



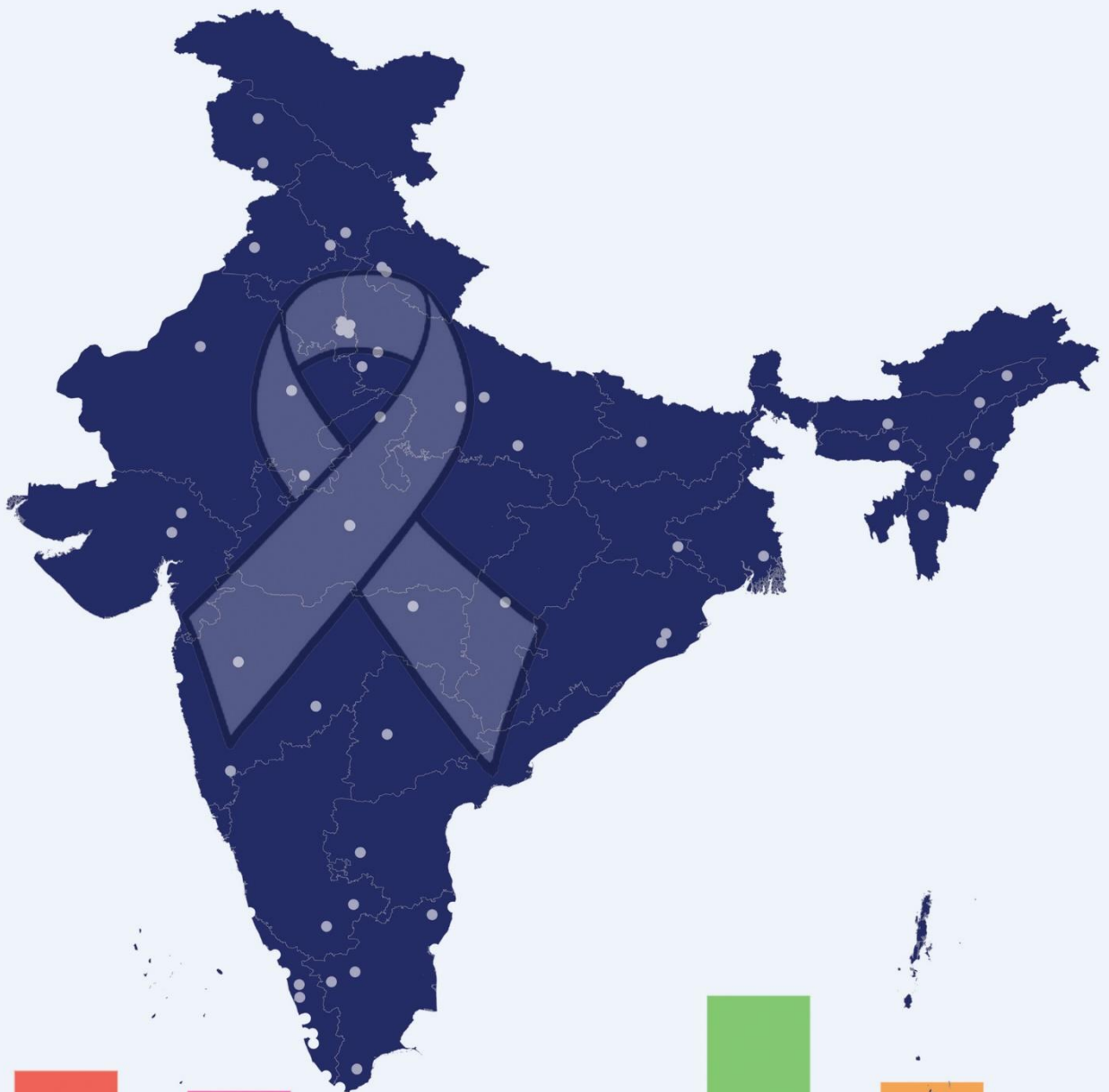
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Clinicopathological Profile of Cancers in India: A Report of the Hospital Based Cancer Registries, 2021 National Cancer Registry Programme





Impacting NCD Public Health Actions and Policies
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**Clinicopathological Profile of Cancers in India:
A Report of the Hospital Based Cancer Registries,
2021**

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Preface

We are pleased to bring out 'Clinicopathological Profile of Cancers in India: A Report of the Hospital Based Cancer Registries, 2021'. The report is commensurate with the broad mission of ICMR-NCDIR to support cancer surveillance and improve disease outcomes through the National Cancer Registry Programme (NCRP).

This report is based on the analysis of cancer cases reported from 96 hospitals throughout India for eight years (2012-2019). The first section of the report gives a collective description of cancer cases in terms of distribution across reporting hospitals, occurrence in sites associated with tobacco use and childhood cancers. A detailed anatomic site wise clinical description for eight systems/specific organ are covered in the subsequent section. There is a dedicated chapter on reproductive cancers, including breast cancer in women. An attempt has been made to keep the report concise yet descriptive through many graphics and tables that are self-explanatory. The salient findings are highlighted in the form of key points at the end of each chapter.

The report shall be of much interest to clinicians, pathologists, epidemiologists, academicians, researchers, students, and everyone engaged in cancer care and research. The results presented in this all-inclusive report will broaden the reader's understanding of the clinical details of different cancers. We hope it will help to scale up and sustain robust cancer care in India.

We thank all the investigators and staff of the cancer registries, the scientific, technical and administrative contributions of concerned.


Prashant Mathur

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Foreword

Cancer registries form an essential part and fundamental basis for cancer-directed control measures in the country. The National Cancer Registry Programme (NCRP) of the Indian Council of Medical Research has played a crucial role in cancer surveillance in India since 1981 through a network of 269 Hospital-based and 38 Population-based cancer registries (HBCRs' and PBCRs).

The report 'Clinicopathological Profile of Cancers in India: A Report of the Hospital Based Cancer Registries, 2021' covers data compiled from 96 Hospital Based Cancer Registries for the time period 2012 to 2019. This report gives a comprehensive overview of cancer case distribution reported from the participating hospitals and cancers in sites associated with tobacco use. A prime feature is the anatomic site-wise description of cancers in terms of the relative proportion to all sites, age distribution, basis of diagnosis, the clinical extent of disease, treatment modalities and treatment waiting time.

Health planners and relevant stakeholders can use it to plan and implement good quality cancer care services by a better understanding of the frequency of cancer types and current scenario of treatment modalities. Such information will help contribute to patient care by providing readily available clinical details and current cancer treatment trends. I anticipate that the report findings will strengthen health systems and enhance cancer care services in the country.

Dr G.K.Rath


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MESSAGE

I am pleased that the ICMR-National Center for Disease Informatics and Research (NCDIR), Bengaluru has prepared a report on "Clinicopathological Profile of Cancers in India: A Report of the Hospital Based Cancer Registries, 2021".

It is a detailed report on various aspects on cancer management from 96 hospitals across the country, in both public and private sector. It provides useful data to identify gaps in diagnosis, referral and cancer directed treatment. Useful steps taken to streamline cancer referral and treatment to tertiary hospitals will reflect in better outcomes and optimal use of resources. The results shall help in strengthening efforts towards Universal Health Coverage and its related activities.

I congratulate all the HBCR investigators and staff, the scientists and technical staff at ICMR-NCDIR for their valuable contribution. I look forward to this report being utilised to improve cancer patient care.

Balram Bhargava

(Balram Bhargava)

Acknowledgement

It is an immense pleasure to bring out the report entitled 'Clinicopathological Profile of Cancers in India: A Report of the Hospital Based Cancer Registries, 2021', which has been made possible by the valuable contribution of several persons.

First and foremost, we would like to thank the cancer patients whose data were included in the report. We acknowledge the tireless efforts of the registry investigators and staff for the daunting task of compiling patient data from various hospital departments. We would also like to thank the hospital staff for their support in providing the required data.

We want to thank our experts and reviewers on cancer and investigators for giving their valuable time and critically reviewing the report's chapters.

We are very much indebted to Prof Balram Bhargava for his visionary guidance for achieving optimal scientific outputs through the research activities at ICMR.

We want to thank our Director, Dr Prashant Mathur, for motivating us to develop scientific thinking and skills and facilitating the timely preparation of this report.

This passage would not be complete without acknowledging the vital and supportive role of the scientific and technical staff of NCDIR. They include, Dr. Ranjith Viswanath, Dr Bhavani C, Dr. Shubhra Singh, Dr Prachi Phadke, Mr Monesh B Vishwakarma, Mr Velidi Ramesh, Ms. Gurpreet Kaur Rajput, Mr. Solomon T, Mr. Vijay Kumar DD, Mr. Seelam Rajesh, Ms. Vyshnavi B P, Mr. Saravananaraj K and Mr. Keerthan. The support and facilitation of the administrative and finance staff at NCDIR is duly acknowledged.

We express our gratitude to ICMR and the Ministry of Health & Family Welfare for providing financial support for the Hospital Based Cancer Registries.

We hope that this report will be widely used to improve cancer care and survival in India.



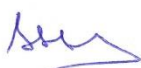
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Executive Summary



Executive Summary

Cancer is rapidly emerging as a matter of public health concern in India. In 2020, there were an estimated 1.39 million cancers in India. Cancer surveillance is an essential part of cancer prevention and control efforts. The Indian Council of Medical Research (ICMR) started the National Cancer Registry Programme (NCRP) in 1981, through a network of Population and Hospital Based Cancer Registries (PBCRs and HBCRs). Cancer registries systematically collect, store, analyze, interpret and generate meaningful data on cancer, which helps develop plans and implement effective evidence-based strategies. HBCRs contribute to providing robust data on clinical, pathological and treatment-related details of cancer patients availing of care at designated cancer care facilities.

This report, "Clinicopathological Profile of Cancers in India: A Report of Hospital Based Cancer Registries, 2021", is based on seven-year data of cancer cases from 96 HBCRs' under the NCRP. The data pertains to all diagnosed and treated patients of confirmed malignancies reported to these centres across the country. The report presents a general overview of the proportion of cancer sites relative to all sites, cancers in sites associated with tobacco use, childhood cancers and detailed chapters for cancers in various organs sites, which include head and neck, gastrointestinal tract, lung, prostate, central nervous system, thyroid, kidney, bladder, childhood and gynaecological cancers including breast.

A total of 1332207 cancer cases were registered from 96 hospitals under the NCRP during 2012-19. Of these, 610084 cases, were included for analysis, based on the completeness and quality of data.

Key Findings

- Out of 610084 cancers, 319098 (52.4%) cancers were reported in males, and 290986 (47.6%) in females.
- Childhood cancers (0-14 years) comprised 7.9% of all cancers.
- Cancers in sites associated with tobacco use comprised 48.7% of cancers among males and 16.5% among females.

- Cancers of the head and neck region accounted for nearly one third (31.2%) of the cancers among males. Gynaecologic cancers, including breast cancer (51%), accounted for over half of all cancers in females.
- The relative proportion of site-specific cancers was higher in males than females except for thyroid cancer (2.5 % in females versus 1% in males) and gall bladder cancer (3.7% in females versus 2.2 % in males)
- The highest proportion of cancer from all sites were reported in the age group 45 to 64 years, except for prostate cancer, which was higher in those over 65.
- Over 90% of the cancers in different organ sites got diagnosed by microscopic examination.
- Among all the cancers, the highest proportion of distant metastasis at presentation was seen in patients with lung cancer (49.2% males and 55.5% females), followed by gall bladder cancer (40.9% males and 45.7% females) and prostate cancer (42.9%).
- Over one-third of patients with cancers of the tongue, larynx, thyroid, corpus uteri, kidney (including children), bladder and retinoblastoma had localized disease at the time of presentation.
- Chemotherapy was the most typical treatment modality for many cancers regardless of the clinical extent of disease at presentation, including cancers of the liver, gall bladder, stomach, lung and childhood cancers.
- Regardless of the organ site and clinical extent, most cancer patients, were initiated on cancer-directed treatment within 8 to 30 days of diagnosis.
- Over half of the patients with cancer of the brain and nervous system and about one-third of the patients of lung, prostate, bladder and thyroid cancer with localized disease, diagnosed at the reporting institution were initiated on cancer-directed treatment on the same day.

Introduction

In India, the number of new cases of cancer was estimated to be 1.39 million in 2020 [1]. Globally, cancer is among the leading causes of death, contributing to about 10 million deaths during 2020[2]. India exhibits a wide heterogeneity in the geographic incidence of cancer. According to the recent report of the National Cancer Registry Programme of 2020, the cancer incidence rates in Aizawl district were about seven times higher than the rates in Osmanabad district [1].

The rising cancer incidence is bound to exert a tremendous strain on people and the health systems, which may be least prepared to manage this burden. Cancer registries play a crucial role in cancer prevention and control by generating systematic and timely information on new cases of cancer, which enable health system preparedness and framing of programmes and policies.

Cancer has a unique course, and control can be achieved through providing information to the general population on trends in the occurrence, profile and distribution of cancer cases. The Ministry of Health and Family Welfare (MoHFW) has developed several legislations, policies and programmes to enable and strengthen cancer prevention and control.

Present Status/policies/Programmes

The National Health Policy (NHP) 2017 focuses and commits itself to prevention, early diagnosis and treatment for all Noncommunicable Diseases (NCDs'), including cancer [3].

The cancer component under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS) focuses on [4]

1. Primary prevention through information, education and communication (IEC) and Behavioural Change Communication (BCC)
2. Secondary prevention, through early detection and diagnosis of common cancers like cervix, oral cancers and breast cancers.
3. Tertiary prevention by means of strengthening of provision of cancer care, including palliative care at the existing institutions and setting up of new institutions.

Strengthening existing regional cancer centres, oncology wings with the availability of cancer treatment facilities, and assistance to NGOs working in cancer are some of the initiatives that are part of this scheme.

The National Cancer Registry Programme

Cancer Registry aims for systematic collection, storage, analysis, interpretation and reporting of patients diagnosed with cancer. They provide an opportunity to adequately assess the extent and nature of the cancer burden in society. The ability to distinguish individuals by events (e.g., hospital admissions) is a vital feature of a cancer registry. The records of cancer patients are appropriately identified in a registry so that case abstraction can be performed.

The National Cancer Registry Programme (NCRP) under the Indian Council of Medical Research (ICMR) has successfully collected cancer data since 1981. NCRP is coordinated by the **ICMR-National Centre for Disease Informatics and Research**, Bengaluru. The NCRP collects the

data on cancer incidence, mortality, pattern, trend and geo-pathological distribution of cancers. It also helps to formulate and implement policies and programmes, monitor and evaluate the cancer control activities. NCRP started with a network of three PBCRs in Bengaluru, Chennai and Mumbai and three HBCRs at Chandigarh, Dibrugarh and Thiruvananthapuram. The registries have expanded into a vibrant network of 38 PBCRs and 269 HBCRs registered under NCRP. There are two types of cancer registry: hospital-based and population based.

The Hospital Based Cancer Registries (HBCRs) record information on cancer patients attending a particular hospital, focusing on clinical care, treatment and outcome. Their primary purpose is to contribute to patient care and administrative management, although they may be helpful to a certain extent for epidemiological purposes. Population Based Cancer Registries (PBCRs) record all the new cancer cases occurring in a defined population within a geographic area. Cancer Atlas approaches have also been used for specific short-term purposes.

Functioning of Hospital Based Cancer Registry

A Hospital Based Cancer Registry scientifically collates data on all confirmed malignancy cases from all departments and units where any cancer is diagnosed or treated in the hospital. Interdepartmental cooperation is a predominant feature of such a registry, as shown in Fig 1.

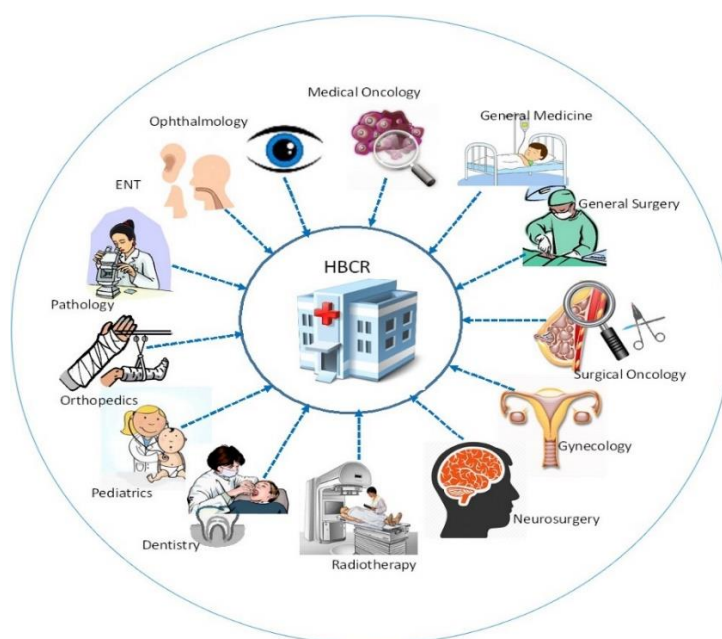


Fig 1 – Key departments providing information to HBCR

The information collected on a standardised core form is entered into a software-based computer for transmission to ICMR- NCDIR, Bengaluru. Over the years, the registries and the office of the NCRP have employed advanced electronic information technology for data entry, data checks and verification for duplicates. The software applications have advanced over the years to provide robust support for data submission. The data quality is assessed for different dimensions like validity, comparability, timeliness and completeness. Frequent training and

refresher programs are conducted for cancer registry investigators and staff to enhance sustain the quality of registry work (Fig. 2).

The information collected on a standardised core form is entered into a software for transmission to ICMR- NCDIR, Bengaluru. Over the years, the registries and the office of the NCRP have used modern advances in electronic information technology to enter the data, check the data, and verify duplicates. The software applications developed by ICMR-NCDIR have further evolved, and so has the data submission methodology and overall support. Data quality is assessed at the coordinating unit under different dimensions like comparability, validity, timeliness and completeness. Frequent training and re-training programs are conducted for cancer registry investigators and staff to maintain quality of work (Fig. 2).

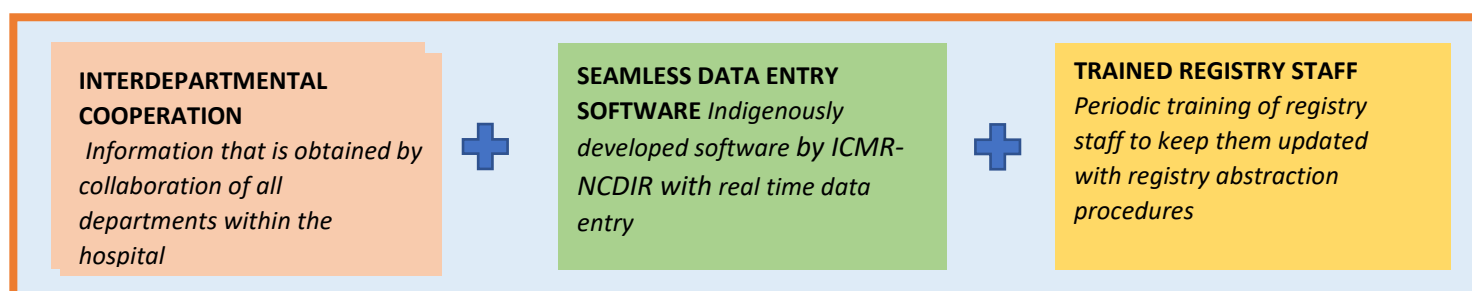


Figure 2 - Features of a Hospital Based Cancer Registry

About this Report

This report " Clinicopathological Profile of Cancers in India: A Report of the Hospital Based Cancer Registries, 2021" consolidates the data collected during the period 2012-19 across 96 Hospital Based Cancer Registries under National Cancer Registry Programme. The data pertains to all diagnosed and treated cases of confirmed malignancies reported to these centres across the country. Registries whose data sets were complete and finalised have been included for the referenced period. These HBCRs are usually located in specialised oncology centres / general or multi-speciality hospitals (public & private) of the respective urban/ rural population.

This report addresses the needs of clinicians, researchers, health professionals, policymakers, and those who would like to obtain and use cancer statistics. The aim is to give an idea regarding types of treatment administered to cancer patients in various stages of cancer, emphasising which organ site is the origin of the disease (primary site of cancer).

The hospitals/centres which have contributed data to this report have been divided into groups and given zone-wise categorisation. The hospital-based data collected has been divided into five zones depending on the hospital's geographical location, which has contributed to the data. This is done for the ease of locating the hospital in the zone. Key findings of each chapter are mentioned at the end of each chapter.

A total of 1332207 cancer cases were recorded from the 96 hospitals during the period 2012-19. The data of 610084 cases, for which complete details are available, were included for analysis

Section I

A. Number and Relative Proportion of New Cases Reported in HBCRs

Section I: A. Number and Relative Proportion of New Cases reported in Hospital Based Cancer Registries

Hospital Based Cancer Registries (HBCRs) are mainly involved in collecting, compiling and organizing information on cancer patients diagnosed and/or treated in a medical institution. They serve the needs of the hospital administration, the hospital's cancer programme, and above all, the individual patient. Furthermore, HBCR data register information of cancer patients irrespective of their residential status and give vital information to the individual hospital administration of all the patients that visit the concerned hospital running the Hospital Based Cancer Registry.

Out of 269 HBCR centres registered under the NCRP, 96 HBCRs were selected which had completed data transmission and quality checks for one or more years during the period 2012-2019 for inclusion in the report. All the new cancer cases registered from government hospitals, private hospitals, medical colleges and multi-speciality hospitals which mainly cater to cancer patients, were used for analysis. The 96 HBCRs' were distributed according to their location according to six regions of the country- North, South, East, West, Central and North East.

Table A: Number (n) and Relative Proportion (%) of New Cases reported in 96 HBCRs under NCRP

Sl No	Registry (Period)	Males		Females		Total
		n	%	n	%	N
North						
1	Dr. B.R. Ambedkar Institute Rotary Cancer Hospital, New Delhi (2012,2014-2017)	25600	55.6	20437	44.4	46037
2	PGIMER, Chandigarh (2012-2018)	24397	55.5	19568	44.5	43965
3	Mahavir Cancer Sansthan and Research Centre, Patna (2015-2018)	17658	46.5	20304	53.5	37962
4	Regional Cancer Centre Kamala Nehru Memorial Hospital, Prayagraj (2014-2019)	14619	51.6	13706	48.4	28325
5	Sher-I-Kashmir Institute of Medical Sciences, Srinagar (2012-2018)	13721	57.8	10014	42.2	23735
6	Rajiv Gandhi Cancer Institute and Research Centre, New Delhi (2012-2013,2017)	12887	56.4	9966	43.6	22853
7	Indira Gandhi Institute of Medical Sciences, Patna (2014-2018)	9586	51.9	8899	48.1	18485
8	Max Super Speciality Hospital, New Delhi (2013-2019)	9163	50.3	9056	49.7	18219
9	Fortis Memorial Research Institute, Gurugram (2014-2018)	9837	55.0	8035	45.0	17872
10	Medanta Cancer Centre, Gurugram (2012-2019)	7688	57.5	5684	42.5	13372
11	Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow (2014-2019)	7159	55.3	5786	44.7	12945

Section I A: Number and Relative Proportion of New Cases Reported in HBCRs

Sl No	Registry (Period)	Males		Females		Total
		n	%	n	%	N
12	Acharya Tulsi Regional Cancer Treatment and Research Institute, Bikaner (2018-2019)	6258	60.7	4055	39.3	10313
13	Government Medical College, Jammu (2014-2019)	5645	56.0	4440	44.0	10085
14	King George Medical University, Lucknow (2018-2019)	5796	59.1	4007	40.9	9803
15	Regional Cancer Centre Indira Gandhi Medical College, Shimla (2014-2018)	5133	53.4	4482	46.6	9615
16	J K Cancer Institute, Kanpur (2018-2019)	5801	62.9	3423	37.1	9224
17	Bhagwan Mahaveer Cancer Hospital and Research Centre, Jaipur (2018)	3819	58.8	2680	41.2	6499
18	Max Super Speciality Hospital, PPG, New Delhi (2015-2018)	2752	47.4	3052	52.6	5804
19	J.N. Medical College & Hospital, Aligarh (2018-2019)	3297	57.7	2416	42.3	5713
20	All India Institute of Medical Sciences, Rishikesh (2018-2019)	2989	59.8	2012	40.2	5001
21	Asian Institute of Medical Sciences, Faridabad (2016-2018)	2091	55.3	1688	44.7	3779
22	Max Super Speciality Hospital, Vaishali (2018-2019)	1523	48.1	1643	51.9	3166
23	Government Medical College and Hospital, Chandigarh (2017-2018)	1467	51.4	1386	48.6	2853
24	Institute of Liver and Biliary Sciences, New Delhi (2017-2018)	1178	70.5	493	29.5	1671
25	Cancer Research Institute - Himalayan Institute Hospital Trust, Dehradun (2016-2018)	1348	55.6	1076	44.4	2424
26	Max Super Speciality Hospital, Shalimar Bagh, New Delhi (2015,2017-2018)	705	44.9	865	55.1	1570
27	Guru Gobind Singh Medical College, Faridkot (2018)	459	40.2	682	59.8	1141
28	Jhalawar Medical College and SRG hospital, Jhalawar (2019)	139	54.1	118	45.9	257
29	Nayathi Health Care, Mathura (2018)	163	65.7	85	34.3	248
East						
30	Acharya Harihar Regional Cancer Centre, Cuttack (2015-2019)	9550	45.7	11361	54.3	20911
31	Chittaranjan National Cancer Institute, Kolkata (2016-2018)	8113	52.4	7381	47.6	15494
32	Tata Medical Center, Kolkata (2015-2017)	7460	52.8	6663	47.2	14123
33	All India Institute of Medical Sciences, Bhubaneswar (2018-2019)	2979	56.1	2331	43.9	5310
34	Meherbai Tata Memorial Hospital, East Singhbhum (2017-2018)	2017	45.5	2419	54.5	4436
35	Apollo Hospital, Bhubaneswar (2012-2019)	1159	61.3	731	38.7	1890
36	Peerless Hospitex Hospital and Research Center Limited, Kolkata (2017-2018)	599	57.1	450	42.9	1049
West						
37	Tata Memorial Hospital, Mumbai (2012-2014,2017,2018)	81588	57.0	61597	43.0	143185
38	The Gujarat Cancer & Research Institute, Ahmedabad (2014-2019)	68365	61.0	43652	39.0	112017
39	Kolhapur Cancer Centre, Kolhapur (2014,2017-2019)	4870	49.6	4948	50.4	9818
40	Apollo CBCC Cancer Care, Gandhinagar (2017-2019)	4614	63.6	2636	36.4	7250

Sl No	Registry (Period)	Males		Females		Total
		n	%	n	%	N
41	Pravara Rural Hospital & Rural Medical College, Loni (2012,2016-2019)	1725	43.4	2246	56.6	3971
42	Vivekananda Cancer Hospital, Latur (2018-2019)	642	53.6	555	46.4	1197
43	Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute, Mumbai (2018)	422	48.0	457	52.0	879
South						
44	Regional Cancer Centre, Thiruvananthapuram (2012-2019)	48245	49.1	49979	50.9	98224
45	Cancer Institute (WIA), Chennai (2012-2018)	29428	47.4	32599	52.6	62027
46	Kidwai Memorial Institute of Oncology, Bengaluru (2012-2017)	22913	44.8	28189	55.2	51102
47	Indo-American Cancer Institute & Research Centre, Hyderabad (2012,2017-2018)	11683	42.8	15630	57.2	27313
48	Amrita Institute of Medical Sciences & Research Centre, Kochi (2012-2018)	15057	55.8	11921	44.2	26978
49	Malabar Cancer Centre, Kannur (2012-2018)	12566	53.8	10804	46.2	23370
50	JIPMER, Regional Cancer Centre, Puducherry (2014-2017)	7681	43.5	9957	56.5	17638
51	Vydehi Institute of Medical Sciences, Bengaluru (2012-2018)	6623	53.6	5727	46.4	12350
52	Govt Arignar Anna Memorial Cancer Hospital & Research Institute, RCC, Kanchipuram (2014-2019)	3646	37.5	6065	62.5	9711
53	Government Medical College, Thrissur (2014,2017-2018)	5312	55.5	4263	44.5	9575
54	Narayana Hrudayalaya Health City, Bengaluru (2016-2019)	3988	55.7	3176	44.3	7164
55	St. Johns Medical Hospital, Bengaluru (2013-2019)	3629	51.1	3476	48.9	7105
56	MNJ Institute of Oncology and Regional Cancer Centre, Hyderabad (2017)	3032	47.1	3412	52.9	6444
57	Caritas Cancer Institute - Caritas Hospital, Kottayam (2013-2015)	2178	46.9	2470	53.1	4648
58	Lakeshore Hospital and Research Centre Ltd., Kochi (2012,2015-2017)	2257	49.8	2272	50.2	4529
59	Father Muller Medical College Hospital, Mangaluru (2016-2019)	1819	44.2	2294	55.8	4113
60	International Cancer Centre, Neyyoor (2012-2018)	1832	46.7	2093	53.3	3925
61	KMC Hospital, Mangaluru (2015-2018)	2022	52.0	1868	48.0	3890
62	Madras Cancer Care Foundation, Chennai (2013-2019)	1334	38.0	2175	62.0	3509
63	Government Royapettah Hospital, Chennai (2017-2018)	1503	43.9	1923	56.1	3426
64	Kovai Medical Centre and Hospital, Coimbatore (2017-2018)	1591	47.7	1741	52.3	3332
65	Nizams Institute of Medical Sciences, Hyderabad (2017)	1816	56.4	1402	43.6	3218
66	General Hospital, Ernakulam (2017-2018)	1598	51.7	1494	48.3	3092
67	MVR Cancer Center and Research Institute, Kozhikode (2018)	1567	51.4	1480	48.6	3047
68	Baby Memorial Hospital Ltd., Kozhikode (2017-2019)	1558	51.1	1488	48.9	3046
69	Government Stanley Medical College, Chennai (2017-2019)	1619	53.4	1410	46.6	3029
70	Rural Development Trust, Bathalapalle (2012-2019)	709	24.4	2194	75.6	2903

Sl No	Registry (Period)	Males		Females		Total
		n	%	n	%	N
71	Madras Medical College, Chennai (2017)	1493	56.1	1168	43.9	2661
72	Erode Cancer Centre, Thindal, Erode (2012,2017-2018)	973	43.2	1279	56.8	2252
73	Cytecure Hospitals PVT LTD, Bengaluru (2017-2018)	854	45.3	1033	54.7	1887
74	Amala Institute of Medical Sciences, Amalanagar, Thrissur (2018)	882	47.3	983	52.7	1865
75	MES Medical College & Hospital, Perinthalmanna (2012,2015-2019)	929	50.5	910	49.5	1839
76	G Kuppaswamy Naidu Memorial Hospital, Coimbatore (2018)	695	40.5	1022	59.5	1717
77	Institute of Obstetrics and Gynaecology, Chennai (2017-2018)	154	12.7	1056	87.3	1210
78	Tirunelveli Medical College, Tirunelveli (2018-2019)	552	46.3	640	53.7	1192
79	Aster Medcity, Kochi (2017-2018)	608	52.2	556	47.8	1164
80	Mandya Institute of Medical Sciences, Mandya (2015-2019)	485	44.9	594	55.1	1079
81	Monsignor Joseph Kandathil Memorial Cancer Research Centre, Alappuzha (2018-2019)	447	47.1	502	52.9	949
82	Pushpagiri Institute of Medical Sciences & Research Centre, Tiruvalla (2016-2018)	440	47.5	486	52.5	926
83	ESIC Medical College Hospital and Super Speciality Hospital, Hyderabad (2017-2019)	200	38.9	314	61.1	514
Central						
84	Regional Cancer Centre, Raipur (2012-2019)	9639	43.9	12314	56.1	21953
85	RST Regional Cancer Hospital, Cancer Relief Society, Nagpur (2012-2018)	9667	51.6	9057	48.4	18724
86	Cancer Hospital & Research Institute, Gwalior (2014-2017)	7772	60.4	5105	39.6	12877
87	Gandhi Medical College, Bhopal (2012-2019)	5692	51.6	5341	48.4	11033
North East						
88	Dr. B. Borooah Cancer Institute, Guwahati (2012-2019)	39678	57.3	29523	42.7	69201
89	Cachar Cancer Hospital and Research Centre, Silchar (2012-2018)	6823	57.8	4983	42.2	11806
90	Regional Cancer Centre, Agartala (2014-2019)	6408	56.5	4936	43.5	11344
91	Assam Medical College, Dibrugarh (2012-2019)	4076	46.1	4769	53.9	8794
92	North East Cancer Hospital & Research Institute, Guwahati (2014-2018)	4002	61.4	2514	38.6	6516
93	Mizoram State Cancer Institute (Civil Hospital), Aizawl (2014-2019)	3169	52.3	2885	47.7	6054
94	Regional Institute of Medical Sciences, Imphal (2014-2019)	2656	44.5	3308	55.5	5964
95	State Cancer Institute, Guwahati (2018-2019)	2724	52.6	2455	47.4	5179
96	Naga Hospital Authority, Kohima (2019)	191	67.5	92	32.5	283
Total		705395	52.9	626812	47.1	1332207

The total number of cancer patients that were registered from 96 HBCRs from 2012 – 2019 were 1332207 cases, and final analysis was done using data of 610084 cases (319098 males; 290986 females) which had passed the quality checks.

Section I

B. Cancers in Childhood

Section 1 B: Cancers in Childhood

Childhood cancers rank ninth as a leading cause of childhood diseases at the global level, accounting for 11.5 million (10.6–12.3 95% CI) of the Disability Adjusted Life Years (DALYs') [5]. In India, according to a recent report of the National Cancer Registry Programme, the proportion of childhood cancers (0-19 years) relative to cancers in all age groups was found to range from 1% to 4.9% [1]. Delhi PBCR reported the highest Age-Adjusted Incidence Rate (AAR) of 203.1 per million in boys and 125.4 per million in girls. Leukaemia accounted for nearly half of all the childhood cancers in both genders in the 0-14 years age group (46.4% in boys and 44.3% in girls). The other common childhood cancer in boys was lymphoma (16.4%), while in girls, it was a malignant bone tumour (8.9%). Childhood cancers are presented for two age groups: 0-14 years and 0-19 years to enable national and international comparison. Childhood cancers have been classified according to the International Classification of Childhood Cancer [6].

B1.1 Number (n) and relative proportion (%) of childhood cancers

Table B1.1.1: Number (n) and relative proportion (%) of childhood cancers (0-14 years) relative to all cancers

Sex	Childhood Cancers	
	n	%
Boys	15549	4.9
Girls	8719	3.0
Total	24268	7.9

Table B1.1.2: Number (n) and relative proportion (%) of childhood cancers (0-19 years) relative to all cancers

Sex	Childhood Cancers	
	n	%
Boys	21845	6.8
Girls	12013	4.1
Total	33858	10.9

B1.2 Distribution of childhood cancers according to five-year age groups

Table B1.2: Number (n) and proportion (%) of childhood cancers according to five-year age groups

Age Group	Boys		Girls	
	n	%	n	%
00-04	5262	24.1	3240	27.0
05-09	5212	23.9	2646	22.0
10-14	5075	23.2	2833	23.6
15-19	6296	28.8	3294	27.4
Total	21845	100.0	12013	100.0

B1.3 Distribution of childhood cancers according to type

Table B1.3.1: Number (n) and proportion (%) of specific types of cancers in childhood (0-14 years)

Specific types of cancers in childhood	Boys		Girls	
	n	%	n	%
LEUKAEMIAS	7369	47.4	3932	45.1
Lymphoid leukaemia	5607	36.1	2961	34.0
Acute non-lymphocytic leukaemia	1141	7.3	642	7.4
Chronic myeloid leukaemia	180	1.2	114	1.3
Other specified leukaemia	59	0.4	33	0.3
Unspecified leukaemia	382	2.4	182	2.1
MALIGNANT BONE TUMOURS	1104	7.1	827	9.5
Osteosarcoma	565	3.6	407	4.7
Chondrosarcoma	16	0.1	7	0.1
Ewings sarcoma	470	3.0	361	4.1
Other specified malignant bone tumours	26	0.2	30	0.3
Unspecified malignant bone tumours	27	0.2	22	0.3
LYMPHOMAS & RETICULOENDOTHELIAL NEOP.	2581	16.6	679	7.8
Hodgkin's disease	1246	8.0	286	3.3
Non-Hodgkin's disease	895	5.8	279	3.2
Burkitt's lymphoma	300	1.9	54	0.6
Miscellaneous lymphoreticular neoplasm	66	0.4	40	0.5
Unspecified lymphomas	74	0.5	20	0.2

C.N.S. & MISC. INTRACRANIAL & INTRASPINAL NEOP.	963	6.2	638	7.3
Ependymoma	141	0.9	81	0.9
Astrocytoma	188	1.2	130	1.5
Primitive neuroectodermal tumours	373	2.4	198	2.3
Other gliomas	182	1.2	155	1.8
Other specified intracranial and intraspinal neoplasms	38	0.2	29	0.3
Unspecified intracranial and intraspinal neoplasms	41	0.3	45	0.5
SOFT-TISSUE(S-T) SARCOMAS(S)	923	5.9	607	6.9
Rhabdomyosarcoma and embryonal sarcoma	418	2.7	262	3.0
Fibrosarcoma, neurofibrosarcoma and other fibromatous neoplasms	31	0.2	37	0.4
Kaposi's sarcoma	1	<0.1	2	<0.1
Other specified soft tissue sarcoma	361	2.3	234	2.7
Unspecified soft tissue sarcoma	112	0.7	72	0.8
RENAL TUMOURS	571	3.7	410	4.7
Wilms tumour, rhabdoid and clear cell sarcoma	552	3.6	388	4.5
Renal carcinoma	19	0.1	22	0.2
GERM-CELL TROPHOBLASTIC & OTH. GONADAL NEOP.	208	1.3	350	4.0
Intracranial and intraspinal germ cell tumours	25	0.2	22	0.2
Other and unspecified non-gonadal germ cell tumours	67	0.4	83	0.9
Gonadal germ cell tumours	109	0.7	232	2.7
Gonadal carcinomas	4	<0.1	8	0.1
Other and unspecified gonadal tumours	3	<0.1	5	0.1
SYMPATHETIC NERVOUS SYSTEM TUMOURS	524	3.4	337	3.9
Neuroblastoma and ganglioneuroblastoma	510	3.3	336	3.9
Other sympathetic nervous system tumours	14	0.1	1	<0.1
RETINOBLASTOMA	458	3.0	342	3.9
CARCINOMA & OTHER MALIGNANT EPITHELIAL NEOP.	418	2.7	332	3.8
Adrenocortical carcinoma	10	0.1	7	0.1
Thyroid carcinoma	9	0.1	14	0.2
Nasopharyngeal carcinoma	116	0.7	23	0.3
Malignant melanoma	7	<0.1	4	<0.1
Skin carcinoma	19	0.1	9	0.1
Other and unspecified carcinoma	257	1.7	275	3.1
HEPATIC TUMOURS	226	1.5	138	1.6
Hepatoblastoma	196	1.3	119	1.4
hepatic carcinoma	27	0.2	12	0.1
Unspecified malignant hepatic tumours	3	<0.1	7	0.1
OTHER & UNSPECIFIED MALIGNANT NEOPLASMS	191	1.2	122	1.4
Other specified malignant tumours	16	0.1	11	0.1
Other unspecified malignant tumours	175	1.1	111	1.3
Others (not classified)	13	0.1	5	0.1
TOTAL	15549	100.0	8719	100.0

Table B1.3.2: Number (n) and proportion (%) of specific types of cancers in childhood (0-19 years)

Specific types of cancers in childhood	Boys		Girls	
	n	%	n	%
LEUKAEMIAS	9603	44.0	4763	39.7
Lymphoid leukaemia	6976	31.9	3346	27.8
Acute non-lymphocytic leukaemia	1603	7.3	901	7.5
Chronic myeloid leukaemia	414	2.0	238	2.0
Other specified leukaemia	79	0.4	43	0.4
Unspecified leukaemia	531	2.4	235	2.0
MALIGNANT BONE TUMOURS	2389	10.9	1382	11.5
Osteosarcoma	1452	6.6	744	6.2
Chondrosarcoma	39	0.2	21	0.2
Ewings sarcoma	783	3.6	518	4.3
Other specified malignant bone tumours	66	0.3	61	0.5
Unspecified malignant bone tumours	49	0.2	38	0.3
LYMPHOMAS & RETICULOENDOTHELIAL NEOP.	3665	16.8	1120	9.3
Hodgkin's disease	1795	8.2	524	4.3
Non-hodgkin's disease	1363	6.2	454	3.8
Burkitt's lymphoma	329	1.5	63	0.5
Miscellaneous lymphoreticular neoplasms	78	0.4	45	0.4
Unspecified lymphomas	100	0.5	34	0.3
CARCINOMA & OTH. MALIGNANT EPITHELIAL NEOP.	1042	4.9	991	8.2
Adrenocortical carcinoma	12	0.1	9	0.1
Thyroid carcinoma	22	0.1	52	0.4
Nasopharyngeal carcinoma	279	1.3	76	0.6
Malignant melanoma	12	0.1	7	<0.1
Skin carcinoma	37	0.2	22	0.2
Other and unspecified carcinoma	680	3.1	825	6.9
SOFT-TISSUE(S-T) SARCOMAS(S)	1344	6.1	892	7.4
Rhabdomyosarcoma and embryonal sarcoma	487	2.2	315	2.6
Fibrosarcoma, neurofibrosarcoma and other fibromatous neoplasms	63	0.3	67	0.6
Kaposi's sarcoma	1	<0.1	2	<0.1
other specified soft tissue sarcoma	597	2.7	385	3.2
Unspecified soft tissue sarcoma	196	0.9	123	1.0

C.N.S. & MISC. INTRACRANIAL & INTRASPINAL NEOP.	1259	5.7	780	6.5
Ependymoma	161	0.7	101	0.8
Astrocytoma	286	1.3	182	1.5
Primitive neuroectodermal tumours	453	2.1	235	2.0
Other gliomas	253	1.2	177	1.5
Other specified intracranial and intraspinal neoplasms	53	0.2	37	0.3
Unspecified intracranial and intraspinal neoplasms	53	0.2	48	0.4
GERM-CELL TROPHOBLASTIC & OTH. GONADAL NEOP.	416	1.9	636	5.3
Intracranial and intraspinal germ cell tumours	46	0.2	30	0.2
Other and unspecified non-gonadal germ cell tumours	113	0.5	107	0.9
Gonadal germ cell tumours	236	1.1	451	3.8
Gonadal carcinomas	12	0.1	33	0.3
Other and unspecified gonadal tumours	9	<0.1	15	0.1
RENAL TUMOURS	587	2.7	428	3.6
Wilms tumour, rhabdoid and clear cell sarcoma	556	2.6	392	3.3
Renal carcinoma	31	0.1	36	0.3
SYMPATHETIC NERVOUS SYSTEM TUMOURS	546	2.5	351	2.9
Neuroblastoma and Ganglioneuroblastoma	524	2.4	344	2.8
Other sympathetic nervous system tumours	22	0.1	7	0.1
RETINOBLASTOMA	458	2.1	342	2.8
OTHER & UNSP. MALIGNANT NEOPLASMS	267	1.2	164	1.4
Other specified malignant tumours	21	0.1	25	0.2
Other unspecified malignant tumours	246	1.1	139	1.2
HEPATIC TUMOURS	249	1.1	151	1.3
Hepatoblastoma	196	0.9	119	1.0
Hepatic carcinoma	49	0.2	23	0.2
Unspecified malignant hepatic tumours	4	<0.1	9	0.1
OTHERS (NOT CLASSIFIED)	20	0.1	13	0.1
TOTAL	21845	100.0	12013	100.0

