

Chapter 7

Cancer survival in Shanghai, China, 1992–1995

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Abstract

The Shanghai cancer registry, established in 1963, is the oldest one in mainland China; cancer registration is entirely done by passive methods. The registry contributed data on 52 cancer sites or types registered during 1992–1995 for this survival study. The methods of follow-up have been a mixture of both active and passive ones, with median follow-up ranging 3–81 months. The proportion with histologically verified diagnosis for various cancers ranged from 14–95%; death certificates only (DCOs) ranged from 0–2% and 98–100% of total registered cases were included for survival analysis. The top ranking cancers on 5-year age-standardized relative survival (%) were thyroid (90%), non-melanoma skin (86%), penis (84%), corpus uteri (82%) and testis (80%). The corresponding survival rates for common cancers were lung (16%), stomach (30%), liver (9%), breast (78%) and colon (48%). The 5-year relative survival by age group reveals an inverse relationship for most cancers. An increasing trend in the 5-year absolute and relative survival was noted for all cancers registered in 1992–1995 compared to 1988–1991.

Shanghai cancer registry

The Shanghai cancer registry, established in 1963, is the oldest one in mainland China. It is based at the Shanghai Cancer Institute, Shanghai. The registry has been contributing data to the quinquennial IARC publication *Cancer Incidence in Five Continents* since Vol IV [1]. Cancer notification is by a regulation issued by the Shanghai Municipal Bureau of Public Health. Hence, cancer registration is entirely done by passive methods. The principal source of information on cancer cases is the notification card consisting of basic required information for cancer registration that is sent to the registry. The residential status of cancer cases is confirmed by house visit. The registry covers an area of 290 km² and caters to a population of about 6.4 million, with a sex ratio of 982 females to 1000 males in 1995. The average annual age-standardized incidence rate is 190 per 100 000 among males and 155 per 100 000 among females with a lifetime cumulative risk of one in 5 of developing cancer in the period 1993–1997. The common cancers among males are lung, stomach and liver. The rank order among females is breast, lung and stomach [1].

The registry contributed data on survival from 38 cancer sites or types registered during 1988–1991 to the first volume of IARC publication on *Cancer*

Survival in Developing Countries [2]. In the present volume, data on survival from 52 cancers registered during 1992–1995 are reported.

Data quality indices (Table 1)

The proportion of cases with histologically verified cancer diagnosis in the series is 56%, varying from 14% (liver cancer) to 95% (corpus uteri cancer). The proportion of cases registered as death certificates only (DCOs) is the highest in lip cancer (2%), and cases without any follow-up are negligible. Thus, 98–100% of the total cases registered are included in the estimation of the survival probability.

Outcome of follow-up (Table 2)

The methods of follow-up have been a mixture of both active and passive ones. These included obtaining cancer mortality information from the death certificates in vital statistics section of Shanghai Hygiene and Anti-epidemic Centre. The mortality data are periodically matched with the incident cancer database. The vital status of the unmatched incident cases is then collected by house visits or postal/telephone enquiries.

The closing date of follow-up was 31st December 2000.

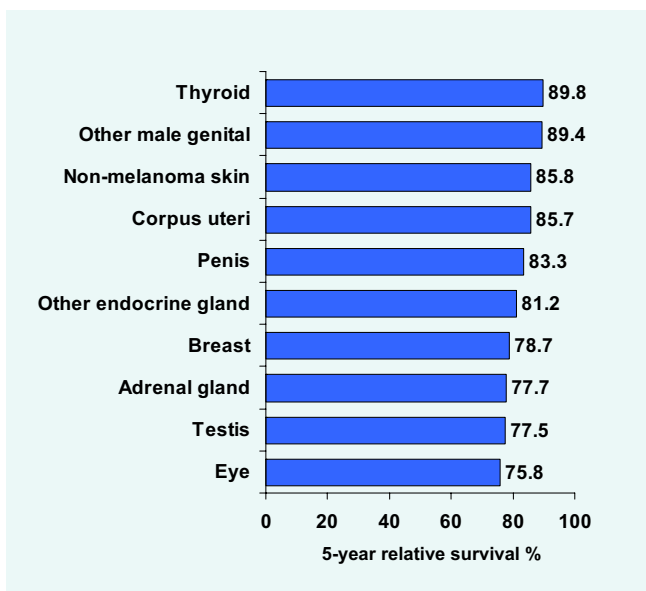
The median follow-up ranged from 3 months for cancers of the pancreas and liver to 81 months for cancer of the adrenal gland. The completeness of follow-up at 5 years from the incidence date is available in 95-100%.

Survival statistics

All ages and both sexes together (Table 3)

The top ranking cancers on 5-year relative survival are thyroid (90%), other male genital organ (89%), non-melanoma skin (86%), corpus uteri (86%) and penis (83%). The least survival is encountered with pancreatic cancer (8%), preceded by liver (9%), unspecified leukaemia (12%), lung and gallbladder (15%). Lip and salivary gland (73%) among other head and neck cancers and colon, rectum and anus (48–51%) among gastrointestinal cancers have higher survival than others. Survival from cancers of the urinary system is 65% for urinary bladder and 62% for renal pelvis. Hodgkin lymphoma had a better survival (66%) than non-Hodgkin lymphoma (39%). The survival figures for leukaemias are lymphoid (30%) and myeloid (27%).

