

# Argentina, Bahía Blanca

## REGISTRATION AREA

The Regional Tumor Registry of the South of the Province of Buenos Aires covers the political area of Bahía Blanca, with a population of 290 000 at the 2005 census. Nearly 100% of the population is White, primarily descended from European immigrants. In some political areas, such as Coronel Suárez, there are settlements of German descendants. In the south of the province, a varying population of workers comes from Chile for the onion harvest, but the permanent Chilean population amounts to less than 5% of the total population.

## CANCER CARE FACILITIES

Both of the area's public hospitals provide oncology services. There are two private radiotherapy institutes, which also treat patients from public hospitals; one has a linear accelerator. Computerized tomography is available in almost all the larger public and private institutions, and one institution has a nuclear magnetic resonance imaging facility.

## REGISTRY STRUCTURE AND METHODS

Although the registry was recognized by a provincial law and a municipal resolution in 1993, it does not have a specific budget. The Argentine Association for Cancer Prevention and Education (AAPEC), a non-profit organization founded in 1986 to improve cancer control, maintains the registry and other high-priority projects, such as the tobacco control programme. Although resources are limited, the registry employs two registrars and a registry coordinator. Most of the registry's resources are provided by the municipal government of Bahía Blanca.

## USE OF THE DATA

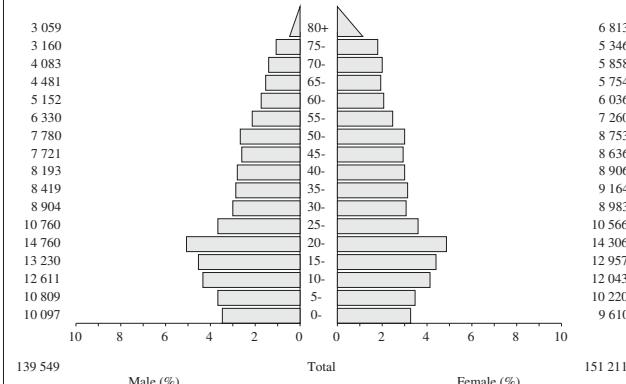
Incidence reporting is the most important activity of the registry, as population-based cancer registration is limited in the country. The registry is currently involved in epidemiological research, and policy-makers use its data for planning and evaluating health services. In 2011, an agreement was reached between the

municipality of Bahía Blanca, the Health Sciences Department of the National University of the South, and AAPEC to improve cancer registration quality and increase data use. The agreement includes the creation of two scholarships for advanced medical students. The registry has recently performed studies on cancer incidence trends and was invited to participate in the CONCORD-2 survival study.

## CONTRIBUTORS

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**Argentina, Bahía Blanca (2003–2007)**  
**Average annual person-years by sex and age group**



## SOURCE OF POPULATION

Based on the 1991 and 2001 censuses, with a 2005 estimate for Bahía Blanca using exponential interpolation.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	45.4	Breast	74.7
Trachea, bronchus and lung	36.9	Non-melanoma skin cancer	17.3
Colon	26.4	Other and unspecified	14.7
Non-melanoma skin cancer	24.0	Colon	14.4
Bladder	17.9	Ovary	13.0
Other and unspecified	15.6	Cervix uteri	12.5
Stomach	14.4	Non-Hodgkin lymphoma	8.9
Kidney	11.2	Trachea, bronchus and lung	8.3
Non-Hodgkin lymphoma	9.3	Corpus uteri	8.0
Rectum	7.8	Thyroid	6.6
All sites	280.2	All sites	238.3

## Argentina, Bahía Blanca (2003-2007)

SITE	Male						Female						ICD-10	
	§No. cases	Freq. (%)	Crude rate world (per 100,000)	Cum. rates		§No. cases	Freq. (%)	Crude rate world (per 100,000)	Cum. rates					
				0-64	0-74				(%)	0-64	0-74			
Lip	7	0.3	1.0	<b>0.7</b>	0.03	0.10	1	0.0	0.1	<b>0.1</b>	0.00	0.02	C00	
Tongue	14	0.6	2.0	<b>1.6</b>	0.12	0.21	4	0.2	0.5	<b>0.5</b>	0.06	0.06	C01-02	
Mouth	22	1.0	3.2	<b>2.9</b>	0.23	0.37	11	0.4	1.5	<b>0.7</b>	0.03	0.07	C03-06	
Salivary glands	4	0.2	0.6	<b>0.4</b>	0.03	0.03	4	0.2	0.5	<b>0.4</b>	0.04	0.04	C07-08	
Tonsil	2	0.1	0.3	<b>0.3</b>	0.03	0.03	2	0.1	0.3	<b>0.1</b>	0.01	0.01	C09	
Other oropharynx	1	0.0	0.1	<b>0.1</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10	
Nasopharynx	3	0.1	0.4	<b>0.4</b>	0.02	0.02	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C11	
Hypopharynx	4	0.2	0.6	<b>0.4</b>	0.03	0.05	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C12-13	
Pharynx unspecified	2	0.1	0.3	<b>0.2</b>	0.02	0.04	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C14	
Oesophagus	56	2.4	8.0	<b>6.0</b>	0.34	0.77	25	1.0	3.3	<b>1.4</b>	0.08	0.09	C15	
Stomach	134	5.8	19.2	<b>14.4</b>	0.78	1.66	82	3.3	10.8	<b>6.1</b>	0.35	0.64	C16	
Small intestine	3	0.1	0.4	<b>0.4</b>	0.03	0.03	4	0.2	0.5	<b>0.4</b>	0.04	0.04	C17	
Colon	242	10.5	34.7	<b>26.4</b>	1.48	3.03	207	8.3	27.4	<b>14.4</b>	0.71	1.70	C18	
Rectum	70	3.0	10.0	<b>7.8</b>	0.46	1.09	56	2.2	7.4	<b>4.7</b>	0.28	0.57	C19-20	
Anus	3	0.1	0.4	<b>0.4</b>	0.02	0.06	10	0.4	1.3	<b>0.8</b>	0.05	0.06	C21	
Liver	44	1.9	6.3	<b>5.1</b>	0.35	0.70	23	0.9	3.0	<b>1.4</b>	0.04	0.17	C22	
Gallbladder etc.	31	1.3	4.4	<b>3.2</b>	0.12	0.38	30	1.2	4.0	<b>2.2</b>	0.14	0.22	C23-24	
Pancreas	60	2.6	8.6	<b>6.7</b>	0.41	0.74	90	3.6	11.9	<b>5.7</b>	0.26	0.70	C25	
Nose, sinuses etc.	2	0.1	0.3	<b>0.3</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C30-31	
Larynx	45	2.0	6.4	<b>5.7</b>	0.41	0.71	10	0.4	1.3	<b>0.6</b>	0.03	0.05	C32	
Trachea, bronchus and lung	317	13.7	45.4	<b>36.9</b>	2.25	4.80	96	3.9	12.7	<b>8.3</b>	0.58	0.91	C33-34	
Other thoracic organs	10	0.4	1.4	<b>1.4</b>	0.13	0.15	8	0.3	1.1	<b>0.5</b>	0.02	0.03	C37-38	
Bone	15	0.7	2.1	<b>1.9</b>	0.13	0.18	11	0.4	1.5	<b>1.2</b>	0.08	0.10	C40-41	
Melanoma of skin	23	1.0	3.3	<b>2.9</b>	0.22	0.34	20	0.8	2.6	<b>1.8</b>	0.10	0.22	C43	
Other skin	247		35.4	<b>24.0</b>	1.14	2.52	231		30.6	<b>17.3</b>	1.00	1.84	C44	
Mesothelioma	7	0.3	1.0	<b>0.9</b>	0.06	0.11	3	0.1	0.4	<b>0.1</b>	0.00	0.00	C45	
Kaposi sarcoma	2	0.1	0.3	<b>0.1</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46	
Connective and soft tissue	18	0.8	2.6	<b>2.0</b>	0.08	0.16	21	0.8	2.8	<b>2.0</b>	0.10	0.21	C47+C49	
Breast	14	0.6	2.0	<b>1.5</b>	0.10	0.13	791	31.8	104.6	<b>74.7</b>	5.29	8.76	C50	
Vulva							6	0.2	0.8	<b>0.3</b>	0.00	0.04	C51	
Vagina							11	0.4	1.5	<b>1.0</b>	0.09	0.09	C52	
Cervix uteri							109	4.4	14.4	<b>12.5</b>	1.04	1.25	C53	
Corpus uteri							95	3.8	12.6	<b>8.0</b>	0.52	0.97	C54	
Uterus unspecified							22	0.9	2.9	<b>1.9</b>	0.13	0.20	C55	
Ovary							128	5.1	16.9	<b>13.0</b>	0.96	1.44	C56	
Other female genital organs							8	0.3	1.1	<b>0.7</b>	0.05	0.07	C57	
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58	
Penis	11	0.5	1.6	<b>1.2</b>	0.08	0.13							C60	
Prostate	450	19.5	64.5	<b>45.4</b>	1.50	6.09							C61	
Testis	33	1.4	4.7	<b>4.5</b>	0.34	0.34							C62	
Other male genital organs	1	0.0	0.1	<b>0.1</b>	0.00	0.00							C63	
Kidney	94	4.1	13.5	<b>11.2</b>	0.64	1.56	47	1.9	6.2	<b>3.7</b>	0.23	0.40	C64	
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.00	0.02	C65	
Ureter	3	0.1	0.4	<b>0.2</b>	0.00	0.00	3	0.1	0.4	<b>0.3</b>	0.01	0.05	C66	
Bladder	171	7.4	24.5	<b>17.9</b>	0.84	2.07	48	1.9	6.3	<b>2.9</b>	0.14	0.26	C67	
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68	
Eye	2	0.1	0.3	<b>0.3</b>	0.03	0.03	2	0.1	0.3	<b>0.1</b>	0.00	0.02	C69	
Brain, nervous system	39	1.7	5.6	<b>4.9</b>	0.29	0.53	53	2.1	7.0	<b>5.4</b>	0.35	0.46	C70-72	
Thyroid	11	0.5	1.6	<b>1.4</b>	0.09	0.16	55	2.2	7.3	<b>6.6</b>	0.53	0.64	C73	
Adrenal gland	1	0.0	0.1	<b>0.1</b>	0.01	0.01	2	0.1	0.3	<b>0.5</b>	0.02	0.02	C74	
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	2	0.1	0.3	<b>0.2</b>	0.03	0.03	C75	
Hodgkin lymphoma	19	0.8	2.7	<b>2.4</b>	0.18	0.25	17	0.7	2.2	<b>2.0</b>	0.11	0.17	C81	
Non-Hodgkin lymphoma	77	3.3	11.0	<b>9.3</b>	0.56	0.87	87	3.5	11.5	<b>8.9</b>	0.70	0.90	C82-85,C96	
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88	
Multiple myeloma	18	0.8	2.6	<b>1.7</b>	0.05	0.17	24	1.0	3.2	<b>1.7</b>	0.08	0.20	C90	
Lymphoid leukaemia	30	1.3	4.3	<b>4.0</b>	0.21	0.37	31	1.2	4.1	<b>3.9</b>	0.19	0.27	C91	
Myeloid leukaemia	31	1.3	4.4	<b>3.5</b>	0.14	0.42	37	1.5	4.9	<b>3.7</b>	0.21	0.35	C92-94	
Leukaemia unspecified	8	0.3	1.1	<b>0.9</b>	0.06	0.08	9	0.4	1.2	<b>0.6</b>	0.03	0.05	C95	
Myeloproliferative disorders	1	0.0	0.1	<b>0.1</b>	0.00	0.02	1	0.0	0.1	<b>0.1</b>	0.01	0.01	MPD	
Myelodysplastic syndromes	2	0.1	0.3	<b>0.2</b>	0.00	0.02	1	0.0	0.1	<b>0.0</b>	0.00	0.00	MDS	
Other and unspecified	150	6.5	21.5	<b>15.6</b>	0.79	1.75	179	7.2	23.7	<b>14.7</b>	0.96	1.64	O&U	
All sites	2554		366.0	<b>280.2</b>	14.98	33.45	2721		359.9	<b>238.3</b>	15.73	26.11	C00-96	
All sites except C44	2307	100.0	330.6	<b>256.1</b>	13.82	30.90	2490	100.0	329.3	<b>221.0</b>	14.72	24.26	C00-96 exc. C44	

§Includes 114 cases of unknown age

§Includes 144 cases of unknown age

# Argentina, Córdoba

## REGISTRATION AREA

The Córdoba Cancer Registry covers the city of Córdoba (the capital of Córdoba Province), with an area of 576 km<sup>2</sup>. The population is approximately 1.3 million (48% male).

## CANCER CARE FACILITIES

The health system in Córdoba Province consists of private and public providers. There are 12 public hospitals, each with pathology and oncology services. There are also 20 private health care institutions that provide care for cancer patients. Data are collected from 17 of these; in the others, the number of cancer patients is very low. There are two radiotherapy centres and two highly complex diagnostic centres in the city.

## REGISTRY STRUCTURE AND METHODS

The registry is located at the Provincial Cancer Hospital, with a dedicated office and all equipment necessary to carry out its activities. The staff consists of two medical doctors, a statistician, and two registrars. Data are collected both actively and passively from all 33 of the above-mentioned sources. In addition, the social insurance of state employees (25% of the population) provides pathology results. Information on death certificates is obtained from the State Statistics Department. Data are recorded using CanReg4 software. Quality checks are done periodically using IARC tools to calculate the standard quality indicators.

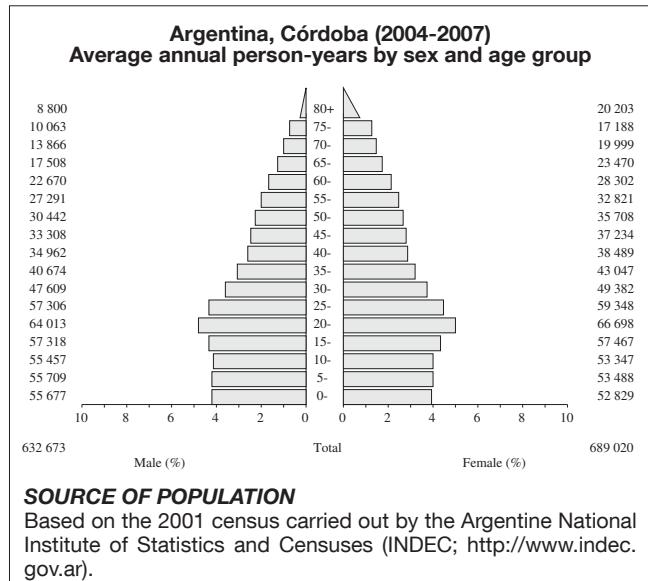
## USE OF THE DATA

The registry has produced three publications, and is participating in the most recent CONCORD survival study. Registry data have been provided to university

instructors and researchers for a variety of projects. The registry has also been consulted by state judicial courts to provide information on environmental issues in the city.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on the 2001 census carried out by the Argentine National Institute of Statistics and Censuses (INDEC; <http://www.indec.gov.ar>).

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	43.8	Breast	78.1
Trachea, bronchus and lung	29.4	Non-melanoma skin cancer	16.7
Non-melanoma skin cancer	26.5	Cervix uteri	14.0
Colon	19.9	Colon	13.1
Bladder	14.9	Ovary	10.5
Kidney	12.3	Other and unspecified	9.9
Other and unspecified	11.9	Trachea, bronchus and lung	9.3
Stomach	10.6	Corpus uteri	8.2
Non-Hodgkin lymphoma	9.4	Thyroid	7.3
Pancreas	7.2	Non-Hodgkin lymphoma	6.5
All sites	264.2	All sites	233.3

## Argentina, Córdoba (2004-2007)

SITE	Male						Female						ICD-10
	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	
Lip	6	0.1	0.2	<b>0.2</b>	0.01	0.02	2	0.0	0.1	<b>0.1</b>	0.01	0.01	C00
Tongue	33	0.5	1.3	<b>1.3</b>	0.13	0.15	17	0.2	0.6	<b>0.5</b>	0.03	0.06	C01-02
Mouth	31	0.5	1.2	<b>1.2</b>	0.07	0.14	22	0.3	0.8	<b>0.6</b>	0.03	0.07	C03-06
Salivary glands	34	0.5	1.3	<b>1.2</b>	0.08	0.12	29	0.4	1.1	<b>0.8</b>	0.05	0.09	C07-08
Tonsil	11	0.2	0.4	<b>0.5</b>	0.03	0.07	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	9	0.1	0.4	<b>0.3</b>	0.02	0.04	1	0.0	0.0	<b>0.0</b>	0.00	0.01	C10
Nasopharynx	3	0.0	0.1	<b>0.1</b>	0.00	0.02	2	0.0	0.1	<b>0.1</b>	0.01	0.01	C11
Hypopharynx	16	0.2	0.6	<b>0.6</b>	0.04	0.09	6	0.1	0.2	<b>0.2</b>	0.01	0.03	C12-13
Pharynx unspecified	5	0.1	0.2	<b>0.2</b>	0.01	0.04	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	167	2.6	6.6	<b>6.0</b>	0.33	0.73	96	1.3	3.5	<b>2.3</b>	0.10	0.30	C15
Stomach	288	4.5	11.4	<b>10.6</b>	0.47	1.37	162	2.1	5.9	<b>4.2</b>	0.26	0.49	C16
Small intestine	43	0.7	1.7	<b>1.6</b>	0.08	0.20	21	0.3	0.8	<b>0.5</b>	0.02	0.05	C17
Colon	548	8.5	21.7	<b>19.9</b>	0.87	2.39	526	6.9	19.1	<b>13.1</b>	0.71	1.47	C18
Rectum	167	2.6	6.6	<b>6.2</b>	0.35	0.72	129	1.7	4.7	<b>3.5</b>	0.26	0.39	C19-20
Anus	20	0.3	0.8	<b>0.7</b>	0.05	0.07	16	0.2	0.6	<b>0.4</b>	0.03	0.06	C21
Liver	121	1.9	4.8	<b>4.4</b>	0.23	0.55	96	1.3	3.5	<b>2.3</b>	0.11	0.23	C22
Gallbladder etc.	94	1.5	3.7	<b>3.3</b>	0.16	0.38	159	2.1	5.8	<b>3.8</b>	0.20	0.40	C23-24
Pancreas	197	3.1	7.8	<b>7.2</b>	0.36	0.90	230	3.0	8.3	<b>5.2</b>	0.23	0.57	C25
Nose, sinuses etc.	9	0.1	0.4	<b>0.4</b>	0.03	0.04	9	0.1	0.3	<b>0.2</b>	0.02	0.02	C30-31
Larynx	167	2.6	6.6	<b>6.5</b>	0.47	0.82	24	0.3	0.9	<b>0.7</b>	0.05	0.09	C32
Trachea, bronchus and lung	781	12.1	30.9	<b>29.4</b>	1.63	3.73	350	4.6	12.7	<b>9.3</b>	0.59	1.12	C33-34
Other thoracic organs	33	0.5	1.3	<b>1.3</b>	0.08	0.15	24	0.3	0.9	<b>0.7</b>	0.04	0.09	C37-38
Bone	40	0.6	1.6	<b>1.5</b>	0.10	0.13	33	0.4	1.2	<b>1.1</b>	0.07	0.08	C40-41
Melanoma of skin	100	1.6	4.0	<b>3.7</b>	0.25	0.39	102	1.3	3.7	<b>3.1</b>	0.21	0.33	C43
Other skin	735		29.0	<b>26.5</b>	1.32	3.07	626		22.7	<b>16.7</b>	1.00	1.95	C44
Mesothelioma	21	0.3	0.8	<b>0.9</b>	0.07	0.11	19	0.2	0.7	<b>0.5</b>	0.03	0.06	C45
Kaposi sarcoma	42	0.7	1.7	<b>1.6</b>	0.13	0.15	8	0.1	0.3	<b>0.3</b>	0.02	0.02	C46
Connective and soft tissue	61	0.9	2.4	<b>2.3</b>	0.13	0.24	47	0.6	1.7	<b>1.4</b>	0.07	0.15	C47+C49
Breast	46	0.7	1.8	<b>1.7</b>	0.09	0.17	2661	34.8	96.6	<b>78.1</b>	5.68	8.87	C50
Vulva							49	0.6	1.8	<b>1.1</b>	0.04	0.14	C51
Vagina							14	0.2	0.5	<b>0.4</b>	0.03	0.04	C52
Cervix uteri							421	5.5	15.3	<b>14.0</b>	1.18	1.35	C53
Corpus uteri							287	3.8	10.4	<b>8.2</b>	0.53	1.01	C54
Uterus unspecified							71	0.9	2.6	<b>1.9</b>	0.13	0.21	C55
Ovary							351	4.6	12.7	<b>10.5</b>	0.74	1.18	C56
Other female genital organs							10	0.1	0.4	<b>0.3</b>	0.02	0.02	C57
Placenta							17	0.2	0.6	<b>0.6</b>	0.04	0.04	C58
Penis	33	0.5	1.3	<b>1.2</b>	0.06	0.15							C60
Prostate	1241	19.2	49.0	<b>43.8</b>	1.46	5.63							C61
Testis	179	2.8	7.1	<b>6.4</b>	0.48	0.49							C62
Other male genital organs	4	0.1	0.2	<b>0.2</b>	0.01	0.02							C63
Kidney	323	5.0	12.8	<b>12.3</b>	0.81	1.43	164	2.1	6.0	<b>4.6</b>	0.30	0.51	C64
Renal pelvis	8	0.1	0.3	<b>0.3</b>	0.02	0.03	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C65
Ureter	2	0.0	0.1	<b>0.1</b>	0.00	0.00	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	407	6.3	16.1	<b>14.9</b>	0.78	1.86	131	1.7	4.8	<b>3.3</b>	0.16	0.39	C67
Other urinary organs	6	0.1	0.2	<b>0.2</b>	0.01	0.02	2	0.0	0.1	<b>0.1</b>	0.01	0.01	C68
Eye	18	0.3	0.7	<b>0.8</b>	0.04	0.06	5	0.1	0.2	<b>0.2</b>	0.01	0.01	C69
Brain, nervous system	181	2.8	7.2	<b>7.1</b>	0.49	0.70	182	2.4	6.6	<b>5.6</b>	0.36	0.56	C70-72
Thyroid	43	0.7	1.7	<b>1.7</b>	0.14	0.17	221	2.9	8.0	<b>7.3</b>	0.61	0.70	C73
Adrenal gland	4	0.1	0.2	<b>0.2</b>	0.01	0.01	10	0.1	0.4	<b>0.3</b>	0.03	0.03	C74
Other endocrine	12	0.2	0.5	<b>0.4</b>	0.03	0.04	2	0.0	0.1	<b>0.1</b>	0.00	0.00	C75
Hodgkin lymphoma	63	1.0	2.5	<b>2.4</b>	0.16	0.24	59	0.8	2.1	<b>1.8</b>	0.12	0.15	C81
Non-Hodgkin lymphoma	248	3.8	9.8	<b>9.4</b>	0.62	0.96	228	3.0	8.3	<b>6.5</b>	0.40	0.75	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	54	0.8	2.1	<b>2.0</b>	0.12	0.26	56	0.7	2.0	<b>1.5</b>	0.09	0.17	C90
Lymphoid leukaemia	73	1.1	2.9	<b>2.9</b>	0.16	0.26	61	0.8	2.2	<b>2.3</b>	0.12	0.20	C91
Myeloid leukaemia	64	1.0	2.5	<b>2.4</b>	0.16	0.22	50	0.7	1.8	<b>1.5</b>	0.09	0.15	C92-94
Leukaemia unspecified	32	0.5	1.3	<b>1.2</b>	0.04	0.13	32	0.4	1.2	<b>0.8</b>	0.03	0.06	C95
Myeloproliferative disorders	22	0.3	0.9	<b>0.8</b>	0.06	0.07	18	0.2	0.7	<b>0.6</b>	0.03	0.07	MPD
Myelodysplastic syndromes	19	0.3	0.8	<b>0.7</b>	0.04	0.08	12	0.2	0.4	<b>0.3</b>	0.02	0.04	MDS
Other and unspecified	322	5.0	12.7	<b>11.9</b>	0.61	1.44	390	5.1	14.2	<b>9.9</b>	0.52	1.15	O&U
All sites	7186		284.0	<b>264.2</b>	13.88	31.27	8264		299.8	<b>233.3</b>	15.44	25.97	C00-96
All sites except C44	6451	100.0	254.9	<b>237.8</b>	12.56	28.20	7638	100.0	277.1	<b>216.6</b>	14.44	24.02	C00-96 exc. C44

§Includes 1 case of unknown age

§Includes 5 cases of unknown age

# Argentina, Mendoza

## REGISTRATION AREA

The Mendoza Cancer Registry covers Mendoza Province, with an area of 148 827 km<sup>2</sup>. The Andes mountain range is located to the west, and most of the rest of the province consists of desert plains. The population of 1.6 million is distributed across 18 municipalities, with 79% of residents living in urban areas. The population is ethnically heterogeneous, with a mixture of Native peoples and Europeans. Chilean, Bolivian, and Peruvian immigration to the area has increased in recent decades. The economically active population works in agriculture, livestock, business, mining, services, and industry.

## CANCER CARE FACILITIES

Cancer diagnosis and treatment are provided through the public, private, and social security systems. Oncology services are provided by six state hospitals, two social security hospitals, and five private hospitals. Three centres provide radiation therapy. The 49.1% of the population that is not covered by social security can receive treatment through the Mendoza Oncology Program. There is also a cervical and breast cancer prevention and early detection programme.

## REGISTRY STRUCTURE AND METHODS

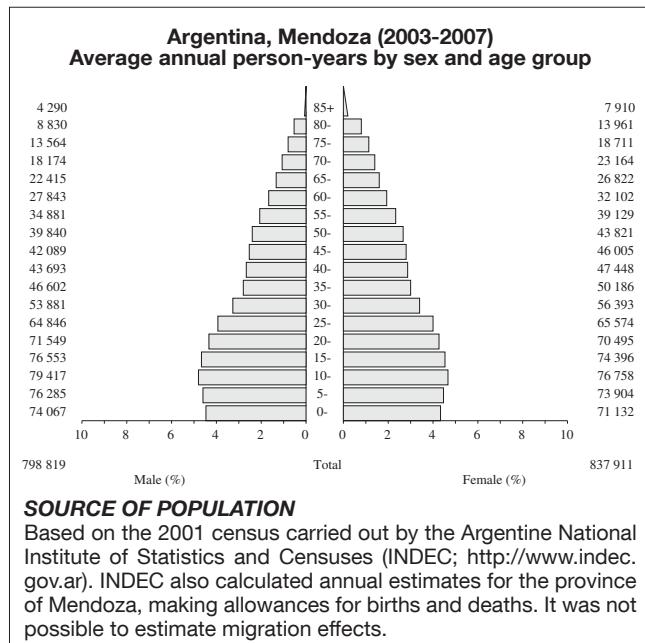
The registry was created by law, and its administration and budget are handled by the Epidemiology Division of the Mendoza Health Department. The registry is staffed by three medical doctors and three registrars, who are in charge of passive and active data collection from private and public hospitals, pathology and haematology laboratories, radiation therapy centres, and private practices. The registry also has access to death certificates. Data are collected manually from medical records, anatomical pathology reports, and computerized lists provided by the various sources. Data are coded at the Registry Central Unit using ICD-O-3. Data entry is performed using CanReg software.

## USE OF THE DATA

The registry started data collection in 2003, and the first analysis was carried out in 2010. The resulting information was provided to local authorities and professionals and to the National Cancer Institute.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on the 2001 census carried out by the Argentine National Institute of Statistics and Censuses (INDEC; <http://www.indec.gov.ar>). INDEC also calculated annual estimates for the province of Mendoza, making allowances for births and deaths. It was not possible to estimate migration effects.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

	Male		Female
Prostate	42.5	Breast	74.4
Trachea, bronchus and lung	25.8	Cervix uteri	14.0
Non-melanoma skin cancer	21.2	Colon	13.7
Colon	17.8	Non-melanoma skin cancer	12.9
Bladder	14.2	Ovary	9.4
Stomach	13.1	Other and unspecified	9.2
Other and unspecified	12.1	Corpus uteri	8.4
Kidney	9.1	Trachea, bronchus and lung	6.6
Non-Hodgkin lymphoma	8.3	Non-Hodgkin lymphoma	6.1
Rectum	7.0	Pancreas	5.8
All sites	242.5	All sites	223.8

## Argentina, Mendoza (2003-2007)

SITE	Male						Female						ICD-10
	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	
Lip	8	0.1	0.2	<b>0.2</b>	0.01	0.02	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	51	0.5	1.3	<b>1.2</b>	0.09	0.13	35	0.3	0.8	<b>0.6</b>	0.04	0.06	C01-02
Mouth	42	0.4	1.1	<b>1.0</b>	0.08	0.11	24	0.2	0.6	<b>0.5</b>	0.03	0.05	C03-06
Salivary glands	43	0.4	1.1	<b>1.0</b>	0.05	0.13	32	0.3	0.8	<b>0.7</b>	0.05	0.07	C07-08
Tonsil	25	0.3	0.6	<b>0.6</b>	0.06	0.07	4	0.0	0.1	<b>0.1</b>	0.01	0.01	C09
Other oropharynx	4	0.0	0.1	<b>0.1</b>	0.01	0.01	2	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	14	0.1	0.4	<b>0.3</b>	0.02	0.04	5	0.0	0.1	<b>0.1</b>	0.01	0.01	C11
Hypopharynx	6	0.1	0.2	<b>0.1</b>	0.01	0.02	2	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	9	0.1	0.2	<b>0.2</b>	0.01	0.03	4	0.0	0.1	<b>0.1</b>	0.01	0.01	C14
Oesophagus	294	3.0	7.4	<b>6.4</b>	0.31	0.71	132	1.2	3.2	<b>2.1</b>	0.09	0.23	C15
Stomach	582	5.9	14.6	<b>13.1</b>	0.66	1.57	290	2.7	6.9	<b>5.1</b>	0.28	0.57	C16
Small intestine	37	0.4	0.9	<b>0.9</b>	0.05	0.11	46	0.4	1.1	<b>0.8</b>	0.05	0.09	C17
Colon	808	8.2	20.2	<b>17.8</b>	0.85	2.15	772	7.1	18.4	<b>13.7</b>	0.76	1.55	C18
Rectum	312	3.2	7.8	<b>7.0</b>	0.36	0.88	233	2.1	5.6	<b>4.1</b>	0.21	0.49	C19-20
Anus	21	0.2	0.5	<b>0.4</b>	0.02	0.06	33	0.3	0.8	<b>0.6</b>	0.04	0.07	C21
Liver	163	1.7	4.1	<b>3.7</b>	0.19	0.42	119	1.1	2.8	<b>2.1</b>	0.10	0.25	C22
Gallbladder etc.	140	1.4	3.5	<b>3.1</b>	0.17	0.39	230	2.1	5.5	<b>4.2</b>	0.24	0.49	C23-24
Pancreas	310	3.2	7.8	<b>6.8</b>	0.36	0.79	344	3.2	8.2	<b>5.8</b>	0.24	0.73	C25
Nose, sinuses etc.	23	0.2	0.6	<b>0.5</b>	0.04	0.05	15	0.1	0.4	<b>0.3</b>	0.02	0.04	C30-31
Larynx	232	2.4	5.8	<b>5.5</b>	0.36	0.66	23	0.2	0.5	<b>0.5</b>	0.03	0.06	C32
Trachea, bronchus and lung	1122	11.4	28.1	<b>25.8</b>	1.46	3.28	353	3.3	8.4	<b>6.6</b>	0.41	0.79	C33-34
Other thoracic organs	29	0.3	0.7	<b>0.7</b>	0.05	0.07	27	0.2	0.6	<b>0.5</b>	0.02	0.04	C37-38
Bone	48	0.5	1.2	<b>1.2</b>	0.08	0.09	45	0.4	1.1	<b>1.0</b>	0.06	0.10	C40-41
Melanoma of skin	130	1.3	3.3	<b>3.1</b>	0.21	0.38	148	1.4	3.5	<b>3.0</b>	0.21	0.35	C43
Other skin	967		24.2	<b>21.2</b>	0.96	2.47	733		17.5	<b>12.9</b>	0.71	1.39	C44
Mesothelioma	27	0.3	0.7	<b>0.6</b>	0.04	0.09	10	0.1	0.2	<b>0.2</b>	0.01	0.02	C45
Kaposi sarcoma	14	0.1	0.4	<b>0.3</b>	0.02	0.03	3	0.0	0.1	<b>0.1</b>	0.00	0.00	C46
Connective and soft tissue	92	0.9	2.3	<b>2.1</b>	0.13	0.19	115	1.1	2.7	<b>2.3</b>	0.15	0.22	C47+C49
Breast	40	0.4	1.0	<b>0.9</b>	0.05	0.11	3721	34.3	88.8	<b>74.4</b>	5.17	8.47	C50
Vulva							69	0.6	1.6	<b>1.2</b>	0.06	0.15	C51
Vagina							24	0.2	0.6	<b>0.5</b>	0.02	0.06	C52
Cervix uteri							642	5.9	15.3	<b>14.0</b>	1.10	1.50	C53
Corpus uteri							428	3.9	10.2	<b>8.4</b>	0.57	1.07	C54
Uterus unspecified							124	1.1	3.0	<b>2.3</b>	0.14	0.23	C55
Ovary							448	4.1	10.7	<b>9.4</b>	0.66	1.08	C56
Other female genital organs							16	0.1	0.4	<b>0.3</b>	0.01	0.04	C57
Placenta							10	0.1	0.2	<b>0.2</b>	0.02	0.02	C58
Penis	58	0.6	1.5	<b>1.4</b>	0.08	0.17							C60
Prostate	2013	20.5	50.4	<b>42.5</b>	1.54	5.23							C61
Testis	282	2.9	7.1	<b>6.9</b>	0.52	0.53							C62
Other male genital organs	1	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	390	4.0	9.8	<b>9.1</b>	0.56	1.13	230	2.1	5.5	<b>4.8</b>	0.30	0.55	C64
Renal pelvis	4	0.0	0.1	<b>0.1</b>	0.00	0.01	4	0.0	0.1	<b>0.1</b>	0.00	0.01	C65
Ureter	6	0.1	0.2	<b>0.1</b>	0.01	0.02	3	0.0	0.1	<b>0.1</b>	0.01	0.01	C66
Bladder	641	6.5	16.0	<b>14.2</b>	0.70	1.71	189	1.7	4.5	<b>3.3</b>	0.18	0.39	C67
Other urinary organs	11	0.1	0.3	<b>0.2</b>	0.01	0.02	3	0.0	0.1	<b>0.1</b>	0.00	0.01	C68
Eye	11	0.1	0.3	<b>0.3</b>	0.02	0.03	12	0.1	0.3	<b>0.2</b>	0.01	0.02	C69
Brain, nervous system	203	2.1	5.1	<b>5.0</b>	0.32	0.47	189	1.7	4.5	<b>4.0</b>	0.27	0.41	C70-72
Thyroid	71	0.7	1.8	<b>1.7</b>	0.11	0.18	262	2.4	6.3	<b>5.8</b>	0.43	0.58	C73
Adrenal gland	9	0.1	0.2	<b>0.2</b>	0.02	0.03	9	0.1	0.2	<b>0.2</b>	0.01	0.02	C74
Other endocrine	14	0.1	0.4	<b>0.3</b>	0.02	0.02	8	0.1	0.2	<b>0.2</b>	0.01	0.01	C75
Hodgkin lymphoma	93	0.9	2.3	<b>2.3</b>	0.15	0.21	69	0.6	1.6	<b>1.6</b>	0.11	0.14	C81
Non-Hodgkin lymphoma	343	3.5	8.6	<b>8.3</b>	0.51	0.94	312	2.9	7.4	<b>6.1</b>	0.41	0.64	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	8	0.1	0.2	<b>0.1</b>	0.00	0.02	C88
Multiple myeloma	96	1.0	2.4	<b>2.3</b>	0.15	0.31	100	0.9	2.4	<b>1.7</b>	0.09	0.22	C90
Lymphoid leukaemia	114	1.2	2.9	<b>2.9</b>	0.16	0.25	103	0.9	2.5	<b>2.2</b>	0.11	0.18	C91
Myeloid leukaemia	147	1.5	3.7	<b>3.4</b>	0.19	0.36	132	1.2	3.2	<b>2.7</b>	0.15	0.24	C92-94
Leukaemia unspecified	42	0.4	1.1	<b>0.8</b>	0.03	0.07	41	0.4	1.0	<b>0.6</b>	0.02	0.06	C95
Myeloproliferative disorders	68	0.7	1.7	<b>1.5</b>	0.08	0.18	63	0.6	1.5	<b>1.3</b>	0.09	0.15	MPD
Myelodysplastic syndromes	44	0.4	1.1	<b>1.0</b>	0.04	0.10	52	0.5	1.2	<b>0.9</b>	0.05	0.08	MDS
Other and unspecified	548	5.6	13.7	<b>12.1</b>	0.63	1.40	543	5.0	13.0	<b>9.2</b>	0.43	1.05	O&U
All sites	10802		270.4	<b>242.5</b>	12.56	28.44	11594		276.7	<b>223.8</b>	14.23	25.09	C00-96
All sites except C44	9835	100.0	246.2	<b>221.3</b>	11.61	25.97	10861	100.0	259.2	<b>210.9</b>	13.51	23.70	C00-96 exc. C44

# Argentina, Tierra del Fuego

## REGISTRATION AREA

The Cancer Registry of Tierra del Fuego Province covers the entire population of Tierra del Fuego Province, which has an area of 21 571 km<sup>2</sup>. The climate is cold, with the median temperature ranging between 3 °C and 12 °C. At the 2001 census, the population was 100 000, with a density of 4.7 inhabitants/km<sup>2</sup> and 97% of residents living in urban areas. The province's main cities are Ushuaia (the capital) and Río Grande. The majority of the population is White; 56% of residents are immigrants from other Argentine provinces and 11% are foreigners. Almost all of the population is of the Catholic religion.

## CANCER CARE FACILITIES

Diagnosis and treatment are mainly provided by two public hospitals, which are complemented by two private clinics. The services available include clinical oncology, haematology-oncology, tomography, mammography, magnetic resonance imaging, chemotherapy, and surgery. Radiotherapy services are not available. The proportion of the population not covered by social security is 30.1%. These individuals are typically covered by a social support system administered by the provincial government.