II. Renal tumours

B2.1 Distribution according to age groups

Table B2.1: Number (n) and proportion (%) of renal tumours according to five-year age groups

Age group	Boys			Girls			Total		
	n	Col %	Row %	n	Col %	Row %	n	Col %	Row %
00 - 04	442	70.8	60.7	286	63.3	39.3	728	67.7	100.0
05 - 09	123	19.7	52.6	111	24.6	47.4	234	21.7	100.0
10 - 14	36	5.8	54.5	30	6.6	45.5	66	6.1	100.0
15 - 19	23	3.7	47.9	25	5.5	52.1	48	4.5	100.0
Total	624	100.0	58.0	452	100.0	42.0	1076	100.0	100.0

B2.2 Major histological types

Table B2.2: Number (n) and proportion (%) of renal tumours according to broad histological classification (0-19 years)

Broad histological classification	Boys		Girls		Total	
	n	%	n	%	n	%
Nephroblastoma	525	87.4	367	83.8	892	85.9
Renal Cell Carcinoma (RCC), NOS	26	4.3	33	7.5	59	5.7
Clear Cell Sarcoma of Kidney	18	3.0	7	1.6	25	2.4
Neuroendocrine Tumours	5	0.8	8	1.8	13	1.3
Mesenchymal Tumours	12	2.0	6	1.4	18	1.7
Rhabdoid Tumour	3	0.5	4	0.9	7	0.7
Germ Cell Tumour	5	0.8	2	0.5	7	0.7
Papillary Renal Cell Carcinoma	2	0.3	3	0.7	5	0.5
Carcinoma, NOS	1	0.2	2	0.5	3	0.3
Sarcomatoid RCC	1	0.2	1	0.2	2	0.2
Clear Cell RCC	1	0.2	1	0.2	2	0.2
Renal Cell Carcinoma, Chromophobe Type	0	0.0	1	0.2	1	0.1
Others	2	0.3	3	0.7	5	0.5
Total*	601	100.0	438	100.0	1039	100.0

* Excludes data with 'unknown values'

B2.3 Clinical Extent of Disease

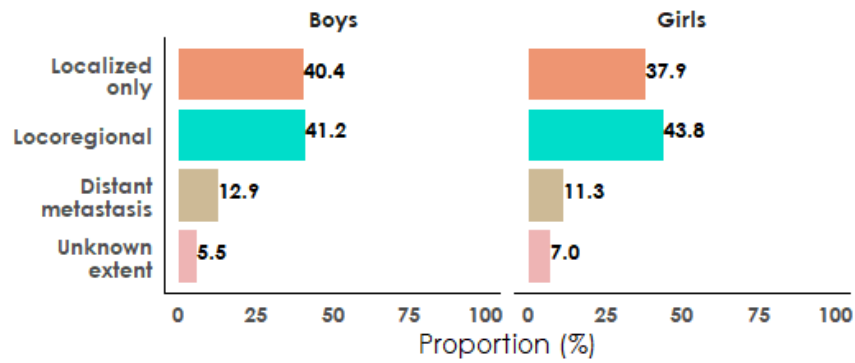
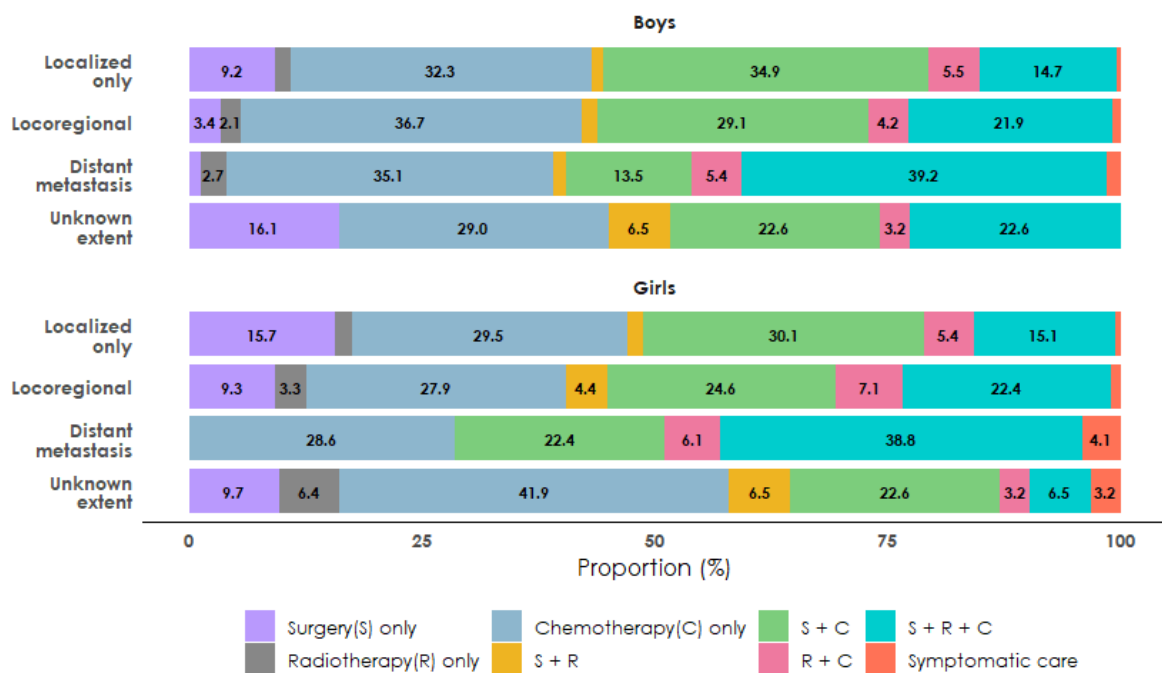


Figure B2.3: Clinical extent of disease of of renal tumours (%) (0-19 years)

B2.4 Treatment modalities according to clinical extent of disease



< 2.0% values are not shown in the chart

Figure B2.4: Treatment modalities according to the clinical extent of disease (%) - renal tumours (%) (0-19 years)

III. CNS and miscellaneous intracranial and intraspinal neoplasms

B3.1 Distribution according to five-year age groups

Table B3.1: Number (n) and proportion (%) of CNS and miscellaneous intracranial and intraspinal neoplasms according to five-year age groups (0-19 years)

Age group	Boys			Girls			Total		
	n	Col %	Row %	n	Col %	Row %	n	Col %	Row %
00 - 04	269	20.8	61.6	168	21.1	38.4	437	20.9	100.0
05 - 09	421	32.5	59.1	291	36.5	40.9	712	34.0	100.0
10 - 14	324	25.0	62.8	192	24.1	37.2	516	24.7	100.0
15 - 19	280	21.6	65.6	147	18.4	34.4	427	20.4	100.0
Total	1294	100.0	61.9	798	100.0	38.1	2092	100.0	100.0

B3.2 Major histological types

Table B3.2: Number (n) and relative proportion (%) CNS and miscellaneous intracranial and intraspinal neoplasms according to broad histological classification (0-19 years)

Broad histological classification	Boys		Girls		Total	
	n	%	n	%	n	%
Medulloblastoma	377	32.4	188	27.0	565	30.4
Astrocytoma	198	17.0	109	15.6	307	16.5
All Other Gliomas	161	13.9	111	15.9	272	14.6
Ependymal tumours	148	12.7	93	13.3	241	13.0
Neuroepithelioma	104	9.0	56	8.0	160	8.6
Glioblastoma	81	7.0	69	9.9	150	8.1
Germ cell tumour	28	2.4	26	3.7	54	2.9
Oligodendroglial tumours	19	1.6	14	2.0	33	1.8
Carcinoma, NOS	18	1.5	7	1.0	25	1.3
Choroid Plexus Papilloma, Malignant	10	0.9	5	0.7	15	0.8
Meningioma, malignant	6	0.5	6	0.9	12	0.6
Neoplasm, malignant	5	0.4	0	0.0	5	0.3
Peripheral Neuroectodermal Tumour	3	0.3	5	0.7	8	0.4
Neuronal & Mixed neuronal - glial tumours	3	0.3	4	0.6	7	0.4
Pineoblastoma	1	0.1	3	0.4	4	0.2
Others	0	0.0	1	0.1	1	0.1
Total*	1162	100.0	697	100.0	1859	100.0

*Excludes data with 'unknown values'

B3.3 Clinical Extent of Disease

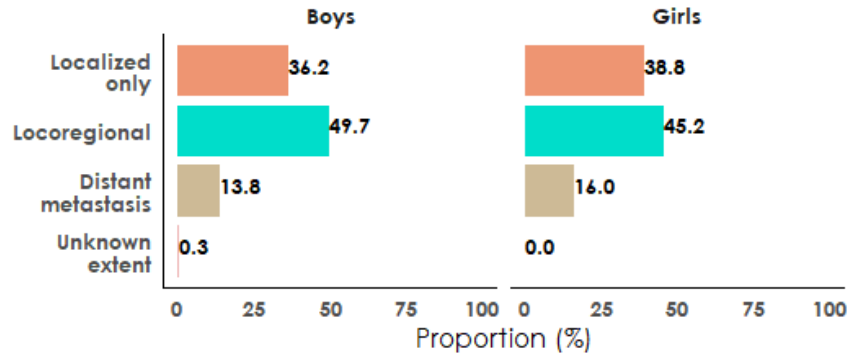
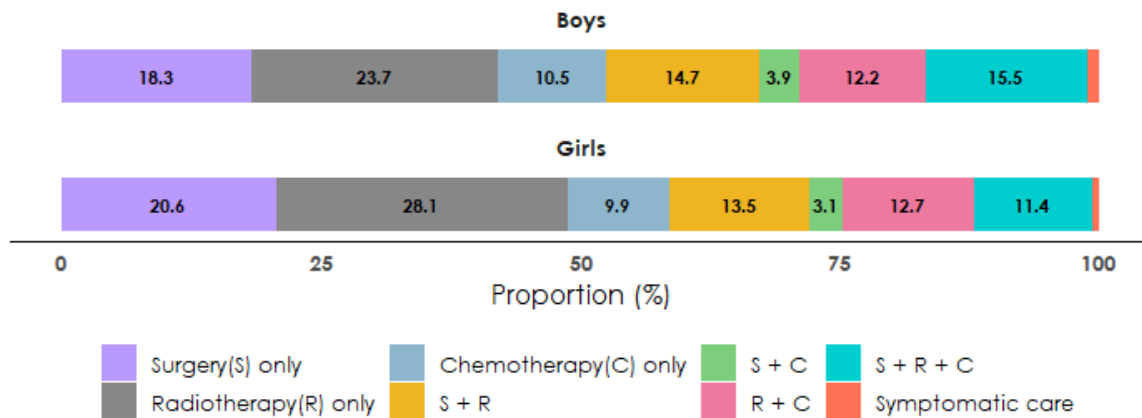


Figure B3.1: Clinical extent of disease (%) - CNS and miscellaneous intracranial and intraspinal neoplasms (0-19 years)

B3.4 Treatment modalities according to clinical extent of disease



< 2.0% values are not shown in the chart

Figure B3.2: Type of treatment according to the clinical extent of disease - CNS and miscellaneous intracranial and intraspinal neoplasms (0-19 years)

IV: Other solid tumours: Clinical extent of disease and treatment

B4.1 Retinoblastoma

B4.1.1 Clinical extent of disease

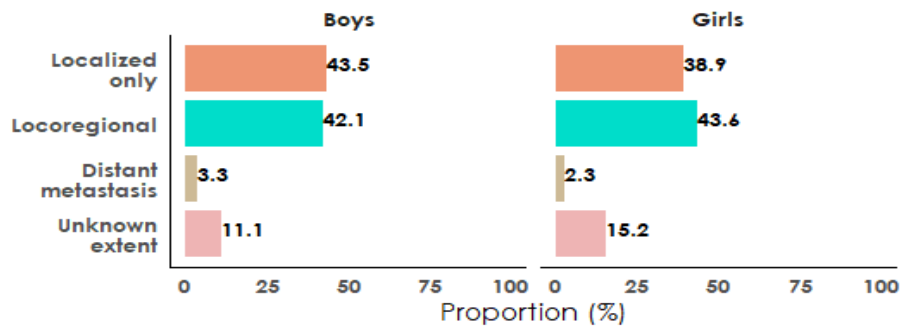


Figure B4.1.1: Clinical extent of disease (%) – Retinoblastoma (0-19 years)

B4.1.2 Treatment according to clinical extent of disease

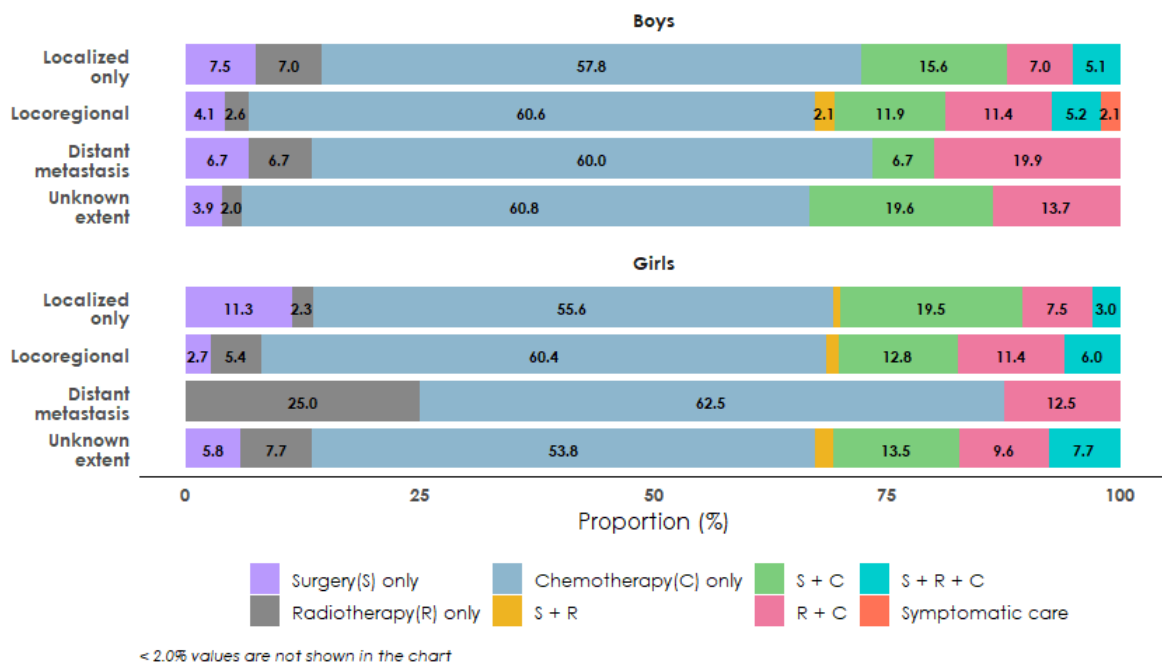


Figure B4.1.2: Type of treatment according to the clinical extent of disease (%) –Retinoblastoma (0-19 years)

B4.2 Hepatic Tumours

B4.2.1 Clinical Extent of Disease

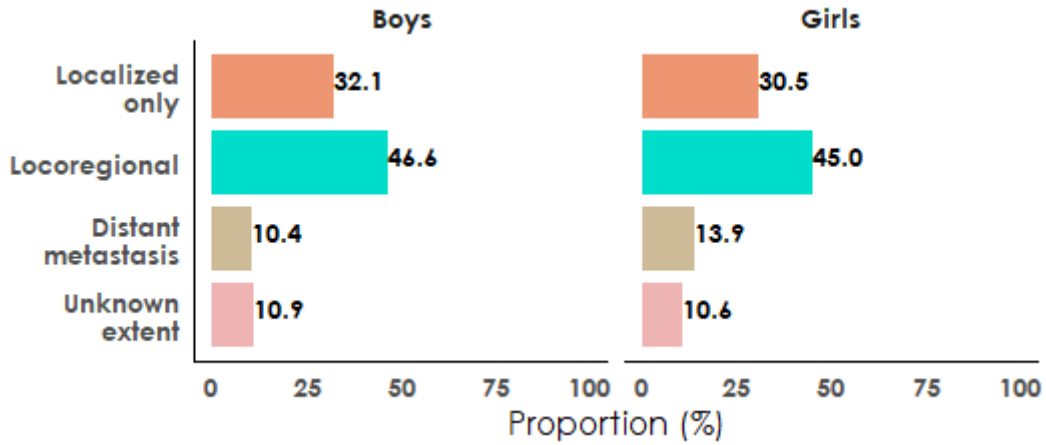


Figure B4.2.1: Clinical extent of disease (%) – Hepatic tumours (0-19 years)

B4.2.2 Treatment according to clinical extent of disease

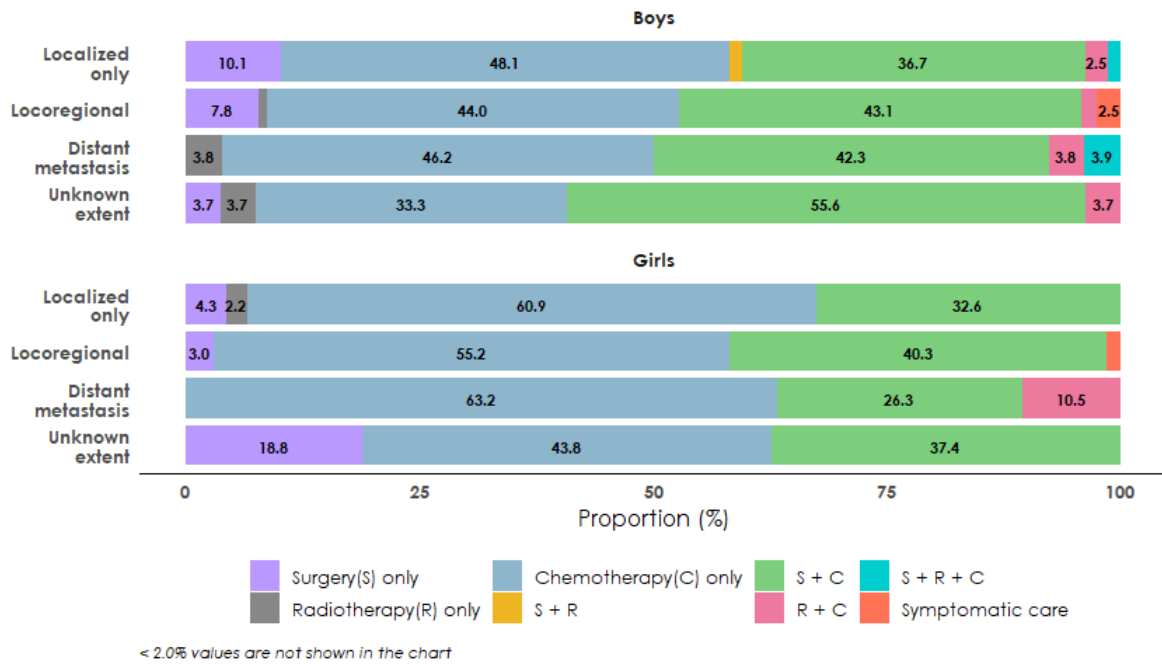


Figure B4.2.2: Type of treatment according to the clinical extent of disease (%) – Hepatic Tumours (0-19 years)

B4.3 Malignant Bone Tumours

B4.3.1 Clinical Extent of Disease

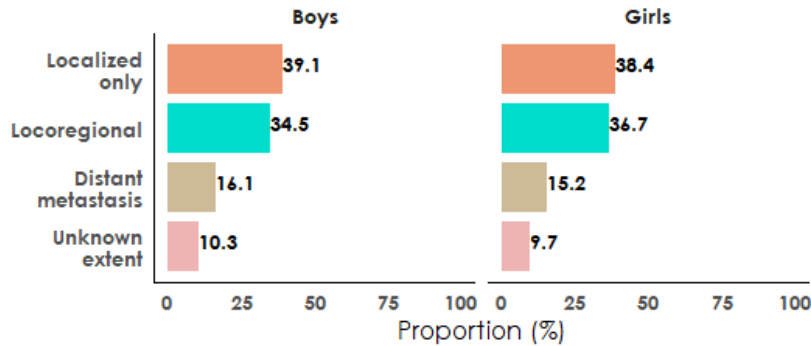


Figure B4.3.1: Clinical extent of disease (%) – Malignant bone tumours (0-19 years)

B4.3.2 Treatment according to clinical extent of disease

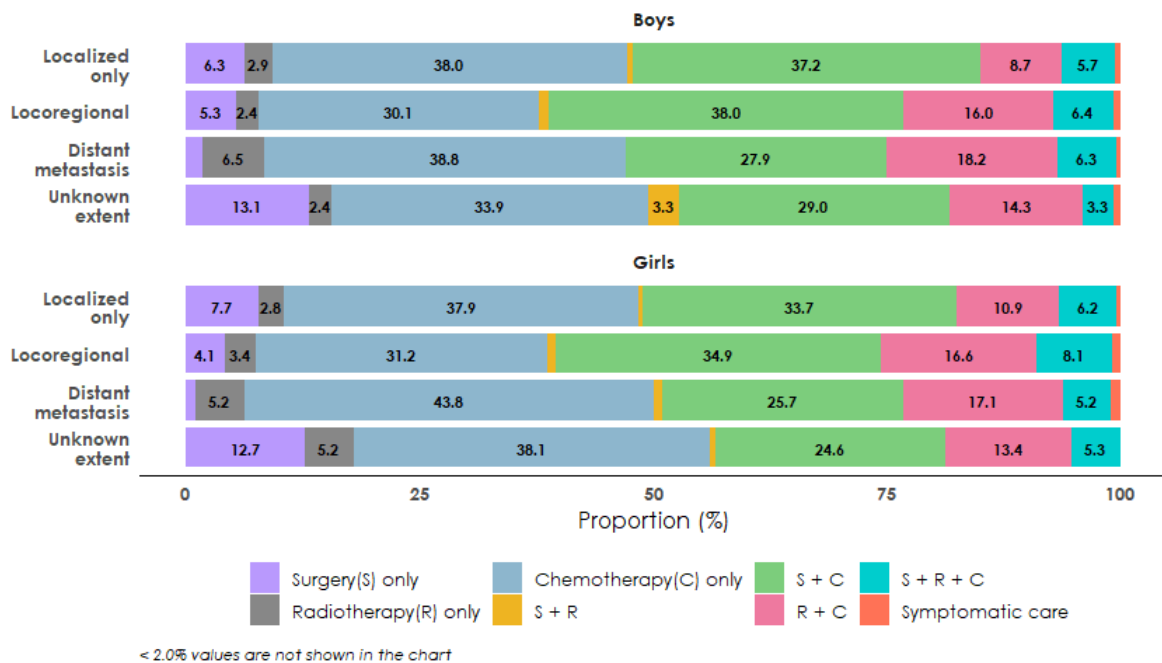


Figure B4.3.2: Type of treatment according to the clinical extent of disease (%) – Malignant bone tumours (0-19 years)

B4.4 Soft Tissue Sarcomas

B4.4.1 Clinical Extent of Disease

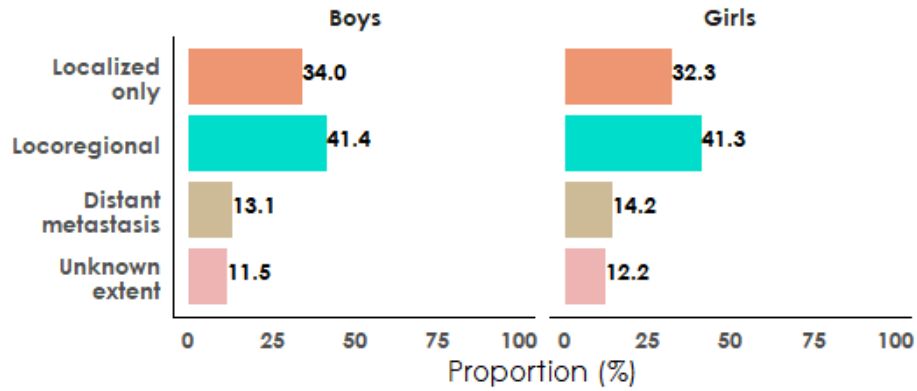


Figure B4.4.1: Clinical extent of disease (%) – Soft Tissue Sarcomas (0-19 years)

B4.4.2 Treatment according to clinical extent of disease

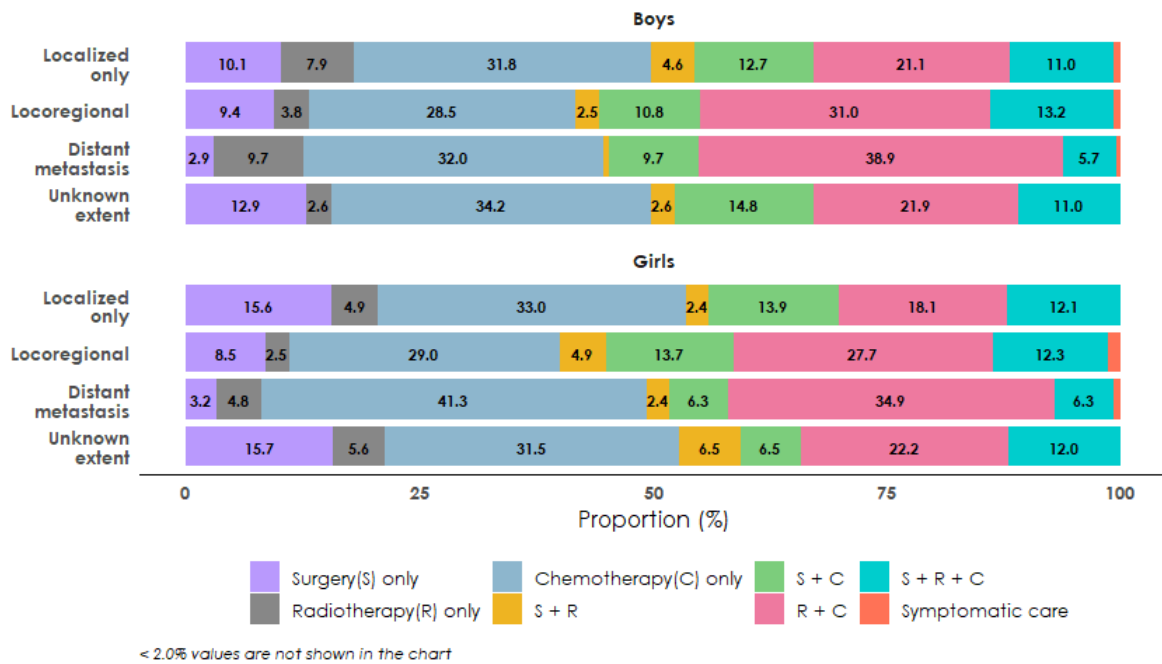


Figure B4.4.2: Type of treatment according to the clinical extent of disease (%) – Soft Tissue Sarcomas (0-19 years)

B4.5 Germ-cell trophoblastic & other gonadal neoplasms

B4.5.1 Clinical extent of disease

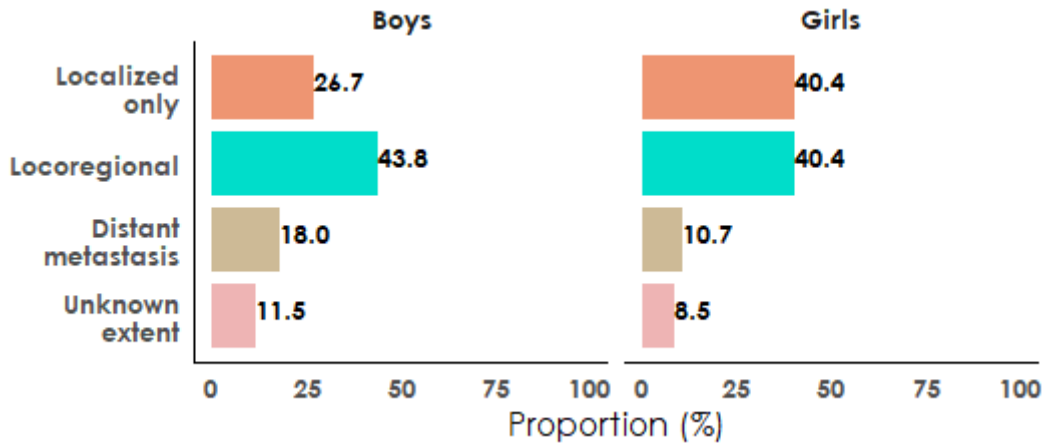


Figure B4.5.1: Clinical extent of disease (%) – Germ-cell trophoblastic & other gonadal neoplasms (0-19 years)

B4.5.2 Treatment according to clinical extent of disease

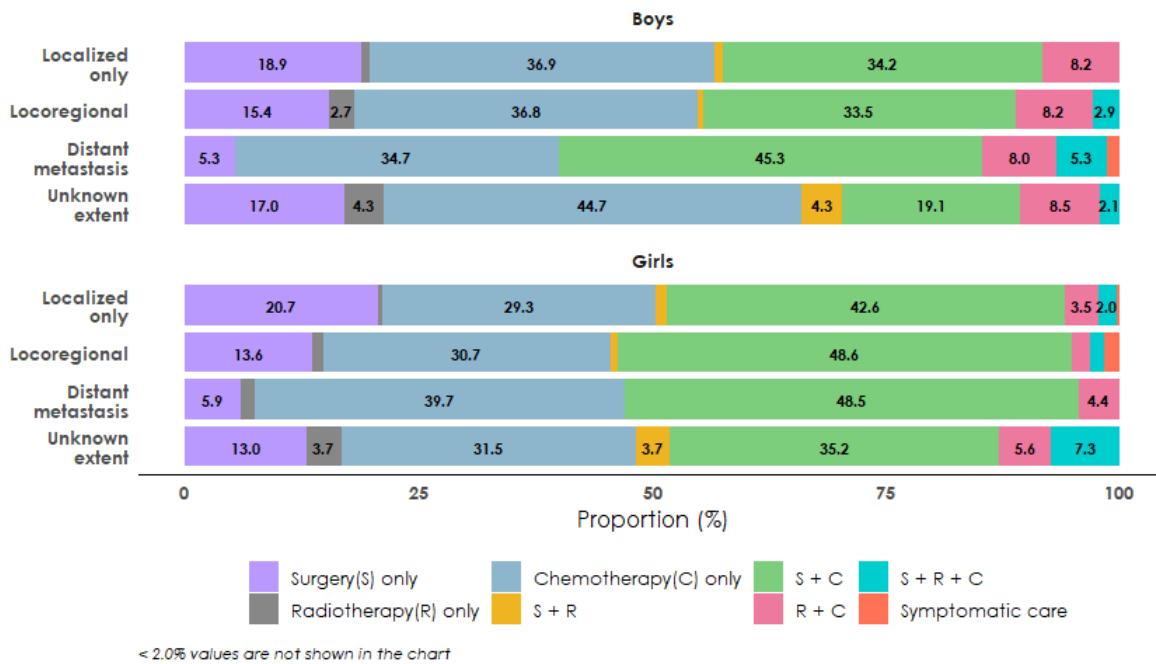


Figure B4.5.2: Type of treatment according to the clinical extent of disease (%) – Germ-cell trophoblastic & other gonadal neoplasms (0-19 years)

Key Findings

- Childhood cancers accounted for 7.9% of the total cancers.
- The proportion of reported childhood cancer cases is higher among boys compared to girls.
- Leukaemia was the predominant form of childhood cancer in both boys and girls in both age groups (0-14 and 0-19 years), of which lymphoid leukaemia was the predominant type.
- Close to 70% of the childhood kidney cancer cases were reported in the age group of 0-4 years. Nephroblastoma (Wilm's tumour) accounted for most kidney cancer cases (males 87.4%, females 83.8%).
- Over one-third of cancers of the brain and nervous system (32.5% in males and 36.5% in females) were recorded in the age group of 5-9 years. The most common type reported was Medulloblastoma.
- Among the solid tumours, the highest proportion of presentation with distant metastasis was observed for germ cell trophoblastic and gonadal neoplasms, followed by malignant bone tumours.
- More than half of the patients with retinoblastoma and hepatic tumours were treated with chemotherapy.
- Most of the patients with renal tumours, hepatic tumours, malignant bone tumours, and germ cell trophoblastic tumours were treated by a combination of surgery and chemotherapy or chemotherapy only.

Section I

C. Cancer in Sites Associated with Tobacco Use

Section I C. Cancer in Sites Associated with Tobacco Use

Tobacco use is associated with cancers of several anatomical sites, and due to its adverse impact and carcinogenicity, it has become a global threat including India. According to the recent report on cancer in sites associated with tobacco use of 2021, the projected number of cancers in the sites associated with tobacco use in 2025 would be 427273 (313646 in males; 113627 in females) [8]. These cancers would contribute to 27.2% of India's total projected cancer cases.

The National Noncommunicable Disease Monitoring Survey (NNMS) 2017-2018 reported that 32.8% of adults between 18-69 years used either smoked or smokeless forms of tobacco, and 28% used tobacco daily [9]. The average age of initiation of tobacco use was 21 years, which is a contributory factor to the increased burden of cancers associated with tobacco use in India. Tobacco contains at least 69 carcinogenic agents, including various kinds of hydrocarbons, amines, aldehydes, organic, inorganic and phenolic compounds[10].

The NCRP has been using the classification provided by the International Agency for Research on Cancer (IARC) for identifying the anatomical sites associated with tobacco usage [11]. Although the recent updates of IARC reports have added more anatomical sites, we continue to use the original classification in our reports for comparison purposes with our earlier data[12].

Number and proportion of cancers associated with use of tobacco according to geographic region

Cancers associated with tobacco use comprised of 48.7% of all cancers among males and 16.5% among females, respectively. Of all the cancers reported in the hospital-based cancer registry, irrespective of gender, such cancers associated with tobacco use constituted 33.3% of all cancers (Table C.1).

Table C.1 Number (n) and relative proportion (%) of cancers associated with use of tobacco according to geographic region

Region	Males			Females			Total		
	All Cases	n	%	All Cases	n	%	All Cases	n	%
Central	13963	8895	63.7	13342	2577	19.3	27305	11472	42.0
East	27036	10314	38.1	27198	3402	12.5	54234	13716	25.3
North	74700	35215	47.1	60512	9274	15.3	135212	44489	32.9
North East	28677	18972	66.2	21274	6228	29.3	49951	25200	50.4
South	102641	45210	44.0	114205	16719	14.6	216846	61929	28.6
West	72081	36699	50.9	54455	9937	18.2	126536	46636	36.9
Total	319098	155305	48.7	290986	48137	16.5	610084	203442	33.3

Distribution of cancers in sites associated with tobacco use:

The sites of cancer used along with their ICD-10 codes for our reports are given in Table C.2. Among cancers associated with tobacco use which was reported from all HBCRs, the highest among males was mouth cancer (24.4%) followed by lung cancer (22.4%) and tongue cancer (16.6%). The highest among females was mouth cancer (26.4%) followed by lung cancer (22.9%) and oesophageal cancer (20.8%) (Table C.2).

Table C.2 Number (n) and proportion (%) of specific sites of cancer associated with tobacco use

Site of Cancer (ICD-10 codes)	Males		Females	
	n	%	n	%
Lip (C00)	1723	1.1	688	1.4
Tongue (C01-C02)	25721	16.6	7149	14.9
Mouth (C03-C06)	37972	24.4	12722	26.4
Oropharynx (C10)	5122	3.3	654	1.4
Hypopharynx (C12-C13)	12856	8.3	3092	6.4
Pharynx Unspecified (C14)	1019	0.7	243	0.5
Oesophagus (C15)	16853	10.9	10029	20.8
Larynx (C32)	14466	9.3	1507	3.1
Lung etc. (C33-C34)	34832	22.4	11026	22.9
Urinary Bladder (C67)	4741	3.1	1027	2.1
Total	155305	100.0	48137	100.0

Age distribution of cancers in sites associated with tobacco use

According to the age group, the highest number of new cases of cancers in sites associated with tobacco use were seen in 60-64 years among both males (16.3%) and females (15.3%). Close to a half of such cancers occur after 60 years among males (44.6%) and females (42.7%) (Table C.3).

Table C.3 Number (n) and proportion (%) of cancers in sites associated with tobacco use by five-year age groups

Age Groups	Males		Females	
	n	%	n	%
<20	230	0.1	122	0.2
20-24	536	0.3	226	0.5
25-29	1946	1.3	594	1.2
30-34	4870	3.1	1258	2.6
35-39	8313	5.4	2502	5.2
40-44	11501	7.4	3792	7.9
45-49	15988	10.3	5864	12.2
50-54	20179	13.0	6546	13.6
55-59	22608	14.6	6671	13.9
60-64	25291	16.3	7343	15.3
65-69	19967	12.9	5936	12.3
70-74	13321	8.6	3894	8.1
75+	10540	6.8	3386	7.0
All ages*	155305	100.0	48137	100.0

*Includes cases with Unknown Age

Chapter - 1

**Cancers of the Head and Neck
(C01-C14, C32 except C07-C08)**

CHAPTER 1

CANCERS OF THE HEAD AND NECK

Table 1.0: Site classification according to ICD-10

Site of Cancer	ICD-10 Code
Tongue	C02
Mouth	C03 - C04 & C06
Oropharynx	C01, C05, C09, C10 & C14
Nasopharynx	C11
Hypopharynx	C12-C13
Larynx	C32

The sites included here are Tongue (C02), Mouth (C03-C04 & C06), Oropharynx (C01, C05, C09, C10 & C14), Nasopharynx (C11), Hypopharynx (C12-C13) and Larynx (C32).

The grouping has been done for the following reasons:

1. Oropharynx has been regrouped for analysis of HBCR data as this data focusses more on the treatment patterns followed in hospitals.
2. Also, the regrouping follows embryological development pattern where cancers of anterior two thirds of tongue (2/3) are grouped as tongue (C02). Cancers of posterior one third (1/3) of tongue (C01) while anatomically being part of tongue, histologically resemble cancers of oropharynx and hence are grouped along with them.

1.1 Number (n) and relative proportion (%) by sites of cancers of the head and neck

Table 1.1: Number (n) and relative proportion (%) of sites of cancers of head and neck relative to all sites of cancer

Site of Cancer (ICD-10 code)	Males		Females		Total	
	n	% (all sites)	n	% (all sites)	n	% (all sites)
Tongue (C02)	18420	5.8	6065	2.1	24485	4.0
Mouth (C03, C04, C06)	34547	10.8	11761	4.1	46308	7.6
<i>Gum (C03)</i>	7799	2.4	3282	1.1	11081	1.8
<i>Floor of mouth (C04)</i>	1599	0.5	201	0.1	1800	0.3
<i>Other and unspecified parts of mouth (C06)</i>	25149	7.9	8278	2.9	33427	5.5
Oropharynx (C01, C05, C09, C10, C14)	20627	6.5	3327	1.1	23954	3.9
<i>Base of tongue (C01)</i>	7039	2.2	993	0.3	8032	1.3
<i>Palate (C05)</i>	3017	0.9	731	0.3	3748	0.6
<i>Tonsil (C09)</i>	4503	1.4	722	0.2	5225	0.9
<i>Oropharynx (C10)</i>	1006	0.3	236	0.1	1242	0.2
<i>Other and ill-defined sites in lip, oral cavity and pharynx (C14)</i>	5062	1.6	645	0.2	5707	0.9
Nasopharynx (C11)	2494	0.8	983	0.3	3477	0.6
Hypopharynx (C12-C13)	12765	4.0	3072	1.1	15837	2.6
<i>Pyriform sinus (C12)</i>	8551	2.7	1075	0.4	9626	1.6
<i>Hypopharynx (C13)</i>	4214	1.3	1997	0.7	6211	1.0
Larynx (C32)	14377	4.5	1484	0.5	15861	2.6
Cancers of Head and Neck	103230	32.4	26692	9.2	129922	21.3

1.2 Distribution of Head and Neck Cancers according to Five-year Age Groups

Table 1.2.1: Number (n) and proportion (%) of cancers of head and neck according to five-year age group: Males

Age group	Tongue			Mouth			Oropharynx			Nasopharynx			Hypopharynx			Larynx			Cancers of Head and Neck		
	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %
< 20	26	5.6	0.1	41	8.9	0.1	28	6.1	0.1	339	73.3	13.6	11	2.4	0.1	17	3.7	0.1	462	100.0	0.5
20-24	131	24.4	0.7	190	35.5	0.5	42	7.8	0.2	135	25.2	5.4	18	3.4	0.1	20	3.7	0.1	536	100.0	0.5
25-29	654	37.7	3.6	834	48.0	2.4	85	4.9	0.4	87	5.0	3.5	39	2.2	0.3	38	2.2	0.3	1737	100.0	1.7
30-34	1445	32.7	7.9	2357	53.3	6.8	285	6.5	1.4	120	2.7	4.8	101	2.3	0.8	110	2.5	0.8	4418	100.0	4.3
35-39	2230	30.3	12.1	3753	51.0	10.9	699	9.5	3.4	159	2.2	6.4	281	3.8	2.2	240	3.2	1.7	7362	100.0	7.1
40-44	2451	25.7	13.3	4410	46.2	12.8	1278	13.4	6.2	221	2.3	8.9	609	6.4	4.8	573	6.0	4.0	9542	100.0	9.2
45-49	2551	21.0	13.9	4916	40.4	14.2	2152	17.7	10.4	270	2.2	10.8	1141	9.4	8.9	1126	9.3	7.8	12156	100.0	11.8
50-54	2268	16.2	12.3	4703	33.6	13.6	3049	21.8	14.8	290	2.1	11.6	1763	12.6	13.8	1919	13.7	13.4	13992	100.0	13.6
55-59	2049	14.2	11.1	4079	28.2	11.8	3463	23.9	16.8	279	1.9	11.2	2179	15.0	17.1	2429	16.8	16.9	14478	100.0	14.0
60-64	1864	12.6	10.1	3790	25.6	11.0	3757	25.4	18.2	248	1.7	9.9	2266	15.3	17.8	2867	19.4	19.9	14792	100.0	14.3
65-69	1384	12.6	7.5	2597	23.6	7.5	2738	24.9	13.3	164	1.5	6.6	1860	16.9	14.6	2272	20.5	15.8	11015	100.0	10.7
70-74	738	10.5	4.0	1584	22.4	4.6	1757	24.9	8.5	104	1.5	4.2	1359	19.3	10.7	1511	21.4	10.5	7053	100.0	6.8
75-79	356	10.5	1.9	749	22.1	2.2	759	22.4	3.7	46	1.4	1.8	707	20.9	5.5	765	22.6	5.3	3382	100.0	3.3
80-84	176	11.2	1.0	351	22.4	1.0	369	23.5	1.8	17	1.1	0.7	295	18.8	2.3	360	23.0	2.5	1568	100.0	1.5
85+	97	13.3	0.5	189	26.0	0.6	163	22.4	0.8	15	2.1	0.6	134	18.4	1.0	129	17.8	0.9	727	100.0	0.7
All ages*	18420	17.8	100.0	34547	33.5	100.0	20627	20.0	100.0	2494	2.4	100.0	12765	12.4	100.0	14377	13.9	100.0	103230	100.0	100.0
Mean (SD) Years	50 (13)			51 (13)			57 (11)			45(18)			59(11)			60 (11)			54 (13)		

* Includes cases with unknown age

Table 1.2.2: Number (n) and proportion (%) of cancers of head and neck according to five-year age group: Females

Age group	Tongue			Mouth			Oropharynx			Nasopharynx			Hypopharynx			Larynx			Cancers of Head and Neck		
	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	N	Row %	Col %
< 20	14	8.4	0.2	30	18.1	0.3	14	8.4	0.4	94	56.6	9.6	8	4.8	0.3	6	3.7	0.4	166	100.0	0.6
20-24	38	17.4	0.6	45	20.6	0.4	21	9.6	0.6	75	34.4	7.6	24	11.0	0.8	15	7.0	1.0	218	100.0	0.8
25-29	119	28.5	2.0	135	32.4	1.2	32	7.7	1.0	49	11.8	5.0	61	14.6	2.0	21	5.0	1.4	417	100.0	1.6
30-34	208	24.7	3.4	339	40.3	2.9	68	8.1	2.0	66	7.9	6.7	127	15.1	4.1	33	3.9	2.2	841	100.0	3.2
35-39	435	26.3	7.2	708	42.8	6.0	148	8.9	4.5	78	4.7	7.9	230	14.0	7.5	55	3.3	3.7	1654	100.0	6.2
40-44	558	24.3	9.2	1001	43.7	8.5	233	10.2	7.0	97	4.2	9.9	322	14.1	10.5	81	3.5	5.5	2292	100.0	8.6
45-49	841	24.2	13.9	1503	43.3	12.8	395	11.4	11.9	117	3.4	11.9	459	13.2	14.9	158	4.5	10.7	3473	100.0	13.0
50-54	911	25.2	15.0	1531	42.4	13.0	414	11.5	12.4	119	3.3	12.1	461	12.7	15.0	177	4.9	11.9	3613	100.0	13.5
55-59	797	22.5	13.1	1527	43.1	13.0	474	13.4	14.3	95	2.7	9.7	395	11.2	12.8	252	7.1	17.0	3540	100.0	13.3
60-64	775	20.4	12.8	1721	45.3	14.6	559	14.7	16.8	94	2.5	9.6	389	10.3	12.7	258	6.8	17.4	3796	100.0	14.2
65-69	653	22.0	10.8	1359	45.9	11.6	420	14.2	12.6	45	1.5	4.6	290	9.8	9.4	195	6.6	13.1	2961	100.0	11.1
70-74	378	19.9	6.2	911	47.8	7.7	307	16.1	9.2	27	1.4	2.7	162	8.5	5.3	119	6.3	8.0	1904	100.0	7.1
75-79	187	18.7	3.1	521	52.2	4.4	132	13.2	4.0	15	1.5	1.5	77	7.7	2.5	67	6.7	4.5	999	100.0	3.8
80-84	96	18.6	1.6	259	50.3	2.2	73	14.2	2.2	6	1.2	0.6	49	9.5	1.6	32	6.2	2.2	515	100.0	1.9
85+	55	18.3	0.9	169	56.1	1.4	37	12.3	1.1	6	2.0	0.6	19	6.3	0.6	15	5.0	1.0	301	100.0	1.1
All ages*	6065	22.7	100.0	11761	44.1	100.0	3327	12.5	100.0	983	3.7	100.0	3072	11.5	100.0	1484	5.5	100.0	26692	100.0	100.0
Mean (SD) Years	54 (13)			55 (13)			56 (13)			44(17)			52(13)			57 (13)			54 (13)		

* Includes cases with unknown age

1.3 Broad methods of diagnosis

Table 1.3: Number (n) and proportion (%) of head and neck cancers by most valid method of diagnosis

Method of diagnosis	Tongue		Mouth		Oropharynx		Nasopharynx		Hypopharynx		Larynx		Cancers of Head and Neck	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males														
Microscopic	18351	99.6	34377	99.5	20540	99.6	2465	98.9	12701	99.5	14297	99.4	102731	99.5
Imaging Techniques	25	0.1	65	0.2	38	0.2	25	1.0	30	0.2	39	0.3	222	0.2
Clinical Only	29	0.2	90	0.3	32	0.2	4	0.1	23	0.2	27	0.2	205	0.2
Total*	18420	100.0	34547	100.0	20627	100.0	2494	100.0	12765	100.0	14377	100.0	103230	100.0
Females														
Microscopic	6031	99.4	11678	99.3	3314	99.6	966	98.3	3061	99.6	1471	99.1	26521	99.4
Imaging Techniques	8	0.1	28	0.2	5	0.1	14	1.4	3	0.1	8	0.5	66	0.2
Clinical Only	24	0.4	48	0.4	8	0.2	0	0.0	7	0.2	2	0.1	89	0.3
Total*	6065	100.0	11761	100.0	3327	100.0	983	100.0	3072	100.0	1484	100.0	26692	100.0

*Cases with unknown and other methods of diagnosis are included.