Figure 1a. Top ten cancers (ranked by survival), Shanghai, China, 1992–1995



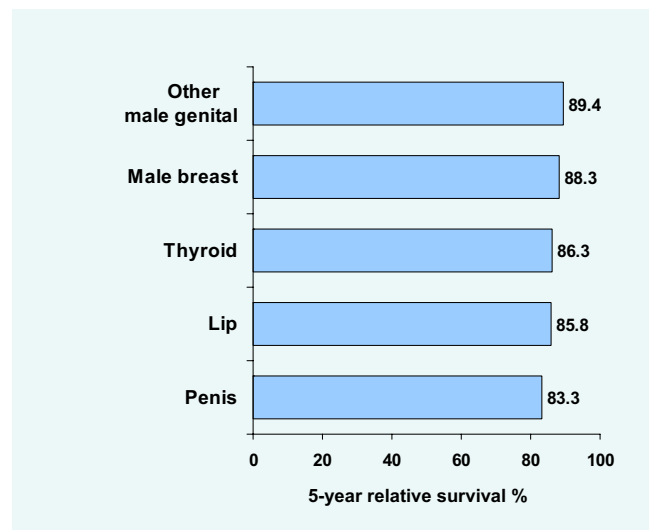
The 5-year age-standardized relative survival (ASRS) probability for all ages together is generally less than or similar to the corresponding unadjusted one for a majority of cancers. Also, the 5-year ASRS (0–74 years of age) is generally higher than or similar to the corresponding ASRS (all ages) for a majority of cancers.

Sex

Male (Table 4a)

The 5-year relative survival probabilities for lip, breast, renal pelvis, bladder, other urinary organ cancers and lymphoid leukaemia are noticeably higher among males than females.

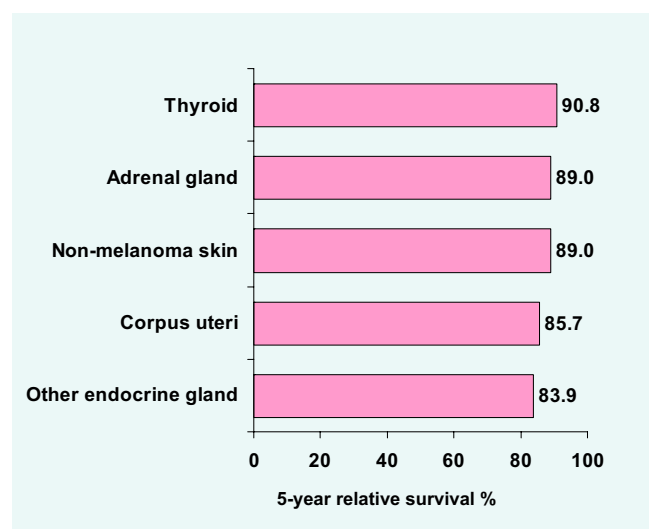
Figure 1b. Top five cancers (ranked by survival), Male, Shanghai, China, 1992–1995



Female (Table 4a)

The 5-year relative survival is distinctly higher among females than males in cancers of the oral cavity, oropharynx, nasopharynx, nose/sinuses, ureter, brain and adrenal gland.

Figure 1c. Top five cancers (ranked by survival), Female, Shanghai, China, 1992–1995



Age group (Table 4b)

The 5-year relative survival by age group reveals an inverse relationship: a decreasing survival with increasing age at diagnosis for many cancers such as tongue, salivary gland, nasopharynx, oesophagus, stomach, liver, pancreas, other thoracic organs, bone, uterus unspecified, ovary, bladder, thyroid and other endocrine glands. In the rest, it is observed to fluctuate.

Survival trend (Table 5)

The data on survival trend is available for 38 cancers sites or types spanning eight years in the two time periods 1988–1991 [2] and 1992–1995. An increasing

trend in the 5-year absolute and relative survival probabilities is observed for most cancers registered in 1992–1995 compared to 1988–1991.

References

1. Parkin DM, Whelan SL, Ferlay J and Storm H. *Cancer Incidence in Five Continents, Vol. I to VIII: IARC Cancerbase No. 7*. IARCPress, Lyon, 2005.
2. Jin F, Xiang YB and Gao YT. Cancer survival in Shanghai, People's Republic of China. In: *Cancer Survival in Developing Countries* (eds) R Sankaranarayanan, RJ Black and DM Parkin. IARC Scientific Publications No. 145. IARCPress, Lyon, 1998, pp 37–50.