## REGISTRY STRUCTURE AND METHODS

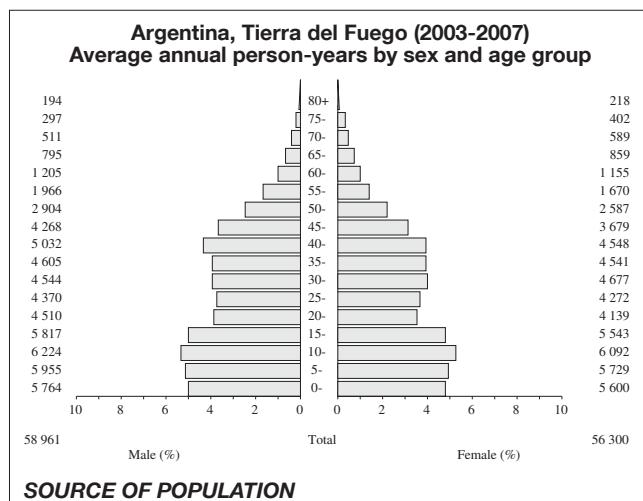
The registry was created by law (Ley Provincial No. 557/02), and its implementation began in 2003. It is a separate unit located in the Epidemiology Department of the Ministry of Health. Data collection is both passive and active, and 73% of cancer cases were reported by public health institutions. CanReg software is used for data entry and analysis. The staff consists of an oncologist, an epidemiologist, an administrator, and a full-time dedicated nurse who serves as the director of the registry.

## USE OF THE DATA

The information is used by a variety of health professionals, including health decision-makers and students, and is also used as a basis for research. Cancer incidence data for the period from 2003 to 2007 were published in 2008 and can be found on the Ministry of Health's website.

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## SOURCE OF POPULATION

Based on the 2001 census, making allowances for births and deaths. It was not possible to estimate migration effects.

## NOTES ON THE DATA

\*No official mortality data. Fluctuation in rates from year to year.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male	Female		
Trachea, bronchus and lung	36.2	Breast	54.1
Prostate	24.8	Non-melanoma skin cancer	17.5
Non-melanoma skin cancer	23.5	Cervix uteri	13.5
Other and unspecified	17.4	Colon	12.5
Colon	15.7	Kidney	10.4
Stomach	13.5	Thyroid	8.8
Kidney	13.4	Other and unspecified	8.7
Bladder	12.7	Trachea, bronchus and lung	8.1
Rectum	11.4	Ovary	8.0
Oesophagus	10.2	Gallbladder etc.	6.9
All sites	247.3	All sites	213.2

## \*Argentina, Tierra del Fuego (2003-2007)

SITE	Male						Female						ICD-10
	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.2	0.4	<b>0.7</b>	0.00	0.17	C00
Tongue	6	1.5	2.0	<b>2.9</b>	0.14	0.39	1	0.2	0.4	<b>0.3</b>	0.03	0.03	C01-02
Mouth	1	0.3	0.3	<b>0.7</b>	0.08	0.08	2	0.5	0.7	<b>0.8</b>	0.03	0.03	C03-06
Salivary glands	1	0.3	0.3	<b>0.7</b>	0.00	0.00	2	0.5	0.7	<b>0.7</b>	0.06	0.06	C07-08
Tonsil	1	0.3	0.3	<b>0.3</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	2	0.5	0.7	<b>0.6</b>	0.05	0.05	1	0.2	0.4	<b>0.3</b>	0.02	0.02	C11
Hypopharynx	1	0.3	0.3	<b>0.7</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	16	4.1	5.4	<b>10.2</b>	0.52	1.17	2	0.5	0.7	<b>1.1</b>	0.04	0.16	C15
Stomach	25	6.3	8.5	<b>13.5</b>	0.58	1.22	10	2.4	3.6	<b>6.2</b>	0.29	0.92	C16
Small intestine	1	0.3	0.3	<b>0.7</b>	0.08	0.08	4	0.9	1.4	<b>2.5</b>	0.13	0.13	C17
Colon	32	8.1	10.9	<b>15.7</b>	1.01	2.08	24	5.6	8.5	<b>12.5</b>	0.55	1.41	C18
Rectum	18	4.6	6.1	<b>11.4</b>	0.40	1.37	6	1.4	2.1	<b>3.0</b>	0.21	0.32	C19-20
Anus	1	0.3	0.3	<b>0.2</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C21
Liver	11	2.8	3.7	<b>7.3</b>	0.25	1.02	2	0.5	0.7	<b>0.6</b>	0.05	0.05	C22
Gallbladder etc.	11	2.8	3.7	<b>6.6</b>	0.23	0.23	11	2.6	3.9	<b>6.9</b>	0.33	1.18	C23-24
Pancreas	14	3.5	4.7	<b>8.4</b>	0.39	1.10	8	1.9	2.8	<b>4.7</b>	0.18	0.58	C25
Nose, sinuses etc.	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C30-31
Larynx	5	1.3	1.7	<b>2.8</b>	0.24	0.37	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C32
Trachea, bronchus and lung	61	15.4	20.7	<b>36.2</b>	1.61	3.65	15	3.5	5.3	<b>8.1</b>	0.34	1.32	C33-34
Other thoracic organs	2	0.5	0.7	<b>0.9</b>	0.10	0.10	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C37-38
Bone	5	1.3	1.7	<b>1.5</b>	0.12	0.12	2	0.5	0.7	<b>0.7</b>	0.04	0.04	C40-41
Melanoma of skin	7	1.8	2.4	<b>3.0</b>	0.12	0.44	9	2.1	3.2	<b>4.9</b>	0.14	0.59	C43
Other skin	43		14.6	<b>23.5</b>	0.76	2.42	36		12.8	<b>17.5</b>	0.71	1.68	C44
Mesothelioma	1	0.3	0.3	<b>0.8</b>	0.00	0.13	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C45
Kaposi sarcoma	1	0.3	0.3	<b>0.7</b>	0.08	0.08	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	2	0.5	0.7	<b>1.0</b>	0.02	0.15	3	0.7	1.1	<b>1.7</b>	0.06	0.06	C47+C49
Breast	0	0.0	0.0	<b>0.0</b>	0.00	0.00	134	31.5	47.6	<b>54.1</b>	3.79	5.79	C50
Vulva					5	1.2	1.8	<b>3.0</b>	0.04	0.44	0.44	0.44	C51
Vagina					1	0.2	0.4	<b>0.4</b>	0.02	0.02	0.02	0.02	C52
Cervix uteri					35	8.2	12.4	<b>13.5</b>	1.12	1.58	1.58	1.58	C53
Corpus uteri					14	3.3	5.0	<b>6.7</b>	0.35	0.64	0.64	0.64	C54
Uterus unspecified					5	1.2	1.8	<b>2.4</b>	0.09	0.32	0.32	0.32	C55
Ovary					16	3.8	5.7	<b>8.0</b>	0.44	0.79	0.79	0.79	C56
Other female genital organs					1	0.2	0.4	<b>0.4</b>	0.02	0.02	0.02	0.02	C57
Placenta					0	0.0	0.0	<b>0.0</b>	0.00	0.00	0.00	0.00	C58
Penis	2	0.5	0.7	<b>1.2</b>	0.05	0.18							C60
Prostate	35	8.9	11.9	<b>24.8</b>	0.69	3.31							C61
Testis	17	4.3	5.8	<b>5.5</b>	0.35	0.47							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	24	6.1	8.1	<b>13.4</b>	0.65	1.67	20	4.7	7.1	<b>10.4</b>	0.37	1.51	C64
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	19	4.8	6.4	<b>12.7</b>	0.27	1.48	7	1.6	2.5	<b>3.3</b>	0.11	0.28	C67
Other urinary organs	1	0.3	0.3	<b>0.7</b>	0.08	0.08	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	1	0.3	0.3	<b>0.3</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C69
Brain, nervous system	6	1.5	2.0	<b>2.4</b>	0.13	0.13	7	1.6	2.5	<b>3.5</b>	0.21	0.44	C70-72
Thyroid	1	0.3	0.3	<b>0.3</b>	0.02	0.02	27	6.4	9.6	<b>8.8</b>	0.71	0.82	C73
Adrenal gland	1	0.3	0.3	<b>0.4</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin lymphoma	4	1.0	1.4	<b>1.3</b>	0.08	0.08	5	1.2	1.8	<b>2.1</b>	0.15	0.32	C81
Non-Hodgkin lymphoma	10	2.5	3.4	<b>6.5</b>	0.27	0.92	13	3.1	4.6	<b>6.1</b>	0.45	0.73	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	7	1.8	2.4	<b>3.8</b>	0.27	0.40	9	2.1	3.2	<b>4.8</b>	0.18	0.58	C90
Lymphoid leukaemia	5	1.3	1.7	<b>2.2</b>	0.10	0.30	4	0.9	1.4	<b>2.4</b>	0.16	0.16	C91
Myeloid leukaemia	4	1.0	1.4	<b>1.3</b>	0.08	0.08	3	0.7	1.1	<b>1.5</b>	0.04	0.04	C92-94
Leukaemia unspecified	5	1.3	1.7	<b>2.0</b>	0.16	0.16	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C95
Myeloproliferative disorders	1	0.3	0.3	<b>0.8</b>	0.00	0.13	0	0.0	0.0	<b>0.0</b>	0.00	0.00	MPD
Myelodysplastic syndromes	1	0.3	0.3	<b>0.3</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	MDS
Other and unspecified	26	6.6	8.8	<b>17.4</b>	0.68	2.22	16	3.8	5.7	<b>8.7</b>	0.24	1.32	O&U
All sites	438		148.6	<b>247.3</b>	10.82	28.02	461		163.8	<b>213.2</b>	11.65	24.54	C00-96
All sites except C44	395	100.0	134.0	<b>223.9</b>	10.06	25.59	425	100.0	151.0	<b>195.7</b>	10.94	22.86	C00-96 exc. C44

\*See note following population pyramid

# Brazil, Aracaju

## REGISTRATION AREA

The Cancer Registry of Aracaju covers the urban area of the city of Aracaju, in the north-eastern region of Brazil. Aracaju has an area of 181 856 km<sup>2</sup> and a population of 499 000. The annual growth rate is 2.0%. The city of Aracaju is 4 m above sea level. Its climate is warm and humid, with an average annual temperature of 26.0 °C.

## CANCER CARE FACILITIES

The city of Aracaju has a network of 29 public and private hospitals, with a total of 2229 beds (4.47 per 1000 inhabitants). Aracaju has two universities and two medical schools. Other cancer diagnostic and treatment facilities include two radiation therapy clinics, seven chemotherapy clinics, several ultrasound and radiology clinics, and six clinical pathology laboratories.

## REGISTRY STRUCTURE AND METHODS

The registry was established in 1998 and is located in the state of Sergipe. It has permanent funding. The staff includes a medical coordinator and four registrars. The advisory committee includes a pathologist and three oncologists. Data are actively collected from sources that include a university hospital, two general hospitals, six anatomical pathology laboratories, an oncology clinic, two chemotherapy clinics, and four general health systems (APAC, Siscolo, Sismama, and SIM). Information about deaths is retrieved from the Mortality Information System of the Ministry of Health.

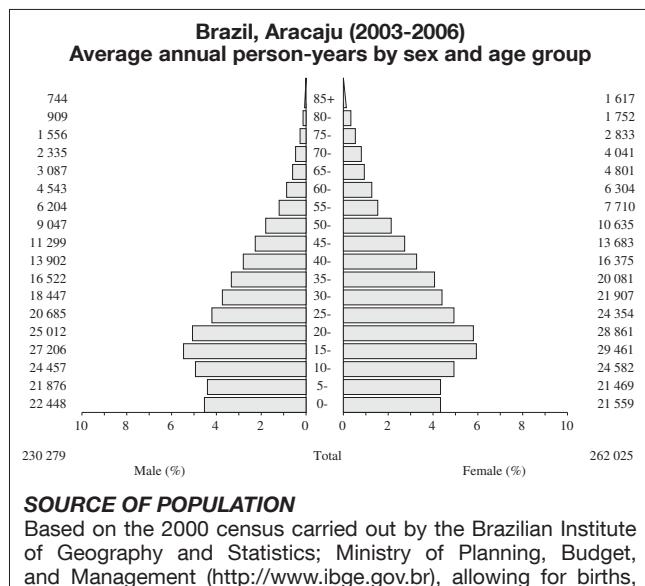
## USE OF THE DATA

The data are used for a variety of purposes, including to estimate incidence and geographical distribution of

cancer cases, to study temporal trends, for survival assessments, to evaluate screening programmes, to carry out geographical referral of cancer cases through a spatial assessment of cancer cases in Aracaju, for epidemiological studies, and for teaching purposes.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on the 2000 census carried out by the Brazilian Institute of Geography and Statistics; Ministry of Planning, Budget, and Management (<http://www.ibge.gov.br>), allowing for births, deaths, and migration into and out of the registration area.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	143.0	Non-melanoma skin cancer	108.0
Non-melanoma skin cancer	136.4	Breast	59.7
Trachea, bronchus and lung	26.0	Cervix uteri	25.5
Stomach	14.6	Thyroid	18.6
Bladder	11.3	Trachea, bronchus and lung	9.8
Larynx	10.7	Corpus uteri	8.8
Colon	9.4	Ovary	8.5
Non-Hodgkin lymphoma	9.1	Other and unspecified	8.3
Other and unspecified	7.7	Colon	7.9
Kidney	6.8	Stomach	7.2
All sites	462.6	All sites	329.6

## Brazil, Aracaju (2003-2006)

SITE	Male						Female						ICD-10	
	§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates		§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates					
				0-64	0-74				0-64	0-74				
Lip	15	0.8	1.6	<b>2.5</b>	0.15	0.28	11	0.5	1.0	<b>1.4</b>	0.08	0.16	C00	
Tongue	29	1.5	3.1	<b>4.8</b>	0.31	0.58	9	0.4	0.9	<b>0.8</b>	0.03	0.06	C01-02	
Mouth	33	1.8	3.6	<b>5.7</b>	0.43	0.70	6	0.3	0.6	<b>0.7</b>	0.03	0.09	C03-06	
Salivary glands	10	0.5	1.1	<b>1.9</b>	0.11	0.28	9	0.4	0.9	<b>1.0</b>	0.09	0.12	C07-08	
Tonsil	4	0.2	0.4	<b>0.7</b>	0.07	0.07	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09	
Other oropharynx	13	0.7	1.4	<b>2.4</b>	0.25	0.29	4	0.2	0.4	<b>0.3</b>	0.02	0.02	C10	
Nasopharynx	7	0.4	0.8	<b>0.8</b>	0.07	0.07	2	0.1	0.2	<b>0.2</b>	0.02	0.02	C11	
Hypopharynx	9	0.5	1.0	<b>1.4</b>	0.17	0.17	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13	
Pharynx unspecified	6	0.3	0.7	<b>1.0</b>	0.08	0.13	1	0.0	0.1	<b>0.1</b>	0.00	0.00	C14	
Oesophagus	21	1.1	2.3	<b>3.7</b>	0.22	0.39	12	0.6	1.1	<b>1.3</b>	0.07	0.13	C15	
Stomach	81	4.3	8.8	<b>14.6</b>	0.74	1.70	61	3.0	5.8	<b>7.2</b>	0.43	0.93	C16	
Small intestine	15	0.8	1.6	<b>2.6</b>	0.19	0.28	9	0.4	0.9	<b>1.0</b>	0.06	0.15	C17	
Colon	54	2.9	5.9	<b>9.4</b>	0.48	1.06	73	3.6	7.0	<b>7.9</b>	0.43	0.84	C18	
Rectum	30	1.6	3.3	<b>5.3</b>	0.27	0.75	55	2.7	5.2	<b>6.2</b>	0.36	0.72	C19-20	
Anus	9	0.5	1.0	<b>1.4</b>	0.07	0.13	11	0.5	1.0	<b>1.2</b>	0.07	0.09	C21	
Liver	40	2.1	4.3	<b>6.7</b>	0.27	0.80	38	1.9	3.6	<b>4.0</b>	0.15	0.41	C22	
Gallbladder etc.	18	1.0	2.0	<b>3.3</b>	0.12	0.45	54	2.7	5.2	<b>6.3</b>	0.28	0.83	C23-24	
Pancreas	18	1.0	2.0	<b>3.3</b>	0.23	0.36	49	2.4	4.7	<b>5.5</b>	0.30	0.60	C25	
Nose, sinuses etc.	4	0.2	0.4	<b>0.5</b>	0.04	0.04	1	0.0	0.1	<b>0.1</b>	0.00	0.03	C30-31	
Larynx	58	3.1	6.3	<b>10.7</b>	0.57	1.45	10	0.5	1.0	<b>1.2</b>	0.10	0.16	C32	
Trachea, bronchus and lung	145	7.7	15.7	<b>26.0</b>	1.31	3.29	83	4.1	7.9	<b>9.8</b>	0.53	1.15	C33-34	
Other thoracic organs	2	0.1	0.2	<b>0.2</b>	0.02	0.02	2	0.1	0.2	<b>0.2</b>	0.01	0.01	C37-38	
Bone	9	0.5	1.0	<b>1.2</b>	0.12	0.12	10	0.5	1.0	<b>0.9</b>	0.06	0.09	C40-41	
Melanoma of skin	28	1.5	3.0	<b>4.3</b>	0.23	0.48	33	1.6	3.1	<b>3.8</b>	0.29	0.40	C43	
Other skin	813	88.3	136.4	7.02	15.84	960	91.6	108.0	6.21	12.09	C44			
Mesothelioma	1	0.1	0.1	<b>0.1</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C45	
Kaposi sarcoma	7	0.4	0.8	<b>1.0</b>	0.08	0.08	1	0.0	0.1	<b>0.2</b>	0.02	0.02	C46	
Connective and soft tissue	18	1.0	2.0	<b>2.3</b>	0.13	0.22	16	0.8	1.5	<b>1.8</b>	0.15	0.20	C47+C49	
Breast	2	0.1	0.2	<b>0.2</b>	0.03	0.03	532	26.5	50.8	<b>59.7</b>	4.30	6.72	C50	
Vulva							10	0.5	1.0	<b>1.0</b>	0.05	0.07	C51	
Vagina							6	0.3	0.6	<b>0.9</b>	0.05	0.13	C52	
Cervix uteri							233	11.6	22.2	<b>25.5</b>	1.81	2.87	C53	
Corpus uteri							72	3.6	6.9	<b>8.8</b>	0.54	1.16	C54	
Uterus unspecified							8	0.4	0.8	<b>1.0</b>	0.05	0.17	C55	
Ovary							76	3.8	7.3	<b>8.5</b>	0.53	0.93	C56	
Other female genital organs							2	0.1	0.2	<b>0.2</b>	0.00	0.03	C57	
Placenta							1	0.0	0.1	<b>0.1</b>	0.00	0.00	C58	
Penis	17	0.9	1.8	<b>2.5</b>	0.14	0.24							C60	
Prostate	759	40.4	82.4	<b>143.0</b>	4.92	17.56							C61	
Testis	5	0.3	0.5	<b>0.4</b>	0.03	0.03							C62	
Other male genital organs	1	0.1	0.1	<b>0.2</b>	0.02	0.02							C63	
Kidney	41	2.2	4.5	<b>6.8</b>	0.32	0.80	29	1.4	2.8	<b>3.1</b>	0.17	0.36	C64	
Renal pelvis	4	0.2	0.4	<b>0.6</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65	
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C66	
Bladder	64	3.4	6.9	<b>11.3</b>	0.39	1.19	30	1.5	2.9	<b>3.1</b>	0.09	0.32	C67	
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.2</b>	0.00	0.03	C68	
Eye	11	0.6	1.2	<b>1.8</b>	0.10	0.25	4	0.2	0.4	<b>0.4</b>	0.02	0.05	C69	
Brain, nervous system	42	2.2	4.6	<b>6.0</b>	0.37	0.60	38	1.9	3.6	<b>3.8</b>	0.24	0.33	C70-72	
Thyroid	40	2.1	4.3	<b>5.2</b>	0.41	0.57	191	9.5	18.2	<b>18.6</b>	1.51	1.78	C73	
Adrenal gland	0	0.0	0.0	<b>0.0</b>	0.00	0.00	4	0.2	0.4	<b>0.4</b>	0.02	0.05	C74	
Other endocrine	2	0.1	0.2	<b>0.3</b>	0.01	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75	
Hodgkin lymphoma	21	1.1	2.3	<b>2.2</b>	0.13	0.19	14	0.7	1.3	<b>1.1</b>	0.07	0.10	C81	
Non-Hodgkin lymphoma	61	3.2	6.6	<b>9.1</b>	0.54	1.01	48	2.4	4.6	<b>5.2</b>	0.34	0.56	C82-85,C96	
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88	
Multiple myeloma	18	1.0	2.0	<b>3.1</b>	0.21	0.35	28	1.4	2.7	<b>3.7</b>	0.25	0.46	C90	
Lymphoid leukaemia	24	1.3	2.6	<b>3.5</b>	0.19	0.32	13	0.6	1.2	<b>1.6</b>	0.09	0.15	C91	
Myeloid leukaemia	25	1.3	2.7	<b>3.8</b>	0.22	0.34	23	1.1	2.2	<b>2.3</b>	0.16	0.22	C92-94	
Leukaemia unspecified	2	0.1	0.2	<b>0.2</b>	0.01	0.01	2	0.1	0.2	<b>0.3</b>	0.04	0.04	C95	
Myeloproliferative disorders	3	0.2	0.3	<b>0.5</b>	0.02	0.06	4	0.2	0.4	<b>0.5</b>	0.02	0.07	MPD	
Myelodysplastic syndromes	1	0.1	0.1	<b>0.2</b>	0.02	0.02	1	0.0	0.1	<b>0.1</b>	0.00	0.00	MDS	
Other and unspecified	51	2.7	5.5	<b>7.7</b>	0.48	0.77	73	3.6	7.0	<b>8.3</b>	0.46	0.92	O&U	
All sites	2691	292.1	462.6	22.33	54.46	2964	282.8	329.6	20.63	36.89	C00-96			
All sites except C44	1878	100.0	203.9	326.3	15.31	38.63	2004	100.0	191.2	221.6	14.41	24.80	C00-96 exc. C44	

§Includes 11 cases of unknown age

§Includes 8 cases of unknown age

# Brazil, Belo Horizonte

## REGISTRATION AREA

The Population-based Cancer Registry of Belo Horizonte covers the city of Belo Horizonte, in the south-eastern region of Brazil. Belo Horizonte has an area of 331 400 km<sup>2</sup> and a population of 2.4 million (all living in urban areas). Between the 2000 and 2010 censuses, the annual growth rate was 0.6%. The city of Belo Horizonte is 852 m above sea level. Its climate is tropical, with warm summers and an average annual temperature of 21.1 °C.

## CANCER CARE FACILITIES

The city of Belo Horizonte has a network of 75 modern public and private hospitals, with a total of 9983 beds (4.07 per 1000 inhabitants). Other cancer diagnostic and treatment facilities include 23 radiation or chemotherapy services, 37 haematological services, and 121 cytopathology or pathology services. Belo Horizonte has 85 universities, five of which offer degrees in medicine.

## REGISTRY STRUCTURE AND METHODS

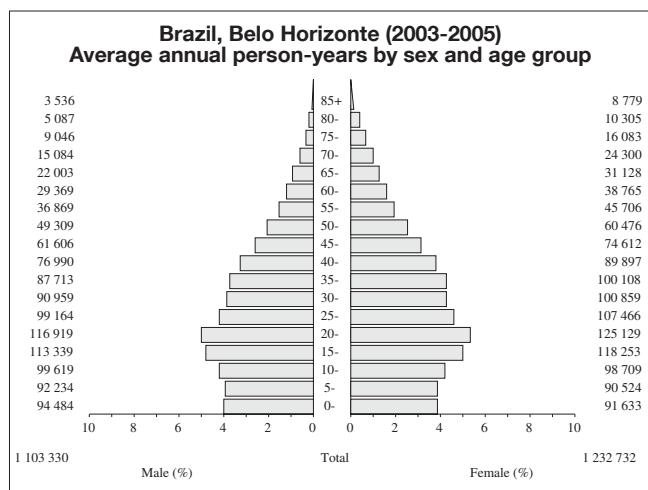
The registry was created in 2001. It is located in the Health Surveillance Secretariat of the State Secretariat of Health of Minas Gerais, within the Program for Evaluation and Monitoring of Cancer and its Risk Factors of Minas Gerais. The registry has permanent funding, and data are collected actively. The registry staff includes an epidemiologist coordinator, two statisticians, a field supervising nurse, nine collection registrars, a coding registrar, and a field supervisor of the hospital-based cancer registries. The advisory committee includes an epidemiologist, two statisticians, and an oncologist. Data are actively collected from 43 sources, which include a specialized hospital, a university hospital, 16 general hospitals, and 23 pathology laboratories. Information about deaths is retrieved from the Mortality Information System of the Ministry of Health.

## USE OF THE DATA

The data are used for a variety of purposes, including to estimate incidence and geographical distribution of cancer cases, to study temporal trends, for survival assessments, to evaluate screening programmes, to carry out geographical referral of cancer cases through a spatial assessment of cancer cases, for epidemiological studies, and for teaching purposes.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on the 2000 census carried out by the Brazilian Institute of Geography and Statistics; Ministry of Planning, Budget, and Management (<http://www.ibge.gov.br>), allowing for births, deaths, and migration into and out of the registration area.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	135.2	Breast	66.8
Non-melanoma skin cancer	60.2	Non-melanoma skin cancer	40.9
Trachea, bronchus and lung	22.0	Cervix uteri	16.1
Stomach	18.8	Colon	11.9
Other and unspecified	13.4	Other and unspecified	9.8
Colon	13.4	Stomach	8.5
Bladder	10.8	Thyroid	7.8
Larynx	9.7	Trachea, bronchus and lung	7.6
Oesophagus	9.5	Rectum	7.4
Rectum	8.7	Ovary	7.4
All sites	382.7	All sites	248.7

## Brazil, Belo Horizonte (2003-2005)

SITE	Male						Female						ICD-10	
	§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates		§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates					
				0-64	0-74				0-64	0-74				
Lip	6	0.1	0.2	<b>0.2</b>	0.01	0.01	5	0.1	0.1	<b>0.1</b>	0.00	0.01	C00	
Tongue	114	1.4	3.4	<b>4.2</b>	0.27	0.47	39	0.5	1.1	<b>1.0</b>	0.06	0.11	C01-02	
Mouth	122	1.5	3.7	<b>4.6</b>	0.31	0.57	52	0.7	1.4	<b>1.4</b>	0.08	0.16	C03-06	
Salivary glands	28	0.3	0.8	<b>1.1</b>	0.07	0.11	23	0.3	0.6	<b>0.6</b>	0.04	0.05	C07-08	
Tonsil	32	0.4	1.0	<b>1.1</b>	0.10	0.13	6	0.1	0.2	<b>0.1</b>	0.00	0.02	C09	
Other oropharynx	48	0.6	1.5	<b>1.7</b>	0.13	0.19	12	0.2	0.3	<b>0.3</b>	0.02	0.03	C10	
Nasopharynx	27	0.3	0.8	<b>1.0</b>	0.07	0.10	13	0.2	0.4	<b>0.3</b>	0.02	0.04	C11	
Hypopharynx	50	0.6	1.5	<b>1.9</b>	0.11	0.24	4	0.1	0.1	<b>0.1</b>	0.01	0.01	C12-13	
Pharynx unspecified	53	0.6	1.6	<b>2.0</b>	0.15	0.23	16	0.2	0.4	<b>0.4</b>	0.03	0.06	C14	
Oesophagus	251	3.0	7.6	<b>9.5</b>	0.59	1.16	101	1.3	2.7	<b>2.5</b>	0.13	0.25	C15	
Stomach	486	5.9	14.7	<b>18.8</b>	0.95	2.17	338	4.2	9.1	<b>8.5</b>	0.38	0.95	C16	
Small intestine	25	0.3	0.8	<b>1.0</b>	0.05	0.10	15	0.2	0.4	<b>0.4</b>	0.03	0.04	C17	
Colon	342	4.1	10.3	<b>13.4</b>	0.60	1.58	471	5.9	12.7	<b>11.9</b>	0.60	1.26	C18	
Rectum	227	2.7	6.9	<b>8.7</b>	0.46	1.08	284	3.6	7.7	<b>7.4</b>	0.41	0.87	C19-20	
Anus	25	0.3	0.8	<b>0.9</b>	0.04	0.10	53	0.7	1.4	<b>1.4</b>	0.08	0.15	C21	
Liver	156	1.9	4.7	<b>5.9</b>	0.36	0.70	102	1.3	2.8	<b>2.6</b>	0.11	0.28	C22	
Gallbladder etc.	55	0.7	1.7	<b>2.2</b>	0.06	0.24	149	1.9	4.0	<b>3.8</b>	0.17	0.44	C23-24	
Pancreas	155	1.9	4.7	<b>6.1</b>	0.23	0.69	164	2.1	4.4	<b>4.1</b>	0.13	0.45	C25	
Nose, sinuses etc.	19	0.2	0.6	<b>0.7</b>	0.05	0.06	13	0.2	0.4	<b>0.3</b>	0.01	0.03	C30-31	
Larynx	246	3.0	7.4	<b>9.7</b>	0.59	1.23	37	0.5	1.0	<b>1.0</b>	0.05	0.12	C32	
Trachea, bronchus and lung	557	6.7	16.8	<b>22.0</b>	1.01	2.66	293	3.7	7.9	<b>7.6</b>	0.45	0.88	C33-34	
Other thoracic organs	22	0.3	0.7	<b>0.8</b>	0.03	0.10	13	0.2	0.4	<b>0.3</b>	0.03	0.03	C37-38	
Bone	37	0.4	1.1	<b>1.2</b>	0.08	0.12	39	0.5	1.1	<b>1.0</b>	0.06	0.08	C40-41	
Melanoma of skin	94	1.1	2.8	<b>3.3</b>	0.18	0.33	114	1.4	3.1	<b>2.8</b>	0.16	0.28	C43	
Other skin	1558		47.1	<b>60.2</b>	2.48	6.45	1636		44.2	<b>40.9</b>	1.88	4.32	C44	
Mesothelioma	3	0.0	0.1	<b>0.1</b>	0.01	0.01	2	0.0	0.1	<b>0.0</b>	0.00	0.00	C45	
Kaposi sarcoma	15	0.2	0.5	<b>0.4</b>	0.03	0.03	3	0.0	0.1	<b>0.1</b>	0.00	0.02	C46	
Connective and soft tissue	50	0.6	1.5	<b>1.6</b>	0.11	0.17	61	0.8	1.6	<b>1.6</b>	0.09	0.18	C47+C49	
Breast	9	0.1	0.3	<b>0.4</b>	0.01	0.04	2544	31.9	68.8	<b>66.8</b>	4.73	7.32	C50	
Vulva							33	0.4	0.9	<b>0.8</b>	0.04	0.10	C51	
Vagina							24	0.3	0.6	<b>0.6</b>	0.02	0.07	C52	
Cervix uteri							609	7.6	16.5	<b>16.1</b>	1.16	1.82	C53	
Corpus uteri							255	3.2	6.9	<b>7.0</b>	0.41	0.90	C54	
Uterus unspecified							33	0.4	0.9	<b>0.9</b>	0.06	0.10	C55	
Ovary							276	3.5	7.5	<b>7.4</b>	0.51	0.87	C56	
Other female genital organs							21	0.3	0.6	<b>0.6</b>	0.02	0.07	C57	
Placenta							6	0.1	0.2	<b>0.1</b>	0.01	0.01	C58	
Penis	24	0.3	0.7	<b>0.9</b>	0.05	0.11							C60	
Prostate	3289	39.8	99.4	<b>135.2</b>	5.33	17.24							C61	
Testis	63	0.8	1.9	<b>1.7</b>	0.12	0.12							C62	
Other male genital organs	4	0.0	0.1	<b>0.2</b>	0.02	0.03							C63	
Kidney	147	1.8	4.4	<b>5.6</b>	0.34	0.63	124	1.6	3.4	<b>3.3</b>	0.21	0.35	C64	
Renal pelvis	6	0.1	0.2	<b>0.2</b>	0.01	0.03	5	0.1	0.1	<b>0.1</b>	0.00	0.00	C65	
Ureter	4	0.0	0.1	<b>0.2</b>	0.01	0.01	2	0.0	0.1	<b>0.0</b>	0.00	0.00	C66	
Bladder	273	3.3	8.2	<b>10.8</b>	0.44	1.27	115	1.4	3.1	<b>2.8</b>	0.10	0.30	C67	
Other urinary organs	6	0.1	0.2	<b>0.3</b>	0.00	0.04	8	0.1	0.2	<b>0.2</b>	0.01	0.02	C68	
Eye	13	0.2	0.4	<b>0.5</b>	0.04	0.05	16	0.2	0.4	<b>0.4</b>	0.03	0.04	C69	
Brain, nervous system	174	2.1	5.3	<b>5.7</b>	0.37	0.53	173	2.2	4.7	<b>4.6</b>	0.27	0.50	C70-72	
Thyroid	69	0.8	2.1	<b>2.3</b>	0.13	0.26	307	3.8	8.3	<b>7.8</b>	0.63	0.79	C73	
Adrenal gland	17	0.2	0.5	<b>0.7</b>	0.03	0.05	14	0.2	0.4	<b>0.5</b>	0.02	0.04	C74	
Other endocrine	5	0.1	0.2	<b>0.2</b>	0.02	0.03	6	0.1	0.2	<b>0.1</b>	0.01	0.02	C75	
Hodgkin lymphoma	61	0.7	1.8	<b>1.9</b>	0.11	0.15	73	0.9	2.0	<b>1.8</b>	0.11	0.14	C81	
Non-Hodgkin lymphoma	234	2.8	7.1	<b>8.4</b>	0.54	0.90	230	2.9	6.2	<b>5.9</b>	0.36	0.63	C82-85,C96	
Immunoproliferative diseases	1	0.0	0.0	<b>0.0</b>	0.01	0.01	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C88	
Multiple myeloma	84	1.0	2.5	<b>3.3</b>	0.16	0.40	100	1.3	2.7	<b>2.6</b>	0.13	0.34	C90	
Lymphoid leukaemia	77	0.9	2.3	<b>2.8</b>	0.11	0.22	76	1.0	2.1	<b>2.2</b>	0.11	0.18	C91	
Myeloid leukaemia	81	1.0	2.4	<b>3.0</b>	0.17	0.34	100	1.3	2.7	<b>2.6</b>	0.17	0.26	C92-94	
Leukaemia unspecified	17	0.2	0.5	<b>0.6</b>	0.02	0.06	18	0.2	0.5	<b>0.5</b>	0.02	0.04	C95	
Myeloproliferative disorders	7	0.1	0.2	<b>0.3</b>	0.00	0.04	4	0.1	0.1	<b>0.1</b>	0.01	0.01	MPD	
Myelodysplastic syndromes	1	0.0	0.0	<b>0.0</b>	0.00	0.00	3	0.0	0.1	<b>0.1</b>	0.00	0.01	MDS	
Other and unspecified	346	4.2	10.5	<b>13.4</b>	0.57	1.58	386	4.8	10.4	<b>9.8</b>	0.46	1.09	O&U	
All sites	9815		296.5	<b>382.7</b>	17.73	45.14	9620		260.1	<b>248.7</b>	14.66	27.14	C00-96	
All sites except C44	8257	100.0	249.5	<b>322.5</b>	15.25	38.69	7984	100.0	215.9	<b>207.7</b>	12.78	22.82	C00-96 exc. C44	

§Includes 20 cases of unknown age

§Includes 20 cases of unknown age

# Brazil, Cuiabá

## REGISTRATION AREA

The Population-based Cancer Registry of Cuiabá covers the cities of Cuiabá and Várzea Grande, in the mid-west region of Brazil. Cuiabá and Várzea Grande have a total area of 4482 km<sup>2</sup> and a combined population of 783 000 (98% living in urban areas). The annual growth rate is 2%. Cuiabá and Várzea Grande are 177 m and 191 m above sea level, respectively. The area's climate is continental tropical, with warm summers and an average annual temperature of 33 °C.

## CANCER CARE FACILITIES

The area has a health care network of four public and five private hospitals, with 1477 public beds (1.87 per 1000 inhabitants). There are seven universities and two medical schools. Other cancer diagnostic and treatment facilities include three radiation therapy clinics, seven chemotherapy clinics, 15 ultrasound clinics, 10 clinical pathology laboratories, and 18 radiology clinics.

## REGISTRY STRUCTURE AND METHODS

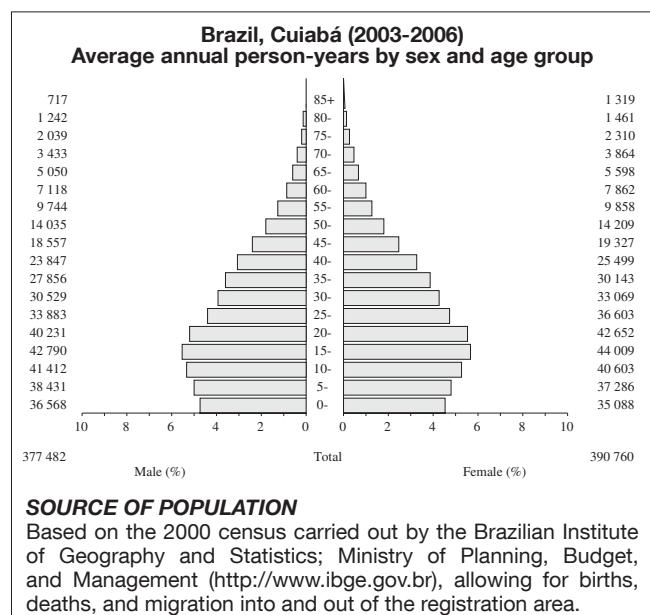
The registry was established in 1999. It is located in the State Health Secretariat of Mato Grosso and has permanent funding. The registry has a coordinator and two registrars. The advisory committee includes an epidemiologist, a statistician, a pathologist, and an oncologist. Data are actively collected from sources including a specialized hospital, two university hospitals, a general hospital, 10 anatomical pathology laboratories, a haematology clinic, two oncology clinics, three radiation therapy clinics, and seven chemotherapy clinics. Information about deaths is retrieved from the Mortality Information System of the Ministry of Health.

## USE OF THE DATA

The data are used to determine cancer incidence and geographical distribution of cancer in the area, to study temporal trends, for survival studies, to evaluate screening programmes, for teaching purposes, and for various epidemiological studies. The information has also been published in scientific papers.

