A.C.Camargo
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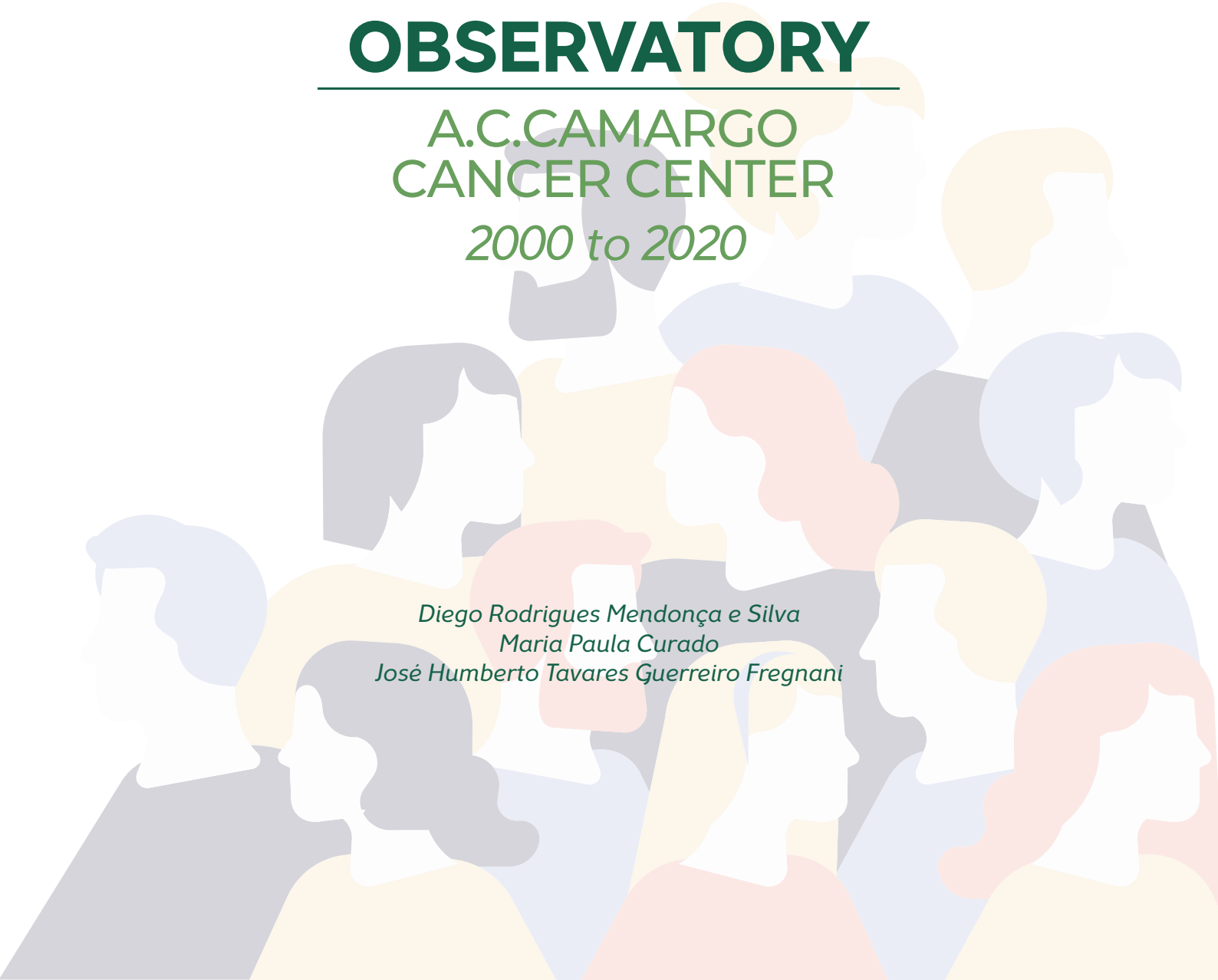
CANCER OBSERVATORY

A.C.CAMARGO CANCER CENTER

2000 to 2020

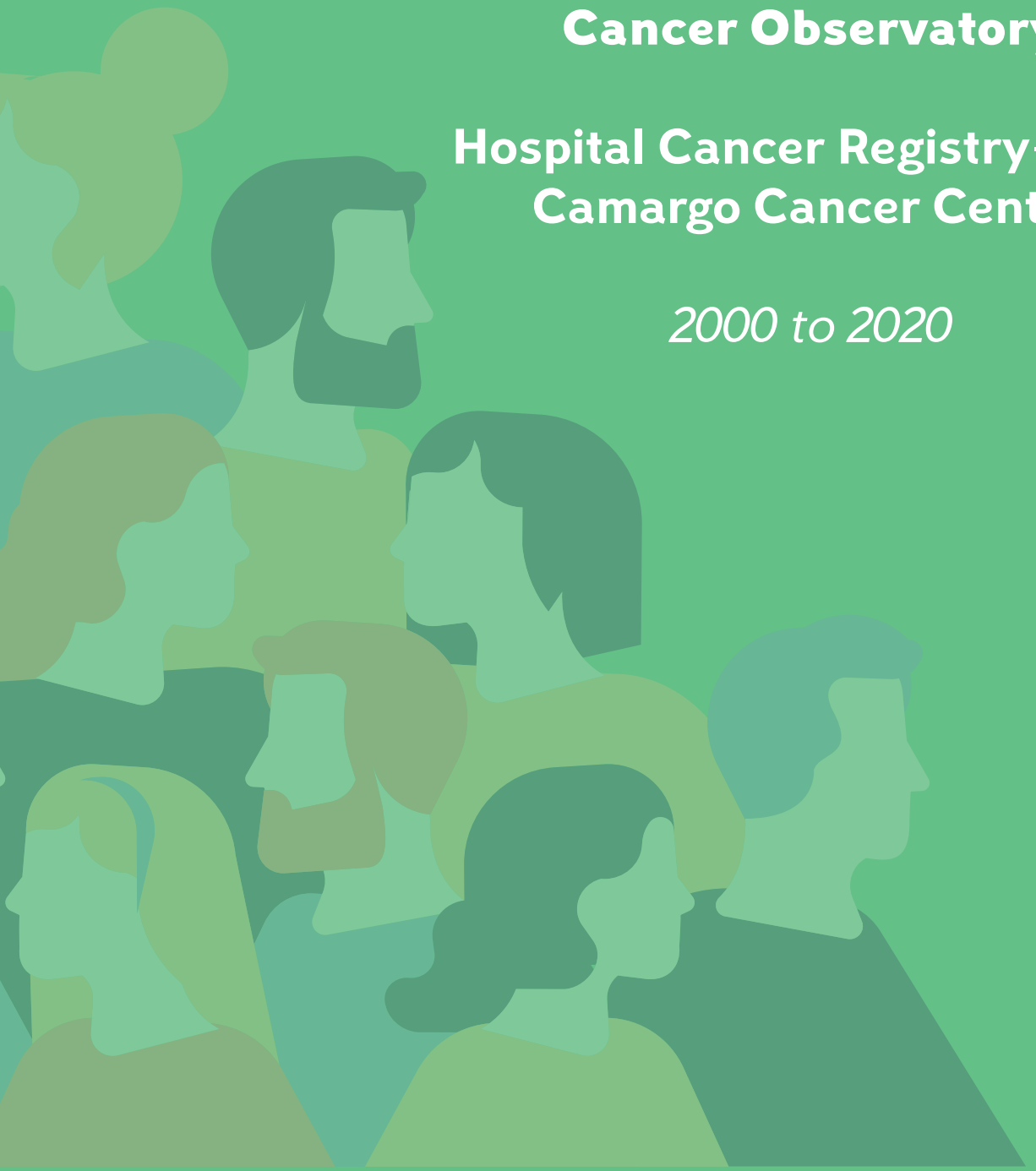


Diego Rodrigues Mendonça e Silva
Maria Paula Curado
José Humberto Tavares Guerreiro Fregnani

Cancer Observatory

Hospital Cancer Registry– A.C. Camargo Cancer Center

2000 to 2020



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To the doctors of the ACCCC's Clinical Team for their collaboration when doubts about specific cases arose and for allowing the use of the database to disseminate information about cancer within ACCCC.

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Diego Rodrigues Mendonça e Silva
HCR Supervisor

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Introduction

This report is the first Cancer Observatory for the A.C. Camargo Cancer Center's (ACCCC's) Hospital Cancer Registry (HCR), containing information about the cancer cases diagnosed and treated at the institution between 2000 and 2020.

HCRs are sources of information about cancer, including diagnoses, clinical characteristics, treatment, and short- and long-term outcomes. They contribute to cancer control programs and population-based cancer registries (Curado, 2019). Thus, they are data sources that help to inform health professionals, patients, the scientific community, and society about the profile of patients treated, including sociodemographic, clinical, diagnostic, and treatment characteristics, as well as overall survival information.

We would like to pay tribute to the founders of the registry of cancer patients at ACCCC since its creation in 1953, including the pathologist Dr. Humberto Torloni (1924–2016), who contributed greatly to the registry and the description of tumors, and Hirde Contesini (1924–), head of the Medical Archive Service, who, in partnership with Dr. Torloni, has contributed significantly to the institution's records and archives of cancer cases. Our tribute also goes to Dr. Massaki Udiahara (1913–1981), a member of ACCCC's Technical Board, which began the work of developing a registry of cancer cases (Bueno, 2015).

We hope that the information presented here constitutes a valuable contribution to doctors, health professionals, scientists, graduate students, and cancer patients.

Maria Paula Curado
Epidemiologist, Head of the Epidemiology and Statistics Group

José Humberto Tavares Guerreiro Fregnani
Superintendent of Teaching and Research

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1 The Hospital Cancer Registry (HCR)

1.1. What is a Hospital Cancer Registry?

A Hospital Cancer Registry is an information system maintained by a work group specializing in the extraction, coding, and validation of data on patients treated for cancer at a particular institution. Each cancer case record includes information about the patient's sociodemographic status, diagnosis, cancer staging, and treatment, as well as follow-up.

The HCR team consists of cancer registrars trained in the extraction, classification, and coding of cancer cases according to the International Classification of Diseases for Oncology, 3rd edition (ICD-O3).

In 1993, the Brazilian Health Ministry, via Ordinance 170, mandated that hospitals providing cancer care through the Unified Health System establish HCRs. Ordinance MS 3.535/1998 made it obligatory for advanced cancer treatment centers in Brazil to have and continue the activities of hospital registries (MS, 1998).

In the state of São Paulo, Resolution SS-15 charged the Fundação Oncocentro de São Paulo (FOSP) with the coordination and processing of cases registered in the state's HCRs (SESSP, 2000). In 2000, a standardized form for the collection of patient data (including information as sociodemographic tumor diagnosis, staging, treatment, and outcomes) was developed. This form facilitates systematic data collection by all public and private hospital units that treat cancer patients in the state of São Paulo.

1.2. General objective of the HCR

- To describe cancer cases treated at the ACCCC.

1.3. Specific objectives

- To describe the sociodemographic, epidemiological, and clinical patterns of cancer cases.
- To describe neoplasm staging at diagnosis.
- To estimate the overall survival of patients treated.

1.4. The HCR rules for abstracting

Single and/or multiple tumors

The HCR contains records of all malignancies diagnosed in individual patients. One or more tumors may be registered for the same patient at same time or at different date. Morphological diagnoses are recorded for each tumor based on the anatomopathological description available as the gold standard for diagnostic confirmation. Multiple tumors can be synchronous, meaning that two primary tumors are diagnosed at the same time o in a short interval period, in the same organ or different organs; or metachronous, meaning that a new tumor is diagnosed six or more months after the primary tumor. The second primary (or third) tumor may present with or without the same histological type.

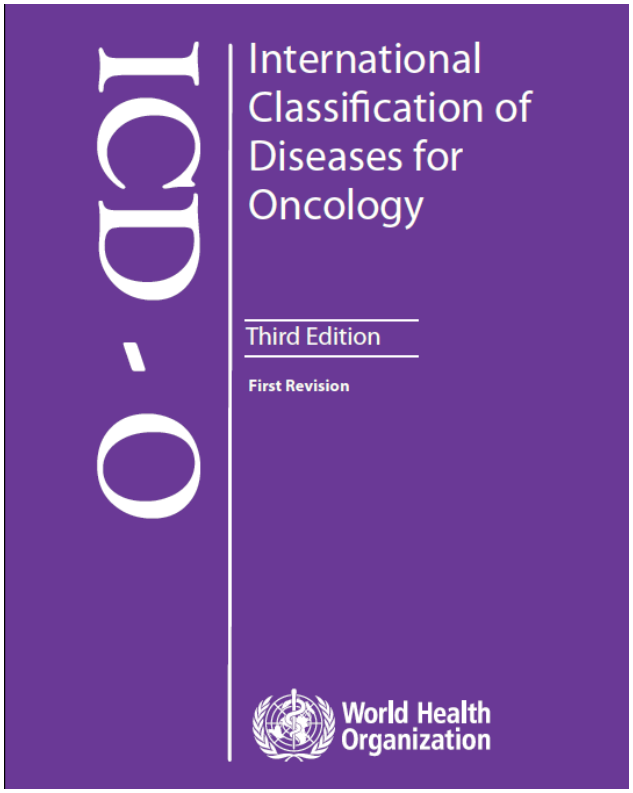

Figure 1. International Classification of Diseases for Oncology – 3rd edition, 2013.

Steps for malignant tumor recording

The database contains information on all patients who receive partial or complete cancer treatment at the institution in each calendar year. Cancer cases are recorded retrospectively, with a delay of about six months to one year relative to the current calendar year.

The first step for the recording of a new cancer case is the identification of the new case from the data sources available; at the hospital through referral from a department of anatomical pathology, chemotherapy, or radiation therapy or an oncological clinic. After the case is identified as cancer, the patient is admitted, a process that includes the collection of data on variables required for the HCR (Appendix) via the analysis of the patient's medical records.

The classification and coding are performed based on the tumor's topography and morphology, using the 2005 Portuguese version of the ICD-O3 as a reference (Figure 1). At this time, the hospital staff also collects information about the tumor's clinical stage, pathology classification, and abstract the treatments administered; finally, it records the patient's vital status (alive or dead).

