>	0.07	0.14	C32
Trachea, bronchus and lung	4169	13.5	81.0	<b>51.4</b>	2.59	6.49	3905	13.4	74.5	<b>38.9</b>	2.12	5.10	C33-34
Other thoracic organs	34	0.1	0.7	<b>0.5</b>	0.04	0.05	15	0.1	0.3	<b>0.2</b>	0.01	0.02	C37-38
Bone	56	0.2	1.1	<b>1.0</b>	0.07	0.09	50	0.2	1.0	<b>0.8</b>	0.06	0.07	C40-41
Melanoma of skin	1346	4.4	26.1	<b>18.2</b>	1.27	2.02	988	3.4	18.8	<b>12.6</b>	0.94	1.28	C43
†Other skin	119		2.3	<b>1.4</b>	0.08	0.14	88		1.7	<b>0.9</b>	0.07	0.10	C44
Mesothelioma	174	0.6	3.4	<b>1.9</b>	0.08	0.22	35	0.1	0.7	<b>0.3</b>	0.02	0.05	C45
Kaposi sarcoma	1247	4.0	24.2	<b>16.7</b>	1.39	1.42	16	0.1	0.3	<b>0.1</b>	0.01	0.01	C46
Connective and soft tissue	176	0.6	3.4	<b>2.4</b>	0.13	0.21	145	0.5	2.8	<b>2.1</b>	0.14	0.19	C47+C49
Breast	72	0.2	1.4	<b>0.9</b>	0.06	0.12	9376	32.2	178.8	<b>109.6</b>	8.10	12.72	C50
Vulva							119	0.4	2.3	<b>1.1</b>	0.07	0.13	C51
Vagina							42	0.1	0.8	<b>0.4</b>	0.02	0.04	C52
Cervix uteri							443	1.5	8.4	<b>6.0</b>	0.47	0.57	C53
Corpus uteri							1830	6.3	34.9	<b>20.2</b>	1.33	2.53	C54
Uterus unspecified							30	0.1	0.6	<b>0.3</b>	0.01	0.03	C55
Ovary							1205	4.1	23.0	<b>14.0</b>	1.00	1.54	C56
Other female genital organs							45	0.2	0.9	<b>0.5</b>	0.03	0.07	C57
Placenta							6	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	37	0.1	0.7	<b>0.4</b>	0.01	0.04							C60
Prostate	8642	28.1	167.9	<b>108.9</b>	5.15	14.99							C61
Testis	394	1.3	7.7	<b>6.4</b>	0.48	0.50							C62
Other male genital organs	10	0.0	0.2	<b>0.1</b>	0.01	0.02							C63
Kidney	655	2.1	12.7	<b>8.9</b>	0.60	1.07	395	1.4	7.5	<b>4.4</b>	0.25	0.53	C64
Renal pelvis	57	0.2	1.1	<b>0.7</b>	0.03	0.09	49	0.2	0.9	<b>0.4</b>	0.02	0.04	C65
Ureter	46	0.1	0.9	<b>0.5</b>	0.02	0.08	24	0.1	0.5	<b>0.2</b>	0.01	0.03	C66
Bladder	2006	6.5	39.0	<b>23.3</b>	1.03	2.81	725	2.5	13.8	<b>6.6</b>	0.34	0.82	C67
Other urinary organs	16	0.1	0.3	<b>0.2</b>	0.01	0.02	13	0.0	0.2	<b>0.1</b>	0.00	0.02	C68
Eye	65	0.2	1.3	<b>0.9</b>	0.05	0.10	43	0.1	0.8	<b>0.6</b>	0.04	0.07	C69
Brain, nervous system	517	1.7	10.0	<b>8.0</b>	0.52	0.81	365	1.3	7.0	<b>4.9</b>	0.31	0.49	C70-72
Thyroid	195	0.6	3.8	<b>2.8</b>	0.22	0.30	490	1.7	9.3	<b>7.5</b>	0.57	0.64	C73
Adrenal gland	14	0.0	0.3	<b>0.3</b>	0.02	0.02	23	0.1	0.4	<b>0.5</b>	0.02	0.03	C74
Other endocrine	8	0.0	0.2	<b>0.2</b>	0.01	0.01	7	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	191	0.6	3.7	<b>3.1</b>	0.23	0.26	164	0.6	3.1	<b>2.9</b>	0.20	0.22	C81
Non-Hodgkin lymphoma	1871	6.1	36.3	<b>24.6</b>	1.70	2.51	1097	3.8	20.9	<b>11.3</b>	0.65	1.28	C82-85,C96
Immunoproliferative diseases	30	0.1	0.6	<b>0.4</b>	0.02	0.05	20	0.1	0.4	<b>0.2</b>	0.01	0.02	C88
Multiple myeloma	328	1.1	6.4	<b>4.0</b>	0.21	0.45	264	0.9	5.0	<b>2.5</b>	0.14	0.30	C90
Lymphoid leukaemia	373	1.2	7.2	<b>5.9</b>	0.31	0.53	236	0.8	4.5	<b>3.3</b>	0.16	0.29	C91
Myeloid leukaemia	369	1.2	7.2	<b>4.7</b>	0.25	0.50	291	1.0	5.6	<b>3.1</b>	0.20	0.31	C92-94
Leukaemia unspecified	46	0.1	0.9	<b>0.5</b>	0.01	0.04	53	0.2	1.0	<b>0.4</b>	0.02	0.03	C95
Other and unspecified	800	2.6	15.5	<b>9.5</b>	0.47	1.07	996	3.4	19.0	<b>8.2</b>	0.37	0.95	O&U
All sites	30923		600.7	<b>393.2</b>	21.69	47.14	29200		557.0	<b>314.2</b>	20.23	36.18	ALL
All sites but C44	30804	100.0	598.4	<b>391.7</b>	21.61	47.00	29112	100.0	555.3	<b>313.2</b>	20.17	36.08	ALLbC44

†See note following population pyramid

## USA, CALIFORNIA, SAN FRANCISCO BAY AREA: HISPANIC WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	Cum. rates 0-74	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	Cum. rates 0-74	
Lip	7	0.2	0.5	<b>0.6</b>	0.03	0.10	4	0.1	0.3	<b>0.4</b>	0.03	0.04	C00
Tongue	15	0.5	1.1	<b>1.5</b>	0.09	0.17	7	0.2	0.5	<b>0.5</b>	0.02	0.05	C01-02
Mouth	15	0.5	1.1	<b>1.6</b>	0.10	0.21	12	0.4	0.9	<b>0.8</b>	0.03	0.10	C03-06
Salivary glands	5	0.2	0.4	<b>0.5</b>	0.03	0.05	13	0.4	1.0	<b>1.0</b>	0.07	0.12	C07-08
Tonsil	22	0.7	1.6	<b>2.0</b>	0.18	0.20	7	0.2	0.5	<b>0.6</b>	0.01	0.11	C09
Other oropharynx	1	0.0	0.1	<b>0.1</b>	0.02	0.02	1	0.0	0.1	<b>0.1</b>	0.00	0.01	C10
Nasopharynx	6	0.2	0.4	<b>0.5</b>	0.01	0.05	6	0.2	0.4	<b>0.4</b>	0.02	0.03	C11
Hypopharynx	11	0.3	0.8	<b>1.1</b>	0.07	0.09	3	0.1	0.2	<b>0.3</b>	0.01	0.04	C12-13
Pharynx unspecified	4	0.1	0.3	<b>0.4</b>	0.02	0.04	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	32	1.0	2.3	<b>3.2</b>	0.21	0.38	10	0.3	0.7	<b>0.6</b>	0.04	0.05	C15
Stomach	120	3.7	8.5	<b>11.4</b>	0.50	1.20	72	2.3	5.4	<b>5.1</b>	0.28	0.55	C16
Small intestine	7	0.2	0.5	<b>0.6</b>	0.01	0.04	9	0.3	0.7	<b>0.6</b>	0.02	0.09	C17
Colon	204	6.3	14.5	<b>20.5</b>	1.02	2.50	236	7.4	17.7	<b>16.6</b>	0.88	1.85	C18
Rectum	111	3.4	7.9	<b>11.1</b>	0.64	1.41	89	2.8	6.7	<b>6.3</b>	0.30	0.86	C19-20
Anus	12	0.4	0.9	<b>1.2</b>	0.06	0.15	12	0.4	0.9	<b>0.7</b>	0.04	0.05	C21
Liver	92	2.8	6.5	<b>9.2</b>	0.50	1.11	42	1.3	3.1	<b>3.0</b>	0.14	0.31	C22
Gallbladder etc.	20	0.6	1.4	<b>2.0</b>	0.09	0.25	29	0.9	2.2	<b>2.2</b>	0.12	0.26	C23-24
Pancreas	68	2.1	4.8	<b>6.8</b>	0.35	0.75	87	2.7	6.5	<b>5.9</b>	0.25	0.69	C25
Nose, sinuses etc.	8	0.2	0.6	<b>0.8</b>	0.07	0.09	5	0.2	0.4	<b>0.5</b>	0.03	0.05	C30-31
Larynx	44	1.4	3.1	<b>4.6</b>	0.33	0.52	8	0.3	0.6	<b>0.6</b>	0.04	0.05	C32
Trachea, bronchus and lung	332	10.3	23.6	<b>33.9</b>	1.58	4.39	318	9.9	23.8	<b>24.3</b>	1.36	3.17	C33-34
Other thoracic organs	10	0.3	0.7	<b>0.8</b>	0.06	0.06	3	0.1	0.2	<b>0.3</b>	0.03	0.04	C37-38
Bone	12	0.4	0.9	<b>0.9</b>	0.04	0.07	8	0.3	0.6	<b>0.6</b>	0.03	0.06	C40-41
Melanoma of skin	39	1.2	2.8	<b>3.4</b>	0.23	0.42	56	1.8	4.2	<b>4.0</b>	0.30	0.38	C43
†Other skin	6		0.4	<b>0.4</b>	0.02	0.02	6		0.4	<b>0.4</b>	0.04	0.04	C44
Mesothelioma	18	0.6	1.3	<b>1.7</b>	0.06	0.17	3	0.1	0.2	<b>0.3</b>	0.02	0.02	C45
Kaposi sarcoma	222	6.9	15.8	<b>13.0</b>	1.12	1.15	2	0.1	0.1	<b>0.1</b>	0.00	0.00	C46
Connective and soft tissue	42	1.3	3.0	<b>3.4</b>	0.25	0.32	21	0.7	1.6	<b>1.5</b>	0.10	0.14	C47+C49
Breast	4	0.1	0.3	<b>0.4</b>	0.00	0.05	904	28.3	67.6	<b>71.3</b>	5.20	8.31	C50
Vulva							14	0.4	1.0	<b>0.9</b>	0.05	0.09	C51
Vagina							7	0.2	0.5	<b>0.6</b>	0.06	0.07	C52
Cervix uteri							166	5.2	12.4	<b>11.9</b>	0.93	1.25	C53
Corpus uteri							172	5.4	12.9	<b>13.9</b>	1.03	1.67	C54
Uterus unspecified							3	0.1	0.2	<b>0.2</b>	0.01	0.03	C55
Ovary							167	5.2	12.5	<b>13.0</b>	0.85	1.50	C56
Other female genital organs							1	0.0	0.1	<b>0.1</b>	0.01	0.01	C57
Placenta							2	0.1	0.1	<b>0.2</b>	0.01	0.01	C58
Penis	3	0.1	0.2	<b>0.3</b>	0.01	0.06							C60
Prostate	827	25.6	58.7	<b>87.0</b>	3.31	12.17							C61
Testis	64	2.0	4.5	<b>3.7</b>	0.28	0.28							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	101	3.1	7.2	<b>9.7</b>	0.60	1.15	57	1.8	4.3	<b>4.2</b>	0.22	0.51	C64
Renal pelvis	5	0.2	0.4	<b>0.5</b>	0.02	0.04	10	0.3	0.7	<b>0.6</b>	0.03	0.08	C65
Ureter	2	0.1	0.1	<b>0.2</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	137	4.2	9.7	<b>13.7</b>	0.61	1.57	68	2.1	5.1	<b>4.1</b>	0.12	0.43	C67
Other urinary organs	1	0.0	0.1	<b>0.1</b>	0.00	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	6	0.2	0.4	<b>0.5</b>	0.03	0.05	5	0.2	0.4	<b>0.4</b>	0.03	0.05	C69
Brain, nervous system	69	2.1	4.9	<b>6.1</b>	0.37	0.66	34	1.1	2.5	<b>2.5</b>	0.17	0.26	C70-72
Thyroid	31	1.0	2.2	<b>2.5</b>	0.19	0.25	128	4.0	9.6	<b>8.7</b>	0.60	0.81	C73
Adrenal gland	2	0.1	0.1	<b>0.2</b>	0.01	0.01	5	0.2	0.4	<b>0.3</b>	0.01	0.01	C74
Other endocrine	2	0.1	0.1	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	38	1.2	2.7	<b>2.7</b>	0.20	0.25	28	0.9	2.1	<b>2.0</b>	0.12	0.14	C81
Non-Hodgkin lymphoma	238	7.4	16.9	<b>18.1</b>	1.31	1.82	137	4.3	10.3	<b>9.8</b>	0.58	1.04	C82-85,C96
Immunoproliferative diseases	2	0.1	0.1	<b>0.2</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	44	1.4	3.1	<b>4.2</b>	0.19	0.53	31	1.0	2.3	<b>2.1</b>	0.10	0.22	C90
Lymphoid leukaemia	46	1.4	3.3	<b>3.8</b>	0.21	0.25	38	1.2	2.8	<b>2.7</b>	0.14	0.21	C91
Myeloid leukaemia	45	1.4	3.2	<b>3.4</b>	0.17	0.35	41	1.3	3.1	<b>3.2</b>	0.20	0.38	C92-94
Leukaemia unspecified	5	0.2	0.4	<b>0.4</b>	0.00	0.03	4	0.1	0.3	<b>0.4</b>	0.04	0.04	C95
Other and unspecified	85	2.6	6.0	<b>8.2</b>	0.37	0.96	113	3.5	8.5	<b>7.8</b>	0.36	0.93	O&U
All sites	3242		230.2	<b>303.2</b>	15.64	36.47	3204		239.7	<b>238.4</b>	15.04	27.20	ALL
All sites but C44	3236	100.0	229.7	<b>302.8</b>	15.62	36.45	3198	100.0	239.3	<b>238.0</b>	15.00	27.16	ALLbC44

†See note following population pyramid



## USA, CALIFORNIA, SAN FRANCISCO BAY AREA: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	2	0.0	0.2	<b>0.2</b>	0.00	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	32	0.6	2.8	<b>2.9</b>	0.22	0.31	13	0.3	1.1	<b>1.0</b>	0.06	0.11	C01-02
Mouth	36	0.7	3.2	<b>3.5</b>	0.30	0.43	18	0.5	1.5	<b>1.3</b>	0.11	0.13	C03-06
Salivary glands	12	0.2	1.1	<b>1.0</b>	0.06	0.10	12	0.3	1.0	<b>0.8</b>	0.04	0.09	C07-08
Tonsil	19	0.4	1.7	<b>1.7</b>	0.13	0.21	6	0.2	0.5	<b>0.5</b>	0.04	0.05	C09
Other oropharynx	8	0.2	0.7	<b>0.7</b>	0.05	0.10	3	0.1	0.2	<b>0.2</b>	0.00	0.04	C10
Nasopharynx	14	0.3	1.2	<b>1.2</b>	0.09	0.11	6	0.2	0.5	<b>0.4</b>	0.02	0.05	C11
Hypopharynx	24	0.5	2.1	<b>2.2</b>	0.15	0.25	8	0.2	0.7	<b>0.7</b>	0.07	0.08	C12-13
Pharynx unspecified	10	0.2	0.9	<b>0.9</b>	0.06	0.12	2	0.1	0.2	<b>0.1</b>	0.01	0.01	C14
Oesophagus	70	1.4	6.2	<b>6.2</b>	0.39	0.79	35	0.9	2.9	<b>2.6</b>	0.22	0.35	C15
Stomach	161	3.2	14.1	<b>13.1</b>	0.54	1.61	98	2.6	8.2	<b>5.7</b>	0.29	0.57	C16
Small intestine	25	0.5	2.2	<b>2.1</b>	0.14	0.25	15	0.4	1.2	<b>1.1</b>	0.08	0.15	C17
Colon	358	7.2	31.5	<b>29.8</b>	1.53	3.47	355	9.4	29.6	<b>21.5</b>	1.11	2.44	C18
Rectum	127	2.5	11.2	<b>11.2</b>	0.73	1.35	107	2.8	8.9	<b>6.9</b>	0.42	0.83	C19-20
Anus	26	0.5	2.3	<b>2.1</b>	0.16	0.24	11	0.3	0.9	<b>0.9</b>	0.07	0.13	C21
Liver	98	2.0	8.6	<b>8.8</b>	0.60	1.10	39	1.0	3.2	<b>2.7</b>	0.22	0.30	C22
Gallbladder etc.	11	0.2	1.0	<b>1.0</b>	0.06	0.14	24	0.6	2.0	<b>1.5</b>	0.08	0.15	C23-24
Pancreas	128	2.6	11.2	<b>11.1</b>	0.58	1.38	155	4.1	12.9	<b>9.3</b>	0.38	1.15	C25
Nose, sinuses etc.	10	0.2	0.9	<b>0.8</b>	0.05	0.10	2	0.1	0.2	<b>0.2</b>	0.01	0.02	C30-31
Larynx	85	1.7	7.5	<b>7.7</b>	0.53	0.97	24	0.6	2.0	<b>1.7</b>	0.13	0.21	C32
Trachea, bronchus and lung	860	17.2	75.6	<b>73.7</b>	4.15	9.20	530	14.0	44.1	<b>37.5</b>	2.37	4.70	C33-34
Other thoracic organs	4	0.1	0.4	<b>0.3</b>	0.02	0.02	9	0.2	0.7	<b>0.7</b>	0.05	0.06	C37-38
Bone	10	0.2	0.9	<b>0.8</b>	0.05	0.06	7	0.2	0.6	<b>0.4</b>	0.03	0.03	C40-41
Melanoma of skin	6	0.1	0.5	<b>0.6</b>	0.05	0.07	7	0.2	0.6	<b>0.5</b>	0.03	0.05	C43
†Other skin	19		1.7	<b>1.6</b>	0.14	0.17	11		0.9	<b>0.7</b>	0.05	0.06	C44
Mesothelioma	19	0.4	1.7	<b>1.5</b>	0.05	0.18	7	0.2	0.6	<b>0.4</b>	0.02	0.04	C45
Kaposi sarcoma	207	4.1	18.2	<b>14.5</b>	1.21	1.24	8	0.2	0.7	<b>0.5</b>	0.04	0.04	C46
Connective and soft tissue	31	0.6	2.7	<b>2.6</b>	0.20	0.29	30	0.8	2.5	<b>2.1</b>	0.12	0.20	C47+C49
Breast	7	0.1	0.6	<b>0.6</b>	0.03	0.09	1092	28.9	90.9	<b>76.4</b>	5.61	8.59	C50
Vulva							22	0.6	1.8	<b>1.3</b>	0.08	0.13	C51
Vagina							11	0.3	0.9	<b>0.7</b>	0.03	0.07	C52
Cervix uteri							120	3.2	10.0	<b>8.0</b>	0.60	0.78	C53
Corpus uteri							163	4.3	13.6	<b>11.2</b>	0.70	1.39	C54
Uterus unspecified							9	0.2	0.7	<b>0.6</b>	0.06	0.07	C55
Ovary							127	3.4	10.6	<b>9.1</b>	0.62	1.03	C56
Other female genital organs							4	0.1	0.3	<b>0.2</b>	0.00	0.01	C57
Placenta							1	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	3	0.1	0.3	<b>0.2</b>	0.00	0.04							C60
Prostate	1690	33.8	148.5	<b>147.0</b>	7.28	20.06							C61
Testis	14	0.3	1.2	<b>0.9</b>	0.08	0.08							C62
Other male genital organs	3	0.1	0.3	<b>0.2</b>	0.00	0.02							C63
Kidney	106	2.1	9.3	<b>9.1</b>	0.55	1.07	72	1.9	6.0	<b>5.1</b>	0.34	0.52	C64
Renal pelvis	6	0.1	0.5	<b>0.5</b>	0.03	0.06	7	0.2	0.6	<b>0.3</b>	0.01	0.03	C65
Ureter	1	0.0	0.1	<b>0.1</b>	0.00	0.00	2	0.1	0.2	<b>0.1</b>	0.00	0.01	C66
Bladder	117	2.3	10.3	<b>9.7</b>	0.46	1.16	76	2.0	6.3	<b>4.2</b>	0.17	0.49	C67
Other urinary organs	2	0.0	0.2	<b>0.1</b>	0.00	0.02	4	0.1	0.3	<b>0.3</b>	0.01	0.03	C68
Eye	2	0.0	0.2	<b>0.3</b>	0.01	0.01	3	0.1	0.2	<b>0.2</b>	0.01	0.01	C69
Brain, nervous system	52	1.0	4.6	<b>4.4</b>	0.25	0.38	36	1.0	3.0	<b>2.9</b>	0.17	0.30	C70-72
Thyroid	18	0.4	1.6	<b>1.5</b>	0.09	0.14	33	0.9	2.7	<b>2.7</b>	0.21	0.26	C73
Adrenal gland	4	0.1	0.4	<b>0.3</b>	0.00	0.02	2	0.1	0.2	<b>0.1</b>	0.01	0.01	C74
Other endocrine	2	0.0	0.2	<b>0.2</b>	0.01	0.01	1	0.0	0.1	<b>0.1</b>	0.00	0.00	C75
Hodgkin disease	39	0.8	3.4	<b>3.1</b>	0.25	0.27	29	0.8	2.4	<b>2.1</b>	0.15	0.17	C81
Non-Hodgkin lymphoma	222	4.4	19.5	<b>17.8</b>	1.39	1.69	107	2.8	8.9	<b>7.0</b>	0.47	0.69	C82-85,C96
Immunoproliferative diseases	3	0.1	0.3	<b>0.3</b>	0.04	0.04	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	88	1.8	7.7	<b>7.4</b>	0.39	0.90	114	3.0	9.5	<b>7.0</b>	0.29	0.88	C90
Lymphoid leukaemia	44	0.9	3.9	<b>3.9</b>	0.25	0.39	28	0.7	2.3	<b>1.9</b>	0.09	0.14	C91
Myeloid leukaemia	46	0.9	4.0	<b>3.7</b>	0.11	0.46	39	1.0	3.2	<b>2.8</b>	0.17	0.31	C92-94
Leukaemia unspecified	6	0.1	0.5	<b>0.5</b>	0.03	0.05	4	0.1	0.3	<b>0.3</b>	0.02	0.03	C95
Other and unspecified	127	2.5	11.2	<b>10.5</b>	0.56	1.15	141	3.7	11.7	<b>8.8</b>	0.50	0.98	O&U
All sites	5014		440.7	<b>426.0</b>	24.04	52.40	3789		315.5	<b>255.3</b>	16.37	28.99	ALL
All sites but C44	4995	100.0	439.0	<b>424.5</b>	23.90	52.22	3778	100.0	314.6	<b>254.6</b>	16.32	28.93	ALLbC44

†See note following population pyramid



# USA, Connecticut

## **Registration area**

The Connecticut Tumor Registry (CTR) covers the entire State of Connecticut which is bounded by Massachusetts to the north, Rhode Island to the east, Long Island to the south and New York to the west. It lies between latitudes 41° and 42° N and longitudes 71° and 73° W. The total registration area is 12 973 km<sup>2</sup>. At the 1990 census, the population of Connecticut was 3 287 116, composed of 87% white, and 9.3% black. Approximately 6.5% of the Connecticut population is Hispanic, mostly of Puerto Rican origin.

## **Cancer care facilities**

Health care related to cancer is provided predominantly by hospitals in Connecticut but reciprocal reporting agreements with surrounding states also identify some cases. Most patients suspected to have cancer who are first seen in facilities outside of a hospital are likely to be referred to a hospital for testing and/or treatment.

## **Registry structure and methods**

The CTR is located in the Connecticut Department of Public Health in Hartford, Connecticut. The CTR is funded by the State of Connecticut and the federal government. Since 1973, the registry has participated in the Surveillance, Epidemiology and End Results (SEER) Program sponsored by the National Cancer Institute (NCI).

The registry is staffed by over 20 full-time employees including an epidemiologist, research analyst, supervisor, coders, quality control staff and office support personnel.

The CTR is primarily a hospital-based reporting system. All hospitals in Connecticut are required by public health legislation to report incident cases, along with follow-up and treatment information to the registry. Reports, containing pre-coded data, are prepared by tumour registrars located in the hospitals and submitted, either on paper, diskette or electronically to the registry. In 1981, this reporting mandate was extended to include private pathology laboratories. The CTR also has reciprocal cancer-reporting agreements with all of the adjacent states and several other states. This allows for the identification of Connecticut residents whose cancers are diagnosed or treated in other states.

In an effort to increase the accuracy, timeliness and completeness of reporting to the CTR, the registry has implemented a quality control plan. This calls for biannual audits and annual

reabstracting audits of hospitals, biannual survey of all hospitals to assess the status of reporting, regular detailed analyses of reporting errors received by the CTR, regular quality and quantity reports of CTR staff productivity and training workshops for in-house and hospital registrars.

All death certificates with mention of cancer are reviewed and checked against the CTR for prior registration. Follow-back is initiated on all death certificates that do not match to a patient in the registry database.

From its inception in 1941, the CTR has maintained lifetime follow-up on all tumours. Follow-up information is primarily obtained from the hospitals. Follow-up information is also obtained from periodic linkages with the Connecticut mortality files and annual linkages with the State of Connecticut motor vehicle license files and the Medicare files of the Health Care Finance Administration. Although not legislatively mandated to report cancer cases to the CTR, physicians have also been contacted as part of follow-up activities.

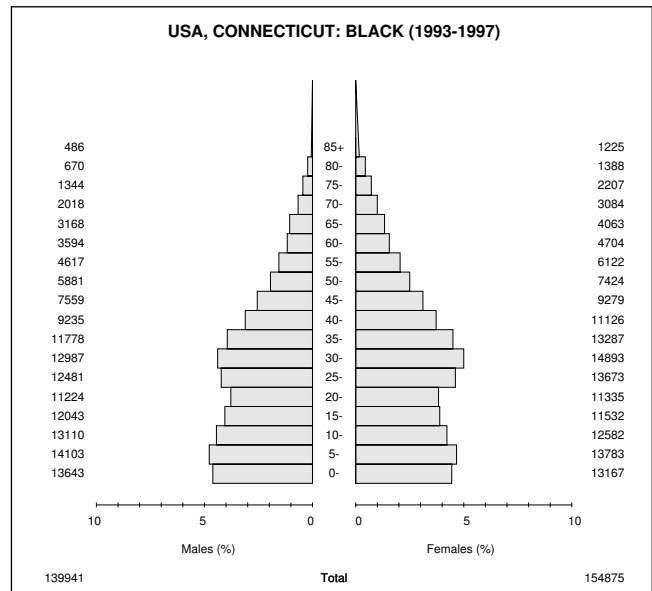
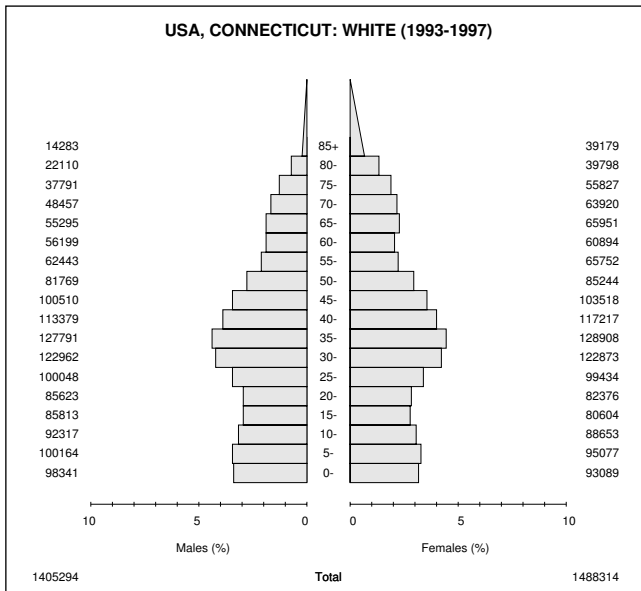
## **Interpreting the results**

Lack of reporting of cancer diagnoses from physicians may result in under-ascertainment, mainly for certain cancers treated and diagnosed solely in physicians' or dermatopathologists' offices. The possibility of use of out-of-state pathology laboratories also requires examination.

## **Use of the data**

CTR's database contains statistical information on cancers diagnosed since 1935, making it the oldest cancer registry in the USA.

Data from the registry are included with those from other SEER registries in the NCI's annual publication entitled Cancer Statistics Review. This document is used by the NCI as part of the process of setting priorities for research on the prevention and treatment of cancer in the US population. The data the CTR collects are also used to identify priorities and target prevention and control activities in Connecticut, educate the public and health professionals about specific cancer risks, trends and treatments, monitor cancer incidence and trends and aid research studies. Data from the CTR have been used in hundreds of scientific publications by researchers worldwide. Incidence rates in Connecticut are routinely reported in various monographs produced by the CTR.



**Source of population**

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

**Notes on the data**

† C44 does not include basal cell or squamous cell carcinoma except for skin of anus.

## USA, CONNECTICUT: WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	31	0.1	0.4	<b>0.3</b>	0.01	0.03	8	0.0	0.1	<b>0.0</b>	0.00	0.00	C00
Tongue	262	0.7	3.7	<b>2.7</b>	0.19	0.34	147	0.4	2.0	<b>1.3</b>	0.09	0.15	C01-02
Mouth	293	0.7	4.2	<b>3.0</b>	0.20	0.38	196	0.5	2.6	<b>1.5</b>	0.09	0.18	C03-06
Salivary glands	97	0.2	1.4	<b>0.9</b>	0.05	0.11	85	0.2	1.1	<b>0.7</b>	0.04	0.07	C07-08
Tonsil	135	0.3	1.9	<b>1.5</b>	0.11	0.18	49	0.1	0.7	<b>0.5</b>	0.04	0.06	C09
Other oropharynx	51	0.1	0.7	<b>0.5</b>	0.03	0.06	11	0.0	0.1	<b>0.1</b>	0.01	0.01	C10
Nasopharynx	54	0.1	0.8	<b>0.6</b>	0.05	0.07	26	0.1	0.3	<b>0.2</b>	0.01	0.01	C11
Hypopharynx	120	0.3	1.7	<b>1.2</b>	0.07	0.15	44	0.1	0.6	<b>0.4</b>	0.03	0.04	C12-13
Pharynx unspecified	42	0.1	0.6	<b>0.4</b>	0.02	0.05	19	0.0	0.3	<b>0.1</b>	0.01	0.02	C14
Oesophagus	573	1.4	8.2	<b>5.4</b>	0.29	0.66	198	0.5	2.7	<b>1.3</b>	0.07	0.17	C15
Stomach	912	2.3	13.0	<b>7.9</b>	0.33	0.93	607	1.6	8.2	<b>3.4</b>	0.13	0.38	C16
Small intestine	124	0.3	1.8	<b>1.2</b>	0.07	0.15	107	0.3	1.4	<b>0.8</b>	0.04	0.09	C17
Colon	3253	8.1	46.3	<b>28.3</b>	1.23	3.28	3632	9.3	48.8	<b>21.4</b>	0.97	2.46	C18
Rectum	1493	3.7	21.2	<b>13.8</b>	0.70	1.72	1191	3.1	16.0	<b>8.2</b>	0.46	0.96	C19-20
Anus	37	0.1	0.5	<b>0.4</b>	0.02	0.04	98	0.3	1.3	<b>0.7</b>	0.05	0.09	C21
Liver	454	1.1	6.5	<b>4.4</b>	0.23	0.56	204	0.5	2.7	<b>1.3</b>	0.06	0.15	C22
Gallbladder etc.	193	0.5	2.7	<b>1.6</b>	0.06	0.16	240	0.6	3.2	<b>1.3</b>	0.05	0.16	C23-24
Pancreas	896	2.2	12.8	<b>8.1</b>	0.39	1.01	988	2.5	13.3	<b>6.1</b>	0.28	0.73	C25
Nose, sinuses etc.	58	0.1	0.8	<b>0.5</b>	0.03	0.07	43	0.1	0.6	<b>0.3</b>	0.02	0.04	C30-31
Larynx	634	1.6	9.0	<b>6.3</b>	0.36	0.82	174	0.4	2.3	<b>1.4</b>	0.09	0.18	C32
Trachea, bronchus and lung	6088	15.2	86.6	<b>56.1</b>	2.73	7.19	5073	13.0	68.2	<b>37.9</b>	2.17	4.88	C33-34
Other thoracic organs	34	0.1	0.5	<b>0.4</b>	0.03	0.04	25	0.1	0.3	<b>0.3</b>	0.02	0.03	C37-38
Bone	76	0.2	1.1	<b>1.0</b>	0.07	0.08	63	0.2	0.8	<b>0.7</b>	0.04	0.06	C40-41
Melanoma of skin	1641	4.1	23.4	<b>16.7</b>	1.11	1.93	1330	3.4	17.9	<b>12.3</b>	0.92	1.26	C43
†Other skin	108		1.5	<b>1.1</b>	0.06	0.11	102		1.4	<b>0.8</b>	0.05	0.08	C44
Mesothelioma	107	0.3	1.5	<b>1.0</b>	0.04	0.13	23	0.1	0.3	<b>0.1</b>	0.01	0.02	C45
Kaposi sarcoma	160	0.4	2.3	<b>1.7</b>	0.12	0.15	25	0.1	0.3	<b>0.1</b>	0.00	0.01	C46
Connective and soft tissue	235	0.6	3.3	<b>2.5</b>	0.16	0.25	194	0.5	2.6	<b>1.8</b>	0.11	0.17	C47+C49
Breast	109	0.3	1.6	<b>1.0</b>	0.07	0.13	11579	29.8	155.6	<b>97.7</b>	6.97	11.25	C50
Vulva							225	0.6	3.0	<b>1.4</b>	0.08	0.15	C51
Vagina							61	0.2	0.8	<b>0.4</b>	0.03	0.04	C52
Cervix uteri							639	1.6	8.6	<b>6.3</b>	0.48	0.61	C53
Corpus uteri							2446	6.3	32.9	<b>20.7</b>	1.49	2.58	C54
Uterus unspecified							62	0.2	0.8	<b>0.5</b>	0.03	0.04	C55
Ovary							1466	3.8	19.7	<b>13.0</b>	0.91	1.48	C56
Other female genital organs							66	0.2	0.9	<b>0.6</b>	0.05	0.07	C57
Placenta							3	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	61	0.2	0.9	<b>0.5</b>	0.02	0.05							C60
Prostate	11536	28.8	164.2	<b>105.8</b>	4.69	14.36							C61
Testis	433	1.1	6.2	<b>5.4</b>	0.40	0.42							C62
Other male genital organs	14	0.0	0.2	<b>0.1</b>	0.01	0.02							C63
Kidney	1054	2.6	15.0	<b>10.6</b>	0.63	1.28	635	1.6	8.5	<b>5.0</b>	0.28	0.58	C64
Renal pelvis	76	0.2	1.1	<b>0.7</b>	0.04	0.08	60	0.2	0.8	<b>0.4</b>	0.02	0.04	C65
Ureter	65	0.2	0.9	<b>0.5</b>	0.02	0.07	34	0.1	0.5	<b>0.2</b>	0.01	0.02	C66
Bladder	3092	7.7	44.0	<b>27.8</b>	1.32	3.33	1191	3.1	16.0	<b>8.0</b>	0.44	0.94	C67
Other urinary organs	26	0.1	0.4	<b>0.2</b>	0.01	0.03	9	0.0	0.1	<b>0.1</b>	0.01	0.01	C68
Eye	71	0.2	1.0	<b>0.7</b>	0.04	0.07	54	0.1	0.7	<b>0.6</b>	0.04	0.06	C69
Brain, nervous system	606	1.5	8.6	<b>7.1</b>	0.44	0.69	511	1.3	6.9	<b>5.1</b>	0.32	0.50	C70-72
Thyroid	245	0.6	3.5	<b>2.8</b>	0.21	0.27	643	1.7	8.6	<b>6.7</b>	0.52	0.62	C73
Adrenal gland	35	0.1	0.5	<b>0.6</b>	0.03	0.04	27	0.1	0.4	<b>0.5</b>	0.03	0.03	C74
Other endocrine	13	0.0	0.2	<b>0.2</b>	0.01	0.01	6	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	295	0.7	4.2	<b>3.8</b>	0.27	0.31	242	0.6	3.3	<b>3.1</b>	0.20	0.23	C81
Non-Hodgkin lymphoma	1682	4.2	23.9	<b>16.6</b>	0.98	1.78	1589	4.1	21.4	<b>11.6</b>	0.64	1.32	C82-85,C96
Immunoproliferative diseases	26	0.1	0.4	<b>0.2</b>	0.01	0.03	20	0.1	0.3	<b>0.1</b>	0.01	0.01	C88
Multiple myeloma	407	1.0	5.8	<b>3.6</b>	0.17	0.44	370	1.0	5.0	<b>2.3</b>	0.11	0.27	C90
Lymphoid leukaemia	477	1.2	6.8	<b>5.2</b>	0.28	0.54	369	0.9	5.0	<b>3.3</b>	0.15	0.30	C91
Myeloid leukaemia	472	1.2	6.7	<b>4.7</b>	0.23	0.52	388	1.0	5.2	<b>3.1</b>	0.18	0.32	C92-94
Leukaemia unspecified	91	0.2	1.3	<b>0.7</b>	0.02	0.07	80	0.2	1.1	<b>0.5</b>	0.02	0.04	C95
Other and unspecified	1127	2.8	16.0	<b>10.0</b>	0.46	1.11	1303	3.4	17.5	<b>7.9</b>	0.38	0.86	O&U
All sites	40174		571.8	<b>378.6</b>	19.13	46.30	38980		523.8	<b>304.3</b>	19.27	34.88	ALL
All sites but C44	40066	100.0	570.2	<b>377.5</b>	19.07	46.18	38878	100.0	522.4	<b>303.5</b>	19.22	34.81	ALLbC44

