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

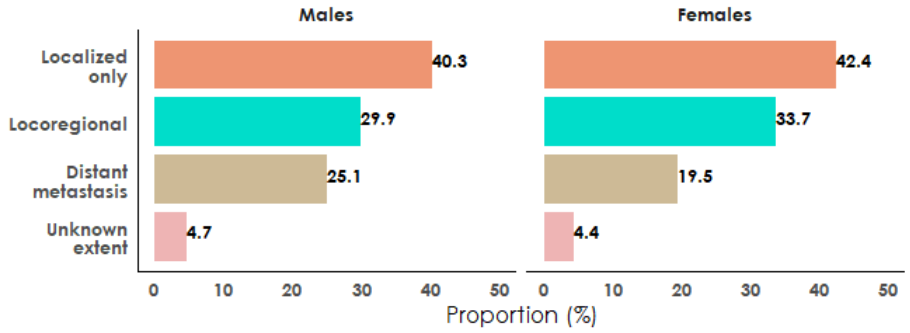

Figure 6.6.1: Clinical extent of disease (%): Cancer of kidney in males and females

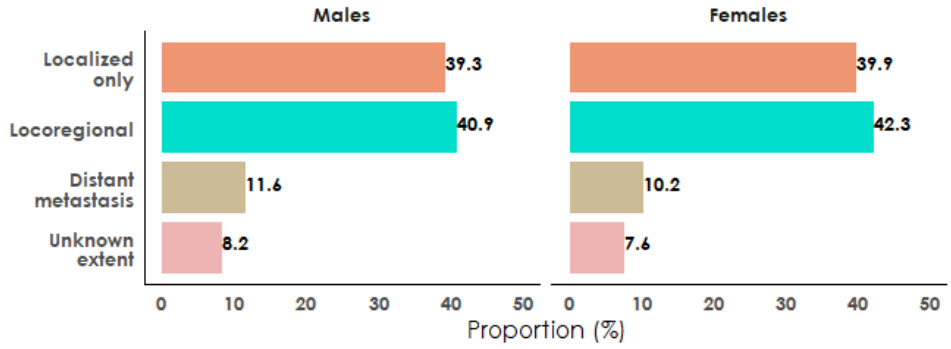

Figure 6.6.2: Clinical extent of disease (%): Cancer of bladder in males and females

6.7 Intention to treat

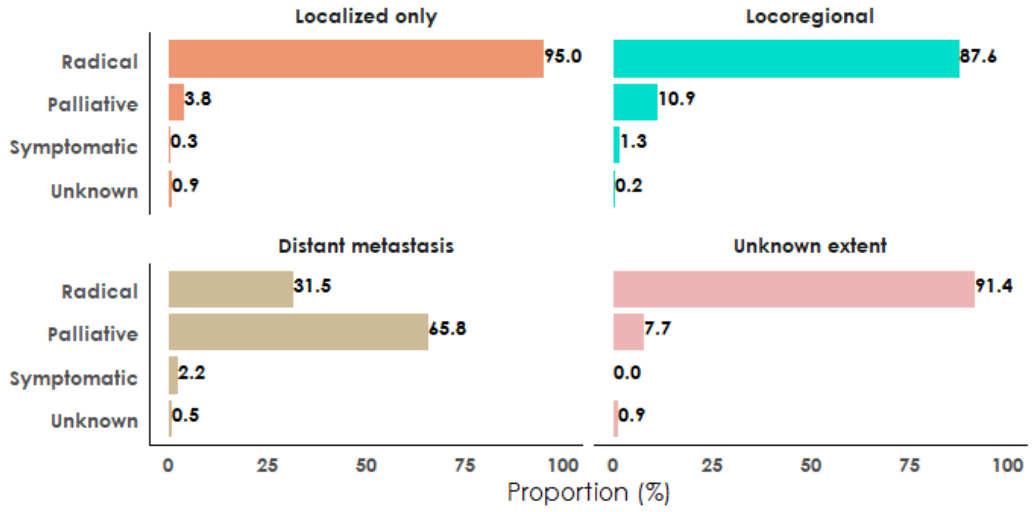

Figure 6.7.1: Intention to treat according to clinical extent of disease (%) - Cancer of kidney (Both Sexes)