Table 1. Data quality indices - Proportion of histologically verified and death certificate only cases, number and proportion of included and excluded cases by site: Shanghai, China, 1992–1995 cases followed-up until 2000

Site	ICD-10	Total registered	%		Excluded cases					Included cases	
			HV	DCO	DCO	Follow-up	Others	Total	%	No.	%
Lip	C00	43	88.4	2.3	1	0	0	1	2.3	42	97.7
Tongue	C01-02	206	92.7	0.0	0	0	0	0	0.0	206	100.0
Oral cavity	C03-06	285	91.2	0.0	0	0	0	0	0.0	285	100.0
Salivary gland	C07-08	189	89.9	0.0	0	0	0	0	0.0	189	100.0
Tonsil	C09	59	89.8	0.0	0	0	0	0	0.0	59	100.0
Nasopharynx	C11	1 061	85.4	0.0	0	1	0	1	0.1	1 060	99.9
Hypopharynx	C12-13	37	94.6	0.0	0	0	0	0	0.0	37	100.0
Oesophagus	C15	2 990	47.5	0.1	2	0	0	2	0.1	2 988	99.9
Stomach	C16	11 741	59.7	0.0	2	4	0	6	0.1	11 735	99.9
Small intestine	C17	229	72.5	0.0	0	0	0	0	0.0	229	100.0
Colon	C18	4 785	70.2	0.0	1	2	0	3	0.1	4 782	99.9
Rectum	C19-20	3 285	74.9	0.0	0	1	0	1	0.0	3 284	100.0
Anus	C21	93	66.7	0.0	0	0	0	0	0.0	93	100.0
Liver	C22	6 959	13.9	0.0	3	2	0	5	0.1	6 954	99.9
Gall bladder	C23-24	1 383	41.9	0.0	0	0	0	0	0.0	1 383	100.0
Pancreas	C25	2 243	20.5	0.0	1	0	0	1	0.0	2 242	100.0
Nose/Sinuses	C30-31	200	79.5	0.0	0	0	0	0	0.0	200	100.0
Larynx	C32	625	86.2	0.2	1	0	0	1	0.2	624	99.8
Lung	C33-34	14 113	41.2	0.0	5	4	0	9	0.1	14 104	99.9
Other thoracic organs	C37-38	403	43.4	0.0	0	0	0	0	0.0	403	100.0
Bone	C40-41	523	40.9	0.0	0	0	0	0	0.0	523	100.0
Melanoma of skin	C43	110	86.4	0.0	0	0	0	0	0.0	110	100.0
Other skin	C44	473	88.8	0.0	0	1	0	1	0.2	472	99.8
Connective tissue	C47+C49	483	83.9	0.0	0	1	0	1	0.2	482	99.8
Breast	C50	5 184	86.3	0.0	0	0	0	0	0.0	5 184	100.0
Vulva	C51	54	85.2	0.0	0	0	0	0	0.0	54	100.0
Vagina	C52	45	91.1	0.0	0	0	0	0	0.0	45	100.0
Cervix	C53	548	85.4	0.0	0	0	0	0	0.0	548	100.0
Corpus uteri	C54	735	94.8	0.0	0	0	0	0	0.0	735	100.0
Uterus unspecified	C55	145	52.4	0.0	0	0	0	0	0.0	145	100.0
Ovary	C56	1 087	77.4	0.0	0	0	0	0	0.0	1 087	100.0
Other female genital org.	C57	35	94.3	0.0	0	0	0	0	0.0	35	100.0
Penis	C60	49	91.8	0.0	0	0	0	0	0.0	49	100.0
Prostate	C61	641	63.2	0.2	1	1	0	2	0.3	639	99.7
Testis	C62	113	85.8	0.0	0	0	0	0	0.0	113	100.0
Other male genital org.	C63	45	80.0	0.0	0	0	0	0	0.0	45	100.0
Kidney	C64	743	60.7	0.0	0	0	0	0	0.0	743	100.0
Renal pelvis	C65	67	79.1	0.0	0	0	0	0	0.0	67	100.0
Ureter	C66	68	82.4	0.0	0	0	0	0	0.0	68	100.0
Urinary bladder	C67	1 750	72.1	0.0	0	0	0	0	0.0	1 750	100.0
Other urinary organs	C68	26	65.4	0.0	0	0	0	0	0.0	26	100.0
Eye	C69	40	77.5	0.0	0	0	0	0	0.0	40	100.0
Brain & nervous system	C70-72	1 906	53.5	0.0	0	0	0	0	0.0	1 906	100.0
Thyroid	C73	868	88.0	0.0	0	0	0	0	0.0	868	100.0
Adrenal gland	C74	123	52.0	0.0	0	0	0	0	0.0	123	100.0
Other endocrine	C75	330	61.8	0.0	0	0	0	0	0.0	330	100.0
Hodgkin lymphoma	C81	99	80.8	0.0	0	0	0	0	0.0	99	100.0
Non-Hodgkin lymphoma	C82-85+C96	1 272	78.7	0.1	1	0	0	1	0.1	1 271	99.9

Table 1 (Continued).

Site	ICD-10	Total registered	%		Excluded cases					Included cases	
			HV	DCO	DCO	Follow-up	Others	Total	%	No.	%
Multiple myeloma	C90	233	70.0	0.9	2	1	0	3	1.3	230	98.7
Lymphoid leukaemia	C91	338	89.6	0.0	0	0	0	0	0.0	338	100.0
Myeloid leukaemia	C92-94	606	88.0	0.2	1	0	0	1	0.2	605	99.8
Leukaemia unspecified	C95	378	75.1	0.3	1	0	0	1	0.3	377	99.7

HV: histologically verified; DCO: death certificate only

Table 2. Number and proportion of cases with complete/incomplete follow-up (in years) and median follow-up (in months) by site: Shanghai, China, 1992–1995 cases followed-up until 2000

