

1.Total registered number of primary brain tumors and brain metastases

	1986	1987	1988	1989	1990	1991	1992	1993
Primary BT	3,530	3,673	4,108	4,400	3,998	4,302	4,446	4,402
Brain metastases	730	750	851	955	881	926	853	902
total	4,260	4,423	4,959	5,355	4,879	5,228	5,299	5,304

	1994	1995	1996	1997	1998	1999	2000	2001
Primary BT	4,737	4,609	4,646	3,458	3,714	3,767	3,407	3,283
Brain metastases	878	925	982	757	881	928	918	747
total	5,615	5,534	5,628	4,215	4,595	4,695	4,325	4,030

	2002	2003	2004	2005	2006	2007	2008	2005-2008
Primary BT	3,318	3,487	3,343	4,105	4,146	4,302	4,169	16,722
Brain metastases	703	801	656	884	775	785	756	3,200
total	4,021	4,288	3,999	4,989	4,921	5,087	4,925	19,922

** All registered tumors including imcomplete data

2. General features of primary brain tumors (2005-2008)

1) Age distribution of primary brain tumors

	All primary brain tumors			Malignant brain tumors			Benign brain tumors		
age	male	female	total	male	female	total	male	female	total
0	32 (0.4%)	41 (0.5%)	73 (0.4%)	18 (0.5%)	25 (1.0%)	43 (0.7%)	10 (0.3%)	12 (0.2%)	22 (0.2%)
1	41 (0.5%)	34 (0.4%)	75 (0.4%)	23 (0.7%)	18 (0.7%)	41 (0.7%)	13 (0.3%)	12 (0.2%)	25 (0.3%)
2	29 (0.4%)	25 (0.3%)	54 (0.3%)	14 (0.4%)	15 (0.6%)	29 (0.5%)	11 (0.3%)	8 (0.1%)	19 (0.2%)
3	31 (0.4%)	25 (0.3%)	56 (0.3%)	13 (0.4%)	12 (0.5%)	25 (0.4%)	14 (0.4%)	12 (0.2%)	26 (0.3%)
4	40 (0.5%)	27 (0.3%)	67 (0.4%)	16 (0.5%)	11 (0.4%)	27 (0.4%)	13 (0.3%)	6 (0.1%)	19 (0.2%)
5- 9	199 (2.5%)	144 (1.6%)	343 (2.1%)	98 (2.8%)	72 (2.8%)	170 (2.8%)	74 (1.9%)	51 (0.9%)	125 (1.3%)
10-14	254 (3.2%)	143 (1.6%)	397 (2.4%)	161 (4.6%)	65 (2.5%)	226 (3.7%)	75 (1.9%)	60 (1.0%)	135 (1.4%)
15-19	202 (2.6%)	173 (2.0%)	375 (2.2%)	130 (3.7%)	63 (2.4%)	193 (3.2%)	55 (1.4%)	88 (1.5%)	143 (1.5%)
20-24	250 (3.2%)	253 (2.9%)	503 (3.0%)	140 (4.0%)	89 (3.4%)	229 (3.7%)	92 (2.3%)	146 (2.5%)	238 (2.4%)
25-29	327 (4.2%)	367 (4.2%)	694 (4.2%)	148 (4.2%)	112 (4.3%)	260 (4.3%)	161 (4.1%)	238 (4.1%)	399 (4.1%)
30-34	439 (5.6%)	426 (4.8%)	865 (5.2%)	195 (5.5%)	127 (4.9%)	322 (5.3%)	222 (5.6%)	272 (4.6%)	494 (5.0%)
35-39	458 (5.8%)	521 (5.9%)	979 (5.9%)	202 (5.7%)	154 (6.0%)	356 (5.8%)	234 (5.9%)	354 (6.0%)	588 (6.0%)
40-44	507 (6.5%)	560 (6.3%)	1,067 (6.4%)	195 (5.5%)	138 (5.3%)	333 (5.4%)	289 (7.3%)	397 (6.8%)	686 (7.0%)
45-49	499 (6.4%)	606 (6.9%)	1,105 (6.6%)	197 (5.6%)	146 (5.7%)	343 (5.6%)	279 (7.1%)	442 (7.5%)	721 (7.3%)
50-54	643 (8.2%)	799 (9.1%)	1,442 (8.6%)	253 (7.2%)	157 (6.1%)	410 (6.7%)	369 (9.3%)	614 (10.5%)	983 (10.0%)
55-59	918 (11.7%)	1,237 (14.0%)	2,155 (12.9%)	345 (9.8%)	282 (10.9%)	627 (10.3%)	544 (13.8%)	903 (15.4%)	1,447 (14.7%)
60-64	835 (10.6%)	942 (10.7%)	1,777 (10.7%)	322 (9.1%)	247 (9.6%)	569 (9.3%)	490 (12.4%)	665 (11.3%)	1,155 (11.8%)
65-69	835 (10.6%)	961 (10.9%)	1,796 (10.8%)	398 (11.3%)	268 (10.4%)	666 (10.9%)	409 (10.4%)	667 (11.4%)	1,076 (11.0%)
70-74	690 (8.8%)	779 (8.8%)	1,469 (8.8%)	339 (9.6%)	237 (9.2%)	576 (9.4%)	328 (8.3%)	525 (9.0%)	853 (8.7%)
75-79	432 (5.5%)	503 (5.7%)	935 (5.6%)	225 (6.4%)	228 (8.8%)	453 (7.4%)	185 (4.7%)	262 (4.5%)	447 (4.6%)
80-84	154 (2.0%)	197 (2.2%)	351 (2.1%)	77 (2.2%)	94 (3.6%)	171 (2.8%)	65 (1.6%)	97 (1.7%)	162 (1.7%)
85-89	36 (0.5%)	53 (0.6%)	89 (0.5%)	16 (0.5%)	21 (0.8%)	37 (0.6%)	17 (0.4%)	26 (0.4%)	43 (0.4%)
90-94	6 (0.1%)	7 (0.1%)	13 (0.1%)	3 (0.1%)	2 (0.1%)	5 (0.1%)	2 (0.1%)	4 (0.1%)	6 (0.1%)
95-	1 (0.0%)	2 (0.0%)	3 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (0.0%)	2 (0.0%)
total	7,858 (100%)	8,825 (100%)	16,683 (100%)	3,528 (100%)	2,583 (100%)	6,111 (100%)	3,951 (100%)	5,863 (100%)	9,814 (100%)
median	54.0	56.0	55.0	54.0	56.0	55.0	55.0	56.0	56.0

** Data for analyses

2) Resident area: All primary brain tumors (2005-2008)