Cases are registered in the ACCC's HCR, as in other HCRs in the state of São Paulo, using the SISRHC© 2007 (version 6.72) software developed by the FOSP. This software has rules of compatibility and validation for Topography/Morphology, Sex/Topography, and Age/Morphology. After all cases for a calendar year have been recorded, a new verification of data consistency and validity is performed using the IARCcrgTools© 2005 (version 2.13) software developed by the International Agency for Research on Cancer. Checks for duplicate cases are performed using the Linkage Plus 2007 (version 2.0) software developed by the Centers for Disease Control and Prevention.

The consolidated database is backed up monthly and sent to the FOSP every three months. The FOSP send the recorded cases on to the National Cancer Institute (INCA).

The FOSP disseminates the data by making it available to the public via its institutional website, on the TabNet platform (http://www.fosp.saude.sp.gov.br). Aggregated data is also available on the TabNet platform in the ACCCC's internal institutional network (http://10.11.39.42:8080/cgi-bin/dh?rhc/RHC-Geral.def).

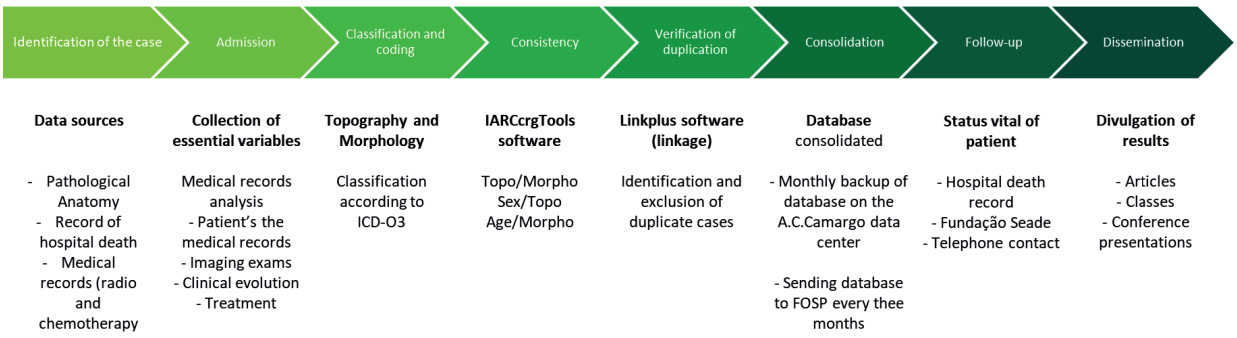

Figure 2. Flow of the registry of new cancer cases in the HCR of the ACCCC, São Paulo, 2022.

2 *HCR data quality indicators*

The data quality indicators for the HCR are the proportions of cases confirmed histologically, of "Neoplasm malignant" (8000/3) and "Unknown primary site" (C80.9), and without clinical code X staging. Periodic monitoring of these indicators enables the identification of flaws, improvements, and advances in the quality of information generated in the HCR.

The Ministry of Health/INCA's Manual for Cancer Registries (2010) contains recommendations for quality indicator evaluation. in the state of São Paulo, the FOSP evaluates the same indicators. Table 1 shows values for the data quality indicators for the ACCCC's HCR for the period of 2000–2020.

Tablel 1. Data Quality indicators for the Hospital Cancer Registry of the A.C. Camargo Cancer Center, 2000–2020.

Indicators	A.C. CAMARGO	Fundação Oncocentro de São Paulo (FOSP)a	National Cancer Institute (INCA)b
Proportion of cases with microscopic confirmation (histology)	98.8%	98.3%	≥ 95.0% - <100%
Proportion of cases coded as "Neoplasm malignant - (8000/3)"	0.2%	0.9%	< 3.0%
Proportion of cases coded as "Unknown primary site" (C80.9)	0.7%	1.4%	<2.5%
Proportion of cases without staging (code "X")	5.1%	4.1%	<10.0 %

a) HCRs from the state of São Paulo, 2000-2016. Source: FOSP, August 2022.

b) National Cancer Institute (Brazil), Hospital Cancer Registries: planning and development. 2nd ed. rev. Rio de Janeiro: INCA, 2010.

3 The Cancer Observatory methods

3.1. Descriptive

The descriptive analysis was performed with data from patients diagnosed with cancer between 2000 and 2020 and treated fully at the Institution, extracted from the HCR database on August 10, 2022.

Absolute and relative frequencies were calculated for the following variables: year of diagnosis, sex, age range, municipality of residence in the state of São Paulo, type of cancer (topography), and ACCCC reference center (RC).

The analyses were performed using Microsoft Excel (Microsoft 365) and IBM® SPSS Statistics (version 23). A thematic map was plotted using the QGIS geoprocessing software (version 3.24.2) and a WGS 84 projection of the cartographic base for municipalities in the state of São Paulo.

3.2. Survival

The survival analysis was performed with data on cases of cancer diagnosed between 2000 and 2017 and treated at the ACCCC. For each sex, the ten most common malignant neoplasms were chosen based on topography (solid malignancies) and ICD-O3 classification, and presented according to the International Classification of Diseases, 10th revision (Chart 1).

Survival was calculated as the difference between the dates of diagnosis and death (of any cause) or latest record, with vital status to June 1, 2022. Overall survival was calculated by sex for three five-year periods (2000-2004, 2005-2009, and 2010-2014) and one three-year period (2015-2017).

An analysis of overall survival by sex that was stratified by clinical stage (I–IV) according to the TNM classification of malignant tumors was also performed. Excluded from this analysis were tumors exclusive to a single sex (e.g., female breast, cervix uterine, and prostate) and Hodgkin's lymphoma, for which TNM staging is not used. Overall five-year survival during the period 2000-2017 was examined in this analysis.

Survival curves were produced using the Shiny package of the RStudio© 2018 (version 1.1.463) software, and survival probabilities at 60 months were estimated. The survival curves were compared using the log-rank test with a significance level of $p < 0.05$ using IBM® SPSS Statistics (version 23).

Chart 1. Histological types of cancer included in the analysis of survival by sex, 2000-2017.

Histological type (ICD-10)	Topography (CID-O3)	Morphology (ICD-O3)	Sex
Squamous cell carcinomas of oropharynx (C01, C02.4, C05.1, C05.2, C09-C10)	C01, C02.4, C05.1, C05.2, C09-C10	80523, 80703, 80713, 80723, 80743, 80763, 80833	Male/Female
Squamous cell carcinomas of oral cavity (C02-C06)	C02-C06 except C05.1 and C05.2	80703, 80713, 80723, 80743, 80753, 80763, 80833	Male/Female
Adenocarcinomas of stomach (C16)	C16	81403, 81443, 82013, 82103, 82113, 82433, 82513, 82553, 82603, 82633, 83103, 83233, 84803, 84813, 84903, 85503	Male/Female
Adenocarcinomas of colon and rectum (C18-C20)	C18, C19, C20	81403, 82103, 82113, 82203, 82213, 82613, 82623, 82633, 84703, 84803, 84813, 84903	Male/Female
Adenocarcinoma of lung (C34)	C34	81403, 82003, 82013, 82113, 82503 – 82553, 82603, 83103, 83233, 83333, 84303, 84803, 84813, 84903, 85503, 85743 – 85763	Male/Female
Melanoma of skin (C43)	C44	87203 – 87233, 87303, 87403 – 87463, 87613, 87703 – 87723, 87803	Male/Female
Invasive breast carcinoma of no special type (C50)	C50	85003, 85213	Female
Squamous cell carcinomas of cervix (C53)	C53	80523, 80703 – 80763, 80833, 80843	Female
Endometrial adenocarcinoma of uterus (C54)	C54	83803	Female
Adenocarcinomas of prostate (C61)	C61	81403, 85003, 85503	Male
Renal cell carcinoma (C64)	C64	81203, 81303, 82603, 82903, 83103 – 83193, 83233, 84803	Male/Female
Carcinomas of bladder (C67)	C67	80103, 80203, 80413, 80503, 80703, 81203, 81303, 81403, 82113, 83103, 84803, 84903	Male/Female
Papillary thyroid carcinoma (C73)	C73	80503, 82603, 83413, 83433, 83443	Male/Female
Hodgkin's lymphoma (C81)	C77	96503, 96513, 96523, 96533, 96593, 96633, 96643, 96653, 96673	Male/Female

4 Cancer Observatory results

4.1 Descriptive

From January 2000 to December 2020, 98,711 analytical cases of cancer (i.e., cancer in patients without prior cancer treatment) were recorded in the HCR of the ACCCC.

The annual number of cases ranged from 2,031 in 2000 to 6,119 in 2020, with a reduction in 2020 relative to 2013-2019 due to the COVID-19 pandemic.

The data show a trend of an 11.0% (95% CI, 9.3–12.9%) annual increase in the number of cases from 2000 to 2017, with an insignificant reduction of 9.7% (95% CI, 13.8–28.4%) between 2017 and 2020. For the whole period 2000–2020, the trend was a 7.7% (95% CI 4.0–11.4%) annual increase in the number of cases (Figure 3).

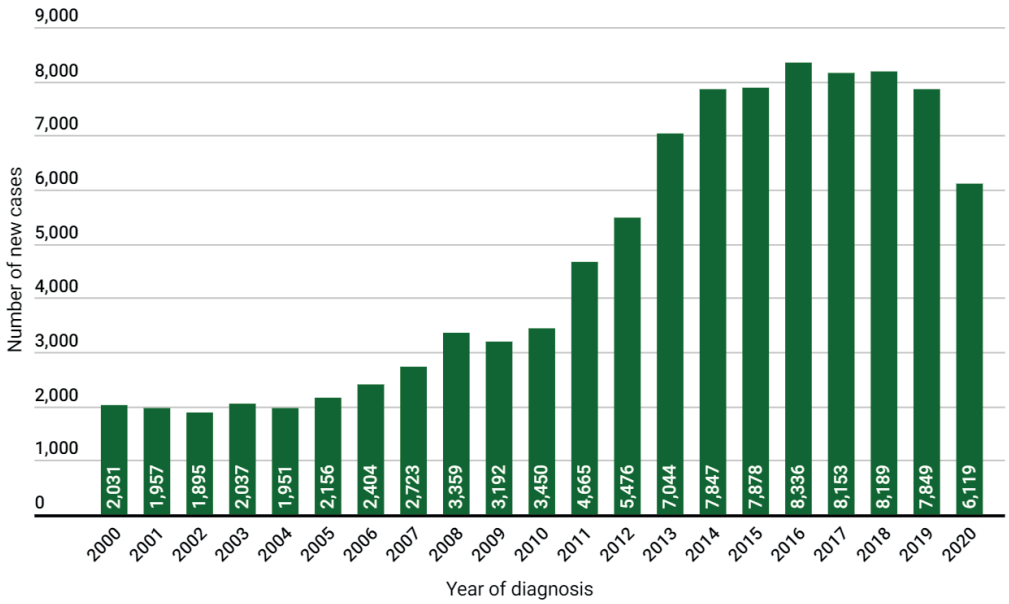

Figure 3. Numbers of new cancer cases recorded in the HCR of ACCCC, 2000–2020.

Fifty-three percent (n= 51,944) of the cases, including those of non-melanoma skin cancer, recorded in 2000–2020 were in female patients (Figure 4).

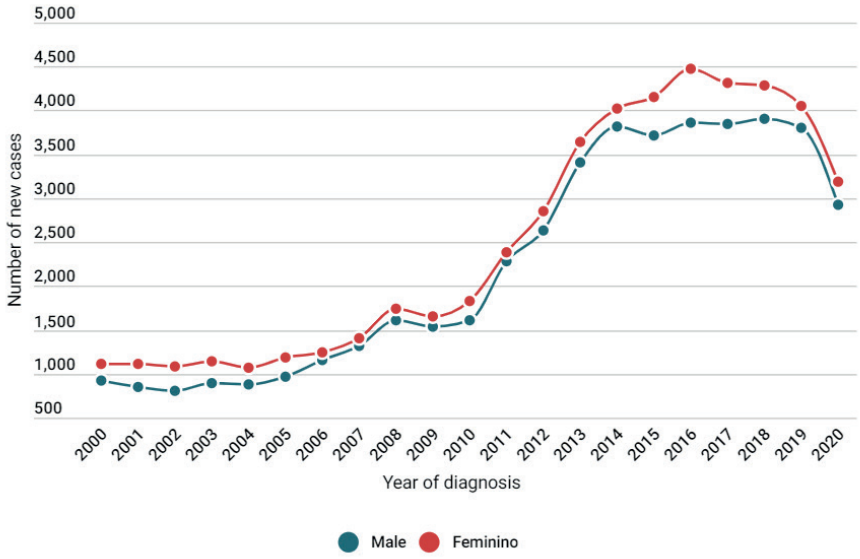

Figure 4. Numbers of new cancer cases (including non-melanoma skin cancer) recorded in the HCR of ACCCC, 2000–2020, by sex.

Two percent of the cases registered between 2000 and 2020 occurred in adolescents and children (933 in males and 930 in females). For males, 7% (n= 3262) of cases were in young adults, 32% (n = 14,744) were in adults, and 60% (n = 27,828) were in elderly adults. For females, these proportions were 16% (n = 8404) for young adults, 40% (n = 20,790) for adults, and 42% (n = 21,820) for elderly adults (Figure 5).