## CONTRIBUTORS

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## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	110.1	Non-melanoma skin cancer	85.4
Non-melanoma skin cancer	78.4	Breast	51.8
Trachea, bronchus and lung	23.6	Cervix uteri	36.5
Stomach	20.8	Other and unspecified	12.0
Other and unspecified	12.2	Trachea, bronchus and lung	10.1
Colon	10.5	Stomach	9.5
Larynx	9.7	Colon	7.4
Oesophagus	8.9	Rectum	7.1
Bladder	7.9	Ovary	6.6
Rectum	6.5	Brain, nervous system	6.3
All sites	360.1	All sites	292.1

## Brazil, Cuiabá (2003-2006)

SITE	Male						Female						ICD-10	
	§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates		§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates					
				0-64	0-74				0-64	0-74				
Lip	5	0.2	0.3	<b>0.4</b>	0.05	0.05	5	0.2	0.3	<b>0.5</b>	0.03	0.03	C00	
Tongue	38	1.6	2.5	<b>4.2</b>	0.32	0.53	16	0.7	1.0	<b>1.5</b>	0.09	0.14	C01-02	
Mouth	62	2.6	4.1	<b>6.5</b>	0.46	0.71	18	0.8	1.2	<b>1.8</b>	0.09	0.23	C03-06	
Salivary glands	3	0.1	0.2	<b>0.3</b>	0.01	0.01	4	0.2	0.3	<b>0.3</b>	0.01	0.03	C07-08	
Tonsil	11	0.5	0.7	<b>0.9</b>	0.06	0.12	2	0.1	0.1	<b>0.2</b>	0.02	0.02	C09	
Other oropharynx	20	0.8	1.3	<b>2.3</b>	0.14	0.30	2	0.1	0.1	<b>0.2</b>	0.02	0.02	C10	
Nasopharynx	5	0.2	0.3	<b>0.5</b>	0.02	0.05	2	0.1	0.1	<b>0.2</b>	0.02	0.02	C11	
Hypopharynx	10	0.4	0.7	<b>1.3</b>	0.10	0.16	2	0.1	0.1	<b>0.1</b>	0.01	0.01	C12-13	
Pharynx unspecified	9	0.4	0.6	<b>1.1</b>	0.06	0.13	2	0.1	0.1	<b>0.1</b>	0.00	0.00	C14	
Oesophagus	76	3.1	5.0	<b>8.9</b>	0.45	1.18	23	1.0	1.5	<b>2.4</b>	0.10	0.32	C15	
Stomach	176	7.3	11.7	<b>20.8</b>	0.94	2.68	98	4.3	6.3	<b>9.5</b>	0.61	1.14	C16	
Small intestine	5	0.2	0.3	<b>0.7</b>	0.01	0.05	9	0.4	0.6	<b>0.8</b>	0.05	0.09	C17	
Colon	94	3.9	6.2	<b>10.5</b>	0.64	1.37	74	3.2	4.7	<b>7.4</b>	0.49	0.82	C18	
Rectum	61	2.5	4.0	<b>6.5</b>	0.34	0.78	74	3.2	4.7	<b>7.1</b>	0.47	0.86	C19-20	
Anus	10	0.4	0.7	<b>0.8</b>	0.06	0.06	13	0.6	0.8	<b>1.2</b>	0.08	0.14	C21	
Liver	27	1.1	1.8	<b>3.0</b>	0.20	0.41	20	0.9	1.3	<b>2.0</b>	0.12	0.20	C22	
Gallbladder etc.	13	0.5	0.9	<b>1.8</b>	0.03	0.30	18	0.8	1.2	<b>2.0</b>	0.06	0.33	C23-24	
Pancreas	29	1.2	1.9	<b>3.3</b>	0.19	0.48	41	1.8	2.6	<b>4.4</b>	0.15	0.53	C25	
Nose, sinuses etc.	8	0.3	0.5	<b>0.8</b>	0.04	0.07	7	0.3	0.4	<b>0.7</b>	0.04	0.12	C30-31	
Larynx	87	3.6	5.8	<b>9.7</b>	0.67	1.10	16	0.7	1.0	<b>1.3</b>	0.11	0.14	C32	
Trachea, bronchus and lung	197	8.1	13.0	<b>23.6</b>	1.26	2.80	95	4.2	6.1	<b>10.1</b>	0.55	1.23	C33-34	
Other thoracic organs	18	0.7	1.2	<b>2.0</b>	0.08	0.15	9	0.4	0.6	<b>0.8</b>	0.05	0.08	C37-38	
Bone	27	1.1	1.8	<b>2.4</b>	0.12	0.31	13	0.6	0.8	<b>0.9</b>	0.05	0.05	C40-41	
Melanoma of skin	26	1.1	1.7	<b>2.6</b>	0.19	0.27	32	1.4	2.0	<b>2.6</b>	0.16	0.26	C43	
Other skin	690	45.7	78.4	3.88	8.82	844		54.0	<b>85.4</b>	4.15	9.15	9.15	C44	
Mesothelioma	1	0.0	0.1	<b>0.1</b>	0.00	0.00	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C45	
Kaposi sarcoma	9	0.4	0.6	<b>0.7</b>	0.05	0.05	2	0.1	0.1	<b>0.2</b>	0.00	0.04	C46	
Connective and soft tissue	27	1.1	1.8	<b>2.2</b>	0.17	0.17	18	0.8	1.2	<b>1.5</b>	0.09	0.13	C47+C49	
Breast	7	0.3	0.5	<b>0.8</b>	0.06	0.09	590	25.8	37.7	<b>51.8</b>	4.01	5.58	C50	
Vulva							12	0.5	0.8	<b>1.0</b>	0.03	0.10	C51	
Vagina							7	0.3	0.4	<b>0.6</b>	0.04	0.10	C52	
Cervix uteri							432	18.9	27.6	<b>36.5</b>	2.62	4.05	C53	
Corpus uteri							45	2.0	2.9	<b>4.8</b>	0.23	0.61	C54	
Uterus unspecified							20	0.9	1.3	<b>2.0</b>	0.13	0.28	C55	
Ovary							72	3.2	4.6	<b>6.6</b>	0.49	0.80	C56	
Other female genital organs							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C57	
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58	
Penis	20	0.8	1.3	<b>2.1</b>	0.18	0.23							C60	
Prostate	831	34.3	55.0	<b>110.1</b>	3.58	12.79							C61	
Testis	21	0.9	1.4	<b>1.7</b>	0.12	0.19							C62	
Other male genital organs	3	0.1	0.2	<b>0.4</b>	0.03	0.03							C63	
Kidney	28	1.2	1.9	<b>3.1</b>	0.24	0.35	22	1.0	1.4	<b>2.0</b>	0.09	0.18	C64	
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65	
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.02	0.02	C66	
Bladder	66	2.7	4.4	<b>7.9</b>	0.25	0.89	20	0.9	1.3	<b>2.3</b>	0.08	0.29	C67	
Other urinary organs	2	0.1	0.1	<b>0.2</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68	
Eye	4	0.2	0.3	<b>0.5</b>	0.03	0.06	6	0.3	0.4	<b>0.6</b>	0.04	0.07	C69	
Brain, nervous system	61	2.5	4.0	<b>5.9</b>	0.30	0.57	75	3.3	4.8	<b>6.3</b>	0.38	0.57	C70-72	
Thyroid	13	0.5	0.9	<b>1.1</b>	0.08	0.08	60	2.6	3.8	<b>4.5</b>	0.32	0.45	C73	
Adrenal gland	3	0.1	0.2	<b>0.2</b>	0.01	0.01	4	0.2	0.3	<b>0.3</b>	0.02	0.02	C74	
Other endocrine	5	0.2	0.3	<b>0.5</b>	0.04	0.04	3	0.1	0.2	<b>0.3</b>	0.01	0.03	C75	
Hodgkin lymphoma	18	0.7	1.2	<b>1.3</b>	0.09	0.12	15	0.7	1.0	<b>1.3</b>	0.07	0.15	C81	
Non-Hodgkin lymphoma	72	3.0	4.8	<b>6.4</b>	0.37	0.60	63	2.8	4.0	<b>5.2</b>	0.36	0.53	C82-85,C96	
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C88	
Multiple myeloma	26	1.1	1.7	<b>2.9</b>	0.13	0.41	30	1.3	1.9	<b>3.6</b>	0.11	0.57	C90	
Lymphoid leukaemia	37	1.5	2.5	<b>3.4</b>	0.14	0.27	42	1.8	2.7	<b>3.1</b>	0.17	0.19	C91	
Myeloid leukaemia	24	1.0	1.6	<b>1.9</b>	0.09	0.20	19	0.8	1.2	<b>1.6</b>	0.09	0.19	C92-94	
Leukaemia unspecified	13	0.5	0.9	<b>1.3</b>	0.07	0.14	4	0.2	0.3	<b>0.3</b>	0.03	0.03	C95	
Myeloproliferative disorders	1	0.0	0.1	<b>0.1</b>	0.01	0.01	1	0.0	0.1	<b>0.1</b>	0.00	0.03	MPD	
Myelodysplastic syndromes	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	MDS	
Other and unspecified	113	4.7	7.5	<b>12.2</b>	0.83	1.45	123	5.4	7.9	<b>12.0</b>	0.68	1.37	O&U	
All sites	3112	206.1	<b>360.1</b>	17.25	41.61		3127	200.1	<b>292.1</b>	17.67	32.32	C00-96		
All sites except C44	2422	100.0	160.4	<b>281.7</b>	13.36	32.78	2283	100.0	146.1	<b>206.9</b>	13.50	23.18	C00-96 exc. C44	

§Includes 77 cases of unknown age

§Includes 53 cases of unknown age

# Brazil, Fortaleza

## REGISTRATION AREA

The Population-based Cancer Registry (PBCR) of Fortaleza covers the city of Fortaleza, in the north-eastern region of Brazil. Fortaleza has an area of 313 km<sup>2</sup> and a population of 2.5 million (100% living in urban areas). The annual growth rate is 2.6%. Fortaleza is at sea level and its climate is equatorial, with an average annual temperature of 27 °C.

## CANCER CARE FACILITIES

The city of Fortaleza has a network of 60 public and private hospitals, with a total of 7177 beds (3.13 per 1000 inhabitants). Fortaleza has three universities and four medical schools. Other cancer diagnostic and treatment facilities include two radiation therapy clinics and eight chemotherapy clinics.

## REGISTRY STRUCTURE AND METHODS

The PBCR of Fortaleza was established in 1973 and is located in the State Health Secretariat. The registry has permanent funding, and data are collected actively. The registry staff includes a medical coordinator and four registrars. Data are collected from 44 sources: a specialized hospital, a university hospital, 22 general hospitals, eight anatomical pathology laboratories, two haematology clinics, two radiation therapy clinics, and eight chemotherapy clinics. Information about deaths is retrieved from the Mortality Information System of the Ministry of Health.

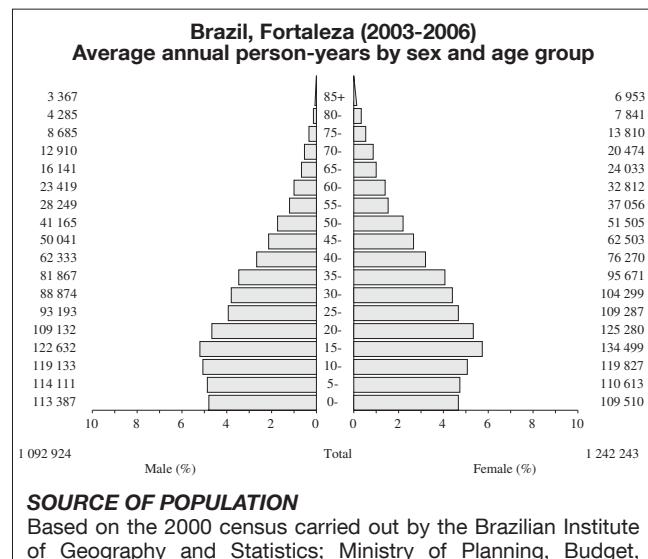
## USE OF THE DATA

The data are used for a variety of purposes, including to estimate incidence and geographical distribution of

cancer cases, to study temporal trends, for survival assessments, for epidemiological studies, and for teaching purposes.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on the 2000 census carried out by the Brazilian Institute of Geography and Statistics; Ministry of Planning, Budget, and Management (<http://www.ibge.gov.br>), allowing for births, deaths, and migration into and out of the registration area.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	56.9	Breast	52.0
Non-melanoma skin cancer	39.0	Non-melanoma skin cancer	23.9
Trachea, bronchus and lung	22.7	Cervix uteri	21.7
Stomach	17.6	Trachea, bronchus and lung	11.6
Other and unspecified	12.9	Other and unspecified	10.7
Larynx	9.2	Thyroid	8.7
Oesophagus	6.7	Stomach	8.0
Colon	6.7	Ovary	7.9
Non-Hodgkin lymphoma	5.7	Colon	5.9
Rectum	5.4	Corpus uteri	4.6
All sites	239.0	All sites	199.0

## Brazil, Fortaleza (2003-2006)

SITE	Male							Female						
	§No. cases	Freq. (%)	Crude rate world (per 100,000)	Cum. rates		§No. cases	Freq. (%)	Crude rate world (per 100,000)	Cum. rates		(%)	ICD-10		
				0-64	0-74				0-64	0-74				
Lip	9	0.2	0.2	<b>0.3</b>	0.01	0.03	4	0.1	0.1	<b>0.1</b>	0.00	0.02	C00	
Tongue	118	2.0	2.7	<b>4.1</b>	0.33	0.48	38	0.5	0.8	<b>0.9</b>	0.04	0.09	C01-02	
Mouth	138	2.4	3.2	<b>4.7</b>	0.33	0.53	76	1.0	1.5	<b>1.7</b>	0.06	0.19	C03-06	
Salivary glands	31	0.5	0.7	<b>1.1</b>	0.05	0.11	25	0.3	0.5	<b>0.5</b>	0.02	0.05	C07-08	
Tonsil	25	0.4	0.6	<b>0.9</b>	0.08	0.11	7	0.1	0.1	<b>0.2</b>	0.00	0.03	C09	
Other oropharynx	41	0.7	0.9	<b>1.4</b>	0.10	0.16	14	0.2	0.3	<b>0.3</b>	0.02	0.04	C10	
Nasopharynx	21	0.4	0.5	<b>0.6</b>	0.04	0.06	13	0.2	0.3	<b>0.3</b>	0.02	0.02	C11	
Hypopharynx	58	1.0	1.3	<b>2.1</b>	0.15	0.27	7	0.1	0.1	<b>0.2</b>	0.01	0.02	C12-13	
Pharynx unspecified	15	0.3	0.3	<b>0.5</b>	0.04	0.06	4	0.1	0.1	<b>0.1</b>	0.01	0.01	C14	
Oesophagus	184	3.2	4.2	<b>6.7</b>	0.38	0.79	93	1.2	1.9	<b>2.3</b>	0.11	0.27	C15	
Stomach	500	8.6	11.4	<b>17.6</b>	0.88	2.07	342	4.6	6.9	<b>8.0</b>	0.46	0.91	C16	
Small intestine	23	0.4	0.5	<b>0.8</b>	0.05	0.08	19	0.3	0.4	<b>0.5</b>	0.02	0.06	C17	
Colon	194	3.3	4.4	<b>6.7</b>	0.41	0.77	253	3.4	5.1	<b>5.9</b>	0.37	0.62	C18	
Rectum	156	2.7	3.6	<b>5.4</b>	0.33	0.65	162	2.2	3.3	<b>3.8</b>	0.21	0.42	C19-20	
Anus	13	0.2	0.3	<b>0.4</b>	0.03	0.03	49	0.7	1.0	<b>1.2</b>	0.08	0.14	C21	
Liver	28	0.5	0.6	<b>1.0</b>	0.06	0.13	19	0.3	0.4	<b>0.5</b>	0.03	0.06	C22	
Gallbladder etc.	29	0.5	0.7	<b>1.1</b>	0.05	0.15	79	1.1	1.6	<b>1.9</b>	0.09	0.23	C23-24	
Pancreas	88	1.5	2.0	<b>3.1</b>	0.15	0.36	127	1.7	2.6	<b>3.0</b>	0.16	0.33	C25	
Nose, sinuses etc.	15	0.3	0.3	<b>0.4</b>	0.02	0.03	9	0.1	0.2	<b>0.2</b>	0.01	0.01	C30-31	
Larynx	255	4.4	5.8	<b>9.2</b>	0.51	1.15	45	0.6	0.9	<b>1.1</b>	0.06	0.12	C32	
Trachea, bronchus and lung	628	10.8	14.4	<b>22.7</b>	1.00	2.85	471	6.3	9.5	<b>11.6</b>	0.71	1.36	C33-34	
Other thoracic organs	19	0.3	0.4	<b>0.6</b>	0.05	0.06	18	0.2	0.4	<b>0.4</b>	0.02	0.04	C37-38	
Bone	57	1.0	1.3	<b>1.5</b>	0.07	0.14	42	0.6	0.8	<b>0.8</b>	0.05	0.06	C40-41	
Melanoma of skin	71	1.2	1.6	<b>2.3</b>	0.14	0.27	64	0.9	1.3	<b>1.5</b>	0.11	0.17	C43	
Other skin	1134		25.9	<b>39.0</b>	1.88	4.32	1063		21.4	<b>23.9</b>	1.21	2.45	C44	
Mesothelioma	6	0.1	0.1	<b>0.2</b>	0.01	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C45	
Kaposi sarcoma	10	0.2	0.2	<b>0.2</b>	0.02	0.02	2	0.0	0.0	<b>0.0</b>	0.00	0.00	C46	
Connective and soft tissue	79	1.4	1.8	<b>2.2</b>	0.14	0.18	60	0.8	1.2	<b>1.3</b>	0.09	0.13	C47+C49	
Breast	12	0.2	0.3	<b>0.4</b>	0.02	0.05	2207	29.4	44.4	<b>52.0</b>	3.89	5.81	C50	
Vulva							17	0.2	0.3	<b>0.4</b>	0.01	0.03	C51	
Vagina							22	0.3	0.4	<b>0.5</b>	0.03	0.06	C52	
Cervix uteri							934	12.4	18.8	<b>21.7</b>	1.58	2.44	C53	
Corpus uteri							187	2.5	3.8	<b>4.6</b>	0.30	0.55	C54	
Uterus unspecified							45	0.6	0.9	<b>1.0</b>	0.06	0.09	C55	
Ovary							343	4.6	6.9	<b>7.9</b>	0.53	0.89	C56	
Other female genital organs							2	0.0	0.0	<b>0.0</b>	0.00	0.00	C57	
Placenta							2	0.0	0.0	<b>0.0</b>	0.00	0.00	C58	
Penis	51	0.9	1.2	<b>1.7</b>	0.08	0.23							C60	
Prostate	1553	26.6	35.5	<b>56.9</b>	1.61	6.49							C61	
Testis	41	0.7	0.9	<b>1.0</b>	0.07	0.08							C62	
Other male genital organs	1	0.0	0.0	<b>0.0</b>	0.00	0.00							C63	
Kidney	75	1.3	1.7	<b>2.5</b>	0.17	0.28	92	1.2	1.9	<b>2.3</b>	0.13	0.26	C64	
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65	
Ureter	1	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66	
Bladder	118	2.0	2.7	<b>4.2</b>	0.17	0.49	75	1.0	1.5	<b>1.8</b>	0.07	0.20	C67	
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.0	<b>0.0</b>	0.00	0.01	C68	
Eye	14	0.2	0.3	<b>0.4</b>	0.01	0.03	8	0.1	0.2	<b>0.2</b>	0.01	0.02	C69	
Brain, nervous system	165	2.8	3.8	<b>4.6</b>	0.30	0.49	170	2.3	3.4	<b>3.8</b>	0.23	0.37	C70-72	
Thyroid	54	0.9	1.2	<b>1.7</b>	0.11	0.19	387	5.2	7.8	<b>8.7</b>	0.69	0.93	C73	
Adrenal gland	9	0.2	0.2	<b>0.3</b>	0.02	0.03	2	0.0	0.0	<b>0.0</b>	0.00	0.00	C74	
Other endocrine	3	0.1	0.1	<b>0.1</b>	0.00	0.01	4	0.1	0.1	<b>0.1</b>	0.00	0.00	C75	
Hodgkin lymphoma	91	1.6	2.1	<b>2.2</b>	0.13	0.23	73	1.0	1.5	<b>1.4</b>	0.10	0.12	C81	
Non-Hodgkin lymphoma	186	3.2	4.3	<b>5.7</b>	0.29	0.64	182	2.4	3.7	<b>4.3</b>	0.26	0.49	C82-85,C96	
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88	
Multiple myeloma	60	1.0	1.4	<b>2.1</b>	0.11	0.28	75	1.0	1.5	<b>1.8</b>	0.09	0.22	C90	
Lymphoid leukaemia	81	1.4	1.9	<b>2.2</b>	0.07	0.15	49	0.7	1.0	<b>1.1</b>	0.06	0.08	C91	
Myeloid leukaemia	105	1.8	2.4	<b>2.9</b>	0.19	0.27	91	1.2	1.8	<b>2.0</b>	0.12	0.20	C92-94	
Leukaemia unspecified	20	0.3	0.5	<b>0.6</b>	0.03	0.05	20	0.3	0.4	<b>0.4</b>	0.02	0.03	C95	
Myeloproliferative disorders	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	MPD	
Myelodysplastic syndromes	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.0	<b>0.0</b>	0.00	0.00	MDS	
Other and unspecified	381	6.5	8.7	<b>12.9</b>	0.63	1.48	472	6.3	9.5	<b>10.7</b>	0.51	1.11	O&U	
All sites	6966		159.3	<b>239.0</b>	11.33	27.36	8566		172.4	<b>199.0</b>	12.67	21.79	C00-96	
All sites except C44	5832	100.0	133.4	<b>200.0</b>	9.46	23.04	7503	100.0	151.0	<b>175.0</b>	11.45	19.34	C00-96 exc. C44	

§Includes 23 cases of unknown age

§Includes 49 cases of unknown age

# Brazil, Goiânia

## REGISTRATION AREA

The Population-based Cancer Registry of Goiânia is located in the central part of Brazil. The area's climate is tropical, and the city is hot and sunny almost all year long, with an average annual temperature of 23–33 °C. Goiânia, the second planned city in Brazil, is now 78 years old. The majority of the population lives in rural areas, and the main religion is Catholicism.

## CANCER CARE FACILITIES

There is one cancer centre (with 180 beds), which is also a training facility for oncological surgery, radiotherapy, and chemotherapy. There are two radiotherapy units, six linear accelerators, a brachytherapy unit, 14 chemotherapy units, 10 oncology clinics, 33 pathology laboratories, and two bone marrow centres. There are also two medical schools and eight nursing schools.

## REGISTRY STRUCTURE AND METHODS

The registry is located in a private cancer hospital centre and is coordinated by an oncologist. It also employs a supervisor; an epidemiologist; and four registrars responsible for data collection, coding, and data entry. There is also an advisory council, which consists of a pathologist and an oncologist. Data collection is active. The registry has access to death certificates, which include information on identification. The registry uses the IARC/IACR rules (2004) for multiple primary tumours. Quality control procedures include verification of date of birth versus topography, sex versus topography and morphology, duplication, and mortality versus incidence. The registry area has screening programmes for breast, cervical, skin, and prostate cancer.

## USE OF THE DATA

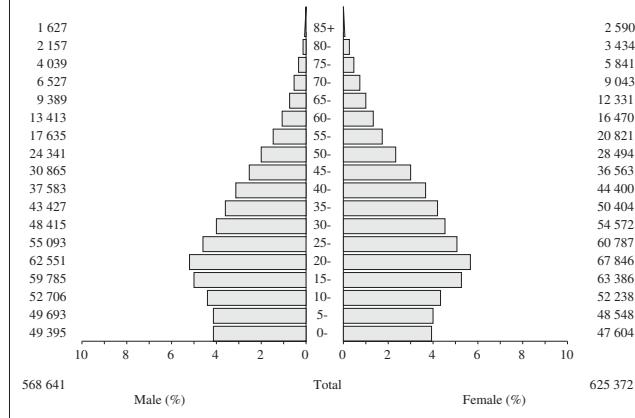
Incidence data are reported to the data sources periodically. The registry carries out many epidemiological studies, including studies that investigate survival associated with several cancer

sites. The registry also produces many publications and has participated in international collaborative projects such as CONCORD, INHANCE, and (more recently) InterCHANGE. Collaborative research is also being carried out on cancers of the oral cavity, larynx, and oesophagus. Data are provided to the National Cancer Institute of Brazil (INCA) to estimate cancer incidence at the national and subnational levels.

## CONTRIBUTORS

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**Brazil, Goiânia (2003-2007)**  
**Average annual person-years by sex and age group**



## SOURCE OF POPULATION

Based on the 2000 census carried out by the Brazilian Institute of Geography and Statistics; Ministry of Planning, Budget, and Management (<http://www.ibge.gov.br>), allowing for births, deaths, and migration into and out of the registration area.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Non-melanoma skin cancer	226.1	Non-melanoma skin cancer	205.2
Prostate	157.4	Breast	69.3
Trachea, bronchus and lung	30.3	Cervix uteri	28.5
Stomach	24.4	Colon	15.7
Colon	18.9	Thyroid	14.8
Bladder	15.4	Trachea, bronchus and lung	14.4
Other and unspecified	13.3	Stomach	11.6
Rectum	11.9	Rectum	10.6
Non-Hodgkin lymphoma	11.4	Ovary	9.6
Oesophagus	10.7	Other and unspecified	8.9
All sites	631.9	All sites	474.6

## Brazil, Goiânia (2003-2007)

SITE	Male						Female					
	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74 (%)	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 ICD-10
Lip	29	0.4	1.0	<b>1.4</b>	0.08	0.17	5	0.1	0.2	<b>0.2</b>	0.00	0.02 C00
Tongue	100	1.3	3.5	<b>4.8</b>	0.34	0.56	32	0.4	1.0	<b>1.2</b>	0.06	0.13 C01-02
Mouth	126	1.6	4.4	<b>6.0</b>	0.41	0.72	48	0.6	1.5	<b>1.9</b>	0.08	0.22 C03-06
Salivary glands	23	0.3	0.8	<b>1.0</b>	0.09	0.11	31	0.4	1.0	<b>0.9</b>	0.06	0.08 C07-08
Tonsil	31	0.4	1.1	<b>1.5</b>	0.11	0.22	7	0.1	0.2	<b>0.3</b>	0.01	0.04 C09
Other oropharynx	58	0.7	2.0	<b>2.7</b>	0.20	0.30	15	0.2	0.5	<b>0.5</b>	0.04	0.06 C10
Nasopharynx	39	0.5	1.4	<b>1.8</b>	0.11	0.19	22	0.3	0.7	<b>0.7</b>	0.05	0.08 C11
Hypopharynx	67	0.8	2.4	<b>3.4</b>	0.21	0.44	8	0.1	0.3	<b>0.3</b>	0.02	0.02 C12-13
Pharynx unspecified	1	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.0	<b>0.0</b>	0.00	0.01 C14
Oesophagus	214	2.7	7.5	<b>10.7</b>	0.69	1.33	65	0.9	2.1	<b>2.6</b>	0.15	0.32 C15
Stomach	473	5.9	16.6	<b>24.4</b>	1.14	2.83	301	4.0	9.6	<b>11.6</b>	0.63	1.37 C16
Small intestine	37	0.5	1.3	<b>1.9</b>	0.09	0.26	23	0.3	0.7	<b>0.9</b>	0.05	0.10 C17
Colon	392	4.9	13.8	<b>18.9</b>	0.96	2.25	416	5.6	13.3	<b>15.7</b>	0.94	1.78 C18
Rectum	244	3.1	8.6	<b>11.9</b>	0.60	1.38	278	3.7	8.9	<b>10.6</b>	0.66	1.27 C19-20
Anus	12	0.2	0.4	<b>0.6</b>	0.03	0.08	33	0.4	1.1	<b>1.2</b>	0.08	0.15 C21
Liver	139	1.7	4.9	<b>7.0</b>	0.36	0.84	77	1.0	2.5	<b>3.0</b>	0.15	0.37 C22
Gallbladder etc.	59	0.7	2.1	<b>3.1</b>	0.16	0.32	92	1.2	2.9	<b>3.6</b>	0.15	0.44 C23-24
Pancreas	106	1.3	3.7	<b>5.4</b>	0.29	0.62	109	1.5	3.5	<b>4.3</b>	0.22	0.54 C25
Nose, sinuses etc.	14	0.2	0.5	<b>0.6</b>	0.03	0.08	15	0.2	0.5	<b>0.5</b>	0.03	0.04 C30-31
Larynx	143	1.8	5.0	<b>7.3</b>	0.45	0.93	35	0.5	1.1	<b>1.3</b>	0.09	0.16 C32
Trachea, bronchus and lung	571	7.2	20.1	<b>30.3</b>	1.43	4.07	359	4.8	11.5	<b>14.4</b>	0.82	1.76 C33-34
Other thoracic organs	15	0.2	0.5	<b>0.6</b>	0.03	0.06	14	0.2	0.4	<b>0.5</b>	0.04	0.04 C37-38
Bone	60	0.8	2.1	<b>2.1</b>	0.14	0.16	42	0.6	1.3	<b>1.3</b>	0.07	0.11 C40-41
Melanoma of skin	165	2.1	5.8	<b>8.0</b>	0.39	0.87	145	2.0	4.6	<b>5.0</b>	0.30	0.51 C43
Other skin	4466	157.1	<b>226.1</b>	10.04	24.91	5394		172.5	<b>205.2</b>	9.36	22.79	C44
Mesothelioma	1	0.0	0.0	<b>0.0</b>	0.00	0.00	6	0.1	0.2	<b>0.2</b>	0.02	0.02 C45
Kaposi sarcoma	29	0.4	1.0	<b>0.9</b>	0.07	0.07	4	0.1	0.1	<b>0.1</b>	0.00	0.01 C46
Connective and soft tissue	63	0.8	2.2	<b>2.8</b>	0.17	0.29	66	0.9	2.1	<b>2.4</b>	0.17	0.21 C47+C49
Breast	14	0.2	0.5	<b>0.7</b>	0.02	0.06	1961	26.4	62.7	<b>69.3</b>	5.20	7.67 C50
Vulva							34	0.5	1.1	<b>1.3</b>	0.04	0.15 C51
Vagina							22	0.3	0.7	<b>0.8</b>	0.05	0.07 C52
Cervix uteri							836	11.2	26.7	<b>28.5</b>	2.08	3.09 C53
Corpus uteri							190	2.6	6.1	<b>7.4</b>	0.50	0.92 C54
Uterus unspecified							41	0.6	1.3	<b>1.5</b>	0.11	0.17 C55
Ovary							265	3.6	8.5	<b>9.6</b>	0.71	1.09 C56
Other female genital organs							2	0.0	0.1	<b>0.1</b>	0.00	0.01 C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00 C58
Penis	65	0.8	2.3	<b>3.3</b>	0.13	0.37						C60
Prostate	2835	35.5	99.7	<b>157.4</b>	5.56	20.23						C61
Testis	54	0.7	1.9	<b>1.7</b>	0.12	0.13						C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00						C63
Kidney	165	2.1	5.8	<b>7.9</b>	0.51	0.92	127	1.7	4.1	<b>5.0</b>	0.28	0.58 C64
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C65
Ureter	2	0.0	0.1	<b>0.1</b>	0.00	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C66
Bladder	289	3.6	10.2	<b>15.4</b>	0.50	1.70	148	2.0	4.7	<b>5.8</b>	0.23	0.66 C67
Other urinary organs	2	0.0	0.1	<b>0.1</b>	0.01	0.01	1	0.0	0.0	<b>0.0</b>	0.00	0.00 C68
Eye	23	0.3	0.8	<b>1.0</b>	0.06	0.10	22	0.3	0.7	<b>0.8</b>	0.05	0.06 C69
Brain, nervous system	247	3.1	8.7	<b>10.5</b>	0.65	1.15	172	2.3	5.5	<b>6.0</b>	0.36	0.66 C70-72
Thyroid	79	1.0	2.8	<b>3.1</b>	0.21	0.32	460	6.2	14.7	<b>14.8</b>	1.16	1.51 C73
Adrenal gland	4	0.1	0.1	<b>0.2</b>	0.00	0.01	12	0.2	0.4	<b>0.5</b>	0.03	0.04 C74
Other endocrine	11	0.1	0.4	<b>0.5</b>	0.01	0.07	4	0.1	0.1	<b>0.1</b>	0.01	0.01 C75
Hodgkin lymphoma	69	0.9	2.4	<b>2.6</b>	0.15	0.22	55	0.7	1.8	<b>1.6</b>	0.10	0.14 C81
Non-Hodgkin lymphoma	254	3.2	8.9	<b>11.4</b>	0.63	1.19	242	3.3	7.7	<b>8.9</b>	0.55	1.00 C82-85,C96
Immunoproliferative diseases	1	0.0	0.0	<b>0.1</b>	0.00	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C88
Multiple myeloma	93	1.2	3.3	<b>4.8</b>	0.30	0.60	80	1.1	2.6	<b>3.2</b>	0.18	0.43 C90
Lymphoid leukaemia	103	1.3	3.6	<b>4.4</b>	0.22	0.32	79	1.1	2.5	<b>3.0</b>	0.16	0.23 C91
Myeloid leukaemia	106	1.3	3.7	<b>4.5</b>	0.23	0.46	110	1.5	3.5	<b>3.8</b>	0.22	0.40 C92-94
Leukaemia unspecified	21	0.3	0.7	<b>0.9</b>	0.04	0.08	25	0.3	0.8	<b>0.9</b>	0.05	0.07 C95
Myeloproliferative disorders	4	0.1	0.1	<b>0.2</b>	0.00	0.04	3	0.0	0.1	<b>0.1</b>	0.01	0.02 MPD
Myelodysplastic syndromes	58	0.7	2.0	<b>2.5</b>	0.14	0.22	59	0.8	1.9	<b>2.2</b>	0.14	0.24 MDS
Other and unspecified	265	3.3	9.3	<b>13.3</b>	0.69	1.63	234	3.1	7.5	<b>8.9</b>	0.51	0.97 O&U
All sites	12441		437.6	<b>631.9</b>	28.82	73.92	12827		410.2	<b>474.6</b>	27.01	52.84 C00-96
All sites except C44	7975	100.0	280.5	<b>405.8</b>	18.78	49.01	7433	100.0	237.7	<b>269.5</b>	17.65	30.05 C00-96 exc. C44

§Includes 30 cases of unknown age

§Includes 21 cases of unknown age

# Brazil, São Paulo

## REGISTRATION AREA

The Population-based Cancer Registry of São Paulo covers the city of São Paulo, in the south-eastern region of Brazil. São Paulo has an area of 1 522 986 km<sup>2</sup> and a population of 11.2 million (with 99% living in urban areas). The annual growth rate is 0.66%. São Paulo is 792 m above sea level. Its climate is subtropical, with warm summers and an average annual temperature of 18.3 °C.

## CANCER CARE FACILITIES

The city of São Paulo has a network of 212 public and private hospitals, with a total of 29 483 beds (2.6 per 1000 inhabitants). There are 196 universities and eight medical schools. Other cancer diagnostic and treatment facilities include 15 radiation therapy and chemotherapy clinics, 751 ultrasound clinics, and 157 clinical pathology laboratories.

## REGISTRY STRUCTURE AND METHODS

The registry was established in 1969 and is located in the Public Health School of the University of São Paulo. The registry has permanent funding, and data are collected actively. The registry employs a general coordinator, a database coordinator, five typists, a source-of-information coordinator, six registrars, and a systems analyst. It also has an advisory committee, which includes three epidemiologists, three statisticians, a pathologist, and an oncologist. Data are collected from 301 sources: 168 hospitals, 35 anatomical pathology laboratories, 76 oncology clinics, two death investigation services, and 20 hospital-based cancer registries. Information about deaths is retrieved from the Program for Improvement of Death Information (PRO-AIM).

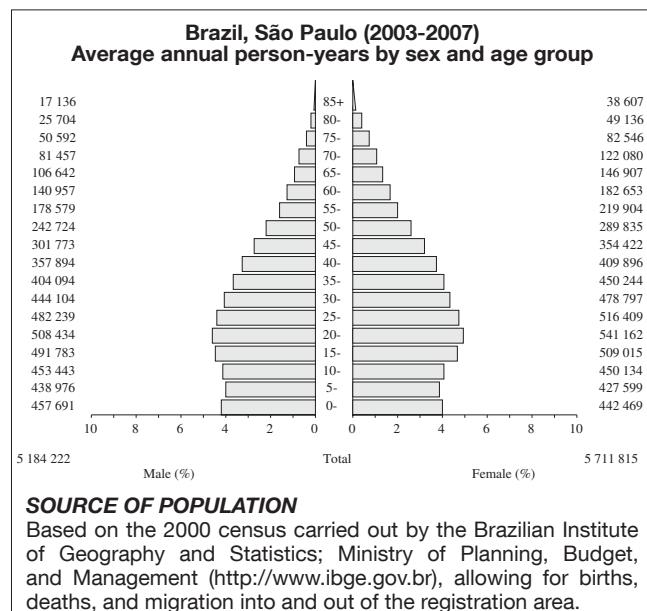
## USE OF THE DATA

The registry data are used for many purposes, including to estimate incidence and geographical distribution of

cancer cases, to study temporal trends, for survival assessments, to evaluate access to screening programmes, for geographical referral of cancer cases through a spatial assessment of cancer cases in the city, for epidemiological studies, for scientific articles, and for teaching purposes.

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## SOURCE OF POPULATION

Based on the 2000 census carried out by the Brazilian Institute of Geography and Statistics; Ministry of Planning, Budget, and Management (<http://www.ibge.gov.br>), allowing for births, deaths, and migration into and out of the registration area.