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		
Lip	C00	42	41	97.6	1	2.4	0.0	0.0	2.4	0.0	97.6	66.2
Tongue	C01-02	206	203	98.5	3	1.5	0.0	0.5	0.5	0.5	99.0	66.1
Oral cavity	C03-06	285	278	97.5	7	2.5	0.0	1.4	0.4	0.7	98.2	61.9
Salivary gland	C07-08	189	186	98.4	3	1.6	0.0	1.1	0.5	0.0	98.4	74.1
Tonsil	C09	59	56	94.9	3	5.1	3.4	1.7	0.0	0.0	94.9	47.8
Nasopharynx	C11	1 060	1 045	98.6	15	1.4	0.3	0.5	0.5	0.1	98.7	61.9
Hypopharynx	C12-13	37	37	100.0	0	0.0	0.0	0.0	0.0	0.0	100.0	11.8
Oesophagus	C15	2 988	2 980	99.7	8	0.3	0.1	0.1	0.1	0.0	99.8	6.8
Stomach	C16	11 735	11 656	99.3	79	0.7	0.2	0.2	0.2	0.1	99.4	9.3
Small intestine	C17	229	226	98.7	3	1.3	0.0	0.0	0.4	0.9	99.6	11.0
Colon	C18	4 782	4 734	99.0	48	1.0	0.1	0.3	0.4	0.2	99.2	31.4
Rectum	C19-20	3 284	3 249	98.9	35	1.1	0.1	0.3	0.4	0.3	99.2	32.5
Anus	C21	93	91	97.8	2	2.2	0.0	2.2	0.0	0.0	97.8	28.7
Liver	C22	6 954	6 942	99.8	12	0.2	0.1	0.1	0.0	0.0	99.8	3.0
Gall bladder	C23-24	1 383	1 378	99.6	5	0.4	0.2	0.1	0.1	0.0	99.6	3.8
Pancreas	C25	2 242	2 238	99.8	4	0.2	0.1	0.1	0.0	0.0	99.9	3.0
Nose/Sinuses	C30-31	200	195	97.5	5	2.5	0.5	0.5	1.0	0.5	98.0	31.4
Larynx	C32	624	621	99.5	3	0.5	0.0	0.2	0.1	0.2	99.7	56.5
Lung	C33-34	14 104	14 050	99.6	54	0.4	0.0	0.2	0.1	0.1	99.7	6.5
Other thoracic organs	C37-38	403	400	99.3	3	0.7	0.0	0.2	0.0	0.5	99.8	11.2
Bone	C40-41	523	520	99.4	3	0.6	0.0	0.2	0.2	0.2	99.6	8.2
Melanoma of skin	C43	110	109	99.1	1	0.9	0.9	0.0	0.0	0.0	99.1	40.9
Other skin	C44	472	459	97.2	13	2.8	0.0	1.3	1.5	0.0	97.2	74.1
Connective tissue	C47+C49	482	475	98.5	7	1.5	0.1	0.8	0.4	0.2	98.8	65.4
Breast	C50	5 184	5 094	98.3	90	1.7	0.3	0.6	0.5	0.3	98.6	73.5
Vulva	C51	54	54	100.0	0	0.0	0.0	0.0	0.0	0.0	100.0	49.8
Vagina	C52	45	44	97.8	1	2.2	0.0	2.2	0.0	0.0	97.8	29.1
Cervix	C53	548	541	98.7	7	1.3	0.2	0.3	0.4	0.4	99.1	62.1
Corpus uteri	C54	735	725	98.6	10	1.4	0.3	0.3	0.1	0.7	99.3	76.3
Uterus unspecified	C55	145	145	100.0	0	0.0	0.0	0.0	0.0	0.0	100.0	11.6
Ovary	C56	1 087	1 076	99.0	11	1.0	0.2	0.4	0.2	0.2	99.2	30.2
Other female genital org.	C57	35	34	97.1	1	2.9	2.9	0.0	0.0	0.0	97.1	56.1
Penis	C60	49	49	100.0	0	0.0	0.0	0.0	0.0	0.0	100.0	73.6
Prostate	C61	639	634	99.2	5	0.8	0.2	0.2	0.2	0.2	99.4	25.9
Testis	C62	113	112	99.1	1	0.9	0.0	0.9	0.0	0.0	99.1	78.4
Other male genital org.	C63	45	44	97.8	1	2.2	2.2	0.0	0.0	0.0	97.8	73.6
Kidney	C64	743	729	98.1	14	1.9	0.2	0.8	0.5	0.4	98.5	39.6
Renal pelvis	C65	67	67	100.0	0	0.0	0.0	0.0	0.0	0.0	100.0	61.4
Ureter	C66	68	66	97.1	2	2.9	0.0	0.0	2.9	0.0	97.1	47.3
Urinary bladder	C67	1 750	1 729	98.8	21	1.2	0.2	0.1	0.6	0.3	99.1	61.0
Other urinary organs	C68	26	26	100.0	0	0.0	0.0	0.0	0.0	0.0	100.0	31.6
Eye	C69	40	39	97.5	1	2.5	0.0	0.0	2.5	0.0	97.5	66.7
Brain & nervous system	C70-72	1 906	1 886	99.0	20	1.0	0.0	0.3	0.5	0.2	99.2	14.4
Thyroid	C73	868	841	96.9	27	3.1	0.3	1.1	1.2	0.5	97.4	77.9
Adrenal gland	C74	123	118	95.9	5	4.1	0.1	0.8	2.4	0.8	96.7	81.1
Other endocrine	C75	330	320	97.0	10	3.0	0.3	0.9	1.2	0.6	97.6	75.0

Table 2 (Continued).