	prefecture	All primary brain tumors		Malignant brain tumors		Benign brain tumors	
1	Hokkaido	736	(4.4%)	287	(4.7%)	406	(4.1%)
2	Aomori	201	(1.2%)	77	(1.3%)	98	(1.0%)
3	Iwate	125	(0.7%)	80	(1.3%)	44	(0.4%)
4	Miyagi	231	(1.4%)	145	(2.4%)	79	(0.8%)
5	Akita	234	(1.4%)	115	(1.9%)	111	(1.1%)
6	Yamagata	232	(1.4%)	79	(1.3%)	145	(1.5%)
7	Fukushima	126	(0.8%)	63	(1.0%)	59	(0.6%)
8	Ibaraki	377	(2.3%)	122	(2.0%)	248	(2.5%)
9	Tochigi	37	(0.2%)	9	(0.1%)	27	(0.3%)
10	Gunma	327	(2.0%)	128	(2.1%)	188	(1.9%)
11	Saitama	970	(5.8%)	341	(5.6%)	585	(6.0%)
12	Chiba	645	(3.9%)	218	(3.6%)	401	(4.1%)
13	Tokyo	2,285	(13.7%)	747	(12.2%)	1,426	(14.5%)
14	Kanagawa	1,341	(8.0%)	476	(7.8%)	827	(8.4%)
15	Niigata	172	(1.0%)	125	(2.0%)	43	(0.4%)
16	Toyama	106	(0.6%)	25	(0.4%)	80	(0.8%)
17	Ishikawa	253	(1.5%)	100	(1.6%)	150	(1.5%)
18	Fukui	91	(0.5%)	27	(0.4%)	58	(0.6%)
19	Yamanashi	175	(1.0%)	70	(1.1%)	99	(1.0%)
20	Nagano	262	(1.6%)	84	(1.4%)	170	(1.7%)
21	Gifu	289	(1.7%)	91	(1.5%)	192	(2.0%)
22	Shizuoka	522	(3.1%)	230	(3.8%)	281	(2.9%)
23	Aichi	527	(3.2%)	203	(3.3%)	307	(3.1%)
24	Mie	189	(1.1%)	64	(1.0%)	120	(1.2%)
25	Shiga	191	(1.1%)	69	(1.1%)	108	(1.1%)
26	Kyoto	491	(2.9%)	177	(2.9%)	300	(3.1%)
27	Osaka	868	(5.2%)	293	(4.8%)	528	(5.4%)
28	Hyogo	478	(2.9%)	145	(2.4%)	305	(3.1%)
29	Nara	109	(0.7%)	31	(0.5%)	75	(0.8%)
30	Wakayama	259	(1.6%)	94	(1.5%)	157	(1.6%)
31	Tottori	16	(0.1%)	5	(0.1%)	10	(0.1%)
32	Shimane	85	(0.5%)	30	(0.5%)	51	(0.5%)
33	Okayama	316	(1.9%)	112	(1.8%)	190	(1.9%)
34	Hiroshima	605	(3.6%)	180	(2.9%)	387	(3.9%)
35	Yamaguchi	276	(1.7%)	109	(1.8%)	161	(1.6%)
36	Tokushima	191	(1.1%)	70	(1.1%)	121	(1.2%)
37	Kagawa	187	(1.1%)	66	(1.1%)	115	(1.2%)
38	Ehime	305	(1.8%)	79	(1.3%)	107	(1.1%)
39	Kochi	59	(0.4%)	16	(0.3%)	41	(0.4%)
40	Fukuoka	410	(2.5%)	144	(2.4%)	254	(2.6%)
41	Saga	150	(0.9%)	46	(0.8%)	98	(1.0%)
42	Nagasaki	155	(0.9%)	74	(1.2%)	73	(0.7%)
43	Kumamoto	47	(0.3%)	32	(0.5%)	15	(0.2%)
44	Oita	75	(0.4%)	46	(0.8%)	28	(0.3%)
45	Miyazaki	296	(1.8%)	109	(1.8%)	178	(1.8%)
46	Kagoshima	418	(2.5%)	182	(3.0%)	227	(2.3%)
47	Okinawa	143	(0.9%)	63	(1.0%)	75	(0.8%)
48	foreign country	9	(0.1%)	2	(0.0%)	7	(0.1%)
49	unknown	94	(0.6%)	32	(0.5%)	61	(0.6%)
	total	16,686	(100%)	6,112	(100%)	9,816	(100%)

3) Initial symptoms

	All primary brain tumors		Malignant brain tumors		Benign brain tumors	
no clinical symptoms (medical check-up)	1,141	(7%)	182	(3%)	896	(9%)
no clinical symptoms (detailed examination of brain disease)	892	(5%)	171	(3%)	680	(7%)
subjective symptoms (headache, etc)	4,135	(25%)	1,568	(26%)	2,365	(24%)
seizure	1,631	(10%)	1,083	(18%)	491	(5%)
focal symptom	3,907	(23%)	2,533	(41%)	1,225	(12%)
intracranial hypertension	1,017	(6%)	677	(11%)	315	(3%)
disturbance of consciousness	1,003	(6%)	726	(12%)	230	(2%)
cranial nerve symptom	3,884	(23%)	426	(7%)	3,266	(33%)
hormonal decline or excess	1,395	(8%)	107	(1.8%)	1,241	(13%)
intracerebral hemorrhage	82	(0.5%)	41	(0.7%)	39	(0.4%)
cerebral infarction	12	(0.1%)	1	(0.0%)	11	(0.1%)
others	524	(3%)	175	(3%)	287	(3%)
patient number	16,686		6,112		9,816	

4) Diagnostic methods

	All primary brain tumors		Malignant brain tumors		Benign brain tumors	
histopathology	15,320	(92%)	5,849	(96%)	8,969	(91%)
diagnostic imaging	1,150	(7%)	219	(4%)	683	(7%)
cerebrospinal fluid cytology	14	(0.1%)	14	(0.2%)	-	(-)
blood or cerebrospinal fluid test	67	(0.4%)	25	(0.4%)	40	(0.4%)
genetic diagnosis	4	(0.0%)	-	(-)	4	(0.0%)
autopsy	1	(0.0%)	1	(0.0%)	-	(-)
others	130	(0.8%)	4	(0.1%)	120	(1.2%)
total	16,686	(100%)	6,112	(100%)	9,816	(100%)

5) Multiplicity

	All primary brain tumors		Malignant brain tumors		Benign brain tumors	
single	15,491	(93%)	5,230	(86%)	9,566	(97%)
multiple	1,038	(6%)	748	(12%)	237	(2%)
dissemination	93	(1%)	80	(1%)	7	(0.1%)
LMM	6	(0.0%)	6	(0.1%)	-	(-)
others	58	(0.3%)	48	(1%)	6	(0.1%)
total	16,686	(100%)	6,112	(100%)	9,816	(100%)

6) Laterality

	All primary brain tumors		Malignant brain tumors		Benign brain tumors	
right	5,049	(30%)	2,301	(38%)	2,562	(26%)
left	5,174	(31%)	2,283	(37%)	2,670	(27%)
across both sides	1,181	(7%)	553	(9%)	542	(6%)
on both sides	353	(2%)	226	(4%)	106	(1%)
central neuroaxis	4,810	(29%)	726	(12%)	3,842	(39%)
others	119	(1%)	23	(0.4%)	94	(1%)
total	16,686	(100%)	6,112	(100%)	9,816	(100%)

7) Tumor location

	All primary brain tumors		Malignant brain tumors		Benign brain tumors	
frontal lobe	3,422	(20.5%)	2,197	(35.9%)	1,139	(11.6%)
temporal lobe	1,637	(9.8%)	1,212	(19.8%)	365	(3.7%)
parietal lobe	1,097	(6.6%)	690	(11.3%)	380	(3.9%)
occipital lobe	401	(2.4%)	259	(4.2%)	134	(1.4%)
insular gyri	135	(0.8%)	127	(2.1%)	3	(0.0%)
gliomatosis cerebri	36	(0.2%)	35	(0.6%)	1	(0.0%)
cerebellum	925	(5.5%)	356	(5.8%)	536	(5.5%)
midbrain	116	(0.7%)	72	(1.2%)	22	(0.2%)
pons	197	(1.2%)	101	(1.7%)	29	(0.3%)
medulla oblongata	130	(0.8%)	48	(0.8%)	59	(0.6%)
lateral ventricle	365	(2.2%)	224	(3.7%)	123	(1.3%)
third ventricle	148	(0.9%)	77	(1.3%)	58	(0.6%)
cerebral aqueduct	21	(0.1%)	11	(0.2%)	5	(0.1%)
fourth ventricle	220	(1.3%)	171	(2.8%)	45	(0.5%)
basal ganglia	313	(1.9%)	279	(4.6%)	14	(0.1%)
thalamus	300	(1.8%)	255	(4.2%)	27	(0.3%)
hypothalamus	131	(0.8%)	67	(1.1%)	64	(0.7%)
corpus callosum	239	(1.4%)	223	(3.6%)	11	(0.1%)
pineal region	312	(1.9%)	250	(4.1%)	47	(0.5%)
intraorbital	156	(0.9%)	31	(0.5%)	70	(0.7%)
pituitary gland	3,775	(22.6%)	110	(1.8%)	3,522	(35.9%)
optic nerve	52	(0.3%)	11	(0.2%)	36	(0.4%)
cerebello-pontine angle	1,594	(9.6%)	40	(0.7%)	1,521	(15.5%)
clivus	230	(1.4%)	65	(1.1%)	151	(1.5%)
cavernous sinus	121	(0.7%)	19	(0.3%)	94	(1.0%)
cranial nerve	268	(1.6%)	6	(0.1%)	259	(2.6%)
other skull base	902	(5.4%)	77	(1.3%)	789	(8.0%)
skull bone	124	(0.7%)	23	(0.4%)	59	(0.6%)
LMM	20	(0.1%)	18	(0.3%)	-	(-)
others	539	(3.2%)	89	(1.5%)	420	(4.3%)
patient number	16,686		6,112		9,816	