## NOTES ON THE DATA

\*High M:I ratios. Fluctuation in rates from year to year.  
 High age unknown %.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Non-melanoma skin cancer	94.0	Breast	77.7
Prostate	90.1	Non-melanoma skin cancer	69.8
Trachea, bronchus and lung	26.0	Thyroid	20.9
Stomach	24.0	Other and unspecified	18.2
Other and unspecified	22.3	Colon	16.8
Colon	21.3	Cervix uteri	15.2
Bladder	14.5	Trachea, bronchus and lung	11.4
Rectum	14.2	Stomach	10.9
Oesophagus	11.0	Rectum	9.8
Larynx	10.6	Ovary	8.6
All sites	423.7	All sites	334.1

## \*Brazil, São Paulo (2003-2007)

SITE	Male						Female						
	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	ICD-10
Lip	242	0.3	0.9	<b>1.1</b>	0.07	0.13	129	0.2	0.5	<b>0.4</b>	0.02	0.04	C00
Tongue	1243	1.7	4.8	<b>5.6</b>	0.42	0.66	407	0.5	1.4	<b>1.3</b>	0.08	0.14	C01-02
Mouth	1409	2.0	5.4	<b>6.3</b>	0.46	0.75	573	0.7	2.0	<b>1.9</b>	0.12	0.21	C03-06
Salivary glands	255	0.4	1.0	<b>1.1</b>	0.07	0.11	282	0.4	1.0	<b>0.9</b>	0.06	0.09	C07-08
Tonsil	353	0.5	1.4	<b>1.6</b>	0.11	0.16	110	0.1	0.4	<b>0.4</b>	0.03	0.04	C09
Other oropharynx	535	0.7	2.1	<b>2.5</b>	0.19	0.31	106	0.1	0.4	<b>0.3</b>	0.02	0.04	C10
Nasopharynx	202	0.3	0.8	<b>0.9</b>	0.06	0.10	87	0.1	0.3	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	336	0.5	1.3	<b>1.6</b>	0.11	0.20	56	0.1	0.2	<b>0.2</b>	0.01	0.02	C12-13
Pharynx unspecified	274	0.4	1.1	<b>1.2</b>	0.09	0.15	90	0.1	0.3	<b>0.3</b>	0.02	0.03	C14
Oesophagus	2375	3.3	9.2	<b>11.0</b>	0.71	1.30	693	0.9	2.4	<b>2.3</b>	0.14	0.27	C15
Stomach	5168	7.2	19.9	<b>24.0</b>	1.19	2.75	3441	4.3	12.0	<b>10.9</b>	0.56	1.18	C16
Small intestine	342	0.5	1.3	<b>1.5</b>	0.08	0.17	363	0.5	1.3	<b>1.2</b>	0.06	0.14	C17
Colon	4600	6.4	17.7	<b>21.3</b>	0.99	2.44	5260	6.6	18.4	<b>16.8</b>	0.88	1.84	C18
Rectum	3068	4.3	11.8	<b>14.2</b>	0.72	1.67	3011	3.8	10.5	<b>9.8</b>	0.56	1.09	C19-20
Anus	235	0.3	0.9	<b>1.0</b>	0.07	0.11	387	0.5	1.4	<b>1.3</b>	0.08	0.14	C21
Liver	623	0.9	2.4	<b>2.9</b>	0.18	0.34	300	0.4	1.1	<b>1.0</b>	0.05	0.12	C22
Gallbladder etc.	443	0.6	1.7	<b>2.0</b>	0.10	0.22	722	0.9	2.5	<b>2.4</b>	0.12	0.27	C23-24
Pancreas	1138	1.6	4.4	<b>5.2</b>	0.27	0.61	1324	1.6	4.6	<b>4.2</b>	0.21	0.46	C25
Nose, sinuses etc.	201	0.3	0.8	<b>0.9</b>	0.05	0.10	183	0.2	0.6	<b>0.6</b>	0.04	0.06	C30-31
Larynx	2282	3.2	8.8	<b>10.6</b>	0.72	1.30	435	0.5	1.5	<b>1.5</b>	0.11	0.18	C32
Trachea, bronchus and lung	5524	7.7	21.3	<b>26.0</b>	1.27	3.16	3426	4.3	12.0	<b>11.4</b>	0.66	1.34	C33-34
Other thoracic organs	151	0.2	0.6	<b>0.7</b>	0.03	0.08	121	0.2	0.4	<b>0.4</b>	0.03	0.04	C37-38
Bone	474	0.7	1.8	<b>1.9</b>	0.11	0.15	435	0.5	1.5	<b>1.5</b>	0.10	0.12	C40-41
Melanoma of skin	1309	1.8	5.0	<b>5.8</b>	0.32	0.63	1421	1.8	5.0	<b>4.6</b>	0.30	0.49	C43
Other skin	20420		78.8	<b>94.0</b>	3.99	9.41	22178		77.7	<b>69.8</b>	3.30	7.14	C44
Mesothelioma	39	0.1	0.2	<b>0.2</b>	0.01	0.02	22	0.0	0.1	<b>0.1</b>	0.00	0.01	C45
Kaposi sarcoma	231	0.3	0.9	<b>0.8</b>	0.06	0.07	54	0.1	0.2	<b>0.2</b>	0.01	0.01	C46
Connective and soft tissue	614	0.9	2.4	<b>2.5</b>	0.15	0.25	599	0.7	2.1	<b>2.0</b>	0.13	0.19	C47+C49
Breast	396	0.6	1.5	<b>1.8</b>	0.10	0.21	23362	29.1	81.8	<b>77.7</b>	5.63	8.59	C50
Vulva							510	0.6	1.8	<b>1.6</b>	0.09	0.16	C51
Vagina							348	0.4	1.2	<b>1.1</b>	0.07	0.11	C52
Cervix uteri							4657	5.8	16.3	<b>15.2</b>	1.15	1.63	C53
Corpus uteri							2480	3.1	8.7	<b>8.4</b>	0.51	1.04	C54
Uterus unspecified							983	1.2	3.4	<b>3.2</b>	0.22	0.36	C55
Ovary							2553	3.2	8.9	<b>8.6</b>	0.60	0.97	C56
Other female genital organs							94	0.1	0.3	<b>0.3</b>	0.02	0.04	C57
Placenta							19	0.0	0.1	<b>0.1</b>	0.00	0.00	C58
Penis	403	0.6	1.6	<b>1.7</b>	0.09	0.17							C60
Prostate	18592	25.9	71.7	<b>90.1</b>	3.86	11.24							C61
Testis	801	1.1	3.1	<b>2.8</b>	0.18	0.21							C62
Other male genital organs	75	0.1	0.3	<b>0.3</b>	0.02	0.03							C63
Kidney	1428	2.0	5.5	<b>6.5</b>	0.41	0.75	909	1.1	3.2	<b>3.1</b>	0.19	0.33	C64
Renal pelvis	26	0.0	0.1	<b>0.1</b>	0.01	0.02	12	0.0	0.0	<b>0.0</b>	0.00	0.01	C65
Ureter	26	0.0	0.1	<b>0.1</b>	0.01	0.01	19	0.0	0.1	<b>0.1</b>	0.00	0.01	C66
Bladder	3096	4.3	11.9	<b>14.5</b>	0.57	1.58	1369	1.7	4.8	<b>4.3</b>	0.20	0.46	C67
Other urinary organs	52	0.1	0.2	<b>0.2</b>	0.01	0.02	39	0.0	0.1	<b>0.1</b>	0.01	0.01	C68
Eye	198	0.3	0.8	<b>0.9</b>	0.05	0.08	231	0.3	0.8	<b>0.8</b>	0.05	0.07	C69
Brain, nervous system	1411	2.0	5.4	<b>6.1</b>	0.38	0.61	1343	1.7	4.7	<b>4.6</b>	0.29	0.43	C70-72
Thyroid	1261	1.8	4.9	<b>5.0</b>	0.39	0.51	6530	8.1	22.9	<b>20.9</b>	1.69	2.06	C73
Adrenal gland	103	0.1	0.4	<b>0.5</b>	0.03	0.03	105	0.1	0.4	<b>0.4</b>	0.02	0.03	C74
Other endocrine	63	0.1	0.2	<b>0.3</b>	0.02	0.02	79	0.1	0.3	<b>0.3</b>	0.02	0.02	C75
Hodgkin lymphoma	633	0.9	2.4	<b>2.4</b>	0.15	0.20	550	0.7	1.9	<b>1.7</b>	0.12	0.14	C81
Non-Hodgkin lymphoma	2413	3.4	9.3	<b>10.4</b>	0.62	1.09	2251	2.8	7.9	<b>7.3</b>	0.43	0.79	C82-85,C96
Immunoproliferative diseases	9	0.0	0.0	<b>0.0</b>	0.00	0.00	5	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	687	1.0	2.7	<b>3.1</b>	0.20	0.37	783	1.0	2.7	<b>2.6</b>	0.16	0.32	C90
Lymphoid leukaemia	599	0.8	2.3	<b>2.6</b>	0.13	0.20	513	0.6	1.8	<b>1.9</b>	0.10	0.14	C91
Myeloid leukaemia	711	1.0	2.7	<b>3.0</b>	0.16	0.29	690	0.9	2.4	<b>2.3</b>	0.13	0.21	C92-94
Leukaemia unspecified	202	0.3	0.8	<b>0.9</b>	0.05	0.08	179	0.2	0.6	<b>0.6</b>	0.03	0.05	C95
Myeloproliferative disorders	27	0.0	0.1	<b>0.1</b>	0.01	0.01	25	0.0	0.1	<b>0.1</b>	0.01	0.01	MPD
Myelodysplastic syndromes	19	0.0	0.1	<b>0.1</b>	0.00	0.01	20	0.0	0.1	<b>0.1</b>	0.00	0.00	MDS
Other and unspecified	4937	6.9	19.0	<b>22.3</b>	1.27	2.51	5566	6.9	19.5	<b>18.2</b>	1.06	1.96	O&U
All sites	92254		355.9	<b>423.7</b>	21.43	47.64	102439		358.7	<b>334.1</b>	20.65	35.74	C00-96
All sites except C44	71834	100.0	277.1	<b>329.7</b>	17.37	38.12	80261	100.0	281.0	<b>264.0</b>	17.24	28.55	C00-96 exc. C44

\*Includes 10375 cases of unknown age

\$Includes 11500 cases of unknown age

\*See note following population pyramid

# Chile, Region of Antofagasta

## REGISTRATION AREA

The Regional Cancer Registry II, Region of Antofagasta covers the Antofagasta Region of northern Chile, with an area of 126 049 km<sup>2</sup>. At the 2007 census, the region's population was 555 000, living mainly in urban areas (97.6%). The population consists mainly of members of the Atacama and Aymara ethnic groups. The Antofagasta Region is a desert area, with high levels of ultraviolet radiation. Its main economic activity is mining. There are large deposits of copper, and environmental issues are important. The soil contains significant deposits of arsenic, to which the population has been exposed through the drinking-water (particularly from the 1950s to the late 1970s).

## CANCER CARE FACILITIES

For diagnosis, five public and five private hospitals are available. Treatment is available at two public hospitals; one provides surgery and the other provides medical oncology and radiotherapy. The latter hospital also serves as a referral centre for the region. Some cancers, such as those of the breast and stomach, are given high priority by national plans and programmes.

## REGISTRY STRUCTURE AND METHODS

The population-based cancer registries of Chile were created by law in 2002, and data confidentiality is protected by two laws (Ley 19.628 and Ley 20.285). The registry is funded by the Ministry of Health and is located in the Regional Health Secretariat of the Antofagasta Region. The staff consists of two professionals, and the registry uses both active and passive data collection. The database is managed using CanReg5 software, and IARC tools are used for

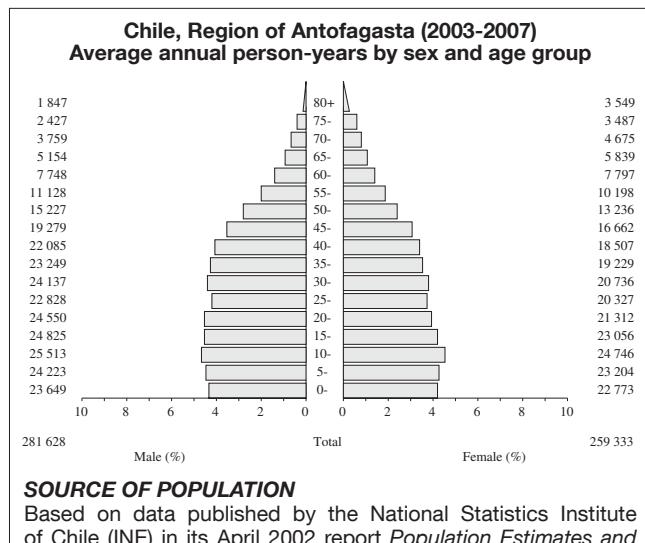
quality control. Technical assistance is provided at the national level, and more recently, also by the Tarragona Cancer Registry in Spain.

## USE OF THE DATA

The registry has published a report presenting data for the period from 2003 to 2007. Registry staff members also participate in meetings to help develop cancer control strategies in the region.

## CONTRIBUTORS

Juan Carlos Galaz Alamos  
Jessica Moya Cortés



## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Trachea, bronchus and lung	55.9	Non-melanoma skin cancer	40.8
Non-melanoma skin cancer	48.7	Breast	36.0
Prostate	39.4	Trachea, bronchus and lung	19.4
Stomach	23.7	Cervix uteri	11.8
Bladder	17.6	Gallbladder etc.	9.9
Kidney	10.2	Bladder	9.8
Colon	9.0	Thyroid	9.4
Pancreas	5.6	Colon	9.3
Oesophagus	5.4	Stomach	7.5
Gallbladder etc.	5.4	Kidney	5.6
All sites	279.7	All sites	214.3

## Chile, Region of Antofagasta (2003-2007)

SITE	Male						Female						ICD-10
	No. cases	Freq. (%)	Crude rate world (per 100,000)	ASR 0-64	Cum. rates 0-74 (%)	No. cases	Freq. (%)	Crude rate world (per 100,000)	ASR 0-64	Cum. rates 0-74 (%)			
Lip	2	0.1	0.1	<b>0.2</b>	0.00	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	7	0.3	0.5	<b>0.6</b>	0.02	0.06	5	0.2	0.4	<b>0.4</b>	0.04	0.04	C01-02
Mouth	11	0.4	0.8	<b>1.0</b>	0.06	0.10	9	0.4	0.7	<b>0.7</b>	0.02	0.09	C03-06
Salivary glands	6	0.2	0.4	<b>0.5</b>	0.04	0.04	5	0.2	0.4	<b>0.3</b>	0.01	0.01	C07-08
Tonsil	4	0.2	0.3	<b>0.3</b>	0.02	0.04	8	0.4	0.6	<b>0.6</b>	0.05	0.07	C09
Other oropharynx	3	0.1	0.2	<b>0.2</b>	0.01	0.04	2	0.1	0.2	<b>0.2</b>	0.01	0.03	C10
Nasopharynx	2	0.1	0.1	<b>0.1</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C11
Hypopharynx	3	0.1	0.2	<b>0.3</b>	0.00	0.05	1	0.0	0.1	<b>0.1</b>	0.00	0.02	C12-13
Pharynx unspecified	4	0.2	0.3	<b>0.4</b>	0.00	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	54	2.1	3.8	<b>5.4</b>	0.09	0.69	38	1.7	2.9	<b>2.8</b>	0.08	0.29	C15
Stomach	258	10.1	18.3	<b>23.7</b>	0.93	2.96	100	4.4	7.7	<b>7.5</b>	0.32	0.83	C16
Small intestine	8	0.3	0.6	<b>0.7</b>	0.04	0.10	4	0.2	0.3	<b>0.3</b>	0.00	0.02	C17
Colon	99	3.9	7.0	<b>9.0</b>	0.32	0.98	120	5.3	9.3	<b>9.3</b>	0.38	1.13	C18
Rectum	53	2.1	3.8	<b>4.8</b>	0.21	0.46	34	1.5	2.6	<b>2.5</b>	0.14	0.27	C19-20
Anus	4	0.2	0.3	<b>0.4</b>	0.01	0.04	14	0.6	1.1	<b>1.0</b>	0.04	0.10	C21
Liver	50	2.0	3.6	<b>4.5</b>	0.17	0.46	43	1.9	3.3	<b>3.3</b>	0.17	0.33	C22
Gallbladder etc.	56	2.2	4.0	<b>5.4</b>	0.19	0.49	125	5.5	9.6	<b>9.9</b>	0.39	1.20	C23-24
Pancreas	59	2.3	4.2	<b>5.6</b>	0.25	0.83	57	2.5	4.4	<b>4.2</b>	0.21	0.42	C25
Nose, sinuses etc.	14	0.5	1.0	<b>1.2</b>	0.09	0.14	6	0.3	0.5	<b>0.4</b>	0.03	0.03	C30-31
Larynx	38	1.5	2.7	<b>3.4</b>	0.18	0.38	14	0.6	1.1	<b>1.1</b>	0.08	0.17	C32
Trachea, bronchus and lung	597	23.4	42.4	<b>55.9</b>	2.67	7.14	244	10.8	18.8	<b>19.4</b>	0.86	2.45	C33-34
Other thoracic organs	42	1.6	3.0	<b>3.5</b>	0.19	0.35	19	0.8	1.5	<b>1.4</b>	0.08	0.13	C37-38
Bone	22	0.9	1.6	<b>1.7</b>	0.12	0.12	9	0.4	0.7	<b>0.6</b>	0.04	0.04	C40-41
Melanoma of skin	27	1.1	1.9	<b>2.0</b>	0.16	0.23	27	1.2	2.1	<b>2.1</b>	0.13	0.23	C43
Other skin	556		39.5	<b>48.7</b>	2.58	5.55	541		41.7	<b>40.8</b>	2.30	4.51	C44
Mesothelioma	5	0.2	0.4	<b>0.3</b>	0.01	0.01	3	0.1	0.2	<b>0.3</b>	0.02	0.04	C45
Kaposi sarcoma	1	0.0	0.1	<b>0.1</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.00	0.00	C46
Connective and soft tissue	12	0.5	0.9	<b>1.0</b>	0.04	0.11	16	0.7	1.2	<b>1.2</b>	0.05	0.11	C47+C49
Breast	2	0.1	0.1	<b>0.2</b>	0.00	0.02	470	20.8	36.2	<b>36.0</b>	2.51	4.12	C50
Vulva							17	0.8	1.3	<b>1.3</b>	0.05	0.14	C51
Vagina							7	0.3	0.5	<b>0.6</b>	0.06	0.06	C52
Cervix uteri							161	7.1	12.4	<b>11.8</b>	0.86	1.25	C53
Corpus uteri							39	1.7	3.0	<b>3.0</b>	0.19	0.37	C54
Uterus unspecified							20	0.9	1.5	<b>1.4</b>	0.09	0.11	C55
Ovary							65	2.9	5.0	<b>5.1</b>	0.33	0.60	C56
Other female genital organs							5	0.2	0.4	<b>0.4</b>	0.04	0.06	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	19	0.7	1.3	<b>1.6</b>	0.08	0.16							C60
Prostate	406	15.9	28.8	<b>39.4</b>	0.76	4.43							C61
Testis	82	3.2	5.8	<b>5.2</b>	0.37	0.39							C62
Other male genital organs	3	0.1	0.2	<b>0.2</b>	0.01	0.04							C63
Kidney	111	4.3	7.9	<b>10.2</b>	0.48	1.23	69	3.1	5.3	<b>5.6</b>	0.32	0.65	C64
Renal pelvis	1	0.0	0.1	<b>0.1</b>	0.00	0.00	4	0.2	0.3	<b>0.3</b>	0.03	0.03	C65
Ureter	12	0.5	0.9	<b>1.1</b>	0.07	0.14	8	0.4	0.6	<b>0.7</b>	0.08	0.08	C66
Bladder	197	7.7	14.0	<b>17.6</b>	0.78	2.03	126	5.6	9.7	<b>9.8</b>	0.41	1.25	C67
Other urinary organs	21	0.8	1.5	<b>1.6</b>	0.11	0.21	4	0.2	0.3	<b>0.3</b>	0.02	0.02	C68
Eye	6	0.2	0.4	<b>0.5</b>	0.04	0.07	2	0.1	0.2	<b>0.1</b>	0.02	0.02	C69
Brain, nervous system	21	0.8	1.5	<b>1.7</b>	0.09	0.11	23	1.0	1.8	<b>1.9</b>	0.12	0.20	C70-72
Thyroid	20	0.8	1.4	<b>1.4</b>	0.09	0.18	127	5.6	9.8	<b>9.4</b>	0.75	0.89	C73
Adrenal gland	2	0.1	0.1	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	1	0.0	0.1	<b>0.1</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin lymphoma	13	0.5	0.9	<b>0.9</b>	0.06	0.06	15	0.7	1.2	<b>1.1</b>	0.07	0.13	C81
Non-Hodgkin lymphoma	52	2.0	3.7	<b>4.1</b>	0.23	0.40	63	2.8	4.9	<b>4.7</b>	0.29	0.44	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	31	1.2	2.2	<b>2.9</b>	0.12	0.42	24	1.1	1.9	<b>2.0</b>	0.07	0.24	C90
Lymphoid leukaemia	11	0.4	0.8	<b>1.0</b>	0.05	0.09	18	0.8	1.4	<b>1.5</b>	0.10	0.11	C91
Myeloid leukaemia	29	1.1	2.1	<b>2.5</b>	0.12	0.21	25	1.1	1.9	<b>1.9</b>	0.11	0.20	C92-94
Leukaemia unspecified	17	0.7	1.2	<b>1.5</b>	0.06	0.09	13	0.6	1.0	<b>1.0</b>	0.04	0.11	C95
Myeloproliferative disorders	1	0.0	0.1	<b>0.1</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	MPD
Myelodysplastic syndromes	5	0.2	0.4	<b>0.5</b>	0.00	0.07	10	0.4	0.8	<b>0.7</b>	0.05	0.05	MDS
Other and unspecified	52	2.0	3.7	<b>4.5</b>	0.25	0.62	38	1.7	2.9	<b>3.1</b>	0.17	0.33	O&U
All sites	3112		221.0	<b>279.7</b>	12.20	32.47	2799		215.9	<b>214.3</b>	12.23	24.00	C00-96
All sites except C44	2556	100.0	181.5	<b>231.0</b>	9.62	26.92	2258	100.0	174.1	<b>173.5</b>	9.93	19.49	C00-96 exc. C44

# Chile, Bío Bío Province

## REGISTRATION AREA

The Population-based Cancer Registry of Bío Bío, Chile, covers the 14 municipalities of Bío Bío Province, located in the Bío Bío Region of south-central Chile. At the 2005 census, the province's population was 380 000. Of the total population, 51% of residents were female, 8.4% were older than 64 years, 31% lived in rural areas, and 7% were members of the Mapuche ethnic group.

## CANCER CARE FACILITIES

The majority of the medical services available are provided by the public health care system, to which 80% of patients have access. The public system includes seven hospitals (one of which is of higher complexity). There are also three private hospitals in the province. The public hospitals provide university teaching. Patients requiring radiotherapy, and some requiring surgical treatment, are referred to the regional reference hospital and other hospitals in the region. All cases of childhood cancer are referred to the reference hospital. The main provincial hospital provides pathology, haematology, oncologic surgery, chemotherapy, and palliative care services.

## REGISTRY STRUCTURE AND METHODS

The population-based cancer registries of Chile were created by law in 2002, and data confidentiality is protected by two laws (Ley 19.628 and Ley 20.285). The registry is part of the epidemiology unit of the provincial office of the Regional Health Authority. It has its own office and computer equipment, and the staff consists of a medical epidemiologist and a nurse (both working at the registry part-time), with support from administrative personnel. Data collection is both active and passive. The registry receives reports from various sources, as well as notifications from national cancer and childhood cancer programmes. The registry also collects data from official mortality statistics.

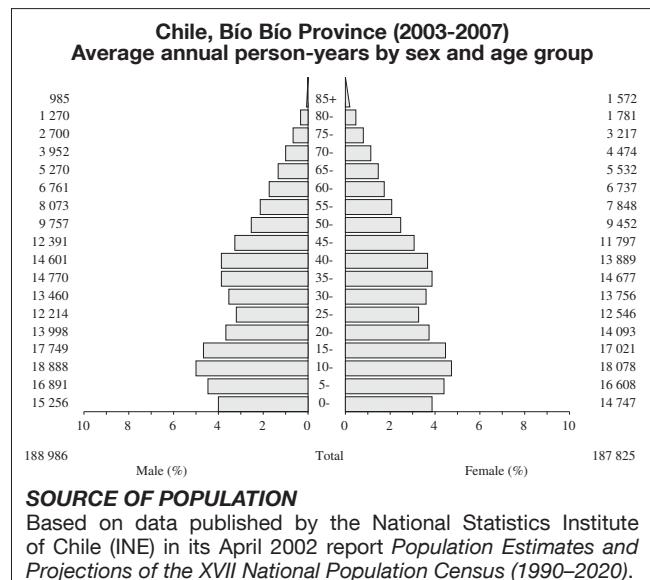
Clinical reports and death certificates are actively reviewed. CanReg4 software is used for data storage and quality control. Coding is done by the registry's staff. Standard indicators are used for quality control. There are two national cancer screening programmes: for cancers of the cervix uteri and breast in women. These programmes include physical examinations and mammograms in high-risk groups. Changes in environmental exposures are not registered.

## USE OF THE DATA

The registry has published a report presenting data for the period from 2003 to 2007.

## CONTRIBUTORS

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## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	53.0	Breast	31.7
Stomach	41.2	Gallbladder etc.	24.6
Gallbladder etc.	11.3	Cervix uteri	16.7
Oesophagus	9.9	Stomach	16.4
Non-melanoma skin cancer	8.9	Ovary	8.6
Trachea, bronchus and lung	8.6	Colon	8.0
Testis	8.3	Non-melanoma skin cancer	7.6
Kidney	6.5	Other and unspecified	4.3
Colon	6.5	Pancreas	4.0
Rectum	5.5	Rectum	3.9
All sites	211.0	All sites	174.2

## Chile, Bío Bío Province (2003-2007)

SITE	Male						Female						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.1	0.1	<b>0.1</b>	0.00	0.02	C00
Tongue	2	0.1	0.2	<b>0.2</b>	0.01	0.03	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C01-02
Mouth	4	0.2	0.4	<b>0.4</b>	0.02	0.04	4	0.2	0.4	<b>0.4</b>	0.02	0.04	C03-06
Salivary glands	3	0.1	0.3	<b>0.3</b>	0.02	0.04	4	0.2	0.4	<b>0.4</b>	0.04	0.04	C07-08
Tonsil	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.1	0.1	<b>0.1</b>	0.00	0.00	C09
Other oropharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	1	0.0	0.1	<b>0.1</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C11
Hypopharynx	3	0.1	0.3	<b>0.3</b>	0.01	0.06	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C12-13
Pharynx unspecified	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C14
Oesophagus	103	5.0	10.9	<b>9.9</b>	0.25	1.23	46	2.5	4.9	<b>3.9</b>	0.14	0.43	C15
Stomach	418	20.4	44.2	<b>41.2</b>	1.92	4.95	189	10.4	20.1	<b>16.4</b>	0.70	1.86	C16
Small intestine	7	0.3	0.7	<b>0.7</b>	0.04	0.04	6	0.3	0.6	<b>0.5</b>	0.02	0.04	C17
Colon	66	3.2	7.0	<b>6.5</b>	0.31	0.74	91	5.0	9.7	<b>8.0</b>	0.40	0.84	C18
Rectum	56	2.7	5.9	<b>5.5</b>	0.19	0.65	42	2.3	4.5	<b>3.9</b>	0.18	0.45	C19-20
Anus	3	0.1	0.3	<b>0.3</b>	0.00	0.04	2	0.1	0.2	<b>0.1</b>	0.00	0.02	C21
Liver	35	1.7	3.7	<b>3.6</b>	0.16	0.42	27	1.5	2.9	<b>2.3</b>	0.09	0.24	C22
Gallbladder etc.	117	5.7	12.4	<b>11.3</b>	0.39	1.19	263	14.5	28.0	<b>24.6</b>	1.40	3.03	C23-24
Pancreas	52	2.5	5.5	<b>4.9</b>	0.21	0.53	48	2.6	5.1	<b>4.0</b>	0.16	0.34	C25
Nose, sinuses etc.	1	0.0	0.1	<b>0.1</b>	0.01	0.01	3	0.2	0.3	<b>0.2</b>	0.02	0.02	C30-31
Larynx	12	0.6	1.3	<b>1.1</b>	0.02	0.14	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C32
Trachea, bronchus and lung	88	4.3	9.3	<b>8.6</b>	0.34	1.00	44	2.4	4.7	<b>3.7</b>	0.15	0.40	C33-34
Other thoracic organs	8	0.4	0.8	<b>0.9</b>	0.05	0.13	5	0.3	0.5	<b>0.4</b>	0.01	0.05	C37-38
Bone	12	0.6	1.3	<b>1.2</b>	0.06	0.11	8	0.4	0.9	<b>0.7</b>	0.05	0.05	C40-41
Melanoma of skin	23	1.1	2.4	<b>2.3</b>	0.12	0.24	24	1.3	2.6	<b>2.3</b>	0.13	0.27	C43
Other skin	94	9.9	8.9	<b>8.9</b>	0.28	0.85	93		9.9	<b>7.6</b>	0.34	0.72	C44
Mesothelioma	2	0.1	0.2	<b>0.2</b>	0.01	0.04	3	0.2	0.3	<b>0.3</b>	0.01	0.06	C45
Kaposi sarcoma	1	0.0	0.1	<b>0.1</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	16	0.8	1.7	<b>1.5</b>	0.07	0.14	13	0.7	1.4	<b>1.2</b>	0.07	0.11	C47+C49
Breast	5	0.2	0.5	<b>0.5</b>	0.03	0.05	332	18.3	35.4	<b>31.7</b>	2.31	3.64	C50
Vulva							4	0.2	0.4	<b>0.3</b>	0.02	0.02	C51
Vagina							9	0.5	1.0	<b>0.8</b>	0.05	0.09	C52
Cervix uteri							186	10.2	19.8	<b>16.7</b>	1.09	1.74	C53
Corpus uteri							38	2.1	4.0	<b>3.6</b>	0.23	0.41	C54
Uterus unspecified							4	0.2	0.4	<b>0.3</b>	0.02	0.02	C55
Ovary							89	4.9	9.5	<b>8.6</b>	0.54	0.93	C56
Other female genital organs							3	0.2	0.3	<b>0.3</b>	0.01	0.03	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	8	0.4	0.8	<b>0.8</b>	0.02	0.06							C60
Prostate	550	26.8	58.2	<b>53.0</b>	1.28	5.94							C61
Testis	80	3.9	8.5	<b>8.3</b>	0.59	0.59							C62
Other male genital organs	1	0.0	0.1	<b>0.1</b>	0.00	0.02							C63
Kidney	65	3.2	6.9	<b>6.5</b>	0.37	0.78	36	2.0	3.8	<b>3.4</b>	0.21	0.43	C64
Renal pelvis	3	0.1	0.3	<b>0.3</b>	0.01	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	30	1.5	3.2	<b>2.8</b>	0.12	0.28	16	0.9	1.7	<b>1.3</b>	0.04	0.14	C67
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	1	0.0	0.1	<b>0.1</b>	0.00	0.00	2	0.1	0.2	<b>0.2</b>	0.01	0.01	C69
Brain, nervous system	41	2.0	4.3	<b>4.6</b>	0.30	0.46	34	1.9	3.6	<b>3.6</b>	0.20	0.36	C70-72
Thyroid	13	0.6	1.4	<b>1.3</b>	0.07	0.14	39	2.1	4.2	<b>3.7</b>	0.31	0.37	C73
Adrenal gland	1	0.0	0.1	<b>0.1</b>	0.00	0.02	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C74
Other endocrine	3	0.1	0.3	<b>0.3</b>	0.03	0.03	1	0.1	0.1	<b>0.1</b>	0.00	0.00	C75
Hodgkin lymphoma	14	0.7	1.5	<b>1.5</b>	0.08	0.13	10	0.6	1.1	<b>1.1</b>	0.08	0.13	C81
Non-Hodgkin lymphoma	51	2.5	5.4	<b>5.2</b>	0.29	0.60	39	2.1	4.2	<b>3.6</b>	0.18	0.38	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.1	0.1	<b>0.1</b>	0.00	0.00	C88
Multiple myeloma	21	1.0	2.2	<b>2.1</b>	0.13	0.31	24	1.3	2.6	<b>2.1</b>	0.11	0.21	C90
Lymphoid leukaemia	32	1.6	3.4	<b>3.4</b>	0.18	0.30	30	1.7	3.2	<b>3.3</b>	0.16	0.27	C91
Myeloid leukaemia	22	1.1	2.3	<b>2.4</b>	0.12	0.20	19	1.0	2.0	<b>1.9</b>	0.10	0.16	C92-94
Leukaemia unspecified	1	0.0	0.1	<b>0.1</b>	0.00	0.00	6	0.3	0.6	<b>0.4</b>	0.00	0.02	C95
Myeloproliferative disorders	16	0.8	1.7	<b>1.7</b>	0.07	0.19	9	0.5	1.0	<b>0.8</b>	0.04	0.06	MPD
Myelodysplastic syndromes	5	0.2	0.5	<b>0.5</b>	0.00	0.08	4	0.2	0.4	<b>0.3</b>	0.00	0.02	MDS
Other and unspecified	55	2.7	5.8	<b>5.4</b>	0.14	0.63	53	2.9	5.6	<b>4.3</b>	0.14	0.39	O&U
All sites	2145	227.0	211.0	8.36	23.42		1910	203.4	174.2	9.82	18.92	C00-96	
All sites except C44	2051	100.0	217.1	<b>202.0</b>	8.08	22.58	1817	100.0	193.5	<b>166.6</b>	9.48	18.20	C00-96 exc. C44

# Chile, Valdivia

## REGISTRATION AREA

The Valdivia Cancer Registry covers the Los Ríos Region of Chile. At the 2005 census, the region's population was 372 000, with a male-to-female ratio of 1:1. The majority of the population lives in urban areas, with 32% living in rural areas. Members of minority ethnic groups account for 11.4% of the population, and 68% of residents are of the Catholic religion.

## CANCER CARE FACILITIES

The public health care network (which covers 83.6% of the region's population) includes 17 primary health care centres, eight health care centres that provide only certain services, and the only oncological hospital in the region (Hospital Clínico Regional de Valdivia), which provides oncological surgery, radiotherapy, and chemotherapy, as well as diagnostic services, imaging, cytology, and pathology. It is also a teaching centre. In the private sector, surgery and chemotherapy, as well as anatomical pathology services, are available for adult patients. The public university hospital is the only treatment provider for childhood cancers.

## REGISTRY STRUCTURE AND METHODS

The registry follows strict confidentiality rules in accordance with Chilean laws protecting private information (Ley 19.628 and Ley 18.575). The registry employs only one public health professional, and it receives technical assistance from the hospital-based cancer registry. The registry uses both active and passive data collection and uses standard quality indicators (percentage of cases with microscopic verification, percentage of death-certificate-only cases, and mortality-to-incidence ratio). Although it is not possible for the registry to collect information on the cases that finish treatment in other regions, this figure might be relatively insignificant since the

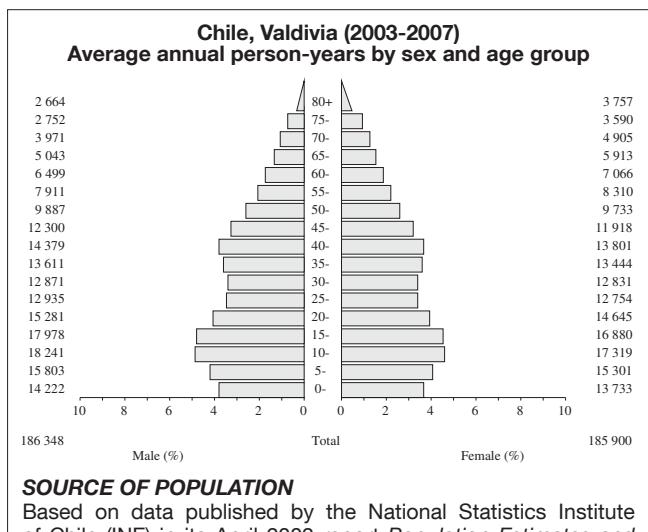
regional oncological hospital in Valdivia is the only one in the area.

