



The Tables

Age-standardized incidence rates

Algeria, Algiers

Registration area

The Algiers cancer registry covers the Wilaya of Alger, an urban area in Northern Africa. Alger is a coastal region situated in the north of Algeria on the southern edge of the Mediterranean. The population is Muslim.

Cancer care facilities

The registration area has three university hospital centres ('centres hospitaliers universitaires'), the Central, East and West, and two cancer centres, the Centre Pierre et Marie Curie in Alger and the Centre Frantz Fanon in Blida, each providing surgery, oncology and radiotherapy. There are seven university and twelve private pathology laboratories.

Registry structure and methods

The registry is located in the National Institute of Public Health in Alger. The Institute finances the registry.

The staff comprises an epidemiologist (the director), a pathologist, an oncologist, a radiotherapist, a surgeon, five health record clerks and a secretary. Only the epidemiologist, the clerks and the secretary work full-time for the registry.

Data collection is active. The principal sources of information are the public and private pathology, cytology and haematology laboratories; departments of radiotherapy, oncology, surgery, general medicine and paediatrics; hospital admission records; health insurance and death certificates.

The registry has access to death certificates through the Health Department of the county, which makes available all death certificates from the preceding year. These are anonymous, and once all deaths from cancer have been abstracted the names of the individuals are found in the statistical departments of the town halls. The registry misses deaths from cancer because many physicians do not put the true cause of death on the certificate.

It is not mandatory to report cancer in Alger. There is no problem of confidentiality at the moment.

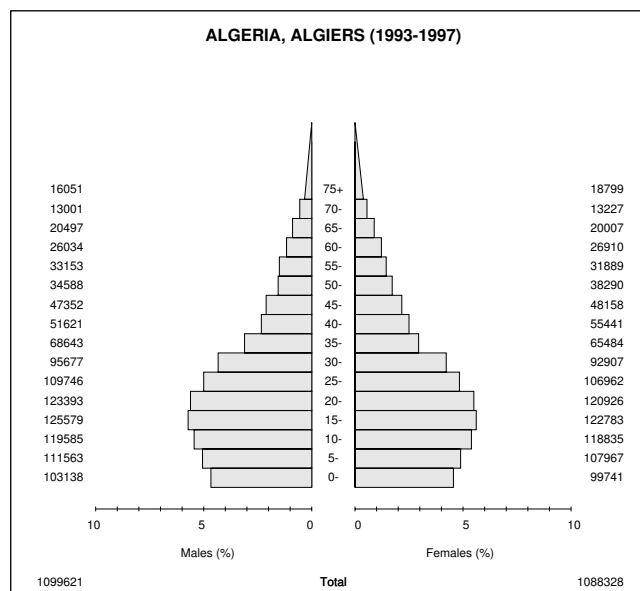
Interpreting the results

The registry has covered two additional counties since 1997, Tizi-ouzou and Blida, with a population of more than 400 000 inhabitants. As Alger is the largest centre in the country for the diagnosis and treatment of cancer the registry has to be particularly careful not to include non-residents. It is also probable that there is under-diagnosis of cancer, notably among the elderly, and it is not possible to estimate the degree of potential under-diagnosis.

Use of the data

The registry publishes an annual report which presents data on incidence. The quality of information available on follow-up of the patients (notably in the medical record) does not permit studies of

extent of disease nor of survival. A special study on survival from breast cancer is planned in collaboration with the oncological department of the Pierre et Marie Curie cancer centre.



Source of population

The population was estimated by applying the annual percentage change by age and sex between the 1987 and 1998 censuses.

Census

Recensement Général de la Population et de l'Habitat (20 mars 1987). Office National des Statistiques. Collections Statistiques No. 46, Série Résultats – Vol. 4. Recensement Général de la Population et de l'Habitat (25 juin 1998). Office National des Statistiques. Collections Statistiques No. 80, Série Résultats no. 1

Notes on the data

* The high proportion of cases with microscopic confirmation, low incidence of haematological malignancies and irregular registration year-by-year suggest a degree of under-ascertainment.

***ALGERIA, ALGIERS (1993-1997)**

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	Cum. rates 0-74	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	Cum. rates 0-74	
Lip	20	0.6	0.4	0.5	0.02	0.05	2	0.1	0.0	0.1	0.01	0.01	C00
Tongue	12	0.4	0.2	0.3	0.03	0.03	9	0.2	0.2	0.2	0.01	0.04	C01-02
Mouth	17	0.5	0.3	0.4	0.03	0.06	18	0.5	0.3	0.4	0.03	0.04	C03-06
Salivary glands	18	0.5	0.3	0.4	0.03	0.04	9	0.2	0.2	0.2	0.01	0.03	C07-08
Oropharynx	20	0.6	0.4	0.6	0.03	0.08	6	0.2	0.1	0.1	0.01	0.02	C09-10
Nasopharynx	128	3.7	2.3	2.7	0.22	0.27	61	1.7	1.1	1.3	0.09	0.13	C11
Hypopharynx	6	0.2	0.1	0.2	0.01	0.02	0	0.0	0.0	0.0	0.00	0.00	C12-13
Pharynx unspecified	5	0.1	0.1	0.1	0.00	0.01	4	0.1	0.1	0.1	0.01	0.01	C14
Oesophagus	34	1.0	0.6	0.9	0.06	0.13	19	0.5	0.3	0.5	0.02	0.05	C15
Stomach	211	6.2	3.8	5.6	0.35	0.68	155	4.3	2.8	3.7	0.25	0.43	C16
Small intestine	16	0.5	0.3	0.4	0.03	0.06	15	0.4	0.3	0.3	0.01	0.03	C17
Colon	130	3.8	2.4	3.3	0.19	0.37	115	3.2	2.1	2.8	0.20	0.36	C18
Rectum etc.	154	4.5	2.8	3.8	0.23	0.45	133	3.7	2.4	3.3	0.22	0.43	C19-21
Liver	34	1.0	0.6	0.9	0.04	0.08	34	0.9	0.6	0.9	0.03	0.12	C22
Gallbladder etc.	53	1.5	1.0	1.5	0.07	0.20	204	5.6	3.7	5.3	0.33	0.67	C23-24
Pancreas	44	1.3	0.8	1.2	0.06	0.16	36	1.0	0.7	0.9	0.05	0.12	C25
Nose, sinuses etc.	16	0.5	0.3	0.4	0.03	0.05	11	0.3	0.2	0.2	0.01	0.03	C30-31
Larynx	155	4.5	2.8	4.3	0.26	0.58	11	0.3	0.2	0.3	0.01	0.04	C32
Trachea, bronchus and lung	635	18.5	11.5	17.2	1.08	2.11	73	2.0	1.3	1.9	0.12	0.25	C33-34
Other thoracic organs	10	0.3	0.2	0.2	0.01	0.02	7	0.2	0.1	0.2	0.01	0.01	C37-38
Bone	94	2.7	1.7	1.8	0.11	0.14	56	1.5	1.0	1.0	0.06	0.08	C40-41
Melanoma of skin	22	0.6	0.4	0.6	0.03	0.06	19	0.5	0.3	0.4	0.03	0.03	C43
Other skin	292		5.3	7.7	0.44	0.80	142		2.6	3.5	0.17	0.38	C44
Mesothelioma	17	0.5	0.3	0.4	0.04	0.05	5	0.1	0.1	0.1	0.00	0.01	C45
Kaposi sarcoma	16	0.5	0.3	0.4	0.02	0.05	3	0.1	0.1	0.1	0.01	0.01	C46
Connective and soft tissue	53	1.5	1.0	1.2	0.09	0.11	50	1.4	0.9	0.9	0.06	0.09	C47+C49
Breast	26	0.8	0.5	0.7	0.05	0.08	906	25.0	16.6	21.3	1.73	2.25	C50
Cervix uteri							506	14.0	9.3	12.5	1.07	1.36	C53
Corpus uteri							82	2.3	1.5	2.2	0.15	0.27	C54
Uterus unspecified							43	1.2	0.8	1.1	0.08	0.13	C55
Ovary etc.							180	5.0	3.3	4.2	0.31	0.43	C56,C57.1-4
Other female genital organs							28	0.8	0.5	0.7	0.04	0.09	C51-52,C57.7-9
Placenta							0	0.0	0.0	0.0	0.00	0.00	C58
Prostate	194	5.7	3.5	5.4	0.18	0.72							C61
Testis	38	1.1	0.7	0.7	0.05	0.06							C62
Penis, other male genital organs	2	0.1	0.0	0.0	0.01	0.01							C60+C63
Kidney etc.	60	1.8	1.1	1.5	0.10	0.16	67	1.8	1.2	1.5	0.11	0.15	C64-66,C68
Bladder	402	11.7	7.3	10.8	0.61	1.34	86	2.4	1.6	2.3	0.12	0.31	C67
Eye	20	0.6	0.4	0.5	0.02	0.03	22	0.6	0.4	0.5	0.03	0.05	C69
Brain, nervous system	128	3.7	2.3	2.7	0.17	0.28	70	1.9	1.3	1.4	0.10	0.11	C70-72
Thyroid	52	1.5	0.9	1.2	0.08	0.14	192	5.3	3.5	4.2	0.33	0.43	C73
Other endocrine	32	0.9	0.6	0.6	0.04	0.04	15	0.4	0.3	0.3	0.02	0.02	C74-75
Hodgkin disease	33	1.0	0.6	0.5	0.04	0.04	27	0.7	0.5	0.5	0.03	0.04	C81
Non-Hodgkin lymphoma	161	4.7	2.9	3.6	0.28	0.38	109	3.0	2.0	2.4	0.16	0.26	C82-85,96
Multiple myeloma	24	0.7	0.4	0.7	0.04	0.09	23	0.6	0.4	0.6	0.03	0.08	C88,C90
Lymphoid leukaemia	56	1.6	1.0	1.2	0.07	0.12	29	0.8	0.5	0.7	0.03	0.05	C91
Myeloid leukaemia	37	1.1	0.7	0.8	0.05	0.07	26	0.7	0.5	0.5	0.04	0.04	C92-94
Leukaemia unspecified	18	0.5	0.3	0.4	0.02	0.04	14	0.4	0.3	0.3	0.02	0.02	C95
Other and unspecified	223	6.5	4.1	5.5	0.34	0.59	145	4.0	2.7	3.5	0.23	0.36	O&U
All sites	3718		67.6	93.6	5.65	10.81	3767		69.2	89.4	6.37	9.87	ALL
All sites but C44	3426	100.0	62.3	85.9	5.21	10.01	3625	100.0	66.6	85.9	6.20	9.49	ALLbC44