8) Mode of therapy

	All primary brain tumors	Malignant brain tumors	Benign brain tumors
surgery	9,140 (55%)	981 (16%)	7,807 (80%)
surgery + RT	1,333 (8%)	781 (13%)	510 (5%)
surgery + CRT	3,662 (22%)	3,501 (57%)	88 (0.9%)
surgery + CTX	1,406 (8%)	550 (9%)	788 (8%)
CRT	198 (1.2%)	135 (2%)	8 (0.1%)
RT	231 (1.4%)	47 (0.8%)	150 (2%)
CTX	165 (1.0%)	54 (0.9%)	88 (0.9%)
observation alone	502 (3%)	46 (0.8%)	354 (3.6%)
others	49 (0.3%)	17 (0.3%)	23 (0.2%)
total	16,686 (100%)	6,112 (100%)	9,816 (100%)

9) Initial surgery

	All primary brain tumors	Malignant brain tumors	Benign brain tumors
none	1,170 (7%)	258 (4%)	695 (7%)
decompressive craniectomy	12 (0.1%)	6 (0.1%)	4 (0.0%)
biopsy	1,839 (11%)	1,606 (26%)	117 (1.2%)
1-50% resection	700 (4%)	394 (6%)	278 (3%)
50-75% resection	1,169 (7%)	506 (8%)	637 (6%)
75-95% resection	2,734 (16%)	1,091 (18%)	1,581 (16%)
95-99% resection	2,949 (18%)	985 (16%)	1,895 (19%)
100% total resection	5,834 (35%)	1,176 (19%)	4,466 (45%)
extended tumor resection	47 (0.3%)	29 (0.5%)	14 (0.1%)
shunt	50 (0.3%)	15 (0.2%)	22 (0.2%)
drainage	64 (0.4%)	24 (0.4%)	31 (0.3%)
others	118 (0.7%)	22 (0.4%)	76 (0.8%)
total	16,686 (100%)	6,112 (100%)	9,816 (100%)

10) Seizures during the whole treatment

	All primary brain tumors	Malignant brain tumors	Benign brain tumors
(+)	2,920 (17%)	1,991 (33%)	836 (9%)
(-)	12,610 (76%)	3,507 (57%)	8,486 (86%)
unknown	1,156 (7%)	614 (10%)	494 (5%)
total	16,686 (100%)	6,112 (100%)	9,816 (100%)

3. General features of WHO2007 primary brain tumors (2005-2008)

1) Number of Primary Brain Tumors according to WHO2007 Classification

classification	ID	histology	number	WHO code
Astrocytic tumors	1	Pilocytic astrocytoma	222 (1.3%)	9421 1
	2	Pilomyxoid astrocytoma	13 (0.1%)	9425 3
	3	Subependymal giant cell astrocytoma	17 (0.1%)	9384 1
	4	Pleomorphic xanthoastrocytoma	28 (0.2%)	9424 3
	5	Diffuse astrocytoma	352 (2.1%)	9400 3
	6	Fibrillary astrocytoma	37 (0.2%)	9420 3
	7	Gemistocytic astrocytoma	23 (0.1%)	9411 3
	8	Protoplasmic astrocytoma	4 (0.0%)	9410 3
	9	Anaplastic astrocytoma	545 (3.3%)	9401 3
	10	Glioblastoma	2,006 (12.0%)	9440 3
	11	Giant cell glioblastoma	14 (0.1%)	9441 3
	12	Gliosarcoma	29 (0.2%)	9442 3
	13	Gliomatosis cerebri	67 (0.4%)	9381 3
Oligodendroglial tumors	14	Oligodendroglioma	242 (1.5%)	9450 3
	15	Anaplastic oligodendroglioma	235 (1.4%)	9451 3
Oligoastrocytic tumors	16	Oligoastrocytoma	149 (0.9%)	9382 3
	17	Anaplastic oligoastrocytoma	181 (1.1%)	9382 3
Ependymal tumors	18	Subependymoma	21 (0.1%)	9383 1
	19	Myxopapillary ependymoma	3 (0.0%)	9394 1
	20	Ependymoma	79 (0.5%)	9391 3
	21	Cellular ependymoma	5 (0.0%)	9391 3
	22	Papillary ependymoma	0 (0.0%)	9393 3
	23	Clear cell ependymoma	1 (0.0%)	9391 3
	24	Tanycytic ependymoma	1 (0.0%)	9391 3
	25	Anaplastic ependymoma	90 (0.5%)	9392 3
Unclassified gliomas	26	Unclassified gliomas including brainstem gliomas	157 (0.9%)	
Choroid plexus tumors	27	Choroid plexus papilloma	39 (0.2%)	9390 0
	28	Atypical choroid plexus papilloma	1 (0.0%)	9390 1
	29	Choroid plexus carcinoma	12 (0.1%)	9390 3
Other neuroepithelial tumors	30	Astroblastoma	3 (0.0%)	9430 3
	31	Chordoid glioma of the third ventricle	4 (0.0%)	9444 1
	32	Angiocentric glioma	1 (0.0%)	9431 1
Neuronal and mixed neuronal-glial tumors	33	Dysplastic gangliocytoma of cerebellum (Lhermitte-Duclos)	3 (0.0%)	9493 0
	34	Desmoplastic infantile astrocytoma/ganglioglioma	3 (0.0%)	9412 1
	35	Dysembryoplastic neuroepithelial tumor	23 (0.1%)	9413 0
	36	Gangliocytoma	12 (0.1%)	9492 0
	37	Ganglioglioma	58 (0.3%)	9505 1
	38	Anaplastic ganglioglioma	11 (0.1%)	9505 3
	39	Central neurocytoma	75 (0.4%)	9506 1
	40	Extraventricular neurocytoma	2 (0.0%)	9506 1
	41	Cerebellar liponeurocytoma	- (-)	9506 1
	42	Papillary glioneuronal tumor	2 (0.0%)	9509 1
	43	Rosette-forming glioneuronal tumor	2 (0.0%)	9509 1
	44	Paraganglioma	7 (0.0%)	8680 1
Tumors of the pineal region	45	Pineocytoma	25 (0.1%)	9361 1
	46	Pineal parenchymal tumor of intermediate differentiation	15 (0.1%)	9362 3
	47	Pineoblastoma	8 (0.0%)	9362 3
	48	Papillary tumor of the pineal region	- (-)	9395 3
Embryonal tumors	49	Medulloblastoma	139 (1.0%)	9470 3
	50	Desmoplastic/nodular medulloblastoma	2 (0.0%)	9471 3
	51	Medulloblastoma with extensive nodularity	- (-)	9471 3
	52	Anaplastic medulloblastoma	- (-)	9474 3
	53	Large cell medulloblastoma	- (-)	9474 3