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		
Hodgkin lymphoma	C81	99	97	98.0	2	2.0	1.0	0.0	0.0	1.0	99.0	65.5
Non-Hodgkin lymphoma	C82-85+C96	1 271	1 258	99.0	13	1.0	0.2	0.6	0.1	0.1	99.1	15.4
Multiple myeloma	C90	230	229	99.6	1	0.4	0.0	0.0	0.4	0.0	99.6	11.1
Lymphoid leukaemia	C91	338	338	100.0	0	0.0	0.0	0.0	0.0	0.0	100.0	13.9
Myeloid leukaemia	C92-94	605	601	99.3	4	0.7	0.0	0.2	0.3	0.2	99.5	12.4
Leukaemia unspecified	C95	377	377	100.0	0	0.0	0.0	0.0	0.0	0.0	100.0	3.6

FU: follow-up

Table 3. Comparison of 1-, 3- and 5-year absolute and relative survival and 5-year age-standardized relative survival by site: Shanghai, China, 1992–1995 cases followed-up until 2000

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
Lip	C00	42	83.3	71.4	59.5	86.8	80.9	73.9	78.8	84.1
Tongue	C01-02	206	72.3	59.7	54.8	74.3	64.0	61.5	64.1	66.9
Oral cavity	C03-06	285	75.1	60.6	53.4	77.7	67.0	63.4	68.5	70.9
Salivary gland	C07-08	189	87.8	74.0	65.9	89.7	78.7	73.4	71.0	73.7
Oropharynx	C09-10	59	72.4	56.2	52.6	74.6	60.9	60.4	61.0	62.1
Nasopharynx	C11	1 060	78.9	60.8	51.9	80.2	63.5	56.0	52.9	57.6
Hypopharynx	C12-13	37	51.4	29.7	24.3	53.4	33.2	29.7	31.2	31.0
Oesophagus	C15	2 988	34.7	15.9	13.1	36.3	17.9	16.0	18.0	20.6
Stomach	C16	11 735	45.8	28.7	24.8	47.6	31.7	29.3	30.4	36.0
Small intestine	C17	229	48.0	28.4	24.0	49.5	30.8	27.6	27.9	32.1
Colon	C18	4 782	66.3	48.6	43.0	68.4	53.4	50.6	48.2	54.0
Rectum	C19-20	3 284	70.5	48.6	40.8	72.7	53.2	47.7	44.1	51.0
Anus	C21	93	69.9	48.1	39.1	72.5	53.9	47.5	45.8	49.9
Liver	C22	6 954	18.4	8.9	7.5	19.0	9.6	8.6	8.9	9.8
Gall bladder	C23-24	1 383	24.1	14.4	12.7	25.0	16.0	15.2	19.2	21.0
Pancreas	C25	2 242	16.2	7.3	6.5	16.9	8.1	7.8	8.5	9.5
Nose/Sinuses	C30-31	200	67.9	48.7	43.6	69.9	52.7	49.8	48.5	52.4
Larynx	C32	624	74.8	56.7	49.9	77.8	63.5	60.6	61.7	67.2
Lung	C33-34	14 104	34.1	15.1	12.4	35.4	16.9	15.0	15.6	18.0
Other thoracic organs	C37-38	403	48.6	35.4	32.4	49.9	37.8	36.0	33.2	41.4
Bone	C40-41	523	42.8	29.6	27.3	44.2	31.6	30.1	27.8	34.0
Melanoma of skin	C43	110	74.4	55.1	44.1	77.0	60.5	51.5	55.4	61.7
Other skin	C44	472	84.5	74.5	69.5	88.0	84.2	85.8	86.0	85.9
Connective tissue	C47+C49	482	73.0	61.6	56.7	74.5	65.2	62.4	58.3	62.9
Breast	C50	5 184	90.8	79.2	73.1	92.0	82.6	78.7	77.8	79.4
Vulva	C51	54	68.5	51.9	48.1	71.2	57.5	57.7	55.9	56.5
Vagina	C52	45	71.1	48.8	41.8	73.0	52.9	47.9	42.8	49.5
Cervix	C53	548	77.0	57.8	52.4	79.0	62.5	60.1	61.6	63.5
Corpus uteri	C54	735	90.3	82.8	79.7	91.6	86.3	85.7	82.3	86.9
Uterus unspecified	C55	145	49.0	31.0	29.7	50.6	33.4	32.7	37.6	49.5
Ovary	C56	1 087	66.4	48.4	42.7	67.3	50.3	45.6	43.5	47.9
Other female genital org.	C57	35	91.3	67.7	47.1	92.9	71.2	51.6	55.6	50.1
Penis	C60	49	87.8	73.5	67.3	91.7	83.5	83.3	84.2	90.7
Prostate	C61	639	68.8	44.0	36.9	73.1	53.0	50.8	48.8	54.2
Testis	C62	113	82.3	77.0	74.3	83.2	79.0	77.5	80.1	81.7
Other male genital org.	C63	45	79.8	68.4	66.1	84.4	81.3	89.4	91.4	94.8
Kidney	C64	743	63.1	51.5	46.5	65.0	55.8	53.3	51.2	60.3
Renal pelvis	C65	67	74.6	55.2	50.7	77.2	61.6	61.6	70.7	71.2
Ureter	C66	68	85.3	54.4	48.4	87.8	59.3	56.1	65.6	73.0
Urinary bladder	C67	1 750	71.9	56.8	51.1	75.4	65.0	64.3	62.9	74.5
Other urinary organs	C68	26	84.6	46.2	42.3	88.9	53.0	54.0	62.1	64.3
Eye	C69	40	90.0	77.5	69.8	91.6	81.4	75.8	78.6	79.1
Brain & nervous system	C70-72	1 906	54.2	42.4	39.8	55.3	44.3	42.8	48.8	51.1
Thyroid	C73	868	90.5	87.2	85.6	91.5	89.6	89.8	89.7	91.2
Adrenal gland	C74	123	80.5	78.0	73.9	81.5	80.4	77.7	71.3	69.5
Other endocrine	C75	330	85.7	80.9	77.4	86.6	83.1	81.2	70.8	78.0
Hodgkin lymphoma	C81	99	80.7	67.4	62.3	81.8	69.9	66.0	75.1	77.6