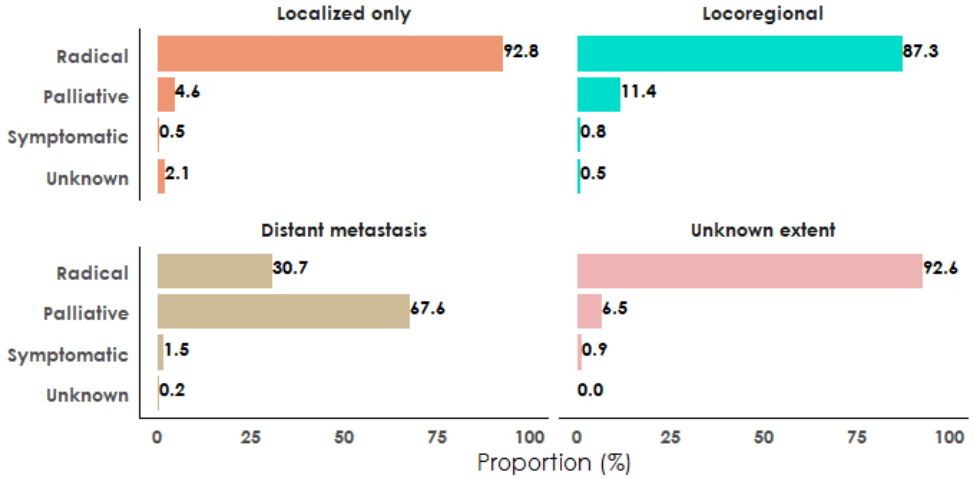

Figure 6.7.2: Intention to treat according to clinical extent of disease (%) - Cancer of bladder (Both Sexes)

