NORTH AMERICA

Canada

Canada is located in the northern part of North America. It is the second largest country in the world, with an area of 9.9 million km^2. The country is sparsely populated, and most of its land area is dominated by forest and tundra. Consequently, the population is highly urbanized; more than 80% of residents are concentrated in large and medium-sized cities, many near the southern border. Almost one third of the population lives in the metropolitan areas of Toronto, Montreal, and Vancouver. In 2010, the estimated population was 34.1 million (Table A.7), and 23% of the population was younger than 20 years (Table A.6). Canada is a multicultural society. In 2006, members of visible minorities constituted 16.2% of the population, including Aboriginal people, who accounted for 3.8% of the total population. English is the first language of 56% of the population, and French is the first language of 22% of the population. Canada is divided into 10 provinces and three territories.

The highly globalized economy is dominated by the service sector, in which 75% of the workforce is employed. There is also a strong primary sector, which includes forestry, petroleum industries, and mining. Agriculture is also important; products such as wheat, canola, and other grains are grown, including for export. A sizeable manufacturing sector is centred in southern Ontario and Quebec; automobiles and aeronautics are particularly important industries. The Canadian Space Agency operates a highly active space programme. The country has a relatively low level of income disparity.

Health-care delivery is backed by a publicly funded universal health insurance system. Health care falls under provincial or territorial jurisdiction; therefore, each province and territory manages its own health insurance system. The Canada Health Act specifies the conditions that the provincial and territorial health insurance systems must abide by. Access to health care is universal, with no fees for use of most services. Diagnostic and treatment services for children with cancer are available at 17 specialized paediatric cancer centres.

Cancer registration started in some areas of Canada in the 1930s, and it became population-based in the 1950s (Table A.10). Since 1969, Statistics Canada has collected population-based cancer incidence data. Since 1992, these data have been compiled in the person-oriented Canadian Cancer Registry, which replaced the event-oriented National Cancer Incidence Reporting System. The Canadian Cancer Registry falls under the governance of the Canadian Council of Cancer Registries, a collaboration between the 13 Canadian provincial and territorial cancer registries and the Centre for Population Health Data of Statistics Canada. The ultimate authority and responsibility for the completeness and quality of the data reside with the provinces and territories, whereas Statistics Canada is the custodian of the Canadian Cancer Registry. All provincial and territorial registries participate in an annual linkage of data through the national Canadian Cancer Registry and identify any duplicate registrations across jurisdictions. This process improves completeness of registration across Canada, reduces the likelihood of duplicate registration, and captures patients treated outside their province of residence. The Canadian Cancer Registry provides national incidence and survival information required for cancer control programmes. Statistics Canada produces an annual report based on the data provided by the provincial and territorial registries.

POPULATION AT RISK

Population estimates were provided by Statistics Canada (https://www.statcan.gc.ca/eng/start) and are based on the national censuses conducted every 5 years. The censuses of 1991, 1996, 2001, 2006, and 2011 were used to generate the population data required for IICC-3 (Table A.7). The intercensal and postcensal estimates are adjusted for census underenumeration and account for demographic changes. The reference date is 1 July. The individual cancer registries submitted the population data in the requested detail as provided by the Population Estimates Section

CANADA, 9 registries (1992-2013)

Registry	Period	Cases	%	Person-years	%
Alberta	1992-2013	3329	12.2	19 224 736	12.2
British Columbia	1992-2013	3503	12.8	21 521 989	13.6
Manitoba	1992-2013	1199	4.4	7 127 938	4.5
Northwest Territories	1992-2012	33	0.1	292 880	0.2
Nova Scotia	1992-2013	831	3.0	4 917 182	3.1
Ontario	1992-2012	11374	41.5	64 102 963	40.6
Quebec	1992-2010	6039	22.0	34 199 625	21.7
Saskatchewan	1992-2013	1066	3.9	6 356 782	4.0
Yukon	1992-2013	22	0.1	191 578	0.1
CANADA	**1992-2013**	**27396**	**100.0**	**157 935 673**	**100.0**

Please consult the quality indicators for this pool and its constituent registries

in the Demography Division of Statistics Canada, unless otherwise specified below.

EDITORS' COMMENTS

Although the cancer data are assembled by Statistics Canada, the provincial and territorial cancer registries are responsible for data provision and protection. Therefore, the long time series required by the IICC-3 call for data could be provided only through the individual cancer registries. All 12 jurisdictions in existence at the time contributed data to IICC-2; data from 8 provinces were presented as the Atlantic Provinces or Western Provinces pooled datasets in IICC-1 (Table A.1). However, not all registries were able to supply data for IICC-3, because of restrictions on data sharing. As a result, nine registries provided data and were included in IICC-3. These data are presented in a pooled dataset in the IICC-3 book. The individual tables are available online for Alberta, British Columbia, Manitoba, Nova Scotia, Ontario, Quebec, and Saskatchewan. The registries of the Northwest Territories and the Yukon contributed data to the pool, but their tables are not published because of the very small numbers of cases (Table A.12).

Dates of birth and incidence were incomplete in several registries (Table A.8). The proportion of cases with an unknown basis of diagnosis was rather high in the combined dataset (Table A.9). Non-malignant CNS tumours are reportable in all included Canadian registries except that of Quebec, although their registration may be incomplete (Table A.9). Pilocytic astrocytoma was coded with malignant behaviour since 2001 in most registries; it was coded with uncertain behaviour until 2000 in some registries, as specified below. Basal and squamous cell skin carcinomas were registered in Alberta, Manitoba, and Saskatchewan but not in other registries. Laterality information was missing for 30% of the cases of interest in the pooled dataset, mostly as a result of its incomplete provision from Quebec.

Alberta Cancer Registry, 1992–2013

Carol Russell, Zoran Miladinovic, Cindy Nikiforuk

Alberta covers an area of 661 688 km^2 and is bordered to the north by the Northwest Territories, to the east by Saskatchewan, to the west by British Columbia, and to the south by the USA (the state of Montana). In 2010, the population was 3.7 million, and 25% of the population was younger than 20 years (Table A.6). Most of the population is urban, and 64% of residents live in the metropolitan areas of the two largest cities: Edmonton and Calgary. About 78% of the population is of European descent, mostly of British origin. The remainder of the population is multi-ethnic, with people of Chinese and South Asian origin predominating. Alberta has had a net gain in population from immigration because of employment opportunities in the petrochemical industry, which was built on large reserves of oil, gas, and bitumen. Other natural resources have enabled the development of forestry and agriculture.

The Alberta Cancer Registry is operated by Alberta Health Services Cancer Care. All cancer records are stored in an electronic database. The earliest records are from 1941, and the registration is considered to be population-based from 1951 onwards (Table A.10). Since 1973, new processes have been implemented to improve the collection and recording of data and to upgrade the registration system. Legislation was passed that requires the Alberta Cancer Registry to seek registration of all reportable cancers diagnosed in the province. All laboratories and physicians must report a person with a diagnosis of a reportable cancer, and the registry may request any additional necessary information. All malignant neoplasms and all non-malignant CNS tumours are reportable.

An extensive system of case tracking has been established within the Cancer Care Appointment Offices, Department of Patient Information, and Cancer Registry Department to ensure that any information about a cancer case is followed up and the maximum amount of data is gathered. The Alberta Cancer Registry also has access to multiple electronic databases to complete or verify the recorded data. Pathology reports and vital statistics abstracts that are received are followed up to ensure complete registration information. A follow-up system tracks whether the patient is known to have active provincial health-care coverage (is presumed to be alive), is known to be dead, or is otherwise lost to follow-up.

The registry data are used to assess and improve the standards of treatment and care provided to patients with cancer; to assist in cancer research, education, and prevention; and to compile statistics on cancer. Registry data can also help identify Albertans who may be eligible for participation in research studies that have been approved by a research ethics committee. Every 2 years, the Surveillance and Reporting Department of Alberta Health Services publishes *Report on Cancer Statistics in Alberta* (https://www.albertahealthservices.ca/cancer/Page1774.aspx).

POPULATION AT RISK

See Canada, above.

EDITORS' COMMENTS

Although cancer cases are ascertained from death certificates, no DCO cases were identified (Table A.9). Pilocytic astrocytoma was coded with uncertain behaviour in the period 1992–2000 and with malignant behaviour thereafter. Skin carcinomas are registered. Laterality was almost complete. See also Canada, above.

British Columbia Cancer Registry, 1992–2013

Ryan Woods, Colleen Wong, Cathy MacKay, John Spinelli

British Columbia (BC) is the westernmost province of Canada. It is bordered to the east by the province of Alberta, to the north by the Yukon and the Northwest Territories, to the south by the USA (the states of Washington, Idaho,

and Montana), and to the west by the Pacific Ocean. The province covers an area of 926 492 km^2, a considerable portion of which is mountainous. Most of the population is concentrated in the south-western area of BC, where the climate is mildest.

In 2010, the estimated population was 4.5 million, and 22% of the population was younger than 20 years (Table A.6). More than half of the population lives in the Vancouver metropolitan area. The capital city is Victoria. Immigration to BC has increased in recent years. At the 2006 Canadian census, it was estimated that 27.2% of BC residents had immigrated to Canada; of these, one sixth had immigrated between the 2001 and 2006 censuses. At the 2006 census, 25.5% of BC residents identified as a member of a visible minority group, of which the largest groups were Chinese, South Asian, and Korean. Aboriginal people comprised 4.8% of the population.

Health care in BC is delivered by a publicly funded system (BC Cancer), which operates six regional cancer centres. These centres are the exclusive providers of radiotherapy in the province and provide about 50% of chemotherapy services. Specialist paediatric oncology services are provided by a single paediatric hospital, located in Vancouver.

The BC Cancer Registry is a population-based registry that is integrated with other clinical databases maintained by BC Cancer. The registry receives notification of cancer cases diagnosed in the province by submission of pathology and other diagnostic reports from hospitals or from one of the regional cancer centres. The registry also receives listings of all deaths in the province from the BC Vital Statistics Agency and registers cases of cancer first reported at death. Case listings extracted from hospital discharge data from the paediatric cancer specialty centre are routinely shared with the registry to ensure the ascertainment of all paediatric cancers. The registry is funded by the public health-care system and is permitted by provincial law to request information from sources relevant to the registration of cancer in BC.

The registry serves as a source of data for epidemiological, health services, and outcomes research. Surveillance reports of cancer statistics (https://www.bccancer.bc.ca/health-info/disease-system-statistics) are regularly generated and are used for services and facilities planning, for budgeting, and to monitor system performance. In particular, the registry has provided case identification, diagnosis, sociodemographic, and death follow-up data for the childhood cancer survivor research programme: the Childhood, Adolescent, and Young Adult Cancer Survivors Research Program (CAYACS). This programme links registry, clinical, and administrative data on all survivors of cancers diagnosed in BC residents younger than 25 years since 1970, to identify and characterize long-term medical, educational, and vocational problems, utilization of health services, and access to quality care. Findings from this research programme led the BC government to announce in 2015 the funding and establishment of a special programme to provide appropriate follow-up care guidelines and monitoring to survivors of childhood and adolescent cancer.

PUBLICATIONS

McBride ML, Rogers PC, Sheps SB, Glickman V, Broemeling AM, Goddard K, et al. (2010). Childhood, Adolescent, and Young Adult Cancer Survivors Research Program of British Columbia: objectives, study design, and cohort characteristics. Pediatr Blood Cancer. 55(2):324–30. https://doi.org/10.1002/pbc.22476 PMID:20582971

POPULATION AT RISK

Population estimates are produced by the provincial statistical agency BC Stats (https://www2.gov.bc.ca/gov/content/data/about-data-management/bc-stats) and are based on estimates obtained from Canadian national censuses. See also Canada, above.

EDITORS' COMMENTS

The registry collects the full dates of birth and incidence, but because of privacy laws only year of birth and incidence were included in the dataset provided (Table A.8). Pilocytic astrocytoma was coded with malignant behaviour throughout the reporting period. Skin carcinomas have not been registered since 1994. Laterality was almost complete for nephroblastoma. See also Canada, above.

Manitoba Cancer Registry, 1992–2013

Gail Noonan, Sheila Fukumura, Grace Musto, Lin Xue, Donna Turner

Manitoba is located in central Canada. It is bordered to the east by Ontario, to the west by Saskatchewan, to the north by Nunavut, and to the south by the Northwest Territories and the USA (the states of North Dakota and Minnesota). Manitoba covers an area of 649 947 km^2. In 2010, the population was 1.2 million, and 26% of the population was younger than 20 years (Table A.6). About 16.7% of all residents had an Aboriginal identity (58.3% First Nations, 40.2% Métis, 0.3% Inuit, and 0.5% other Aboriginal identity). Immigrants accounted for 15.7% of the population, and 31.2% of them immigrated to Canada between 2006 and 2011. The three most common countries of birth of the recent immigrants residing in Manitoba are the Philippines (accounting for 36.2% of the immigrant population in Manitoba), India (17.3%), and China (5.4%).

CancerCare Manitoba is a provincial cancer agency with a mandate to coordinate all aspects of cancer control in the province. Treatment services are provided in two outpatient-based radiotherapy centres, one in the major urban centre of Winnipeg and the other in the rural city of Brandon, where chemotherapy is also provided. The agency partners with other community care facilities to provide cancer services through the Community Cancer Programs Network, to deliver cancer care (primarily chemotherapy) in local communities throughout the province.

The registry became fully population-based and mandated by law in 1956 (Table A.10), although it has cases from 1937. The registry is funded through CancerCare Manitoba by the provincial health department. In the Department of Epidemiology and Cancer Registry, the registry staff includes a manager and 10 cancer registrars, and the epidemiology staff includes a director, five epidemiologists, one health economist, seven analysts, and two project managers. The staff is supported by

one administrative assistant. Multiple sources for case ascertainment are used. The registry has been certified by the North American Association of Central Cancer Registries (NAACCR) for the past 14 consecutive years.

The registry data are used for surveillance, research, evaluation, planning, and teaching purposes and to provide diagnostic confirmation and treatment-related information to health-care providers.

POPULATION AT RISK

See Canada, above.

EDITORS' COMMENTS

The registry collects the full date of birth, but only the month and year of birth were included in the dataset provided (Table A.8), because the full date of birth is considered to be a patient identifier and was withheld for privacy reasons. The proportion of cases aged 19 years in the age group 15–19 years was high (28.0%) (Table A.9). All cases of pilocytic astrocytoma were coded with malignant behaviour. Skin carcinomas are registered. Information on laterality is complete. See also Canada, above.

Northwest Territories Cancer Registry, 1992–2012

Heather Hannah, Helen MacPherson, Yalda Jafari, Shannon LeBlanc, Megan McCallum, Kami Kandola, André Corriveau, Andrew Min, Cindy Nikiforuk

The Northwest Territories (NWT) is a federal territory of Canada located between the Yukon and Nunavut territories in northern Canada and bordered to the south by the provinces of British Columbia, Alberta, and Saskatchewan. It covers an area of about 1.1 million km^2, which is covered by boreal forest (taiga) and tundra and extends to the northern regions of the Canadian Arctic Archipelago. Natural resources include gold, diamonds, natural gas, and petroleum and contribute to a high GDP per capita.

In 2010, the estimated population was 43 000, and about 30% of the population was younger than 20 years (Table A.6). The residents of the NWT rely heavily on the health-care services provided in the province of Alberta, including laboratory diagnostic and medical referral services. Most NWT residents who require cancer care are diagnosed and treated in Alberta.

The NWT Cancer Registry has recorded tumour-specific descriptions and demographic information on residents of the territory since 1992 (Table A.10). The registry was established under the authority of the Public Health Act and the Disease Surveillance Regulations. The Chief Public Health Officer of the NWT holds the statutory appointment of registrar for the Public Health Registries, and the Territorial Epidemiologist is responsible for managing the NWT Cancer Registry. The NWT Cancer Registry is located within the Population Health Division, under the authority of the Chief Public Health Officer, NWT Department of Health and Social Services. Management and oversight of the registry is one of many mandates of the Epidemiology and Surveillance Unit.

Since 2007, the NWT Cancer Registry has contracted with Alberta Health Services to administer NWT cancer data by creating a territorial registry within its infrastructure. Cancer Control Alberta provides collaborative staging of all tumours diagnosed from 2006 onwards and submits all relevant datasets to Statistics Canada and the NAACCR. The NWT Cancer Registry is responsible for case ascertainment and the provision of all information required for collaborative staging.

The comprehensive listing of data on tumours and screening tests among NWT residents has become an important tool for evidence-based, data-driven decision-making. The registry actively participates in various projects, which increase the value of the registry in the betterment of the health of NWT residents.

POPULATION AT RISK

The population estimates are based on data from the national census, as provided by the NWT Bureau of Statistics. See also Canada, above.

EDITORS' COMMENTS

Although cancer cases are ascertained from death certificates, no DCO cases were identified. Non-malignant CNS tumours are collected, but none were registered during the reporting period. Pilocytic astrocytoma was coded with malignant behaviour. Laterality is collected and is complete. See also Canada, above.

Nova Scotia Cancer Registry, 1992–2013

Gordon Walsh, Nathalie St-Jacques

Nova Scotia is a province located on Canada's eastern coast. The province is largely surrounded by the Atlantic Ocean and is joined to the adjacent province of New Brunswick by a narrow isthmus of land. Nova Scotia covers an area of about 55 940 km^2. In 2011, the population was 0.9 million, and 21% of the population was younger than 20 years (Table A.6); 65% of the total population lived within a census metropolitan area. The traditionally resource-based economy diversified after the closure of fishery, mining, and forestry industries in the early 1990s and the negative effect of those closures on the income level. The newer sectors mostly include offshore oil and gas production, defence, film-making, tourism, information and communication technology, and manufacturing. Agriculture remains an important contributor to the economy.

Residents are covered by a publicly funded, comprehensive health insurance programme, including family physician visits and hospital-based care, accessed through a unique, lifetime-assigned health card number. The Nova Scotia Health Authority, which is funded by the provincial Department of Health and Wellness, manages health-care services (e.g. hospitals, home care, public health). Cancer care is highly centralized, with coordination through a provincial cancer programme. Two main cancer

centres, based in Halifax and Sydney, offer specialized treatment (e.g. radiotherapy services), and numerous satellite clinics located throughout the province provide specialist oncology referral, chemotherapy, and follow-up care.

The Nova Scotia Cancer Registry operates as part of the government-funded provincial cancer programme. Eighteen programme staff (registrars, analysts, and administrative staff) work with abstraction staff located at cancer centres to collect data. Cancer has been a reportable disease in Nova Scotia since 1964, and multiple reporting sources (e.g. pathology laboratories, hospital records, cancer centre referrals) are used to ensure completeness. Since 2004, standardized data on stage at diagnosis are part of routine data abstraction. Only limited data on treatment are collected, but these are being expanded. Routine linkage with vital statistics death data began with cases diagnosed in 1969. The registry follows standards outlined by the Canadian Council of Cancer Registries.

Data are reported annually to the Canadian Cancer Registry at Statistics Canada and are submitted to the NAACCR for certification and inclusion in the publication *Cancer in North America*. Provincial data (e.g. incidence, mortality, survival) are reported annually to local stakeholders and are used for programme evaluation and planning purposes. Data are frequently made available for use in approved studies.

POPULATION AT RISK

See Canada, above.

EDITORS' COMMENTS

The registry receives the full dates of birth and incidence, but these were truncated to year and month in the dataset provided (Table A.8), because of patient privacy regulations; thus, age calculations could not be verified at IARC. Pilocytic astrocytoma was reported with benign or uncertain behaviour until 2000 and with malignant behaviour thereafter. Laterality was complete for gonadal tumours. See also Canada, above.

Ontario Cancer Registry, 1992–2012

Tanya Navaneelan, Mary Jane King

Ontario is located in east-central Canada. It is bordered by Quebec to the east, Manitoba to the west, Hudson Bay and James Bay to the north, and the USA to the south. An abundance of natural resources and excellent transportation links with the USA and the Great Lakes contributed to the development of the manufacture of motor vehicles, iron, steel, food, electrical appliances, machinery, chemicals, and paper. The rivers provide hydroelectric power. Information technology, transportation, petrochemical production, mining, forestry, and tourism contribute to the developed economy. Agriculture is an important sector, although it employs a small percentage of the population. Toronto, the capital of Ontario, is the largest city in Canada and the centre of the country's financial services and banking industry. Ottawa, the capital city of Canada, is also located in Ontario.

Ontario is the country's most populous province, accounting for 38% of the national population; most of the population (85%) is urban. In 2010, the estimated population was 13.1 million, and 24% of the population was younger than 20 years (Table A.6). The major racial or ethnic groups among Ontario children are European (67.9%), South Asian (8.5%), Black (4.9%), Chinese (4.0%), and Aboriginal (2.9%). All children have access to universal health care. The province has five paediatric cancer centres (located in Toronto, Ottawa, London, Hamilton, and Kingston), six satellite centres, and aftercare programmes for survivors of childhood cancer.

The Ontario Cancer Registry covers the entire province. It has been operated by Cancer Care Ontario (an agency of the Ministry of Health and Long-Term Care) since 1964 (Table A.10). Cancer is not a reportable disease in Ontario; however, the Cancer Act provides a legal mandate for Cancer Care Ontario to establish and maintain a cancer registry. Cancer registration is passive, relying on electronic records collected for other purposes. Almost 750 000 source records are submitted to the registry per year. The four major data sources are hospital discharge summaries and outpatient surgeries with a cancer diagnosis, pathology reports with any mention of cancer, records of patients referred to the regional cancer centres for treatment, and death certificates for all underlying causes of death. Because multiple sources are used, the completeness of registration is believed to be quite high. The data sources switched coding systems at different times; all have used ICD-10 or ICD-O-3 since 2003. Follow-up of patients relies solely on routine death linkages.

The registry data (https://www.cancercareontario.ca/en/cancer-care-ontario/programs/data-research/ontario-cancer-registry) have been used in studies of reproductive outcomes in survivors of childhood cancer and of the incidence of childhood leukaemia around nuclear facilities. Other uses of registry data include studies of utilization of health-care services, estimation of relative survival, occupational cohort studies, and projections of incidence and mortality trends to predict future cancer burdens.

PUBLICATIONS

Chiarelli AM, Marrett LD, Darlington GA (2000). Pregnancy outcomes in females after treatment for childhood cancer. Epidemiology. 11(2):161–6. https://doi.org/10.1097/00001648-200003000-00013 PMID:11021613

McLaughlin JR, Clarke EA, Nishri ED, Anderson TW (1993). Childhood leukemia in the vicinity of Canadian nuclear facilities. Cancer Causes Control. 4(1):51–8. https://doi.org/10.1007/BF00051714 PMID:8431531

POPULATION AT RISK

See Canada, above.

EDITORS' COMMENTS

The MV% was low (Table A.9). According to the registry, this is because of possibly incomplete notification from the two major children's hospitals in Ontario. The proportion of cases with an unknown basis of diagnosis was high (5.9%) (Table A.9); this denotes the cases in which no

surgery was performed and no pathology report exists. Non-malignant CNS tumours were recorded from 2010 onwards. Pilocytic astrocytoma was coded with malignant behaviour, but cases were found in the dataset only in the last 3 years. Laterality was provided for 80% of the cases of interest. See also Canada, above.

Quebec Cancer Registry, 1992–2010

Rabia Louchini, Christine Bertrand

The province of Quebec covers a vast area of 1 667 441 km^2, only 2.3% of which is used as urban or agricultural land. In 2010, the population was 7.9 million; 22% of the population was younger than 20 years (Table A.6), and 15.7% was aged 65 years and older. About 80% of the population resides in urban areas. French is the first language of 79% of the population, and the life expectancy at birth is 79 years for men and 83 years for women. The economy has traditionally been reliant on the abundant natural resources and a well-developed infrastructure. It is currently based mainly on the services sector.

In Quebec, health services have been available to the whole population through a comprehensive public system since 1970. Cancer is diagnosed and treated in 70 hospital facilities. Of those, 11 offer radiation oncology services. Children with cancer are treated mainly in four paediatric centres, located in Montreal, Quebec City, and Sherbrooke.

The Quebec Cancer Registry is maintained by the Ministry of Health and Social Services of Quebec and covers the population of the entire province. Notification of cancer is mandatory under the Public Health Act of Quebec. Before 2011, cancer cases were notified after hospitalization or a visit to the outpatient surgery unit of a hospital offering specialized care, or via death certificates. Therefore, melanoma not requiring a hospital stay or a visit to an outpatient surgery unit may be underreported. Since 2011, pathology reports have also been used to collect cancer cases. Since 2014, data on extent of disease, stage, and treatment for some cancers have been collected.

The registry data are used mainly for monitoring, surveillance, prevention, programme evaluation, and research. Special reports on survival, prevalence, data quality, and projections are published periodically. Specific databases for regional cancer surveillance are produced annually, and a variety of statistics are made available for general and specific purposes.

POPULATION AT RISK

See Canada, above.

EDITORS' COMMENTS

Non-malignant CNS tumours were not registered (Table A.9). Pilocytic astrocytoma was coded with malignant behaviour. There was no melanoma before 2000. Laterality was provided for only 7% of the cases of interest. See also Canada, above.

Saskatchewan Cancer Registry, 1992–2013

Heather Stuart-Panko, Raelene Hobson

Saskatchewan is a landlocked province in south-central Canada. It is bordered by Alberta to the west, the Northwest Territories to the north, Manitoba to the east, Nunavut to the north-east, and the USA to the south (the states of Montana and North Dakota). Almost 10% of the province's area of 651 900 km^2 is fresh water. The climate is extremely continental, with severe winters throughout the province and hot summers in southern areas. In 2010, the population was 1.0 million, and 26% of the population was younger than 20 years (Table A.6). Residents live mainly in the southern half of the province; the northern, boreal half is mostly forested and is sparsely populated. The population is of mixed origin; 64% of the population lives in urban areas, and half of the population lives in the largest city, Saskatoon, or the provincial capital, Regina. The economy is based on agriculture, forestry, mining, and energy.

The Saskatchewan Cancer Registry is located within the Saskatchewan Cancer Agency, which is responsible for treatment, prevention, and early detection programmes, research, education, and supportive care services. By mandate of the Cancer Agency Act, all cancers must be reported to the Saskatchewan Cancer Agency. This mandate results in case ascertainment of about 95%. Other case ascertainment strategies, such as notification of deaths by the Vital Statistics agency, result in the capture of the other 5% of cases.

The registry is staffed by 14 registrars, two training and education coordinators, two clerks, two site managers, one coordinator, one data quality specialist, one business specialist, and a director. The registry captures about 10 000 cancer cases per year, including non-melanoma skin cancers. The registry also uses active follow-up procedures to capture outcomes information.

The registry is patient- and case-oriented. Electronic data are available for all cancers diagnosed since 1967, and paper records are available from 1932. Collection of collaborative staging data began in 2005. Quality control practices include re-abstraction of cases, internal and external audits, and electronic editing. The data are also edited by Statistics Canada and the NAACCR upon submission to these databases.

The registry data are used for business and planning purposes, research, outcomes analysis, performance measurement, evaluation of early detection and screening programmes, and statistics. Statistical data are published at the provincial, national, and international levels.

POPULATION AT RISK

See Canada, above.

EDITORS' COMMENTS

Pilocytic astrocytoma was coded with malignant behaviour throughout the reporting period, and some cases were coded with uncertain behaviour until 1996. Skin carcinomas are registered. Laterality is complete for all of the cases of interest. See also Canada, above.

Yukon Cancer Registry, 1992–2013

Shauna Demers, Ryan Woods, Colleen Wong, Cathy MacKay

The Yukon Territory is located in north-western Canada. It is bordered by the Northwest Territories to the east, the province of British Columbia to the south, and the USA to the west (the state of Alaska). It covers a land area of 482 443 km^2. Most of the territory has a subarctic climate, characterized by long, cold winters and brief, warm summers. The Arctic Ocean coast has a tundra climate.

Historically, the major industry was mining for lead, zinc, silver, gold, asbestos, and copper. The scenic landscape and outdoor recreation opportunities make tourism the second most important industry in the territory. Other sectors include manufacturing (furniture, clothing, and handicrafts), hydroelectricity, and government services.

The Yukon has a small population. In 2010, the population was 34 600, and 24% of the population was younger than 20 years (Table A.6). About 75% of the territory's population lives in Whitehorse, the capital of the Yukon. The population increased by 18.2% from 2001 to 2011. The Yukon has a low proportion of elderly people; only 8.9% of the population is older than 65 years, compared with 14.8% of the population of Canada. One quarter of the Yukon's population is of Aboriginal origin. Despite the small population, all of the many small communities (except one) are accessible by road.

Health programmes and services in the Yukon are provided through 14 health centres and two hospitals. There are no dedicated cancer centres or specialist paediatric hospitals. Specialized cancer services are provided by visiting specialists, or patients travel to adjacent provinces where such care is available.

The Yukon Cancer Registry includes information dating back to 1987 (Table A.10). BC Cancer (in the province of British Columbia) maintains the Yukon Cancer Registry along with its own provincial data. Data from the Yukon are submitted to the Canadian Cancer Registry.

POPULATION AT RISK

See Canada, above.

EDITORS' COMMENTS

The registry collects the full dates of birth and incidence, but because of privacy laws only year of birth and incidence were included in the dataset provided. Pilocytic astrocytoma was coded with malignant behaviour. Skin carcinomas have not been registered since 1994. Laterality was available for the two registered cases of interest. See also Canada, above.

CANADA, 9 registries (1992-2013)

	Age group (years)	Males	Females
Person-years	0	3 703 315	3 516 426
	1-4	15 246 812	14 501 895
	5-9	19 749 514	18 792 301
	10-14	20 722 059	19 691 038
	15-19	21 583 941	20 428 372
	0-14	59 421 700	56 501 660
	0-19	81 005 641	76 930 032

Please consult the quality indicators for this pool and its constituent registries

CANADA, 9 registries (1992-2013)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)							0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	LEUKAEMIA	399	2798	1577	1110	1079	**5884**	**6963**	32.1	100.0	25.4	100.0	55.3	94.1	40.9	27.5	25.7	**54.6**	**48.1**	774	903	86.5	0.2
	a. Lymphoid	136	2395	1298	728	549	**4557**	**5106**	24.9	77.4	18.6	73.3	18.8	80.5	33.7	18.0	13.1	**42.6**	**36.0**	601	666	88.0	0.1
	b. Acute myeloid	121	268	176	258	305	**823**	**1128**	4.5	14.0	4.1	16.2	16.8	9.0	4.6	6.4	7.3	**7.4**	**7.4**	107	144	89.7	0.0
	c. CMD	67	32	36	56	116	**191**	**307**	1.0	3.2	1.1	4.4	9.3	1.1	0.9	1.4	2.8	**1.7**	**2.0**	25	39	68.4	0.3
	d. MDS & other	24	27	18	32	38	**101**	**139**	0.6	1.7	0.5	2.0	3.3	0.9	0.5	0.8	0.9	**0.9**	**0.9**	13	18	72.7	1.4
	e. Unspecified	51	76	49	36	71	**212**	**283**	1.2	3.6	1.0	4.1	7.1	2.6	1.3	0.9	1.7	**2.0**	**1.9**	28	36	73.1	1.8
II	LYMPHOMA & RELATED	65	345	577	1078	2435	**2065**	**4500**	11.3	100.0	16.4	100.0	9.0	11.6	15.0	26.7	58.0	**16.9**	**26.1**	264	553	94.5	0.1
	a. Hodgkin	1	26	141	596	1676	**764**	**2440**	4.2	37.0	8.9	54.2	0.1	0.9	3.7	14.7	39.9	**5.7**	**13.4**	96	295	97.5	0.0
	b. Non-Hodgkin except BL	13	175	260	311	572	**759**	**1331**	4.1	36.8	4.9	29.6	1.8	5.9	6.7	7.7	13.6	**6.4**	**8.0**	98	166	95.3	0.1
	c. Burkitt (BL)	0	70	124	119	95	**313**	**408**	1.7	15.2	1.5	9.1	-	2.4	3.2	2.9	2.3	**2.6**	**2.5**	40	52	95.8	0.0
	d. Lymphoreticular	46	65	34	20	20	**165**	**185**	0.9	8.0	0.7	4.1	6.4	2.2	0.9	0.5	0.5	**1.6**	**1.3**	22	24	75.1	0.0
	e. Unspecified	5	9	18	32	72	**64**	**136**	0.3	3.1	0.5	3.0	0.7	0.3	0.5	0.8	1.7	**0.5**	**0.8**	8	17	55.1	2.9
III	CNS NEOPLASMS †	235	1152	1214	1087	1042	**3688**	**4730**	20.1	100.0	17.3	100.0	32.5	38.7	31.5	26.9	24.8	**32.5**	**30.8**	480	604	75.8	0.5
	a. Ependymoma	43	187	75	74	67	**379**	**446**	2.1	10.3	1.6	9.4	6.0	6.3	1.9	1.8	1.6	**3.6**	**3.1**	50	58	93.9	0.0
	b. Astrocytoma	68	399	472	455	399	**1394**	**1793**	7.6	37.8	6.5	37.9	9.4	13.4	12.2	11.3	9.5	**12.1**	**11.5**	181	228	87.3	0.0
	c. CNS embryonal	56	310	300	176	99	**842**	**941**	4.6	22.8	3.4	19.9	7.8	10.4	7.8	4.4	2.4	**7.6**	**6.4**	110	122	94.8	0.0
	d. Other gliomas	18	150	224	173	183	**565**	**748**	3.1	15.3	2.7	15.8	2.5	5.0	5.8	4.3	4.4	**4.9**	**4.8**	73	95	37.4	0.0
	e. Other specified	21	44	85	134	211	**284**	**495**	1.6	7.7	1.8	10.5	2.9	1.5	2.2	3.3	5.0	**2.4**	**3.0**	36	62	75.8	0.0
	f. Unspecified CNS	29	62	58	75	83	**224**	**307**	1.2	6.1	1.1	6.5	4.0	2.1	1.5	1.9	2.0	**2.0**	**2.0**	29	39	17.6	7.2
IV	NEUROBLASTOMA	502	665	172	46	29	**1385**	**1414**	7.6	100.0	5.2	100.0	69.5	22.4	4.5	1.1	0.7	**14.0**	**11.0**	186	189	92.6	0.1
	a. (Ganglio)neuroblastoma	500	658	169	32	15	**1359**	**1374**	7.4	98.1	5.0	97.2	69.3	22.1	4.4	0.8	0.4	**13.8**	**10.8**	183	184	92.6	0.1
	b. Peripheral nervous	2	7	3	14	14	**26**	**40**	0.1	1.9	0.1	2.8	0.3	0.2	0.1	0.3	0.3	**0.2**	**0.2**	3	5	92.5	0.0
V	RETINOBLASTOMA	167	278	14	4	1	**463**	**464**	2.5	100.0	1.7	100.0	23.1	9.3	0.4	0.1	0.0	**4.8**	**3.7**	62	63	71.6	0.0
VI	RENAL TUMOURS	141	582	221	53	60	**997**	**1057**	5.4	100.0	3.9	100.0	19.5	19.6	5.7	1.3	1.4	**9.8**	**7.9**	133	140	93.8	0.2
	a. Nephroblastoma	131	572	210	32	12	**945**	**957**	5.2	94.8	3.5	90.5	18.1	19.2	5.4	0.8	0.3	**9.3**	**7.3**	126	128	95.2	0.0
	b. Renal carcinoma	1	5	9	19	45	**34**	**79**	0.2	3.4	0.3	7.5	0.1	0.2	0.2	0.5	1.1	**0.3**	**0.5**	4	10	100.0	0.0
	c. Unspecified	9	5	2	2	3	**18**	**21**	0.1	1.8	0.1	2.0	1.2	0.2	0.1	0.0	0.1	**0.2**	**0.2**	2	3	4.8	9.5
VII	HEPATIC TUMOURS	67	150	34	37	42	**288**	**330**	1.6	100.0	1.2	100.0	9.3	5.0	0.9	0.9	1.0	**2.8**	**2.4**	38	43	90.9	0.0
	a. Hepatoblastoma	64	140	24	12	1	**240**	**241**	1.3	83.3	0.9	73.0	8.9	4.7	0.6	0.3	0.0	**2.4**	**1.9**	32	32	93.8	0.0
	b. Hepatic carcinoma	0	6	10	24	38	**40**	**78**	0.2	13.9	0.3	23.6	-	0.2	0.3	0.6	0.9	**0.3**	**0.5**	5	10	93.6	0.0
	c. Unspecified	3	4	0	1	3	**8**	**11**	0.0	2.8	0.0	3.3	0.4	0.1	-	0.0	0.1	**0.1**	**0.1**	1	1	9.1	0.0
VIII	BONE TUMOURS	4	66	229	513	618	**812**	**1430**	4.4	100.0	5.2	100.0	0.6	2.2	5.9	12.7	14.7	**6.3**	**8.2**	103	176	94.4	0.0
	a. Osteosarcoma	0	15	107	293	317	**415**	**732**	2.3	51.1	2.7	51.2	-	0.5	2.8	7.3	7.5	**3.2**	**4.1**	52	90	97.3	0.0
	b. Chondrosarcoma	0	0	2	12	41	**14**	**55**	0.1	1.7	0.2	3.8	-	-	0.1	0.3	1.0	**0.1**	**0.3**	2	7	96.4	0.0
	c. Ewing & related	0	45	104	179	201	**328**	**529**	1.8	40.4	1.9	37.0	-	1.5	2.7	4.4	4.8	**2.6**	**3.1**	42	66	95.1	0.0
	d. Other specified	1	3	7	16	41	**27**	**68**	0.1	3.3	0.2	4.8	0.1	0.1	0.2	0.4	1.0	**0.2**	**0.4**	3	8	91.2	0.0
	e. Unspecified	3	3	9	13	18	**28**	**46**	0.2	3.4	0.2	3.2	0.4	0.1	0.2	0.3	0.4	**0.2**	**0.3**	4	6	43.5	0.0
IX	SOFT TISSUE SARCOMA	119	318	307	407	613	**1151**	**1764**	6.3	100.0	6.4	100.0	16.5	10.7	8.0	10.1	14.6	**10.1**	**11.1**	149	222	94.8	0.0
	a. Rhabdomyosarcoma	32	243	167	118	136	**560**	**696**	3.1	48.7	2.5	39.5	4.4	8.2	4.3	2.9	3.2	**5.1**	**4.7**	73	90	95.7	0.0
	b. Fibrosarcoma	36	9	27	44	70	**116**	**186**	0.6	10.1	0.7	10.5	5.0	0.3	0.7	1.1	1.7	**1.0**	**1.2**	15	23	93.0	0.0
	c. Kaposi sarcoma	0	0	0	0	5	**0**	**5**	-	-	0.0	0.3	-	-	-	-	0.1	**-**	**0.0**	-	1	100.0	0.0
	d. Other specified	27	45	87	183	308	**342**	**650**	1.9	29.7	2.4	36.8	3.7	1.5	2.3	4.5	7.3	**2.8**	**3.8**	44	80	95.8	0.0
	e. Unspecified	24	21	26	62	94	**133**	**227**	0.7	11.6	0.8	12.9	3.3	0.7	0.7	1.5	2.2	**1.1**	**1.4**	17	28	90.7	0.0
X	GERM CELL TUMOURS	117	118	83	303	1139	**621**	**1760**	3.4	100.0	6.4	100.0	16.2	4.0	2.2	7.5	27.1	**5.3**	**10.2**	80	216	92.3	0.0
	a. CNS germ cell ‡	8	17	40	116	104	**181**	**285**	1.0	29.1	1.0	16.2	1.1	0.6	1.0	2.9	2.5	**1.4**	**1.7**	23	35	82.5	0.0
	b. Other extragonadal	79	51	2	17	56	**149**	**205**	0.8	24.0	0.7	11.6	10.9	1.7	0.1	0.4	1.3	**1.5**	**1.5**	20	27	88.8	0.0
	c. Gonadal germ cell	25	43	39	152	897	**259**	**1156**	1.4	41.7	4.2	65.7	3.5	1.4	1.0	3.8	21.4	**2.1**	**6.5**	33	140	98.3	0.0
	d. Gonadal carcinoma	0	0	0	6	52	**6**	**58**	0.0	1.0	0.2	3.3	-	-	-	0.1	1.2	**0.0**	**0.3**	1	7	93.1	0.0
	e. Unspecified gonadal	5	7	2	12	30	**26**	**56**	0.1	4.2	0.2	3.2	0.7	0.2	0.1	0.3	0.7	**0.2**	**0.3**	3	7	32.1	0.0
XI	CARCINOMA & MELANOMA	43	42	146	524	1888	**755**	**2643**	4.1	100.0	9.6	100.0	6.0	1.4	3.8	13.0	44.9	**5.9**	**14.7**	95	320	96.5	0.0
	a. Adrenocortical	11	7	4	7	10	**29**	**39**	0.2	3.8	0.1	1.5	1.5	0.2	0.1	0.2	0.2	**0.3**	**0.3**	4	5	97.4	0.0
	b. Thyroid	2	8	58	207	873	**275**	**1148**	1.5	36.4	4.2	43.4	0.3	0.3	1.5	5.1	20.8	**2.1**	**6.3**	34	138	98.1	0.0
	c. Nasopharyngeal	0	0	0	19	46	**19**	**65**	0.1	2.5	0.2	2.5	-	-	-	0.5	1.1	**0.1**	**0.4**	2	8	100.0	0.0
	d. Melanoma	8	17	34	98	405	**157**	**562**	0.9	20.8	2.1	21.3	1.1	0.6	0.9	2.4	9.6	**1.3**	**3.1**	20	68	92.0	0.2
	e. Skin carcinoma	3	1	20	44	106	**68**	**174**	0.4	9.0	0.6	6.6	0.4	0.0	0.5	1.1	2.5	**0.5**	**1.0**	9	21	97.7	0.0
	f. Other & unspecified	19	9	30	149	448	**207**	**655**	1.1	27.4	2.4	24.8	2.6	0.3	0.8	3.7	10.7	**1.6**	**3.7**	26	79	96.9	0.0
XII	OTHER & UNSPECIFIED	51	54	32	63	141	**200**	**341**	1.1	100.0	1.2	100.0	7.1	1.8	0.8	1.6	3.4	**1.8**	**2.2**	26	43	30.2	6.7
	a. Other specified	8	16	6	16	13	**46**	**59**	0.3	23.0	0.2	17.3	1.1	0.5	0.2	0.4	0.3	**0.4**	**0.4**	6	8	89.8	0.0
	b. Other unspecified	43	38	26	47	128	**154**	**282**	0.8	77.0	1.0	82.7	6.0	1.3	0.7	1.2	3.0	**1.4**	**1.8**	20	35	17.7	8.2
	TOTAL	1910	6568	4606	5225	9087	**18309**	**27396**	100.0	100.0	100.0	100.0	264.6	220.8	119.5	129.3	216.3	**164.9**	**176.4**	2391	3472	88.0	0.2

† includes 684 non-malignant ‡ includes 8 non-malignant

Please consult the quality indicators for this pool and its constituent registries

USA, 1998–2012

The USA is a federal republic composed of 50 states, the District of Columbia, and several territories, including Puerto Rico. The country covers an area of 98 million km^2. In 2010, the estimated population was 309.9 million (Table A.7). The USA is a highly developed country, with a leading role in politics, the economy, and science.