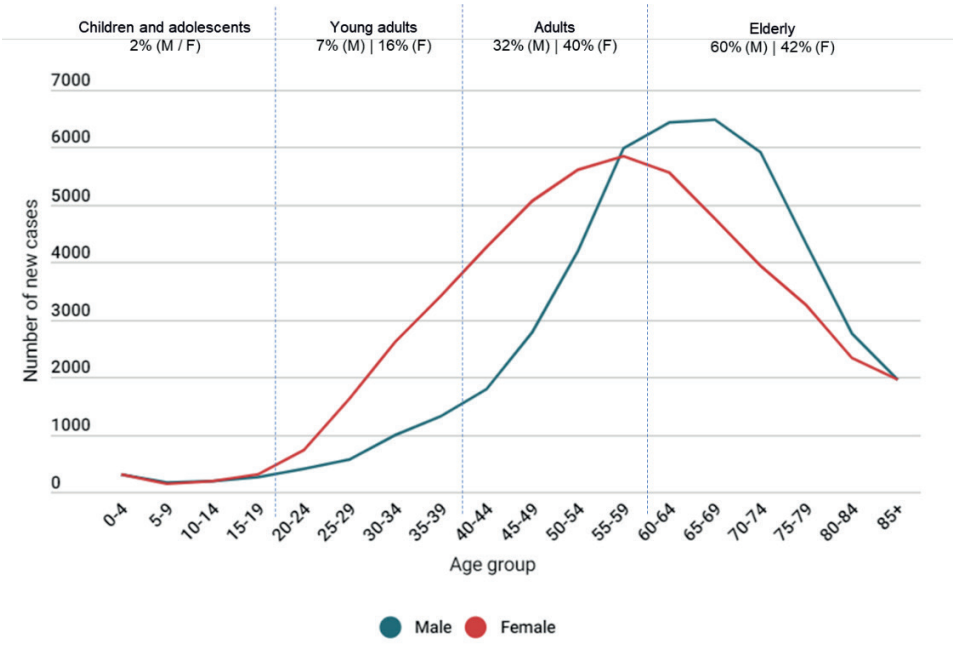

Figure 5. Distribution of the 98,711 cases of cancer recorded in the HCR of ACCCC, 2000–2020, by age and sex.

The majority [94% (n = 92,814)] of patients treated at the ACCCC lived in the state of São Paulo; of these, 65% (60,522) lived in the city of São Paulo, 22% (n = 20,563) lived in the São Paulo metropolitan region, and 13% (n = 11,729) lived in elsewhere in the state (Figure 6).

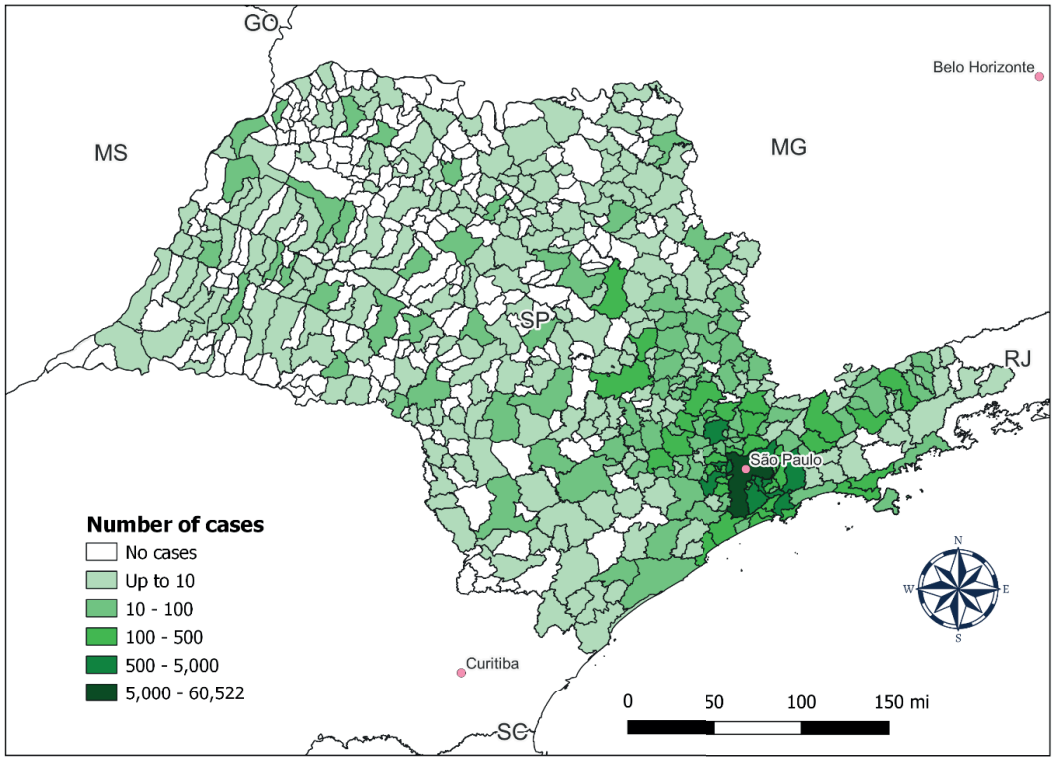

Figure 6. Numbers of new cancer cases (including non-melanoma skin cancer) recorded in the HCR of ACCCC, 2000–2020, by sex.

Distribution of malignant neoplasms by topography and sex

Among the female patients, the most common malignant neoplasms were breast, non-melanoma skin cancer, thyroid, cervix, and colorectal cancers. Among the male patients, the most common malignancies were non-melanoma skin cancer, prostate, melanoma skin, colorectal, and lung cancers (Figure 7).

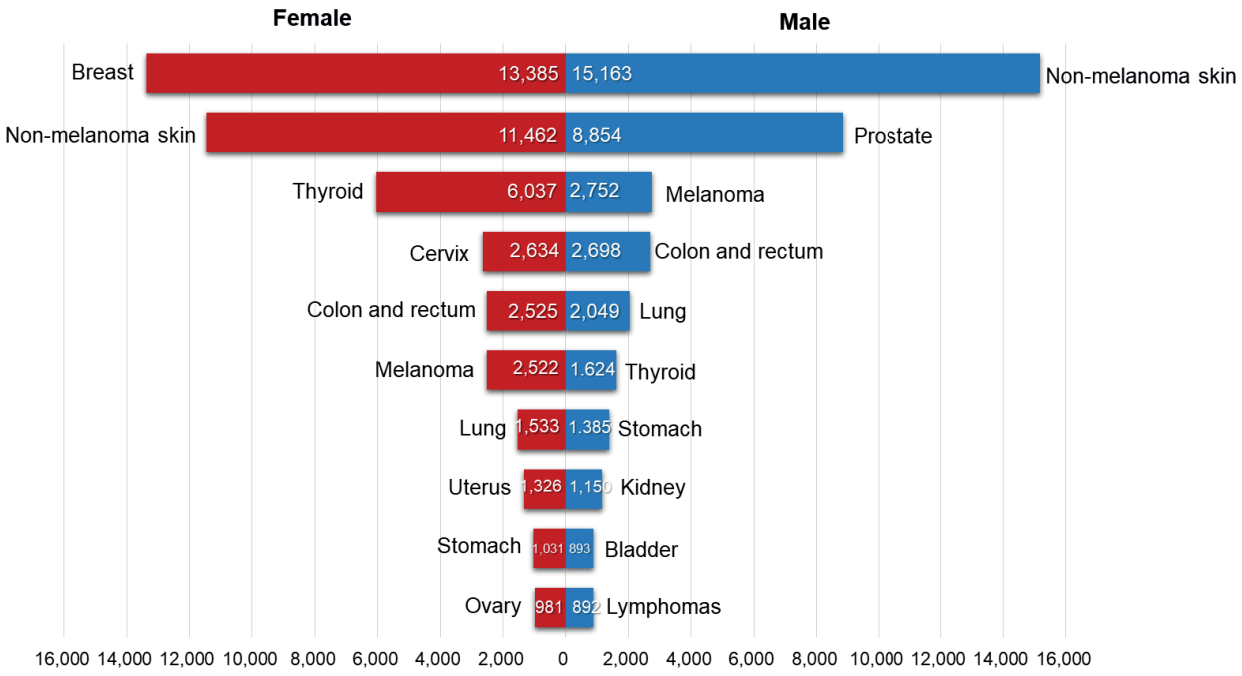

Figure 7. The ten malignant neoplasms, including non-melanoma skin cancer, treated most at the ACCCC in male and female patients. HCR, 2000–2020.

Distribution of cancer cases by ACCCC Reference Center for treatment

The cancer center model is a comprehensive approach that combines the pillars of diagnosis, treatment, research, and teaching to improve the well-being of cancer patients. This model is implemented through Reference Center, which are staffed by multidisciplinary teams of oncologists dedicated to providing patients with the best possible care in terms of prevention, diagnosis, treatment, and rehabilitation.

The ACCCC has 12 specialized Reference Center that focus on breast, gynecological, skin, lung and thoracic, pediatric, upper gastrointestinal tract, central nervous system, colorectal, urological, and head and neck tumors, neoplastic blood diseases, sarcomas and bone tumors.

More than 30% (n = 31,776) of the cases recorded in the HCR between 2000 and 2020 were treated at the Skin Tumor RC, which includes non-melanoma skin cancers such as basal cell and squamous cell carcinomas, as well as melanoma. The Breast Tumor and Head and Neck Tumor RCs treated 13.6% and 13.1% of cases, respectively (Figure 8).

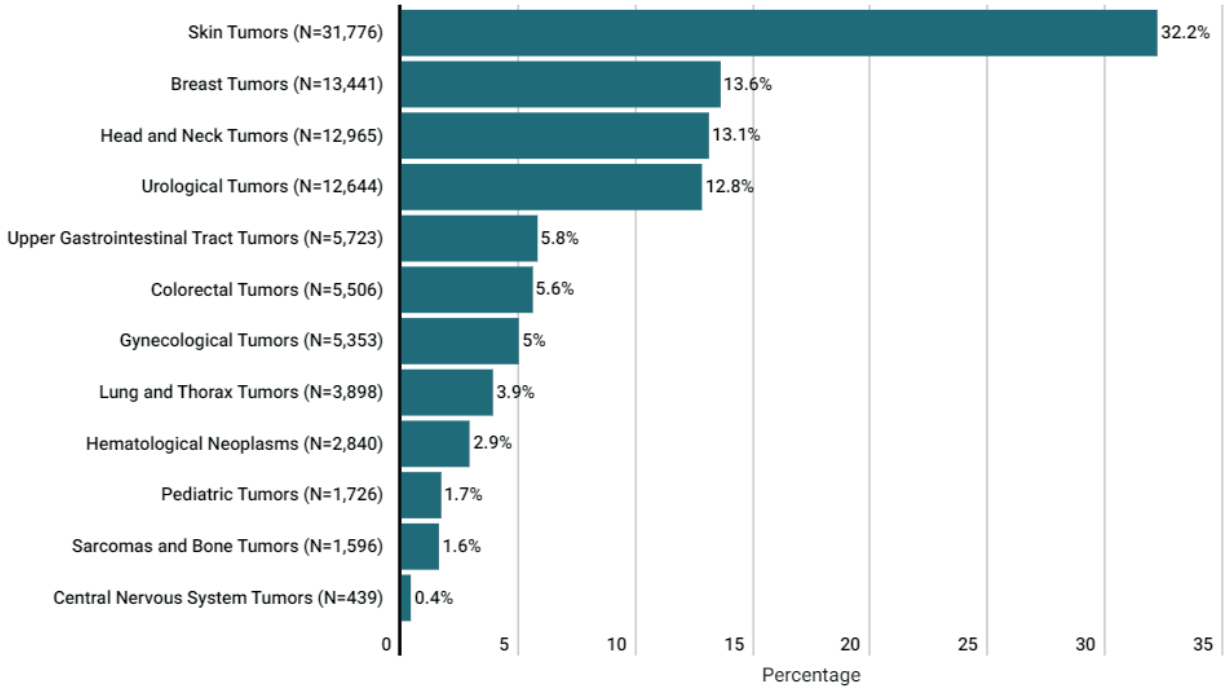

Figure 8. Proportions of the 98,711 cancer cases recorded in the HCR of ACCCC, 2000-2020, treated at the RCs.

Table 2 shows the distribution of cases recorded in 2000-2020 by topography (ICD-O3 C00–C80) and year of diagnosis.

Table 2. Distribution of new cancer cases recorded in the HCR of ACCCC, 2000-2020, by topography (ICD-O3 code) and year of diagnosis for both sexes.

Topography (ICD-O3)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
C00 Lip	2	7	0	3	3	7	6	3	5	7	7	8	10	7	13	6	6	13	2	4	5	124
C01 Base of tongue	13	12	7	12	7	1	6	13	14	15	16	29	14	17	32	17	14	18	17	11	14	299
C02 Other and unspecified parts of tongue	28	17	15	18	11	15	12	33	20	22	23	38	31	30	35	35	51	52	35	33	32	586
C03 Gum	11	6	9	8	9	5	5	9	6	2	10	11	13	8	7	14	8	9	4	14	8	176
C04 Floor of mouth	12	7	10	3	5	8	10	5	11	9	8	16	9	12	15	10	11	14	13	9	6	203
C05 Palate	9	11	11	6	4	11	8	16	10	7	9	17	17	19	18	12	16	16	14	12	10	253
C06 Other and unspecified parts of mouth	18	4	13	6	5	5	6	9	9	10	9	15	16	15	14	31	23	29	16	15	13	281
C07 Parotid gland	4	7	5	9	7	3	7	8	3	7	9	11	16	12	14	9	13	19	12	18	10	203
C08 Other and unspecified major salivary glands	1	4	2	2	1	4	1	2	0	2	4	1	7	3	2	4	9	4	4	2	4	63
C09 Tonsil	14	11	9	13	8	9	13	13	12	10	13	18	22	23	22	22	22	27	20	15	12	328
C10 Oropharynx	6	4	4	4	2	3	6	12	11	10	14	14	12	27	17	11	17	22	10	14	12	232
C11 Nasopharynx	13	10	7	13	6	10	7	8	17	10	13	13	13	17	21	10	8	9	8	8	7	228
C12 Pyriform sinus	12	12	12	5	4	3	7	3	13	2	8	5	6	9	10	5	7	6	3	3	3	138
C13 Hypopharynx	0	7	6	5	5	2	6	9	3	5	6	3	5	10	8	8	6	5	5	6	1	111
C14 Other and ill-defined sites in lip, oral cavity and pharynx	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0	7
C15 Esophagus	25	23	20	30	26	17	10	19	41	30	27	35	29	42	51	49	39	44	31	23	17	628
C16 Stomach	64	66	57	47	57	59	75	92	107	129	106	138	133	202	174	203	175	174	144	114	100	2416
C17 Small intestine	1	0	3	4	3	3	8	8	7	8	3	11	19	14	16	30	28	23	18	23	22	252
C18 Colon	25	36	41	60	40	64	72	83	90	67	102	132	164	249	224	228	247	236	202	203	147	2712
C19 Rectosigmoid junction	2	2	10	14	21	7	22	9	12	17	18	25	36	38	53	48	68	57	53	28	26	566
C20 Rectum	32	36	48	47	39	50	58	82	104	81	70	114	114	153	149	142	163	138	127	128	70	1945
C21 Anus and anal canal	6	9	11	7	6	10	4	10	14	14	11	7	19	22	16	21	15	19	24	23	20	288
C22 Liver and intrahepatic bile ducts	12	12	18	16	17	25	15	28	33	34	32	37	50	38	57	66	69	50	59	53	33	754
C23 Gallbladder	4	1	3	1	3	3	1	2	2	6	3	4	4	4	4	3	4	3	2	5	3	65
C24 Other and unspecified parts of biliary tract	7	4	0	6	6	5	10	10	9	8	8	16	13	20	31	28	28	16	22	20	9	276
C25 Pancreas	27	22	26	22	20	27	31	37	45	46	50	68	86	88	108	120	127	97	105	121	82	1355
C26 Other and ill-defined digestive organs	0	1	1	0	0	0	0	1	0	0	1	1	4	5	2	6	3	2	8	1	0	36
C30 Nasal cavity and middle ear	4	2	5	4	2	5	4	2	5	6	6	5	5	8	5	5	9	13	9	5	9	118
C31 Accessory sinuses	7	3	2	8	2	3	3	4	6	1	3	6	5	6	3	2	4	7	8	7	6	96
C32 Larynx	43	32	27	31	29	19	46	36	41	45	34	51	42	48	72	47	41	46	31	33	28	822
C33 Trachea	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	1	0	0	7
C34 Bronchus and Lung	132	105	93	112	103	115	109	123	138	130	130	173	195	237	241	251	261	284	269	211	163	3575
C37 Thymus	1	1	1	1	0	0	2	2	6	3	5	5	1	4	11	4	8	6	13	4	3	81
C38 Heart, Mediastinum and pleura	15	6	7	11	12	11	9	9	10	5	11	17	15	23	19	17	15	15	30	21	8	286
C40 Bones, joints and articular cartilage of limbs	29	34	19	20	13	4	10	7	10	5	10	7	11	25	20	8	11	16	8	11	13	291
C41 Bones, joints and articular cartilage of other and unspecified sites	12	10	11	8	6	8	9	11	18	8	7	7	12	12	10	13	18	11	16	9	10	226