## USE OF THE DATA

Incidence and mortality information is disseminated regularly and is available from <http://www.seremisaludlosrios.cl/>. A wide variety of studies, including survival studies, are also carried out based on the registry data.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on data published by the National Statistics Institute of Chile (INE) in its April 2002 report *Population Estimates and Projections of the XVII National Population Census (1990–2020)*.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	65.4	Breast	33.9
Stomach	35.2	Gallbladder etc.	25.1
Non-melanoma skin cancer	16.7	Non-melanoma skin cancer	18.3
Testis	13.7	Cervix uteri	16.9
Kidney	11.0	Stomach	13.5
Trachea, bronchus and lung	10.5	Other and unspecified	11.3
Other and unspecified	10.4	Colon	9.6
Gallbladder etc.	9.7	Thyroid	6.7
Colon	8.8	Ovary	6.6
Oesophagus	6.9	Kidney	5.7
All sites	246.5	All sites	202.8

## Chile, Valdivia (2003-2007)

SITE	Male						Female						ICD-10
	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	
Lip	5	0.2	0.5	<b>0.5</b>	0.05	0.07	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	2	0.1	0.2	<b>0.2</b>	0.03	0.03	3	0.1	0.3	<b>0.2</b>	0.01	0.01	C01-02
Mouth	6	0.3	0.6	<b>0.6</b>	0.05	0.05	2	0.1	0.2	<b>0.2</b>	0.02	0.02	C03-06
Salivary glands	7	0.3	0.8	<b>0.7</b>	0.05	0.05	6	0.3	0.6	<b>0.5</b>	0.01	0.04	C07-08
Tonsil	3	0.1	0.3	<b>0.3</b>	0.03	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	1	0.0	0.1	<b>0.1</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C11
Hypopharynx	3	0.1	0.3	<b>0.3</b>	0.02	0.06	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	3	0.1	0.3	<b>0.4</b>	0.03	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	74	3.1	7.9	<b>6.9</b>	0.22	0.76	49	2.3	5.3	<b>3.4</b>	0.06	0.34	C15
Stomach	365	15.5	39.2	<b>35.2</b>	1.49	4.17	162	7.6	17.4	<b>13.5</b>	0.70	1.46	C16
Small intestine	6	0.3	0.6	<b>0.6</b>	0.04	0.06	12	0.6	1.3	<b>1.0</b>	0.03	0.11	C17
Colon	90	3.8	9.7	<b>8.8</b>	0.51	1.04	117	5.5	12.6	<b>9.6</b>	0.45	0.99	C18
Rectum	63	2.7	6.8	<b>6.1</b>	0.29	0.68	48	2.3	5.2	<b>4.1</b>	0.21	0.54	C19-20
Anus	5	0.2	0.5	<b>0.5</b>	0.05	0.07	7	0.3	0.8	<b>0.7</b>	0.07	0.07	C21
Liver	48	2.0	5.2	<b>4.9</b>	0.33	0.59	39	1.8	4.2	<b>3.4</b>	0.16	0.41	C22
Gallbladder etc.	100	4.2	10.7	<b>9.7</b>	0.38	1.21	297	14.0	32.0	<b>25.1</b>	1.36	2.96	C23-24
Pancreas	53	2.2	5.7	<b>5.1</b>	0.29	0.53	50	2.3	5.4	<b>4.1</b>	0.20	0.45	C25
Nose, sinuses etc.	2	0.1	0.2	<b>0.2</b>	0.02	0.02	3	0.1	0.3	<b>0.2</b>	0.01	0.01	C30-31
Larynx	19	0.8	2.0	<b>1.8</b>	0.05	0.27	3	0.1	0.3	<b>0.3</b>	0.01	0.03	C32
Trachea, bronchus and lung	106	4.5	11.4	<b>10.5</b>	0.49	1.31	54	2.5	5.8	<b>4.3</b>	0.19	0.52	C33-34
Other thoracic organs	4	0.2	0.4	<b>0.4</b>	0.03	0.05	2	0.1	0.2	<b>0.1</b>	0.00	0.00	C37-38
Bone	10	0.4	1.1	<b>1.0</b>	0.05	0.07	12	0.6	1.3	<b>1.1</b>	0.06	0.06	C40-41
Melanoma of skin	33	1.4	3.5	<b>3.2</b>	0.20	0.36	25	1.2	2.7	<b>2.2</b>	0.14	0.23	C43
Other skin	176		18.9	<b>16.7</b>	0.73	1.92	226		24.3	<b>18.3</b>	1.02	1.87	C44
Mesothelioma	1	0.0	0.1	<b>0.1</b>	0.01	0.01	5	0.2	0.5	<b>0.4</b>	0.03	0.03	C45
Kaposi sarcoma	2	0.1	0.2	<b>0.2</b>	0.01	0.03	2	0.1	0.2	<b>0.2</b>	0.02	0.02	C46
Connective and soft tissue	25	1.1	2.7	<b>2.3</b>	0.11	0.26	22	1.0	2.4	<b>2.0</b>	0.13	0.17	C47+C49
Breast	2	0.1	0.2	<b>0.2</b>	0.02	0.02	377	17.7	40.6	<b>33.9</b>	2.35	3.73	C50
Vulva							9	0.4	1.0	<b>0.6</b>	0.02	0.04	C51
Vagina							2	0.1	0.2	<b>0.2</b>	0.01	0.01	C52
Cervix uteri							186	8.7	20.0	<b>16.9</b>	1.26	1.61	C53
Corpus uteri							51	2.4	5.5	<b>4.8</b>	0.38	0.57	C54
Uterus unspecified							10	0.5	1.1	<b>0.8</b>	0.04	0.11	C55
Ovary							71	3.3	7.6	<b>6.6</b>	0.46	0.75	C56
Other female genital organs							5	0.2	0.5	<b>0.5</b>	0.04	0.06	C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	10	0.4	1.1	<b>0.9</b>	0.01	0.13							C60
Prostate	685	29.0	73.5	<b>65.4</b>	2.08	7.86							C61
Testis	137	5.8	14.7	<b>13.7</b>	1.02	1.02							C62
Other male genital organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00							C63
Kidney	107	4.5	11.5	<b>11.0</b>	0.69	1.42	63	3.0	6.8	<b>5.7</b>	0.37	0.67	C64
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.00	0.02	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	40	1.7	4.3	<b>3.8</b>	0.16	0.47	26	1.2	2.8	<b>2.3</b>	0.12	0.33	C67
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	3	0.1	0.3	<b>0.4</b>	0.01	0.01	1	0.0	0.1	<b>0.1</b>	0.00	0.02	C69
Brain, nervous system	37	1.6	4.0	<b>3.9</b>	0.22	0.46	33	1.6	3.6	<b>3.3</b>	0.20	0.37	C70-72
Thyroid	14	0.6	1.5	<b>1.4</b>	0.08	0.15	71	3.3	7.6	<b>6.7</b>	0.48	0.61	C73
Adrenal gland	1	0.0	0.1	<b>0.1</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin lymphoma	15	0.6	1.6	<b>1.5</b>	0.09	0.11	12	0.6	1.3	<b>1.2</b>	0.07	0.11	C81
Non-Hodgkin lymphoma	48	2.0	5.2	<b>4.7</b>	0.28	0.45	46	2.2	4.9	<b>3.8</b>	0.17	0.34	C82-85,C96
Immunoproliferative diseases	2	0.1	0.2	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	35	1.5	3.8	<b>3.5</b>	0.20	0.44	26	1.2	2.8	<b>2.1</b>	0.06	0.29	C90
Lymphoid leukaemia	25	1.1	2.7	<b>3.0</b>	0.13	0.18	28	1.3	3.0	<b>3.1</b>	0.15	0.21	C91
Myeloid leukaemia	33	1.4	3.5	<b>3.4</b>	0.20	0.27	21	1.0	2.3	<b>2.0</b>	0.11	0.16	C92-94
Leukaemia unspecified	3	0.1	0.3	<b>0.3</b>	0.04	0.04	1	0.0	0.1	<b>0.1</b>	0.00	0.00	C95
Myeloproliferative disorders	3	0.1	0.3	<b>0.4</b>	0.01	0.06	8	0.4	0.9	<b>0.7</b>	0.03	0.09	MPD
Myelodysplastic syndromes	13	0.6	1.4	<b>1.2</b>	0.05	0.07	15	0.7	1.6	<b>1.1</b>	0.03	0.11	MDS
Other and unspecified	110	4.7	11.8	<b>10.4</b>	0.42	1.08	144	6.8	15.5	<b>11.3</b>	0.48	1.22	O&U
All sites	2535		272.1	<b>246.5</b>	11.28	28.02	2354		253.3	<b>202.8</b>	11.73	21.75	C00-96
All sites except C44	2359	100.0	253.2	<b>229.8</b>	10.55	26.11	2128	100.0	228.9	<b>184.4</b>	10.71	19.89	C00-96 exc. C44

# Colombia, Bucaramanga

## REGISTRATION AREA

The Population-based Cancer Registry of the Bucaramanga Metropolitan Area (RPC-AMB) covers the populations of four municipalities (Bucaramanga, Floridablanca, Girón, and Piedecuesta) in the Andean region of Colombia, over an area of 1479 km<sup>2</sup>. At the mid-year 2005 census, the population covered by the registry was 1 million, with 94% living in urban areas. The majority of the area's residents are Mestizo (of mixed Spanish and Amerindian ancestry).

## CANCER CARE FACILITIES

Most Colombians are covered by the national health system, through two social security regimes: a contributive regime for workers and their families (who can afford to pay) and a subsidized regime for the poor. Both regimes are affiliated with health maintenance organizations (HMOs), which administer the provision of health services through contracts with health care institutions and providers. Oncological care is provided mainly by private institutions. Only one of the five general public hospitals in the registry area provides oncology services. Cancer diagnostic and treatment facilities include 10 clinics, two radiation therapy centres, four chemotherapy units, 11 pathology laboratories, two oncologists, and several clinical specialists in oncology.

## REGISTRY STRUCTURE AND METHODS

The RPC-AMB was established in 2000, and data collection began the same year. The registry is located within the Medicine Program of the Autonomous University of Bucaramanga. Financial support is provided by the university (as a research project) and by the National Cancer Institute in Bogotá. The registry staff includes a director, a coordinator, a digitizer, and three registrars. Data collection is active. Information from death certificates is obtained from the local office

of vital statistics. The registry uses the IARC/IACR rules (2004) for multiple primary tumours, as well as CanReg4 software.

## USE OF THE DATA

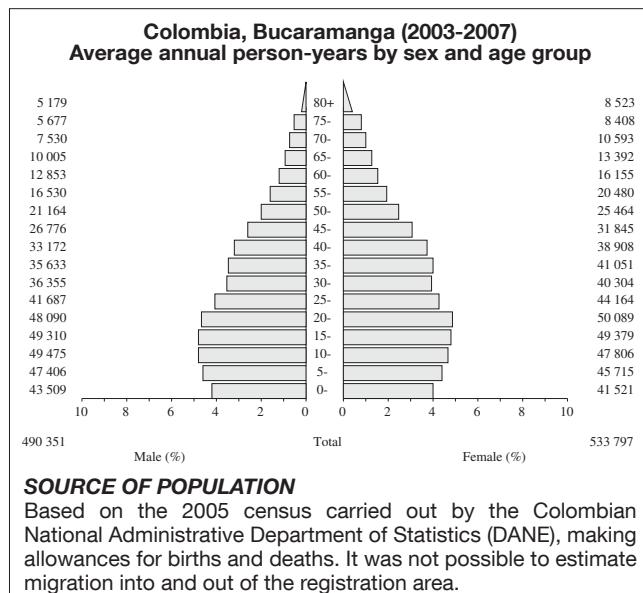
Several quality control studies and epidemiological studies of selected cancer sites have been carried out, and the results have been published locally. The data have also been used by graduate students for their master's degree dissertations. The registry prepares a periodic report on cancer incidence.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on the 2005 census carried out by the Colombian National Administrative Department of Statistics (DANE), making allowances for births and deaths. It was not possible to estimate migration into and out of the registration area.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	50.5	Breast	41.9
Stomach	22.4	Cervix uteri	17.3
Non-melanoma skin cancer	19.9	Non-melanoma skin cancer	10.5
Trachea, bronchus and lung	11.6	Stomach	10.3
Other and unspecified	9.5	Thyroid	9.6
Non-Hodgkin lymphoma	8.3	Other and unspecified	8.5
Colon	8.2	Colon	7.8
Brain, nervous system	5.9	Trachea, bronchus and lung	6.8
Rectum	5.0	Ovary	6.3
Liver	4.0	Corpus uteri	5.8
All sites	198.2	All sites	173.9

## Colombia, Bucaramanga (2003-2007)

SITE	Male						Female						
	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	ICD-10
Lip	3	0.1	0.1	<b>0.2</b>	0.01	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	23	0.6	0.9	<b>1.1</b>	0.07	0.15	27	0.6	1.0	<b>1.0</b>	0.06	0.12	C01-02
Mouth	29	0.8	1.2	<b>1.4</b>	0.09	0.16	23	0.5	0.9	<b>0.8</b>	0.03	0.08	C03-06
Salivary glands	18	0.5	0.7	<b>0.8</b>	0.05	0.08	12	0.3	0.4	<b>0.4</b>	0.02	0.04	C07-08
Tonsil	12	0.3	0.5	<b>0.6</b>	0.04	0.08	7	0.2	0.3	<b>0.2</b>	0.02	0.02	C09
Other oropharynx	9	0.2	0.4	<b>0.4</b>	0.02	0.06	3	0.1	0.1	<b>0.1</b>	0.01	0.02	C10
Nasopharynx	8	0.2	0.3	<b>0.4</b>	0.03	0.05	4	0.1	0.1	<b>0.1</b>	0.00	0.01	C11
Hypopharynx	7	0.2	0.3	<b>0.3</b>	0.02	0.03	1	0.0	0.0	<b>0.0</b>	0.01	0.01	C12-13
Pharynx unspecified	8	0.2	0.3	<b>0.4</b>	0.03	0.04	4	0.1	0.1	<b>0.1</b>	0.01	0.02	C14
Oesophagus	83	2.2	3.4	<b>3.9</b>	0.14	0.43	34	0.8	1.3	<b>1.1</b>	0.03	0.14	C15
Stomach	466	12.3	19.0	<b>22.4</b>	1.04	2.71	303	6.8	11.4	<b>10.3</b>	0.51	1.18	C16
Small intestine	16	0.4	0.7	<b>0.8</b>	0.04	0.10	19	0.4	0.7	<b>0.7</b>	0.02	0.08	C17
Colon	172	4.6	7.0	<b>8.2</b>	0.48	0.92	216	4.8	8.1	<b>7.8</b>	0.42	0.94	C18
Rectum	106	2.8	4.3	<b>5.0</b>	0.23	0.63	120	2.7	4.5	<b>4.3</b>	0.27	0.53	C19-20
Anus	6	0.2	0.2	<b>0.3</b>	0.01	0.02	35	0.8	1.3	<b>1.4</b>	0.10	0.17	C21
Liver	85	2.3	3.5	<b>4.0</b>	0.21	0.45	90	2.0	3.4	<b>3.2</b>	0.14	0.38	C22
Gallbladder etc.	44	1.2	1.8	<b>2.1</b>	0.10	0.30	92	2.1	3.4	<b>3.4</b>	0.18	0.43	C23-24
Pancreas	35	0.9	1.4	<b>1.8</b>	0.09	0.20	69	1.5	2.6	<b>2.3</b>	0.10	0.26	C25
Nose, sinuses etc.	14	0.4	0.6	<b>0.7</b>	0.04	0.08	11	0.2	0.4	<b>0.4</b>	0.04	0.04	C30-31
Larynx	66	1.7	2.7	<b>3.3</b>	0.22	0.38	14	0.3	0.5	<b>0.5</b>	0.03	0.06	C32
Trachea, bronchus and lung	238	6.3	9.7	<b>11.6</b>	0.56	1.45	185	4.1	6.9	<b>6.8</b>	0.35	0.88	C33-34
Other thoracic organs	18	0.5	0.7	<b>0.8</b>	0.06	0.07	13	0.3	0.5	<b>0.4</b>	0.02	0.04	C37-38
Bone	22	0.6	0.9	<b>0.9</b>	0.06	0.08	20	0.4	0.7	<b>0.7</b>	0.04	0.07	C40-41
Melanoma of skin	35	0.9	1.4	<b>1.7</b>	0.10	0.20	62	1.4	2.3	<b>2.3</b>	0.15	0.26	C43
Other skin	428	12.3	17.5	<b>19.9</b>	0.74	2.15	332	6.8	12.4	<b>10.5</b>	0.33	1.00	C44
Mesothelioma	4	0.1	0.2	<b>0.2</b>	0.01	0.02	2	0.0	0.1	<b>0.1</b>	0.00	0.01	C45
Kaposi sarcoma	17	0.5	0.7	<b>0.7</b>	0.05	0.05	2	0.0	0.1	<b>0.1</b>	0.00	0.01	C46
Connective and soft tissue	62	1.6	2.5	<b>2.7</b>	0.16	0.31	64	1.4	2.4	<b>2.3</b>	0.14	0.22	C47+C49
Breast	7	0.2	0.3	<b>0.4</b>	0.02	0.05	1129	25.2	42.3	<b>41.9</b>	3.27	4.73	C50
Vulva							20	0.4	0.7	<b>0.7</b>	0.04	0.08	C51
Vagina							20	0.4	0.7	<b>0.8</b>	0.05	0.10	C52
Cervix uteri							482	10.7	18.1	<b>17.3</b>	1.28	1.90	C53
Corpus uteri							155	3.5	5.8	<b>5.8</b>	0.47	0.66	C54
Uterus unspecified							19	0.4	0.7	<b>0.7</b>	0.05	0.09	C55
Ovary							168	3.7	6.3	<b>6.3</b>	0.48	0.69	C56
Other female genital organs							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C57
Placenta							6	0.1	0.2	<b>0.2</b>	0.02	0.02	C58
Penis	31	0.8	1.3	<b>1.4</b>	0.08	0.15							C60
Prostate	1030	27.3	42.0	<b>50.5</b>	1.79	6.45							C61
Testis	47	1.2	1.9	<b>1.8</b>	0.13	0.14							C62
Other male genital organs	3	0.1	0.1	<b>0.1</b>	0.01	0.01							C63
Kidney	50	1.3	2.0	<b>2.4</b>	0.19	0.26	34	0.8	1.3	<b>1.3</b>	0.07	0.13	C64
Renal pelvis	2	0.1	0.1	<b>0.1</b>	0.00	0.02	2	0.0	0.1	<b>0.1</b>	0.00	0.02	C65
Ureter	1	0.0	0.0	<b>0.0</b>	0.00	0.00	2	0.0	0.1	<b>0.1</b>	0.00	0.01	C66
Bladder	81	2.1	3.3	<b>3.8</b>	0.10	0.44	37	0.8	1.4	<b>1.3</b>	0.06	0.14	C67
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	38	1.0	1.5	<b>1.8</b>	0.07	0.20	15	0.3	0.6	<b>0.5</b>	0.02	0.05	C69
Brain, nervous system	133	3.5	5.4	<b>5.9</b>	0.33	0.64	109	2.4	4.1	<b>4.1</b>	0.25	0.43	C70-72
Thyroid	58	1.5	2.4	<b>2.6</b>	0.20	0.27	269	6.0	10.1	<b>9.6</b>	0.74	0.97	C73
Adrenal gland	2	0.1	0.1	<b>0.1</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	2	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin lymphoma	32	0.8	1.3	<b>1.3</b>	0.09	0.09	26	0.6	1.0	<b>1.0</b>	0.07	0.08	C81
Non-Hodgkin lymphoma	186	4.9	7.6	<b>8.3</b>	0.50	0.81	125	2.8	4.7	<b>4.7</b>	0.28	0.53	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	38	1.0	1.5	<b>1.8</b>	0.12	0.20	33	0.7	1.2	<b>1.3</b>	0.09	0.18	C90
Lymphoid leukaemia	64	1.7	2.6	<b>2.8</b>	0.15	0.22	45	1.0	1.7	<b>1.8</b>	0.10	0.14	C91
Myeloid leukaemia	61	1.6	2.5	<b>2.7</b>	0.17	0.27	37	0.8	1.4	<b>1.5</b>	0.10	0.15	C92-94
Leukaemia unspecified	83	2.2	3.4	<b>3.6</b>	0.17	0.34	65	1.4	2.4	<b>2.4</b>	0.16	0.23	C95
Myeloproliferative disorders	3	0.1	0.1	<b>0.1</b>	0.00	0.00	9	0.2	0.3	<b>0.3</b>	0.02	0.03	MPD
Myelodysplastic syndromes	16	0.4	0.7	<b>0.7</b>	0.03	0.08	8	0.2	0.3	<b>0.3</b>	0.01	0.04	MDS
Other and unspecified	205	5.4	8.4	<b>9.5</b>	0.53	1.04	237	5.3	8.9	<b>8.5</b>	0.44	0.99	O&U
All sites	4205	171.5	198.2	9.42	22.95		4819	180.6	173.9	11.10	19.40	C00-96	
All sites except C44	3777	100.0	154.1	<b>178.3</b>	8.68	20.80	4487	100.0	168.1	<b>163.4</b>	10.76	18.39	C00-96 exc. C44

§Includes 20 cases of unknown age

\$Includes 23 cases of unknown age

# Colombia, Cali

## REGISTRATION AREA

The Cali Cancer Registry (CCR) covers the urban area of Cali, the third-most populous city in Colombia. The total registration area is 120.9 km<sup>2</sup>. At the most recent official census (2005), the population was 2 million. The large majority of the population is Mestizo (of mixed Spanish and Amerindian ancestry), with a minority of Blacks and Whites. More than half of the population of Cali consists of migrants from other areas of Colombia.

## CANCER CARE FACILITIES

Most Colombians are covered by the national health system, through two social security regimes: a contributive regime for workers and their families (who can afford to pay) and a subsidized regime for the poor. Both regimes are affiliated with health maintenance organizations (HMOs), which administer the provision of health services through contracts with health care institutions and providers. Cancer care services in Cali, including screening, diagnosis, and treatment, are provided through this system, but cancer treatment is provided mainly by private institutions.

## REGISTRY STRUCTURE AND METHODS

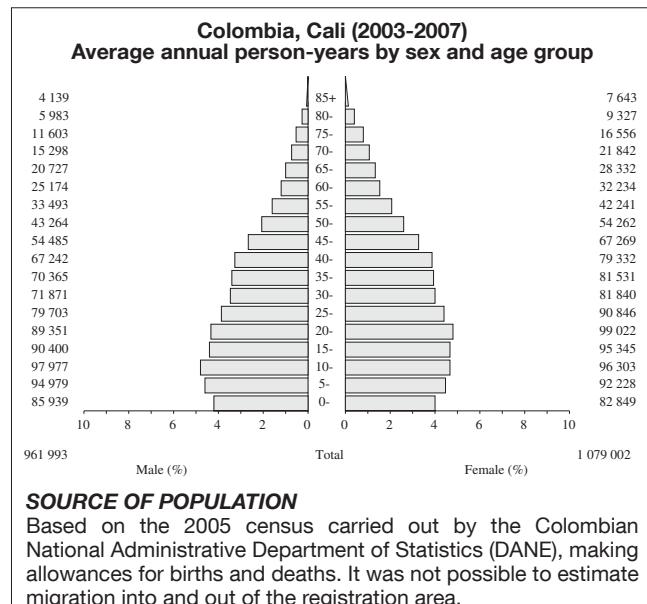
The CCR has been in continuous operation since 1962, within the Department of Pathology of the Universidad del Valle. Its staff includes a director (the university's professor of pathology), three assessing pathologists, an epidemiologist coordinator, three records clerks, and a data manager. Cancer notification is not compulsory in Colombia. The CCR uses active case finding from various data sources consisting of cancer hospitals, general hospitals, teaching hospitals, and pathology laboratories. Every 2 years, a group of 25 specially trained medical students is selected to carry out a field survey of the files of all private physicians who diagnose or treat cancer patients. Information from death certificates is obtained from the Municipal Office of Vital Statistics. The death registration system is adequate and complete. No active follow-up is carried out.

## USE OF THE DATA

The CCR studies incidence and mortality trends using the age-period-cohort model. Long-term survival analysis has been carried out for the five leading causes of cancer and for all cases of childhood cancer. The CCR publishes cancer statistics on its website (<http://rpcc.univalle.edu.co>).

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on the 2005 census carried out by the Colombian National Administrative Department of Statistics (DANE), making allowances for births and deaths. It was not possible to estimate migration into and out of the registration area.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	66.9	Breast	49.2
Stomach	26.0	Cervix uteri	20.5
Trachea, bronchus and lung	19.0	Stomach	13.9
Non-Hodgkin lymphoma	11.7	Thyroid	11.3
Other and unspecified	11.2	Colon	9.6
Colon	9.5	Other and unspecified	9.0
Bladder	6.8	Trachea, bronchus and lung	8.9
Rectum	6.5	Ovary	8.7
Brain, nervous system	5.8	Non-Hodgkin lymphoma	8.4
Kidney	4.4	Corpus uteri	5.5
All sites	226.6	All sites	202.2

## Colombia, Cali (2003-2007)

SITE	Male						Female						ICD-10	
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR		Cum. rates 0-64 (%)	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR		Cum. rates 0-64 (%)		
				world	0-74					world	0-74			
Lip	14	0.1	0.3	<b>0.3</b>	0.02	0.03	12	0.1	0.2	<b>0.2</b>	0.01	0.02	C00	
Tongue	53	0.6	1.1	<b>1.3</b>	0.07	0.14	36	0.3	0.7	<b>0.6</b>	0.02	0.07	C01-02	
Mouth	62	0.6	1.3	<b>1.4</b>	0.07	0.18	51	0.4	0.9	<b>0.9</b>	0.05	0.10	C03-06	
Salivary glands	50	0.5	1.0	<b>1.1</b>	0.07	0.12	42	0.4	0.8	<b>0.8</b>	0.05	0.09	C07-08	
Tonsil	20	0.2	0.4	<b>0.5</b>	0.03	0.06	18	0.2	0.3	<b>0.3</b>	0.03	0.04	C09	
Other oropharynx	8	0.1	0.2	<b>0.2</b>	0.01	0.03	6	0.1	0.1	<b>0.1</b>	0.01	0.01	C10	
Nasopharynx	26	0.3	0.5	<b>0.6</b>	0.04	0.08	17	0.1	0.3	<b>0.3</b>	0.01	0.04	C11	
Hypopharynx	9	0.1	0.2	<b>0.2</b>	0.01	0.02	4	0.0	0.1	<b>0.1</b>	0.00	0.01	C12-13	
Pharynx unspecified	6	0.1	0.1	<b>0.1</b>	0.01	0.01	4	0.0	0.1	<b>0.1</b>	0.00	0.00	C14	
Oesophagus	120	1.2	2.5	<b>2.8</b>	0.11	0.32	82	0.7	1.5	<b>1.4</b>	0.04	0.17	C15	
Stomach	1096	11.4	22.8	<b>26.0</b>	1.28	3.12	822	7.2	15.2	<b>13.9</b>	0.70	1.57	C16	
Small intestine	31	0.3	0.6	<b>0.7</b>	0.04	0.10	37	0.3	0.7	<b>0.6</b>	0.03	0.08	C17	
Colon	412	4.3	8.6	<b>9.5</b>	0.46	1.10	557	4.9	10.3	<b>9.6</b>	0.49	1.09	C18	
Rectum	275	2.9	5.7	<b>6.5</b>	0.33	0.78	266	2.3	4.9	<b>4.7</b>	0.28	0.56	C19-20	
Anus	29	0.3	0.6	<b>0.7</b>	0.04	0.09	101	0.9	1.9	<b>1.9</b>	0.13	0.23	C21	
Liver	178	1.9	3.7	<b>4.2</b>	0.16	0.49	182	1.6	3.4	<b>3.2</b>	0.15	0.35	C22	
Gallbladder etc.	108	1.1	2.2	<b>2.6</b>	0.07	0.29	286	2.5	5.3	<b>4.9</b>	0.22	0.60	C23-24	
Pancreas	165	1.7	3.4	<b>3.9</b>	0.21	0.44	203	1.8	3.8	<b>3.4</b>	0.15	0.37	C25	
Nose, sinuses etc.	34	0.4	0.7	<b>0.8</b>	0.03	0.12	40	0.4	0.7	<b>0.7</b>	0.05	0.09	C30-31	
Larynx	169	1.8	3.5	<b>4.2</b>	0.21	0.53	36	0.3	0.7	<b>0.6</b>	0.03	0.07	C32	
Trachea, bronchus and lung	810	8.4	16.8	<b>19.0</b>	0.65	2.22	512	4.5	9.5	<b>8.9</b>	0.42	1.08	C33-34	
Other thoracic organs	21	0.2	0.4	<b>0.5</b>	0.03	0.05	30	0.3	0.6	<b>0.6</b>	0.04	0.06	C37-38	
Bone	92	1.0	1.9	<b>1.9</b>	0.11	0.16	80	0.7	1.5	<b>1.4</b>	0.09	0.13	C40-41	
Melanoma of skin	175	1.8	3.6	<b>4.0</b>	0.22	0.43	178	1.6	3.3	<b>3.1</b>	0.19	0.35	C43	
Other skin	30	0.6	0.6	<b>0.6</b>	0.04	0.05	50	0.9	0.9	<b>0.9</b>	0.05	0.11	C44	
Mesothelioma	17	0.2	0.4	<b>0.4</b>	0.02	0.05	8	0.1	0.1	<b>0.2</b>	0.01	0.02	C45	
Kaposi sarcoma	97	1.0	2.0	<b>1.9</b>	0.14	0.17	17	0.1	0.3	<b>0.3</b>	0.02	0.03	C46	
Connective and soft tissue	125	1.3	2.6	<b>2.8</b>	0.18	0.29	143	1.3	2.7	<b>2.5</b>	0.18	0.25	C47+C49	
Breast	18	0.2	0.4	<b>0.4</b>	0.02	0.04	2742	24.0	50.8	<b>49.2</b>	3.70	5.57	C50	
Vulva							55	0.5	1.0	<b>0.9</b>	0.04	0.10	C51	
Vagina							31	0.3	0.6	<b>0.6</b>	0.04	0.08	C52	
Cervix uteri							1181	10.3	21.9	<b>20.5</b>	1.49	2.19	C53	
Corpus uteri							302	2.6	5.6	<b>5.5</b>	0.38	0.67	C54	
Uterus unspecified							26	0.2	0.5	<b>0.5</b>	0.03	0.05	C55	
Ovary							494	4.3	9.2	<b>8.7</b>	0.58	0.98	C56	
Other female genital organs							13	0.1	0.2	<b>0.2</b>	0.01	0.02	C57	
Placenta							13	0.1	0.2	<b>0.2</b>	0.01	0.02	C58	
Penis	54	0.6	1.1	<b>1.2</b>	0.08	0.14							C60	
Prostate	2734	28.4	56.8	<b>66.9</b>	2.46	8.58							C61	
Testis	146	1.5	3.0	<b>2.9</b>	0.20	0.21							C62	
Other male genital organs	9	0.1	0.2	<b>0.2</b>	0.01	0.02							C63	
Kidney	183	1.9	3.8	<b>4.4</b>	0.26	0.51	154	1.3	2.9	<b>2.9</b>	0.17	0.35	C64	
Renal pelvis	8	0.1	0.2	<b>0.2</b>	0.00	0.02	2	0.0	0.0	<b>0.0</b>	0.00	0.00	C65	
Ureter	1	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66	
Bladder	293	3.0	6.1	<b>6.8</b>	0.27	0.79	130	1.1	2.4	<b>2.2</b>	0.11	0.23	C67	
Other urinary organs	1	0.0	0.0	<b>0.0</b>	0.00	0.00	3	0.0	0.1	<b>0.1</b>	0.01	0.01	C68	
Eye	30	0.3	0.6	<b>0.8</b>	0.06	0.07	24	0.2	0.4	<b>0.5</b>	0.02	0.04	C69	
Brain, nervous system	254	2.6	5.3	<b>5.8</b>	0.40	0.60	240	2.1	4.4	<b>4.4</b>	0.30	0.45	C70-72	
Thyroid	107	1.1	2.2	<b>2.3</b>	0.17	0.22	639	5.6	11.8	<b>11.3</b>	0.87	1.18	C73	
Adrenal gland	3	0.0	0.1	<b>0.1</b>	0.00	0.00	8	0.1	0.1	<b>0.1</b>	0.01	0.02	C74	
Other endocrine	3	0.0	0.1	<b>0.1</b>	0.00	0.00	3	0.0	0.1	<b>0.1</b>	0.00	0.01	C75	
Hodgkin lymphoma	77	0.8	1.6	<b>1.7</b>	0.11	0.17	63	0.6	1.2	<b>1.1</b>	0.07	0.10	C81	
Non-Hodgkin lymphoma	523	5.4	10.9	<b>11.7</b>	0.74	1.27	475	4.2	8.8	<b>8.4</b>	0.49	1.00	C82-85,C96	
Immunoproliferative diseases	2	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C88	
Multiple myeloma	111	1.2	2.3	<b>2.7</b>	0.16	0.34	129	1.1	2.4	<b>2.3</b>	0.13	0.31	C90	
Lymphoid leukaemia	166	1.7	3.5	<b>3.7</b>	0.19	0.30	175	1.5	3.2	<b>3.4</b>	0.17	0.25	C91	
Myeloid leukaemia	140	1.5	2.9	<b>3.1</b>	0.17	0.32	157	1.4	2.9	<b>2.8</b>	0.16	0.29	C92-94	
Leukaemia unspecified	42	0.4	0.9	<b>0.9</b>	0.05	0.09	40	0.4	0.7	<b>0.7</b>	0.04	0.06	C95	
Myeloproliferative disorders	14	0.1	0.3	<b>0.3</b>	0.02	0.05	11	0.1	0.2	<b>0.2</b>	0.01	0.02	MPD	
Myelodysplastic syndromes	13	0.1	0.3	<b>0.3</b>	0.01	0.02	19	0.2	0.4	<b>0.3</b>	0.01	0.03	MDS	
Other and unspecified	482	5.0	10.0	<b>11.2</b>	0.55	1.22	526	4.6	9.7	<b>9.0</b>	0.45	1.00	O&U	
All sites	9646		200.5	<b>226.6</b>	10.57	26.50	11476		212.7	<b>202.2</b>	12.77	22.63	C00-96	
All sites except C44	9616	100.0	199.9	<b>225.9</b>	10.53	26.45	11426	100.0	211.8	<b>201.3</b>	12.71	22.53	C00-96 exc. C44	

§Includes 196 cases of unknown age

§Includes 230 cases of unknown age

# Colombia, Manizales

## REGISTRATION AREA

The Population-based Cancer Registry of Manizales covers the urban and rural population of the city of Manizales, which is located 2150 m above sea level in the Andean region of Colombia. The average temperature is 18 °C. At the most recent census (2005), the population was 368 000. About 80% of residents live in urban areas, and 85% are Catholic. The area's economy is based on agriculture, marketing, and coffee exportation.

## CANCER CARE FACILITIES

Most Colombians are covered by the national health system, through two social security regimes: a contributive regime for workers and their families (who can afford to pay) and a subsidized regime for the poor. Both regimes are affiliated with health maintenance organizations (HMOs), which administer the provision of health services through contracts with health care institutions and providers. Most cancer care institutions in Manizales belong to the private network of providers – including imaging, cytology, and pathology services, as well as radiotherapy, chemotherapy, and cancer surgery services.

## REGISTRY STRUCTURE AND METHODS

The registry is supported by the University of Caldas and the National Cancer Institute (INC). The registry staff consists of a part-time medical officer, a full-time registrar, and three part-time health workers. The registry uses active case finding from 38 data sources consisting of hospitals, clinics, cancer care institutions, cytology and pathology laboratories, imaging services, HMOs, and the district's vital statistics office. Although cancer is not a reportable disease in Colombia,

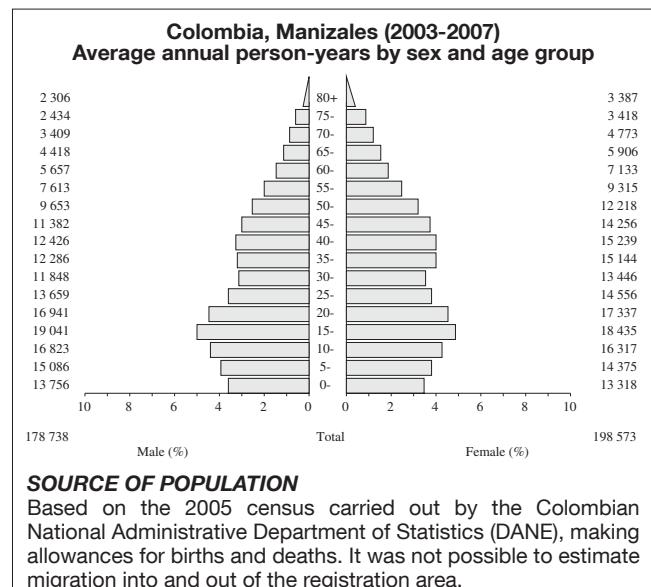
registration forms are received from some private practitioners.

## USE OF THE DATA

The registry prepares an annual report on cancer incidence, and recently initiated several cancer survival studies.

## CONTRIBUTORS

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Daniela Morantes Arenas



## SOURCE OF POPULATION

Based on the 2005 census carried out by the Colombian National Administrative Department of Statistics (DANE), making allowances for births and deaths. It was not possible to estimate migration into and out of the registration area.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	32.0	Breast	32.2
Stomach	23.6	Cervix uteri	19.5
Trachea, bronchus and lung	14.9	Thyroid	12.1
Colon	8.9	Stomach	10.0
Other and unspecified	8.1	Trachea, bronchus and lung	8.4
Non-Hodgkin lymphoma	7.9	Colon	7.4
Non-melanoma skin cancer	5.7	Other and unspecified	6.7
Rectum	5.3	Corpus uteri	6.2
Bladder	5.2	Rectum	6.1
Larynx	4.3	Ovary	6.1
All sites	168.4	All sites	162.1

## Colombia, Manizales (2003-2007)

SITE	Male						Female						ICD-10
	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	
Lip	1	0.1	0.1	<b>0.1</b>	0.00	0.00	2	0.1	0.2	<b>0.1</b>	0.01	0.01	C00
Tongue	9	0.6	1.0	<b>1.0</b>	0.03	0.12	4	0.2	0.4	<b>0.3</b>	0.01	0.01	C01-02
Mouth	6	0.4	0.7	<b>0.7</b>	0.05	0.07	8	0.4	0.8	<b>0.7</b>	0.05	0.05	C03-06
Salivary glands	9	0.6	1.0	<b>1.0</b>	0.04	0.12	13	0.7	1.3	<b>1.1</b>	0.07	0.11	C07-08
Tonsil	6	0.4	0.7	<b>0.7</b>	0.07	0.07	1	0.1	0.1	<b>0.1</b>	0.00	0.00	C09
Other oropharynx	4	0.3	0.4	<b>0.4</b>	0.04	0.04	1	0.1	0.1	<b>0.1</b>	0.00	0.02	C10
Nasopharynx	1	0.1	0.1	<b>0.1</b>	0.01	0.01	3	0.2	0.3	<b>0.3</b>	0.03	0.03	C11
Hypopharynx	1	0.1	0.1	<b>0.1</b>	0.01	0.01	1	0.1	0.1	<b>0.1</b>	0.00	0.02	C12-13
Pharynx unspecified	5	0.3	0.6	<b>0.6</b>	0.03	0.09	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	18	1.2	2.0	<b>2.0</b>	0.08	0.26	30	1.6	3.0	<b>2.5</b>	0.15	0.31	C15
Stomach	216	14.6	24.2	<b>23.6</b>	1.25	2.87	121	6.6	12.2	<b>10.0</b>	0.56	1.15	C16
Small intestine	5	0.3	0.6	<b>0.5</b>	0.01	0.06	15	0.8	1.5	<b>1.4</b>	0.05	0.19	C17
Colon	83	5.6	9.3	<b>8.9</b>	0.39	1.01	88	4.8	8.9	<b>7.4</b>	0.37	0.95	C18
Rectum	48	3.3	5.4	<b>5.3</b>	0.26	0.68	73	4.0	7.4	<b>6.1</b>	0.41	0.72	C19-20
Anus	12	0.8	1.3	<b>1.3</b>	0.06	0.17	10	0.5	1.0	<b>0.8</b>	0.02	0.12	C21
Liver	22	1.5	2.5	<b>2.3</b>	0.14	0.28	19	1.0	1.9	<b>1.6</b>	0.08	0.14	C22
Gallbladder etc.	17	1.2	1.9	<b>2.0</b>	0.12	0.27	36	2.0	3.6	<b>2.8</b>	0.10	0.29	C23-24
Pancreas	26	1.8	2.9	<b>2.9</b>	0.17	0.35	26	1.4	2.6	<b>2.1</b>	0.12	0.26	C25
Nose, sinuses etc.	3	0.2	0.3	<b>0.3</b>	0.02	0.02	4	0.2	0.4	<b>0.3</b>	0.03	0.03	C30-31
Larynx	37	2.5	4.1	<b>4.3</b>	0.23	0.58	6	0.3	0.6	<b>0.6</b>	0.04	0.06	C32
Trachea, bronchus and lung	131	8.9	14.7	<b>14.9</b>	0.75	1.93	98	5.3	9.9	<b>8.4</b>	0.49	1.06	C33-34
Other thoracic organs	7	0.5	0.8	<b>0.8</b>	0.06	0.08	7	0.4	0.7	<b>0.5</b>	0.03	0.03	C37-38
Bone	10	0.7	1.1	<b>1.1</b>	0.07	0.10	13	0.7	1.3	<b>1.2</b>	0.08	0.08	C40-41
Melanoma of skin	27	1.8	3.0	<b>3.2</b>	0.17	0.43	36	2.0	3.6	<b>3.1</b>	0.16	0.33	C43
Other skin	54	6.0	5.7	<b>5.7</b>	0.21	0.57	53		5.3	<b>4.2</b>	0.14	0.47	C44
Mesothelioma	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C45
Kaposi sarcoma	9	0.6	1.0	<b>0.9</b>	0.07	0.07	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	18	1.2	2.0	<b>2.0</b>	0.12	0.21	18	1.0	1.8	<b>1.8</b>	0.10	0.18	C47+C49
Breast	5	0.3	0.6	<b>0.6</b>	0.04	0.09	379	20.7	38.2	<b>32.2</b>	2.42	3.57	C50
Vulva							5	0.3	0.5	<b>0.3</b>	0.01	0.01	C51
Vagina							5	0.3	0.5	<b>0.5</b>	0.03	0.07	C52
Cervix uteri							225	12.3	22.7	<b>19.5</b>	1.47	2.13	C53
Corpus uteri							67	3.7	6.7	<b>6.2</b>	0.46	0.86	C54
Uterus unspecified							9	0.5	0.9	<b>0.9</b>	0.10	0.10	C55
Ovary							70	3.8	7.1	<b>6.1</b>	0.45	0.68	C56
Other female genital organs							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C57
Placenta							1	0.1	0.1	<b>0.1</b>	0.01	0.01	C58
Penis	20	1.4	2.2	<b>2.2</b>	0.10	0.29							C60
Prostate	292	19.8	32.7	<b>32.0</b>	1.03	4.07							C61
Testis	33	2.2	3.7	<b>3.4</b>	0.26	0.26							C62
Other male genital organs	1	0.1	0.1	<b>0.1</b>	0.01	0.01							C63
Kidney	27	1.8	3.0	<b>3.2</b>	0.19	0.33	27	1.5	2.7	<b>2.4</b>	0.14	0.28	C64
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65
Ureter	1	0.1	0.1	<b>0.1</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	50	3.4	5.6	<b>5.2</b>	0.24	0.55	14	0.8	1.4	<b>1.2</b>	0.05	0.18	C67
Other urinary organs	2	0.1	0.2	<b>0.2</b>	0.02	0.02	1	0.1	0.1	<b>0.1</b>	0.00	0.00	C68
Eye	4	0.3	0.4	<b>0.6</b>	0.03	0.03	4	0.2	0.4	<b>0.4</b>	0.02	0.02	C69
Brain, nervous system	35	2.4	3.9	<b>3.8</b>	0.32	0.32	23	1.3	2.3	<b>2.2</b>	0.12	0.23	C70-72
Thyroid	33	2.2	3.7	<b>3.6</b>	0.22	0.44	140	7.6	14.1	<b>12.1</b>	0.94	1.18	C73
Adrenal gland	1	0.1	0.1	<b>0.2</b>	0.01	0.01	3	0.2	0.3	<b>0.4</b>	0.03	0.03	C74
Other endocrine	2	0.1	0.2	<b>0.2</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin lymphoma	32	2.2	3.6	<b>3.4</b>	0.24	0.27	19	1.0	1.9	<b>1.7</b>	0.12	0.18	C81
Non-Hodgkin lymphoma	72	4.9	8.1	<b>7.9</b>	0.47	0.88	63	3.4	6.3	<b>5.4</b>	0.31	0.64	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	9	0.6	1.0	<b>1.0</b>	0.07	0.14	15	0.8	1.5	<b>1.3</b>	0.05	0.18	C90
Lymphoid leukaemia	28	1.9	3.1	<b>3.2</b>	0.16	0.23	26	1.4	2.6	<b>2.7</b>	0.12	0.25	C91
Myeloid leukaemia	18	1.2	2.0	<b>1.9</b>	0.16	0.16	26	1.4	2.6	<b>2.4</b>	0.15	0.18	C92-94
Leukaemia unspecified	3	0.2	0.3	<b>0.3</b>	0.02	0.02	2	0.1	0.2	<b>0.2</b>	0.01	0.02	C95
Myeloproliferative disorders	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	MPD
Myelodysplastic syndromes	2	0.1	0.2	<b>0.3</b>	0.00	0.05	0	0.0	0.0	<b>0.0</b>	0.00	0.00	MDS
Other and unspecified	75	5.1	8.4	<b>8.1</b>	0.44	0.93	77	4.2	7.8	<b>6.7</b>	0.33	0.72	O&U
All sites	1530	171.2	<b>168.4</b>	8.54	19.60		1887	190.1	<b>162.1</b>	10.43	18.11	C00-96	
All sites except C44	1476	100.0	<b>162.7</b>	8.33	19.03		1834	100.0	<b>157.9</b>	10.29	17.64	C00-96 exc. C44	

# Colombia, Pasto

## REGISTRATION AREA

The Cancer Registry of Pasto covers the population of Pasto (the capital city of the department of Nariño), located in the southern Andean region of Colombia. At the 2005 census, the population was 383 000, with 82% living in urban areas. The majority of residents are Mestizo (of mixed Spanish and Amerindian ancestry), and most of the population is of the Roman Catholic religion.