†See note following population pyramid

## USA, CONNECTICUT: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.00	0.02	C00
Tongue	21	0.8	3.0	<b>3.6</b>	0.36	0.39	10	0.5	1.3	<b>1.4</b>	0.12	0.19	C01-02
Mouth	42	1.5	6.0	<b>7.5</b>	0.59	0.80	16	0.7	2.1	<b>2.0</b>	0.14	0.22	C03-06
Salivary glands	8	0.3	1.1	<b>1.4</b>	0.08	0.18	4	0.2	0.5	<b>0.5</b>	0.05	0.05	C07-08
Tonsil	20	0.7	2.9	<b>3.5</b>	0.32	0.47	4	0.2	0.5	<b>0.6</b>	0.05	0.07	C09
Other oropharynx	9	0.3	1.3	<b>1.5</b>	0.10	0.25	2	0.1	0.3	<b>0.3</b>	0.03	0.03	C10
Nasopharynx	8	0.3	1.1	<b>1.2</b>	0.08	0.08	1	0.0	0.1	<b>0.2</b>	0.02	0.02	C11
Hypopharynx	21	0.8	3.0	<b>3.7</b>	0.36	0.42	4	0.2	0.5	<b>0.5</b>	0.04	0.04	C12-13
Pharynx unspecified	3	0.1	0.4	<b>0.5</b>	0.04	0.09	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	96	3.5	13.7	<b>17.6</b>	1.34	2.24	34	1.6	4.4	<b>4.5</b>	0.34	0.62	C15
Stomach	89	3.2	12.7	<b>16.4</b>	0.96	1.92	56	2.6	7.2	<b>6.4</b>	0.24	0.79	C16
Small intestine	15	0.5	2.1	<b>2.6</b>	0.21	0.33	16	0.7	2.1	<b>1.9</b>	0.18	0.18	C17
Colon	209	7.5	29.9	<b>37.6</b>	2.17	4.52	217	10.1	28.0	<b>27.4</b>	1.49	3.46	C18
Rectum	66	2.4	9.4	<b>11.9</b>	0.64	1.39	52	2.4	6.7	<b>6.5</b>	0.39	0.77	C19-20
Anus	4	0.1	0.6	<b>0.7</b>	0.06	0.09	8	0.4	1.0	<b>1.0</b>	0.07	0.10	C21
Liver	33	1.2	4.7	<b>5.6</b>	0.37	0.64	13	0.6	1.7	<b>1.4</b>	0.05	0.13	C22
Gallbladder etc.	7	0.3	1.0	<b>1.2</b>	0.05	0.19	11	0.5	1.4	<b>1.2</b>	0.08	0.11	C23-24
Pancreas	81	2.9	11.6	<b>14.7</b>	0.91	1.91	80	3.7	10.3	<b>9.5</b>	0.44	1.17	C25
Nose, sinuses etc.	5	0.2	0.7	<b>0.9</b>	0.04	0.08	3	0.1	0.4	<b>0.4</b>	0.02	0.07	C30-31
Larynx	60	2.2	8.6	<b>11.1</b>	0.61	1.55	21	1.0	2.7	<b>2.8</b>	0.18	0.38	C32
Trachea, bronchus and lung	423	15.2	60.5	<b>76.2</b>	4.78	9.37	248	11.6	32.0	<b>31.4</b>	1.93	3.92	C33-34
Other thoracic organs	5	0.2	0.7	<b>0.9</b>	0.09	0.09	3	0.1	0.4	<b>0.3</b>	0.02	0.04	C37-38
Bone	6	0.2	0.9	<b>0.8</b>	0.06	0.06	5	0.2	0.6	<b>0.7</b>	0.04	0.06	C40-41
Melanoma of skin	14	0.5	2.0	<b>2.4</b>	0.19	0.19	5	0.2	0.6	<b>0.5</b>	0.03	0.06	C43
†Other skin	6		0.9	<b>0.8</b>	0.03	0.10	8		1.0	<b>0.9</b>	0.06	0.09	C44
Mesothelioma	3	0.1	0.4	<b>0.6</b>	0.02	0.07	2	0.1	0.3	<b>0.3</b>	0.02	0.05	C45
Kaposi sarcoma	37	1.3	5.3	<b>4.3</b>	0.35	0.35	5	0.2	0.6	<b>0.5</b>	0.05	0.05	C46
Connective and soft tissue	19	0.7	2.7	<b>2.7</b>	0.17	0.25	12	0.6	1.5	<b>1.3</b>	0.05	0.11	C47+C49
Breast	8	0.3	1.1	<b>1.6</b>	0.11	0.11	612	28.6	79.0	<b>75.0</b>	5.20	8.63	C50
Vulva							17	0.8	2.2	<b>2.2</b>	0.14	0.29	C51
Vagina							5	0.2	0.6	<b>0.6</b>	0.07	0.07	C52
Cervix uteri							94	4.4	12.1	<b>11.0</b>	0.91	1.05	C53
Corpus uteri							110	5.1	14.2	<b>14.2</b>	0.95	1.75	C54
Uterus unspecified							1	0.0	0.1	<b>0.1</b>	0.00	0.02	C55
Ovary							54	2.5	7.0	<b>6.8</b>	0.40	0.79	C56
Other female genital organs							2	0.1	0.3	<b>0.3</b>	0.03	0.03	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	4	0.1	0.6	<b>0.7</b>	0.03	0.08							C60
Prostate	967	34.8	138.2	<b>181.4</b>	8.86	24.88							C61
Testis	4	0.1	0.6	<b>0.5</b>	0.03	0.03							C62
Other male genital organs	3	0.1	0.4	<b>0.5</b>	0.05	0.05							C63
Kidney	61	2.2	8.7	<b>10.6</b>	0.77	1.23	53	2.5	6.8	<b>6.9</b>	0.40	0.75	C64
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.00	0.00	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	74	2.7	10.6	<b>13.1</b>	0.45	1.79	41	1.9	5.3	<b>4.5</b>	0.15	0.46	C67
Other urinary organs	1	0.0	0.1	<b>0.2</b>	0.00	0.03	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C68
Eye	1	0.0	0.1	<b>0.2</b>	0.01	0.01	2	0.1	0.3	<b>0.4</b>	0.03	0.03	C69
Brain, nervous system	24	0.9	3.4	<b>3.8</b>	0.21	0.36	23	1.1	3.0	<b>2.9</b>	0.14	0.22	C70-72
Thyroid	11	0.4	1.6	<b>1.7</b>	0.13	0.22	29	1.4	3.7	<b>3.4</b>	0.26	0.34	C73
Adrenal gland	3	0.1	0.4	<b>0.5</b>	0.02	0.02	1	0.0	0.1	<b>0.2</b>	0.02	0.02	C74
Other endocrine	1	0.0	0.1	<b>0.1</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	15	0.5	2.1	<b>2.2</b>	0.18	0.23	20	0.9	2.6	<b>2.5</b>	0.18	0.18	C81
Non-Hodgkin lymphoma	113	4.1	16.1	<b>17.3</b>	1.22	1.91	66	3.1	8.5	<b>8.2</b>	0.45	0.93	C82-85,C96
Immunoproliferative diseases	1	0.0	0.1	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	53	1.9	7.6	<b>9.6</b>	0.48	1.08	49	2.3	6.3	<b>6.1</b>	0.41	0.74	C90
Lymphoid leukaemia	19	0.7	2.7	<b>3.1</b>	0.11	0.33	23	1.1	3.0	<b>3.0</b>	0.15	0.29	C91
Myeloid leukaemia	25	0.9	3.6	<b>3.9</b>	0.25	0.37	25	1.2	3.2	<b>3.1</b>	0.19	0.27	C92-94
Leukaemia unspecified	5	0.2	0.7	<b>0.9</b>	0.04	0.11	4	0.2	0.5	<b>0.6</b>	0.02	0.07	C95
Other and unspecified	79	2.8	11.3	<b>13.8</b>	0.75	1.58	75	3.5	9.7	<b>8.9</b>	0.44	0.99	O&U
All sites	2782		397.6	<b>498.0</b>	28.72	62.44	2149		277.5	<b>265.8</b>	16.64	30.75	ALL
All sites but C44	2776	100.0	396.7	<b>497.2</b>	28.69	62.35	2141	100.0	276.5	<b>264.9</b>	16.58	30.66	ALLbC44

†See note following population pyramid

# USA, Georgia, Atlanta

### Registration area

The Metropolitan Atlanta area covered by the five counties is 4500 km<sup>2</sup> and is situated at latitude 33° N and 84° W. The total population in 1995 was estimated to be 2 465 175, of which 30% was black and less than 3% were races other than white or black. The area has one of the fastest growing populations in the USA, with an increase of 737 546 (33.8%) between 1990 and 2000. Occupations are diverse with an emphasis on office employment rather than agriculture or manufacturing. Atlanta lies at an altitude of over 320 m and enjoys a mild climate. Air pollution has become a problem, particularly during summer months.

### Registry structure and methods

The Georgia Center for Cancer Statistics (GCCS), a division of the Department of Epidemiology in the Rollins School of Public Health at Emory University, was founded in 1976 to provide population-based incidence data for a five-county region in the southeastern USA. Metropolitan Atlanta was a logical choice, since it had been included in the First, Second, and Third National Cancer Surveys. Since its inception, the population covered by the Metropolitan Atlanta SEER Registry has increased dramatically, but the geographical boundaries have not changed.

The GCCS also operates the Rural Georgia SEER Registry and the Georgia Cancer Registry. It collaborates with the Surveillance Epidemiology and End Results (SEER) Program of the National Cancer Institute, the Cancer Control Program of the State of Georgia, and the National Program of Cancer Registries at the Centers for Disease Control and Prevention on these cancer registry projects.

Cancer is a reportable disease in Georgia; however, for the 1993–97 data, the Metropolitan Atlanta SEER Registry did not rely on passive reporting. Data were collected by specially trained abstractors from hospital inpatient and outpatient services, free-standing pathology laboratories, offices of private physicians, radiation oncology centres, autopsies, and death certificates.

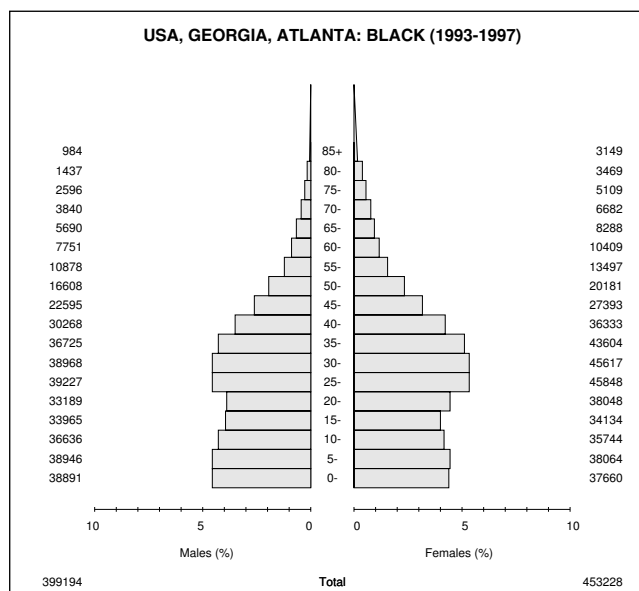
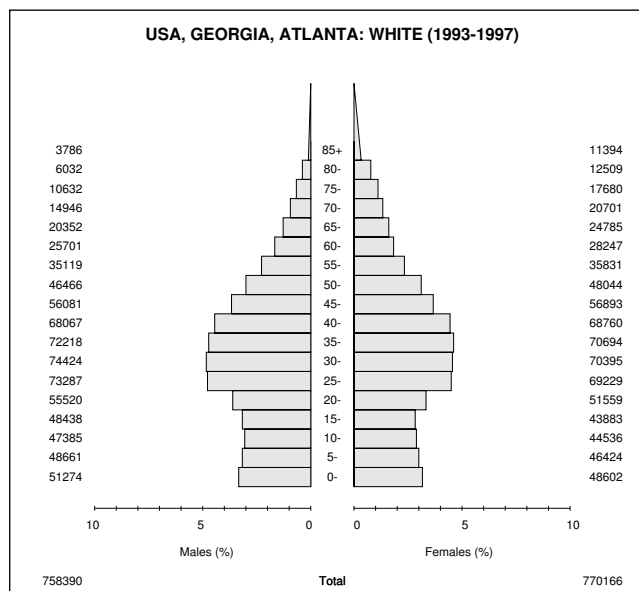
Patient follow-up is conducted through hospital cancer registries, treating physicians, linkage against death certificates for residents of Georgia, records of the US Health Care Financing Administration, and county voter registration files. Through these sources, vital status is known to within one year of the current date for 95% of all registrants. Data are processed using central registry software developed at the GCCS. Automated and visual screening are performed to avoid duplicate records. Thirty-five employees were involved in the collection, editing, data-processing and analysis of the data.

All hospitals in the area allow access to their data. The GCCS exchanges information with individual hospital cancer registries to their mutual benefit. Time has proved that the GCCS maintains the confidentiality it pledges, and favorable working relationships have been established with area hospitals and physicians.

### Use of the data

A number of population-based descriptive and analytical epidemiological investigations have been conducted through the GCCS. Several investigations have focused on factors which may relate to the observed high incidence and low survival rates for cancer among blacks. These studies have included cancers of the prostate, pancreas, oesophagus, breast, ovary and colorectum, and multiple myeloma. The GCCS also has been involved in collaborative case-control studies involving multiple SEER Registries. Among these have been studies of passive exposure to

cigarette smoke, lung cancer in non-smoking women, breast cancer in young women, and exposure to Agent Orange among Viet Nam war veterans.



### Source of population

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

### Notes on the data

† C44 does not include basal cell or squamous cell carcinoma.

## USA, GEORGIA, ATLANTA: WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	27	0.2	0.7	<b>0.7</b>	0.03	0.08	6	0.0	0.2	<b>0.1</b>	0.00	0.02	C00
Tongue	114	0.7	3.0	<b>2.7</b>	0.18	0.32	61	0.4	1.6	<b>1.3</b>	0.08	0.16	C01-02
Mouth	107	0.7	2.8	<b>2.6</b>	0.15	0.30	95	0.6	2.5	<b>1.7</b>	0.09	0.22	C03-06
Salivary glands	42	0.3	1.1	<b>1.1</b>	0.06	0.12	39	0.3	1.0	<b>0.8</b>	0.04	0.07	C07-08
Tonsil	68	0.4	1.8	<b>1.7</b>	0.12	0.22	20	0.1	0.5	<b>0.4</b>	0.02	0.04	C09
Other oropharynx	24	0.1	0.6	<b>0.6</b>	0.03	0.09	11	0.1	0.3	<b>0.3</b>	0.02	0.03	C10
Nasopharynx	21	0.1	0.6	<b>0.6</b>	0.03	0.07	15	0.1	0.4	<b>0.3</b>	0.01	0.03	C11
Hypopharynx	47	0.3	1.2	<b>1.1</b>	0.06	0.15	15	0.1	0.4	<b>0.3</b>	0.01	0.03	C12-13
Pharynx unspecified	17	0.1	0.4	<b>0.4</b>	0.02	0.04	12	0.1	0.3	<b>0.2</b>	0.01	0.02	C14
Oesophagus	165	1.0	4.4	<b>4.2</b>	0.21	0.56	71	0.5	1.8	<b>1.2</b>	0.05	0.15	C15
Stomach	231	1.4	6.1	<b>5.5</b>	0.26	0.65	124	0.8	3.2	<b>2.0</b>	0.09	0.22	C16
Small intestine	55	0.3	1.5	<b>1.3</b>	0.07	0.15	45	0.3	1.2	<b>0.8</b>	0.04	0.10	C17
Colon	1056	6.5	27.8	<b>25.7</b>	1.06	3.15	1165	7.6	30.3	<b>18.9</b>	0.78	2.17	C18
Rectum	436	2.7	11.5	<b>10.6</b>	0.58	1.28	413	2.7	10.7	<b>7.6</b>	0.42	0.96	C19-20
Anus	44	0.3	1.2	<b>1.0</b>	0.08	0.12	58	0.4	1.5	<b>1.1</b>	0.07	0.14	C21
Liver	151	0.9	4.0	<b>3.6</b>	0.16	0.43	82	0.5	2.1	<b>1.3</b>	0.05	0.13	C22
Gallbladder etc.	50	0.3	1.3	<b>1.2</b>	0.05	0.13	85	0.6	2.2	<b>1.4</b>	0.06	0.17	C23-24
Pancreas	271	1.7	7.1	<b>6.5</b>	0.28	0.80	280	1.8	7.3	<b>4.6</b>	0.16	0.54	C25
Nose, sinuses etc.	27	0.2	0.7	<b>0.6</b>	0.03	0.05	13	0.1	0.3	<b>0.2</b>	0.01	0.03	C30-31
Larynx	264	1.6	7.0	<b>6.5</b>	0.34	0.86	59	0.4	1.5	<b>1.2</b>	0.06	0.18	C32
Trachea, bronchus and lung	2578	15.8	68.0	<b>64.2</b>	2.90	8.51	1984	12.9	51.5	<b>37.8</b>	1.98	5.09	C33-34
Other thoracic organs	13	0.1	0.3	<b>0.3</b>	0.02	0.04	9	0.1	0.2	<b>0.2</b>	0.01	0.02	C37-38
Bone	29	0.2	0.8	<b>0.9</b>	0.06	0.07	29	0.2	0.8	<b>0.8</b>	0.05	0.07	C40-41
Melanoma of skin	956	5.9	25.2	<b>21.8</b>	1.44	2.46	748	4.9	19.4	<b>15.0</b>	1.10	1.48	C43
†Other skin	38		1.0	<b>0.9</b>	0.05	0.08	38		1.0	<b>0.7</b>	0.04	0.06	C44
Mesothelioma	37	0.2	1.0	<b>0.9</b>	0.05	0.11	13	0.1	0.3	<b>0.2</b>	0.01	0.03	C45
Kaposi sarcoma	346	2.1	9.1	<b>6.2</b>	0.50	0.50	5	0.0	0.1	<b>0.1</b>	0.01	0.01	C46
Connective and soft tissue	136	0.8	3.6	<b>3.5</b>	0.20	0.34	84	0.5	2.2	<b>1.7</b>	0.09	0.18	C47+C49
Breast	26	0.2	0.7	<b>0.7</b>	0.05	0.08	5009	32.5	130.1	<b>97.6</b>	6.86	11.33	C50
Vulva							94	0.6	2.4	<b>1.6</b>	0.09	0.16	C51
Vagina							23	0.1	0.6	<b>0.4</b>	0.02	0.05	C52
Cervix uteri							386	2.5	10.0	<b>7.6</b>	0.60	0.75	C53
Corpus uteri							820	5.3	21.3	<b>16.3</b>	1.12	2.02	C54
Uterus unspecified							14	0.1	0.4	<b>0.3</b>	0.02	0.03	C55
Ovary							672	4.4	17.5	<b>13.2</b>	0.87	1.57	C56
Other female genital organs							28	0.2	0.7	<b>0.4</b>	0.02	0.05	C57
Placenta							3	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	15	0.1	0.4	<b>0.4</b>	0.01	0.04							C60
Prostate	4979	30.5	131.3	<b>127.3</b>	5.74	17.85							C61
Testis	227	1.4	6.0	<b>4.6</b>	0.34	0.35							C62
Other male genital organs	5	0.0	0.1	<b>0.1</b>	0.01	0.01							C63
Kidney	382	2.3	10.1	<b>9.4</b>	0.51	1.16	206	1.3	5.3	<b>4.4</b>	0.24	0.53	C64
Renal pelvis	33	0.2	0.9	<b>0.8</b>	0.03	0.10	34	0.2	0.9	<b>0.5</b>	0.02	0.05	C65
Ureter	28	0.2	0.7	<b>0.7</b>	0.03	0.09	23	0.1	0.6	<b>0.4</b>	0.01	0.04	C66
Bladder	956	5.9	25.2	<b>23.3</b>	0.97	2.83	372	2.4	9.7	<b>6.3</b>	0.26	0.77	C67
Other urinary organs	9	0.1	0.2	<b>0.2</b>	0.01	0.02	6	0.0	0.2	<b>0.1</b>	0.01	0.01	C68
Eye	23	0.1	0.6	<b>0.7</b>	0.04	0.07	31	0.2	0.8	<b>0.7</b>	0.05	0.08	C69
Brain, nervous system	273	1.7	7.2	<b>6.8</b>	0.42	0.69	246	1.6	6.4	<b>5.3</b>	0.32	0.55	C70-72
Thyroid	148	0.9	3.9	<b>3.3</b>	0.25	0.36	384	2.5	10.0	<b>8.1</b>	0.64	0.77	C73
Adrenal gland	13	0.1	0.3	<b>0.4</b>	0.02	0.03	11	0.1	0.3	<b>0.3</b>	0.02	0.02	C74
Other endocrine	3	0.0	0.1	<b>0.1</b>	0.01	0.01	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	146	0.9	3.9	<b>3.3</b>	0.23	0.29	110	0.7	2.9	<b>2.5</b>	0.17	0.20	C81
Non-Hodgkin lymphoma	741	4.5	19.5	<b>16.9</b>	0.95	1.89	541	3.5	14.0	<b>9.7</b>	0.50	1.16	C82-85,C96
Immunoproliferative diseases	8	0.0	0.2	<b>0.2</b>	0.01	0.02	2	0.0	0.1	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	162	1.0	4.3	<b>4.0</b>	0.16	0.52	129	0.8	3.3	<b>2.3</b>	0.11	0.28	C90
Lymphoid leukaemia	167	1.0	4.4	<b>4.7</b>	0.22	0.44	126	0.8	3.3	<b>2.6</b>	0.12	0.24	C91
Myeloid leukaemia	212	1.3	5.6	<b>5.2</b>	0.26	0.57	158	1.0	4.1	<b>3.1</b>	0.16	0.34	C92-94
Leukaemia unspecified	15	0.1	0.4	<b>0.3</b>	0.01	0.04	29	0.2	0.8	<b>0.4</b>	0.01	0.03	C95
Other and unspecified	419	2.6	11.0	<b>10.2</b>	0.46	1.20	419	2.7	10.9	<b>7.1</b>	0.37	0.82	O&U
All sites	16340		430.9	<b>400.5</b>	19.77	50.37	15456		401.4	<b>293.6</b>	17.96	34.20	ALL
All sites but C44	16302	100.0	429.9	<b>399.7</b>	19.72	50.28	15418	100.0	400.4	<b>292.9</b>	17.92	34.14	ALLbC44

†See note following population pyramid



## USA, GEORGIA, ATLANTA: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	2	0.0	0.1	<b>0.1</b>	0.00	0.00	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	39	0.7	2.0	<b>2.9</b>	0.23	0.37	14	0.3	0.6	<b>0.8</b>	0.07	0.09	C01-02
Mouth	62	1.1	3.1	<b>4.4</b>	0.36	0.48	29	0.6	1.3	<b>1.5</b>	0.12	0.18	C03-06
Salivary glands	10	0.2	0.5	<b>0.7</b>	0.03	0.05	14	0.3	0.6	<b>0.6</b>	0.04	0.06	C07-08
Tonsil	32	0.6	1.6	<b>2.2</b>	0.20	0.24	9	0.2	0.4	<b>0.4</b>	0.03	0.05	C09
Other oropharynx	14	0.2	0.7	<b>1.0</b>	0.08	0.12	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	9	0.2	0.5	<b>0.5</b>	0.04	0.04	4	0.1	0.2	<b>0.2</b>	0.01	0.04	C11
Hypopharynx	33	0.6	1.7	<b>2.4</b>	0.16	0.31	8	0.2	0.4	<b>0.5</b>	0.06	0.07	C12-13
Pharynx unspecified	7	0.1	0.4	<b>0.5</b>	0.03	0.07	4	0.1	0.2	<b>0.2</b>	0.01	0.03	C14
Oesophagus	151	2.7	7.6	<b>11.9</b>	0.83	1.63	54	1.0	2.4	<b>3.2</b>	0.17	0.45	C15
Stomach	156	2.7	7.8	<b>12.4</b>	0.54	1.47	88	1.7	3.9	<b>4.2</b>	0.17	0.54	C16
Small intestine	24	0.4	1.2	<b>1.6</b>	0.09	0.20	31	0.6	1.4	<b>1.4</b>	0.11	0.14	C17
Colon	356	6.3	17.8	<b>28.8</b>	1.32	3.45	503	9.7	22.2	<b>25.1</b>	1.23	3.00	C18
Rectum	126	2.2	6.3	<b>9.4</b>	0.53	1.13	141	2.7	6.2	<b>7.0</b>	0.39	0.83	C19-20
Anus	23	0.4	1.2	<b>1.2</b>	0.09	0.14	11	0.2	0.5	<b>0.6</b>	0.05	0.08	C21
Liver	59	1.0	3.0	<b>4.2</b>	0.31	0.47	45	0.9	2.0	<b>2.3</b>	0.10	0.25	C22
Gallbladder etc.	13	0.2	0.7	<b>1.0</b>	0.05	0.15	34	0.7	1.5	<b>1.8</b>	0.11	0.19	C23-24
Pancreas	126	2.2	6.3	<b>9.9</b>	0.58	1.11	143	2.8	6.3	<b>7.4</b>	0.31	0.93	C25
Nose, sinuses etc.	8	0.1	0.4	<b>0.6</b>	0.06	0.06	7	0.1	0.3	<b>0.4</b>	0.03	0.03	C30-31
Larynx	113	2.0	5.7	<b>8.8</b>	0.56	1.20	21	0.4	0.9	<b>1.3</b>	0.08	0.16	C32
Trachea, bronchus and lung	954	16.8	47.8	<b>79.2</b>	4.35	10.44	498	9.7	22.0	<b>27.2</b>	1.66	3.57	C33-34
Other thoracic organs	6	0.1	0.3	<b>0.4</b>	0.01	0.05	6	0.1	0.3	<b>0.3</b>	0.02	0.03	C37-38
Bone	15	0.3	0.8	<b>0.8</b>	0.04	0.07	13	0.3	0.6	<b>0.6</b>	0.04	0.05	C40-41
Melanoma of skin	20	0.4	1.0	<b>1.6</b>	0.08	0.18	13	0.3	0.6	<b>0.5</b>	0.03	0.04	C43
†Other skin	20		1.0	<b>1.0</b>	0.07	0.09	22		1.0	<b>0.9</b>	0.06	0.07	C44
Mesothelioma	5	0.1	0.3	<b>0.4</b>	0.04	0.06	3	0.1	0.1	<b>0.2</b>	0.01	0.02	C45
Kaposi sarcoma	171	3.0	8.6	<b>6.4</b>	0.51	0.54	7	0.1	0.3	<b>0.2</b>	0.01	0.01	C46
Connective and soft tissue	53	0.9	2.7	<b>3.2</b>	0.18	0.37	44	0.9	1.9	<b>2.1</b>	0.14	0.22	C47+C49
Breast	9	0.2	0.5	<b>0.5</b>	0.05	0.05	1770	34.3	78.1	<b>84.0</b>	5.95	9.54	C50
Vulva							27	0.5	1.2	<b>1.2</b>	0.06	0.13	C51
Vagina							16	0.3	0.7	<b>0.9</b>	0.06	0.10	C52
Cervix uteri							226	4.4	10.0	<b>9.6</b>	0.69	1.01	C53
Corpus uteri							214	4.1	9.4	<b>11.5</b>	0.65	1.53	C54
Uterus unspecified							20	0.4	0.9	<b>1.0</b>	0.04	0.12	C55
Ovary							162	3.1	7.1	<b>7.6</b>	0.50	0.89	C56
Other female genital organs							6	0.1	0.3	<b>0.4</b>	0.03	0.04	C57
Placenta							4	0.1	0.2	<b>0.2</b>	0.01	0.01	C58
Penis	8	0.1	0.4	<b>0.7</b>	0.05	0.10							C60
Prostate	2039	35.9	102.2	<b>181.5</b>	8.77	24.26							C61
Testis	27	0.5	1.4	<b>1.2</b>	0.08	0.10							C62
Other male genital organs	2	0.0	0.1	<b>0.2</b>	0.01	0.01							C63
Kidney	140	2.5	7.0	<b>10.1</b>	0.69	1.22	102	2.0	4.5	<b>5.1</b>	0.30	0.52	C64
Renal pelvis	9	0.2	0.5	<b>0.7</b>	0.03	0.08	5	0.1	0.2	<b>0.3</b>	0.02	0.04	C65
Ureter	1	0.0	0.1	<b>0.1</b>	0.00	0.02	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	126	2.2	6.3	<b>9.9</b>	0.38	1.07	73	1.4	3.2	<b>3.8</b>	0.13	0.50	C67
Other urinary organs	2	0.0	0.1	<b>0.1</b>	0.01	0.01	3	0.1	0.1	<b>0.2</b>	0.00	0.02	C68
Eye	2	0.0	0.1	<b>0.2</b>	0.00	0.03	4	0.1	0.2	<b>0.2</b>	0.02	0.02	C69
Brain, nervous system	46	0.8	2.3	<b>2.8</b>	0.17	0.25	60	1.2	2.6	<b>2.8</b>	0.20	0.27	C70-72
Thyroid	14	0.2	0.7	<b>0.8</b>	0.05	0.10	97	1.9	4.3	<b>3.9</b>	0.26	0.40	C73
Adrenal gland	1	0.0	0.1	<b>0.1</b>	0.01	0.01	7	0.1	0.3	<b>0.3</b>	0.03	0.03	C74
Other endocrine	1	0.0	0.1	<b>0.1</b>	0.00	0.00	2	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	53	0.9	2.7	<b>2.6</b>	0.22	0.23	35	0.7	1.5	<b>1.3</b>	0.09	0.10	C81
Non-Hodgkin lymphoma	226	4.0	11.3	<b>12.9</b>	0.88	1.31	158	3.1	7.0	<b>7.4</b>	0.46	0.81	C82-85,C96
Immunoproliferative diseases	2	0.0	0.1	<b>0.2</b>	0.02	0.02	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	101	1.8	5.1	<b>8.0</b>	0.37	0.91	105	2.0	4.6	<b>5.6</b>	0.33	0.70	C90
Lymphoid leukaemia	51	0.9	2.6	<b>3.4</b>	0.15	0.33	29	0.6	1.3	<b>1.4</b>	0.06	0.11	C91
Myeloid leukaemia	60	1.1	3.0	<b>3.7</b>	0.19	0.40	50	1.0	2.2	<b>2.2</b>	0.09	0.26	C92-94
Leukaemia unspecified	5	0.1	0.3	<b>0.4</b>	0.00	0.00	8	0.2	0.4	<b>0.3</b>	0.00	0.02	C95
Other and unspecified	169	3.0	8.5	<b>12.7</b>	0.71	1.45	228	4.4	10.1	<b>10.9</b>	0.51	1.20	O&U
All sites	5701		285.6	<b>450.6</b>	24.23	56.47	5181		228.6	<b>253.2</b>	15.61	29.49	ALL
All sites but C44	5681	100.0	284.6	<b>449.6</b>	24.16	56.38	5159	100.0	227.7	<b>252.4</b>	15.55	29.42	ALLbC44

†See note following population pyramid



# USA, Iowa

### Registration area

The state of Iowa is located near the geographical middle of the USA and is part of the American agricultural heartland. Iowa is bordered on the north by Minnesota, the south by Missouri, the east by Illinois, and the west by Nebraska. The state lies between 40° N and 43° N, and 90° W and 96° W. The total area is about 145 800 km<sup>2</sup> with elevation ranging between 146 and 505 m above sea level. Iowa's climate is classified as humid continental with an average annual temperature of 9.5° C and average annual precipitation of approximately 80 cm.