Topography (ICD-O3)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
C42 Hematopoietic and reticuloendothelial systems	61	56	32	47	40	28	50	43	62	57	46	84	81	87	106	121	109	114	107	84	79	1494
C43 Skin Melanoma	75	54	60	60	77	124	141	131	174	125	111	252	333	364	367	407	476	535	499	508	401	5274
C44 Skin Non-melanoma	191	300	285	315	310	368	374	468	640	672	725	879	1343	1676	2199	2214	2453	2476	2979	3150	2608	26625
C47 Peripheral nerves and autonomic nervous system	5	6	8	6	2	2	3	4	4	1	3	3	0	0	1	0	4	0	1	0	2	55
C48 Retroperitoneum and peritoneum	12	10	13	9	10	13	12	9	13	19	15	22	16	24	23	20	26	11	23	20	17	337
C49 Connective, subcutaneous and other soft tissues	44	32	44	40	36	26	34	42	40	37	38	45	70	71	65	88	64	61	50	52	47	1026
C50 Breast	337	331	317	324	302	365	350	425	475	452	529	649	728	943	986	1037	1108	1071	1123	934	657	13443
C51 Vulva	11	8	9	13	4	8	6	9	9	8	10	12	12	11	29	18	19	19	20	10	10	255
C52 Vagina	8	2	6	3	1	5	5	3	7	4	6	14	7	12	9	5	6	9	10	4	4	130
C53 Cervix uteri	91	73	63	72	53	36	35	44	93	68	82	109	116	236	236	234	246	240	212	158	137	2634
C54 Corpus uteri	27	29	30	32	23	29	37	20	48	44	55	66	72	84	120	104	111	107	106	106	76	1326
C55 Uterus, NOS	2	1	1	1	2	0	2	0	0	1	2	2	4	2	5	3	1	1	0	1	3	34
C56 Ovary	26	31	22	32	30	26	36	33	28	28	31	43	40	66	80	90	93	82	63	53	48	981
C57 Other and unspecified female genital organs	2	1	0	1	0	0	0	1	1	1	2	3	3	2	4	3	4	1	0	1	2	32
C58 Placenta	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
C60 Penis	3	4	2	3	1	0	6	3	6	4	3	8	7	11	12	10	17	8	10	11	12	141
C61 Prostate gland	138	114	122	156	205	213	271	311	377	354	387	577	581	791	838	768	671	671	548	504	257	8854
C62 Testis	4	11	6	5	10	10	19	7	8	12	16	24	23	48	39	39	39	38	46	46	30	480
C63 Other and unspecified male genital organs	0	0	0	0	0	1	1	0	1	0	0	0	0	0	1	0	0	0	2	1	1	8
C64 Kidney	26	17	28	33	28	33	29	42	42	42	57	100	82	134	163	192	192	169	149	144	86	1788
C65 Renal Pelvis	0	2	1	2	2	1	1	2	4	3	3	5	6	13	9	10	6	8	5	11	5	99
C66 Ureter	2	0	1	1	2	0	0	0	0	0	1	2	5	3	5	3	6	5	3	9	5	53
C67 Bladder	35	22	29	23	21	29	39	51	40	53	40	62	62	115	108	107	104	93	85	76	50	1244
C68 Other and unspecified urinary organs	0	1	1	0	0	0	1	1	2	0	0	0	0	0	0	0	1	0	0	0	1	8
C69 Eye and adnexa	125	92	62	52	62	74	78	69	86	80	65	54	61	64	61	60	72	61	53	34	51	1416
C70 Meninges	1	0	1	0	1	0	0	0	1	1	1	1	0	5	1	1	1	0	0	0	4	19
C71 Brain	26	23	26	23	16	17	23	29	31	22	16	20	28	42	33	37	29	23	18	26	19	527
C72 Spinal cord, cranial nerves, and other parts of central nervous	2	5	2	0	1	0	1	2	2	0	1	0	1	6	2	1	1	2	3	0	2	34
C73 Thyroid gland	68	84	114	123	132	149	160	143	214	231	303	423	474	594	667	639	767	685	607	585	499	7661
C74 Adrenal gland	4	2	4	7	9	3	7	7	7	3	3	5	1	5	5	5	6	9	4	5	7	108
C75 Other endocrine gland and related structures	2	4	4	4	1	3	4	2	7	5	7	9	4	9	12	11	6	14	2	11	5	126
C76 Other and ill-defined sites	2	3	2	3	2	0	1	0	2	0	0	1	4	6	1	1	1	0	0	0	0	29
C77 Lymph nodes	68	71	50	56	53	55	53	62	70	77	69	88	115	136	117	132	124	104	95	87	75	1757
C80 Unknown primary site	40	43	36	34	33	16	27	42	33	27	37	44	48	36	49	33	27	35	22	9	13	684
Total	2031	1957	1895	2037	1951	2156	2404	2723	3359	3192	3450	4665	5476	7044	7847	7878	8336	8153	8189	7849	6119	98711

4.2. Survival

The probability of five-year survival of the 10 most common cancers increased during 2000–2017 in both sexes, but to a greater extent among females. For adenocarcinoma of the lung (C34), the survival rate rose from 10.4% (2000-2004) to 51.1% (2015-2017) in men and from 18.8% (2000-2004) to 59.0% (2015-2017) in women. For adenocarcinoma of the stomach, the probability of five-year overall survival increased from 25.2% (2000-2004) to 51.0% (2015-2017) in men and from 31.3% (2000-2004) to 58.5% (2015-2017) in women (Tables 3 and 4). Increases in survival occurred for papillary thyroid adenocarcinoma in men and Hodgkin's lymphoma in both sexes, although with no difference among periods. Survival decreased for bladder carcinoma in women during the period 2015-2017.

The most common neoplasms showed survival increments. For males, squamous cell carcinomas of the oropharynx and oral cavity; adenocarcinomas of the stomach, colon, and rectum; lung cancer; prostate cancer; carcinomas of the bladder and kidneys; papillary thyroid carcinoma; Hodgkin's lymphoma; and melanomas of the skin were analyzed. For women, the same tumors, as well as invasive breast cancer of no special type, cervical squamous cell carcinoma, and uterine endometrial adenocarcinoma, were analyzed. Figures 9–22 show overall survival probability curves by sex.

Overall survival rates for these cancers increased gradually, with better survival observed in the most recent period (2015-2017) in women. ACCCC has embraced innovations and advances in oncological diagnosis and treatment, offering patients better opportunities and increasing their survival.

Table 3. Overall five-year survival probabilities for the most common malignant neoplasms in male patients recorded in the HCR of the ACCCC, 2000-2017.

Cancer type (ICD-10) – Males	Five-year global survival rate								Log-rank test
	2000-2004		2005-2009		2010-2014		2015-2017		
	Deaths/total	%	Deaths/total	%	Deaths/ total	%	Deaths/ total	%	p-value
Squamous cell carcinomas of oropharynx (C01, C02.4, C05.1, C05.2, C09-C10)	75/115	34.8	62/128	51.4	117/233	47.2	44/143	64.0	<0.001
Squamous cell carcinomas of oral cavity (C02-C06. except C05.1 and C05.2)	81/142	43.0	69/136	49.2	82/201	56.2	42/164	70.2	<0.001
Adenocarcinomas of stomach (C16)	101/135	25.2	129/199	35.2	196/323	36.3	81/197	51.0	<0.001
Adenocarcinomas of colon and rectum (C18-C20)	82/206	60.2	152/423	63.9	218/760	68.7	118/560	74.7	0.001
Adenocarcinomas of lungs (C34)	129/144	10.4	96/118	17.9	162/271	34.2	76/187	51.1	<0.001
Melanoma of skin (C43)	31/111	71.9	48/268	82.0	71/503	83.0	23/423	92.9	<0.001
Adenocarcinomas of prostate (C61)	120/728	83.4	146/1519	90.0	230/3151	91.3	87/2084	94.2	<0.001
Renal cell carcinoma (C64)	27/57	52.6	24/98	75.4	55/342	81.4	29/349	89.3	<0.001
Bladder carcinomas (C67)	39/84	53.3	57/118	51.2	64/220	67.8	27/106	68.1	0.002
Papillary thyroid carcinoma (C73)	2/64	96.9	2/118	98.2	9/383	97.3	2/349	99.4	0.306
Hodgkin's lymphoma (C81)	9/63	85.7	8/64	87.5	10/90	88.1	3/54	93.1	0.640

Table 4. Overall five-year survival probabilities for the most common malignant neoplasms in female patients recorded in the HCR of the ACCCC, 2000-2017.

Cancer type (ICD-10) – Female patients	Five-year overall survival rate								Log-rank test
	2000-2004		2005-2009		2010-2014		2015-2017		
	Deaths/ total	%	Deaths/ total	%	Deaths/ total	%	Deaths/ total	%	p-value
Squamous cell carcinomas of oral cavity (C01, C02.4. C05.1, C05.2, C09-C10)	10/18	44,4	15/26	42,3	14/46	66,5	7/31	68,7	0,048
Squamous cell carcinomas of oral cavity (C02-C06, except C05.1 and C05.2)	30/62	50,8	30/68	54,4	39/123	65,3	19/94	76,5	0,013
Adenocarcinomas of stomach (C16)	68/99	31,3	80/125	36,0	110/214	45,3	41/114	58,5	0,001
Adenocarcinomas of colon and rectum (C18-C20)	101/239	57,7	133/367	63,6	190/685	69,5	87/479	79,2	<0,001
Adenocarcinomas of lungs (C34)	56/69	18,8	80/108	24,9	119/238	42,8	73/210	59,0	<0,001
Melanoma of skin (C43)	34/148	76,7	38/267	85,3	41/472	90,1	12/384	95,8	<0,001
Invasive breast carcinomas of no special type (C50)	189/1127	83,2	193/1311	85,2	205/2191	90,0	102/1835	93,6	<0,001
Squamous cell carcinomas of cervix (C53)	63/161	60,9	48/109	55,5	46/188	69,8	16/111	83,6	<0,001
Endometrial adenocarcinoma of uterine corpus (C54)	24/88	72,7	20/133	84,8	26/304	90,7	19/230	90,3	<0,001
Renal cell carcinoma (C64)	15/40	62,5	13/62	78,8	17/165	88,5	18/185	89,0	<0,001
Bladder carcinomas (C67)	13/26	48,6	23/54	57,2	26/71	60,9	16/43	57,6	0,751
Papillary thyroid carcinoma (C73)	10/352	97,1	5/571	99,1	19/1475	98,4	4/1313	99,6	0,003
Hodgkin's lymphoma (C81)	8/53	84,9	7/44	83,6	10/99	88,9	3/66	92,8	0,317

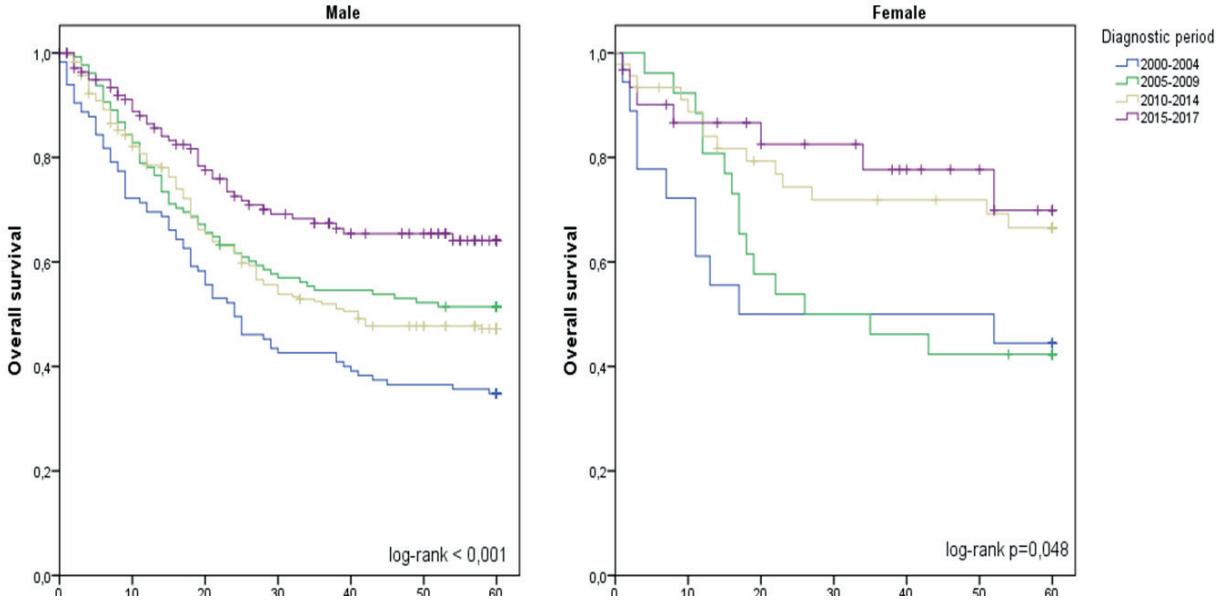

Figure 9. Estimated five-year survival for squamous cell carcinomas of the oropharynx (C01, C02.4, C05.1, C05.2, C09-C10) recorded in the HCR of the ACCCC, 2000-2017.