§Includes 247 cases of unknown age

§Includes 183 cases of unknown age

For this registry, only ICD-9 3 digit categories were available.

France, La Réunion

Registration area

The island of La Réunion, one of the four overseas 'départements' of France, is situated in the Indian Ocean, 9180 km from Paris on longitude 55°E and latitude 21°S, between the equator and the Tropic of Capricorn. Like the islands of Mauritius and Rodriguez, it belongs to the Mascarene Archipelago, with Madagascar to the west and the Seychelles to the north. It is a volcanic and mountainous island, 2512 km² in area, dominated by the Piton des Neiges, the highest point in the Indian Ocean at 3069 m. The Piton de la Fournaise is still an active volcano, occupying the south-east third of the island.

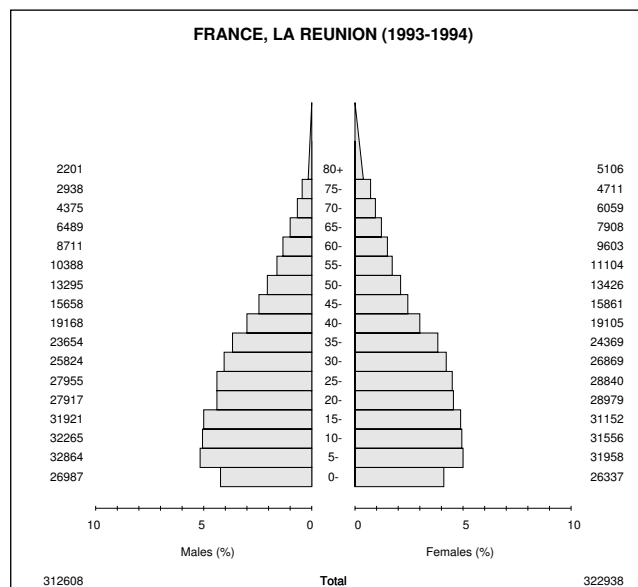
The tropical climate is hot and humid; the high temperatures are moderated by the sea and the trade winds which blow from the south-east. There are two seasons: summer or the hurricane period, which is hot and humid, from November to April, and winter which is dry and cool (May to October).

La Réunion was first inhabited in the 17th century, by European colonials and African and Malagasy slaves. After the abolition of slavery in 1848, the immigration of labourers from India and China added to this ethnic diversity.

Registry structure and methods

Collection of data on cancer morbidity was initiated on the island of La Réunion in 1983. The population-based registry was established in 1988, with the aim of establishing the burden and patterns of cancer among residents of the island, whether diagnosed locally or elsewhere.

Registration is active. The first step involves collecting information from the principal sources, the public and private pathology and haematology laboratories. These data are then linked and supplemented with data from the treating physician. The notification forms are kept for additional information to be added as received. The data are then coded and entered onto a personal computer.



Source of population

Average of the annual estimates provided by the Institut National de la Statistique, taking into account births, deaths and migration each year.

Notes on the data

* The very high proportion of diagnoses based on microscopic confirmation and some rather high ratios of mortality to incidence suggest a degree of under-ascertainment.