6.8 Treatment modalities according to clinical extent of disease

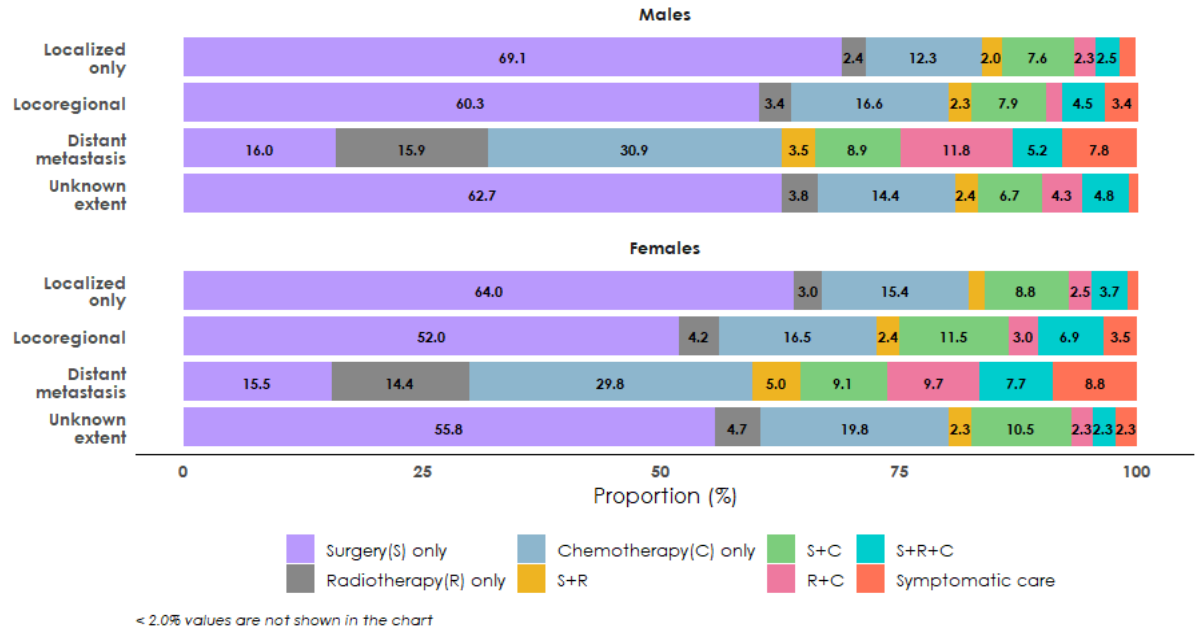

Figure 6.8.1: Type of treatment according to clinical extent of disease (%) - Cancer of kidney (Both Sexes)

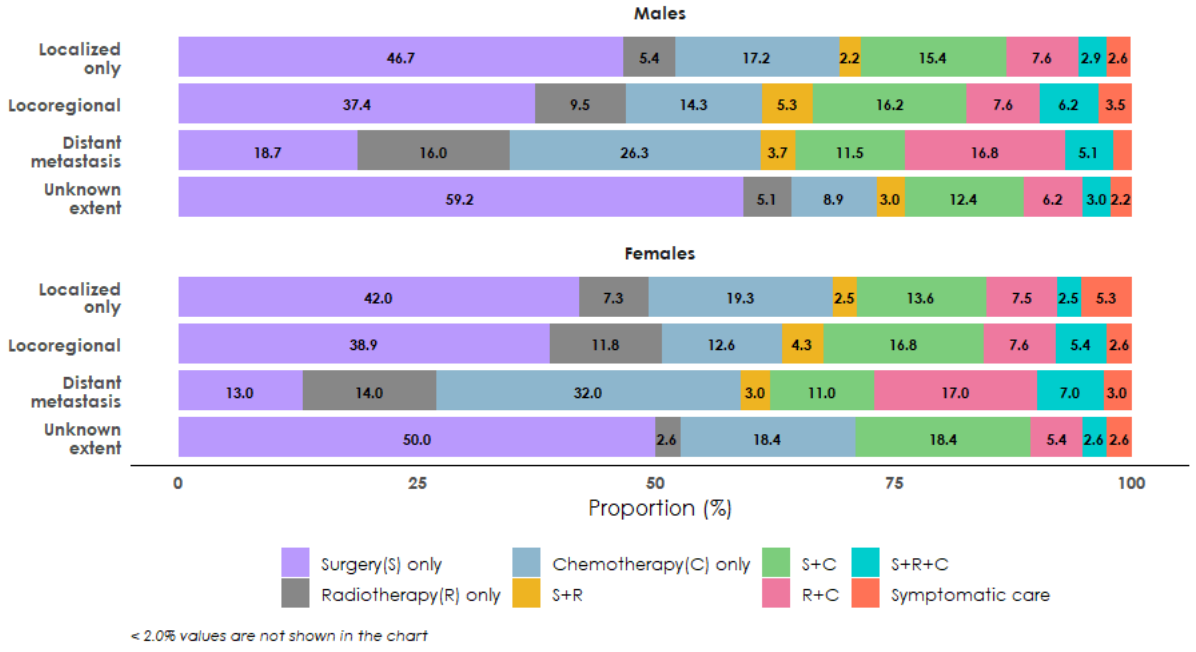

Figure 6.8.2: Type of treatment according to clinical extent of disease (%) - Cancer of bladder (Both Sexes)