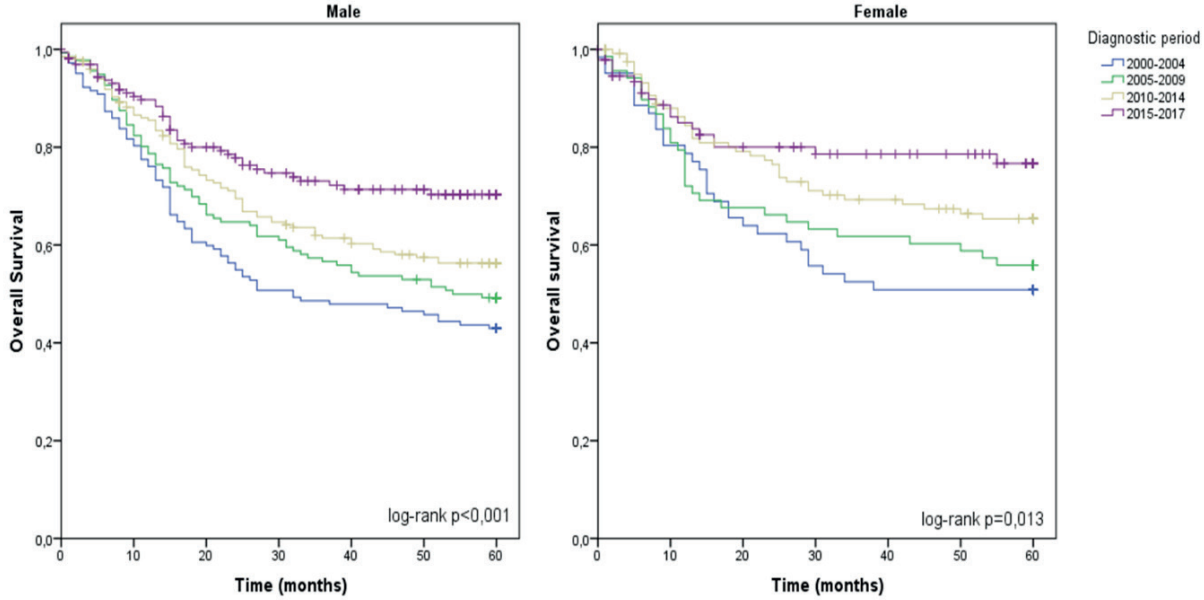

Figure 10. Estimated five-year survival for squamous cell carcinomas of the oral cavity (C02-C06 except C05.1 and C05.2) in the HCR of the ACCCC, 2000-2017.

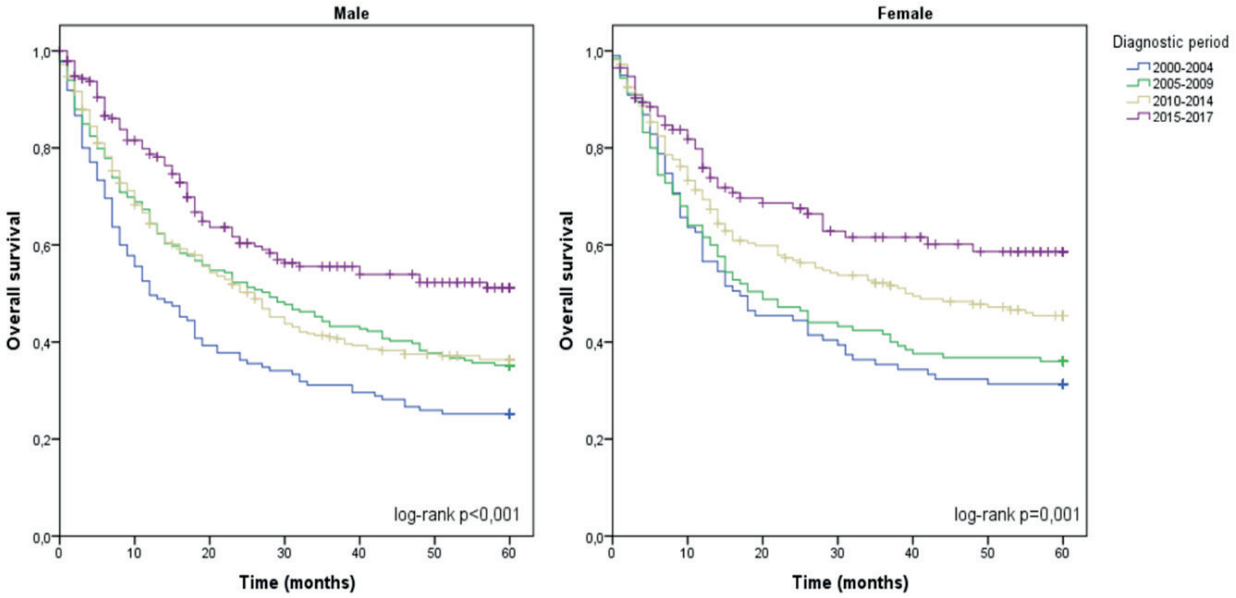

Figure 11. Estimated five-year survival for adenocarcinomas of the stomach (C16) in the HCR of the ACCCC, 2000-2017.

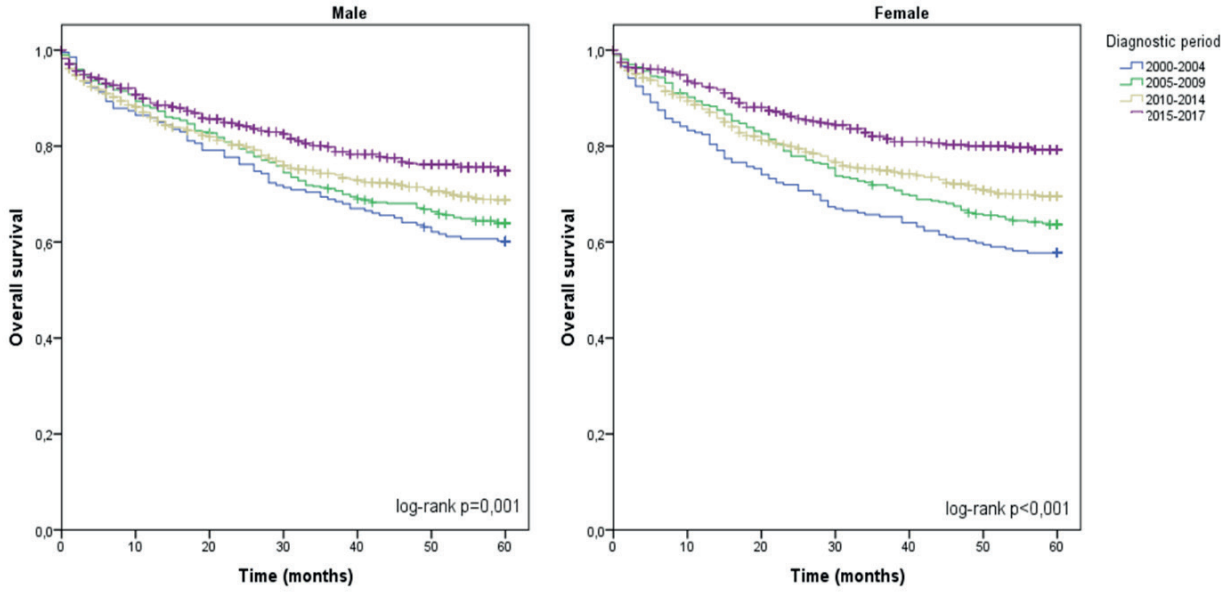

Figura 12. Estimated five-year survival for adenocarcinomas of the colon and rectum (C18-C20) in the HCR of the ACCCC, 2000-2017.

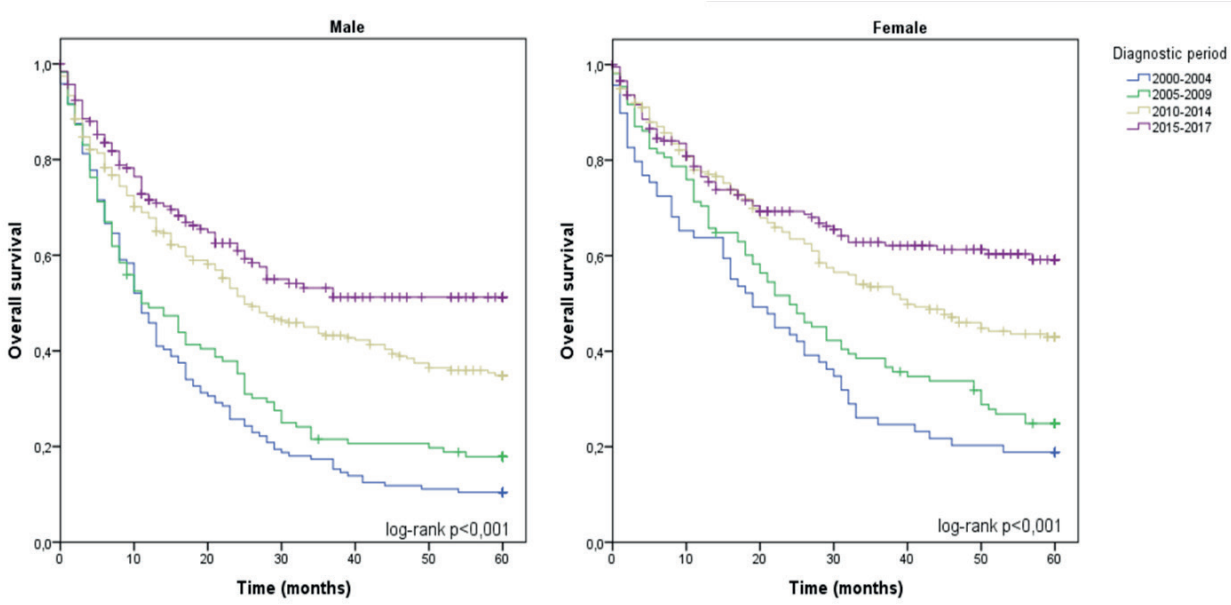

Figure 13. Estimated five-year survival for adenocarcinomas of the lung (C34) in the HCR of the ACCCC, 2000-2017.

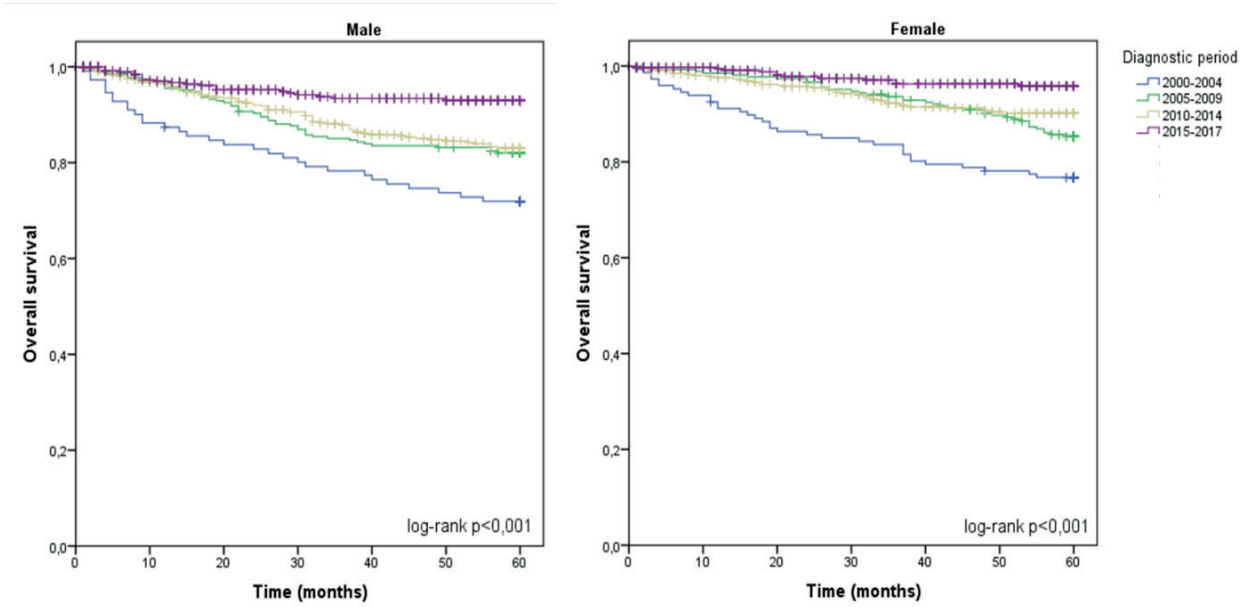

Figure 14. Estimated five-year survival for melanomas of the skin (C43) in the HCR of the ACCCC, 2000-2017.