† C44 does not include basal cell carcinoma

***FRANCE, LA REUNION (1993-1994)**

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 (percent)	Cum. rates 0-74 (percent)	
Lip	2	0.2	0.3	0.4	0.02	0.02	0	0.0	0.0	0.0	0.00	0.00	C00
Tongue	24	2.3	3.8	4.5	0.35	0.48	2	0.3	0.3	0.4	0.02	0.05	C01-02
Mouth	42	3.9	6.7	8.6	0.63	1.02	0	0.0	0.0	0.0	0.00	0.00	C03-06
Salivary glands	3	0.3	0.5	0.6	0.02	0.08	2	0.3	0.3	0.3	0.03	0.03	C07-08
Tonsil	19	1.8	3.0	3.8	0.36	0.45	4	0.6	0.6	0.6	0.06	0.06	C09
Other oropharynx	11	1.0	1.8	2.1	0.15	0.29	0	0.0	0.0	0.0	0.00	0.00	C10
Nasopharynx	4	0.4	0.6	0.7	0.07	0.07	1	0.1	0.2	0.1	0.01	0.01	C11
Hypopharynx	35	3.3	5.6	7.0	0.54	0.77	1	0.1	0.2	0.2	0.02	0.02	C12-13
Pharynx unspecified	6	0.6	1.0	1.1	0.05	0.13	0	0.0	0.0	0.0	0.00	0.00	C14
Oesophagus	122	11.5	19.5	24.3	1.83	2.94	14	2.0	2.2	2.4	0.16	0.28	C15
Stomach	103	9.7	16.5	21.0	1.19	2.78	41	5.9	6.3	6.2	0.23	0.78	C16
Small intestine	2	0.2	0.3	0.3	0.03	0.03	0	0.0	0.0	0.0	0.00	0.00	C17
Colon	42	3.9	6.7	8.3	0.50	1.09	40	5.8	6.2	6.3	0.37	0.65	C18
Rectum	18	1.7	2.9	3.6	0.22	0.45	20	2.9	3.1	3.2	0.24	0.36	C19-20
Anus	3	0.3	0.5	0.6	0.07	0.07	3	0.4	0.5	0.5	0.02	0.10	C21
Liver	18	1.7	2.9	3.5	0.24	0.47	10	1.4	1.5	1.6	0.09	0.19	C22
Gallbladder etc.	8	0.8	1.3	1.5	0.10	0.20	16	2.3	2.5	2.5	0.08	0.34	C23-24
Pancreas	19	1.8	3.0	4.1	0.26	0.51	10	1.4	1.5	1.5	0.07	0.14	C25
Nose, sinuses etc.	5	0.5	0.8	1.0	0.08	0.13	1	0.1	0.2	0.2	0.01	0.01	C30-31
Larynx	24	2.3	3.8	4.8	0.41	0.54	2	0.3	0.3	0.4	0.02	0.05	C32
Trachea, bronchus and lung	162	15.2	25.9	33.9	1.65	4.49	18	2.6	2.8	2.8	0.13	0.33	C33-34
Other thoracic organs	4	0.4	0.6	0.7	0.04	0.04	1	0.1	0.2	0.2	0.02	0.02	C37-38
Bone	6	0.6	1.0	0.9	0.06	0.06	2	0.3	0.3	0.3	0.02	0.02	C40-41
Melanoma of skin	11	1.0	1.8	1.9	0.13	0.24	4	0.6	0.6	0.6	0.04	0.08	C43
†Other skin	28		4.5	5.6	0.30	0.59	26		4.0	3.7	0.16	0.33	C44
Mesothelioma	2	0.2	0.3	0.5	0.00	0.04	2	0.3	0.3	0.3	0.03	0.03	C45
Kaposi sarcoma	5	0.5	0.8	0.6	0.05	0.05	0	0.0	0.0	0.0	0.00	0.00	C46
Connective and soft tissue	6	0.6	1.0	1.0	0.06	0.10	2	0.3	0.3	0.3	0.01	0.05	C47+C49
Breast	5	0.5	0.8	1.1	0.08	0.17	174	25.2	26.9	29.2	2.08	3.44	C50
Vulva							1	0.1	0.2	0.2	0.00	0.03	C51
Vagina							4	0.6	0.6	0.6	0.04	0.07	C52
Cervix uteri							109	15.8	16.9	17.7	1.33	2.00	C53
Corpus uteri							32	4.6	5.0	5.2	0.28	0.79	C54
Uterus unspecified							6	0.9	0.9	1.0	0.07	0.11	C55
Ovary							39	5.7	6.0	6.7	0.45	0.89	C56
Other female genital organs							1	0.1	0.2	0.1	0.00	0.00	C57
Placenta							1	0.1	0.2	0.1	0.01	0.01	C58
Penis	1	0.1	0.2	0.2	0.01	0.01							C60
Prostate	122	11.5	19.5	26.6	0.51	3.42							C61
Testis	5	0.5	0.8	0.7	0.05	0.05							C62
Other male genital organs	1	0.1	0.2	0.2	0.02	0.02							C63
Kidney	12	1.1	1.9	2.4	0.17	0.25	10	1.4	1.5	1.5	0.11	0.11	C64
Renal pelvis	1	0.1	0.2	0.2	0.02	0.02	0	0.0	0.0	0.0	0.00	0.00	C65
Ureter	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C66
Bladder	56	5.3	9.0	12.0	0.57	1.53	8	1.2	1.2	1.3	0.06	0.18	C67
Other urinary organs	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C68
Eye	1	0.1	0.2	0.2	0.00	0.04	2	0.3	0.3	0.4	0.03	0.03	C69
Brain, nervous system	14	1.3	2.2	2.7	0.18	0.26	11	1.6	1.7	1.9	0.10	0.25	C70-72
Thyroid	2	0.2	0.3	0.4	0.02	0.02	9	1.3	1.4	1.3	0.09	0.09	C73
Adrenal gland	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C74
Other endocrine	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C75
Hodgkin disease	6	0.6	1.0	1.0	0.08	0.08	2	0.3	0.3	0.3	0.02	0.02	C81
Non-Hodgkin lymphoma	39	3.7	6.2	7.5	0.45	0.85	20	2.9	3.1	3.2	0.11	0.34	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C88
Multiple myeloma	20	1.9	3.2	4.0	0.24	0.42	19	2.8	2.9	3.2	0.13	0.55	C90
Lymphoid leukaemia	8	0.8	1.3	1.5	0.11	0.11	7	1.0	1.1	0.9	0.03	0.07	C91
Myeloid leukaemia	17	1.6	2.7	3.2	0.16	0.37	10	1.4	1.5	1.7	0.10	0.21	C92-94
Leukaemia unspecified	5	0.5	0.8	1.0	0.03	0.13	1	0.1	0.2	0.1	0.00	0.00	C95
Other and unspecified	44	4.1	7.0	8.7	0.49	0.91	28	4.1	4.3	4.2	0.20	0.40	O&U
All sites	1093		174.8	220.2	12.58	26.77	716		110.9	115.2	7.07	13.49	ALL
All sites but C44	1065	100.0	170.3	214.6	12.28	26.18	690	100.0	106.8	111.6	6.92	13.15	ALLbC44

†See note following population pyramid

The Gambia

Registration area

The Gambia is a small country in West Africa (11 300 km²) occupying a strip of land on both banks of the river Gambia. The country is divided into seven administrative districts, and more than three quarters of the population are rural, engaged in peasant farming and stock rearing.

Cancer care facilities

Primary health care is delivered through village health posts, dispensaries and minor health centres. Qualified medical doctors at the major health centres and private 'non-profit' institutions provide secondary care. There are also several private clinics, mainly in and around the capital city, that deliver general medical care. There are three major hospitals providing facilities for tertiary and/or specialist care, the Royal Victoria Hospital (RVH) in the capital city of Banjul, Bansang Hospital in the centre of the country and the Medical Research Council (MRC) Laboratories of the UK. The RVH and Bansang hospitals are semi-autonomous government-owned institutions with services in surgery, dentistry, paediatrics, obstetrics and gynaecology, ophthalmology, pathology, radiology (X-ray only) and general medicine.

As part of efforts to improve diagnosis of cancer in the country a pathology service has been set up. This service is at its infancy, located at the country's only histopathology laboratory based in the RVH.

Registry structure and methods

The National Cancer Registry of The Gambia (NCR) covers the entire country. During the period for which data are published here, registration was carried out from the NCR, located in the MRC in Banjul. In 1997 registration was decentralized and a registrar posted in each major hospital to work with the clinical, nursing and medical records staff and to collect data from other private and public sources in the area of the hospital.

Notification is voluntary. Doctors in the public and private sectors willing to collaborate are supplied with notification forms designed by the registry. In addition, data are collected actively by the trained registrars from all health institutions that provide secondary or tertiary care. Sources of data include laboratory reports (mostly histopathology, haematology and biochemistry), patient case notes, ward admissions and discharges, nursing report books, medical records ledgers, and theatre record books. Personal interviews with patients are also carried out to estimate age and determine usual place of residence and nationality. Most Gambians do not know their exact date of birth, and there is considerable migration across national or regional borders, often in search of better health care. The Gambia's immigration service has issued national identity cards (ID) to all adult citizens (18 and above), the possession of which is mandatory by law. The ID contains information on age and usual place of residence. If a patient is not in possession of a valid ID card, the person is eligible for inclusion into the cancer register only if he or she has resided for three or more years in the country before first presentation of symptoms. This criterion effectively excludes non-residents who come to seek treatment in The Gambia.

Registration of death is incomplete in Gambia. A death certificate is only needed in order to obtain a permit for burial within the capital city, Banjul (with only 6% of the population), or for legal

purposes. Copies of certificates mentioning cancer are obtained from the registration office.

The registry is computerized and uses the IARC/IACR CanReg software.

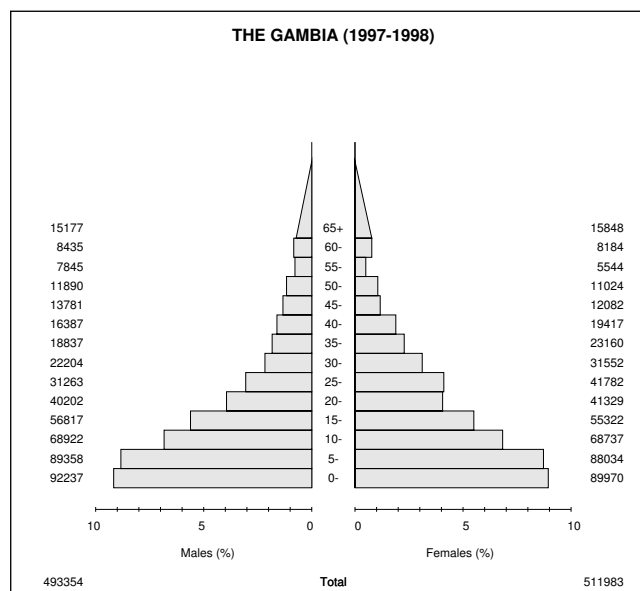
Interpreting the results

The number of cases increased rapidly from 1997, probably due to an increase in the number of specialists in-country and the decentralization of the registration process as described above. In addition, special liver disease referral clinics were set up in the major hospitals to assist subject recruitment for a case-control study on the etiology of liver cancer in which the registry was involved.