Ninety-two per cent of the land area in the state is devoted to agriculture, ranking the highest among the 50 US states. In the 1997 Census of Agriculture, Iowa had 90 792 farms. Iowa typically leads all states of the USA in annual production of corn, soybeans and pork. Food processing and farm equipment manufacturing are two industrial components of the Iowa economy.

Iowa had a 2000 population of 2 926 324, a 5.4% increase over its 1990 population. The principal ethnic group is northern European, with Germans, Danes and Swedes accounting for a large segment of the population. Over 80% of Iowa residents are native-born. The 2000 population is 93.9% white with 2.1% blacks, 1.3% Asian/Pacific Islander, 0.3% American Indian/Alaskan native, and 2.4% other or more than one race. The population is primarily Christian, the most prevalent religions being Roman Catholic, Lutheran and Methodist.

### Registry structure and methods

Cancer data collection for the entire state of Iowa began in 1969 with the Third National Cancer Survey sponsored by the National Cancer Institute (NCI). With the completion of the survey in 1971, no further funding for cancer registration was available and 1972 data are incomplete. In 1973, the State Health Registry of Iowa, frequently referred to as the Iowa Cancer Registry, became part of the NCI Surveillance, Epidemiology and End Results (SEER) Program.

Cancer became a reportable disease in 1982. The Iowa Department of Public Health has designated responsibility for cancer data collection to the registry. Cancer data for Iowa residents are obtained from 180 hospitals, clinics, and private pathology laboratories located both within the state and bordering the state. Cancer data are exchanged with other states.

Data are collected by Hospital Cancer Registrars and by 20 field staff, employed by the registry to cover specified geographical areas. The field personnel visit hospitals and other facilities in their areas and abstract data using laptop computers. The data are extensively edited before submission to the SEER Programme.

The registry uses active and passive follow-up to obtain survival data. Passive follow-up activities include computerized linkage of data with death certificate information, drivers' license files from the

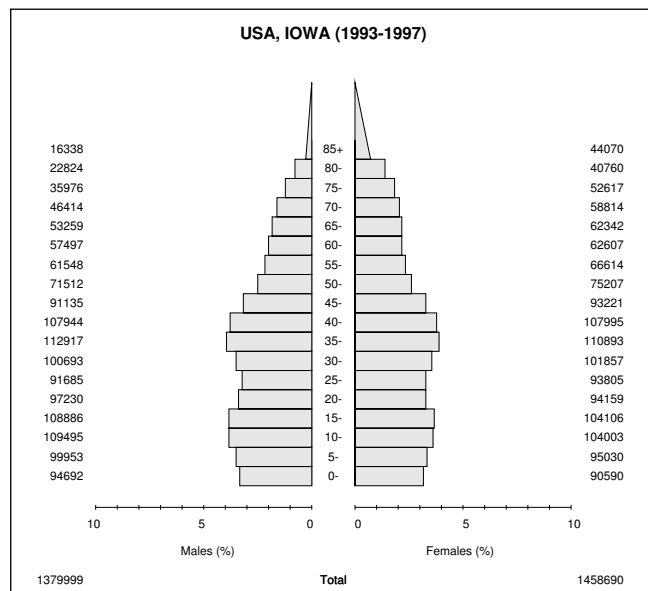
Iowa Department of Transportation, and Medicare information provided by the Centers for Medicare & Medicaid Services. Active patient follow-up is conducted annually. Quality control activities involve a significant portion of the registry's operation.

### Interpreting the results

Although some Iowans who leave the state for care are not identified and missed, ascertainment is thought to be about 99%. The Iowa Registry continually leads the other SEER areas in follow-up percentages with over 98% of all patients being successfully followed into the current year.

### Use of the data

The registry functions as a collaborative programme with the Iowa Department of Public Health. Many University of Iowa researchers have used registry data. Registry data have also been extensively used in a number of local, national and international epidemiological studies.



### Source of population

Annual census projection based on the 2000 census, prepared by the US Bureau of the Census.

### Notes on the data

† C44 does not include basal cell or squamous cell carcinoma.

## USA, IOWA (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	376	1.0	5.4	<b>3.5</b>	0.16	0.42	64	0.2	0.9	<b>0.4</b>	0.02	0.04	C00
Tongue	177	0.5	2.6	<b>2.0</b>	0.13	0.25	118	0.3	1.6	<b>1.0</b>	0.07	0.11	C01-02
Mouth	226	0.6	3.3	<b>2.4</b>	0.16	0.30	162	0.5	2.2	<b>1.2</b>	0.06	0.15	C03-06
Salivary glands	108	0.3	1.6	<b>1.1</b>	0.06	0.12	74	0.2	1.0	<b>0.6</b>	0.04	0.05	C07-08
Tonsil	109	0.3	1.6	<b>1.3</b>	0.10	0.15	35	0.1	0.5	<b>0.3</b>	0.02	0.04	C09
Other oropharynx	17	0.0	0.2	<b>0.2</b>	0.01	0.02	7	0.0	0.1	<b>0.1</b>	0.00	0.01	C10
Nasopharynx	41	0.1	0.6	<b>0.5</b>	0.04	0.05	16	0.0	0.2	<b>0.1</b>	0.01	0.02	C11
Hypopharynx	83	0.2	1.2	<b>0.9</b>	0.06	0.12	25	0.1	0.3	<b>0.2</b>	0.01	0.03	C12-13
Pharynx unspecified	34	0.1	0.5	<b>0.4</b>	0.02	0.04	17	0.0	0.2	<b>0.1</b>	0.01	0.01	C14
Oesophagus	493	1.3	7.1	<b>4.9</b>	0.29	0.62	172	0.5	2.4	<b>1.1</b>	0.05	0.14	C15
Stomach	646	1.7	9.4	<b>6.0</b>	0.30	0.70	326	0.9	4.5	<b>2.1</b>	0.11	0.22	C16
Small intestine	122	0.3	1.8	<b>1.2</b>	0.08	0.15	123	0.4	1.7	<b>0.9</b>	0.05	0.10	C17
Colon	3250	8.6	47.1	<b>28.5</b>	1.21	3.44	3902	11.3	53.5	<b>22.8</b>	0.99	2.61	C18
Rectum	1446	3.8	21.0	<b>13.7</b>	0.70	1.70	1105	3.2	15.2	<b>7.7</b>	0.43	0.90	C19-20
Anus	52	0.1	0.8	<b>0.5</b>	0.03	0.06	95	0.3	1.3	<b>0.7</b>	0.04	0.09	C21
Liver	304	0.8	4.4	<b>2.8</b>	0.14	0.32	196	0.6	2.7	<b>1.2</b>	0.06	0.13	C22
Gallbladder etc.	168	0.4	2.4	<b>1.5</b>	0.07	0.15	297	0.9	4.1	<b>1.8</b>	0.08	0.22	C23-24
Pancreas	800	2.1	11.6	<b>7.3</b>	0.34	0.88	884	2.6	12.1	<b>5.2</b>	0.21	0.61	C25
Nose, sinuses etc.	60	0.2	0.9	<b>0.6</b>	0.04	0.07	30	0.1	0.4	<b>0.2</b>	0.01	0.02	C30-31
Larynx	554	1.5	8.0	<b>5.8</b>	0.35	0.76	149	0.4	2.0	<b>1.4</b>	0.10	0.17	C32
Trachea, bronchus and lung	6613	17.6	95.8	<b>61.8</b>	2.99	7.94	3992	11.5	54.7	<b>31.0</b>	1.78	4.06	C33-34
Other thoracic organs	27	0.1	0.4	<b>0.3</b>	0.02	0.03	10	0.0	0.1	<b>0.1</b>	0.01	0.02	C37-38
Bone	91	0.2	1.3	<b>1.2</b>	0.07	0.10	66	0.2	0.9	<b>0.8</b>	0.05	0.06	C40-41
Melanoma of skin	1039	2.8	15.1	<b>11.3</b>	0.78	1.23	926	2.7	12.7	<b>9.3</b>	0.66	0.91	C43
†Other skin	92		1.3	<b>0.9</b>	0.05	0.10	66		0.9	<b>0.6</b>	0.04	0.06	C44
Mesothelioma	95	0.3	1.4	<b>0.9</b>	0.04	0.12	25	0.1	0.3	<b>0.2</b>	0.01	0.02	C45
Kaposi sarcoma	38	0.1	0.6	<b>0.4</b>	0.04	0.04	4	0.0	0.1	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	244	0.6	3.5	<b>2.6</b>	0.16	0.24	233	0.7	3.2	<b>2.1</b>	0.13	0.20	C47+C49
Breast	51	0.1	0.7	<b>0.5</b>	0.03	0.05	9856	28.4	135.1	<b>84.0</b>	5.77	9.70	C50
Vulva							241	0.7	3.3	<b>1.6</b>	0.10	0.17	C51
Vagina							58	0.2	0.8	<b>0.4</b>	0.02	0.04	C52
Cervix uteri							654	1.9	9.0	<b>7.0</b>	0.54	0.66	C53
Corpus uteri							2242	6.5	30.7	<b>19.2</b>	1.32	2.39	C54
Uterus unspecified							41	0.1	0.6	<b>0.3</b>	0.02	0.03	C55
Ovary							1464	4.2	20.1	<b>13.0</b>	0.91	1.45	C56
Other female genital organs							50	0.1	0.7	<b>0.4</b>	0.02	0.04	C57
Placenta							4	0.0	0.1	<b>0.1</b>	0.00	0.00	C58
Penis	45	0.1	0.7	<b>0.5</b>	0.04	0.05							C60
Prostate	11072	29.4	160.5	<b>101.5</b>	4.10	13.81							C61
Testis	359	1.0	5.2	<b>4.9</b>	0.36	0.38							C62
Other male genital organs	19	0.1	0.3	<b>0.2</b>	0.01	0.02							C63
Kidney	1001	2.7	14.5	<b>10.4</b>	0.65	1.21	689	2.0	9.4	<b>5.5</b>	0.32	0.65	C64
Renal pelvis	67	0.2	1.0	<b>0.6</b>	0.02	0.07	50	0.1	0.7	<b>0.3</b>	0.01	0.04	C65
Ureter	52	0.1	0.8	<b>0.4</b>	0.01	0.05	33	0.1	0.5	<b>0.2</b>	0.00	0.02	C66
Bladder	2505	6.7	36.3	<b>22.2</b>	0.91	2.70	786	2.3	10.8	<b>5.0</b>	0.24	0.58	C67
Other urinary organs	34	0.1	0.5	<b>0.3</b>	0.01	0.03	14	0.0	0.2	<b>0.1</b>	0.00	0.01	C68
Eye	93	0.2	1.3	<b>1.1</b>	0.06	0.10	69	0.2	0.9	<b>0.8</b>	0.04	0.07	C69
Brain, nervous system	570	1.5	8.3	<b>7.0</b>	0.45	0.67	468	1.4	6.4	<b>4.9</b>	0.30	0.50	C70-72
Thyroid	231	0.6	3.3	<b>2.7</b>	0.21	0.29	671	1.9	9.2	<b>7.8</b>	0.59	0.71	C73
Adrenal gland	28	0.1	0.4	<b>0.4</b>	0.02	0.04	26	0.1	0.4	<b>0.4</b>	0.03	0.03	C74
Other endocrine	9	0.0	0.1	<b>0.2</b>	0.01	0.01	4	0.0	0.1	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	207	0.6	3.0	<b>2.8</b>	0.19	0.22	214	0.6	2.9	<b>2.7</b>	0.18	0.21	C81
Non-Hodgkin lymphoma	1486	3.9	21.5	<b>14.7</b>	0.83	1.63	1476	4.3	20.2	<b>11.1</b>	0.63	1.29	C82-85,C96
Immunoproliferative diseases	31	0.1	0.4	<b>0.2</b>	0.01	0.03	33	0.1	0.5	<b>0.2</b>	0.02	0.03	C88
Multiple myeloma	419	1.1	6.1	<b>3.8</b>	0.17	0.45	443	1.3	6.1	<b>2.8</b>	0.13	0.32	C90
Lymphoid leukaemia	683	1.8	9.9	<b>7.3</b>	0.38	0.75	476	1.4	6.5	<b>3.9</b>	0.20	0.37	C91
Myeloid leukaemia	519	1.4	7.5	<b>4.9</b>	0.23	0.53	438	1.3	6.0	<b>3.4</b>	0.19	0.35	C92-94
Leukaemia unspecified	78	0.2	1.1	<b>0.6</b>	0.02	0.05	64	0.2	0.9	<b>0.3</b>	0.01	0.03	C95
Other and unspecified	858	2.3	12.4	<b>7.7</b>	0.34	0.87	1032	3.0	14.1	<b>6.2</b>	0.28	0.69	O&U
All sites	37722		546.7	<b>359.2</b>	17.50	44.17	34715		476.0	<b>274.9</b>	16.93	31.39	ALL
All sites but C44	37630	100.0	545.4	<b>358.3</b>	17.45	44.07	34649	100.0	475.1	<b>274.3</b>	16.90	31.34	ALLbC44

†See note following population pyramid

# USA, Louisiana

## Registration area

The Louisiana Tumor Registry (LTR) was established in 1974 to provide population-based cancer registration in the three-county metropolitan area that comprised Greater New Orleans. The catchment area for the LTR was expanded in 1983 to include all of south Louisiana. Northern Louisiana was added to the coverage area in 1988, which resulted in statewide population-based cancer registration for Louisiana.

Louisiana, 31st in land area among the 50 US states (somewhat larger than the state of New York), is part of the US 'deep south'. With the Gulf of Mexico serving as its southern border, Louisiana lies roughly between parallels 28° and 33° N and 88° and 94° W.

The average population size of Louisiana for the years 1993–97 was about 4.3 million (an increase of about 2.5% from 1990). Approximately 32% of the people of Louisiana are of African-American descent, 66% are white, and less than 2% are of other races and ethnic groups. About 68% of the population in Louisiana is considered of urban nature. In the rural-to-urban population movement, there has been a clear regional shift. Four of the six major urban centres lie in southern Louisiana.

## Registry structure and methods

The Louisiana Tumor Registry is composed of a central office and eight regional offices. Each regional registry abstracts, compiles, stores, and edits data on cancer cases diagnosed in its counties. The central registry consolidates, processes and edits data from the regional registries, monitors completeness of case ascertainment, provides quality assurance services, and analyses and interprets the statistical information derived from the data.

The LSU Health Sciences Center operates the LTR central office as well as three regional offices. Local academic and medical organizations with cancer research and treatment interests coordinate the data collection activities in the five remaining regional registries.

Each regional office is responsible for the complete ascertainment of all data on cancer diagnoses and treatments provided in its region on residents of the state of Louisiana within six months of diagnosis. Every health care provider is required by law to report this information and the regional offices work with each provider to ensure full coverage. About one quarter of all hospitals in Louisiana maintain their own cancer registries and report about 60% of the state's total number of incident cases. Abstractors from the LTR's eight regional offices record cases from the remaining reporting sources.

Interstate exchange of data began in 1997. This permits the LTR to obtain cancer incidence data from participating states on Louisiana state residents who have travelled out of Louisiana for

cancer diagnosis and/or treatment. This ensures a higher level of case ascertainment and completeness. Strict protocols on patient confidentiality are followed.

Mandatory screening of records for cancer cases in medical facilities where cancer is diagnosed or treated has been an integral part of the success of the LTR. These sources include hospitals, private pathology laboratories, free-standing radiation centres, dermatology clinics, one-day surgery facilities and all other health care providers, including physicians' offices for patients who do not receive cancer-related services elsewhere. The death certificate files are also consulted.

The majority of cancer cases are identified in hospitals by screening many types of records, such as pathology reports including tissue (histology), cytology, haematology, bone marrow, and autopsy findings, disease indices, outpatient records, radiation therapy logs, radiology logs (including scans) and oncology services.

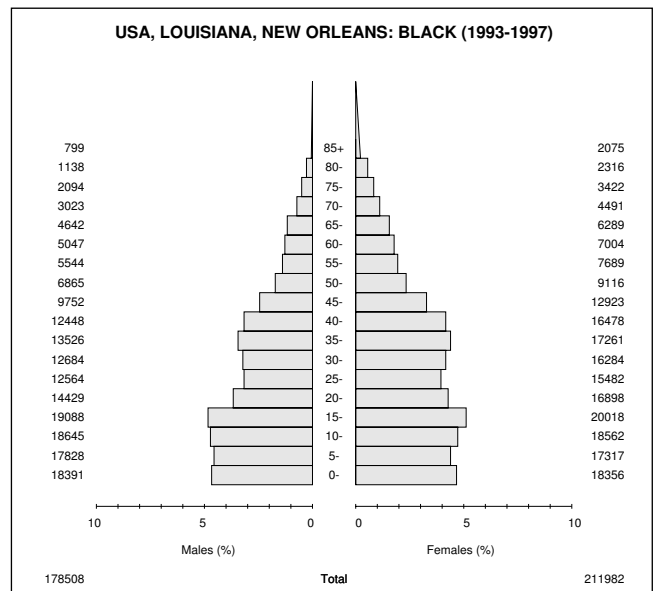
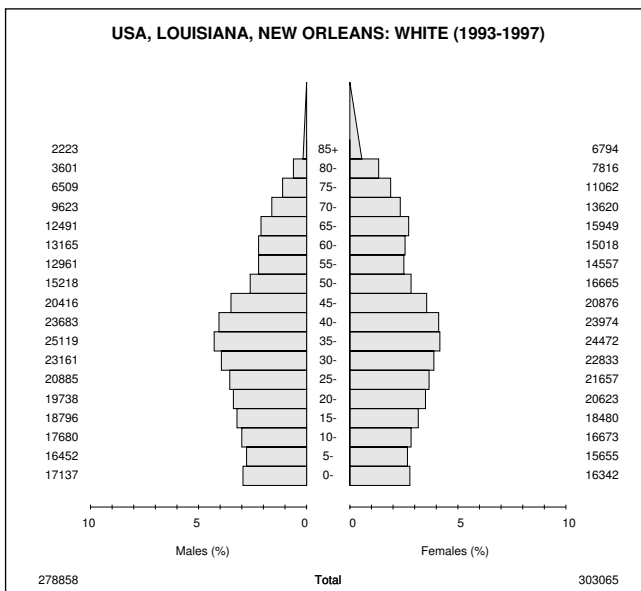
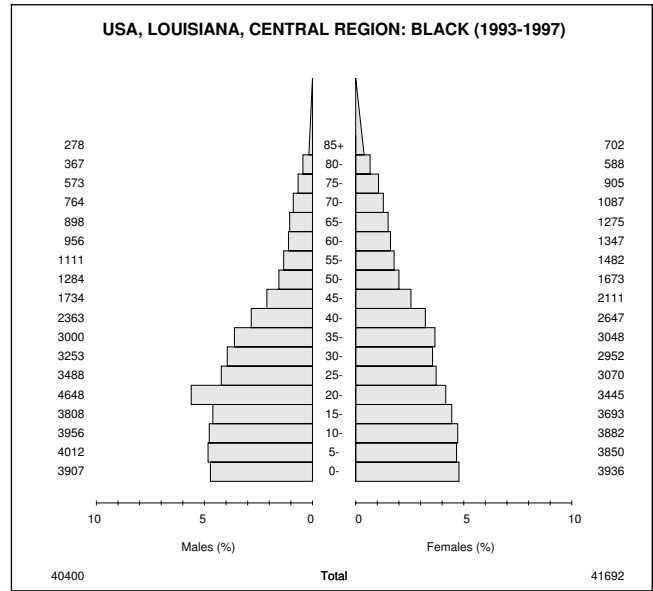
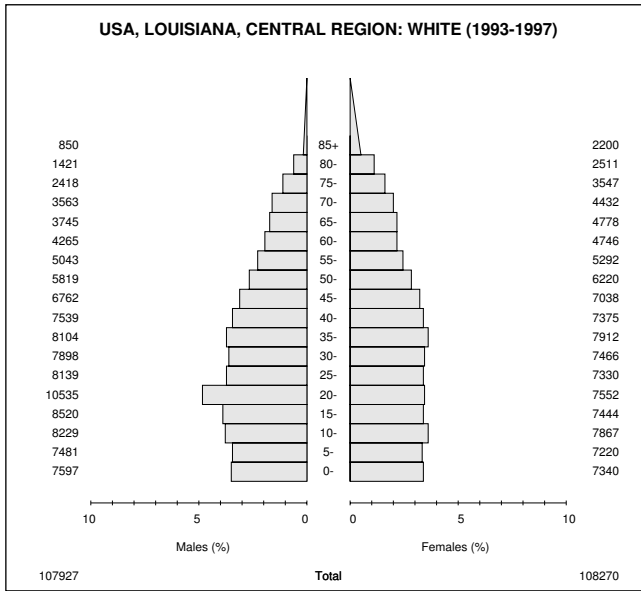
Demographic data on patients and detailed information on each primary tumour, including site, histology, staging information, and diagnostic procedures, are collected on each cancer case. The first course of cancer-directed treatment received during the four months following diagnosis is also recorded.

Stage of disease, diagnostic confirmation and other variables are coded following the conventions set by NAACCR, the SEER Program and the American College of Surgeons (ACoS). In defining multiple primaries, the registry follows the SEER rules. The LTR requires that all *in situ* and invasive neoplasms (those with behaviour codes 2 or 3 as classified in the ICD-O-2) be reported. Two exceptions are carcinoma *in situ* of the cervix, which has not been reported since 1992, and basal cell and squamous cell carcinomas of the skin.

## Use of the data

The LTR conducts cancer research studies, often in collaboration with other researchers and institutions, which include studies of risk factors, patterns of care and racial disparities. The LTR data have provided the foundation for studies evaluating the efficacy of clinical therapies, changes in diagnostic procedures, public awareness campaigns and other cancer control initiatives.

The *Cancer in Louisiana* series is the LTR's principal document for reporting cancer statistics. The LTR cancer incidence data is also published yearly in the April issue of the *Journal of the Louisiana State Medical Society*.



**Source of population**

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

**Notes on the data**

† C44 does not include basal cell or squamous cell carcinoma.

## USA, LOUISIANA, CENTRAL REGION: WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	9	0.4	1.7	<b>1.0</b>	0.02	0.13	3	0.1	0.6	<b>0.2</b>	0.00	0.00	C00
Tongue	14	0.6	2.6	<b>2.1</b>	0.17	0.23	3	0.1	0.6	<b>0.5</b>	0.05	0.05	C01-02
Mouth	18	0.7	3.3	<b>2.4</b>	0.14	0.28	15	0.7	2.8	<b>1.4</b>	0.07	0.19	C03-06
Salivary glands	8	0.3	1.5	<b>1.2</b>	0.05	0.16	6	0.3	1.1	<b>0.7</b>	0.05	0.07	C07-08
Tonsil	8	0.3	1.5	<b>1.4</b>	0.10	0.15	1	0.0	0.2	<b>0.1</b>	0.00	0.00	C09
Other oropharynx	3	0.1	0.6	<b>0.5</b>	0.04	0.07	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	6	0.2	1.1	<b>0.9</b>	0.05	0.08	4	0.2	0.7	<b>0.5</b>	0.06	0.06	C11
Hypopharynx	10	0.4	1.9	<b>1.6</b>	0.13	0.21	1	0.0	0.2	<b>0.2</b>	0.02	0.02	C12-13
Pharynx unspecified	3	0.1	0.6	<b>0.4</b>	0.02	0.05	1	0.0	0.2	<b>0.1</b>	0.00	0.02	C14
Oesophagus	31	1.2	5.7	<b>4.5</b>	0.28	0.52	12	0.5	2.2	<b>1.2</b>	0.04	0.17	C15
Stomach	42	1.7	7.8	<b>5.9</b>	0.34	0.64	29	1.3	5.4	<b>2.4</b>	0.11	0.24	C16
Small intestine	13	0.5	2.4	<b>1.6</b>	0.08	0.19	5	0.2	0.9	<b>0.7</b>	0.05	0.09	C17
Colon	214	8.4	39.7	<b>27.2</b>	1.31	3.18	207	9.3	38.2	<b>20.7</b>	1.04	2.56	C18
Rectum	104	4.1	19.3	<b>14.4</b>	0.90	1.89	81	3.7	15.0	<b>8.7</b>	0.47	1.12	C19-20
Anus	8	0.3	1.5	<b>1.1</b>	0.05	0.16	7	0.3	1.3	<b>0.8</b>	0.06	0.08	C21
Liver	26	1.0	4.8	<b>3.9</b>	0.28	0.46	17	0.8	3.1	<b>1.3</b>	0.04	0.10	C22
Gallbladder etc.	13	0.5	2.4	<b>1.5</b>	0.02	0.22	19	0.9	3.5	<b>1.7</b>	0.04	0.24	C23-24
Pancreas	68	2.7	12.6	<b>8.7</b>	0.42	1.08	69	3.1	12.7	<b>6.2</b>	0.33	0.74	C25
Nose, sinuses etc.	4	0.2	0.7	<b>0.6</b>	0.03	0.06	5	0.2	0.9	<b>0.7</b>	0.05	0.10	C30-31
Larynx	39	1.5	7.2	<b>5.4</b>	0.35	0.60	22	1.0	4.1	<b>2.7</b>	0.17	0.34	C32
Trachea, bronchus and lung	589	23.2	109.1	<b>79.4</b>	4.00	10.16	342	15.4	63.2	<b>37.7</b>	2.12	5.01	C33-34
Other thoracic organs	1	0.0	0.2	<b>0.2</b>	0.02	0.02	1	0.0	0.2	<b>0.1</b>	0.00	0.02	C37-38
Bone	8	0.3	1.5	<b>1.1</b>	0.08	0.11	7	0.3	1.3	<b>1.0</b>	0.07	0.07	C40-41
Melanoma of skin	52	2.0	9.6	<b>7.2</b>	0.42	0.78	46	2.1	8.5	<b>5.9</b>	0.43	0.64	C43
†Other skin	5		0.9	<b>0.7</b>	0.01	0.06	5		0.9	<b>0.5</b>	0.01	0.06	C44
Mesothelioma	4	0.2	0.7	<b>0.5</b>	0.02	0.02	3	0.1	0.6	<b>0.2</b>	0.00	0.05	C45
Kaposi sarcoma	4	0.2	0.7	<b>0.5</b>	0.01	0.04	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	12	0.5	2.2	<b>1.6</b>	0.09	0.15	7	0.3	1.3	<b>1.2</b>	0.04	0.13	C47+C49
Breast	7	0.3	1.3	<b>1.1</b>	0.07	0.15	595	26.9	109.9	<b>68.8</b>	4.39	7.96	C50
Vulva							19	0.9	3.5	<b>2.0</b>	0.12	0.23	C51
Vagina							6	0.3	1.1	<b>0.5</b>	0.02	0.06	C52
Cervix uteri							52	2.3	9.6	<b>7.9</b>	0.62	0.73	C53
Corpus uteri							88	4.0	16.3	<b>10.2</b>	0.71	1.21	C54
Uterus unspecified							5	0.2	0.9	<b>0.6</b>	0.03	0.08	C55
Ovary							80	3.6	14.8	<b>9.9</b>	0.68	1.10	C56
Other female genital organs							2	0.1	0.4	<b>0.2</b>	0.00	0.02	C57
Placenta							1	0.0	0.2	<b>0.2</b>	0.01	0.01	C58
Penis	3	0.1	0.6	<b>0.5</b>	0.05	0.05							C60
Prostate	646	25.4	119.7	<b>81.6</b>	3.17	10.50							C61
Testis	22	0.9	4.1	<b>3.7</b>	0.30	0.30							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	71	2.8	13.2	<b>10.3</b>	0.65	1.17	52	2.3	9.6	<b>6.1</b>	0.36	0.77	C64
Renal pelvis	5	0.2	0.9	<b>0.4</b>	0.00	0.00	4	0.2	0.7	<b>0.3</b>	0.00	0.05	C65
Ureter	5	0.2	0.9	<b>0.5</b>	0.02	0.05	2	0.1	0.4	<b>0.2</b>	0.00	0.05	C66
Bladder	139	5.5	25.8	<b>17.9</b>	0.82	2.00	52	2.3	9.6	<b>5.2</b>	0.34	0.55	C67
Other urinary organs	2	0.1	0.4	<b>0.3</b>	0.01	0.04	1	0.0	0.2	<b>0.2</b>	0.02	0.02	C68
Eye	1	0.0	0.2	<b>0.2</b>	0.02	0.02	5	0.2	0.9	<b>0.7</b>	0.03	0.05	C69
Brain, nervous system	33	1.3	6.1	<b>4.9</b>	0.33	0.52	26	1.2	4.8	<b>3.9</b>	0.25	0.36	C70-72
Thyroid	10	0.4	1.9	<b>1.5</b>	0.09	0.15	32	1.4	5.9	<b>4.4</b>	0.34	0.38	C73
Adrenal gland	2	0.1	0.4	<b>0.6</b>	0.03	0.03	1	0.0	0.2	<b>0.1</b>	0.00	0.02	C74
Other endocrine	1	0.0	0.2	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	18	0.7	3.3	<b>3.1</b>	0.19	0.32	15	0.7	2.8	<b>2.6</b>	0.17	0.21	C81
Non-Hodgkin lymphoma	81	3.2	15.0	<b>11.6</b>	0.59	1.30	102	4.6	18.8	<b>11.1</b>	0.53	1.35	C82-85,C96
Immunoproliferative diseases	1	0.0	0.2	<b>0.2</b>	0.00	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	36	1.4	6.7	<b>4.9</b>	0.27	0.60	27	1.2	5.0	<b>2.1</b>	0.08	0.23	C90
Lymphoid leukaemia	29	1.1	5.4	<b>4.2</b>	0.23	0.42	20	0.9	3.7	<b>2.3</b>	0.09	0.11	C91
Myeloid leukaemia	34	1.3	6.3	<b>4.8</b>	0.24	0.46	31	1.4	5.7	<b>3.4</b>	0.17	0.32	C92-94
Leukaemia unspecified	2	0.1	0.4	<b>0.3</b>	0.04	0.04	7	0.3	1.3	<b>0.7</b>	0.02	0.11	C95
Other and unspecified	81	3.2	15.0	<b>10.7</b>	0.64	1.14	77	3.5	14.2	<b>8.3</b>	0.49	0.92	O&U
All sites	2545		471.6	<b>341.1</b>	17.23	40.99	2220		410.1	<b>249.1</b>	14.77	29.07	ALL
All sites but C44	2540	100.0	470.7	<b>340.4</b>	17.22	40.93	2215	100.0	409.2	<b>248.6</b>	14.76	29.01	ALLbC44

†See note following population pyramid

## USA, LOUISIANA, CENTRAL REGION: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	4	0.6	2.0	<b>3.1</b>	0.32	0.32	1	0.2	0.5	<b>0.2</b>	0.00	0.00	C01-02
Mouth	5	0.7	2.5	<b>3.5</b>	0.28	0.39	5	0.9	2.4	<b>1.4</b>	0.11	0.11	C03-06
Salivary glands	1	0.1	0.5	<b>0.5</b>	0.00	0.13	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C07-08
Tonsil	4	0.6	2.0	<b>2.5</b>	0.27	0.27	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	1	0.1	0.5	<b>0.4</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	3	0.6	1.4	<b>1.2</b>	0.03	0.11	C11
Hypopharynx	5	0.7	2.5	<b>3.4</b>	0.27	0.53	2	0.4	1.0	<b>1.0</b>	0.07	0.15	C12-13
Pharynx unspecified	3	0.4	1.5	<b>1.8</b>	0.17	0.17	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	26	3.8	12.9	<b>16.1</b>	1.23	2.12	7	1.3	3.4	<b>2.7</b>	0.14	0.40	C15
Stomach	20	2.9	9.9	<b>11.1</b>	0.55	1.54	19	3.5	9.1	<b>5.9</b>	0.25	0.68	C16
Small intestine	7	1.0	3.5	<b>3.7</b>	0.24	0.37	2	0.4	1.0	<b>0.5</b>	0.00	0.09	C17
Colon	62	9.1	30.7	<b>33.0</b>	1.72	4.09	59	10.8	28.3	<b>22.7</b>	1.42	2.78	C18
Rectum	11	1.6	5.4	<b>6.3</b>	0.32	0.83	20	3.7	9.6	<b>6.7</b>	0.35	0.58	C19-20
Anus	1	0.1	0.5	<b>0.8</b>	0.08	0.08	1	0.2	0.5	<b>0.2</b>	0.00	0.00	C21
Liver	4	0.6	2.0	<b>2.7</b>	0.14	0.38	3	0.6	1.4	<b>1.2</b>	0.07	0.15	C22
Gallbladder etc.	2	0.3	1.0	<b>0.9</b>	0.00	0.13	1	0.2	0.5	<b>0.5</b>	0.07	0.07	C23-24
Pancreas	23	3.4	11.4	<b>12.0</b>	0.77	1.14	20	3.7	9.6	<b>6.8</b>	0.27	0.95	C25
Nose, sinuses etc.	2	0.3	1.0	<b>1.2</b>	0.12	0.12	1	0.2	0.5	<b>0.5</b>	0.07	0.07	C30-31
Larynx	11	1.6	5.4	<b>7.3</b>	0.75	0.88	2	0.4	1.0	<b>0.7</b>	0.00	0.08	C32
Trachea, bronchus and lung	150	22.1	74.3	<b>92.0</b>	5.98	11.94	70	12.9	33.6	<b>28.5</b>	1.83	3.33	C33-34
Other thoracic organs	1	0.1	0.5	<b>0.8</b>	0.08	0.08	1	0.2	0.5	<b>0.6</b>	0.05	0.05	C37-38
Bone	2	0.3	1.0	<b>1.4</b>	0.08	0.19	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C40-41
Melanoma of skin	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C43
†Other skin	2		1.0	<b>1.4</b>	0.10	0.24	1		0.5	<b>0.1</b>	0.00	0.00	C44
Mesothelioma	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C45
Kaposi sarcoma	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.2	0.5	<b>0.4</b>	0.00	0.09	C46
Connective and soft tissue	9	1.3	4.5	<b>5.3</b>	0.28	0.66	4	0.7	1.9	<b>0.7</b>	0.00	0.00	C47+C49
Breast	5	0.7	2.5	<b>2.1</b>	0.09	0.22	129	23.7	61.9	<b>54.4</b>	3.57	6.42	C50
Vulva							2	0.4	1.0	<b>0.8</b>	0.00	0.17	C51
Vagina							4	0.7	1.9	<b>0.6</b>	0.00	0.00	C52
Cervix uteri							39	7.2	18.7	<b>16.9</b>	1.29	1.63	C53
Corpus uteri							21	3.9	10.1	<b>9.1</b>	0.52	1.17	C54
Uterus unspecified							1	0.2	0.5	<b>0.6</b>	0.06	0.06	C55
Ovary							16	2.9	7.7	<b>7.4</b>	0.49	0.73	C56
Other female genital organs							1	0.2	0.5	<b>0.5</b>	0.00	0.08	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C60
Prostate	208	30.7	103.0	<b>114.7</b>	4.81	15.56							C61
Testis	1	0.1	0.5	<b>0.5</b>	0.03	0.03							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	15	2.2	7.4	<b>8.0</b>	0.29	1.31	12	2.2	5.8	<b>5.1</b>	0.31	0.58	C64
Renal pelvis	2	0.3	1.0	<b>0.7</b>	0.03	0.03	2	0.4	1.0	<b>0.8</b>	0.05	0.05	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	20	2.9	9.9	<b>10.2</b>	0.38	1.21	12	2.2	5.8	<b>3.8</b>	0.22	0.39	C67
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	1	0.1	0.5	<b>0.8</b>	0.10	0.10	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C69
Brain, nervous system	3	0.4	1.5	<b>1.7</b>	0.12	0.12	7	1.3	3.4	<b>2.4</b>	0.13	0.22	C70-72
Thyroid	1	0.1	0.5	<b>0.3</b>	0.00	0.00	4	0.7	1.9	<b>1.6</b>	0.11	0.11	C73
Adrenal gland	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	1	0.1	0.5	<b>0.3</b>	0.02	0.02	3	0.6	1.4	<b>1.4</b>	0.10	0.18	C81
Non-Hodgkin lymphoma	15	2.2	7.4	<b>7.2</b>	0.25	0.71	22	4.0	10.6	<b>9.0</b>	0.54	1.25	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	16	2.4	7.9	<b>8.7</b>	0.34	1.20	13	2.4	6.2	<b>5.2</b>	0.39	0.57	C90
Lymphoid leukaemia	6	0.9	3.0	<b>3.3</b>	0.21	0.21	3	0.6	1.4	<b>1.3</b>	0.12	0.12	C91
Myeloid leukaemia	10	1.5	5.0	<b>5.9</b>	0.38	0.76	5	0.9	2.4	<b>2.2</b>	0.09	0.27	C92-94
Leukaemia unspecified	2	0.3	1.0	<b>0.8</b>	0.03	0.03	3	0.6	1.4	<b>0.9</b>	0.03	0.03	C95
Other and unspecified	18	2.7	8.9	<b>11.0</b>	0.69	1.38	23	4.2	11.0	<b>9.8</b>	0.62	1.42	O&U
All sites	680		336.6	<b>387.2</b>	21.56	49.54	545		261.4	<b>216.4</b>	13.35	25.13	ALL
All sites but C44	678	100.0	335.6	<b>385.8</b>	21.46	49.30	544	100.0	261.0	<b>216.3</b>	13.35	25.13	ALLbC44