## CANCER CARE FACILITIES

Most Colombians are covered by the national health system, through two social security regimes: a contributive regime for workers and their families (who can afford to pay) and a subsidized regime for the poor. Both regimes are affiliated with health maintenance organizations (HMOs), which administer the provision of health services through contracts with health care institutions and providers. The major cancer facilities in Pasto are six cytology and pathology laboratories, three hospitals with radiotherapy and chemotherapy services, and five oncology units.

## REGISTRY STRUCTURE AND METHODS

The registry was created in 1998 (conceived as a permanent research project) at the University of Nariño's Center for Health Studies, in collaboration with the Municipal Health Secretariat. The registry is endorsed by the university's ethics committee and receives resources from the university. It is cosponsored by the Instituto Nacional de Cancerología (INC) in Bogotá. It also receives technical advice from the Cali Cancer Registry. The registry staff includes a director, a pathologist, a statistician, an assistant director, a computer engineer, a quality control technician, a coordinator, and two registrars. Information is actively collected from 39 sources consisting of hospitals, oncology units, pathology laboratories, specialized clinics, and the Municipal Health Secretariat, which is responsible for mortality information. Rare cases are addressed by the scientific committee, composed of specialists. Recently, through INC, the registration's

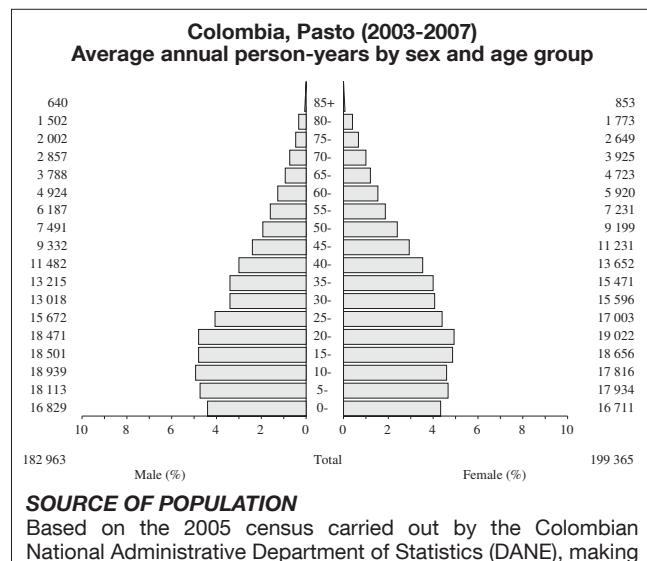
completeness and validity have been significantly improved.

## USE OF THE DATA

The purpose of the registry is to provide cancer incidence data for decision-making and for the implementation of promotion and prevention activities. To date, the registry has published cancer incidence rates for the period from 1998 to 2002. The registry has also supported epidemiological studies on cervical, colorectal, and gastric cancers, as well as childhood cancers.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on the 2005 census carried out by the Colombian National Administrative Department of Statistics (DANE), making allowances for births and deaths. It was not possible to estimate migration into and out of the registration area.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Stomach	32.5	Cervix uteri	27.4
Prostate	27.0	Breast	26.8
Non-Hodgkin lymphoma	9.7	Stomach	15.9
Trachea, bronchus and lung	7.3	Thyroid	8.4
Other and unspecified	5.0	Ovary	7.1
Brain, nervous system	5.0	Non-Hodgkin lymphoma	6.4
Pancreas	4.6	Other and unspecified	6.1
Testis	4.1	Pancreas	5.4
Colon	4.1	Gallbladder etc.	5.1
Connective and soft tissue	4.1	Corpus uteri	4.7
All sites	144.4	All sites	153.3

## Colombia, Pasto (2003-2007)

SITE	Male						Female						ICD-10
	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	
Lip	1	0.1	0.1	<b>0.2</b>	0.00	0.03	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	2	0.2	0.2	<b>0.3</b>	0.03	0.03	9	0.6	0.9	<b>0.9</b>	0.04	0.12	C01-02
Mouth	1	0.1	0.1	<b>0.2</b>	0.00	0.03	4	0.3	0.4	<b>0.4</b>	0.02	0.04	C03-06
Salivary glands	6	0.5	0.7	<b>0.8</b>	0.04	0.10	7	0.5	0.7	<b>0.7</b>	0.06	0.09	C07-08
Tonsil	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C09
Other oropharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	2	0.2	0.2	<b>0.2</b>	0.02	0.02	1	0.1	0.1	<b>0.1</b>	0.00	0.00	C11
Hypopharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	23	2.1	2.5	<b>3.0</b>	0.12	0.41	13	0.9	1.3	<b>1.3</b>	0.03	0.10	C15
Stomach	250	22.3	27.3	<b>32.5</b>	1.42	3.77	161	10.8	16.2	<b>15.9</b>	0.73	1.68	C16
Small intestine	5	0.4	0.5	<b>0.6</b>	0.04	0.06	3	0.2	0.3	<b>0.3</b>	0.01	0.04	C17
Colon	31	2.8	3.4	<b>4.1</b>	0.24	0.48	40	2.7	4.0	<b>3.9</b>	0.23	0.40	C18
Rectum	25	2.2	2.7	<b>3.2</b>	0.15	0.42	35	2.3	3.5	<b>3.6</b>	0.22	0.43	C19-20
Anus	2	0.2	0.2	<b>0.3</b>	0.04	0.04	8	0.5	0.8	<b>0.8</b>	0.04	0.10	C21
Liver	28	2.5	3.1	<b>3.7</b>	0.16	0.47	32	2.1	3.2	<b>3.0</b>	0.11	0.38	C22
Gallbladder etc.	20	1.8	2.2	<b>2.7</b>	0.13	0.44	48	3.2	4.8	<b>5.1</b>	0.20	0.62	C23-24
Pancreas	35	3.1	3.8	<b>4.6</b>	0.12	0.49	53	3.5	5.3	<b>5.4</b>	0.14	0.61	C25
Nose, sinuses etc.	2	0.2	0.2	<b>0.3</b>	0.02	0.04	3	0.2	0.3	<b>0.3</b>	0.01	0.01	C30-31
Larynx	16	1.4	1.7	<b>2.2</b>	0.15	0.29	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C32
Trachea, bronchus and lung	58	5.2	6.3	<b>7.3</b>	0.29	0.83	37	2.5	3.7	<b>3.8</b>	0.18	0.54	C33-34
Other thoracic organs	4	0.4	0.4	<b>0.5</b>	0.02	0.08	3	0.2	0.3	<b>0.2</b>	0.01	0.01	C37-38
Bone	7	0.6	0.8	<b>0.9</b>	0.04	0.11	7	0.5	0.7	<b>0.6</b>	0.05	0.05	C40-41
Melanoma of skin	16	1.4	1.7	<b>2.1</b>	0.10	0.25	30	2.0	3.0	<b>3.1</b>	0.18	0.35	C43
Other skin	12		1.3	<b>1.6</b>	0.11	0.23	10		1.0	<b>1.1</b>	0.04	0.10	C44
Mesothelioma	2	0.2	0.2	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C45
Kaposi sarcoma	1	0.1	0.1	<b>0.1</b>	0.01	0.01	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C46
Connective and soft tissue	32	2.9	3.5	<b>4.1</b>	0.24	0.39	15	1.0	1.5	<b>1.6</b>	0.11	0.18	C47+C49
Breast	2	0.2	0.2	<b>0.2</b>	0.00	0.03	255	17.0	25.6	<b>26.8</b>	2.14	3.03	C50
Vulva							5	0.3	0.5	<b>0.6</b>	0.04	0.09	C51
Vagina							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C52
Cervix uteri							271	18.1	27.2	<b>27.4</b>	1.98	3.04	C53
Corpus uteri							45	3.0	4.5	<b>4.7</b>	0.33	0.56	C54
Uterus unspecified							1	0.1	0.1	<b>0.1</b>	0.01	0.01	C55
Ovary							70	4.7	7.0	<b>7.1</b>	0.54	0.77	C56
Other female genital organs							0	0.0	0.0	<b>0.0</b>	0.00	0.00	C57
Placenta							4	0.3	0.4	<b>0.3</b>	0.02	0.02	C58
Penis	11	1.0	1.2	<b>1.4</b>	0.06	0.14							C60
Prostate	203	18.1	22.2	<b>27.0</b>	0.84	3.15							C61
Testis	42	3.7	4.6	<b>4.1</b>	0.30	0.30							C62
Other male genital organs	1	0.1	0.1	<b>0.1</b>	0.01	0.01							C63
Kidney	15	1.3	1.6	<b>1.7</b>	0.12	0.15	13	0.9	1.3	<b>1.4</b>	0.10	0.10	C64
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	27	2.4	3.0	<b>3.6</b>	0.20	0.45	14	0.9	1.4	<b>1.5</b>	0.06	0.18	C67
Other urinary organs	1	0.1	0.1	<b>0.1</b>	0.00	0.00	1	0.1	0.1	<b>0.1</b>	0.00	0.00	C68
Eye	1	0.1	0.1	<b>0.2</b>	0.00	0.03	6	0.4	0.6	<b>0.6</b>	0.05	0.05	C69
Brain, nervous system	44	3.9	4.8	<b>5.0</b>	0.38	0.51	27	1.8	2.7	<b>2.8</b>	0.18	0.27	C70-72
Thyroid	18	1.6	2.0	<b>2.4</b>	0.15	0.26	87	5.8	8.7	<b>8.4</b>	0.59	0.85	C73
Adrenal gland	1	0.1	0.1	<b>0.2</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C74
Other endocrine	1	0.1	0.1	<b>0.1</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C75
Hodgkin lymphoma	8	0.7	0.9	<b>1.0</b>	0.06	0.12	7	0.5	0.7	<b>0.7</b>	0.06	0.06	C81
Non-Hodgkin lymphoma	76	6.8	8.3	<b>9.7</b>	0.55	1.19	62	4.1	6.2	<b>6.4</b>	0.37	0.81	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	8	0.7	0.9	<b>0.9</b>	0.05	0.11	19	1.3	1.9	<b>2.1</b>	0.19	0.23	C90
Lymphoid leukaemia	28	2.5	3.1	<b>3.0</b>	0.16	0.20	20	1.3	2.0	<b>2.3</b>	0.07	0.17	C91
Myeloid leukaemia	17	1.5	1.9	<b>2.1</b>	0.15	0.26	9	0.6	0.9	<b>0.9</b>	0.07	0.09	C92-94
Leukaemia unspecified	4	0.4	0.4	<b>0.5</b>	0.02	0.06	5	0.3	0.5	<b>0.5</b>	0.03	0.06	C95
Myeloproliferative disorders	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	MPD
Myelodysplastic syndromes	2	0.2	0.2	<b>0.3</b>	0.00	0.03	3	0.2	0.3	<b>0.3</b>	0.00	0.02	MDS
Other and unspecified	42	3.7	4.6	<b>5.0</b>	0.21	0.56	62	4.1	6.2	<b>6.1</b>	0.25	0.71	O&U
All sites	1133		123.9	<b>144.4</b>	6.75	16.57	1507		151.2	<b>153.3</b>	9.53	17.01	C00-96
All sites except C44	1121	100.0	122.5	<b>142.8</b>	6.64	16.34	1497	100.0	150.2	<b>152.2</b>	9.49	16.92	C00-96 exc. C44

# Costa Rica

## REGISTRATION AREA

The Costa Rica National Tumor Registry covers the entire country, which has an area of 51 100 km<sup>2</sup>. At the 2000 census, the population was 3.8 million (1.9 million males and 1.9 million females), with 59% living in urban areas. The main ethnic group is Caucasian-Natives, and there are smaller proportions of Blacks, Natives, Chinese, and Caucasian-Blacks.

## CANCER CARE FACILITIES

The national social security system covers more than 90% of the population and is organized in three levels. Patients suspected to have cancer are referred to the second and third (specialized) levels. The social security system includes 29 hospitals, five of which have an oncology department. There are four radiotherapy departments in Costa Rica – two public and two private.

## REGISTRY STRUCTURE AND METHODS

The registry was founded in December 1976 by executive order, and nationwide coverage was achieved in 1980. Its objectives are to collect data on cancer incidence and mortality by age, sex, tumour site, and geographical distribution. The registry is part of the Unit of Monitoring Health Indicators within the Bureau of Health Surveillance at the Ministry of Health, which provides financial support. The registry has three full-time technicians, who are supported by medical staff members, epidemiologists, and public health specialists. There is also an evaluation team, which conducts visits to hospitals and private clinics to check the quality of information. The registry's data sources consist of biopsy reports with a diagnosis of cancer from all pathology services, death certificates, hospital discharge information, and mortality databases from the National Statistics Department. The registry is fully computerized and uses databases from the National Civil Registry to complete information. The level of

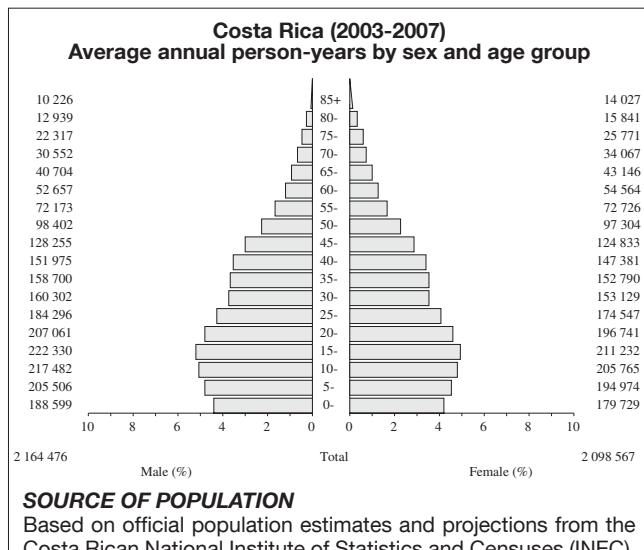
underreporting is low, due to the characteristics of the health system and the vital statistics system.

## USE OF THE DATA

Costa Rica has made significant efforts to establish early detection programmes for cancer, particularly for breast, cervical, stomach, colon, prostate, and skin cancers. The registry information is used in cancer control decision-making at several levels, and is also used for research and teaching purposes.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on official population estimates and projections from the Costa Rican National Institute of Statistics and Censuses (INEC).

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	53.9	Non-melanoma skin cancer	40.8
Non-melanoma skin cancer	45.8	Breast	39.6
Stomach	26.5	Stomach	15.0
Trachea, bronchus and lung	10.5	Cervix uteri	13.9
Other and unspecified	10.2	Thyroid	12.6
Colon	9.4	Colon	9.4
Non-Hodgkin lymphoma	6.7	Other and unspecified	8.9
Liver	5.6	Corpus uteri	7.2
Bladder	5.4	Ovary	5.5
Rectum	5.2	Non-Hodgkin lymphoma	5.4
All sites	228.4	All sites	202.5

## Costa Rica (2003-2007)

SITE	Male						Female						
	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	ICD-10
Lip	2	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	80	0.5	0.7	<b>0.9</b>	0.05	0.09	56	0.3	0.5	<b>0.6</b>	0.03	0.06	C01-02
Mouth	100	0.6	0.9	<b>1.2</b>	0.06	0.15	45	0.3	0.4	<b>0.5</b>	0.03	0.05	C03-06
Salivary glands	67	0.4	0.6	<b>0.7</b>	0.04	0.08	48	0.3	0.5	<b>0.4</b>	0.02	0.04	C07-08
Tonsil	46	0.3	0.4	<b>0.5</b>	0.03	0.06	13	0.1	0.1	<b>0.1</b>	0.01	0.02	C09
Other oropharynx	16	0.1	0.1	<b>0.2</b>	0.01	0.02	5	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	97	0.6	0.9	<b>0.9</b>	0.07	0.09	36	0.2	0.3	<b>0.3</b>	0.02	0.03	C11
Hypopharynx	35	0.2	0.3	<b>0.4</b>	0.02	0.05	6	0.0	0.1	<b>0.1</b>	0.01	0.01	C12-13
Pharynx unspecified	16	0.1	0.1	<b>0.2</b>	0.01	0.01	5	0.0	0.0	<b>0.1</b>	0.00	0.01	C14
Oesophagus	189	1.1	1.7	<b>2.2</b>	0.07	0.27	63	0.4	0.6	<b>0.6</b>	0.01	0.05	C15
Stomach	2380	14.4	22.0	<b>26.5</b>	1.15	3.05	1512	9.4	14.4	<b>15.0</b>	0.72	1.65	C16
Small intestine	66	0.4	0.6	<b>0.7</b>	0.04	0.08	54	0.3	0.5	<b>0.6</b>	0.03	0.06	C17
Colon	854	5.2	7.9	<b>9.4</b>	0.48	1.04	950	5.9	9.1	<b>9.4</b>	0.46	1.02	C18
Rectum	465	2.8	4.3	<b>5.2</b>	0.29	0.61	402	2.5	3.8	<b>4.1</b>	0.24	0.46	C19-20
Anus	44	0.3	0.4	<b>0.5</b>	0.03	0.06	56	0.3	0.5	<b>0.6</b>	0.05	0.07	C21
Liver	505	3.1	4.7	<b>5.6</b>	0.23	0.62	349	2.2	3.3	<b>3.4</b>	0.11	0.38	C22
Gallbladder etc.	160	1.0	1.5	<b>1.8</b>	0.08	0.21	289	1.8	2.8	<b>2.9</b>	0.12	0.31	C23-24
Pancreas	402	2.4	3.7	<b>4.5</b>	0.16	0.52	373	2.3	3.6	<b>3.7</b>	0.13	0.42	C25
Nose, sinuses etc.	34	0.2	0.3	<b>0.4</b>	0.02	0.04	26	0.2	0.2	<b>0.3</b>	0.01	0.03	C30-31
Larynx	263	1.6	2.4	<b>3.0</b>	0.13	0.36	25	0.2	0.2	<b>0.3</b>	0.02	0.03	C32
Trachea, bronchus and lung	934	5.7	8.6	<b>10.5</b>	0.39	1.19	453	2.8	4.3	<b>4.7</b>	0.21	0.57	C33-34
Other thoracic organs	44	0.3	0.4	<b>0.4</b>	0.03	0.04	9	0.1	0.1	<b>0.1</b>	0.00	0.01	C37-38
Bone	94	0.6	0.9	<b>0.9</b>	0.06	0.08	66	0.4	0.6	<b>0.6</b>	0.04	0.05	C40-41
Melanoma of skin	234	1.4	2.2	<b>2.5</b>	0.16	0.29	221	1.4	2.1	<b>2.2</b>	0.13	0.22	C43
Other skin	4140		38.3	<b>45.8</b>	2.10	5.17	4071		38.8	<b>40.8</b>	2.11	4.53	C44
Mesothelioma	13	0.1	0.1	<b>0.2</b>	0.01	0.02	5	0.0	0.0	<b>0.0</b>	0.00	0.00	C45
Kaposi sarcoma	53	0.3	0.5	<b>0.5</b>	0.03	0.04	9	0.1	0.1	<b>0.1</b>	0.00	0.01	C46
Connective and soft tissue	188	1.1	1.7	<b>1.9</b>	0.13	0.20	163	1.0	1.6	<b>1.6</b>	0.10	0.15	C47+C49
Breast	36	0.2	0.3	<b>0.4</b>	0.02	0.03	3845	23.8	36.6	<b>39.6</b>	2.88	4.51	C50
Vulva							92	0.6	0.9	<b>0.9</b>	0.05	0.10	C51
Vagina							25	0.2	0.2	<b>0.2</b>	0.01	0.03	C52
Cervix uteri							1465	9.1	14.0	<b>13.9</b>	1.06	1.40	C53
Corpus uteri							658	4.1	6.3	<b>7.2</b>	0.46	0.88	C54
Uterus unspecified							65	0.4	0.6	<b>0.6</b>	0.04	0.07	C55
Ovary							546	3.4	5.2	<b>5.5</b>	0.36	0.61	C56
Other female genital organs							23	0.1	0.2	<b>0.2</b>	0.02	0.03	C57
Placenta							5	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	110	0.7	1.0	<b>1.2</b>	0.07	0.14							C60
Prostate	4567	27.7	42.2	<b>53.9</b>	1.94	6.67							C61
Testis	409	2.5	3.8	<b>3.4</b>	0.23	0.25							C62
Other male genital organs	13	0.1	0.1	<b>0.1</b>	0.01	0.01							C63
Kidney	359	2.2	3.3	<b>4.1</b>	0.27	0.50	230	1.4	2.2	<b>2.4</b>	0.14	0.28	C64
Renal pelvis	6	0.0	0.1	<b>0.1</b>	0.00	0.01	6	0.0	0.1	<b>0.1</b>	0.00	0.01	C65
Ureter	4	0.0	0.0	<b>0.0</b>	0.00	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	486	2.9	4.5	<b>5.4</b>	0.18	0.60	149	0.9	1.4	<b>1.5</b>	0.05	0.17	C67
Other urinary organs	5	0.0	0.0	<b>0.0</b>	0.00	0.00	6	0.0	0.1	<b>0.0</b>	0.00	0.00	C68
Eye	75	0.5	0.7	<b>0.8</b>	0.04	0.08	27	0.2	0.3	<b>0.3</b>	0.01	0.01	C69
Brain, nervous system	359	2.2	3.3	<b>3.7</b>	0.23	0.36	260	1.6	2.5	<b>2.6</b>	0.15	0.26	C70-72
Thyroid	215	1.3	2.0	<b>2.1</b>	0.15	0.21	1343	8.3	12.8	<b>12.6</b>	1.01	1.23	C73
Adrenal gland	12	0.1	0.1	<b>0.1</b>	0.01	0.01	13	0.1	0.1	<b>0.1</b>	0.01	0.01	C74
Other endocrine	8	0.0	0.1	<b>0.1</b>	0.00	0.01	4	0.0	0.0	<b>0.0</b>	0.00	0.01	C75
Hodgkin lymphoma	205	1.2	1.9	<b>1.9</b>	0.13	0.16	156	1.0	1.5	<b>1.4</b>	0.09	0.12	C81
Non-Hodgkin lymphoma	646	3.9	6.0	<b>6.7</b>	0.38	0.72	530	3.3	5.1	<b>5.4</b>	0.31	0.61	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	111	0.7	1.0	<b>1.3</b>	0.06	0.16	94	0.6	0.9	<b>1.0</b>	0.06	0.13	C90
Lymphoid leukaemia	290	1.8	2.7	<b>3.0</b>	0.15	0.22	259	1.6	2.5	<b>2.8</b>	0.14	0.20	C91
Myeloid leukaemia	212	1.3	2.0	<b>2.2</b>	0.11	0.21	155	1.0	1.5	<b>1.6</b>	0.10	0.16	C92-94
Leukaemia unspecified	32	0.2	0.3	<b>0.3</b>	0.02	0.04	25	0.2	0.2	<b>0.3</b>	0.02	0.02	C95
Myeloproliferative disorders	4	0.0	0.0	<b>0.0</b>	0.00	0.00	2	0.0	0.0	<b>0.0</b>	0.00	0.00	MPD
Myelodysplastic syndromes	8	0.0	0.1	<b>0.1</b>	0.00	0.00	7	0.0	0.1	<b>0.1</b>	0.01	0.01	MDS
Other and unspecified	941	5.7	8.7	<b>10.2</b>	0.45	1.08	900	5.6	8.6	<b>8.9</b>	0.41	0.98	O&U
All sites	20634		190.7	<b>228.4</b>	10.33	25.94	20202		192.5	<b>202.5</b>	12.02	22.07	C00-96
All sites except C44	16494	100.0	152.4	<b>182.6</b>	8.23	20.77	16131	100.0	153.7	<b>161.8</b>	9.91	17.54	C00-96 exc. C44

§Includes 100 cases of unknown age

\$Includes 81 cases of unknown age

# Cuba, Villa Clara

## REGISTRATION AREA

The Villa Clara Cancer Registry is part of the National Cancer Registry (NCR) of Cuba. The registry was created in 1994 and covers the population of Villa Clara Province, which has an area of 8413 km<sup>2</sup>. At the 2011 census, the province's population was 798 000, representing 7% of the total population of Cuba. The male-to-female ratio is 1.01:1, and 74% of the population lives in urban areas.

## CANCER CARE FACILITIES

The public health system provides free universal coverage at all levels, based on extended primary care. Oncology services are available, with a total of 22 oncologists in the area. The oncology unit of the Provincial University Hospital provides specialized diagnosis and treatment through radiotherapy, chemotherapy, oncological surgery, and nuclear medicine services. There is also a haematology-oncology unit in the Paediatric Hospital.

## REGISTRY STRUCTURE AND METHODS

Cancer has been a reportable disease in Cuba since mandatory reporting was first legislated in 1986. The registry's data processing, coding, and database maintenance are performed under contract with the Central Offices of the NCR. Data collection is passive, consisting of receiving reports from hospitals. In the provincial health statistics department, the reports are double-checked to detect any possible duplicates. All data are rigorously computer-checked for validity and consistency, and routine checks are regularly conducted on the files. Data quality is assured by matching pathology reports with hospital registrations for cases in which diagnosis was based on histological confirmation. Other data sources include details of all death certificates. The Villa Clara Cancer Registry adheres to IACR definitions and coding recommendations. All data were coded using ICD-O-1 until 2007, when the registry switched to ICD-O-3.

## USE OF THE DATA

The registry produces regular statistical reports and overviews of its accumulated data. The information is used to monitor disease burden, to assess the impact of cancer control efforts, and as a resource for cancer research.

## CONTRIBUTORS

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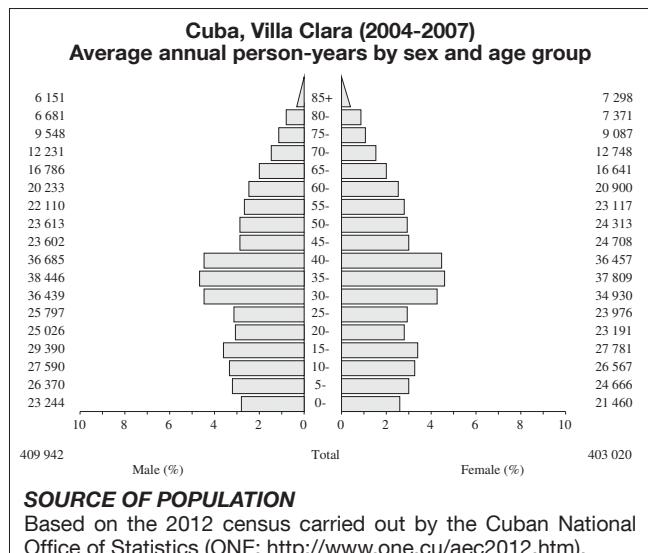
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## SOURCE OF POPULATION

Based on the 2012 census carried out by the Cuban National Office of Statistics (ONE; <http://www.one.cu/aec2012.htm>).

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Trachea, bronchus and lung	39.1	Breast	32.4
Non-melanoma skin cancer	25.1	Trachea, bronchus and lung	18.9
Prostate	24.2	Non-melanoma skin cancer	18.2
Larynx	13.1	Colon	11.0
Colon	10.6	Cervix uteri	10.6
Bladder	8.3	Thyroid	7.7
Stomach	8.0	Corpus uteri	7.1
Non-Hodgkin lymphoma	7.8	Other and unspecified	7.0
Other and unspecified	7.0	Ovary	5.4
Brain, nervous system	5.1	Non-Hodgkin lymphoma	5.2
All sites	203.8	All sites	172.8

**Cuba, Villa Clara (2004-2007)**

SITE	Male						Female					
	§No. cases	Freq. (%)	Crude rate world (per 100,000)	Cum. rates 0-64 0-74		§No. cases	Freq. (%)	Crude rate world (per 100,000)	Cum. rates 0-64 0-74		ICD-10	
Lip	36	0.8	2.2	<b>1.5</b>	0.10	0.17	11	0.3	0.7	<b>0.5</b>	0.03	0.06 C00
Tongue	52	1.1	3.2	<b>2.1</b>	0.15	0.23	16	0.4	1.0	<b>0.5</b>	0.01	0.06 C01-02
Mouth	48	1.0	2.9	<b>2.0</b>	0.12	0.26	25	0.6	1.6	<b>0.9</b>	0.03	0.11 C03-06
Salivary glands	24	0.5	1.5	<b>0.9</b>	0.05	0.09	18	0.5	1.1	<b>0.6</b>	0.04	0.06 C07-08
Tonsil	20	0.4	1.2	<b>0.9</b>	0.05	0.11	11	0.3	0.7	<b>0.4</b>	0.03	0.05 C09
Other oropharynx	16	0.3	1.0	<b>0.5</b>	0.04	0.05	3	0.1	0.2	<b>0.1</b>	0.01	0.02 C10
Nasopharynx	13	0.3	0.8	<b>0.6</b>	0.06	0.06	5	0.1	0.3	<b>0.2</b>	0.01	0.03 C11
Hypopharynx	19	0.4	1.2	<b>0.8</b>	0.04	0.10	1	0.0	0.1	<b>0.0</b>	0.00	0.01 C12-13
Pharynx unspecified	14	0.3	0.9	<b>0.6</b>	0.04	0.07	3	0.1	0.2	<b>0.1</b>	0.01	0.02 C14
Oesophagus	117	2.5	7.1	<b>4.4</b>	0.22	0.54	30	0.8	1.9	<b>1.0</b>	0.05	0.13 C15
Stomach	206	4.5	12.6	<b>8.0</b>	0.42	0.89	119	3.1	7.4	<b>3.9</b>	0.16	0.46 C16
Small intestine	17	0.4	1.0	<b>0.7</b>	0.03	0.09	8	0.2	0.5	<b>0.3</b>	0.02	0.03 C17
Colon	295	6.4	18.0	<b>10.6</b>	0.45	1.18	341	8.8	21.2	<b>11.0</b>	0.46	1.18 C18
Rectum	124	2.7	7.6	<b>4.7</b>	0.26	0.54	115	3.0	7.1	<b>4.3</b>	0.23	0.47 C19-20
Anus	13	0.3	0.8	<b>0.6</b>	0.04	0.06	20	0.5	1.2	<b>0.8</b>	0.05	0.11 C21
Liver	102	2.2	6.2	<b>3.6</b>	0.17	0.39	96	2.5	6.0	<b>3.3</b>	0.15	0.32 C22
Gallbladder etc.	32	0.7	2.0	<b>1.1</b>	0.04	0.14	40	1.0	2.5	<b>1.4</b>	0.06	0.16 C23-24
Pancreas	127	2.7	7.7	<b>4.4</b>	0.20	0.48	114	2.9	7.1	<b>3.9</b>	0.14	0.44 C25
Nose, sinuses etc.	20	0.4	1.2	<b>0.9</b>	0.05	0.10	16	0.4	1.0	<b>0.7</b>	0.05	0.05 C30-31
Larynx	315	6.8	19.2	<b>13.1</b>	0.81	1.68	38	1.0	2.4	<b>1.5</b>	0.10	0.15 C32
Trachea, bronchus and lung	1022	22.1	62.3	<b>39.1</b>	2.21	4.67	501	12.9	31.1	<b>18.9</b>	1.07	2.12 C33-34
Other thoracic organs	18	0.4	1.1	<b>0.8</b>	0.07	0.08	16	0.4	1.0	<b>0.6</b>	0.04	0.08 C37-38
Bone	36	0.8	2.2	<b>1.8</b>	0.10	0.14	22	0.6	1.4	<b>1.1</b>	0.07	0.11 C40-41
Melanoma of skin	39	0.8	2.4	<b>1.6</b>	0.10	0.18	41	1.1	2.5	<b>1.8</b>	0.13	0.19 C43
Other skin	645	39.3	25.1	<b>14.0</b>	2.99	486		30.1	<b>18.2</b>	1.07	1.97	C44
Mesothelioma	4	0.1	0.2	<b>0.1</b>	0.01	0.01	5	0.1	0.3	<b>0.2</b>	0.01	0.02 C45
Kaposi sarcoma	3	0.1	0.2	<b>0.1</b>	0.01	0.01	1	0.0	0.1	<b>0.0</b>	0.00	0.00 C46
Connective and soft tissue	49	1.1	3.0	<b>2.3</b>	0.15	0.24	40	1.0	2.5	<b>1.7</b>	0.10	0.16 C47+C49
Breast	13	0.3	0.8	<b>0.5</b>	0.04	0.06	780	20.0	48.4	<b>32.4</b>	2.24	3.64 C50
Vulva							29	0.7	1.8	<b>1.0</b>	0.05	0.11 C51
Vagina							4	0.1	0.2	<b>0.1</b>	0.01	0.01 C52
Cervix uteri							230	5.9	14.3	<b>10.6</b>	0.85	1.01 C53
Corpus uteri							174	4.5	10.8	<b>7.1</b>	0.46	0.86 C54
Uterus unspecified							38	1.0	2.4	<b>1.5</b>	0.12	0.14 C55
Ovary							115	3.0	7.1	<b>5.4</b>	0.38	0.58 C56
Other female genital organs							3	0.1	0.2	<b>0.1</b>	0.01	0.01 C57
Placenta							0	0.0	0.0	<b>0.0</b>	0.00	0.00 C58
Penis	41	0.9	2.5	<b>1.6</b>	0.11	0.18						C60
Prostate	741	16.0	45.2	<b>24.2</b>	0.61	2.89						C61
Testis	12	0.3	0.7	<b>0.6</b>	0.03	0.06						C62
Other male genital organs	2	0.0	0.1	<b>0.1</b>	0.00	0.01						C63
Kidney	83	1.8	5.1	<b>3.6</b>	0.27	0.43	67	1.7	4.2	<b>3.1</b>	0.20	0.32 C64
Renal pelvis	2	0.0	0.1	<b>0.1</b>	0.00	0.01	6	0.2	0.4	<b>0.1</b>	0.01	0.01 C65
Ureter	2	0.0	0.1	<b>0.1</b>	0.01	0.01	1	0.0	0.1	<b>0.0</b>	0.00	0.00 C66
Bladder	235	5.1	14.3	<b>8.3</b>	0.33	0.96	74	1.9	4.6	<b>2.5</b>	0.11	0.26 C67
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C68
Eye	33	0.7	2.0	<b>1.3</b>	0.09	0.13	13	0.3	0.8	<b>0.5</b>	0.03	0.07 C69
Brain, nervous system	106	2.3	6.5	<b>5.1</b>	0.33	0.53	83	2.1	5.1	<b>3.7</b>	0.22	0.39 C70-72
Thyroid	28	0.6	1.7	<b>1.5</b>	0.10	0.15	158	4.1	9.8	<b>7.7</b>	0.61	0.70 C73
Adrenal gland	4	0.1	0.2	<b>0.2</b>	0.01	0.02	3	0.1	0.2	<b>0.1</b>	0.01	0.02 C74
Other endocrine	3	0.1	0.2	<b>0.1</b>	0.00	0.01	1	0.0	0.1	<b>0.0</b>	0.01	0.01 C75
Hodgkin lymphoma	41	0.9	2.5	<b>2.1</b>	0.15	0.18	30	0.8	1.9	<b>1.4</b>	0.09	0.12 C81
Non-Hodgkin lymphoma	172	3.7	10.5	<b>7.8</b>	0.44	0.77	126	3.2	7.8	<b>5.2</b>	0.27	0.62 C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	2	0.1	0.1	<b>0.1</b>	0.01	0.01 C88
Multiple myeloma	42	0.9	2.6	<b>1.7</b>	0.08	0.21	35	0.9	2.2	<b>1.3</b>	0.07	0.15 C90
Lymphoid leukaemia	38	0.8	2.3	<b>1.8</b>	0.09	0.15	21	0.5	1.3	<b>1.0</b>	0.05	0.09 C91
Myeloid leukaemia	48	1.0	2.9	<b>2.1</b>	0.14	0.21	30	0.8	1.9	<b>1.4</b>	0.09	0.13 C92-94
Leukaemia unspecified	25	0.5	1.5	<b>1.0</b>	0.06	0.12	26	0.7	1.6	<b>1.1</b>	0.06	0.13 C95
Myeloproliferative disorders	1	0.0	0.1	<b>0.0</b>	0.00	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00 MPD
Myelodysplastic syndromes	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 MDS
Other and unspecified	169	3.7	10.3	<b>7.0</b>	0.39	0.88	190	4.9	11.8	<b>7.0</b>	0.35	0.80 O&U
All sites	5267		321.2	<b>203.8</b>	10.69	23.49	4381		271.8	<b>172.8</b>	10.46	18.77 C00-96
All sites except C44	4622	100.0	281.9	<b>178.7</b>	9.28	20.50	3895	100.0	241.6	<b>154.6</b>	9.39	16.80 C00-96 exc. C44

§Includes 5 cases of unknown age

§Includes 3 cases of unknown age

# Ecuador, Cuenca

## REGISTRATION AREA

The Cuenca Tumor Registry covers the population of Cuenca Canton (which has an area of about 120 km<sup>2</sup>). About 73% of residents live in urban areas. Cuenca Canton is located 2550 m above sea level. The average temperature of the area is 15 °C.