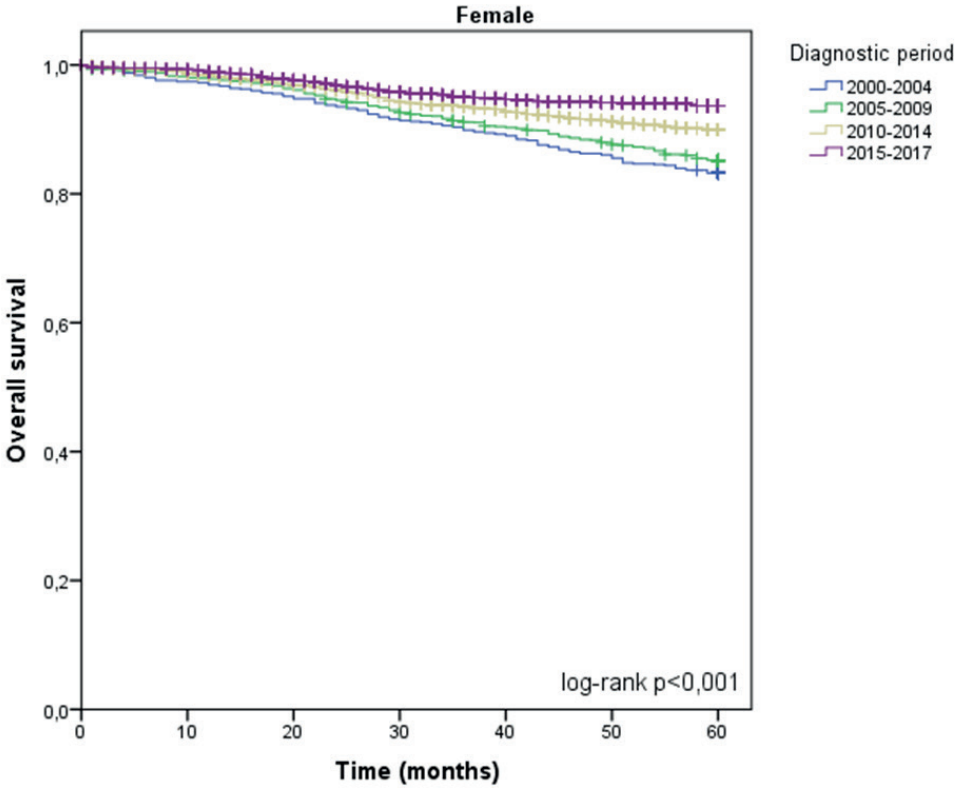

Figure 15. Estimated five-year survival for invasive breast carcinomas of no special type (C50) in the HCR of the ACCCC, 2000-2017.

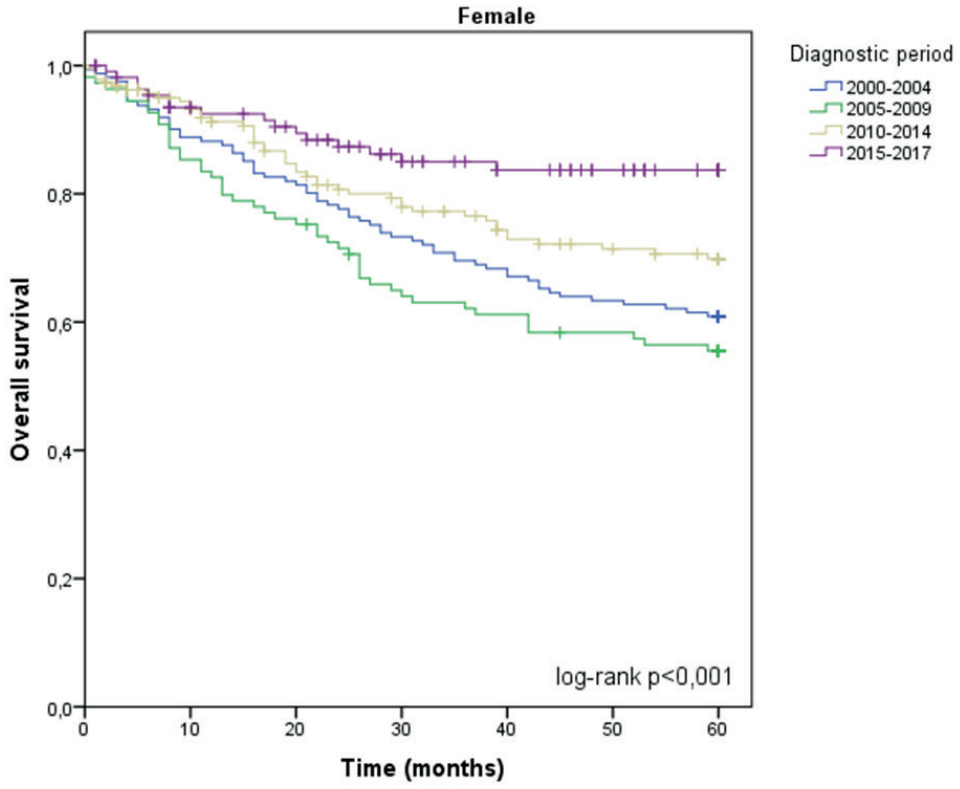

Figure 16. Estimated five-year survival probabilities for squamous cell carcinomas of the cervix (C53) recorded in the HCR of the ACCCC, 2000-2017.

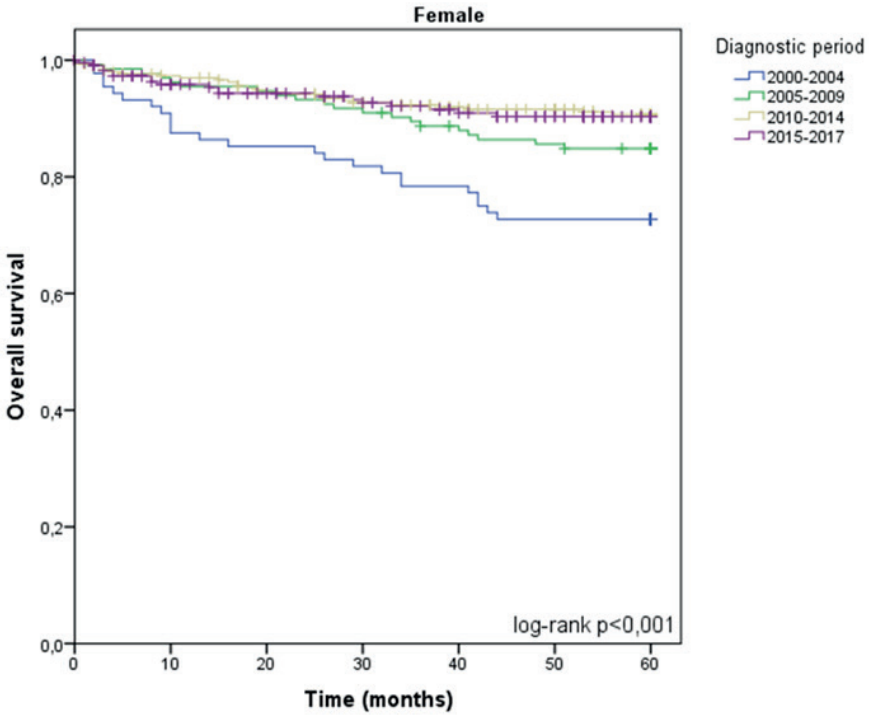

Figura 17. Estimated five-year survival probabilities for endometrial adenocarcinomas of the uterine corpus (C54) recorded in the HCR of the ACCCC, 2000-2017.

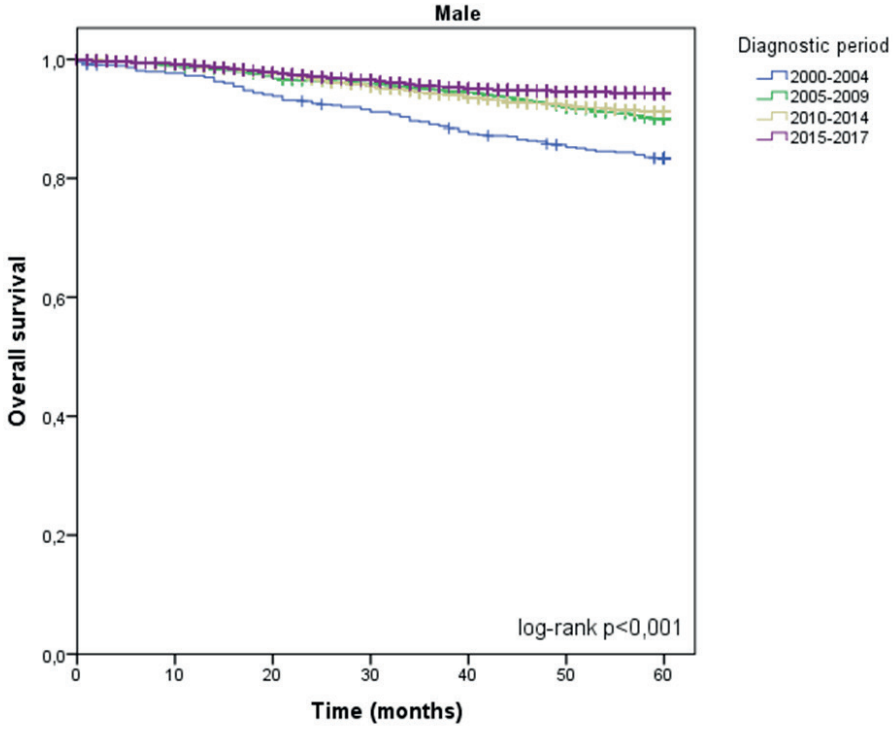

Figura 18. Estimated five-year survival probabilities for invasive adenocarcinomas of the prostate (C61) recorded in the HCR of the ACCCC, 2000-2017.

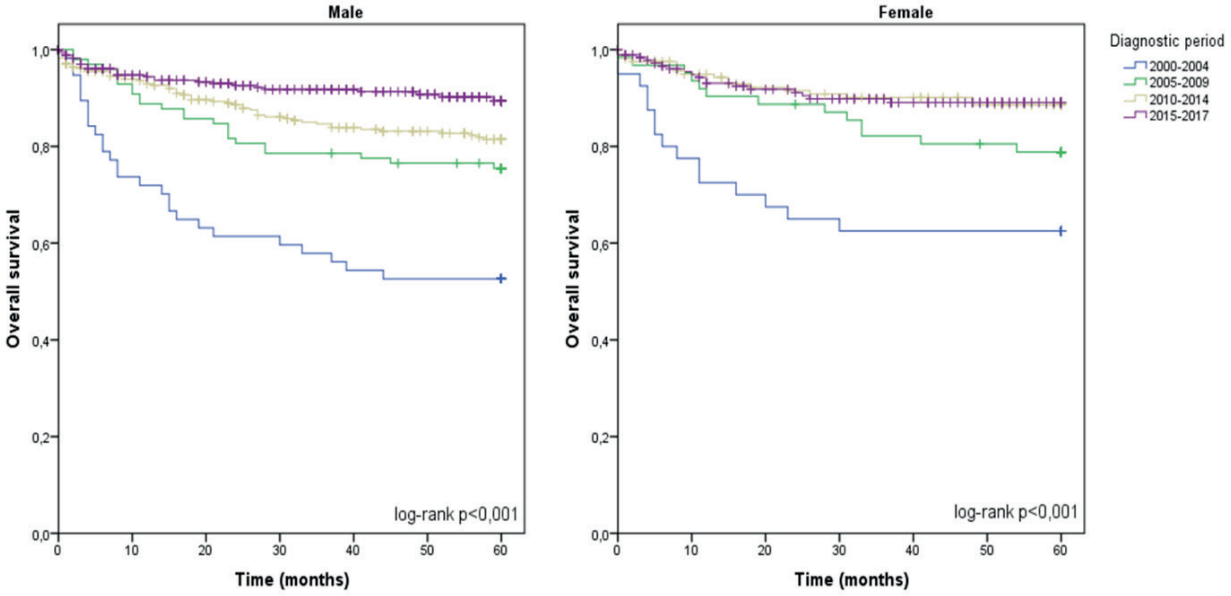

Figure 19. Estimated five-year survival for renal cell carcinomas (C64) r in the HCR of the ACCCC, 2000-2017.

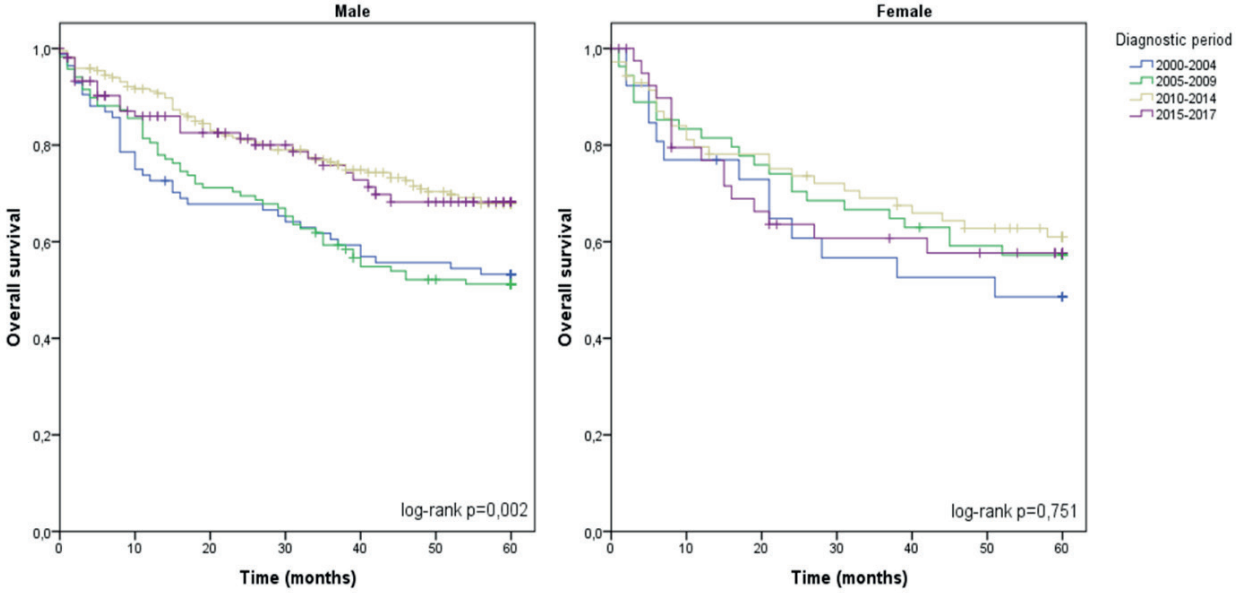

Figure 20. Estimated five-year survival for bladder carcinomas (C67) in the HCR of the ACCCC, 2000-2017.