The population of the USA grew by about 10% between the 2000 census (281.4 million) and the 2010 census (308.8 million); more than half of the growth resulted from the increase in the Hispanic population. Information on Hispanic origin is collected separately from information on race. About 3% of the population reported multiple races. Of the 97% who reported one race, 72% were White, 13% Black, 5% Asian, 0.9% Native American, 0.2% Native Hawaiian or Other Pacific Islander, and 6% some other race. About 13% of the population is foreign-born. In 2010, 27% of the population of the USA was younger than 20 years; this percentage ranged from 23% for Non-Hispanic White (White NH) to 37% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 56% White NH, 20% Hispanic White, 16.5% Black, 5.5% Asian or Pacific Islander (API), and 2% Native American.

The USA currently operates under a mixed-market health-care system. Governmental sources (federal, state, and local) account for 45% of health-care expenditures in the USA. Private sources account for the remainder of costs. The USA does not have universal health-care insurance; 38% of people receive health coverage through their employers, and the other 17% are covered by private insurance or pay out of pocket. However, publicly funded programmes include Medicare, which covers people aged 65 years and older with a work record and certain people with disabilities. Medicaid is available for some, but not all, people with low income, and the State Children's Health Insurance Program covers children from low-income families.

The United States Centers for Medicare and Medicaid Services estimated the country's health-care spending at $3.3 trillion in 2016, accounting for 18% of the GDP. About 11% of total health-care expenditure is spent on people younger than 19 years.

Cancer is a reportable disease in all states. Each state or regional geographical area has a legislative mandate to collect information on every cancer case among the residents of that area. De-identified data are submitted to the National Program of Cancer Registries (NPCR) at the United States Centers for Disease Control and Prevention (CDC), and 18 cancer registries also report data to the Surveillance, Epidemiology, and End Results (SEER) Program at the National Cancer Institute (NCI). All registries are funded partly by the federal government (Table 6.1) and by local sources.

The NAACCR is a professional organization that develops and promotes uniform data standards for cancer registration, provides education and training, certifies population-based cancer registries, aggregates and publishes data from central cancer registries, and promotes the use of cancer surveillance data and systems for cancer control and epidemiological research, public health programmes, and patient care, to reduce the burden of cancer in North America (https://www.naaccr.org). The NAACCR was established in 1987, and all central cancer registries in Canada and the USA are full members. Most states in the USA participate in a National Interstate Data Exchange Agreement to ensure complete reporting of cases and to eliminate duplicate reporting. Registries that meet or exceed all standards for completeness, timeliness, and quality achieve NAACCR certification. Cancer incidence statistics for the member registries are available at https://www.cancer-rates.info/naaccr.

There may be slight inconsistencies in classification of race, ethnic origin, and place of residency between the population and the cancer cases. In the population, race and ethnicity are self-reported (or reported by a family member), whereas for the cancer cases, race and ethnicity are based on hospital records and other sources, in which the assessment of these variables may differ from the self-reported values. For example, information on Hispanic ethnicity and Asian subgroup may be supplemented using the NAACCR Hispanic Identification Algorithm and Asian and Pacific Islander Identification Algorithm, which take into account birthplace and surname. The residency status is recorded in the census data as place of usual residence, and for the cancer case it is usually the same place. However, for college students, the census uses the college as the place of residence, whereas the cancer diagnosis may be reported at their parents' home. This difference in the assessment of place of residence for students, mostly aged 17 or 18 years and older, would result in some underestimation of incidence rates in the age group 15–19 years in the states with a large student population.

POPULATION AT RISK

The population data are derived from censuses conducted in 1990, 2000, and 2010, with intercensal estimates for the years between two censuses and postcensal estimates for 2011 and 2012, as provided by the United States Census Bureau (https://www.census.gov). The estimates include the bridged single-race estimates derived from the original multiple-race categories and take into consideration the numbers of births and deaths. See also NPCR and SEER, below.

EDITORS' COMMENTS

The data for IICC-3 were provided by the NPCR and the SEER Program. The combined USA national dataset for 1998–2012 was created at IARC by including data from each state and the District of Columbia as authorized and by excluding any overlapping areas that contribute to both programmes to avoid double counting. The data from Puerto Rico are presented separately and are reported in the section on Latin America and the Caribbean.

In the IICC-3 book, full USA tables are shown for all races combined and for five racial or ethnic groups: API, Black, Hispanic White, Native American, and White NH. Two tables show all races combined for NPCR and SEER, and a table for Native Hawaiians in Hawaii is also provided. The tables for the individual registries, combined and by racial or ethnic origin, are available online, as specified in Table A.12.

Table 6.1 describes the contribution of the USA registries to IICC-3. Only data for the period 1998–2012 are included in the combined USA estimates; the period was shorter for three registries. Unless otherwise specified in the narratives of individual cancer registries, data on CNS tumours with benign or uncertain behaviour were collected by all registries since 2004 and were submitted by the NPCR. The SEER Program did not submit non-malignant tumours, because they were not collected over the entire reporting period. However, pilocytic astrocytoma was coded with

Table 6.1. Overview of the contribution of the USA registries and programmes to IICC-3

Registry or pooled dataset	Programme	Data source in national dataset	Period	Contributing to pooled datasets	Laterality	Number of cases: total and by race and ethnic origin								
						Total	API†	Black	Hawaiian	Hispanic White	Native American	White NH	White‡	Unknown
USA, national dataset	–	NPCR, SEER	1998–2012	USA	*	216 741	7 965	26 339	–	38 677	1 849	135 752	–	6 159
NPCR	NPCR	NPCR	1998–2012	USA, NPCR	*	207 568	7 247	25 946	–	37 198	1 669	129 458	–	6 050
SEER 18	SEER	SEER	1993–2012	USA, SEER 18		65 217	4 889	7 104	–	16 750	667	34 916	–	891
SEER 9	SEER	SEER	1993–2012	SEER 9		2 956	–	2 956	–	–	–	–	19 796	–
Alabama	NPCR	NPCR	1998–2012	USA, NPCR	*	2 881	23	772	–	90	#	1 949	–	42
Alaska	NPCR	NPCR	1998–2012	USA, NPCR	*	553	43	#	–	19	154	306	–	16
Alaska Natives	SEER	SEER	1993–2012	SEER 18		159	–	–	–	–	159	–	–	–
Arizona	NPCR	NPCR	1998–2012	USA, NPCR	*	4 341	72	145	–	1 427	249	2 220	–	228
Arkansas	NPCR	NPCR	1998–2012	USA, NPCR	*	1 914	22	336	–	91	#	1 437	–	20
California	NPCR, SEER	NPCR	1998–2012	USA, NPCR		27 570	2 708	1 638	–	12 306	103	10 556	–	259
California, Greater California	SEER	SEER	2000–2012	SEER 18		13 237	973	631	–	5 785	142	5 520	–	186
California, Los Angeles	SEER	SEER	1993–2012	SEER 18		9 333	830	770	–	5 281	#	2 336	–	106
California, San Francisco	SEER	SEER	1993–2012	SEER 18, SEER 9		3 358	670	325	–	832	#	1 411	2 243	110
California, San José-Monterey	SEER	SEER	1993–2012	SEER 18		2 363	434	54	–	952	#	889	–	31
Colorado	NPCR	NPCR	1998–2012	USA, NPCR	*	3 356	86	127	–	823	23	2 217	–	80
Connecticut	SEER	SEER	1993–2012	USA, SEER 18, SEER 9		3 297	77	333	–	472	#	2 353	2 825	58
Delaware	NPCR	NPCR	1998–2012	USA, NPCR	*	663	#	164	–	58	#	415	–	16
District of Columbia	NPCR	NPCR	1998–2012	USA, NPCR	*	338	#	188	–	24	#	80	–	37
Florida	NPCR	NPCR	1998–2012	USA, NPCR	*	11 510	143	2 033	–	2 876	18	6 198	–	242
Georgia	NPCR, SEER	NPCR	1998–2012	USA, NPCR		6 541	163	1 944	–	505	#	3 844	–	76
Georgia, Atlanta	SEER	SEER	1993–2012	SEER 18, SEER 9		2 681	129	1 002	–	287	#	1 233	1 520	23
Georgia, Greater Georgia	SEER	SEER	2000–2012	SEER 18		3 533	43	879	–	251	#	2 316	–	41
Georgia, Rural	SEER	SEER	1993–2012	SEER 18		91	#	39	–	#	#	51	–	#
Hawaii	SEER	SEER	1993–2012	USA, SEER 18, SEER 9		1 059	775	24	317	24	#	211	235	20
Idaho	NPCR	NPCR	1998–2012	USA, NPCR	*	1 201	#	#	–	119	#	1 037	–	#
Illinois	NPCR	NPCR	1998–2012	USA, NPCR		9 369	304	1 322	–	1 623	#	5 934	–	175
Indiana	NPCR	NPCR	1998–2012	USA, NPCR	*	4 757	55	417	–	267	#	3 938	–	79
Iowa	SEER	SEER	1993–2012	USA, SEER 18, SEER 9		2 869	40	96	–	144	#	2 549	2 693	30
Kentucky	NPCR, SEER	NPCR	1998–2012	USA, NPCR, SEER 18		3 160	28	245	–	78	#	2 695	–	112
Louisiana	NPCR, SEER	NPCR	1998–2012	USA, NPCR, SEER 18		3 162	54	999	–	95	#	1 950	–	61
Maine	NPCR	NPCR	1998–2012	USA, NPCR	*	962	#	#	–	#	#	921	–	#
Massachusetts	NPCR	NPCR	1998–2012	USA, NPCR	*	4 643	150	302	–	452	#	3 606	–	123
Michigan	NPCR	NPCR	1998–2012	USA, NPCR	*	7 752	93	1 089	–	306	35	5 937	–	292
Michigan, Detroit	SEER	SEER	1993–2012	SEER 18, SEER 9		3 772	92	888	–	163	#	2 578	2 741	43
Minnesota	NPCR	NPCR	1998–2012	USA, NPCR		3 872	191	204	–	95	58	2 899	–	425
Mississippi	NPCR	NPCR	2002–2012	USA, NPCR	*	1 435	#	540	–	22	#	837	–	19
Missouri	NPCR	NPCR	1998–2012	USA, NPCR		3 951	47	515	–	116	#	2 792	–	476
Montana	NPCR	NPCR	1998–2012	USA, NPCR	*	678	#	#	–	21	70	564	–	#
Nebraska	NPCR	NPCR	1998–2012	USA, NPCR		1 447	26	85	–	122	#	1 153	–	48
Nevada	NPCR	NPCR	1998–2012	USA, NPCR	*	1 571	76	112	–	485	#	835	–	48
New Hampshire	NPCR	NPCR	1998–2012	USA, NPCR	*	999	#	#	–	36	#	922	–	17
New Jersey	NPCR, SEER	NPCR	1998–2012	USA, NPCR, SEER 18		6 735	411	916	–	971	#	4 250	–	181
New Mexico	SEER	SEER	1993–2012	USA, SEER 18, SEER 9		1 712	23	39	–	778	182	675	1 453	#
New York State	NPCR	NPCR	1998–2012	USA, NPCR	*	14 435	851	2 336	–	2 279	25	8 602	10 881	342
North Carolina	NPCR	NPCR	1998–2012	USA, NPCR	*	5 982	96	1 262	–	536	53	3 932	–	103
North Dakota	NPCR	NPCR	1998–2012	USA, NPCR	*	425	#	#	–	#	42	372	–	#
Ohio	NPCR	NPCR	1998–2012	USA, NPCR	*	7 931	85	959	–	160	#	6 463	–	257
Oklahoma	NPCR	NPCR	1998–2012	USA, NPCR	*	2 552	41	230	–	207	345	1 661	–	68
Oregon	NPCR	NPCR	1998–2012	USA, NPCR	*	2 758	93	54	–	352	41	2 137	–	81
Pennsylvania	NPCR	NPCR	1998–2012	USA, NPCR	*	9 053	158	1 053	–	309	#	7 178	–	346
Rhode Island	NPCR	NPCR	1998–2012	USA, NPCR	*	736	#	41	–	104	#	559	–	16
South Carolina	NPCR	NPCR	1998–2012	USA, NPCR	*	2 698	27	753	–	109	#	1 764	–	43
South Dakota	NPCR	NPCR	2001–2012	USA, NPCR	*	404	#	#	–	#	50	337	–	#
Tennessee	NPCR	NPCR	1999–2012	USA, NPCR	*	3 901	42	721	–	140	#	2 897	–	94
Texas	NPCR	NPCR	1998–2012	USA, NPCR	*	19 914	384	1 976	–	8 467	60	8 483	–	544
Utah	SEER	SEER	1993–2012	USA, SEER 18, SEER 9		2 917	52	31	–	367	29	2 435	2 802	#
Vermont	NPCR	NPCR	1998–2012	USA, NPCR	*	448	#	#	–	#	#	435	–	#
Virginia	NPCR	NPCR	1998–2012	USA, NPCR	*	4 727	153	851	–	306	#	3 189	–	224
Washington State	NPCR	NPCR	1998–2012	USA, NPCR	*	4 910	285	204	–	537	106	3 559	–	219
Washington, Seattle	SEER	SEER	1993–2012	SEER 18, SEER 9		3 956	336	218	–	303	84	2 981	3 284	34
West Virginia	NPCR	NPCR	1998–2012	USA, NPCR	*	1 157	#	34	–	#	#	1 100	–	#
Wisconsin	NPCR	NPCR	1998–2012	USA, NPCR	*	4 197	107	272	–	218	55	3 344	–	201
Wyoming	NPCR	NPCR	1998–2012	USA, NPCR	*	341	#	#	–	23	#	294	–	#

API, Asian Pacific Islander; NH, Non-Hispanic; NPCR, National Program of Cancer Registries; SEER, Surveillance, Epidemiology, and End Results.
Two additional NPCR registries are not shown separately but contribute to the totals. See Table A.12 to locate other relevant tables with more detail.
* Laterality not available for period 2003–2007.
† API includes Hawaiian.
‡ White overlaps with Hispanic White and White Non-Hispanic.
# 15 cases or fewer.

malignant behaviour for all years from all USA registries. This should be taken into account when interpreting the incidence rates of CNS tumours. Basal and squamous cell skin carcinomas were not registered by any registries, except for the genital sites (unless mentioned otherwise below). For the pooled USA data, laterality is shown for 1998–2002 and for 2008–2012, because information on laterality of tumours was not provided by the NPCR for 2003–2007. In the Native American population, the cancer incidence rate in the age group 0–19 years was low (95.3 per million) (Table A.9). In the IICC-3 book, Tables A.6, A.8, A.9, and A.11 do not contain information for racial and ethnic groups in the individual cancer registries, but these data are available in the online version of these tables. The narratives provided by the NPCR, the SEER Program, and individual registries and the editors' comments for these entities should be consulted for further information.

Day of birth was unknown in 21% of cases of the pooled dataset, and this percentage varied by ethnicity (Table A.8). The variations in data patterns that are outside the arbitrary limits outlined in Fig. 4.1 are highlighted in Table A.9 and Table A.11 for the datasets including all ethnicities, and the editors refer to these in their comments below. The online version of Table A.9 and Table A.11 also show the indicators for each ethnic group or origin for the registries with enough cases to constitute a separate standard or abbreviated table, as indicated in Table A.12.

USA (1998-2012)

	Age group (years)	Males	Females
Person-years	0	30 309 463	28 970 428
	1-4	120 470 737	115 261 137
	5-9	152 989 283	146 180 503
	10-14	159 136 159	151 672 416
	15-19	162 669 855	153 727 595
	0-14	462 905 642	442 084 484
	0-19	625 575 497	595 812 079

Please consult the quality indicators for this pool and its constituent registries

USA, Asian and Pacific Islander (1998-2012)

	Age group (years)	Males	Females
Person-years	0	1 609 044	1 523 973
	1-4	6 270 082	6 101 931
	5-9	7 520 570	7 389 136
	10-14	7 507 148	7 221 783
	15-19	7 875 780	7 508 741
	0-14	22 906 844	22 236 823
	0-19	30 782 624	29 745 564

Please consult the quality indicators for this pool and its constituent registries

USA, Black (1998-2012)

	Age group (years)	Males	Females
Person-years	0	4 909 404	4 750 348
	1-4	19 438 753	18 813 913
	5-9	24 941 709	24 137 534
	10-14	26 071 814	25 224 828
	15-19	26 044 717	25 239 513
	0-14	75 361 680	72 926 623
	0-19	101 406 397	98 166 136

Please consult the quality indicators for this pool and its constituent registries

USA, Hispanic White (1998-2012)

	Age group (years)	Males	Females
Person-years	0	6 439 076	6 194 071
	1-4	24 454 187	23 439 688
	5-9	28 323 588	27 117 904
	10-14	27 065 074	25 870 784
	15-19	27 114 996	24 569 778
	0-14	86 281 925	82 622 447
	0-19	113 396 921	107 192 225

Please consult the quality indicators for this pool and its constituent registries

USA, Native American (1998-2012)

	Age group (years)	Males	Females
Person-years	0	493 405	481 178
	1-4	1 924 249	1 867 388
	5-9	2 426 806	2 355 697
	10-14	2 537 735	2 481 822
	15-19	2 617 240	2 470 856
	0-14	7 382 195	7 186 085
	0-19	9 999 435	9 656 941

Please consult the quality indicators for this pool and its constituent registries

USA, White non-Hispanic (1998-2012)

	Age group (years)	Males	Females
Person-years	0	16 858 534	16 020 858
	1-4	68 383 466	65 038 217
	5-9	89 776 610	85 180 232
	10-14	95 954 388	90 873 199
	15-19	99 017 122	93 938 707
	0-14	270 972 998	257 112 506
	0-19	369 990 120	351 051 213

Please consult the quality indicators for this pool and its constituent registries

USA (1998-2012)

Registry	Period	Cases	%	Person-years	%
Alabama	1998-2012	2881	1.3	18 860 359	1.5
Alaska	1998-2012	553	0.3	3 109 822	0.3
Arizona	1998-2012	4341	2.0	25 079 066	2.1
Arkansas	1998-2012	1914	0.9	11 601 340	0.9
California	1998-2012	27570	12.7	155 288 043	12.7
Colorado	1998-2012	3356	1.5	19 423 554	1.6
Connecticut	1998-2012	2551	1.2	13 898 598	1.1
Delaware	1998-2012	663	0.3	3 388 357	0.3
District of Columbia	1998-2012	338	0.2	1 947 572	0.2
Florida	1998-2012	11510	5.3	64 860 345	5.3
Georgia	1998-2012	6541	3.0	39 042 726	3.2
Hawaii	1998-2012	782	0.4	4 991 355	0.4
Idaho	1998-2012	1201	0.6	6 638 966	0.5
Illinois	1998-2012	9369	4.3	53 143 088	4.4
Indiana	1998-2012	4757	2.2	26 693 628	2.2
Iowa	1998-2012	2157	1.0	12 278 747	1.0
Kentucky	1998-2012	3160	1.5	16 875 855	1.4
Louisiana	1998-2012	3162	1.5	19 403 680	1.6
Maine	1998-2012	962	0.4	4 873 435	0.4
Massachusetts	1998-2012	4643	2.1	24 758 690	2.0
Michigan	1998-2012	7752	3.6	41 670 814	3.4
Minnesota	1998-2012	3872	1.8	21 489 556	1.8
Mississippi	2002-2012	1435	0.7	9 324 749	0.8
Missouri	1998-2012	3951	1.8	23 895 810	2.0
Montana	1998-2012	678	0.3	3 795 661	0.3
Nebraska	1998-2012	1447	0.7	7 606 671	0.6
Nevada	1998-2012	1571	0.7	9 814 134	0.8
New Hampshire	1998-2012	999	0.5	5 072 869	0.4
New Jersey	1998-2012	6735	3.1	34 475 321	2.8
New Mexico	1998-2012	1363	0.6	8 513 738	0.7
New York State	1998-2012	14435	6.7	75 632 915	6.2
North Carolina	1998-2012	5982	2.8	35 642 902	2.9
North Dakota	1998-2012	425	0.2	2 643 880	0.2
Ohio	1998-2012	7931	3.7	47 030 420	3.9
Oklahoma	1998-2012	2552	1.2	15 177 646	1.2
Oregon	1998-2012	2758	1.3	14 317 432	1.2
Pennsylvania	1998-2012	9053	4.2	48 300 780	4.0
Rhode Island	1998-2012	736	0.3	4 099 993	0.3
South Carolina	1998-2012	2698	1.2	17 634 636	1.4
South Dakota	2001-2012	404	0.2	2 696 431	0.2
Tennessee	1999-2012	3901	1.8	22 670 397	1.9
Texas	1998-2012	19914	9.2	105 930 232	8.7
Utah	1998-2012	2320	1.1	13 154 819	1.1
Vermont	1998-2012	448	0.2	2 381 221	0.2
Virginia	1998-2012	4727	2.2	30 256 338	2.5
Washington State	1998-2012	4910	2.3	25 726 192	2.1
West Virginia	1998-2012	1157	0.5	6 659 911	0.5
Wisconsin	1998-2012	4197	1.9	22 738 594	1.9
Wyoming	1998-2012	341	0.2	2 186 831	0.2
USA*	**1998-2012**	**216741**	**100.0**	**1 221 387 576**	**100.0**

* Data not shown for two registries included in the total

Please consult the quality indicators for this pool and its constituent registries

USA (1998-2012)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)							0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	**LEUKAEMIA**	2935	20672	11809	9180	9536	**44596**	**54132**	30.5	100.0	25.0	100.0	49.5	87.7	39.5	29.5	30.1	**52.3**	**47.3**	745	896	96.9	0.5
	a. Lymphoid	1172	17328	9744	6064	4969	**34308**	**39277**	23.5	76.9	18.1	72.6	19.8	73.5	32.6	19.5	15.7	**40.4**	**34.9**	574	652	98.3	0.3
	b. Acute myeloid	1018	2354	1351	2062	2819	**6785**	**9604**	4.6	15.2	4.4	17.7	17.2	10.0	4.5	6.6	8.9	**7.8**	**8.1**	113	157	97.9	0.5
	c. CMD	250	238	256	546	1124	**1290**	**2414**	0.9	2.9	1.1	4.5	4.2	1.0	0.9	1.8	3.6	**1.4**	**1.9**	21	39	79.2	1.4
	d. MDS & other	314	410	211	256	312	**1191**	**1503**	0.8	2.7	0.7	2.8	5.3	1.7	0.7	0.8	1.0	**1.4**	**1.3**	20	25	92.1	0.9
	e. Unspecified	181	342	247	252	312	**1022**	**1334**	0.7	2.3	0.6	2.5	3.1	1.5	0.8	0.8	1.0	**1.2**	**1.1**	17	22	84.6	5.4
II	**LYMPHOMA & RELATED**	685	2539	4431	7630	15498	**15285**	**30783**	10.5	100.0	14.2	100.0	11.6	10.8	14.8	24.5	49.0	**16.1**	**23.5**	251	496	98.4	0.3
	a. Hodgkin	3	240	1131	3704	9986	**5078**	**15064**	3.5	33.2	7.0	48.9	0.1	1.0	3.8	11.9	31.6	**5.0**	**11.0**	83	240	99.4	0.1
	b. Non-Hodgkin except BL	196	1052	1903	2741	4434	**5892**	**10326**	4.0	38.5	4.8	33.5	3.3	4.5	6.4	8.8	14.0	**6.2**	**8.0**	97	167	98.6	0.3
	c. Burkitt (BL)	7	474	954	823	681	**2258**	**2939**	1.5	14.8	1.4	9.5	0.1	2.0	3.2	2.6	2.2	**2.4**	**2.4**	37	48	99.4	0.1
	d. Lymphoreticular	458	724	350	254	156	**1786**	**1942**	1.2	11.7	0.9	6.3	7.7	3.1	1.2	0.8	0.5	**2.2**	**1.8**	30	32	95.5	0.9
	e. Unspecified	21	49	93	108	241	**271**	**512**	0.2	1.8	0.2	1.7	0.4	0.2	0.3	0.3	0.8	**0.3**	**0.4**	4	8	73.4	6.6
III	**CNS NEOPLASMS** †	2432	10869	11551	10550	11308	**35402**	**46710**	24.2	100.0	21.6	100.0	41.0	46.1	38.6	33.9	35.7	**39.8**	**38.9**	588	767	79.3	0.6
	a. Ependymoma	446	1342	737	664	740	**3189**	**3929**	2.2	9.0	1.8	8.4	7.5	5.7	2.5	2.1	2.3	**3.8**	**3.4**	53	65	97.4	0.1
	b. Astrocytoma	790	4661	4902	4585	3859	**14938**	**18797**	10.2	42.2	8.7	40.2	13.3	19.8	16.4	14.8	12.2	**16.7**	**15.7**	248	309	87.1	0.1
	c. CNS embryonal	655	2502	2205	1325	898	**6687**	**7585**	4.6	18.9	3.5	16.2	11.0	10.6	7.4	4.3	2.8	**7.8**	**6.7**	112	126	98.8	0.3
	d. Other gliomas	158	1318	2023	1457	1275	**4956**	**6231**	3.4	14.0	2.9	13.3	2.7	5.6	6.8	4.7	4.0	**5.5**	**5.2**	82	102	45.0	0.5
	e. Other specified	238	781	1400	2138	4042	**4557**	**8599**	3.1	12.9	4.0	18.4	4.0	3.3	4.7	6.9	12.8	**4.8**	**6.6**	75	139	70.4	0.3
	f. Unspecified CNS	145	265	284	381	494	**1075**	**1569**	0.7	3.0	0.7	3.4	2.4	1.1	0.9	1.2	1.6	**1.2**	**1.3**	18	26	32.2	12.1
IV	**NEUROBLASTOMA**	3412	5022	1036	382	244	**9852**	**10096**	6.7	100.0	4.7	100.0	57.6	21.3	3.5	1.2	0.8	**12.5**	**9.9**	166	170	97.5	0.2
	a. (Ganglio)neuroblastoma	3401	4991	1007	310	129	**9709**	**9838**	6.6	98.5	4.5	97.4	57.4	21.2	3.4	1.0	0.4	**12.4**	**9.7**	164	166	97.6	0.2
	b. Peripheral nervous	11	31	29	72	115	**143**	**258**	0.1	1.5	0.1	2.6	0.2	0.1	0.1	0.2	0.4	**0.2**	**0.2**	2	4	96.1	0.0
V	**RETINOBLASTOMA**	1624	1963	134	14	8	**3735**	**3743**	2.6	100.0	1.7	100.0	27.4	8.3	0.4	0.0	0.0	**4.9**	**3.8**	63	63	76.8	0.4
VI	**RENAL TUMOURS**	964	4669	1617	401	498	**7651**	**8149**	5.2	100.0	3.8	100.0	16.3	19.8	5.4	1.3	1.6	**9.5**	**7.7**	129	137	98.7	0.3
	a. Nephroblastoma	941	4631	1513	215	103	**7300**	**7403**	5.0	95.4	3.4	90.8	15.9	19.6	5.1	0.7	0.3	**9.1**	**7.2**	123	125	99.1	0.1
	b. Renal carcinoma	17	26	95	181	388	**319**	**707**	0.2	4.2	0.3	8.7	0.3	0.1	0.3	0.6	1.2	**0.3**	**0.5**	5	11	97.9	0.4
	c. Unspecified	6	12	9	5	7	**32**	**39**	0.0	0.4	0.0	0.5	0.1	0.1	0.0	0.0	0.0	**0.0**	**0.0**	1	1	38.5	30.8
VII	**HEPATIC TUMOURS**	690	1202	242	293	424	**2427**	**2851**	1.7	100.0	1.3	100.0	11.6	5.1	0.8	0.9	1.3	**3.0**	**2.6**	41	48	96.2	0.8
	a. Hepatoblastoma	664	1150	161	104	47	**2079**	**2126**	1.4	85.7	1.0	74.6	11.2	4.9	0.5	0.3	0.1	**2.7**	**2.1**	35	36	97.8	0.4
	b. Hepatic carcinoma	16	47	79	184	372	**326**	**698**	0.2	13.4	0.3	24.5	0.3	0.2	0.3	0.6	1.2	**0.3**	**0.5**	5	11	93.3	1.4
	c. Unspecified	10	5	2	5	5	**22**	**27**	0.0	0.9	0.0	0.9	0.2	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0	0	48.1	18.5
VIII	**BONE TUMOURS**	40	368	1647	4100	4611	**6155**	**10766**	4.2	100.0	5.0	100.0	0.7	1.6	5.5	13.2	14.6	**6.1**	**8.0**	100	173	98.0	0.4
	a. Osteosarcoma	3	88	883	2475	2656	**3449**	**6105**	2.4	56.0	2.8	56.7	0.1	0.4	3.0	8.0	8.4	**3.4**	**4.5**	56	98	98.8	0.1
	b. Chondrosarcoma	1	8	26	114	275	**149**	**424**	0.1	2.4	0.2	3.9	0.0	0.0	0.1	0.4	0.9	**0.1**	**0.3**	2	7	97.9	0.5
	c. Ewing & related	17	226	636	1285	1338	**2164**	**3502**	1.5	35.2	1.6	32.5	0.3	1.0	2.1	4.1	4.2	**2.2**	**2.7**	35	57	98.8	0.2
	d. Other specified	9	30	71	144	249	**254**	**503**	0.2	4.1	0.2	4.7	0.2	0.1	0.2	0.5	0.8	**0.3**	**0.4**	4	8	97.8	0.2
	e. Unspecified	10	16	31	82	93	**139**	**232**	0.1	2.3	0.1	2.2	0.2	0.1	0.1	0.3	0.3	**0.1**	**0.2**	2	4	65.9	10.3
IX	**SOFT TISSUE SARCOMA**	976	2490	2397	3425	4854	**9288**	**14142**	6.4	100.0	6.5	100.0	16.5	10.6	8.0	11.0	15.3	**10.3**	**11.5**	154	231	99.0	0.2
	a. Rhabdomyosarcoma	337	1770	1263	1034	1117	**4404**	**5521**	3.0	47.4	2.5	39.0	5.7	7.5	4.2	3.3	3.5	**5.1**	**4.7**	73	91	99.3	0.2
	b. Fibrosarcoma	277	123	193	363	576	**956**	**1532**	0.7	10.3	0.7	10.8	4.7	0.5	0.6	1.2	1.8	**1.1**	**1.2**	16	25	98.6	0.0
	c. Kaposi sarcoma	8	4	2	6	35	**20**	**55**	0.0	0.2	0.0	0.4	0.1	0.0	0.0	0.0	0.1	**0.0**	**0.0**	0	1	87.3	1.8
	d. Other specified	251	440	712	1575	2511	**2978**	**5489**	2.0	32.1	2.5	38.8	4.2	1.9	2.4	5.1	7.9	**3.1**	**4.2**	49	89	99.5	0.1
	e. Unspecified	103	153	227	447	615	**930**	**1545**	0.6	10.0	0.7	10.9	1.7	0.6	0.8	1.4	1.9	**1.0**	**1.2**	15	25	97.3	0.6
X	**GERM CELL TUMOURS**	1190	839	765	2175	8531	**4969**	**13500**	3.4	100.0	6.2	100.0	20.1	3.6	2.6	7.0	27.0	**5.5**	**10.3**	82	217	97.0	0.1
	a. CNS germ cell ‡	172	124	374	824	763	**1494**	**2257**	1.0	30.1	1.0	16.7	2.9	0.5	1.3	2.7	2.4	**1.6**	**1.8**	25	37	87.5	0.3
	b. Other extragonadal	722	349	40	98	523	**1209**	**1732**	0.8	24.3	0.8	12.8	12.2	1.5	0.1	0.3	1.7	**1.5**	**1.6**	20	29	96.6	0.2
	c. Gonadal germ cell	284	354	320	1090	6620	**2048**	**8668**	1.4	41.2	4.0	64.2	4.8	1.5	1.1	3.5	20.9	**2.2**	**6.4**	34	138	99.7	0.0
	d. Gonadal carcinoma	3	1	10	81	394	**95**	**489**	0.1	1.9	0.2	3.6	0.1	0.0	0.0	0.3	1.2	**0.1**	**0.4**	2	8	97.5	0.2
	e. Unspecified gonadal	9	11	21	82	231	**123**	**354**	0.1	2.5	0.2	2.6	0.2	0.0	0.1	0.3	0.7	**0.1**	**0.3**	2	6	90.1	2.3
XI	**CARCINOMA & MELANOMA**	308	408	1120	4192	14803	**6028**	**20831**	4.1	100.0	9.6	100.0	5.2	1.7	3.7	13.5	46.8	**6.1**	**15.2**	98	332	99.3	0.1
	a. Adrenocortical	25	95	40	50	73	**210**	**283**	0.1	3.5	0.1	1.4	0.4	0.4	0.1	0.2	0.2	**0.2**	**0.2**	4	5	97.9	0.0
	b. Thyroid	14	58	356	1735	6396	**2163**	**8559**	1.5	35.9	3.9	41.1	0.2	0.2	1.2	5.6	20.2	**2.1**	**6.2**	35	136	99.8	0.1
	c. Nasopharyngeal	0	0	25	236	428	**261**	**689**	0.2	4.3	0.3	3.3	-	-	0.1	0.8	1.4	**0.2**	**0.5**	4	11	99.6	0.0
	d. Melanoma	180	210	410	1043	4480	**1843**	**6323**	1.3	30.6	2.9	30.4	3.0	0.9	1.4	3.4	14.2	**1.9**	**4.7**	30	101	99.0	0.2
	e. Skin carcinoma	4	1	8	40	62	**53**	**115**	0.0	0.9	0.1	0.6	0.1	0.0	0.0	0.1	0.2	**0.1**	**0.1**	1	2	99.1	0.0
	f. Other & unspecified	85	44	281	1088	3364	**1498**	**4862**	1.0	24.9	2.2	23.3	1.4	0.2	0.9	3.5	10.6	**1.5**	**3.5**	24	78	98.6	0.2
XII	**OTHER & UNSPECIFIED**	128	214	104	181	411	**627**	**1038**	0.4	100.0	0.5	100.0	2.2	0.9	0.3	0.6	1.3	**0.7**	**0.9**	10	17	70.8	11.2
	a. Other specified	50	145	42	77	170	**314**	**484**	0.2	50.1	0.2	46.6	0.8	0.6	0.1	0.2	0.5	**0.4**	**0.4**	5	8	99.2	0.4
	b. Other unspecified	78	69	62	104	241	**313**	**554**	0.2	49.9	0.3	53.4	1.3	0.3	0.2	0.3	0.8	**0.4**	**0.4**	5	9	46.0	20.6
	TOTAL	15384	51255	36853	42523	70726	**146015**	**216741**	100.0	100.0	100.0	100.0	259.5	217.4	123.2	136.8	223.5	**166.9**	**179.6**	2429	3547	93.4	0.5

† includes 10178 non-malignant ‡ includes 233 non-malignant

Please consult the quality indicators for this pool and its constituent registries

USA, Asian and Pacific Islander (1998-2012)

Registry	Period	Cases	%	Person-years	%
Alabama	1998-2012	23	0.3	216 500	0.4
Alaska	1998-2012	43	0.5	202 610	0.3
Arizona	1998-2012	72	0.9	737 081	1.2
Arkansas	1998-2012	22	0.3	166 481	0.3
California	1998-2012	2708	34.0	19 245 093	31.8
Colorado	1998-2012	86	1.1	639 507	1.1
Connecticut	1998-2012	67	0.8	542 163	0.9
Delaware	1998-2012	#	0.1	106 178	0.2
District of Columbia	1998-2012	#	0.1	50 994	0.1
Florida	1998-2012	143	1.8	1 755 096	2.9
Georgia	1998-2012	163	2.0	1 208 881	2.0
Hawaii	1998-2012	563	7.1	3 964 128	6.5
Idaho	1998-2012	#	0.1	94 196	0.2
Illinois	1998-2012	304	3.8	2 238 140	3.7
Indiana	1998-2012	55	0.7	424 062	0.7
Iowa	1998-2012	27	0.3	238 695	0.4
Kentucky	1998-2012	28	0.4	209 928	0.3
Louisiana	1998-2012	54	0.7	297 827	0.5
Maine	1998-2012	#	0.1	66 081	0.1
Massachusetts	1998-2012	150	1.9	1 379 920	2.3
Michigan	1998-2012	93	1.2	1 103 510	1.8
Minnesota	1998-2012	191	2.4	1 131 848	1.9
Mississippi	2002-2012	#	0.1	87 481	0.1
Missouri	1998-2012	47	0.6	416 956	0.7
Montana	1998-2012	#	0.1	31 846	0.1
Nebraska	1998-2012	26	0.3	152 452	0.3
Nevada	1998-2012	76	1.0	682 717	1.1
New Hampshire	1998-2012	#	0.1	115 590	0.2
New Jersey	1998-2012	411	5.2	2 734 790	4.5
New Mexico	1998-2012	20	0.3	134 460	0.2
New York State	1998-2012	851	10.7	5 139 575	8.5
North Carolina	1998-2012	96	1.2	868 246	1.4
North Dakota	1998-2012	#	0.0	25 646	0.0
Ohio	1998-2012	85	1.1	797 249	1.3
Oklahoma	1998-2012	41	0.5	291 870	0.5
Oregon	1998-2012	93	1.2	670 569	1.1
Pennsylvania	1998-2012	158	2.0	1 363 986	2.3
Rhode Island	1998-2012	#	0.2	153 499	0.3
South Carolina	1998-2012	27	0.3	242 754	0.4
South Dakota	2001-2012	#	0.0	29 530	0.0
Tennessee	1999-2012	42	0.5	370 530	0.6
Texas	1998-2012	384	4.8	3 756 079	6.2
Utah	1998-2012	41	0.5	402 136	0.7
Vermont	1998-2012	#	0.0	36 415	0.1
Virginia	1998-2012	153	1.9	1 636 581	2.7
Washington State	1998-2012	285	3.6	2 074 625	3.4
West Virginia	1998-2012	#	0.1	48 721	0.1
Wisconsin	1998-2012	107	1.3	725 827	1.2
Wyoming	1998-2012	#	0.1	18 738	0.0
USA*	**1998-2012**	**7965**	**100.0**	**60 528 188**	**100.0**