†See note following population pyramid



## USA, LOUISIANA, NEW ORLEANS: WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	20	0.3	1.4	<b>0.9</b>	0.04	0.10	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C00
Tongue	69	0.9	4.9	<b>3.7</b>	0.26	0.47	30	0.4	2.0	<b>1.1</b>	0.05	0.12	C01-02
Mouth	55	0.7	3.9	<b>2.7</b>	0.20	0.32	44	0.6	2.9	<b>1.5</b>	0.06	0.17	C03-06
Salivary glands	18	0.2	1.3	<b>0.8</b>	0.03	0.07	17	0.2	1.1	<b>0.8</b>	0.07	0.08	C07-08
Tonsil	31	0.4	2.2	<b>1.7</b>	0.15	0.22	11	0.2	0.7	<b>0.5</b>	0.04	0.06	C09
Other oropharynx	11	0.1	0.8	<b>0.5</b>	0.02	0.06	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	16	0.2	1.1	<b>0.9</b>	0.08	0.11	7	0.1	0.5	<b>0.3</b>	0.01	0.03	C11
Hypopharynx	27	0.3	1.9	<b>1.3</b>	0.08	0.15	7	0.1	0.5	<b>0.2</b>	0.00	0.02	C12-13
Pharynx unspecified	10	0.1	0.7	<b>0.5</b>	0.02	0.07	2	0.0	0.1	<b>0.1</b>	0.01	0.01	C14
Oesophagus	95	1.2	6.8	<b>4.6</b>	0.22	0.58	40	0.5	2.6	<b>1.1</b>	0.03	0.14	C15
Stomach	152	1.9	10.9	<b>6.9</b>	0.29	0.80	88	1.2	5.8	<b>2.5</b>	0.11	0.27	C16
Small intestine	27	0.3	1.9	<b>1.2</b>	0.06	0.17	34	0.5	2.2	<b>1.1</b>	0.04	0.12	C17
Colon	641	8.1	46.0	<b>28.6</b>	1.16	3.31	766	10.5	50.6	<b>22.0</b>	0.94	2.56	C18
Rectum	246	3.1	17.6	<b>11.5</b>	0.55	1.43	192	2.6	12.7	<b>5.9</b>	0.31	0.67	C19-20
Anus	19	0.2	1.4	<b>1.0</b>	0.06	0.10	24	0.3	1.6	<b>0.8</b>	0.06	0.10	C21
Liver	95	1.2	6.8	<b>4.4</b>	0.22	0.54	37	0.5	2.4	<b>1.1</b>	0.05	0.12	C22
Gallbladder etc.	39	0.5	2.8	<b>1.6</b>	0.04	0.17	58	0.8	3.8	<b>1.7</b>	0.06	0.24	C23-24
Pancreas	157	2.0	11.3	<b>7.1</b>	0.34	0.79	175	2.4	11.5	<b>4.8</b>	0.20	0.55	C25
Nose, sinuses etc.	10	0.1	0.7	<b>0.5</b>	0.03	0.06	12	0.2	0.8	<b>0.5</b>	0.02	0.06	C30-31
Larynx	159	2.0	11.4	<b>7.9</b>	0.48	1.03	51	0.7	3.4	<b>2.0</b>	0.16	0.23	C32
Trachea, bronchus and lung	1476	18.6	105.9	<b>68.1</b>	3.19	8.77	1108	15.2	73.1	<b>38.0</b>	1.99	5.04	C33-34
Other thoracic organs	5	0.1	0.4	<b>0.3</b>	0.02	0.02	4	0.1	0.3	<b>0.2</b>	0.01	0.02	C37-38
Bone	14	0.2	1.0	<b>0.9</b>	0.06	0.08	20	0.3	1.3	<b>1.0</b>	0.07	0.07	C40-41
Melanoma of skin	141	1.8	10.1	<b>7.1</b>	0.46	0.80	83	1.1	5.5	<b>3.6</b>	0.27	0.34	C43
†Other skin	18		1.3	<b>0.7</b>	0.04	0.05	12		0.8	<b>0.5</b>	0.03	0.05	C44
Mesothelioma	63	0.8	4.5	<b>2.9</b>	0.14	0.38	20	0.3	1.3	<b>0.7</b>	0.04	0.08	C45
Kaposi sarcoma	140	1.8	10.0	<b>7.8</b>	0.62	0.63	3	0.0	0.2	<b>0.1</b>	0.01	0.01	C46
Connective and soft tissue	46	0.6	3.3	<b>2.5</b>	0.13	0.25	38	0.5	2.5	<b>1.8</b>	0.09	0.16	C47+C49
Breast	21	0.3	1.5	<b>1.0</b>	0.06	0.12	2223	30.4	146.7	<b>87.4</b>	5.94	10.20	C50
Vulva							38	0.5	2.5	<b>1.2</b>	0.07	0.12	C51
Vagina							11	0.2	0.7	<b>0.4</b>	0.02	0.03	C52
Cervix uteri							112	1.5	7.4	<b>5.5</b>	0.43	0.51	C53
Corpus uteri							308	4.2	20.3	<b>11.7</b>	0.77	1.44	C54
Uterus unspecified							13	0.2	0.9	<b>0.5</b>	0.04	0.05	C55
Ovary							247	3.4	16.3	<b>10.2</b>	0.70	1.19	C56
Other female genital organs							8	0.1	0.5	<b>0.3</b>	0.02	0.03	C57
Placenta							1	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	18	0.2	1.3	<b>0.8</b>	0.04	0.08							C60
Prostate	2126	26.8	152.5	<b>96.9</b>	3.96	12.99							C61
Testis	73	0.9	5.2	<b>4.6</b>	0.34	0.35							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	207	2.6	14.8	<b>10.3</b>	0.67	1.21	181	2.5	11.9	<b>7.0</b>	0.44	0.82	C64
Renal pelvis	22	0.3	1.6	<b>0.9</b>	0.02	0.09	13	0.2	0.9	<b>0.3</b>	0.01	0.01	C65
Ureter	13	0.2	0.9	<b>0.5</b>	0.02	0.07	16	0.2	1.1	<b>0.4</b>	0.01	0.06	C66
Bladder	562	7.1	40.3	<b>25.2</b>	1.08	2.85	185	2.5	12.2	<b>5.7</b>	0.27	0.66	C67
Other urinary organs	3	0.0	0.2	<b>0.1</b>	0.00	0.00	3	0.0	0.2	<b>0.1</b>	0.01	0.01	C68
Eye	12	0.2	0.9	<b>0.8</b>	0.05	0.07	10	0.1	0.7	<b>0.5</b>	0.04	0.06	C69
Brain, nervous system	109	1.4	7.8	<b>6.2</b>	0.38	0.59	93	1.3	6.1	<b>4.5</b>	0.31	0.43	C70-72
Thyroid	40	0.5	2.9	<b>2.1</b>	0.15	0.21	142	1.9	9.4	<b>7.3</b>	0.55	0.70	C73
Adrenal gland	10	0.1	0.7	<b>0.7</b>	0.03	0.06	4	0.1	0.3	<b>0.2</b>	0.01	0.02	C74
Other endocrine	2	0.0	0.1	<b>0.1</b>	0.01	0.01	3	0.0	0.2	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	63	0.8	4.5	<b>3.7</b>	0.27	0.29	43	0.6	2.8	<b>2.6</b>	0.18	0.21	C81
Non-Hodgkin lymphoma	376	4.7	27.0	<b>18.8</b>	1.13	2.10	298	4.1	19.7	<b>10.4</b>	0.60	1.16	C82-85,C96
Immunoproliferative diseases	2	0.0	0.1	<b>0.1</b>	0.01	0.01	4	0.1	0.3	<b>0.1</b>	0.01	0.02	C88
Multiple myeloma	70	0.9	5.0	<b>3.2</b>	0.12	0.36	78	1.1	5.1	<b>2.4</b>	0.13	0.27	C90
Lymphoid leukaemia	88	1.1	6.3	<b>5.1</b>	0.28	0.47	55	0.8	3.6	<b>2.7</b>	0.14	0.21	C91
Myeloid leukaemia	85	1.1	6.1	<b>4.2</b>	0.20	0.45	81	1.1	5.3	<b>2.9</b>	0.15	0.30	C92-94
Leukaemia unspecified	17	0.2	1.2	<b>0.7</b>	0.02	0.08	21	0.3	1.4	<b>1.0</b>	0.06	0.08	C95
Other and unspecified	221	2.8	15.9	<b>10.5</b>	0.59	1.21	244	3.3	16.1	<b>7.1</b>	0.30	0.79	O&U
All sites	7940		569.5	<b>375.3</b>	18.40	45.21	7320		483.1	<b>266.7</b>	15.97	30.74	ALL
All sites but C44	7922	100.0	568.2	<b>374.6</b>	18.37	45.17	7308	100.0	482.3	<b>266.2</b>	15.94	30.69	ALLbC44

†See note following population pyramid

## USA, LOUISIANA, NEW ORLEANS: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	1	0.0	0.1	<b>0.1</b>	0.01	0.01	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C00
Tongue	27	0.7	3.0	<b>3.5</b>	0.27	0.38	12	0.4	1.1	<b>1.0</b>	0.05	0.14	C01-02
Mouth	40	1.1	4.5	<b>5.4</b>	0.46	0.71	20	0.6	1.9	<b>1.8</b>	0.15	0.20	C03-06
Salivary glands	7	0.2	0.8	<b>0.8</b>	0.04	0.09	10	0.3	0.9	<b>0.9</b>	0.07	0.12	C07-08
Tonsil	24	0.6	2.7	<b>3.1</b>	0.20	0.39	9	0.3	0.8	<b>0.7</b>	0.04	0.07	C09
Other oropharynx	8	0.2	0.9	<b>1.2</b>	0.11	0.16	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C10
Nasopharynx	9	0.2	1.0	<b>1.1</b>	0.06	0.14	5	0.2	0.5	<b>0.4</b>	0.03	0.03	C11
Hypopharynx	15	0.4	1.7	<b>2.1</b>	0.21	0.24	5	0.2	0.5	<b>0.5</b>	0.02	0.06	C12-13
Pharynx unspecified	8	0.2	0.9	<b>1.0</b>	0.02	0.15	3	0.1	0.3	<b>0.3</b>	0.01	0.05	C14
Oesophagus	86	2.3	9.6	<b>11.5</b>	0.71	1.57	36	1.1	3.4	<b>3.2</b>	0.21	0.40	C15
Stomach	129	3.5	14.5	<b>16.4</b>	0.79	1.98	85	2.6	8.0	<b>6.4</b>	0.29	0.71	C16
Small intestine	13	0.4	1.5	<b>1.7</b>	0.08	0.23	15	0.5	1.4	<b>1.2</b>	0.10	0.12	C17
Colon	274	7.4	30.7	<b>34.3</b>	1.42	4.23	344	10.4	32.5	<b>27.7</b>	1.36	3.19	C18
Rectum	83	2.2	9.3	<b>10.6</b>	0.61	1.34	85	2.6	8.0	<b>7.0</b>	0.42	0.79	C19-20
Anus	8	0.2	0.9	<b>1.1</b>	0.09	0.16	13	0.4	1.2	<b>1.2</b>	0.08	0.16	C21
Liver	57	1.5	6.4	<b>7.9</b>	0.66	0.94	34	1.0	3.2	<b>3.0</b>	0.17	0.33	C22
Gallbladder etc.	17	0.5	1.9	<b>2.2</b>	0.09	0.26	22	0.7	2.1	<b>1.7</b>	0.11	0.16	C23-24
Pancreas	90	2.4	10.1	<b>11.5</b>	0.59	1.44	104	3.1	9.8	<b>8.2</b>	0.39	0.95	C25
Nose, sinuses etc.	11	0.3	1.2	<b>1.2</b>	0.04	0.09	2	0.1	0.2	<b>0.1</b>	0.00	0.02	C30-31
Larynx	129	3.5	14.5	<b>17.3</b>	1.29	2.20	26	0.8	2.5	<b>2.4</b>	0.15	0.29	C32
Trachea, bronchus and lung	824	22.3	92.3	<b>107.0</b>	6.01	13.84	429	13.0	40.5	<b>37.9</b>	2.15	4.97	C33-34
Other thoracic organs	4	0.1	0.4	<b>0.5</b>	0.03	0.03	4	0.1	0.4	<b>0.3</b>	0.02	0.02	C37-38
Bone	12	0.3	1.3	<b>1.3</b>	0.09	0.11	2	0.1	0.2	<b>0.1</b>	0.00	0.02	C40-41
Melanoma of skin	2	0.1	0.2	<b>0.3</b>	0.03	0.03	7	0.2	0.7	<b>0.6</b>	0.04	0.06	C43
†Other skin	4		0.4	<b>0.5</b>	0.03	0.03	7		0.7	<b>0.5</b>	0.04	0.04	C44
Mesothelioma	14	0.4	1.6	<b>1.7</b>	0.12	0.16	9	0.3	0.8	<b>0.9</b>	0.06	0.12	C45
Kaposi sarcoma	60	1.6	6.7	<b>6.3</b>	0.50	0.50	7	0.2	0.7	<b>0.5</b>	0.02	0.02	C46
Connective and soft tissue	27	0.7	3.0	<b>3.3</b>	0.23	0.36	16	0.5	1.5	<b>1.4</b>	0.10	0.12	C47+C49
Breast	12	0.3	1.3	<b>1.5</b>	0.07	0.16	955	28.8	90.1	<b>83.5</b>	5.93	9.41	C50
Vulva							31	0.9	2.9	<b>2.7</b>	0.21	0.30	C51
Vagina							10	0.3	0.9	<b>0.9</b>	0.06	0.09	C52
Cervix uteri							207	6.3	19.5	<b>17.5</b>	1.28	1.72	C53
Corpus uteri							125	3.8	11.8	<b>10.8</b>	0.53	1.47	C54
Uterus unspecified							7	0.2	0.7	<b>0.5</b>	0.02	0.04	C55
Ovary							95	2.9	9.0	<b>7.9</b>	0.46	0.90	C56
Other female genital organs							3	0.1	0.3	<b>0.3</b>	0.02	0.02	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	10	0.3	1.1	<b>1.3</b>	0.07	0.18							C60
Prostate	1055	28.5	118.2	<b>134.2</b>	5.25	18.17							C61
Testis	15	0.4	1.7	<b>1.6</b>	0.12	0.12							C62
Other male genital organs	2	0.1	0.2	<b>0.3</b>	0.03	0.03							C63
Kidney	94	2.5	10.5	<b>11.9</b>	0.67	1.43	91	2.7	8.6	<b>7.9</b>	0.39	0.98	C64
Renal pelvis	7	0.2	0.8	<b>0.8</b>	0.02	0.07	2	0.1	0.2	<b>0.2</b>	0.01	0.03	C65
Ureter	2	0.1	0.2	<b>0.2</b>	0.00	0.03	3	0.1	0.3	<b>0.2</b>	0.01	0.02	C66
Bladder	101	2.7	11.3	<b>12.5</b>	0.47	1.51	54	1.6	5.1	<b>3.9</b>	0.15	0.42	C67
Other urinary organs	7	0.2	0.8	<b>0.9</b>	0.05	0.09	2	0.1	0.2	<b>0.1</b>	0.00	0.02	C68
Eye	1	0.0	0.1	<b>0.1</b>	0.00	0.00	2	0.1	0.2	<b>0.3</b>	0.01	0.01	C69
Brain, nervous system	38	1.0	4.3	<b>4.4</b>	0.23	0.46	40	1.2	3.8	<b>3.6</b>	0.23	0.31	C70-72
Thyroid	5	0.1	0.6	<b>0.5</b>	0.05	0.05	42	1.3	4.0	<b>3.6</b>	0.26	0.37	C73
Adrenal gland	1	0.0	0.1	<b>0.1</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	2	0.1	0.2	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	15	0.4	1.7	<b>1.8</b>	0.12	0.19	15	0.5	1.4	<b>1.3</b>	0.11	0.12	C81
Non-Hodgkin lymphoma	110	3.0	12.3	<b>13.1</b>	0.95	1.40	91	2.7	8.6	<b>7.4</b>	0.40	0.80	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.00	0.02	C88
Multiple myeloma	69	1.9	7.7	<b>8.8</b>	0.44	1.18	59	1.8	5.6	<b>4.7</b>	0.21	0.54	C90
Lymphoid leukaemia	24	0.6	2.7	<b>3.1</b>	0.14	0.43	13	0.4	1.2	<b>1.3</b>	0.07	0.15	C91
Myeloid leukaemia	23	0.6	2.6	<b>2.8</b>	0.12	0.31	34	1.0	3.2	<b>3.0</b>	0.18	0.26	C92-94
Leukaemia unspecified	4	0.1	0.4	<b>0.5</b>	0.01	0.07	6	0.2	0.6	<b>0.4</b>	0.00	0.04	C95
Other and unspecified	125	3.4	14.0	<b>15.8</b>	0.93	1.91	115	3.5	10.8	<b>8.5</b>	0.34	0.85	O&U
All sites	3703		414.9	<b>470.8</b>	24.51	59.57	3318		313.0	<b>281.3</b>	16.98	32.07	ALL
All sites but C44	3699	100.0	414.4	<b>470.3</b>	24.48	59.54	3311	100.0	312.4	<b>280.7</b>	16.94	32.03	ALLbC44

†See note following population pyramid

# USA, Michigan, Detroit

### Registration area

Metropolitan Detroit is on the eastern border of Michigan, facing Canada, between longitudes 82° and 83° W and latitudes 42° and 43° N. The total registration area is 5095 km<sup>2</sup>. The population covered by the MDCSS was 3 912 679 in the 1990 census. Of these 73.5% were white, 24.0% black and 2% of Spanish origin. Foreign-born persons residing in the Metropolitan area are primarily of Arabic, Greek, Polish, Italian, German, English, Irish or Scottish origin. The area is predominantly urban and is heavily industrialized, as the centre of the US automobile manufacturing industry.

### Registry structure and methods

The Metropolitan Detroit Cancer Surveillance (MDCSS) is a unit in the Epidemiology Section of the Karmanos Cancer Institute and Wayne State University. It began in 1949 as a pathology registry for 25 collaborating hospitals and in 1960 became a central statistical resource for these hospitals.

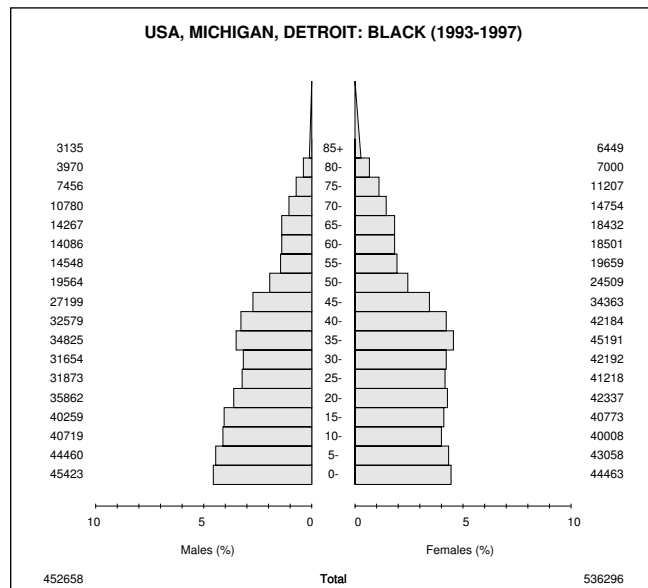
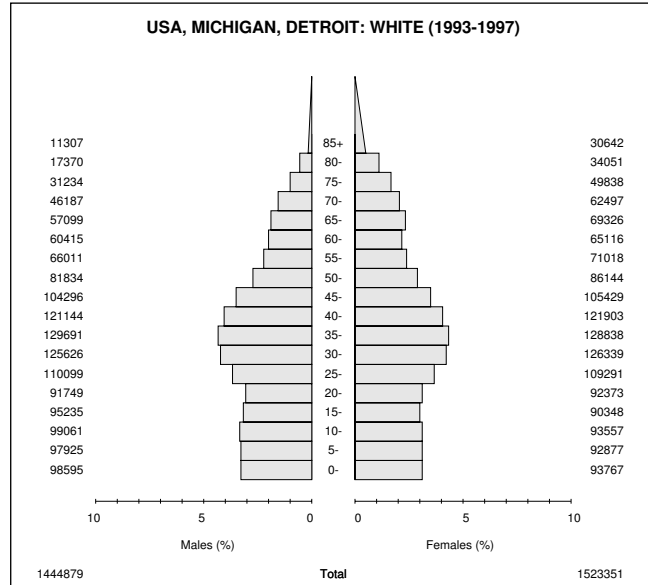
The MDCSS was organized in its current form to participate in the Third National Cancer Survey for the years 1969–71. In 1973, the MDCSS became one of the founding participants in the NCI's SEER Program. In Michigan, cancer is a reportable disease and, effective from January 1985, the Public Health Statutes of Michigan authorized the establishment of a statewide cancer incidence reporting system. The MDCSS functions as the official designate of the Michigan Department of Community Health for collecting this information in the Detroit Metropolitan area. These data are being provided to the new statewide system by the MDCSS.

The MDCSS provides both incidence and survival reporting for the Metropolitan Detroit area. Data are collected by the MDCSS abstracting staff from 50 hospitals as well as from private pathology laboratories, radiation therapy facilities and selected clinics and physicians' offices. These facilities include all those located in Metropolitan Detroit as well as facilities outside the tri-county area which routinely provide care for cancer patients residing in the MDCSS registration area. Active follow-up is maintained for all cases, with requests for information sent to physicians on a bi-monthly basis. Re-admissions to hospitals are also abstracted for follow-up data; additionally, telephone contacts are made with physicians' offices and with patients as part of active follow-up. Death certificates for the State of Michigan, and for other states which are retirement areas for local residents, are linked by computer tape each quarter to provide up-to-date information about vital status and causes of death.

### Use of the data

Epidemiological research based upon MDCSS data is conducted by the Epidemiology Section of the Skarmanos Cancer Institute and faculty of Wayne State University. Particular emphasis is placed upon studies of cancer etiology, delineating occupational cancer risk, understanding racial and ethnic differences in cancer incidence and survival, and identifying genetic and familial patterns of cancer occurrence.

In addition to providing a research base, MDCSS data are used extensively by local health departments, by the Michigan Department of Community Health, and by area health professionals for planning, evaluation and education purposes. Community concerns about cancer risk are also addressed through use of the MDCSS data.



### Source of population

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

### Notes on the data

† C44 does not include basal cell or squamous cell carcinoma except for skin of anus.

## USA, MICHIGAN, DETROIT: WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	94	0.2	1.3	<b>0.9</b>	0.05	0.10	26	0.1	0.3	<b>0.2</b>	0.01	0.02	C00
Tongue	288	0.7	4.0	<b>3.1</b>	0.22	0.37	152	0.4	2.0	<b>1.3</b>	0.08	0.15	C01-02
Mouth	282	0.7	3.9	<b>3.0</b>	0.19	0.36	181	0.5	2.4	<b>1.3</b>	0.08	0.15	C03-06
Salivary glands	108	0.3	1.5	<b>1.1</b>	0.06	0.11	84	0.2	1.1	<b>0.7</b>	0.05	0.08	C07-08
Tonsil	149	0.4	2.1	<b>1.6</b>	0.12	0.19	52	0.1	0.7	<b>0.5</b>	0.03	0.06	C09
Other oropharynx	29	0.1	0.4	<b>0.3</b>	0.02	0.04	12	0.0	0.2	<b>0.1</b>	0.00	0.01	C10
Nasopharynx	42	0.1	0.6	<b>0.5</b>	0.04	0.05	30	0.1	0.4	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	123	0.3	1.7	<b>1.3</b>	0.08	0.17	26	0.1	0.3	<b>0.2</b>	0.01	0.03	C12-13
Pharynx unspecified	63	0.2	0.9	<b>0.7</b>	0.04	0.08	21	0.1	0.3	<b>0.2</b>	0.01	0.02	C14
Oesophagus	503	1.2	7.0	<b>5.0</b>	0.29	0.62	185	0.5	2.4	<b>1.3</b>	0.07	0.17	C15
Stomach	788	2.0	10.9	<b>7.3</b>	0.33	0.81	476	1.3	6.2	<b>2.9</b>	0.13	0.31	C16
Small intestine	122	0.3	1.7	<b>1.1</b>	0.06	0.13	142	0.4	1.9	<b>1.0</b>	0.05	0.11	C17
Colon	2934	7.3	40.6	<b>26.8</b>	1.08	3.03	3014	8.3	39.6	<b>18.8</b>	0.80	2.17	C18
Rectum	1398	3.5	19.4	<b>13.4</b>	0.64	1.63	1108	3.1	14.5	<b>7.6</b>	0.39	0.90	C19-20
‡Anus	62	0.2	0.9	<b>0.6</b>	0.03	0.08	99	0.3	1.3	<b>0.8</b>	0.05	0.09	C21
Liver	371	0.9	5.1	<b>3.6</b>	0.15	0.41	231	0.6	3.0	<b>1.6</b>	0.09	0.18	C22
Gallbladder etc.	195	0.5	2.7	<b>1.8</b>	0.08	0.21	245	0.7	3.2	<b>1.6</b>	0.06	0.19	C23-24
Pancreas	854	2.1	11.8	<b>8.1</b>	0.38	0.95	962	2.7	12.6	<b>6.1</b>	0.27	0.72	C25
Nose, sinuses etc.	58	0.1	0.8	<b>0.6</b>	0.04	0.07	60	0.2	0.8	<b>0.5</b>	0.02	0.05	C30-31
Larynx	614	1.5	8.5	<b>6.3</b>	0.39	0.82	147	0.4	1.9	<b>1.3</b>	0.08	0.16	C32
Trachea, bronchus and lung	6824	17.0	94.5	<b>65.8</b>	3.08	8.53	5241	14.4	68.8	<b>40.0</b>	2.23	5.18	C33-34
Other thoracic organs	32	0.1	0.4	<b>0.4</b>	0.03	0.04	25	0.1	0.3	<b>0.3</b>	0.02	0.03	C37-38
Bone	77	0.2	1.1	<b>1.1</b>	0.07	0.08	55	0.2	0.7	<b>0.6</b>	0.04	0.05	C40-41
Melanoma of skin	1226	3.0	17.0	<b>12.6</b>	0.80	1.40	995	2.7	13.1	<b>9.2</b>	0.64	0.92	C43
†Other skin	106		1.5	<b>1.1</b>	0.06	0.11	95		1.2	<b>0.8</b>	0.05	0.08	C44
Mesothelioma	123	0.3	1.7	<b>1.1</b>	0.05	0.15	37	0.1	0.5	<b>0.3</b>	0.02	0.03	C45
Kaposi sarcoma	140	0.3	1.9	<b>1.4</b>	0.10	0.12	12	0.0	0.2	<b>0.1</b>	0.00	0.00	C46
Connective and soft tissue	244	0.6	3.4	<b>2.6</b>	0.14	0.23	203	0.6	2.7	<b>1.9</b>	0.12	0.17	C47+C49
Breast	97	0.2	1.3	<b>0.9</b>	0.05	0.10	10339	28.5	135.7	<b>87.7</b>	6.14	10.20	C50
Vulva							225	0.6	3.0	<b>1.5</b>	0.07	0.16	C51
Vagina							62	0.2	0.8	<b>0.4</b>	0.02	0.05	C52
Cervix uteri							693	1.9	9.1	<b>6.9</b>	0.52	0.67	C53
Corpus uteri							2192	6.0	28.8	<b>18.4</b>	1.26	2.24	C54
Uterus unspecified							31	0.1	0.4	<b>0.2</b>	0.02	0.03	C55
Ovary							1539	4.2	20.2	<b>13.3</b>	0.91	1.47	C56
Other female genital organs							55	0.2	0.7	<b>0.4</b>	0.02	0.05	C57
Placenta							8	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	48	0.1	0.7	<b>0.5</b>	0.02	0.06							C60
Prostate	12525	31.1	173.4	<b>119.6</b>	5.18	15.90							C61
Testis	474	1.2	6.6	<b>5.6</b>	0.42	0.44							C62
Other male genital organs	19	0.0	0.3	<b>0.2</b>	0.01	0.02							C63
Kidney	1072	2.7	14.8	<b>11.0</b>	0.66	1.36	698	1.9	9.2	<b>5.7</b>	0.34	0.68	C64
Renal pelvis	89	0.2	1.2	<b>0.8</b>	0.04	0.10	95	0.3	1.2	<b>0.6</b>	0.02	0.08	C65
Ureter	63	0.2	0.9	<b>0.6</b>	0.03	0.07	32	0.1	0.4	<b>0.2</b>	0.01	0.03	C66
Bladder	2862	7.1	39.6	<b>26.9</b>	1.15	3.22	1027	2.8	13.5	<b>7.0</b>	0.35	0.85	C67
Other urinary organs	76	0.2	1.1	<b>0.7</b>	0.03	0.08	29	0.1	0.4	<b>0.2</b>	0.01	0.02	C68
Eye	58	0.1	0.8	<b>0.6</b>	0.03	0.07	54	0.1	0.7	<b>0.5</b>	0.03	0.05	C69
Brain, nervous system	619	1.5	8.6	<b>7.2</b>	0.44	0.69	497	1.4	6.5	<b>4.9</b>	0.30	0.48	C70-72
Thyroid	271	0.7	3.8	<b>2.9</b>	0.21	0.32	729	2.0	9.6	<b>7.7</b>	0.59	0.71	C73
Adrenal gland	18	0.0	0.2	<b>0.3</b>	0.02	0.02	29	0.1	0.4	<b>0.4</b>	0.02	0.03	C74
Other endocrine	9	0.0	0.1	<b>0.1</b>	0.01	0.01	4	0.0	0.1	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	265	0.7	3.7	<b>3.3</b>	0.23	0.28	242	0.7	3.2	<b>2.9</b>	0.19	0.22	C81
Non-Hodgkin lymphoma	1558	3.9	21.6	<b>15.8</b>	0.89	1.74	1434	4.0	18.8	<b>10.9</b>	0.64	1.27	C82-85,C96
Immunoproliferative diseases	30	0.1	0.4	<b>0.3</b>	0.01	0.03	25	0.1	0.3	<b>0.2</b>	0.01	0.02	C88
Multiple myeloma	407	1.0	5.6	<b>3.8</b>	0.18	0.45	415	1.1	5.4	<b>2.8</b>	0.13	0.34	C90
Lymphoid leukaemia	508	1.3	7.0	<b>5.8</b>	0.30	0.57	382	1.1	5.0	<b>3.4</b>	0.14	0.32	C91
Myeloid leukaemia	494	1.2	6.8	<b>4.9</b>	0.24	0.52	470	1.3	6.2	<b>3.7</b>	0.21	0.39	C92-94
Leukaemia unspecified	90	0.2	1.2	<b>0.8</b>	0.03	0.08	82	0.2	1.1	<b>0.5</b>	0.02	0.06	C95
Other and unspecified	851	2.1	11.8	<b>8.0</b>	0.34	0.89	1083	3.0	14.2	<b>6.9</b>	0.30	0.77	O&U
All sites	40352		558.6	<b>393.6</b>	19.12	47.89	36387		477.7	<b>288.6</b>	17.71	33.27	ALL
All sites but C44	40246	100.0	557.1	<b>392.5</b>	19.06	47.78	36292	100.0	476.5	<b>287.8</b>	17.66	33.19	ALLbC44