classification	ID	histology	number	WHO code
Embryonal tumors	54	CNS primitive neuroectodermal tumor (CNS PNET)	34 (0.2%)	9473 3
	55	CNS neuroblastoma	12 (0.1%)	9500 3
	56	CNS ganglioneuroblastoma	- (-)	9490 3
	57	Medulloepithelioma	- (-)	9501 3
	58	Ependyoblastoma	1 (0.0%)	9392 3
	59	Atypical teratoid/rhabdoid tumor	17 (0.1%)	9508 3
Tumors of cranial and paraspinal nerves	60	Schwannoma (neurilemoma, neurinoma)	1,437 (8.6%)	9560 0
	61	Cellular schwannoma	4 (0.0%)	9560 0
	62	Plexiform schwannoma	- (-)	9560 0
	63	Melanotic schwannoma	- (-)	9560 0
	64	Neurofibroma	9 (0.1%)	9540 0
	65	Plexiform neurofibroma	- (-)	9550 0
	66	Perineurioma	- (-)	
	67	Perineurioma, NOS	- (-)	9571 0
	68	Malignant perineurioma	- (-)	9571 3
	69	Malignant peripheral nerve sheath tumor (MPNST)	2 (0.0%)	
	70	Epithelioid MPNST	- (-)	9540 3
	71	MPNST with mesenchymal differentiation	- (-)	9540 3
	72	Melanotic MPNST	- (-)	9540 3
	73	MPNST with glandular differentiation	- (-)	9540 3
Tumors of meningeothelial cells	74	Meningioma	1,162 (7.0%)	9530 0
	75	Meningothelial meningioma	1,272 (7.6%)	9531 0
	76	Fibrous (fibroblastic) meningioma	404 (2.4%)	9532 0
	77	Transitional (mixed) meningioma	548 (3.3%)	9537 0
	78	Psammomatous meningioma	76 (0.5%)	9533 0
	79	Angiomatous meningioma	111 (0.7%)	9534 0
	80	Microcystic meningioma	42 (0.3%)	9530 0
	81	Secretory meningioma	26 (0.2%)	9530 0
	82	Lymphoplasmacyte-rich meningioma	6 (0.0%)	9530 0
	83	Metaplastic meningioma	2 (0.0%)	9530 0
	84	Chordoid meningioma	17 (0.1%)	9538 1
	85	Clear cell meningioma	8 (0.0%)	9538 1
	86	Atypical meningioma	237 (1.4%)	9539 1
	87	Papillary meningioma	9 (0.1%)	9538 3
	88	Rhabdoid meningioma	5 (0.0%)	9538 3
	89	Anaplastic (malignant) meningioma	48 (0.3%)	9530 3
Mesenchymal tumors	90	Lipoma	15 (0.1%)	8850 0
	91	Angiolipoma	- (-)	8861 0
	92	Hibernoma	- (-)	8880 0
	93	Liposarcoma	- (-)	8850 3
	94	Solitary fibrous tumor	24 (0.1%)	8815 0
	95	Fibrosarcoma	1 (0.0%)	8810 3
	96	Malignant fibrous histiocytoma	7 (0.0%)	8830 3
	97	Leiomyoma	- (-)	8890 0
	98	Leiomyosarcoma	- (-)	8890 3
	99	Rhabdomyoma	- (-)	8900 0
	100	Rhabdomyosarcoma	5 (0.0%)	8900 3
	101	Chordoma	77 (0.5%)	
	102	Chondroma	3 (0.0%)	9220 0
	103	Chondrosarcoma	18 (0.1%)	9220 3
	104	Osteoma	24 (0.1%)	9180 0
	105	Osteosarcoma	7 (0.0%)	9180 3
	106	Osteochondroma	1 (0.0%)	9210 0
	107	Hemangioma, capillary, cavernous	177 (1.1%)	9120 0

classification	ID	histology	number	WHO code
Mesenchymal tumors	108	Epithelioid hemangioendothelioma	- (-)	9133 1
	109	Hemangiopericytoma	35 (0.2%)	9150 1
	110	Anaplastic hemangiopericytoma	2 (0.0%)	9150 3
	111	Angiosarcoma	- (-)	9120 3
	112	Kaposi sarcoma	- (-)	9140 3
	113	Ewing sarcoma -PNET	3 (0.0%)	9364 3
Primary melanocytic lesions	114	Diffuse melanocytosis	- (-)	8728 0
	115	Melanocytoma	- (-)	8728 1
	116	Malignant melanoma	8 (0.0%)	8720 3
	117	Meningeal melanomatosis	1 (0.0%)	8728 3
Other neoplasms related to the meninges	118	Hemangioblastoma	250 (1.5%)	9161 1
Lymphomas and hematopoietic neoplasms	119	Malignant lymphoma (B cell type)	749 (4.5%)	9590 3
	120	Malignant lymphoma (T cell type)	15 (0.1%)	
	121	Other malignant lymphomas	50 (0.3%)	
	122	Plasmacytoma	4 (0.0%)	9731 3
	123	Granulocytic sarcoma	0 (0.0%)	9930 3
Germ cell tumors	124	Pure germinoma	224 (1.3%)	9064 3
	125	HCG producing germinoma	25 (0.1%)	
	126	Embryonal carcinoma	2 (0.0%)	9070 3
	127	Yolk sac tumor	16 (0.1%)	9071 3
	128	Choriocarcinoma	6 (0.0%)	9100 3
	129	Teratoma	8 (0.0%)	9080 1
	130	Mature teratoma	19 (0.1%)	9080 0
	131	Immature teratoma	24 (0.1%)	9080 3
	132	Teratoma with malignant transformation	1 (0.0%)	9084 3
	133	Mixed germ cell tumor	34 (0.2%)	9085 3
Tumors of the sellar region	134	Craniopharyngioma	315 (1.9%)	9350 1
	135	Adamantinomatous craniopharyngioma	48 (0.3%)	9351 1
	136	Papillary craniopharyngioma	11 (0.1%)	9352 1
	137	Granular cell tumor of the neurohypophysis	7 (0.0%)	9582 0
	138	Pituicytoma	18 (0.1%)	9432 1
	139	Spindle cell oncocyoma of the adenohypophysis	1 (0.0%)	8291 0
Pituitary adenoma	140	Rathke's cleft cyst	309 (1.9%)	
	141	GH producing adenoma	570 (3.4%)	
	142	PRL producing adenoma	392 (2.3%)	
	143	GH-PRL producing adenoma	42 (0.3%)	
	144	TSH producing adenoma	40 (0.2%)	
	145	ACTH producing adenoma	162 (1.0%)	
	146	Gonadotropin producing adenoma	159 (1.0%)	
	147	Null cell adenoma	1,526 (9.1%)	
Other tumor	148	Epidermoid cyst	147 (0.9%)	
	149	Dermoid cyst	25 (0.1%)	
	150	Plurihormonal adenoma	6 (0.0%)	
	151	Pseudotumor	22 (0.1%)	
	152	Other tumors	428 (2.6%)	
	153	Unknown diagnosis	111 (0.7%)	
total (%)			16,686 (100%)	

2) Age distribution of WHO2007 brain tumors (2005-2008)