1.4 Types of microscopic diagnosis

Table 1.4: Number (n) and proportion (%) of head and neck cancers according to specific type of microscopic diagnosis

Type of microscopic diagnosis	Tongue		Mouth		Oropharynx		Nasopharynx		Hypopharynx		Larynx		Cancers of Head and Neck	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males														
Primary Histology	17714	96.5	33097	96.3	18523	90.2	2121	86.0	11581	91.2	13398	93.7	96434	93.9
Histology of metastasis	76	0.4	132	0.4	271	1.3	141	5.7	167	1.3	124	0.9	911	0.9
Cytology of Primary	432	2.4	974	2.8	838	4.1	90	3.7	380	3.0	397	2.8	3111	3.0
Cytology of Metastasis	129	0.7	174	0.5	908	4.4	113	4.6	573	4.5	378	2.6	2275	2.2
All microscopic	18351	100.0	34377	100.0	20540	100.0	2465	100.0	12701	100.0	14297	100.0	102731	100.0
Females														
Primary Histology	5842	96.9	11246	96.3	3006	90.7	814	84.2	2910	95.1	1380	93.8	25198	95.0
Histology of metastasis	14	0.2	29	0.2	34	1.0	48	5.0	25	0.8	10	0.7	160	0.6
Cytology of Primary	141	2.3	317	2.7	153	4.6	48	5.0	57	1.9	43	2.9	759	2.9
Cytology of Metastasis	34	0.6	86	0.8	121	3.7	56	5.8	69	2.2	38	2.6	404	1.5
All microscopic	6031	100.0	11678	100.0	3314	100.0	966	100.0	3061	100.0	1471	100.0	26521	100.0

1.5 Major histological types

1.5.1 Tongue (C02)

Table 1.5.1: Number (n) and proportion (%) according to broad histological classification- Cancer of Tongue

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Epithelial cell tumours						
Squamous Cell Carcinoma, NOS	17018	92.7	5593	92.7	22611	92.7
Squamous Cell Carcinoma, Keratinizing	705	3.8	227	3.8	932	3.8
Squamous Cell Carcinoma, Non-Keratinizing	82	0.4	16	0.3	98	0.4
Verrucous carcinoma	100	0.5	33	0.5	133	0.5
All other Squamous Cell Carcinomas	75	0.4	30	0.5	105	0.4
Adenocarcinoma	41	0.2	20	0.3	61	0.3
Carcinoma, NOS	229	1.2	82	1.4	311	1.3
Mesenchymal tumours						
Sarcoma	4	<0.1	1	<0.1	5	<0.1
Others	97	0.5	29	0.5	126	0.5
Total	18351	100.0	6031	100.0	24382	100.0

1.5.2 Mouth (C03 - C04 & C06)

Table 1.5.2: Number (n) and proportion (%) according to broad histological classification- Cancer of Mouth

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Epithelial cell tumours						
Squamous Cell Carcinoma, NOS	30840	89.7	10602	90.8	41442	90.0
Squamous Cell Carcinoma, Keratinizing	1837	5.3	423	3.6	2260	4.9
Squamous Cell Carcinoma, Non -Keratinizing	164	0.5	37	0.3	201	0.4
Verrucous carcinoma	614	1.8	235	2.0	849	1.8
All other Squamous Cell Carcinomas	165	0.5	79	0.7	244	0.5
Adenocarcinoma	138	0.4	77	0.7	215	0.5
Carcinoma, NOS	424	1.2	144	1.2	568	1.2
Mesenchymal tumours						
Sarcoma	34	0.1	17	0.1	51	0.1
Others	161	0.5	64	0.5	225	0.5
Total	34377	100.0	11678	100.0	46055	100.0

1.5.3 Oropharynx (C01, C05, C09, C10 & C14)

Table 1.5.3: Number (n) and proportion (%) according to broad histological classification- Cancer of Oropharynx

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Epithelial cell tumours						
Squamous Cell Carcinoma, NOS	17941	87.3	2711	81.8	20652	86.6
Squamous Cell Carcinoma, Keratinizing	582	2.8	115	3.5	697	2.9
Squamous Cell Carcinoma, Non-Keratinizing	268	1.3	80	2.4	348	1.5
Verrucous carcinoma	47	0.2	14	0.4	61	0.3
All other Squamous Cell Carcinomas	81	0.4	14	0.4	95	0.4
Adenocarcinoma	181	0.9	116	3.5	297	1.2
Carcinoma, NOS	737	3.6	152	4.6	889	3.7
Mesenchymal tumours						
Sarcoma	21	0.1	9	0.3	30	0.1
Others	682	3.3	103	3.1	785	3.3
Total	20540	100.0	3314	100.0	23854	100.0

1.5.4 Nasopharynx (C11)

Table 1.5.4: Number (n) and proportion (%) according to broad histological classification- Cancer of Nasopharynx

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Epithelial cell tumours						
Squamous Cell Carcinoma, NOS	784	31.8	296	30.6	1080	31.5
Squamous Cell Carcinoma, Keratinizing	43	1.7	17	1.8	60	1.7
Squamous Cell Carcinoma, Non-Keratinizing	229	9.3	92	9.5	321	9.4
Undifferentiated	1112	45.1	426	44.1	1538	44.8
All other Squamous Cell Carcinomas	23	0.9	8	0.8	31	0.9
Adenocarcinoma	47	1.9	27	2.8	74	2.2
Mesenchymal tumours						
Sarcoma	29	1.2	18	1.9	47	1.4
Others	198	8.0	82	8.5	280	8.2
Total	2465	100.0	966	100.0	3431	100.0

1.5.5 Hypopharynx (C12-C13)

Table 1.5.5: Number (n) and proportion (%) according to broad histological classification- Cancer of Hypopharynx

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Epithelial cell tumours						
Squamous Cell Carcinoma, NOS	11189	88.1	2767	90.4	13956	88.5
Squamous Cell Carcinoma, Keratinizing	240	1.9	88	2.9	328	2.1
Squamous Cell Carcinoma, Non-Keratinizing	263	2.1	40	1.3	303	1.9
Verrucous carcinoma	0	0.0	2	0.1	2	0.0
All other Squamous Cell Carcinomas	37	0.3	5	0.2	42	0.3
Adenocarcinoma	62	0.5	17	0.6	79	0.5
Carcinoma, NOS	374	2.9	78	2.5	452	2.9
Mesenchymal tumours						
Sarcoma	6	<0.1	1	<0.1	7	<0.1
Others	530	4.2	63	2.1	593	3.8
Total	12701	100.0	3061	100.0	15762	100.0

1.5.6 Larynx (C32)

Table 1.5.6: Number (n) and proportion (%) according to broad histological classification- Cancer of Larynx

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Epithelial cell tumours						
Squamous Cell Carcinoma, NOS	12644	88.4	1271	86.4	13915	88.2
Squamous Cell Carcinoma, Keratinizing	466	3.3	50	3.4	516	3.3
Squamous Cell Carcinoma, Non-Keratinizing	194	1.4	33	2.2	227	1.4
Verrucous carcinoma	10	0.1	1	0.1	11	0.1
All other Squamous Cell Carcinomas	166	1.2	19	1.3	185	1.2
Adenocarcinoma	85	0.6	16	1.1	101	0.6
Carcinoma, NOS	453	3.2	61	4.1	514	3.3
Mesenchymal tumours						
Sarcoma	10	0.1	1	0.1	11	0.1
Others	269	1.9	19	1.3	288	1.8
Total	14297	100.0	1471	100.0	15768	100.0

1.6 Clinical extent of disease

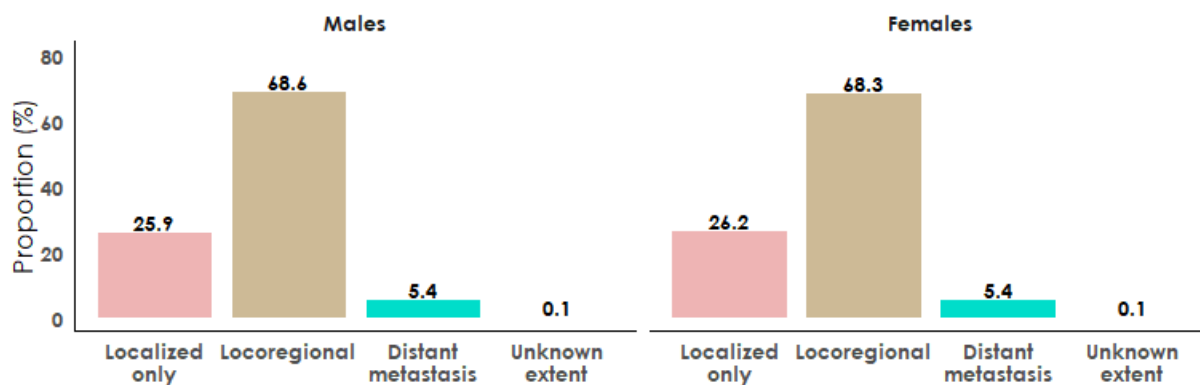


Figure 1.6.1 - Clinical extent of disease (%) – all sites of cancers of the head and neck in males and females

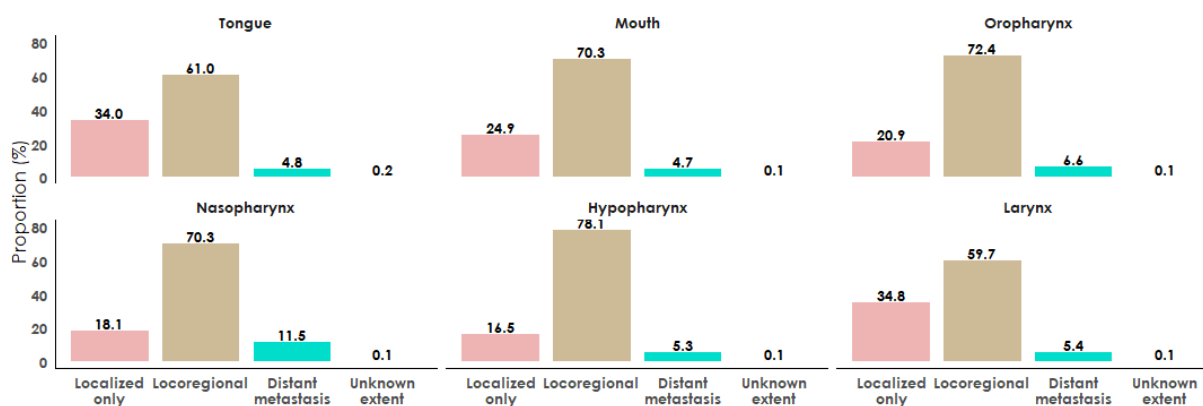


Figure 1.6.2 - Clinical extent of disease (%) – Site wise cancers of head and neck– Males

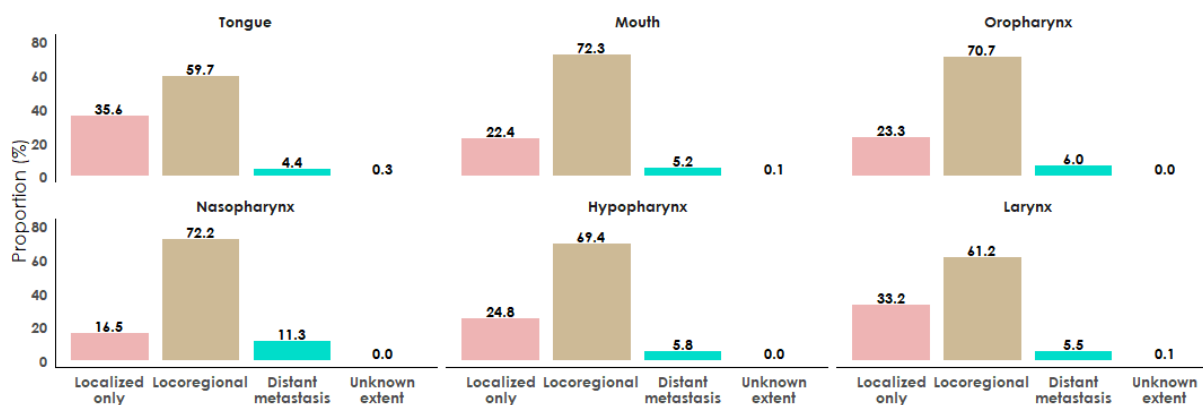


Figure 1.6.3 - Clinical extent of disease (%) – Site wise cancers of head and neck – Females

1.7 Intention to treat

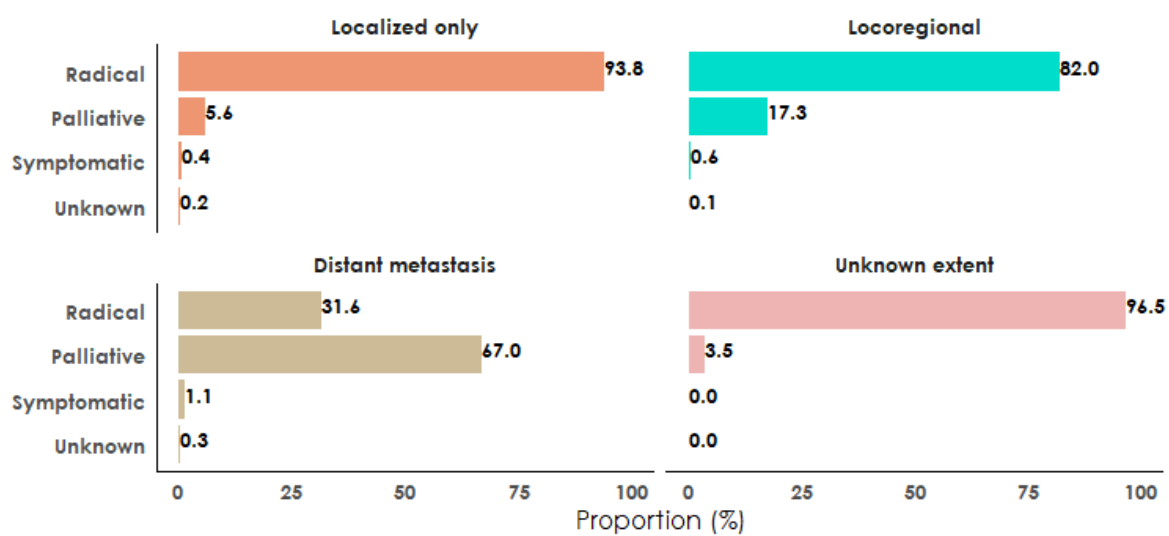
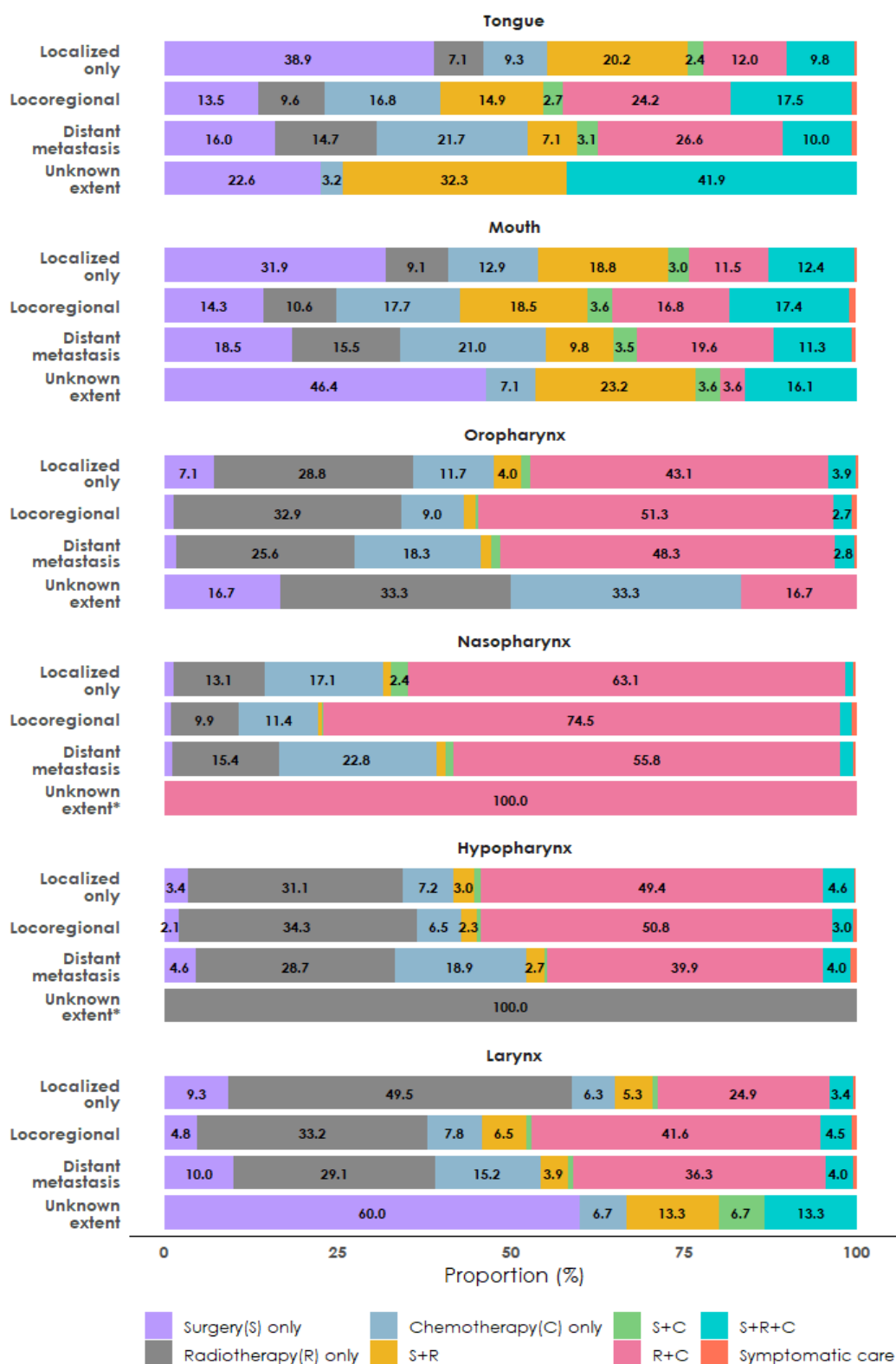


Figure 1.7 - Intention to treat according to clinical extent of disease – cancers of head and neck in both sexes

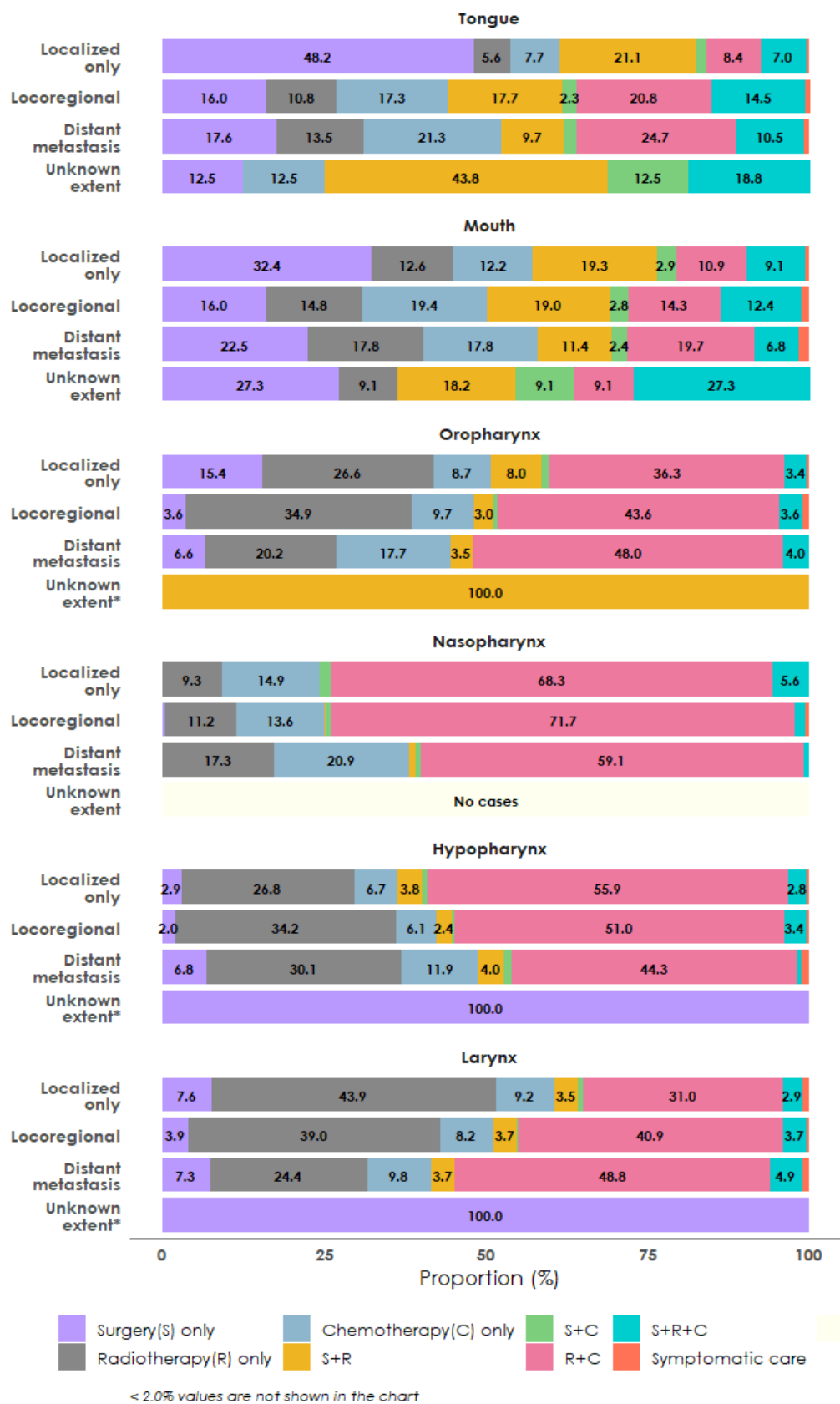
1.8 Treatment modalities according to clinical extent of disease



< 2.0% values are not shown in the chart

*no. of cases ≤15

Figure 1.8.1: Type of treatment according to clinical extent of disease – cancers of head and neck - Males



*no. of cases ≤1

Figure 1.8.2: Type of treatment according to clinical extent of disease – cancers of head and neck – Females

1.9 Waiting time between registration and commencement of cancer directed treatment

1.9.1 Patients of head and neck cancers earlier diagnosed at another health facility and referred for cancer directed treatment to the reporting institution

(a) Time between diagnosis and first attendance at the reporting institution

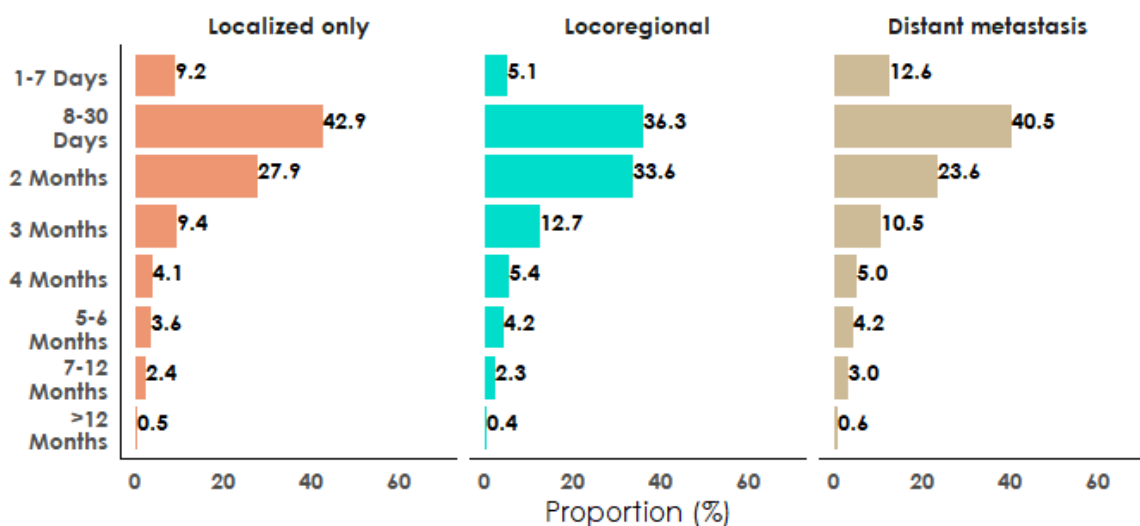


Figure 1.9.1a: Time between diagnosis and first attendance at reporting institution

(b) Time between first attendance and commencement of cancer directed treatment at reporting institution

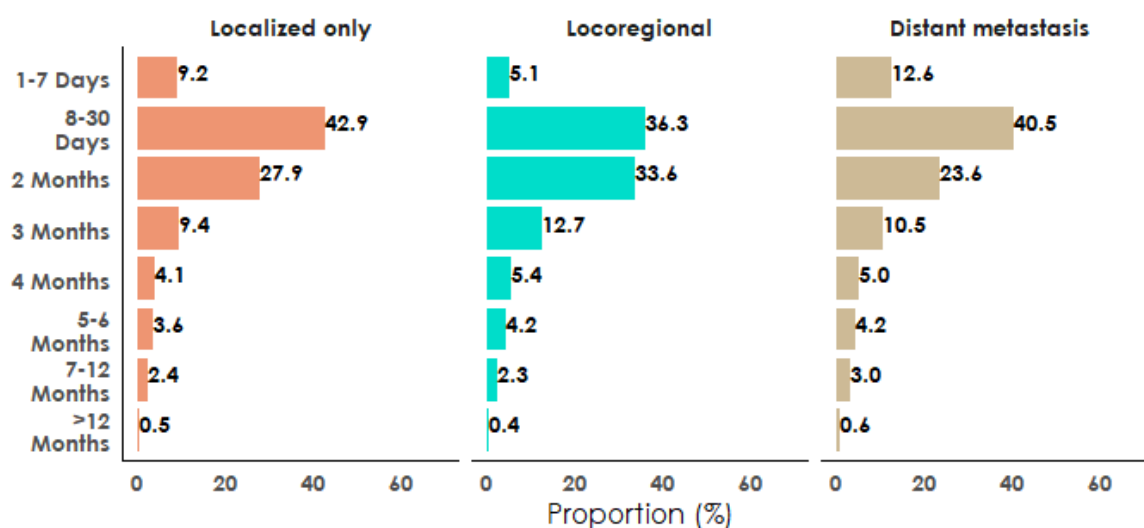


Figure 1.9.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution

(c) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

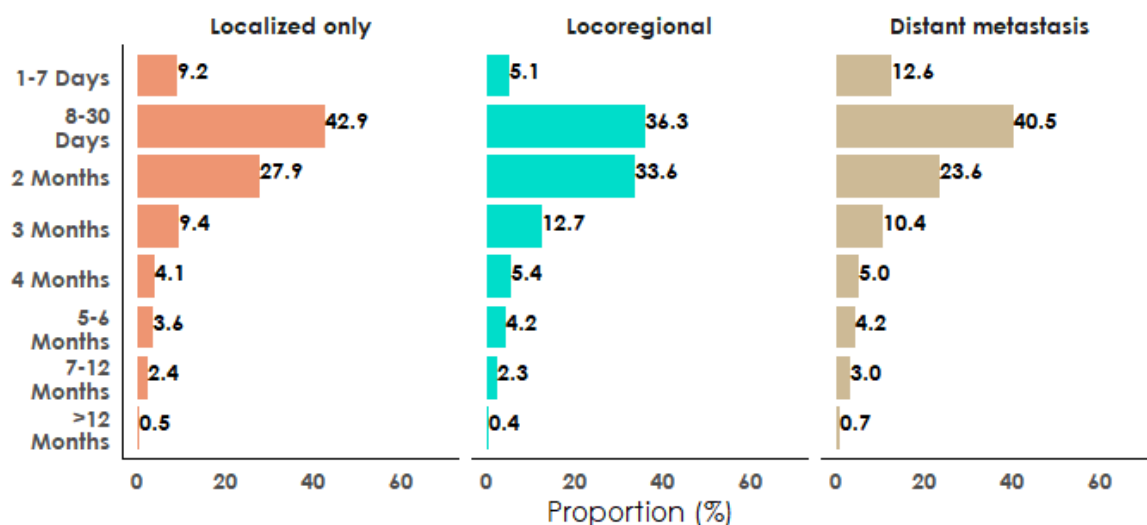


Figure 1.9.1c: Time between first diagnosis and commencement of cancer directed treatment at Reporting Institution

1.9.2 Patients of head and neck cancers diagnosed and treated for cancer at the reporting institution

Time between first diagnosis and commencement of cancer directed treatment at reporting institution

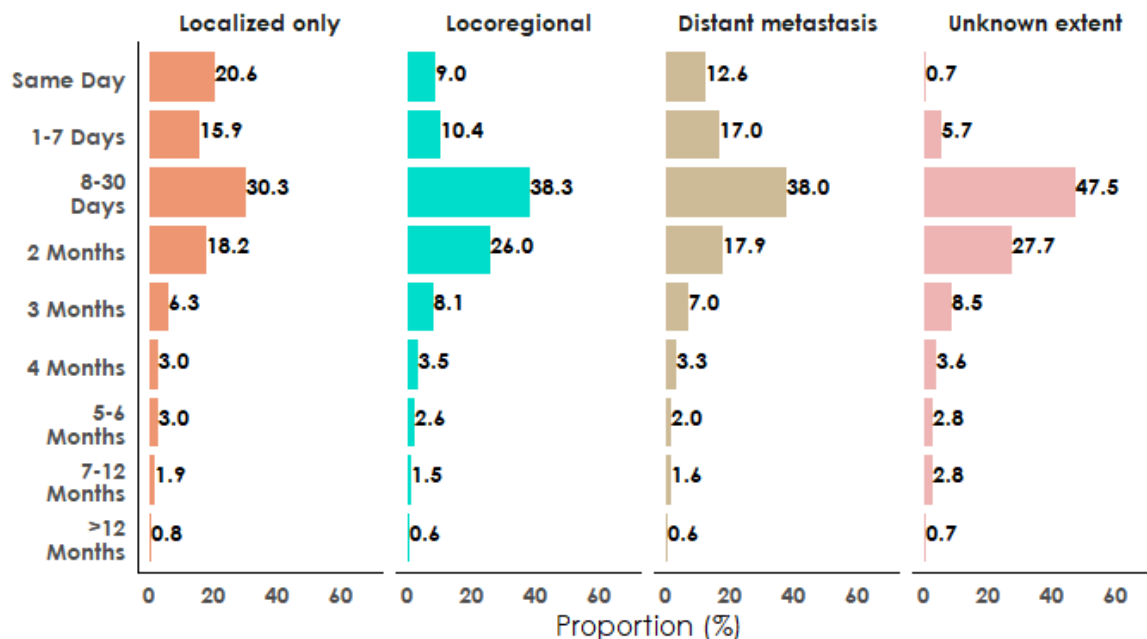


Figure 1.9.2: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

Key Findings

- Cancers of the head and neck accounted for nearly one-fifth (21.3%) of cancers in all the anatomic sites, constituting almost a third (32.4%) of all cancers in males.
- Over half of the cancers were reported in the 45-64 years age group in males (53.7%) and females (54%).
- Squamous cell carcinoma, NOS was the major histological type for all head and neck cancer sites, except for cancer of the nasopharynx, where undifferentiated epithelial cell cancer comprised close to half of the histological type.
- A higher proportion of patients with nasopharyngeal cancer had distal metastasis at the time of presentation, compared to cancer in other head and neck sites.
- A combination of radiotherapy and chemotherapy was the mainstay of treatment for most cancers of the oropharynx, nasopharynx and hypopharynx.
- The time between first diagnosis and commencement of cancer directed treatment at reporting institution for over one third of the patients with different stages disease extent ranged from 8 days to 30 days.

Chapter - 2

Gastrointestinal Tract Cancers (C15 – C25)

CHAPTER 2

GASTROINTESTINAL TRACT CANCERS

Table 2.0: Site classification according to ICD-10

Site of Cancer	ICD-10 Code
Oesophagus	C15
Stomach	C16
Liver	C22
Gall Bladder & other unspecified parts of the biliary tract	C23 - C24
Colon	C18
Rectum	C19 – C20
Other GI tract sites such as Small intestine, Anus, Pancreas	C17, C21, C25

2.1 Number and relative proportion by sites of GI tract cancers

Table 2.1: Number (n) and relative proportion (%) by sites of GI tract cancers relative to all sites of cancer

Site of cancer	Males		Females		Total	
	n	%	n	%	n	%
Oesophagus	16758	5.3	9978	3.4	26736	4.4
Stomach	14170	4.4	6548	2.3	20718	3.4
Colon	6610	2.1	4382	1.5	10992	1.8
Rectum	9565	3.0	6323	2.2	15888	2.6
Liver And Intrahepatic Bile Ducts	6374	2.0	1912	0.7	8286	1.4
Gall Bladder	6883	2.2	10873	3.7	17756	2.9
Other GI tract	5776	1.8	3615	1.2	9391	1.5
Total GI tract cancer	66136	20.7	43631	15.0	109767	18.0
All sites	319098	100.0	290986	100.0	610084	100.0

2.2 Distribution of GI tract cancers according to five-year age groups

Table 2.2.1: Number (n) and proportion (%) of GI tract cancers according to five-year age groups: Males

Age group	Oesophagus			Stomach			Colon			Rectum			Liver			Gall Bladder			Other GI tract cancers			Total GI Cancers		
	n	Row %	Col %	n	Row %	Col %	N	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %
<20	10	2.1	0.1	35	7.4	0.2	43	9.0	0.7	97	20.4	1.0	246	51.7	3.9	12	2.5	0.2	33	6.9	0.6	476	100.0	0.7
20-24	30	5.1	0.2	64	10.8	0.5	94	15.9	1.4	255	43.1	2.7	37	6.3	0.6	38	6.4	0.6	74	12.4	1.3	592	100.0	0.9
25-29	58	5.5	0.3	170	16.2	1.2	145	13.8	2.2	417	39.8	4.4	51	4.9	0.8	91	8.7	1.3	115	11.1	2.0	1047	100.0	1.6
30-34	164	9.0	1.0	341	18.7	2.4	261	14.3	3.9	556	30.6	5.8	109	6.0	1.7	204	11.2	3.0	184	10.2	3.2	1819	100.0	2.8
35-39	384	14.1	2.3	505	18.6	3.6	383	14.1	5.8	634	23.3	6.6	147	5.4	2.3	354	13.0	5.1	309	11.5	5.3	2716	100.0	4.1
40-44	803	19.3	4.8	832	20.0	5.9	520	12.5	7.9	724	17.4	7.6	296	7.1	4.6	572	13.7	8.3	416	10.0	7.2	4163	100.0	6.3
45-49	1545	24.4	9.2	1402	22.1	9.9	690	10.9	10.4	876	13.8	9.2	457	7.2	7.2	756	11.9	11.0	608	9.7	10.5	6334	100.0	9.6
50-54	2273	27.6	13.6	1733	21.0	12.2	790	9.6	12	1059	12.8	11.1	710	8.6	11.1	927	11.2	13.5	751	9.2	13.0	8243	100.0	12.5
55-59	2738	28.0	16.3	2173	22.3	15.3	847	8.7	12.8	1156	11.8	12.1	944	9.7	14.8	1056	10.8	15.3	852	8.7	14.8	9766	100.0	14.8
60-64	3135	28.8	18.7	2426	22.3	17.1	955	8.8	14.4	1246	11.5	13.0	1161	10.7	18.2	1077	9.9	15.6	870	8.0	15.1	10870	100.0	16.4
65-69	2486	27.2	14.8	2052	22.5	14.5	806	8.8	12.2	1087	11.9	11.4	1032	11.3	16.2	883	9.7	12.8	787	8.6	13.6	9133	100.0	13.8
70-74	1704	28.0	10.2	1396	23.0	9.9	559	9.2	8.5	764	12.6	8.0	697	11.5	10.9	517	8.5	7.5	443	7.2	7.7	6080	100.0	9.2
75-79	873	28.0	5.2	679	21.8	4.8	335	10.8	5.1	422	13.6	4.4	334	10.7	5.2	243	7.8	3.5	228	7.3	3.9	3114	100.0	4.7
80-84	398	30.5	2.4	269	20.6	1.9	130	10.0	2.0	197	15.1	2.0	118	9.0	1.9	118	9.0	1.7	75	5.8	1.3	1305	100.0	2.0
85+	156	33.3	0.9	91	19.4	0.6	49	10.5	0.7	73	15.6	0.7	33	7.1	0.6	35	7.5	0.6	31	6.6	0.5	468	100.0	0.6
All ages*	16758	25.3	100.0	14170	21.4	100.0	6610	10.0	100.0	9565	14.5	100.0	6374	9.6	100.0	6883	10.4	100.0	5776	8.8	100.0	66136	100.0	100.0
Mean (SD) Years	59(11)			58 (12)			55(14)			53(15)			57(16)			55(12)			57(13)			57(13)		

* Includes cases with unknown age

Table 2.2.2: Number (n) and proportion (%) of GI tract Cancers according to five-year age groups: Females