## CANCER CARE FACILITIES

The main cancer care facility in the area is the Institute of Cancer SOLCA-Cuenca.

## REGISTRY STRUCTURE AND METHODS

The registry began operating in November 1996. Its staff consists of a coordinator and two registrars. The registry gathers information from hospitals, clinics, pathology laboratories, the Institute of Cancer SOLCA-Cuenca, and the National Institute of Statistics and Census. The registry receives technical assistance from the National Cancer Registry in Quito and also cooperates with public health institutions, private pathology laboratories, and doctors in private practice. Data are actively collected from nine pathologists and haematologists, seven hospitals, and 36 clinics and private practices. Quality assurance is performed through internal consistency analysis, the establishment and verification of the data with the primary source, and the use of IARC tools and software.

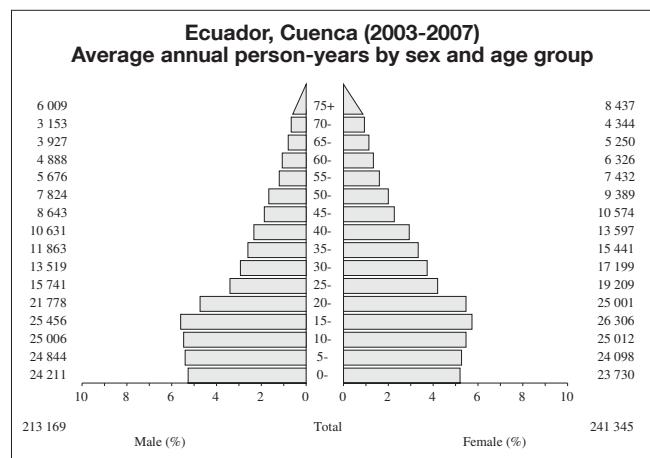
## USE OF THE DATA

The registry publishes its results in an incidence report that is distributed to public health authorities, institutions, health professionals, and the general

public. Five such reports have been published to date. This published information is intended to serve as a reliable reference for policy-making, planning, and public health programmes, and as a basis for epidemiological and clinical research. It is also a source of information for the development of presentations by professionals.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on regional projections for 2001–2010 from the 2001 census, provided by the Ecuadorian National Institute of Statistics and Census (INEC), making allowances for migration.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	34.7	Breast	25.1
Stomach	20.2	Non-melanoma skin cancer	21.0
Non-melanoma skin cancer	16.7	Cervix uteri	19.4
Non-Hodgkin lymphoma	7.2	Stomach	14.4
Other and unspecified	5.5	Thyroid	11.5
Trachea, bronchus and lung	5.0	Non-Hodgkin lymphoma	8.6
Brain, nervous system	3.9	Other and unspecified	5.2
Bladder	3.7	Ovary	5.1
Colon	3.6	Liver	5.1
Pancreas	3.5	Colon	4.7
All sites	139.9	All sites	160.0

## Ecuador, Cuenca (2003-2007)

SITE	Male						Female						ICD-10
	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	0-74	
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C00
Tongue	5	0.4	0.5	<b>0.6</b>	0.02	0.08	6	0.4	0.5	<b>0.5</b>	0.01	0.07	C01-02
Mouth	2	0.2	0.2	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C03-06
Salivary glands	4	0.3	0.4	<b>0.5</b>	0.01	0.06	5	0.3	0.4	<b>0.5</b>	0.03	0.03	C07-08
Tonsil	2	0.2	0.2	<b>0.2</b>	0.02	0.02	1	0.1	0.1	<b>0.1</b>	0.01	0.01	C09
Other oropharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10
Nasopharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C11
Hypopharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	1	0.1	0.1	<b>0.1</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C14
Oesophagus	12	1.0	1.1	<b>1.4</b>	0.08	0.14	6	0.4	0.5	<b>0.5</b>	0.02	0.07	C15
Stomach	188	16.4	17.6	<b>20.2</b>	0.93	2.30	184	11.5	15.2	<b>14.4</b>	0.60	1.61	C16
Small intestine	5	0.4	0.5	<b>0.6</b>	0.03	0.06	6	0.4	0.5	<b>0.6</b>	0.02	0.09	C17
Colon	31	2.7	2.9	<b>3.6</b>	0.19	0.42	59	3.7	4.9	<b>4.7</b>	0.27	0.51	C18
Rectum	13	1.1	1.2	<b>1.4</b>	0.05	0.19	26	1.6	2.2	<b>2.4</b>	0.15	0.27	C19-20
Anus	2	0.2	0.2	<b>0.2</b>	0.00	0.03	2	0.1	0.2	<b>0.2</b>	0.00	0.04	C21
Liver	29	2.5	2.7	<b>3.5</b>	0.14	0.46	61	3.8	5.1	<b>5.1</b>	0.24	0.65	C22
Gallbladder etc.	18	1.6	1.7	<b>1.9</b>	0.09	0.21	55	3.4	4.6	<b>4.7</b>	0.24	0.56	C23-24
Pancreas	30	2.6	2.8	<b>3.5</b>	0.16	0.40	42	2.6	3.5	<b>3.6</b>	0.15	0.46	C25
Nose, sinuses etc.	5	0.4	0.5	<b>0.6</b>	0.04	0.09	3	0.2	0.2	<b>0.3</b>	0.03	0.05	C30-31
Larynx	11	1.0	1.0	<b>1.3</b>	0.11	0.14	4	0.2	0.3	<b>0.4</b>	0.03	0.05	C32
Trachea, bronchus and lung	47	4.1	4.4	<b>5.0</b>	0.24	0.57	29	1.8	2.4	<b>2.2</b>	0.11	0.24	C33-34
Other thoracic organs	6	0.5	0.6	<b>0.7</b>	0.05	0.08	3	0.2	0.2	<b>0.3</b>	0.03	0.03	C37-38
Bone	14	1.2	1.3	<b>1.1</b>	0.04	0.07	5	0.3	0.4	<b>0.4</b>	0.03	0.03	C40-41
Melanoma of skin	20	1.7	1.9	<b>2.2</b>	0.13	0.22	30	1.9	2.5	<b>2.2</b>	0.12	0.16	C43
Other skin	147		13.8	<b>16.7</b>	0.95	1.94	254		21.0	<b>21.0</b>	1.12	2.34	C44
Mesothelioma	1	0.1	0.1	<b>0.1</b>	0.01	0.01	4	0.2	0.3	<b>0.3</b>	0.01	0.03	C45
Kaposi sarcoma	2	0.2	0.2	<b>0.2</b>	0.01	0.04	1	0.1	0.1	<b>0.1</b>	0.00	0.02	C46
Connective and soft tissue	18	1.6	1.7	<b>2.2</b>	0.13	0.26	21	1.3	1.7	<b>1.8</b>	0.09	0.17	C47+C49
Breast	1	0.1	0.1	<b>0.1</b>	0.00	0.00	267	16.7	22.1	<b>25.1</b>	1.91	2.61	C50
Vulva							9	0.6	0.7	<b>0.6</b>	0.00	0.06	C51
Vagina							5	0.3	0.4	<b>0.4</b>	0.01	0.06	C52
Cervix uteri							214	13.4	17.7	<b>19.4</b>	1.44	2.00	C53
Corpus uteri							23	1.4	1.9	<b>2.3</b>	0.19	0.29	C54
Uterus unspecified							22	1.4	1.8	<b>1.6</b>	0.06	0.17	C55
Ovary							55	3.4	4.6	<b>5.1</b>	0.34	0.59	C56
Other female genital organs							1	0.1	0.1	<b>0.1</b>	0.00	0.02	C57
Placenta							1	0.1	0.1	<b>0.1</b>	0.00	0.00	C58
Penis	1	0.1	0.1	<b>0.1</b>	0.01	0.01							C60
Prostate	333	29.0	31.2	<b>34.7</b>	1.27	3.97							C61
Testis	25	2.2	2.3	<b>2.4</b>	0.17	0.20							C62
Other male genital organs	2	0.2	0.2	<b>0.3</b>	0.01	0.03							C63
Kidney	21	1.8	2.0	<b>2.5</b>	0.15	0.26	23	1.4	1.9	<b>2.1</b>	0.10	0.29	C64
Renal pelvis	3	0.3	0.3	<b>0.3</b>	0.02	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66
Bladder	32	2.8	3.0	<b>3.7</b>	0.11	0.52	16	1.0	1.3	<b>1.3</b>	0.06	0.15	C67
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C68
Eye	5	0.4	0.5	<b>0.4</b>	0.02	0.02	3	0.2	0.2	<b>0.2</b>	0.00	0.00	C69
Brain, nervous system	35	3.1	3.3	<b>3.9</b>	0.25	0.41	28	1.7	2.3	<b>2.2</b>	0.12	0.20	C70-72
Thyroid	21	1.8	2.0	<b>2.3</b>	0.10	0.27	126	7.9	10.4	<b>11.5</b>	0.86	1.25	C73
Adrenal gland	1	0.1	0.1	<b>0.1</b>	0.00	0.00	1	0.1	0.1	<b>0.0</b>	0.00	0.00	C74
Other endocrine	1	0.1	0.1	<b>0.2</b>	0.02	0.02	2	0.1	0.2	<b>0.2</b>	0.01	0.01	C75
Hodgkin lymphoma	6	0.5	0.6	<b>0.5</b>	0.02	0.02	10	0.6	0.8	<b>0.7</b>	0.04	0.06	C81
Non-Hodgkin lymphoma	64	5.6	6.0	<b>7.2</b>	0.40	0.87	100	6.2	8.3	<b>8.6</b>	0.43	1.04	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	18	1.6	1.7	<b>2.0</b>	0.11	0.20	15	0.9	1.2	<b>1.4</b>	0.11	0.17	C90
Lymphoid leukaemia	31	2.7	2.9	<b>2.7</b>	0.15	0.15	24	1.5	2.0	<b>2.2</b>	0.09	0.19	C91
Myeloid leukaemia	19	1.7	1.8	<b>1.9</b>	0.12	0.15	26	1.6	2.2	<b>2.2</b>	0.14	0.22	C92-94
Leukaemia unspecified	13	1.1	1.2	<b>1.2</b>	0.07	0.09	9	0.6	0.7	<b>0.8</b>	0.05	0.05	C95
Myeloproliferative disorders	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	MPD
Myelodysplastic syndromes	2	0.2	0.2	<b>0.2</b>	0.00	0.03	2	0.1	0.2	<b>0.1</b>	0.00	0.00	MDS
Other and unspecified	47	4.1	4.4	<b>5.5</b>	0.22	0.75	65	4.1	5.4	<b>5.2</b>	0.29	0.53	O&U
All sites	1294		121.4	<b>139.9</b>	6.68	15.80	1855		153.7	<b>160.0</b>	9.59	17.48	C00-96
All sites except C44	1147	100.0	107.6	<b>123.3</b>	5.72	13.86	1601	100.0	132.7	<b>139.0</b>	8.47	15.14	C00-96 exc. C44

# Ecuador, Quito

## REGISTRATION AREA

The National Cancer Registry covers the population of Quito (the capital city of Ecuador), situated 2810 m above sea level. Most of the population is Mestizo (of mixed Spanish and Amerindian ancestry). The registry is funded by a private organization: Sociedad de Lucha contra el Cáncer del Ecuador (SOLCA).

## CANCER CARE FACILITIES

The city's health care facilities include nine general hospitals run by the social security system and the Ministry of Health, three private hospitals, and 50 private clinics. Most of the human and technological resources for the diagnosis and treatment of cancer are concentrated in the city. Approximately one third of patients are treated at the oncological hospital belonging to SOLCA. The city has five radiotherapy units, 80 pathologists, and several haematologists.

## REGISTRY STRUCTURE AND METHODS

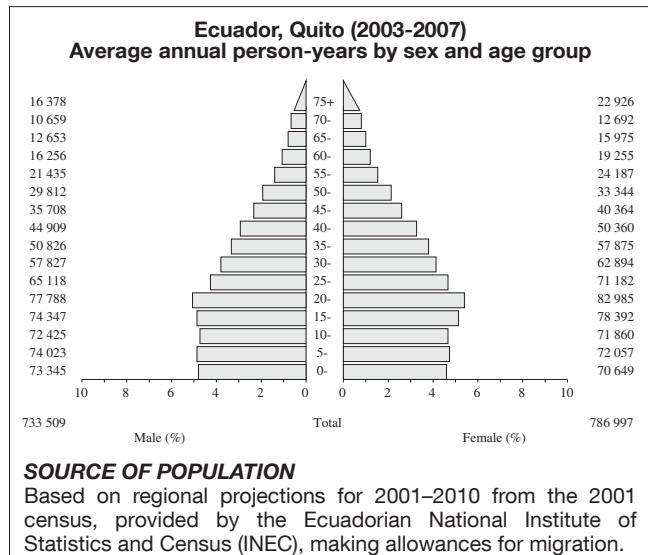
The registry staff consists of a director (who specializes in epidemiology), an epidemiologist, and four full-time registrars. Data collection is active, and the registry's primary data sources are pathology reports from public and private laboratories, medical records, hospital discharge records, and death certificates. The 80 pathologists in the city collaborate voluntarily and enthusiastically with the registry. There is systematic control for duplicate cases, as well as validation of the information through quality and consistency checks. Death certificates are matched with registered cases to update the information. The registry is part of the National Statistical System; and as such, it is subject to all applicable rules of confidentiality. The registry has promoted the creation of cancer registries in other Ecuadorian cities, and monitors their activities; there are now registries in the cities of Guayaquil, Cuenca, Portoviejo, Loja, and Machala.

## USE OF THE DATA

The registry information is regularly used by Ecuadorian researchers, and is an important source of data for project monitoring and cervical cancer screening. The National Cancer Registry publishes its data on a regular basis. To date, 14 publications have been released, the most recent of which reported on cancer incidence in Quito during the period from 2003 to 2005.

## CONTRIBUTORS

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## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	54.2	Breast	38.0
Non-melanoma skin cancer	41.0	Non-melanoma skin cancer	34.4
Stomach	23.7	Cervix uteri	20.2
Non-Hodgkin lymphoma	11.7	Thyroid	17.6
Trachea, bronchus and lung	8.3	Stomach	15.0
Colon	7.3	Non-Hodgkin lymphoma	9.5
Other and unspecified	5.6	Ovary	7.9
Bladder	5.4	Colon	7.8
Testis	4.9	Gallbladder etc.	7.7
Liver	4.8	Other and unspecified	6.7
All sites	222.1	All sites	221.9

## Ecuador, Quito (2003-2007)

SITE	Male						Female						ICD-10	
	§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates		§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates					
				0-64	0-74				0-64	0-74				
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	4	0.1	0.1	<b>0.1</b>	0.01	0.01	C00	
Tongue	13	0.2	0.4	<b>0.4</b>	0.02	0.04	26	0.4	0.7	<b>0.6</b>	0.03	0.07	C01-02	
Mouth	8	0.1	0.2	<b>0.3</b>	0.02	0.03	19	0.3	0.5	<b>0.5</b>	0.04	0.05	C03-06	
Salivary glands	17	0.3	0.5	<b>0.5</b>	0.03	0.04	26	0.4	0.7	<b>0.7</b>	0.04	0.08	C07-08	
Tonsil	6	0.1	0.2	<b>0.2</b>	0.01	0.04	3	0.0	0.1	<b>0.1</b>	0.01	0.01	C09	
Other oropharynx	1	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C10	
Nasopharynx	6	0.1	0.2	<b>0.2</b>	0.01	0.03	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C11	
Hypopharynx	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C12-13	
Pharynx unspecified	5	0.1	0.1	<b>0.1</b>	0.01	0.01	2	0.0	0.1	<b>0.1</b>	0.00	0.01	C14	
Oesophagus	71	1.3	1.9	<b>2.2</b>	0.07	0.21	23	0.3	0.6	<b>0.7</b>	0.03	0.08	C15	
Stomach	712	13.1	19.4	<b>23.7</b>	1.11	2.56	580	8.6	14.7	<b>15.0</b>	0.62	1.67	C16	
Small intestine	25	0.5	0.7	<b>0.8</b>	0.05	0.08	34	0.5	0.9	<b>0.9</b>	0.04	0.07	C17	
Colon	223	4.1	6.1	<b>7.3</b>	0.35	0.80	286	4.2	7.3	<b>7.8</b>	0.41	0.87	C18	
Rectum	112	2.1	3.1	<b>4.0</b>	0.23	0.45	111	1.6	2.8	<b>2.9</b>	0.16	0.28	C19-20	
Anus	5	0.1	0.1	<b>0.2</b>	0.00	0.02	25	0.4	0.6	<b>0.7</b>	0.03	0.08	C21	
Liver	140	2.6	3.8	<b>4.8</b>	0.20	0.55	142	2.1	3.6	<b>3.7</b>	0.14	0.40	C22	
Gallbladder etc.	129	2.4	3.5	<b>4.6</b>	0.25	0.51	266	3.9	6.8	<b>7.7</b>	0.40	0.94	C23-24	
Pancreas	90	1.7	2.5	<b>3.1</b>	0.12	0.37	137	2.0	3.5	<b>3.7</b>	0.16	0.43	C25	
Nose, sinuses etc.	15	0.3	0.4	<b>0.5</b>	0.03	0.06	18	0.3	0.5	<b>0.4</b>	0.03	0.04	C30-31	
Larynx	35	0.6	1.0	<b>1.2</b>	0.06	0.14	8	0.1	0.2	<b>0.2</b>	0.02	0.03	C32	
Trachea, bronchus and lung	241	4.4	6.6	<b>8.3</b>	0.37	1.03	217	3.2	5.5	<b>6.2</b>	0.36	0.71	C33-34	
Other thoracic organs	14	0.3	0.4	<b>0.4</b>	0.02	0.04	3	0.0	0.1	<b>0.1</b>	0.00	0.01	C37-38	
Bone	44	0.8	1.2	<b>1.2</b>	0.07	0.12	45	0.7	1.1	<b>1.2</b>	0.07	0.11	C40-41	
Melanoma of skin	105	1.9	2.9	<b>3.6</b>	0.17	0.43	138	2.0	3.5	<b>3.9</b>	0.24	0.44	C43	
Other skin	1200		32.7	<b>41.0</b>	2.00	4.85	1303		33.1	<b>34.4</b>	1.61	3.66	C44	
Mesothelioma	9	0.2	0.2	<b>0.3</b>	0.01	0.04	4	0.1	0.1	<b>0.1</b>	0.01	0.01	C45	
Kaposi sarcoma	29	0.5	0.8	<b>0.8</b>	0.06	0.06	2	0.0	0.1	<b>0.1</b>	0.01	0.01	C46	
Connective and soft tissue	117	2.1	3.2	<b>3.6</b>	0.21	0.37	104	1.5	2.6	<b>2.9</b>	0.21	0.31	C47+C49	
Breast	16	0.3	0.4	<b>0.6</b>	0.04	0.07	1309	19.4	33.3	<b>38.0</b>	2.89	4.30	C50	
Vulva							28	0.4	0.7	<b>0.8</b>	0.03	0.10	C51	
Vagina							15	0.2	0.4	<b>0.5</b>	0.03	0.05	C52	
Cervix uteri							728	10.8	18.5	<b>20.2</b>	1.51	2.24	C53	
Corpus uteri							164	2.4	4.2	<b>5.0</b>	0.34	0.61	C54	
Uterus unspecified							42	0.6	1.1	<b>1.0</b>	0.06	0.08	C55	
Ovary							280	4.1	7.1	<b>7.9</b>	0.58	0.85	C56	
Other female genital organs							2	0.0	0.1	<b>0.1</b>	0.01	0.01	C57	
Placenta							7	0.1	0.2	<b>0.2</b>	0.01	0.01	C58	
Penis	18	0.3	0.5	<b>0.6</b>	0.03	0.06							C60	
Prostate	1550	28.4	42.3	<b>54.2</b>	1.85	6.81							C61	
Testis	199	3.7	5.4	<b>4.9</b>	0.35	0.37							C62	
Other male genital organs	9	0.2	0.2	<b>0.3</b>	0.02	0.03							C63	
Kidney	119	2.2	3.2	<b>4.3</b>	0.26	0.50	98	1.5	2.5	<b>3.0</b>	0.20	0.37	C64	
Renal pelvis	2	0.0	0.1	<b>0.1</b>	0.00	0.01	1	0.0	0.0	<b>0.0</b>	0.01	0.01	C65	
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C66	
Bladder	158	2.9	4.3	<b>5.4</b>	0.22	0.62	80	1.2	2.0	<b>2.2</b>	0.16	0.25	C67	
Other urinary organs	0	0.0	0.0	<b>0.0</b>	0.00	0.00	3	0.0	0.1	<b>0.1</b>	0.00	0.00	C68	
Eye	36	0.7	1.0	<b>1.2</b>	0.05	0.12	33	0.5	0.8	<b>0.9</b>	0.04	0.09	C69	
Brain, nervous system	141	2.6	3.8	<b>4.3</b>	0.30	0.43	142	2.1	3.6	<b>3.9</b>	0.27	0.35	C70-72	
Thyroid	122	2.2	3.3	<b>3.9</b>	0.28	0.41	654	9.7	16.6	<b>17.6</b>	1.39	1.80	C73	
Adrenal gland	4	0.1	0.1	<b>0.1</b>	0.01	0.01	8	0.1	0.2	<b>0.2</b>	0.02	0.02	C74	
Other endocrine	2	0.0	0.1	<b>0.0</b>	0.00	0.00	2	0.0	0.1	<b>0.0</b>	0.00	0.00	C75	
Hodgkin lymphoma	49	0.9	1.3	<b>1.5</b>	0.12	0.14	19	0.3	0.5	<b>0.5</b>	0.03	0.03	C81	
Non-Hodgkin lymphoma	358	6.6	9.8	<b>11.7</b>	0.70	1.32	341	5.0	8.7	<b>9.5</b>	0.57	1.03	C82-85,C96	
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C88	
Multiple myeloma	88	1.6	2.4	<b>3.0</b>	0.19	0.32	57	0.8	1.4	<b>1.8</b>	0.10	0.25	C90	
Lymphoid leukaemia	131	2.4	3.6	<b>3.7</b>	0.20	0.26	148	2.2	3.8	<b>4.1</b>	0.23	0.33	C91	
Myeloid leukaemia	86	1.6	2.3	<b>2.6</b>	0.15	0.22	99	1.5	2.5	<b>2.6</b>	0.15	0.25	C92-94	
Leukaemia unspecified	22	0.4	0.6	<b>0.7</b>	0.05	0.08	17	0.3	0.4	<b>0.4</b>	0.03	0.05	C95	
Myeloproliferative disorders	0	0.0	0.0	<b>0.0</b>	0.00	0.00	4	0.1	0.1	<b>0.1</b>	0.00	0.00	MPD	
Myelodysplastic syndromes	8	0.1	0.2	<b>0.2</b>	0.01	0.01	7	0.1	0.2	<b>0.2</b>	0.01	0.03	MDS	
Other and unspecified	162	3.0	4.4	<b>5.6</b>	0.28	0.69	244	3.6	6.2	<b>6.7</b>	0.34	0.79	O&U	
All sites	6652		181.4	<b>222.1</b>	10.59	25.34	8059		204.8	<b>221.9</b>	13.71	24.30	C00-96	
All sites except C44	5452	100.0	148.7	<b>181.2</b>	8.59	20.50	6756	100.0	171.7	<b>187.5</b>	12.08	20.63	C00-96 exc. C44	

§Includes 83 cases of unknown age

§Includes 96 cases of unknown age

# France, Martinique

## **REGISTRATION AREA**

The Martinique Cancer Registry covers the urban (98%) and rural (2%) population of the Caribbean island of Martinique, an overseas region of France.

## **CANCER CARE FACILITIES**

The population is covered by national health insurance complemented by optional private insurance. Martinique's diagnostic and treatment facilities include two pathology laboratories, a haematology laboratory, two public hospitals with facilities located throughout the region – including a radiation oncology service at the CHR (Regional Hospital) – and two private clinics. There is centralized organized screening for breast, colorectal, and cervical cancers, and there is a National Cancer Plan and Programme at the regional and public health levels.

## **REGISTRY STRUCTURE AND METHODS**

A legal framework has been established for the registration, confidentiality, and encryption of data, as well as for informed consent. Encrypted data are transmitted to the French network of cancer registries (FRANCIM). The registry is financed by the French Institute for Public Health Surveillance and the CHU (University Hospital) of Martinique in Fort-de-France. The registry staff includes a managing registrar, a registrar, a biostatistician, a clinical research coordinator, several clinical research associates, and two secretaries. Data collection is both passive and active. Data are received from the Sun Laboratory of Pathology and from health insurance coverage of long-term illness. Patient records are reviewed actively. Quality control procedures are performed as recommended by FRANCIM, in accordance with IARC Technical Report No. 19: *Comparability and Quality Control in Cancer Registration*. The consistency of the data is also checked as recommended by FRANCIM.

## **USE OF THE DATA**

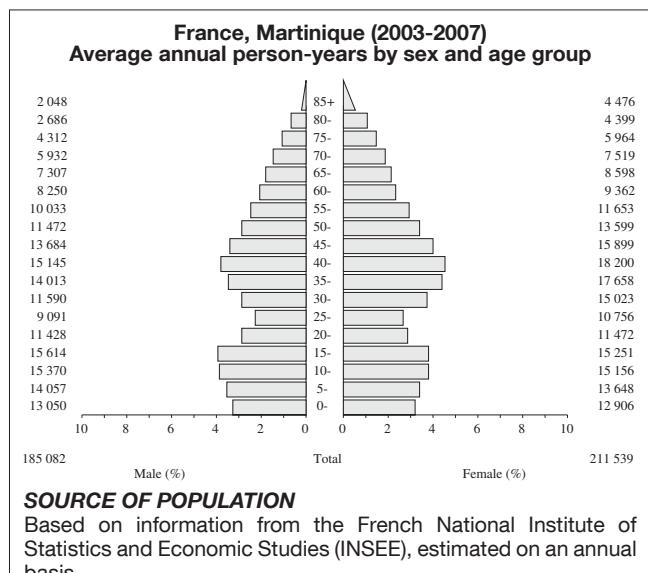
The registry publishes a report on cancer in Martinique every 5 years. Registry data are used for research and included in publications regarding specific issues. The

information is also provided to health authorities and used to evaluate health services and the impact of organized screening programmes (particularly those for breast, colorectal, and cervical cancers). The registry's results are interpreted for a variety of purposes (with a special interest in health risks), such as measuring the impact of environmental pollutants (pesticides) on the incidence of cancer or in the workplace, and measuring the impact of new cancer treatments on survival.

## **CONTRIBUTORS**

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#### **NOTES ON THE DATA**

\*No DCO registrations. †C67 (bladder cancer) includes neoplasms of uncertain or unknown behaviour together with invasive cancers.

**10 MAJOR CANCERS. ASR (WORLD) PER 100 000**

Male		Female	
Prostate	177.8	Breast	55.3
Stomach	15.2	Colon	12.9
Trachea, bronchus and lung	13.1	Cervix uteri	10.1
Colon	12.6	Corpus uteri	7.7
Rectum	7.1	Stomach	7.3
Multiple myeloma	6.9	Thyroid	6.5
Bladder	6.7	Trachea, bronchus and lung	6.2
Non-Hodgkin lymphoma	6.2	Multiple myeloma	5.4
Pancreas	5.3	Ovary	5.4
Oesophagus	4.8	Other and unspecified	4.6
All sites	314.8	All sites	158.6

**\*France, Martinique (2003-2007)**

S I T E	Male						Female						
	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	ICD-10
Lip	1	0.0	0.1	<b>0.1</b>	0.00	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C00
Tongue	23	0.5	2.5	<b>1.8</b>	0.12	0.19	4	0.1	0.4	<b>0.3</b>	0.02	0.03	C01-02
Mouth	42	0.9	4.5	<b>3.2</b>	0.17	0.44	8	0.3	0.8	<b>0.4</b>	0.03	0.05	C03-06
Salivary glands	8	0.2	0.9	<b>0.7</b>	0.04	0.08	7	0.3	0.7	<b>0.4</b>	0.03	0.03	C07-08
Tonsil	18	0.4	1.9	<b>1.4</b>	0.09	0.16	2	0.1	0.2	<b>0.1</b>	0.01	0.01	C09
Other oropharynx	27	0.6	2.9	<b>2.1</b>	0.14	0.27	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C10
Nasopharynx	11	0.2	1.2	<b>1.0</b>	0.08	0.10	3	0.1	0.3	<b>0.2</b>	0.02	0.03	C11
Hypopharynx	25	0.6	2.7	<b>2.0</b>	0.14	0.25	2	0.1	0.2	<b>0.1</b>	0.01	0.02	C12-13
Pharynx unspecified	12	0.3	1.3	<b>0.9</b>	0.06	0.11	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C14
Oesophagus	65	1.5	7.0	<b>4.8</b>	0.28	0.57	13	0.5	1.2	<b>0.6</b>	0.02	0.07	C15
Stomach	231	5.2	25.0	<b>15.2</b>	0.61	1.66	167	6.2	15.8	<b>7.3</b>	0.26	0.77	C16
Small intestine	16	0.4	1.7	<b>1.1</b>	0.05	0.15	11	0.4	1.0	<b>0.6</b>	0.04	0.06	C17
Colon	191	4.3	20.6	<b>12.6</b>	0.52	1.36	240	8.9	22.7	<b>12.9</b>	0.76	1.39	C18
Rectum	94	2.1	10.2	<b>7.1</b>	0.43	0.90	93	3.4	8.8	<b>4.6</b>	0.24	0.47	C19-20
Anus	3	0.1	0.3	<b>0.2</b>	0.02	0.02	8	0.3	0.8	<b>0.3</b>	0.02	0.02	C21
Liver	47	1.1	5.1	<b>3.5</b>	0.15	0.45	37	1.4	3.5	<b>2.0</b>	0.09	0.23	C22
Gallbladder etc.	23	0.5	2.5	<b>1.6</b>	0.10	0.18	46	1.7	4.3	<b>2.3</b>	0.10	0.30	C23-24
Pancreas	82	1.8	8.9	<b>5.3</b>	0.21	0.60	73	2.7	6.9	<b>3.5</b>	0.15	0.40	C25
Nose, sinuses etc.	9	0.2	1.0	<b>0.7</b>	0.05	0.08	4	0.1	0.4	<b>0.2</b>	0.02	0.02	C30-31
Larynx	53	1.2	5.7	<b>3.8</b>	0.22	0.47	2	0.1	0.2	<b>0.1</b>	0.01	0.01	C32
Trachea, bronchus and lung	182	4.1	19.7	<b>13.1</b>	0.71	1.67	110	4.1	10.4	<b>6.2</b>	0.41	0.72	C33-34
Other thoracic organs	10	0.2	1.1	<b>0.8</b>	0.05	0.10	8	0.3	0.8	<b>0.5</b>	0.04	0.06	C37-38
Bone	10	0.2	1.1	<b>1.1</b>	0.06	0.08	6	0.2	0.6	<b>0.5</b>	0.03	0.05	C40-41
Melanoma of skin	27	0.6	2.9	<b>2.0</b>	0.10	0.22	25	0.9	2.4	<b>1.6</b>	0.12	0.18	C43
Other skin	4	0.4	0.4	<b>0.4</b>	0.03	0.03	2		0.2	<b>0.1</b>	0.01	0.02	C44
Mesothelioma	2	0.0	0.2	<b>0.2</b>	0.02	0.02	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C45
Kaposi sarcoma	3	0.1	0.3	<b>0.2</b>	0.01	0.01	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C46
Connective and soft tissue	20	0.4	2.2	<b>1.8</b>	0.09	0.18	25	0.9	2.4	<b>1.8</b>	0.11	0.14	C47+C49
Breast	10	0.2	1.1	<b>0.7</b>	0.04	0.08	851	31.6	80.5	<b>55.3</b>	4.27	5.97	C50
Vulva							3	0.1	0.3	<b>0.2</b>	0.01	0.03	C51
Vagina							10	0.4	0.9	<b>0.5</b>	0.01	0.05	C52
Cervix uteri							165	6.1	15.6	<b>10.1</b>	0.69	1.01	C53
Corpus uteri							134	5.0	12.7	<b>7.7</b>	0.42	1.01	C54
Uterus unspecified							14	0.5	1.3	<b>0.7</b>	0.02	0.10	C55
Ovary							79	2.9	7.5	<b>5.4</b>	0.34	0.59	C56
Other female genital organs							4	0.1	0.4	<b>0.2</b>	0.02	0.02	C57
Placenta							2	0.1	0.2	<b>0.2</b>	0.02	0.02	C58
Penis	14	0.3	1.5	<b>0.9</b>	0.04	0.09							C60
Prostate	2595	58.0	280.4	<b>177.8</b>	7.44	23.34							C61
Testis	12	0.3	1.3	<b>1.4</b>	0.10	0.10							C62
Other male genital organs	2	0.0	0.2	<b>0.3</b>	0.02	0.02							C63
Kidney	38	0.8	4.1	<b>3.1</b>	0.19	0.35	20	0.7	1.9	<b>1.3</b>	0.09	0.11	C64
Renal pelvis	1	0.0	0.1	<b>0.1</b>	0.01	0.01	2	0.1	0.2	<b>0.1</b>	0.01	0.01	C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.0</b>	0.00	0.00	C66
†Bladder	100	2.2	10.8	<b>6.7</b>	0.27	0.76	45	1.7	4.3	<b>1.8</b>	0.05	0.16	C67
Other urinary organs	5	0.1	0.5	<b>0.3</b>	0.01	0.04	2	0.1	0.2	<b>0.1</b>	0.01	0.01	C68
Eye	6	0.1	0.6	<b>0.6</b>	0.04	0.05	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C69
Brain, nervous system	33	0.7	3.6	<b>2.8</b>	0.19	0.34	27	1.0	2.6	<b>2.1</b>	0.13	0.23	C70-72
Thyroid	26	0.6	2.8	<b>2.2</b>	0.17	0.21	90	3.3	8.5	<b>6.5</b>	0.57	0.69	C73
Adrenal gland	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.01	0.01	C74
Other endocrine	2	0.0	0.2	<b>0.2</b>	0.02	0.02	2	0.1	0.2	<b>0.2</b>	0.01	0.01	C75
Hodgkin lymphoma	13	0.3	1.4	<b>1.4</b>	0.08	0.10	12	0.4	1.1	<b>1.0</b>	0.07	0.08	C81
Non-Hodgkin lymphoma	84	1.9	9.1	<b>6.2</b>	0.37	0.75	45	1.7	4.3	<b>2.7</b>	0.18	0.29	C82-85,C96
Immunoproliferative diseases	4	0.1	0.4	<b>0.2</b>	0.00	0.02	2	0.1	0.2	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	100	2.2	10.8	<b>6.9</b>	0.39	0.78	108	4.0	10.2	<b>5.4</b>	0.29	0.61	C90
Lymphoid leukaemia	45	1.0	4.9	<b>3.9</b>	0.28	0.40	37	1.4	3.5	<b>2.6</b>	0.17	0.21	C91
Myeloid leukaemia	47	1.1	5.1	<b>3.5</b>	0.19	0.38	24	0.9	2.3	<b>1.4</b>	0.07	0.14	C92-94
Leukaemia unspecified	3	0.1	0.3	<b>0.2</b>	0.01	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00	C95
Myeloproliferative disorders	11	0.2	1.2	<b>0.8</b>	0.06	0.09	8	0.3	0.8	<b>0.5</b>	0.03	0.05	MPD
Myelodysplastic syndromes	21	0.5	2.3	<b>1.4</b>	0.05	0.13	24	0.9	2.3	<b>1.0</b>	0.04	0.09	MDS
Other and unspecified	69	1.5	7.5	<b>4.6</b>	0.26	0.45	87	3.2	8.2	<b>4.6</b>	0.25	0.47	O&U
All sites	4480		484.1	<b>314.8</b>	14.80	38.88	2699		255.2	<b>158.6</b>	10.33	17.06	C00-96
All sites except C44	4476	100.0	483.7	<b>314.4</b>	14.77	38.85	2697	100.0	255.0	<b>158.5</b>	10.32	17.04	C00-96 exc. C44

†See note following population pyramid

# Jamaica, Kingston and St Andrew

## REGISTRATION AREA

The Caribbean island country of Jamaica has a total area of 11 424 km<sup>2</sup>. At the 2011 census, the national population was 2.7 million. Jamaica's capital city is Kingston. The Jamaica Cancer Registry (Kingston and St Andrew) covers the adjacent parishes of Kingston and St Andrew (KSA), which have a combined area of 480 km<sup>2</sup> in the south-eastern region of the island and are jointly governed by the Kingston and St Andrew Corporation (KSAC). The registration of cancer cases in Jamaica is restricted to KSA, which is predominantly urban and accounts for 25% of the national population. The Jamaican population consists primarily of individuals of African ancestry (92.1%) but also includes individuals of East Indian, Chinese, European, and mixed ancestry.

## CANCER CARE FACILITIES

The residents of KSA have widespread access to a range of general and specialist health care providers, including oncologists. Health insurance coverage is variable, predominating among the middle and upper income classes. Public health care does not require insurance coverage.