Use of the data

The NCR was established in July 1986 as part of the Gambia Hepatitis Intervention Study (GHIS) project. This is a joint venture between IARC, the MRC and the Government of The Gambia, to measure the effectiveness of vaccination in preventing both chronic carriage of HBV and cancer of the liver.

Recently, the NCR started a study on survival from cancer in The Gambia as part of an international study. The aim is to establish feasible and cost-effective methods of active follow-up in the context of The Gambia, estimate population-based survival for selected cancer sites registered during 1993-1997, and compare the survival experience with that in other African countries.



Source of population

Population and Housing Censuses of the Gambia 1983 and 1993, Central Statistics Dept., Banjul, The Gambia

Notes on the data

* Registration has been irregular, particularly in the rural population, and numbers are low. Data are published for the last two years of the period because of improved ascertainment at that time.

***THE GAMBIA (1997-1998)**

SITE	MALE					FEMALE					ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 0-74 (percent)	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64 0-74 (percent)	
Lip	1	0.2	0.1	0.2	0.02	2	0.4	0.2	0.3	0.03	C00
Tongue	1	0.2	0.1	0.2	0.00	2	0.4	0.2	0.5	0.02	C01-02
Mouth	2	0.5	0.2	0.5	0.05	3	0.6	0.3	0.3	0.02	C03-06
Salivary glands	2	0.5	0.2	0.1	0.01	2	0.4	0.2	0.0	0.00	C07-08
Tonsil	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C09
Other oropharynx	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C10
Nasopharynx	1	0.2	0.1	0.0	0.00	0	0.0	0.0	0.0	0.00	C11
Hypopharynx	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C12-13
Pharynx unspecified	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C14
Oesophagus	7	1.6	0.7	1.4	0.10	5	1.1	0.5	1.1	0.05	C15
Stomach	11	2.5	1.1	2.5	0.12	8	1.7	0.8	2.1	0.19	C16
Small intestine	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C17
Colon	3	0.7	0.3	0.5	0.02	5	1.1	0.5	1.1	0.08	C18
Rectum	4	0.9	0.4	0.7	0.06	7	1.5	0.7	1.1	0.06	C19-20
Anus	1	0.2	0.1	0.2	0.02	2	0.4	0.2	0.3	0.03	C21
Liver	257	58.0	26.0	48.9	3.92	91	19.5	8.9	17.6	1.45	C22
Gallbladder etc.	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C23-24
Pancreas	9	2.0	0.9	1.8	0.16	7	1.5	0.7	1.9	0.17	C25
Nose, sinuses etc.	1	0.2	0.1	0.2	0.02	0	0.0	0.0	0.0	0.00	C30-31
Larynx	1	0.2	0.1	0.2	0.02	1	0.2	0.1	0.2	0.02	C32
Trachea, bronchus and lung	22	5.0	2.2	5.1	0.25	3	0.6	0.3	0.5	0.04	C33-34
Other thoracic organs	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C37-38
Bone	7	1.6	0.7	1.0	0.08	4	0.9	0.4	0.5	0.03	C40-41
Melanoma of skin	2	0.5	0.2	0.3	0.02	1	0.2	0.1	0.1	0.01	C43
Other skin	6		0.6	1.0	0.05	12		1.2	2.4	0.14	C44
Mesothelioma	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C45
Kaposi sarcoma	4	0.9	0.4	0.6	0.04	4	0.9	0.4	0.4	0.03	C46
Connective and soft tissue	8	1.8	0.8	1.5	0.10	6	1.3	0.6	0.7	0.05	C47+C49
Breast	1	0.2	0.1	0.2	0.02	41	8.8	4.0	7.0	0.47	C50
Vulva						1	0.2	0.1	0.2	0.03	C51
Vagina						2	0.4	0.2	0.2	0.01	C52
Cervix uteri						171	36.6	16.7	29.8	2.54	C53
Corpus uteri						10	2.1	1.0	2.1	0.21	C54
Uterus unspecified						10	2.1	1.0	1.6	0.09	C55
Ovary						13	2.8	1.3	2.0	0.17	C56
Other female genital organs						1	0.2	0.1	0.1	0.00	C57
Placenta						1	0.2	0.1	0.1	0.01	C58
Penis	4	0.9	0.4	0.7	0.04						C60
Prostate	20	4.5	2.0	4.7	0.10						C61
Testis	2	0.5	0.2	0.3	0.00						C62
Other male genital organs	1	0.2	0.1	0.2	0.03						C63
Kidney	3	0.7	0.3	0.4	0.01	6	1.3	0.6	1.0	0.11	C64
Renal pelvis	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C65
Ureter	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C66
Bladder	6	1.4	0.6	1.2	0.09	3	0.6	0.3	0.5	0.01	C67
Other urinary organs	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C68
Eye	6	1.4	0.6	1.0	0.06	5	1.1	0.5	0.6	0.05	C69
Brain, nervous system	1	0.2	0.1	0.1	0.00	1	0.2	0.1	0.2	0.03	C70-72
Thyroid	0	0.0	0.0	0.0	0.00	4	0.9	0.4	1.0	0.12	C73
Adrenal gland	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C74
Other endocrine	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C75
Hodgkin disease	6	1.4	0.6	0.5	0.03	3	0.6	0.3	0.4	0.00	C81
Non-Hodgkin lymphoma	19	4.3	1.9	2.4	0.16	13	2.8	1.3	1.0	0.04	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C88
Multiple myeloma	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C90
Lymphoid leukaemia	1	0.2	0.1	0.1	0.01	0	0.0	0.0	0.0	0.00	C91
Myeloid leukaemia	0	0.0	0.0	0.0	0.00	0	0.0	0.0	0.0	0.00	C92-94
Leukaemia unspecified	3	0.7	0.3	0.2	0.01	3	0.6	0.3	0.4	0.04	C95
Other and unspecified	26	5.9	2.6	5.4	0.41	26	5.6	2.5	4.5	0.28	O&U
All sites	449		45.5	84.5	6.07	479		46.8	84.6	6.73	ALL
All sites but C44	443	100.0	44.9	83.5	6.01	467	100.0	45.6	82.3	6.58	ALLbC44

§Includes 35 cases of unknown age

§Includes 53 cases of unknown age

Mali, Bamako

Registration area

Mali is situated in the centre of West Africa. It is a large country (1.24 million km²), consisting mostly of savannah and lateritic plains, merging into the sandy desert of the Sahara to the north. The west and south-west, however, have more highland and forested regions, and the two great rivers of western Africa, the Senegal and Niger, traverse the southern and western part of the country.

There are several ethnic groups: Mande 50% (Bambara, Malinke, Sarakole), Peul 17%, Mowsi 12%, Songhvi 6%, Tuareg and Moor 10% and others 5%. Most are Moslem and 83% of the population is rural, engaged in agriculture growing principally millet, sorghum, rice, maize and tropical fruit for local consumption; cotton and groundnuts are the principal export crops. Stock-rearing, particularly of cattle, is the second most important rural activity, and fishing is carried out extensively in the major rivers. There is very little industry.

Cancer care facilities

In common with other developing countries, the health care infrastructure is far from adequate. Hospitals, clinics and other health facilities are concentrated in the capital city of Bamako. Two major hospitals provide tertiary care: Hôpital Gabriel Touré and Hôpital de Point G. The only histopathology laboratory in Mali is the Department of Pathology of the National Institute of Public Health Research, where the registry is located.