15 cases or fewer

* Data not shown for two registries included in the total

Please consult the quality indicators for this pool and its constituent registries

USA, Asian and Pacific Islander (1998-2012)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)							0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	LEUKAEMIA	137	918	544	389	385	**1988**	**2373**	35.5	100.0	29.8	100.0	43.7	74.2	36.5	26.4	25.0	**45.8**	**41.1**	655	780	97.6	0.6
	a. Lymphoid	61	745	430	234	177	**1470**	**1647**	26.3	73.9	20.7	69.4	19.5	60.2	28.8	15.9	11.5	**34.0**	**29.0**	484	541	98.8	0.3
	b. Acute myeloid	50	130	79	105	124	**364**	**488**	6.5	18.3	6.1	20.6	16.0	10.5	5.3	7.1	8.1	**8.3**	**8.2**	120	160	99.0	0.4
	c. CMD	8	7	13	33	50	**61**	**111**	1.1	3.1	1.4	4.7	2.6	0.6	0.9	2.2	3.3	**1.3**	**1.7**	20	37	84.7	5.4
	d. MDS & other	14	22	12	6	18	**54**	**72**	1.0	2.7	0.9	3.0	4.5	1.8	0.8	0.4	1.2	**1.3**	**1.3**	18	24	87.5	0.0
	e. Unspecified	4	14	10	11	16	**39**	**55**	0.7	2.0	0.7	2.3	1.3	1.1	0.7	0.7	1.0	**0.9**	**0.9**	13	18	89.1	3.6
II	LYMPHOMA & RELATED	34	136	187	261	462	**618**	**1080**	11.0	100.0	13.6	100.0	10.9	11.0	12.5	17.7	30.0	**13.4**	**17.2**	206	356	98.5	0.4
	a. Hodgkin	0	18	42	99	235	**159**	**394**	2.8	25.7	4.9	36.5	-	1.5	2.8	6.7	15.3	**3.3**	**6.0**	53	130	99.5	0.0
	b. Non-Hodgkin except BL	7	50	91	124	181	**272**	**453**	4.9	44.0	5.7	41.9	2.2	4.0	6.1	8.4	11.8	**5.8**	**7.2**	91	150	99.3	0.0
	c. Burkitt (BL)	0	24	39	26	30	**89**	**119**	1.6	14.4	1.5	11.0	-	1.9	2.6	1.8	2.0	**2.0**	**2.0**	30	39	98.3	0.8
	d. Lymphoreticular	27	42	13	9	8	**91**	**99**	1.6	14.7	1.2	9.2	8.6	3.4	0.9	0.6	0.5	**2.2**	**1.8**	30	32	97.0	2.0
	e. Unspecified	0	2	2	3	8	**7**	**15**	0.1	1.1	0.2	1.4	-	0.2	0.1	0.2	0.5	**0.2**	**0.2**	2	5	60.0	6.7
III	CNS NEOPLASMS †	92	358	368	285	335	**1103**	**1438**	19.7	100.0	18.1	100.0	29.4	28.9	24.7	19.3	21.8	**24.8**	**24.1**	365	474	79.4	0.8
	a. Ependymoma	19	47	28	16	31	**110**	**141**	2.0	10.0	1.8	9.8	6.1	3.8	1.9	1.1	2.0	**2.6**	**2.4**	36	46	98.6	0.0
	b. Astrocytoma	27	138	124	121	109	**410**	**519**	7.3	37.2	6.5	36.1	8.6	11.2	8.3	8.2	7.1	**9.2**	**8.7**	136	171	89.4	0.2
	c. CNS embryonal	29	87	99	39	30	**254**	**284**	4.5	23.0	3.6	19.7	9.3	7.0	6.6	2.6	2.0	**5.8**	**4.9**	84	94	98.6	0.4
	d. Other gliomas	3	44	82	45	36	**174**	**210**	3.1	15.8	2.6	14.6	1.0	3.6	5.5	3.1	2.3	**3.8**	**3.5**	58	70	38.1	1.4
	e. Other specified	5	31	34	55	121	**125**	**246**	2.2	11.3	3.1	17.1	1.6	2.5	2.3	3.7	7.9	**2.7**	**3.9**	42	81	67.9	0.0
	f. Unspecified CNS	9	11	1	9	8	**30**	**38**	0.5	2.7	0.5	2.6	2.9	0.9	0.1	0.6	0.5	**0.7**	**0.7**	10	12	31.6	15.8
IV	NEUROBLASTOMA	105	182	36	5	13	**328**	**341**	5.9	100.0	4.3	100.0	33.5	14.7	2.4	0.3	0.8	**8.0**	**6.4**	106	111	97.4	0.0
	a. (Ganglio)neuroblastoma	105	182	36	4	6	**327**	**333**	5.8	99.7	4.2	97.7	33.5	14.7	2.4	0.3	0.4	**8.0**	**6.3**	106	108	97.3	0.0
	b. Peripheral nervous	0	0	0	1	7	**1**	**8**	0.0	0.3	0.1	2.3	-	-	-	0.1	0.5	**0.0**	**0.1**	0	3	100.0	0.0
V	RETINOBLASTOMA	62	101	6	1	0	**170**	**170**	3.0	100.0	2.1	100.0	19.8	8.2	0.4	0.1	-	**4.2**	**3.3**	55	55	77.6	1.2
VI	RENAL TUMOURS	27	114	26	9	15	**176**	**191**	3.1	100.0	2.4	100.0	8.6	9.2	1.7	0.6	1.0	**4.3**	**3.5**	57	62	98.4	1.0
	a. Nephroblastoma	27	112	24	6	5	**169**	**174**	3.0	96.0	2.2	91.1	8.6	9.1	1.6	0.4	0.3	**4.1**	**3.3**	55	57	100.0	0.0
	b. Renal carcinoma	0	0	2	3	10	**5**	**15**	0.1	2.8	0.2	7.9	-	-	0.1	0.2	0.7	**0.1**	**0.2**	2	5	93.3	6.7
	c. Unspecified	0	2	0	0	0	**2**	**2**	0.0	1.1	0.0	1.0	-	0.2	-	-	-	**0.0**	**0.0**	1	1	0.0	50.0
VII	HEPATIC TUMOURS	43	81	19	16	30	**159**	**189**	2.8	100.0	2.4	100.0	13.7	6.5	1.3	1.1	2.0	**3.8**	**3.4**	52	62	96.3	0.0
	a. Hepatoblastoma	39	80	9	3	2	**131**	**133**	2.3	82.4	1.7	70.4	12.4	6.5	0.6	0.2	0.1	**3.2**	**2.5**	42	43	97.7	0.0
	b. Hepatic carcinoma	3	0	10	13	28	**26**	**54**	0.5	16.4	0.7	28.6	1.0	-	0.7	0.9	1.8	**0.5**	**0.8**	9	18	92.6	0.0
	c. Unspecified	1	1	0	0	0	**2**	**2**	0.0	1.3	0.0	1.1	0.3	0.1	-	-	-	**0.0**	**0.0**	1	1	100.0	0.0
VIII	BONE TUMOURS	3	15	69	139	175	**226**	**401**	4.0	100.0	5.0	100.0	1.0	1.2	4.6	9.4	11.4	**4.7**	**6.2**	76	133	99.0	0.2
	a. Osteosarcoma	0	3	46	99	107	**148**	**255**	2.6	65.5	3.2	63.6	-	0.2	3.1	6.7	7.0	**3.0**	**3.9**	50	85	100.0	0.0
	b. Chondrosarcoma	0	1	0	2	7	**3**	**10**	0.1	1.3	0.1	2.5	-	0.1	-	0.1	0.5	**0.1**	**0.2**	1	3	90.0	0.0
	c. Ewing & related	3	9	16	30	46	**58**	**104**	1.0	25.7	1.3	25.9	1.0	0.7	1.1	2.0	3.0	**1.2**	**1.6**	19	34	100.0	0.0
	d. Other specified	0	2	7	6	12	**15**	**27**	0.3	6.6	0.3	6.7	-	0.2	0.5	0.4	0.8	**0.3**	**0.4**	5	9	96.3	0.0
	e. Unspecified	0	0	0	2	3	**2**	**5**	0.0	0.9	0.1	1.2	-	-	-	0.1	0.2	**0.0**	**0.1**	1	2	60.0	20.0
IX	SOFT TISSUE SARCOMA	29	80	63	106	166	**278**	**444**	5.0	100.0	5.6	100.0	9.3	6.5	4.2	7.2	10.8	**6.2**	**7.2**	92	146	99.3	0.2
	a. Rhabdomyosarcoma	15	62	33	34	33	**144**	**177**	2.6	51.8	2.2	39.9	4.8	5.0	2.2	2.3	2.1	**3.3**	**3.0**	47	58	99.4	0.0
	b. Fibrosarcoma	7	6	6	12	16	**31**	**47**	0.6	11.2	0.6	10.6	2.2	0.5	0.4	0.8	1.0	**0.7**	**0.8**	10	15	100.0	0.0
	c. Kaposi sarcoma	0	0	0	0	1	**0**	**1**	-	-	0.0	0.2	-	-	-	-	0.1	**-**	**0.0**	-	0	100.0	0.0
	d. Other specified	3	11	16	45	86	**75**	**161**	1.3	27.0	2.0	36.3	1.0	0.9	1.1	3.1	5.6	**1.6**	**2.5**	25	53	100.0	0.0
	e. Unspecified	4	1	8	15	30	**28**	**58**	0.5	10.1	0.7	13.1	1.3	0.1	0.5	1.0	2.0	**0.6**	**0.9**	9	19	96.6	1.7
X	GERM CELL TUMOURS	58	64	54	152	303	**328**	**631**	5.9	100.0	7.9	100.0	18.5	5.2	3.6	10.3	19.7	**7.2**	**10.0**	109	208	96.2	0.0
	a. CNS germ cell ‡	5	10	28	83	63	**126**	**189**	2.3	38.4	2.4	30.0	1.6	0.8	1.9	5.6	4.1	**2.6**	**2.9**	42	63	92.1	0.0
	b. Other extragonadal	33	21	3	8	40	**65**	**105**	1.2	19.8	1.3	16.6	10.5	1.7	0.2	0.5	2.6	**1.6**	**1.8**	21	34	94.3	0.0
	c. Gonadal germ cell	19	33	23	57	169	**132**	**301**	2.4	40.2	3.8	47.7	6.1	2.7	1.5	3.9	11.0	**2.9**	**4.7**	44	99	99.7	0.0
	d. Gonadal carcinoma	0	0	0	3	26	**3**	**29**	0.1	0.9	0.4	4.6	-	-	-	0.2	1.7	**0.1**	**0.4**	1	9	96.6	0.0
	e. Unspecified gonadal	1	0	0	1	5	**2**	**7**	0.0	0.6	0.1	1.1	0.3	-	-	0.1	0.3	**0.0**	**0.1**	1	2	85.7	0.0
XI	CARCINOMA & MELANOMA	7	17	33	147	477	**204**	**681**	3.6	100.0	8.5	100.0	2.2	1.4	2.2	10.0	31.0	**4.2**	**10.2**	69	224	99.0	0.3
	a. Adrenocortical	1	3	1	2	1	**7**	**8**	0.1	3.4	0.1	1.2	0.3	0.2	0.1	0.1	0.1	**0.2**	**0.1**	2	3	87.5	0.0
	b. Thyroid	0	2	10	83	294	**95**	**389**	1.7	46.6	4.9	57.1	-	0.2	0.7	5.6	19.1	**1.9**	**5.8**	32	128	100.0	0.0
	c. Nasopharyngeal	0	0	3	11	31	**14**	**45**	0.3	6.9	0.6	6.6	-	-	0.2	0.7	2.0	**0.3**	**0.7**	5	15	97.8	0.0
	d. Melanoma	2	11	6	11	23	**30**	**53**	0.5	14.7	0.7	7.8	0.6	0.9	0.4	0.7	1.5	**0.7**	**0.9**	10	17	96.2	0.0
	e. Skin carcinoma	1	0	1	0	0	**2**	**2**	0.0	1.0	0.0	0.3	0.3	-	0.1	-	-	**0.0**	**0.0**	1	1	100.0	0.0
	f. Other & unspecified	3	1	12	40	128	**56**	**184**	1.0	27.5	2.3	27.0	1.0	0.1	0.8	2.7	8.3	**1.1**	**2.8**	19	60	98.4	1.1
XII	OTHER & UNSPECIFIED	3	9	2	4	8	**18**	**26**	0.3	100.0	0.3	100.0	1.0	0.7	0.1	0.3	0.5	**0.4**	**0.4**	6	8	73.1	3.8
	a. Other specified	1	8	1	1	3	**11**	**14**	0.2	61.1	0.2	53.8	0.3	0.6	0.1	0.1	0.2	**0.3**	**0.3**	4	5	100.0	0.0
	b. Other unspecified	2	1	1	3	5	**7**	**12**	0.1	38.9	0.2	46.2	0.6	0.1	0.1	0.2	0.3	**0.2**	**0.2**	2	4	41.7	8.3
	TOTAL	600	2075	1407	1514	2369	**5596**	**7965**	100.0	100.0	100.0	100.0	191.5	167.7	94.4	102.8	154.0	**127.1**	**133.1**	1848	2618	94.1	0.5

† includes 306 non-malignant ‡ includes 9 non-malignant

Please consult the quality indicators for this pool and its constituent registries

USA, Black (1998-2012)

Registry	Period	Cases	%	Person-years	%
Alabama	1998-2012	772	2.9	6 091 863	3.1
Alaska	1998-2012	#	0.1	178 645	0.1
Arizona	1998-2012	145	0.6	1 405 205	0.7
Arkansas	1998-2012	336	1.3	2 409 950	1.2
California	1998-2012	1638	6.2	13 116 262	6.6
Colorado	1998-2012	127	0.5	1 168 006	0.6
Connecticut	1998-2012	252	1.0	1 998 676	1.0
Delaware	1998-2012	164	0.6	935 064	0.5
District of Columbia	1998-2012	188	0.7	1 357 430	0.7
Florida	1998-2012	2033	7.7	14 955 787	7.5
Georgia	1998-2012	1944	7.4	13 996 387	7.0
Hawaii	1998-2012	18	0.1	184 042	0.1
Idaho	1998-2012	#	0.0	85 257	0.0
Illinois	1998-2012	1322	5.0	10 127 021	5.1
Indiana	1998-2012	417	1.6	3 259 441	1.6
Iowa	1998-2012	73	0.3	587 476	0.3
Kentucky	1998-2012	245	0.9	1 744 382	0.9
Louisiana	1998-2012	999	3.8	7 754 960	3.9
Maine	1998-2012	#	0.0	108 977	0.1
Massachusetts	1998-2012	302	1.1	2 533 575	1.3
Michigan	1998-2012	1089	4.1	7 774 052	3.9
Minnesota	1998-2012	204	0.8	1 644 072	0.8
Mississippi	2002-2012	540	2.1	4 187 757	2.1
Missouri	1998-2012	515	2.0	3 707 288	1.9
Montana	1998-2012	#	0.0	42 116	0.0
Nebraska	1998-2012	85	0.3	520 931	0.3
Nevada	1998-2012	112	0.4	1 082 627	0.5
New Hampshire	1998-2012	#	0.1	98 890	0.0
New Jersey	1998-2012	916	3.5	6 237 283	3.1
New Mexico	1998-2012	25	0.1	284 220	0.1
New York State	1998-2012	2336	8.9	16 463 884	8.2
North Carolina	1998-2012	1262	4.8	9 589 062	4.8
North Dakota	1998-2012	#	0.0	53 057	0.0
Ohio	1998-2012	959	3.6	7 650 872	3.8
Oklahoma	1998-2012	230	0.9	1 664 103	0.8
Oregon	1998-2012	54	0.2	478 597	0.2
Pennsylvania	1998-2012	1053	4.0	7 245 219	3.6
Rhode Island	1998-2012	41	0.2	428 091	0.2
South Carolina	1998-2012	753	2.9	6 290 688	3.2
South Dakota	2001-2012	#	0.0	62 616	0.0
Tennessee	1999-2012	721	2.7	4 979 072	2.5
Texas	1998-2012	1976	7.5	14 441 073	7.2
Utah	1998-2012	25	0.1	227 839	0.1
Vermont	1998-2012	#	0.0	43 863	0.0
Virginia	1998-2012	851	3.2	7 349 994	3.7
Washington State	1998-2012	204	0.8	1 543 055	0.8
West Virginia	1998-2012	34	0.1	312 176	0.2
Wisconsin	1998-2012	272	1.0	2 228 283	1.1
Wyoming	1998-2012	#	0.0	37 114	0.0
USA*	**1998-2012**	**26339**	**100.0**	**199 572 533**	**100.0**

15 cases or fewer

* Data not shown for two registries included in the total

Please consult the quality indicators for this pool and its constituent registries

USA, Black (1998-2012)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)							0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	**LEUKAEMIA**	299	1722	1154	1205	1116	**4380**	**5496**	24.0	100.0	20.9	100.0	31.0	45.0	23.5	23.5	21.8	**30.7**	**28.7**	446	555	96.3	0.8
	a. Lymphoid	124	1256	865	701	456	**2946**	**3402**	16.1	67.3	12.9	61.9	12.8	32.8	17.6	13.7	8.9	**20.8**	**18.1**	300	345	97.9	0.5
	b. Acute myeloid	114	348	199	337	381	**998**	**1379**	5.5	22.8	5.2	25.1	11.8	9.1	4.1	6.6	7.4	**6.9**	**7.1**	101	138	97.5	0.7
	c. CMD	24	31	40	94	188	**189**	**377**	1.0	4.3	1.4	6.9	2.5	0.8	0.8	1.8	3.7	**1.2**	**1.8**	19	37	83.3	1.3
	d. MDS & other	27	46	23	35	47	**131**	**178**	0.7	3.0	0.7	3.2	2.8	1.2	0.5	0.7	0.9	**0.9**	**0.9**	13	18	94.4	0.0
	e. Unspecified	10	41	27	38	44	**116**	**160**	0.6	2.6	0.6	2.9	1.0	1.1	0.6	0.7	0.9	**0.8**	**0.8**	12	16	85.0	7.5
II	**LYMPHOMA & RELATED**	61	268	601	1192	2006	**2122**	**4128**	11.6	100.0	15.7	100.0	6.3	7.0	12.2	23.2	39.1	**13.4**	**19.2**	212	407	98.4	0.3
	a. Hodgkin	0	34	189	548	1150	**771**	**1921**	4.2	36.3	7.3	46.5	-	0.9	3.9	10.7	22.4	**4.6**	**8.6**	76	188	99.3	0.1
	b. Non-Hodgkin except BL	22	128	277	538	758	**965**	**1723**	5.3	45.5	6.5	41.7	2.3	3.3	5.6	10.5	14.8	**6.1**	**8.0**	96	170	98.5	0.4
	c. Burkitt (BL)	2	43	95	79	57	**219**	**276**	1.2	10.3	1.0	6.7	0.2	1.1	1.9	1.5	1.1	**1.4**	**1.4**	22	28	98.6	0.4
	d. Lymphoreticular	36	55	27	13	6	**131**	**137**	0.7	6.2	0.5	3.3	3.7	1.4	0.6	0.3	0.1	**1.0**	**0.8**	14	14	96.4	0.7
	e. Unspecified	1	8	13	14	35	**36**	**71**	0.2	1.7	0.3	1.7	0.1	0.2	0.3	0.3	0.7	**0.2**	**0.3**	4	7	74.6	2.8
III	**CNS NEOPLASMS** †	305	1324	1551	1322	1422	**4502**	**5924**	24.6	100.0	22.5	100.0	31.6	34.6	31.6	25.8	27.7	**30.8**	**30.1**	457	596	78.3	0.7
	a. Ependymoma	52	165	95	64	82	**376**	**458**	2.1	8.4	1.7	7.7	5.4	4.3	1.9	1.2	1.6	**2.7**	**2.5**	39	47	96.9	0.2
	b. Astrocytoma	95	520	623	563	461	**1801**	**2262**	9.8	40.0	8.6	38.2	9.8	13.6	12.7	11.0	9.0	**12.2**	**11.5**	183	227	90.0	0.1
	c. CNS embryonal	84	288	225	143	113	**740**	**853**	4.0	16.4	3.2	14.4	8.7	7.5	4.6	2.8	2.2	**5.3**	**4.6**	76	87	98.9	0.0
	d. Other gliomas	21	196	324	173	130	**714**	**844**	3.9	15.9	3.2	14.2	2.2	5.1	6.6	3.4	2.5	**4.9**	**4.3**	73	85	39.2	0.2
	e. Other specified	36	120	237	316	575	**709**	**1284**	3.9	15.7	4.9	21.7	3.7	3.1	4.8	6.2	11.2	**4.6**	**6.1**	71	127	71.0	0.2
	f. Unspecified CNS	17	35	47	63	61	**162**	**223**	0.9	3.6	0.8	3.8	1.8	0.9	1.0	1.2	1.2	**1.1**	**1.1**	16	22	33.6	14.3
IV	**NEUROBLASTOMA**	320	715	170	65	47	**1270**	**1317**	6.9	100.0	5.0	100.0	33.1	18.7	3.5	1.3	0.9	**9.8**	**7.8**	132	136	98.0	0.2
	a. (Ganglio)neuroblastoma	320	708	163	58	26	**1249**	**1275**	6.8	98.3	4.8	96.8	33.1	18.5	3.3	1.1	0.5	**9.7**	**7.6**	130	132	98.1	0.2
	b. Peripheral nervous	0	7	7	7	21	**21**	**42**	0.1	1.7	0.2	3.2	-	0.2	0.1	0.1	0.4	**0.1**	**0.2**	2	4	95.2	0.0
V	**RETINOBLASTOMA**	270	348	20	2	1	**640**	**641**	3.5	100.0	2.4	100.0	28.0	9.1	0.4	0.0	0.0	**5.1**	**4.0**	67	67	78.5	0.3
VI	**RENAL TUMOURS**	147	848	342	110	125	**1447**	**1572**	7.9	100.0	6.0	100.0	15.2	22.2	7.0	2.1	2.4	**10.9**	**9.0**	149	162	98.5	0.3
	a. Nephroblastoma	145	837	311	46	23	**1339**	**1362**	7.3	92.5	5.2	86.6	15.0	21.9	6.3	0.9	0.4	**10.2**	**8.0**	139	141	98.9	0.1
	b. Renal carcinoma	1	9	30	62	102	**102**	**204**	0.6	7.0	0.8	13.0	0.1	0.2	0.6	1.2	2.0	**0.6**	**0.9**	10	20	97.5	0.0
	c. Unspecified	1	2	1	2	0	**6**	**6**	0.0	0.4	0.0	0.4	0.1	0.1	0.0	0.0	-	**0.0**	**0.0**	1	1	50.0	50.0
VII	**HEPATIC TUMOURS**	55	129	34	40	61	**258**	**319**	1.4	100.0	1.2	100.0	5.7	3.4	0.7	0.8	1.2	**1.9**	**1.8**	27	33	94.7	0.9
	a. Hepatoblastoma	51	124	21	20	5	**216**	**221**	1.2	83.7	0.8	69.3	5.3	3.2	0.4	0.4	0.1	**1.7**	**1.3**	22	23	97.7	0.0
	b. Hepatic carcinoma	2	5	13	20	55	**40**	**95**	0.2	15.5	0.4	29.8	0.2	0.1	0.3	0.4	1.1	**0.3**	**0.4**	4	9	90.5	2.1
	c. Unspecified	2	0	0	0	1	**2**	**3**	0.0	0.8	0.0	0.9	0.2	-	-	-	0.0	**0.0**	**0.0**	0	0	0.0	33.3
VIII	**BONE TUMOURS**	4	32	211	542	601	**789**	**1390**	4.3	100.0	5.3	100.0	0.4	0.8	4.3	10.6	11.7	**4.7**	**6.3**	78	137	97.3	0.1
	a. Osteosarcoma	0	16	173	448	466	**637**	**1103**	3.5	80.7	4.2	79.4	-	0.4	3.5	8.7	9.1	**3.8**	**5.0**	63	108	98.1	0.0
	b. Chondrosarcoma	0	2	5	12	34	**19**	**53**	0.1	2.4	0.2	3.8	-	0.1	0.1	0.2	0.7	**0.1**	**0.2**	2	5	94.3	1.9
	c. Ewing & related	1	7	21	43	44	**72**	**116**	0.4	9.1	0.4	8.3	0.1	0.2	0.4	0.8	0.9	**0.4**	**0.5**	7	11	96.6	0.0
	d. Other specified	0	2	7	24	45	**33**	**78**	0.2	4.2	0.3	5.6	-	0.1	0.1	0.5	0.9	**0.2**	**0.4**	3	8	100.0	0.0
	e. Unspecified	3	5	5	15	12	**28**	**40**	0.2	3.5	0.2	2.9	0.3	0.1	0.1	0.3	0.2	**0.2**	**0.2**	3	4	77.5	0.0
IX	**SOFT TISSUE SARCOMA**	134	366	390	656	844	**1546**	**2390**	8.5	100.0	9.1	100.0	13.9	9.6	7.9	12.8	16.5	**10.3**	**11.7**	156	238	98.7	0.1
	a. Rhabdomyosarcoma	46	246	211	210	215	**713**	**928**	3.9	46.1	3.5	38.8	4.8	6.4	4.3	4.1	4.2	**4.9**	**4.8**	72	93	99.0	0.1
	b. Fibrosarcoma	35	25	35	73	111	**168**	**279**	0.9	10.9	1.1	11.7	3.6	0.7	0.7	1.4	2.2	**1.1**	**1.4**	17	28	97.1	0.0
	c. Kaposi sarcoma	3	1	0	3	24	**7**	**31**	0.0	0.5	0.1	1.3	0.3	0.0	-	0.1	0.5	**0.0**	**0.1**	1	3	83.9	0.0
	d. Other specified	37	67	109	284	385	**497**	**882**	2.7	32.1	3.3	36.9	3.8	1.8	2.2	5.5	7.5	**3.2**	**4.1**	50	87	99.4	0.1
	e. Unspecified	13	27	35	86	109	**161**	**270**	0.9	10.4	1.0	11.3	1.3	0.7	0.7	1.7	2.1	**1.0**	**1.3**	16	27	98.1	0.0
X	**GERM CELL TUMOURS**	149	81	107	269	635	**606**	**1241**	3.3	100.0	4.7	100.0	15.4	2.1	2.2	5.2	12.4	**4.1**	**6.0**	61	123	96.3	0.2
	a. CNS germ cell ‡	22	14	32	69	90	**137**	**227**	0.7	22.6	0.9	18.3	2.3	0.4	0.7	1.3	1.8	**0.9**	**1.1**	14	23	87.2	0.0
	b. Other extragonadal	111	43	3	13	89	**170**	**259**	0.9	28.1	1.0	20.9	11.5	1.1	0.1	0.3	1.7	**1.3**	**1.4**	18	26	96.9	0.0
	c. Gonadal germ cell	16	21	68	160	370	**265**	**635**	1.4	43.7	2.4	51.2	1.7	0.5	1.4	3.1	7.2	**1.7**	**2.9**	26	62	99.7	0.0
	d. Gonadal carcinoma	0	0	1	8	32	**9**	**41**	0.0	1.5	0.2	3.3	-	-	0.0	0.2	0.6	**0.1**	**0.2**	1	4	97.6	0.0
	e. Unspecified gonadal	0	3	3	19	54	**25**	**79**	0.1	4.1	0.3	6.4	-	0.1	0.1	0.4	1.1	**0.2**	**0.4**	2	8	92.4	3.8
XI	**CARCINOMA & MELANOMA**	26	33	109	458	1116	**626**	**1742**	3.4	100.0	6.6	100.0	2.7	0.9	2.2	8.9	21.8	**3.8**	**7.8**	62	171	99.2	0.1
	a. Adrenocortical	0	10	2	2	2	**14**	**16**	0.1	2.2	0.1	0.9	-	0.3	0.0	0.0	0.0	**0.1**	**0.1**	1	2	100.0	0.0
	b. Thyroid	2	2	27	120	348	**151**	**499**	0.8	24.1	1.9	28.6	0.2	0.1	0.6	2.3	6.8	**0.9**	**2.2**	15	49	100.0	0.0
	c. Nasopharyngeal	0	0	9	122	177	**131**	**308**	0.7	20.9	1.2	17.7	-	-	0.2	2.4	3.5	**0.7**	**1.4**	13	30	99.7	0.0
	d. Melanoma	7	11	24	12	45	**54**	**99**	0.3	8.6	0.4	5.7	0.7	0.3	0.5	0.2	0.9	**0.4**	**0.5**	5	10	99.0	1.0
	e. Skin carcinoma	0	0	4	7	7	**11**	**18**	0.1	1.8	0.1	1.0	-	-	0.1	0.1	0.1	**0.1**	**0.1**	1	2	100.0	0.0
	f. Other & unspecified	17	10	43	195	537	**265**	**802**	1.4	42.3	3.0	46.0	1.8	0.3	0.9	3.8	10.5	**1.6**	**3.6**	26	79	98.5	0.1
XII	**OTHER & UNSPECIFIED**	17	25	23	35	79	**100**	**179**	0.5	100.0	0.7	100.0	1.8	0.7	0.5	0.7	1.5	**0.7**	**0.9**	10	18	70.9	15.1
	a. Other specified	5	17	8	15	31	**45**	**76**	0.2	45.0	0.3	42.5	0.5	0.4	0.2	0.3	0.6	**0.3**	**0.4**	5	8	100.0	0.0
	b. Other unspecified	12	8	15	20	48	**55**	**103**	0.3	55.0	0.4	57.5	1.2	0.2	0.3	0.4	0.9	**0.4**	**0.5**	6	10	49.5	26.2
	TOTAL	1787	5891	4712	5896	8053	**18286**	**26339**	100.0	100.0	100.0	100.0	185.0	154.0	96.0	114.9	157.0	**126.4**	**133.3**	1856	2641	92.6	0.5

† includes 1388 non-malignant ‡ includes 32 non-malignant

Please consult the quality indicators for this pool and its constituent registries

USA, Hispanic White (1998-2012)

Registry	Period	Cases	%	Person-years	%
Alabama	1998-2012	90	0.2	644 851	0.3
Alaska	1998-2012	19	0.0	148 576	0.1
Arizona	1998-2012	1427	3.7	9 162 160	4.2
Arkansas	1998-2012	91	0.2	807 661	0.4
California	1998-2012	12306	31.8	67 563 885	30.6
Colorado	1998-2012	823	2.1	4 780 278	2.2
Connecticut	1998-2012	389	1.0	1 914 331	0.9
Delaware	1998-2012	58	0.1	270 992	0.1
District of Columbia	1998-2012	24	0.1	149 684	0.1
Florida	1998-2012	2876	7.4	14 098 597	6.4
Georgia	1998-2012	505	1.3	3 260 534	1.5
Hawaii	1998-2012	17	0.0	151 486	0.1
Idaho	1998-2012	119	0.3	875 723	0.4
Illinois	1998-2012	1623	4.2	9 795 267	4.4
Indiana	1998-2012	267	0.7	1 713 042	0.8
Iowa	1998-2012	124	0.3	721 244	0.3
Kentucky	1998-2012	78	0.2	499 886	0.2
Louisiana	1998-2012	95	0.2	590 110	0.3
Maine	1998-2012	#	0.0	77 170	0.0
Massachusetts	1998-2012	452	1.2	2 473 826	1.1
Michigan	1998-2012	306	0.8	2 145 280	1.0
Minnesota	1998-2012	95	0.2	1 132 251	0.5
Mississippi	2002-2012	22	0.1	220 741	0.1
Missouri	1998-2012	116	0.3	905 962	0.4
Montana	1998-2012	21	0.1	123 171	0.1
Nebraska	1998-2012	122	0.3	791 609	0.4
Nevada	1998-2012	485	1.3	3 093 647	1.4
New Hampshire	1998-2012	36	0.1	164 165	0.1
New Jersey	1998-2012	971	2.5	5 692 322	2.6
New Mexico	1998-2012	621	1.6	4 304 859	2.0
New York State	1998-2012	2279	5.9	11 908 970	5.4
North Carolina	1998-2012	536	1.4	3 019 683	1.4
North Dakota	1998-2012	#	0.0	58 701	0.0
Ohio	1998-2012	160	0.4	1 499 991	0.7
Oklahoma	1998-2012	207	0.5	1 395 949	0.6
Oregon	1998-2012	352	0.9	2 151 142	1.0
Pennsylvania	1998-2012	309	0.8	2 691 923	1.2
Rhode Island	1998-2012	104	0.3	542 388	0.2
South Carolina	1998-2012	109	0.3	761 051	0.3
South Dakota	2001-2012	#	0.0	76 010	0.0
Tennessee	1999-2012	140	0.4	1 035 691	0.5
Texas	1998-2012	8467	21.9	45 052 405	20.4
Utah	1998-2012	328	0.8	1 663 725	0.8
Vermont	1998-2012	#	0.0	38 359	0.0
Virginia	1998-2012	306	0.8	2 188 174	1.0
Washington State	1998-2012	537	1.4	3 442 668	1.6
West Virginia	1998-2012	#	0.0	86 392	0.0
Wisconsin	1998-2012	218	0.6	1 544 539	0.7
Wyoming	1998-2012	23	0.1	216 805	0.1
USA*	**1998-2012**	**38677**	**100.0**	**220 589 146**	**100.0**

15 cases or fewer

* Data not shown for two registries included in the total

Please consult the quality indicators for this pool and its constituent registries

