

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

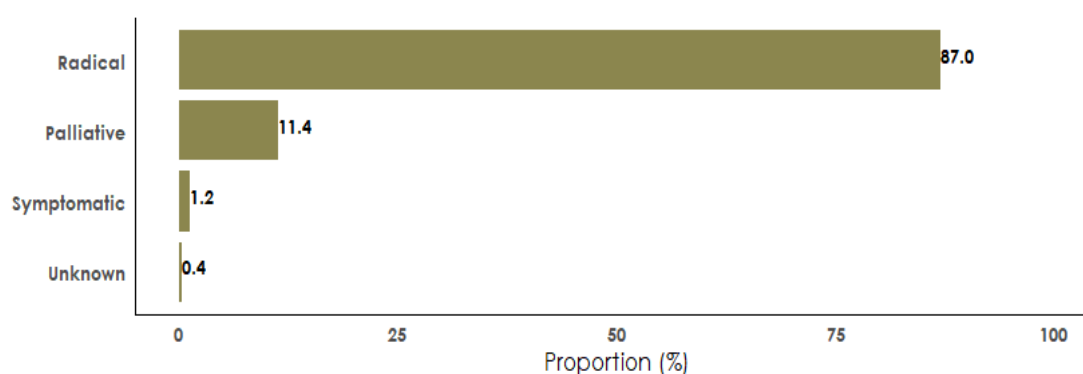


Figure 7.6: Intention to treat (%) – cancers of brain and nervous system (both sexes)

7.7 Treatment modalities according to clinical extent of the disease

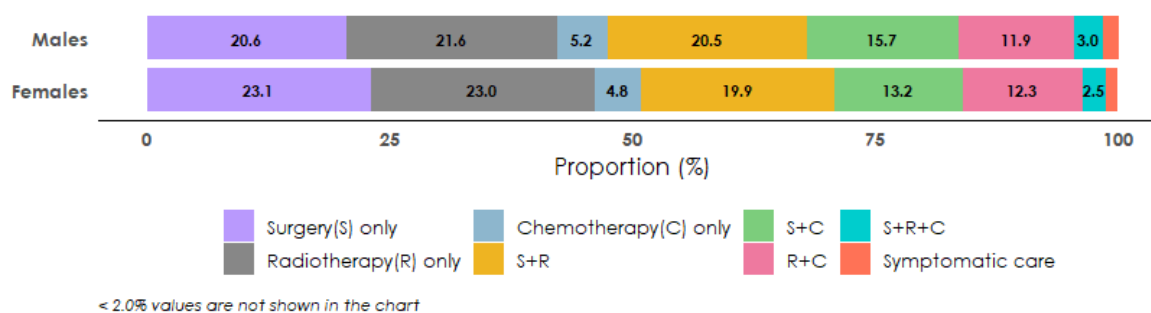


Figure 7.7: Type of treatment according to clinical extent of disease- cancers of brain and nervous system (both sexes)

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

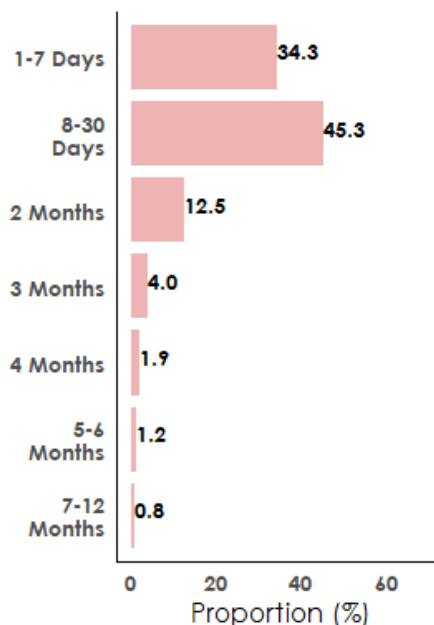


Figure 7.8.1a: Time between diagnosis and first attendance at reporting institution

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

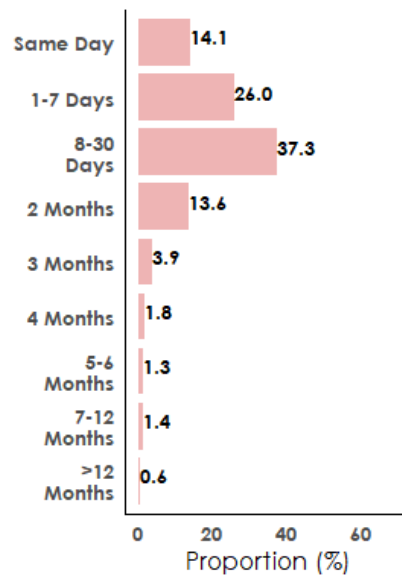


Figure 7.7.1b: Time between first attendance and commencement of cancer directed treatment at reporting institution

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

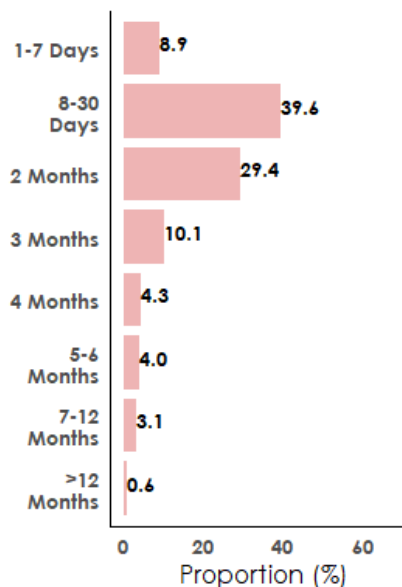


Figure 7. 7.1c: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

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

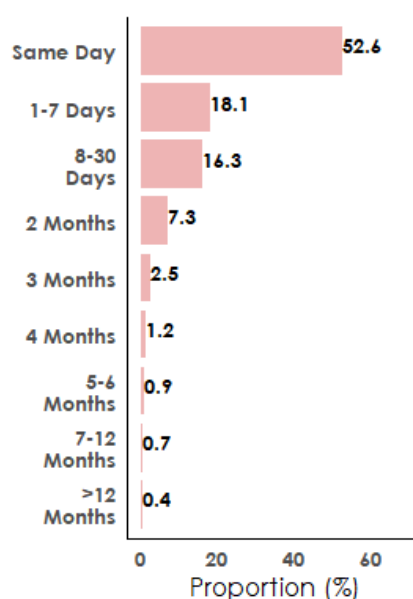


Figure 7.7.2: Time between first diagnosis and commencement of cancer directed treatment at reporting institution

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.