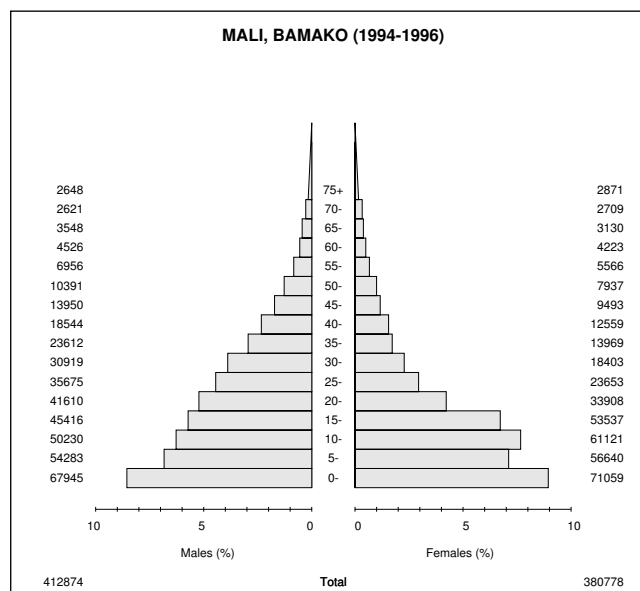
Registry structure and methods

The registry started in 1986 and covers the population of Bamako and its immediate surroundings. Active case-finding is carried out by a cancer registrar who regularly visits the principal health-care structures. These basically consist of the two public hospitals within the city, and Kati hospital, 15 km distant. Visits are also made to two specialized institutes (dermatology and ophthalmology) and to two centres of maternal and child health staffed by gynaecologists. In each service there is a contact person for the registry, usually the head nurse who, under the supervision of the consulting physician, records information on all cancer diagnoses using a form provided by the registry. During his regular visits, the registrar checks these forms for completeness and verifies the information obtained from other sources, e.g. ward books, operation lists, as well as with the medical and nursing staff. The frequency of visits is determined by the number of cases detected.

Death registration is incomplete in Mali and covers only the city of Bamako, where a death certificate is required in order to obtain a burial permit. Copies of death certificates are obtained and the death register is scanned by the registry as a source of information.

Registration is confined to 'usual residents', defined as having lived for at least six months in Bamako or having the intention to stay for six months.

The registry uses the IARC/IACR CanReg software for data management. This allows a search for duplicate records based on name, age, sex and ethnic group.



Source of population

The population is estimated based on the 1992 census (Recensement Général de la Population et de l'Habitat 1992) and on official government estimates for 1995.

Notes on the data

* There is evidence of under-registration for several sites. The figures are not comparable with those published in Volume VII as there was an error in the population data submitted for that volume.

† C67 does not include non-invasive tumours

Note: The male and female populations were reversed in Volume VII and the data are not comparable. Corrected data for Volume VII are provided on the CD-ROM.

***MALI, BAMAKO (1994-1996)**

SITE	MALE						FEMALE						ICD-10
	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	Cum. rates 0-74	No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates 0-64	Cum. rates 0-74	
Lip	2	0.3	0.2	0.6	0.04	0.08	1	0.1	0.1	0.2	0.02	0.02	C00
Tongue	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C01-02
Mouth	3	0.5	0.2	0.6	0.00	0.07	1	0.1	0.1	0.2	0.00	0.06	C03-06
Salivary glands	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C07-08
Tonsil	2	0.3	0.2	0.5	0.02	0.07	0	0.0	0.0	0.0	0.00	0.00	C09
Other oropharynx	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C10
Nasopharynx	0	0.0	0.0	0.0	0.00	0.00	1	0.1	0.1	0.1	0.00	0.00	C11
Hypopharynx	1	0.2	0.1	0.1	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C12-13
Pharynx unspecified	1	0.2	0.1	0.3	0.00	0.05	1	0.1	0.1	0.1	0.01	0.01	C14
Oesophagus	17	2.9	1.4	3.0	0.29	0.29	9	1.3	0.8	1.7	0.15	0.15	C15
Stomach	91	15.5	7.3	17.7	1.34	2.26	94	14.1	8.2	20.8	1.55	2.32	C16
Small intestine	1	0.2	0.1	0.1	0.01	0.01	0	0.0	0.0	0.0	0.00	0.00	C17
Colon	11	1.9	0.9	2.1	0.14	0.24	10	1.5	0.9	1.7	0.13	0.20	C18
Rectum	17	2.9	1.4	2.4	0.12	0.23	9	1.3	0.8	1.9	0.14	0.20	C19-20
‡Anus	4	0.7	0.3	0.6	0.06	0.06	6	0.9	0.5	1.1	0.11	0.11	C21
Liver	197	33.6	15.9	31.2	2.50	3.42	67	10.0	5.9	14.7	1.00	1.77	C22
Gallbladder etc.	2	0.3	0.2	0.4	0.04	0.04	2	0.3	0.2	0.6	0.08	0.08	C23-24
Pancreas	8	1.4	0.6	2.0	0.11	0.28	3	0.4	0.3	0.6	0.03	0.09	C25
Nose, sinuses etc.	1	0.2	0.1	0.2	0.02	0.02	0	0.0	0.0	0.0	0.00	0.00	C30-31
Larynx	4	0.7	0.3	0.9	0.07	0.12	0	0.0	0.0	0.0	0.00	0.00	C32
Trachea, bronchus and lung	12	2.0	1.0	2.7	0.13	0.38	1	0.1	0.1	0.1	0.01	0.01	C33-34
Other thoracic organs	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C37-38
Bone	4	0.7	0.3	0.4	0.01	0.01	4	0.6	0.4	0.2	0.01	0.01	C40-41
Melanoma of skin	0	0.0	0.0	0.0	0.00	0.00	5	0.7	0.4	1.2	0.11	0.17	C43
Other skin	17		1.4	2.2	0.21	0.21	15		1.3	2.9	0.17	0.36	C44
Mesothelioma	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C45
Kaposi sarcoma	16	2.7	1.3	2.1	0.08	0.29	8	1.2	0.7	1.0	0.08	0.08	C46
Connective and soft tissue	10	1.7	0.8	1.5	0.10	0.14	4	0.6	0.4	0.5	0.04	0.04	C47+C49
Breast	5	0.9	0.4	0.8	0.04	0.09	103	15.4	9.0	20.0	1.64	2.09	C50
Vulva							1	0.1	0.1	0.2	0.02	0.02	C51
Vagina							1	0.1	0.1	0.1	0.00	0.00	C52
Cervix uteri							182	27.3	15.9	35.9	2.96	3.76	C53
Corpus uteri							8	1.2	0.7	1.7	0.18	0.18	C54
Uterus unspecified							16	2.4	1.4	3.3	0.19	0.41	C55
Ovary							12	1.8	1.1	2.1	0.11	0.29	C56
Other female genital organs							0	0.0	0.0	0.0	0.00	0.00	C57
Placenta							2	0.3	0.2	0.3	0.02	0.02	C58
Penis	0	0.0	0.0	0.0	0.00	0.00							C60
Prostate	29	4.9	2.3	7.6	0.35	1.08							C61
Testis	4	0.7	0.3	0.6	0.04	0.08							C62
Other male genital organs	0	0.0	0.0	0.0	0.00	0.00							C63
Kidney	8	1.4	0.6	0.9	0.09	0.09	11	1.6	1.0	1.7	0.12	0.24	C64
Renal pelvis	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C65
Ureter	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C66
†Bladder	59	10.1	4.8	11.3	0.64	1.34	28	4.2	2.5	5.8	0.41	0.69	C67
Other urinary organs	0	0.0	0.0	0.0	0.00	0.00	1	0.1	0.1	0.2	0.02	0.02	C68
Eye	10	1.7	0.8	1.2	0.05	0.18	8	1.2	0.7	0.9	0.01	0.13	C69
Brain, nervous system	0	0.0	0.0	0.0	0.00	0.00	1	0.1	0.1	0.1	0.00	0.00	C70-72
Thyroid	1	0.2	0.1	0.1	0.01	0.01	5	0.7	0.4	0.7	0.07	0.07	C73
Adrenal gland	0	0.0	0.0	0.0	0.00	0.00	2	0.3	0.2	0.3	0.00	0.07	C74
Other endocrine	0	0.0	0.0	0.0	0.00	0.00	1	0.1	0.1	0.2	0.02	0.02	C75
Hodgkin disease	14	2.4	1.1	1.1	0.08	0.08	9	1.3	0.8	1.1	0.11	0.11	C81
Non-Hodgkin lymphoma	20	3.4	1.6	2.0	0.13	0.13	18	2.7	1.6	2.2	0.19	0.19	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C88
Multiple myeloma	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C90
Lymphoid leukaemia	0	0.0	0.0	0.0	0.00	0.00	2	0.3	0.2	0.3	0.01	0.01	C91
Myeloid leukaemia	12	2.0	1.0	1.3	0.10	0.10	10	1.5	0.9	2.3	0.24	0.24	C92-94
Leukaemia unspecified	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C95
Other and unspecified	20	3.4	1.6	2.3	0.15	0.15	20	3.0	1.8	3.8	0.23	0.52	O&U
All sites	603		48.7	100.7	6.98	11.59	682		59.7	133.1	10.21	14.77	ALL
All sites but C44	586	100.0	47.3	98.5	6.78	11.39	667	100.0	58.4	130.3	10.04	14.41	ALLbC44