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

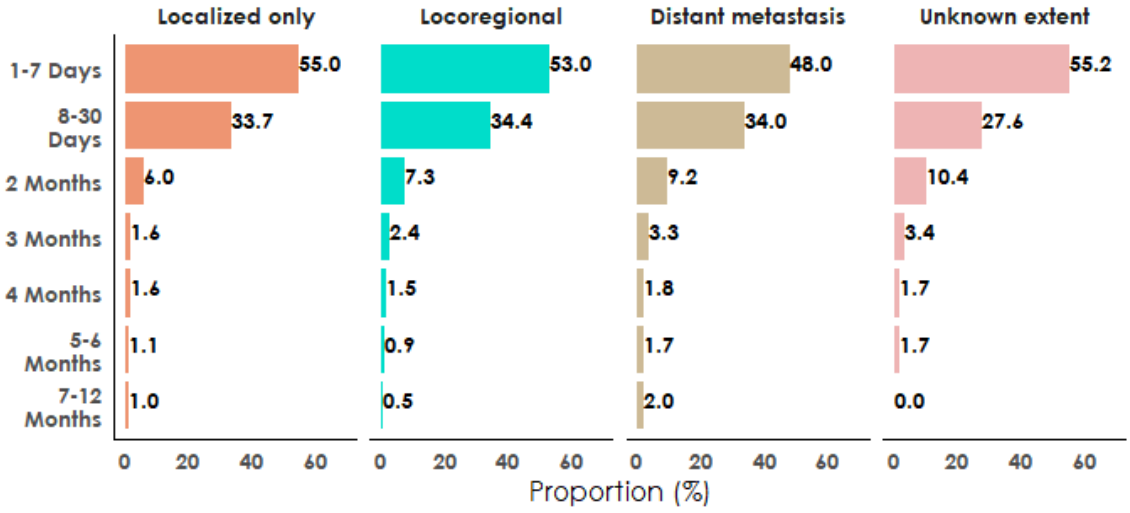

Figure 6.9.1a: Time between diagnosis and first attendance at reporting institution – kidney cancer

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

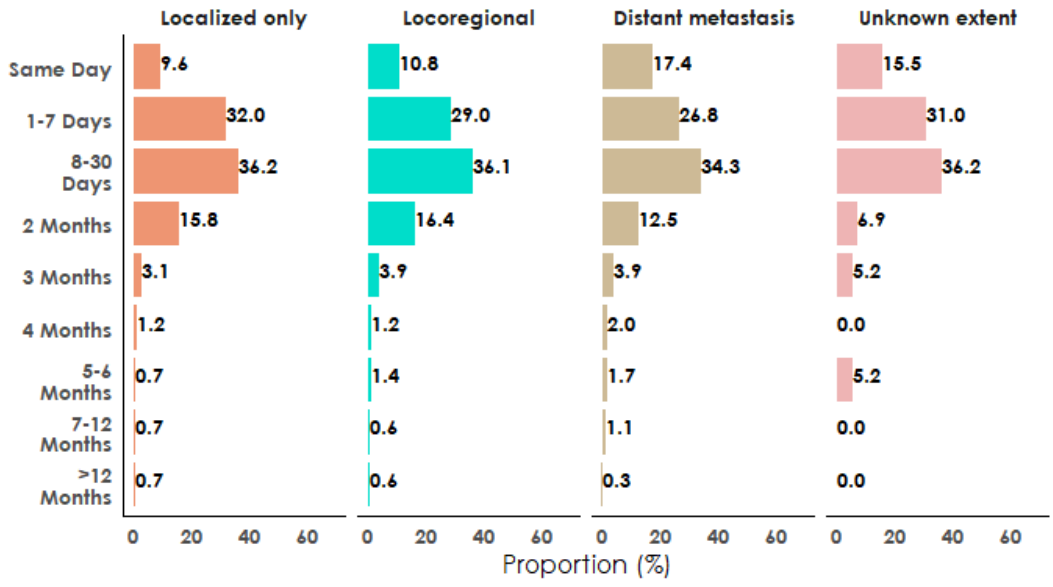

Figure 6.9.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution – kidney cancer