age	Pilocytic astrocytoma				Piloxyoid astrocytoma				Subependymal giant cell astrocytoma				Plemorphic xanthoastrocytoma				Diffuse astrocytoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	1	2	(0.6)
1	4	4	8	(3.6)	-	1	1	(7.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	6	3	9	(4.1)	1	-	1	(7.7)	-	-	-	(-)	-	-	-	(-)	1	3	4	(1.1)
3	3	5	8	(3.6)	1	-	1	(7.7)	1	-	1	(5.9)	-	-	-	(-)	2	-	2	(0.6)
4	5	2	7	(3.2)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	23	19	42	(18.9)	2	-	2	(15.4)	4	2	6	(35.3)	1	-	1	(3.6)	11	5	16	(4.5)
10-14	21	15	36	(16.2)	1	1	2	(15.4)	3	2	5	(29.4)	2	-	2	(7.1)	6	5	11	(3.1)
15-19	12	17	29	(13.1)	2	-	2	(15.4)	-	1	1	(5.9)	1	4	5	(17.9)	4	6	10	(2.8)
20-24	11	7	18	(8.1)	2	1	3	(23.1)	-	1	1	(5.9)	2	1	3	(10.7)	16	9	25	(7.1)
25-29	8	5	13	(5.9)	-	-	-	(-)	-	-	-	(-)	2	-	2	(7.1)	15	19	34	(9.7)
30-34	1	3	4	(1.8)	-	-	-	(-)	-	-	-	(-)	2	3	5	(17.9)	24	17	41	(11.6)
35-39	4	3	7	(3.2)	-	-	-	(-)	-	3	3	(17.6)	1	1	2	(7.1)	26	18	44	(12.5)
40-44	5	4	9	(4.1)	-	-	-	(-)	-	-	-	(-)	2	1	3	(10.7)	22	13	35	(9.9)
45-49	2	7	9	(4.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	14	9	23	(6.5)
50-54	3	3	6	(2.7)	-	-	-	(-)	-	-	-	(-)	1	1	2	(7.1)	13	7	20	(5.7)
55-59	1	3	4	(1.8)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	19	12	31	(8.8)
60-64	3	1	4	(1.8)	-	-	-	(-)	-	-	-	(-)	-	1	1	(3.6)	11	10	21	(6.0)
65-69	1	1	2	(0.9)	-	-	-	(-)	-	-	-	(-)	-	2	2	(7.1)	8	9	17	(4.8)
(100)	2	2	4	(1.8)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	6	8	(2.3)
75-79	-	2	2	(0.9)	1	-	1	(7.7)	-	-	-	(-)	-	-	-	(-)	2	6	8	(2.3)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	1	1	(0.5)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	115	107	222	(100)	10	3	13	(100)	8	9	17	(100)	14	14	28	(100)	197	155	352	(100)
median	14.0	16.0	15		13.5	14.0	14.0		7.5	17.0	10.0		27.5	33.0	31.5		38.0	38.0	38.0	

age	Fibrillary astrocytoma				Gemistocytic astrocytoma				Protoplasmic astrocytoma				Anaplastic astrocytoma				Glioblastoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	3	4	(0.2)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	-	2	(0.1)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	3	4	(0.2)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.2)	-	2	2	(0.1)
4	-	1	1	(2.7)	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.2)	1	1	2	(0.1)
5- 9	1	-	1	(2.7)	-	-	-	(-)	-	-	-	(-)	5	3	8	(1.5)	4	10	14	(0.7)
10-14	1	1	2	(5.4)	-	-	-	(-)	-	-	-	(-)	6	5	11	(2.0)	15	7	22	(1.1)
15-19	1	-	1	(2.7)	-	-	-	(-)	-	-	-	(-)	3	5	8	(1.5)	13	9	22	(1.1)
20-24	1	-	1	(2.7)	1	-	1	(4.3)	-	-	-	(-)	12	10	22	(4.0)	22	18	40	(2.0)
25-29	2	2	4	(10.8)	1	-	1	(4.3)	-	-	-	(-)	17	14	31	(5.7)	30	22	52	(2.6)
30-34	1	2	3	(8.1)	1	2	3	(13.0)	-	-	-	(-)	24	30	54	(9.9)	34	17	51	(2.5)
35-39	3	4	7	(18.9)	6	-	6	(26.1)	-	-	-	(-)	30	20	50	(9.2)	37	26	63	(3.1)
40-44	2	2	4	(10.8)	3	-	3	(13.0)	-	1	1	(25.0)	26	17	43	(7.9)	44	39	83	(4.1)
45-49	2	1	3	(8.1)	1	1	2	(8.7)	1	-	1	(25.0)	27	20	47	(8.6)	60	49	109	(5.4)
50-54	1	-	1	(2.7)	3	-	3	(13.0)	-	1	1	(25.0)	18	10	28	(5.1)	75	46	121	(6.0)
55-59	1	1	2	(5.4)	1	-	1	(4.3)	-	1	1	(25.0)	27	23	50	(9.2)	141	117	258	(12.9)
60-64	1	3	4	(10.8)	-	1	1	(4.3)	-	-	-	(-)	16	20	36	(6.6)	149	103	252	(12.6)
65-69	-	-	-	(-)	-	1	1	(4.3)	-	-	-	(-)	28	23	51	(9.4)	200	108	308	(15.4)
70-74	1	1	2	(5.4)	-	-	-	(-)	-	-	-	(-)	24	22	46	(8.4)	172	94	266	(13.3)
75-79	1	-	1	(2.7)	1	-	1	(4.3)	-	-	-	(-)	20	23	43	(7.9)	117	112	229	(11.4)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	7	5	12	(2.2)	38	47	85	(4.2)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	1	3	(0.6)	5	8	13	(0.6)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	1	3	(0.1)
total	19	18	37	(100)	18	5	23	(100)	1	3	4	(100)	294	251	545	(100)	1,163	842	2,005	(100)
median	38.0	37.5	38.0		38.5	49.0	40.0		48.0	50.0	49.0		49.0	51.0	49.0		63.0	62.0	63.0	

age	Giant cell glioblastoma				Gliosarcoma				Gliomatosis cerebri				Oligodendroglioma				Anaplastic oligodendroglioma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.4)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	1	1	(3.4)	-	-	-	(-)	1	-	1	(0.4)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	2	-	2	(14.3)	-	-	-	(-)	1	-	1	(1.5)	2	1	3	(1.2)	-	-	-	(-)
10-14	-	-	-	(-)	-	-	-	(-)	1	1	2	(3.0)	2	1	3	(1.2)	1	2	3	(1.3)
15-19	1	-	1	(7.1)	2	-	2	(6.9)	1	3	4	(6.0)	3	-	3	(1.2)	4	-	4	(1.7)
20-24	1	1	2	(14.3)	-	-	-	(-)	-	3	3	(4.5)	3	4	7	(2.9)	1	2	3	(1.3)
25-29	-	-	-	(-)	1	-	1	(3.4)	1	-	1	(1.5)	6	12	18	(7.4)	6	4	10	(4.3)
30-34	-	-	-	(-)	1	1	2	(6.9)	2	1	3	(4.5)	20	10	30	(12.4)	18	8	26	(11.1)
35-39	-	1	1	(7.1)	-	-	-	(-)	7	-	7	(10.4)	17	27	44	(18.2)	8	6	14	(6.0)
40-44	1	2	3	(21.4)	-	1	1	(3.4)	6	1	7	(10.4)	17	15	32	(13.2)	9	7	16	(6.8)
45-49	1	-	1	(7.1)	2	1	3	(10.3)	5	2	7	(10.4)	10	8	18	(7.4)	6	7	13	(5.5)
50-54	-	-	-	(-)	1	-	1	(3.4)	5	1	6	(9.0)	21	7	28	(11.6)	17	12	29	(12.3)
55-59	1	-	1	(7.1)	1	2	3	(10.3)	3	-	3	(4.5)	13	8	21	(8.7)	15	13	28	(11.9)
60-64	-	2	2	(14.3)	4	-	4	(13.8)	1	2	3	(4.5)	10	12	22	(9.1)	16	9	25	(10.6)
65-69	-	-	-	(-)	3	-	3	(10.3)	4	3	7	(10.4)	1	2	3	(1.2)	21	4	25	(10.6)
70-74	-	-	-	(-)	3	1	4	(13.8)	2	4	6	(9.0)	2	2	4	(1.7)	13	7	20	(8.5)
75-79	1	-	1	(7.1)	2	-	2	(6.9)	2	2	4	(6.0)	2	-	2	(0.8)	4	5	9	(3.8)
80-84	-	-	-	(-)	1	1	2	(6.9)	-	1	1	(1.5)	-	-	-	(-)	7	3	10	(4.3)
85-89	-	-	-	(-)	-	-	-	(-)	1	1	2	(3.0)	1	1	2	(0.8)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	8	6	14	(100)	21	8	29	(100)	42	25	67	(100)	131	111	242	(100)	146	89	235	(100)
median	31.5	42.0	40.5		62.0	50.5	61.0		46.5	60.0	48.0		43.0	39.0	42.0		56.0	53.0	54.0	