‡50.0% of cases are anorectal tumours

‡83.3% of cases are anorectal tumours

†See note following population pyramid

Uganda, Kyadondo County

Registration area

The Kampala Cancer Registry collects data on the population of Kyadondo county which includes that of Kampala, the capital of Uganda, with its peri-urban areas and an area extending 30 km to the north. This population, which is mainly urban (80%), is composed of the Ganda ethnic group (50%) and other ethnic groups (30%). There are also immigrants from neighbouring countries, particularly from Kenya and Rwanda. One per cent of the population is composed of Europeans, Asians and other nationalities.

The major activities of the residents of the capital include administration, trade, professional and para-professional activities, personal services, plant and machine operators. There are no major industries in the county. Subsistence farming is carried out on the outskirts of the capital.

50% of the population are Catholic, 30% Anglican, 15% Muslim and 5% other.

The main foods consumed by the population of Kyadondo county include matoke (steamed green banana), posho (maize bread), beans and groundnuts. About 50% of the city dwellers receive chlorine treated piped water from lake Victoria which is a fresh water lake.

Cancer care facilities

Kyadondo county is served by a 900-bed national referral hospital, Mulago Hospital, which is well equipped with modern diagnostic facilities. Mulago, which is also a teaching hospital for Makerere University Faculty of Medicine, is well supplied with consultants and teaching staff of the Faculty in all disciplines of medicine. An oncology unit involved in chemotherapy for various types of cancer and a radiotherapy unit are attached. The county has three other missionary hospitals with 100 beds each. A hospice unit has been set up in the county to cater for the care of terminal cancer cases in addition to other terminal diseases. A private histopathology laboratory has also been established in the capital which provides additional histological data.

Registry structure and methods

The Kampala Cancer Registry is situated in the Department of Pathology, Faculty of Medicine, Makerere University. Personnel consist of a director who is a pathologist, a cancer registrar and an assistant cancer registrar. who are all employees of Makerere University.

However, in various hospitals and units the registry has recruited personnel to assist in co-ordinating collection of data. Submission of data to the registry is voluntary as cancer is not a notifiable disease and mainly active registration is carried out. Doctors report a few cases to the registry directly. For hospitals, hospice and histopathology laboratories, the registrars visit at least once a month and consult the hospital records, which include admissions and discharge registers, clinical notes and pathology reports. For each case both demographic and cancer diagnostic data are sought. There is no access to death certificates in all health units of the county.

The registry is computerized and data management is carried out using the IARC/IACR CanReg software, which includes checks for consistency and validity and permits a search for potential duplicate registrations.

Confidentiality is taken care of by using only registration numbers during analysis of data. The registry is out of bounds for unauthorized persons.

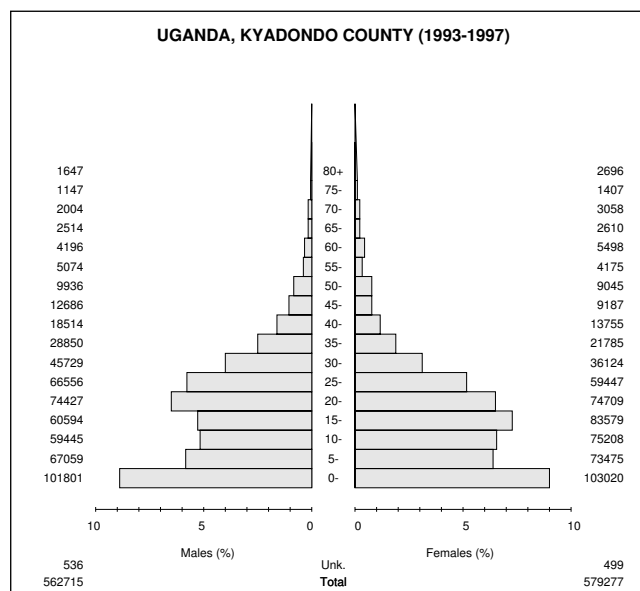
Interpreting the results

Since its inception in 1951, the county covered by the registry has not changed its boundaries. However the population is increasingly becoming more urbanized as the city expands. Migration to the county is also on the increase as part of the worldwide trend of rural to urban migration. Another factor which may influence incidence rates is availability of diagnostic services, which is improving, particularly in the national referral hospital.

Screening programmes for cancer are not organized, but with the health-oriented population of the county many patients seek screening services. PSA testing, mammography and Pap smears are done on an individual basis.

Use of the data

The data provided by the Kampala Cancer Registry have been used mainly for research, particularly as the baseline for analytical studies and intervention studies. The reporting of incidence is of particular interest to health planners.



Source of population

The population is based on the 1992 census and a 1995 estimate.

Notes on the data

* There are doubts about the accuracy of the denominator.