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

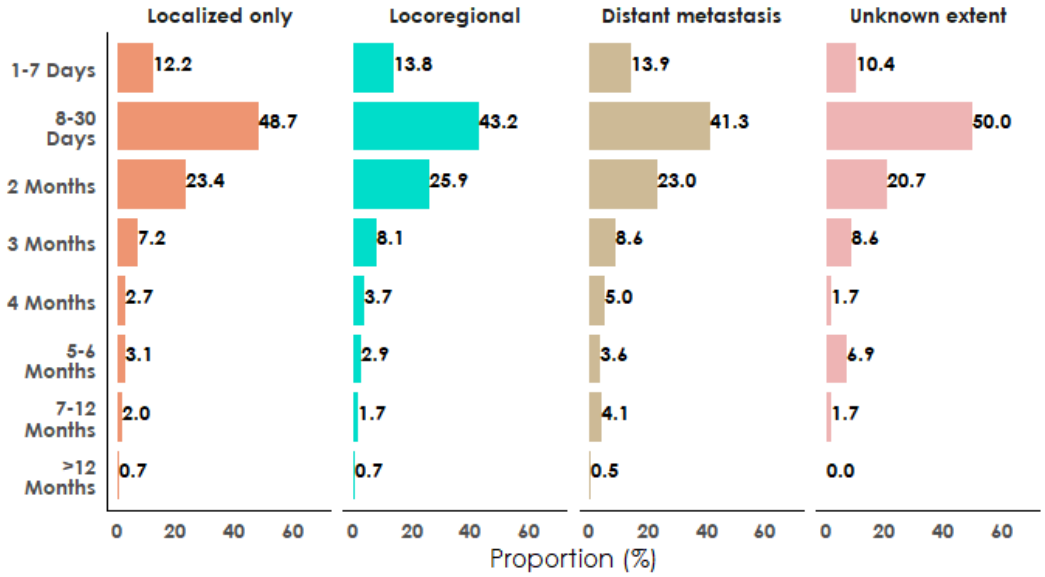

Figure 6.9.1c: Time between first diagnosis and commencement of cancer directed treatment at reporting institution – kidney cancer

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

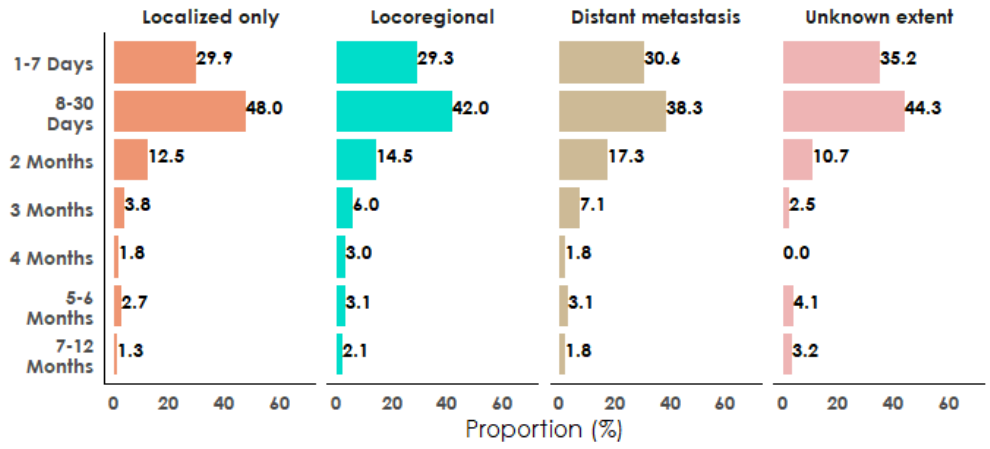

Figure 6.9.1d: Time between diagnosis and first attendance at reporting institution – bladder cancer