USA, Hispanic White (1998-2012)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)							0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	LEUKAEMIA	704	4811	2836	2164	2134	**10515**	**12649**	37.8	100.0	32.7	100.0	55.7	100.5	51.2	40.9	41.3	**63.6**	**58.6**	916	1122	96.8	0.5
	a. Lymphoid	271	4071	2414	1541	1335	**8297**	**9632**	29.8	78.9	24.9	76.1	21.5	85.0	43.5	29.1	25.8	**50.3**	**44.8**	722	851	98.4	0.2
	b. Acute myeloid	234	508	263	419	492	**1424**	**1916**	5.1	13.5	5.0	15.1	18.5	10.6	4.7	7.9	9.5	**8.6**	**8.8**	125	172	97.8	0.3
	c. CMD	86	54	49	88	194	**277**	**471**	1.0	2.6	1.2	3.7	6.8	1.1	0.9	1.7	3.8	**1.7**	**2.1**	24	43	72.0	2.1
	d. MDS & other	67	82	45	51	45	**245**	**290**	0.9	2.3	0.7	2.3	5.3	1.7	0.8	1.0	0.9	**1.5**	**1.4**	21	26	90.0	2.1
	e. Unspecified	46	96	65	65	68	**272**	**340**	1.0	2.6	0.9	2.7	3.6	2.0	1.2	1.2	1.3	**1.6**	**1.6**	24	30	84.1	5.0
II	LYMPHOMA & RELATED	164	647	901	1183	1895	**2895**	**4790**	10.4	100.0	12.4	100.0	13.0	13.5	16.3	22.3	36.7	**16.9**	**21.4**	260	443	98.0	0.4
	a. Hodgkin	0	92	329	575	1164	**996**	**2160**	3.6	34.4	5.6	45.1	-	1.9	5.9	10.9	22.5	**5.7**	**9.5**	92	204	99.2	0.1
	b. Non-Hodgkin except BL	23	233	350	445	590	**1051**	**1641**	3.8	36.3	4.2	34.3	1.8	4.9	6.3	8.4	11.4	**6.1**	**7.3**	95	152	98.5	0.4
	c. Burkitt (BL)	2	98	118	90	77	**308**	**385**	1.1	10.6	1.0	8.0	0.2	2.0	2.1	1.7	1.5	**1.8**	**1.7**	27	35	99.2	0.0
	d. Lymphoreticular	134	208	84	56	24	**482**	**506**	1.7	16.6	1.3	10.6	10.6	4.3	1.5	1.1	0.5	**3.0**	**2.4**	41	43	96.4	0.6
	e. Unspecified	5	16	20	17	40	**58**	**98**	0.2	2.0	0.3	2.0	0.4	0.3	0.4	0.3	0.8	**0.3**	**0.4**	5	9	68.4	7.1
III	CNS NEOPLASMS †	466	1876	1830	1515	1607	**5687**	**7294**	20.4	100.0	18.9	100.0	36.9	39.2	33.0	28.6	31.1	**33.9**	**33.3**	502	657	78.4	0.8
	a. Ependymoma	88	273	145	115	119	**621**	**740**	2.2	10.9	1.9	10.1	7.0	5.7	2.6	2.2	2.3	**3.8**	**3.4**	54	65	97.2	0.0
	b. Astrocytoma	134	709	709	562	443	**2114**	**2557**	7.6	37.2	6.6	35.1	10.6	14.8	12.8	10.6	8.6	**12.6**	**11.7**	187	230	88.6	0.3
	c. CNS embryonal	145	484	368	194	154	**1191**	**1345**	4.3	20.9	3.5	18.4	11.5	10.1	6.6	3.7	3.0	**7.2**	**6.3**	103	118	97.8	0.3
	d. Other gliomas	31	231	331	205	124	**798**	**922**	2.9	14.0	2.4	12.6	2.5	4.8	6.0	3.9	2.4	**4.7**	**4.2**	71	83	40.5	0.7
	e. Other specified	40	128	221	379	676	**768**	**1444**	2.8	13.5	3.7	19.8	3.2	2.7	4.0	7.2	13.1	**4.4**	**6.4**	70	135	66.2	0.4
	f. Unspecified CNS	28	51	56	60	91	**195**	**286**	0.7	3.4	0.7	3.9	2.2	1.1	1.0	1.1	1.8	**1.2**	**1.3**	17	26	32.5	11.9
IV	NEUROBLASTOMA	495	682	114	46	26	**1337**	**1363**	4.8	100.0	3.5	100.0	39.2	14.2	2.1	0.9	0.5	**8.4**	**6.7**	112	114	96.7	0.2
	a. (Ganglio)neuroblastoma	490	676	110	33	12	**1309**	**1321**	4.7	97.9	3.4	96.9	38.8	14.1	2.0	0.6	0.2	**8.3**	**6.5**	109	111	96.7	0.2
	b. Peripheral nervous	5	6	4	13	14	**28**	**42**	0.1	2.1	0.1	3.1	0.4	0.1	0.1	0.2	0.3	**0.2**	**0.2**	2	4	95.2	0.0
V	RETINOBLASTOMA	360	500	27	8	1	**895**	**896**	3.2	100.0	2.3	100.0	28.5	10.4	0.5	0.2	0.0	**5.7**	**4.4**	74	74	79.9	0.2
VI	RENAL TUMOURS	163	741	216	43	54	**1163**	**1217**	4.2	100.0	3.1	100.0	12.9	15.5	3.9	0.8	1.0	**7.3**	**5.9**	98	103	98.4	0.2
	a. Nephroblastoma	162	736	200	25	8	**1123**	**1131**	4.0	96.6	2.9	92.9	12.8	15.4	3.6	0.5	0.2	**7.0**	**5.5**	95	95	98.9	0.1
	b. Renal carcinoma	1	2	14	18	44	**35**	**79**	0.1	3.0	0.2	6.5	0.1	0.0	0.3	0.3	0.9	**0.2**	**0.3**	3	7	96.2	1.3
	c. Unspecified	0	3	2	0	2	**5**	**7**	0.0	0.4	0.0	0.6	-	0.1	0.0	-	0.0	**0.0**	**0.0**	0	1	57.1	14.3
VII	HEPATIC TUMOURS	170	269	53	64	69	**556**	**625**	2.0	100.0	1.6	100.0	13.5	5.6	1.0	1.2	1.3	**3.5**	**3.0**	47	54	96.2	0.6
	a. Hepatoblastoma	164	253	40	27	6	**484**	**490**	1.7	87.1	1.3	78.4	13.0	5.3	0.7	0.5	0.1	**3.0**	**2.4**	41	41	97.1	0.6
	b. Hepatic carcinoma	3	15	13	36	62	**67**	**129**	0.2	12.1	0.3	20.6	0.2	0.3	0.2	0.7	1.2	**0.4**	**0.6**	6	12	95.3	0.0
	c. Unspecified	3	1	0	1	1	**5**	**6**	0.0	0.9	0.0	1.0	0.2	0.0	-	0.0	0.0	**0.0**	**0.0**	0	1	33.3	16.7
VIII	BONE TUMOURS	9	73	302	746	717	**1130**	**1847**	4.1	100.0	4.8	100.0	0.7	1.5	5.4	14.1	13.9	**6.4**	**8.1**	104	174	97.2	0.6
	a. Osteosarcoma	0	18	177	485	441	**680**	**1121**	2.4	60.2	2.9	60.7	-	0.4	3.2	9.2	8.5	**3.8**	**4.9**	63	106	98.7	0.1
	b. Chondrosarcoma	0	1	7	23	31	**31**	**62**	0.1	2.7	0.2	3.4	-	0.0	0.1	0.4	0.6	**0.2**	**0.3**	3	6	98.4	0.0
	c. Ewing & related	6	44	95	197	186	**342**	**528**	1.2	30.3	1.4	28.6	0.5	0.9	1.7	3.7	3.6	**2.0**	**2.3**	31	49	97.5	0.4
	d. Other specified	1	7	14	22	40	**44**	**84**	0.2	3.9	0.2	4.5	0.1	0.1	0.3	0.4	0.8	**0.3**	**0.4**	4	8	97.6	0.0
	e. Unspecified	2	3	9	19	19	**33**	**52**	0.1	2.9	0.1	2.8	0.2	0.1	0.2	0.4	0.4	**0.2**	**0.2**	3	5	61.5	17.3
IX	SOFT TISSUE SARCOMA	198	429	446	551	712	**1624**	**2336**	5.8	100.0	6.0	100.0	15.7	9.0	8.0	10.4	13.8	**9.6**	**10.6**	144	213	98.6	0.3
	a. Rhabdomyosarcoma	76	299	225	165	149	**765**	**914**	2.7	47.1	2.4	39.1	6.0	6.2	4.1	3.1	2.9	**4.6**	**4.2**	67	81	99.5	0.0
	b. Fibrosarcoma	50	14	39	64	93	**167**	**260**	0.6	10.3	0.7	11.1	4.0	0.3	0.7	1.2	1.8	**1.0**	**1.2**	15	24	97.7	0.0
	c. Kaposi sarcoma	1	1	1	1	3	**4**	**7**	0.0	0.2	0.0	0.3	0.1	0.0	0.0	0.0	0.1	**0.0**	**0.0**	0	1	100.0	0.0
	d. Other specified	46	87	135	256	391	**524**	**915**	1.9	32.3	2.4	39.2	3.6	1.8	2.4	4.8	7.6	**3.0**	**4.1**	47	85	99.5	0.2
	e. Unspecified	25	28	46	65	76	**164**	**240**	0.6	10.1	0.6	10.3	2.0	0.6	0.8	1.2	1.5	**1.0**	**1.1**	15	22	93.3	2.1
X	GERM CELL TUMOURS	230	186	167	523	1904	**1106**	**3010**	4.0	100.0	7.8	100.0	18.2	3.9	3.0	9.9	36.8	**6.5**	**13.3**	99	283	97.4	0.1
	a. CNS germ cell ‡	27	25	70	172	134	**294**	**428**	1.1	26.6	1.1	14.2	2.1	0.5	1.3	3.2	2.6	**1.7**	**1.9**	27	40	90.7	0.2
	b. Other extragonadal	117	52	14	30	169	**213**	**382**	0.8	19.3	1.0	12.7	9.3	1.1	0.3	0.6	3.3	**1.3**	**1.8**	18	34	95.5	0.0
	c. Gonadal germ cell	84	108	77	296	1484	**565**	**2049**	2.0	51.1	5.3	68.1	6.6	2.3	1.4	5.6	28.7	**3.3**	**9.0**	51	194	99.6	0.0
	d. Gonadal carcinoma	1	0	1	12	73	**14**	**87**	0.1	1.3	0.2	2.9	0.1	-	0.0	0.2	1.4	**0.1**	**0.4**	1	8	97.7	0.0
	e. Unspecified gonadal	1	1	5	13	44	**20**	**64**	0.1	1.8	0.2	2.1	0.1	0.0	0.1	0.2	0.9	**0.1**	**0.3**	2	6	82.8	3.1
XI	CARCINOMA & MELANOMA	18	60	167	591	1635	**836**	**2471**	3.0	100.0	6.4	100.0	1.4	1.3	3.0	11.2	31.6	**4.7**	**10.8**	77	235	99.2	0.1
	a. Adrenocortical	6	16	8	12	10	**42**	**52**	0.2	5.0	0.1	2.1	0.5	0.3	0.1	0.2	0.2	**0.3**	**0.2**	4	5	100.0	0.0
	b. Thyroid	1	9	72	295	941	**377**	**1318**	1.4	45.1	3.4	53.3	0.1	0.2	1.3	5.6	18.2	**2.1**	**5.7**	35	126	99.8	0.1
	c. Nasopharyngeal	0	0	4	33	48	**37**	**85**	0.1	4.4	0.2	3.4	-	-	0.1	0.6	0.9	**0.2**	**0.4**	3	8	100.0	0.0
	d. Melanoma	8	27	44	74	144	**153**	**297**	0.5	18.3	0.8	12.0	0.6	0.6	0.8	1.4	2.8	**0.9**	**1.3**	14	28	98.3	0.0
	e. Skin carcinoma	0	0	0	5	8	**5**	**13**	0.0	0.6	0.0	0.5	-	-	-	0.1	0.2	**0.0**	**0.1**	0	1	92.3	0.0
	f. Other & unspecified	3	8	39	172	484	**222**	**706**	0.8	26.6	1.8	28.6	0.2	0.2	0.7	3.2	9.4	**1.2**	**3.1**	21	67	98.3	0.3
XII	OTHER & UNSPECIFIED	17	43	21	29	69	**110**	**179**	0.4	100.0	0.5	100.0	1.3	0.9	0.4	0.5	1.3	**0.7**	**0.8**	10	16	68.2	14.5
	a. Other specified	5	27	8	13	26	**53**	**79**	0.2	48.2	0.2	44.1	0.4	0.6	0.1	0.2	0.5	**0.3**	**0.4**	5	7	97.5	1.3
	b. Other unspecified	12	16	13	16	43	**57**	**100**	0.2	51.8	0.3	55.9	0.9	0.3	0.2	0.3	0.8	**0.3**	**0.5**	5	9	45.0	25.0
	TOTAL	2994	10317	7080	7463	10823	**27854**	**38677**	100.0	100.0	100.0	100.0	237.0	215.4	127.7	141.0	209.4	**167.3**	**176.7**	2443	3490	93.3	0.5

† includes 1763 non-malignant ‡ includes 37 non-malignant

Please consult the quality indicators for this pool and its constituent registries

USA, Native American (1998-2012)

Registry	Period	Cases	%	Person-years	%
Alabama	1998-2012	#	0.3	138 295	0.7
Alaska	1998-2012	154	8.3	700 022	3.6
Arizona	1998-2012	249	13.5	1 941 195	9.9
Arkansas	1998-2012	#	0.4	120 551	0.6
California	1998-2012	103	5.6	3 168 323	16.1
Colorado	1998-2012	23	1.2	388 276	2.0
Connecticut	1998-2012	#	0.2	83 934	0.4
Delaware	1998-2012	#	0.0	23 301	0.1
District of Columbia	1998-2012	#	0.1	11 019	0.1
Florida	1998-2012	18	1.0	386 774	2.0
Georgia	1998-2012	#	0.5	197 045	1.0
Hawaii	1998-2012	#	0.2	21 507	0.1
Idaho	1998-2012	#	0.8	144 328	0.7
Illinois	1998-2012	#	0.6	340 728	1.7
Indiana	1998-2012	#	0.1	116 915	0.6
Iowa	1998-2012	#	0.4	77 274	0.4
Kentucky	1998-2012	#	0.1	45 098	0.2
Louisiana	1998-2012	#	0.2	162 310	0.8
Maine	1998-2012	#	0.3	47 682	0.2
Massachusetts	1998-2012	#	0.5	142 092	0.7
Michigan	1998-2012	35	1.9	425 478	2.2
Minnesota	1998-2012	58	3.1	432 330	2.2
Mississippi	2002-2012	#	0.5	64 660	0.3
Missouri	1998-2012	#	0.3	165 987	0.8
Montana	1998-2012	70	3.8	405 895	2.1
Nebraska	1998-2012	#	0.7	140 811	0.7
Nevada	1998-2012	#	0.8	213 479	1.1
New Hampshire	1998-2012	#	0.1	19 719	0.1
New Jersey	1998-2012	#	0.3	208 976	1.1
New Mexico	1998-2012	144	7.8	1 169 182	5.9
New York State	1998-2012	25	1.4	838 487	4.3
North Carolina	1998-2012	53	2.9	674 088	3.4
North Dakota	1998-2012	42	2.3	234 062	1.2
Ohio	1998-2012	#	0.4	160 087	0.8
Oklahoma	1998-2012	345	18.7	2 050 180	10.4
Oregon	1998-2012	41	2.2	370 293	1.9
Pennsylvania	1998-2012	#	0.5	179 635	0.9
Rhode Island	1998-2012	#	0.2	49 849	0.3
South Carolina	1998-2012	#	0.1	98 597	0.5
South Dakota	2001-2012	50	2.7	401 309	2.0
Tennessee	1999-2012	#	0.4	94 691	0.5
Texas	1998-2012	60	3.2	1 083 009	5.5
Utah	1998-2012	21	1.1	248 719	1.3
Vermont	1998-2012	#	0.0	13 278	0.1
Virginia	1998-2012	#	0.2	159 528	0.8
Washington State	1998-2012	106	5.7	725 331	3.7
West Virginia	1998-2012	#	0.0	12 927	0.1
Wisconsin	1998-2012	55	3.0	348 937	1.8
Wyoming	1998-2012	#	0.8	85 260	0.4
USA*	**1998-2012**	**1849**	**100.0**	**19 656 376**	**100.0**

15 cases or fewer

* Data not shown for two registries included in the total

Please consult the quality indicators for this pool and its constituent registries

USA, Native American (1998-2012)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)							0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	LEUKAEMIA	36	196	114	97	119	443	562	35.9	100.0	30.4	100.0	36.9	51.7	23.8	19.3	23.4	32.1	30.2	459	576	97.2	1.2
	a. Lymphoid	15	163	87	53	56	318	374	25.8	71.8	20.2	66.5	15.4	43.0	18.2	10.6	11.0	23.4	20.6	330	386	97.9	1.1
	b. Acute myeloid	9	24	17	34	40	84	124	6.8	19.0	6.7	22.1	9.2	6.3	3.6	6.8	7.9	5.8	6.3	86	126	99.2	0.8
	c. CMD	2	2	1	5	12	10	22	0.8	2.3	1.2	3.9	2.1	0.5	0.2	1.0	2.4	0.7	1.1	10	22	86.4	0.0
	d. MDS & other	9	4	5	3	5	21	26	1.7	4.7	1.4	4.6	9.2	1.1	1.0	0.6	1.0	1.6	1.4	22	27	96.2	0.0
	e. Unspecified	1	3	4	2	6	10	16	0.8	2.3	0.9	2.8	1.0	0.8	0.8	0.4	1.2	0.7	0.8	10	16	81.3	12.5
II	LYMPHOMA & RELATED	8	32	25	53	83	118	201	9.6	100.0	10.9	100.0	8.2	8.4	5.2	10.6	16.3	8.0	9.9	121	202	98.0	0.5
	a. Hodgkin	0	3	4	15	49	22	71	1.8	18.6	3.8	35.3	-	0.8	0.8	3.0	9.6	1.4	3.2	22	70	100.0	0.0
	b. Non-Hodgkin except BL	0	8	12	29	26	49	75	4.0	41.5	4.1	37.3	-	2.1	2.5	5.8	5.1	3.1	3.6	50	75	94.7	1.3
	c. Burkitt (BL)	0	4	4	7	6	15	21	1.2	12.7	1.1	10.4	-	1.1	0.8	1.4	1.2	1.0	1.0	15	21	100.0	0.0
	d. Lymphoreticular	7	17	5	2	1	31	32	2.5	26.3	1.7	15.9	7.2	4.5	1.0	0.4	0.2	2.4	1.9	32	33	100.0	0.0
	e. Unspecified	1	0	0	0	1	1	2	0.1	0.8	0.1	1.0	1.0	-	-	-	0.2	0.1	0.1	1	2	100.0	0.0
III	CNS NEOPLASMS †	15	73	91	87	118	266	384	21.6	100.0	20.8	100.0	15.4	19.3	19.0	17.3	23.2	18.3	19.4	274	390	77.3	0.8
	a. Ependymoma	4	13	6	4	8	27	35	2.2	10.2	1.9	9.1	4.1	3.4	1.3	0.8	1.6	2.0	1.9	28	36	97.1	2.9
	b. Astrocytoma	6	28	33	31	27	98	125	7.9	36.8	6.8	32.6	6.2	7.4	6.9	6.2	5.3	6.8	6.4	101	128	88.0	0.0
	c. CNS embryonal	4	16	22	8	12	50	62	4.1	18.8	3.4	16.1	4.1	4.2	4.6	1.6	2.4	3.6	3.3	52	64	98.4	1.6
	d. Other gliomas	0	10	16	14	11	40	51	3.2	15.0	2.8	13.3	-	2.6	3.3	2.8	2.2	2.7	2.6	41	52	45.1	0.0
	e. Other specified	1	3	12	27	52	43	95	3.5	16.2	5.1	24.7	1.0	0.8	2.5	5.4	10.2	2.7	4.4	44	95	62.1	0.0
	f. Unspecified CNS	0	3	2	3	8	8	16	0.6	3.0	0.9	4.2	-	0.8	0.4	0.6	1.6	0.6	0.8	8	16	62.5	6.3
IV	NEUROBLASTOMA	27	36	5	1	3	69	72	5.6	100.0	3.9	100.0	27.7	9.5	1.0	0.2	0.6	5.5	4.4	72	75	100.0	0.0
	a. (Ganglio)neuroblastoma	27	36	5	1	1	69	70	5.6	100.0	3.8	97.2	27.7	9.5	1.0	0.2	0.2	5.5	4.3	72	73	100.0	0.0
	b. Peripheral nervous	0	0	0	0	2	0	2	-	-	0.1	2.8	-	-	-	-	0.4	-	0.1	-	2	100.0	0.0
V	RETINOBLASTOMA	12	12	2	0	1	26	27	2.1	100.0	1.5	100.0	12.3	3.2	0.4	-	0.2	2.1	1.7	27	28	77.8	3.7
VI	RENAL TUMOURS	10	42	9	2	6	63	69	5.1	100.0	3.7	100.0	10.3	11.1	1.9	0.4	1.2	4.9	4.1	66	72	98.6	0.0
	a. Nephroblastoma	10	41	7	0	1	58	59	4.7	92.1	3.2	85.5	10.3	10.8	1.5	-	0.2	4.6	3.6	61	62	100.0	0.0
	b. Renal carcinoma	0	1	2	2	5	5	10	0.4	7.9	0.5	14.5	-	0.3	0.4	0.4	1.0	0.3	0.5	5	10	90.0	0.0
	c. Unspecified	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VII	HEPATIC TUMOURS	6	18	4	2	3	30	33	2.4	100.0	1.8	100.0	6.2	4.7	0.8	0.4	0.6	2.3	1.9	31	34	100.0	0.0
	a. Hepatoblastoma	6	17	3	0	0	26	26	2.1	86.7	1.4	78.8	6.2	4.5	0.6	-	-	2.1	1.6	27	27	100.0	0.0
	b. Hepatic carcinoma	0	1	1	2	3	4	7	0.3	13.3	0.4	21.2	-	0.3	0.2	0.4	0.6	0.3	0.3	4	7	100.0	0.0
	c. Unspecified	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VIII	BONE TUMOURS	0	3	19	40	43	62	105	5.0	100.0	5.7	100.0	-	0.8	4.0	8.0	8.5	3.8	4.9	63	105	96.2	1.9
	a. Osteosarcoma	0	0	11	24	27	35	62	2.8	56.5	3.4	59.0	-	-	2.3	4.8	5.3	2.1	2.8	35	62	98.4	0.0
	b. Chondrosarcoma	0	0	1	0	2	1	3	0.1	1.6	0.2	2.9	-	-	0.2	-	0.4	0.1	0.1	1	3	100.0	0.0
	c. Ewing & related	0	3	6	13	10	22	32	1.8	35.5	1.7	30.5	-	0.8	1.3	2.6	2.0	1.4	1.5	22	32	96.9	3.1
	d. Other specified	0	0	1	2	1	3	4	0.2	4.8	0.2	3.8	-	-	0.2	0.4	0.2	0.2	0.2	3	4	100.0	0.0
	e. Unspecified	0	0	0	1	3	1	4	0.1	1.6	0.2	3.8	-	-	-	0.2	0.6	0.1	0.2	1	4	50.0	25.0
IX	SOFT TISSUE SARCOMA	6	28	12	26	46	72	118	5.8	100.0	6.4	100.0	6.2	7.4	2.5	5.2	9.0	5.1	6.0	74	119	100.0	0.0
	a. Rhabdomyosarcoma	1	20	3	8	8	32	40	2.6	44.4	2.2	33.9	1.0	5.3	0.6	1.6	1.6	2.4	2.2	33	41	100.0	0.0
	b. Fibrosarcoma	4	0	2	1	2	7	9	0.6	9.7	0.5	7.6	4.1	-	0.4	0.2	0.4	0.5	0.5	7	9	100.0	0.0
	c. Kaposi sarcoma	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	d. Other specified	1	7	6	15	32	29	61	2.4	40.3	3.3	51.7	1.0	1.8	1.3	3.0	6.3	1.9	2.9	30	61	100.0	0.0
	e. Unspecified	0	1	1	2	4	4	8	0.3	5.6	0.4	6.8	-	0.3	0.2	0.4	0.8	0.3	0.4	4	8	100.0	0.0
X	GERM CELL TUMOURS	8	5	4	16	75	33	108	2.7	100.0	5.8	100.0	8.2	1.3	0.8	3.2	14.7	2.3	5.1	34	107	98.1	0.0
	a. CNS germ cell	2	1	1	8	3	12	15	1.0	36.4	0.8	13.9	2.1	0.3	0.2	1.6	0.6	0.8	0.7	12	15	93.3	0.0
	b. Other extragonadal	4	1	2	0	9	7	16	0.6	21.2	0.9	14.8	4.1	0.3	0.4	-	1.8	0.5	0.8	7	16	93.8	0.0
	c. Gonadal germ cell	2	3	1	7	61	13	74	1.1	39.4	4.0	68.5	2.1	0.8	0.2	1.4	12.0	0.9	3.4	13	73	100.0	0.0
	d. Gonadal carcinoma	0	0	0	0	1	0	1	-	-	0.1	0.9	-	-	-	-	0.2	-	0.0	-	1	100.0	0.0
	e. Unspecified gonadal	0	0	0	1	1	1	2	0.1	3.0	0.1	1.9	-	-	-	0.2	0.2	0.1	0.1	1	2	100.0	0.0
XI	CARCINOMA & MELANOMA	1	4	10	29	115	44	159	3.6	100.0	8.6	100.0	1.0	1.1	2.1	5.8	22.6	2.8	7.2	45	158	100.0	0.0
	a. Adrenocortical	1	3	1	0	0	5	5	0.4	11.4	0.3	3.1	1.0	0.8	0.2	-	-	0.4	0.3	5	5	100.0	0.0
	b. Thyroid	0	1	2	13	47	16	63	1.3	36.4	3.4	39.6	-	0.3	0.4	2.6	9.2	1.0	2.8	16	62	100.0	0.0
	c. Nasopharyngeal	0	0	0	4	8	4	12	0.3	9.1	0.6	7.5	-	-	-	0.8	1.6	0.2	0.5	4	12	100.0	0.0
	d. Melanoma	0	0	4	5	10	9	19	0.7	20.5	1.0	11.9	-	-	0.8	1.0	2.0	0.6	0.9	9	19	100.0	0.0
	e. Skin carcinoma	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	f. Other & unspecified	0	0	3	7	50	10	60	0.8	22.7	3.2	37.7	-	-	0.6	1.4	9.8	0.6	2.7	10	59	100.0	0.0
XII	OTHER & UNSPECIFIED	3	2	0	2	4	7	11	0.6	100.0	0.6	100.0	3.1	0.5	-	0.4	0.8	0.5	0.6	7	11	72.7	9.1
	a. Other specified	2	1	0	0	1	3	4	0.2	42.9	0.2	36.4	2.1	0.3	-	-	0.2	0.2	0.2	3	4	100.0	0.0
	b. Other unspecified	1	1	0	2	3	4	7	0.3	57.1	0.4	63.6	1.0	0.3	-	0.4	0.6	0.3	0.3	4	7	57.1	14.3
	TOTAL	132	451	295	355	616	1233	1849	100.0	100.0	100.0	100.0	135.4	118.9	61.7	70.7	121.1	87.8	95.3	1274	1879	93.3	0.8

† includes 104 non-malignant

Please consult the quality indicators for this pool and its constituent registries

USA, White non-Hispanic (1998-2012)

Registry	Period	Cases	%	Person-years	%
Alabama	1998-2012	1949	1.4	11 768 850	1.6
Alaska	1998-2012	306	0.2	1 879 969	0.3
Arizona	1998-2012	2220	1.6	11 833 425	1.6
Arkansas	1998-2012	1437	1.1	8 096 697	1.1
California	1998-2012	10556	7.8	52 194 480	7.2
Colorado	1998-2012	2217	1.6	12 447 487	1.7
Connecticut	1998-2012	1794	1.3	9 359 494	1.3
Delaware	1998-2012	415	0.3	2 052 822	0.3
District of Columbia	1998-2012	80	0.1	378 445	0.1
Florida	1998-2012	6198	4.6	33 664 091	4.7
Georgia	1998-2012	3844	2.8	20 379 879	2.8
Hawaii	1998-2012	164	0.1	670 192	0.1
Idaho	1998-2012	1037	0.8	5 439 462	0.8
Illinois	1998-2012	5934	4.4	30 641 932	4.2
Indiana	1998-2012	3938	2.9	21 180 168	2.9
Iowa	1998-2012	1896	1.4	10 654 058	1.5
Kentucky	1998-2012	2695	2.0	14 376 561	2.0
Louisiana	1998-2012	1950	1.4	10 598 473	1.5
Maine	1998-2012	921	0.7	4 573 525	0.6
Massachusetts	1998-2012	3606	2.7	18 229 277	2.5
Michigan	1998-2012	5937	4.4	30 222 494	4.2
Minnesota	1998-2012	2899	2.1	17 149 055	2.4
Mississippi	2002-2012	837	0.6	4 764 110	0.7
Missouri	1998-2012	2792	2.1	18 699 617	2.6
Montana	1998-2012	564	0.4	3 192 633	0.4
Nebraska	1998-2012	1153	0.8	6 000 868	0.8
Nevada	1998-2012	835	0.6	4 741 664	0.7
New Hampshire	1998-2012	922	0.7	4 674 505	0.6
New Jersey	1998-2012	4250	3.1	19 601 950	2.7
New Mexico	1998-2012	538	0.4	2 621 017	0.4
New York State	1998-2012	8602	6.3	41 281 999	5.7
North Carolina	1998-2012	3932	2.9	21 491 823	3.0
North Dakota	1998-2012	372	0.3	2 272 414	0.3
Ohio	1998-2012	6463	4.8	36 922 221	5.1
Oklahoma	1998-2012	1661	1.2	9 775 544	1.4
Oregon	1998-2012	2137	1.6	10 646 831	1.5
Pennsylvania	1998-2012	7178	5.3	36 820 017	5.1
Rhode Island	1998-2012	559	0.4	2 926 166	0.4
South Carolina	1998-2012	1764	1.3	10 241 546	1.4
South Dakota	2001-2012	337	0.2	2 126 966	0.3
Tennessee	1999-2012	2897	2.1	16 190 413	2.2
Texas	1998-2012	8483	6.2	41 597 666	5.8
Utah	1998-2012	1902	1.4	10 612 400	1.5
Vermont	1998-2012	435	0.3	2 249 306	0.3
Virginia	1998-2012	3189	2.3	18 922 061	2.6
Washington State	1998-2012	3559	2.6	17 940 513	2.5
West Virginia	1998-2012	1100	0.8	6 199 695	0.9
Wisconsin	1998-2012	3344	2.5	17 891 008	2.5
Wyoming	1998-2012	294	0.2	1 828 914	0.3
USA*	**1998-2012**	**135752**	**100.0**	**721 041 333**	**100.0**

* Data not shown for two registries included in the total

Please consult the quality indicators for this pool and its constituent registries

USA, White non-Hispanic (1998-2012)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)					0-14	0-19	0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19			All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	LEUKAEMIA	1673	12414	6889	5125	5595	**26101**	**31696**	29.3	100.0	23.3	100.0	50.9	93.0	39.4	27.4	29.0	**53.5**	**48.0**	758	903	97.0	0.4
	a. Lymphoid	671	10590	5726	3398	2860	**20385**	**23245**	22.9	78.1	17.1	73.3	20.4	79.4	32.7	18.2	14.8	**42.0**	**35.9**	593	667	98.3	0.3
	b. Acute myeloid	580	1278	762	1128	1730	**3748**	**5478**	4.2	14.4	4.0	17.3	17.6	9.6	4.4	6.0	9.0	**7.5**	**7.8**	108	153	98.0	0.4
	c. CMD	122	133	146	308	642	**709**	**1351**	0.8	2.7	1.0	4.3	3.7	1.0	0.8	1.6	3.3	**1.3**	**1.8**	20	37	80.2	0.9
	d. MDS & other	187	239	123	157	189	**706**	**895**	0.8	2.7	0.7	2.8	5.7	1.8	0.7	0.8	1.0	**1.5**	**1.4**	21	25	92.8	0.7
	e. Unspecified	113	174	132	134	174	**553**	**727**	0.6	2.1	0.5	2.3	3.4	1.3	0.8	0.7	0.9	**1.1**	**1.1**	16	20	84.9	5.0
II	LYMPHOMA & RELATED	389	1386	2578	4747	10659	**9100**	**19759**	10.2	100.0	14.6	100.0	11.8	10.4	14.7	25.4	55.2	**16.3**	**25.0**	254	530	98.6	0.3
	a. Hodgkin	2	88	540	2388	7139	**3018**	**10157**	3.4	33.2	7.5	51.4	0.1	0.7	3.1	12.8	37.0	**4.9**	**12.1**	82	267	99.4	0.1
	b. Non-Hodgkin except BL	131	609	1108	1525	2767	**3373**	**6140**	3.8	37.1	4.5	31.1	4.0	4.6	6.3	8.2	14.3	**6.1**	**8.0**	95	166	98.7	0.3
	c. Burkitt (BL)	3	293	678	599	500	**1573**	**2073**	1.8	17.3	1.5	10.5	0.1	2.2	3.9	3.2	2.6	**2.9**	**2.8**	44	57	99.6	0.1
	d. Lymphoreticular	241	374	198	168	111	**981**	**1092**	1.1	10.8	0.8	5.5	7.3	2.8	1.1	0.9	0.6	**2.1**	**1.7**	29	32	94.4	1.0
	e. Unspecified	12	22	54	67	142	**155**	**297**	0.2	1.7	0.2	1.5	0.4	0.2	0.3	0.4	0.7	**0.3**	**0.4**	4	8	74.7	7.4
III	CNS NEOPLASMS †	1482	6925	7376	7061	7487	**22844**	**30331**	25.7	100.0	22.3	100.0	45.1	51.9	42.2	37.8	38.8	**44.1**	**42.9**	653	847	80.1	0.6
	a. Ependymoma	273	817	444	448	487	**1982**	**2469**	2.2	8.7	1.8	8.1	8.3	6.1	2.5	2.4	2.5	**4.1**	**3.7**	57	70	97.6	0.0
	b. Astrocytoma	502	3123	3249	3196	2732	**10070**	**12802**	11.3	44.1	9.4	42.2	15.3	23.4	18.6	17.1	14.2	**19.4**	**18.2**	287	358	86.4	0.1
	c. CNS embryonal	382	1563	1453	918	579	**4316**	**4895**	4.9	18.9	3.6	16.1	11.6	11.7	8.3	4.9	3.0	**8.6**	**7.4**	125	140	99.1	0.3
	d. Other gliomas	100	800	1214	978	940	**3092**	**4032**	3.5	13.5	3.0	13.3	3.0	6.0	6.9	5.2	4.9	**5.9**	**5.6**	88	112	47.7	0.5
	e. Other specified	144	471	849	1299	2441	**2763**	**5204**	3.1	12.1	3.8	17.2	4.4	3.5	4.9	7.0	12.7	**5.0**	**6.7**	78	141	72.4	0.2
	f. Unspecified CNS	81	151	167	222	308	**621**	**929**	0.7	2.7	0.7	3.1	2.5	1.1	1.0	1.2	1.6	**1.2**	**1.3**	18	26	31.5	11.5
IV	NEUROBLASTOMA	2367	3299	693	252	151	**6611**	**6762**	7.4	100.0	5.0	100.0	72.0	24.7	4.0	1.3	0.8	**14.9**	**11.7**	197	201	97.8	0.2
	a. (Ganglio)neuroblastoma	2361	3283	675	203	81	**6522**	**6603**	7.3	98.7	4.9	97.6	71.8	24.6	3.9	1.1	0.4	**14.7**	**11.5**	194	197	97.8	0.2
	b. Peripheral nervous	6	16	18	49	70	**89**	**159**	0.1	1.3	0.1	2.4	0.2	0.1	0.1	0.3	0.4	**0.2**	**0.2**	2	4	96.2	0.0
V	RETINOBLASTOMA	854	934	75	2	4	**1865**	**1869**	2.1	100.0	1.4	100.0	26.0	7.0	0.4	0.0	0.0	**4.3**	**3.3**	56	56	74.8	0.3
VI	RENAL TUMOURS	582	2792	986	232	282	**4592**	**4874**	5.2	100.0	3.6	100.0	17.7	20.9	5.6	1.2	1.5	**10.0**	**8.1**	136	143	98.8	0.3
	a. Nephroblastoma	562	2775	937	135	64	**4409**	**4473**	5.0	96.0	3.3	91.8	17.1	20.8	5.4	0.7	0.3	**9.7**	**7.6**	131	132	99.2	0.1
	b. Renal carcinoma	15	12	43	94	213	**164**	**377**	0.2	3.6	0.3	7.7	0.5	0.1	0.2	0.5	1.1	**0.3**	**0.5**	5	10	98.7	0.3
	c. Unspecified	5	5	6	3	5	**19**	**24**	0.0	0.4	0.0	0.5	0.2	0.0	0.0	0.0	0.0	**0.0**	**0.0**	1	1	33.3	29.2
VII	HEPATIC TUMOURS	392	673	126	163	250	**1354**	**1604**	1.5	100.0	1.2	100.0	11.9	5.0	0.7	0.9	1.3	**3.0**	**2.6**	40	46	96.4	1.0
	a. Hepatoblastoma	380	647	84	53	31	**1164**	**1195**	1.3	86.0	0.9	74.5	11.6	4.8	0.5	0.3	0.2	**2.6**	**2.1**	35	36	98.0	0.5
	b. Hepatic carcinoma	8	24	40	106	216	**178**	**394**	0.2	13.1	0.3	24.6	0.2	0.2	0.2	0.6	1.1	**0.3**	**0.5**	5	11	93.4	1.8
	c. Unspecified	4	2	2	4	3	**12**	**15**	0.0	0.9	0.0	0.9	0.1	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0	0	53.3	20.0
VIII	BONE TUMOURS	22	235	1013	2559	2980	**3829**	**6809**	4.3	100.0	5.0	100.0	0.7	1.8	5.8	13.7	15.4	**6.4**	**8.5**	105	182	98.4	0.3
	a. Osteosarcoma	3	48	454	1379	1567	**1884**	**3451**	2.1	49.2	2.5	50.7	0.1	0.4	2.6	7.4	8.1	**3.1**	**4.2**	51	92	99.0	0.2
	b. Chondrosarcoma	1	4	13	72	193	**90**	**283**	0.1	2.4	0.2	4.2	0.0	0.0	0.1	0.4	1.0	**0.1**	**0.3**	2	7	98.9	0.0
	c. Ewing & related	6	159	488	983	1027	**1636**	**2663**	1.8	42.7	2.0	39.1	0.2	1.2	2.8	5.3	5.3	**2.8**	**3.4**	45	72	99.1	0.2
	d. Other specified	8	19	41	86	141	**154**	**295**	0.2	4.0	0.2	4.3	0.2	0.1	0.2	0.5	0.7	**0.3**	**0.4**	4	8	97.6	0.0
	e. Unspecified	4	5	17	39	52	**65**	**117**	0.1	1.7	0.1	1.7	0.1	0.0	0.1	0.2	0.3	**0.1**	**0.1**	2	3	67.5	9.4
IX	SOFT TISSUE SARCOMA	581	1531	1406	1973	2942	**5491**	**8433**	6.2	100.0	6.2	100.0	17.7	11.5	8.0	10.6	15.2	**10.6**	**11.6**	156	233	99.3	0.2
	a. Rhabdomyosarcoma	191	1109	760	594	684	**2654**	**3338**	3.0	48.3	2.5	39.6	5.8	8.3	4.3	3.2	3.5	**5.4**	**4.9**	77	94	99.4	0.3
	b. Fibrosarcoma	172	76	103	201	348	**552**	**900**	0.6	10.1	0.7	10.7	5.2	0.6	0.6	1.1	1.8	**1.1**	**1.2**	16	25	99.3	0.0
	c. Kaposi sarcoma	3	2	1	2	7	**8**	**15**	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0	0	86.7	6.7
	d. Other specified	159	253	415	911	1521	**1738**	**3259**	2.0	31.7	2.4	38.6	4.8	1.9	2.4	4.9	7.9	**3.1**	**4.2**	49	88	99.6	0.0
	e. Unspecified	56	91	127	265	382	**539**	**921**	0.6	9.8	0.7	10.9	1.7	0.7	0.7	1.4	2.0	**1.0**	**1.2**	15	25	98.0	0.2
X	GERM CELL TUMOURS	689	462	411	1169	5382	**2731**	**8113**	3.1	100.0	6.0	100.0	21.0	3.5	2.3	6.3	27.9	**5.3**	**10.3**	78	217	96.9	0.1
	a. CNS germ cell ‡	105	70	232	478	464	**885**	**1349**	1.0	32.4	1.0	16.6	3.2	0.5	1.3	2.6	2.4	**1.6**	**1.8**	25	37	86.1	0.3
	b. Other extragonadal	425	219	16	46	201	**706**	**907**	0.8	25.9	0.7	11.2	12.9	1.6	0.1	0.2	1.0	**1.6**	**1.5**	21	26	97.4	0.3
	c. Gonadal germ cell	151	168	143	543	4347	**1005**	**5352**	1.1	36.8	3.9	66.0	4.6	1.3	0.8	2.9	22.5	**1.8**	**6.5**	28	141	99.8	0.0
	d. Gonadal carcinoma	2	0	8	55	249	**65**	**314**	0.1	2.4	0.2	3.9	0.1	-	0.0	0.3	1.3	**0.1**	**0.4**	2	8	97.5	0.3
	e. Unspecified gonadal	6	5	12	47	121	**70**	**191**	0.1	2.6	0.1	2.4	0.2	0.0	0.1	0.3	0.6	**0.1**	**0.2**	2	5	91.1	1.6
XI	CARCINOMA & MELANOMA	224	281	749	2825	10825	**4079**	**14904**	4.6	100.0	11.0	100.0	6.8	2.1	4.3	15.1	56.1	**6.9**	**18.0**	112	393	99.3	0.1
	a. Adrenocortical	17	59	25	34	58	**135**	**193**	0.2	3.3	0.1	1.3	0.5	0.4	0.1	0.2	0.3	**0.3**	**0.3**	4	5	97.4	0.0
	b. Thyroid	10	41	233	1181	4549	**1465**	**6014**	1.6	35.9	4.4	40.4	0.3	0.3	1.3	6.3	23.6	**2.4**	**7.2**	40	158	99.9	0.1
	c. Nasopharyngeal	0	0	8	65	157	**73**	**230**	0.1	1.8	0.2	1.5	-	-	0.0	0.3	0.8	**0.1**	**0.3**	2	6	99.6	0.0
	d. Melanoma	139	155	306	875	3962	**1475**	**5437**	1.7	36.2	4.0	36.5	4.2	1.2	1.7	4.7	20.5	**2.6**	**6.6**	41	144	99.1	0.1
	e. Skin carcinoma	3	1	3	25	41	**32**	**73**	0.0	0.8	0.1	0.5	0.1	0.0	0.0	0.1	0.2	**0.1**	**0.1**	1	2	100.0	0.0
	f. Other & unspecified	55	25	174	645	2058	**899**	**2957**	1.0	22.0	2.2	19.8	1.7	0.2	1.0	3.5	10.7	**1.5**	**3.6**	25	78	98.7	0.1
XII	OTHER & UNSPECIFIED	81	129	57	98	233	**365**	**598**	0.4	100.0	0.4	100.0	2.5	1.0	0.3	0.5	1.2	**0.7**	**0.8**	11	17	72.9	9.7
	a. Other specified	36	91	25	46	105	**198**	**303**	0.2	54.2	0.2	50.7	1.1	0.7	0.1	0.2	0.5	**0.4**	**0.4**	6	8	99.3	0.3
	b. Other unspecified	45	38	32	52	128	**167**	**295**	0.2	45.8	0.2	49.3	1.4	0.3	0.2	0.3	0.7	**0.3**	**0.4**	5	8	45.8	19.3
	TOTAL	9336	31061	22359	26206	46790	**88962**	**135752**	100.0	100.0	100.0	100.0	283.9	232.8	127.8	140.3	242.5	**176.0**	**190.9**	2555	3767	93.6	0.4

† includes 6211 non-malignant ‡ includes 138 non-malignant

Please consult the quality indicators for this pool and its constituent registries

National Program of Cancer Registries (NPCR), United States Centers for Disease Control and Prevention (CDC), 1998–2012

Reda Wilson, Jonathan Stanger, Yuan Ren

The National Program of Cancer Registries (NPCR) was established by the United States Centers for Disease Control and Prevention (CDC) in 1992 through the federal Cancer Registries Amendment Act (Public Law 102-515). As authorized by the United States Congress, the CDC provides financial and technical support for the NPCR, which includes population-based cancer registries in 45 states, the District of Columbia, Puerto Rico, and the Pacific Island Jurisdictions, and covers 95% of the population of the USA.

Annually, NPCR contributing cancer registries transmit data to the CDC electronically using a standardized record layout and coding system. These data must meet stringent quality criteria for incidence reporting as established by the CDC, which in 1998–2012 included the following data quality criteria for all cancer sites and all ages combined: at least 90% completeness of case ascertainment, a maximum of 5% of DCO cases, a maximum of 3% of cases with missing information on sex or age, a maximum of 5% of cases with missing information on race, and at least 97% of the registry records passing a set of electronic edits.

The CDC and the NCI, in collaboration with the NAACCR, annually publish the *United States Cancer Statistics* report. These federal cancer statistics are available to the public and cancer control planners through public-use and restricted-access datasets. In addition, several monographs, peer-reviewed publications, and special topic reports have been published (https://www.cdc.gov/cancer/npcr/about.htm). United States Cancer Statistics data visualizations are available at https://gis.cdc.gov/Cancer/USCS/DataViz.html, and state cancer profiles are available at https://statecancerprofiles.cancer.gov.

POPULATION AT RISK

The data were provided by age, sex, race (API, Black, Native American, and White), and ethnic origin (Hispanic and Non-Hispanic) at the 1 July mid-year point of each calendar year. See also USA, above.

EDITORS' COMMENTS

Data from 45 states and the District of Columbia were used for the pooled estimate for the NPCR and as part of the pooled estimate for the USA (Table 6.1). The common reporting period for the contributing cancer registries was 1998–2012; this period was covered by all registries except three: Mississippi (2002–2012), South Dakota (2001–2012), and Tennessee (1999–2012) (Table 6.1). Two states requested that their data not be shown separately. Data for API, Black, Hispanic White, Native American, and White NH are available online, as specified in Table A.12. Tables for the constituent registries, both overall and by race and ethnic group, are also provided online. In addition, data for the New York State Cancer Registry, which also contributed to IICC-1 and IICC-2 (Table A.1), are also tabulated online for White.