Age group	Oesophagus			Stomach			Colon			Rectum			Liver			Gall Bladder			Other GI tract cancers			Total GI Cancers		
	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %
<20	1	0.3	<0.1	31	10.5	0.5	29	9.9	0.7	51	17.3	0.8	150	51.0	7.8	4	1.4	<0.1	28	9.6	0.8	294	100.0	0.7
20-24	20	4.0	0.2	82	16.4	1.3	69	13.8	1.6	208	41.7	3.3	20	4.0	1.00	52	10.4	0.5	48	9.7	1.3	499	100.0	1.1
25-29	78	8.2	0.8	222	23.4	3.4	111	11.7	2.5	258	27.2	4.1	42	4.4	2.2	150	15.8	1.4	87	9.3	2.4	948	100.0	2.2
30-34	194	12.0	1.9	342	21.2	5.2	173	10.7	3.9	385	23.8	6.1	64	4.0	3.3	328	20.3	3.0	129	8.0	3.6	1615	100.0	3.7
35-39	391	14.4	3.9	512	18.9	7.8	265	9.8	6.0	493	18.2	7.8	117	4.3	6.1	703	25.9	6.5	230	8.5	6.4	2711	100.0	6.2
40-44	712	18.7	7.1	668	17.5	10.2	357	9.4	8.1	538	14.1	8.5	145	3.8	7.6	1137	29.8	10.5	260	6.7	7.2	3817	100.0	8.7
45-49	1179	21.7	11.8	813	15.0	12.4	463	8.5	10.6	670	12.3	10.6	196	3.6	10.3	1721	31.7	15.8	393	7.2	10.9	5435	100.0	12.5
50-54	1378	22.7	13.8	904	14.9	13.8	561	9.2	12.8	776	12.8	12.3	240	4.0	12.6	1707	28.1	15.7	507	8.3	14.0	6073	100.0	13.9
55-59	1428	23.5	14.3	881	14.5	13.5	585	9.6	13.4	769	12.7	12.2	251	4.1	13.1	1621	26.7	14.9	529	8.9	14.6	6064	100.0	13.9
60-64	1601	25.5	16.0	856	13.6	13.1	629	10.0	14.4	772	12.3	12.2	289	4.6	15.1	1560	24.9	14.3	567	9.1	15.7	6274	100.0	14.4
65-69	1356	28.1	13.6	636	13.2	9.7	543	11.2	12.4	667	13.8	10.5	193	4.0	10.1	986	20.4	9.1	450	9.3	12.4	4831	100.0	11.1
70-74	919	32.0	9.2	357	12.4	5.5	334	11.6	7.6	368	12.8	5.8	123	4.3	6.4	543	18.9	5.0	224	8.0	6.2	2868	100.0	6.6
75-79	439	31.8	4.4	168	12.2	2.6	153	11.1	3.5	230	16.7	3.6	50	3.6	2.6	246	17.8	2.3	95	6.8	2.6	1381	100.0	3.2
80-84	193	34.8	2.0	58	10.5	0.8	80	14.4	1.8	91	16.4	1.4	18	3.2	1.0	70	12.6	0.6	44	8.1	1.2	554	100.0	1.3
85+	89	33.8	1.0	17	6.5	0.2	30	11.4	0.7	47	17.9	0.8	12	4.6	0.7	44	16.7	0.4	24	9.1	0.7	263	100.0	0.5
All ages*	9978	22.9	100.0	6548	15.0	100.0	4382	10.0	100.0	6323	14.5	100.0	1912	4.4	100.0	10873	24.9	100.0	3615	8.3	100.0	43631	100.0	100.0
Mean (SD) Years	57 (12)			52 (13)			54 (14)			52 (15)			50 (18)			53 (12)			54 (13)			54 (13)		

* Includes cases with unknown age

2.3 Broad methods of diagnosis

Table 2.3: Number (n) and proportion (%) of GI tract cancers by most valid method of diagnosis – GI Cancers

Method of diagnosis	Oesophagus		Stomach		Colon		Rectum		Liver		Gall Bladder		Other GI tract cancers		Total GI cancers	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males																
Microscopic	16654	99.4	14020	98.9	6536	98.9	9505	99.4	4492	70.5	6429	93.4	5643	97.7	63279	95.7
Imaging Techniques	65	0.4	111	0.8	53	0.8	46	0.5	1701	26.7	220	3.2	111	1.9	2307	3.5
Clinical Only	11	0.1	19	0.1	11	0.2	6	0.1	12	0.2	209	3.0	6	0.1	274	0.4
Total*	16758	100.0	14170	100.0	6610	100.0	9565	100.0	6374	100.0	6883	100.0	5776	100.0	66136	100.0
Females																
Microscopic	9921	99.4	6457	98.6	4335	98.9	6276	99.3	1638	85.7	9967	91.7	3512	97.2	42106	96.5
Imaging Techniques	32	0.3	61	0.9	32	0.7	36	0.6	239	12.5	447	4.1	91	2.5	938	2.1
Clinical Only	5	0.1	11	0.2	8	0.2	3	<0.1	4	0.2	435	4.0	6	0.2	472	1.1
Total*	9978	100.0	6548	100.0	4382	100.0	6323	100.0	1912	100.0	10873	100.0	3615	100.0	43631	100.0

*Including others and unknown cases of method of diagnosis

2.4 Types of microscopic diagnosis

Table 2.4: Number (n) and proportion (%) of GI tract cancers according to specific type of microscopic diagnosis

Type of microscopic diagnosis	Oesophagus		Stomach		Colon		Rectum		Liver		Gall Bladder		Other GI tract cancers		Total GI cancers	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males																
Primary Histology	16273	97.7	13521	96.4	6203	94.9	9350	98.4	2925	65.1	4002	62.2	4418	78.3	56692	89.6
Histology of metastasis	88	0.5	146	1.0	136	2.1	68	0.7	125	2.8	270	4.2	256	4.5	1089	1.7
Cytology of Primary	181	1.1	232	1.7	115	1.8	52	0.5	1330	29.6	1619	25.2	711	12.6	4240	6.7
Cytology of Metastasis	112	0.7	121	0.9	82	1.3	35	0.4	112	2.5	538	8.4	258	4.5	1258	2.0
All microscopic	16654	100.0	14020	100.0	6536	100.0	9505	100.0	4492	100.0	6429	100.0	5643	100.0	63279	100.0
Females																
Primary Histology	9739	98.2	6161	95.4	4108	94.8	6167	98.3	1017	62.1	5435	54.5	2765	78.7	35392	84.1
Histology of metastasis	36	0.4	93	1.4	89	2.1	38	0.6	46	2.8	398	4.0	137	3.9	837	2.0
Cytology of Primary	101	1.0	144	2.2	79	1.8	47	0.7	520	31.7	3153	31.6	449	12.8	4493	10.7
Cytology of Metastasis	45	0.5	59	0.9	59	1.4	24	0.4	55	3.4	981	9.8	161	4.6	1384	3.3
All microscopic	9921	100.0	6457	100.0	4335	100.0	6276	100.0	1638	100.0	9967	100.0	3512	100.0	42106	100.0

2.5 Major histological types

2.5.1 Oesophagus (C15)

Table 2.5.1: Number (n) and proportion (%) according to broad histological classification- Cancer of Oesophagus

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Squamous cell carcinoma						
Squamous cell carcinoma NOS	13218	79.4	8507	85.7	21725	81.7
Squamous cell carcinoma, keratinizing	296	1.8	217	2.2	513	1.9
Squamous cell carcinoma, non-keratinizing	261	1.6	195	2.0	456	1.7
All Other squamous cell carcinomas	78	0.5	79	0.8	157	0.6
Adenocarcinoma						
Adenocarcinoma NOS	1913	11.5	523	5.3	2436	9.2
Papillary adenocarcinoma	19	0.1	3	< 0.1	22	0.1
Signet ring cell carcinoma	92	0.6	24	0.2	116	0.4
All other adenocarcinoma	60	0.4	11	0.1	71	0.3
Carcinoma, NOS	441	2.6	235	2.4	676	2.5
Neuroendocrine tumours						
Neuroendocrine carcinoma	105	0.6	53	0.5	158	0.6
Other neuroendocrine tumours	2	< 0.1	0	0.0	2	< 0.1
Adenosquamous carcinoma						
Adenosquamous Carcinoma	57	0.3	25	0.3	82	0.3
Mesenchymal tumours						
Gastrointestinal stromal tumour	1	< 0.1	3	< 0.1	4	< 0.1
Other mesenchymal tumours	6	< 0.1	2	< 0.1	8	< 0.1
Others	106	0.6	44	0.4	150	0.6
Total	16655	100.0	9921	100.0	26576	100.0

2.5.2 Stomach (C16)

Table 2.5.2: Number (n) and proportion (%) according to broad histological classification- Cancer of Stomach

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Adenocarcinoma						
Adenocarcinoma NOS	10681	76.2	4452	68.9	15133	73.9
Papillary adenocarcinoma	49	0.3	14	0.2	63	0.3
Signet ring cell carcinoma	1230	8.8	914	14.2	2144	10.5
Linitus plastica	1	< 0.1	3	< 0.1	4	< 0.1
Adenocarcinoma, intestinal type	137	1.0	34	0.5	171	0.8
Adenocarcinoma, diffuse type	108	0.8	77	1.2	185	0.9
All other adenocarcinomas	313	2.2	107	1.7	420	2.1
Carcinoma NOS	526	3.8	242	3.7	768	3.7
Squamous cell carcinoma						
Squamous cell carcinoma NOS	418	3.0	271	4.2	689	3.4
Neuroendocrine tumours						
Neuroendocrine Carcinoma	127	0.9	49	0.8	176	0.9
Typical carcinoid	4	< 0.1	4	0.1	8	< 0.1
Goblet cell carcinoid	1	< 0.1	0	0.0	1	< 0.1
Mesenchymal tumours						
Gastrointestinal stromal sarcoma	236	1.7	160	2.5	396	2.0
Other mesenchymal tumours	15	0.1	14	0.2	29	0.1
Adenosquamous carcinoma	31	0.2	18	0.3	49	0.2
Others	140	1.0	92	1.4	232	1.1
Total	14024	100.0	6459	100.0	20483	100.0

2.5.3 Liver (C22)

Table 2.5.3: Number (n) and proportion (%) according to broad histological classification- Cancer of Liver

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Malignant hepatocellular tumours						
Hepatocellular carcinoma	3055	67.9	739	45.1	3794	61.8
Hepatoblastoma	187	4.2	118	7.2	305	5.0
Malignant biliary tumours						
Cholangiocarcinoma	354	7.9	279	17.0	633	10.3
Combined Hepatocellular carcinoma & Cholangiocarcinoma	29	0.6	10	0.6	39	0.6
Neuroendocrine carcinoma	57	1.3	36	2.2	93	1.5
Carcinoma, NOS	147	3.3	56	3.4	203	3.3
Other adenocarcinomas	508	11.3	319	19.5	827	13.5
Squamous cell carcinoma						
Squamous cell carcinoma	20	0.4	16	1.0	36	0.6
Others	142	3.2	66	4.0	208	3.4
Total	4499	100.0	1639	100.0	6138	100.0

2.5.4 Gall Bladder (C23- C24)

Table 2.5.4: Number (n) and proportion (%) according to broad histological classification- Cancer of Gall Bladder

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Malignant epithelial tumours						
Adenocarcinoma, NOS	5065	78.8	8169	81.9	13234	80.7
Cholangiocarcinoma	224	3.5	200	2.0	424	2.6
Squamous Cell Carcinoma	104	1.6	126	1.3	230	1.4
All other Adenocarcinoma	96	1.5	113	1.1	209	1.3
Mucinous Adenocarcinoma	68	1.1	89	0.9	157	1.0
Neuroendocrine Tumour	72	1.1	79	0.8	151	0.9
Adenosquamous carcinoma	41	0.6	80	0.8	121	0.7
Mixed Adenocarcinoma	3	< 0.1	8	0.1	11	0.1
Carcinoma NOS	408	6.3	577	5.8	985	6.0
Mesenchymal tumours						
Gastrointestinal stromal sarcoma	2	< 0.1	0	0.0	2	< 0.1
Others	347	5.4	528	5.3	875	5.3
Total	6430	100.0	9969	100.0	16399	100.0

2.5.5 Pancreas (C25)

Table 2.5.5: Number (n) and proportion (%) according to broad histological classification- Cancer of Pancreas

Broad Histological Classification	Males		Females		Total	
	n	%	n	%	n	%
Adenocarcinoma						
Adenocarcinoma, NOS	2177	69.0	1312	67.6	3489	68.5
Mucinous adenocarcinoma	45	1.4	34	1.8	79	1.6
Signet ring cell carcinoma	1	< 0.1	0	0.0	1	< 0.1
Papillary adenocarcinoma	7	0.2	17	0.9	24	0.5
All other adenocarcinomas	29	0.9	25	1.3	54	1.1
Carcinoma, NOS	339	10.7	181	9.3	520	10.2
Neuroendocrine tumours						
Neuroendocrine carcinoma	172	5.5	150	7.7	322	6.3
Squamous cell carcinoma						
Squamous cell carcinoma	53	1.7	30	1.5	83	1.6
Other Malignant epithelial tumours						
Solid pseudopapillary carcinoma	4	0.1	13	0.7	17	0.3
Pancreatoblastoma	6	0.2	3	0.2	9	0.2
Mixed acinar-endocrine carcinoma	4	0.1	2	0.1	6	0.1
Mesenchymal tumours						
Gastrointestinal stromal sarcoma	1	< 0.1	3	0.2	4	0.1
All other sarcomas	8	0.3	5	0.3	13	0.3
Others	308	9.8	165	8.5	473	9.3
Total	3154	100.0	1940	100.0	5094	100.0

2.5.6 Small Intestine (C17)

Table 2.5.6: Number (n) and proportion (%) according to broad histological classification- Cancer of Small Intestine

Broad Histological Classification	Males		Females		Total	
	n	%	n	%	n	%
Adenocarcinoma						
Adenocarcinoma, NOS	375	56.0	235	53.9	610	55.2
Mucinous adenocarcinoma	9	1.3	11	2.5	20	1.8
Signet ring cell carcinoma	8	1.2	4	0.9	12	1.1
Papillary adenocarcinoma	3	0.4	3	0.7	6	0.5
All other adenocarcinomas	1	0.1	1	0.2	2	0.2
Neuroendocrine tumours						
Neuroendocrine carcinoma	114	17.0	71	16.3	185	16.7
Mesenchymal tumours						
Gastrointestinal stromal sarcoma	97	14.5	61	14.0	158	14.3
Carcinoma, NOS	28	4.2	16	3.7	44	4.0
Squamous cell carcinoma						
Squamous cell carcinoma, NOS	3	0.4	7	1.6	10	0.9
All other squamous cell carcinomas	9	1.3	9	2.1	18	1.6
All other sarcomas	2	0.3	4	0.9	6	0.5
Others	21	3.1	14	3.2	35	3.2
Total	670	100.0	436	100.0	1106	100.0

2.5.7 Colon (C18)

Table 2.5.7: Number (n) and proportion (%) according to broad histological classification- Cancer of Colon

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Adenocarcinoma						
Adenocarcinoma NOS	5320	81.4	3545	81.7	8865	81.5
Papillary adenocarcinoma	35	0.5	35	0.8	70	0.6
Signet ring cell carcinoma	205	3.1	102	2.4	307	2.8
Mucinous adenocarcinoma	344	5.3	226	5.2	570	5.2
Mucin-producing adenocarcinoma	131	2.0	86	2.0	217	2.0
All other adenocarcinomas	40	0.6	16	0.4	56	0.5
Carcinoma, NOS	208	3.2	146	3.4	354	3.3
Squamous cell carcinoma						
Squamous cell carcinoma	54	0.8	35	0.8	89	0.8
Neuroendocrine tumours						
Neuroendocrine carcinoma	39	0.6	26	0.6	65	0.6
Other neuroendocrine tumours	4	0.1	10	0.2	14	0.1
Mesenchymal tumours						
Gastrointestinal stromal sarcoma	17	0.3	9	0.2	26	0.2
Other mesenchymal tumours	6	0.1	11	0.3	17	0.2
Others	133	2.0	90	2.1	223	2.1
Total	6536	100.0	4337	100.0	10873	100.0

2.5.8 Rectum (C19 – C20)

Table 2.5.8: Number (n) and Relative proportion (%) according to broad histological classification- Cancer of Rectum

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Adenocarcinoma						
Adenocarcinoma NOS	7940	83.5	5366	85.5	13306	84.3
Papillary adenocarcinoma	110	1.2	71	1.1	181	1.1
Signet ring cell carcinoma	425	4.5	222	3.5	647	4.1
Mucinous adenocarcinoma	256	2.7	128	2.0	384	2.4
Mucin-producing adenocarcinoma	172	1.8	93	1.5	265	1.7
All other adenocarcinomas	54	0.6	42	0.7	96	0.6
Carcinoma, NOS	235	2.5	135	2.2	370	2.3
Squamous cell carcinoma						
Squamous cell carcinoma	158	1.7	130	2.1	288	1.8
Neuroendocrine tumours						
Neuroendocrine carcinoma	53	0.6	33	0.5	86	0.5
Other neuroendocrine tumours	2	< 0.1	2	< 0.1	4	< 0.1
Mesenchymal tumours						
Gastrointestinal stromal sarcoma	29	0.3	9	0.1	38	0.2
Other mesenchymal tumour	4	< 0.1	4	0.1	8	0.1
Others	68	0.7	41	0.7	109	0.7
Total	9506	100.0	6276	100.0	15782	100.0

2.5.9 Anus and Anal Canal (C21)

Table 2.5.9: Number (n) and proportion (%) according to broad histological classification - Cancer of Anus and Anal Canal

Broad Histological Classification	Males		Females		Total	
	n	%	n	%	n	%
Squamous cell carcinoma						
Squamous cell carcinoma, NOS	796	43.7	483	42.5	1279	43.3
All other squamous cell carcinomas	45	2.5	28.0	2.5	73	2.5
Adenocarcinoma						
Adenocarcinoma, NOS	713	39.2	474	41.7	1187	40.2
Mucinous adenocarcinoma	91	5.0	33	2.9	124	4.2
Signet ring cell carcinoma	73	4.0	30	2.6	103	3.5
Papillary adenocarcinoma	13	0.7	13	1.1	26	0.9
All other adenocarcinomas	10	0.5	11	1.0	21	0.7
Carcinoma, NOS	62	3.4	48.0	4.2	110	3.7
Neuroendocrine tumours						
Neuroendocrine carcinoma	6	0.3	4	0.4	10	0.3
Other Neuroendocrine tumour	1	0.1	0	0.0	1	<0.1
Mesenchymal tumours						
Gastrointestinal stromal sarcoma	2	0.1	0	0.0	2	0.1
All other sarcomas	3	0.2	6	0.5	9	0.3
Others	5	0.3	6	0.5	11	0.4
Total	1820	100.0	1136	100.0	2956	100.0

2.6 Clinical Extent of Disease

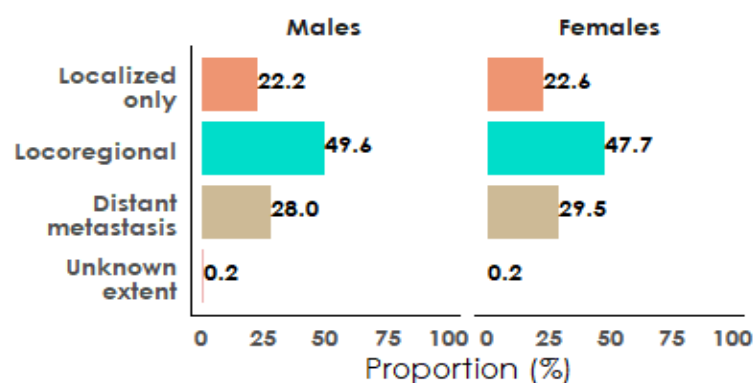


Figure 2.6.1: Clinical extent of disease (%) for all sites of GI tract cancers in males and females

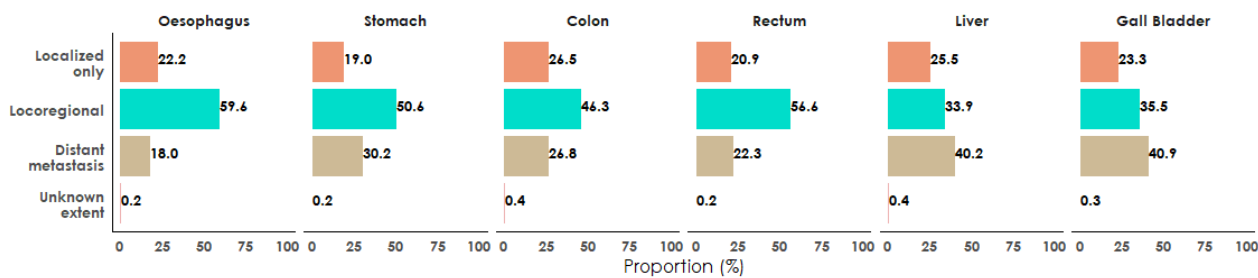


Figure 2.6.2: Clinical extent of disease (%): Site wise GI tract cancers – Males

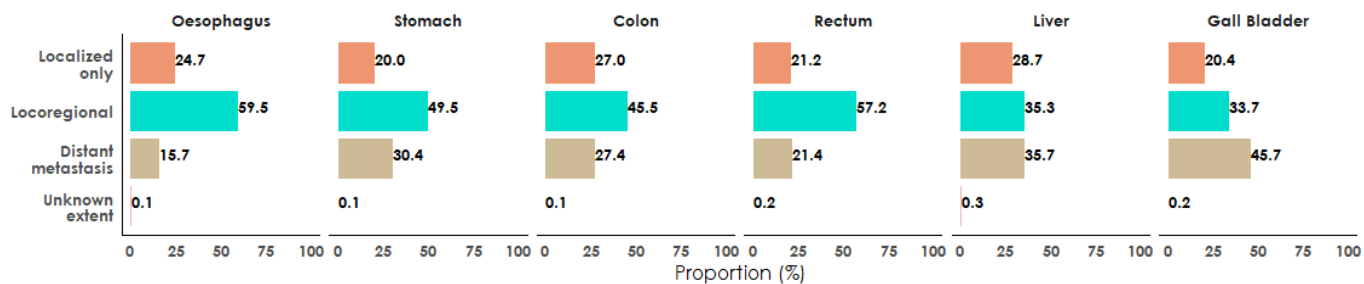


Figure 2.6.3: Clinical extent of disease (%): Site wise GI tract cancers - Females

2.7 Intention to treat

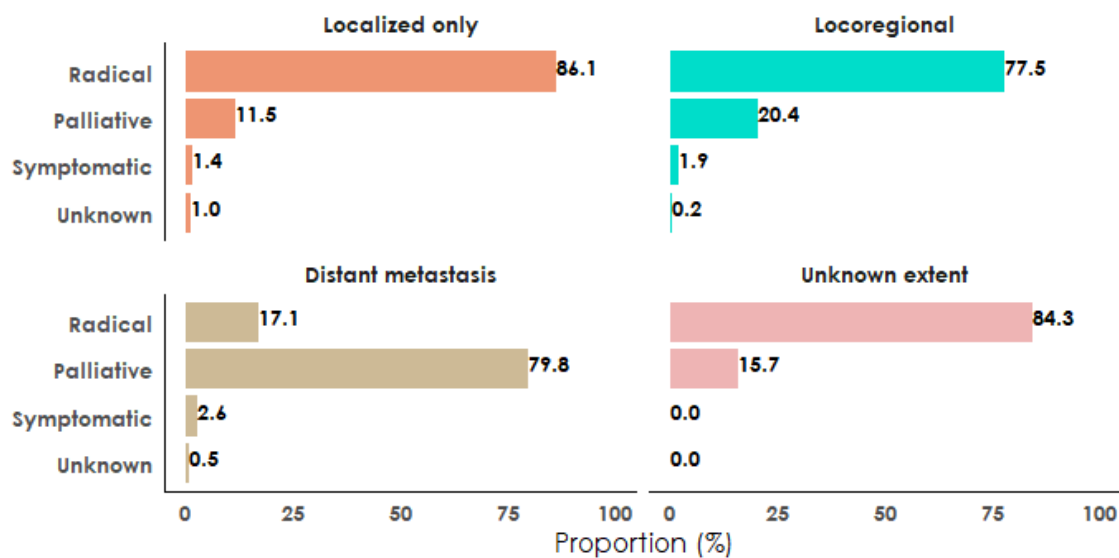


Figure 2.7: Intention to treat according to clinical extent of disease (%) – GI tract cancers in both sexes

2.8 Treatment modalities according to clinical extent of disease

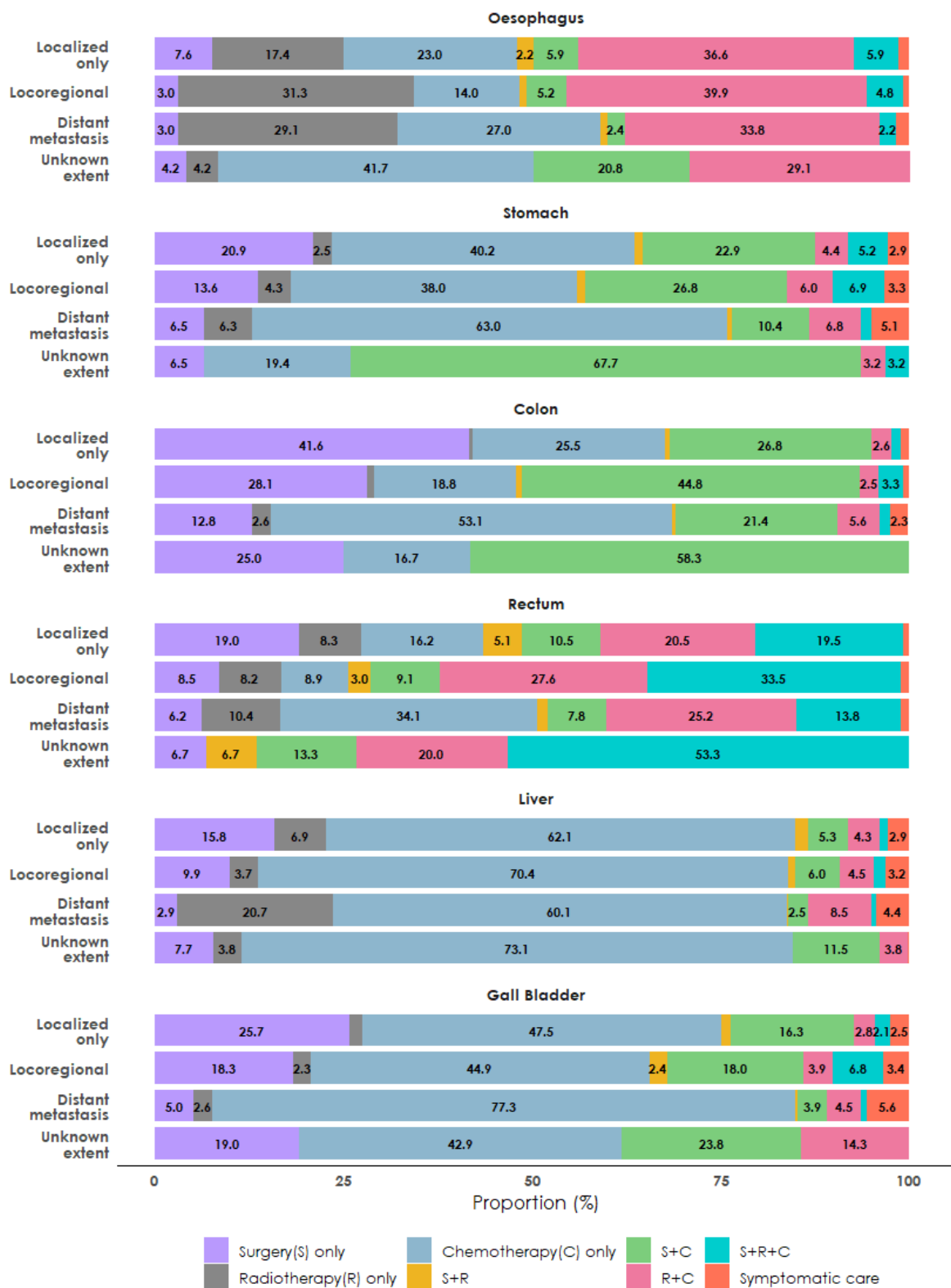


Figure 2.8.1: Type of treatment according to clinical extent of disease- GI tract cancers - Males

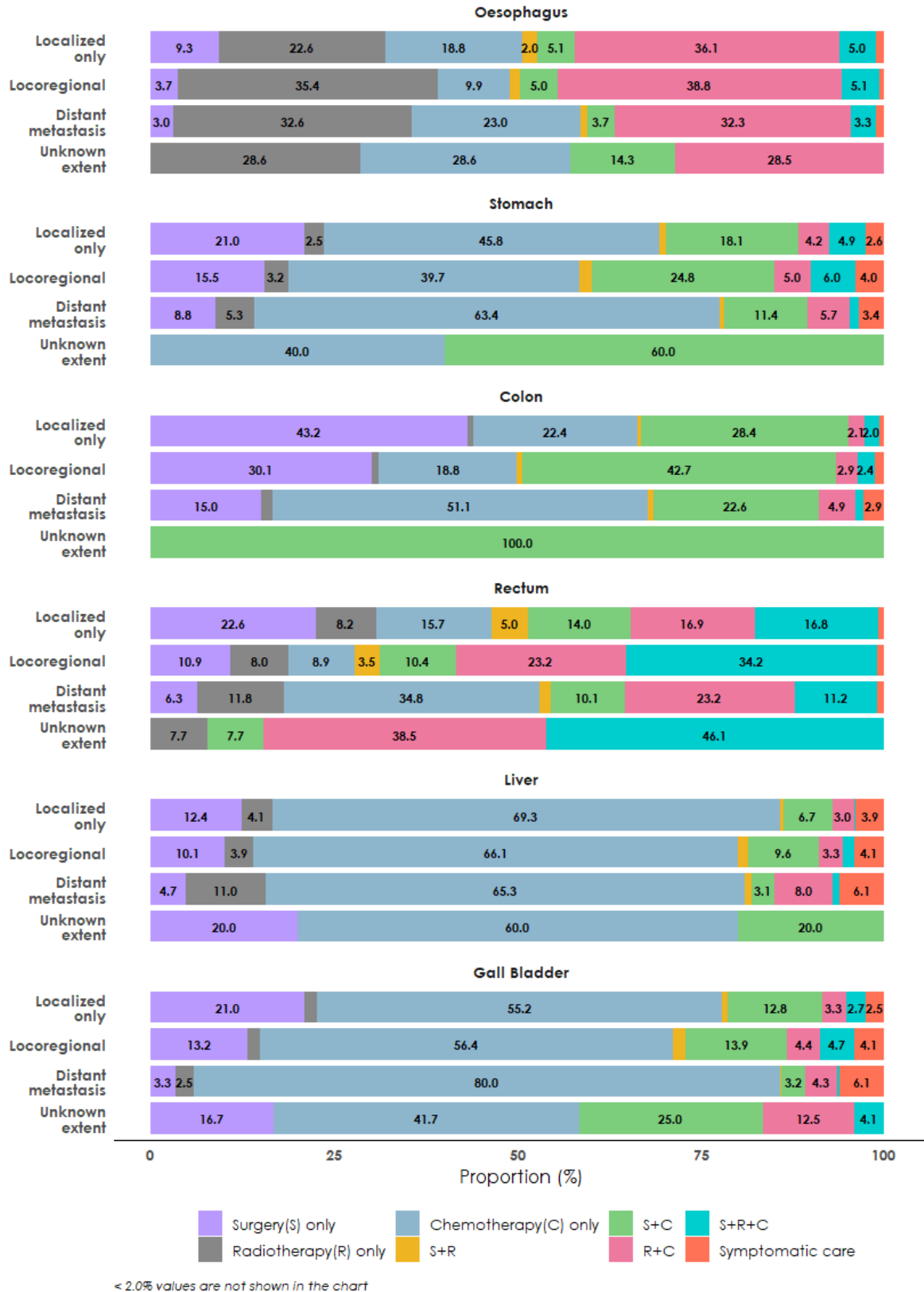


Figure 2.8.2: Type of treatment according to clinical extent of disease – GI tract cancers – Females

2.9 Waiting time between registration and commencement of cancer directed treatment

2.9.1 Patients of GI tract cancers earlier diagnosed at another health facility and referred for cancer directed treatment to the reporting institution

(a) Time between diagnosis and first attendance at the reporting institution

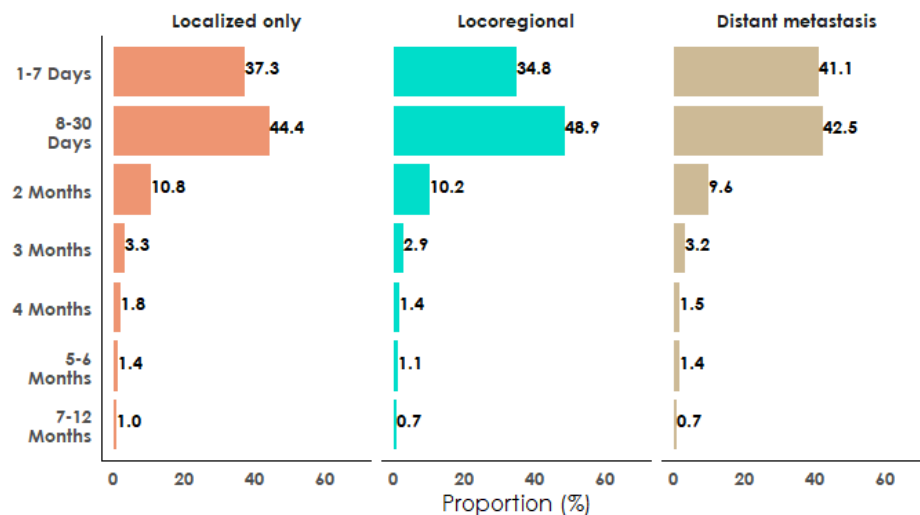


Figure 2.9.1a: Time between diagnosis and first attendance at reporting institution

(b) Time between first attendance and commencement of cancer directed treatment at reporting institution

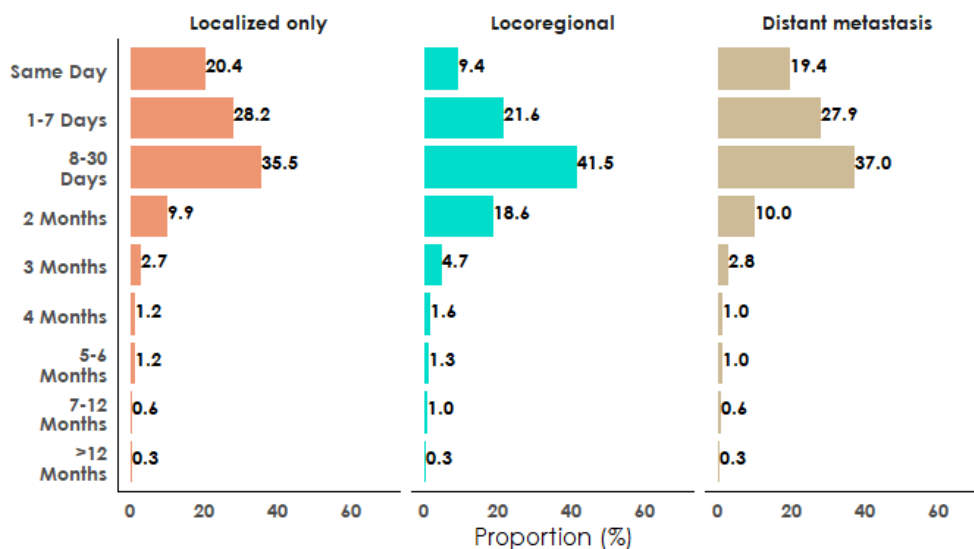


Figure 2.9.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution

(c) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

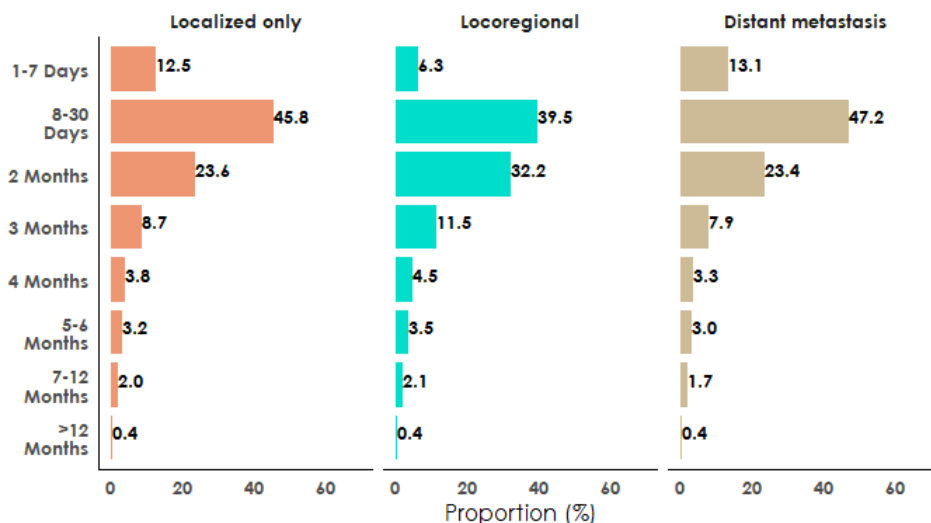


Figure 2.9.1c: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

2.9.2 Patients of GI tract cancers diagnosed and treated for cancer at the reporting institution

Time between first diagnosis and commencement of cancer directed treatment at reporting institution

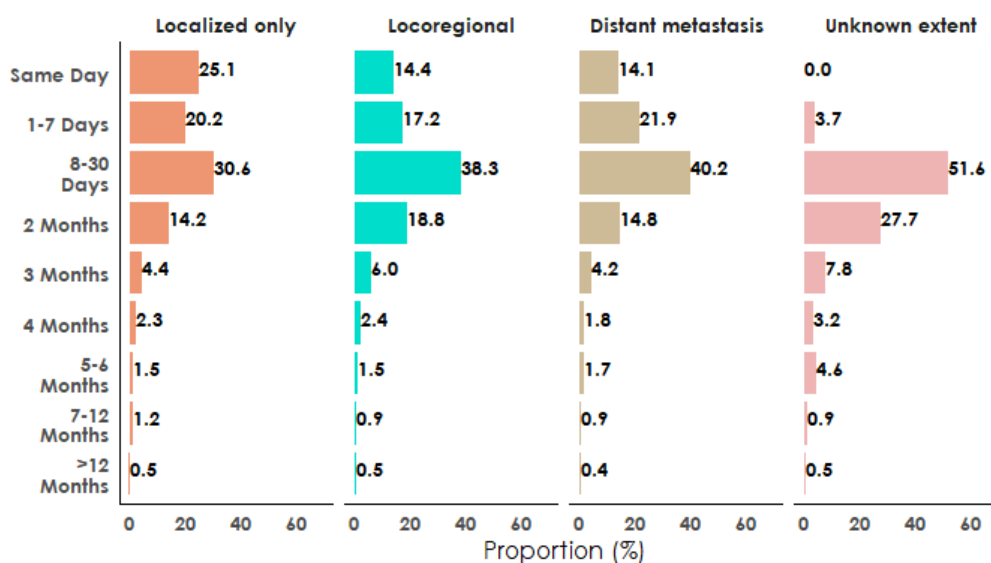


Figure 2.9.2: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

Key Findings

- The proportion of gall bladder cancer relative to all sites was higher in females (3.7%) than males (2.2%), in comparison to other gastrointestinal sites.
- Over one-tenth of GI cancers were reported in the age group of 60-64 years among males.
- Gall bladder cancer was reported in a higher proportion at a younger age (45-49 years) in women compared to other cancers.
- Liver cancers comprised over half the cancers in the less than 20 years age group in both sexes.
- Rectal cancers comprised over a quarter of the cancers in the younger age groups (20 to 34 years) in both sexes.
- Squamous Cell Carcinoma (SCC) constituted the majority of the oesophageal cancer cases.
- Adenocarcinoma was the major histological type for all gastrointestinal cancer sites except oesophagus and anus where squamous cell carcinoma was the commonest.
- A higher proportion of patients with gall bladder and liver cancers had distal metastasis at the time of presentation.
- Chemotherapy was the primary single treatment modality for most stomach, liver and gall bladder cancers, irrespective of the disease stage.
- The time between first diagnosis and commencement of cancer directed treatment at reporting institution for over one-third of the patients ranged from 8 days to 30 days.

Chapter - 3

Lung Cancer (C33 –C34)

CHAPTER 3

LUNG CANCER

Table 3.0: Site classification according to ICD-10

Site of Cancer	ICD-10 Code
Trachea	C33
Bronchus and Lung	C34

3.1 Number and relative proportion of lung cancer

Table 3.1: Number (n) and relative proportion (%) of lung cancer relative to all sites of cancer

Site of Cancer	Males		Females		Total	
	n	%	n	%	n	%
Lung Cancer	34395	10.8	10833	3.7	45228	7.4

3.2 Distribution of lung cancer according to five-year age groups

Table 3.2: Number (n) and proportion (%) of lung cancer according to five-year age groups

Age Groups	Males			Females		
	n	Col %	Row %	n	Col %	Row %
<20	47	0.1	62.7	28	0.3	37.3
20-24	77	0.2	58.3	55	0.5	41.7
25-29	182	0.5	59.5	124	1.1	40.5
30-34	319	0.9	55.4	257	2.4	44.6
35-39	590	1.7	55.8	468	4.3	44.2
40-44	1203	3.5	61.0	768	7.1	39.0
45-49	2387	6.9	67.0	1174	10.8	33.0
50-54	4021	11.7	73.0	1485	13.7	27.0
55-59	5420	15.8	77.1	1610	14.9	22.9
60-64	7059	20.5	79.8	1783	16.5	20.2
65-69	6021	17.5	80.5	1458	13.5	19.5
70-74	4105	11.9	81.4	937	8.6	18.6
75-79	1952	5.7	82.6	411	3.8	17.4
80-84	748	2.2	79.0	199	1.8	21.0
85+	261	0.9	77.4	76	0.7	22.6
All ages*	34395	100.0	76.0	10833	100.0	24.0
Mean (SD) Years	60 (11)			56 (12)		

*Includes cases with unknown age

3.3 Broad methods of diagnosis

Table 3.3: Number (n) and proportion (%) of lung cancer according to most valid method of diagnosis

Method of Diagnosis	Males		Females	
	n	%	n	%
Microscopic	33624	97.8	10594	97.8
Imaging Techniques	680	2.0	205	1.9
Clinical Only	36	0.1	17	0.2
Total*	34395	100.0	10833	100.0

*Cases with unknown and other methods of diagnosis are included.