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

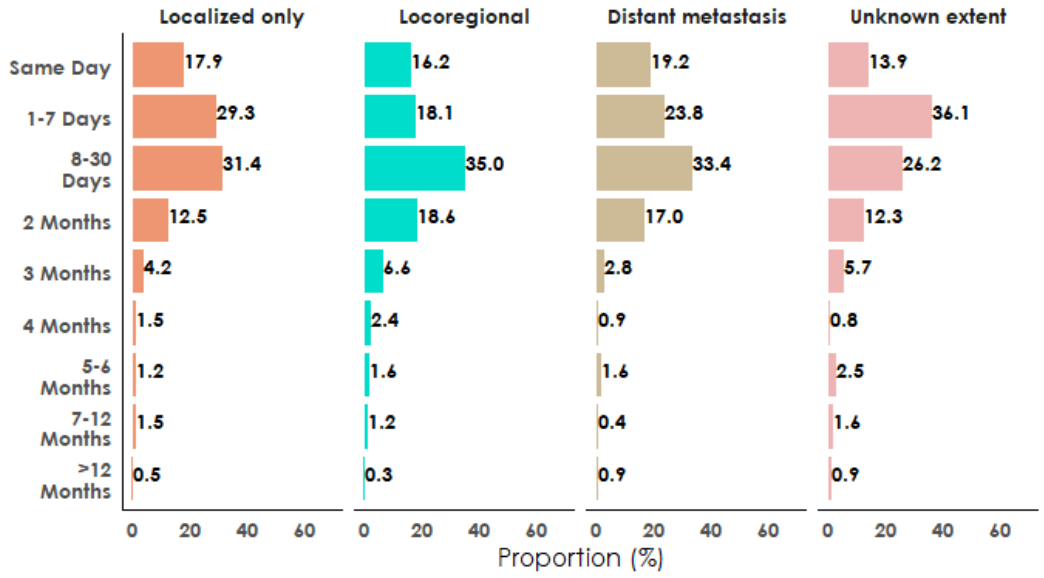

Figure 6.9.1e: Time between first attendance and commencement of cancer directed treatment at reporting institution – bladder cancer

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

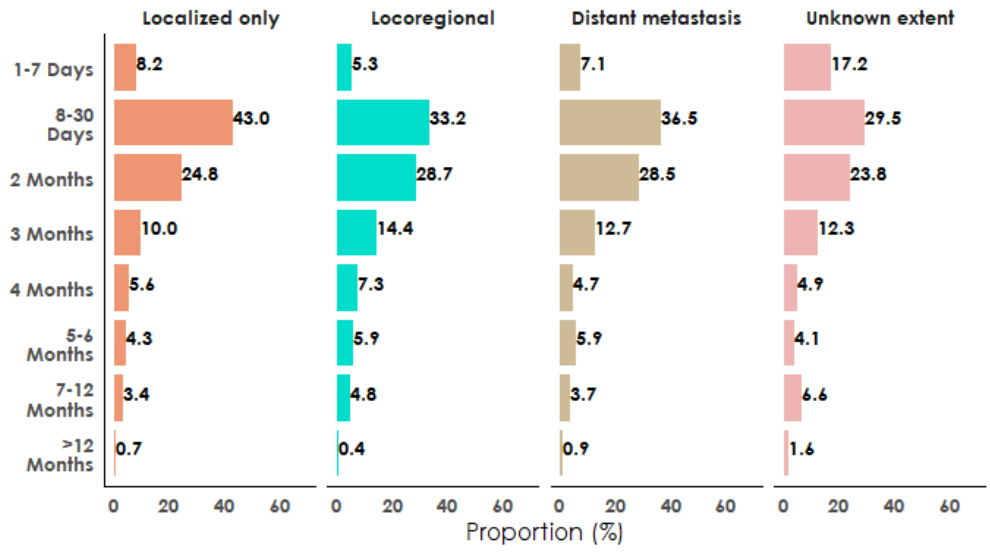

Figure 6.9.1f: Time between first diagnosis and commencement of cancer directed treatment at reporting institution - bladder cancer