‡33.9% of cases are anorectal tumours

†See note following population pyramid

## USA, MICHIGAN, DETROIT: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	1	0.0	0.0	<b>0.1</b>	0.01	0.01	4	0.0	0.1	<b>0.1</b>	0.01	0.02	C00
Tongue	96	0.8	4.2	<b>4.2</b>	0.32	0.50	37	0.4	1.4	<b>1.2</b>	0.10	0.16	C01-02
Mouth	114	0.9	5.0	<b>5.2</b>	0.42	0.65	57	0.6	2.1	<b>1.8</b>	0.11	0.22	C03-06
Salivary glands	25	0.2	1.1	<b>1.1</b>	0.07	0.13	19	0.2	0.7	<b>0.7</b>	0.05	0.07	C07-08
Tonsil	80	0.6	3.5	<b>3.9</b>	0.36	0.44	23	0.2	0.9	<b>0.8</b>	0.07	0.09	C09
Other oropharynx	18	0.1	0.8	<b>0.9</b>	0.08	0.10	6	0.1	0.2	<b>0.2</b>	0.01	0.02	C10
Nasopharynx	23	0.2	1.0	<b>0.9</b>	0.05	0.10	10	0.1	0.4	<b>0.3</b>	0.03	0.03	C11
Hypopharynx	70	0.6	3.1	<b>3.2</b>	0.23	0.40	20	0.2	0.7	<b>0.7</b>	0.06	0.09	C12-13
Pharynx unspecified	27	0.2	1.2	<b>1.2</b>	0.10	0.16	9	0.1	0.3	<b>0.3</b>	0.02	0.04	C14
Oesophagus	247	2.0	10.9	<b>10.7</b>	0.71	1.35	113	1.2	4.2	<b>3.6</b>	0.24	0.47	C15
Stomach	330	2.6	14.6	<b>13.2</b>	0.66	1.64	221	2.4	8.2	<b>5.8</b>	0.32	0.57	C16
Small intestine	71	0.6	3.1	<b>2.9</b>	0.17	0.36	68	0.7	2.5	<b>2.1</b>	0.13	0.26	C17
Colon	767	6.2	33.9	<b>30.7</b>	1.57	3.72	964	10.4	36.0	<b>26.6</b>	1.37	3.08	C18
Rectum	298	2.4	13.2	<b>12.3</b>	0.73	1.49	253	2.7	9.4	<b>7.6</b>	0.47	0.89	C19-20
Anus	20	0.2	0.9	<b>0.9</b>	0.07	0.09	37	0.4	1.4	<b>1.1</b>	0.08	0.12	C21
Liver	182	1.5	8.0	<b>7.8</b>	0.56	0.90	69	0.7	2.6	<b>1.8</b>	0.06	0.20	C22
Gallbladder etc.	41	0.3	1.8	<b>1.7</b>	0.10	0.19	48	0.5	1.8	<b>1.3</b>	0.05	0.15	C23-24
Pancreas	332	2.7	14.7	<b>13.7</b>	0.79	1.66	347	3.7	12.9	<b>9.4</b>	0.46	1.10	C25
Nose, sinuses etc.	26	0.2	1.1	<b>1.1</b>	0.08	0.13	20	0.2	0.7	<b>0.6</b>	0.04	0.06	C30-31
Larynx	247	2.0	10.9	<b>10.9</b>	0.79	1.39	65	0.7	2.4	<b>2.2</b>	0.17	0.26	C32
Trachea, bronchus and lung	2260	18.1	99.9	<b>94.8</b>	5.49	12.44	1322	14.2	49.3	<b>40.8</b>	2.47	5.28	C33-34
Other thoracic organs	12	0.1	0.5	<b>0.5</b>	0.03	0.04	10	0.1	0.4	<b>0.4</b>	0.02	0.03	C37-38
Bone	23	0.2	1.0	<b>1.0</b>	0.06	0.09	13	0.1	0.5	<b>0.4</b>	0.03	0.04	C40-41
Melanoma of skin	16	0.1	0.7	<b>0.6</b>	0.04	0.07	14	0.2	0.5	<b>0.4</b>	0.03	0.03	C43
†Other skin	19		0.8	<b>0.8</b>	0.04	0.07	26		1.0	<b>0.9</b>	0.06	0.08	C44
Mesothelioma	14	0.1	0.6	<b>0.5</b>	0.03	0.06	3	0.0	0.1	<b>0.1</b>	0.01	0.01	C45
Kaposi sarcoma	107	0.9	4.7	<b>4.3</b>	0.33	0.33	10	0.1	0.4	<b>0.3</b>	0.01	0.02	C46
Connective and soft tissue	64	0.5	2.8	<b>2.7</b>	0.18	0.27	68	0.7	2.5	<b>2.1</b>	0.12	0.19	C47+C49
Breast	31	0.2	1.4	<b>1.2</b>	0.07	0.13	2583	27.8	96.3	<b>81.3</b>	5.81	9.31	C50
Vulva							44	0.5	1.6	<b>1.3</b>	0.08	0.15	C51
Vagina							32	0.3	1.2	<b>0.8</b>	0.03	0.08	C52
Cervix uteri							365	3.9	13.6	<b>11.3</b>	0.82	1.14	C53
Corpus uteri							380	4.1	14.2	<b>11.8</b>	0.75	1.45	C54
Uterus unspecified							16	0.2	0.6	<b>0.5</b>	0.04	0.06	C55
Ovary							310	3.3	11.6	<b>9.4</b>	0.56	1.11	C56
Other female genital organs							14	0.2	0.5	<b>0.4</b>	0.02	0.04	C57
Placenta							5	0.1	0.2	<b>0.2</b>	0.01	0.01	C58
Penis	21	0.2	0.9	<b>0.8</b>	0.04	0.08							C60
Prostate	4919	39.4	217.3	<b>202.0</b>	9.75	27.74							C61
Testis	31	0.2	1.4	<b>1.4</b>	0.09	0.09							C62
Other male genital organs	5	0.0	0.2	<b>0.2</b>	0.01	0.02							C63
Kidney	320	2.6	14.1	<b>13.7</b>	0.92	1.60	224	2.4	8.4	<b>6.8</b>	0.41	0.83	C64
Renal pelvis	16	0.1	0.7	<b>0.7</b>	0.05	0.08	15	0.2	0.6	<b>0.4</b>	0.03	0.04	C65
Ureter	4	0.0	0.2	<b>0.1</b>	0.00	0.01	3	0.0	0.1	<b>0.1</b>	0.01	0.02	C66
Bladder	315	2.5	13.9	<b>12.3</b>	0.61	1.46	168	1.8	6.3	<b>4.5</b>	0.22	0.51	C67
Other urinary organs	26	0.2	1.1	<b>1.1</b>	0.07	0.14	16	0.2	0.6	<b>0.5</b>	0.03	0.07	C68
Eye	4	0.0	0.2	<b>0.2</b>	0.01	0.01	4	0.0	0.1	<b>0.2</b>	0.01	0.01	C69
Brain, nervous system	94	0.8	4.2	<b>4.2</b>	0.29	0.40	82	0.9	3.1	<b>2.9</b>	0.18	0.25	C70-72
Thyroid	29	0.2	1.3	<b>1.2</b>	0.09	0.14	136	1.5	5.1	<b>4.5</b>	0.36	0.45	C73
Adrenal gland	4	0.0	0.2	<b>0.2</b>	0.01	0.02	10	0.1	0.4	<b>0.4</b>	0.03	0.04	C74
Other endocrine	7	0.1	0.3	<b>0.3</b>	0.02	0.02	1	0.0	0.0	<b>0.0</b>	0.00	0.01	C75
Hodgkin disease	58	0.5	2.6	<b>2.5</b>	0.17	0.21	60	0.6	2.2	<b>2.1</b>	0.15	0.17	C81
Non-Hodgkin lymphoma	357	2.9	15.8	<b>14.7</b>	1.01	1.50	222	2.4	8.3	<b>6.7</b>	0.43	0.74	C82-85,C96
Immunoproliferative diseases	5	0.0	0.2	<b>0.2</b>	0.02	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	234	1.9	10.3	<b>9.6</b>	0.53	1.20	248	2.7	9.2	<b>7.1</b>	0.38	0.86	C90
Lymphoid leukaemia	115	0.9	5.1	<b>4.8</b>	0.23	0.57	66	0.7	2.5	<b>2.0</b>	0.07	0.21	C91
Myeloid leukaemia	97	0.8	4.3	<b>3.9</b>	0.20	0.42	119	1.3	4.4	<b>3.7</b>	0.21	0.38	C92-94
Leukaemia unspecified	11	0.1	0.5	<b>0.5</b>	0.03	0.05	7	0.1	0.3	<b>0.2</b>	0.01	0.02	C95
Other and unspecified	257	2.1	11.4	<b>10.4</b>	0.56	1.21	322	3.5	12.0	<b>8.7</b>	0.44	0.92	O&U
All sites	12490		551.9	<b>518.1</b>	28.84	65.91	9308		347.1	<b>281.5</b>	17.68	32.46	ALL
All sites but C44	12471	100.0	551.0	<b>517.4</b>	28.79	65.84	9282	100.0	346.2	<b>280.6</b>	17.61	32.38	ALLbC44

†See note following population pyramid



# USA, New Jersey

## **Registration area**

In 1998, the population of the state of New Jersey comprised eight million inhabitants. Nearly 15% were African-American, 12% Hispanic and approximately 5.6% Asian and Pacific Islander. According to the 1990 census, 27% of immigrants came from abroad, nearly 40% of this group being Hispanic.

65% of the labour force is involved in services, trade and manufacturing. Services include business services, engineering firms and health services, as well as hotels and casinos. 15% work in the manufacturing industries where chemicals, pharmaceuticals, food processing and electronics are the major products.

## **Cancer care facilities**

A total of 98 in-state hospitals report to the registry on a monthly basis via modem to a closed bulletin board system. The proximity of New Jersey to prestigious cancer centres in neighbouring states causes many residents to seek diagnosis and treatment outside the state. Over 5000 case reports are received annually from out-of-state sources through reciprocal reporting agreements with other states.

## **Registry structure and methods**

Cancer Epidemiology Services (CES) is located in the Division of Epidemiology, Environmental and Occupational Health. CES is financed by both state and federal sources. There are 45 full-time equivalent staff working in the unit on cancer registry and cancer surveillance activities. Certified Tumor Registrars (CTRs) are employed in all aspects of the registry operations including data collection, quality assurance, reporting and analysis.

The majority of cases are reported by hospitals throughout the state. Abstracting, coding and data entry are conducted at the hospital level by CTRs directly from source records and reported electronically to the central office. It is required by law that all health care facilities must report cancer cases electronically within three months of discharge or six months of diagnosis or face a penalty. Hospitals are required to report all cases of cancer, regardless of in- or outpatient status. Reporting from non-hospital facilities accounts for a small but growing number of cases. The majority of non-hospitalized cases are reported by ten independent pathology

laboratories. Other sources include 22 surgery centres and several free-standing radiation treatment centres. Reports are also received from nursing homes, psychiatric facilities and rehabilitation facilities. Physicians and dentists are required to report non-hospitalized cases. Matching of the registry database with the Department's AIDS registry and the Breast and Cervical Cancer Early Detection Program have resulted in the identification of cases.

Quarterly record linkages are performed between the registry database and the state death file. A built-in death certificate match system links and updates cancer registry records with death information.

## **Interpreting the results**

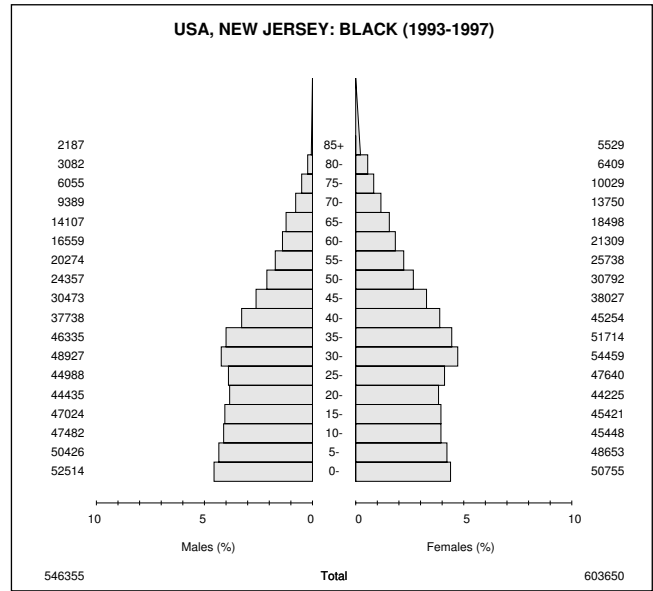
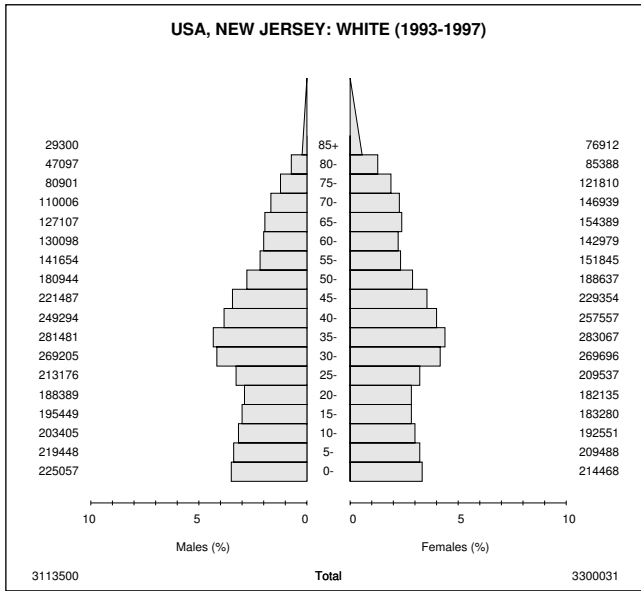
New Jersey has Gold Certification Status from NAACCR. The data quality assurance programme is a continuous multi-faceted programme of checks and balances, performed by highly skilled CTRs with years of quality control experience. Other components include consistent application of computerized edits, systematic review of problem cases, re-abstracting and re-coding studies centred in hospitals, feedback and training programmes for hospital staff, documentation of policies and procedures, and case-finding audits.

Definite and possible duplicates are electronically generated and resolved by staff. Computerized programs are used to identify multiple primary cancers for review.

## **Use of the data**

The Cancer Surveillance Program, staffed by epidemiologists and a statistician, monitors cancer incidence trends, disseminates data, and responds to citizens' concerns about cancer. The staff publish various registry reports, including a recent Hispanic cancer report and an in-depth analysis of prostate cancer.

The data are used for a wide array of applications in cancer control and prevention, etiological studies, policy making and epidemiological research. Registry data were used to define baseline measures and set targets for the general and special populations in the state in the development of a policy document setting public health objectives for the coming decade.



**Source of population**

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

**Notes on the data**

† C44 does not include basal cell or squamous cell carcinoma except for skin of anus.



## USA, NEW JERSEY: WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	156	0.2	1.0	<b>0.6</b>	0.03	0.07	62	0.1	0.4	<b>0.2</b>	0.01	0.02	C00
Tongue	560	0.6	3.6	<b>2.6</b>	0.19	0.31	301	0.3	1.8	<b>1.0</b>	0.06	0.12	C01-02
Mouth	568	0.6	3.6	<b>2.6</b>	0.18	0.32	412	0.5	2.5	<b>1.4</b>	0.09	0.16	C03-06
Salivary glands	236	0.3	1.5	<b>1.0</b>	0.05	0.11	203	0.2	1.2	<b>0.7</b>	0.04	0.08	C07-08
Tonsil	241	0.3	1.5	<b>1.2</b>	0.09	0.15	114	0.1	0.7	<b>0.4</b>	0.03	0.05	C09
Other oropharynx	88	0.1	0.6	<b>0.4</b>	0.02	0.05	36	0.0	0.2	<b>0.1</b>	0.01	0.02	C10
Nasopharynx	126	0.1	0.8	<b>0.6</b>	0.04	0.07	65	0.1	0.4	<b>0.3</b>	0.02	0.02	C11
Hypopharynx	254	0.3	1.6	<b>1.2</b>	0.07	0.15	69	0.1	0.4	<b>0.2</b>	0.02	0.03	C12-13
Pharynx unspecified	111	0.1	0.7	<b>0.5</b>	0.03	0.06	54	0.1	0.3	<b>0.2</b>	0.01	0.02	C14
Oesophagus	1266	1.4	8.1	<b>5.4</b>	0.30	0.69	467	0.5	2.8	<b>1.3</b>	0.07	0.15	C15
Stomach	2124	2.3	13.6	<b>8.6</b>	0.41	0.99	1410	1.6	8.5	<b>3.7</b>	0.17	0.39	C16
Small intestine	235	0.3	1.5	<b>1.0</b>	0.06	0.13	219	0.2	1.3	<b>0.7</b>	0.03	0.08	C17
Colon	7986	8.7	51.3	<b>31.2</b>	1.31	3.69	8553	9.7	51.8	<b>22.7</b>	0.98	2.57	C18
Rectum	3535	3.8	22.7	<b>14.8</b>	0.78	1.85	2935	3.3	17.8	<b>8.7</b>	0.44	1.03	C19-20
Anus	145	0.2	0.9	<b>0.7</b>	0.05	0.08	236	0.3	1.4	<b>0.8</b>	0.05	0.09	C21
Liver	977	1.1	6.3	<b>4.2</b>	0.22	0.50	552	0.6	3.3	<b>1.6</b>	0.08	0.18	C22
Gallbladder etc.	460	0.5	3.0	<b>1.8</b>	0.07	0.20	661	0.8	4.0	<b>1.8</b>	0.07	0.21	C23-24
Pancreas	2004	2.2	12.9	<b>8.1</b>	0.39	0.98	2416	2.8	14.6	<b>6.6</b>	0.30	0.76	C25
Nose, sinuses etc.	138	0.1	0.9	<b>0.6</b>	0.03	0.07	123	0.1	0.7	<b>0.4</b>	0.02	0.04	C30-31
Larynx	1360	1.5	8.7	<b>6.1</b>	0.38	0.77	373	0.4	2.3	<b>1.4</b>	0.09	0.18	C32
Trachea, bronchus and lung	14177	15.4	91.1	<b>58.6</b>	2.83	7.50	11050	12.6	67.0	<b>36.3</b>	2.06	4.62	C33-34
Other thoracic organs	88	0.1	0.6	<b>0.4</b>	0.03	0.04	66	0.1	0.4	<b>0.3</b>	0.02	0.03	C37-38
Bone	196	0.2	1.3	<b>1.2</b>	0.08	0.10	159	0.2	1.0	<b>0.9</b>	0.06	0.07	C40-41
Melanoma of skin	2701	2.9	17.4	<b>12.2</b>	0.75	1.41	2075	2.4	12.6	<b>8.3</b>	0.59	0.87	C43
†Other skin	206		1.3	<b>0.9</b>	0.05	0.09	172		1.0	<b>0.6</b>	0.03	0.06	C44
Mesothelioma	515	0.6	3.3	<b>2.0</b>	0.08	0.23	122	0.1	0.7	<b>0.4</b>	0.02	0.05	C45
Kaposi sarcoma	368	0.4	2.4	<b>1.7</b>	0.13	0.15	42	0.0	0.3	<b>0.1</b>	0.01	0.01	C46
Connective and soft tissue	598	0.6	3.8	<b>2.9</b>	0.18	0.28	489	0.6	3.0	<b>2.0</b>	0.13	0.20	C47+C49
Breast	272	0.3	1.7	<b>1.2</b>	0.06	0.14	25344	28.9	153.6	<b>95.5</b>	6.74	11.02	C50
Vulva							476	0.5	2.9	<b>1.4</b>	0.06	0.15	C51
Vagina							137	0.2	0.8	<b>0.4</b>	0.03	0.05	C52
Cervix uteri							1930	2.2	11.7	<b>8.6</b>	0.66	0.84	C53
Corpus uteri							5294	6.0	32.1	<b>20.0</b>	1.42	2.48	C54
Uterus unspecified							255	0.3	1.5	<b>0.9</b>	0.06	0.10	C55
Ovary							3786	4.3	22.9	<b>14.4</b>	0.99	1.62	C56
Other female genital organs							112	0.1	0.7	<b>0.4</b>	0.03	0.05	C57
Placenta							14	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	114	0.1	0.7	<b>0.5</b>	0.03	0.06							C60
Prostate	27475	29.8	176.5	<b>110.8</b>	4.61	14.78							C61
Testis	980	1.1	6.3	<b>5.5</b>	0.41	0.42							C62
Other male genital organs	41	0.0	0.3	<b>0.2</b>	0.01	0.02							C63
Kidney	2405	2.6	15.4	<b>10.8</b>	0.66	1.29	1604	1.8	9.7	<b>5.5</b>	0.32	0.64	C64
Renal pelvis	198	0.2	1.3	<b>0.8</b>	0.03	0.10	159	0.2	1.0	<b>0.4</b>	0.02	0.05	C65
Ureter	168	0.2	1.1	<b>0.7</b>	0.03	0.08	111	0.1	0.7	<b>0.3</b>	0.01	0.04	C66
Bladder	7015	7.6	45.1	<b>28.0</b>	1.25	3.37	2580	2.9	15.6	<b>7.6</b>	0.37	0.91	C67
Other urinary organs	65	0.1	0.4	<b>0.2</b>	0.01	0.03	29	0.0	0.2	<b>0.1</b>	0.00	0.01	C68
Eye	196	0.2	1.3	<b>1.0</b>	0.06	0.10	176	0.2	1.1	<b>0.8</b>	0.05	0.08	C69
Brain, nervous system	1346	1.5	8.6	<b>6.9</b>	0.43	0.69	1160	1.3	7.0	<b>4.9</b>	0.31	0.49	C70-72
Thyroid	517	0.6	3.3	<b>2.6</b>	0.20	0.27	1374	1.6	8.3	<b>6.6</b>	0.50	0.62	C73
Adrenal gland	52	0.1	0.3	<b>0.3</b>	0.02	0.03	60	0.1	0.4	<b>0.4</b>	0.02	0.03	C74
Other endocrine	36	0.0	0.2	<b>0.2</b>	0.01	0.02	20	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	632	0.7	4.1	<b>3.7</b>	0.25	0.30	544	0.6	3.3	<b>3.2</b>	0.22	0.25	C81
Non-Hodgkin lymphoma	3752	4.1	24.1	<b>16.7</b>	0.99	1.82	3500	4.0	21.2	<b>11.6</b>	0.67	1.30	C82-85,C96
Immunoproliferative diseases	52	0.1	0.3	<b>0.2</b>	0.01	0.02	35	0.0	0.2	<b>0.1</b>	0.00	0.01	C88
Multiple myeloma	893	1.0	5.7	<b>3.6</b>	0.17	0.43	835	1.0	5.1	<b>2.5</b>	0.13	0.30	C90
Lymphoid leukaemia	1058	1.1	6.8	<b>5.5</b>	0.28	0.51	810	0.9	4.9	<b>3.2</b>	0.15	0.28	C91
Myeloid leukaemia	1111	1.2	7.1	<b>5.0</b>	0.27	0.53	935	1.1	5.7	<b>3.3</b>	0.19	0.32	C92-94
Leukaemia unspecified	202	0.2	1.3	<b>0.8</b>	0.02	0.07	190	0.2	1.2	<b>0.5</b>	0.01	0.05	C95
Other and unspecified	2346	2.5	15.1	<b>9.3</b>	0.40	1.04	3064	3.5	18.6	<b>8.2</b>	0.36	0.90	O&U
All sites	92345		593.2	<b>387.2</b>	19.03	47.15	87970		533.1	<b>303.9</b>	18.83	34.70	ALL
All sites but C44	92139	100.0	591.9	<b>386.3</b>	18.97	47.06	87798	100.0	532.1	<b>303.3</b>	18.79	34.64	ALLbC44

‡Includes 4 cases of unknown age

§Includes 3 cases of unknown age

†See note following population pyramid

## USA, NEW JERSEY: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	0-74	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	0-74	
Lip	2	0.0	0.1	<b>0.1</b>	0.00	0.01	3	0.0	0.1	<b>0.1</b>	0.01	0.01	C00
Tongue	90	0.8	3.3	<b>3.7</b>	0.32	0.43	45	0.5	1.5	<b>1.4</b>	0.08	0.18	C01-02
Mouth	98	0.9	3.6	<b>4.0</b>	0.32	0.49	50	0.5	1.7	<b>1.5</b>	0.12	0.17	C03-06
Salivary glands	33	0.3	1.2	<b>1.2</b>	0.08	0.14	25	0.3	0.8	<b>0.7</b>	0.05	0.08	C07-08
Tonsil	52	0.5	1.9	<b>2.1</b>	0.18	0.23	23	0.2	0.8	<b>0.7</b>	0.05	0.08	C09
Other oropharynx	28	0.2	1.0	<b>1.1</b>	0.09	0.13	7	0.1	0.2	<b>0.2</b>	0.02	0.03	C10
Nasopharynx	24	0.2	0.9	<b>0.9</b>	0.08	0.10	10	0.1	0.3	<b>0.3</b>	0.02	0.04	C11
Hypopharynx	58	0.5	2.1	<b>2.4</b>	0.17	0.31	19	0.2	0.6	<b>0.6</b>	0.04	0.08	C12-13
Pharynx unspecified	24	0.2	0.9	<b>1.0</b>	0.08	0.12	3	0.0	0.1	<b>0.1</b>	0.01	0.01	C14
Oesophagus	286	2.5	10.5	<b>11.7</b>	0.74	1.51	125	1.3	4.1	<b>3.7</b>	0.22	0.50	C15
Stomach	324	2.8	11.9	<b>12.9</b>	0.59	1.53	247	2.6	8.2	<b>6.3</b>	0.26	0.67	C16
Small intestine	39	0.3	1.4	<b>1.5</b>	0.09	0.16	41	0.4	1.4	<b>1.2</b>	0.08	0.15	C17
Colon	816	7.1	29.9	<b>33.0</b>	1.63	4.21	975	10.2	32.3	<b>26.6</b>	1.34	3.13	C18
Rectum	300	2.6	11.0	<b>12.1</b>	0.67	1.55	288	3.0	9.5	<b>8.0</b>	0.40	0.97	C19-20
Anus	29	0.3	1.1	<b>1.1</b>	0.09	0.10	36	0.4	1.2	<b>1.0</b>	0.06	0.12	C21
Liver	136	1.2	5.0	<b>5.4</b>	0.33	0.59	67	0.7	2.2	<b>1.8</b>	0.09	0.20	C22
Gallbladder etc.	33	0.3	1.2	<b>1.3</b>	0.04	0.15	72	0.8	2.4	<b>1.7</b>	0.08	0.16	C23-24
Pancreas	242	2.1	8.9	<b>10.0</b>	0.51	1.34	290	3.0	9.6	<b>8.1</b>	0.40	1.01	C25
Nose, sinuses etc.	18	0.2	0.7	<b>0.7</b>	0.04	0.08	11	0.1	0.4	<b>0.3</b>	0.02	0.03	C30-31
Larynx	258	2.2	9.4	<b>10.7</b>	0.68	1.42	65	0.7	2.2	<b>2.0</b>	0.13	0.26	C32
Trachea, bronchus and lung	1964	17.1	71.9	<b>80.3</b>	4.40	10.39	1207	12.6	40.0	<b>34.8</b>	2.00	4.54	C33-34
Other thoracic organs	16	0.1	0.6	<b>0.6</b>	0.03	0.06	9	0.1	0.3	<b>0.3</b>	0.02	0.02	C37-38
Bone	25	0.2	0.9	<b>0.9</b>	0.07	0.07	13	0.1	0.4	<b>0.4</b>	0.03	0.03	C40-41
Melanoma of skin	30	0.3	1.1	<b>1.2</b>	0.10	0.15	23	0.2	0.8	<b>0.7</b>	0.03	0.09	C43
†Other skin	21		0.8	<b>0.8</b>	0.05	0.08	27		0.9	<b>0.7</b>	0.05	0.06	C44
Mesothelioma	26	0.2	1.0	<b>1.1</b>	0.07	0.14	6	0.1	0.2	<b>0.2</b>	0.01	0.02	C45
Kaposi sarcoma	196	1.7	7.2	<b>6.1</b>	0.50	0.51	14	0.1	0.5	<b>0.3</b>	0.02	0.02	C46
Connective and soft tissue	78	0.7	2.9	<b>2.9</b>	0.20	0.30	74	0.8	2.5	<b>2.3</b>	0.15	0.21	C47+C49
Breast	26	0.2	1.0	<b>1.1</b>	0.06	0.14	2624	27.5	86.9	<b>76.1</b>	5.36	8.64	C50
Vulva							46	0.5	1.5	<b>1.3</b>	0.09	0.14	C51
Vagina							30	0.3	1.0	<b>0.8</b>	0.06	0.09	C52
Cervix uteri							512	5.4	17.0	<b>14.5</b>	1.07	1.45	C53
Corpus uteri							450	4.7	14.9	<b>13.1</b>	0.84	1.60	C54
Uterus unspecified							49	0.5	1.6	<b>1.4</b>	0.11	0.15	C55
Ovary							333	3.5	11.0	<b>9.6</b>	0.57	1.12	C56
Other female genital organs							10	0.1	0.3	<b>0.3</b>	0.03	0.04	C57
Placenta							12	0.1	0.4	<b>0.4</b>	0.02	0.02	C58
Penis	17	0.1	0.6	<b>0.7</b>	0.03	0.07							C60
Prostate	4200	36.5	153.7	<b>173.9</b>	8.09	23.20							C61
Testis	31	0.3	1.1	<b>1.0</b>	0.07	0.09							C62
Other male genital organs	3	0.0	0.1	<b>0.1</b>	0.00	0.01							C63
Kidney	293	2.5	10.7	<b>11.5</b>	0.70	1.37	172	1.8	5.7	<b>5.1</b>	0.32	0.60	C64
Renal pelvis	6	0.1	0.2	<b>0.3</b>	0.02	0.05	5	0.1	0.2	<b>0.1</b>	0.01	0.01	C65
Ureter	1	0.0	0.0	<b>0.0</b>	0.01	0.01	3	0.0	0.1	<b>0.1</b>	0.00	0.01	C66
Bladder	302	2.6	11.1	<b>12.2</b>	0.53	1.52	153	1.6	5.1	<b>4.1</b>	0.19	0.50	C67
Other urinary organs	4	0.0	0.1	<b>0.2</b>	0.00	0.01	9	0.1	0.3	<b>0.3</b>	0.02	0.02	C68
Eye	11	0.1	0.4	<b>0.5</b>	0.03	0.05	5	0.1	0.2	<b>0.2</b>	0.01	0.01	C69
Brain, nervous system	112	1.0	4.1	<b>4.3</b>	0.29	0.41	102	1.1	3.4	<b>3.3</b>	0.20	0.27	C70-72
Thyroid	36	0.3	1.3	<b>1.4</b>	0.10	0.17	122	1.3	4.0	<b>3.6</b>	0.27	0.38	C73
Adrenal gland	6	0.1	0.2	<b>0.2</b>	0.01	0.01	10	0.1	0.3	<b>0.3</b>	0.02	0.03	C74
Other endocrine	4	0.0	0.1	<b>0.2</b>	0.02	0.02	2	0.0	0.1	<b>0.1</b>	0.00	0.00	C75
Hodgkin disease	83	0.7	3.0	<b>2.9</b>	0.21	0.27	57	0.6	1.9	<b>1.7</b>	0.12	0.14	C81
Non-Hodgkin lymphoma	409	3.6	15.0	<b>14.8</b>	1.02	1.52	319	3.3	10.6	<b>9.1</b>	0.61	0.95	C82-85,C96
Immunoproliferative diseases	2	0.0	0.1	<b>0.1</b>	0.00	0.01	2	0.0	0.1	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	196	1.7	7.2	<b>7.9</b>	0.43	0.93	224	2.3	7.4	<b>6.1</b>	0.32	0.71	C90
Lymphoid leukaemia	91	0.8	3.3	<b>3.7</b>	0.23	0.37	72	0.8	2.4	<b>2.2</b>	0.11	0.19	C91
Myeloid leukaemia	101	0.9	3.7	<b>3.8</b>	0.25	0.40	100	1.0	3.3	<b>2.8</b>	0.16	0.29	C92-94
Leukaemia unspecified	13	0.1	0.5	<b>0.5</b>	0.01	0.06	17	0.2	0.6	<b>0.5</b>	0.03	0.06	C95
Other and unspecified	331	2.9	12.1	<b>13.3</b>	0.74	1.57	355	3.7	11.8	<b>9.4</b>	0.48	0.99	O&U
All sites	11524		421.9	<b>465.3</b>	25.01	58.55	9570		317.1	<b>272.8</b>	16.80	31.32	ALL
All sites but C44	11503	100.0	421.1	<b>464.5</b>	24.96	58.47	9543	100.0	316.2	<b>272.0</b>	16.76	31.26	ALLbC44

§Includes 1 case of unknown age

†See note following population pyramid

## USA, New Mexico

### **Registration area**

With an area of 195 000 km<sup>2</sup>, New Mexico is the fifth largest state in the USA. Its population is about 1.8 million, of whom approximately one third live in the Albuquerque metropolitan area; the remainder lives in small cities or in villages. Located in the southwest of the country (latitude 30° to 37° N), it has extensive high desert and mountain terrain, the altitude ranging from 859 to 4010 m above sea level. Rainfall and humidity are low.

The people of New Mexico come from diverse ethnic backgrounds: 42% have Spanish and/or Mexican-American heritage (Hispanics); 9.5% are American Indians (Navajo, Pueblo, Apache); 1.9% are black; about 1% are Asian; the remaining 45% are non-Hispanic white of European descent. A sizeable subgroup of New Mexico's Hispanic population lives in small mountain communities in the northern part of the state and traces its ancestry to Spanish soldiers and colonists who settled in New Mexico during the 17th and 18th centuries. Median levels of education and per capita income are in the lowest decile of the 50 states.

### **Registry structure and methods**

The New Mexico Tumor Registry, located at the University of New Mexico Cancer Research and Treatment Center in Albuquerque, began its operation in 1967 and expanded statewide in 1969. Cancer reporting has been required (but not enforced) by a State Health Agency regulation since 1922. The registry became the official repository for cancer data for the State Health Agency in 1975. Funding for the registry initially came from the New Mexico Regional Medical Program and since 1973 primarily from the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program.

The registry abstracts and follows all cases of known malignancy. Multiple primary tumours are counted separately by assigning cancer sequence numbers within the records of individual patients. Patients entered into the registry system are followed for life.

Some of the larger hospitals employ tumour registrars, and abstractors from the central registry travel to other hospitals and clinics throughout the state to review and abstract cancer patient records. The majority of the registry's cases are registered from hospital admission and outpatient records. Regular visits to all non-hospital diagnostic or treatment centres in the state provide additional cases. Within hospitals, pathology reports and all

available billing and diagnostic indices are reviewed to assure complete coverage. Other methods of case-finding are used to obtain information on cancer cases not seen in reporting hospitals. Radiation therapy records and death certificates are reviewed regularly.

Data from the medical chart are entered directly onto diskettes via portable laptop computers using a software package assembled locally. This allows collection of supplemental data items of special interest to individual hospitals and physicians. It also allows each hospital to analyse its own 30+ year complete dataset and compare it with a statewide analytical dataset of individual records that have been stripped of personal identifiers.

The data from the abstractors' diskettes are edited, linked and merged into the master file that is maintained on a central mini-computer.