3.4 Types of microscopic diagnosis

Table 3.4: Number (n) and proportion (%) of lung cancer according to specific type of microscopic diagnosis

Type of microscopic diagnosis	Males		Females	
	n	%	n	%
Primary Histology	23489	69.9	7168	67.7
Histology of metastasis	2245	6.7	828	7.8
Cytology of Primary	5458	16.2	1888	17.8
Cytology of Metastasis	2432	7.2	710	6.7
All microscopic	33624	100.0	10594	100.0

3.5 Major histological types

Table 3.5: Number (n) and proportion (%) of lung cancer according to broad histological classification

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Epithelial tumours						
Adenocarcinomas	11801	35.1	5745	54.2	17546	39.7
Squamous cell carcinoma	7844	23.3	1192	11.3	9036	20.4
Non-small cell carcinoma, NOS	5280	15.7	1229	11.6	6509	14.7
Small cell carcinoma	3342	9.9	618	5.8	3960	9.0
Other neuroendocrine tumours	434	1.3	171	1.6	605	1.4
Carcinoma, NOS	1848	5.5	530	5.0	2378	5.4
Mesenchymal Tumours	91	0.3	58	0.6	149	0.3
Tumours of ectopic origin						
Germ cell tumours	5	<0.1	1	<0.1	6	<0.1
Others	2979	8.9	1050	9.9	4029	9.1
Total	33624	100.0	10594	100.0	44218	100.0

3.6 Clinical extent of disease

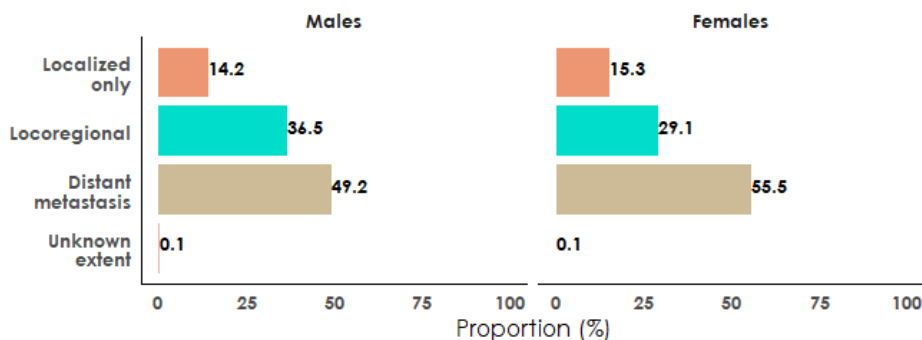


Figure 3.6: Clinical extent of disease (%): lung cancer in males and females

3.7 Intention to Treat

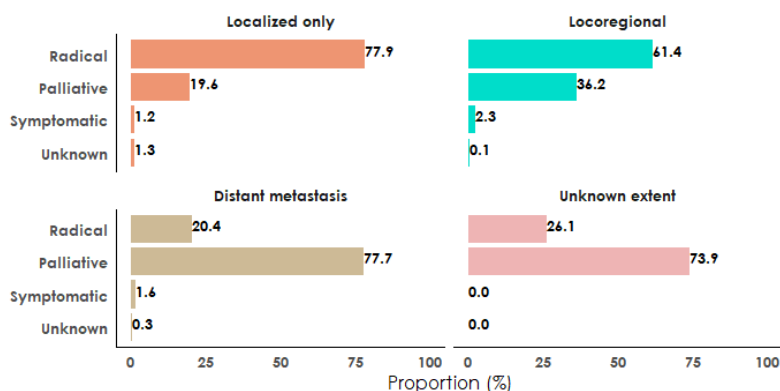


Figure 3.7: Intention to treat of lung cancer according to clinical extent of disease (%) – (Both Sexes)

3.8 Treatment modalities according to clinical extent of disease

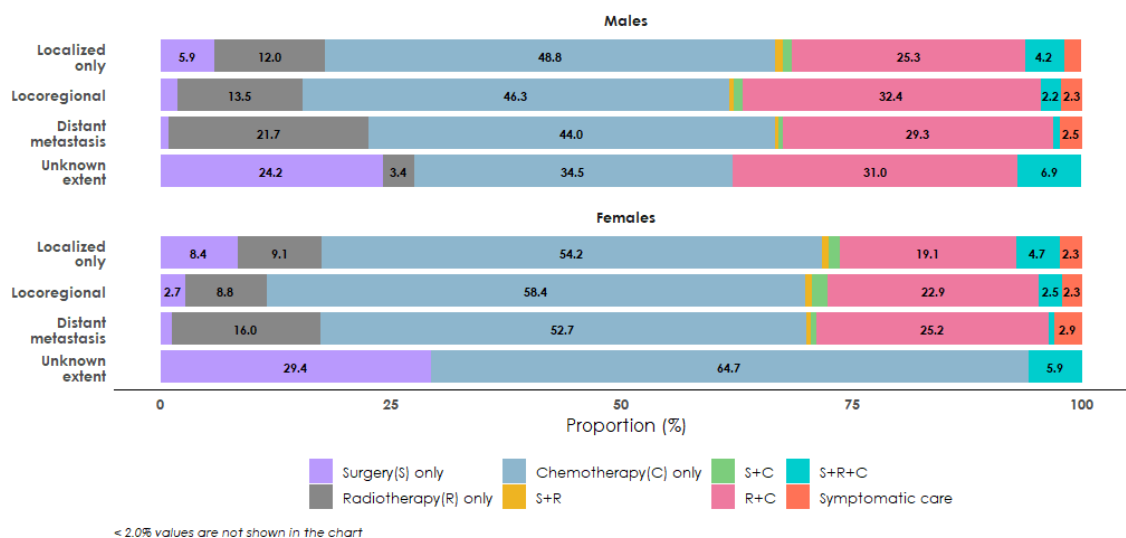


Figure 3.8.1: Type of treatment of lung cancer according to clinical extent of disease (%) – (Both Sexes)

3.9 Waiting time between registration and commencement of cancer directed treatment

3.9.1 Patients of lung cancer earlier diagnosed at another health facility and referred for cancer directed treatment to the reporting institution

(a) Time between diagnosis and first attendance at the reporting institution

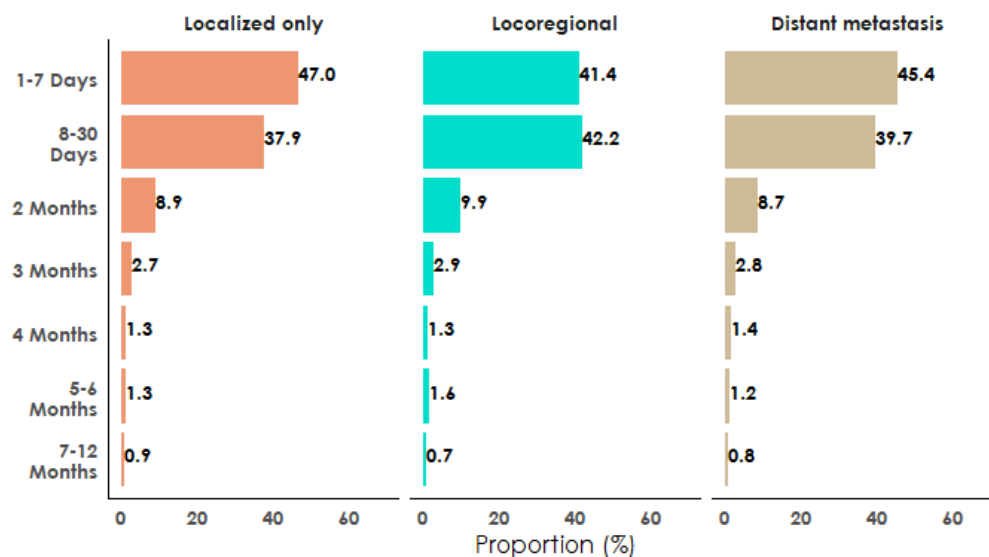


Figure 3.9.1a: Time between diagnosis and first attendance at reporting institution

(b) Time between first attendance and commencement of cancer directed treatment at reporting institution

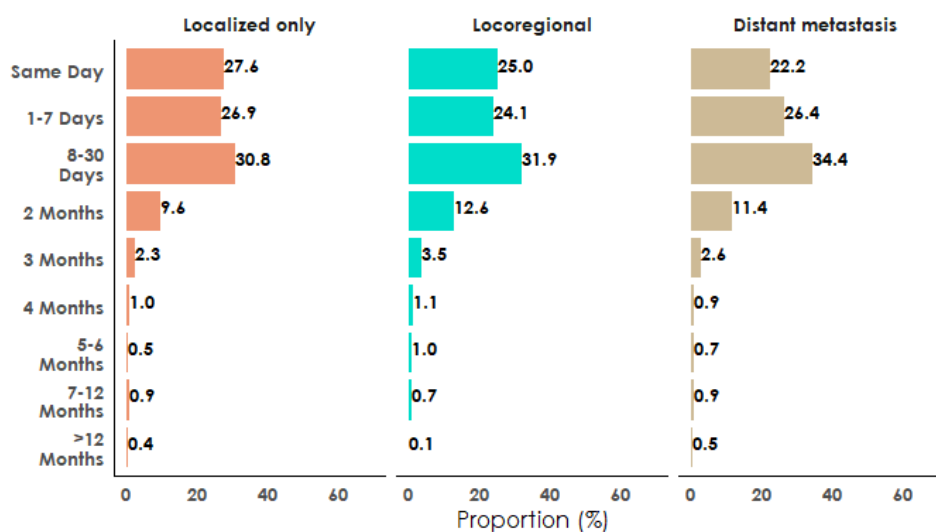


Figure 3.9.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution

Time between first diagnosis and commencement of cancer directed treatment at reporting institution

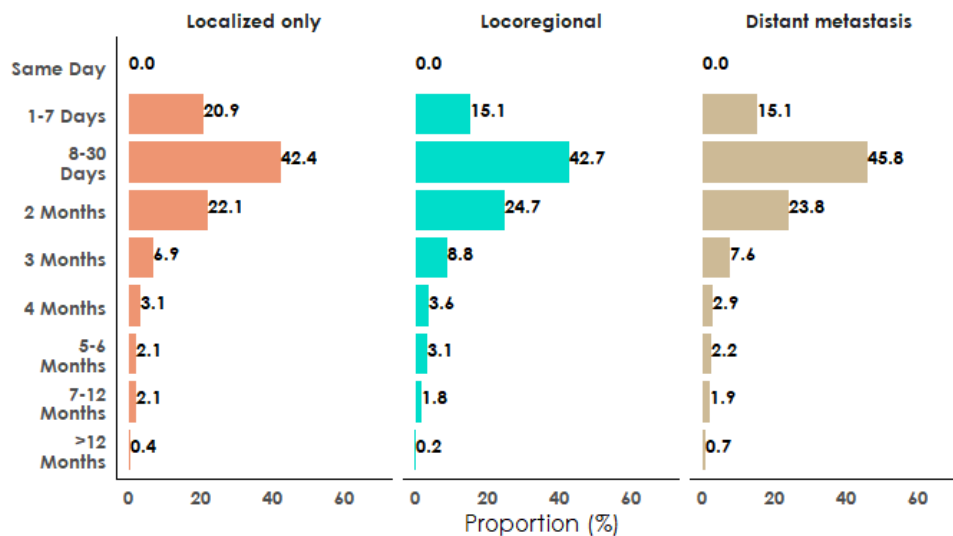


Figure 3.9.1c: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

3.9.2 Patients of lung cancer diagnosed and treated for cancer at the reporting institution

Time between first diagnosis and commencement of cancer directed treatment at reporting institution

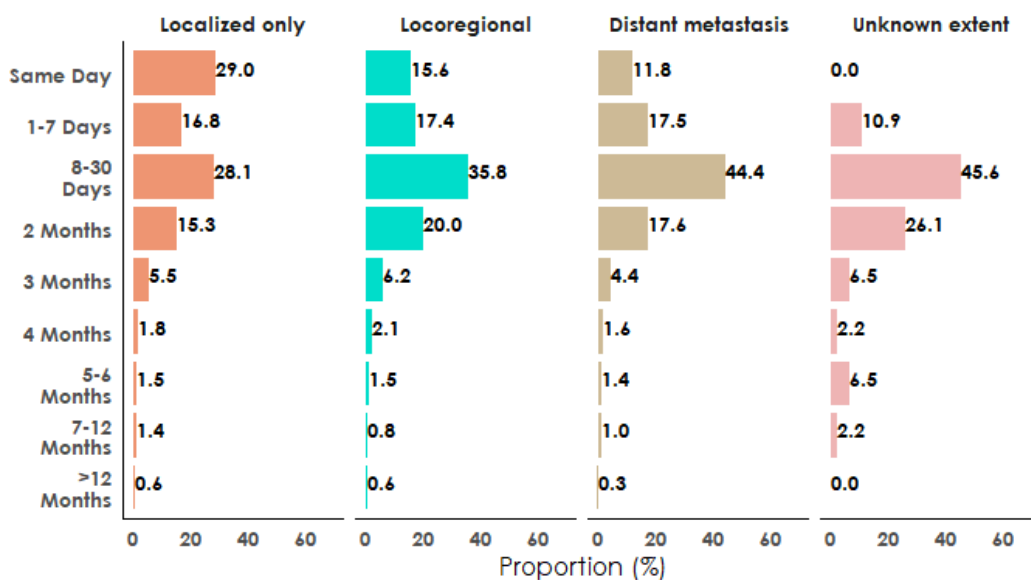


Figure 3.9.2: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

Key Findings

- Cancer of the lung accounted for over 10 % of the cancers among males.
- Nearly a fifth (20.5%) of lung cancers were reported in the age group of 60-64 years among males.
- Adenocarcinoma was the most common histological type of lung cancer in males and females, accounting for 35.1% and 54.2 % of the histological types.
- Nearly half of the lung cancer cases (49.2% among males and 55.5% among females) were diagnosed with distant metastasis.
- Chemotherapy only was the most commonly used treatment modality for most cases, irrespective of the clinical extent of disease.
- Close to one-third of patients with localized disease diagnosed at the reporting institutions were initiated on treatment on the same day.

Chapter - 4

Gynaecological Cancers including Breast Cancer (C50-C58)

CHAPTER 4

GYNAECOLOGICAL CANCERS INCLUDING BREAST CANCER

Table 4.0: Site classification according to ICD-10

Site of Cancer	ICD-10 Code
Breast	C50
Vulva	C51
Vagina	C52
Cervix Uteri	C53
Corpus Uteri	C54
Uterus part unspecified	C55
Ovary	C56
Fallopian Tube	C57

4.1 Number and relative proportion of gynaecological cancers including breast cancer

Table 4.1: Number (n) and relative proportion (%) of gynaecological cancers including breast cancer relative to all sites of cancer among women

Site of cancer (ICD-10 Code)	n	%
Breast (C50)	73998	25.4
Cervix Uteri (C53)	44300	15.2
Corpus Uteri (C54)	7648	2.6
Ovary (C56)	18411	6.3
Other Gynaecological Cancers (C51, C52, C55, C57, C58)	3981	1.4
C51(Vulva)	1112	0.4
C52(Vagina)	1749	0.6
C55 (Uterus part unspecified)	691	0.2
C57 (Fallopian tube)	216	0.1
C58 (Placenta)	213	0.1
Gynaecological cancers including breast cancer	148338	51.0
All sites of cancer in women	290986	100.0

4.2 Distribution of gynaecological cancers including breast cancer according to five-year age groups

Table 4.2: Number (n) and proportion (%) of gynaecological cancers including breast cancer according to five-year age groups

Age group	Breast			Cervix Uteri			Corpus Uteri			Ovary			Other Gynaecological Cancers			Total		
	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %	n	Row %	Col %
< 20	26	2.6	<0.1	9	1.0	<0.1	6	0.4	0.1	624	82.0	3.4	62	14.0	1.6	727	100.0	0.5
20-24	302	32.4	0.4	68	7.3	0.1	24	2.6	0.3	442	47.4	2.4	96	10.3	2.4	932	100.0	0.6
25-29	1330	56.2	1.8	309	13.0	0.7	53	2.2	0.7	535	22.6	2.9	141	6.0	3.5	2368	100.0	1.6
30-34	3512	64.0	4.7	1025	18.7	2.3	105	1.9	1.4	690	12.6	3.8	156	2.8	3.9	5488	100.0	3.7
35-39	6716	59.3	9.1	2919	25.8	6.6	214	1.9	2.8	1270	11.2	6.9	208	1.8	5.2	11327	100.0	7.7
40-44	9778	55.7	13.2	5215	29.7	11.8	334	1.9	4.3	1942	11.0	10.6	297	1.7	7.5	17566	100.0	11.8
45-49	12465	52.4	16.8	7423	31.2	16.8	651	2.7	8.5	2784	11.7	15.1	472	2.0	11.9	23795	100.0	16.0
50-54	11239	48.8	15.2	7320	31.8	16.5	1213	5.2	15.9	2759	12.0	15.0	515	2.2	12.9	23046	100.0	15.6
55-59	9764	46.9	13.2	6647	31.9	15.0	1469	7.0	19.2	2433	11.7	13.2	520	2.5	13.1	20833	100.0	14.0
60-64	8116	44.1	11.0	5994	32.6	13.5	1565	8.5	20.5	2195	11.9	11.9	522	2.9	13.1	18392	100.0	12.4
65-69	5479	44.2	7.4	3949	31.8	8.9	1093	8.8	14.3	1460	11.8	7.9	419	3.4	10.5	12400	100.0	8.4
70-74	2916	44.4	3.9	2021	30.8	4.6	570	8.7	7.4	771	11.8	4.2	285	4.3	7.2	6563	100.0	4.4
75-79	1424	47.7	1.9	832	27.9	1.9	227	7.6	3.0	332	11.1	1.8	171	5.7	4.3	2986	100.0	2.0
80-84	649	48.9	0.9	381	28.7	0.9	86	6.5	1.1	126	9.5	0.7	85	6.4	2.1	1327	100.0	0.9
85+	281	48.3	0.4	184	31.7	0.4	38	6.5	0.5	46	7.9	0.2	32	5.5	0.8	581	100.0	0.4
All ages*	73998	49.9	100.0	44300	29.9	100.0	7648	5.1	100.0	18411	12.4	100.0	3981	2.7	100.0	148338	100.0	100.0
Mean (SD) (Years)	51 (12)			53 (11)			58 (11)			50 (14)			53 (15)			52 (12)		

* Includes cases with unknown age

4.3 Broad methods of diagnosis

Table 4.3: Number (n) and proportion (%) of cancer sites by most valid method of diagnosis – gynaecological cancers including breast cancer

Method of diagnosis	Breast		Cervix Uteri		Corpus Uteri		Ovary		Other Gynaecological Cancers		Total	
	n	%	n	%	n	%	n	%	n	%	N	%
Microscopic	73766	99.7	44102	99.6	7595	99.3	17887	97.2	3877	97.4	147227	99.3
Imaging Techniques	123	0.2	107	0.2	40	0.5	389	2.1	44	1.1	703	0.5
Clinical Only	69	0.1	71	0.2	7	0.1	44	0.2	13	0.3	204	0.1
Total*	73998	100.0	44300	100.0	7648	100.0	18411	100.0	3981	100.0	148338	100.0

*Cases with unknown and other methods of diagnosis are included.

4.4 Types of microscopic diagnosis

Table 4.4: Number (n) and proportion (%) according to specific type of microscopic diagnosis – gynaecological cancers including breast cancer

Type of microscopic diagnosis	Breast		Cervix Uteri		Corpus Uteri		Ovary		Other Gynaecological Cancers		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Primary Histology	68651	93.1	42920	97.3	7375	97.1	14517	81.2	3694	95.3	137157	93.2
Histology of metastasis	513	0.7	96	0.2	35	0.5	601	3.4	18	0.4	1263	0.8
Cytology of Primary	4054	5.5	1038	2.4	169	2.2	2136	11.9	138	3.6	7535	5.1
Cytology of Metastasis	548	0.7	48	0.1	16	0.2	633	3.5	27	0.7	1272	0.9
All microscopic	73766	100.0	44102	100.0	7595	100.0	17887	100.0	3877	100.0	147227	100.0

4.5 Major histological types

4.5.1 Breast (C50)

Table 4.5.1: Number (n) and proportion (%) according to broad histological classification – Breast Cancer

Broad histological classification	n	%
Epithelial tumours		
Infiltrating duct carcinoma	66160	89.7
Lobular carcinoma	1341	1.8
Papillary carcinoma	398	0.5
Carcinoma, NOS	3025	4.1
Fibroepithelial tumours		
Phyllodes tumour	414	0.6
Mesenchymal tumours		
Sarcoma	122	0.2
Others	2306	3.1
Total	73766	100.0

4.5.2 Cervix Uteri (C53)

Table 4.5.2: Number (n) and proportion (%) according to broad histological classification- Cancer of Cervix Uteri

Broad histological classification	n	%
Squamous cell carcinoma		
Squamous cell carcinoma, NOS	26524	60.1
Squamous cell carcinoma, non-keratinising	8314	18.9
Squamous cell carcinoma, keratinising	4184	9.5
All other squamous cell carcinomas	430	1.0
Adenocarcinoma		
Adenocarcinoma, NOS	2215	5.0
All other adenocarcinomas	687	1.6
Carcinoma, NOS	1150	2.6
Adenosquamous carcinoma		
Adenosquamous carcinoma	426	1.0
Mesenchymal tumours		
Sarcoma	52	0.1
Others	120	0.3
Total	44102	100.0

4.5.3 Corpus Uteri (C54)

Table 4.5.3: Number (n) and proportion (%) according to broad histological Classification-Cancer of Corpus Uteri

Broad histological classification	n	%
Endometrial epithelial tumours		
Endometrioid adenocarcinoma	4133	54.4
Adenocarcinoma, NOS	1779	23.4
Serous carcinoma	204	2.7
Clear cell adenocarcinoma	146	1.9
Papillary adenocarcinoma	129	1.7
All other adenocarcinomas	69	0.9
Carcinoma, NOS	363	4.8
Mixed epithelial mesenchymal tumours		
Mullerian mixed tumour	134	1.8
Carcinosarcoma	94	1.2
Mesenchymal tumours		
Sarcoma	63	0.8
Endometrial stromal sarcoma	60	0.8
Neuroendocrine tumours		
Neuroendocrine carcinoma	16	0.2
Others	280	3.7
Total	7595	100.0

4.5.4 Ovary (C56)

Table 4.5.4: Number (n) and proportion (%) according to broad histological classification- Cancer of Ovary

Broad histological classification	n	%
Epithelial cell tumours		
Adenocarcinoma, NOS	5850	32.7
Serous Adenocarcinoma	5529	30.9
Mucinous Adenocarcinoma	895	5.0
Papillary Carcinoma, NOS	863	4.8
Endometrioid Adenocarcinoma	318	1.8
Clear Cell Adenocarcinoma	252	1.4
All Other Adenocarcinomas	68	0.4
Other Endometrioid tumours	7	<0.1
Granular cell carcinoma	6	<0.1
Metaplastic carcinoma	7	<0.1
Carcinoma, NOS	1299	7.3
Malignant Neoplasms - ovary	966	5.4
Germ cell tumours		
Germ Cell Neoplasms	863	4.8
Sex-cord stromal tumours		
Granulosa Cell Tumour	205	1.1
Mesenchymal tumours		
Sarcoma	117	0.7
Others	642	3.6
Total	17887	100.0

4.6 Clinical Extent of Disease

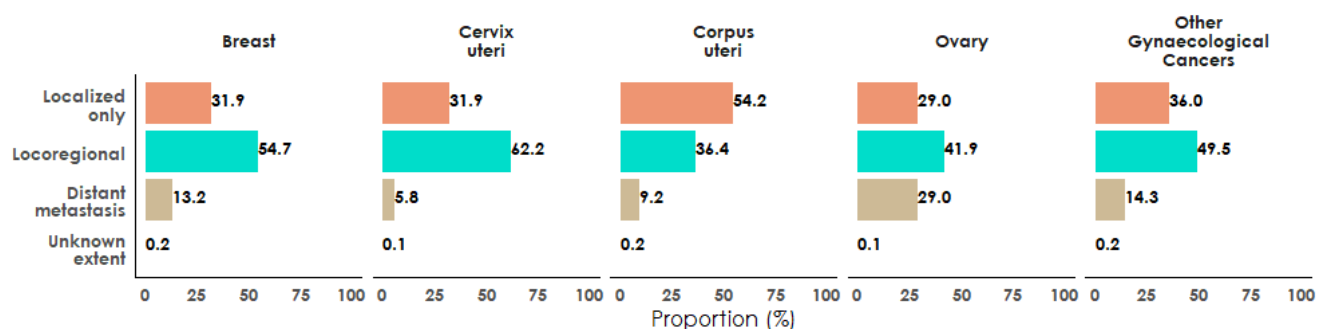


Figure 4.6: Clinical extent of disease (%) for all sites of different type of gynaecological cancers including breast cancer

4.7 Intention to Treat

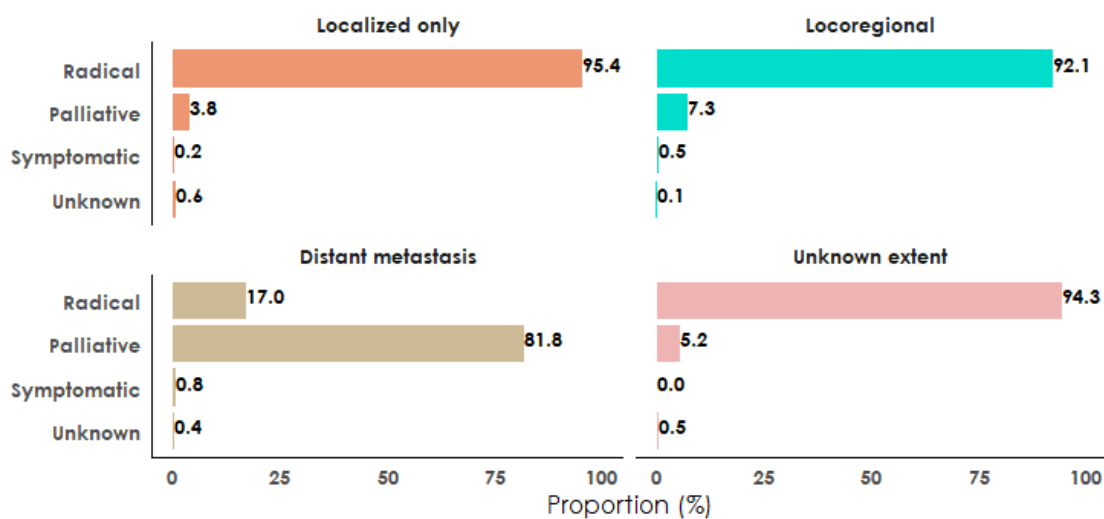


Figure 4.7: Intention to treat according to clinical extent of disease (%) – gynaecological cancers including breast cancer

4.8 Treatment modalities according to clinical extent of disease

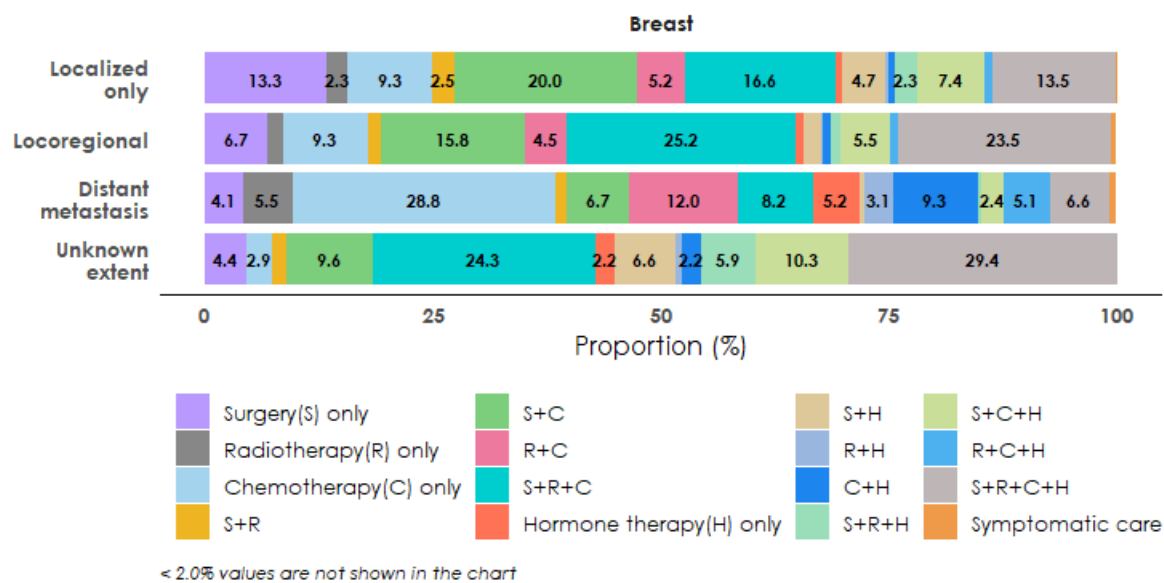


Figure 4.8.1: Type of treatment according to clinical extent of disease (%) – Breast Cancer

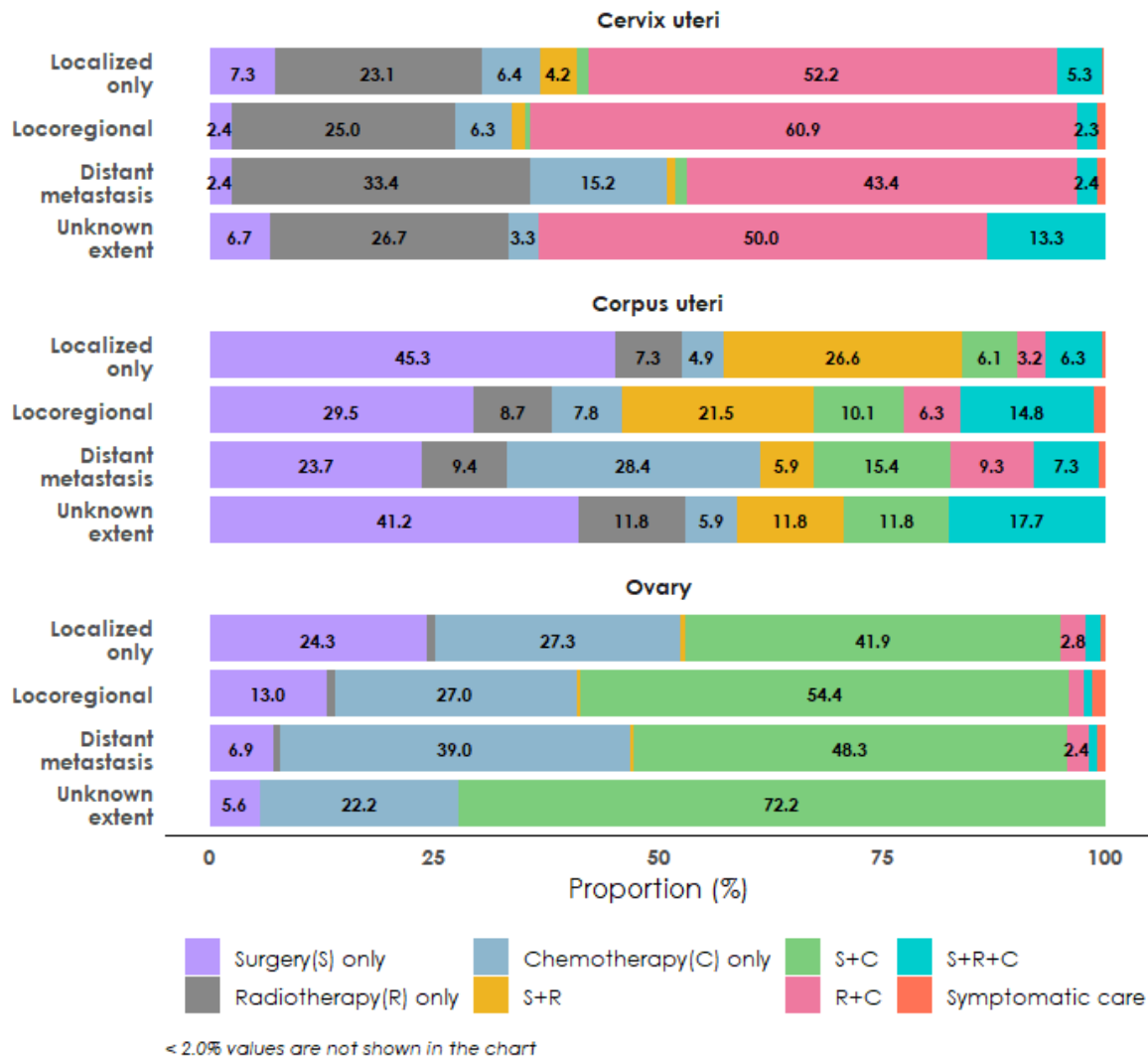


Figure 4.8.2: Type of treatment according to clinical extent of disease (%) – Cancer of cervix uteri, corpus uteri and ovary

4.9 Waiting time between registration and commencement of cancer directed treatment

4.9.1 Patients of gynaecological cancers including breast cancer earlier diagnosed at another health facility and referred for cancer directed treatment to the reporting institution

(a) Time between diagnosis and first attendance at the reporting institution

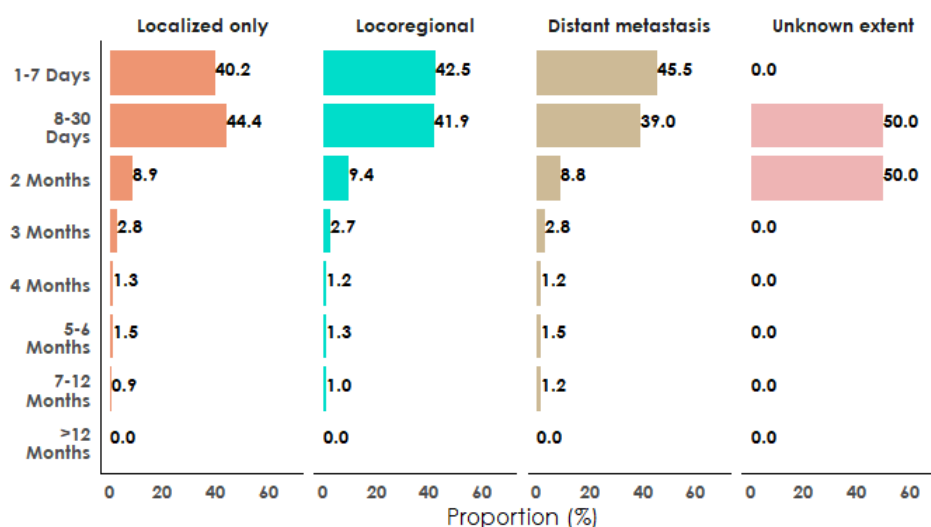


Figure 4.9.1a: Time between diagnosis and first attendance at reporting institution

(b) Time between first attendance and commencement of cancer directed treatment at reporting institution

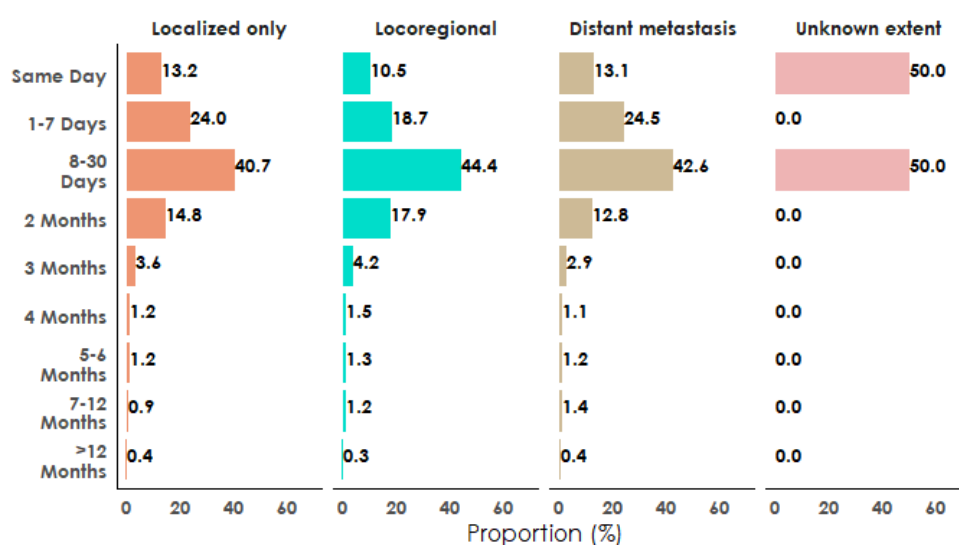


Figure 4.9.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution

(c) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

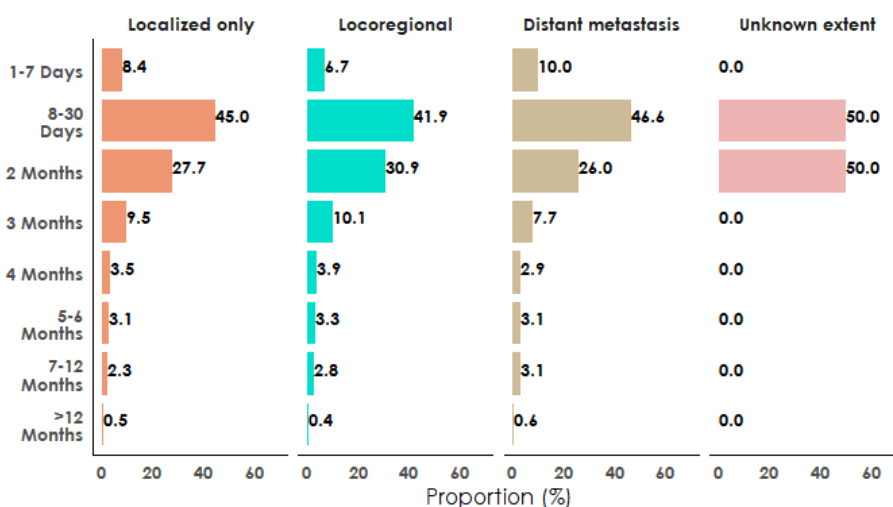


Figure 4.9.1c: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

4.9.2 Patients of gynaecological cancers including breast cancer who had been diagnosed and treated for cancer at reporting institution

Time between first diagnosis and commencement of cancer directed treatment at reporting institution

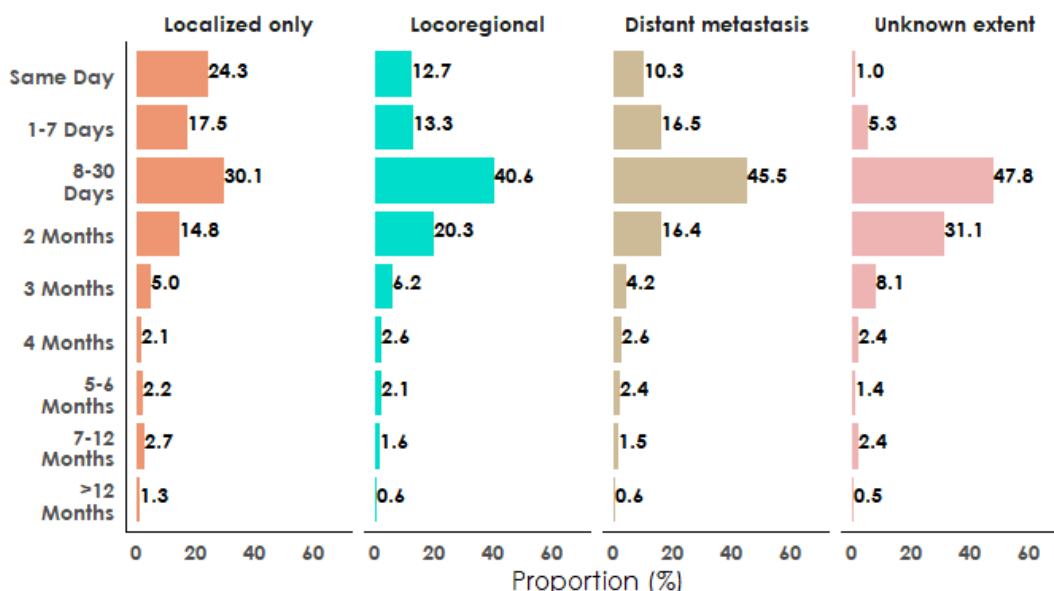


Figure 4.9.2: Time between first diagnosis and commencement of cancer directed treatment at Reporting Institution

Key findings

- Gynaecological cancers, including breast cancer, account for over half of all cancers in women. Over a quarter of the cases were breast cancer (25.4%) followed by cervical cancer (15.2%).
- In the younger age group (below 25 years), ovarian cancers were the commonest cancer types. From 25 years and up, breast cancer was the major cancer type in all age groups.
- Cancers of breast, cervix-uteri and ovary were recorded in higher proportion in the younger age group of 45-49 years than other gynaecological cancers.
- Epithelial tumours (infiltrating duct carcinoma-89.7%) was the most common histology of breast cancer, and squamous cell carcinoma (60.1 %) was the most common histology of cancer of cervix-uteri. Among corpus uteri cancer, endometroid adenocarcinoma (54.4%) was the most common histology observed.
- Over half of the patients with corpus uterine cancer presented with localised disease.
- Among all the gynaecological cancers, the proportion of patients presenting with distant spread was highest (nearly one-third) for ovarian cancer.
- The broadest used treatment modality for cervical cancer was a combination of radiotherapy and chemotherapy. A larger number of ovarian cancers were treated by surgery and chemotherapy combination.
- About a quarter of the patients with localised disease diagnosed at the reporting institution were initiated on cancer directed treatment on the same day.

Chapter - 5

Prostate Cancer (C61)

CHAPTER 5

PROSTATE CANCER

Table 5.0: Site classification according to ICD-10

Site of Cancer	ICD-10 Code
Prostate	C61

5.1 Number and relative proportion of prostate cancer

Table 5.1: Number (n) and relative proportion (%) of prostate cancer relative to all sites of cancer

All sites	Prostate cancer	
	n	%
319098	9547	3.0

5.2 Distribution of prostate cancers according to five-year age groups

Table 5.2: Number (n) and proportion (%) of prostate cancer according to five-year age groups

Age groups	n	%
< 20	16	0.2
20-24	5	0.1
25-29	2	<0.1
30-34	5	0.1
35-39	10	0.1
40-44	49	0.5
45-49	168	1.8
50-54	415	4.3
55-59	934	9.8
60-64	1762	18.5
65-69	2128	22.3
70-74	2026	21.2
75-79	1296	13.6
80-84	509	5.3
85+	221	2.2
All ages*	9547	100.0
Mean (SD) Years	67 (9)	

* Includes cases with unknown age

5.3 Broad methods of diagnosis

Table 5.3: Number (n) and proportion (%) of prostate cancer by most valid method of diagnosis

Method of Diagnosis	n	%
Microscopic	9367	98.1
Imaging Techniques	123	1.3
Clinical Only	27	0.3
Total*	9547	100.0

*Cases with unknown and other methods of diagnosis are included.