Exact dates of birth and incidence were provided. Although day of birth was missing for 18% of cases overall (the proportion differed between the races), the provided age was consistent with the provided dates. Overall incidence rates of CNS tumours in the combined tables and in registry-specific tables may be low because some non-malignant tumours were not registered before 2004. The tables showing incidence rates of CNS tumours by behaviour in Chapter 8 include the NPCR dataset for 2004–2012. For most constituent registries, laterality was not provided for 2003–2007; thus, the tables in Chapter 13 show laterality data for 1998–2002 and 2008–2012 in these registries, USA SEER, and USA total. In the Native American population, the cancer incidence rate in the age group 0–19 years was low (93.7 per million) (Table A.9). See also USA, above.

USA, National Program of Cancer Registries (NPCR) (1998-2012)

	Age group (years)	Males	Females
Person-years	0	28 979 248	27 701 346
	1-4	115 191 796	110 220 761
	5-9	146 345 907	139 853 020
	10-14	152 321 915	145 188 264
	15-19	155 685 757	147 062 305
	0-14	442 838 866	422 963 391
	0-19	598 524 623	570 025 696

Please consult the quality indicators for this pool and its constituent registries

USA, National Program of Cancer Registries (NPCR) (1998-2012)

Registry	Period	Cases	%	Person-years	%
Alabama	1998-2012	2881	1.4	18 860 359	1.6
Alaska	1998-2012	553	0.3	3 109 822	0.3
Arizona	1998-2012	4341	2.1	25 079 066	2.1
Arkansas	1998-2012	1914	0.9	11 601 340	1.0
California	1998-2012	27570	13.3	155 288 043	13.3
Colorado	1998-2012	3356	1.6	19 423 554	1.7
Delaware	1998-2012	663	0.3	3 388 357	0.3
District of Columbia	1998-2012	338	0.2	1 947 572	0.2
Florida	1998-2012	11510	5.5	64 860 345	5.6
Georgia	1998-2012	6541	3.2	39 042 726	3.3
Idaho	1998-2012	1201	0.6	6 638 966	0.6
Illinois	1998-2012	9369	4.5	53 143 088	4.5
Indiana	1998-2012	4757	2.3	26 693 628	2.3
Kentucky	1998-2012	3160	1.5	16 875 855	1.4
Louisiana	1998-2012	3162	1.5	19 403 680	1.7
Maine	1998-2012	962	0.5	4 873 435	0.4
Massachusetts	1998-2012	4643	2.2	24 758 690	2.1
Michigan	1998-2012	7752	3.7	41 670 814	3.6
Minnesota	1998-2012	3872	1.9	21 489 556	1.8
Mississippi	2002-2012	1435	0.7	9 324 749	0.8
Missouri	1998-2012	3951	1.9	23 895 810	2.0
Montana	1998-2012	678	0.3	3 795 661	0.3
Nebraska	1998-2012	1447	0.7	7 606 671	0.7
Nevada	1998-2012	1571	0.8	9 814 134	0.8
New Hampshire	1998-2012	999	0.5	5 072 869	0.4
New Jersey	1998-2012	6735	3.2	34 475 321	3.0
New York State	1998-2012	14435	7.0	75 632 915	6.5
North Carolina	1998-2012	5982	2.9	35 642 902	3.1
North Dakota	1998-2012	425	0.2	2 643 880	0.2
Ohio	1998-2012	7931	3.8	47 030 420	4.0
Oklahoma	1998-2012	2552	1.2	15 177 646	1.3
Oregon	1998-2012	2758	1.3	14 317 432	1.2
Pennsylvania	1998-2012	9053	4.4	48 300 780	4.1
Rhode Island	1998-2012	736	0.4	4 099 993	0.4
South Carolina	1998-2012	2698	1.3	17 634 636	1.5
South Dakota	2001-2012	404	0.2	2 696 431	0.2
Tennessee	1999-2012	3901	1.9	22 670 397	1.9
Texas	1998-2012	19914	9.6	105 930 232	9.1
Vermont	1998-2012	448	0.2	2 381 221	0.2
Virginia	1998-2012	4727	2.3	30 256 338	2.6
Washington State	1998-2012	4910	2.4	25 726 192	2.2
West Virginia	1998-2012	1157	0.6	6 659 911	0.6
Wisconsin	1998-2012	4197	2.0	22 738 594	1.9
Wyoming	1998-2012	341	0.2	2 186 831	0.2
NPCR*	**1998-2012**	**207568**	**100.0**	**1 168 550 319**	**100.0**

* Data not shown for two registries included in total

Please consult the quality indicators for this pool and its constituent registries

USA, National Program of Cancer Registries (NPCR) (1998-2012)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)							0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	LEUKAEMIA	2807	19738	11310	8789	9131	**42644**	**51775**	30.5	100.0	24.9	100.0	49.5	87.6	39.5	29.5	30.2	**52.3**	**47.3**	745	896	96.9	0.5
	a. Lymphoid	1120	16533	9325	5798	4759	**32776**	**37535**	23.4	76.9	18.1	72.5	19.8	73.3	32.6	19.5	15.7	**40.4**	**34.8**	573	652	98.3	0.3
	b. Acute myeloid	968	2256	1304	1971	2676	**6499**	**9175**	4.6	15.2	4.4	17.7	17.1	10.0	4.6	6.6	8.8	**7.8**	**8.0**	113	157	97.9	0.5
	c. CMD	242	225	245	530	1090	**1242**	**2332**	0.9	2.9	1.1	4.5	4.3	1.0	0.9	1.8	3.6	**1.4**	**1.9**	21	39	79.0	1.4
	d. MDS & other	305	395	201	248	305	**1149**	**1454**	0.8	2.7	0.7	2.8	5.4	1.8	0.7	0.8	1.0	**1.4**	**1.3**	20	25	92.1	0.9
	e. Unspecified	172	329	235	242	301	**978**	**1279**	0.7	2.3	0.6	2.5	3.0	1.5	0.8	0.8	1.0	**1.2**	**1.1**	17	22	84.6	5.5
II	LYMPHOMA & RELATED	668	2445	4227	7280	14837	**14620**	**29457**	10.5	100.0	14.2	100.0	11.8	10.8	14.8	24.5	49.0	**16.1**	**23.5**	251	496	98.4	0.4
	a. Hodgkin	3	232	1079	3549	9568	**4863**	**14431**	3.5	33.3	7.0	49.0	0.1	1.0	3.8	11.9	31.6	**5.0**	**11.0**	83	241	99.4	0.1
	b. Non-Hodgkin except BL	194	1013	1810	2600	4242	**5617**	**9859**	4.0	38.4	4.7	33.5	3.4	4.5	6.3	8.7	14.0	**6.2**	**8.0**	97	167	98.6	0.3
	c. Burkitt (BL)	7	460	907	779	647	**2153**	**2800**	1.5	14.7	1.3	9.5	0.1	2.0	3.2	2.6	2.1	**2.4**	**2.4**	37	48	99.4	0.1
	d. Lymphoreticular	443	691	340	248	150	**1722**	**1872**	1.2	11.8	0.9	6.4	7.8	3.1	1.2	0.8	0.5	**2.2**	**1.8**	30	33	95.6	0.9
	e. Unspecified	21	49	91	104	230	**265**	**495**	0.2	1.8	0.2	1.7	0.4	0.2	0.3	0.3	0.8	**0.3**	**0.4**	5	8	73.3	6.9
III	CNS NEOPLASMS †	2345	10390	11115	10197	11042	**34047**	**45089**	24.3	100.0	21.7	100.0	41.4	46.1	38.8	34.3	36.5	**40.0**	**39.2**	591	774	79.2	0.6
	a. Ependymoma	432	1284	712	641	724	**3069**	**3793**	2.2	9.0	1.8	8.4	7.6	5.7	2.5	2.2	2.4	**3.8**	**3.5**	54	66	97.3	0.1
	b. Astrocytoma	751	4439	4696	4379	3713	**14265**	**17978**	10.2	41.9	8.7	39.9	13.2	19.7	16.4	14.7	12.3	**16.7**	**15.7**	248	309	87.1	0.1
	c. CNS embryonal	631	2380	2107	1282	860	**6400**	**7260**	4.6	18.8	3.5	16.1	11.1	10.6	7.4	4.3	2.8	**7.8**	**6.7**	112	126	98.8	0.2
	d. Other gliomas	152	1256	1924	1388	1216	**4720**	**5936**	3.4	13.9	2.9	13.2	2.7	5.6	6.7	4.7	4.0	**5.5**	**5.1**	82	102	45.1	0.5
	e. Other specified	236	775	1394	2131	4038	**4536**	**8574**	3.2	13.3	4.1	19.0	4.2	3.4	4.9	7.2	13.3	**5.0**	**6.9**	78	145	70.3	0.3
	f. Unspecified CNS	143	256	282	376	491	**1057**	**1548**	0.8	3.1	0.7	3.4	2.5	1.1	1.0	1.3	1.6	**1.2**	**1.3**	18	26	31.9	12.3
IV	NEUROBLASTOMA	3257	4821	993	365	229	**9436**	**9665**	6.7	100.0	4.7	100.0	57.5	21.4	3.5	1.2	0.8	**12.6**	**9.9**	167	170	97.5	0.2
	a. (Ganglio)neuroblastoma	3247	4791	965	295	122	**9298**	**9420**	6.6	98.5	4.5	97.5	57.3	21.3	3.4	1.0	0.4	**12.4**	**9.7**	164	166	97.5	0.2
	b. Peripheral nervous	10	30	28	70	107	**138**	**245**	0.1	1.5	0.1	2.5	0.2	0.1	0.1	0.2	0.4	**0.2**	**0.2**	2	4	95.9	0.0
V	RETINOBLASTOMA	1549	1885	128	13	7	**3575**	**3582**	2.6	100.0	1.7	100.0	27.3	8.4	0.4	0.0	0.0	**4.9**	**3.8**	63	63	76.9	0.4
VI	RENAL TUMOURS	931	4515	1561	387	480	**7394**	**7874**	5.3	100.0	3.8	100.0	16.4	20.0	5.5	1.3	1.6	**9.6**	**7.8**	130	138	98.7	0.3
	a. Nephroblastoma	908	4479	1459	208	102	**7054**	**7156**	5.0	95.4	3.4	90.9	16.0	19.9	5.1	0.7	0.3	**9.2**	**7.2**	124	126	99.1	0.1
	b. Renal carcinoma	17	24	93	174	371	**308**	**679**	0.2	4.2	0.3	8.6	0.3	0.1	0.3	0.6	1.2	**0.3**	**0.5**	5	11	97.8	0.4
	c. Unspecified	6	12	9	5	7	**32**	**39**	0.0	0.4	0.0	0.5	0.1	0.1	0.0	0.0	0.0	**0.0**	**0.0**	1	1	38.5	30.8
VII	HEPATIC TUMOURS	658	1131	228	279	409	**2296**	**2705**	1.6	100.0	1.3	100.0	11.6	5.0	0.8	0.9	1.4	**3.0**	**2.6**	40	47	96.3	0.8
	a. Hepatoblastoma	633	1084	153	101	45	**1971**	**2016**	1.4	85.8	1.0	74.5	11.2	4.8	0.5	0.3	0.1	**2.6**	**2.1**	35	36	97.9	0.4
	b. Hepatic carcinoma	15	43	74	173	359	**305**	**664**	0.2	13.3	0.3	24.5	0.3	0.2	0.3	0.6	1.2	**0.3**	**0.5**	5	11	93.5	1.2
	c. Unspecified	10	4	1	5	5	**20**	**25**	0.0	0.9	0.0	0.9	0.2	0.0	0.0	0.0	0.0	**0.0**	**0.0**	0	0	44.0	20.0
VIII	BONE TUMOURS	40	352	1556	3921	4408	**5869**	**10277**	4.2	100.0	5.0	100.0	0.7	1.6	5.4	13.2	14.6	**6.1**	**8.0**	100	173	97.9	0.4
	a. Osteosarcoma	3	82	843	2375	2548	**3303**	**5851**	2.4	56.3	2.8	56.9	0.1	0.4	2.9	8.0	8.4	**3.4**	**4.5**	56	98	98.8	0.1
	b. Chondrosarcoma	1	7	25	104	258	**137**	**395**	0.1	2.3	0.2	3.8	0.0	0.0	0.1	0.3	0.9	**0.1**	**0.3**	2	7	98.0	0.5
	c. Ewing & related	17	221	595	1223	1278	**2056**	**3334**	1.5	35.0	1.6	32.4	0.3	1.0	2.1	4.1	4.2	**2.2**	**2.6**	35	56	98.7	0.2
	d. Other specified	9	27	62	139	232	**237**	**469**	0.2	4.0	0.2	4.6	0.2	0.1	0.2	0.5	0.8	**0.3**	**0.4**	4	8	97.9	0.2
	e. Unspecified	10	15	31	80	92	**136**	**228**	0.1	2.3	0.1	2.2	0.2	0.1	0.1	0.3	0.3	**0.1**	**0.2**	2	4	65.8	10.1
IX	SOFT TISSUE SARCOMA	922	2397	2278	3258	4636	**8855**	**13491**	6.3	100.0	6.5	100.0	16.3	10.6	8.0	11.0	15.3	**10.3**	**11.4**	153	230	99.0	0.2
	a. Rhabdomyosarcoma	321	1705	1202	987	1077	**4215**	**5292**	3.0	47.6	2.5	39.2	5.7	7.6	4.2	3.3	3.6	**5.1**	**4.8**	73	91	99.3	0.2
	b. Fibrosarcoma	259	117	183	346	551	**905**	**1456**	0.6	10.2	0.7	10.8	4.6	0.5	0.6	1.2	1.8	**1.1**	**1.2**	16	25	98.5	0.0
	c. Kaposi sarcoma	8	4	2	6	35	**20**	**55**	0.0	0.2	0.0	0.4	0.1	0.0	0.0	0.0	0.1	**0.0**	**0.0**	0	1	87.3	1.8
	d. Other specified	234	423	673	1492	2387	**2822**	**5209**	2.0	31.9	2.5	38.6	4.1	1.9	2.4	5.0	7.9	**3.1**	**4.2**	48	88	99.5	0.1
	e. Unspecified	100	148	218	427	586	**893**	**1479**	0.6	10.1	0.7	11.0	1.8	0.7	0.8	1.4	1.9	**1.0**	**1.2**	15	25	97.2	0.6
X	GERM CELL TUMOURS	1128	801	732	2081	8107	**4742**	**12849**	3.4	100.0	6.2	100.0	19.9	3.6	2.6	7.0	26.8	**5.5**	**10.3**	82	216	96.9	0.1
	a. CNS germ cell ‡	167	123	358	789	728	**1437**	**2165**	1.0	30.3	1.0	16.8	2.9	0.5	1.3	2.7	2.4	**1.6**	**1.8**	25	37	87.3	0.3
	b. Other extragonadal	678	331	37	90	507	**1136**	**1643**	0.8	24.0	0.8	12.8	12.0	1.5	0.1	0.3	1.7	**1.5**	**1.6**	20	28	96.5	0.2
	c. Gonadal germ cell	271	335	307	1043	6266	**1956**	**8222**	1.4	41.2	4.0	64.0	4.8	1.5	1.1	3.5	20.7	**2.2**	**6.4**	34	137	99.8	0.0
	d. Gonadal carcinoma	3	1	10	81	380	**95**	**475**	0.1	2.0	0.2	3.7	0.1	0.0	0.0	0.3	1.3	**0.1**	**0.4**	2	8	97.5	0.2
	e. Unspecified gonadal	9	11	20	78	226	**118**	**344**	0.1	2.5	0.2	2.7	0.2	0.0	0.1	0.3	0.7	**0.1**	**0.3**	2	6	89.8	2.3
XI	CARCINOMA & MELANOMA	304	391	1059	4004	14037	**5758**	**19795**	4.1	100.0	9.5	100.0	5.4	1.7	3.7	13.5	46.4	**6.1**	**15.1**	98	330	99.2	0.1
	a. Adrenocortical	23	92	39	50	68	**204**	**272**	0.1	3.5	0.1	1.4	0.4	0.4	0.1	0.2	0.2	**0.3**	**0.2**	4	5	97.8	0.0
	b. Thyroid	14	55	344	1657	6056	**2070**	**8126**	1.5	35.9	3.9	41.1	0.2	0.2	1.2	5.6	20.0	**2.1**	**6.1**	35	135	99.8	0.1
	c. Nasopharyngeal	0	0	25	230	417	**255**	**672**	0.2	4.4	0.3	3.4	-	-	0.1	0.8	1.4	**0.3**	**0.5**	4	11	99.6	0.0
	d. Melanoma	178	202	377	983	4249	**1740**	**5989**	1.2	30.2	2.9	30.3	3.1	0.9	1.3	3.3	14.0	**1.9**	**4.6**	30	100	99.0	0.2
	e. Skin carcinoma	4	1	8	39	59	**52**	**111**	0.0	0.9	0.1	0.6	0.1	0.0	0.0	0.1	0.2	**0.1**	**0.1**	1	2	99.1	0.0
	f. Other & unspecified	85	41	266	1045	3188	**1437**	**4625**	1.0	25.0	2.2	23.4	1.5	0.2	0.9	3.5	10.5	**1.5**	**3.5**	24	77	98.6	0.2
XII	OTHER & UNSPECIFIED	124	203	102	176	404	**605**	**1009**	0.4	100.0	0.5	100.0	2.2	0.9	0.4	0.6	1.3	**0.7**	**0.9**	11	17	70.6	11.2
	a. Other specified	49	140	42	74	164	**305**	**469**	0.2	50.4	0.2	46.5	0.9	0.6	0.1	0.2	0.5	**0.4**	**0.4**	5	8	99.1	0.4
	b. Other unspecified	75	63	60	102	240	**300**	**540**	0.2	49.6	0.3	53.5	1.3	0.3	0.2	0.3	0.8	**0.4**	**0.5**	5	9	45.7	20.6
	TOTAL	14733	49069	35289	40750	67727	**139841**	**207568**	100.0	100.0	100.0	100.0	259.9	217.7	123.3	137.0	223.7	**167.1**	**179.8**	2432	3551	93.3	0.5

† includes 10178 non-malignant ‡ includes 233 non-malignant

Please consult the quality indicators for this pool and its constituent registries

Surveillance, Epidemiology, and End Results (SEER), National Cancer Institute (NCI), 1993–2012

Serban Negoita, Carol Kosary

The Surveillance, Epidemiology, and End Results (SEER) Program is managed by the Surveillance Research Program of the Division of Cancer Control and Population Sciences at the NCI. The SEER Program began collecting data on cancer cases on 1 January 1973, in the states of Connecticut, Iowa, New Mexico, Utah, and Hawaii and the metropolitan areas of Detroit (Michigan) and San Francisco–Oakland (California). In 1974–1975, the metropolitan area of Atlanta (Georgia) and the Seattle–Puget Sound area (Washington State) were added, and together these constitute SEER-9. SEER-18 includes SEER-9 plus nine areas added in various years: Los Angeles and San José–Monterey (both in California), 10 rural counties in Georgia, Alaska Natives in Alaska, the remaining counties in Georgia, and the remaining counties in California, Louisiana, Kentucky, and New Jersey. The NCI and the CDC provide partial funding for the registries in Kentucky, California, New Jersey, Louisiana, and Georgia. The participating registries are shown on the map of North America. More information is available at https://seer.cancer.gov. In 2010, the total population covered by SEER-18 was 86.2 million (29% of the population of the USA). People aged 0–19 years made up 28% of the population covered by SEER registries; the racial and ethnic distribution in that age group was 73% White, 15% Black, 10% API (including 1.2% Chinese, 1.3% Filipino, 0.4% Japanese, and 0.6% Native Hawaiian), and 2% Native American. In addition, at least 27% of people aged 0–19 years residing in SEER areas were identified as Hispanic. Table A.6 shows the proportion of the national population covered by age, race, and ethnicity for the final dataset included in IICC-3.

Cancer records are collected from several sources, including pathology laboratories, hospitals, oncology practices, and radiology facilities. Data are also gathered through data exchange agreements with other states and a death clearance process. Completeness is estimated to be 98% or higher. Incident cases are compared with national and state mortality files to complete case ascertainment and for follow-up of the registered patients.

All registries are required to report all malignancies (except papillary, squamous and basal cell, and histologically unspecified carcinomas of the skin other than genital sites) and in situ neoplasms (except in situ cervix and prostatic intraepithelial neoplasia grade III) listed in ICD-O-3. Data on CNS neoplasms with benign or uncertain behaviour were collected since 2004, but they were not submitted because they were not collected over the entire reporting period and were not reported in IICC-1 or IICC-2. Pilocytic astrocytoma was coded with malignant behaviour throughout and submitted with malignant behaviour, for consistency with IICC-1 and IICC-2.

The data collected must be in sufficient detail to be classified according to the *SEER Program Coding and Staging Manual*. Data from multiple sources are consolidated into a single record for each individual cancer. The registries use SEER Multiple Primary and Histology Coding Rules, which can be converted to international rules. Because of privacy concerns, the SEER Program did not submit day of birth; however, the full date of birth was used to calculate age at diagnosis. Data are edited for legitimate codes and internal consistency.

POPULATION AT RISK

The data were provided by age, sex, race (API, Black, Native American, and White), and ethnic origin (Hispanic and Non-Hispanic) at the 1 July mid-year point of each calendar year. See also USA, above.

EDITORS' COMMENTS

In the IICC-3 book, data are presented for all races combined for SEER-18 for the overall period 1993–2012, with the exception of five registries, which provided data for shorter periods (Table 6.1). The tables for SEER-18 by race and ethnicity, and those for individual registries and their subpopulations, are available online, as specified in Table A.12. In addition, data for the SEER-9 registries, which also contributed to IICC-1 and IICC-2, are also available online for the period 1993–2012 for the same racial groups as previously (White and Black) for the combined SEER-9 dataset and for individual registries with sufficient numbers of cases for the racial and ethnic groups.

Day of birth and day of incidence were not provided for any SEER registry (Table A.8). In the Native American population, the proportion of cases aged 19 years in the age group 15–19 years was high (26.5%) (Table A.9). In the Native American population, the cancer incidence rate in the age group 0–19 years was low (93.3 per million) (Table A.9). See also USA, above.

USA, Surveillance, Epidemiology and End Results Programme, 18 registries (SEER 18) (1993-2012)

	Age group (years)	Males	Females
Person-years	0	9 720 146	9 281 072
	1-4	38 721 190	37 012 926
	5-9	48 290 296	46 126 868
	10-14	49 749 901	47 416 271
	15-19	49 639 436	46 712 952
	0-14	146 481 533	139 837 137
	0-19	196 120 969	186 550 089

Please consult the quality indicators for this pool and its constituent registries

USA, Surveillance, Epidemiology and End Results Programme, 18 registries (SEER 18)
1993-2012

Registry	Period	Cases	%	Person-years	%
Alaska Natives	1993-2012	159	0.2	912 127	0.2
California*					
California, Greater California	2000-2012	13237	20.3	76 459 077	20.0
California, Los Angeles	1993-2012	9333	14.3	56 663 992	14.8
California, San Francisco	1993-2012	3358	5.1	20 247 600	5.3
California, San José-Monterey	1993-2012	2363	3.6	13 310 401	3.5
Connecticut	1993-2012	3297	5.1	18 314 349	4.8
Georgia*					
Georgia, Atlanta	1993-2012	2681	4.1	17 138 008	4.5
Georgia, Greater Georgia	2000-2012	3533	5.4	21 987 621	5.7
Georgia, Rural	1993-2012	91	0.1	664 320	0.2
Hawaii	1993-2012	1059	1.6	6 685 312	1.7
Iowa	1993-2012	2869	4.4	16 343 420	4.3
Kentucky	2000-2012	2586	4.0	14 642 066	3.8
Louisiana	2000-2012	2579	4.0	16 647 484	4.4
Michigan, Detroit	1993-2012	3772	5.8	22 376 592	5.8
New Jersey	2000-2012	5715	8.8	29 972 596	7.8
New Mexico	1993-2012	1712	2.6	11 280 048	2.9
Utah	1993-2012	2917	4.5	16 960 655	4.4
Washington, Seattle	1993-2012	3956	6.1	22 065 390	5.8
SEER-18	**1993-2012**	**65217**	**100.0**	**382 671 058**	**100.0**

*The entire state is covered by the listed registries

Please consult the quality indicators for this pool and its constituent registries

USA, Surveillance, Epidemiology and End Results Programme, 18 registries (SEER 18) (1993-2012)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)							0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	LEUKAEMIA	953	6889	3882	3000	3043	**14724**	**17767**	32.9	100.0	27.2	100.0	50.2	91.0	41.1	30.9	31.6	**54.3**	**49.2**	774	932	98.0	0.1
	a. Lymphoid	394	5825	3225	2018	1640	**11462**	**13102**	25.6	77.8	20.1	73.7	20.7	76.9	34.2	20.8	17.0	**42.5**	**36.7**	603	688	98.9	0.1
	b. Acute myeloid	358	779	450	703	914	**2290**	**3204**	5.1	15.6	4.9	18.0	18.8	10.3	4.8	7.2	9.5	**8.3**	**8.6**	120	167	98.8	0.1
	c. CMD	63	59	62	162	318	**346**	**664**	0.8	2.3	1.0	3.7	3.3	0.8	0.7	1.7	3.3	**1.2**	**1.7**	18	35	83.9	0.5
	d. MDS & other	88	121	63	60	95	**332**	**427**	0.7	2.3	0.7	2.4	4.6	1.6	0.7	0.6	1.0	**1.2**	**1.2**	17	22	93.0	0.5
	e. Unspecified	50	105	82	57	76	**294**	**370**	0.7	2.0	0.6	2.1	2.6	1.4	0.9	0.6	0.8	**1.1**	**1.0**	15	19	88.6	1.6
II	LYMPHOMA & RELATED	174	803	1418	2410	4688	**4805**	**9493**	10.7	100.0	14.6	100.0	9.2	10.6	15.0	24.8	48.7	**16.0**	**23.4**	251	494	98.8	0.0
	a. Hodgkin	1	83	412	1134	2951	**1630**	**4581**	3.6	33.9	7.0	48.3	0.1	1.1	4.4	11.7	30.6	**5.1**	**10.9**	85	238	99.7	0.0
	b. Non-Hodgkin except BL	28	345	592	914	1395	**1879**	**3274**	4.2	39.1	5.0	34.5	1.5	4.6	6.3	9.4	14.5	**6.3**	**8.1**	98	170	98.9	0.0
	c. Burkitt (BL)	3	145	286	257	220	**691**	**911**	1.5	14.4	1.4	9.6	0.2	1.9	3.0	2.6	2.3	**2.3**	**2.3**	36	48	99.6	0.0
	d. Lymphoreticular	139	213	104	76	54	**532**	**586**	1.2	11.1	0.9	6.2	7.3	2.8	1.1	0.8	0.6	**2.0**	**1.7**	28	31	95.6	0.0
	e. Unspecified	3	17	24	29	68	**73**	**141**	0.2	1.5	0.2	1.5	0.2	0.2	0.3	0.3	0.7	**0.3**	**0.4**	4	7	78.0	0.7
III	CNS NEOPLASMS	641	3083	3068	2455	1955	**9247**	**11202**	20.7	100.0	17.2	100.0	33.7	40.7	32.5	25.3	20.3	**33.0**	**30.2**	485	587	83.8	0.3
	a. Ependymoma	95	389	195	155	152	**834**	**986**	1.9	9.0	1.5	8.8	5.0	5.1	2.1	1.6	1.6	**3.1**	**2.8**	44	52	98.4	0.2
	b. Astrocytoma	246	1389	1463	1377	1084	**4475**	**5559**	10.0	48.4	8.5	49.6	12.9	18.3	15.5	14.2	11.3	**15.8**	**14.8**	235	291	88.7	0.1
	c. CNS embryonal	213	843	703	409	275	**2168**	**2443**	4.8	23.4	3.7	21.8	11.2	11.1	7.4	4.2	2.9	**7.9**	**6.8**	114	128	98.6	0.2
	d. Other gliomas	51	376	646	442	376	**1515**	**1891**	3.4	16.4	2.9	16.9	2.7	5.0	6.8	4.5	3.9	**5.3**	**5.0**	79	99	43.9	0.3
	e. Other specified	15	51	41	43	47	**150**	**197**	0.3	1.6	0.3	1.8	0.8	0.7	0.4	0.4	0.5	**0.5**	**0.5**	8	10	97.5	0.0
	f. Unspecified CNS	21	35	20	29	21	**105**	**126**	0.2	1.1	0.2	1.1	1.1	0.5	0.2	0.3	0.2	**0.4**	**0.3**	6	7	41.3	11.9
IV	NEUROBLASTOMA	997	1519	345	127	83	**2988**	**3071**	6.7	100.0	4.7	100.0	52.5	20.1	3.7	1.3	0.9	**11.8**	**9.4**	158	162	97.9	0.0
	a. (Ganglio)neuroblastoma	992	1508	334	110	39	**2944**	**2983**	6.6	98.5	4.6	97.1	52.2	19.9	3.5	1.1	0.4	**11.7**	**9.1**	155	157	97.9	0.0
	b. Peripheral nervous	5	11	11	17	44	**44**	**88**	0.1	1.5	0.1	2.9	0.3	0.1	0.1	0.2	0.5	**0.2**	**0.2**	2	5	96.6	0.0
V	RETINOBLASTOMA	519	703	42	6	2	**1270**	**1272**	2.8	100.0	2.0	100.0	27.3	9.3	0.4	0.1	0.0	**5.2**	**4.0**	67	67	81.1	0.1
VI	RENAL TUMOURS	299	1438	496	104	143	**2337**	**2480**	5.2	100.0	3.8	100.0	15.7	19.0	5.3	1.1	1.5	**9.1**	**7.4**	123	131	99.2	0.0
	a. Nephroblastoma	296	1426	470	59	27	**2251**	**2278**	5.0	96.3	3.5	91.9	15.6	18.8	5.0	0.6	0.3	**8.8**	**6.9**	119	120	99.3	0.0
	b. Renal carcinoma	2	8	25	45	116	**80**	**196**	0.2	3.4	0.3	7.9	0.1	0.1	0.3	0.5	1.2	**0.3**	**0.5**	4	10	99.0	0.5
	c. Unspecified	1	4	1	0	0	**6**	**6**	0.0	0.3	0.0	0.2	0.1	0.1	0.0	-	-	**0.0**	**0.0**	0	0	50.0	0.0
VII	HEPATIC TUMOURS	223	409	91	99	128	**822**	**950**	1.8	100.0	1.5	100.0	11.7	5.4	1.0	1.0	1.3	**3.2**	**2.8**	43	50	96.7	0.3
	a. Hepatoblastoma	216	395	61	36	10	**708**	**718**	1.6	86.1	1.1	75.6	11.4	5.2	0.6	0.4	0.1	**2.8**	**2.2**	37	38	97.4	0.1
	b. Hepatic carcinoma	6	12	29	63	118	**110**	**228**	0.2	13.4	0.3	24.0	0.3	0.2	0.3	0.6	1.2	**0.4**	**0.6**	6	12	94.7	0.9
	c. Unspecified	1	2	1	0	0	**4**	**4**	0.0	0.5	0.0	0.4	0.1	0.0	0.0	-	-	**0.0**	**0.0**	0	0	100.0	0.0
VIII	BONE TUMOURS	14	120	526	1277	1409	**1937**	**3346**	4.3	100.0	5.1	100.0	0.7	1.6	5.6	13.1	14.6	**6.2**	**8.1**	101	174	98.6	0.1
	a. Osteosarcoma	1	33	291	805	807	**1130**	**1937**	2.5	58.3	3.0	57.9	0.1	0.4	3.1	8.3	8.4	**3.5**	**4.6**	59	101	99.1	0.0
	b. Chondrosarcoma	0	1	10	52	85	**63**	**148**	0.1	3.3	0.2	4.4	-	0.0	0.1	0.5	0.9	**0.2**	**0.3**	3	8	97.3	0.0
	c. Ewing & related	6	71	189	365	397	**631**	**1028**	1.4	32.6	1.6	30.7	0.3	0.9	2.0	3.8	4.1	**2.1**	**2.5**	33	53	99.4	0.0
	d. Other specified	4	11	25	36	91	**76**	**167**	0.2	3.9	0.3	5.0	0.2	0.1	0.3	0.4	0.9	**0.3**	**0.4**	4	9	98.2	0.0
	e. Unspecified	3	4	11	19	29	**37**	**66**	0.1	1.9	0.1	2.0	0.2	0.1	0.1	0.2	0.3	**0.1**	**0.2**	2	3	74.2	4.5
IX	SOFT TISSUE SARCOMA	319	788	767	1127	1550	**3001**	**4551**	6.7	100.0	7.0	100.0	16.8	10.4	8.1	11.6	16.1	**10.5**	**11.8**	157	237	99.3	0.0
	a. Rhabdomyosarcoma	107	566	411	351	329	**1435**	**1764**	3.2	47.8	2.7	38.8	5.6	7.5	4.4	3.6	3.4	**5.2**	**4.8**	75	92	99.5	0.1
	b. Fibrosarcoma	95	46	62	110	176	**313**	**489**	0.7	10.4	0.7	10.7	5.0	0.6	0.7	1.1	1.8	**1.1**	**1.3**	16	26	98.8	0.0
	c. Kaposi sarcoma	3	0	1	1	10	**5**	**15**	0.0	0.2	0.0	0.3	0.2	-	0.0	0.0	0.1	**0.0**	**0.0**	0	1	86.7	0.0
	d. Other specified	82	132	241	526	860	**981**	**1841**	2.2	32.7	2.8	40.5	4.3	1.7	2.6	5.4	8.9	**3.3**	**4.5**	51	96	99.7	0.0
	e. Unspecified	32	44	52	139	175	**267**	**442**	0.6	8.9	0.7	9.7	1.7	0.6	0.6	1.4	1.8	**0.9**	**1.1**	14	23	97.7	0.0
X	GERM CELL TUMOURS	393	274	244	753	2816	**1664**	**4480**	3.7	100.0	6.9	100.0	20.7	3.6	2.6	7.7	29.2	**5.8**	**11.1**	87	233	97.5	0.0
	a. CNS germ cell	42	13	112	282	265	**449**	**714**	1.0	27.0	1.1	15.9	2.2	0.2	1.2	2.9	2.8	**1.4**	**1.7**	23	37	91.0	0.0
	b. Other extragonadal	259	123	13	47	193	**442**	**635**	1.0	26.6	1.0	14.2	13.6	1.6	0.1	0.5	2.0	**1.7**	**1.8**	23	33	96.2	0.2
	c. Gonadal germ cell	89	136	111	381	2181	**717**	**2898**	1.6	43.1	4.4	64.7	4.7	1.8	1.2	3.9	22.6	**2.4**	**7.0**	37	151	99.6	0.0
	d. Gonadal carcinoma	0	0	1	23	130	**24**	**154**	0.1	1.4	0.2	3.4	-	-	0.0	0.2	1.3	**0.1**	**0.4**	1	8	96.1	0.6
	e. Unspecified gonadal	3	2	7	20	47	**32**	**79**	0.1	1.9	0.1	1.8	0.2	0.0	0.1	0.2	0.5	**0.1**	**0.2**	2	4	94.9	0.0
XI	CARCINOMA & MELANOMA	33	126	348	1287	4565	**1794**	**6359**	4.0	100.0	9.8	100.0	1.7	1.7	3.7	13.2	47.4	**5.7**	**15.1**	93	330	99.5	0.0
	a. Adrenocortical	10	29	16	17	19	**72**	**91**	0.2	4.0	0.1	1.4	0.5	0.4	0.2	0.2	0.2	**0.3**	**0.2**	4	5	98.9	0.0
	b. Thyroid	2	15	115	524	1957	**656**	**2613**	1.5	36.6	4.0	41.1	0.1	0.2	1.2	5.4	20.3	**2.0**	**6.1**	34	136	99.8	0.0
	c. Nasopharyngeal	0	0	5	73	128	**78**	**206**	0.2	4.3	0.3	3.2	-	-	0.1	0.8	1.3	**0.2**	**0.5**	4	11	100.0	0.0
	d. Melanoma	12	66	132	327	1363	**537**	**1900**	1.2	29.9	2.9	29.9	0.6	0.9	1.4	3.4	14.1	**1.7**	**4.5**	28	99	99.4	0.0
	e. Skin carcinoma	1	0	2	12	23	**15**	**38**	0.0	0.8	0.1	0.6	0.1	-	0.0	0.1	0.2	**0.0**	**0.1**	1	2	100.0	0.0
	f. Other & unspecified	8	16	78	334	1075	**436**	**1511**	1.0	24.3	2.3	23.8	0.4	0.2	0.8	3.4	11.2	**1.4**	**3.6**	23	78	99.1	0.1
XII	OTHER & UNSPECIFIED	27	51	26	48	94	**152**	**246**	0.3	100.0	0.4	100.0	1.4	0.7	0.3	0.5	1.0	**0.6**	**0.6**	8	13	82.5	6.9
	a. Other specified	14	36	10	31	48	**91**	**139**	0.2	59.9	0.2	56.5	0.7	0.5	0.1	0.3	0.5	**0.3**	**0.4**	5	7	99.3	0.0
	b. Other unspecified	13	15	16	17	46	**61**	**107**	0.1	40.1	0.2	43.5	0.7	0.2	0.2	0.2	0.5	**0.2**	**0.3**	3	6	60.7	15.9
	TOTAL	4592	16203	11253	12693	20476	**44741**	**65217**	100.0	100.0	100.0	100.0	241.7	213.9	119.2	130.6	212.5	**161.3**	**172.9**	2347	3409	95.5	0.1

Please consult the quality indicators for this pool and its constituent registries

USA, Hawaii, Hawaiian (1993-2012)