Abstracted cases are reviewed for thoroughness and accuracy in the registry. The medical director of the registry, a pathologist, is consulted on problem cases. The file is ordered by the computer-generated accession numbers, but can be sorted by any item of data. Numerous routine crosschecks are made to ensure that the file does not contain duplicate cases.

### **Use of the data**

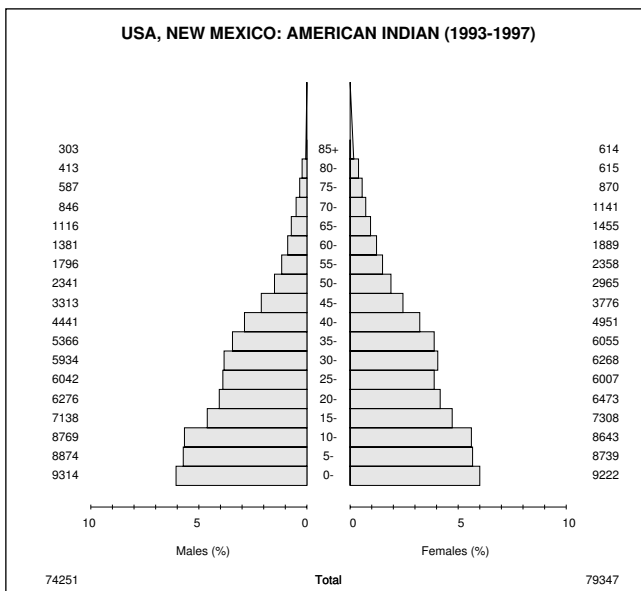
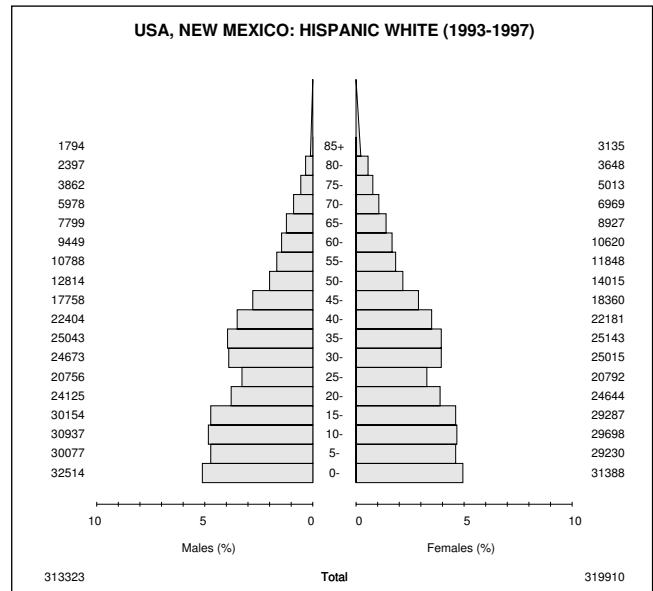
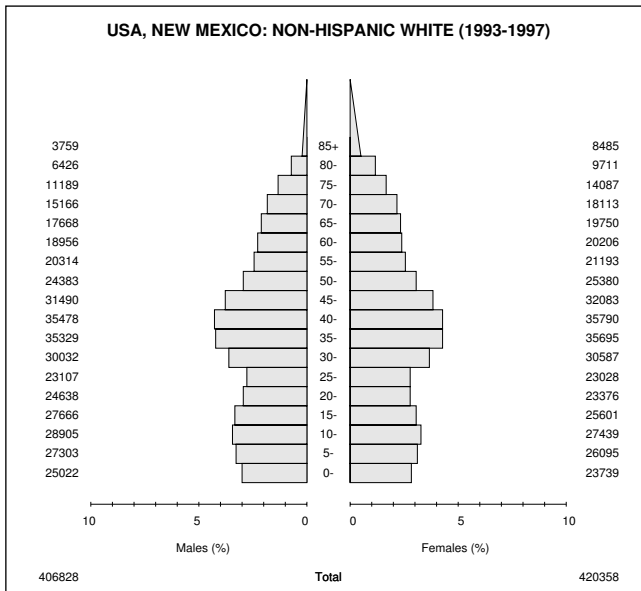
Periodic reports are sent to participating hospitals and individual physicians. The registry also handles over 100 special requests for cancer data annually.

Descriptive epidemiological analyses have shown that Hispanics and American Indians have lower rates than the non-Hispanic white population for skin, breast, endometrium, lung and colorectal cancers, and higher rates for stomach, uterine cervix, kidney and gallbladder cancers.

The registry has been a case-finding source for various population-based case-control studies relating to cancer etiology. It has also been used to monitor patterns of cancer care and survival in relation to factors such as ethnicity, age and marital status.

The development of new laboratory techniques for investigating molecular and cellular changes in preserved tissue specimens has created requests for the registry to help select cases from the file that have documentation of different clinical courses and outcomes.

The registry is conducting a large cohort study of underground uranium miners.



**Source of population**

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

**Notes on the data**

† C44 does not include basal cell or squamous cell carcinoma.

## USA, NEW MEXICO: NON-HISPANIC WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	129	1.2	6.3	<b>4.1</b>	0.23	0.49	28	0.3	1.3	<b>0.7</b>	0.04	0.10	C00
Tongue	58	0.5	2.9	<b>1.8</b>	0.11	0.21	41	0.4	2.0	<b>1.1</b>	0.07	0.14	C01-02
Mouth	70	0.6	3.4	<b>2.3</b>	0.16	0.30	53	0.6	2.5	<b>1.2</b>	0.06	0.13	C03-06
Salivary glands	37	0.3	1.8	<b>1.1</b>	0.05	0.14	29	0.3	1.4	<b>0.8</b>	0.04	0.08	C07-08
Tonsil	30	0.3	1.5	<b>1.1</b>	0.09	0.12	18	0.2	0.9	<b>0.6</b>	0.05	0.07	C09
Other oropharynx	6	0.1	0.3	<b>0.2</b>	0.01	0.03	1	0.0	0.0	<b>0.0</b>	0.00	0.01	C10
Nasopharynx	7	0.1	0.3	<b>0.2</b>	0.01	0.02	2	0.0	0.1	<b>0.1</b>	0.00	0.01	C11
Hypopharynx	30	0.3	1.5	<b>1.0</b>	0.08	0.13	10	0.1	0.5	<b>0.2</b>	0.00	0.04	C12-13
Pharynx unspecified	10	0.1	0.5	<b>0.3</b>	0.02	0.03	6	0.1	0.3	<b>0.2</b>	0.01	0.03	C14
Oesophagus	129	1.2	6.3	<b>3.9</b>	0.22	0.48	44	0.5	2.1	<b>1.1</b>	0.05	0.14	C15
Stomach	153	1.4	7.5	<b>4.4</b>	0.19	0.56	97	1.0	4.6	<b>2.3</b>	0.11	0.25	C16
Small intestine	23	0.2	1.1	<b>0.7</b>	0.04	0.10	28	0.3	1.3	<b>0.7</b>	0.03	0.08	C17
Colon	736	6.8	36.2	<b>21.2</b>	0.95	2.57	730	7.7	34.7	<b>16.2</b>	0.72	1.88	C18
Rectum	301	2.8	14.8	<b>9.3</b>	0.52	1.16	213	2.2	10.1	<b>5.4</b>	0.32	0.65	C19-20
Anus	23	0.2	1.1	<b>0.7</b>	0.03	0.10	40	0.4	1.9	<b>1.1</b>	0.06	0.13	C21
Liver	106	1.0	5.2	<b>3.2</b>	0.15	0.39	60	0.6	2.9	<b>1.4</b>	0.06	0.16	C22
Gallbladder etc.	32	0.3	1.6	<b>1.0</b>	0.04	0.13	45	0.5	2.1	<b>1.0</b>	0.03	0.16	C23-24
Pancreas	227	2.1	11.2	<b>6.5</b>	0.27	0.77	242	2.6	11.5	<b>5.0</b>	0.18	0.55	C25
Nose, sinuses etc.	22	0.2	1.1	<b>0.7</b>	0.05	0.07	11	0.1	0.5	<b>0.3</b>	0.02	0.03	C30-31
Larynx	147	1.4	7.2	<b>4.8</b>	0.34	0.60	42	0.4	2.0	<b>1.2</b>	0.06	0.15	C32
Trachea, bronchus and lung	1545	14.3	76.0	<b>45.3</b>	2.02	5.76	1131	11.9	53.8	<b>29.0</b>	1.49	3.83	C33-34
Other thoracic organs	11	0.1	0.5	<b>0.4</b>	0.03	0.04	6	0.1	0.3	<b>0.2</b>	0.01	0.01	C37-38
Bone	34	0.3	1.7	<b>1.5</b>	0.10	0.13	20	0.2	1.0	<b>0.8</b>	0.06	0.06	C40-41
Melanoma of skin	542	5.0	26.6	<b>18.9</b>	1.33	1.94	415	4.4	19.7	<b>14.3</b>	1.07	1.43	C43
†Other skin	43		2.1	<b>1.4</b>	0.08	0.15	46		2.2	<b>1.5</b>	0.11	0.14	C44
Mesothelioma	30	0.3	1.5	<b>1.0</b>	0.05	0.14	10	0.1	0.5	<b>0.3</b>	0.03	0.04	C45
Kaposi sarcoma	52	0.5	2.6	<b>2.0</b>	0.17	0.17	2	0.0	0.1	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	83	0.8	4.1	<b>2.7</b>	0.14	0.28	58	0.6	2.8	<b>1.9</b>	0.11	0.16	C47+C49
Breast	24	0.2	1.2	<b>0.8</b>	0.05	0.10	3071	32.4	146.1	<b>90.3</b>	6.39	10.56	C50
Vulva							46	0.5	2.2	<b>1.2</b>	0.07	0.12	C51
Vagina							20	0.2	1.0	<b>0.4</b>	0.03	0.05	C52
Cervix uteri							200	2.1	9.5	<b>7.1</b>	0.54	0.72	C53
Corpus uteri							506	5.3	24.1	<b>14.0</b>	0.86	1.74	C54
Uterus unspecified							12	0.1	0.6	<b>0.3</b>	0.01	0.03	C55
Ovary							397	4.2	18.9	<b>11.6</b>	0.79	1.30	C56
Other female genital organs							12	0.1	0.6	<b>0.4</b>	0.03	0.05	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	9	0.1	0.4	<b>0.3</b>	0.01	0.04							C60
Prostate	3593	33.2	176.6	<b>106.4</b>	4.65	14.46							C61
Testis	135	1.2	6.6	<b>6.1</b>	0.46	0.47							C62
Other male genital organs	10	0.1	0.5	<b>0.4</b>	0.02	0.04							C63
Kidney	252	2.3	12.4	<b>8.3</b>	0.55	0.99	155	1.6	7.4	<b>4.7</b>	0.32	0.48	C64
Renal pelvis	22	0.2	1.1	<b>0.7</b>	0.03	0.08	11	0.1	0.5	<b>0.2</b>	0.00	0.02	C65
Ureter	19	0.2	0.9	<b>0.5</b>	0.01	0.08	10	0.1	0.5	<b>0.3</b>	0.01	0.03	C66
Bladder	671	6.2	33.0	<b>19.4</b>	0.88	2.35	250	2.6	11.9	<b>5.8</b>	0.29	0.71	C67
Other urinary organs	11	0.1	0.5	<b>0.2</b>	0.01	0.02	2	0.0	0.1	<b>0.0</b>	0.00	0.00	C68
Eye	19	0.2	0.9	<b>0.7</b>	0.05	0.07	14	0.1	0.7	<b>0.4</b>	0.02	0.04	C69
Brain, nervous system	177	1.6	8.7	<b>6.8</b>	0.46	0.69	131	1.4	6.2	<b>4.3</b>	0.31	0.43	C70-72
Thyroid	71	0.7	3.5	<b>2.7</b>	0.20	0.27	226	2.4	10.8	<b>8.9</b>	0.69	0.82	C73
Adrenal gland	2	0.0	0.1	<b>0.1</b>	0.00	0.00	4	0.0	0.2	<b>0.3</b>	0.01	0.02	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.0	<b>0.1</b>	0.00	0.00	C75
Hodgkin disease	54	0.5	2.7	<b>2.2</b>	0.16	0.18	53	0.6	2.5	<b>2.3</b>	0.14	0.19	C81
Non-Hodgkin lymphoma	399	3.7	19.6	<b>12.9</b>	0.76	1.43	340	3.6	16.2	<b>9.1</b>	0.52	1.06	C82-85,C96
Immunoproliferative diseases	13	0.1	0.6	<b>0.4</b>	0.03	0.05	10	0.1	0.5	<b>0.3</b>	0.01	0.03	C88
Multiple myeloma	125	1.2	6.1	<b>3.8</b>	0.20	0.48	108	1.1	5.1	<b>2.5</b>	0.13	0.32	C90
Lymphoid leukaemia	167	1.5	8.2	<b>5.4</b>	0.28	0.58	92	1.0	4.4	<b>3.0</b>	0.14	0.27	C91
Myeloid leukaemia	139	1.3	6.8	<b>4.4</b>	0.22	0.50	111	1.2	5.3	<b>3.0</b>	0.17	0.33	C92-94
Leukaemia unspecified	18	0.2	0.9	<b>0.4</b>	0.01	0.04	21	0.2	1.0	<b>0.4</b>	0.01	0.02	C95
Other and unspecified	319	2.9	15.7	<b>9.2</b>	0.39	0.99	287	3.0	13.7	<b>6.3</b>	0.28	0.67	O&U
All sites	10865		534.1	<b>334.0</b>	16.93	40.92	9518		452.9	<b>265.8</b>	16.57	30.48	ALL
All sites but C44	10822	100.0	532.0	<b>332.6</b>	16.84	40.77	9472	100.0	450.7	<b>264.3</b>	16.47	30.34	ALLbC44

†See note following population pyramid

## USA, NEW MEXICO: HISPANIC WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	25	0.6	1.6	<b>1.7</b>	0.05	0.20	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	16	0.4	1.0	<b>1.1</b>	0.08	0.12	10	0.3	0.6	<b>0.6</b>	0.04	0.08	C01-02
Mouth	29	0.7	1.9	<b>2.1</b>	0.17	0.23	14	0.4	0.9	<b>0.7</b>	0.04	0.08	C03-06
Salivary glands	15	0.4	1.0	<b>0.9</b>	0.06	0.09	13	0.4	0.8	<b>0.9</b>	0.07	0.10	C07-08
Tonsil	8	0.2	0.5	<b>0.6</b>	0.05	0.09	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	5	0.1	0.3	<b>0.4</b>	0.01	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	13	0.3	0.8	<b>0.9</b>	0.07	0.11	4	0.1	0.3	<b>0.3</b>	0.01	0.02	C11
Hypopharynx	14	0.3	0.9	<b>1.0</b>	0.08	0.13	2	0.1	0.1	<b>0.1</b>	0.01	0.02	C12-13
Pharynx unspecified	6	0.1	0.4	<b>0.4</b>	0.00	0.07	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	51	1.3	3.3	<b>3.5</b>	0.18	0.45	11	0.3	0.7	<b>0.6</b>	0.02	0.09	C15
Stomach	170	4.2	10.9	<b>11.3</b>	0.61	1.28	99	2.8	6.2	<b>4.8</b>	0.24	0.45	C16
Small intestine	11	0.3	0.7	<b>0.8</b>	0.04	0.11	10	0.3	0.6	<b>0.6</b>	0.04	0.07	C17
Colon	285	7.0	18.2	<b>18.6</b>	0.74	2.29	266	7.5	16.6	<b>14.7</b>	0.76	1.79	C18
Rectum	161	4.0	10.3	<b>11.1</b>	0.67	1.34	117	3.3	7.3	<b>6.4</b>	0.31	0.76	C19-20
‡Anus	6	0.1	0.4	<b>0.4</b>	0.03	0.04	4	0.1	0.3	<b>0.3</b>	0.02	0.05	C21
Liver	128	3.1	8.2	<b>8.4</b>	0.34	1.03	62	1.7	3.9	<b>3.3</b>	0.12	0.40	C22
Gallbladder etc.	26	0.6	1.7	<b>1.6</b>	0.03	0.21	64	1.8	4.0	<b>3.4</b>	0.16	0.41	C23-24
Pancreas	115	2.8	7.3	<b>7.5</b>	0.34	0.84	112	3.1	7.0	<b>5.8</b>	0.25	0.68	C25
Nose, sinuses etc.	10	0.2	0.6	<b>0.7</b>	0.04	0.06	7	0.2	0.4	<b>0.4</b>	0.00	0.07	C30-31
Larynx	54	1.3	3.4	<b>3.7</b>	0.21	0.49	9	0.3	0.6	<b>0.5</b>	0.01	0.06	C32
Trachea, bronchus and lung	429	10.6	27.4	<b>27.7</b>	1.00	3.37	278	7.8	17.4	<b>15.8</b>	0.77	2.11	C33-34
Other thoracic organs	8	0.2	0.5	<b>0.5</b>	0.03	0.05	4	0.1	0.3	<b>0.2</b>	0.01	0.03	C37-38
Bone	12	0.3	0.8	<b>0.7</b>	0.05	0.07	17	0.5	1.1	<b>1.0</b>	0.07	0.09	C40-41
Melanoma of skin	35	0.9	2.2	<b>2.3</b>	0.16	0.25	49	1.4	3.1	<b>2.8</b>	0.21	0.28	C43
†Other skin	6		0.4	<b>0.4</b>	0.04	0.04	8		0.5	<b>0.5</b>	0.04	0.04	C44
Mesothelioma	21	0.5	1.3	<b>1.4</b>	0.08	0.18	9	0.3	0.6	<b>0.5</b>	0.01	0.06	C45
Kaposi sarcoma	54	1.3	3.4	<b>3.1</b>	0.23	0.25	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	36	0.9	2.3	<b>2.3</b>	0.16	0.24	35	1.0	2.2	<b>2.0</b>	0.14	0.19	C47+C49
Breast	5	0.1	0.3	<b>0.4</b>	0.02	0.05	1041	29.2	65.1	<b>61.6</b>	4.48	6.91	C50
Vulva							16	0.4	1.0	<b>0.9</b>	0.03	0.10	C51
Vagina							7	0.2	0.4	<b>0.4</b>	0.02	0.04	C52
Cervix uteri							165	4.6	10.3	<b>9.5</b>	0.72	0.97	C53
Corpus uteri							184	5.2	11.5	<b>11.3</b>	0.85	1.38	C54
Uterus unspecified							4	0.1	0.3	<b>0.2</b>	0.01	0.03	C55
Ovary							153	4.3	9.6	<b>8.9</b>	0.61	0.98	C56
Other female genital organs							9	0.3	0.6	<b>0.5</b>	0.03	0.06	C57
Placenta							1	0.0	0.1	<b>0.1</b>	0.00	0.00	C58
Penis	17	0.4	1.1	<b>1.0</b>	0.05	0.10							C60
Prostate	1306	32.1	83.4	<b>89.4</b>	3.62	12.09							C61
Testis	63	1.5	4.0	<b>4.0</b>	0.29	0.29							C62
Other male genital organs	1	0.0	0.1	<b>0.1</b>	0.00	0.00							C63
Kidney	143	3.5	9.1	<b>10.1</b>	0.70	1.19	95	2.7	5.9	<b>5.3</b>	0.32	0.64	C64
Renal pelvis	5	0.1	0.3	<b>0.3</b>	0.01	0.03	8	0.2	0.5	<b>0.4</b>	0.03	0.04	C65
Ureter	3	0.1	0.2	<b>0.2</b>	0.00	0.04	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C66
Bladder	143	3.5	9.1	<b>9.2</b>	0.33	1.18	54	1.5	3.4	<b>3.0</b>	0.15	0.36	C67
Other urinary organs	4	0.1	0.3	<b>0.2</b>	0.00	0.03	2	0.1	0.1	<b>0.1</b>	0.00	0.00	C68
Eye	5	0.1	0.3	<b>0.3</b>	0.01	0.04	8	0.2	0.5	<b>0.5</b>	0.01	0.05	C69
Brain, nervous system	76	1.9	4.9	<b>5.0</b>	0.28	0.48	38	1.1	2.4	<b>2.4</b>	0.14	0.20	C70-72
Thyroid	41	1.0	2.6	<b>2.6</b>	0.20	0.28	150	4.2	9.4	<b>8.9</b>	0.62	0.88	C73
Adrenal gland	5	0.1	0.3	<b>0.3</b>	0.01	0.01	3	0.1	0.2	<b>0.2</b>	0.01	0.01	C74
Other endocrine	3	0.1	0.2	<b>0.2</b>	0.01	0.03	1	0.0	0.1	<b>0.1</b>	0.00	0.01	C75
Hodgkin disease	35	0.9	2.2	<b>2.3</b>	0.15	0.21	23	0.6	1.4	<b>1.4</b>	0.11	0.13	C81
Non-Hodgkin lymphoma	154	3.8	9.8	<b>9.9</b>	0.59	1.12	114	3.2	7.1	<b>6.4</b>	0.33	0.72	C82-85,C96
Immunoproliferative diseases	3	0.1	0.2	<b>0.1</b>	0.00	0.00	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	60	1.5	3.8	<b>3.9</b>	0.19	0.46	45	1.3	2.8	<b>2.5</b>	0.10	0.32	C90
Lymphoid leukaemia	60	1.5	3.8	<b>3.9</b>	0.23	0.30	48	1.3	3.0	<b>2.8</b>	0.14	0.21	C91
Myeloid leukaemia	51	1.3	3.3	<b>3.1</b>	0.13	0.39	60	1.7	3.8	<b>3.5</b>	0.23	0.33	C92-94
Leukaemia unspecified	9	0.2	0.6	<b>0.6</b>	0.02	0.05	9	0.3	0.6	<b>0.4</b>	0.02	0.02	C95
Other and unspecified	131	3.2	8.4	<b>8.2</b>	0.29	0.85	125	3.5	7.8	<b>6.3</b>	0.25	0.61	O&U
All sites	4072		259.9	<b>270.2</b>	12.69	32.90	3570		223.2	<b>203.8</b>	12.57	22.94	ALL
All sites but C44	4066	100.0	259.5	<b>269.8</b>	12.66	32.87	3562	100.0	222.7	<b>203.3</b>	12.53	22.90	ALLbC44

‡33.3% of cases are anorectal tumours

†See note following population pyramid

## USA, NEW MEXICO: AMERICAN INDIAN (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	1	0.2	0.3	<b>0.5</b>	0.00	0.09	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.2	0.3	<b>0.3</b>	0.04	0.04	C01-02
Mouth	2	0.4	0.5	<b>0.5</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C03-06
Salivary glands	1	0.2	0.3	<b>0.2</b>	0.00	0.00	1	0.2	0.3	<b>0.3</b>	0.02	0.02	C07-08
Tonsil	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	5	1.0	1.3	<b>1.8</b>	0.13	0.22	3	0.6	0.8	<b>1.0</b>	0.02	0.18	C11
Hypopharynx	5	1.0	1.3	<b>1.8</b>	0.00	0.09	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	1	0.2	0.3	<b>0.4</b>	0.06	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	6	1.3	1.6	<b>2.6</b>	0.19	0.31	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C15
Stomach	25	5.2	6.7	<b>9.9</b>	0.37	1.29	21	3.9	5.3	<b>6.3</b>	0.37	0.73	C16
Small intestine	3	0.6	0.8	<b>1.3</b>	0.14	0.14	1	0.2	0.3	<b>0.3</b>	0.03	0.03	C17
Colon	33	6.9	8.9	<b>14.3</b>	0.83	1.64	38	7.1	9.6	<b>11.1</b>	0.56	1.23	C18
Rectum	18	3.8	4.8	<b>8.3</b>	0.61	1.00	13	2.4	3.3	<b>4.1</b>	0.19	0.48	C19-20
Anus	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.2	0.3	<b>0.4</b>	0.00	0.09	C21
Liver	28	5.9	7.5	<b>12.0</b>	0.76	1.33	17	3.2	4.3	<b>5.3</b>	0.23	0.67	C22
Gallbladder etc.	18	3.8	4.8	<b>7.5</b>	0.13	0.99	18	3.4	4.5	<b>5.1</b>	0.17	0.66	C23-24
Pancreas	11	2.3	3.0	<b>4.5</b>	0.07	0.45	22	4.1	5.5	<b>6.6</b>	0.28	0.93	C25
Nose, sinuses etc.	1	0.2	0.3	<b>0.6</b>	0.07	0.07	4	0.8	1.0	<b>1.1</b>	0.04	0.13	C30-31
Larynx	1	0.2	0.3	<b>0.6</b>	0.07	0.07	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C32
Trachea, bronchus and lung	35	7.3	9.4	<b>15.0</b>	0.55	1.83	17	3.2	4.3	<b>5.3</b>	0.23	0.58	C33-34
Other thoracic organs	2	0.4	0.5	<b>0.9</b>	0.07	0.07	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C37-38
Bone	1	0.2	0.3	<b>0.2</b>	0.01	0.01	3	0.6	0.8	<b>0.9</b>	0.08	0.08	C40-41
Melanoma of skin	1	0.2	0.3	<b>0.3</b>	0.00	0.00	4	0.8	1.0	<b>0.9</b>	0.06	0.06	C43
†Other skin	0	0.0	0.0	<b>0.0</b>	0.00	0.00	3	0.8	0.8	<b>0.9</b>	0.09	0.09	C44
Mesothelioma	1	0.2	0.3	<b>0.4</b>	0.06	0.06	1	0.2	0.3	<b>0.2</b>	0.00	0.00	C45
Kaposi sarcoma	4	0.8	1.1	<b>1.0</b>	0.09	0.09	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	6	1.3	1.6	<b>1.6</b>	0.11	0.11	6	1.1	1.5	<b>1.5</b>	0.09	0.09	C47+C49
Breast	0	0.0	0.0	<b>0.0</b>	0.00	0.00	122	22.9	30.8	<b>38.1</b>	3.04	4.29	C50
Vulva							3	0.6	0.8	<b>1.1</b>	0.05	0.23	C51
Vagina							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C52
Cervix uteri							34	6.4	8.6	<b>9.7</b>	0.81	1.05	C53
Corpus uteri							38	7.1	9.6	<b>11.5</b>	0.78	1.40	C54
Uterus unspecified							2	0.4	0.5	<b>0.4</b>	0.02	0.02	C55
Ovary							34	6.4	8.6	<b>10.1</b>	0.69	1.02	C56
Other female genital organs							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C57
Placenta							2	0.4	0.5	<b>0.4</b>	0.03	0.03	C58
Penis	2	0.4	0.5	<b>0.8</b>	0.02	0.11							C60
Prostate	121	25.4	32.6	<b>52.3</b>	1.86	6.56							C61
Testis	12	2.5	3.2	<b>3.3</b>	0.26	0.26							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	46	9.6	12.4	<b>18.8</b>	1.19	2.40	27	5.1	6.8	<b>9.4</b>	0.47	1.27	C64
Renal pelvis	1	0.2	0.3	<b>0.4</b>	0.06	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.2	0.3	<b>0.4</b>	0.00	0.07	C66
Bladder	9	1.9	2.4	<b>4.1</b>	0.27	0.45	3	0.6	0.8	<b>0.7</b>	0.00	0.00	C67
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	3	0.6	0.8	<b>0.7</b>	0.04	0.04	2	0.4	0.5	<b>0.4</b>	0.02	0.02	C69
Brain, nervous system	10	2.1	2.7	<b>3.6</b>	0.15	0.36	5	0.9	1.3	<b>1.1</b>	0.08	0.08	C70-72
Thyroid	5	1.0	1.3	<b>2.2</b>	0.20	0.20	19	3.6	4.8	<b>5.5</b>	0.46	0.46	C73
Adrenal gland	2	0.4	0.5	<b>0.8</b>	0.01	0.10	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	1	0.2	0.3	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	0	0.0	0.0	<b>0.0</b>	0.00	0.00	3	0.6	0.8	<b>0.8</b>	0.08	0.08	C81
Non-Hodgkin lymphoma	13	2.7	3.5	<b>4.9</b>	0.28	0.60	16	3.0	4.0	<b>5.3</b>	0.45	0.61	C82-85,C96
Immunoproliferative diseases	2	0.4	0.5	<b>0.6</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	9	1.9	2.4	<b>4.0</b>	0.21	0.51	8	1.5	2.0	<b>2.1</b>	0.10	0.19	C90
Lymphoid leukaemia	8	1.7	2.2	<b>2.3</b>	0.15	0.15	3	0.6	0.8	<b>0.7</b>	0.03	0.03	C91
Myeloid leukaemia	8	1.7	2.2	<b>2.7</b>	0.26	0.26	9	1.7	2.3	<b>2.7</b>	0.16	0.32	C92-94
Leukaemia unspecified	1	0.2	0.3	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C95
Other and unspecified	15	3.1	4.0	<b>6.5</b>	0.39	0.71	30	5.6	7.6	<b>7.7</b>	0.40	0.64	O&U
All sites	477		128.5	<b>194.8</b>	9.71	22.72	535		134.9	<b>159.7</b>	10.15	17.86	ALL
All sites but C44	477	100.0	128.5	<b>194.8</b>	9.71	22.72	532	100.0	134.1	<b>158.8</b>	10.06	17.77	ALLbC44

†See note following population pyramid





# USA, New York State

## **Registration area**

In 1995, about 80% of the population of New York State lived in urban areas (>14 million inhabitants); 77.2% were Caucasian, 17.5% were black, 13.7% were Hispanics (of any race), 0.4% were American Indian and 4.9% were Asian (including Pacific Islanders).

The registration area for the New York State Cancer Registry has been constant since 1973. The absolute size of the population of New York has remained steady, but the median age increased from 33.7 years in 1990 to 36.4 years in 1998. The percentage of the population in a racial or ethnic minority group increased from 34% to 38% in the same period.

## **Cancer care facilities**

Residents of New York State have access to more than 250 acute-care hospitals, including 21 Community Hospital Comprehensive Cancer Care facilities located throughout the state and two National Cancer Institute designated Comprehensive Cancer Centers. In addition, many free-standing health care facilities and private physicians diagnose and treat cancer. There are 50 Health Maintenance Organizations and six Veterans Administration Hospitals that also provide health services.

## **Registry structure and methods**

The New York State Cancer Registry (NYSCR) is the second oldest state tumour registry in the USA, and has had mandatory cancer reporting since 1940. At the time of its founding, the registration area covered the entire state except New York City. In 1973, the reporting mandate was extended to include New York City.

The registry is located within the New York State Department of Health (NYSDOH), and is funded partly by the NYSDOH and partly by the National Program of Cancer Registries. The registry has a staff of 44.75, including a director, 11 field staff who act as liaisons with reporting facilities and provide training, 12 coding staff who visually edit and consolidate case reports, three quality assurance staff, five research scientists, 4.75 computer programmer analysts, and eight geo-coding and secretarial support staff. Thirteen staff members are Certified Tumor Registrars.

The NYSCR uses passive notification of reports from nearly 300 sources including hospitals, pathology and cytology laboratories, radiation treatment centres, and state vital records. Data are received electronically.

Death certificates are electronically matched against registry files. New cases identified are followed up to hospitals and physicians. To further assure complete reporting, New York State cases diagnosed and/or treated in 16 other states are identified through reciprocal reporting agreements.

Much time and effort is devoted to elimination of duplicate case reports. Each report is matched electronically to the existing records using name, date of birth, Social Security number, gender, and address. Exact

matches are electronically processed; possible matches are reviewed clerically. A case-consolidation program is run at least once annually to identify remaining duplicate records.

In order to evaluate the quality and completeness of cancer reporting, the registry conducts routine audits at hospitals throughout the state. Staff from the Field Services Unit also compare the number of cases reported to the number of cancer-related hospital discharges and review the results for consistency. Results of the evaluations are used to target the location and content of educational and training programmes conducted throughout the state.

## **Interpreting the results**

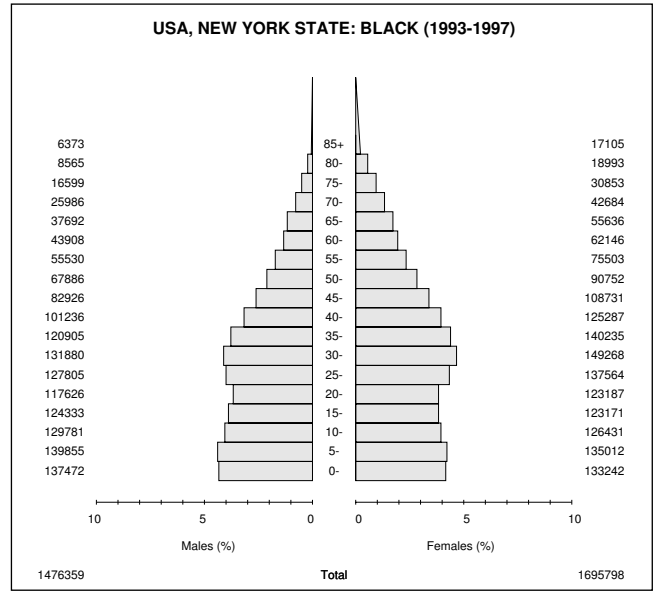
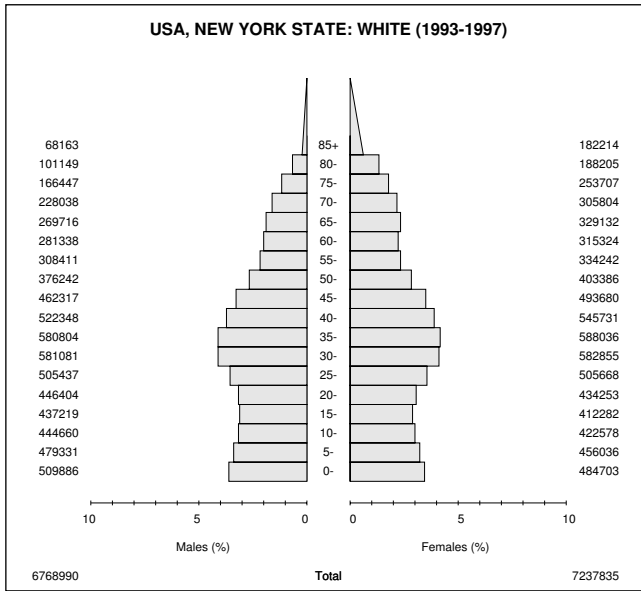
Changes in cancer screening patterns have had a large impact on the number of cancer cases diagnosed in the state in the 1990s. According to the Behavioral Risk Factor Surveillance System telephone survey, the percentage of women age 40 years or older who have ever had a mammogram increased from 78% in 1994 to 87% in 1998. The percentage of persons age 50 years or older who ever had sigmoidoscopy increased from 34% in 1995 to 44% in 1997. The percentage of men 50 years of age or older who ever had a PSA test increased from 62% in 1994 to 77% in 1997.