5.4 Types of microscopic diagnosis

Table 5.4: Number (n) and proportion (%) of prostate cancer by type of microscopic diagnosis

Type of microscopic diagnosis	n	%
Primary Histology	8881	94.8
Histology of metastasis	175	1.9
Cytology of Primary	230	2.4
Cytology of Metastasis	81	0.9
All microscopic	9367	100.0

5.5 Major histological types

Table 5.5: Number (n) and proportion (%) of prostate cancer according to broad histological classification

Broad histological classification	n	%
Epithelial tumours		
Adenocarcinoma, NOS	7207	77.0
Acinar cell carcinoma	1416	15.1
Transitional cell carcinoma	31	0.3
Squamous cell carcinoma	48	0.5
Carcinoma, NOS	434	4.6
Neuroendocrine tumours		
Neuroendocrine tumours	52	0.6
Mesenchymal tumours		
Mesenchymal tumours	31	0.3
Others	148	1.6
Total	9367	100

5.6 Clinical extent of disease

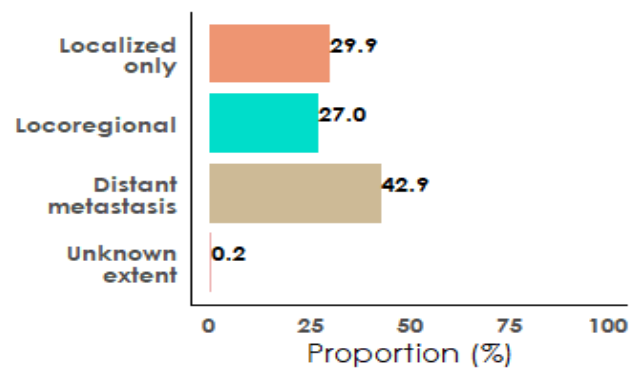


Figure 5.6: Clinical extent of disease (%): prostate cancer

5.7 Intention to treat

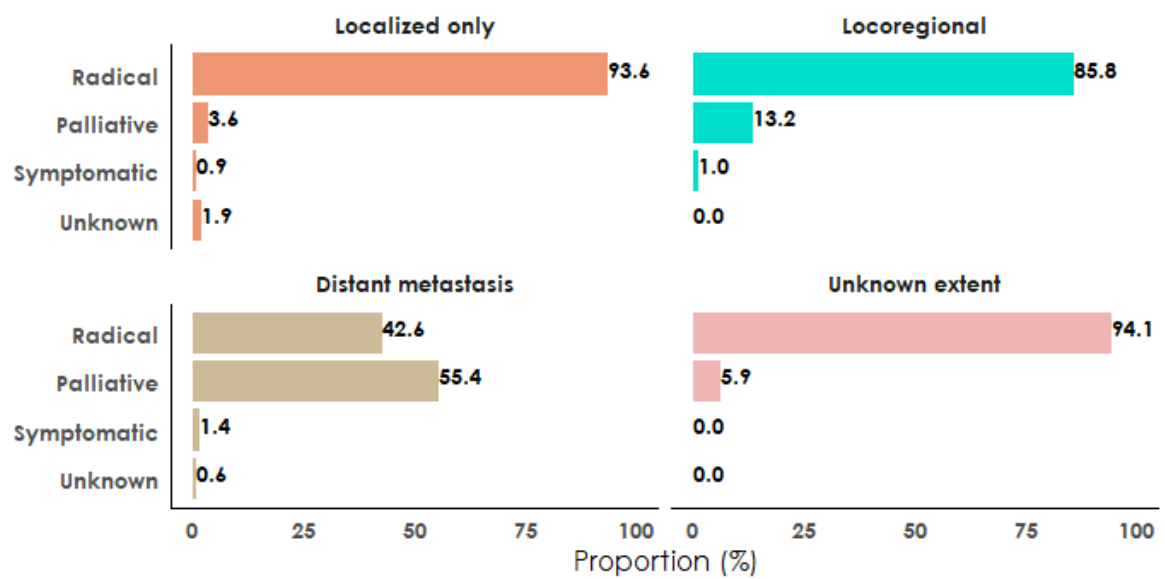


Figure 5.7: Intention to treat according to the clinical extent of disease (%) - prostate cancer

5.8 Treatment modalities according to clinical extent of disease

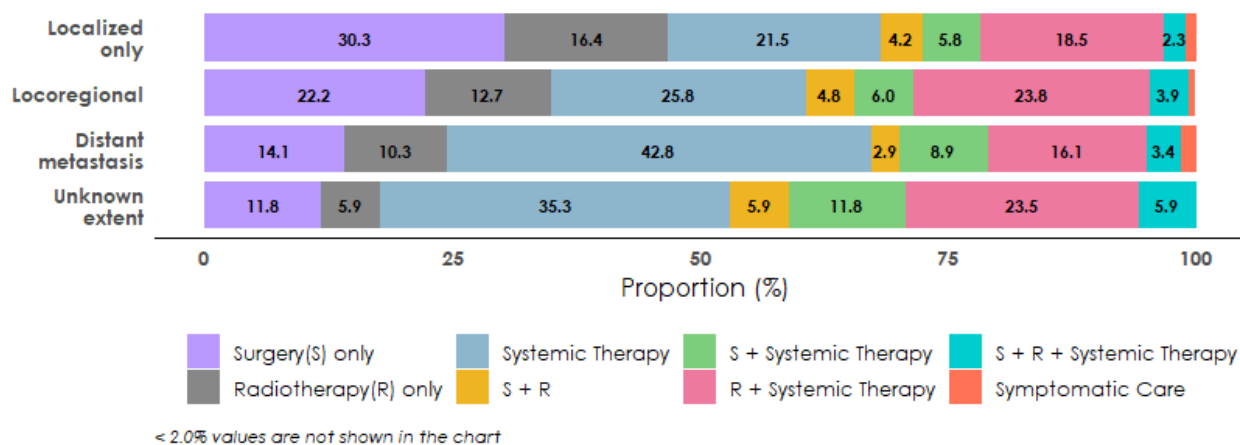


Figure 5.8: Type of treatment according to clinical extent of disease (%) - prostate cancer

5.9 Waiting time between registration and commencement of cancer directed treatment

5.9.1 Patients of prostate cancer earlier diagnosed at another health facility and referred for cancer directed treatment to the reporting institution

(a) Time between diagnosis and first attendance at the reporting institution

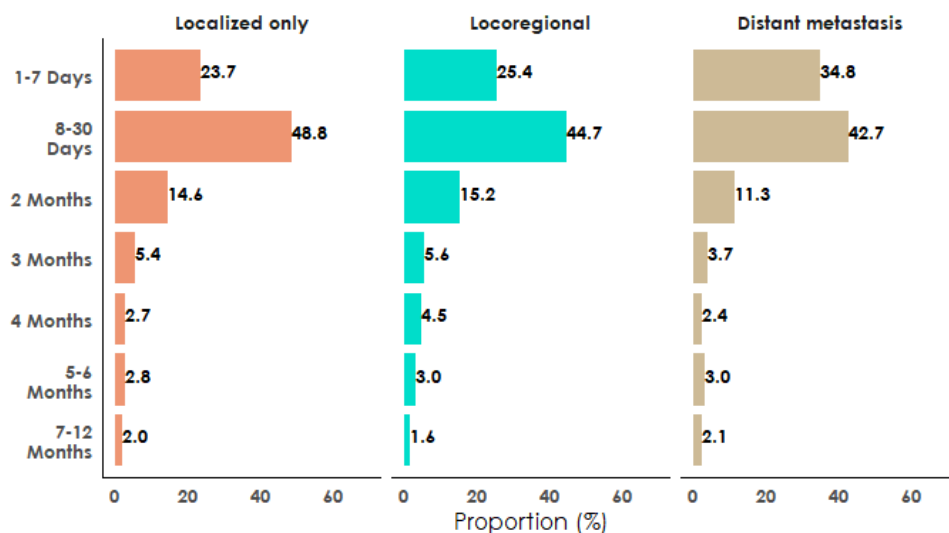


Figure 5.9.1a: Time between diagnosis and first attendance at reporting institution

(b) Time between first attendance and commencement of cancer directed treatment at reporting institution

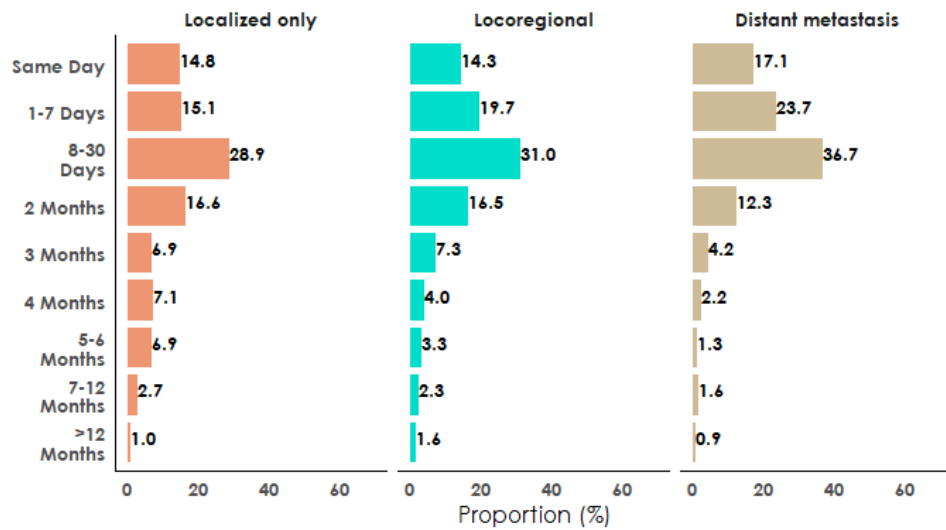


Figure 5.9.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution

(c) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

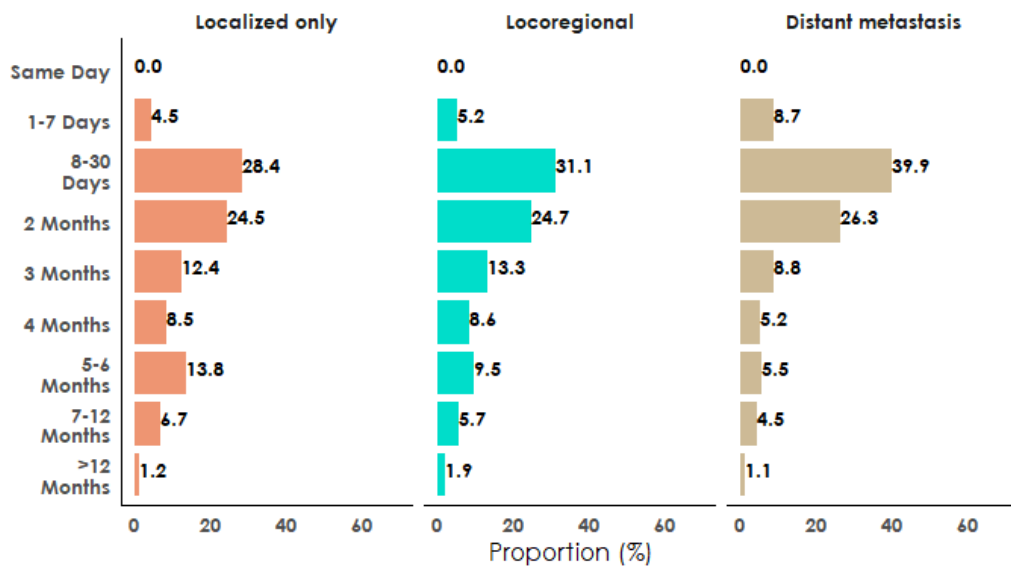


Figure 5.9.1c: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

5.9.2 Patients of prostate cancer diagnosed and treated for cancer at the reporting institution

Time between first diagnosis and commencement of cancer directed treatment at reporting institution

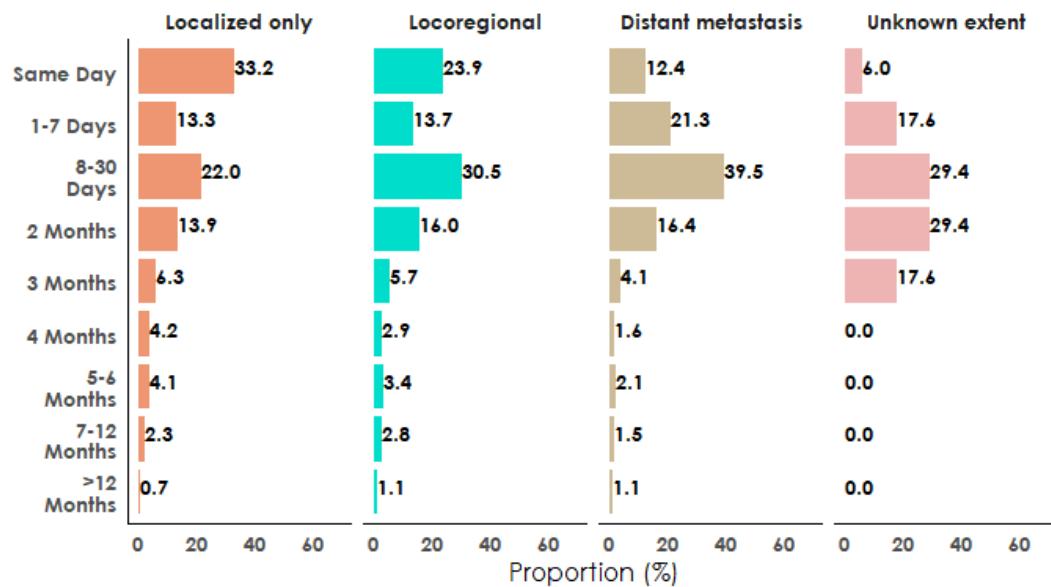


Figure 5.9.2: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

Key findings

- Over 80% of the cases were reported in patients above the age of 60 years.
- Adenocarcinoma, NOS constituted the majority of the prostate cancer cases (77%).
- Nearly 42.9% of the patients were diagnosed with distant metastasis.
- Systemic therapy was the most frequently used treatment modality for patients with distant metastasis.
- Close to half of the patients who had been diagnosed in another institution sought treatment at the reporting hospital within 8 to 30 days.
- About one-third of patients with localised disease diagnosed at the reporting institution initiated cancer directed treatment on the same day.

Chapter - 6

Cancers of Kidney (C64) and Urinary Bladder (C67)

CHAPTER 6

CANCERS OF KIDNEY AND URINARY BLADDER

Table 6.0: Site classification according to ICD-10

Site of Cancer	ICD-10 Code
Kidney	C64
Urinary Bladder	C67

6.1 Number and relative proportion of cancers of kidney and bladder

Table 6.1: Number (n) and relative proportion (%) of cancers of kidney and bladder relative to all sites of cancer

Site of Cancer	Males		Females		Total	
	n	%	n	%	n	%
Kidney	4582	1.4	1944	0.7	6526	2.1
Bladder	4706	1.5	1020	0.4	5726	1.9

6.2 Distribution of cancers of kidney and bladder according to five-year age groups

Table 6.2.1: Number (n) and proportion (%) of cancers of kidney and bladder according to five-year age groups - Males

Age groups	Kidney		Bladder	
	n	%	n	%
< 20	624	13.6	36	0.8
20-24	35	0.8	16	0.3
25-29	63	1.4	27	0.6
30-34	82	1.8	46	1.0
35-39	152	3.3	97	2.1
40-44	282	6.2	207	4.4
45-49	430	9.4	342	7.3
50-54	559	12.2	495	10.5
55-59	621	13.6	577	12.3
60-64	675	14.7	863	18.3
65-69	544	11.9	750	15.9
70-74	321	7.0	623	13.2
75-79	138	3.0	381	8.1
80-84	36	0.8	146	3.1
85+	20	0.4	99	2.1
All ages*	4582	100.0	4706	100.0
Mean (SD) Years	49 (21)		61 (13)	

* Includes cases with unknown age

Table 6.2.2: Number (n) and proportion (%) of cancers of kidney and bladder according to five-year age groups – Females

Age groups	Kidney		Bladder	
	n	%	n	%
< 20	452	23.3	15	1.5
20-24	27	1.4	3	0.3
25-29	53	2.7	11	1.1
30-34	63	3.2	12	1.2
35-39	73	3.8	30	2.9
40-44	133	6.8	65	6.4
45-49	205	10.5	86	8.4
50-54	173	8.9	114	11.2
55-59	235	12.1	130	12.7
60-64	207	10.6	160	15.7
65-69	162	8.3	153	15.0
70-74	98	5.0	127	12.5
75-79	36	1.9	65	6.4
80-84	22	1.1	32	3.1
85+	4	0.2	17	1.7
All ages*	1944	100.0	1020	100.0
Mean (SD) Years	42 (24)		59 (14)	

* Includes cases with unknown age

6.3 Broad methods of diagnosis

Table 6.3: Number (n) and proportion (%) of cancers of kidney and bladder by most valid method of diagnosis

Method of diagnosis	Kidney		Bladder	
	n	%	n	%
Males				
Microscopic	4479	97.8	4651	98.8
Imaging Techniques	89	1.9	43	0.9
Clinical Only	5	0.1	3	0.1
Total*	4582	100.0	4706	100.0
Females				
Microscopic	1910	98.3	1011	99.1
Imaging Techniques	32	1.6	7	0.7
Clinical Only	2	0.1	1	0.1
Total*	1944	100.0	1020	100.0

*Cases with unknown and other methods of diagnosis are included.

6.4 Types of microscopic diagnosis

Table 6.4: Number (n) and proportion (%) of cancers of kidney and bladder according to specific type of microscopic diagnosis

Type of microscopic diagnosis	Kidney		Bladder	
	n	%	n	%
Males				
Primary Histology	4030	90.0	4489	96.5
Histology of metastasis	91	2.0	24	0.5
Cytology of Primary	312	7.0	113	2.4
Cytology of Metastasis	46	1.0	25	0.5
All microscopic	4479	100.0	4651	100.0
Females				
Primary Histology	1720	90.1	967	95.6
Histology of metastasis	22	1.2	5	0.5
Cytology of Primary	145	7.6	29	2.9
Cytology of Metastasis	23	1.2	10	1.0
All microscopic	1910	100.0	1011	100.0

6.5 Major histological types

6.5.1 Kidney (C64)

Table 6.5.1: Number (n) and proportion (%) according to broad histological classification- Cancer of kidney

Broad histological classification	Males		Females		Total	
	n	%	n	%	n	%
Renal cell tumours						
Renal Cell Carcinoma,NOS	2921	65.2	1140	59.7	4061	63.6
Clear cell renal cell carcinoma	357	8.0	113	5.9	470	7.4
Papillary renal cell carcinoma	231	5.2	60	3.1	291	4.6
Renal cell carcinoma, chromophobe type	58	1.3	48	2.5	106	1.7
Transitional Cell Carcinoma	52	1.2	26	1.4	78	1.2
Sarcomatoid renal cell carcinoma	45	1.0	15	0.8	60	0.9
Renal carcinoma, collecting duct type	9	0.2	3	0.2	12	0.2
Nephroblastic and cystic tumours occurring mainly in children						
Nephroblastoma	535	11.9	371	19.4	906	14.2
Mesenchymal tumours						
Clear Cell Sarcoma of Kidney	23	0.5	9	0.5	32	0.5
Rhabdoid tumour	5	0.1	4	0.2	9	0.1
Other mesenchymal tumours	48	1.1	37	1.9	85	1.3
Neuroendocrine tumours						
Neuroendocrine tumours	23	0.5	20	1.0	43	0.7
Squamous cell carcinoma	19	0.4	12	0.6	31	0.5
Carcinoma,NOS	55	1.2	24	1.3	79	1.2
Miscellaneous						
Germ Cell Tumours	6	0.1	3	0.2	9	0.1
Others	92	2.1	25	1.3	117	1.8
Total	4479	100.0	1910	100.0	6389	100.0

6.5.2 Bladder (C67)

Table 6.5.2: Number (n) and proportion (%) according to broad histological classification- Cancer of bladder

Broad histological classification	Males		Females		Total	
	n	%	n	%	N	%
Urothelial carcinoma						
Transitional Cell Carcinoma	2496	53.7	498	49.3	2994	52.9
Papillary Carcinoma	1433	30.8	298	29.5	1731	30.6
Carcinoma, NOS	276	5.9	57	5.6	333	5.9
Glandular neoplasms						
Adenocarcinoma	229	4.9	81	8.0	310	5.5
Squamous cell neoplasms						
Squamous Cell Carcinoma	134	2.9	53	5.2	187	3.3
Mesenchymal tumours						
Sarcoma	46	1.0	16	1.6	62	1.1
Neuroendocrine tumours						
Neuroendocrine Carcinoma, NOS	14	0.3	0	0.0	14	0.2
Others	23	0.5	8	0.8	31	0.5
Total	4651	100.0	1011	100.0	5662	100.0

6.6 Clinical extent of disease

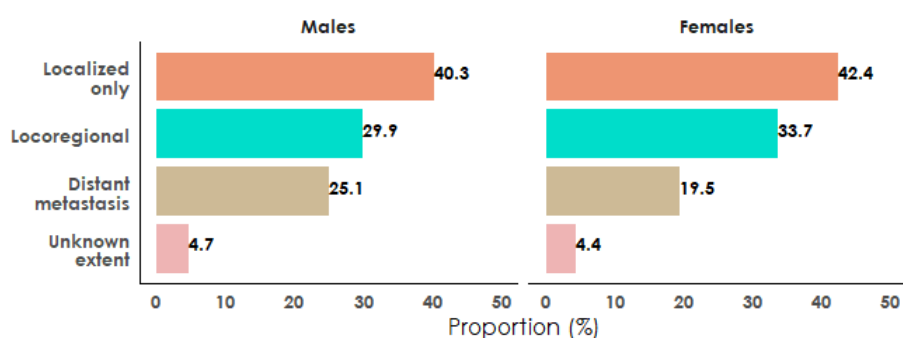


Figure 6.6.1: Clinical extent of disease (%): Cancer of kidney in males and females

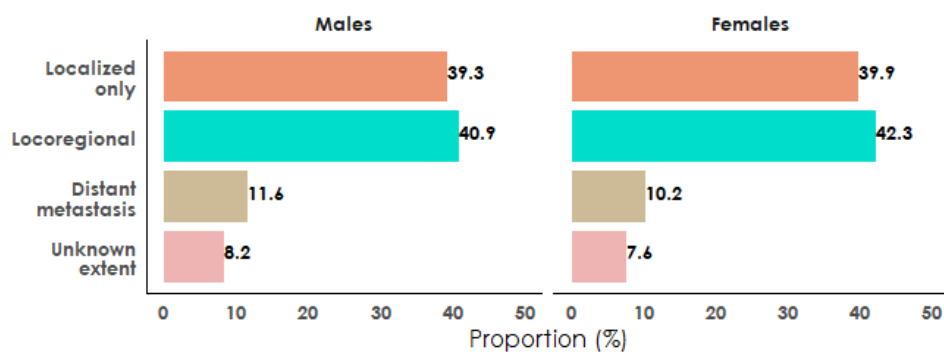


Figure 6.6.2: Clinical extent of disease (%): Cancer of bladder in males and females

6.7 Intention to treat

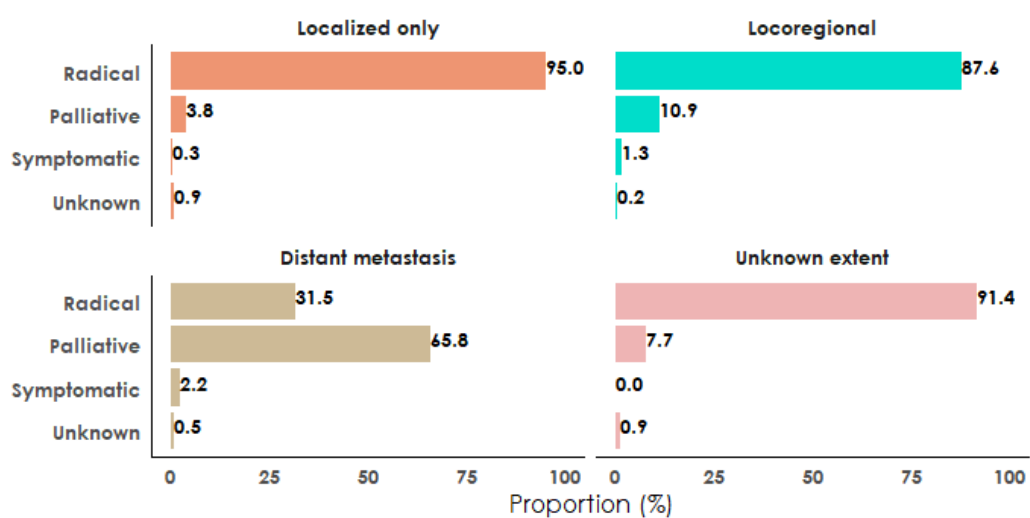


Figure 6.7.1: Intention to treat according to clinical extent of disease (%) - Cancer of kidney (Both Sexes)

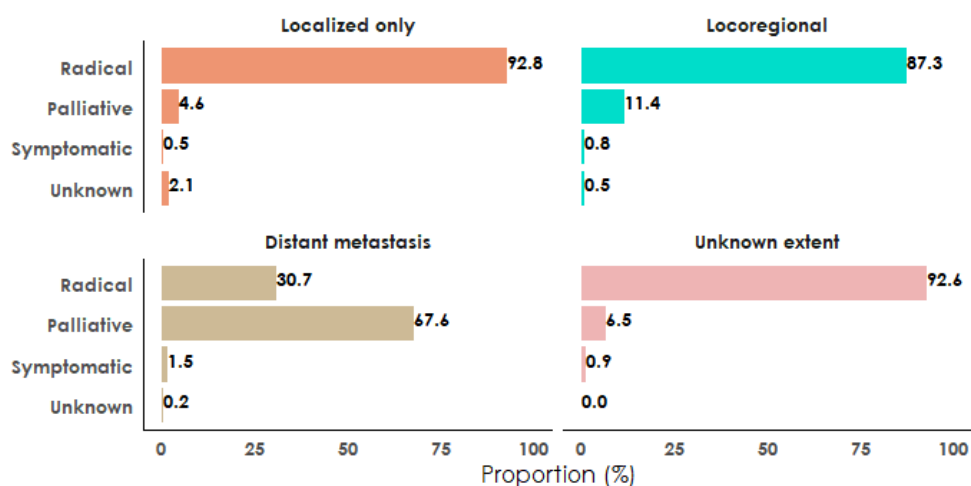


Figure 6.7.2: Intention to treat according to clinical extent of disease (%) - Cancer of bladder (Both Sexes)

6.8 Treatment modalities according to clinical extent of disease

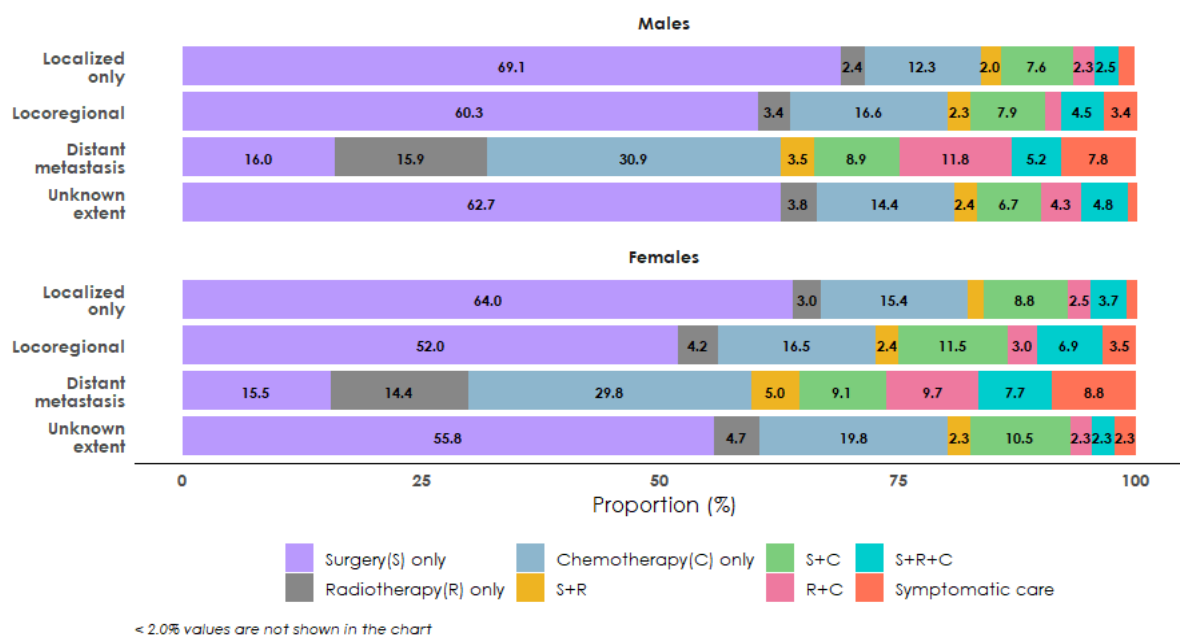


Figure 6.8.1: Type of treatment according to clinical extent of disease (%) - Cancer of kidney (Both Sexes)

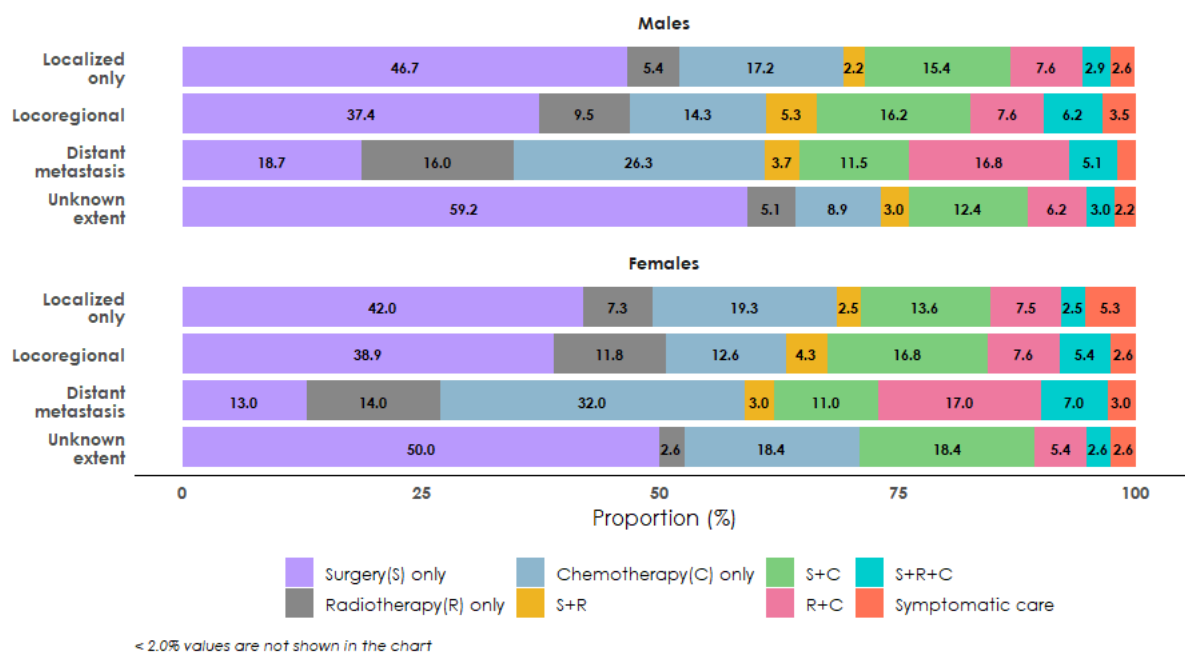


Figure 6.8.2: Type of treatment according to clinical extent of disease (%) - Cancer of bladder (Both Sexes)

6.9: Waiting time between registration and commencement of cancer directed treatment

6.9.1 Patients of cancers of kidney and bladder earlier diagnosed at another health facility and referred for cancer directed treatment to the reporting institution

(a) Time between diagnosis and first attendance at reporting institution

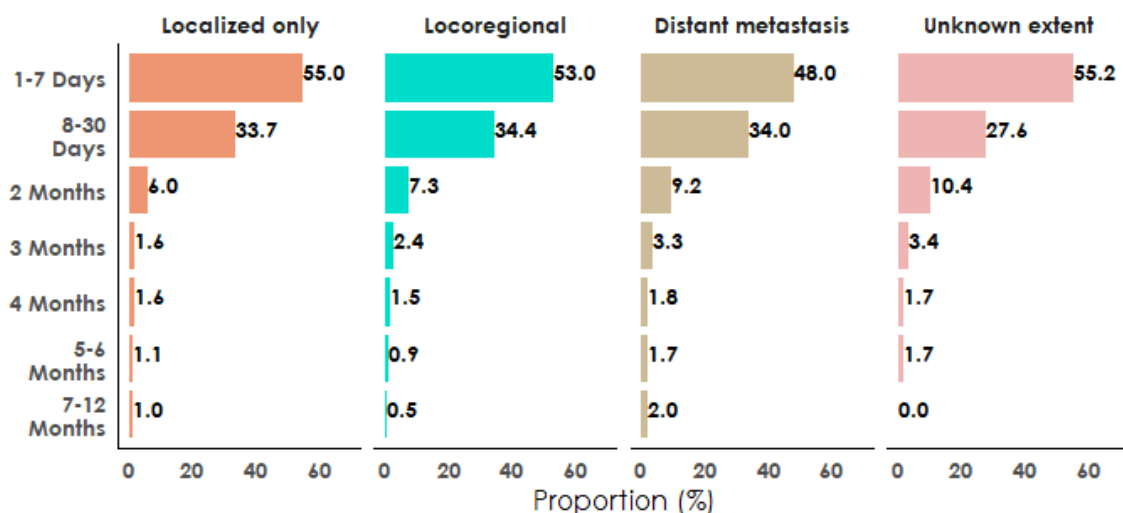


Figure 6.9.1a: Time between diagnosis and first attendance at reporting institution – kidney cancer

(b) Time between first attendance and commencement of cancer directed treatment at reporting institution

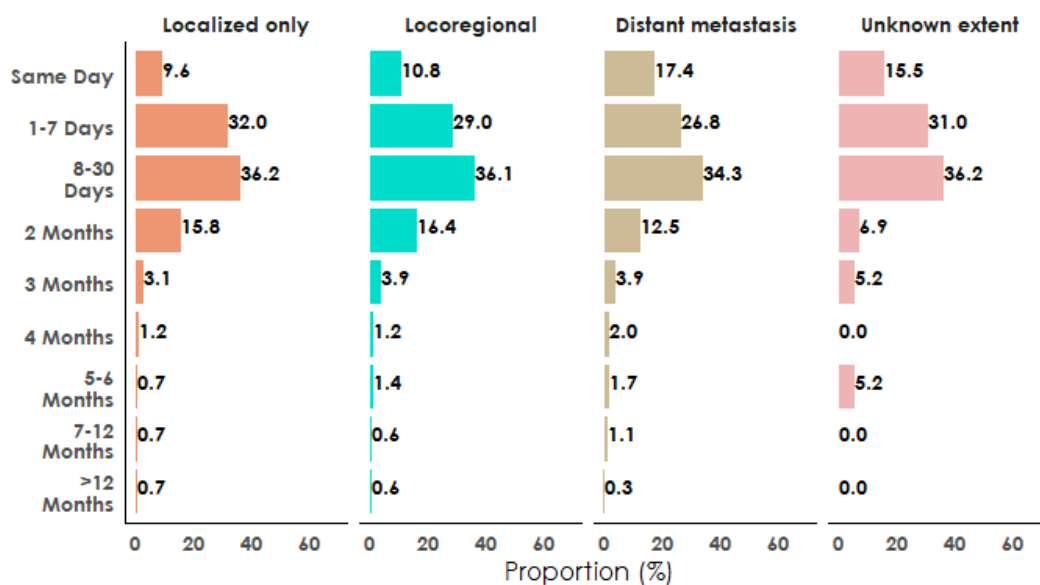


Figure 6.9.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution – kidney cancer

(c) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

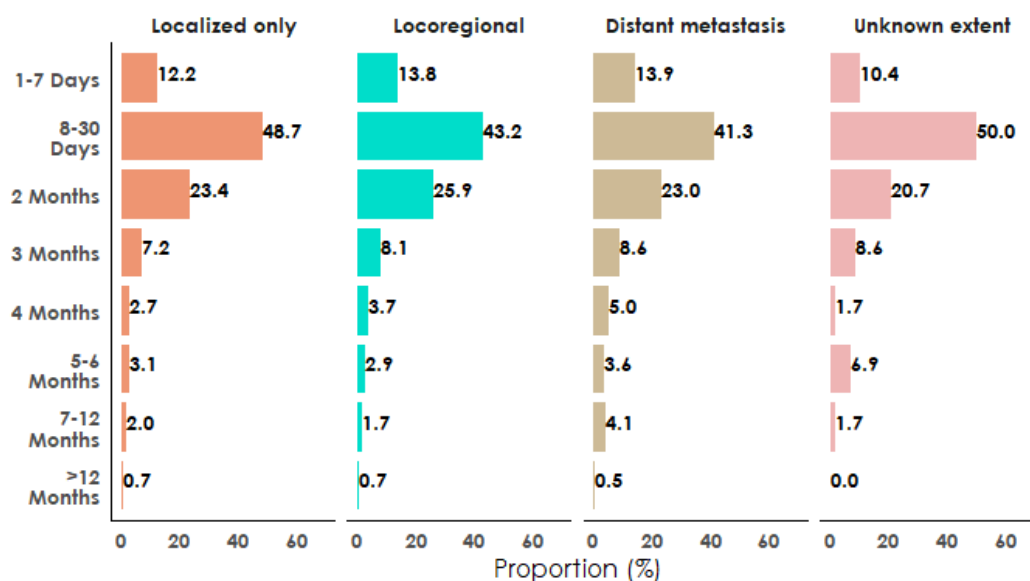


Figure 6.9.1c: Time between first diagnosis and commencement of cancer directed treatment at reporting institution – kidney cancer

(d) Time between diagnosis and first attendance at reporting institution

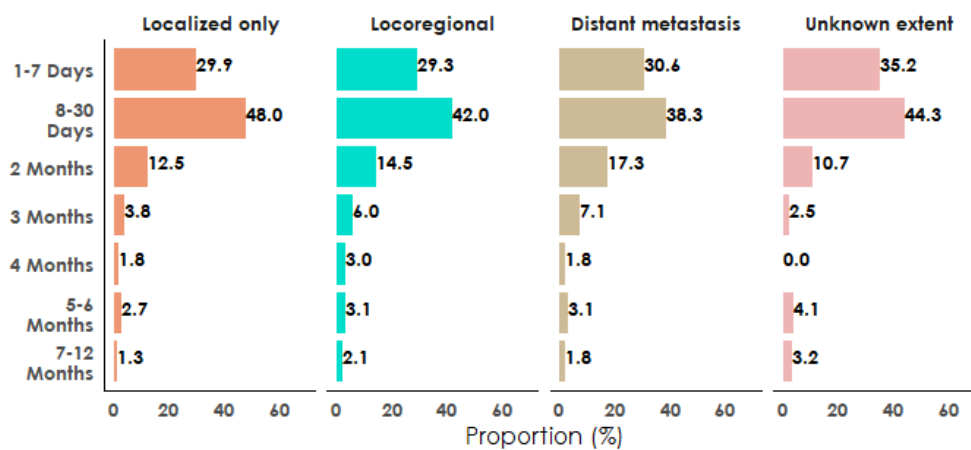


Figure 6.9.1d: Time between diagnosis and first attendance at reporting institution – bladder cancer

(e) Time between first attendance and commencement of cancer directed treatment at reporting institution

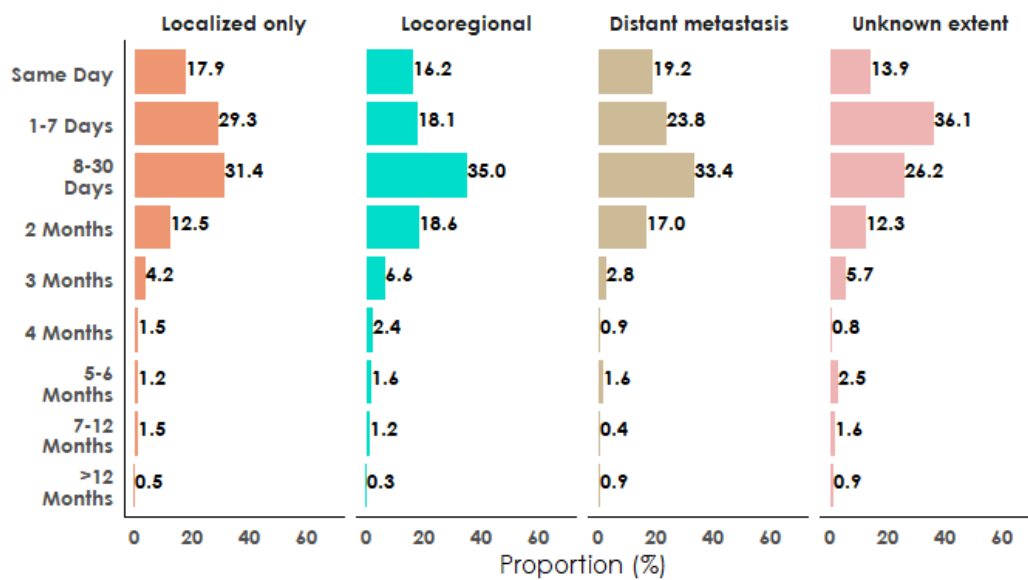


Figure 6.9.1e: Time between first attendance and commencement of cancer directed treatment at reporting institution – bladder cancer

(f) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

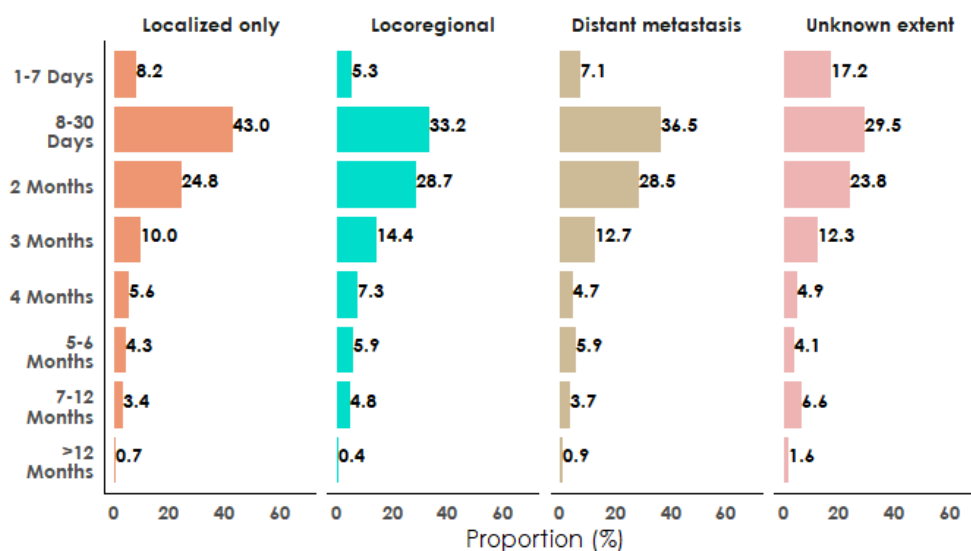


Figure 6.9.1f: Time between first diagnosis and commencement of cancer directed treatment at reporting institution - bladder cancer

6.9.2 Patients of cancers of kidney and bladder diagnosed and treated for cancer at the reporting institution

(a) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

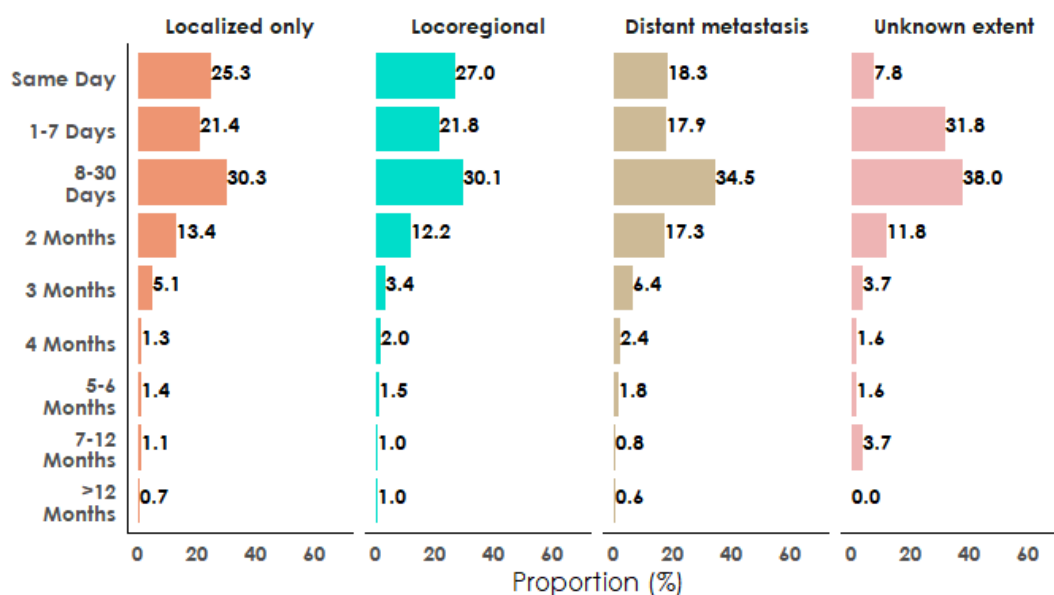


Figure 6.9.2a: Time between first diagnosis and commencement of cancer directed treatment at reporting institution – kidney cancer

(b) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

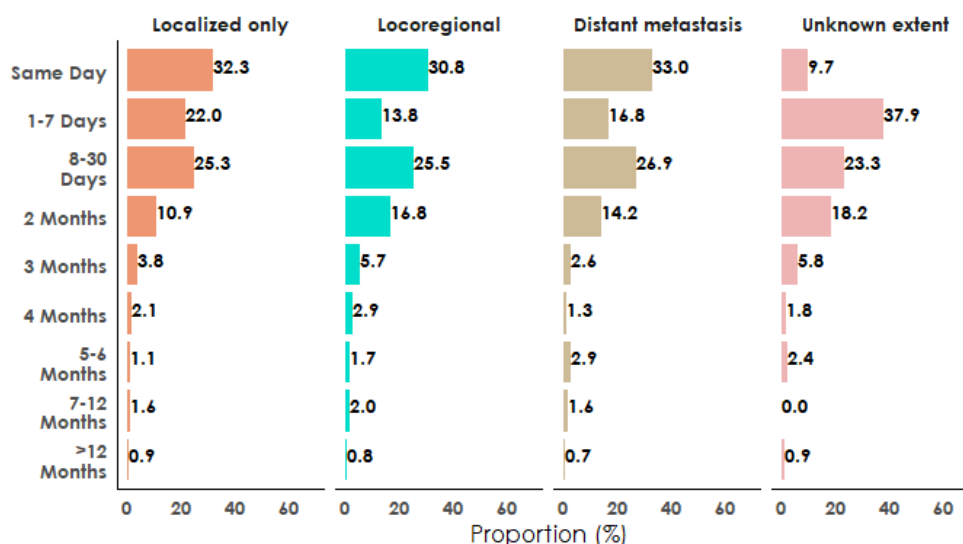


Figure 6.9.2b: Time between first diagnosis and commencement of cancer directed treatment at reporting institution – bladder cancer

Key findings

- Close to a quarter (23.3%) of kidney cancers were reported in the age group of <20 years.
- Among kidney cancers, Renal Cell Carcinoma (RCC), NOS constituted the majority of the renal cancer cases (males -65.2%, females-59.7%).
- Among the urinary bladder cancers, about half the cancers reported (males-53.7%, females-49.3%) were transitional cell carcinoma.
- Over a quarter of the male kidney cancer patients presented with distant metastasis.
- Surgery was the most frequently used treatment modality for localised, locoregional and unknown disease stages of kidney and bladder cancer.
- Close to one- third patients with bladder cancer regardless of clinical extent, who had been diagnosed at the reporting institutions, commenced cancer directed treatment on the same day.

