

Chapter 11

Cancer survival in the Gambia, 1993–1997

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Abstract

The national cancer registry of the Gambia was established in 1986 as part of the Gambia Hepatitis Intervention Study in collaboration with IARC, France; Medical Research Council (MRC) Laboratories of the UK; and the Government of the Gambia at MRC, Banjul. Registration of incident cancer cases is done by active and passive methods. For this study, the registry contributed data on survival for six cancer sites or types registered during 1993–1997. Follow-up has been carried out predominantly by active methods with median follow-up ranging between 1–6 months. The proportion of histologically verified diagnosis for various cancers ranged between 1–45%, and 54–82% of total registered cases were included for survival analysis. Complete follow-up at five years from the incidence date ranged between 81–98% for different cancers. The 5-year age-standardized relative survival for selected cancers were cervix (23%), non-Hodgkin lymphoma (22%), breast (10%), stomach (4%) and liver (3%). The 5-year relative survival by age group showed fluctuations with no definite pattern or trend emerging, and with no survivors in many age intervals.

National cancer registry

The national cancer registry of the Gambia was established in 1986 as part of the Gambia Hepatitis Intervention Study in collaboration with International Agency for Research on Cancer (IARC), the Medical Research Council (MRC) Laboratories of UK and the Government of the Gambia at MRC, Banjul. It contributed data to the quinquennial IARC publication *Cancer Incidence in Five Continents* in volumes VI and VIII [1]. Cancer notification is voluntary, and registration of cases is done by passive and active methods. The principal sources of data are the medical records/registers in the hospitals in public and private sectors, pathology laboratories and other medical institutions. The registry covers the entire country of 11 300 km² and caters to a population of about 1 million in 1997–1998 with a sex ratio of 1038 females to 1000 males. The average annual age-standardized incidence rate is 84 per 100 000 among males and 85 per 100 000 among females in 1997–1998. The top ranking cancers among males are liver, lung and prostate. Among females, the order is cervix, liver and breast.

The registry contributed data on survival from 6 cancer sites or types for the first time in this volume of the IARC publication on *Cancer Survival in Africa, Asia, the Caribbean and Central America*. A random sample of 150 cases of liver cancer and 275 cases of cervix cancer among the total incident cases was

selected for this study. For the rest of the cancers, all incident cases have been included.

Data quality indices (Table 1)

The proportion of cases with histological confirmation of cancer diagnosis in this series is 25%, varying between 1% for cancer of the liver and 45% for non-Hodgkin lymphoma. The proportion of cases registered based on a death certificate only (DCO) is negligible except for lung cancer. The exclusion of cases without any follow-up information is 25%, ranging from 1% in liver cancer to 34% in non-Hodgkin lymphoma. Thus, 54–82% of the total cases in different cancers are included in the estimation of the survival probability.

Outcome of follow-up (Table 2)

Follow-up has been carried out predominantly by active methods. Cancer mortality information obtained from accessible death certificates in registration office is matched with the registry database. The vital status of the unmatched incident cases is then ascertained by repeated scrutiny of hospital records and house visits.

The closing date of follow-up was 31st December 1999. The median follow-up varied from one month in stomach, liver and lung cancers to 6 months for cervix cancer. Complete follow-up at five years from the

incidence date ranged between 81% in cancer of the lung and 98% for liver cancer. The bulk of the losses to follow-up generally occurred in the first year of follow-up.

Survival statistics

All ages and both sexes together (Table 3)

The 5-year relative survival was the highest in cancer of the lung (32%) followed by non-Hodgkin lymphoma (25%) and cervix (24%). The lowest survival rate was encountered with liver cancer (3%) and preceded by stomach cancer (5%) in the series.

The 5-year age-standardized relative survival (ASRS) probability for all ages together is either less than or similar to the corresponding unadjusted one for all the cancers except lung. The 5-year ASRS (0–74 years of age) is observed to be greater than or similar to the corresponding ASRS (all ages) for most cancers.

Sex

Male (Table 4a)

The highest 5-year relative survival was observed in lung cancer (29%). None of the breast cancer cases survived for 5 years from incidence date. The 5-year relative survival was notably higher among males than females in cancer of the stomach.

Female (Table 4a)

The 5-year relative survival estimates for breast and cervix cancers were 11% and 24% respectively. None of the stomach cancer cases survived until 5 years from incidence date. Survival from non-Hodgkin lymphoma was noticeably higher among females than males.

Age group (Table 4b)

The 5-year relative survival by age group was seen to fluctuate, with no definite pattern or trend emerging and no survivors in many age intervals.

References

1. Parkin DM, Whelan SL, Ferlay J and Storm H. *Cancer Incidence in Five Continents, Vol I to VIII: IARC Cancerbase No. 7*. IARC Press, Lyon, 2005.