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

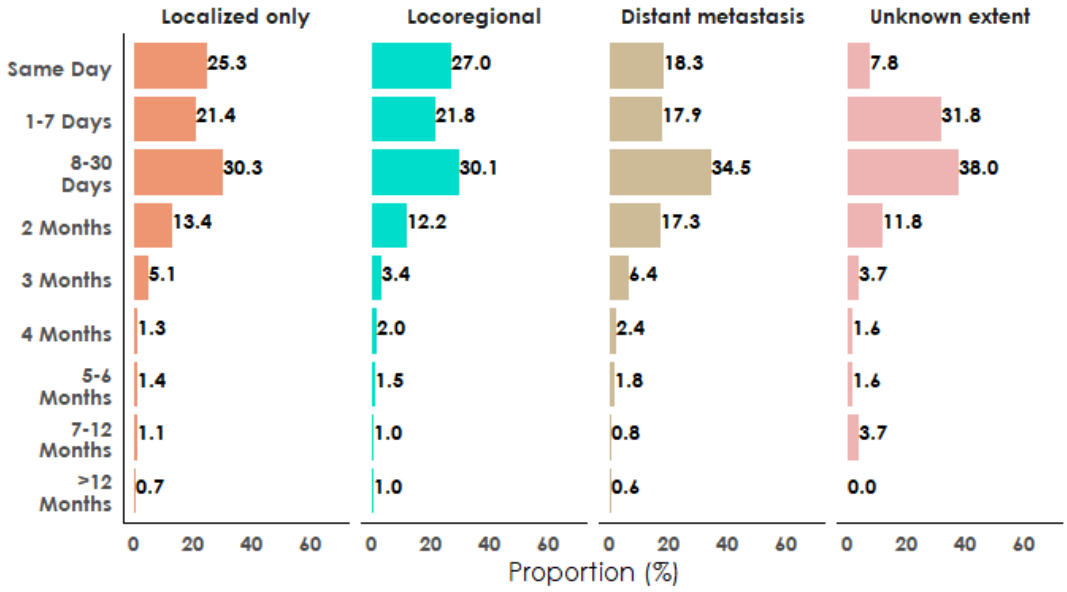

Figure 6.9.2a: Time between first diagnosis and commencement of cancer directed treatment at reporting institution – kidney cancer

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

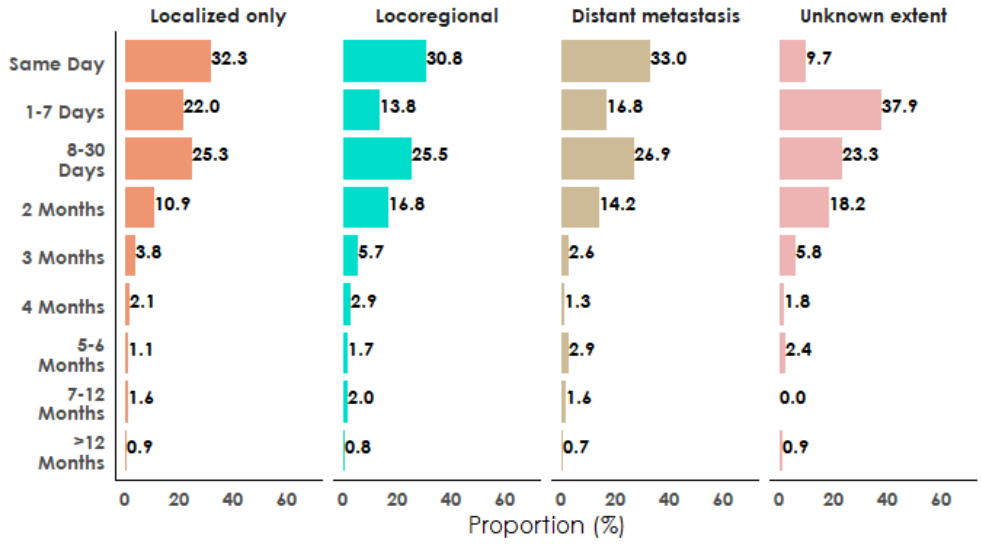

Figure 6.9.2b: Time between first diagnosis and commencement of cancer directed treatment at reporting institution – bladder cancer

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.