Table 3 (Continued).

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
Non-Hodgkin lymphoma	C82-85+C96	1 271	56.3	39.2	35.1	57.7	41.9	39.2	43.3	45.6
Multiple myeloma	C90	230	49.1	28.3	19.5	50.6	30.6	22.3	25.1	28.1
Lymphoid leukaemia	C91	338	52.7	32.2	27.8	53.5	33.8	30.2	28.8	30.4
Myeloid leukaemia	C92-94	605	51.7	31.4	25.4	52.6	32.7	27.1	27.2	30.0
Leukaemia unspecified	C95	377	26.3	14.6	11.1	26.9	15.5	12.3	13.3	14.6

ASRS: age-standardized relative survival

Table 4a. Site-wise number of cases, 5-year absolute and relative survival by sex: Shanghai, China, 1992–1995 cases followed-up until 2000

Site	ICD-10	Cases included	Male			Female		
			% 5-year survival			% 5-year survival		
			No.	Abs	Rel	No.	Abs	Rel
Lip	C00	42	26	65.4	85.8	16	50.0	55.4
Tongue	C01-02	206	109	54.8	61.5	97	52.2	59.7
Oral cavity	C03-06	285	165	46.4	57.4	120	63.1	71.5
Salivary gland	C07-08	189	108	60.9	69.9	81	72.6	77.9
Tonsil	C09	59	38	42.6	51.1	21	70.6	76.7
Nasopharynx	C11	1 060	771	48.1	52.4	289	61.9	65.2
Hypopharynx	C12-13	37	28	25.0	31.4	9	22.2	24.8
Oesophagus	C15	2 988	2 001	13.2	16.6	987	12.8	15.0
Stomach	C16	11 735	7 670	25.2	30.6	4 065	24.1	27.1
Small intestine	C17	229	142	26.1	30.2	87	20.6	23.3
Colon	C18	4 782	2 404	41.5	50.6	2 378	44.5	50.6
Rectum	C19-20	3 284	1 838	40.1	48.4	1 446	41.6	46.8
Anus	C21	93	42	37.5	46.9	51	40.5	48.1
Liver	C22	6 954	4 952	7.9	9.1	2 002	6.4	7.3
Gall bladder	C23-24	1 383	510	12.5	15.7	873	12.8	14.9
Pancreas	C25	2 242	1 213	6.7	8.4	1 029	6.2	7.1
Nose/Sinuses	C30-31	200	128	40.1	46.4	72	49.6	55.8
Larynx	C32	624	555	50.1	61.2	69	48.8	56.1
Lung	C33-34	14 104	10 178	12.6	15.6	3 926	11.9	13.7
Other thoracic organs	C37-38	403	266	30.4	34.2	137	36.5	39.5
Bone	C40-41	523	268	27.9	31.1	255	26.7	29.0
Melanoma of skin	C43	110	52	46.2	54.9	58	42.2	48.4
Other skin	C44	472	257	66.3	83.0	215	73.3	89.0
Connective tissue	C47+C49	482	275	57.3	63.9	207	55.8	60.3
Breast	C50	5 184	58	72.1	88.3	5 126	73.1	78.6
Vulva	C51	54				54	48.1	57.7
Vagina	C52	45				45	41.8	47.9
Cervix	C53	548				548	52.4	60.1
Corpus uteri	C54	735				735	79.7	85.7
Uterus unspecified	C55	145				145	29.7	32.7
Ovary	C56	1 087				1 087	42.7	45.6
Other female genital org.	C57	35				35	47.1	51.6
Penis	C60	49	49	67.3	83.3			
Prostate	C61	639	639	36.9	50.8			
Testis	C62	113	113	74.3	77.5			
Other male genital org.	C63	45	45	66.1	89.4			
Kidney	C64	743	485	47.4	55.6	258	44.9	49.1
Renal pelvis	C65	67	42	54.8	70.2	25	44.0	48.2
Ureter	C66	68	48	43.7	51.8	20	60.0	66.1
Urinary bladder	C67	1 750	1 359	53.4	68.1	391	43.2	51.3
Other urinary organs	C68	26	19	57.9	73.9	7	0.0	0.0
Eye	C69	40	28	67.9	74.1	12	74.1	79.3
Brain & nervous system	C70-72	1 906	958	34.8	37.9	948	45.0	47.7
Thyroid	C73	868	192	78.9	86.3	676	87.5	90.8
Adrenal gland	C74	123	55	57.9	63.5	68	86.7	89.0
Other endocrine	C75	330	131	71.5	77.1	199	81.3	83.9

Table 4a (Continued).