		Number of cases							Percentage				Incidence rates per million person-years									MV	DCO
		Age group (years)							0-14		0-19		Age-specific					ASR		Cumulative		%	%
		0	1-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0	1-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-19	0-19
I	LEUKAEMIA	6	34	22	18	10	**80**	**90**	35.4	100.0	28.4	100.0	52.9	76.1	41.2	34.0	20.0	**50.8**	**43.9**	733	833	97.8	1.1
	a. Lymphoid	3	27	21	8	3	**59**	**62**	26.1	73.8	19.6	68.9	26.4	60.4	39.4	15.1	6.0	**37.8**	**30.6**	540	570	98.4	1.6
	b. Acute myeloid	3	6	0	8	7	**17**	**24**	7.5	21.3	7.6	26.7	26.4	13.4	-	15.1	14.0	**10.6**	**11.4**	156	226	95.8	0.0
	c. CMD	0	0	1	2	0	**3**	**3**	1.3	3.8	0.9	3.3	-	-	1.9	3.8	-	**1.7**	**1.3**	28	28	100.0	0.0
	d. MDS & other	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
	e. Unspecified	0	1	0	0	0	**1**	**1**	0.4	1.3	0.3	1.1	-	2.2	-	-	-	**0.7**	**0.5**	9	9	100.0	0.0
II	LYMPHOMA & RELATED	0	4	10	13	13	**27**	**40**	11.9	100.0	12.6	100.0	-	9.0	18.7	24.5	26.0	**15.9**	**18.2**	252	382	95.0	2.5
	a. Hodgkin	0	0	3	3	8	**6**	**14**	2.7	22.2	4.4	35.0	-	-	5.6	5.7	16.0	**3.5**	**6.3**	56	136	100.0	0.0
	b. Non-Hodgkin except BL	0	2	7	8	5	**17**	**22**	7.5	63.0	6.9	55.0	-	4.5	13.1	15.1	10.0	**10.0**	**10.0**	159	209	90.9	4.5
	c. Burkitt (BL)	0	1	0	1	0	**2**	**2**	0.9	7.4	0.6	5.0	-	2.2	-	1.9	-	**1.2**	**1.0**	18	18	100.0	0.0
	d. Lymphoreticular	0	1	0	1	0	**2**	**2**	0.9	7.4	0.6	5.0	-	2.2	-	1.9	-	**1.2**	**1.0**	18	18	100.0	0.0
	e. Unspecified	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
III	CNS NEOPLASMS	5	12	18	14	9	**49**	**58**	21.7	100.0	18.3	100.0	44.1	26.9	33.7	26.4	18.0	**30.3**	**27.5**	452	543	89.7	0.0
	a. Ependymoma	1	1	1	0	2	**3**	**5**	1.3	6.1	1.6	8.6	8.8	2.2	1.9	-	4.0	**2.0**	**2.4**	27	47	100.0	0.0
	b. Astrocytoma	0	4	11	12	5	**27**	**32**	11.9	55.1	10.1	55.2	-	9.0	20.6	22.6	10.0	**16.0**	**14.6**	252	302	93.8	0.0
	c. CNS embryonal	2	5	6	1	1	**14**	**15**	6.2	28.6	4.7	25.9	17.6	11.2	11.2	1.9	2.0	**9.0**	**7.4**	128	138	100.0	0.0
	d. Other gliomas	2	2	0	1	1	**5**	**6**	2.2	10.2	1.9	10.3	17.6	4.5	-	1.9	2.0	**3.3**	**3.0**	45	55	33.3	0.0
	e. Other specified	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
	f. Unspecified CNS	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
IV	NEUROBLASTOMA	4	8	0	0	2	**12**	**14**	5.3	100.0	4.4	100.0	35.3	17.9	-	-	4.0	**8.3**	**7.3**	107	127	100.0	0.0
	a. (Ganglio)neuroblastoma	4	8	0	0	1	**12**	**13**	5.3	100.0	4.1	92.9	35.3	17.9	-	-	2.0	**8.3**	**6.9**	107	117	100.0	0.0
	b. Peripheral nervous	0	0	0	0	1	**0**	**1**	-	-	0.3	7.1	-	-	-	-	2.0	**-**	**0.5**	-	10	100.0	0.0
V	RETINOBLASTOMA	2	6	0	0	0	**8**	**8**	3.5	100.0	2.5	100.0	17.6	13.4	-	-	-	**5.5**	**4.3**	71	71	87.5	0.0
VI	RENAL TUMOURS	1	0	0	0	1	**1**	**2**	0.4	100.0	0.6	100.0	8.8	-	-	-	2.0	**0.7**	**1.0**	9	19	100.0	0.0
	a. Nephroblastoma	1	0	0	0	0	**1**	**1**	0.4	100.0	0.3	50.0	8.8	-	-	-	-	**0.7**	**0.5**	9	9	100.0	0.0
	b. Renal carcinoma	0	0	0	0	1	**0**	**1**	-	-	0.3	50.0	-	-	-	-	2.0	**-**	**0.5**	-	10	100.0	0.0
	c. Unspecified	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
VII	HEPATIC TUMOURS	3	2	0	0	0	**5**	**5**	2.2	100.0	1.6	100.0	26.4	4.5	-	-	-	**3.5**	**2.7**	45	45	100.0	0.0
	a. Hepatoblastoma	3	2	0	0	0	**5**	**5**	2.2	100.0	1.6	100.0	26.4	4.5	-	-	-	**3.5**	**2.7**	45	45	100.0	0.0
	b. Hepatic carcinoma	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
	c. Unspecified	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
VIII	BONE TUMOURS	0	0	9	6	7	**15**	**22**	6.6	100.0	6.9	100.0	-	-	16.9	11.3	14.0	**8.7**	**9.9**	141	211	100.0	0.0
	a. Osteosarcoma	0	0	5	6	3	**11**	**14**	4.9	73.3	4.4	63.6	-	-	9.4	11.3	6.0	**6.3**	**6.2**	103	133	100.0	0.0
	b. Chondrosarcoma	0	0	0	0	1	**0**	**1**	-	-	0.3	4.5	-	-	-	-	2.0	**-**	**0.5**	-	10	100.0	0.0
	c. Ewing & related	0	0	2	0	3	**2**	**5**	0.9	13.3	1.6	22.7	-	-	3.7	-	6.0	**1.2**	**2.3**	19	49	100.0	0.0
	d. Other specified	0	0	2	0	0	**2**	**2**	0.9	13.3	0.6	9.1	-	-	3.7	-	-	**1.2**	**0.9**	19	19	100.0	0.0
	e. Unspecified	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
IX	SOFT TISSUE SARCOMA	0	2	3	8	10	**13**	**23**	5.8	100.0	7.3	100.0	-	4.5	5.6	15.1	20.0	**7.6**	**10.4**	121	222	100.0	0.0
	a. Rhabdomyosarcoma	0	2	1	2	2	**5**	**7**	2.2	38.5	2.2	30.4	-	4.5	1.9	3.8	4.0	**3.1**	**3.3**	46	66	100.0	0.0
	b. Fibrosarcoma	0	0	1	2	0	**3**	**3**	1.3	23.1	0.9	13.0	-	-	1.9	3.8	-	**1.7**	**1.3**	28	28	100.0	0.0
	c. Kaposi sarcoma	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
	d. Other specified	0	0	1	3	5	**4**	**9**	1.8	30.8	2.8	39.1	-	-	1.9	5.7	10.0	**2.2**	**4.0**	38	88	100.0	0.0
	e. Unspecified	0	0	0	1	3	**1**	**4**	0.4	7.7	1.3	17.4	-	-	-	1.9	6.0	**0.5**	**1.8**	9	39	100.0	0.0
X	GERM CELL TUMOURS	2	3	1	1	22	**7**	**29**	3.1	100.0	9.1	100.0	17.6	6.7	1.9	1.9	44.0	**4.6**	**13.5**	63	284	100.0	0.0
	a. CNS germ cell	0	0	1	1	5	**2**	**7**	0.9	28.6	2.2	24.1	-	-	1.9	1.9	10.0	**1.2**	**3.1**	19	69	100.0	0.0
	b. Other extragonadal	2	2	0	0	1	**4**	**5**	1.8	57.1	1.6	17.2	17.6	4.5	-	-	2.0	**2.8**	**2.6**	36	46	100.0	0.0
	c. Gonadal germ cell	0	1	0	0	15	**1**	**16**	0.4	14.3	5.0	55.2	-	2.2	-	-	30.0	**0.7**	**7.3**	9	159	100.0	0.0
	d. Gonadal carcinoma	0	0	0	0	1	**0**	**1**	-	-	0.3	3.4	-	-	-	-	2.0	**-**	**0.5**	-	10	100.0	0.0
	e. Unspecified gonadal	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
XI	CARCINOMA & MELANOMA	1	1	1	6	17	**9**	**26**	4.0	100.0	8.2	100.0	8.8	2.2	1.9	11.3	34.0	**5.3**	**11.7**	84	254	100.0	0.0
	a. Adrenocortical	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
	b. Thyroid	0	0	1	3	8	**4**	**12**	1.8	44.4	3.8	46.2	-	-	1.9	5.7	16.0	**2.2**	**5.3**	38	118	100.0	0.0
	c. Nasopharyngeal	0	0	0	1	2	**1**	**3**	0.4	11.1	0.9	11.5	-	-	-	1.9	4.0	**0.5**	**1.3**	9	29	100.0	0.0
	d. Melanoma	1	0	0	1	2	**2**	**4**	0.9	22.2	1.3	15.4	8.8	-	-	1.9	4.0	**1.2**	**1.9**	18	38	100.0	0.0
	e. Skin carcinoma	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
	f. Other & unspecified	0	1	0	1	5	**2**	**7**	0.9	22.2	2.2	26.9	-	2.2	-	1.9	10.0	**1.2**	**3.2**	18	68	100.0	0.0
XII	OTHER & UNSPECIFIED	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
	a. Other specified	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
	b. Other unspecified	0	0	0	0	0	**0**	**0**	-	-	-	-	-	-	-	-	-	**-**	**-**	-	-	-	-
	TOTAL	24	72	64	66	91	**226**	**317**	100.0	100.0	100.0	100.0	211.5	161.1	119.9	124.6	182.1	**141.2**	**150.4**	2079	2990	96.5	0.6

Please consult the quality indicators for this registry

Alabama Statewide Cancer Registry, 1998–2012

Xuejun Shen, Justin T. George, Diane Hadley, Mark K. Jackson, Tara Freeman, Teisha Robertson, Ashley Gruenwald, Crystal Morton, Teresa Trailer, Elaine Wooden

Alabama is located in the south-eastern USA. The capital city is Montgomery, and the largest city is Birmingham. In 2010, the total population was 4.8 million, and about 27% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 40% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 60% White NH, 32% Black, 5% Hispanic White, 2% API, and 1% Native American.

The Alabama Statewide Cancer Registry collects data on all cancer cases diagnosed or treated in the state of Alabama. The registry was established in 1995 by the Alabama Department of Public Health in response to a state law that made cancer a reportable condition. Data collection began on 1 January 1996 (Table A.10). The registry is located within the Bureau of Family Health Services and is responsible for maintaining a statewide cancer incidence reporting system to provide accurate and up-to-date information about cancer in Alabama. The registry is a participant in the NPCR. The Alabama Statewide Cancer Registry has achieved NAACCR Gold Certification since data year 2004.

The registry's central repository of information is a valuable tool for monitoring trends in cancer incidence, identifying populations at high risk of cancer, facilitating studies related to cancer prevention, and planning cancer control initiatives.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Alaska Cancer Registry, 1998–2012

Rosa Avila, David O'Brien, Evelyn Honeycutt, Jaylynn Backus, Adrienne Driskill

Alaska is located in the north-western extremity of the North American continent. It is the largest state in the USA by area and the most sparsely populated. Alaska comprises 16% of the total land area of the country but accounts for only 0.2% of the country's population. Most of the state is rural. About 41% of Alaska residents live in the municipality of Anchorage. In 2010, the population was 0.7 million, and about 29% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 40% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 58% White NH, 22% Native American, 8% API, 6% Black, and 5% Hispanic White.

General health care in the state is provided by 24 hospitals, numerous health clinics, and many private practitioners. Because the municipality of Anchorage has the largest population, it also has the highest number of health-care facilities, including four hospitals. Alaska Natives are provided with health care at no cost at a central hospital in Anchorage.

The Alaska Cancer Registry covers the population of the state of Alaska. It is located in Anchorage and is part of the state health department. It is funded mostly by the CDC/NPCR and partly by the state health department. The registry is staffed by three full-time registrars, a registry manager, and a full-time data analyst.

Cancer is a reportable disease by state and federal law. The registry's annual caseload is about 2900 consolidated malignancy cases. The Alaska Cancer Registry receives most of its cases from hospitals. The remaining cases are received from physicians, pathology laboratories, other state cancer registries in the USA, and review of death certificates. The registry has data exchange agreements with most of the other state cancer registries in the USA. Quality control is regularly performed on the data using the most current NAACCR Edits Metafile.

The registry prepares an annual report on cancer incidence and mortality. Registry data are regularly requested by the Alaska state legislature, physicians, researchers, and the general public.

PUBLICATIONS

O'Brien DK (2017). Finding "zombies" in your database by confirming vital status. North American Association of Central Cancer Registries. Available from: https://www.naaccr.org/finding-zombies-database-confirming-vital-status.

Alaska Cancer Registry (2017). Cancer in Alaska – 2013. Alaska Cancer Registry, Section of Chronic Disease Prevention and Health Promotion, Division of Public Health, Alaska Department of Health and Social Services. Available from: https://dhss.alaska.gov/dph/VitalStats/Documents/cancerregistry/data/CancerInAlaska2013.pdf.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The proportion of cases aged 19 years in the age group 15–19 years was high (25.4%) (Table A.9). The sex ratio in the age group 15–19 years was low (0.7) (Table A.9). See also USA and NPCR, above.

Alaska Native Tumor Registry, 1993–2012

Sarah H. Nash, Janet J. Kelly, Teresa Schade, Garrett L. Zimpelman, Iona Sallison, Linda O'Brien, Jennifer Brantley, Sadie Bean, Anne P. Lanier

The Alaska Native Tumor Registry is a population-based registry that collects information about all cancers diagnosed in American Indian and Alaska Native people residing in the state of Alaska at the time of diagnosis. In 2010, about 39% of the Alaska Native population was younger than 20 years (Table A.6). The registry started collecting data in 1974 and has data from 1969 (Table A.10); the registry has been a full member of the NCI's SEER Program since 1999. The registry is fully funded by the SEER Program.

During the reporting period, it is likely that many paediatric cancer cases were treated outside the registration area. Most paediatric cancer cases that are treated outside Alaska are referred to hospitals in the area of Seattle (Washington State) for treatment. This treatment information is captured through annual data sharing with the Washington State Cancer Registry.

PUBLICATIONS

Kelly JJ, Lanier AP, Schade T, Brantley J, Starkey BM (2014). Cancer disparities among Alaska Native people, 1970–2011. Prev Chronic Dis. 11:E221. https://doi.org/10.5888/pcd11.130369 PMID:25523352

Lanier AP, Holck P, Ehrsam Day G, Key C (2003). Childhood cancer among Alaska Natives. Pediatrics. 112(5):e396. https://doi.org/10.1542/peds.112.5.e396 PMID:14595083

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and SEER-18 tables in the IICC-3 book. An abbreviated registry-specific table is available online within the SEER-18 results, as specified in Table A.12. For Alaska Natives, the proportion of cases aged 19 years in the age group 15–19 years was quite high (25.0%) (Table A.9). In addition, the sex ratio in the age group 15–19 years was low (0.6) (Table A.9). The reported highlighted variations may be the result of the small number of cases. See also USA and SEER, above.

Arizona Cancer Registry, 1998–2012

Georgia Yee, Chris Newton

Arizona is located in the south-western USA and is bordered by Mexico to the south. The state is divided into 15 counties and has two major population centres: the capital city of Phoenix (Maricopa County) and the city of Tucson (Pima County). The total population is 6.4 million. About 75% of the population lives in the two major centres, and about 90% of the population lives in urban areas. The state has a large Native American population, and in 2010, 9% of the Native American population younger than 20 years in the USA lived in Arizona (Table A.6 online). The total population younger than 20 years increased from 1.3 million in 1995 to 1.8 million in 2010. The change in the proportion from 1995 to 2010 varied by ethnic and racial group; the proportion decreased from 56% to 44% for White NH, increased from 29% to 39% for Hispanic, and increased slightly from 15% to 17% for all other groups (see also Table A.6). The proportion of the student population and the internal migration of the Arizona population have remained steady.

Health care in the region is provided by private practitioners, clinics, and hospitals. About 81% of the population have health insurance; 74% of health-care expenses are covered by nongovernmental insurance.

The Arizona Cancer Registry is a population-based surveillance system that collects, manages, and analyses information on cancer incidence, survival, and mortality in the entire state. The registry is funded through state legislature appropriations to the Arizona Department of Health Services. Enhancement funds are provided through a cooperative agreement with the CDC/NPCR.

Arizona law mandates the reporting of cancer cases from hospitals, clinics, physicians, and pathology laboratories. The registry conducts data linkage with death certificates to capture unreported cases. The registry also has data exchange agreements with 21 other states in the USA. Data linkages are performed with the Arizona Department of Health Services, Navajo Nation, and Hopi Tribe breast and cervical screening programmes in Arizona.

Quality assurance procedures include electronic and visual editing, case ascertainment reviews, and re-abstracting studies. Hospitals are required to conduct follow-up of registered cases. The Arizona Cancer Registry follows the NAACCR standards for cancer reporting. Completeness of data coverage is between 90% and 95%. Most patients are treated in Arizona.

The registry analyses the incidence, mortality, and survival of Arizona residents annually. Registry data are used for epidemiological research, cancer control planning and evaluation, and addressing community cancer concerns. The registry also is involved in research studies that have been approved by the Arizona Department of Health Services Human Subjects Review Board.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Arkansas Central Cancer Registry, 1998–2012

Nathaniel Smith, Joseph Bates, Abby Holt, Christopher Fisher

Arkansas is located in the south-central USA. In 2010, the population was 2.9 million, and about 27% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 44% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 67% White NH, 20% Black, 9% Hispanic White, 2% API, and 1% Native American.

Cancer is a reportable disease in Arkansas, mandated by state law. The Arkansas Central Cancer Registry covers the entire state. It is located within the Arkansas Department of Health. The registry has eight full-time positions that are funded through the NPCR and two full-time positions that are funded by the state. The registry receives data from all hospital facilities that report abstracted cases from medical records electronically. The registry also receives cases from dermatology clinics, oncology clinics, urology clinics, other physician groups, pathology laboratories, and radiotherapy facilities.

The registry receives electronic pathology (ePath) reports in Health Level Seven (HL7) format from about 10 laboratories. Other reported data are received electronically from clinics and physicians within the state. All data are collected and compiled into the registry's database management system, CancerCORE, version 2.

The registry provides data to Arkansas hospitals, treatment centres, and community organizations that offer screening programmes. Every 5 years, the registry produces a comprehensive surveillance report, which highlights disparities in incidence and mortality, diagnosis by stage, and cancer survival by stage at diagnosis. The registry also provides data for cancer studies approved by the institutional review board (IRB).

The registry's database system includes many predefined reports and query tools for analysing cancer registry data. The Arkansas Central Cancer Registry has a contract with the Kentucky Cancer Registry for a web-based query system that provides public access to population-based cancer incidence data, which are updated annually.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

California Cancer Registry, 1998–2012

Mark Damesyn

California is the most populous state and the third largest state in the USA, covering a large area along the Pacific coast in the west of the country. The total area of 423 970 km^2 is divided into 58 counties. In 2010, the population was 37.3 million, and 28% of the population was younger than 20 years; this percentage ranged from 20% for White NH to 37% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 46% Hispanic White, 30% White NH, 13% API, 8% Black, and 3% Native American.

California has 380 inpatient facilities throughout the state that provide cancer care. Of these, 153 are approved by the American College of Surgeons, 218 are hospitals without a cancer registry, eight are Veterans Health Administration hospitals, and one is an Indian Health Service hospital. California also has 308 independent surgery centres and 42 independent radiotherapy centres.

The California Cancer Registry covers the entire state of California. The registry is a programme of the California Department of Public Health's Cancer Surveillance and Research Branch, located in Sacramento. Provisions of the California Health and Safety Code mandated the establishment of a statewide system of cancer reporting. The system is composed of regional registries (see below), health-care providers, registrars, and researchers. All hospitals and facilities report cancer cases to the California Cancer Registry electronically. The registry also receives reports from pathology laboratories, outpatient surgery centres, free-standing radiology facilities, and independent physicians.

The California Cancer Registry monitors cancer incidence and mortality over time and analyses differential cancer risks by geographical region, race or ethnicity, and other sociodemographic characteristics. The system is also designed to monitor patient survival. The registry produces annual reports on incidence and mortality, and it collaborates with the American Cancer Society to produce *California Cancer Facts and Figures*. The registry conducts and collaborates on special research projects about the etiology, treatment, and prevention of specific cancers. Registry data are provided to research institutions that seek to better understand cancer causes and control. The data are also used to address public concerns and questions. Data for the state of California are available online (https://www.ccrcal.org/learn-about-ccr/) for all races and ethnic groups combined and separately.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. Data for the state of California were also submitted to IICC-3 from the SEER Program for a different period and by region, as described in the narratives of other registries in California below. Day of birth was not provided (Table A.8). See also USA, NPCR, and SEER, above.

Cancer Registry of Greater California, 2000–2012

Rosemary D. Cress, Dee W. West, Marta Induni

The Cancer Registry of Greater California (CRGC) is one of three registries that comprise the California Cancer Registry. Since 1988, the CRGC has collected cancer incidence and mortality data for 48 counties on all reportable cancers diagnosed in children, adolescents, and adults residing in the region. Residence status is based on address at diagnosis, which is geocoded to census tract to enable determination of neighbourhood socioeconomic status. Information for patients who are diagnosed or treated outside the CRGC area is captured through collaborative relationships with registries within and outside of California.

The catchment area of the CRGC includes a large geographical area with a population that is diverse in terms of race, ethnicity, and socioeconomic status. In 2010, the total population of the CRGC catchment area was 20.6 million; more than 3 million lived below the poverty level, and 4% lived in rural areas. In 2010, 29% of the population covered by the CRGC was younger than 20 years; this percentage ranged from 21% for White NH to 39% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 45% Hispanic White, 34% White NH, 11% API, 7% Black, and 3% Native American.

The CRGC is funded mainly by the NCI's SEER Program and partly by the state of California, with a small proportion from the CDC/NPCR. The CRGC follows SEER guidelines and standards for case ascertainment and quality, and it has achieved NAACCR Gold Certification.

CRGC epidemiologists conduct studies on cancer incidence, mortality, treatment, and surveillance methodology, with an emphasis on disparities by race, ethnicity, and socioeconomic status. The collected data are also used by researchers at academic institutions across California and the USA.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA, SEER, and California Cancer Registry, above.

California, Los Angeles Cancer Surveillance Program, 1993–2012

Lihua Liu, Donna Morrell, Dennis Deapen

Los Angeles County is an urban area that covers more than 12 000 km^2 in the state of California. It has more than 10 million residents, and more than 25% of the population of California lives there. It is the most populous county in the USA and is characterized by population diversity in terms of race and ethnicity, immigration origin, culture, religion, and socioeconomic status, as well as geographical diversity (including mountains, valleys, deserts, and seashores).

Los Angeles County is one of the most racially and ethnically diverse counties in the USA. Among the residents, 48% are Hispanic or Latino, and only 28% are non-Latino White. Of the 4.8 million self-reported Latino residents, 76% identify as Mexican. More than 0.8 million residents of the county are Black or African American, more than 1.4 million are API, and less than 0.06 million are Native American. People with more than one race or ethnicity make up 3.9% of the total population. More than one third of the residents of the county are foreign-born, first-generation immigrants. In 2010, about 28% of the population was younger than 20 years; this percentage ranged from 18% for White NH to 35% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 57% Hispanic White, 19% White NH, 12% API, 10% Black, and 2% Native American.

Los Angeles County has more than 100 hospitals and clinics, many of which provide advanced treatment and screening programmes. Most children with cancer are treated in the renowned paediatric medical centre, Children's Hospital Los Angeles.

The Los Angeles Cancer Surveillance Program (CSP) provides cancer registration for the county. It was started at the University of Southern California, with complete population-based cancer incidence data beginning in 1972 (Table A.10). In 1987, the CSP began contributing to the California Cancer Registry. The CSP joined the NCI's SEER Program in 1992. The CSP receives funding from the California Department of Public Health, the CDC/NPCR, and the NCI's SEER Program.

As mandated by law, the CSP has consistently collected all types of reportable cancer cases, following data standards set by SEER and the NAACCR. The CSP routinely exchanges data with other registries in California and the 43 other state registries under the NAACCR data exchange agreement. The CSP has been annually certified for achieving NAACCR standards for complete, accurate, and timely data.

The CSP allows unrestricted use of the registry data for research, education, and public health purposes. The CSP is one of the most productive cancer registries in the world in terms of scientific contributions towards understanding the demographic patterns and the etiology of specific cancers. CSP data have been used in more than 6900 publications.

POPULATION AT RISK
See USA, above.

EDITORS' COMMENTS
Data are included in the pooled USA and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. In addition, the online tables for White NH, Black, and Hispanic White can be used for comparison with IICC-1 and IICC-2 (Table A.1). See also USA, SEER, and California Cancer Registry, above.

California, Greater Bay Area Cancer Registry (San Francisco and San José–Monterey), 1993–2012

Scarlett Lin Gomez, Kathleen Davidson-Allen

The Greater Bay Area includes nine counties (Alameda, Contra Costa, Marin, Monterey, San Benito, San Francisco, Santa Clara, San Mateo, and Santa Cruz) in northern California. In 2010, the population of this region was 6.8 million (~2% of the national population), and about 25% of the population was younger than 20 years; this percentage ranged from 19% for White NH to 33% for Hispanic White in San Francisco, and from 20% for White NH to 37% for Hispanic White in San José–Monterey (Table A.6). The racial and ethnic distribution in the age group 0–19 years for San Francisco was 34% White NH, 27% Hispanic White, 26% API, 12% Black, and less than 2% Native American, and for San José–Monterey was 40% Hispanic White, 28% White NH, 26% API, 4% Black, and less than 3% Native American.

The Greater Bay Area is noteworthy for its racial and ethnic diversity, with substantial Hispanic and Asian populations. Overall levels of education and income are higher than national averages. The San Francisco Bay Area hosts a major financial centre and Silicon Valley, which is known for technological innovation. Several universities attract students from other parts of the USA and abroad. This area has two major academic cancer centres, which have independent children's hospitals that provide state-of-the-art paediatric oncology and specialty care.

The Greater Bay Area Cancer Registry is funded through the NCI's SEER Program and the California Department of Public Health's Cancer Surveillance and Research Branch. The registry includes two regions: San Francisco–Oakland, which has been part of the SEER Program since 1973, and San José–Monterey, which has been part of the SEER Program since 1992. Both regions have contributed data to the statewide California Cancer Registry since 1988. The registry adheres to all SEER and NAACCR standards.

The registry is estimated to capture more than 98% of cancer diagnoses in residents. More than 90% of the registry's reports are received from hospitals, and the remainder are received from physicians and free-standing radiology facilities. Cases are also identified through routine review of electronic pathology reports and death certificates. Well-established data-sharing programmes with neighbouring cancer registries enable the identification of residents diagnosed or treated outside the coverage area.

The registry collects data on all in situ and invasive tumours, except basal and squamous cell skin carcinomas and in situ neoplasms of the cervix diagnosed after 1996. Data on benign and borderline CNS neoplasms have been collected since 2001. Data are collected on patient demographics, tumour characteristics, treatment, and survival.

All patients reported to the registry are followed up both actively and passively for vital status. Passive follow-up involves electronic linkages to vital statistics and other relevant databases. Through these methods, the registry maintains current follow-up information for more than 95% of patients with cancer.

The registry data are used primarily to investigate trends in cancer incidence, survival, tumour characteristics, and treatment. Registry data are routinely combined with data from the California Cancer Registry and the SEER Program. Every year, numerous investigators apply to access registry information for use in analytical epidemiological studies.

POPULATION AT RISK
See USA, above.

EDITORS' COMMENTS
In the tables, data from this registry are presented separately for San Francisco and San José–Monterey, to enable comparison with data in IICC-1 and IICC-2 (Table A.1). Data for San Francisco are also included in SEER-9, for White and Black (Table 6.1). In the IICC-3 book, data are included in the pooled USA and SEER-18 tables (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA, SEER, and California Cancer Registry, above.

Colorado Central Cancer Registry, 1998–2012

Randi K. Rycroft, Kieu Vu, Jack Finch

Colorado is located in the western USA; the state covers an area of 269 837 km^2. Colorado is divided into 64 counties, of which 17 are considered urban, 24 rural, and 23 intermediate. The climatic conditions are complex because the state's geography includes mountains, foothills, high plains, and desert. In 2010, the population was 5.0 million, and 27% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 39% for Hispanic White (Table A.6). The population is 86% urban. The racial and ethnic distribution in the age group 0–19 years was 61% White NH, 27% Hispanic White, 6% Black, 4% API, and 2% Native American. Colorado is

economically strong, with a per capita income of almost $52 000 in 2010. In 2013, 86% of the residents were covered by some type of health insurance. By 2015, the proportion of the covered population had increased to 93% after implementation of the Affordable Care Act; 97.5% of the population younger than 19 years is insured.

Paediatric oncology care is widely available throughout the state. In addition, the University of Colorado offers a Pediatric Hematology-Oncology Fellowship Program, which emphasizes excellence of clinical care for children with haematological or malignant disorders. Most paediatric patients are diagnosed and receive all care in Colorado.

The Colorado Central Cancer Registry is a programme of the Colorado Department of Public Health and Environment and covers the entire population of Colorado. The registry is funded mostly by federal funds through the CDC/NPCR. About 20% of the funding is from state general funds. About 25 000 incident cases per year are registered, and the registry has statewide population-based data from 1988 onwards (Table A.10). Most cases are reported by hospitals; additional data sources include free-standing treatment centres, pathology laboratories, interstate data exchange with other cancer registries, and selected physicians' offices. Each year, the registry links its database with state death files and hospital discharge files to obtain follow-up information and to identify potential missed case reports. It also links to the National Death Index every 2–3 years to obtain follow-up information. All registry data are collected in accordance with national cancer registration standards and practices. The registry maintains a rigorous quality control programme, and as a result, Colorado data consistently meet national standards for quality and completeness.

The registry produces an annual report on cancer incidence and mortality, which includes survival statistics, county-level data, and measures of early detection of disease. De-identified data are published online and can be interactively queried. The registry data are also used in many special studies, environmental risk analyses, cancer control programme evaluations, cancer care facility market analyses, and responses to enquiries from the public.

PUBLICATIONS

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Arend J, Bledsoe C, Vu K (2015). Cancer and poverty, Colorado 2001–2012. Denver (CO), USA: Colorado Department of Public Health and Environment, Colorado Central Cancer Registry.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The proportion of cases aged 19 years in the age group 15–19 years was high (25.9%) (Table A.9). See also USA and NPCR, above.

Connecticut Tumor Registry, 1993–2012

Lloyd Mueller, Cathryn Phillips

The state of Connecticut covers an area of about 14 357 km^2. In 2010, the total population was about 3.6 million (~1% of the national population). The state is very densely populated. Although Connecticut is one of the highest-income states in the USA, it has an unusually wide income gap between urban and suburban areas. About 26% of the population is younger than 20 years; this percentage ranged from 22% for White NH to 36% for Hispanic White (Table A.6).

In 2010, Hispanic and Latino residents of any race comprised 13.4% of the population. The proportion of the population that is White NH decreased from 98% in 1940 to 71% in 2010. The racial and ethnic distribution in the age group 0–19 years was 63% White NH, 16% Hispanic White, 15% Black, 5% API, and 1% Native American.

The Connecticut Tumor Registry contains records on all reported tumours diagnosed in the residents of the entire state since 1935 (Table A.10). The registry has been a member of the NCI's SEER Program since 1973; before then, it was a participant in the NCI End Results Program. The registry follows SEER coding and staging rules. Reporting of cancer cases to the registry by all licensed medical providers is mandated by state statute. The registry receives about 90% of its case reports from Connecticut hospitals and private laboratories. Other reports are received from independent ambulatory surgery, radiotherapy, and infusion therapy centres. In addition, the registry has reciprocal reporting agreements with all contiguous states and with those southern states that are recognized as typical winter holiday destinations for Connecticut residents, such as Florida.

The registry data are used by researchers for a wide range of studies aimed at furthering the understanding of cancer etiology, reducing cancer incidence and mortality, and improving the quality of cancer care, and for treatment cost-containment studies. The data are also used for public health assessments that identify specific population groups in which better screening and treatment is needed, and in the development of policy initiatives to reduce the burden of cancer in Connecticut.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. In the online tables, these data are also included in SEER-9 White, for comparison with IICC-1 and IICC-2 (Table A.1). See also USA and SEER, above.

Delaware Cancer Registry, 1998–2012

Heather Brown, Zeinab Baba, Betsy Cromartie

Delaware is the second smallest state in the USA by area. It is located in the north-east megalopolis region of the country and is bordered by the states of Pennsylvania, Maryland, and New Jersey. Delaware residents have access to Children's Oncology Group treatment centres, which have met the quality assurance standards established by the NCI, within Delaware as well as in the neighbouring states. In 2010, the total population of Delaware was 0.9 million, and about 26% of the population was younger than 20 years (~0.3% of the national population in this age range); this percentage ranged from 22% for White NH to 39% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 55% White NH, 29% Black, 11% Hispanic White, 4% API, and 1% Native American. An online report released by the United States Census Bureau, *2012 Small Area Income and Poverty Estimates*, shows a range of poverty rate estimates of 12.0–15.8%, which is below the median for the national population.

The Delaware Cancer Registry was founded in 1972 and legally established in 1980 (Table A.10) under the Delaware Cancer Control Act. The registry's mission is to ensure accurate, timely, and complete data for use in cancer prevention and control initiatives, including surveillance of cancer trends and investigation of patterns of care. The registry is part of the Comprehensive Cancer Control Program within the Chronic Disease Prevention Bureau of the Delaware Division of Public Health's Health Promotion and Disease Prevention Section. The registry is funded by the CDC/NPCR.

The Delaware Cancer Control Act requires all health-care providers and facilities diagnosing or treating cancer cases (including hospitals, physicians, pathology laboratories, and ambulatory surgery centres) to submit information on each case to the registry within 180 days. The entities currently reporting to the registry include eight hospitals, 10 state central cancer registries, 11 diagnostic laboratories, 14 free-standing ambulatory surgery centres, and 23 physicians' offices. Most cancer cases reported to the registry are submitted electronically, and the remaining cases are abstracted from paper sources. Data coding and file format standards set by the NAACCR are observed. Linkage with state of Delaware death certificates, the National Death Index, and the Social Security Death Index is performed regularly to update vital status. The registry achieved NAACCR Gold Certification for high-quality, timely, and complete cancer incidence data for more than 10 consecutive years.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The incidence rate of 193.3 per million for the age group 0–14 years was high, and the proportion of cases aged 19 years in the age group 15–19 years was also high (27.3%) (Table A.9). See also USA and NPCR, above.

District of Columbia Cancer Registry, 1998–2012

Alfreda Woods, Nitin Shivappa

The District of Columbia covers an area of about 177 km^2. It is divided into four quadrants (north-west, north-east, south-west, and south-east), and there are a total of eight wards within the four quadrants.

The District has four cancer centres: Georgetown University Hospital, George Washington University Hospital, Howard University Hospital, and Washington Hospital Center. All of them are located in the north-west quadrant.

The population increased by 5.2% from 2000 to 2010. In 2010, the total population was 0.6 million, and about 21% of the population was younger than 20 years; this percentage ranged from 13% for White NH to 26% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 63% Black, 22% White NH, 8% Hispanic White, 3% API, and less than 1% Native American. The Hispanic population is growing the fastest. Male and female residents are almost evenly distributed across the District (47.2% male and 52.8% female) and within each ward. Almost three quarters (71.7%) of the residents are younger than 49 years, and only 11.4% are aged 65 years and older.

Income distribution is unequal among the eight wards. About 26% of residents have an annual income of less than $20 000. The high cost of living in the District places households with annual earnings of less than $20 000 in poverty and those with annual earnings of less than $10 000 in extreme poverty. African American residents have the lowest median household income.

Almost 300 000 residents do not have a high school diploma (22% of those older than 25 years). The percentage of people with a college degree is highest in ward 3 (79%) and lowest in ward 8 (8%).

The District of Columbia Cancer Registry maintains a record of the occurrence of all malignant neoplasms and certain reportable benign conditions within the District. National collection of cancer surveillance data has been congressionally mandated since 1951. Since 1 January 1996, all cancers diagnosed and treated are reportable to the registry (Table A.10). Of the 270 386 cancer cases currently in the District of Columbia Cancer Registry, less than 1% are younger than 20 years. About 8200 new cases are added per year; of these, one third are residents of the District. The remaining cases are primarily

residents of the states of Maryland and Virginia who seek diagnosis or treatment in the District. The registry produces cancer burden reports and fact sheets, which are used to educate the community about cancer in the District and to encourage cancer researchers to use the registry data to improve cancer outcomes.

The priorities of the District's cancer programmes include supporting policy, studying the impact of environmental systems change, evaluating human papillomavirus (HPV) vaccination, securing sun safety, detecting radon exposure, examining the role of nutrition in cancer risk, planning survivorship care, and encouraging smoking cessation among survivors of cancer.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The incidence rate of 181.2 per million for the age group 0–14 years was high. The percentage of infants (aged < 1 year) in the age group 0–14 years was high (15.4%), and the proportion of cases aged 19 years in the age group 15–19 years was also high (31.5%) (Table A.9). The percentage of cases with an unknown basis of diagnosis (5.9%) was higher than that in any other geographical area of the USA (Table A.9). See also USA and NPCR, above.

Florida Cancer Data System, 1998–2012

Gary M. Levin, Brad Wohler

The state of Florida is located on the south-eastern peninsula of the USA. It is bordered by seas from the east to the west and is bordered by land only to the north. Tallahassee is the capital city, Jacksonville is the most populous municipality, and Miami is the most populous metropolitan area. The state is divided into 67 counties. About 17 million people (91% of the state total) live in 38 urban counties. The remaining 29 counties are rural. In 2010, the total population was 18.8 million, and 24% of the population was younger than 20 years; this percentage ranged from 20% for White NH to 33% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 48% White NH, 25% Hispanic White, 23% Black, 3% API, and less than 1% Native American.

More than 230 primary care facilities report data to the Florida Cancer Data System. Data are also collected from more than 350 ambulatory care facilities, 800 pathology laboratories, the State of Florida Vital Statistics, the State of Florida discharge database, and interstate data exchange agreements.

The registry is a legislatively mandated, statewide incidence registry and a joint project of the Florida Department of Health and the University of Miami Miller School of Medicine (UMMSM). The UMMSM has operated the registry since its inception in 1981 (Table A.10) under contract with the Florida Department of Health. The registry collects and codes data in accordance with national standards set by the NAACCR. The data collection is more than 95% complete. The registry is part of the CDC/NPCR and has achieved NAACCR Gold Certification.

The registry prepares annual reports of cancer incidence, highlighting trends and changes, and maintains a website for dissemination of tabular data. The registry also provides data for researchers.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Georgia Comprehensive Cancer Registry: State of Georgia, 1998–2012, and Atlanta Metropolitan Area, 1993–2012

A. Rana Bayakly, Chrissy McNamara, Debbie Chambers, Carol Crosby, LeRue Perry, Sheree Holloway, Kevin Ward, Lyn Almon, Judy Andrews, Robin Billet

The state of Georgia is located in the south-eastern USA. Atlanta is the capital and the largest city. In 2010, the total population of Georgia was 9.7 million, and about 29% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 40% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 49% White NH, 36.5% Black, 10.5% Hispanic White, 4% API, and less than 1% Native American.

The Georgia Comprehensive Cancer Registry covers the entire state. The purpose of the registry is to collect, analyse, use, and disseminate cancer incidence information. The Notifiable Disease Law mandates the reporting of certain diseases, including cancer. Since 1 January 1995 (Table A.10), all cancers indicated in the ICD-O in use with a behaviour code of 2 or 3 must be reported by all health-care providers in the state of Georgia. This applies to all facilities that provide diagnostic or treatment services for patients with cancer, including hospitals, outpatient surgical facilities, laboratories, radiology and medical oncology departments, and physicians' offices. In addition, the registry receives information on all Georgia residents diagnosed or treated in any of the 49 states of the USA, the District of Columbia, and the territories that signed the national data exchange agreement.

The registry has participated in the NPCR since 1995 and receives funding and guidance from the CDC. The

Georgia Department of Public Health has designated the Georgia Center for Cancer Statistics within the Rollins School of Public Health of Emory University as its agent for the purpose of collecting and editing cancer data. The NCI funded the Metropolitan Atlanta Cancer Registry through the SEER Program for cases diagnosed starting in 1975 (Table A.10), additional counties around the Atlanta Metropolitan Area as Rural Georgia (since 1992), and the remaining counties as Greater Georgia (since 2000). In 2010, the funding from the NCI and the CDC was combined to support the collection of cancer data statewide.

Registry data are used to help state agencies, healthcare providers, and Georgia residents monitor cancer incidence trends, plan and implement cancer control activities, develop public and professional education programmes, and stimulate cancer research.

PUBLICATIONS

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POPULATION AT RISK

See USA above.

EDITORS' COMMENTS

Data for the state of Georgia for 1998–2012 are reported in the pooled estimate for USA and NPCR. Data for the Atlanta Metropolitan Area for 1993–2012 are included in the pooled SEER-18 and SEER-9 tables, for comparison with IICC-1 and IICC-2 (Table A.1). Data from the expanded counties around the Atlanta Metropolitan Area (Rural Georgia) for 1993–2012 and the remaining counties in Georgia (Greater Georgia) for 2000–2012 are included only in the pooled estimate for SEER-18 (Table A.12). See also USA, NPCR, and SEER, above.

Hawaii Tumor Registry, 1993–2012

Brenda Y. Hernandez, Michael D. Green

Hawaii is the only state in the USA that is composed entirely of islands; it is geographically part of the Polynesian subregion of Oceania. It is the northernmost island group in Polynesia, occupying most of an archipelago in the central Pacific Ocean. The state encompasses almost the entire volcanic Hawaiian archipelago, which is spread over 2400 km. At the south-eastern end of the archipelago, the eight main islands are – in order from north-west to south-east – Niihau, Kauai, Oahu, Molokai, Lanai, Kahoolawe, Maui, and the Island of Hawaii. Hawaii's capital is Honolulu, which is located on the island of Oahu.