Chapter - 7

Cancers of Brain and Nervous System (C70-C72)

CHAPTER 7

CANCERS OF BRAIN AND NERVOUS SYSTEM (NS)

Table 7.0: Site classification according to ICD-10

Site of Cancer	ICD-10 Code
Meninges (Cerebral Meninges, Spinal meninges, Meninges, NOS)	C70
Brain	C71
Spinal Cord, Cranial Nerves and Other parts of Central Nervous System	C72

The sites included here are Meninges (C70), Brain (C71) and Spinal Cord, Cranial Nerves and Other parts of Central Nervous System (C72).

7.1 Number and relative proportion of cancers of the brain and nervous system

Table 7.1: Number (n) and relative proportion (%) of cancers of brain and nervous system relative to all sites of cancer

Sex	All sites	Cancers of Brain and Nervous System	
	N	n	%
Males	319098	6372	2.0
Females	290986	3670	1.3
Total	610084	10042	1.6

7.2 Distribution of cancers of brain and nervous system according to five-year age groups

Table 7.2: Number (n) and proportion (%) of cancers of brain and nervous system according to five year age group

Age groups	Males			Females		
	n	Col %	Row %	n	Col %	Row %
00-04	269	4.2	61.6	168	4.6	38.4
05-09	421	6.6	59.1	291	7.9	40.9
10-14	324	5.1	62.8	192	5.2	37.2
15-19	280	4.4	65.6	147	4.0	34.4
20-24	325	5.1	67.4	157	4.3	32.6
25-29	413	6.5	63.8	234	6.4	36.2
30-34	504	7.9	63.0	296	8.1	37.0
35-39	543	8.5	63.4	314	8.6	36.6
40-44	530	8.3	60.4	347	9.5	39.6
45-49	558	8.8	61.2	354	9.6	38.8
50-54	601	9.4	64.1	337	9.2	35.9

Age groups	Males			Females		
	n	Col %	Row %	n	Col %	Row %
55-59	527	8.3	61.5	330	9.0	38.5
60-64	505	7.9	67.2	246	6.7	32.8
65-69	322	5.1	68.1	151	4.1	31.9
70-74	153	2.4	72.2	59	1.6	27.8
75-79	68	1.1	66.0	35	0.9	34.0
80-84	22	0.3	73.3	8	0.2	26.7
85+	6	0.1	60.0	4	0.1	40.0
All ages*	6372	100.0	63.5	3670	100.0	36.5
Mean (SD) Years	39 (20)			38 (19)		

* Includes cases with unknown age

7.3 Broad methods of diagnosis

Table 7.3: Number (n) and proportion (%) for cancers of the brain and nervous system by most valid methods of diagnosis

Method of Diagnosis	Males		Females	
	n	%	n	%
Microscopic	6048	94.9	3472	94.6
Imaging Techniques	307	4.8	191	5.2
Clinical Only	5	0.1	4	0.1
Total*	6372	100.0	3670	100.0

*Cases with unknown and other methods of diagnosis are included.

7.4 Types of microscopic diagnosis

Table 7.4: Number (n) and proportion (%) according to specific type of microscopic diagnosis for cancers of brain and nervous system

Type of microscopic diagnosis	Males		Females	
	n	%	n	%
Primary Histology	5947	98.3	3422	98.6
Histology of metastasis	25	0.4	10	0.3
Cytology of Primary	68	1.2	36	1.0
Cytology of Metastasis	9	0.1	5	0.1
All microscopic	6048	100.0	3472	100.0

7.5 Major histological types

Table 7.5: Number (n) and proportion (%) according to broad histological classification - cancers of brain and nervous system

Broad histological classification	Males		Females		Total	
	n	%	n	%	N	%
Glioblastoma	1898	31.4	963	27.7	2861	30.0
Astrocytoma	1497	24.8	780	22.5	2277	23.9
Oligodendroglial tumors	611	10.1	391	11.3	1002	10.5
Glioma, NOS	494	8.2	274	7.9	768	8.1
Medulloblastoma	501	8.3	257	7.4	758	8.0
Ependymal tumors	300	5.0	202	5.8	502	5.3
Meningioma, malignant	193	3.2	265	7.6	458	4.8
All Other Gliomas	195	3.2	120	3.5	315	3.3
Carcinoma, NOS	134	2.2	81	2.3	215	2.2
Embryonal tumors	118	1.9	69	2.0	187	2.0
Germ cell tumor	38	0.6	30	0.9	68	0.7
Neoplasm, malignant	30	0.5	7	0.2	37	0.4
Peripheral Neuroectodermal Tumour	10	0.2	10	0.3	20	0.2
Neuronal & Mixed neuronal - glial tumours	8	0.1	10	0.3	18	0.2
Choroid Plexus Papilloma, Malignant	12	0.2	5	0.1	17	0.2
Pineoblastoma	3	<0.1	3	0.1	6	0.1
Others	6	0.1	5	0.1	11	0.1
Total	6048	100.0	3472	100.0	9520	100.0

7.6 Intention to treat

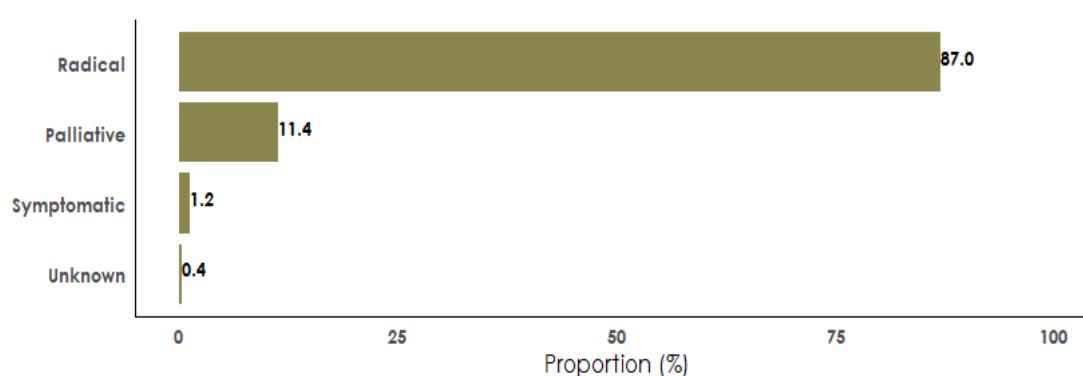


Figure 7.6: Intention to treat (%) – cancers of brain and nervous system (both sexes)

7.7 Treatment modalities according to clinical extent of the disease

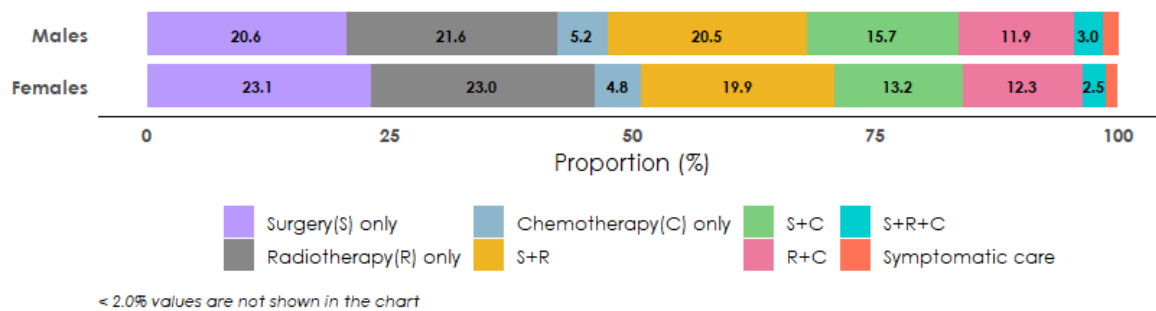


Figure 7.7: Type of treatment according to clinical extent of disease- cancers of brain and nervous system (both sexes)

7.8. Waiting time between registration and commencement of cancer directed treatment

7.8.1 Patients of cancers of brain and nervous system earlier diagnosed at another health facility and referred for cancer directed treatment to the reporting institution

(a) Time between diagnosis and first attendance at the reporting institution

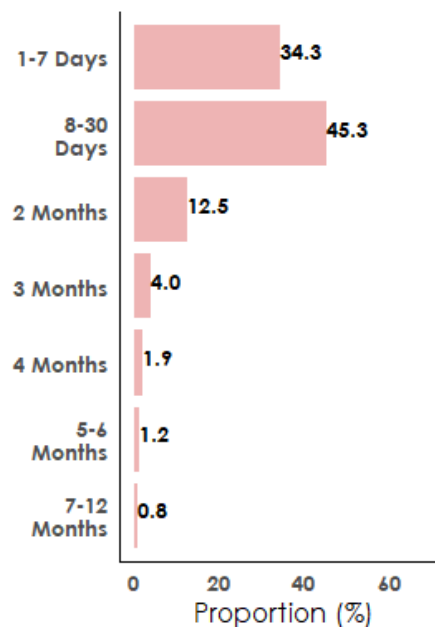


Figure 7.8.1a: Time between diagnosis and first attendance at reporting institution

(b) Time between first attendance and commencement of cancer directed treatment at reporting institution

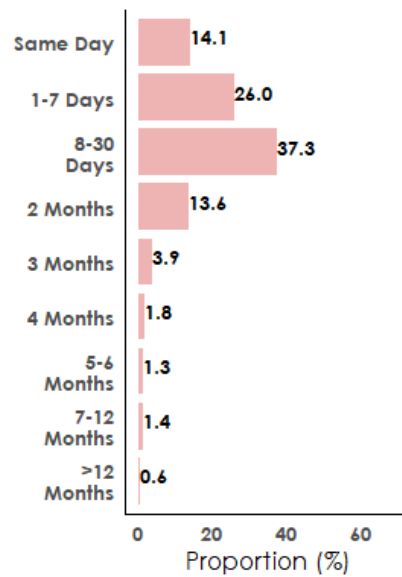


Figure 7.7.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution

(c) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

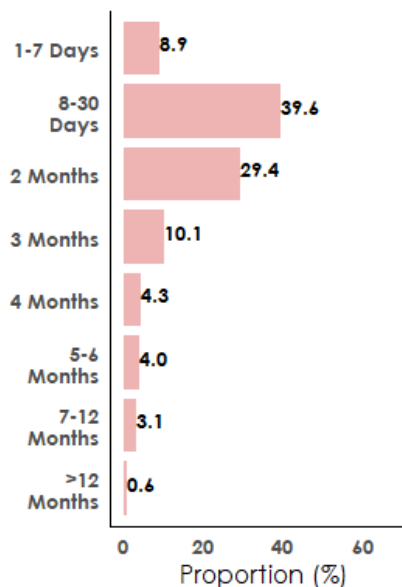


Figure 7. 7.1c: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

7.7.2 Patients of cancers of brain and nervous system diagnosed and treated for cancer at the reporting institution

Time between first diagnosis and commencement of cancer directed treatment at reporting institution

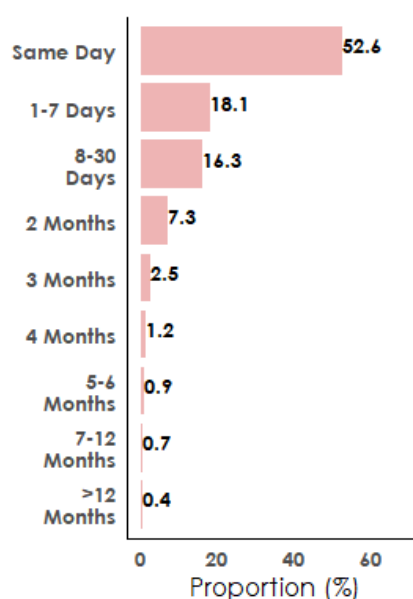


Figure 7.7.2: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

Key Findings

- Cancers of the brain and nervous system accounted for less than 2% of the cancers.
- Close to one-tenth of the cases were in the 50-54 years age group in males, and 40-44 and 45-49 years age group in females.
- Glioblastoma (males-31.4%, females-27.7%) and Astrocytoma (males-24.8%, females-22.5%) were the commonest histologies seen.
- Over half of the patients who sought diagnosis and treatment at the reporting institutions were started on cancer directed treatment on the same day.

Chapter - 8

Thyroid Cancer (C73)

CHAPTER 8

THYROID CANCER

Table 8.0: Site classification according to ICD-10

Site of Cancer	ICD-10 Code
Thyroid	C73

8.1 Number and relative proportion by sites of thyroid cancer

Table 8.1: Number (n) and relative proportion (%) of thyroid cancer relative to all sites of cancer

Sex	All sites	Thyroid Cancer	
	N	n	%
Males	319098	3340	1.0
Females	290986	7181	2.5
Total	610084	10521	1.7

8.2 Distribution of thyroid cancer according to five-year age groups

Table 8.2: Number (n) and proportion (%) of thyroid cancer according to five-year age groups

Age groups	Males			Females		
	n	Col %	Row %	n	Col %	Row %
< 20	126	3.8	29.0	308	4.3	71.0
20-24	162	4.9	26.7	445	6.2	73.3
25-29	249	7.5	25.3	734	10.2	74.7
30-34	274	8.2	26.0	779	10.8	74.0
35-39	322	9.6	26.6	888	12.4	73.4
40-44	338	10.1	28.9	831	11.6	71.1
45-49	370	11.1	32.0	786	10.9	68.0
50-54	353	10.6	33.8	692	9.6	66.2
55-59	322	9.6	38.4	517	7.2	61.6
60-64	314	9.4	38.7	498	6.9	61.3
65-69	257	7.7	42.3	350	4.9	57.7
70-74	138	4.1	42.7	185	2.6	57.3
75-79	83	2.5	45.6	99	1.4	54.4
80-84	17	0.5	27.9	44	0.6	72.1
85+	15	0.4	38.5	24	0.4	61.5
All ages*	3340	100.0	31.7	7181	100.0	68.3
Mean (SD) Years	47 (16)			43 (15)		

*Includes cases with unknown age

8.3 Broad methods of diagnosis

Table 8.3: Number (n) and proportion (%) of thyroid cancer by most valid method of diagnosis

Method of Diagnosis	Males		Females	
	n	%	n	%
Microscopic	3316	99.3	7135	99.4
Imaging Techniques	19	0.6	27	0.4
Clinical Only	3	0.1	12	0.2
Total*	3340	100.0	7181	100.0

*Cases with unknown and other methods of diagnosis are included.

8.4 Types of microscopic diagnosis

Table 8.4: Number (n) and proportion (%) of thyroid cancer according to specific type of microscopic diagnosis

Type of microscopic diagnosis	Males		Females	
	n	%	n	%
Primary Histology	2817	85.0	6215	87.1
Histology of metastasis	40	1.2	85	1.2
Cytology of Primary	366	11.0	686	9.6
Cytology of Metastasis	93	2.8	149	2.1
All microscopic	3316	100.0	7135	100.0

8.5 Major histological type

Table 8.5: Number (n) and proportion (%) of thyroid cancer according to broad histological classification

Broad histological classification	Males		Females	
	n	%	n	%
Papillary Carcinoma	2544	76.7	5830	81.7
Follicular Carcinoma	168	5.1	437	6.1
Medullary Carcinoma	234	7.0	233	3.3
Carcinoma, NOS	131	3.9	231	3.2
Anaplastic Carcinoma	105	3.2	163	2.3
Squamous Cell Carcinoma	80	2.4	113	1.6
Others	54	1.7	128	1.8
Total	3316	100.0	7135	100.0

8.6 Clinical extent of disease

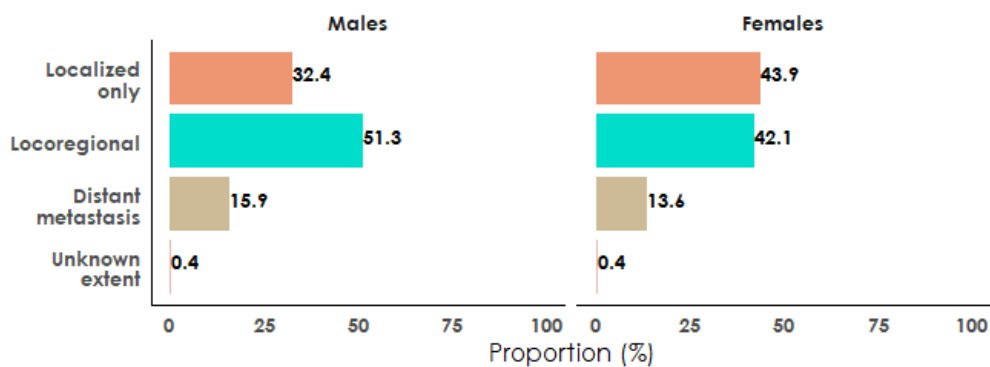


Figure 8.6: Clinical extent of disease (%): thyroid cancer (males and females)

8.7 Intention to treat

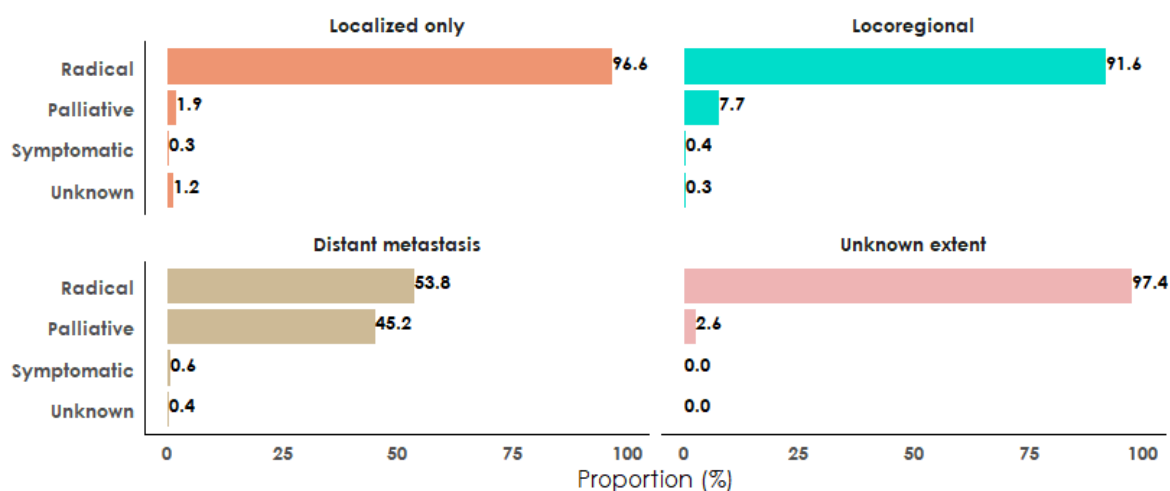


Figure 8.7: Intention to treat according to clinical extent of disease (%) – thyroid cancer (both sexes)

8.8 Treatment modalities according to clinical extent of disease

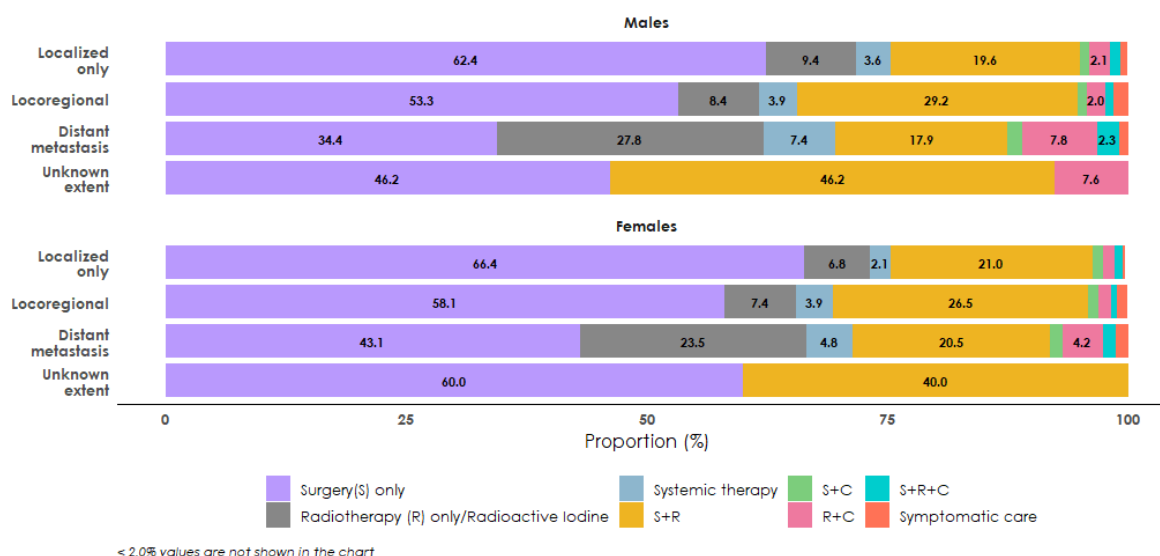


Figure 8.8: Type of treatment according to clinical extent of disease (%) – thyroid cancer in males and females

8.9 Waiting time between registration and commencement of cancer directed treatment

8.9.1 Patients of thyroid cancer earlier diagnosed at another health facility and referred for cancer directed treatment to the reporting institution

(a) Time between diagnosis and first attendance at the reporting institution

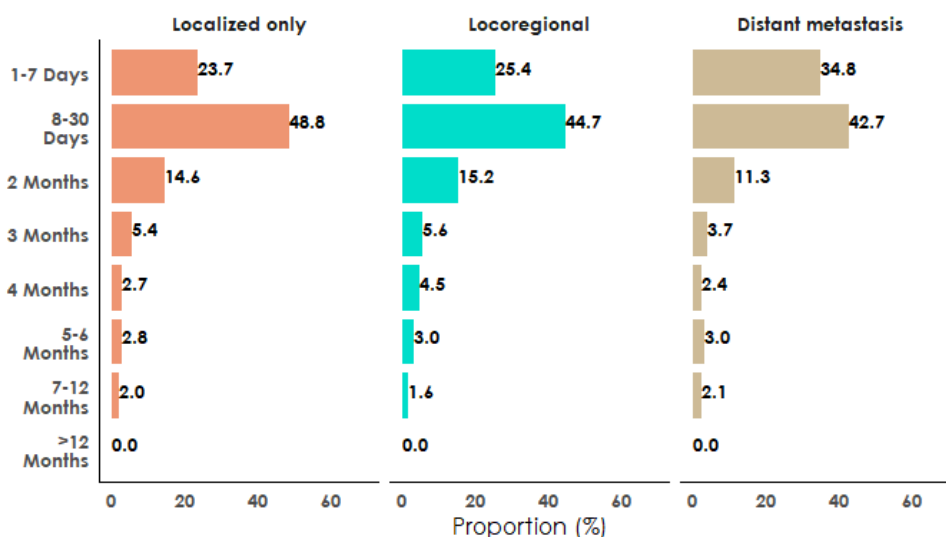


Figure 8.9.1a: Time between diagnosis and first attendance at reporting institution

(b) Time between first attendance and commencement of cancer directed treatment at reporting institution

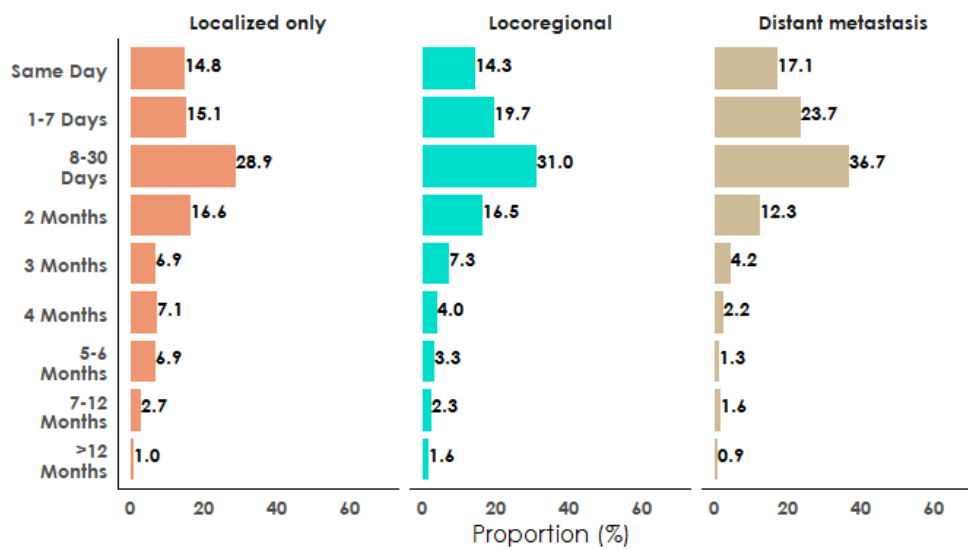


Figure 8.9.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution

(c) Time between first diagnosis and commencement of cancer directed treatment at reporting institution

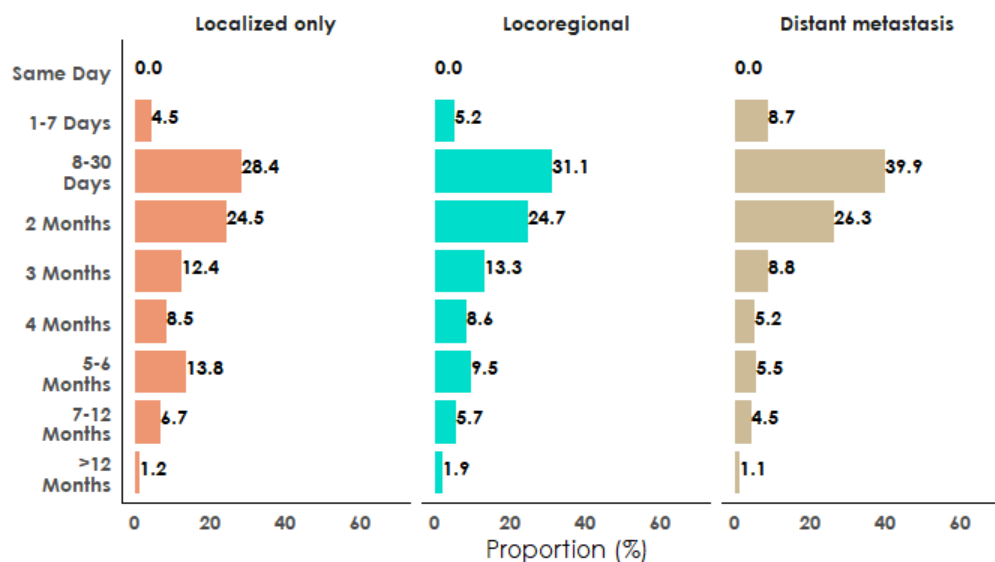


Figure 8.9.1c: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

8.9.2 Patients of thyroid cancer diagnosed and treated for cancer at the reporting institution

Time between first diagnosis and commencement of cancer directed treatment at reporting institution

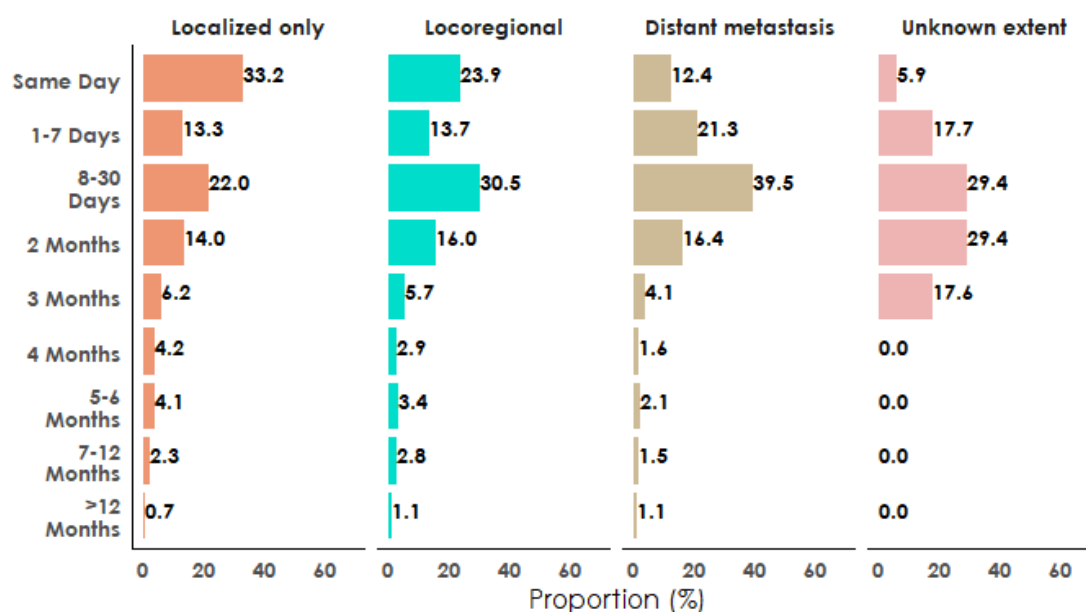


Figure 8.9.2: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

Key Findings

- The proportion of thyroid cancers relative to all sites was higher in females (2.5%) than in males (1.0%).
- Over half (51.2%) of the cases among female patients were reported in the 20 to 45 years age group.
- Papillary Thyroid Carcinoma constituted the majority of the thyroid cancer cases (males-76.7%, females-81.7%).
- Over 40 % of the female patients presented with localised disease.
- Surgery was the most frequently used treatment modality for most patients, regardless of the clinical extent of disease.
- Around one third of the patients with localised disease, who had been diagnosed at the reporting institutions, were initiated on cancer directed treatment on the same day.

Annexure - Terminologies Snapshot of Registries

Annexure 1 - Terminologies

Terms frequently used in the report

Cancer Registration: The process of continuing, systematic collection of data on the occurrence and characteristics of reportable neoplasms to help assess and control the impact of cancer.

Cancer Case: All neoplasms with a behaviour code of '3' as defined by the International Classification of Diseases - Oncology (Third edition) are considered reportable and are registered in NCRP.

Cancer site: The organ/anatomic site of cancer occurrence, classified according to the International Classification of Diseases (ICD-10)

Cancer Directed Treatment: The treatments offered to cancer patients are either surgery/systemic therapy/radiotherapy and combinations therein. Hormone therapy and immunotherapy are also common treatments for some types of cancers.

Cancer Registry: Office at the institution which collects, store, analyse and interpret data on persons with cancer.

Data Processing: Hospital Based Cancer Registry Database Management (HBCRDM) software allows online entry of the data by the hospitals. The quality of the data is monitored. For double registrations, duplicates are prompted. Clarification is sought from each registry, and the data is finalised for further analysis. Auto coding (ICDO-3 and ICD-10) is a feature of this software. A conversion facility from ICD-O3 to ICD-10 is also available.

Clinical extent of disease at presentation: For all anatomical sites, extent of disease prior to initial treatment which is decided by the treating clinician, is recorded.

Histological Classification: All cases received for specific anatomical cancer sites have been classified according to WHO Classification of Tumours, 5th Edition, Volume. These are classified as per number and proportions in the report.

Reporting institution: Major cancer hospital where the registry is located and where the patient avails of cancer directed treatment

Annexure 2 - Snapshots of Registries

1. Acharya Harihar Regional Cancer Centre, Cuttack

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> Dr. Pramod Chandra Pathy, Professor & Head, Dept. of Head & Neck Oncology <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> Dr. Ashutosh Hota, Head & Neck Oncology Dr. Ashok Ku. Padhya, Gyneaoncology Dr. Bharat B Satapathy Surgical Oncology Dr. Durga P Sahoo Radiation Oncology Dr. Kusumbali Bisro, Pathology 	<ol style="list-style-type: none"> Mr. Sapan Jena Ms. Sarmista Sahoo Mr. Shakti Prasad Das Ms. Subhashree Priyadarshini Sethi Mr. Ramakanta Das

2. Acharya Tulsi Regional Cancer Treatment and Research Institute, Bikaner

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> Dr. M R Bardia, Director <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> Dr. Rajesh Kumar, MO 	<ol style="list-style-type: none"> Ms. Bharti Maru Mr. Manish Maru Mr. Parveen Soni

3. All India Institute of Medical Sciences, Bhubaneswar

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> Dr. Saroj Kumar Das Majumdar, Additional Professor, Dept. of Radiation Oncology <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> Dr. Mukund N Sable, Associate Professor Dr. Dillip Kumar Muduly, Additional Professor Dr. Ashutosh Panigrahi, Associate Professor Dr. Somanath Padhi, Associate Professor 	<ol style="list-style-type: none"> Ms. Diana Padhi Mr. Hemanta Kumar Bhuyan

4. All India Institute of Medical Sciences, Rishikesh

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> Dr. Sanjeev Kishore, Professor & Head, Dept. of Pathology & lab Medicine <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> Dr. Prashant Durgapal, Associate Professor, Dept. of Pathology & lab Medicine Dr. Manoj Gupta, Professor & Head, Dept. of Radiation Oncology 	<ol style="list-style-type: none"> Dr. Kamini Kiran Mr. Rajendar Chauhan

5. Amala Institute of Medical Sciences, Amalanagar, Trichur

Year of Establishment: 2011

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> Dr. Sunu Lazar Cyriac, Assistant Professor, Dept. of Medical Oncology & Haematology <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> Dr. Savithri M C, Professor, Dept. of Pathology Dr. Jomon Raphael, Professor, Dept. of Radiation Oncology Dr. Praveen Ravishankaran, Assistant Professor, Dept. of Surgical Oncology 	<ol style="list-style-type: none"> Mr. Feby K L

6. Amrita Institute of Medical Sciences & Research Centre, Kochi (2012-2018)

Year of Establishment: 2011

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> Dr. Prem Nair, Medical Director, Professor, Dept. of Gastroenterology <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> Dr. K Pavithran, Head, Dept. of Medical Oncology Dr. D K Vijaykumar, Head, Dept. of Breast and Gynaec Oncology Dr. Debnarayan Dutta, Head, Dept. of Radiation Oncology 	<ol style="list-style-type: none"> Mr. P Gangadharan (Late) Ms. Thanuja Gopakumar Ms. Suma M S Ms. Mini A P Mr. Ajil Shaji Ms. Navya C S

7. Apollo CBCC Cancer Care, Gandhinagar

Year of Establishment: 2016

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Naveen Keswani, CEO & Deputy Medical Director Co-Principal Investigator 1. Dr. Samarendra Dash, Consultant	1. Dr. Anjana Raval 2. Ms. Manzil Kaurani

8. Apollo Hospital, Bhubaneswar

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Manas Baisakh, Senior consultant, Dept. of Histopathology 2. Dr. Sarala Das, Dept. of Pathology (2012 to September 2018) Co-Principal Investigator 1. Dr. Manas Baisakh (2012 to September 2018)	1. Mr. Suresh Samal (November 2017 to October 2018) 2. Mr. Prasant Kumar Moharana (November 2017 to January 2020) 3. Mr. Premkumar Lazar (from February 2019 to till date)

9. Asian Institute of Medical Sciences, Faridabad

Year of Establishment: 2015

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Neetu Singhal, Head, Dept. of Radiation oncology	1. Mr. Dayachand Kaushik

10. Assam Medical College, Dibrugarh

Year of Establishment: 1984

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Prof.(Dr.) Sanjeeb Kakati Principal and Project Chief 2. Prof.(Dr.) Pranab Baruah, Principal and Project Chief (January 2012 to November 2012) 3. Prof.(Dr.) A K Adliikari, Principal and Project Chief (01-02-2012 to 30-01-2016) 4. Prof.(Dr.) R K Kotoky, Principal and Project Chief (06-02-2016 to 30-01-2017) 5. Prof.(Dr.) H K Goswami, Principal and Project Chief (11-09-2017 to 24-11-2020)	1. Dr. R. Akhthar 2. Mr. S R Nath 3. Ms. J Sonowal 4. Ms. Rabia Ara Rahman

11. Aster Medicity, Kochi

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr Arun R Warriar, Sr. Consultant, Dept. of Medical Oncology	1. Ms. Meera George

12. Baby Memorial Hospital Ltd., Kozhikode

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Prof.(Dr.) P R Sasindran, Sr. Consultant , Dept. of Radiation Oncology	1. Ms. Sruthy A K 2. Ms. Nithya C V
Co-Principal Investigator 1. Dr.Vishnu Rajan Nambiar, Consultant, Radiation Oncologist 2. Dr. K S Dhanya, Consultant, Radiation Oncologist	

13. Bhagwan Mahaveer Cancer Hospital and Research Centre, Jaipur

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Anjali Sharma, Lab Director & Head, Dept. of Pathology	1. Mr. Ashish Kumar Gurjar 2. Mr. Mohit Ajmera
Co-Principal Investigator 1. Dr. Naresh Jakhotia, Sr. Consultant, Dept. of Radiation Oncology	

14. Cachar Cancer Hospital and Research Centre, Silchar

Year of Establishment: 2011

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. R Ravi Kannan, Director	1. Ms. Gayatree Roy 2. Ms. Premjit Kurmi
Co-Principal Investigator 1. Dr. Ritesh Tapkire, Asst. Director	

15. Cancer Hospital & Research Institute, Gwalior

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. B R Shrivastav, Director	1. Mrs. Kalpana Sharma 2. Mrs. Neelam Pathak
Co-Principal Investigator 1. Dr. G S Rajpoot, Medical Superintendent	

16. Cancer Institute (WIA), Chennai

Year of Establishment: 1984

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Swaminathan R, Associate Director & Head, Dept. of Epidemiology, Biostatistics and Cancer registry <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Rama R, Assistant Professor & Senior Bio-Statistician 2. Ms. Shanthi P, Section In-Charge (Training & Data Quality) 3. Ms. Kalyani M S, Data Manager (HBCR & Projects) 4. Ms. Joan of Arc A, Senior Medical Record Technician 	<ol style="list-style-type: none"> 1. Ms. Vidhya J 2. Mr. Sivakumar P 3. Mr. Thiagarajan K 4. Ms. Bhuvaneshwari S 5. Ms. Sahaya Delma C 6. Ms. Anu R 7. Ms. Devi N 8. Ms. Divya S 9. Ms. Swetha R 10. Ms. Malar U 11. Ms. Deepa E 12. Ms. Bagyalakshmi P 13. Ms. Deepa Ramani

17. Cancer Research Institute - Himalayan Institute Hospital Trust, Dehradun

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Sunil Saini, Professor & Director, Department of Surgical Oncology <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Mushtaq Ahmad, Principal HIMS, Prof. Radiation Oncology 2. Dr. Sanjeev Kumar Verma, Professor, Medical Oncology 3. Dr. Neena Chauhan, Professor, Pathology 	<ol style="list-style-type: none"> 1. Mr. Kanak Prabha Rauthan 2. Mr. Pradeep Rawat 3. Mr. Dronacharaya 4. Ms. Usha Rani 5. Mr. Rajat Sharma

18. Caritas Cancer Institute - Caritas Hospital, Kottayam

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator
<p>Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Jose Tom, Senior consultant, Dept. of Radiation Oncology <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Bindu T G, Pathology 2. Dr. Boben Thomas, Medical Oncology Dr. Jenny Joseph, Radiation Oncology

19. Chittaranjan National Cancer Institute, Kolkata (2016-2018)

Year of Establishment: 2015

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Syamsundar Mandal, HOD, Dept. of Epidemiology and Biostatistics Co-Principal Investigator 1. Dr. Partha Nath 2. Mr. Ganesh Gorai	1. Dr. Sushmita Roy 2. Ms. Soumi Sinha 3. Ms. Rinki Chitrakar 4. Ms. Kaberi Biswas 5. Ms. Sudeshna Ghosh 6. Ms. Julekha Mondal 7. Ms. Susmita Patra 8. Ms. Priya Kumari Singh 9. Mr. Dipanjan Mazumdar

20. Cytecure Hospitals PVT LTD, Bangalore

Year of Establishment: 2018

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Prasad Narayanan, Senior Consultant, Dept. of Medical Oncology Co-Principal Investigator 1. Dr. Harish P, Medical Oncology	1. Mr. Lokesh 2. Chaitanya

21. Dr. B.R. Ambedkar Institute Rotary Cancer Hospital, New Delhi

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. S V S Deo, Prof & Head, Dept. of Surgical Oncology & Head, Delhi Cancer Registry Co-Principal Investigator 1. Mr. N Manoharan, Scientist – IV, Delhi Cancer Registry 2. Dr. G K Rath, Professor and Chief, Dept. of Radiation Oncology 3. Dr. Sunil Kumar, Additional Professor, Dept. of Surgical Oncology 4. Dr. Ajay Gogia, Associate Professor, Dept. of Medical Oncology	1. Mr. Ankit 2. Mr. Raman 3. Ms. Anshika 4. Ms. Isha Goswami 5. Ms. Ranjana 6. Mr. Pradeep Kumar 7. Ms. Kanika Behl 8. Ms. Shikha Sharma