age	Oligoastrocytoma				Anaplastic oligoastrocytoma				Subependymoma				Myxopapillary ependymoma				Ependymoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	1	3	(3.8)
2	-	-	-	(-)	-	-	-	(-)	-	1	1	(4.8)	-	-	-	(-)	-	1	1	(1.3)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	1	2	(2.5)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(1.3)
5- 9	3	1	4	(2.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	5	3	8	(10.1)
10-14	1	1	2	(1.3)	5	-	5	(2.8)	-	-	-	(-)	-	-	-	(-)	-	5	5	(6.3)
15-19	2	-	2	(1.3)	3	1	4	(2.2)	-	-	-	(-)	-	-	-	(-)	-	1	1	(1.3)
20-24	6	4	10	(6.7)	4	1	5	(2.8)	-	1	1	(4.8)	-	-	-	(-)	2	7	9	(11.4)
25-29	6	7	13	(8.7)	5	5	10	(5.5)	-	2	2	(9.5)	1	-	1	(33.3)	2	-	2	(2.5)
30-34	13	7	20	(13.4)	12	2	14	(7.7)	1	2	3	(14.3)	-	-	-	(-)	4	1	5	(6.3)
35-39	11	9	20	(13.4)	8	7	15	(8.3)	-	1	1	(4.8)	-	1	1	(33.3)	3	3	6	(7.6)
40-44	10	9	19	(12.8)	7	3	10	(5.5)	1	-	1	(4.8)	-	1	1	(33.3)	2	2	4	(5.1)
45-49	7	10	17	(11.4)	9	4	13	(7.2)	2	-	2	(9.5)	-	-	-	(-)	4	4	8	(10.1)
50-54	12	4	16	(10.7)	16	9	25	(13.8)	-	1	1	(4.8)	-	-	-	(-)	2	2	4	(5.1)
55-59	7	3	10	(6.7)	16	10	26	(14.4)	2	2	4	(19.0)	-	-	-	(-)	3	2	5	(6.3)
60-64	2	1	3	(2.0)	9	7	16	(8.8)	1	-	1	(4.8)	-	-	-	(-)	2	6	8	(10.1)
65-69	5	4	9	(6.0)	11	7	18	(9.9)	2	1	3	(14.3)	-	-	-	(-)	1	2	3	(3.8)
70-74	3	1	4	(2.7)	8	4	12	(6.6)	1	-	1	(4.8)	-	-	-	(-)	2	1	3	(3.8)
75-79	-	-	-	(-)	4	2	6	(3.3)	-	-	-	(-)	-	-	-	(-)	-	1	1	(1.3)
80-84	-	-	-	(-)	2	-	2	(1.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	88	61	149	(100)	119	62	181	(100)	10	11	21	(100)	1	2	3	(100)	36	43	79	(100)
median	40.0	40.0	40.0		51.0	53.5	52.0		58.5	34.0	46.0		25.0	39.5	39.0		37.0	37.0	37.0	

age	Cellular ependymoma				Papillary ependymoma				Clear cell ependymoma				Tanycytic ependymoma				Anaplastic ependymoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	3	4	(4.4)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	7	3	10	(11.1)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(1.1)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	6	7	(7.8)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	6	-	6	(6.7)
5- 9	-	1	1	(20.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	6	9	15	(16.7)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	10	2	12	(13.3)
15-19	-	1	1	(20.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	3	4	(4.4)
20-24	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	-	2	(2.2)
25-29	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	3	1	4	(4.4)
30-34	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(1.1)
35-39	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	3	2	5	(5.6)
40-44	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	1	3	(3.3)
45-49	1	-	1	(20.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	3	1	4	(4.4)
50-54	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(1.1)
55-59	1	-	1	(20.0)	-	-	-	(-)	1	-	1	(100)	-	1	1	(100)	2	1	3	(3.3)
60-64	-	1	1	(20.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(1.1)
65-69	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	5	1	6	(6.7)
70-74	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(1.1)
75-79	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	2	3	5	(100)	-	-	-	(-)	1	-	1	(100)	-	1	1	(100)	54	36	90	(100)
median	51.0	15.0	46.0		-	-	-		56.0	-	56.0		-	55.0	55.0		11.0	6.5	10.0	

age	Unclassified Glioma				Choroid plexus papilloma				Atypical choroid plexus papilloma				Choroid plexus carcinoma				Astroblastoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	1	1	(0.6)	2	3	5	(12.8)	-	-	-	(-)	2	1	3	(25.0)	-	-	-	(-)
1	-	2	2	(1.3)	2	1	3	(7.7)	-	-	-	(-)	-	2	2	(16.7)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	2	3	(25.0)	-	-	-	(-)
3	2	1	3	(1.9)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	8	6	14	(9.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	8	14	22	(14.1)	2	-	2	(5.1)	-	-	-	(-)	-	-	-	(-)	-	1	1	(33.3)
10-14	5	5	10	(6.4)	3	-	3	(7.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
15-19	6	5	11	(7.1)	-	1	1	(2.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
20-24	1	5	6	(3.8)	3	-	3	(7.7)	-	-	-	(-)	-	-	-	(-)	-	1	1	(33.3)
25-29	3	2	5	(3.2)	1	1	2	(5.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
30-34	4	5	9	(5.8)	2	1	3	(7.7)	-	-	-	(-)	-	1	1	(8.3)	1	-	1	(33.3)
35-39	5	2	7	(4.5)	2	1	3	(7.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
40-44	6	5	11	(7.1)	4	2	6	(15.4)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
45-49	2	1	3	(1.9)	-	2	2	(5.1)	1	-	1	(100)	-	-	-	(-)	-	-	-	(-)
50-54	3	5	8	(5.1)	-	2	2	(5.1)	-	-	-	(-)	-	1	1	(8.3)	-	-	-	(-)
55-59	5	5	10	(6.4)	-	2	2	(5.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
60-64	1	1	2	(1.3)	-	-	-	(-)	-	-	-	(-)	1	-	1	(8.3)	-	-	-	(-)
65-69	5	4	9	(5.8)	1	-	1	(2.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
70-74	4	5	9	(5.8)	-	-	-	(-)	-	-	-	(-)	1	-	1	(8.3)	-	-	-	(-)
75-79	5	1	6	(3.8)	-	1	1	(2.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	5	1	6	(3.8)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	1	-	1	(0.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	1	1	(0.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	79	77	156	(100)	22	17	39	(100)	1	-	1	(100)	5	7	12	(100)	1	2	3	(100)
median	38.5	24.0	31.0		21.5	40.0	32.0		49	-	49		2	2	2		34.0	14.5	24.0	

age	Chordoid glioma of the third ventricle				Angiocentric glioma				Dysplastic gangliocytoma of cerebellum (Lhermitte-Duclos)				Desmoplastic infantile astrocytoma/ganglioglioma				Dysembryoplastic neuroepithelial tumor			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	-	2	(66.7)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	1	1	2	(66.7)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(33.3)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(4.3)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	-	2	(8.7)
10-14	-	-	-	(-)	1	-	1	(100)	-	-	-	(-)	-	-	-	(-)	2	3	5	(21.7)
15-19	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	1	3	(13.0)
20-24	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	4	-	4	(17.4)
25-29	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(4.3)
30-34	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	3	3	(13.0)
35-39	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(4.3)
40-44	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	1	2	(8.7)
45-49	-	1	1	(25.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
50-54	-	1	1	(25.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
55-59	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
60-64	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(4.3)
65-69	-	1	1	(25.0)	-	-	-	(-)	1	-	1	(33.3)	-	-	-	(-)	-	-	-	(-)
70-74	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
75-79	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	-	1	1	(25.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	-	4	4	(100)	1	-	1	(100)	2	1	3	(100)	3	-	3	(100)	13	10	23	(100)
median	-	61.5	61.5		14.0	-	14.0		34.0	1.0	1.0		0	-	0		20.0	24.5	20.0	