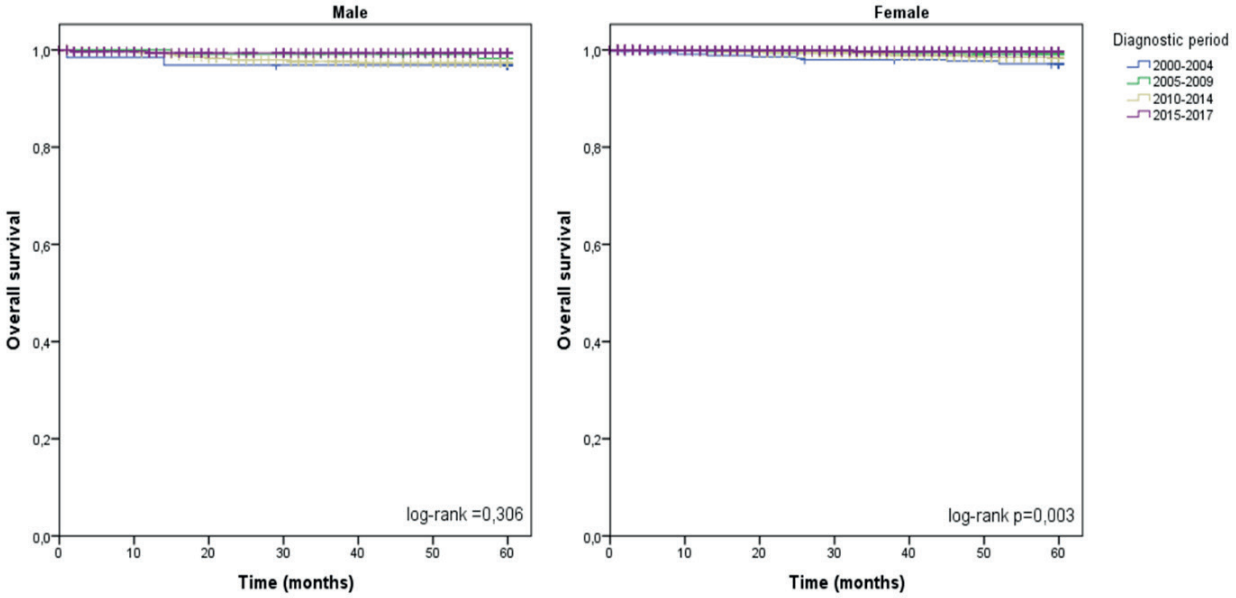

Figure 21. Estimated five-year survival for papillary thyroid carcinomas (C73) in the HCR of the ACCCC, 2000-2017.

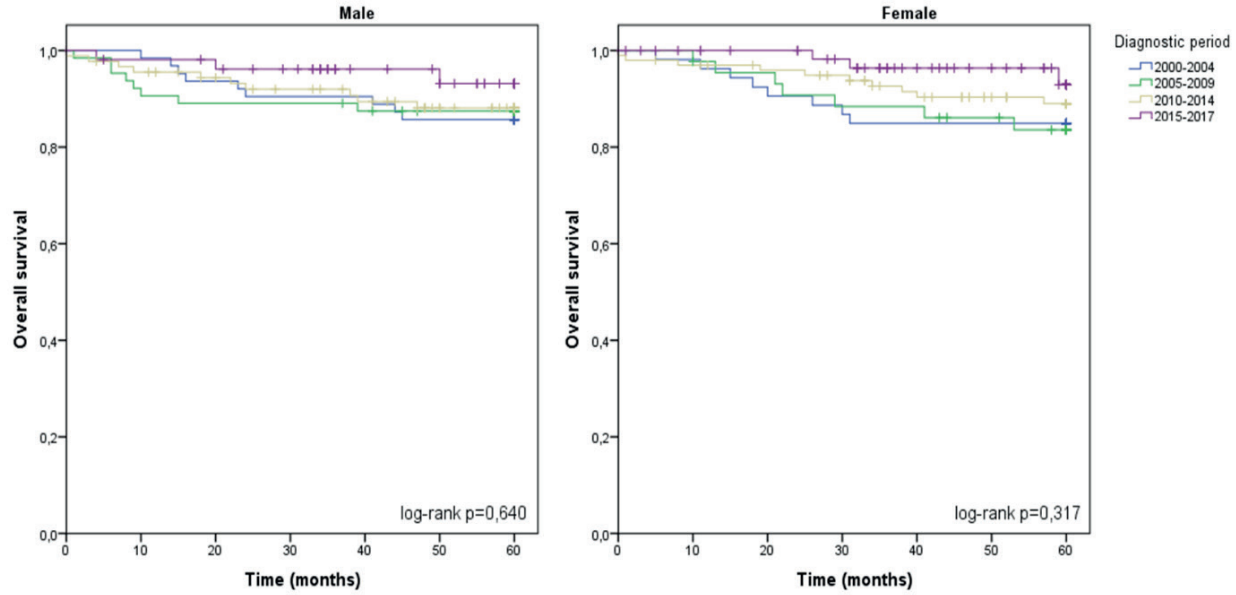

Figure 22. Estimated five-year survival for Hodgkin's lymphomas (C81) in the HCR of the ACCCC, 2000-2017.

Survival stratified by sex and clinical stage

We observed a greater increase in survival among female than among male patients for the majority of cancers studied, by five-year period overall. Differences in overall five-year survival between female and male patients were significant for squamous cell adenomas of the oral cavity (C02-C06 except C05.1 and C05.2; 64.9% vs. 57.0%, p = 0.042), adenocarcinomas of the lung (C34; 45.1% vs. 33.0%, p < 0.001) and melanoma of the skin (C43; 89.3% vs. 86.2%, p = 0.005; Table 5).

The analysis stratified by clinical stage revealed survival differences favoring female and male patients, respectively, for stage-I adenocarcinomas of the lung (C34; 84.4% vs. 72.6%, p < 0.004) and stage-II renal cell carcinomas (C64; 77.4% vs. 94.4%, p = 0.009; Table 6). No sex difference was observed for any stage-III; the survival of stage-IV adenocarcinoma of the lung (C34) was better for female than for male patients (16.9% vs. 10.4%, p < 0.001; Table 7).

Table 5. Overall five-year survival rates for malignant neoplasms recorded in the HCR of the ACCCC, 2000–2017, stratified by sex.

Cancer type (ICD-10)	Male		Female		
	Deaths/total	% Overall Survival	Deaths/total	% Overall Survival	Log-rank test p-value
Squamous cell carcinomas of oropharynx (C01, C02.4, C05.1, C05.2, C09-C10)	311/728	52,8	49/146	61.6	0.072
Squamous cell carcinomas of oral cavity (C02-C06. Except C05.1 and C05.2)	288/753	57.0	128/414	64.9	**0.042**
Adenocarcinomas of stomach (C16)	533/968	39.6	320/621	44.2	0.156
Adenocarcinomas of colon and rectum (C18-C20)	619/2345	69.6	549/2160	71.0	0.374
Adenocarcinoma of lung (C34)	512/883	33.0	363/801	45.1	**<0.001**
Melanoma of skin (C43)	179/1718	86.2	131/1594	89.3	**0.005**
Renal cell carcinoma (C64)	149/1092	83.1	71/564	85.8	0.334
Bladder carcinomas (C67)	204/591	61.2	84/223	58.8	0.363
Papillary thyroid carcinoma (C73)	17/1244	98.2	41/4742	98.8	0.075

Table 6. Overall five-year survival rates for selected cancers recorded in the HCR of the ACCCC, 2000–2017, stratified by clinical stages I and II and sex.

Cancer type (ICD-10)	Clinical Stage I					Clinical Stage II				
	Male		Female			Male		Female		
	Deaths/ Total	%	Deaths/ Total	%	Log-rank test p-value	Deaths/ Total	%	Deaths/ Total	%	Log-rank test p-value
Squamous cell carcinomas of oropharynx (C01, C02.4, C05.1, C05.2, C09-C10)	6/40	81.3	2/18	77.8	0.881	13/48	66.2	2/9	77.8	0.531
Squamous cell carcinomas of oral cavity (C02-C06, except C05.1 and C05.2)	22/158	82.8	10/127	89.6	0.150	35/138	71.4	17/69	71.1	0.897
Adenocarcinomas of stomach (C16)	24/158	83.0	12/112	88.4	0.279	46/168	69.1	27/111	73.6	0.57
Adenocarcinomas of colon and rectum (C18-C20)	42/459	88.9	31/452	91.5	0.215	72/526	84.2	62/448	84.6	0.929
Adenocarcinoma of lung (C34)	**41/190**	**72.6**	**27/234**	**84.4**	**0.004**	16/51	64.6	8/40	76.1	0.162
Melanoma of skin (C43)	37/1167	95.3	28/1159	96.5	0.186	39/253	79.6	33/211	81.4	0.599
Renal cell carcinoma (C64)	26/633	94.4	11/355	96.3	0.309	**3/67**	**94.4**	**6/31**	**77.4**	**0.009**
Bladder carcinomas (C67)	33/232	82.5	10/74	84.6	0.865	28/88	62.7	14/33	48.2	0.285
Papillary thyroid carcinoma (C73)	9/980	98.8	27/4085	99.1	0.320	1/31	96.6	4/102	95.4	0.950

Table 7. Overall five-year survival rates for selected cancers recorded in the HCR of the ACCCC, 2000–2017, stratified by clinical stages III and IV and sex.

Cancer type (ICD-10)	Clinical stage III					Clinical stage IV				
	Male		Female			Male		Female		
	Deaths/ Total	%	Deaths/N	%	Log-rank test p-value	Deaths/ Total	%	Deaths/ Total	%	Log-rank test p-value
Squamous cell carcinomas of oropharynx (C01, C02.4, C05.1, C05.2, C09-C10)	46/149	65.7	11/27	43.0	0.142	237/478	46.2	34/89	59.6	0.069
Squamous cell carcinomas of oral cavity (C02-C06, except C05.1 and C05.2)	46/127	59.2	24/61	58.6	0.681	180/315	36.5	73/142	43.6	0.435
Adenocarcinomas of stomach (C16)	86/190	48.9	53/113	47.5	0.958	322/378	3.3	181/218	6.3	0.968
Adenocarcinomas of colon and rectum (C18-C20)	127/690	77.7	120/681	79.2	0.594	332/585	34.1	304/512	31.1	0.642
Adenocarcinoma of lung (C34)	59/119	39.7	45/108	47.2	0.126	**374/479**	**10.4**	**261/377**	**16.9**	**<0.001**
Melanoma of skin (C43)	62/186	58.9	34/127	68.5	0.053	30/58	41.2	21/35	30.7	0.953
Renal cell carcinoma (C64)	24/113	71.7	9/70	86.3	0.146	82/124	21.0	34/46	23.0	0.825
Bladder carcinomas (C67)	31/73	49.3	19/40	49.8	0.891	73/106	25.1	29/43	27.3	0.691
Papillary thyroid carcinoma (C73)	2/159	98.6	6/447	98.4	0.930	5/64	88.6	3/54	94.1	0.568

5 Access to the HCR database

Access to this information is available on the A.C. Camargo internet using the Tabnet tool, at:
https://intranet.accamargo.org.br/sistemas/rhc-tabnet

Access to the HCR is gained through the Tabnet tool, which enables the construction of tables of a nonymized data showing the numbers of cancer cases according to variables of interest such as: previous treatment/diagnosis, state of birth, state of residence, age range, sex, educational level, tumor topography, morphology, clinical stage, and treatment. Non-anonymized data may be used for specific research projects with the approval of the (Institutional Review Board - IRB), and requests for access to it are made by emailing the supervisor of HCR authority with the IRB approval attached.

The HCR data reflect the care provided at the ACCCC and the characteristics of the patients treated at the Institution. The numbers of cases reported here do not reflect the total numbers of new cases occurring among residents of the city of São Paulo, only those treated at the ACCCC.

6 Conclusions

The HCR of the ACCCC has existed for more than twenty years and contains consolidated data recorded by experienced registrars. Its data quality indicators are highly standards above the standards recommend by INCA/MS and FOSP (Fundacao Oncocentro de Sao Paulo).

During the period of 2000–2020, more than 98,000 new cases of cancer were registered, with the greatest number of cases occurring in women and in residents of the city of São Paulo. For women, the most common malignant neoplasms were breast, non-melanoma skin, thyroid, cervical, and colorectal cancers. For men, they were non-melanoma skin and prostate cancers, melanoma of the skin, and colorectal and lung cancers. The largest number of malignant neoplasms was seen at the Skin Tumor RC, followed by the RCs for breast and head and neck tumors.

The overall five-year survival rate for the most common cancers in women increased in recent periods. No survival difference between periods was observed for papillary thyroid carcinoma in men or Hodgkin's lymphoma in both sexes, probably because the survival rates for these tumors were already high due to their biological behavior (more indolent) For bladder carcinoma in women, the survival rate decreased, but not significantly, in the most recent period (2015-2017).

Increases in survival in both sexes. were greater for female patients for the majority of topographies studied, with significant sex differences observed for cancers of the oral cavity and lung in 2000-2017, Overall five-year survival rates stratified by clinical stage were better for women with stage-I and -IV lung cancer and men with stage-II kidney cancer.

The observed increases in survival during the period 2000–2017 reflect innovations and advances in oncological diagnosis and treatment that the ACCCC has embraced, which has enabled us to offer patients better resources for therapeutic success.