## REGISTRY STRUCTURE AND METHODS

The registry is housed in the Department of Pathology at the University of the West Indies; its funding is provided solely from the department's university budget. The routine work of the registry is carried out by two research nurses who actively collect data from public, private, and university pathology laboratories; public and private hospitals; radiotherapy treatment facilities; and private practitioners. Cancer is not a legally reportable disease in Jamaica. Registry data are recorded on a cancer registration card, filed by site and year of diagnosis, and verified by the registry's pathologists. Cases are also filed alphabetically by patient name to avoid duplication. Cases are registered more than once only when there is more than one primary malignancy as confirmed by microscopy.

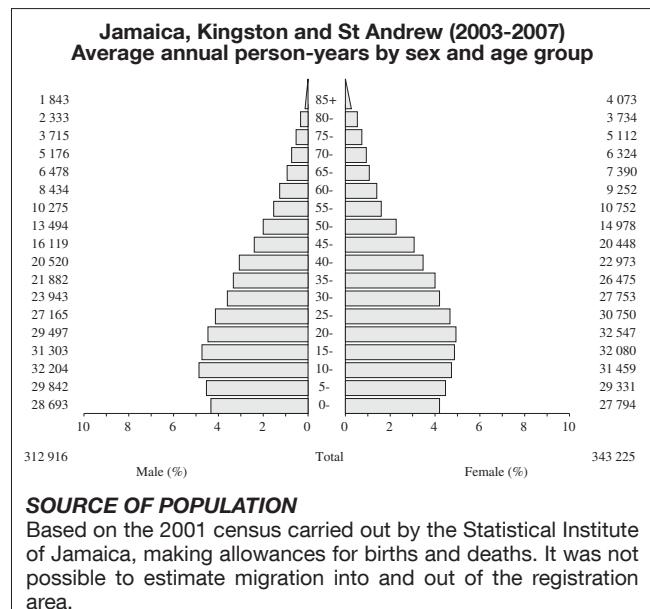
All cases are coded and entered into an electronic database (CanReg5). The registry's limited human and capital resources prevent the routine follow-up of patients, and mortality data are not routinely collected.

## USE OF THE DATA

The registry publishes regular 5-year cancer incidence reports, as well as papers dedicated to more detailed evaluations of the incidence and demographic trends of specific cancers.

## CONTRIBUTORS

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## NOTES ON THE DATA

\*No official mortality data. No DCO registrations.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	77.4	Breast	43.6
Trachea, bronchus and lung	18.6	Cervix uteri	17.2
Colon	11.9	Corpus uteri	10.8
Other and unspecified	10.0	Colon	8.7
Stomach	7.9	Other and unspecified	7.0
Non-Hodgkin lymphoma	6.3	Non-melanoma skin cancer	5.7
Non-melanoma skin cancer	6.2	Non-Hodgkin lymphoma	4.3
Rectum	4.7	Stomach	4.1
Multiple myeloma	4.4	Trachea, bronchus and lung	4.1
Larynx	4.2	Ovary	4.0
All sites	184.6	All sites	142.8

**\*Jamaica, Kingston and St Andrew (2003-2007)**

SITE	Male						Female					
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 0-74	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 0-74	ICD-10	
Lip	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.0</b>	0.00	0.00 C00
Tongue	18	0.7	1.2	<b>1.3</b>	0.07	0.17	5	0.2	0.3	<b>0.4</b>	0.01	0.05 C01-02
Mouth	16	0.7	1.0	<b>1.2</b>	0.08	0.15	10	0.4	0.6	<b>0.6</b>	0.01	0.07 C03-06
Salivary glands	2	0.1	0.1	<b>0.1</b>	0.00	0.00	4	0.2	0.2	<b>0.3</b>	0.02	0.03 C07-08
Tonsil	6	0.2	0.4	<b>0.5</b>	0.02	0.07	2	0.1	0.1	<b>0.1</b>	0.01	0.01 C09
Other oropharynx	3	0.1	0.2	<b>0.3</b>	0.01	0.05	1	0.0	0.1	<b>0.1</b>	0.00	0.02 C10
Nasopharynx	15	0.6	1.0	<b>1.1</b>	0.11	0.12	10	0.4	0.6	<b>0.7</b>	0.04	0.10 C11
Hypopharynx	7	0.3	0.4	<b>0.6</b>	0.06	0.08	2	0.1	0.1	<b>0.1</b>	0.01	0.01 C12-13
Pharynx unspecified	1	0.0	0.1	<b>0.1</b>	0.00	0.02	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C14
Oesophagus	32	1.3	2.0	<b>2.3</b>	0.08	0.29	19	0.8	1.1	<b>1.0</b>	0.03	0.12 C15
Stomach	107	4.4	6.8	<b>7.9</b>	0.37	1.05	73	3.1	4.3	<b>4.1</b>	0.17	0.54 C16
Small intestine	4	0.2	0.3	<b>0.3</b>	0.01	0.03	9	0.4	0.5	<b>0.6</b>	0.04	0.08 C17
Colon	167	6.8	10.7	<b>11.9</b>	0.52	1.49	158	6.8	9.2	<b>8.7</b>	0.45	1.06 C18
Rectum	63	2.6	4.0	<b>4.7</b>	0.22	0.61	58	2.5	3.4	<b>3.2</b>	0.19	0.33 C19-20
Anus	6	0.2	0.4	<b>0.4</b>	0.02	0.05	16	0.7	0.9	<b>1.0</b>	0.08	0.12 C21
Liver	18	0.7	1.2	<b>1.3</b>	0.08	0.18	13	0.6	0.8	<b>0.8</b>	0.06	0.09 C22
Gallbladder etc.	9	0.4	0.6	<b>0.7</b>	0.04	0.10	17	0.7	1.0	<b>1.0</b>	0.08	0.10 C23-24
Pancreas	34	1.4	2.2	<b>2.3</b>	0.10	0.24	43	1.9	2.5	<b>2.4</b>	0.10	0.30 C25
Nose, sinuses etc.	6	0.2	0.4	<b>0.4</b>	0.03	0.05	1	0.0	0.1	<b>0.1</b>	0.00	0.00 C30-31
Larynx	55	2.2	3.5	<b>4.2</b>	0.16	0.63	5	0.2	0.3	<b>0.3</b>	0.03	0.05 C32
Trachea, bronchus and lung	243	9.9	15.5	<b>18.6</b>	1.05	2.44	65	2.8	3.8	<b>4.1</b>	0.26	0.48 C33-34
Other thoracic organs	4	0.2	0.3	<b>0.3</b>	0.02	0.04	5	0.2	0.3	<b>0.3</b>	0.02	0.02 C37-38
Bone	7	0.3	0.4	<b>0.5</b>	0.02	0.06	7	0.3	0.4	<b>0.4</b>	0.02	0.06 C40-41
Melanoma of skin	9	0.4	0.6	<b>0.7</b>	0.06	0.08	10	0.4	0.6	<b>0.6</b>	0.02	0.09 C43
Other skin	86	5.5	5.5	<b>6.2</b>	0.41	0.68	102		5.9	<b>5.7</b>	0.32	0.63 C44
Mesothelioma	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C45
Kaposi sarcoma	2	0.1	0.1	<b>0.1</b>	0.01	0.01	1	0.0	0.1	<b>0.1</b>	0.00	0.00 C46
Connective and soft tissue	28	1.1	1.8	<b>2.0</b>	0.10	0.21	33	1.4	1.9	<b>2.0</b>	0.17	0.20 C47+C49
Breast	6	0.2	0.4	<b>0.3</b>	0.00	0.00	732	31.5	42.7	<b>43.6</b>	3.18	4.86 C50
Vulva							8	0.3	0.5	<b>0.4</b>	0.03	0.04 C51
Vagina							3	0.1	0.2	<b>0.1</b>	0.00	0.02 C52
Cervix uteri							298	12.8	17.4	<b>17.2</b>	1.34	1.79 C53
Corpus uteri							168	7.2	9.8	<b>10.8</b>	0.66	1.52 C54
Uterus unspecified							6	0.3	0.3	<b>0.3</b>	0.04	0.04 C55
Ovary							68	2.9	4.0	<b>4.0</b>	0.30	0.40 C56
Other female genital organs							3	0.1	0.2	<b>0.2</b>	0.00	0.04 C57
Placenta							5	0.2	0.3	<b>0.3</b>	0.02	0.02 C58
Penis	18	0.7	1.2	<b>1.1</b>	0.05	0.10						C60
Prostate	1063	43.3	67.9	<b>77.4</b>	2.74	10.15						C61
Testis	3	0.1	0.2	<b>0.2</b>	0.01	0.01						C62
Other male genital organs	3	0.1	0.2	<b>0.2</b>	0.01	0.03						C63
Kidney	29	1.2	1.9	<b>2.0</b>	0.13	0.18	22	0.9	1.3	<b>1.4</b>	0.07	0.12 C64
Renal pelvis	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C65
Ureter	0	0.0	0.0	<b>0.0</b>	0.00	0.00	1	0.0	0.1	<b>0.1</b>	0.01	0.01 C66
Bladder	58	2.4	3.7	<b>4.1</b>	0.19	0.53	25	1.1	1.5	<b>1.4</b>	0.07	0.13 C67
Other urinary organs	1	0.0	0.1	<b>0.1</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C68
Eye	3	0.1	0.2	<b>0.2</b>	0.02	0.02	6	0.3	0.3	<b>0.5</b>	0.03	0.03 C69
Brain, nervous system	16	0.7	1.0	<b>1.1</b>	0.07	0.09	28	1.2	1.6	<b>1.9</b>	0.16	0.17 C70-72
Thyroid	13	0.5	0.8	<b>0.9</b>	0.07	0.08	60	2.6	3.5	<b>3.3</b>	0.23	0.36 C73
Adrenal gland	2	0.1	0.1	<b>0.2</b>	0.01	0.01	1	0.0	0.1	<b>0.1</b>	0.00	0.00 C74
Other endocrine	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C75
Hodgkin lymphoma	4	0.2	0.3	<b>0.2</b>	0.01	0.01	9	0.4	0.5	<b>0.4</b>	0.03	0.03 C81
Non-Hodgkin lymphoma	90	3.7	5.8	<b>6.3</b>	0.45	0.67	76	3.3	4.4	<b>4.3</b>	0.29	0.44 C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 C88
Multiple myeloma	60	2.4	3.8	<b>4.4</b>	0.26	0.51	49	2.1	2.9	<b>3.0</b>	0.15	0.42 C90
Lymphoid leukaemia	49	2.0	3.1	<b>3.4</b>	0.23	0.33	41	1.8	2.4	<b>2.7</b>	0.16	0.29 C91
Myeloid leukaemia	29	1.2	1.9	<b>1.9</b>	0.11	0.16	19	0.8	1.1	<b>1.1</b>	0.04	0.14 C92-94
Leukaemia unspecified	6	0.2	0.4	<b>0.4</b>	0.03	0.04	5	0.2	0.3	<b>0.3</b>	0.01	0.05 C95
Myeloproliferative disorders	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 MPD
Myelodysplastic syndromes	0	0.0	0.0	<b>0.0</b>	0.00	0.00	0	0.0	0.0	<b>0.0</b>	0.00	0.00 MDS
Other and unspecified	138	5.6	8.8	<b>10.0</b>	0.55	1.26	121	5.2	7.1	<b>7.0</b>	0.45	0.87 O&U
All sites	2539		162.3	<b>184.6</b>	8.59	23.08	2424		141.2	<b>142.8</b>	9.40	16.34 C00-96
All sites except C44	2453	100.0	156.8	<b>178.4</b>	8.19	22.40	2322	100.0	135.3	<b>137.1</b>	9.08	15.71 C00-96 exc. C44

\*Includes 8 cases of unknown age

\$Includes 9 cases of unknown age

\*See note following population pyramid

# USA, Puerto Rico

## REGISTRATION AREA

The Puerto Rico Central Cancer Registry (PRCCR) covers all 78 municipalities of Puerto Rico, including the islands of Vieques and Culebra. About 40% of residents live in urban areas. In 2010, Puerto Rico had a population of approximately 3.7 million, primarily of Hispanic origin (98%).

## CANCER CARE FACILITIES

Puerto Rico's medical facilities include hospitals, primary health centres, radiotherapy and chemotherapy facilities, surgical centres, physicians' offices, and pathology laboratories. Cancer patients are referred by primary and secondary care facilities to hospitals in the metropolitan areas of San Juan, Ponce, Mayagüez, and Fajardo. The main medical centre is located in the city of San Juan. An undetermined number of patients also seek medical care on the United States mainland.

## REGISTRY STRUCTURE AND METHODS

The registry is located at the University of Puerto Rico Comprehensive Cancer Center and is financed by United States federal and state funds. Since 1997, the PRCCR has been part of the United States National Program of Cancer Registries (NPCR). The registry has 22 full-time employees and four units: Case Finding, Quality Control/Case Processing, Education and Training, and Information Technology. Cancer has been a reportable disease in Puerto Rico since 1951. In 2010, a new law was passed to increase the PRCCR's authority and formalize electronic reporting. Active case finding is performed in general and oncology hospitals, pathology laboratories, and the Vital Statistics Office. The death registration system is adequate and complete, and death certificates are required as a legal document. Currently, 95% of institutions report electronically.

## INTERPRETING THE RESULTS

Estimating the number of undiagnosed or unregistered cases is difficult due to the high frequency of migration between Puerto Rico and the United States mainland. However, Puerto Rico has a wide range of diagnostic facilities, and the PRCCR has data exchange agreements with the states of Florida, New Jersey,

New York, and Texas to help identify cases diagnosed and/or treated outside of Puerto Rico. Therefore, it is unlikely that many cases are missed. Data from the PRCCR are submitted annually for inclusion in United States cancer statistics reports.

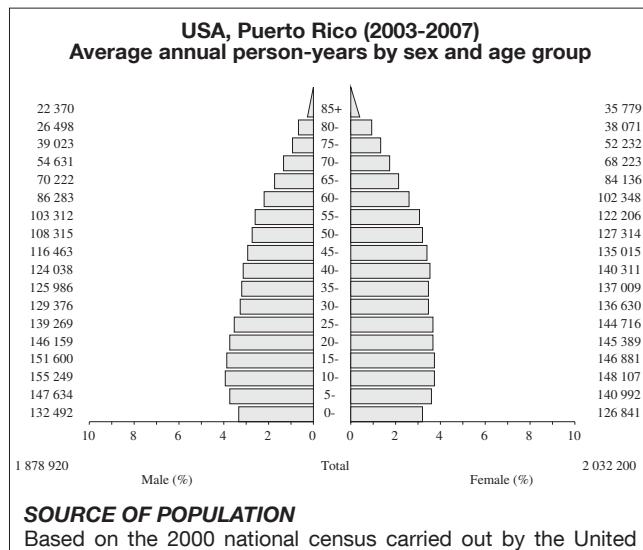
## USE OF THE DATA

The various uses of PRCCR data include programme planning and evaluation, research, cluster investigations, annual reports, and special reports. The PRCCR often participates in academic activities to disseminate and promote the use of the data among stakeholders. The PRCCR also collaborates in national and international projects.

## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on the 2000 national census carried out by the United States Census Bureau, making allowances for births and deaths. It was not possible to estimate migration into and out of Puerto Rico.

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	105.6	Breast	55.3
Colon	22.6	Colon	16.4
Trachea, bronchus and lung	15.3	Thyroid	13.2
Rectum	9.8	Corpus uteri	12.2
Non-Hodgkin lymphoma	9.3	Cervix uteri	7.7
Bladder	9.1	Trachea, bronchus and lung	6.8
Stomach	7.2	Non-Hodgkin lymphoma	6.5
Liver	7.1	Rectum	5.6
Other and unspecified	6.6	Ovary	5.0
Kidney	5.3	Other and unspecified	4.5
All sites	257.8	All sites	174.5

## USA, Puerto Rico (2003-2007)

SITE	Male						Female						ICD-10
	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	§No. cases	Freq.	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (%)	0-74 (%)	
Lip	40	0.1	0.4	<b>0.3</b>	0.01	0.03	18	0.1	0.2	<b>0.1</b>	0.00	0.01	C00
Tongue	318	0.9	3.4	<b>2.5</b>	0.19	0.30	97	0.4	1.0	<b>0.6</b>	0.04	0.06	C01-02
Mouth	329	0.9	3.5	<b>2.6</b>	0.19	0.31	118	0.4	1.2	<b>0.7</b>	0.03	0.08	C03-06
Salivary glands	117	0.3	1.2	<b>0.9</b>	0.05	0.09	81	0.3	0.8	<b>0.6</b>	0.04	0.06	C07-08
Tonsil	157	0.5	1.7	<b>1.3</b>	0.10	0.15	29	0.1	0.3	<b>0.2</b>	0.01	0.03	C09
Other oropharynx	106	0.3	1.1	<b>0.8</b>	0.06	0.10	11	0.0	0.1	<b>0.1</b>	0.00	0.01	C10
Nasopharynx	55	0.2	0.6	<b>0.5</b>	0.03	0.05	25	0.1	0.2	<b>0.2</b>	0.01	0.02	C11
Hypopharynx	154	0.4	1.6	<b>1.2</b>	0.08	0.14	6	0.0	0.1	<b>0.0</b>	0.00	0.00	C12-13
Pharynx unspecified	92	0.3	1.0	<b>0.7</b>	0.05	0.09	17	0.1	0.2	<b>0.1</b>	0.00	0.01	C14
Oesophagus	642	1.9	6.8	<b>4.7</b>	0.27	0.56	185	0.7	1.8	<b>0.9</b>	0.03	0.08	C15
Stomach	1078	3.1	11.5	<b>7.2</b>	0.31	0.80	765	2.9	7.5	<b>4.1</b>	0.19	0.44	C16
Small intestine	99	0.3	1.1	<b>0.7</b>	0.04	0.08	95	0.4	0.9	<b>0.5</b>	0.03	0.06	C17
Colon	3142	9.1	33.4	<b>22.6</b>	1.13	2.75	2858	10.7	28.1	<b>16.4</b>	0.88	1.92	C18
Rectum	1289	3.7	13.7	<b>9.8</b>	0.57	1.22	911	3.4	9.0	<b>5.6</b>	0.35	0.65	C19-20
Anus	79	0.2	0.8	<b>0.6</b>	0.04	0.07	166	0.6	1.6	<b>1.0</b>	0.06	0.12	C21
Liver	943	2.7	10.0	<b>7.1</b>	0.41	0.84	499	1.9	4.9	<b>2.7</b>	0.10	0.29	C22
Gallbladder etc.	131	0.4	1.4	<b>0.9</b>	0.04	0.12	232	0.9	2.3	<b>1.3</b>	0.06	0.16	C23-24
Pancreas	513	1.5	5.5	<b>3.6</b>	0.18	0.43	503	1.9	5.0	<b>2.6</b>	0.11	0.29	C25
Nose, sinuses etc.	54	0.2	0.6	<b>0.4</b>	0.02	0.05	36	0.1	0.4	<b>0.3</b>	0.02	0.03	C30-31
Larynx	668	1.9	7.1	<b>5.1</b>	0.32	0.66	74	0.3	0.7	<b>0.5</b>	0.03	0.05	C32
Trachea, bronchus and lung	2138	6.2	22.8	<b>15.3</b>	0.73	1.86	1220	4.6	12.0	<b>6.8</b>	0.31	0.82	C33-34
Other thoracic organs	38	0.1	0.4	<b>0.4</b>	0.02	0.03	27	0.1	0.3	<b>0.2</b>	0.01	0.02	C37-38
Bone	106	0.3	1.1	<b>1.0</b>	0.06	0.08	89	0.3	0.9	<b>0.7</b>	0.04	0.05	C40-41
Melanoma of skin	233	0.7	2.5	<b>1.8</b>	0.11	0.22	214	0.8	2.1	<b>1.4</b>	0.09	0.14	C43
Other skin	129		1.4	<b>1.0</b>	0.06	0.09	101		1.0	<b>0.6</b>	0.04	0.05	C44
Mesothelioma	27	0.1	0.3	<b>0.2</b>	0.00	0.03	12	0.0	0.1	<b>0.1</b>	0.00	0.01	C45
Kaposi sarcoma	102	0.3	1.1	<b>0.9</b>	0.07	0.08	20	0.1	0.2	<b>0.1</b>	0.00	0.01	C46
Connective and soft tissue	185	0.5	2.0	<b>1.5</b>	0.10	0.15	186	0.7	1.8	<b>1.4</b>	0.08	0.14	C47+C49
Breast	83	0.2	0.9	<b>0.6</b>	0.03	0.07	8061	30.2	79.3	<b>55.3</b>	4.02	6.35	C50
Vulva							200	0.7	2.0	<b>1.0</b>	0.04	0.12	C51
Vagina							110	0.4	1.1	<b>0.7</b>	0.04	0.08	C52
Cervix uteri							1013	3.8	10.0	<b>7.7</b>	0.57	0.77	C53
Corpus uteri							1786	6.7	17.6	<b>12.2</b>	0.88	1.46	C54
Uterus unspecified							135	0.5	1.3	<b>0.8</b>	0.05	0.09	C55
Ovary							744	2.8	7.3	<b>5.0</b>	0.34	0.54	C56
Other female genital organs							26	0.1	0.3	<b>0.2</b>	0.01	0.02	C57
Placenta							4	0.0	0.0	<b>0.0</b>	0.00	0.00	C58
Penis	237	0.7	2.5	<b>1.8</b>	0.11	0.19							C60
Prostate	14610	42.2	155.5	<b>105.6</b>	4.87	13.80							C61
Testis	249	0.7	2.7	<b>2.6</b>	0.19	0.19							C62
Other male genital organs	12	0.0	0.1	<b>0.1</b>	0.01	0.01							C63
Kidney	652	1.9	6.9	<b>5.3</b>	0.33	0.64	410	1.5	4.0	<b>2.8</b>	0.17	0.31	C64
Renal pelvis	27	0.1	0.3	<b>0.2</b>	0.01	0.02	15	0.1	0.1	<b>0.1</b>	0.00	0.01	C65
Ureter	25	0.1	0.3	<b>0.2</b>	0.01	0.02	16	0.1	0.2	<b>0.1</b>	0.00	0.01	C66
Bladder	1362	3.9	14.5	<b>9.1</b>	0.36	1.05	480	1.8	4.7	<b>2.4</b>	0.10	0.26	C67
Other urinary organs	23	0.1	0.2	<b>0.2</b>	0.01	0.02	14	0.1	0.1	<b>0.1</b>	0.01	0.01	C68
Eye	69	0.2	0.7	<b>0.5</b>	0.04	0.05	46	0.2	0.5	<b>0.4</b>	0.02	0.03	C69
Brain, nervous system	396	1.1	4.2	<b>3.7</b>	0.23	0.36	372	1.4	3.7	<b>3.0</b>	0.19	0.28	C70-72
Thyroid	344	1.0	3.7	<b>3.1</b>	0.24	0.32	1642	6.2	16.2	<b>13.2</b>	1.04	1.29	C73
Adrenal gland	20	0.1	0.2	<b>0.2</b>	0.01	0.01	12	0.0	0.1	<b>0.1</b>	0.01	0.01	C74
Other endocrine	19	0.1	0.2	<b>0.2</b>	0.01	0.02	11	0.0	0.1	<b>0.1</b>	0.01	0.01	C75
Hodgkin lymphoma	252	0.7	2.7	<b>2.4</b>	0.17	0.20	189	0.7	1.9	<b>1.6</b>	0.11	0.14	C81
Non-Hodgkin lymphoma	1189	3.4	12.7	<b>9.3</b>	0.58	1.00	1000	3.7	9.8	<b>6.5</b>	0.40	0.72	C82-85,C96
Immunoproliferative diseases	6	0.0	0.1	<b>0.0</b>	0.00	0.01	1	0.0	0.0	<b>0.0</b>	0.00	0.00	C88
Multiple myeloma	414	1.2	4.4	<b>3.1</b>	0.17	0.40	392	1.5	3.9	<b>2.2</b>	0.11	0.27	C90
Lymphoid leukaemia	284	0.8	3.0	<b>2.5</b>	0.12	0.22	154	0.6	1.5	<b>1.4</b>	0.07	0.12	C91
Myeloid leukaemia	287	0.8	3.1	<b>2.4</b>	0.15	0.23	257	1.0	2.5	<b>1.8</b>	0.11	0.18	C92-94
Leukaemia unspecified	207	0.6	2.2	<b>1.5</b>	0.06	0.13	179	0.7	1.8	<b>1.1</b>	0.06	0.10	C95
Myeloproliferative disorders	64	0.2	0.7	<b>0.5</b>	0.03	0.05	52	0.2	0.5	<b>0.4</b>	0.03	0.04	MPD
Myelodysplastic syndromes	53	0.2	0.6	<b>0.4</b>	0.02	0.04	38	0.1	0.4	<b>0.2</b>	0.01	0.03	MDS
Other and unspecified	924	2.7	9.8	<b>6.6</b>	0.36	0.72	814	3.1	8.0	<b>4.5</b>	0.22	0.49	O&U
All sites	34772		370.1	<b>257.8</b>	13.35	31.16	26768		263.4	<b>174.5</b>	11.22	19.34	C00-96
All sites except C44	34643	100.0	368.8	<b>256.8</b>	13.29	31.07	26667	100.0	262.4	<b>173.8</b>	11.19	19.28	C00-96 exc. C44

§Includes 60 cases of unknown age

§Includes 51 cases of unknown age

# Uruguay

## REGISTRATION AREA

The National Cancer Registry of Uruguay has nationwide coverage (19 departments over an area of 176 065 km<sup>2</sup>) of Uruguay's population of 3.4 million (47.8% male and 52.2% female). The population is mainly of Caucasian ethnicity (96.9%), and the majority of residents (95.1%) live in urban areas. In *Cancer Incidence in Five Continents, Volume III*, only information from the capital city (Montevideo) was published.

## CANCER CARE FACILITIES

Approximately 95% of the population has full access to either the public health system (ASSE) or the private system. Cancer diagnosis, treatment (including surgery, radiation therapy, and drugs), follow-up, and palliative care are available to all users of both systems. There are more than 50 oncology services (half of them located in Montevideo) and eight radiation therapy services (four public, four private). In 2005, the National Cancer Control Program (PRONACCAN) was created to coordinate all actions against cancer.

## REGISTRY STRUCTURE AND METHODS

The registry was created by law in 1984. Since 2002, it has been run within the framework of the Epidemiologic Surveillance Program (PVE) of Uruguay's Comisión Honoraria de Lucha contra el Cáncer. The registry staff is organized in three technical units and consists of 30 registrars, three administrative employees, and a director. Confidentiality agreements are signed by all staff members. Documents and databases are protected according to national and international guidelines. Data collection is mainly active, through incidence reports filed by the registrars in hospitals, laboratories, and other information sources. Death certificates are also available to the registry. Quality control procedures are performed both manually and automatically using IARC's and the registry's own software. Uruguay has screening programmes

for colorectal, cervical, and breast cancers, although their coverage is still low. The significant number of older patients diagnosed at very advanced stages of disease results in high rates of non-microscopically-verified diagnosis.

## USE OF THE DATA

Registry data are regularly reported in the publication *Incidence and Mortality Atlas: 5-Year Data*, and the registry provides its cooperation for various research projects and scientific publications. Specific reports are prepared in response to requests from clinicians, researchers, authorities, and the general public.

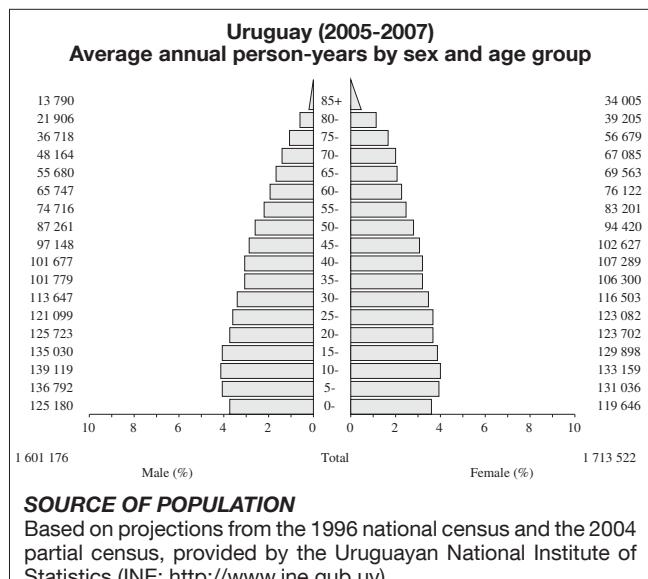
## CONTRIBUTORS

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## SOURCE OF POPULATION

Based on projections from the 1996 national census and the 2004 partial census, provided by the Uruguayan National Institute of Statistics (INE; <http://www.ine.gub.uy>).

## 10 MAJOR CANCERS, ASR (WORLD) PER 100 000

Male		Female	
Prostate	60.1	Breast	67.6
Trachea, bronchus and lung	50.1	Non-melanoma skin cancer	26.3
Non-melanoma skin cancer	40.9	Colon	17.8
Colon	22.7	Cervix uteri	17.1
Other and unspecified	17.5	Other and unspecified	10.9
Bladder	15.8	Trachea, bronchus and lung	9.1
Stomach	14.3	Corpus uteri	8.9
Kidney	13.4	Ovary	8.4
Rectum	11.6	Rectum	6.8
Non-Hodgkin lymphoma	10.8	Thyroid	6.8
All sites	338.5	All sites	244.2

## Uruguay (2005-2007)

SITE	Male						Female					
	§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates		§No. cases	Freq. (%)	Crude rate (per 100,000)	Cum. rates		ICD-10	
				0-64	0-74				0-64	0-74		
Lip	19	0.1	0.4	<b>0.3</b>	0.02	0.02	10	0.1	0.2	<b>0.1</b>	0.00	0.00 C00
Tongue	146	0.7	3.0	<b>2.4</b>	0.17	0.29	52	0.3	1.0	<b>0.6</b>	0.03	0.06 C01-02
Mouth	138	0.7	2.9	<b>2.4</b>	0.18	0.29	49	0.3	1.0	<b>0.6</b>	0.04	0.07 C03-06
Salivary glands	38	0.2	0.8	<b>0.6</b>	0.04	0.05	34	0.2	0.7	<b>0.5</b>	0.03	0.04 C07-08
Tonsil	77	0.4	1.6	<b>1.4</b>	0.11	0.17	20	0.1	0.4	<b>0.3</b>	0.02	0.03 C09
Other oropharynx	33	0.2	0.7	<b>0.6</b>	0.04	0.07	7	0.0	0.1	<b>0.1</b>	0.01	0.01 C10
Nasopharynx	38	0.2	0.8	<b>0.7</b>	0.04	0.08	16	0.1	0.3	<b>0.2</b>	0.02	0.02 C11
Hypopharynx	92	0.5	1.9	<b>1.5</b>	0.09	0.19	8	0.0	0.2	<b>0.1</b>	0.01	0.01 C12-13
Pharynx unspecified	25	0.1	0.5	<b>0.4</b>	0.03	0.05	6	0.0	0.1	<b>0.1</b>	0.01	0.01 C14
Oesophagus	596	3.0	12.4	<b>8.9</b>	0.44	1.06	281	1.6	5.5	<b>2.7</b>	0.13	0.30 C15
Stomach	960	4.9	20.0	<b>14.3</b>	0.72	1.65	648	3.7	12.6	<b>6.7</b>	0.36	0.71 C16
Small intestine	43	0.2	0.9	<b>0.7</b>	0.04	0.09	42	0.2	0.8	<b>0.5</b>	0.03	0.06 C17
Colon	1586	8.1	33.0	<b>22.7</b>	1.05	2.59	1759	9.9	34.2	<b>17.8</b>	0.92	1.97 C18
Rectum	780	4.0	16.2	<b>11.6</b>	0.55	1.42	630	3.6	12.3	<b>6.8</b>	0.37	0.78 C19-20
Anus	62	0.3	1.3	<b>0.9</b>	0.05	0.11	73	0.4	1.4	<b>0.8</b>	0.04	0.09 C21
Liver	197	1.0	4.1	<b>2.9</b>	0.13	0.37	91	0.5	1.8	<b>0.9</b>	0.05	0.10 C22
Gallbladder etc.	195	1.0	4.1	<b>2.8</b>	0.12	0.32	358	2.0	7.0	<b>3.6</b>	0.16	0.46 C23-24
Pancreas	623	3.2	13.0	<b>9.2</b>	0.47	1.12	641	3.6	12.5	<b>6.5</b>	0.30	0.74 C25
Nose, sinuses etc.	34	0.2	0.7	<b>0.5</b>	0.03	0.06	26	0.1	0.5	<b>0.3</b>	0.02	0.04 C30-31
Larynx	450	2.3	9.4	<b>7.2</b>	0.45	0.92	44	0.2	0.9	<b>0.5</b>	0.03	0.06 C32
Trachea, bronchus and lung	3193	16.2	66.5	<b>50.1</b>	2.94	6.42	731	4.1	14.2	<b>9.1</b>	0.61	1.09 C33-34
Other thoracic organs	46	0.2	1.0	<b>0.8</b>	0.05	0.08	38	0.2	0.7	<b>0.5</b>	0.03	0.05 C37-38
Bone	44	0.2	0.9	<b>0.9</b>	0.06	0.08	35	0.2	0.7	<b>0.7</b>	0.04	0.05 C40-41
Melanoma of skin	301	1.5	6.3	<b>4.6</b>	0.24	0.52	277	1.6	5.4	<b>3.6</b>	0.23	0.38 C43
Other skin	2878		59.9	<b>40.9</b>	1.84	4.55	2468		48.0	<b>26.3</b>	1.41	2.90 C44
Mesothelioma	19	0.1	0.4	<b>0.3</b>	0.01	0.03	10	0.1	0.2	<b>0.1</b>	0.01	0.01 C45
Kaposi sarcoma	25	0.1	0.5	<b>0.5</b>	0.04	0.04	7	0.0	0.1	<b>0.1</b>	0.01	0.01 C46
Connective and soft tissue	115	0.6	2.4	<b>1.9</b>	0.12	0.21	102	0.6	2.0	<b>1.4</b>	0.09	0.14 C47+C49
Breast	50	0.3	1.0	<b>0.7</b>	0.03	0.08	5055	28.6	98.3	<b>67.6</b>	4.81	7.61 C50
Vulva							110	0.6	2.1	<b>1.0</b>	0.03	0.10 C51
Vagina							39	0.2	0.8	<b>0.4</b>	0.03	0.05 C52
Cervix uteri							1049	5.9	20.4	<b>17.1</b>	1.39	1.68 C53
Corpus uteri							701	4.0	13.6	<b>8.9</b>	0.60	1.07 C54
Uterus unspecified							116	0.7	2.3	<b>1.3</b>	0.08	0.14 C55
Ovary							626	3.5	12.2	<b>8.4</b>	0.56	0.93 C56
Other female genital organs							31	0.2	0.6	<b>0.4</b>	0.02	0.04 C57
Placenta							11	0.1	0.2	<b>0.2</b>	0.02	0.02 C58
Penis	96	0.5	2.0	<b>1.5</b>	0.10	0.18						C60
Prostate	4287	21.8	89.2	<b>60.1</b>	2.14	7.58						C61
Testis	269	1.4	5.6	<b>5.3</b>	0.40	0.41						C62
Other male genital organs	10	0.1	0.2	<b>0.1</b>	0.01	0.02						C63
Kidney	827	4.2	17.2	<b>13.4</b>	0.89	1.60	455	2.6	8.9	<b>5.7</b>	0.36	0.69 C64
Renal pelvis	19	0.1	0.4	<b>0.3</b>	0.02	0.04	6	0.0	0.1	<b>0.1</b>	0.00	0.01 C65
Ureter	8	0.0	0.2	<b>0.1</b>	0.01	0.02	6	0.0	0.1	<b>0.1</b>	0.01	0.01 C66
Bladder	1103	5.6	23.0	<b>15.8</b>	0.74	1.87	337	1.9	6.6	<b>3.3</b>	0.17	0.35 C67
Other urinary organs	13	0.1	0.3	<b>0.2</b>	0.01	0.02	9	0.1	0.2	<b>0.1</b>	0.01	0.01 C68
Eye	29	0.1	0.6	<b>0.6</b>	0.03	0.05	24	0.1	0.5	<b>0.4</b>	0.02	0.03 C69
Brain, nervous system	346	1.8	7.2	<b>6.2</b>	0.41	0.65	276	1.6	5.4	<b>4.0</b>	0.25	0.40 C70-72
Thyroid	91	0.5	1.9	<b>1.6</b>	0.13	0.17	412	2.3	8.0	<b>6.8</b>	0.53	0.66 C73
Adrenal gland	7	0.0	0.1	<b>0.2</b>	0.01	0.01	25	0.1	0.5	<b>0.4</b>	0.03	0.04 C74
Other endocrine	3	0.0	0.1	<b>0.1</b>	0.00	0.00	2	0.0	0.0	<b>0.0</b>	0.00	0.00 C75
Hodgkin lymphoma	89	0.5	1.9	<b>1.8</b>	0.12	0.14	91	0.5	1.8	<b>1.6</b>	0.10	0.13 C81
Non-Hodgkin lymphoma	647	3.3	13.5	<b>10.8</b>	0.69	1.18	544	3.1	10.6	<b>6.5</b>	0.36	0.74 C82-85,C96
Immunoproliferative diseases	3	0.0	0.1	<b>0.0</b>	0.00	0.01	1	0.0	0.0	<b>0.0</b>	0.00	0.00 C88
Multiple myeloma	174	0.9	3.6	<b>2.6</b>	0.14	0.32	185	1.0	3.6	<b>1.9</b>	0.10	0.22 C90
Lymphoid leukaemia	177	0.9	3.7	<b>3.0</b>	0.14	0.25	133	0.8	2.6	<b>2.1</b>	0.10	0.17 C91
Myeloid leukaemia	190	1.0	4.0	<b>3.2</b>	0.18	0.34	175	1.0	3.4	<b>2.5</b>	0.15	0.25 C92-94
Leukaemia unspecified	37	0.2	0.8	<b>0.5</b>	0.03	0.06	57	0.3	1.1	<b>0.6</b>	0.03	0.06 C95
Myeloproliferative disorders	20	0.1	0.4	<b>0.3</b>	0.02	0.04	14	0.1	0.3	<b>0.1</b>	0.01	0.01 MPD
Myelodysplastic syndromes	51	0.3	1.1	<b>0.8</b>	0.03	0.08	44	0.2	0.9	<b>0.6</b>	0.04	0.06 MDS
Other and unspecified	1234	6.3	25.7	<b>17.5</b>	0.80	1.96	1159	6.6	22.5	<b>10.9</b>	0.47	1.10 O&U
All sites	22533		469.1	<b>338.5</b>	17.11	39.95	20156		392.1	<b>244.2</b>	15.30	26.75 C00-96
All sites except C44	19655	100.0	409.2	<b>297.5</b>	15.27	35.40	17688	100.0	344.1	<b>217.9</b>	13.89	23.86 C00-96 exc. C44

§Includes 14 cases of unknown age

\$Includes 7 cases of unknown age