Table 1. Data quality indices - Proportion of histologically verified and death certificate only cases, number and proportion of included and excluded cases by site: The Gambia, 1993–1997 cases followed-up until 1999

Site	ICD-10	Total registered	%		Excluded cases					Included cases	
			HV	DCO	DCO	Follow-up	Others	Total	%	No.	%
Stomach	C16	52	19.2	0.0	0	3	10	13	25.0	39	75.0
Liver	C22*	150	1.3	0.0	0	1	26	27	18.0	123	82.0
Lung	C33-34	48	12.5	6.3	3	4	10	17	35.4	31	64.6
Breast	C50	93	39.8	1.1	1	11	20	32	34.4	61	65.6
Cervix	C53*	275	17.5	0.4	1	29	43	73	26.5	202	73.5
Non-Hodgkin lymphoma	C82-85+C96	91	45.1	0.0	0	31	11	42	46.2	49	53.8

*HV: histologically verified; DCO: death certificate only; * random sample of total cases*

Table 2. Number and proportion of cases with complete/incomplete follow-up (in years) and median follow-up (in months) by site: The Gambia, 1993–1997 cases followed-up until 1999

Site	ICD-10	Cases included	Complete FU		Incomplete FU: lost to FU						% with complete FU at 5 years	Median FU (in months)
			Alive/dead at end of FU		% lost to FU: years from diagnosis							
			No.	%	No.	%	< 1	1-3	3-5	> 5		
Stomach	C16	39	34	87.2	5	12.8	12.8	0.0	0.0	0.0	87.2	1.3
Liver	C22*	123	121	98.4	2	1.6	1.6	0.0	0.0	0.0	98.4	1.0
Lung	C33-34	31	25	80.6	6	19.4	19.4	0.0	0.0	0.0	80.6	0.8
Breast	C50	61	56	91.8	5	8.2	8.2	1.5	0.0	0.0	91.8	4.6
Cervix	C53*	202	193	95.5	9	4.5	4.5	0.0	0.0	0.0	95.5	5.6
Non-Hodgkin lymphoma	C82-85+C96	49	44	89.8	5	10.2	10.2	0.0	0.0	0.0	89.8	2.2

FU: follow-up; * from a random sample of total cases

Table 3. Comparison of 1-, 3- and 5-year absolute and relative survival and 5-year age-standardized relative survival by site: The Gambia, 1993–1997 cases followed-up until 1999

Site	ICD-10	Cases included	% Absolute survival			% Relative survival			% ASRS at 5-years	
			1-year	3-year	5-year	1-year	3-year	5-year	all ages	0-74 years
Stomach	C16	39	17.8	17.8	4.5	18.3	18.8	4.8	4.0	2.8
Liver	C22*	123	8.2	3.3	3.3	8.4	3.4	3.4	2.6	3.2
Lung	C33-34	31	25.0	25.0	25.0	25.8	28.9	32.1	49.8	19.7
Breast	C50	61	29.9	9.3	9.3	30.3	9.9	10.3	9.5	12.5
Cervix	C53*	202	44.3	22.4	22.4	44.8	23.0	23.6	22.9	21.8
Non-Hodgkin lymphoma	C82-85+C96	49	39.8	24.4	24.4	40.3	25.2	25.4	22.5	25.5

ASRS: age-standardized relative survival; * random sample of total incident cases

Table 4a. Site-wise number of cases, 5-year absolute and relative survival by sex: The Gambia, 1993–1997 cases followed-up until 1999

Site	ICD-10	Cases included	Male			Female		
			% 5-year survival			% 5-year survival		
			No.	Abs	Rel	No.	Abs	Rel
Stomach	C16	39	17	20.0	21.2	22	0.0	0.0
Liver	C22*	123	91	2.1	2.2	32		
Lung	C33-34	31	27	16.0	28.8	4	100.0	106.2
Breast	C50	61	2	0.0	0.0	59	9.7	10.8
Cervix	C53*	202				202	22.4	23.6
Non-Hodgkin lymphoma	C82-85+C96	49	30	17.9	18.6	19	37.8	39.2

*Abs: absolute survival; Rel: relative survival; * random sample of total cases*

Table 4b. Site-wise number of cases and relative survival by age group: The Gambia, 1993–1997 cases followed-up until 1999

Site	ICD-10	Cases included	Number of cases by age group					Relative survival by age group					
			% 5-year survival					% 5-year survival					
			< 45	45-54	55-64	65-74	> 75	< 45	45-54	55-64	65-74	> 75	
Stomach	C16	39	10	3	11	11	4	13.6	0.0	0.0			
Liver	C22*	123	50	27	26	15	5	3.7			0.0	0.0	
Lung	C33-34	31	5	8	7	8	3		56.5	0.0		126.2	
Breast	C50	61	26	18	9	5	3	16.3		0.0	35.5	0.0	
Cervix	C53*	202	109	45	26	18	4	26.4	20.2	22.5	13.2		
Non-Hodgkin lymphoma	C82-85+C96	49	32	7	4	4	2	27.7	29.9		0.0	0.0	

** random sample of total cases*