## **Use of the data**

The NYSCR prepares an extensive two volume annual report of cancer incidence and mortality. All reports and maps are available on the 'Info for Researchers' section of the NYSDOH website: [www.health.state.ny.us](http://www.health.state.ny.us). Additional data are routinely provided in electronic form to local health units within New York State for use in community health assessments and municipal health programme planning.

Within the New York State Department of Health, the data are used extensively for cancer surveillance and for programme planning. The Cancer Surveillance Program has direct access to the registry database for use in investigating possible cancer clusters and addressing community concerns. The Cancer Screening Research and Evaluation Unit uses registry data for targeting, prioritization and programme evaluation. The New York State Department of Health provides cancer education and awareness programmes and funds screening for breast, cervical and colorectal cancer for under- or un-insured individuals.

NYSCR data are routinely provided to other organizations within the state, such as hospitals and other medical care providers, cancer control organizations, patient support and advocacy groups, public interest research groups and other researchers. These data are used for planning and evaluation of health services, grass-roots advocacy and generating etiological hypotheses. In addition, the data are used by researchers throughout the USA for epidemiological studies.



**Source of population**

The annual estimates are based on the 1990 US census and the use of supplementary data, including births, deaths, domestic and international migration, and modelling techniques.

**Notes on the data**

† C44 does not include basal cell or squamous cell carcinoma except for skin of lip and anus.

## USA, NEW YORK STATE: WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	234	0.1	0.7	<b>0.4</b>	0.02	0.05	93	0.1	0.3	<b>0.1</b>	0.01	0.01	C00
Tongue	1238	0.7	3.7	<b>2.7</b>	0.19	0.33	621	0.3	1.7	<b>1.0</b>	0.07	0.12	C01-02
Mouth	1078	0.6	3.2	<b>2.3</b>	0.16	0.27	783	0.4	2.2	<b>1.2</b>	0.08	0.15	C03-06
Salivary glands	540	0.3	1.6	<b>1.1</b>	0.06	0.13	400	0.2	1.1	<b>0.7</b>	0.04	0.07	C07-08
Tonsil	486	0.3	1.4	<b>1.1</b>	0.08	0.13	230	0.1	0.6	<b>0.4</b>	0.03	0.05	C09
Other oropharynx	263	0.1	0.8	<b>0.6</b>	0.04	0.07	113	0.1	0.3	<b>0.2</b>	0.01	0.02	C10
Nasopharynx	250	0.1	0.7	<b>0.6</b>	0.05	0.07	142	0.1	0.4	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	508	0.3	1.5	<b>1.1</b>	0.08	0.14	153	0.1	0.4	<b>0.3</b>	0.02	0.03	C12-13
Pharynx unspecified	177	0.1	0.5	<b>0.4</b>	0.03	0.05	95	0.1	0.3	<b>0.1</b>	0.01	0.02	C14
Oesophagus	2512	1.4	7.4	<b>5.1</b>	0.30	0.64	1096	0.6	3.0	<b>1.4</b>	0.07	0.17	C15
Stomach	4547	2.6	13.4	<b>8.6</b>	0.42	0.98	3157	1.7	8.7	<b>3.8</b>	0.16	0.40	C16
Small intestine	561	0.3	1.7	<b>1.1</b>	0.06	0.13	545	0.3	1.5	<b>0.8</b>	0.05	0.10	C17
Colon	15605	8.8	46.1	<b>28.6</b>	1.20	3.35	17812	9.9	49.2	<b>21.9</b>	0.95	2.51	C18
Rectum	6819	3.9	20.1	<b>13.3</b>	0.68	1.65	5773	3.2	16.0	<b>8.0</b>	0.42	0.96	C19-20
Anus	287	0.2	0.8	<b>0.6</b>	0.04	0.07	439	0.2	1.2	<b>0.7</b>	0.04	0.08	C21
Liver	2286	1.3	6.8	<b>4.6</b>	0.25	0.55	1316	0.7	3.6	<b>1.8</b>	0.08	0.20	C22
Gallbladder etc.	960	0.5	2.8	<b>1.7</b>	0.07	0.20	1528	0.8	4.2	<b>1.9</b>	0.08	0.22	C23-24
Pancreas	4639	2.6	13.7	<b>8.9</b>	0.43	1.07	5204	2.9	14.4	<b>6.4</b>	0.27	0.74	C25
Nose, sinuses etc.	278	0.2	0.8	<b>0.6</b>	0.03	0.07	223	0.1	0.6	<b>0.4</b>	0.02	0.04	C30-31
Larynx	2892	1.6	8.5	<b>6.2</b>	0.40	0.78	867	0.5	2.4	<b>1.5</b>	0.11	0.19	C32
Trachea, bronchus and lung	29176	16.5	86.2	<b>57.2</b>	2.88	7.24	23565	13.0	65.1	<b>36.0</b>	2.05	4.57	C33-34
Other thoracic organs	237	0.1	0.7	<b>0.6</b>	0.04	0.06	184	0.1	0.5	<b>0.4</b>	0.02	0.04	C37-38
Bone	481	0.3	1.4	<b>1.3</b>	0.08	0.11	414	0.2	1.1	<b>1.0</b>	0.06	0.08	C40-41
Melanoma of skin	3903	2.2	11.5	<b>8.3</b>	0.53	0.95	2917	1.6	8.1	<b>5.3</b>	0.37	0.57	C43
†Other skin	365		1.1	<b>0.7</b>	0.04	0.08	334		0.9	<b>0.5</b>	0.03	0.05	C44
Mesothelioma	632	0.4	1.9	<b>1.2</b>	0.05	0.14	186	0.1	0.5	<b>0.3</b>	0.02	0.03	C45
Kaposi sarcoma	1632	0.9	4.8	<b>3.8</b>	0.30	0.31	157	0.1	0.4	<b>0.3</b>	0.02	0.02	C46
Connective and soft tissue	1137	0.6	3.4	<b>2.6</b>	0.16	0.26	1086	0.6	3.0	<b>2.1</b>	0.13	0.20	C47+C49
Breast	481	0.3	1.4	<b>1.0</b>	0.06	0.12	51612	28.5	142.6	<b>90.6</b>	6.41	10.53	C50
Vulva							1095	0.6	3.0	<b>1.5</b>	0.08	0.16	C51
Vagina							274	0.2	0.8	<b>0.4</b>	0.03	0.04	C52
Cervix uteri							4176	2.3	11.5	<b>8.6</b>	0.67	0.86	C53
Corpus uteri							10367	5.7	28.6	<b>18.2</b>	1.29	2.27	C54
Uterus unspecified							617	0.3	1.7	<b>0.9</b>	0.06	0.11	C55
Ovary							7802	4.3	21.6	<b>13.8</b>	0.95	1.57	C56
Other female genital organs							242	0.1	0.7	<b>0.4</b>	0.03	0.05	C57
Placenta							26	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	252	0.1	0.7	<b>0.5</b>	0.03	0.06							C60
Prostate	45809	25.9	135.3	<b>89.0</b>	3.90	11.99							C61
Testis	2006	1.1	5.9	<b>5.2</b>	0.39	0.40							C62
Other male genital organs	73	0.0	0.2	<b>0.2</b>	0.01	0.02							C63
Kidney	4893	2.8	14.5	<b>10.3</b>	0.62	1.25	3181	1.8	8.8	<b>5.3</b>	0.32	0.62	C64
Renal pelvis	345	0.2	1.0	<b>0.6</b>	0.03	0.08	257	0.1	0.7	<b>0.3</b>	0.02	0.04	C65
Ureter	309	0.2	0.9	<b>0.6</b>	0.03	0.08	208	0.1	0.6	<b>0.3</b>	0.01	0.04	C66
Bladder	13294	7.5	39.3	<b>25.0</b>	1.12	2.99	5367	3.0	14.8	<b>7.2</b>	0.36	0.86	C67
Other urinary organs	139	0.1	0.4	<b>0.3</b>	0.01	0.03	65	0.0	0.2	<b>0.1</b>	0.00	0.01	C68
Eye	299	0.2	0.9	<b>0.7</b>	0.04	0.07	285	0.2	0.8	<b>0.6</b>	0.04	0.06	C69
Brain, nervous system	3079	1.7	9.1	<b>7.5</b>	0.48	0.74	2702	1.5	7.5	<b>5.4</b>	0.34	0.53	C70-72
Thyroid	1207	0.7	3.6	<b>2.8</b>	0.21	0.29	3223	1.8	8.9	<b>7.2</b>	0.54	0.67	C73
Adrenal gland	136	0.1	0.4	<b>0.4</b>	0.02	0.03	159	0.1	0.4	<b>0.4</b>	0.03	0.03	C74
Other endocrine	105	0.1	0.3	<b>0.3</b>	0.02	0.02	98	0.1	0.3	<b>0.2</b>	0.02	0.02	C75
Hodgkin disease	1257	0.7	3.7	<b>3.4</b>	0.23	0.28	1159	0.6	3.2	<b>3.0</b>	0.20	0.23	C81
Non-Hodgkin lymphoma	8260	4.7	24.4	<b>17.6</b>	1.09	1.87	7072	3.9	19.5	<b>11.0</b>	0.63	1.23	C82-85,C96
Immunoproliferative diseases	92	0.1	0.3	<b>0.2</b>	0.01	0.02	60	0.0	0.2	<b>0.1</b>	0.00	0.01	C88
Multiple myeloma	1950	1.1	5.8	<b>3.7</b>	0.18	0.44	1913	1.1	5.3	<b>2.6</b>	0.13	0.30	C90
Lymphoid leukaemia	2330	1.3	6.9	<b>5.4</b>	0.27	0.52	1841	1.0	5.1	<b>3.3</b>	0.16	0.28	C91
Myeloid leukaemia	2294	1.3	6.8	<b>4.8</b>	0.25	0.50	1957	1.1	5.4	<b>3.2</b>	0.18	0.32	C92-94
Leukaemia unspecified	473	0.3	1.4	<b>0.8</b>	0.02	0.07	468	0.3	1.3	<b>0.5</b>	0.02	0.05	C95
Other and unspecified	4471	2.5	13.2	<b>8.5</b>	0.40	0.94	5466	3.0	15.1	<b>7.0</b>	0.34	0.75	O&U
All sites	177277		523.8	<b>353.9</b>	18.06	42.67	181125		500.5	<b>291.0</b>	18.11	33.33	ALL
All sites but C44	176912	100.0	522.7	<b>353.2</b>	18.02	42.59	180791	100.0	499.6	<b>290.5</b>	18.08	33.28	ALLbC44

†See note following population pyramid

## USA, NEW YORK STATE: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	1	0.0	0.0	<b>0.0</b>	0.00	0.00	10	0.0	0.1	<b>0.1</b>	0.00	0.01	C00
Tongue	259	1.0	3.5	<b>3.9</b>	0.33	0.46	99	0.4	1.2	<b>1.0</b>	0.08	0.12	C01-02
Mouth	249	0.9	3.4	<b>3.7</b>	0.29	0.45	160	0.7	1.9	<b>1.6</b>	0.11	0.19	C03-06
Salivary glands	57	0.2	0.8	<b>0.8</b>	0.06	0.09	73	0.3	0.9	<b>0.7</b>	0.05	0.09	C07-08
Tonsil	140	0.5	1.9	<b>2.0</b>	0.16	0.22	47	0.2	0.6	<b>0.5</b>	0.04	0.06	C09
Other oropharynx	78	0.3	1.1	<b>1.2</b>	0.09	0.15	26	0.1	0.3	<b>0.3</b>	0.02	0.03	C10
Nasopharynx	78	0.3	1.1	<b>1.1</b>	0.09	0.12	31	0.1	0.4	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	172	0.7	2.3	<b>2.6</b>	0.20	0.32	29	0.1	0.3	<b>0.3</b>	0.02	0.03	C12-13
Pharynx unspecified	65	0.2	0.9	<b>1.0</b>	0.07	0.13	13	0.1	0.2	<b>0.1</b>	0.01	0.01	C14
Oesophagus	686	2.6	9.3	<b>10.3</b>	0.65	1.33	351	1.4	4.1	<b>3.4</b>	0.20	0.42	C15
Stomach	900	3.4	12.2	<b>13.2</b>	0.65	1.55	763	3.1	9.0	<b>6.6</b>	0.28	0.74	C16
Small intestine	107	0.4	1.4	<b>1.6</b>	0.08	0.20	109	0.4	1.3	<b>1.1</b>	0.06	0.13	C17
Colon	1887	7.2	25.6	<b>28.0</b>	1.41	3.34	2421	9.9	28.6	<b>21.8</b>	1.07	2.56	C18
Rectum	668	2.5	9.0	<b>9.8</b>	0.53	1.22	681	2.8	8.0	<b>6.3</b>	0.32	0.76	C19-20
Anus	58	0.2	0.8	<b>0.8</b>	0.06	0.10	85	0.3	1.0	<b>0.8</b>	0.06	0.09	C21
Liver	491	1.9	6.7	<b>7.1</b>	0.46	0.78	276	1.1	3.3	<b>2.5</b>	0.13	0.29	C22
Gallbladder etc.	98	0.4	1.3	<b>1.4</b>	0.06	0.16	196	0.8	2.3	<b>1.8</b>	0.08	0.22	C23-24
Pancreas	605	2.3	8.2	<b>8.9</b>	0.45	1.12	822	3.3	9.7	<b>7.3</b>	0.33	0.86	C25
Nose, sinuses etc.	45	0.2	0.6	<b>0.7</b>	0.04	0.08	30	0.1	0.4	<b>0.3</b>	0.02	0.03	C30-31
Larynx	551	2.1	7.5	<b>8.3</b>	0.59	1.05	171	0.7	2.0	<b>1.8</b>	0.13	0.22	C32
Trachea, bronchus and lung	4261	16.2	57.7	<b>63.6</b>	3.73	8.06	2800	11.4	33.0	<b>27.5</b>	1.68	3.53	C33-34
Other thoracic organs	34	0.1	0.5	<b>0.5</b>	0.03	0.05	27	0.1	0.3	<b>0.2</b>	0.02	0.03	C37-38
Bone	62	0.2	0.8	<b>0.9</b>	0.05	0.08	65	0.3	0.8	<b>0.8</b>	0.05	0.05	C40-41
Melanoma of skin	41	0.2	0.6	<b>0.6</b>	0.03	0.06	75	0.3	0.9	<b>0.7</b>	0.04	0.08	C43
†Other skin	47		0.6	<b>0.6</b>	0.05	0.06	47		0.6	<b>0.5</b>	0.04	0.04	C44
Mesothelioma	41	0.2	0.6	<b>0.6</b>	0.03	0.07	16	0.1	0.2	<b>0.2</b>	0.01	0.02	C45
Kaposi sarcoma	765	2.9	10.4	<b>8.8</b>	0.72	0.74	103	0.4	1.2	<b>1.0</b>	0.08	0.08	C46
Connective and soft tissue	134	0.5	1.8	<b>1.8</b>	0.13	0.19	180	0.7	2.1	<b>1.9</b>	0.13	0.17	C47+C49
Breast	73	0.3	1.0	<b>1.0</b>	0.04	0.12	6705	27.3	79.1	<b>66.3</b>	4.70	7.56	C50
Vulva							96	0.4	1.1	<b>0.9</b>	0.06	0.10	C51
Vagina							69	0.3	0.8	<b>0.6</b>	0.04	0.07	C52
Cervix uteri							1336	5.4	15.8	<b>13.2</b>	0.98	1.39	C53
Corpus uteri							1222	5.0	14.4	<b>12.3</b>	0.77	1.61	C54
Uterus unspecified							157	0.6	1.9	<b>1.6</b>	0.12	0.18	C55
Ovary							899	3.7	10.6	<b>9.0</b>	0.58	1.05	C56
Other female genital organs							48	0.2	0.6	<b>0.5</b>	0.03	0.06	C57
Placenta							17	0.1	0.2	<b>0.2</b>	0.01	0.01	C58
Penis	44	0.2	0.6	<b>0.6</b>	0.04	0.08							C60
Prostate	8993	34.2	121.8	<b>136.9</b>	6.35	18.33							C61
Testis	66	0.3	0.9	<b>0.8</b>	0.06	0.06							C62
Other male genital organs	5	0.0	0.1	<b>0.1</b>	0.00	0.00							C63
Kidney	581	2.2	7.9	<b>8.5</b>	0.59	1.01	401	1.6	4.7	<b>4.1</b>	0.24	0.46	C64
Renal pelvis	11	0.0	0.1	<b>0.2</b>	0.01	0.02	13	0.1	0.2	<b>0.1</b>	0.01	0.01	C65
Ureter	8	0.0	0.1	<b>0.1</b>	0.00	0.02	8	0.0	0.1	<b>0.1</b>	0.00	0.00	C66
Bladder	550	2.1	7.5	<b>8.0</b>	0.31	0.90	408	1.7	4.8	<b>3.5</b>	0.14	0.39	C67
Other urinary organs	21	0.1	0.3	<b>0.3</b>	0.02	0.04	29	0.1	0.3	<b>0.3</b>	0.02	0.03	C68
Eye	20	0.1	0.3	<b>0.3</b>	0.01	0.03	19	0.1	0.2	<b>0.3</b>	0.01	0.02	C69
Brain, nervous system	269	1.0	3.6	<b>3.8</b>	0.25	0.39	266	1.1	3.1	<b>2.9</b>	0.18	0.29	C70-72
Thyroid	92	0.4	1.2	<b>1.3</b>	0.09	0.15	370	1.5	4.4	<b>3.8</b>	0.28	0.37	C73
Adrenal gland	30	0.1	0.4	<b>0.5</b>	0.03	0.03	28	0.1	0.3	<b>0.4</b>	0.02	0.03	C74
Other endocrine	14	0.1	0.2	<b>0.2</b>	0.01	0.03	22	0.1	0.3	<b>0.2</b>	0.01	0.02	C75
Hodgkin disease	187	0.7	2.5	<b>2.4</b>	0.18	0.19	138	0.6	1.6	<b>1.5</b>	0.10	0.12	C81
Non-Hodgkin lymphoma	1109	4.2	15.0	<b>14.8</b>	1.10	1.52	785	3.2	9.3	<b>7.5</b>	0.48	0.79	C82-85,C96
Immunoproliferative diseases	3	0.0	0.0	<b>0.0</b>	0.00	0.00	6	0.0	0.1	<b>0.1</b>	0.00	0.00	C88
Multiple myeloma	460	1.8	6.2	<b>6.7</b>	0.36	0.80	558	2.3	6.6	<b>5.2</b>	0.27	0.62	C90
Lymphoid leukaemia	224	0.9	3.0	<b>3.3</b>	0.18	0.33	198	0.8	2.3	<b>2.0</b>	0.09	0.19	C91
Myeloid leukaemia	259	1.0	3.5	<b>3.6</b>	0.21	0.39	253	1.0	3.0	<b>2.5</b>	0.15	0.24	C92-94
Leukaemia unspecified	46	0.2	0.6	<b>0.7</b>	0.03	0.07	52	0.2	0.6	<b>0.5</b>	0.02	0.05	C95
Other and unspecified	671	2.6	9.1	<b>9.7</b>	0.54	1.12	790	3.2	9.3	<b>7.2</b>	0.39	0.82	O&U
All sites	26316		356.5	<b>387.4</b>	21.42	47.83	24599		290.1	<b>238.1</b>	14.77	27.39	ALL
All sites but C44	26269	100.0	355.9	<b>386.8</b>	21.38	47.77	24552	100.0	289.6	<b>237.6</b>	14.74	27.35	ALLbC44

†See note following population pyramid

# USA, Utah

### Registration area

The State of Utah covers 299 888 km<sup>2</sup> and is the eleventh largest state of the USA in geographical area. There were 2 233 169 residents in Utah at the time of the decennial census conducted in 2000. Approximately 89% of Utah residents are white and, of these, about 10% are of Hispanic origin. The remaining population comprises American Indians (1.3%), Asians (1.7%), Pacific Islanders (0.7%), blacks (0.8%) and individuals of other racial and ethnic backgrounds.

Utah's birth rate of 21.8 per 1000 in 1999 was approximately 50% higher than the national average of 14.5 per 1000. Correspondingly, the median age of Utah residents was 27.1 years at the time of the 2000 decennial census, fully eight years younger than the corresponding nationwide figure of 35.3 years. Approximately 77% of Utah citizens reside within four contiguous counties located in the north central portion of the state. Most counties outside of this four-county population centre are sparsely populated.

Approximately 70% of Utah residents are members of the Church of Jesus Christ of Latter-day Saints (LDS). The LDS Church plays a large role in the lives of many individuals from diverse racial and cultural backgrounds. Church doctrine places a high value on marriage and encourages large families (hence, high fertility rates). The Church also discourages consumption of tobacco, alcohol and caffeinated beverages, and proscribes premarital sex. These practices have profoundly influenced cancer incidence and mortality rates in Utah.

### Cancer care facilities

Forty-five health-care facilities in Utah routinely provide cancer-related services to state residents. Seven of Utah's largest facilities have cancer care programmes that have been accredited by the American College of Surgeons (ACoS). Fourteen hospitals in Utah support one or more cancer registrars on their staff, including each of the ACoS-accredited facilities. Six Utah hospitals have radiation therapy units; there are presently no free-standing radiation therapy units in the state.

### Registry structure and methods

The population-based Utah Cancer Registry (UCR) has operated since 1966. Charles Smart, MD, a prominent surgeon at LDS Hospital in Salt Lake City, founded UCR under the auspices of the Regional Medical Program. In 1973, UCR became one of the original members of the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program. UCR has continuously participated in the SEER program since that time.

Cancer cases are identified and followed using information obtained from hospitals, pathology laboratories, radiation treatment centres, physician offices, nursing homes, vital records, other central cancer registries, and by direct patient contact. Reporting of cancer in Utah is mandated by a combination of legislation and regulatory rule.

Central registry personnel travel to outlying areas of the state to identify and abstract cases in the smaller rural hospitals on an annual basis. Many hospitals and private pathology laboratories are visited monthly to identify non-hospitalized cases and as a quality control measure for hospitalized cases. Physicians may also report cases directly to the registry.

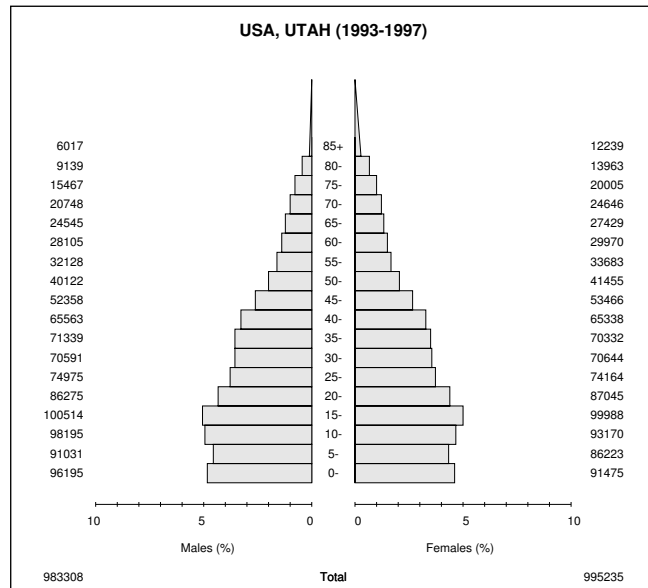
Both hospital-based registrars and central registry personnel conduct active follow-up of cancer patients. UCR also employs a number of passive techniques for obtaining follow-up information. For example, registry records are routinely linked with

administrative databases, including those maintained by the Health Care Financing Administration and the Utah Department of Public Safety's Driver License Division, and local voter registration files. UCR routinely queries vital records from the Utah Department of Health for information about cancer patients who may have died. In rare instances, death certificates may provide information about cancer cases that were not identified through other sources.

Cancer data are abstracted and coded by both hospital-based registrars and central registry personnel. Hospital-based registrars submit abstracts and copies of pathology reports to UCR, which allows central registry staff to systematically monitor the quality of data and process difficult to code items such as extent of disease and site-specific treatment. All electronic records are subjected to various automated edits developed by the SEER Program and other professional organizations. UCR also participates in quality control projects sponsored by the SEER Program.

### Use of the data

UCR data are combined with those from other SEER Program participants to monitor cancer trends in the USA. UCR data are also well utilized by independent investigators for studies of cancer etiology, prevention and control. By combining UCR records with genealogy files and other sources, researchers have made notable contributions to knowledge of cancer genetics. The registry maintains a web page (<http://www.uuhsc.edu/ucr>) and also responds to *ad hoc* requests for cancer-related data.



### Source of population

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

### Notes on the data

† C44 does not include basal cell or squamous cell carcinoma except for skin of anus.

## USA, UTAH (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	165	1.1	3.4	<b>3.3</b>	0.19	0.37	34	0.3	0.7	<b>0.5</b>	0.02	0.06	C00
Tongue	85	0.6	1.7	<b>1.7</b>	0.12	0.18	46	0.4	0.9	<b>0.8</b>	0.05	0.10	C01-02
Mouth	58	0.4	1.2	<b>1.3</b>	0.10	0.15	41	0.3	0.8	<b>0.6</b>	0.04	0.07	C03-06
Salivary glands	58	0.4	1.2	<b>1.1</b>	0.07	0.11	51	0.4	1.0	<b>1.0</b>	0.08	0.11	C07-08
Tonsil	27	0.2	0.5	<b>0.6</b>	0.04	0.08	8	0.1	0.2	<b>0.2</b>	0.01	0.02	C09
Other oropharynx	10	0.1	0.2	<b>0.2</b>	0.01	0.03	2	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	15	0.1	0.3	<b>0.3</b>	0.02	0.03	8	0.1	0.2	<b>0.2</b>	0.01	0.02	C11
Hypopharynx	25	0.2	0.5	<b>0.6</b>	0.05	0.06	5	0.0	0.1	<b>0.1</b>	0.00	0.01	C12-13
Pharynx unspecified	8	0.1	0.2	<b>0.2</b>	0.01	0.01	7	0.1	0.1	<b>0.1</b>	0.01	0.02	C14
Oesophagus	135	0.9	2.7	<b>2.9</b>	0.16	0.36	38	0.3	0.8	<b>0.6</b>	0.03	0.06	C15
Stomach	233	1.6	4.7	<b>4.6</b>	0.23	0.53	137	1.1	2.8	<b>2.2</b>	0.11	0.26	C16
Small intestine	77	0.5	1.6	<b>1.6</b>	0.10	0.17	54	0.4	1.1	<b>1.0</b>	0.06	0.12	C17
Colon	972	6.5	19.8	<b>19.1</b>	0.83	2.30	933	7.4	18.7	<b>14.5</b>	0.67	1.70	C18
Rectum	425	2.8	8.6	<b>8.9</b>	0.48	1.08	367	2.9	7.4	<b>6.0</b>	0.31	0.71	C19-20
Anus	28	0.2	0.6	<b>0.6</b>	0.04	0.08	39	0.3	0.8	<b>0.7</b>	0.03	0.09	C21
Liver	120	0.8	2.4	<b>2.5</b>	0.14	0.32	80	0.6	1.6	<b>1.3</b>	0.06	0.16	C22
Gallbladder etc.	68	0.5	1.4	<b>1.3</b>	0.06	0.17	86	0.7	1.7	<b>1.3</b>	0.06	0.16	C23-24
Pancreas	283	1.9	5.8	<b>5.7</b>	0.27	0.70	236	1.9	4.7	<b>3.7</b>	0.18	0.40	C25
Nose, sinuses etc.	29	0.2	0.6	<b>0.6</b>	0.03	0.07	17	0.1	0.3	<b>0.3</b>	0.02	0.04	C30-31
Larynx	121	0.8	2.5	<b>2.4</b>	0.14	0.29	30	0.2	0.6	<b>0.7</b>	0.06	0.08	C32
Trachea, bronchus and lung	1349	9.0	27.4	<b>27.2</b>	1.26	3.49	809	6.4	16.3	<b>14.3</b>	0.79	1.87	C33-34
Other thoracic organs	20	0.1	0.4	<b>0.4</b>	0.03	0.04	12	0.1	0.2	<b>0.3</b>	0.02	0.02	C37-38
Bone	70	0.5	1.4	<b>1.4</b>	0.08	0.11	49	0.4	1.0	<b>0.9</b>	0.06	0.06	C40-41
Melanoma of skin	734	4.9	14.9	<b>15.2</b>	1.03	1.69	579	4.6	11.6	<b>10.7</b>	0.74	1.10	C43
†Other skin	52		1.1	<b>1.0</b>	0.05	0.10	48		1.0	<b>0.9</b>	0.06	0.09	C44
Mesothelioma	51	0.3	1.0	<b>0.9</b>	0.03	0.11	18	0.1	0.4	<b>0.3</b>	0.02	0.03	C45
Kaposi sarcoma	47	0.3	1.0	<b>0.9</b>	0.07	0.07	2	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	139	0.9	2.8	<b>2.8</b>	0.18	0.29	110	0.9	2.2	<b>2.0</b>	0.12	0.17	C47+C49
Breast	31	0.2	0.6	<b>0.6</b>	0.02	0.07	4061	32.2	81.6	<b>76.1</b>	5.17	8.99	C50
Vulva							64	0.5	1.3	<b>1.1</b>	0.07	0.09	C51
Vagina							18	0.1	0.4	<b>0.3</b>	0.02	0.04	C52
Cervix uteri							325	2.6	6.5	<b>6.4</b>	0.53	0.63	C53
Corpus uteri							898	7.1	18.0	<b>16.5</b>	1.05	2.05	C54
Uterus unspecified							15	0.1	0.3	<b>0.2</b>	0.01	0.02	C55
Ovary							651	5.2	13.1	<b>12.0</b>	0.80	1.36	C56
Other female genital organs							14	0.1	0.3	<b>0.2</b>	0.01	0.02	C57
Placenta							4	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	17	0.1	0.3	<b>0.4</b>	0.03	0.04							C60
Prostate	5642	37.7	114.8	<b>115.8</b>	4.97	15.68							C61
Testis	291	1.9	5.9	<b>5.5</b>	0.41	0.42							C62
Other male genital organs	10	0.1	0.2	<b>0.2</b>	0.01	0.03							C63
Kidney	273	1.8	5.6	<b>5.8</b>	0.34	0.69	197	1.6	4.0	<b>3.6</b>	0.22	0.41	C64
Renal pelvis	33	0.2	0.7	<b>0.7</b>	0.04	0.08	19	0.2	0.4	<b>0.3</b>	0.01	0.05	C65
Ureter	16	0.1	0.3	<b>0.3</b>	0.01	0.03	6	0.0	0.1	<b>0.1</b>	0.00	0.02	C66
Bladder	862	5.8	17.5	<b>16.9</b>	0.71	2.04	256	2.0	5.1	<b>4.2</b>	0.19	0.51	C67
Other urinary organs	8	0.1	0.2	<b>0.2</b>	0.01	0.02	3	0.0	0.1	<b>0.0</b>	0.00	0.00	C68
Eye	35	0.2	0.7	<b>0.8</b>	0.04	0.07	23	0.2	0.5	<b>0.5</b>	0.02	0.04	C69
Brain, nervous system	304	2.0	6.2	<b>6.4</b>	0.41	0.63	258	2.0	5.2	<b>5.2</b>	0.35	0.48	C70-72
Thyroid	150	1.0	3.1	<b>3.2</b>	0.25	0.34	438	3.5	8.8	<b>8.6</b>	0.67	0.80	C73
Adrenal gland	17	0.1	0.3	<b>0.4</b>	0.02	0.02	12	0.1	0.2	<b>0.3</b>	0.01	0.02	C74
Other endocrine	10	0.1	0.2	<b>0.2</b>	0.01	0.01	7	0.1	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin disease	133	0.9	2.7	<b>2.6</b>	0.18	0.21	108	0.9	2.2	<b>2.0</b>	0.13	0.16	C81
Non-Hodgkin lymphoma	711	4.7	14.5	<b>14.4</b>	0.80	1.60	543	4.3	10.9	<b>9.5</b>	0.57	1.11	C82-85,C96
Immunoproliferative diseases	9	0.1	0.2	<b>0.2</b>	0.00	0.02	3	0.0	0.1	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	206	1.4	4.2	<b>4.0</b>	0.17	0.48	133	1.1	2.7	<b>2.3</b>	0.11	0.28	C90
Lymphoid leukaemia	233	1.6	4.7	<b>4.8</b>	0.23	0.50	139	1.1	2.8	<b>2.5</b>	0.13	0.22	C91
Myeloid leukaemia	234	1.6	4.8	<b>4.5</b>	0.22	0.46	150	1.2	3.0	<b>2.5</b>	0.14	0.24	C92-94
Leukaemia unspecified	36	0.2	0.7	<b>0.6</b>	0.02	0.05	32	0.3	0.6	<b>0.5</b>	0.01	0.05	C95
Other and unspecified	371	2.5	7.5	<b>7.3</b>	0.32	0.83	423	3.4	8.5	<b>6.4</b>	0.29	0.69	O&U
All sites	15036		305.8	<b>304.8</b>	15.02	37.33	12646		254.1	<b>226.7</b>	14.16	25.89	ALL
All sites but C44	14984	100.0	304.8	<b>303.8</b>	14.97	37.23	12598	100.0	253.2	<b>225.8</b>	14.10	25.80	ALLbC44

†See note following population pyramid

# USA, Washington, Seattle

### Registration area

The Cancer Surveillance System (CSS) of western Washington State covers a population of 13 contiguous counties in the northwestern corner of the USA (excluding Alaska and Hawaii). The population, according to the 1990 census, was 3 366 824, of which 88% was white, 4% black, 1.5% Native American, 5.5% Asian, and 1% other races. About 2% of the population was white of Hispanic origin and 1% was Hispanic of other races. Approximately 76% of the population resided in two major conurbations.

### Cancer care facilities

Cancer care is provided largely by private physicians and hospitals. Military, veteran, and university medical centres, and state and local government facilities provide care to people meeting specific eligibility criteria. Standard diagnostic services, oncological surgery, radiotherapy and chemotherapy are available in both the private and governmental sectors.

### Registry structure and methods

The registry is an activity of the Program in Epidemiology in the Division of Public Health Sciences of the Fred Hutchinson Cancer Research Center (FHCRC), which is designated a Comprehensive Cancer Center by the US NCI. Primary funding comes from the SEER Program, with additional support from the FHCRC and the Department of Health of the State of Washington. Faculty-level epidemiologists provide overall direction and supervision of the registry. All operations are carried out by 28 staff, under the direction of a full-time registry manager.

Cancer has been a reportable disease in the state since 1990. An active system is used to find cases from the medical records of area hospitals, independent pathology laboratories, radiotherapy offices, surgical centres, and selected physicians' offices. Most pathology reports are obtained electronically, and both results of all laboratory tests and text become a part of the database for registered cases. Cases are actively followed annually. In addition, death certificate information is used to supplement case-finding and follow-up. Incidence, treatment, and survival data are collected and coded by CSS staff using standardized SEER Program definitions.