***UGANDA, KYADONDO COUNTY (1993-1997)**

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C00
Tongue	5	0.2	0.2	0.3	0.03	0.03	1	0.0	0.0	0.1	0.00	0.03	C01-02
Mouth	18	0.9	0.6	1.9	0.11	0.25	15	0.7	0.5	1.7	0.11	0.21	C03-06
Salivary glands	4	0.2	0.1	0.4	0.01	0.06	9	0.4	0.3	0.8	0.07	0.10	C07-08
Tonsil	8	0.4	0.3	0.7	0.07	0.07	1	0.0	0.0	0.1	0.02	0.02	C09
Other oropharynx	1	0.0	0.0	0.2	0.02	0.02	1	0.0	0.0	0.1	0.00	0.00	C10
Nasopharynx	33	1.6	1.2	1.8	0.18	0.18	30	1.3	1.0	1.4	0.12	0.12	C11
Hypopharynx	1	0.0	0.0	0.2	0.02	0.02	4	0.2	0.1	0.5	0.05	0.05	C12-13
Pharynx unspecified	7	0.3	0.2	0.7	0.05	0.05	0	0.0	0.0	0.0	0.00	0.00	C14
Oesophagus	106	5.2	3.8	13.2	0.82	1.56	91	4.1	3.1	12.2	0.68	1.65	C15
Stomach	57	2.8	2.0	7.0	0.39	0.83	47	2.1	1.6	5.5	0.51	0.65	C16
Small intestine	1	0.0	0.0	0.2	0.00	0.05	1	0.0	0.0	0.1	0.01	0.01	C17
Colon	27	1.3	1.0	3.4	0.19	0.34	29	1.3	1.0	3.7	0.22	0.51	C18
Rectum	35	1.7	1.2	3.6	0.18	0.40	24	1.1	0.8	2.8	0.21	0.35	C19-20
Anus	6	0.3	0.2	0.7	0.01	0.10	8	0.4	0.3	0.8	0.05	0.11	C21
Liver	74	3.6	2.6	6.5	0.48	0.84	59	2.6	2.0	6.0	0.46	0.70	C22
Gallbladder etc.	0	0.0	0.0	0.0	0.00	0.00	1	0.0	0.0	0.1	0.01	0.01	C23-24
Pancreas	8	0.4	0.3	1.0	0.04	0.13	9	0.4	0.3	1.1	0.12	0.15	C25
Nose, sinuses etc.	13	0.6	0.5	1.3	0.05	0.19	11	0.5	0.4	1.0	0.11	0.11	C30-31
Larynx	10	0.5	0.4	1.3	0.12	0.16	8	0.4	0.3	1.1	0.02	0.14	C32
Trachea, bronchus and lung	33	1.6	1.2	3.9	0.28	0.51	23	1.0	0.8	2.3	0.20	0.27	C33-34
Other thoracic organs	2	0.1	0.1	0.3	0.01	0.06	5	0.2	0.2	0.5	0.04	0.07	C37-38
Bone	24	1.2	0.9	1.3	0.08	0.13	16	0.7	0.6	0.7	0.03	0.09	C40-41
Melanoma of skin	11	0.5	0.4	1.3	0.06	0.20	13	0.6	0.4	2.0	0.12	0.27	C43
Other skin	32		1.1	3.8	0.19	0.46	12		0.4	1.1	0.07	0.14	C44
Mesothelioma	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C45
Kaposi sarcoma	843	41.3	30.0	37.9	2.94	3.39	533	23.9	18.4	20.4	1.49	1.56	C46
Connective and soft tissue	35	1.7	1.2	2.2	0.16	0.21	47	2.1	1.6	3.0	0.24	0.30	C47+C49
Breast	10	0.5	0.4	1.0	0.04	0.09	224	10.0	7.7	20.7	1.62	2.15	C50
Vulva							5	0.2	0.2	0.6	0.04	0.10	C51
Vagina							8	0.4	0.3	0.5	0.04	0.04	C52
Cervix uteri							465	20.9	16.1	41.7	3.26	4.44	C53
Corpus uteri							29	1.3	1.0	3.3	0.29	0.36	C54
Uterus unspecified							19	0.9	0.7	2.1	0.16	0.25	C55
Ovary							75	3.4	2.6	6.3	0.50	0.70	C56
Other female genital organs							6	0.3	0.2	0.7	0.05	0.09	C57
Placenta							16	0.7	0.6	0.8	0.07	0.07	C58
Penis	34	1.7	1.2	4.0	0.12	0.51							C60
Prostate	215	10.5	7.6	37.1	1.19	4.54							C61
Testis	6	0.3	0.2	0.5	0.06	0.06							C62
Other male genital organs	4	0.2	0.1	0.4	0.02	0.07							C63
Kidney	21	1.0	0.7	1.0	0.06	0.10	17	0.8	0.6	1.1	0.10	0.10	C64
Renal pelvis	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C65
Ureter	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C66
Bladder	17	0.8	0.6	2.9	0.09	0.41	8	0.4	0.3	1.2	0.05	0.16	C67
Other urinary organs	1	0.0	0.0	0.2	0.02	0.02	5	0.2	0.2	0.4	0.03	0.03	C68
Eye	76	3.7	2.7	2.9	0.22	0.22	64	2.9	2.2	2.8	0.23	0.23	C69
Brain, nervous system	11	0.5	0.4	0.8	0.08	0.08	6	0.3	0.2	0.4	0.03	0.03	C70-72
Thyroid	6	0.3	0.2	0.6	0.06	0.06	47	2.1	1.6	4.6	0.41	0.49	C73
Adrenal gland	1	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C74
Other endocrine	1	0.0	0.0	0.0	0.00	0.00	2	0.1	0.1	0.3	0.03	0.03	C75
Hodgkin disease	18	0.9	0.6	1.2	0.06	0.15	20	0.9	0.7	0.7	0.05	0.05	C81
Non-Hodgkin lymphoma	141	6.9	5.0	5.8	0.33	0.45	110	4.9	3.8	4.2	0.25	0.39	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C88
Multiple myeloma	2	0.1	0.1	0.1	0.01	0.01	9	0.4	0.3	1.1	0.08	0.12	C90
Lymphoid leukaemia	6	0.3	0.2	0.2	0.01	0.01	7	0.3	0.2	0.5	0.05	0.05	C91
Myeloid leukaemia	8	0.4	0.3	0.2	0.02	0.02	7	0.3	0.2	0.6	0.06	0.06	C92-94
Leukaemia unspecified	9	0.4	0.3	0.4	0.04	0.04	10	0.4	0.3	0.5	0.02	0.02	C95
Other and unspecified	93	4.6	3.3	9.1	0.59	1.07	84	3.8	2.9	7.1	0.45	0.73	O&U
All sites	2074		73.7	161.9	9.47	17.97	2241		77.4	171.0	12.83	18.31	ALL
All sites but C44	2042	100.0	72.6	158.1	9.28	17.50	2229	100.0	77.0	169.9	12.76	18.17	ALLbC44

§Includes 87 cases of unknown age

§Includes 60 cases of unknown age

Zimbabwe, Harare

Registration area

Harare is located in north-eastern Zimbabwe and is the country's capital city. The population of the city according to an inter-census survey conducted in 1997 was 1.5 million, comprising 96% Africans (mainly Shona and Ndebele), 3% Europeans and the remainder of Asian or mixed ethnicity.

Cancer care facilities

Harare has a reasonably well developed medical delivery system based on a network of primary health care facilities provided by the municipality and government-funded referral facilities. This is complemented by a private sector that caters mainly for the middle and higher income groups.

Registry structure and methods

The Zimbabwe National Cancer Registry (NCR) was established in 1985 in Harare as a result of an agreement between IARC and the Zimbabwean Ministry of Health. The target population of the registry is that of Harare city and adequate population coverage was achieved in 1990. Although the registry records all cancer patients identified from its information sources, irrespective of residence, the present data for 1993–1997 are confined to the Harare city population.

The activities of the registry are overseen by a constituted advisory committee and the day-to-day administration is the responsibility of the registrar under the guidance of the medical director. The registry has four full-time staff comprising the registrar, secretary and two data collection clerks. It is strategically located at Parirenyatwa Hospital, a large government referral centre and the location of the Medical School of the University of Zimbabwe. The project is supported by the Ministry of Health and Child Welfare, IARC and other organizations.

Case-finding is mainly active, with the registry staff visiting institutions within the health care delivery system which are involved in the management of cancer patients. The registry information sources include:

- (1) Routine weekly visits to the inpatient wards of the two government central referral hospitals (Harare and Parirenyatwa).
- (2) Medical records of discharged and deceased cancer patients from the two central hospitals and visits to oncology outpatient clinics.
- (3) Histology reports from the public and private sectors.
- (4) Medical records of the radiotherapy department.
- (5) Death certificates of patients dying of cancer in greater Harare.
- (6) Records of specific clinical research studies.

Hospital inpatients are interviewed to verify the accuracy of reported age, residential status and other demographic data. Information recorded on each case includes sex, date of birth or age, residence, racial group, basis of diagnosis, tumour site and histology. Residence status is defined as the patient's place of residence during the last six months.

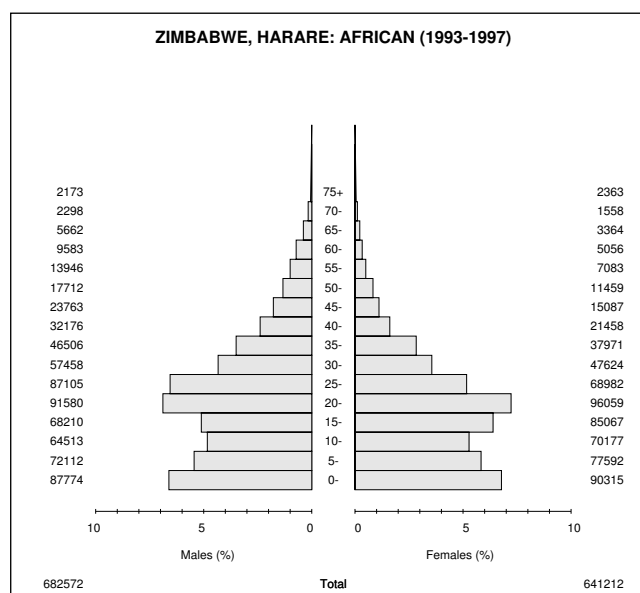
All notifications coming into the registry are thoroughly vetted to ensure that only incident cases are recorded. Incident cases are verified by treating doctors to confirm the diagnosis and completed

forms are coded. The data are stored on a microcomputer using the IARC/IACR CanReg system. Patient name lists are generated periodically to physically identify and eliminate duplicates.

When several lesions of the same histological type occur in a patient, only the first lesion is registered. Subsequent lesions are ignored. For example, the incidence of non-melanoma skin cancer is very high in the white community of Zimbabwe and many patients develop several lesions of the same histological type during their lifetime. However, if basal cell carcinoma and squamous cell carcinoma of the skin occur in the same patient affecting the same or different sites, they are recorded separately.