In 2010, the estimated population was 1.4 million, and 25% of the population was younger than 20 years; this percentage ranged from 14% for White NH to 39% for Hawaiian (Table A.6). Hawaii is the only state in the USA with an Asian majority. In 2010, the racial and ethnic distribution in the age group 0–19 years was estimated to be 34% Hawaiian or partly Hawaiian, 14% White, 9% Japanese, 18% Filipino, 6% Chinese, and 19% other.

The surveillance and registration activities of the Hawaii Tumor Registry are authorized by Hawaii state reporting statutes. The registry is funded mainly by the NCI's SEER Program, with additional support from the Hawaii State Department of Health and the University of Hawaii Cancer Center. The registry collects information on cancer in all residents of the state of Hawaii.

Most oncology-related paediatric care and case information is reported to the registry by the state's largest paediatric medical facility, which maintains a hospital-based cancer registry and is a programme approved by the American College of Surgeons Commission on Cancer. Paediatric case ascertainment is complete and of high quality; the registry follows established national data collection, coding, and reporting guidelines.

PUBLICATIONS

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Hernandez BY, Bordallo RA, Green MD, Haddock RL (2017). Cancer in Guam and Hawaii: a comparison of two U.S. Island populations. Cancer Epidemiol. 50(Pt B):199–206. https://doi.org/10.1016/j.canep.2017.08.005 PMID:29120826

POPULATION AT RISK

The counts for Hawaiians were provided by the registry in the requested detail. See also USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and SEER-18 tables in the IICC-3 book (Table 6.1), and a full table is also included for Hawaiian. Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. In the online tables, these data are also included in SEER-9 White, for comparison with IICC-1 and IICC-2 (Table A.1). For Hawaiian, the proportion of cases aged 19 years in the age group 15–19 years was high (25.3%) (Table A.9). See also USA and SEER, above.

USA, Hawaii, Hawaiian (1993-2012)

	Age group (years)	Males	Females
Person-years	0	58 244	55 225
	1-4	230 534	216 383
	5-9	274 337	259 296
	10-14	272 002	257 828
	15-19	257 925	241 672
	0-14	835 117	788 732
	0-19	1 093 042	1 030 404
Average annual population	0-14	41 756	39 437
	0-19	54 652	51 520

Please consult the quality indicators for this registry

Cancer Data Registry of Idaho, 1998–2012

Christopher J. Johnson, Randi K. Rycroft, Denise Jozwik

Idaho is a large state that covers an area of 216 500 km^2, but it is sparsely populated (the population density is 7.8 per km^2). In 2010, the estimated population was 1.6 million, and 30% of the population was younger than 20 years; this percentage ranged from 28% for White NH to 49% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 79% White NH, 15% Hispanic White, 2% Native American, 2% API, and 2% Black.

Idaho has four hospitals or hospital systems that have cancer programmes accredited by the American College of Surgeons Commission on Cancer. Nine facilities offer radiotherapy. Paediatric and adolescent oncology specialists are available in Idaho and in neighbouring states in the USA. The Cancer Data Registry of Idaho collects incidence and survival data on all patients with cancer who reside in or are diagnosed with or treated for cancer within the state. It is one of the oldest cancer registries in the country and predates the NCI's SEER Program. The registry started in 1969 and has been population-based since 1971 (Table A.10). Since 1994, the registry has enhanced its operations and increased its use of cancer registry data with funding from the CDC/NPCR. It is staffed by five employees, including three registrars certified by the United States National Cancer Registrars Association, an epidemiologist, and a database administrator.

The registry data are used for many purposes, including surveillance of cancer incidence rates, programme planning and evaluation, quality assurance, central registry systems development, responding to requests for information from hospitals, the media, and the public, and public health practice. Registry data are used in IRB-approved epidemiological and translational studies. Published reports of cancer incidence and mortality are available on the registry website (https://www.idcancer.org).

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Illinois State Cancer Registry, 1998–2012

Lori Koch, Tiefu Shen

Illinois is located in the mid-west region of the USA. The state has natural resources and a diverse economic base, with high agricultural productivity in the northern and central areas. In 2010, the total population of the state was 12.8 million, and more than 65% of the population lived in the Chicago metropolitan area. About 27% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 39% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 55% White NH, 21% Hispanic White, 19% Black, 5% API, and almost 1% Native American.

The Illinois State Cancer Registry is based in the Division of Epidemiologic Studies within the Office of Policy, Planning, and Statistics at the Illinois Department of Public Health. Cancer incidence data are available for more than 1.7 million invasive cases diagnosed in Illinois residents in 1986–2014. For more than 20 consecutive years, the registry has achieved NAACCR Gold Certification; it was also recognized as a Registry of Excellence in 2011–2014 by the CDC/NPCR. The registry is funded through both the NPCR and state support.

Cancer data are reported to the registry from 188 hospitals, 100 ambulatory surgical centres, 30 radiotherapy facilities, five Veterans Affairs facilities, 14 laboratories, and physicians who diagnose or treat cancer in their offices.

It is a core mission of the Illinois State Cancer Registry to promote high-quality research and provide better information for cancer control to address public concerns and questions about cancer. The registry annually publishes a public-use dataset along with state and county reports, responds to hundreds of requests for cancer information, and provides data for various research studies and cancer control programmes.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Indiana State Cancer Registry, 1998–2012

Laura Ruppert

Indiana is located in the mid-west area of the USA, in the Great Lakes region. The capital and largest city is Indianapolis. In 2010, the estimated population of Indiana was 6.5 million. The population is predominately White, urban, and middle class. In 2015, 14.5% of the state's population lived at or below the poverty level. In 2010, about 28% of the population was younger than 20 years; this percentage ranged from 26% for White NH to 43% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 76% White

NH, 13% Black, 8% Hispanic White, 2% API, and less than 1% Native American.

Indiana has two highly ranked paediatric hospitals: Riley Hospital for Children at Indiana University Health, and Peyton Manning Children's Hospital at St. Vincent Indianapolis Hospital, both located centrally in the state.

The Indiana State Cancer Registry covers the entire population of the state. It was established in 1985 to record all cases of malignant disease and other tumours and precancerous diseases required to be reported by federal law or federal regulation or the NPCR. The registry compiles information on all patients who are diagnosed with or treated for cancer in Indiana, as determined by the Indiana Department of Health. The registry began collecting cases in 1987 (Table A.10). Facilities report cancer cases to the registry within 6 months of first contact. The registry does not conduct active follow-up on cancer cases in the state registry, but twice a year it links with the Vital Statistics for Death Clearance and the state Breast and Cervical Cancer Program databases to identify missing cases.

The registry has been federally funded by the CDC since 1992, and it has achieved NAACCR Gold or Silver Certification since 1998. As a result, the Indiana State Cancer Registry has grown into a strong and robust central cancer registry. The collected data are used in epidemiological studies and to generate information needed to implement appropriate preventive and control measures.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Iowa Cancer Registry, 1993–2012

Charles F. Lynch, Charles E. Platz, Kathleen M. McKeen

The state of Iowa is located near the geographical centre of the USA and is part of the nation's agricultural heartland. The climate is humid continental, with an average annual temperature of 9.5 °C and average annual precipitation of 80 cm. A total of 92% of the state's land area is allocated to agriculture, ranking the highest in the country. In 2010, the population of Iowa was 3.1 million, and 27% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 45% for Hispanic White and 45% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 83% White NH, 8% Hispanic White, 6% Black, 2% API, and less than 1% Native American.

Cancer diagnostic and treatment services are widely available to the entire Iowa population through both in-state and out-of-state facilities. These include surgery, radiotherapy, chemotherapy, and other treatment modalities, such as immunotherapy.

Cancer data collection began statewide in 1969–1971 with the NCI's Third National Cancer Survey and resumed in 1973 as part of the NCI's SEER Program (Table A.10). The registry is located at the University of Iowa and works in collaboration with the Iowa Department of Public Health. Cancer became a reportable disease in Iowa in 1982. Cancer data for residents are obtained from 158 hospitals, clinics, and pathology laboratories located both within the state and bordering the state. Employees of the registry abstract data on laptop computers in specified geographical areas not covered by hospital cancer registrars. Continuous quality control involves a significant portion of the central registry operation. Cancer data are exchanged with 13 other states in the USA. The registry uses active and passive follow-up activities to obtain survival data. Passive follow-up activities include electronic linkage of data with death certificate information, driver's license files from the Iowa Department of Transportation, and epidemiological vital status data from the Social Security Administration. Active patient follow-up is conducted periodically to trace patients lost to follow-up. The registry obtains vital status information on more than 98% of all registered patients. Although some residents who leave the state for care are not identified and may be missed, completeness of case ascertainment is thought to be about 99%.

Policy-makers look to the registry to provide information about the burden of cancer and time trends in cancer incidence, stage of disease at diagnosis, survival, and mortality.

PUBLICATIONS

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POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. In the online tables, these data are also included in SEER-9 White, for comparison with IICC-1 and IICC-2 (Table A.1). The proportion of cases aged 19 years in the age group 15–19 years was high (25.4%) (Table A.9). See also USA and SEER, above.

Kentucky Cancer Registry, 1998–2012

Eric B. Durbin, Frances E. Ross, Bin Huang, Isaac Hands, Thomas C. Tucker

The Commonwealth of Kentucky is located in the south-eastern central region of the USA. Annual temperatures range from 5 °C to 30 °C. A large eastern area of the state is located within the Appalachian region. This region has high poverty rates, low literacy rates, and an unusually high cancer burden. In 2010, the total population was 4.3 million, and about 26% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 41% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 83% White NH, 11% Black, 4% Hispanic White, 2% API, and less than 0.5% Native American.

In Kentucky there are two hospitals that are affiliated with the Children's Oncology Group; both provide neuro-oncology, haematology, and stem cell transplantation services.

The Kentucky Cancer Registry is the population-based central cancer registry for the state. All health-care facilities that diagnose or treat cancer cases are required by state statute to report each case to the registry using the Cancer Patient Data Management System (CPDMS) developed by the Kentucky Cancer Registry. These facilities include all acute care hospitals and their outpatient facilities as well as free-standing treatment centres, non-hospital (private) pathology laboratories, and physicians' offices.

The data elements collected in the CPDMS include all required data items specified by the NPCR, SEER, and the American College of Surgeons, as well as some additional state-specific items. The complete dataset includes patient demographic information, case-specific data, treatment information, and follow-up information.

The registry requires active follow-up by Kentucky hospitals of all patients reported by those hospitals. The registry also conducts record linkages annually with the United States Social Security Administration, the United States Centers for Medicare and Medicaid Services, the National Death Index, and the Kentucky Department of Vital Statistics to update vital status information.

Registry data are submitted annually to the NAACCR for an objective evaluation of completeness, accuracy, and timeliness. Since 1999, the Kentucky Cancer Registry has achieved NAACCR Gold Certification.

Registry data are used for cancer research and to improve cancer prevention and control programmes in Kentucky. The registry submits data to the NPCR and to the United States Cancer Statistics expanded dataset, the United States Cancer Statistics county dataset, environmental health tracking, and the United States Central Brain Tumor Registry. In addition, the registry submits data to studies coordinated by IARC and the NCI. The registry also maintains a website, which includes interactive tools (https://www.cancer-rates.info) to calculate and display cancer incidence and mortality rates.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA, NPCR, and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA, NPCR, and SEER, above.

Louisiana Tumor Registry, 1998–2012

Lauren Maniscalco, Mei-Chin Hsieh, Xiao-Cheng Wu

Louisiana is located in the south-eastern USA. The state has a humid subtropical climate, and it is often affected by tropical cyclones. In 2005, two major hurricanes – Katrina and Rita – struck the south of the state and resulted in more than 2 million displaced people and more than 1500 fatalities. Louisiana residents were relocated across the country for temporary housing, and many have not returned.

In 2010, the population was 4.5 million, and 28% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 33% for Black and 33% for Native American (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 53% White NH, 40% Black, 4% Hispanic White, 2% API, and 1% Native American. One unique subpopulation is the Cajuns, descendants of French Canadians who are famed for their music, cuisine, and dialect. About 25% of residents live in rural areas. Louisiana has a lower socioeconomic status than the national average, as reflected by the state's income, poverty, and graduation rates. About 27% of people aged 0–18 years live below the federal poverty level (14% for White and 47% for Black). Both the infant mortality rate and the overall death rate in children are significantly higher than the national averages.

More than 100 hospitals provide cancer diagnosis and treatment for all ages, including children. Most of the hospitals with accredited cancer programmes offer radiotherapy services. About half of children with cancer receive diagnostic or treatment services at Children's Hospital of New Orleans. Several affiliate clinics of the large St. Jude Children's Research Hospital (in Memphis, Tennessee) are located throughout Louisiana. In 2015, about 45% of children living below the poverty level had Medicaid health insurance.

The Louisiana Tumor Registry is based at the Louisiana State University Health Sciences Center in New Orleans. The registry comprises a central office and eight regional offices. It receives funding from both the state of Louisiana and federal grants. The registry has about 50 employees, including research, technical, and administrative staff.

Louisiana law mandates all licensed health-care facilities and providers who diagnose or treat cancer to report new cases to the registry within 6 months of diagnosis regardless of state of residence. It also specifies strict data confidentiality procedures and exempts providers from liability for reporting to the registry.

About 90% of reportable abstracts are submitted electronically by hospital cancer registries in a standard format, and the registry staff members abstract the remaining cases. Other sources of reportable cases include pathology laboratories, radiology and oncology clinics, dermatology clinics, urology clinics, and free-standing surgical centres. Quality control procedures are conducted routinely. The registry collects all data items required by federal funding agencies (the NCI's SEER Program and the CDC/NPCR) and follows SEER coding guidelines. Data-sharing agreements are in place with 45 states to increase completeness of registration.

Incidence, mortality, survival, and prevalence data are published annually in the *Cancer in Louisiana* series (https://sph.lsuhsc.edu/louisiana-tumor-registry). Cancer incidence data at the census tract level are published in a separate annual series, *Cancer Incidence in Louisiana by Census Tract*. In addition, registry data are incorporated into several databases for public use, such as State Cancer Profiles (https://statecancerprofiles.cancer.gov). The registry data are also used for research, planning of cancer control, and evaluation of health services.

POPULATION AT RISK

Special processing procedures were used to estimate population for the areas of southern Louisiana affected by hurricanes Katrina and Rita. Estimates of migration into and out of the covered registration area are not possible. See also USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA, NPCR, and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA, NPCR, and SEER, above.

Maine Cancer Registry, 1998–2012

Molly Schwenn, Kathy Boris, Denise Yob

The state of Maine is located on the Atlantic coast in northern New England. It covers a large geographical area but has a small population (1.3 million in 2010). Maine is bordered by the provinces of Quebec and New Brunswick in Canada and by the state of New Hampshire in the USA. Maine is known for its natural attractions, which bring vacationers, retirees, and, more recently, immigrants to the state.

Maine has the oldest population of the states in the USA and has minimal racial diversity; almost 95% of the population is White NH. The proportion of people younger than 18 years decreased from 21% in 2010 to 19% in 2016, and the proportion of people aged 65 years and older increased from 16% in 2010 to 19% in 2016 (see also Table A.6). The racial and ethnic distribution in the age group 0–19 years was 92% White NH, 3% Black, 2% Hispanic White, 2% API, and 1% Native American. Maine has a small but important Native American population of about 9000 people in five tribal units.

The Maine Cancer Registry has covered the entire state since 1983 (Table A.10); since 1995, it has been funded by the NPCR. The size of the registry staff has decreased considerably in the past 10 years; it has a director and 1.5 full-time equivalent positions (certified tumour registrars). An epidemiologist and additional certified tumour registrars work for the registry part-time. The registry is funded by the state of Maine and the NPCR, with almost no increase in funding for more than a decade.

The registry submits about 9000 new cases per year to the NPCR and the NAACCR. The registry annually links the registry information with the federal Indian Health Service database to improve racial identification for the Native American population.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The incidence rate of 188.6 per million for the age group 0–14 years was high, and the rate of 200.3 per million for the age group 0–19 years was high (Table A.9). See also USA and NPCR, above.

Massachusetts Cancer Registry, 1998–2012

Susan T. Gershman, Richard Knowlton

The Commonwealth of Massachusetts is located in the mid-east region of the USA and borders the Atlantic Ocean. The capital of Massachusetts is Boston; more than 80% of the state's population lives in the Greater Boston metropolitan area. In 2010, the total population was 6.5 million, and 25% of the population was younger than 20 years; this percentage ranged from 22% for White NH to 37% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 70% White NH, 12% Hispanic White, 11% Black, 6% API, and 1% Native American.

Massachusetts has 68 acute care hospitals, four endoscopy centres, 10 surgical centres, 20 commercial pathology laboratories, 10 medical practice associations, six radiation oncology centres, 10 urology centres, and 13 dermatology centres. Patients with cancer also receive care from more than 1400 individual physicians, including 30 surgeons, 254 radiation oncologists, 214 urologists, 514 dermatologists, and 400 gastroenterologists. Massachusetts has several well-known cancer treatment facilities, and most residents receive treatment in Massachusetts.

The Massachusetts Cancer Registry covers the population of the entire state. The registry is located within the Office of Data Management and Outcomes Assessment at the Massachusetts Department of Public Health. It is funded by the CDC/NPCR (75%) and the Commonwealth of Massachusetts (25%). The registry staff includes a director, five operations technicians who ensure data acquisition and quality, two epidemiologists, two specialists for geographical information systems dedicated to special projects, a part-time data technician, and two systems analysts. The registry follows CDC/NPCR requirements for data collection, reporting, and sharing. The registry initiated reporting from non-hospital sources in 2001. It has achieved NAACCR Gold Certification for complete, timely, and high-quality data for at least 18 years. The Massachusetts Cancer Registry has also been recognized as a Registry for Surveillance and a Registry of Distinction by the CDC/NPCR.

The registry produces three annual reports: *Cancer Incidence and Mortality in Massachusetts*, *Cancer Incidence in Massachusetts: City and Town Supplement* (which contains information on cancer incidence for 351 cities and towns), and a preliminary data brief with 90% data completeness. It also produces special topic reports, which are published on registry-specific webpages of the CDC (e.g. https://statecancerprofiles.cancer.gov) and the NAACCR (e.g. https://www.cancer-rates.info/naaccr). The registry data are used for programme planning and evaluation, and by external researchers for epidemiological studies.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. Day of birth and day of incidence were unknown in half of the cases (Table A.8). See also USA and NPCR, above.

Michigan Cancer Surveillance Program, 1998–2012

Glenn Copeland, Georgetta Alverson

Michigan is located in the Great Lakes region in the mid-west area of the USA. The state capital is Lansing, and the largest city is Detroit. In 2010, the state's population was 9.9 million, and 27% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 42% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 70% White NH, 19% Black, 6% Hispanic White, 3% API, and 1% Native American.

The Michigan Cancer Surveillance Program (MCSP) began operation in 1982 and became a statewide registry in 1985 (Table A.10). The registry was funded by the state health department until 1994 and then jointly by the state and the CDC/NPCR beginning in 1995. The MCSP also includes the geographical area covered by the Metropolitan Detroit Cancer Surveillance System, which is funded by the NCI (see below). The MCSP has continuously required reporting of precancerous cervical lesions since 1985.

The MCSP was established to provide cancer incidence statistics for the state, to organize surveillance of cancer incidence, and to assist in the conduct of research on cancer risks, causes, and cancer control efforts.

The registry data have been used extensively to assess the impact of the HPV vaccine, which was introduced in 2006 for young females and then in 2014 for young males, to prevent HPV infection and to reduce HPV-associated cancer risk.

The MCSP coverage area has a large American Indian population, and the registry has also provided precise data on cancer risk in the tribal populations. This work is accomplished by linking tribal rosters to the statewide cancer incidence files, with exclusive tribal ownership and control of the resulting tribe-specific data.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The proportion of cases aged 19 years in the age group 15–19 years was high (25.1%) (Table A.9). Information on the Metropolitan Detroit Cancer Surveillance System is separate (see below). See also USA and NPCR, above.

Michigan, Metropolitan Detroit Cancer Surveillance System, 1993–2012

Ann G. Schwartz, Kendra Schwartz, Jennifer Beebe-Dimmer, Fawn D. Vigneau, Nancy Lozon, Patrick Nicolin

The Detroit metropolitan area, which consists of the city of Detroit and its surrounding area, is on the eastern side of the state of Michigan, on the border with Canada. The area of 5094 km^2 includes Macomb, Oakland, and Wayne counties. In 2010, the population was 3.9 million, and 27% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 40% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 58% White NH, 31% Black, 5% API, 5% Hispanic White, and less than 1% Native American. Foreign-born residents 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 national automobile manufacturing industry.

There are three children's hospitals and two NCI-designated Comprehensive Cancer Centers in the area. Many of the more than 60 hospitals and other facilities in the area also provide cancer care and have cancer research and treatment programmes.

The Metropolitan Detroit Cancer Surveillance System (MDCSS) is part of the Epidemiology Section within the Population Studies and Disparities Research Program of the Karmanos Cancer Institute and the Department of Oncology at the Wayne State University School of Medicine. The registry began in 1949 as a pathology registry for 25 collaborating hospitals. In 1973, the MDCSS became a founding participant in the NCI's SEER Program. This project was funded in whole or in part through federal funds from the NCI under SEER Contract No. HHSN261201300011I.

Cancer is a reportable disease under Michigan law. The MDCSS is the official designate of the Michigan Department of Health and Human Services (MDHHS) for cancer data collection in the Detroit metropolitan area. The MDCSS reports on incidence, first course of treatment, and survival. Data are collected by MDCSS abstracting staff from hospitals, private pathology laboratories, radiotherapy facilities, and selected clinics. Active follow-up is maintained annually for all living cases; requests for information are sent to physicians every 2 years. Hospital re-admissions are abstracted, and registry staff members also perform Internet searches for follow-up. Death certificate data for the state of Michigan are linked quarterly to update vital status and causes of death.

The MDCSS data are used extensively by Wayne State University faculty, who report directly to the MDCSS director. The MDCSS researchers frequently collaborate with other local, national, and international researchers and study cancer etiology, racial and ethnic disparities in cancer incidence and survival, and genetic and familial patterns of cancer occurrence. In addition, MDCSS data are frequently used by local area hospitals, health departments, and the MDHHS for planning, evaluation, and education purposes. The data are also used to address community concerns about cancer risk.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. In the online tables, these data are also included in SEER-9 White, for comparison with IICC-1 and IICC-2 (Table A.1). See also USA and SEER, above.

Minnesota Cancer Reporting System, 1998–2012

Judy Punyko, Amy Casey-Paal, Paula Lindgren, Mona Highsmith, Sally Bushhouse

Minnesota is located in the upper mid-west region of the USA, about halfway between the east and west coasts of North America. It borders Canada to the north. The state has two distinct continental climate types, and the north is 5–11 °C colder than the south. Major industries and sectors in Minnesota include biosciences, manufacturing, data centres, clean technology and renewable energy, banking and finance, health-care services, and agriculture and food production.

In 2010, the population was 5.3 million; 27% of the population was younger than 20 years (Table A.6), and 13% was aged 65 years and older. The percentage of the population younger than 20 years ranged from 24% for White NH to 43% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 76% White NH, 9% Black, 7% Hispanic White, 6% API, and 2% Native American. Between 1998 and 2012, net international immigration exceeded emigration to other states and resulted in positive population growth. The Somali and Hmong populations in Minnesota are now among the largest in the USA. Every year, 21 000 young adults move to Minnesota for higher education, and 29 000 students leave the state. Although Minnesota has a higher median household income than the national average, poverty rates are high for a large proportion of children of racial and ethnic minority populations, ranging from 20% for Asian to 50% for Black. Families with an income of less than 285% of the federal poverty level are eligible for medical coverage from public programmes.

The Minnesota Cancer Reporting System covers the entire state of Minnesota. It has been in operation since 1988 (Table A.10) at the Minnesota Department of Health. Until 2011, the registry collected diagnostic and related data on all MV malignancies and in situ tumours, in addition to CNS tumours of benign and uncertain behaviour. In 2012, the registration eligibility expanded to include cancers that were not MV. Certified tumour registrars abstract data from hospitals and pathology laboratories, and the central registry staff requests further information from clinics and physicians, to comply with NAACCR standards. Facilities located in bordering areas of neighbouring states report data to the registry on Minnesota residents who receive care in those facilities. Completeness is estimated to be close to 99%. Almost 70% of children with cancer aged 0–10 years receive care at one of two children's hospitals in Minneapolis and St. Paul. The sources of data for patients aged 10–19 years are more diverse. Quality assurance is conducted routinely. Passive follow-up of vital status is performed via record linkage with state and national death records.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the

threshold for numbers of cases, are available online, as specified in Table A.12. The MV% was high (99.3%), and, correspondingly, the percentage of cases with clinical diagnoses was low (0.5%) (Table A.9), because cases that were not MV were not reported until 2012. Therefore, the incidence rate may be slightly low. See also USA and NPCR, above.

Mississippi Cancer Registry, 2002–2012

Deirdre B. Rogers

The state of Mississippi is located in the south-eastern part of the USA. The state has the highest poverty rate, high disease rates, and the worst disease outcomes in the country. The state economy is growing but continues to lag behind the rest of the country. In 2010, the total state population was 3.0 million, and 29% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 36% for Native American and 36% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 50% White NH, 45% Black, 3% Hispanic White, 1% Native American, and 1% API. The proportion of people without health insurance decreased from 17% in 2013 to 12% in 2016. An estimated 4% of children younger than 18 years do not have health insurance, based on the 2008–2015 American Community Survey data.

The Mississippi Cancer Registry, which is located at the University of Mississippi Medical Center, covers the entire state. All facilities that provide cancer diagnostic and treatment services are required by law to report cancer cases to the registry. Data are received from hospitals, clinics, pathology laboratories, surgery centres, and radiology centres. Mississippi collects data on all cancers and benign or borderline conditions that are required by the CDC/NPCR. The registry also exchanges data with most other states in the USA to obtain data on Mississippi residents who seek care outside the state. The collected data consistently meet the NPCR standards for completeness and quality. The registry conducts follow-up through linkages with state vital records, the Social Security Death Index, and the National Death Index. The only children's hospital in the state, within the University of Mississippi Medical Center, provides a large portion of the oncology care for children in the state. In addition, many children travel to St. Jude Children's Research Hospital in the neighbouring state of Tennessee. The registry obtains data on those children through an exchange agreement with the Tennessee Cancer Registry.

The registry data are used to monitor trends in cancer incidence, plan comprehensive cancer control programmes, and conduct approved research studies. In addition, the registry provides data to the Mississippi State Department of Health to investigate disease clustering.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data for the period 2002–2012 are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Missouri Cancer Registry and Research Center, 1998–2012

Jeannette Jackson-Thompson

Missouri is located in the mid-west region of the USA. The capital city is Jefferson, and the largest urban areas are St. Louis, Kansas City, Springfield, and Columbia. In 2010, the state's population was almost 6.0 million, and 27% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 41% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 76% White NH, 16% Black, 5% Hispanic White, 2% API, and less than 1% Native American.

The Missouri Cancer Registry (MCR) is a state-mandated central cancer registry and is the base component of the Missouri Cancer Registry and Research Center (MCR-ARC), which is located on the campus of the University of Missouri and within the Department of Health Management and Informatics in the School of Medicine. The MCR is a collaborative partnership between the Missouri Department of Health and Senior Services and the University of Missouri. The MCR was established in 1972 when physicians at 12 hospitals around the state began voluntarily reporting new cases of cancer. Reporting of new cancer cases (inpatients only) was mandated by the state of Missouri in 1984, and the MCR became a population-based registry in 1985 (Table A.10). Since 1995, the MCR has received financial support from the CDC/NPCR, with a reference year of 1996. In 1999, Missouri cancer reporting statutes were expanded to include inpatient and outpatient hospital settings, physicians' offices, pathology laboratories, ambulatory surgical centres, residential care facilities and assisted living facilities, intermediate care facilities, skilled nursing facilities, and free-standing cancer clinics and treatment centres.

The MCR collects demographic, tumour, and treatment information on more than 30 000 new cases of invasive cancer per year. Currently, the MCR database contains about 600 000 invasive cases and more than 30 000 in situ cases diagnosed in 1996–2015, plus more than 300 000 invasive cases diagnosed before 1996. To ensure complete reporting of new cases, the MCR-ARC has data exchange agreements with all eight bordering states and more than 12 other states and conducts linkages with other databases (e.g. state vital records, the Missouri Department of Health and Senior Services' Patient Abstract System, the state hospital discharge database, the Social Security Death Index, the National Death Index) to capture missed cases and obtain additional information on previously reported cases.

The MCR has been recognized as a Registry of Excellence by the CDC/NPCR and has achieved NAACCR Gold Certification. The MCR-ARC maintains a website (https://medicine.missouri.edu/centers-institutes-labs/cancer-registry-research-center) to facilitate reporting to the central registry and to serve as an informational and educational data resource for the Missouri Department of Health and Senior Services and other health department staff, as well as researchers, physicians, educators, students, and members of the general public. The MCR-ARC also provides Missouri cancer incidence data to various agencies (e.g. the CDC, the NAACCR, IARC) for inclusion in national and international databases and publications.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Montana Cancer Control Programs, 1998–2012

Debbi Lemons

Montana is a rural state located in the north-west of the USA. In 2010, the population was 1.0 million and was predominantly White. About 25% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 49% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 83% White NH, 11% Native American, 4% Hispanic White, about 1% Black, and about 1% API.

The ageing population is not spread evenly across the state; this creates special challenges to meet public health-care objectives of service delivery despite vast distances and poor transportation.

The Montana Central Tumor Registry was mandated by law in 1979 and has been in operation since then (Table A.10). Federal funding for registry enhancement was initially granted in 1995 through the CDC/NPCR. The registry is funded with NPCR federal funds (80%) and state funds (20%).

Reportable cases are identified and collected from 52 hospitals, six cancer centres accredited by the American College of Surgeons Commission on Cancer, one Veterans Affairs Hospital, four independent pathology laboratories, 29 out-of-state cancer registries, physicians' offices, clinics, cancer treatment centres, and death certificates. About 6200 new cancer cases are diagnosed per year. Since 2000, reporting has been almost 100% complete. Most children with cancer are treated outside Montana.

The registry performs active lifetime follow-up of patients and conducts death linkage with the state's Office of Vital Statistics and the National Death Index.

As part of the programmes of the Chronic Disease Prevention and Health Promotion Bureau, the data generated by the cancer registry are used in conjunction with other surveillance data to better describe the burden of chronic diseases in Montana. These collaborations include cross-programme data analysis and programme evaluation projects.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Nebraska Cancer Registry, 1998–2012

Lifeng Li, Connie Ganz, Ming Qu

Nebraska is located in the Great Plains in the mid-west region of the USA. The state covers an area of 200 356 km^2, spanning about 690 km from east to west and 340 km from north to south. The capital city is Lincoln, and the most populous city is Omaha. In 2010, the population of Nebraska was 1.8 million, and about 28% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 45% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 75% White NH, 13% Hispanic White, 8% Black, slightly more than 2% API, and slightly more than 2% Native American.

The Nebraska Cancer Registry was founded in 1986 (Table A.10), when the Nebraska Unicameral Legislature authorized funding for a state cancer registry with a portion of funds generated by the state's cigarette tax. Since 1987, the registry has been operated by the Nebraska Department of Health and Human Services (NDHHS) in Lincoln, within the Division of Public Health. The establishment of the registry successfully combined the efforts of many Nebraska physicians, legislators, concerned citizens, and the Nebraska Medical Foundation, all of whom had worked for years towards this goal. Since 1994, the registry has received additional funding from the CDC. The registry data are collected and edited by registry staff in Omaha, under contract with the Nebraska Methodist Hospital. Analysis of registry data and preparation of the annual statistical report are the responsibility of the NDHHS.

The legislation that established the registry gave the state of Nebraska authority to establish and maintain a statewide cancer registry, to provide a central data bank of accurate, precise, complete, and current information to assist in the prevention, cure, control, and treatment of cancer. The statute requires all hospitals in the state to make medical records of patients with cancer available

to the department upon request. It also states that any medical doctor, osteopathic physician, or dentist in the state shall make this information available to the department upon request.

The purpose of the registry is to gather data that describe cancer incidence, type, stage at diagnosis, treatment, and survival for Nebraska residents. These data are put to a variety of uses both within and outside the NDHHS. Within the department, they are used to identify geographical patterns and long-term trends, to compare Nebraska data with those of the rest of the country, to investigate reports of possible cancer clusters, and to help plan and evaluate cancer control programmes. The registry has also provided data to many individuals, institutions, and organizations, including the NAACCR, the NCI, the American Cancer Society, the CDC, and the University of Nebraska Medical Center. The registry also contributes its data to several national cancer incidence databases. In recognition of the accuracy and completeness of the data that it has collected, the Nebraska Cancer Registry has achieved NAACCR Gold Certification for 21 consecutive years.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Nevada Central Cancer Registry, 1998–2012

Catherina Short, Carmen Ponce, Christine Pool

Nevada is located in the western USA. The large geographical area of the state is covered mainly by semi-arid desert. The state is divided into 17 counties; of these, only Clark, Washoe, and Carson City (also the state capital) are considered urban. The remaining 14 counties are rural or frontier; this creates pronounced geographical disparities. Almost 75% of Nevada's population lives in Clark County, where the Las Vegas–Paradise metropolitan area is located. The population increased by 13% between 2006 and 2015. In 2010, the population was 2.7 million, and about 27% of the population was younger than 20 years; this percentage ranged from 21% for White NH to 40% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 42% White NH, 35% Hispanic White, 12% Black, 8% API, and 2% Native American.

The geographical dispersion of the population creates many health-care delivery challenges in serving the residents of Nevada, especially those residing in rural and frontier areas. An estimated one third of the population resides in a federally designated primary medical care Health Professional Shortage Area. The average distance between acute care hospitals in rural Nevada and the next level of care (tertiary care hospitals) is 185 km. Cancer reporting in Nevada has traditionally relied primarily on data from acute care hospitals and, more recently, pathology laboratories. Of the 46 hospitals in Nevada, one third are considered rural or frontier hospitals, and of the remaining hospitals only five are certified by the American College of Surgeons Commission on Cancer. Cancers are often reported with a delay, and case reports are not standardized or complete when reporting cancer occurrence and treatment information. Only 5% of ambulatory health-care providers, physicians' offices, and treatment centres conduct active reporting.

The Nevada Central Cancer Registry is funded through the NPCR. Cancer is a reportable disease. Potential cancer cases are identified from hospitals, laboratories, physician specialty groups, and death records. Information from these and other sources is received electronically or as paper records. Cancer case information is registered in the registry database, linked, and consolidated by certified tumour registrars.

Tumours are coded according to the ICD-O in use (Table A.10), and multiple primary tumours are identified by a sequence number according to the SEER rules.

The registry regularly publishes incidence data. The registry data are a critical resource for surveillance, for the development of comprehensive cancer control programmes, and for health-care planning and interventions (https://dpbh.nv.gov/Programs/Office_of_Public_Healh_Informatics_and_Epidemiology_(OPHIE)).

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

New Hampshire State Cancer Registry, 1998–2012

Whitney Hammond, Judy Rees, Maria O. Celaya, Bruce Riddle

New Hampshire is located in the north-east of the USA. It is a rural state, with large open spaces in the north, but there are major population centres in the southern part of the state. Almost 60% of the population lives in urban areas. In 2010, the total population was 1.3 million, and about 25% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 42% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 90% White NH, 4% Hispanic White, 3% API, 2.5% Black, and less than 1% Native American.

New Hampshire has 26 reporting hospitals and two free-standing oncology centres. About 50% of cancer cases in people younger than 20 years are reported through data exchange agreements with other states;

many children with cancer who live in New Hampshire seek care in the neighbouring state of Massachusetts.

The New Hampshire State Cancer Registry (NHSCR) is a statewide, population-based cancer surveillance programme that collects incidence data on all cancer cases diagnosed or treated in the state. Since its inception in 1986 (Table A.10), the registry has operated through a contract between the Geisel School of Medicine at Dartmouth College and the New Hampshire Department of Health and Human Services (NHDHHS) in the Division of Public Health Services. As required by the state administrative rules, the registry collects reports from hospital registrars in all large hospitals. Hospitals with fewer than 105 cases per year generally do not have their own cancer registry, and NHSCR staff members conduct some of their reporting duties. The NHSCR also receives case reports from physicians' offices, free-standing radiology and oncology centres, out-of-state pathology laboratories, and other sources. In addition, the NHSCR receives case reports for New Hampshire residents who are diagnosed outside the state, based on data exchange agreements. The registry actively traces back the registered cases through death clearance trace-back and linkages to state death files and the National Death Index. A pathology audit is conducted at in-state pathology laboratories to verify case ascertainment. Audits of discharge diagnosis codes are also conducted. The registry is supported by the CDC/NPCR through a cooperative agreement awarded to the NHDHHS.

New Hampshire cancer statistics are summarized and reported annually. Reports are available nationally from United States Cancer Statistics and locally through the NHDHHS (https://www.dhhs.nh.gov/programs-services/disease-prevention/cancer/cancer-registry and https://wisdom.dhhs.nh.gov/wisdom/).

The registry data are used for public health planning and investigations, and data are made available for approved research through the NHDHHS (https://www.dhhs.nh.gov/).

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The incidence rate of 181.6 per million for the age group 0–14 years was high (Table A.9). See also USA and NPCR, above.

New Jersey State Cancer Registry, 1998–2012

Antoinette M. Stroup, Lisa E. Paddock, Stephanie M. Hill, Henry Lewis

New Jersey is located in the mid-Atlantic region of the north-eastern USA; it covers an area of 22 591 km^2. The state is ethnically and racially diverse. In 2010, the total population was 8.8 million, and 26% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 33% for Native American (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 53% White NH, 19% Hispanic White, 18% Black, 9% API, and 1% Native American. The population of New Jersey was increasing by 2% per year since 2010, notably in the Asian and Hispanic subgroups.

The New Jersey State Cancer Registry covers the entire state. The registry was established by state law and includes all cases of cancer diagnosed in New Jersey residents since 1 October 1978. Legal regulations require the reporting of all newly diagnosed cancer cases to the registry within 3 months of hospital discharge or within 6 months of diagnosis, whichever is sooner. Reports are made by hospitals, diagnosing physicians, dentists, and independent clinical laboratories.

The registry uses the data standards promulgated by the NAACCR and the SEER rules for multiple primaries. The registry has consistently received awards from the NAACCR, the NPCR, and SEER for having high-quality data. Registry data are publicly released about 18–24 months after diagnosis and are considered to be 99.5% complete.

The registry receives information from cancer registries that participate in the interstate data exchange programme, so that New Jersey residents who are diagnosed with or treated for cancer outside the state can be identified. Because of close proximity to large, specialized facilities in the states of Pennsylvania, Delaware, and New York, many New Jersey residents travel to these neighbouring states to receive care for paediatric and adolescent cancers.

The registry is funded by the NCI, the CDC, the state of New Jersey, and the Rutgers Cancer Institute of New Jersey.

Reports and data briefs are available through the New Jersey Department of Health (https://www.state.nj.us/health/ces/reports.shtml).

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA, NPCR, and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA, NPCR, and SEER, above.

New Mexico Tumor Registry, 1993–2012

Charles Wiggins, Virginia Williams, Angela Meisner, Marc Barry

New Mexico is located in the south-western USA. It is a large state that covers an area of 314 159 km^2. About one third of the population lives in the Albuquerque metropolitan area, and the remaining residents live in small cities, towns, villages, and rural areas. The capital and cultural centre is Santa Fe. Many Hispanic people residing in the state trace their ancestry to Spanish colonists who settled in the region several centuries ago. The median education and income levels in New Mexico are among the lowest in the country. In 2010, the total population was 2.1 million, and about 28% of the population was younger than 20 years; this percentage ranged from 19% for White NH to 37% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 53% Hispanic White, 28% White NH, 14% Native American, 4% Black, and 2% API.

Cancer care is provided by public and private hospitals in population centres throughout New Mexico and in neighbouring states. Community-based oncologists, surgeons, and other health professionals are also key providers of cancer care. Most preadolescent patients with cancer (95%) receive care from paediatric oncologists at the University of New Mexico Comprehensive Cancer Center.

The New Mexico Tumor Registry is a population-based cancer surveillance system that covers the entire state. The registry was established in 1966 and is a founding member of the NCI's SEER Program. Cancer surveillance in New Mexico is a collaborative effort of the New Mexico Tumor Registry, the New Mexico Department of Health, the federal Indian Health Service, and American Indian communities. Cancer surveillance is also supported by hospital-based cancer registrars, health-care providers, and administrators. The registry also routinely receives information from central registries and health-care providers in neighbouring states that serve New Mexico residents who travel outside the state for cancer care. Cancer surveillance in New Mexico is conducted in accordance with prevailing standards established by the SEER Program, the NAACCR, and others since 1975.