Quality of data is maintained by use of an edit package consisting of over 450 range, between field, between record, and between database edits, as well as by the standard SEER edit package, and *ad hoc* quality control studies conducted by the SEER Program.

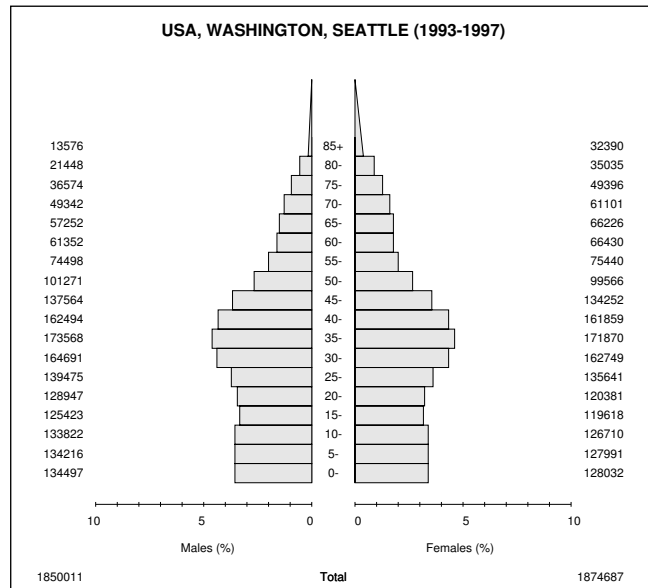
### Interpreting the results

There has been a large migration into the registry area since the 1990 census, and the population estimates for 1993–97 are likely to change when information from the year 2000 census becomes available. Mammographic, Pap smear and PSA screening are

widely practised in the area, and PSA screening was initiated earlier in the area than in most other parts of the country (in about 1986). Point sources of known carcinogens include asbestos from shipbuilding during the second world war and arsenic from a copper smelter until about 1985.

### Use of the data

Reports of incidence, mortality and survival are contained in publications of the SEER Program. A report generator is available to local hospitals to allow each institution to produce annual reports. Tabular, incidence, and survival data are also available on request. The CSS serves as a resource for a large number of descriptive, correlational, population-based case-control and cohort studies of cancer etiology, as well as for studies of survival and cancer care. Data are also provided to the Washington State Department of Health for inclusion in a statewide registry and use by the state for monitoring cancer in the state and conducting public health inquiries.



### Source of population

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

### Notes on the data

† C44 does not include basal cell or squamous cell carcinoma except for skin of anus.

## USA, WASHINGTON, SEATTLE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	149	0.4	1.6	<b>1.2</b>	0.06	0.14	40	0.1	0.4	<b>0.3</b>	0.02	0.03	C00
Tongue	316	0.8	3.4	<b>2.8</b>	0.20	0.33	158	0.4	1.7	<b>1.2</b>	0.08	0.13	C01-02
Mouth	298	0.7	3.2	<b>2.7</b>	0.16	0.33	236	0.6	2.5	<b>1.7</b>	0.11	0.21	C03-06
Salivary glands	125	0.3	1.4	<b>1.1</b>	0.06	0.12	86	0.2	0.9	<b>0.7</b>	0.05	0.07	C07-08
Tonsil	146	0.4	1.6	<b>1.3</b>	0.10	0.16	57	0.1	0.6	<b>0.5</b>	0.03	0.06	C09
Other oropharynx	28	0.1	0.3	<b>0.3</b>	0.01	0.04	11	0.0	0.1	<b>0.1</b>	0.00	0.01	C10
Nasopharynx	66	0.2	0.7	<b>0.6</b>	0.05	0.08	36	0.1	0.4	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	110	0.3	1.2	<b>1.0</b>	0.06	0.14	43	0.1	0.5	<b>0.3</b>	0.02	0.04	C12-13
Pharynx unspecified	57	0.1	0.6	<b>0.5</b>	0.03	0.07	19	0.0	0.2	<b>0.1</b>	0.01	0.02	C14
Oesophagus	566	1.4	6.1	<b>5.0</b>	0.25	0.66	206	0.5	2.2	<b>1.3</b>	0.05	0.17	C15
Stomach	793	1.9	8.6	<b>6.6</b>	0.32	0.77	418	1.1	4.5	<b>2.6</b>	0.13	0.28	C16
Small intestine	168	0.4	1.8	<b>1.5</b>	0.09	0.16	125	0.3	1.3	<b>0.9</b>	0.05	0.10	C17
Colon	2935	7.1	31.7	<b>24.4</b>	1.07	2.83	3011	7.6	32.1	<b>18.7</b>	0.85	2.13	C18
Rectum	1305	3.2	14.1	<b>11.5</b>	0.66	1.39	1036	2.6	11.1	<b>7.1</b>	0.38	0.85	C19-20
Anus	82	0.2	0.9	<b>0.7</b>	0.05	0.09	160	0.4	1.7	<b>1.2</b>	0.07	0.15	C21
Liver	522	1.3	5.6	<b>4.6</b>	0.26	0.55	252	0.6	2.7	<b>1.8</b>	0.09	0.19	C22
Gallbladder etc.	168	0.4	1.8	<b>1.3</b>	0.05	0.13	208	0.5	2.2	<b>1.3</b>	0.05	0.15	C23-24
Pancreas	884	2.1	9.6	<b>7.4</b>	0.34	0.89	922	2.3	9.8	<b>5.7</b>	0.24	0.66	C25
Nose, sinuses etc.	67	0.2	0.7	<b>0.6</b>	0.04	0.08	45	0.1	0.5	<b>0.4</b>	0.02	0.04	C30-31
Larynx	507	1.2	5.5	<b>4.6</b>	0.26	0.61	134	0.3	1.4	<b>1.1</b>	0.06	0.13	C32
Trachea, bronchus and lung	6362	15.4	68.8	<b>55.2</b>	2.62	7.07	5323	13.5	56.8	<b>39.0</b>	2.05	5.16	C33-34
Other thoracic organs	45	0.1	0.5	<b>0.4</b>	0.03	0.04	40	0.1	0.4	<b>0.3</b>	0.02	0.03	C37-38
Bone	115	0.3	1.2	<b>1.2</b>	0.07	0.10	97	0.2	1.0	<b>0.9</b>	0.06	0.08	C40-41
Melanoma of skin	1739	4.2	18.8	<b>15.4</b>	1.07	1.71	1546	3.9	16.5	<b>12.8</b>	0.95	1.30	C43
†Other skin	141		1.5	<b>1.2</b>	0.06	0.12	150		1.6	<b>1.1</b>	0.07	0.12	C44
Mesothelioma	241	0.6	2.6	<b>1.9</b>	0.07	0.21	71	0.2	0.8	<b>0.5</b>	0.03	0.05	C45
Kaposi sarcoma	461	1.1	5.0	<b>3.7</b>	0.30	0.31	5	0.0	0.1	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	305	0.7	3.3	<b>2.8</b>	0.15	0.27	235	0.6	2.5	<b>2.0</b>	0.13	0.18	C47+C49
Breast	63	0.2	0.7	<b>0.5</b>	0.04	0.06	12190	30.8	130.0	<b>96.0</b>	6.76	11.25	C50
Vulva							222	0.6	2.4	<b>1.4</b>	0.09	0.14	C51
Vagina							63	0.2	0.7	<b>0.4</b>	0.02	0.04	C52
Cervix uteri							800	2.0	8.5	<b>6.8</b>	0.53	0.67	C53
Corpus uteri							2411	6.1	25.7	<b>18.6</b>	1.23	2.32	C54
Uterus unspecified							21	0.1	0.2	<b>0.2</b>	0.01	0.02	C55
Ovary							1805	4.6	19.3	<b>14.2</b>	0.96	1.55	C56
Other female genital organs							70	0.2	0.7	<b>0.5</b>	0.04	0.07	C57
Placenta							9	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	59	0.1	0.6	<b>0.5</b>	0.03	0.05							C60
Prostate	11693	28.4	126.4	<b>103.2</b>	4.60	13.94							C61
Testis	643	1.6	7.0	<b>5.8</b>	0.43	0.45							C62
Other male genital organs	34	0.1	0.4	<b>0.3</b>	0.02	0.03							C63
Kidney	1061	2.6	11.5	<b>9.6</b>	0.60	1.13	602	1.5	6.4	<b>4.8</b>	0.29	0.55	C64
Renal pelvis	93	0.2	1.0	<b>0.8</b>	0.02	0.09	88	0.2	0.9	<b>0.5</b>	0.02	0.06	C65
Ureter	52	0.1	0.6	<b>0.4</b>	0.02	0.05	32	0.1	0.3	<b>0.2</b>	0.01	0.03	C66
Bladder	2794	6.8	30.2	<b>23.4</b>	1.01	2.82	954	2.4	10.2	<b>6.3</b>	0.30	0.77	C67
Other urinary organs	28	0.1	0.3	<b>0.2</b>	0.01	0.03	16	0.0	0.2	<b>0.1</b>	0.00	0.01	C68
Eye	89	0.2	1.0	<b>0.8</b>	0.05	0.08	73	0.2	0.8	<b>0.7</b>	0.04	0.06	C69
Brain, nervous system	714	1.7	7.7	<b>7.0</b>	0.44	0.68	501	1.3	5.3	<b>4.5</b>	0.28	0.43	C70-72
Thyroid	272	0.7	2.9	<b>2.5</b>	0.18	0.25	889	2.2	9.5	<b>7.9</b>	0.62	0.72	C73
Adrenal gland	29	0.1	0.3	<b>0.4</b>	0.02	0.03	32	0.1	0.3	<b>0.4</b>	0.02	0.03	C74
Other endocrine	8	0.0	0.1	<b>0.1</b>	0.01	0.01	7	0.0	0.1	<b>0.1</b>	0.00	0.01	C75
Hodgkin disease	301	0.7	3.3	<b>2.9</b>	0.20	0.23	238	0.6	2.5	<b>2.4</b>	0.16	0.19	C81
Non-Hodgkin lymphoma	1972	4.8	21.3	<b>16.9</b>	1.00	1.84	1489	3.8	15.9	<b>10.8</b>	0.63	1.24	C82-85,C96
Immunoproliferative diseases	40	0.1	0.4	<b>0.3</b>	0.01	0.04	26	0.1	0.3	<b>0.2</b>	0.01	0.02	C88
Multiple myeloma	531	1.3	5.7	<b>4.5</b>	0.23	0.52	439	1.1	4.7	<b>2.9</b>	0.14	0.35	C90
Lymphoid leukaemia	672	1.6	7.3	<b>6.5</b>	0.31	0.66	446	1.1	4.8	<b>3.8</b>	0.19	0.33	C91
Myeloid leukaemia	576	1.4	6.2	<b>4.9</b>	0.26	0.52	467	1.2	5.0	<b>3.5</b>	0.21	0.37	C92-94
Leukaemia unspecified	65	0.2	0.7	<b>0.5</b>	0.02	0.06	58	0.1	0.6	<b>0.3</b>	0.01	0.02	C95
Other and unspecified	840	2.0	9.1	<b>6.8</b>	0.29	0.74	1073	2.7	11.4	<b>6.4</b>	0.27	0.69	O&U
All sites	41330		446.8	<b>360.7</b>	18.24	43.69	39691		423.4	<b>297.9</b>	18.52	34.36	ALL
All sites but C44	41189	100.0	445.3	<b>359.6</b>	18.19	43.57	39541	100.0	421.8	<b>296.8</b>	18.45	34.24	ALLbC44

†See note following population pyramid



# USA, SEER

## Registration area

Participants in the Surveillance, Epidemiology, and End Results (SEER) Program were selected on the basis of their ability to operate and maintain a population-based cancer reporting system and for their population sub-groups which were of special epidemiological interest. The SEER Program now covers over 14% of the US population. However, for consistency with earlier IARC publications, only data from the same nine SEER areas were submitted. The nine participants include five states (Connecticut, Iowa, New Mexico, Utah and Hawaii) and four metropolitan areas (the San Francisco Bay area, California; Detroit, Michigan; Atlanta, Georgia; and the Seattle, Washington area). Seven participants began collecting data for cases diagnosed in 1973, one began with 1974 and one began in 1975. This represents about 10% of the total population of the USA and is fairly representative with respect to selected demographic variables. With regard to race, rural blacks are under-represented, whereas other minority populations such as Chinese, Japanese, Hawaiians and American Indians are over-represented. Approximately 160 000 new cases of *in situ* and invasive cancers are added each year to the SEER database. In addition to contributing to SEER, each of these nine SEER Programs reports data from their own registry in this volume.

## Registry structure and methods

The SEER Program is a continuing project of the Surveillance Research Program of the US National Cancer Institute (NCI). The Program was initiated in 1973 as an outgrowth of the End Results Program and the three National Cancer Surveys.

The Program aims to determine the incidence of cancer in selected geographical areas in relation to demographic and social characteristics of the population and to estimate annual cancer incidence for the USA. Trends in incidence by site and histology are monitored, as is survival and trends in survival. Studies are conducted to identify possible etiological factors which can reveal groups of the population at high or low cancer risk, which may be defined by social, occupational, environmental, dietary or other characteristics.

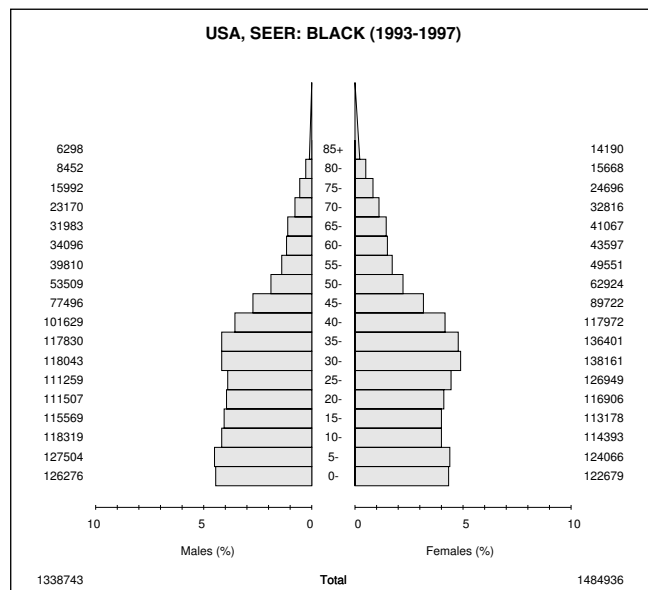
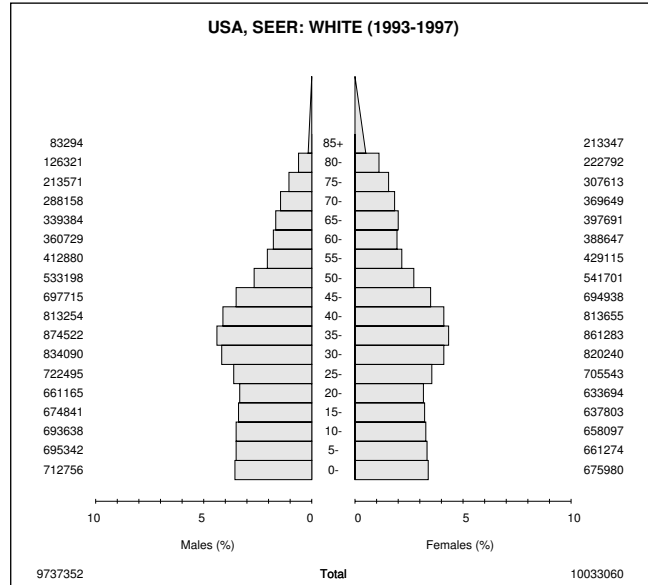
Participants transmit data to NCI within 13 months after the end of each calendar year. In addition to all malignant and *in situ* neoplasms as defined in ICD-O, excepting most non-melanoma skin cancers and *in situ* cervix since 1996, registries must collect information about extent of disease and first course of therapy. Neither the patient's name nor the name of the hospital is provided to NCI.

The SEER Program conducts studies to evaluate quality and completeness of data, and provides specialist training for personnel.

## Use of the data

Updated annually and provided as a public service in print and electronic formats, SEER data are used by thousands of researchers, clinicians, public health officials, legislators, policy-makers, community groups, and the public. Each year since 1985, the NCI has published a 'SEER Annual Cancer Statistics Review (CSR),' which comprises principally SEER incidence and survival data, and mortality data from NCHS. The most recent CSR is for the years 1973-97. In addition, several monographs on specific topics have been published. These publications are available on the SEER Web page: [www.seer.cancer.gov/publications](http://www.seer.cancer.gov/publications)

The SEER program also makes its data available on CD-ROM.



## Source of population

Annual census projection based on the 1990 census, prepared by the US Bureau of the Census.

## Notes on the data

† C44 not available.

## USA, SEER: WHITE (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	1135	0.5	2.3	<b>1.7</b>	0.09	0.20	256	0.1	0.5	<b>0.3</b>	0.01	0.03	C00
Tongue	1614	0.7	3.3	<b>2.6</b>	0.19	0.32	866	0.4	1.7	<b>1.1</b>	0.08	0.14	C01-02
Mouth	1560	0.7	3.2	<b>2.5</b>	0.16	0.31	1176	0.5	2.3	<b>1.4</b>	0.08	0.17	C03-06
Salivary glands	679	0.3	1.4	<b>1.1</b>	0.06	0.12	538	0.2	1.1	<b>0.7</b>	0.05	0.08	C07-08
Tonsil	837	0.4	1.7	<b>1.4</b>	0.11	0.17	307	0.1	0.6	<b>0.4</b>	0.03	0.06	C09
Other oropharynx	208	0.1	0.4	<b>0.3</b>	0.02	0.05	73	0.0	0.1	<b>0.1</b>	0.01	0.01	C10
Nasopharynx	271	0.1	0.6	<b>0.5</b>	0.03	0.05	145	0.1	0.3	<b>0.2</b>	0.01	0.02	C11
Hypopharynx	678	0.3	1.4	<b>1.1</b>	0.07	0.14	214	0.1	0.4	<b>0.3</b>	0.02	0.04	C12-13
Pharynx unspecified	259	0.1	0.5	<b>0.4</b>	0.02	0.05	121	0.1	0.2	<b>0.1</b>	0.01	0.02	C14
Oesophagus	3025	1.3	6.2	<b>4.7</b>	0.26	0.60	1125	0.5	2.2	<b>1.2</b>	0.06	0.15	C15
Stomach	4546	1.9	9.3	<b>6.6</b>	0.31	0.76	2618	1.2	5.2	<b>2.6</b>	0.12	0.28	C16
Small intestine	798	0.3	1.6	<b>1.2</b>	0.07	0.14	738	0.3	1.5	<b>0.9</b>	0.05	0.10	C17
Colon	17855	7.5	36.7	<b>25.5</b>	1.10	2.99	19211	8.7	38.3	<b>19.4</b>	0.86	2.22	C18
Rectum	7996	3.4	16.4	<b>12.2</b>	0.64	1.49	6422	2.9	12.8	<b>7.3</b>	0.40	0.87	C19-20
Anus	449	0.2	0.9	<b>0.7</b>	0.05	0.09	701	0.3	1.4	<b>0.9</b>	0.06	0.11	C21
Liver	2505	1.1	5.1	<b>3.8</b>	0.19	0.46	1301	0.6	2.6	<b>1.4</b>	0.07	0.16	C22
Gallbladder etc.	1006	0.4	2.1	<b>1.4</b>	0.06	0.16	1411	0.6	2.8	<b>1.5</b>	0.06	0.17	C23-24
Pancreas	4986	2.1	10.2	<b>7.3</b>	0.34	0.88	5397	2.4	10.8	<b>5.5</b>	0.24	0.64	C25
Nose, sinuses etc.	380	0.2	0.8	<b>0.6</b>	0.04	0.07	275	0.1	0.5	<b>0.4</b>	0.02	0.04	C30-31
Larynx	3316	1.4	6.8	<b>5.3</b>	0.32	0.70	844	0.4	1.7	<b>1.2</b>	0.07	0.15	C32
Trachea, bronchus and lung	36165	15.2	74.3	<b>54.4</b>	2.58	6.99	28036	12.6	55.9	<b>34.6</b>	1.89	4.54	C33-34
Other thoracic organs	227	0.1	0.5	<b>0.4</b>	0.03	0.04	144	0.1	0.3	<b>0.2</b>	0.01	0.02	C37-38
Bone	569	0.2	1.2	<b>1.1</b>	0.07	0.09	446	0.2	0.9	<b>0.8</b>	0.05	0.06	C40-41
Melanoma of skin	9558	4.0	19.6	<b>15.4</b>	1.05	1.71	7772	3.5	15.5	<b>11.6</b>	0.85	1.16	C43
†Other skin	707		1.5	<b>1.1</b>	0.06	0.11	648		1.3	<b>0.9</b>	0.06	0.09	C44
Mesothelioma	911	0.4	1.9	<b>1.3</b>	0.05	0.16	236	0.1	0.5	<b>0.3</b>	0.02	0.03	C45
Kaposi sarcoma	2788	1.2	5.7	<b>4.4</b>	0.36	0.37	70	0.0	0.1	<b>0.1</b>	0.00	0.00	C46
Connective and soft tissue	1619	0.7	3.3	<b>2.7</b>	0.15	0.25	1299	0.6	2.6	<b>1.9</b>	0.12	0.18	C47+C49
Breast	477	0.2	1.0	<b>0.7</b>	0.04	0.09	67272	30.3	134.1	<b>92.1</b>	6.51	10.69	C50
Vulva							1271	0.6	2.5	<b>1.4</b>	0.08	0.15	C51
Vagina							359	0.2	0.7	<b>0.4</b>	0.02	0.04	C52
Cervix uteri							4372	2.0	8.7	<b>6.8</b>	0.53	0.66	C53
Corpus uteri							13641	6.1	27.2	<b>18.4</b>	1.24	2.28	C54
Uterus unspecified							231	0.1	0.5	<b>0.3</b>	0.02	0.03	C55
Ovary							9504	4.3	18.9	<b>13.2</b>	0.91	1.47	C56
Other female genital organs							348	0.2	0.7	<b>0.5</b>	0.03	0.06	C57
Placenta							38	0.0	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	307	0.1	0.6	<b>0.4</b>	0.02	0.05							C60
Prostate	71146	29.8	146.1	<b>107.8</b>	4.74	14.64							C61
Testis	3109	1.3	6.4	<b>5.6</b>	0.41	0.43							C62
Other male genital organs	119	0.0	0.2	<b>0.2</b>	0.01	0.02							C63
Kidney	5963	2.5	12.2	<b>9.6</b>	0.59	1.16	3690	1.7	7.4	<b>4.9</b>	0.29	0.57	C64
Renal pelvis	480	0.2	1.0	<b>0.7</b>	0.03	0.09	424	0.2	0.8	<b>0.4</b>	0.02	0.05	C65
Ureter	351	0.1	0.7	<b>0.5</b>	0.02	0.06	196	0.1	0.4	<b>0.2</b>	0.01	0.02	C66
Bladder	16059	6.7	33.0	<b>23.3</b>	1.01	2.80	5688	2.6	11.3	<b>6.2</b>	0.31	0.75	C67
Other urinary organs	213	0.1	0.4	<b>0.3</b>	0.01	0.04	88	0.0	0.2	<b>0.1</b>	0.00	0.01	C68
Eye	459	0.2	0.9	<b>0.8</b>	0.04	0.08	372	0.2	0.7	<b>0.6</b>	0.04	0.06	C69
Brain, nervous system	3913	1.6	8.0	<b>7.0</b>	0.44	0.69	3041	1.4	6.1	<b>4.8</b>	0.30	0.47	C70-72
Thyroid	1664	0.7	3.4	<b>2.8</b>	0.21	0.30	4658	2.1	9.3	<b>7.7</b>	0.59	0.70	C73
Adrenal gland	159	0.1	0.3	<b>0.4</b>	0.02	0.03	168	0.1	0.3	<b>0.4</b>	0.02	0.03	C74
Other endocrine	62	0.0	0.1	<b>0.1</b>	0.01	0.01	34	0.0	0.1	<b>0.1</b>	0.00	0.00	C75
Hodgkin disease	1661	0.7	3.4	<b>3.1</b>	0.22	0.25	1408	0.6	2.8	<b>2.6</b>	0.17	0.20	C81
Non-Hodgkin lymphoma	10770	4.5	22.1	<b>16.8</b>	1.01	1.82	8695	3.9	17.3	<b>10.6</b>	0.60	1.22	C82-85,C96
Immunoproliferative diseases	191	0.1	0.4	<b>0.3</b>	0.01	0.03	139	0.1	0.3	<b>0.2</b>	0.01	0.02	C88
Multiple myeloma	2648	1.1	5.4	<b>3.9</b>	0.19	0.46	2329	1.0	4.6	<b>2.5</b>	0.12	0.30	C90
Lymphoid leukaemia	3361	1.4	6.9	<b>5.8</b>	0.29	0.58	2326	1.0	4.6	<b>3.3</b>	0.16	0.30	C91
Myeloid leukaemia	3095	1.3	6.4	<b>4.7</b>	0.24	0.51	2550	1.1	5.1	<b>3.3</b>	0.19	0.34	C92-94
Leukaemia unspecified	451	0.2	0.9	<b>0.6</b>	0.02	0.06	431	0.2	0.9	<b>0.4</b>	0.01	0.04	C95
Other and unspecified	5769	2.4	11.8	<b>8.3</b>	0.37	0.93	6816	3.1	13.6	<b>6.9</b>	0.32	0.77	O&U
All sites	239074		491.0	<b>365.5</b>	18.42	44.58	222479		443.5	<b>285.5</b>	17.80	32.80	ALL
All sites but C44	238367	100.0	489.6	<b>364.5</b>	18.37	44.47	221831	100.0	442.2	<b>284.6</b>	17.74	32.72	ALLbC44

†See note following population pyramid

## USA, SEER: BLACK (1993-1997)

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	6	0.0	0.1	<b>0.1</b>	0.00	0.01	6	0.0	0.1	<b>0.1</b>	0.00	0.01	C00
Tongue	199	0.7	3.0	<b>3.5</b>	0.28	0.42	78	0.4	1.1	<b>1.1</b>	0.09	0.14	C01-02
Mouth	271	1.0	4.0	<b>4.9</b>	0.39	0.59	122	0.6	1.6	<b>1.6</b>	0.12	0.19	C03-06
Salivary glands	60	0.2	0.9	<b>1.0</b>	0.06	0.11	51	0.2	0.7	<b>0.6</b>	0.05	0.07	C07-08
Tonsil	158	0.6	2.4	<b>2.9</b>	0.26	0.34	45	0.2	0.6	<b>0.6</b>	0.05	0.07	C09
Other oropharynx	49	0.2	0.7	<b>0.9</b>	0.07	0.11	12	0.1	0.2	<b>0.2</b>	0.01	0.02	C10
Nasopharynx	57	0.2	0.9	<b>0.9</b>	0.06	0.09	23	0.1	0.3	<b>0.3</b>	0.03	0.04	C11
Hypopharynx	157	0.6	2.3	<b>2.8</b>	0.21	0.35	43	0.2	0.6	<b>0.7</b>	0.06	0.08	C12-13
Pharynx unspecified	53	0.2	0.8	<b>1.0</b>	0.08	0.13	15	0.1	0.2	<b>0.2</b>	0.01	0.03	C14
Oesophagus	593	2.1	8.9	<b>10.7</b>	0.74	1.37	252	1.2	3.4	<b>3.5</b>	0.24	0.46	C15
Stomach	792	2.8	11.8	<b>13.4</b>	0.66	1.63	482	2.2	6.5	<b>5.3</b>	0.26	0.56	C16
Small intestine	148	0.5	2.2	<b>2.4</b>	0.15	0.30	139	0.6	1.9	<b>1.8</b>	0.12	0.21	C17
Colon	1852	6.6	27.7	<b>31.6</b>	1.63	3.79	2182	10.0	29.4	<b>26.0</b>	1.33	3.07	C18
Rectum	674	2.4	10.1	<b>11.5</b>	0.68	1.38	594	2.7	8.0	<b>7.4</b>	0.45	0.87	C19-20
Anus	75	0.3	1.1	<b>1.1</b>	0.09	0.12	68	0.3	0.9	<b>0.9</b>	0.07	0.10	C21
Liver	412	1.5	6.2	<b>7.1</b>	0.49	0.84	177	0.8	2.4	<b>2.1</b>	0.10	0.23	C22
Gallbladder etc.	82	0.3	1.2	<b>1.4</b>	0.07	0.17	129	0.6	1.7	<b>1.5</b>	0.08	0.16	C23-24
Pancreas	723	2.6	10.8	<b>12.5</b>	0.70	1.53	777	3.6	10.5	<b>9.1</b>	0.42	1.11	C25
Nose, sinuses etc.	52	0.2	0.8	<b>0.9</b>	0.06	0.10	33	0.2	0.4	<b>0.4</b>	0.03	0.04	C30-31
Larynx	535	1.9	8.0	<b>9.6</b>	0.66	1.26	142	0.6	1.9	<b>2.0</b>	0.14	0.25	C32
Trachea, bronchus and lung	4879	17.4	72.9	<b>85.9</b>	4.95	11.13	2789	12.8	37.6	<b>36.8</b>	2.26	4.74	C33-34
Other thoracic organs	32	0.1	0.5	<b>0.5</b>	0.03	0.05	32	0.1	0.4	<b>0.4</b>	0.03	0.04	C37-38
Bone	63	0.2	0.9	<b>0.9</b>	0.05	0.08	41	0.2	0.6	<b>0.5</b>	0.03	0.04	C40-41
Melanoma of skin	59	0.2	0.9	<b>1.0</b>	0.07	0.10	45	0.2	0.6	<b>0.5</b>	0.03	0.05	C43
†Other skin	71		1.1	<b>1.0</b>	0.08	0.11	70		0.9	<b>0.8</b>	0.06	0.07	C44
Mesothelioma	47	0.2	0.7	<b>0.8</b>	0.04	0.09	20	0.1	0.3	<b>0.2</b>	0.01	0.02	C45
Kaposi sarcoma	560	2.0	8.4	<b>6.8</b>	0.55	0.56	32	0.1	0.4	<b>0.3</b>	0.02	0.03	C46
Connective and soft tissue	185	0.7	2.8	<b>2.9</b>	0.19	0.30	170	0.8	2.3	<b>2.1</b>	0.13	0.20	C47+C49
Breast	63	0.2	0.9	<b>1.1</b>	0.07	0.11	6527	29.9	87.9	<b>83.1</b>	5.98	9.45	C50
Vulva							113	0.5	1.5	<b>1.3</b>	0.08	0.15	C51
Vagina							65	0.3	0.9	<b>0.8</b>	0.04	0.08	C52
Cervix uteri							853	3.9	11.5	<b>10.2</b>	0.75	1.03	C53
Corpus uteri							919	4.2	12.4	<b>12.0</b>	0.76	1.52	C54
Uterus unspecified							49	0.2	0.7	<b>0.6</b>	0.04	0.07	C55
Ovary							708	3.2	9.5	<b>8.8</b>	0.55	1.02	C56
Other female genital organs							29	0.1	0.4	<b>0.3</b>	0.02	0.03	C57
Placenta							12	0.1	0.2	<b>0.1</b>	0.01	0.01	C58
Penis	39	0.1	0.6	<b>0.6</b>	0.03	0.07							C60
Prostate	10337	36.8	154.4	<b>185.4</b>	9.12	25.33							C61
Testis	80	0.3	1.2	<b>1.0</b>	0.08	0.08							C62
Other male genital organs	14	0.0	0.2	<b>0.2</b>	0.01	0.02							C63
Kidney	704	2.5	10.5	<b>12.1</b>	0.81	1.42	493	2.3	6.6	<b>6.4</b>	0.40	0.72	C64
Renal pelvis	32	0.1	0.5	<b>0.6</b>	0.04	0.06	28	0.1	0.4	<b>0.3</b>	0.02	0.03	C65
Ureter	6	0.0	0.1	<b>0.1</b>	0.00	0.01	6	0.0	0.1	<b>0.1</b>	0.00	0.01	C66
Bladder	683	2.4	10.2	<b>11.3</b>	0.50	1.36	377	1.7	5.1	<b>4.2</b>	0.17	0.49	C67
Other urinary organs	33	0.1	0.5	<b>0.6</b>	0.03	0.08	27	0.1	0.4	<b>0.3</b>	0.02	0.04	C68
Eye	13	0.0	0.2	<b>0.2</b>	0.01	0.01	15	0.1	0.2	<b>0.2</b>	0.01	0.01	C69
Brain, nervous system	248	0.9	3.7	<b>4.0</b>	0.26	0.37	222	1.0	3.0	<b>3.0</b>	0.19	0.28	C70-72
Thyroid	86	0.3	1.3	<b>1.4</b>	0.09	0.15	323	1.5	4.4	<b>4.0</b>	0.31	0.40	C73
Adrenal gland	14	0.0	0.2	<b>0.2</b>	0.01	0.02	22	0.1	0.3	<b>0.3</b>	0.02	0.03	C74
Other endocrine	13	0.0	0.2	<b>0.2</b>	0.01	0.02	4	0.0	0.1	<b>0.0</b>	0.00	0.00	C75
Hodgkin disease	187	0.7	2.8	<b>2.7</b>	0.20	0.24	162	0.7	2.2	<b>2.0</b>	0.14	0.16	C81
Non-Hodgkin lymphoma	1023	3.6	15.3	<b>15.4</b>	1.10	1.56	598	2.7	8.1	<b>7.3</b>	0.48	0.80	C82-85,C96
Immunoproliferative diseases	12	0.0	0.2	<b>0.2</b>	0.02	0.03	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	517	1.8	7.7	<b>8.8</b>	0.46	1.08	552	2.5	7.4	<b>6.8</b>	0.37	0.84	C90
Lymphoid leukaemia	252	0.9	3.8	<b>4.2</b>	0.21	0.47	162	0.7	2.2	<b>2.0</b>	0.09	0.19	C91
Myeloid leukaemia	258	0.9	3.9	<b>4.0</b>	0.21	0.43	249	1.1	3.4	<b>3.0</b>	0.17	0.32	C92-94
Leukaemia unspecified	31	0.1	0.5	<b>0.5</b>	0.02	0.05	23	0.1	0.3	<b>0.3</b>	0.01	0.02	C95
Other and unspecified	688	2.4	10.3	<b>11.6</b>	0.64	1.33	817	3.7	11.0	<b>9.5</b>	0.48	1.02	O&U
All sites	28177		420.9	<b>486.5</b>	27.24	61.33	21925		295.3	<b>274.3</b>	17.34	31.63	ALL
All sites but C44	28106	100.0	419.9	<b>485.5</b>	27.16	61.23	21855	100.0	294.4	<b>273.5</b>	17.28	31.56	ALLbC44

†See note following population pyramid