Site	ICD-10	Cases included	Male			Female		
			% 5-year survival			% 5-year survival		
			No.	Abs	Rel	No.	Abs	Rel
Hodgkin lymphoma	C81	99	54	59.3	62.9	45	66.0	69.7
Non-Hodgkin lymphoma	C82-85+C96	1 271	758	32.2	36.7	513	39.4	42.8
Multiple myeloma	C90	230	136	19.8	23.1	94	19.1	21.2
Lymphoid leukaemia	C91	338	210	31.0	34.0	128	22.7	24.2
Myeloid leukaemia	C92-94	605	348	25.1	27.4	257	25.7	26.7
Leukaemia unspecified	C95	377	200	11.5	13.1	177	10.7	11.4

Abs: absolute survival; Rel: relative survival

Table 4b. Site-wise number of cases and relative survival by age group: Shanghai, China, 1992–1995 cases followed-up until 2000

Site	ICD-10	Cases included	Number of cases by age group					Relative survival by age group				
								% 5-year survival				
			< 45	45-54	55-64	65-74	> 75	< 45	45-54	55-64	65-74	> 75
Lip	C00	42	5	4	7	12	14	81.0	77.6	92.8	82.2	48.5
Tongue	C01-02	206	37	28	49	62	30	82.1	80.7	59.8	48.9	46.6
Oral cavity	C03-06	285	30	19	71	101	64	77.4	81.7	63.9	62.5	50.7
Salivary gland	C07-08	189	50	31	39	49	20	92.9	76.4	69.1	58.9	55.6
Tonsil	C09	59	8	11	15	14	11	100.9	44.2	64.4	47.8	61.3
Nasopharynx	C11	1 060	331	209	277	189	54	64.1	60.0	55.4	41.6	40.1
Hypopharynx	C12-13	37	3	2	7	16	9	0.0	52.1	31.7	30.0	35.4
Oesophagus	C15	2 988	71	108	649	1 282	878	25.7	23.7	20.1	16.4	10.7
Stomach	C16	11 735	1 126	869	2 568	4 306	2 866	44.7	43.1	35.1	26.4	17.3
Small intestine	C17	229	28	25	58	80	38	35.9	45.7	26.8	24.4	16.8
Colon	C18	4 782	463	376	1 245	1 709	989	55.6	58.3	54.0	51.3	39.8
Rectum	C19-20	3 284	396	324	835	1 105	624	50.2	54.5	50.9	49.8	33.8
Anus	C21	93	6	9	22	32	24	50.7	45.9	60.3	44.2	39.5
Liver	C22	6 954	984	808	1 804	2 106	1 252	12.2	10.0	9.0	8.0	5.1
Gall bladder	C23-24	1 383	61	74	290	593	365	38.1	21.0	15.6	12.3	14.9
Pancreas	C25	2 242	95	147	500	892	608	17.1	9.3	7.8	7.3	6.9
Nose/Sinuses	C30-31	200	41	14	50	60	35	46.4	51.4	65.3	45.7	38.8
Larynx	C32	624	23	42	166	273	120	57.4	74.4	72.7	59.2	41.8
Lung	C33-34	14 104	534	756	3 341	6 073	3 400	19.7	21.7	19.4	13.9	10.2
Other thoracic organs	C37-38	403	100	39	78	125	61	52.6	49.7	42.0	25.7	10.4
Bone	C40-41	523	134	40	79	156	114	59.5	38.6	27.1	16.3	10.8
Melanoma of skin	C43	110	13	8	26	35	28	54.6	77.1	71.5	44.3	29.9
Other skin	C44	472	48	35	105	147	137	88.5	85.5	85.4	84.8	87.6
Connective tissue	C47+C49	482	165	60	102	100	55	71.1	75.5	61.5	48.4	45.8
Breast	C50	5 184	1 519	1 124	1 163	936	442	78.9	81.7	78.1	79.1	72.2
Vulva	C51	54	3	1	9	20	21	101.0	0.0	71.0	65.6	40.4
Vagina	C52	45	4	3	8	19	11	75.6	0.0	53.3	60.4	24.4
Cervix	C53	548	63	34	130	214	107	70.4	57.2	62.1	62.3	47.8
Corpus uteri	C54	735	99	172	257	167	40	91.8	95.4	83.4	80.2	65.0
Uterus unspecified	C55	145	23	12	29	30	51	87.9	77.0	32.9	15.4	2.9
Ovary	C56	1 087	308	192	256	236	95	59.4	47.4	42.2	38.5	22.1
Other female genital org.	C57	35	1	8	15	7	4		51.2	49.5	49.4	68.0
Penis	C60	49	8	4	10	12	15	88.9	104.0	67.1	106.8	64.9
Prostate	C61	639	2	4	91	268	274	50.9	52.3	54.3	54.5	46.2
Testis	C62	113	70	17	11	10	5	82.4	78.8	79.2	76.1	0.0
Other male genital org.	C63	45	2	0	12	11	20	100.9	0.0	92.6	92.8	85.0
Kidney	C64	743	101	90	200	235	117	63.0	69.9	66.2	45.2	22.5
Renal pelvis	C65	67	3	5	19	28	12	101.6	82.7	51.6	57.7	72.2
Ureter	C66	68	2	5	31	23	7	101.0	103.0	57.0	44.0	45.7
Urinary bladder	C67	1 750	84	92	350	656	568	83.3	80.0	74.1	69.8	44.9
Other urinary organs	C68	26	1	6	4	6	9	102.0	34.9	55.2	61.6	61.9
Eye	C69	40	16	8	8	4	4	56.9	90.3	107.4	61.7	79.9
Brain & nervous system	C70-72	1 906	551	256	453	463	183	56.2	59.2	43.9	26.2	16.2
Thyroid	C73	868	421	154	129	122	42	98.1	97.9	85.8	71.7	39.0
Adrenal gland	C74	123	64	13	22	18	6	88.2	95.0	73.4	31.6	82.7
Other endocrine	C75	330	176	48	57	38	11	86.5	85.7	74.1	69.6	51.8
Hodgkin lymphoma	C81	99	46	7	24	19	3	85.3	88.1	55.1	24.6	53.4