7 HCR contacts

For more information, please contact:

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- **Telephone:** +55 (11) 2189-5000, Extension 2942.
- **Address:** Rua Taguá, n. 440 – Centro Internacional de Pesquisa, CEP 01508-010 Liberdade – São Paulo/SP

Contact information is also available at:

1. **The Institutional Intranet (Institucional > Recursos > RHC):**
   https://intranet.accamargo.org.br/institucional/recursos/registro-hospitalar-de-cancer-rhc

2. **The A.C. Camargo webpage (HCR):**
   https://accamargo.org.br/pesquisa/registro-hospitalar-de-cancer

8 The HCR Team

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Operations Manager
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Review Pathologist
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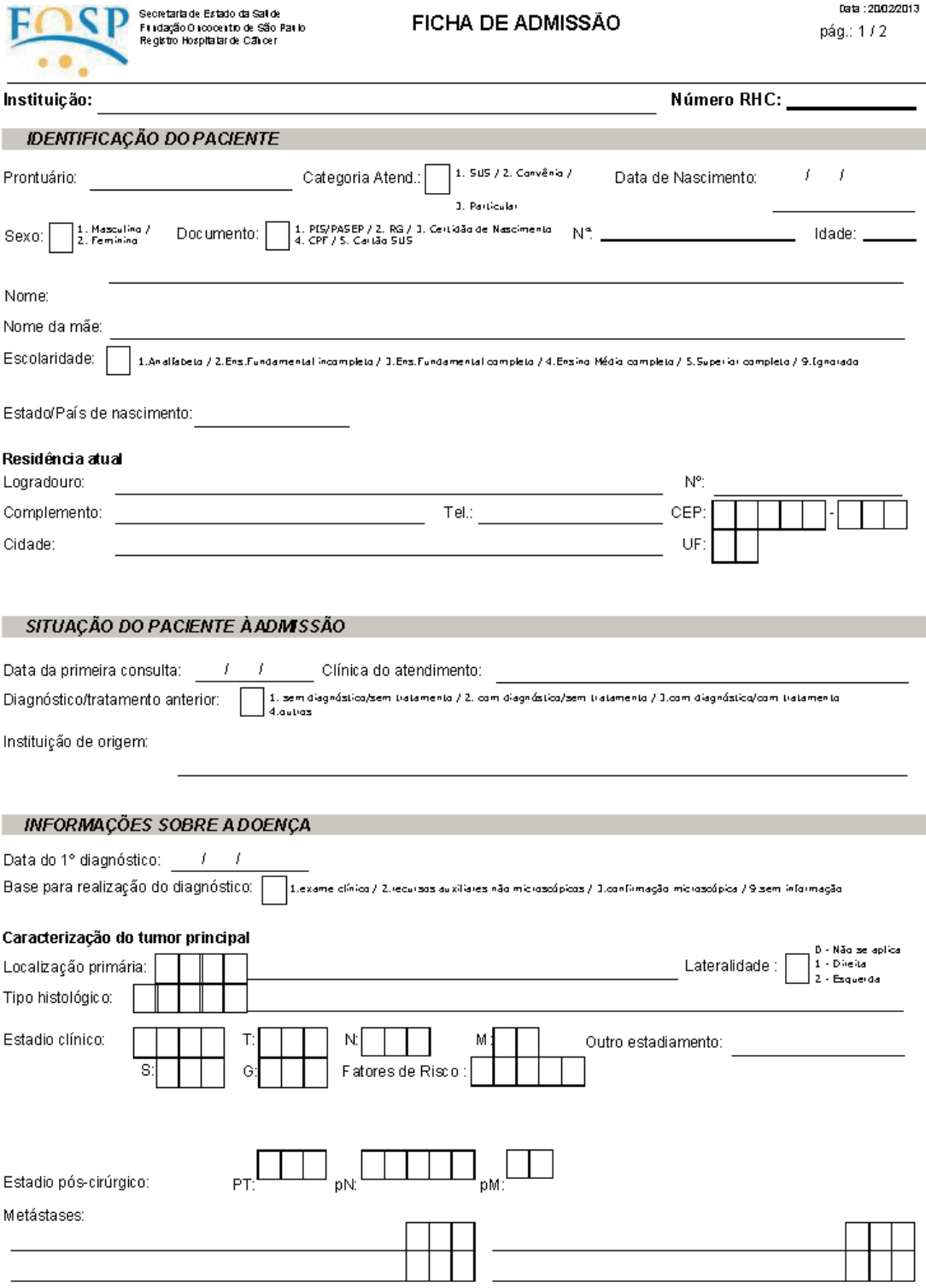
Appendices



Secretaria de Estado da Saúde
Fundação Oncocentro de São Paulo
Registro Hospitalar de Câncer

FICHA DE ADMISSÃO

Data : 20/02/2013
pág.: 1 / 2

Instituição: _____ **Número RHC:** _____

IDENTIFICAÇÃO DO PACIENTE

Prontuário: _____ Categoria Atend.: ☐ 1. SUS / 2. Convênio / 3. Particular Data de Nascimento: / /

Sexo: ☐ 1. Masculino / 2. Feminino Documento: ☐ 1. PIS/PASEP / 2. RG / 3. Certidão de Nascimento 4. CPF / 5. Cartão SUS Nº: _____ Idade: _____

Nome: _____

Nome da mãe: _____

Escolaridade: ☐ 1.Analfabeto / 2.Ens.Fundamental incompleto / 3.Ens.Fundamental completo / 4.Ensino Médio completo / 5.Superior completo / 9.Ignorado

Estado/País de nascimento: _____

Residência atual

Logradouro: _____ Nº: _____

Complemento: _____ Tel.: _____ CEP: ☐☐☐☐☐-☐☐☐

Cidade: _____ UF: ☐☐

SITUAÇÃO DO PACIENTE À ADMISSÃO

Data da primeira consulta: / / Clínica do atendimento: _____

Diagnóstico/tratamento anterior: ☐ 1. sem diagnóstico/sem tratamento / 2. com diagnóstico/sem tratamento / 3.com diagnóstico/com tratamento 4.outros

Instituição de origem: _____

INFORMAÇÕES SOBRE A DOENÇA

Data do 1º diagnóstico: / /

Base para realização do diagnóstico: ☐ 1.exame clínico / 2.recursos auxiliares não microscópicos / 3.confirmação microscópica / 9.sem informação

Caracterização do tumor principal

Localização primária: ☐☐☐☐ _____ Lateralidade : ☐ 0 - Não se aplica 1 - Direita 2 - Esquerda

Tipo histológico: ☐☐☐☐ _____

Estadio clínico: ☐☐☐☐ T: ☐☐☐ N: ☐☐☐ M: ☐☐ Outro estadiamento: _____

S: ☐☐☐ G: ☐☐☐ Fatores de Risco : ☐☐☐☐☐

Estadio pós-cirúrgico: PT: ☐☐☐ pN: ☐☐☐☐☐ pM: ☐☐

Metástases:

_____ ☐☐☐ _____ ☐☐☐

_____ _____

Secretaria de Estado da Saúde
Fundação Oncocentro de São Paulo
Registro Hospitalar de Câncer

FICHA DE ADMISSÃO

Instituição: _____ **Número RHC:** _____

EVENTOS DESSE ATENDIMENTO

Data de início do tratamento no hospital: / /

Tratamento recebido no Hospital:	**Fora do hospital antes da admissão:**	**Fora do hospital durante e/ou após admissão:**
☐ Nenhum	☐ Nenhum	☐ Nenhum
☐ Cirurgia	☐ Cirurgia	☐ Cirurgia
☐ Radioterapia	☐ Radioterapia	☐ Radioterapia
☐ Quimioterapia	☐ Quimioterapia	☐ Quimioterapia
☐ Hormonioterapia	☐ Hormonioterapia	☐ Hormonioterapia
☐ TMO	☐ TMO	☐ TMO
☐ Imunoterapia	☐ Imunoterapia	☐ Imunoterapia
☐ Outros	☐ Outros	☐ Outros
	☐ Sem informação	☐ Sem informação

Razão para não realização do tratamento no hospital : ☐ 1. Recusa do tratamento/ 2.Doença avançada, Falta de condições clínicas/ 3.Outras doenças associadas 4.Abandono tratatamento/ 5.Óbito por câncer/ 6.Óbito por outras causas, SOE/ 7.Outras/ 8.Não se aplica 9. Sem infomação

Estado da doença ao final do tratamento: ☐ 1.Sem evidência da doença / 2.Remissão parcial / 3.Doença estável/ 4.Doença em progressão 5.Fora de possibilidade/ 6.Óbito por câncer/ 7.Óbito por outras causas,SOE/ 8.Tratamento não concluído 9.Não se aplica/ 10.Sem informação

Data do óbito: / / _____

Data de preenchimento: / / _____

Registrador: _____

OBSERVAÇÕES

Secretaria de Estado da Saúde
Fundação Oncocentro de São Paulo
Registro Hospitalar de Câncer

Data : 20/02/2013

FICHA DE SEGUIMENTO

Instituição: **Número RHC:**

IDENTIFICAÇÃO DO PACIENTE

Prontuário: _____ Documento: ☐ 1. PIS/PASEP / 2. RG / 3. Certidão de Nascimento 4. CPF / 5. Cartão SUS Nº: _____

Dt. Nascimento: / / Sexo: ☐ 1. Masculino / 2. Feminino

Nome: _____

ÚLTIMA INFORMAÇÃO DO PACIENTE

Situação Atual: ☐ 1.Vivo com câncer / 2.Vivo, SOE / 3.Óbito por câncer / 4.Óbito, SOE

Data da Informação: / /

Tratamento Realizado no hospital: ☐ Nenhum ☐ Cirurgia ☐ Radioterapia ☐ Quimioterapia ☐ Hormonioterapia ☐ TMO ☐ Imunoterapia ☐ Outros

Tratamento Realizado fora do hospital: ☐ Nenhum ☐ Cirurgia ☐ Radioterapia ☐ Quimioterapia ☐ Hormonioterapia ☐ TMO ☐ Imunoterapia ☐ Outros ☐ Sem informação

Recidiva: ☐ 1. Local / 2.Regional / 3.Não / 9.Sem Informação

Data da Recidiva/Metástase: / /

Metástase: _____ ☐☐☐

_____ ☐☐☐

_____ ☐☐☐

_____ ☐☐☐

Data do Óbito: / /

Data do Preenchimento: / / Registrador: _____

OBSERVAÇÕES

GABARITO DO ARQUIVO DBF

CAMPO	DESCRIÇÃO
IBGE	Código do município brasileiro, segundo o IBGE, onde reside o paciente
ESCOLARI	Escolaridade: 1 – Analfabeto; 2 – Ensino Fundamental Incompleto; 3 – Ensino Fundamental completo; 4 – Ensino Médio Completo; 5 – Ensino Superior; 9 – Ignorado
IDADE	Idade do paciente
DTNASC	Data de nascimento
SEXO	Sexo do paciente: 1 – Masculino; 2 – Feminino
UFNASC	Estado (UF) de nascimento
UFRESID	Estado (UF) da residência
DTOBITO	Data do óbito
DIAGPREV	Diagnóstico e tratamento anterior: 1 – Sem diagnóstico e sem tratamento; 2 – Com diagnóstico e sem tratamento
CATATEND	Categoria de atendimento à admissão: forma do atendimento realizado no hospital, no momento da admissão, de acordo com: SUS; Convênio; Particular (a partir de março/2013)
SITUACAO	Estado atual após o primeiro tratamento: 01 – Sem evidência da doença; 02 – Remissão parcial; 03 – Doença estável; 04 – Doença em progressão; 05 – Fora de possibilidades terapêuticas; 06 – Óbito por câncer; 07 – Óbito por outras causas; 08 – Tratamento não concluído; 09 – Não se aplica; 10 – Sem informação
NAOTRAT	Razão para a não realização do tratamento: 1 – Recusa do tratamento; 2 – Doença avançada, falta de condições clínicas; 3 – Outras doenças associadas; 4 – Abandono do tratamento; 5 – Óbito por câncer; 6 – Óbito por outras causas; 7 – Outras razões; 8 – Não se aplica; 9 – Sem informação
BASEDIAG	Base utilizada para o diagnóstico: 1 – Exame clínico; 2 – Recursos auxiliares não microscópicos; 3 – Confirmação microscópica; 9 – Sem informação
TOPO	Topografia. Localização do tumor primário (CID-O, 2ª e 3ª edições)
MORFO	Morfologia. Tipo histológico do tumor primário (CID-O, 2ª e 3ª edições)
DTCONSULTA	Data da primeira consulta
DTDIAG	Data do diagnóstico do tumor
EC	Estádio clínico (TNM, 5ª e 6ª edições)
T	Código T (TNM, 5ª e 6ª edições)
N	Código N (TNM, 5ª e 6ª edições)
M	Código M (TNM, 5ª e 6ª edições)

DTTRAT	Data de início do primeiro tratamento
TRATAMENTO	Tipo(s) de tratamento(s) proposto(s): A – Cirurgia G – Cirurgia + Radio + Quimio B – Radioterapia H – Cirurgia+Radio+Quimio+Hormonio C – Quimioterapia I – Outras combinações de tratamento D – Cirurgia + Radioterapia J – Nenhum tratamento realizado E – Cirurgia + Quimioterapia K – Sem informação do tratamento F – Radioterapia + Quimioterapia
META01	Localização da metástase (CID-O, 2ª e 3ª edições)
META02	Localização da metástase (CID-O, 2ª e 3ª edições)
META03	Localização da metástase (CID-O, 2ª e 3ª edições)
META04	Localização da metástase (CID-O 2ª e 3ª edições)
DTULTSEG	Data do último seguimento informado
A) SITULTSEG (até dez/2011)	Situação do paciente no último seguimento informado: 1 – Vivo com câncer 3 – Óbito por câncer **5 – Liderado de seguimento** **2** – Vivo, SOE 4 – Óbito, SOE **9 – Sem informação**
B) SITULTSEG (a partir de mar/2012)	Situação do paciente no último seguimento informado: 1 – Vivo com câncer 3 – Óbito por câncer **5 – Perda de seguimento** 2 – Vivo, SOE 4 – Óbito, SOE
ANODIAG	Ano do diagnóstico do tumor
ECGRUP	Estadiamento TNM agrupado
TOPOGRUP	Topografia. Localização do tumor primário (CID-O, 2ª e 3ª edições), com 3 dígitos
CICI	Estadiamento Infantil – Grupo + Subgrupo
CICIGRU	Descrição do Estadiamento Infantil (CICI) – Grupo
CICISUBGRU	Descrição do Estadiamento Infantil (CICI) – Subgrupo
FAIXAETARI	Faixa etária (de 10 em 10 anos)
A) LATERALI	Localização (lateralidade) de tumores em órgãos, glândulas e cavidades em pares 1 – Direita 2 – Esquerda **3 – Indiferente**
B) LATERALI em pares (a partir de set/2011)	Localização (lateralidade) de tumores em órgãos, glândulas e cavidades 1 – Direita 2 – Esquerda **3 – Não se aplica**
DSCTOPO	Descrição da topografia. Localização do tumor primário (CID-O, 2ª e 3ª edições)
DSCMORFO	Descrição da morfologia. Tipo histológico do tumor primário (CID-O, 2ª e 3ª edições)

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2000/2020