It is important to consider race and ethnicity when interpreting the registry's data, because cancer incidence, mortality, and survival vary (sometimes widely) among the diverse racial and ethnic groups. The registry maintains a robust research portfolio, and registry data are frequently used to support science-based research and evidence-based cancer control efforts. Statistics are routinely tabulated and disseminated through published reports and via the registry website. The registry also collaborates with the New Mexico Department of Health to address cancer-related concerns and public health issues.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. In the online tables, these data are also included in SEER-9 White, for comparison with IICC-1 and IICC-2 (Table A.1). See also USA and SEER, above.

New York State Cancer Registry, 1998–2012

Maria J. Schymura, Amy R. Kahn, Colleen G. Sherman

New York State is located in the north-eastern USA and covers a land area of 122 056 km^2. More than 40% of the total population of the state lives in New York City, and about 90% of the residents live in metropolitan areas, such as Buffalo, Rochester, Yonkers, and Syracuse. The state capital is Albany. In 2010, the total population was 19.4 million, and 25% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 33% for Native American (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 53% White NH, 22% Black, 17% Hispanic White, 8% API, and slightly more than 1% Native American.

Residents of New York State have access to 200 acute care hospitals, including 15 that are members of the Children's Oncology Group and three NCI-designated Comprehensive Cancer Centers.

The New York State Cancer Registry contains reports on all reportable tumours in the state's residents. The registry was established by public health law in 1940 and is the second oldest state tumour registry in the USA. The registry has been population-based since 1976 (Table A.10) and is NAACCR-certified for completeness.

The registry is located within the New York State Department of Health (NYSDOH) and is funded partly by the NYSDOH and partly by the CDC/NPCR. The registry has a director, field staff, coding staff, quality assurance staff, research scientists, computer programmer analysts, and geocoding and secretarial support staff; 25 staff members are certified tumour registrars.

State law mandates cancer reporting with full personal identifiers. The registry uses passive notification of reports from more than 300 sources, including hospitals, pathology and cytology laboratories, radiotherapy centres, ambulatory surgery centres, physicians' offices, and state vital records. Data are received electronically and are mostly pre-coded. Many quality checks are routinely applied to the data, and much effort is devoted to case consolidation.

New York State death certificates are electronically matched against registry files. Cancer deaths not previously reported to the registry are traced back to hospitals for complete diagnostic information. Cases not known to be deceased are also routinely matched against the National Death Index. Cause of death is recorded for all deceased registered patients. The registry routinely exchanges data with 38 other states, Puerto Rico, and the District of Columbia.

The registry prepares extensive annual reports of cancer incidence and mortality (https://www.health.ny.gov/statistics/diseases/cancer).

Within the NYSDOH, the registry data are used for cancer surveillance and programme planning. The NYSDOH Cancer Surveillance Program has direct access to the New York State Cancer Registry database for use in investigating possible cancer clusters and addressing community concerns. The registry data are routinely provided to other organizations within New York State for planning and evaluation of health services, grassroots advocacy, and generating etiological hypotheses. The registry data are used by researchers throughout the USA for epidemiological studies.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. In the online tables, these data are also displayed for SEER-9 White, for comparison with IICC-1 and IICC-2 (Table A.1). Day of birth was incomplete in 35% of the cases (Table A.8). See also USA and NPCR, above.

North Carolina Central Cancer Registry, 1998–2012

Chandrika Rao, Soundarya Radhakrishnan

North Carolina is located in the south-eastern region of the USA. The state is divided into 100 counties. The capital is Raleigh, which, along with Durham and Chapel Hill, is in the Research Triangle Park, the largest research park in the USA. The most populous municipality is Charlotte, which is the second largest banking centre in the USA after New York City.

In 2010, the estimated population was 9.5 million, and 27% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 41% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 57% White NH, 27% Black, 11% Hispanic White, 3% API, and 2% Native American.

The North Carolina Central Cancer Registry covers all residents of the state. It receives most of its cancer incidence data from hospitals and health-care facilities (hospitals, cancer treatment centres, and oncology surgical centres). Incidence data are also received from physicians' offices, pathology reports, interstate data exchange, hospice and nursing facilities, and death clearance cases.

The registry is funded through state appropriations and the CDC/NPCR. It became operational in 1987, and increased completeness of case ascertainment to more than 90% in 1990 (Table A.10). The North Carolina Central Cancer Registry is responsible for cancer surveillance, and its core mission is to collect timely data and to analyse and disseminate cancer data to public health agencies and advocates, legislators, policy-makers, researchers, state and national organizations, and residents of North Carolina. It plays an important role in developing data-driven objectives for the North Carolina Cancer Plan (2014–2020) and continues to serve as the key source of population-based data to assess the outcomes of cancer control efforts in the state.

The North Carolina Central Cancer Registry has been recognized as a Registry of Excellence by the CDC/NPCR for meeting the standards for data completeness and quality.

Caution is needed when comparing data, because incidence may be underreported in areas close to neighbouring states, especially for cancers that may not be diagnosed in hospitals.

The registry data are used in publications and are available on the State Center for Health Statistics website (https://schs.dph.ncdhhs.gov/data/cancer.cfm).

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

North Dakota Statewide Cancer Registry, 1998–2012

Susan Mormann, Mary Ann Sens, Yun Zheng, Xudong Zhou, Cristina Oancea

North Dakota is mainly a rural state; it is located in the mid-west region of the USA. The capital city is Bismarck, and the largest city is Fargo. In 2010, the population was 0.7 million, and about 26% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 46% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 84% White NH, 9% Native American, 3% Hispanic White, 3% Black, and 1% API.

The North Dakota Statewide Cancer Registry is located at the Department of Pathology within the School of Medicine and Health Sciences at the University of North Dakota. The registry is authorized by law to collect cancer data for the purpose of preventing or controlling the disease and to conduct public health surveillance as well as public health investigations and interventions. The registry was established in 1994, and collection of incidence and mortality data officially began in January 1997 through administrative ruling (Table A.10).

All health-care facilities, health-care providers, laboratories, and pathology departments that provide outpatient and inpatient diagnostic or treatment services for patients with cancer must report to the registry. About 93% of the incidence cases reported per year are obtained from the six major reporting facilities with cancer registry programmes. The rest of the data are obtained from out-of-state data-sharing agreements, death clearance processes, individual physicians' offices, clinics, and other sources.

All malignant neoplasms, in situ lesions, and benign tumours of the CNS are reportable, with the exception of basal and squamous cell skin carcinomas. Federal and state laws protect the confidentiality of the medical information received. To ensure accurate, complete, and reliable data, metafiles are reviewed and subjected to external audits, internal case finding, and re-abstracting audits. In published tables, the exact numbers are shown only in cells that contain 10 or more cases, to preserve confidentiality.

Incidence numbers and rates, analysed by stage and treatment, are used for cancer control strategies.

The North Dakota Comprehensive Cancer Program is a major user of registry data. Registry data are also used to fulfil data requests (both public and private), investigate possible cancer clusters, perform research analysis, and publish electronic annual reports.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Ohio Cancer Incidence Surveillance System, 1998–2012

Lynn Giljahn

Ohio is located in the mid-west area of the USA, in the Great Lakes region. The state takes its name from the Ohio River. The capital and largest city is Columbus. In 2010, the population was 11.5 million, and about 27% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 41% for Hispanic White. The racial and ethnic distribution in the age group 0–19 years was 76% White NH, 17% Black, 4% Hispanic White, 2% API, and less than 1% Native American.

The Ohio Cancer Incidence Surveillance System (OCISS) at the Ohio Department of Health collects and analyses cancer incidence data pertaining to all residents of the state of Ohio. The OCISS collects information on incident cases of cancer using reports from hospitals, physicians, laboratories, and outpatient ambulatory and radiotherapy centres. The data collected include patient demographics, cancer diagnosis, stage, and first course of treatment.

Together with a variety of partners within and outside the Ohio Department of Health, the OCISS works to reduce the burden of cancer (https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/ohio-cancer-incidence-surveillance-system/Cancer-Programs-ODH). OCISS publications are available at https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/ohio-cancer-incidence-surveillance-system/Data-Statistics.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Oklahoma Central Cancer Registry, 1998–2012

Raffaella Espinoza, Christy Dabbs, Marva Dement, Leslie Dill, Jessica Freeman, Judy Hanna, Kaela Howell, Susan Nagelhout, Christina Panicker

Oklahoma is located in the south-central region of the USA. Most of the state lies in an area referred to as Tornado Alley, which is characterized by frequent tornadoes. Oklahoma is mainly rural; 35% of the population lives in the two major metropolitan areas (Oklahoma City and Tulsa), and 16 of the 77 counties (~20%) are designated as rural by the United States Department of Agriculture. The state is rich in resources such as oil and natural gas and is known for the farming and livestock industry.

In 2010, the total population was about 3.8 million, and 28% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 42% for Hispanic White (Table A.6). Oklahoma has a large American Indian population; in the 2010 United States Census, 9% of residents identified as American Indian. The racial and ethnic distribution in the age group 0–19 years was 61% White NH, 14% Native American, 11% Hispanic White, 11% Black, and 2% API. An estimated 75% of the population of Oklahoma has reported having health insurance.

The Oklahoma Central Cancer Registry is located within the Oklahoma State Department of Health at the Center for Health Statistics. It is funded through a cooperative agreement with the CDC/NPCR. The registry maintains records of all cancers diagnosed or treated in Oklahoma since 1997 (Table A.10). To collect and maintain the data, the registry staff members work with a wide variety of facilities and physicians throughout the state. These activities are supported by state law requiring the reporting of cancer cases to the registry within 180 days of diagnosis. The registry database includes more than 366 000 reported cancer cases, and about 21 000 unique cancer cases are collected per year. The registry conforms to national data collection standards as recommended by the NAACCR. The Oklahoma Central Cancer Registry conducts an annual data linkage with the Oklahoma Vital Statistics death certificates, to update existing records. Cancer data are also linked with the federal Indian Health Service database to achieve more accurate racial identification. The registry staff members are dedicated to providing complete, timely, and high-quality data to clinicians, researchers, and public health officials for programme planning and resources allocation, as well as to support cancer research.

POPULATION AT RISK
See USA, above.

EDITORS' COMMENTS
Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Oregon State Cancer Registry, 1998–2012

Donald Shipley, Meena Patil

Oregon is located in the Pacific Northwest region of the USA, on the Pacific coast. The Columbia River delineates much of the northern boundary of Oregon with Washington State, and the Snake River delineates much of the eastern boundary with Idaho.

In 2010, the population was 3.8 million, and 25% of the population was younger than 20 years; this percentage ranged from 22% for White NH to 44% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 70% White NH, 18% Hispanic White, 5% API, 4% Black, and 3% Native American.

The Oregon State Cancer Registry began collecting cancer data in 1996 (Table A.10), after state legislation made cancer a reportable disease in August 1995. The mission of the registry is to provide information to design, target, monitor, facilitate, and evaluate efforts to determine the causes or sources of cancer in Oregon residents and to reduce the burden of cancer in Oregon. The registry and all its programme activities are funded and supported by the CDC/NPCR.

The registry receives information from a variety of sources, including hospital cancer registries, ambulatory surgical centres, physicians' offices, outpatient clinics, pathology laboratories, hospital medical records departments, cancer registries of neighbouring states in which Oregon residents have received diagnostic or treatment services, and state death certificate files. About 75% of cancer diagnoses are reported by established hospital cancer registries, and the remaining 25% are from other sources. The registry does not perform active follow-up of reported patients; information on patient survival is obtained primarily through regular record linkages with the state death certificate database, the Social Security Death Index, and the National Death Index.

The use of registry data for cancer prevention and control is a fundamental purpose of the Oregon State Cancer Registry. The registry conducts funded research and responds to requests for data from the media, legislators and policy-makers, individual physicians, concerned citizens, and collaborative partners.

POPULATION AT RISK
See USA, above.

EDITORS' COMMENTS
Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Pennsylvania Cancer Registry, 1998–2012

Wendy Aldinger

The Commonwealth of Pennsylvania is located in the mid-Atlantic region of the north-eastern USA. In 2010, the population was 12.7 million, and 25% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 39% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 73% White NH, 16% Black, 7% Hispanic White, 3% API, and less than 1% Native American.

According to the United States Census Bureau *Small Area Health Insurance Estimates*, the percentage of Pennsylvania residents younger than 19 years who have health insurance increased from 88% in 2008 to 91% in 2015.

The Pennsylvania Cancer Registry collects demographic, diagnostic, and first course of treatment information on all patients with cancer diagnosed and treated in health-care facilities in the state. Data collection as mandated by the Pennsylvania Cancer Control, Prevention, and Research Act was initiated in 1982, and statewide reporting became effective in 1985. Reporting of inpatients and outpatients who receive either definitive or supportive cancer treatment is mandatory. The registry receives funding through the CDC/NPCR. Through participation in the CDC/NPCR since its inception in 1994, the Pennsylvania Cancer Registry has significantly enhanced registry operations and has achieved NAACCR certification for meeting national standards of excellence for data completeness, quality, and accuracy.

The registry receives about 140 000 reports per year from 370 hospital and non-hospital reporting sources. After accounting for duplicates, there are almost 76 000 newly diagnosed cases per year. The registry exchanges data with all neighbouring states as well as those states that participate in the national data exchange agreement. Few cases are lost as a result of treatment outside Pennsylvania.

The registry data are used to produce statistics and incidence reports, for cancer research and surveillance activities, and for epidemiological and other special studies. State-specific incidence and mortality data are published annually in *Pennsylvania Cancer Incidence and Mortality* (https://www.health.pa.gov/topics/Reporting-Registries/Cancer-Registry/Pages/Cancer Registry.aspx). Enterprise Data Dissemination Informatics Exchange (EDDIE) is an interactive health statistics web-based tool for creating customized data tables, charts, maps, and county profiles (https://www.phaim1.health.pa.gov/EDD/Default.aspx). The cancer incidence data in this system are calculated from Pennsylvania Cancer Registry data.

POPULATION AT RISK
See USA, above.

EDITORS' COMMENTS
Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Rhode Island Cancer Registry, 1998–2012

David Rousseau, Lisa Garcia, Nancy Lebrun, Nicole Witherell

The state of Rhode Island is located in the New England region of the USA and includes part of the Atlantic coast. Providence is the state capital and the most populous city. In 2010, the state's population was 1.1 million. About 85% of the population resides in urban areas; about 15% of the state's population are of recent immigrant status. Rhode Island has a higher percentage of college students in the population than the national average. In 2010, about 25% of the population was younger than 20 years; this percentage ranged from 22% for White NH to 39% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 67% White NH, 15% Hispanic White, 12% Black, 4% API, and 1% Native American.

General health care in the region is provided by 11 privately funded acute care hospitals, one federally funded acute care veterans hospital, 25 community health centres for primary care, and several hundred private physicians' offices, which provide primary and specialty care. All 12 hospitals provide cancer care; all have cancer care committees, and their cancer programmes are approved by the American College of Surgeons. In addition, the state is served by two free-standing radiotherapy centres.

The Rhode Island Cancer Registry is an administrative unit of the Rhode Island Department of Health, and it covers the population of the entire state. The registry was established in 1986 (Table A.10). Under Rhode Island law, all newly diagnosed malignant neoplasms have been reported since October 1986, with the exception of basal and squamous cell skin carcinomas. Since 1998, benign CNS tumours are reportable. The registry is funded by the state and by the CDC/NPCR. It is run collaboratively by the Rhode Island Department of Health and the Hospital Association of Rhode Island. All cancer registries in the 12 acute care hospitals and the central registry conform to data collection standards adopted by the American College of Surgeons. Data are transmitted electronically between the reporting sources and the central registry The Rhode Island Cancer Registry conforms to NAACCR standards for central registry operations, including data reporting, editing, and transmission. Information on the residents who receive diagnostic or treatment services outside the state is reported from the states that participate in the National Interstate Data Exchange Agreement. Registry data have consistently met NAACCR quality control standards, and completeness is greater than 95%.

The registry produces official cancer statistics for Rhode Island, including annual reports and a series of data briefs used in planning of cancer control; it also supplies cancer data to researchers. Strict guidelines are used to protect patient confidentiality so that individuals cannot be identified. Special studies are performed regularly to support the planning and management of cancer control in the state and to assist with environmental health risk assessments.

POPULATION AT RISK
See USA, above.

EDITORS' COMMENTS
Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The incidence rate of 181.9 per million for the age group 0–14 years was high (Table A.9). See also USA and NPCR, above.

South Carolina Central Cancer Registry, 1998–2012

Susan Bolick, Deborah Hurley

South Carolina is located in the south-eastern USA. It is bordered to the south-east by the Atlantic Ocean. In 2010, the total population was 4.6 million; from 1998 to 2012, the population increased by 20%. During the same period, the population in the age group 0–19 years increased by 7%, and the percentage of Hispanic residents in this population increased from 2% to 8%. In 2010, about 27% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 38% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 57% White NH, 34% Black, 6% Hispanic White, 2% API, and less than 1% Native American.

The South Carolina Central Cancer Registry was established in 1994 with funding from the CDC/NPCR; it covers the entire state. Population-based data were produced from 1996 onwards (Table A.10). Data sources for childhood and adolescent cancer cases include acute care hospitals, especially those specializing in treatment of childhood and adolescent cancers, and private medical oncology and radiation oncology centres. Cases identified by pathology laboratories are captured throughout the state, and this supplements case finding from inpatient and outpatient hospitals and treatment centres. The registry is a member of the National Interstate Data Exchange Agreement; thus, residents who receive diagnostic or treatment services outside the state are also registered.

All malignant tumours are collected, with the exception of basal and squamous cell carcinomas in non-genital

skin sites. The SEER rules are used to determine multiple primaries.

Completeness of case ascertainment was greater than 95% of the expected number of cancers (for all ages) for South Carolina. All CDC and NAACCR data quality criteria were met. Passive follow-up is conducted annually through linkage to vital record death files for the state. Any missed cases identified through death certificate review are confirmed and added as either a missed case or a DCO case.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The proportion of cases aged 19 years in the age group 15–19 years was high (25.1%) (Table A.9). See also USA and NPCR, above.

South Dakota Cancer Registry, 2001–2012

Kay Dosch

The state of South Dakota, which is named after the Lakota and Dakota Sioux Native American tribes, is located in the mid-west region of the USA. Pierre is the state capital, and Sioux Falls is the largest city. In 2010, the state's population was 0.8 million, and 28% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 47% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 78% White NH, 15% Native American, 3% Hispanic White, 3% Black, and 1% API.

Seven hospitals in South Dakota have cancer registries. Five of these have cancer programmes approved by the American College of Surgeons Commission on Cancer.

The South Dakota Cancer Registry collects information on all resident patients with cancer, as well as on all individuals who receive cancer diagnostic or treatment services in the state. All health-care providers in South Dakota who diagnose or treat patients with cancer are required to report to the registry.

The registry is located within the South Dakota Department of Health. The reference year for the registry is 2001 (Table A.10). It is funded by the CDC/NPCR and has two full-time staff positions: a registry coordinator and a data manager. In addition, the chronic disease epidemiologist, team leader, and administrator of the South Dakota Department of Health each dedicate 10% of their time to the registry.

The South Dakota Cancer Registry data meet the timeliness, completeness, and quality standards of the NPCR and the NAACCR. In addition, the registry data meet the criteria for inclusion in the *United States Cancer Statistics* and *Cancer in North America* publications. The state has implemented an HPV prevention campaign that promotes the HPV vaccine.

The registry data are used for surveillance of cancer incidence and mortality rates, programme planning and evaluation, epidemiological studies, and investigation of possible cancer clusters. The cancer prevention and control activities support the goal of reducing the cancer burden in South Dakota.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The proportion of cases aged 19 years in the age group 15–19 years was high (28.6%) (Table A.9). The percentage of cases with an unknown basis of diagnosis was high (3.2%) (Table A.9). See also USA and NPCR, above.

Tennessee Cancer Registry, 1999–2012

Martin Whiteside, Anne Llewellyn

Tennessee is located in the south-eastern region of the USA. It borders eight other states: Kentucky, Virginia, North Carolina, Georgia, Alabama, Mississippi, Arkansas, and Missouri. The capital and the largest city is Nashville. In 2010, the state's population was 6.3 million, and about 26% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 40% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 70% White NH, 22% Black, 6% Hispanic White, 2% API, and less than 1% Native American.

The Tennessee Cancer Registry registers both residents and non-residents who receive cancer diagnostic or treatment services within the state. The registry was established by an act of the Tennessee General Assembly in 1983. The Tennessee Cancer Registry is based in the Department of Health within the Division of Public Health Assessment. The director is responsible for the general operations of the registry, and the programme manager is responsible for the day-to-day operations. The Tennessee Cancer Registry has registered more than 1 million patients with cancer since 1986 (Table A.10).

The registry employs 13 full-time staff, including 10 certified tumour registrars. The registry is funded through State of Tennessee General Assembly appropriations and a cooperative agreement with the CDC. Currently, the registry staff members process more than 45 000 abstracts per year. Most abstracts are completed by hospital or other health facility staff and are subsequently submitted to the registry. Case information reported from medical laboratories and through the death clearance process is abstracted by certified tumour registrars. The registry also exchanges data with all neighbouring states and other reciprocating states at least twice a year.

The registry data are used to support numerous research activities. Annually, cancer data are included in the *Cancer in Tennessee* report, which is mandated by law (https://www.tn.gov/content/dam/tn/health/program-areas/reports_and_publications/2019_Cancer_Report.pdf).

The registry conducts various research studies, including investigations of possible cancer clusters. One example of external research is monitoring the development of cancer as a side-effect in people who have taken or are currently taking certain medications. The registry currently administers more than 20 IRB-approved studies.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Texas Cancer Registry, 1998–2012

Melanie Williams

Texas is a large state located in the south-central region of the USA. The climate varies widely, from arid in the west to humid in the east. The state is divided into 254 counties and covers an area of 676 585 km^2. The population density is 37 per km^2. In 2015, almost 18% of people in Texas lived below the poverty level, 17% lacked health insurance, and 17% lived in rural areas. There was one primary care physician per 1708 people. Cancer treatment services are located primarily in large metropolitan areas and are internationally recognized for their high-quality care.

In 2010, the state's population was 25.1 million, and about 30% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 38% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 45% Hispanic White, 35% White NH, 14% Black, 4% API, and 1% Native American.

The Texas Cancer Registry is based in Austin. The registry is funded by the CDC and the Cancer Prevention Research Institute of Texas. The registry combines active and passive surveillance methods to collect, maintain, and disseminate high-quality cancer data. The registry receives reports from more than 500 hospitals, cancer treatment centres, ambulatory surgery centres, and pathology laboratories across Texas, including 15 licensed paediatric facilities. Confidential cancer reporting without informed consent is mandated by state law. During the reporting period, all hospitals used ICD-9 codes for identification of reportable cases and ICD-O-3 codes for case abstraction. The registry follows SEER guidelines.

The registry data have been population-based since 1995 (Table A.10); since 2006, the data have met the highest quality standards (90–95% completeness) as defined by the NAACCR and the CDC/NPCR. Vital status is ascertained annually from the State Department of Vital Statistics and the National Death Index. Follow-up of patients is also ascertained through linkage with the Social Security Death Index and LexisNexis. In 2016, the registry received more than 190 000 reports of cancer; of these, more than 12 000 were for non-residents, reflecting the high demand for cancer care available in Texas. These reports are forwarded to other state cancer registries and make a significant contribution to the overall completeness of the national cancer surveillance system. The collected data are used to monitor incidence, mortality, and survival trends in Texas. The Texas Cancer Registry conducts data analyses to address community concerns about possible cancer clusters. It also provides data to citizens, community leaders, legislative representatives, the National Breast and Cervical Cancer Early Detection Program, and researchers. Currently, the registry supports more than 60 IRB-approved research projects, which together receive more than $91 million in federal and state grants.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. Day of incidence was incomplete in 13% of the cases (Table A.8). See also USA and NPCR, above.

Utah Cancer Registry, 1993–2012

SuAnn McFadden, Judy Ou, Jennifer Anne Doherty

Utah is a landlocked state in the western USA. Although the state is mostly rural, 80% of the population lives in an urban area along the Wasatch Front, in northern Utah. In 2010, the population was 2.8 million, and about 35% of the population was younger than 20 years; this percentage ranged from 33% for White NH to 48% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 78% White NH, 15% Hispanic White, 3% API, 2% Black, and 2% Native American. Utah has 51 hospitals, two radiology clinics, and numerous nursing homes and hospice care clinics.

The Utah Cancer Registry has covered the state since 1966 (Table A.10). The registry operates under the Utah Cancer Reporting Rule, which requires reporting of each case of cancer or reportable benign tumour diagnosed or treated in Utah. Cancer cases are reported to the registry through electronic pathology reporting, submission of NAACCR abstracts, and through paper pathology records. The registry works with all hospitals and medical centres that treat cancer to ensure 100% reporting.

The registry promotes public health in Utah by maintaining cancer data, which enable the monitoring of

trends in incidence and mortality as well as the evaluation of prevention and control measures. One of the major functions of the Utah Cancer Registry is to serve as a resource for researchers, physicians, hospitals, and the Utah Department of Health. The registry also provides local data to national agencies, including the NCI, the American Cancer Society, and the NAACCR, for the purpose of generating national cancer statistics. The registry also serves as an educational and data resource for physicians and institutions, stimulates research into all aspects of cancer in Utah, and promotes state-of-the-art cancer diagnosis and treatment.

PUBLICATIONS

Sweeney C, Herget KA, Otto VY, McFadden S, Millar MM (2016). Cancer in Utah: an overview of incidence and mortality 2004–2013. Utah Cancer Registry.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. In the online tables, these data are also included in SEER-9 White, for comparison with IICC-1 and IICC-2 (Table A.1). The proportion of cases aged 19 years in the age group 15–19 years was high (25.1%) (Table A.9). See also USA and SEER, above.

Vermont Cancer Registry, 1998–2012

Alison Taft Johnson

Vermont is located in the New England region of the north-eastern USA. The state capital is Montpelier. About 39% of the population lives in urban areas. In 2010, the state's population was 0.6 million, and about 24% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 46% for Black (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 93% White NH, 3% Black, 2% Hispanic White, 2% API, and less than 1% Native American.

General health care in the region is provided predominantly by 15 hospitals, including a Veterans Affairs Medical Center. This is supplemented by private practitioners and one outpatient radiotherapy facility. About 93% of Vermont residents have health insurance.

The Vermont Cancer Registry is located within the Vermont Department of Health, and it covers the population of the state. It is funded by the CDC/NPCR and receives in-kind support from reporting hospitals. The registry is staffed by a full-time director, a health data administrator, an education and quality coordinator, and a public health analyst.

Cancer reporting by health-care facilities and health-care providers is mandatory. Interstate data exchange agreements exist with all bordering states and the state of Florida. Electronic editing, visual editing, and hospital auditing are all used as quality assurance strategies.

The registry data are linked with the state death file annually. Unmatched records are traced back with data providers to determine reportability. Records that are not traced back are recorded as DCO cases. The registry data are also linked with the National Death Index annually. Vital status and date of last contact are updated for all deceased patients. Registry data are estimated to be at least 95% complete at 24 months after the close of the diagnosis year.

The Vermont Cancer Registry, in collaboration with Vermont cancer programmes, publishes reports that include age-adjusted incidence rates, stage at diagnosis, and age-adjusted mortality rates using SEER site groups and, where applicable, stratified by sex and geographical area.

The registry data are used for planning and evaluation of cancer control objectives. Reports are published, with an emphasis on screening-amenable cancers (e.g. breast, cervical, colorectal) diagnosed at a late stage and cancers associated with modifiable risk factors (e.g. tobacco use, obesity, HPV infection).

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. The proportion of cases aged 0–14 years in the age group 0–19 years was slightly low (59.8%) (Table A.9). See also USA and NPCR, above.

Virginia Cancer Registry, 1998–2012

Jim Martin, Jayne Holubowsky, Leslie R. Hoglund

The Commonwealth of Virginia is located in the mid-Atlantic region of the USA, between the Atlantic coast and the Appalachian Mountains. The geography and climate of Virginia are shaped by the Blue Ridge Mountains and the Chesapeake Bay. The population was 8.0 million in 2010 and had increased by 5% by 2016.

Racial and social health disparities exist in Virginia. In 2014, about 12% of residents did not have health insurance. The unemployment rate was 4%, well below the national average. The largest minority group is Black (20%); this group has a higher rate of premature deaths than the White population. The Powhatan, a nationally recognized Native American tribe, comprises 0.4% of the population. In 2010, about 26% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 35% for Hispanic White (Table A.6). The racial and

ethnic distribution in the age group 0–19 years was 60% White NH, 24% Black, 9% Hispanic White, 7% API, and less than 1% Native American.

The Virginia Cancer Registry is part of the Department of Health within the Office of Family Health Services of the Division of Population Health Data. Data are collected from hospitals, laboratories, clinics, nursing homes, and physicians' offices. About 91% of the case records are electronic, and the rest are paper records. All cases are coded according to the NPCR standards, which include the seventh edition of the *AJCC Cancer Staging Manual* and the *SEER Summary Staging Manual 2000*. The Collaborative Stage Data Collection System was used for cases registered since 2004. Data submission to the NPCR at 24 months after the year of diagnosis is at least 95% complete; additional cases were added subsequently. No systematic follow-up is performed, with the exception of death clearance from the Virginia Vital Statistics Office.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Washington State Cancer Registry, 1998–2012

Mahesh Keitheri Cheteri

Washington State is located in the Pacific Northwest region of the USA. The state is bordered by Canada to the north. In 2010, the state's population was 6.7 million, and 26% of the population was younger than 20 years; this percentage ranged from 23% for White NH to 43% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 65% White NH, 16% Hispanic White, 10% API, 7% Black, and 3% Native American.

The Washington State Cancer Registry is based in the Washington State Department of Health and is responsible for the collection of all reportable conditions within the state. The registry is funded by the CDC/NPCR and state general funds.

Since 1992, state law requires hospitals and health-care professionals to submit case information to the registry within 6 months of diagnosis or first treatment visit. The registry also reviews pathology reports to ensure complete case capture. Death certificates are reviewed annually to update case records and vital status and to trace back potentially missed cases. The registry follows the coding guidelines set by the NAACCR.

The registry transmits electronic data to the CDC annually using a standardized NAACCR record layout and coding system. The Washington State Cancer Registry has consistently met or exceeded the NPCR data quality criteria for all cancer sites and ages. Registry data are used to support the work of public health professionals, health-care professionals, and researchers. The data are also used to support investigations of possible cancer clusters. Annual reports on cancer in the state are available from https://fortress.wa.gov/doh/wscr.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. Information from the Seattle–Puget Sound Registry is shown separately (see below). Day of incidence was incomplete in 11% of the cases (Table A.8). See also USA and NPCR, above.

Washington State, Seattle–Puget Sound Registry, 1993–2012

Stephen M. Schwartz, Christopher I. Li, Mary S. Potts, Jennifer L. Hafterson

Puget Sound extends along the north-western coast of Washington State in the USA; it is an inlet of the Pacific Ocean and is part of the Salish Sea. The reference geographical area includes 13 counties – Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pierce, San Juan, Skagit, Snohomish, Thurston, and Whatcom – with a total population of 4.6 million in 2010. Of these, the most populous counties are King (where Seattle is located; 43% of the total population), Pierce (where Tacoma is located; 17%) and Snohomish (where Everett is located; 16%). These three counties are adjacent to each other and form the larger Seattle–Tacoma–Everett metropolitan area. The remaining 24% of the population is distributed across the other 10 counties, each of which contains less than 6% of the total reference population. In 2010, about 25% of the population was younger than 20 years; this percentage ranged from 22% for White NH to 40% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 65% White NH, 12% API, 12% Hispanic White, 9% Black, and 3% Native American. Patients with cancer have access to the most advanced diagnostic and treatment facilities throughout the catchment area.

The Seattle–Puget Sound Registry is operated by the Cancer Surveillance System (CSS). The CSS is located within the Fred Hutchinson Cancer Research Center (FHCRC) and is funded primarily by the SEER Program and partly by the FHCRC and the Washington State Department of Health. Under the SEER Program, the registry provides incidence and follow-up data on all newly diagnosed malignancies occurring in residents of the 13 counties. The registry's 30 highly trained technical staff

members are supported by information technology and administrative personnel. The registry has collected cancer cases since 1974 (Table A.10), with voluntary participation by all hospitals, pathology laboratories, and radiology facilities. In 1992, cancer became a reportable disease in Washington State.

Incidence, treatment, and survival data are collected and coded by CSS staff using standardized SEER Program definitions. Data quality is promoted by continuous training of all staff using SEER*Educate, a web-based platform tailored for registrars to improve their technical skills and use of various editing packages and auditing procedures.

The CSS performs active case finding from data sources provided by hospitals, clinics, pathology laboratories, radiotherapy facilities, dermatology offices, and death certificates. Case finding is performed by CSS staff, independent of the case finding performed by hospital registry staff. Most pathology reports are obtained electronically, and all information is stored in the database. Abstraction and coding of medical records is performed primarily by hospital registry staff. Visual editing, case consolidation, and quality control activities are performed by CSS staff. Passive follow-up methods are used. Death clearance and elimination of duplicate registrations are performed annually.

The CSS provides monthly reports to reporting hospitals. Identifiable information is reported only to the reporting physician or institution, to FHCRC investigators conducting IRB-approved research, and to the Washington State Department of Health. Statistical reports for publication contain no identifying data. Anonymous patient-level data and aggregate information are released to scientists working at the local, regional, national, and international levels through SEER and https://www.cancer-rates.info.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and SEER-18 tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. In the online tables, these data are also included in SEER-9 White, for comparison with IICC-1 and IICC-2 (Table A.1). See also USA and SEER, above.

West Virginia Cancer Registry, 1998–2012

Myra Fernatt, Alana G. Hudson

West Virginia is located in the eastern part of the USA and entirely within the Appalachian region. The climate ranges from hot summers to cold, snowy winters. Coal mining, logging, and tourism are the leading industries. Almost 82% of the population aged 25 years and older has a high school or higher education level. The per capita income is lower than the national average, and the median age is higher. West Virginia is a rural state; less than half of the population lives in urban areas. About 86% of the population is covered by health insurance. In 2010, the population was 1.9 million, and about 24% of the population was younger than 20 years; this percentage ranged from 22% for Native American to 38% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 92% White NH, 5% Black, 2% Hispanic White, 1% API, and 0.2% Native American.

In October 2011, 51 of the 55 counties in West Virginia were classified by the United States Department of Health and Human Services as medically underserved. West Virginia has 52 hospitals, 12 of which have cancer programmes approved by the American College of Surgeons Commission on Cancer. Compared with the national population, West Virginia has higher levels of cancer risk factors, including tobacco use and obesity.

The West Virginia Cancer Registry covers the entire state. It is funded by the state and the CDC/NPCR and has 10 full-time staff members. The registry receives electronic reports from hospitals with cancer registries and provides abstracting services to other hospitals and physicians' offices. No special emphasis was placed on the reporting of childhood cancers. Although the registry does not conduct patient follow-up, linkages are conducted with death certificate data and breast and cervical cancer screening programme data. The West Virginia Cancer Registry performs electronic edits on all data and visual editing on at least 10% of cases from each reporter. The registry achieved the highest NAACCR certification level for the incidence years of 1997–2012.

The West Virginia Cancer Registry publishes annual reports on cancer incidence and mortality, conducts investigations of possible cancer clusters, performs analyses for special projects, promotes the use of registry data in planning and evaluation of cancer control activities, and makes anonymized data available for approved research.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Wisconsin Cancer Reporting System, 1998–2012

Angela Whirry-Achten, Jeffrey Bond, Laura Stephenson, Mary Foote, Robin Malicki

The state of Wisconsin is located in the north-central part of the USA, in the mid-west area and the Great Lakes region. The state capital is Madison, and the largest city is Milwaukee. The state is divided into 72 counties. In 2010, the total population was 5.7 million, and 26% of the population was younger than 20 years; this percentage ranged from 24% for White NH to 43% for Hispanic White (Table A.6). The racial and ethnic distribution in the age group 0–19 years was 76% White NH, 10% Black, 9% Hispanic White, 4% API, and less than 2% Native American. According to the Wisconsin Department of Health Services, the number of people aged 0–17 years decreased by about 3% from 2010 to 2015; this has financial, educational, and health-care allocation implications.

The Wisconsin Cancer Reporting System is a part of the Wisconsin Office of Health Informatics at the Division of Public Health. It is funded through the NPCR and Wisconsin state general purpose revenue.

The Office of Health Informatics is the primary public health entity that captures, organizes, and houses the large, statewide, population-based public health surveillance data systems in Wisconsin, including the birth and death registries, cancer and violent death reporting registries, hospital inpatient records, hospital emergency department visit logs, and census files. The registry is guided by statutory mandate to collect, process, manage, and analyse cancer data on state residents, as provided by the reporting hospitals and physicians. It has data exchange agreements, encompassing both incoming and outgoing data, with 46 central cancer registries of other states and with 29 hospitals in the neighbouring Minnesota, because the Minnesota Cancer Reporting System is not statutorily permitted to exchange data with other states. Although the smaller health-care facilities in Minnesota voluntarily reported to the Wisconsin Cancer Reporting System, cases from at least one large Minnesota health-care facility are missing for 2010–2012. Therefore, some Wisconsin residents who receive diagnostic and treatment services in Minnesota may be missed by the Wisconsin Cancer Reporting System, and this should be considered when interpreting incidence rates.

The registry publishes cancer incidence, mortality rates, and trends for the state of Wisconsin. Detailed data on cancer incidence, stage, and mortality are available by state, regional, and county geographical region and by race, ethnicity, and age through interactive queries in Wisconsin Interactive Statistics on Health (WISH) Cancer Modules, which is the data query system of the Division of Public Health.

The registry publishes epidemiological data in reports such as *Wisconsin Cancer Facts and Figures* and conducts other data analyses at the state and local levels to promote strategic, evidence-based interventions in public health and the cancer surveillance and research communities.

The registry data are published in the NAACCR annual report *Cancer in North America* and the CDC publication *United States Cancer Statistics*. The registry data are also used in cancer control programmes, intervention evaluations, and epidemiological research.

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POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.

Wyoming Cancer Surveillance Program, 1998–2012

Julia Espinoza, Joe Grandpre

The state of Wyoming is located in the mountainous region of the western USA. Cheyenne is the state capital and the most populous city. In 2010, the population of Wyoming was 0.6 million, and 27% of the population was younger than 20 years; this percentage ranged from 25% for White NH to 41% for Black (Table A.6). The fastest growing age group was the group aged 65 years and older. The racial and ethnic distribution in the age group 0–19 years was 81% White NH, 12% Hispanic White, 4% Native American, 2% Black, and 1% API. Wyoming has one university, and seven community colleges located throughout the state.

Health-care facilities involved in providing cancer diagnostic or treatment services include hospitals, radiation oncology centres, cancer centres, physicians' offices, and outpatient surgical centres. Many patients with cancer who are younger than 20 years must travel outside the state to receive treatment, due to the lack of paediatric oncologists in Wyoming.

The Wyoming Cancer Surveillance Program (WCSP) covers the entire population of the state. The WCSP has been in operation since 1966, with retrospective data collection since 1962 (Table A.10). The registry collects and monitors cancer incidence data via pathology reports and uniform reporting of information by health-care providers. In 1977, cancer became a reportable disease by law, which requires the reporting by all entities that detect, diagnose, or treat cancer cases. Data on patients diagnosed and treated outside the state are received by the WCSP via data exchanges with surrounding states in the USA, such as Colorado and Utah.

The WCSP produces annual reports on cancer, which include data on incidence, mortality, and survival of children and adolescents with cancer (https://health.wyo.gov). The registry data are also used by the Integrated Cancer Program for the Wyoming Cancer Plan, programme reports, grant applications, and data briefs for stakeholders. The Wyoming Cancer Plan also has a goal of improving specialized oncology care within the state for children and adolescents.

POPULATION AT RISK

See USA, above.

EDITORS' COMMENTS

Data are included in the pooled USA and NPCR tables in the IICC-3 book (Table 6.1). Registry-specific tables, including those for individual racial and ethnic groups that met the threshold for numbers of cases, are available online, as specified in Table A.12. See also USA and NPCR, above.