Use of the data

Data from the registry are extensively utilized by both indigenous and foreign researchers, conference participants, lecturers, students, health educators, and the Ministry of Health and Child Welfare for management planning and cancer control programmes.



Source of population

Average annual estimate based on the 1982 and 1992 censuses and 1997 intercensal estimate.

Notes on the data

* There are doubts about the accuracy of the denominator.

Note: The estimated population data used in Volume VII were not accurate, resulting in over-estimation of reported incidence rates. Corrected data are provided on the CD-ROM.

***ZIMBABWE, HARARE: AFRICAN (1993-1997)**

SITE	MALE						FEMALE						ICD-10
	§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		§No. cases	Freq. (%)	Crude rate (per 100,000)	ASR world	Cum. rates (percent)		
Lip	0	0.0	0.0	0.0	0.00	0.00	2	0.1	0.1	0.3	0.01	0.04	C00
Tongue	10	0.3	0.3	0.7	0.04	0.10	4	0.1	0.1	0.6	0.00	0.13	C01-02
Mouth	19	0.5	0.6	1.3	0.07	0.19	7	0.3	0.2	0.8	0.03	0.12	C03-06
Salivary glands	15	0.4	0.4	0.9	0.06	0.08	17	0.6	0.5	0.7	0.03	0.10	C07-08
Tonsil	2	0.1	0.1	0.1	0.01	0.01	1	0.0	0.0	0.1	0.01	0.01	C09
Other oropharynx	3	0.1	0.1	0.3	0.01	0.01	0	0.0	0.0	0.0	0.00	0.00	C10
Nasopharynx	12	0.3	0.4	0.5	0.04	0.04	12	0.4	0.4	0.7	0.05	0.08	C11
Hypopharynx	10	0.3	0.3	0.8	0.05	0.10	1	0.0	0.0	0.1	0.01	0.01	C12-13
Pharynx unspecified	2	0.1	0.1	0.2	0.02	0.02	1	0.0	0.0	0.0	0.00	0.00	C14
Oesophagus	223	6.0	6.5	19.3	0.95	2.08	65	2.4	2.0	8.8	0.43	1.02	C15
Stomach	129	3.4	3.8	12.0	0.55	1.45	81	3.0	2.5	10.4	0.56	1.51	C16
Small intestine	4	0.1	0.1	0.2	0.02	0.02	3	0.1	0.1	0.5	0.00	0.13	C17
Colon	55	1.5	1.6	3.9	0.22	0.48	34	1.3	1.1	3.3	0.24	0.32	C18
Rectum	44	1.2	1.3	3.3	0.14	0.38	36	1.3	1.1	3.8	0.27	0.42	C19-20
‡Anus	2	0.1	0.1	0.1	0.01	0.01	0	0.0	0.0	0.0	0.00	0.00	C21
Liver	354	9.5	10.4	27.9	1.32	3.71	106	3.9	3.3	11.6	0.65	1.52	C22
Gallbladder etc.	7	0.2	0.2	0.6	0.02	0.06	10	0.4	0.3	1.3	0.07	0.23	C23-24
Pancreas	52	1.4	1.5	4.2	0.22	0.63	27	1.0	0.8	3.9	0.19	0.58	C25
Nose, sinuses etc.	16	0.4	0.5	1.2	0.05	0.15	7	0.3	0.2	0.8	0.02	0.11	C30-31
Larynx	53	1.4	1.6	4.9	0.22	0.65	6	0.2	0.2	0.9	0.04	0.13	C32
Trachea, bronchus and lung	152	4.1	4.5	13.6	0.66	1.66	48	1.8	1.5	6.2	0.27	0.85	C33-34
Other thoracic organs	6	0.2	0.2	0.3	0.02	0.06	6	0.2	0.2	0.3	0.01	0.04	C37-38
Bone	32	0.9	0.9	1.4	0.05	0.15	25	0.9	0.8	0.9	0.05	0.08	C40-41
Melanoma of skin	28	0.7	0.8	2.0	0.12	0.15	38	1.4	1.2	4.1	0.30	0.42	C43
Other skin	55		1.6	3.3	0.18	0.42	41		1.3	2.9	0.22	0.32	C44
Mesothelioma	3	0.1	0.1	0.2	0.02	0.02	1	0.0	0.0	0.0	0.00	0.00	C45
Kaposi sarcoma	1555	41.6	45.6	50.8	4.09	4.89	554	20.5	17.3	20.3	1.60	1.69	C46
Connective and soft tissue	34	0.9	1.0	1.8	0.09	0.14	36	1.3	1.1	2.2	0.09	0.32	C47+C49
Breast	4	0.1	0.1	0.5	0.02	0.02	237	8.8	7.4	20.3	1.52	2.22	C50
Vulva							13	0.5	0.4	1.6	0.13	0.24	C51
Vagina							4	0.1	0.1	0.7	0.02	0.15	C52
Cervix uteri							613	22.7	19.1	55.0	3.83	6.82	C53
Corpus uteri							49	1.8	1.5	6.3	0.37	0.72	C54
Uterus unspecified							14	0.5	0.4	1.5	0.09	0.19	C55
Ovary							88	3.3	2.7	7.8	0.59	1.06	C56
Other female genital organs							0	0.0	0.0	0.0	0.00	0.00	C57
Placenta							13	0.5	0.4	0.3	0.02	0.02	C58
Penis	19	0.5	0.6	1.6	0.07	0.13							C60
Prostate	251	6.7	7.4	30.7	0.84	3.72							C61
Testis	12	0.3	0.4	0.4	0.03	0.05							C62
Other male genital organs	1	0.0	0.0	0.0	0.00	0.00							C63
Kidney	26	0.7	0.8	1.1	0.07	0.11	28	1.0	0.9	1.6	0.08	0.17	C64
Renal pelvis	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C65
Ureter	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C66
Bladder	94	2.5	2.8	8.3	0.41	1.11	73	2.7	2.3	8.3	0.55	1.03	C67
Other urinary organs	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C68
Eye	72	1.9	2.1	2.2	0.14	0.18	82	3.0	2.6	3.3	0.26	0.30	C69
Brain, nervous system	47	1.3	1.4	2.3	0.12	0.28	31	1.1	1.0	1.4	0.08	0.15	C70-72
Thyroid	13	0.3	0.4	0.7	0.03	0.07	31	1.1	1.0	3.6	0.16	0.47	C73
Adrenal gland	6	0.2	0.2	0.1	0.01	0.01	5	0.2	0.2	0.2	0.02	0.02	C74
Other endocrine	3	0.1	0.1	0.1	0.01	0.01	6	0.2	0.2	0.6	0.04	0.10	C75
Hodgkin disease	23	0.6	0.7	0.6	0.04	0.04	16	0.6	0.5	0.5	0.04	0.04	C81
Non-Hodgkin lymphoma	133	3.6	3.9	5.7	0.43	0.61	92	3.4	2.9	5.3	0.35	0.57	C82-85,C96
Immunoproliferative diseases	0	0.0	0.0	0.0	0.00	0.00	0	0.0	0.0	0.0	0.00	0.00	C88
Multiple myeloma	34	0.9	1.0	3.1	0.14	0.40	31	1.1	1.0	3.7	0.28	0.40	C90
Lymphoid leukaemia	31	0.8	0.9	1.3	0.06	0.14	17	0.6	0.5	1.3	0.05	0.21	C91
Myeloid leukaemia	41	1.1	1.2	1.4	0.08	0.17	39	1.4	1.2	1.6	0.11	0.18	C92-94
Leukaemia unspecified	6	0.2	0.2	0.4	0.01	0.03	5	0.2	0.2	0.3	0.03	0.03	C95
Other and unspecified	102	2.7	3.0	7.3	0.36	0.95	88	3.3	2.7	8.2	0.56	1.01	O&U
All sites	3795		111.2	223.5	12.13	25.70	2744		85.6	219.5	14.38	26.33	ALL
All sites but C44	3740	100.0	109.6	220.2	11.95	25.28	2703	100.0	84.3	216.6	14.15	26.02	ALLbC44

‡Includes 54 cases of unknown age
 ‡50.0% of cases are anorectal tumours

§Includes 46 cases of unknown age