22. Dr. B. Borooah Cancer Institute, Guwahati

Year of Establishment: 2010

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. Dr. Manigreeva Krishnatreya, Scientific Officer 'D', Dept. of Cancer Registry & Epidemiology 2. Dr. Jagannath Dev Sharma, Prof Dept. of Pathology (October 2010 to November 2020) 	<ol style="list-style-type: none"> 1. Dr. Nizara Baishya 2. Dr. Chandi Ram Kalita 3. Mr. Md. Nazmul Haque 4. Mrs. Binita Das 5. Ms. Tapti Kumari 6. Mrs. Himadri Hazarika 7. Mr. Chandan Barman
Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. Ashok Kumar Das, Professor, Dept. of Head & Neck Oncology (October 2010 to November 2020) 2. Dr. B J Saikia, Professor, Dept. of Medical Oncology (October 2010 to November 2020) 3. Dr. M Bhattacharyya, Professor. Dept. of Radiation Oncology (October 2010 to November 2020) 4. Dr. A Talukdar, Associate Professor, Dept. of Surgical Oncology (01/01/2015 to 15/11/2020) 5. Dr. P P Medhi, Assistant Professor, Dept. of Radiation Oncology 6. Dr. Asif Iqbal, Assistant Professor, Dept. of Medical Oncology 7. Dr. Kiran Kamalasanan, Assistant Professor, Dept. of Surgical Oncology 8. Dr. Upasana Baruah, Assistant Professor, Dept. of Surgical Oncology 	

23. Erode Cancer Centre, Thindal, Erode

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. Dr. K Velavan, Dept. of Radiation Oncology 	<ol style="list-style-type: none"> 1. Ms. M Gayathri 2. Mr. G Saravanan
Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. R Suresh Kumar 	

24. ESIC Medical College Hospital and Super Speciality Hospital, Hyderabad

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator
Principal Investigator <ol style="list-style-type: none"> 1. Dr. Ratna Gosain, Sr. Consultant, Dept. of Pathology
Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. Suhasini Gazula, Pediatric Surgeon

25. Father Muller Medical College Hospital, Mangaluru

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Dinesh Shet, Associate Professor, Dept. of Medical Oncology Co-Principal Investigator 1. Dr. Scharaschandra, Associate Professor, Dept. of Medical Oncology 2. Dr. Nisha Marla, Associate Professor, Dept. of Pathology	1. Mrs. Poornima 2. Mrs. Arpitha

26. Fortis Memorial Research Institute, Gurugram

Year of Establishment: 2015

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr Vinod Raina, Chairman Oncosciences, Executive Director & Head of Medical Oncology & Haematology & Head- Cancer Registry 2. Dr B K Mohanti, Executive Director & Head, Dept of of Radiation Oncology Co-Principal Investigator 1. Dr B B Tyagi, Sr. Manager- Cancer Registry	1. Mr. Sujeet Kumar Singh 2. Ms. Manisha

27. G Kuppuswamy Naidu Memorial Hospital, Coimbatore

Year of Establishment: 2018

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigators 1. Dr. Latha Balasubramani, Consultant, Gynaecological Oncologist, Dept of Oncology Co-Principal Investigator 1. Dr. M Nagarajan, Director for Research & Development - VNCC & HOD - Radiation Oncology 2. Dr. Piyush Joshi, Junior Consultant	1. Ms. M Kalaiselvi

28. Gandhi Medical College, Bhopal

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Mr. Atul Shrivastava, Research Officer, Dept of Pathology	1. Dr. AseeraJabeen 2. Mr. Anas Ahmed
Co-Principal Investigator 1. Dr. Reeni Malik, Professor & Head, Dept. of Pathology 2. Mrs. Sushma Shrivastava, Field Officer, Dept. of Pathology 3. Dr. O P Singh, Professor & Head, Dept. of Radiotherapy	

29. General Hospital, Ernakulam

Year of Establishment: 2011

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Balamurali Krishna Consultant, Dept. of Radiation Oncology	1. Ms. Veena K J 2. Mr. Krishna P S
Co-Principal Investigator 1. Dr. Nibin Bose, Radiation Oncology 2. Dr. Jiss Joy, Radiation Oncology 3. Dr. Abilash, Radiation Oncology	

30. Government Medical College and Hospital, Chandigarh

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Awadhesh Kumar Pandey, Prof & Head, Dept. of Radiation Oncology	1. Mr. Suraj 2. Mrs. Kamini
Co-Principal Investigator 1. Dr. Arjun Das, Former Prof & Head, Dept. of ENT (Retired) 2. Dr. Deepak Aggarwal, Professor, Dept. of Pulmonary Medicine 3. Dr. Bharti Goel, Professor, Dept. of Obstetrics & Gynaecology 4. Dr. Sonia Puri, Associate Professor, Dept. of Community Medicine	

31. Government Medical College, Jammu

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Ashutosh Gupta, Professor & Head, Dept. of Radiation Oncology 2. Dr. Dinesh Kumar, Professor, Dept. of Community Medicine <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Pramod Kalsotra, Professor & Head, Dept. of ENT 2. Dr. Subhash Bhardwaj, Professor & Head, Dept. of Pathology 3. Dr. Sanjay Bhasin, Professor & Head, Dept. of Surgery 4. Dr. Rahul Sharma, Associate Professor, Dept. of Radiation Oncology 5. Dr. Kiran Bala, Associate Professor, Post Graduate Dept. of Community Medicine 6. Dr. Rajat Gupta, Lecturer, Dept. of Pathology 	<ol style="list-style-type: none"> 1. Ms. Pooja Devi 2. Mr. Shiv Dutt Sharma 3. Ms. Mamta Devi 4. Mr. Raman Kumar 5. Ms. Kavita Sharma 6. Ms. Shivani Bhagat 7. Mr. Purshotam Kumar

32. Government Medical College, Thrissur

Year of Establishment: 2015

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Suresh Kumar K, Professor & Head, Dept. of Radiation Oncology (July 2021) 2. Dr. Shehna A Khader, Associate Professor, Dept. of Radiotherapy (May 2020 to July 2021) 3. Dr. K L Jayakumar, Professor & HOD, Dept. of Radiotherapy (July 2018 to May 2020) 4. Dr. R Mahadevan, Professor & HOD, Dept. of Radiotherapy (March 2017 to July 2018) <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Shehna A Khader, Associate Professor (CAP), Dept. of Radiation Oncology (March 2017 to May 2020 and August 2021 onwards) 2. Dr. Ajithkumar, Associate Professor (CAP) (March 2017 onwards) 3. Dr. Jayaraman M B, Associate Professor (CAP) (March 2017) 	<ol style="list-style-type: none"> 1. Ms. Shijeena Mathew 2. Mr. Lijo Lazar V 3. Ms. Praseeja K

33. Government Royapettah Hospital, Chennai

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. J Kannan, Professor & HOD, Dept. of Medical oncology 2. Dr. S G D Gangadaran, Prof & Head Dept. of Medical Oncology (till March 2021)	1. Ms. V Padmapriya 2. Ms. G Revathy
Co-Principal Investigator 1. Dr. B Ramkumar, Associate Professor of Medical Oncology 2. Dr. S Subbaiah, Associate Professor of Medical Oncology 3. Dr. S Saravanan, Professor & Head Dept. of Radiation Oncology	

34. Government Stanley Medical College, Chennai

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Naveen Ravel, Head, Dept. of Medical Oncology	1. Ms. Nitya A 2. Mr. Anand
Co-Principal Investigator 1. Dr. P N Sathiyamoorthy, Associate Professor, Medical Oncology	

35. Govt Arignar Anna Memorial Cancer Hospital & Research Institute, RCC, Kanchipuram

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Sakthi Usha Devi, Dept. of Surgical Oncology	1. Dr. R Nirmal Prasath 2. Mr. C Shanthakumar 3. Ms. C Jemima 4. Mr. M Carolin
Co-Principal Investigator 1. Dr. Srinivasan, Dept. of Radiation Oncology 2. Dr. Salini, Dept. of Radiation Oncology 3. Dr. Mudassar Sharief, Dept. of Oral Pathology	5. Ms. G Jayashri 6. Mr. K S Surya 7. Mr. L Dinesh Kumar 8. Ms. S Aishwarya 9. Mr. R Avinash

36. Nayathi Health Care, Mathura

Year of Establishment: 2018

Principal Investigator & Co-Principal Investigator
Principal Investigator 1. Dr. Santanu Chaudhuri, Chairman and Senior Consultant, Dept. of Radiation Oncology
Co-Principal Investigator 1. Dr. Neeraj Kumar, Attending Consultant Dept. of Clinical Oncology

37. Indira Gandhi Institute of Medical Sciences, Patna

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Dinesh Kumar Sinha, Additional Professor, Department of Radiation Oncology 2. Dr. Prof. Rajesh Kumar Singh, HOD Radiation Oncology (till March 2021)	1. Dr. Laloo Kumar 2. Mr. Aman Prakash 3. Mr. Yaswant Kumar Singh 4. Mr. Shahab Hussain
Co-Principal Investigator 1. Dr. Prof. Sangeeta Pankaj, HOD Gynecological Oncology	

38. Indo-American Cancer Institute & Research Centre, Hyderabad

Year of Establishment: 2011

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. K Kalpana Raghunath, Associate Director, Dept. of Academics	1. Mrs. K. Nirmala 2. Mr. Y. Krishnaiah
Co-Principal Investigator 1. Dr. Anjanasurath 2. Dr. A Santha 3. Dr. G Dileep Kumar	

39. Institute of Liver and Biliary Sciences, New Delhi

Year of Establishment: 2016

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Puja Sahai, Associate Professor, Dept. of Radiation Oncology	1. Ms. Aastha Dawar (2017 to April 2019) 2. Ms. Jyoti (2017 to June 2019) 3. Ms. Perna Arora 4. Ms. Gulfasha
Co-Principal Investigator 1. Dr. Hanuman Prasad Yadav, Prof and Head, Radiation Oncology 2. Dr. Archana Rastogi, Professor, Pathology 3. Dr. Vinod Arora, Assistant Professor, Hepatology	

40. Institute of Obstetrics and Gynaecology, Chennai

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. S Vijaya, Director & Professor, Dept. of Obstetrics & Gynaecology	1. Ms. Joe Shalini S 2. Ms. S Saraswathi
Co-Principal Investigator 1. Dr. Rajkumar, Civil Surgeon 2. Dr. Kavitha Sukumar, Associate Professor	

41. International Cancer Centre, Neyyoor

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. V G Sudhakaran, Prof. HoD, Dept. of Oncology Co-Principal Investigator 1. Dr. Prarthana Roselil, Oncology 2. Dr. Jashree T S, Pathology	1. Mr. Robert Nickelson T 2. Mr. Jaya Raj C

42. J K Cancer Institute, Kanpur

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. S N Prasad, Director Co-Principal Investigator 1. Dr. Mohd W Raza, Assistant Professor	1. Mr. Ajay Diwakar 2. Mr. Tanay Pathak

43. J.N. Medical College & Hospital, Aligarh

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Prof. Shahid Ali Siddiqui, Principal, Professor, Dept. of Radiotherapy and Clinical Oncology Co-Principal Investigator 1. Prof. Sayeedul Hasan Arif, Chairman and Professor, Dept. of Pathology 2. Prof. Kafil Akhtar, Professor, Dept. of Pathology	1. Dr. Syed Amaan Ali 2. Ms. Sameer Sherwani 3. Ms. Bilal Baig 4. Mr. Rahil Khan 5. Mr. Mohd Adil 6. Mr. Syed Mohd Osama 7. Mr. TariqueWali 8. Mr. Irfan Ali

44. Jhalawar Medical College and SRG hospital, Jhalawar

Year of Establishment: 2020

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Rishi Diwan, Sr. Professor, Dept. of Pathology Co-Principal Investigator 1. Dr. Arun Kumar Patel, Sr. Professor, ENT	1. Dr. Monika Shekhawat

45. JIPMER, Regional Cancer Centre, Puducherry

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Gunaseelan K, Additional Professor & Head, Dept. of Radiation Oncology (2012 to March 2019) <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Kadambari D, Professor & Head, Dept. of Surgery (2012 to March 2019) 2. Dr. Sunil Kumar Saxena, Professor & Head, Dept. of Ent (2012 to March 2019) 3. Dr. Latha Chaturvedula, Professor & Head, Dept. of Obstetrics & Gynaecology (2012 to March 2019) 4. Dr. Sunu Lazar Cyriac, Assistant Professor, Dept. of Medical Oncology (2012 to March 2019) 5. Dr. Biswajit Dubashi, Additional Professor, Dept. of Medical Oncology 6. Dr. Debasis Gochhait, Additional Professor, Dept. of Pathology (2012 to March 2019) 7. Dr. Pampa Ch. Toi, Additional Professor, Dept. of Pathology (2012 to March 2019) 8. Dr. Srinivas B H, Additional Professor, Dept. of Pathology (2012 to March 2019) 9. Dr. G S Sreenath, Additional Professor, Dept. of General Surgery (2012 to March 2019) 10. Dr. Prasanth Penumadu, Associate Professor, Dept. of Surgical Oncology (2012 to March 2019) 11. Mr. Harichandrakumar K.T, Assistant Professor, Dept. of Biostatistics (2012 to March 2019) 12. Dr. Vivekanandam, Professor & Head (Retd.), Dept. of Radiation Oncology (2012 to March 2019) 13. Dr. Pooja Sethi, Assistant Professor, Dept. of Radiation Oncology 	<ol style="list-style-type: none"> 1. Dr. Aswiny P 2. Ms. Benisha RM 3. Mrs. Anchala Mary A 4. Mr. Boominathan R 5. Mr. Saranraj G 6. Ms. Anupama A.P 7. Mrs. Akila T 8. Mr. Nagaraj K 9. Mr. Vigneshwaran K

46. Kasturba Medical College Hospital, Mangaluru

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. B Unnikrishnan, Additional Dean & Professor, Dept. of Community Medicine	1. Ms. Mamatha 2. Ms. Shrikirthi K
Co-Principal Investigator 1. Dr. P U Prakash Saxena, Professor & Head Dept. of Radiation Oncology 2. Dr. B Reshmi, Associate Professor & Head Dept. of Health Information Management, MCHP 3. Dr. Priya Rathi, Associate Professor of Community Medicine	

47. Kidwai Memorial Institute of Oncology, Bengaluru

Year of Establishment: 1984

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. C Ramachandra, Director, Professor & Unit IHead, Dept. of Surgical Oncology	1. Mr. D J Jayaram 2. Mr. T Venkatesh 3. Mr. M K M Gowda 4. Mrs. B J Kumudhini 5. Mr. P Manjunath
Co-Principal Investigator 1. Dr. C Ramesh, Professor and Head, Dept. of Epidemiology and Biostatistics 2. Mr. C R Vijay, Assistant Professor, Dept. of Epidemiology and Biostatistics	6. Mr. C S Dayananda 7. Mr. K Venkatesh 8. Mr. A Subramani 9. Mr. C Kumar

48. King George Medical University, Lucknow

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Kirti Srivastava, Professor, Dept. of Radiotherapy 2. Dr. Arun Chaturvedi, Prof & Head, Dept. of Surgical Oncology (till July 2021)	1. Dr. Parimal Dubey 2. Ms. Jyotima Shrivastava
Co-Principal Investigator 1. Dr. Sumaira Qayoom, Associate Professor Dept. of Pathology 2. Dr. Shiv Rajan, Assistant Professor Dept. of Surgical Oncology 3. Dr. Mrinalini, Assistant Professor, Dept. of Radiotherapy 4. Dr. Puneet Prakash, Assistant Professor, Dept. of Surgical Oncology	

49. Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute, Mumbai

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Rajesh Mistry, Director, Dept. of Surgical Oncology	1. Dr. Sonali Satam 2. Ms. Priyanka Jansi Rani
Co-Principal Investigator 1. Dr. Imran Shaikh, Consultant, Medical Oncology	

50. Kolhapur Cancer Centre, Kolhapur

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator
Principal Investigator 1. Dr. Reshma Pawar, Executive Director, Dept. of Surgical Oncology
Co-Principal Investigator 1. Dr. Yogesh Anap

51. Kovai Medical Centre and Hospital, Coimbatore

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Madhu Sairam R, Consultant, Dept. of Radiation Oncology	1. Ms Stephy Sebastian 2. Ms Akshara K R
Co-Principal Investigator 1. Dr Subramaniam R	

52. Lakeshore Hospital and Research Centre Ltd., Kochi

Year of Establishment: 2011

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. V P Gangadharan, HOD, Dept. of Medical and Pediatric oncology	1. Remya D Das
Co-Principal Investigator 1. Dr. Anupama G, Senior Consultant 2. Dr. Annu Susan George, Consultant	

53. Madras Cancer Care Foundation, Chennai

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. S G Ramanan, Director, Dept. of Medical Oncology	1. Dr. Kanimozhi 2. Mrs. S Mahalakshmi
Co-Principal Investigator 1. Dr. Vikash Mahajan, Surgical Oncologist 2. Dr. Lakshmi Narayana, Surgical Oncologist Head & Neck Surgeon 3. Dr. M Janarthinakani, Clinical Oncologist	

54. Madras Medical College, Chennai

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. S G D Gangadharan, Dept. of Medical Oncology 2. Prof. Dr. K V S Latha, Dept. of Medical Oncology (till March 2021)	1. Mrs. S Gayathri 2. Mr. A Periyadurai
Co-Principal Investigator 1. Prof.(Dr.) T N Vijaya Sree 2. Dr. S Suresh Kumar 3. Dr. E Senthil Kumar	

55. Mahavir Cancer Sansthan and Research Centre, Patna

Year of Establishment: 2015

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Rita Rani, Sr. Consultant Radiation Oncologist, Department of Radiation Oncology	1. Ms. Sweta Kumari 2. Mr. Jitendra Kumar 3. Ms. Anshu Kumara
Co-Principal Investigator 1. Dr. Vinita Trivedi, Head & Sr. Consultant Radiation Oncologist 2. Dr. Santosh Shubham, Senior Medical Officer 3. Dr. Vasudha Singh, Senior Medical Officer 4. Dr. Sucheta, Senior Resident 5. Dr Hariharnath Tiwari, Senior Resident	

56. Malabar Cancer Centre, Kannur

Year of Establishment: 2011

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Saina Sunilkumar, Lecturer/HOD, Dept. of Cancer Registry & Epidemiology	1. Mr. Nijin P 2. Ms. Subina K
Co-Principal Investigator 1. Ms. Bindu T, Lecturer – Biostatistics 2. Mr. Ratheesan K, Lecturer – Biostatistics 3. Dr. Satheesan B, Director , MCC	

57. Mandya Institute of Medical Sciences, Mandya

Year of Establishment: 2015

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Venkatesh N, Associate Professor & Dept. of Surgical Oncologist, TCCC	1. Ms. Sadhana H S, Project Assistant & D.E.O
Co-Principal Investigator 1. Dr. Ranganathan T, Associate Professor & Dept. of Radiation Oncologist 2. Dr. Shivakumar, Professor, Dept. of Pathology	

58. Max Super Speciality Hospital, PPG, Delhi

Year of Establishment: 2015

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Geeta Kadayaprath, Director, Dept. of Surgical Oncology	1. Mr. Farhan Siddiqui 2. Ms. Poonam
Co-Principal Investigator 1. Dr. Meenu Walia, Senior Director, Dept. of Medical Oncology	

59. Max Super Speciality Hospital, Saket, New Delhi

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Anil Kumar Anand, Principal Director, Dept. of Radiation Oncology (till Sept. 2021)	1. Mr. Naseem Khan 2. Mr. Ankit Kumar 3. Mr. Shailender Rathore 4. Mr. Arun Adhana 5. Mrs. Kamlesh Kumari
Co-Principal Investigator 1. Dr. Ramandeep Singh Arora, Sr. Consultant, Dept. of Paediatric Oncology 2. Dr. Charu Garg, Associate Director, Dept. of Radiation Oncology 3. Dr. Deepak Mittal, Consultant, Dept. of Radiation Oncology 4. Dr. Urmi Mukherjee, Director & Head of Histopathology Institute of Surgical & Anatomical Pathology & Transfusion Services	

60. Max Super Speciality Hospital, Shalimar Bagh, New Delhi

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> Dr. Vineeta Goel, Associate Director, Dept. of Radiation Oncology Dr. Ranga Rao, Director, Dept. of Medical Oncology 	<ol style="list-style-type: none"> Mr. Shailender Rathore
Co-Principal Investigator <ol style="list-style-type: none"> Dr. Waseem Abbas, Consultant, Medical Oncology 	

61. Max Super Speciality Hospital, Vaishali

Year of Establishment: 2018

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> Dr. Vaishali Zamre, Sr. Consultant, Dept. of Radiation Oncology Dr. Shubham Garg, Consultant, Dept. of Surgical Oncology 	<ol style="list-style-type: none"> Mr. Arif Mr. Shailender Rathore
Co-Principal Investigator <ol style="list-style-type: none"> Dr. Vikas Goswami, Consultant, Dept. of Medical Oncology 	

62. Medanta Cancer Centre, Gurugram

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> Dr. Tejinder Kataria, Chairperson, Dept. of Radiation Oncology 	<ol style="list-style-type: none"> Mr. Joseph John
Co-Principal Investigator <ol style="list-style-type: none"> Dr. Ashok Vaid Dr. Deepak Gupta 	

63. Meherbai Tata Memorial Hospital, East Singhbhum

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> Dr. Moujhuri Nandi, Head, Dept. of Radiation Oncology 	<ol style="list-style-type: none"> Mr. Inamur Rahman Ms Mahima Hembram
Co-Principal Investigator <ol style="list-style-type: none"> Dr. Vanita Pandey, Head, Dept. of Pathology 	

64. MES Medical College & Hospital, Perinthalmanna

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 2. Dr. Muhammed Sajid, Medical superintendent Co-Principal Investigator 1. Dr. Shoufeej P M, Medical oncologist	1. Ms. Rajani.K

65. Mizoram State Cancer Institute (Civil Hospital), Aizawl

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. B Zothankima, HOD, Dept. of Radiation Oncology Co-Principal Investigator 1. Dr. Jeremy L Pautu, HOD, Medical Oncology (from August 2014 to till date) 2. Dr. K Lalfakzuala, Radiation Oncologist 3. Dr. Lalhlupuii, Radiation Oncologist 4. Dr. Cindy Lalthanpuii, Radiation Oncologist 5. Dr. Doris Lallawmzuali, Pathologist	1. Dr. C Hmingthansanga (August 2014 to August 2015) 2. Dr. Lalremruati Renthlei (April 2018 to May 2019) 3. Dr. Vanlalremsangpuii (June 2019 to February 2020) 4. Dr. Vanlalchhuanga 5. Mr. Robert Rokhamliana 6. Ms. Rebecca V L Renthlei 7. Lalmalsawmi Hnamte (August 2014 to August 2015) 8. Gospel Laldinpuii (April 2018 to August 2020) 9. Lalruatpuii 10. K Lalhruaitluanga 11. Lalthianghlina (August 2014 to August 2015) 12. Lalhriatchhungi (August 2014 to May 2015) 13. LalrindikaHmar (April 2018 to Sept 2020) 14. Lalhmingangi 15. Lalrinthanga Chhakchhuak

66. MNJ Institute of Oncology and Regional Cancer Centre, Hyderabad

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. S Sai Mallikarjun, Principal Investigator, Dept. of Pathology	1. Mr. C Shivaiah 2. Mr. S Srinivas Goud 3. Mr. M Sinda Raju 4. Ms. Nirmala Devi

67. Monsignor Joseph Kandathil Memorial Cancer Research Centre, Alappuzha

Year of Establishment: 2019

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Surij Salih, Senior consultant, Dept. of Surgical Oncology Co-Principal Investigator 1. Dr. K Somarajan 2. Dr. C S Madhu	1. Ms. Parvathy Sreekumar

68. MVR Cancer Center and Research Institute, Kozhikode

Year of Establishment: 2018

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Nirmal C, Consultant, Dept. of Community Oncology	1. Mr. Shan P M 2. Ms. Anju Mathew 3. Mr. Shaji M G
Co-Principal Investigator 1. Dr. Narayanan Kutty Warriar, Medical Director	

69. Naga Hospital Authority, Kohima

Year of Establishment: 2019

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Vinotsole Khamo, Dept of Pathology & Healthcare Laboratory & Research Centre	1. Dr. Vetsolu Hiese 2. Kevezo 3. Mr. Neithovilie Keyho 4. Mezikholu Zango 5. Sierhevi Nyuwi
Co-Principal Investigator 1. Dr. C. Wathsutho Nyuthe 2. Dr. Zuchamo Patton	

70. Narayana Hrudayalaya Health City, Bengaluru

Year of Establishment: 2011

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Pragnya Coca, Senior Consultant, Dept. of Medical Oncology 2. Dr. Alben Sigamani, Group Head, Dept. of Clinical Research (till May 2021)	1. Ms. Genel Dsouza 2. Ms. Veena 3. Ms. Roopa B 4. Ms. Lavanya R 5. Ms. Mamatha H 6. Ms. Bharathi
Co-Principal Investigator 1. Dr. Moni Kuriakose, Head, Head & Neck Surgery 2. Dr. Rohit Ragunathranade, Head, Oncology Gynaec 3. Dr. Vikneswaran G, Associate Consultant	

71. Nayathi Health Care, Mathura

Year of Establishment: 2018

Principal Investigator & Co-Principal Investigator
Principal Investigator 1. Dr. Santanu Chaudhuri, Chairman and Senior Consultant, Dept. of Radiation Oncology
Co-Principal Investigator 1. Dr. Neeraj Kumar, Attending Consultant Dept. of Clinical Oncology

72. Nizams Institute of Medical Sciences, Hyderabad

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> Dr. Sadashivudu Gundeti, Additional Professor and Head, Dept. of Medical Oncology <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> Dr. Bala Stalin Chowdary, Assistant Professor Dr. Srihari Uppalapati, Research Officer Dept. of Medical Oncology 	<ol style="list-style-type: none"> Mr. Doli Mahesh Mr. Srikanth Vemula

73. North East Cancer Hospital& Research Institute, Guwahati

Year of Establishment: 2015

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> Dr. Gazi Naseem Ahmed, Histopathologist & Cytologist <p>Co- Principal Investigator</p> <ol style="list-style-type: none"> Dr. Dherin Nath, Head and Neck Oncologist Dr. Imliwati Longkumer, Biochemist 	<ol style="list-style-type: none"> Mr. Bedanta Deka Ms. Parbati Sharma

74. Peerless Hospitex Hospital and Research Center Limited, Kolkata

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> Dr. Madhuchanda Kar, Senior consultant & Clinical director, Dept. of Oncology <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> Dr. Digbijoy Choudhury, Senior Registrar Medicine (2017 to march 2019) Dr. Sanjoy Sen, Onco-Surgeon 	<ol style="list-style-type: none"> Dr. Avishek Halder (June2017 to May 2019) Mr. Kingshuk Goswami (2019 June 2020) Mr. Puja Bhattacharya Mr. Baishakhi Chatterjee

75. PGIMER, Chandigarh

Year of Establishment: 2011

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Sushmita Ghoshal, Professor & Head, Dept. of Radiotherapy 2. Dr. S.C. Sharma, Professor & Former Head, Dept of Radiotherapy (2011 to 2014) <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Sushmita Ghoshal, Professor (2011 to 2014) 2. Dr Rakesh Kapoor, Professor (2011 to 2020) 3. Dr. Narender Kumar, Professor (2011 to 2018) 	<ol style="list-style-type: none"> 1. Ms. Neeru Moudgil 2. Mr. Vikas Kapoor 3. Ms. Anita Rani 4. Mr. Anup Verma 5. Ms. Pooja Rawat 6. Mr. Amit Kumar 7. Ms. Tanvi Jindia 8. Mr. Sanjay (September 2016 to September 2018) 9. Mr. Anil Kumar (March 2011 to May 2016) 10. Ms. Jyoti Thakur (November 2012 to May 2017) 11. Mr. Milan Kumar (May 2013 to March 2016) 12. Mr. Jagmeet Bajwa (May 2011 to November 2012) 13. Dr. Nagarjun Ballari (February 2017 to June 2017) 14. Dr. D. Niharika (April 2015 to May 2016) 15. Dr. Deepak Kumar (September 2016 to December 2016)

76. Pravara Rural Hospital& Rural Medical College, Loni

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Vandana Jain, Professor, Dept. of Radiation Oncology 2. Late Dr. K. K. Singh, Professor & Former Head, Dept. of Oncology (2008 to 2015) <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr. Chaitali Waghmare 2. Dr. Nayana Jagtap (2016 to 2017) 3. Dr. Tejal Kadaskar (2017 to 2018) 	<ol style="list-style-type: none"> 1. Mr. Jadhav Sachin (2008 to 2016) 2. Mr. Kakade Sunil (2017 to 2018) 3. Mr. Pawar Vijay (2018 to 2019) 4. Mr. Bhaskar Datir 5. Mr. Maghade Rohit 6. Mrs. Sangita Pandit 7. Dr. Padmini Nirmal

77. Pushpagiri Institute of Medical Sciences & Research Centre, Tiruvalla

Year of Establishment: 2015

Principal Investigator & Co-Principal Investigator
<p>Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr V U Thankamma, Professor & Head, Dept. of Radiation Oncology <p>Co-Principal Investigator</p> <ol style="list-style-type: none"> 1. Dr Jessie M M, Professor & Head

78. Rajiv Gandhi Cancer Institute and Research Centre, New Delhi

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. Dr Col. (Retired) Anurag Mehta, Director - Dept. of Lab. & Transfusion Services and Director Research 2. Dr Sudhir Rawal, Medical Director and Chief of GenitoUro - Oncology Services, Dept of Urogenital Oncology (2016 to 2018) 3. Dr A.K. Dewan, Director, Dept. of Head and Neck Surgical Oncology (2012 to 2016) Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. Swarupa Mitra, Sr. Consultant, Dept. of Radiation Oncology 2. Ms. Swarnima Jaitley, Head of Philanthropic Services 	<ol style="list-style-type: none"> 1. Ms. Priyanka Gupta 2. Ms. Deepika Paliwal 3. Ms. Khusboo 4. Ms. Garima Dhirayan 5. Ms. Shweta 6. Ms. Suman 7. Mr. Deepak Negi 8. Mr. Karan Kumar 9. Mr. Janit Giri

79. Regional Cancer Centre Indira Gandhi Medical College, Shimla

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. Dr. Manish Gupta, Prof. & Head, Dept. of Radiotherapy 2. Dr. Rajeev Seam, Prof. & Head, Dept. of Radiotherapy (2012 to June 2018) Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. Sudarshan Sharma, Prof. & Head Dept. of Pathology 	<ol style="list-style-type: none"> 1. Dr. Siddharth Vats 2. Ms. Neha Sharma 3. Ms. Anamika 4. Ms. Kumari Lucky 5. Mr. Pawan Kumar 6. Mr. Nishanth Sharma 7. Ms. Neha Gautam 8. Mr. Suman Verma

80. Regional Cancer Centre Kamala Nehru Memorial Hospital, Prayagraj

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. Dr. B Paul Thaliath, Addl. Director Medical & Head, Dept. of Radiation Oncology Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. Radha Ghosh, Sr. Consultant, Radiation Oncology 	<ol style="list-style-type: none"> 1. Dr. Sadhana Dwivedi 2. Mr. Alok Kumar Mishra 3. Ms. Bushra Firdous 4. Ms. Helen Dass 5. Mr. Ekta Sivastava 6. Ms. RenuPuspaker 7. Ms. NabiyaKausar 8. Mr. Krishna Kumar 9. Ms. Roshani Mishra

81. Regional Cancer Centre, Agartala

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Gautam Majumdar, Medical Superintendent Co-Principal Investigator 1. Dr. Partha Sarathi Sutradhar 2. Dr. Biswajit Debbarma 3. Dr. Dhritiman Datta	1. Dr. Ramkrishna Banik 2. Mr. Gopal Sarkar 3. Smt. Lakhi Roy Dhar 4. Mr. Litan Banik 5. Smt. Rupa Deb 6. Mr. Mithan Datta 7. Mr. Dhiman Debbarma 8. Ms. Sudesna Bhattacharjee 9. Mr. Nirmal Dey

82. Regional Cancer Centre, Raipur

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Vivek Choudhary, Dean cum Director RCC, Dept. of Radiation Oncology Co-Principal Investigator 1. Dr. Pradeep Kumar Chandrakar, Associate Professor, Dept. of Radiation Oncology	1. Ms. Madhuri Shukla 2. Ms. Sudha Shrivastava 3. Mr. Chandrabhan Marawi 4. Mr. Yogesh Sahu 5. Mr. Dharmraju

83. Regional Cancer Centre, Thiruvananthapuram

Year of Establishment: 1984

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Aleyamma Mathew, Professor & Head, Dept. of Epidemiology & Biostatistics 2. Dr. Paul Sebastian, Director & Professor, Dept. of Surgical Oncology (till August 2018) Co-Principal Investigator 1. Dr. Preethi Sara George, Additional Professor 2. Dr. Aleyamma Mathew, Professor (till September 2018) 3. Dr. Beela Sarah Mathew, Professor 4. Dr. Francis V James, Professor 5. Dr. Kainikkal CT, Additional Professor	1. Dr. Nirmal KB 2. Ms. Sreekala S 3. Ms. Sreelatha D 4. Ms. Sreekala S 5. Ms. Sunitha Kumari CS 6. Mr. Accamma Mathew 7. Mr. Ashok Kumar BS 8. Mr. Shiji Abraham 9. Mr. Nanda KL

84. Regional Institute of Medical Sciences, Imphal

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. Dr. Sushma Khuraijam, Professor & Head, Dept. of Pathology 2. Dr. Ph. Madhubala Dev, Professor & Head, Dept. of Pathology (2017 to 2020) 3. Dr. Kaushik Debnath, Professor & Head Dept. of Pathology (2015 to 2017) Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. Punyabati P, Professor, Dept. of Pathology (2015 to 2019) 2. Dr. Y. Indibor, Professor & Head, Dept. of Pathology 3. Dr. L. Rajesh Singh, Associate Professor, Dept. of Pathology 4. Dr. Sushma Khuraijam, Associate Professor, Dept. of Pathology (2019 to 2020) 5. Dr. Sorokhaibam Babina, Associate Professor, Dept. of Pathology (2019 to 2020) 	<ol style="list-style-type: none"> 1. Dr. Huining shumbam Bankim Singh 2. Mr. Yaikhom Rabindrakumar 3. Mr. Leingakpa Ningthoujam 4. Mr. Steffi Nongmeikapam 5. Ms. Khumukcham Monica 6. Mr. Reberio Meinam 7. Ms. Laishram Thoujal Heiba

85. RST Regional Cancer Hospital, Cancer Relief Society, Nagpur

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. Dr. Anjali Kolhe, Sr. Consultant, Dept. of Anesthesia & Pain Clinic 2. Dr. B K Sharma, Honorary Consultant, Dept. of Head and Neck (till Sept. 2020) Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. Amol Hedaw, Dental Oncosurgeon 	<ol style="list-style-type: none"> 1. Dr. R B Randiwe 2. Ms. Dipti Yadav 3. Ms. Nanda Kolhe 4. Ms. Snehal Chauhan 5. Mr. Vishnudas Sharnagat 6. Mr. Dinesh Lokhande 7. Ms. Mamta Rewatkar 8. Mrs. Sarika Dhote 9. Mr. Mayur Sarode

86. Rural Development Trust, Bathalapalle

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. DR. N Hariharanadha Sarma, Consultant, Dept. of Pathology Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. S M Kannan, Consultant Anaesthetist 2. Dr. K Sudheer Kumar, Consultant Surgeon 	<ol style="list-style-type: none"> 1. Mrs. Bhavani

87. Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Punita Lal, Professor & Head, Department of Radiotherapy Co-Principal Investigator 1. Dr. R Harshvardhan, Professor 2. Dr. K J Maria Das, Additional Professor 3. Dr. Rakesh Pandey, Professor 4. Dr. Uttam Singh, Professor	1. Dr. TapasiBarai 2. Mrs. Kirti Bajpai 3. Ms. Jyoti Verma 4. Mr. Amit Verma 5. Ms. Sidra Qidwai 6. Ms. Akshla Singh 7. Ms. Anamika Awasthi 8. Mr. Vibhu Chaturvedi 9. Mr. Kuldeep Gupta

88. Sher-I-Kashmir Institute of Medical Sciences, Srinagar

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Prof. Fir Afroz, Professor & Head, Dept. of Radiation Oncology 2. Dr. Mohammad Maqbool Lone, Professor & Former Head, Dept. of Radiation Oncology Co-Principal Investigator 1. Dr. Nazir Ahmad Khan, Professor, Dept. of Radiation oncology	1. Dr. Shandana Farooq Bhat 2. Ms. Foziya Zargar 3. Ms. ShaistaSidiq Pandit 4. Ms. Muneera Akhter 5. Ms. Bisma Showkat 6. Ms. Nahida Rashid 7. Ms. Aaliya Amir 8. Mr. Mohammad Asif Sheikh 9. Mr. Naveed Ahmad Bhat

89. St. Johns Medical Hospital, Bengaluru

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Rakesh S Ramesh, Associate Professor & Head, Dept. of Surgical Oncology 2. Dr Elizabeth Vallikad, Prof & Head, Dept. of Gynaecologic Oncology (till March 2018) Co-Principal Investigator 1. Ms. Kalpana V, Co-Investigator & Cancer Registrar	1. Ms. Mallika Devi R 2. Ms. Pooja H.E 3. Ms. Lavanya A.S

90. State Cancer Institute, Guwahati

Year of Establishment: 2018

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Prof. Dr. Kanakeswar Bhuyan, Superintendent	1. Dr. Abhinav Agarwal 2. Mr. Bhaskarjyoti Talukdar 3. Ms. Jhilaam Gautam 4. Ms. Pompei Roy 5. Mrs. Rumi Das Nath 6. Ms. Kiron Rajkumari 7. Mr. Soumen Banerjee 8. Mr. Dhruvjayoti Talukdar 9. Mr. Aminul Alom Ahmed
Co-Principal Investigator 1. Dr. Neelakshi Mahanta, Associate Professor 2. Dr. Barasha Sarma Bhardwaj, Assistant Professor & Consultant (Pathology) 3. Mr. Ridip Talukdar, MRT (Medical Record Department)	

91. Tata Medical Center, Kolkata

Year of Establishment: 2014

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. Indranil Mallick, Senior Consultant, Dept. of Radiation Oncology	1. Mrs. Sarita Kumari 2. Mrs. Sreyashi Samanta 3. Mr. Mayukh Biswas 4. Ms. Ruma Sarkar 5. Ms. Sayani Dey 6. Ms. Tandra Manna
Co-Principal Investigator 1. Dr. Sanjit Agarwal, Associate Consultant 2. Dr. Jaydip Bhaumik, Senior Consultant 3. Ms. Antara Dey	

92. Tata Memorial Hospital, Mumbai

Year of Establishment: 1984

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator 1. Dr. R A Badwe, Director, Dept. of Surgery	1. Mrs. Sapna Kothare 2. Ms. Sushama L. Saoba 3. Mrs. Sandhya A Cheulkar 4. Mrs. Ashwini R Patil 5. Mrs. Monika Sarade 6. Mrs. Amruta A Mhatre 7. Mrs. Deepali N Lokhande 8. Mrs. Suvarna Kolekar 9. Mrs. Esha Dashmukhe 10. Ms. Prachi Joshi 11. Mr. Narpal Padvi 12. Mr. Mahadev Bhise 13. Dr. Rajshree Gaidhani 14. Ms. Kirtee Pardhi 15. Mrs. MitaliSapkal
Co-Principal Investigator 1. Dr. Rajesh Dikshit, Director, Centre for Cancer Epidemiology 2. Dr. Ganesh B, Former Prof. & Head, Dept. of Medical Records, Biostatistics and Epidemiology. (till June 2021)	

93. The Gujarat Cancer & Research Institute, Ahmedabad

Year of Establishment: 2013

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. Dr. Shashank Pandya, Director, Dept. of Surgical Oncology 2. Dr. Rakesh Vyas, Former Director, Dept. Radiation Oncology (till February 2018) 3. Dr. Shilin Shukla, Former Director, Dept. of Medical Oncology (till September 2013) Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. Anand Shah, Assistant Professor, Dept. of Community Oncology and Medical Records 2. Dr. Janmesh Shah, Assistant Professor, Dept. of Community Oncology and Medical Records (August 2016 to November 2019) 3. Dr. Geeta Joshi, Deputy Director (till July 2017) 4. Dr. Parimal Jivarajani, Associate Professor, Dept. of Community Oncology and Medical Records (till August 2014) 	<ol style="list-style-type: none"> 1. Dr. Dhruv Patel 2. Ms. Vaishali Ravani 3. Mr. Vishal Patel 4. Mr. Viral Parmar 5. Mr. Vahidhusain Mathakiya 6. Mr. Ravikant Parmar 7. Ms. Vaishakhi D Soni 8. Ms. Geeta Parmar 9. Ms. Hiral Chauhan

94. Tirunelveli Medical College, Tirunelveli

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
Principal Investigator <ol style="list-style-type: none"> 1. Dr. K Shantaraman MD, Vice Principal & Professor & Head, Dept of Pathology Co-Principal Investigator <ol style="list-style-type: none"> 1. Dr. S S Sundaram MS MCH, Professor & Head 2. Dr. J Devivanayagam MD DM, Professor & Head 3. Dr. J Suresh Durai MD, Professor 4. Dr. V Arumugam MD DM, Professor & Head 	<ol style="list-style-type: none"> 1. Mr. J Solomon Jenifer Raj 2. Mrs. Shankari

95. Vivekananda Cancer Hospital, Latur

Year of Establishment: 2017

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <p>1. Dr. Ashok L Kukade, Founder Trustee</p> <p>Co-Principal Investigator</p> <p>1. Dr. Brij mohan Zanwar, Surgical Oncologist</p>	<p>1. Dr. Sadhana Kaname</p> <p>2. Dr. Devendra Tandale</p> <p>3. Mr. Shrikant Pawar</p> <p>4. Mr. Abhijeet Sonavane</p> <p>5. Ms. Smita Kukade</p> <p>6. Mr. Ajay Jadhav</p> <p>7. Ms. Ashwini Inamdar</p> <p>8. Mr. Shrinivas Salunke</p> <p>9. Mr. Manoj Deshpande</p>

96. Vydehi Institute of Medical Sciences, Bengaluru

Year of Establishment: 2012

Principal Investigator & Co-Principal Investigator	Staff Details
<p>Principal Investigator</p> <p>1. Dr. M S Ganesh, Prof. & Head, Dept. of Oncology Principal Investigator</p> <p>Co-Principal Investigator</p> <p>1. Dr. Aruna E Prasad, In-charge, Preventive Oncology (till Dec 2020)</p> <p>2. Dr. Manjunath N, Associate Professor, Dept. of Medical Oncology</p>	<p>1. Ms. Jahnavi Hatti</p> <p>2. Mr. Raja J</p> <p>3. Mrs. Mythreyi O</p>

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Ways for Cancer Prevention and Control

Health systems strengthening:

People centric, diagnostics & treatment, timely referrals & follow up.



Universal health coverage:

No one is left behind



Community empowerment:

Health literacy, stigmatization, home care



Multi sectorial actions:

To minimize risks, health promotion



Health promotion:

To include healthy lifestyles



Policy and Programmes



Risk Reduction

No tobacco use:

Smoking, smokeless, avoid second hand smoke



No alcohol:

No initiation, cessation to be encouraged



Eat healthy diet:

Low in salt, sugar, fats; green leafy vegetables; fresh fruits & legumes



Physical activity:

Enhance daily activity levels, avoid sitting for long hours



Vaccination:

Hepatitis B, HPV



Early Detection



Comply with treatment advised:

Early treatment can cure many cancers and reduce its severity



Seek prompt medical advice:

For persisting abnormal complaints



Participate in cancer screening activities:

As per norms of eligibility



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