age	Gangliocytoma				Ganglioglioma				Anaplastic ganglioglioma				Central neurocytoma				Extraventricular neurocytoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	1	-	1	(1.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	1	-	1	(8.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	1	1	(1.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	1	1	(1.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	2	2	(3.4)	-	-	-	(-)	-	1	1	(1.3)	-	-	-	(-)
10-14	2	1	3	(25.0)	3	2	5	(8.6)	-	1	1	(9.1)	-	-	-	(-)	1	-	1	(50.0)
15-19	1	1	2	(16.7)	4	3	7	(12.1)	-	-	-	(-)	-	3	3	(4.0)	-	-	-	(-)
20-24	-	-	-	(-)	3	3	6	(10.3)	-	-	-	(-)	8	7	15	(20.0)	-	-	-	(-)
25-29	1	-	1	(8.3)	6	5	11	(19.0)	1	-	1	(9.1)	8	7	15	(20.0)	-	-	-	(-)
30-34	1	1	2	(16.7)	4	3	7	(12.1)	1	-	1	(9.1)	6	5	11	(14.7)	-	-	-	(-)
35-39	-	-	-	(-)	2	1	3	(5.2)	2	-	2	(18.2)	4	4	8	(10.7)	-	-	-	(-)
40-44	1	-	1	(8.3)	-	2	2	(3.4)	1	-	1	(9.1)	5	1	6	(8.0)	1	-	1	(50.0)
45-49	1	-	1	(8.3)	1	1	2	(3.4)	-	1	1	(9.1)	4	2	6	(8.0)	-	-	-	(-)
50-54	-	-	-	(-)	-	3	3	(5.2)	-	-	-	(-)	2	-	2	(2.7)	-	-	-	(-)
55-59	-	1	1	(8.3)	2	2	4	(6.9)	-	-	-	(-)	3	1	4	(5.3)	-	-	-	(-)
60-64	-	-	-	(-)	-	1	1	(1.7)	1	-	1	(9.1)	1	3	4	(5.3)	-	-	-	(-)
65-69	-	-	-	(-)	1	-	1	(1.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
70-74	-	-	-	(-)	-	1	1	(1.7)	1	2	3	(27.3)	-	-	-	(-)	-	-	-	(-)
75-79	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	8	4	12	(100)	27	31	58	(100)	7	4	11	(100)	41	34	75	(100)	2	-	2	(100)
median	21.0	23.0	21.5		27.0	29.0	28.0		39.0	59.5	42.0		32.0	29.0	31.0		28.0	-	28.0	

age	Papillary glioneuronal tumor				Rosette-forming glioneuronal tumor				Paraganglioma				Pineocytoma				Pineal parenchymal tumor of intermediate differentiation			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(4.0)	-	-	-	(-)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	1	3	(20.0)
15-19	-	-	-	(-)	-	1	1	(50.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
20-24	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
25-29	-	-	-	(-)	-	-	-	(-)	1	-	1	(14.3)	1	1	2	(8.0)	1	-	1	(6.7)
30-34	-	-	-	(-)	-	-	-	(-)	1	-	1	(14.3)	1	-	1	(4.0)	2	-	2	(13.3)
35-39	-	-	-	(-)	-	1	1	(50.0)	-	1	1	(14.3)	-	-	-	(-)	1	1	2	(13.3)
40-44	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	2	4	(16.0)	-	-	-	(-)
45-49	-	1	1	(50.0)	-	-	-	(-)	-	-	-	(-)	1	2	3	(12.0)	-	-	-	(-)
50-54	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	3	5	(20.0)	-	3	3	(20.0)
55-59	1	-	1	(50.0)	-	-	-	(-)	-	-	-	(-)	3	2	5	(20.0)	1	1	2	(13.3)
60-64	-	-	-	(-)	-	-	-	(-)	-	1	1	(14.3)	-	2	2	(8.0)	-	-	-	(-)
65-69	-	-	-	(-)	-	-	-	(-)	-	1	1	(14.3)	1	-	1	(4.0)	2	-	2	(13.3)
70-74	-	-	-	(-)	-	-	-	(-)	-	2	2	(28.6)	-	-	-	(-)	-	-	-	(-)
75-79	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(4.0)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	1	1	2	(100)	-	2	2	(100)	2	5	7	(100)	11	14	25	(100)	9	6	15	(100)
median	56.0	46.0	51.0		-	26.5	26.5		27.5	67.0	61.0		35.9	53.6	47.4		31.0	52.0	37.0	

age	Pineoblastoma				Medulloblastoma				Desmoplastic/nodular medulloblastoma				CNS primitive neuroectodermal tumor (CNS PNET)				CNS neuroblastoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	3	6	9	(6.5)	-	-	-	(-)	1	2	3	(8.8)	-	-	-	(-)
1	2	-	2	(25.0)	5	3	8	(5.8)	-	-	-	(-)	-	3	3	(8.8)	-	-	-	(-)
2	-	1	1	(12.5)	4	3	7	(5.0)	-	-	-	(-)	1	2	3	(8.8)	-	-	-	(-)
3	-	-	-	(-)	4	1	5	(3.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	1	1	(12.5)	6	7	13	(9.4)	-	-	-	(-)	-	1	1	(2.9)	-	-	-	(-)
5- 9	-	-	-	(-)	23	21	44	(31.7)	1	-	1	(50.0)	1	3	4	(11.8)	-	-	-	(-)
10-14	-	-	-	(-)	12	10	22	(15.8)	1	-	1	(50.0)	4	3	7	(20.6)	-	-	-	(-)
15-19	1	-	1	(12.5)	6	3	9	(6.5)	-	-	-	(-)	3	2	5	(14.7)	-	1	1	(8.3)
20-24	-	-	-	(-)	5	4	9	(6.5)	-	-	-	(-)	1	1	2	(5.9)	-	1	1	(8.3)
25-29	-	1	1	(12.5)	2	1	3	(2.2)	-	-	-	(-)	2	1	3	(8.8)	1	-	1	(8.3)
30-34	-	-	-	(-)	1	1	2	(1.4)	-	-	-	(-)	-	-	-	(-)	1	-	1	(8.3)
35-39	-	1	1	(12.5)	2	1	3	(2.2)	-	-	-	(-)	1	1	2	(5.9)	-	-	-	(-)
40-44	-	-	-	(-)	1	-	1	(0.7)	-	-	-	(-)	-	-	-	(-)	-	1	1	(8.3)
45-49	-	-	-	(-)	1	-	1	(0.7)	-	-	-	(-)	-	-	-	(-)	-	1	1	(8.3)
50-54	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(8.3)
55-59	-	-	-	(-)	-	1	1	(0.7)	-	-	-	(-)	-	-	-	(-)	2	-	2	(16.7)
60-64	-	-	-	(-)	1	-	1	(0.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
65-69	1	-	1	(12.5)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(8.3)
70-74	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	1	2	(16.7)
75-79	-	-	-	(-)	-	1	1	(0.7)	-	-	-	(-)	-	1	1	(2.9)	-	-	-	(-)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	4	4	8	(100)	76	63	139	(100)	2	-	2	(100)	14	20	34	(100)	5	7	12	(100)
median	10.0	14.5	11.5		8.0	7.0	8.0		9.0	-	9.0		15.5	8.0	11.5		57.0	48.0	49.0	