Table 4b (Continued).

Site	ICD-10	Cases included	Number of cases by age group					Relative survival by age group % 5-year survival				
			< 45	45-54	55-64	65-74	> 75	< 45	45-54	55-64	65-74	> 75
			Non-Hodgkin lymphoma	C82-85+C96	1 271	303	143	295	350	180	50.1	53.9
Multiple myeloma	C90	230	13	30	63	89	35	39.0	38.0	25.9	16.3	8.6
Lymphoid leukaemia	C91	338	173	29	54	60	22	28.5	28.4	32.6	38.2	20.9
Myeloid leukaemia	C92-94	605	248	74	121	118	44	35.4	36.3	20.9	13.5	14.9
Leukaemia unspecified	C95	377	122	34	65	93	63	17.4	12.1	13.4	8.0	7.7

Table 5. Comparison of 5-year absolute and relative survival of cases diagnosed between 1988–1991 and 1992–1995, Shanghai, China

Site	ICD-10	% 5-year absolute survival		% 5-year relative survival	
		1988–1991	1992–1995	1988–1991	1992–1995
Lip	C00	73.1	59.5	86.0	73.9
Tongue	C01-02	41.8	54.8	47.5	61.5
Oral cavity	C03-06	45.0	53.4	52.1	63.4
Salivary gland	C07-08	56.3	65.9	64.1	73.4
Oropharynx	C09-10	46.8	52.6	55.3	60.4
Nasopharynx	C11	50.0	51.9	53.3	56.0
Hypopharynx	C12-13	18.5	24.3	22.3	29.7
Oesophagus	C15	9.0	13.1	11.2	16.0
Stomach	C16	20.1	24.8	23.9	29.3
Small intestine	C17	27.7	24.0	31.4	27.6
Colon	C18	37.7	43.0	43.5	50.6
Rectum	C19-20	37.1	40.8	42.8	47.7
Liver	C22	3.9	7.5	4.4	8.6
Gall bladder	C23-24	8.0	12.7	9.5	15.2
Pancreas	C25	5.2	6.5	6.1	7.8
Larynx	C32	43.7	49.9	52.1	60.6
Lung	C33-34	9.9	12.4	11.9	15.0
Bone	C40-41	17.0	27.3	19.4	30.1
Melanoma of skin	C43	39.1	44.1	45.3	51.5
Other skin	C44	59.4	69.5	72.7	85.8
Connective tissue	C47+C49	56.3	56.7	61.0	62.4
Breast	C50	67.5	73.1	72.0	78.7
Vulva	C51	41.6	45.1	47.1	53.0
Cervix	C53	45.0	52.4	51.9	60.1
Corpus uteri	C54	72.3	79.7	76.8	85.7
Ovary	C56	41.5	42.7	44.2	45.6
Penis	C60	55.8	67.3	67.9	83.3
Prostate	C61	29.6	36.9	40.1	50.8
Testis	C62	62.4	74.3	65.8	77.5
Kidney	C64	42.2	46.5	47.7	53.3
Urinary bladder	C67	49.2	51.1	60.9	64.3
Brain & nervous system	C70-72	32.3	39.8	34.8	42.8
Thyroid	C73	75.8	85.6	79.7	89.8
Hodgkin lymphoma	C81	45.6	62.3	48.8	66.0
Non-Hodgkin lymphoma	C82-85+C96	29.8	35.1	33.4	39.2
Multiple myeloma	C90	20.7	19.5	23.3	22.3
Lymphoid leukaemia	C91	17.9	27.8	19.2	30.2
Myeloid leukaemia	C92-94	16.0	25.4	17.1	27.1