

Treatment patterns of Central Nervous System Tumors in the Veneto Region, Italy: A Population-Based Registry Study (2016-2020)

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Supplementary Material 1. Patterns of neurosurgical management of patients diagnosed with CNS tumors in 2016-2020

Table 1. Characteristics of patients by surgical procedure (biopsy or surgery) and year of diagnosis.

Year	Only biopsy N (%)	Only 1 surgery N (%)	More than 1 surgery* N (%)	None** N (%)	Total N (%)
2016	24 (14.6)	236 (17.9)	13 (8.5)	214 (23.3)	487 (19.1)
2017	22 (13.3)	261 (19.8)	16 (10.5)	166 (18.1)	465 (18.2)
2018	50 (30.3)	260 (19.7)	41 (27.0)	182 (19.8)	533 (20.9)
2019	36 (21.8)	269 (20.4)	39 (25.7)	168 (18.3)	512 (20.1)
2020	33 (20.0)	291 (22.1)	43 (28.3)	188 (20.5)	555 (21.7)
Total	165 (6.5)	1,317 (51.6)	152 (5.9)	918 (36.0)	2,552

* The category “**More than 1 surgery**” includes patients who underwent two or more re-operations at different time points. In general, patients who had surgery within three months of the initial biopsy were classified under the “**Only 1 surgery**” group; otherwise, they were included in the “**More than 1 surgery**” category.

** Patients with CNS tumors diagnosed only through radiological imaging, without any histological type and grade

Table 2. Characteristics of patients by cancer type, surgical procedure (biopsy or surgery) and year of diagnosis.

Cancer type	Only biopsy N (%)					Only 1 surgery N (%)					More than 1 surgery* N (%)				
	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
Glioblastoma IDH-wildtype and IDH-mutant	16 (13.2)	16 (13.2)	39 (32.2)	23 (19.0)	27 (22.3)	148 (17.4)	169 (19.9)	176 (20.7)	166 (19.6)	190 (22.4)	7 (8.2)	9 (10.6)	15 (17.7)	24 (28.2)	30 (35.3)
Astrocytoma grade 2-3	6 (14.3)	6 (14.3)	11 (26.2)	13 (30.9)	6 (14.3)	12 (13.3)	23 (25.6)	16 (17.8)	17 (18.9)	22 (24.4)	4 (19.0)	1 (4.8)	7 (33.3)	6 (28.6)	3 (14.3)
Meningioma grade 2-3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	41 (15.6)	46 (17.6)	49 (18.7)	66 (25.2)	60 (22.9)	1 (2.8)	6 (16.7)	14 (38.9)	8 (22.2)	7 (19.4)
Oligodendroglioma grade 2-3	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	19 (29.7)	11 (17.2)	9 (14.1)	14 (21.9)	11 (17.2)	0 (0.0)	0 (0.0)	5 (62.5)	1 (12.5)	2 (25.0)
Ependymoma grade 2-3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (24.3)	9 (24.3)	7 (18.9)	4 (10.8)	8 (21.6)	1 (50.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (50.0)
CNS embryonal tumor (medulloblastoma)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	7 (46.7)	3 (20.0)	3 (20.0)	2 (13.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

* The category “**More than 1 surgery**” includes patients who underwent two or more re-operations at different time points. In general, patients who had surgery within three months of the initial biopsy were classified under the “**Only 1 surgery**” group; otherwise, they were included in the “**More than 1 surgery**” category.