age	CNS ganglioneuroblastoma				Ependymoblastoma				Atypical teratoid/ rhabdoid tumor				Schwannoma(neurile- moma, neurinoma)				Cellular schwannoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	1	-	1	(100)	2	5	7	(41.2)	2	-	2	(0.1)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	2	3	5	(29.4)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	2	-	2	(11.8)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	1	1	(5.9)	3	-	3	(0.2)	-	-	-	(-)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	4	5	(0.3)	-	-	-	(-)
15-19	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	5	2	7	(0.5)	-	-	-	(-)
20-24	-	-	-	(-)	-	-	-	(-)	1	1	2	(11.8)	14	12	26	(1.8)	-	-	-	(-)
25-29	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	28	26	54	(3.8)	-	-	-	(-)
30-34	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	52	50	102	(7.1)	1	-	1	(25.0)
35-39	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	64	70	134	(9.3)	-	-	-	(-)
40-44	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	66	51	117	(8.1)	-	-	-	(-)
45-49	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	53	65	118	(8.2)	1	-	1	(25.0)
50-54	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	80	69	149	(10.4)	-	-	-	(-)
55-59	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	91	124	215	(15.0)	1	1	2	(50.0)
60-64	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	72	98	170	(11.8)	-	-	-	(-)
65-69	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	69	79	148	(10.3)	-	-	-	(-)
70-74	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	50	72	122	(8.5)	-	-	-	(-)
75-79	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	16	29	45	(3.1)	-	-	-	(-)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	9	6	15	(1.0)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	2	4	(0.3)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.1)	-	-	-	(-)
total	-	-	-	(-)	1	-	1	(100)	7	10	17	(100)	678	759	1,437	(100)	3	1	4	(100)
median	-	-	-		0	-	0		1.0	0.5	1.0		53.0	56.0	55.0		48.0	57.0	52.5	

age	Plexiform schwannoma				Neurofibroma				Malignant perineurioma				Malignant peripheral nerve sheath tumor (MPNST)				Meningioma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	2	3	(0.3)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	-	2	(0.2)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.1)
15-19	-	-	-	(-)	-	1	1	(11.1)	-	-	-	(-)	-	-	-	(-)	1	1	2	(0.2)
20-24	-	-	-	(-)	1	-	1	(11.1)	-	-	-	(-)	-	-	-	(-)	2	3	5	(0.4)
25-29	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	6	8	14	(1.2)
30-34	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	8	13	21	(1.8)
35-39	-	-	-	(-)	-	1	1	(11.1)	-	-	-	(-)	-	-	-	(-)	8	42	50	(4.3)
40-44	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(50.0)	17	50	67	(5.8)
45-49	-	-	-	(-)	-	2	2	(22.2)	-	-	-	(-)	-	-	-	(-)	19	56	75	(6.5)
50-54	-	-	-	(-)	-	1	1	(11.1)	-	-	-	(-)	1	-	1	(50.0)	20	79	99	(8.5)
55-59	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	50	149	199	(17.1)
60-64	-	-	-	(-)	1	1	2	(22.2)	-	-	-	(-)	-	-	-	(-)	54	104	158	(13.6)
65-69	-	-	-	(-)	1	-	1	(11.1)	-	-	-	(-)	-	-	-	(-)	50	120	170	(14.6)
70-74	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	35	105	140	(12.1)
75-79	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	33	56	89	(7.7)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	17	29	46	(4.0)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	6	10	16	(1.4)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	3	3	(0.3)
95-	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.1)
total	-	-	-	(-)	3	6	9	(100)	-	-	-	(-)	2	-	2	(100)	329	832	1,161	(100)
median	-	-	-		64.0	47.0	49.0		-	-	-		48	-	48		63.0	60.0	61.0	

age	Meningothelial meningioma				Fibrous (fibroblastic) meningioma				Transitional (mixed) meningioma				Psammomatous meningioma				Angiomatous meningioma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	1	1	2	(0.2)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	1	3	4	(0.3)	1	1	2	(0.5)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	2	2	(0.2)	-	-	-	(-)	1	1	2	(0.4)	-	-	-	(-)	-	-	-	(-)
15-19	-	-	-	(-)	1	1	2	(0.5)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
20-24	2	1	3	(0.2)	-	2	2	(0.5)	1	-	1	(0.2)	-	-	-	(-)	1	2	3	(2.7)
25-29	12	6	18	(1.4)	1	2	3	(0.7)	2	4	6	(1.1)	-	1	1	(1.3)	-	-	-	(-)
30-34	11	22	33	(2.6)	1	3	4	(1.0)	7	6	13	(2.4)	-	-	-	(-)	5	2	7	(6.3)
35-39	10	35	45	(3.5)	3	7	10	(2.5)	4	17	21	(3.8)	1	2	3	(3.9)	3	1	4	(3.6)
40-44	16	59	75	(5.9)	4	19	23	(5.7)	7	18	25	(4.6)	-	4	4	(5.3)	3	3	6	(5.4)
45-49	28	81	109	(8.6)	9	28	37	(9.2)	6	41	47	(8.6)	-	4	4	(5.3)	2	5	7	(6.3)
50-54	44	116	160	(12.6)	5	36	41	(10.1)	16	43	59	(10.8)	1	7	8	(10.5)	2	6	8	(7.2)
55-59	63	172	235	(18.5)	16	66	82	(20.3)	20	68	88	(16.1)	3	9	12	(15.8)	7	13	20	(18.0)
60-64	55	112	167	(13.1)	7	43	50	(12.4)	33	60	93	(17.0)	2	11	13	(17.1)	13	5	18	(16.2)
65-69	42	127	169	(13.3)	14	45	59	(14.6)	21	60	81	(14.8)	1	8	9	(11.8)	4	11	15	(13.5)
70-74	43	93	136	(10.7)	10	41	51	(12.6)	16	51	67	(12.2)	-	11	11	(14.5)	9	5	14	(12.6)
75-79	28	54	82	(6.4)	7	18	25	(6.2)	17	13	30	(5.5)	-	5	5	(6.6)	1	4	5	(4.5)
80-84	11	16	27	(2.1)	-	12	12	(3.0)	3	9	12	(2.2)	1	4	5	(6.6)	-	2	2	(1.8)
85-89	2	3	5	(0.4)	-	-	-	(-)	2	1	3	(0.5)	-	1	1	(1.3)	1	1	2	(1.8)
90-94	-	-	-	(-)	-	1	1	(0.2)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	369	903	1,272	(100)	79	325	404	(100)	156	392	548	(100)	9	67	76	(100)	51	60	111	(100)
median	59.0	58.0	58.0		59.0	59.0	59.0		62.0	59.0	60.0		59.0	63.0	62.0		60.0	59.0	60.0	

age	Microcystic meningioma				Secretory meningioma				Lymphoplasmacyte-rich meningioma				Metaplastic meningioma				Chordoid meningioma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(5.9)
15-19	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
20-24	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(5.9)
25-29	-	-	-	(-)	-	-	-	(-)	2	-	2	(33.3)	-	-	-	(-)	-	-	-	(-)
30-34	1	-	1	(2.4)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(5.9)
35-39	1	-	1	(2.4)	-	2	2	(7.7)	-	-	-	(-)	-	-	-	(-)	1	-	1	(5.9)
40-44	1	-	1	(2.4)	-	1	1	(3.8)	-	2	2	(33.3)	-	-	-	(-)	1	1	2	(11.8)
45-49	1	1	2	(4.8)	1	2	3	(11.5)	-	-	-	(-)	-	-	-	(-)	1	1	2	(11.8)
50-54	-	2	2	(4.8)	1	5	6	(23.1)	-	-	-	(-)	-	-	-	(-)	1	1	2	(11.8)
55-59	4	4	8	(19.0)	1	3	4	(15.4)	1	-	1	(16.7)	-	1	1	(50.0)	-	-	-	(-)
60-64	3	4	7	(16.7)	-	1	1	(3.8)	1	-	1	(16.7)	-	-	-	(-)	-	2	2	(11.8)
65-69	-	3	3	(7.1)	2	3	5	(19.2)	-	-	-	(-)	-	1	1	(50.0)	1	-	1	(5.9)
70-74	7	3	10	(23.8)	2	1	3	(11.5)	-	-	-	(-)	-	-	-	(-)	2	-	2	(11.8)
75-79	1	3	4	(9.5)	1	-	1	(3.8)	-	-	-	(-)	-	-	-	(-)	2	-	2	(11.8)
80-84	1	2	3	(7.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	20	22	42	(100)	8	18	26	(100)	4	2	6	(100)	-	2	2	(100)	10	7	17	(100)
median	59.0	58.0	58.0		67.0	54.0	56.5		43.5	41.0	41.0		-	63.5	63.5		61.0	49.0	50.0	

age	Clear cell meningioma				Atypical meningioma				Papillary meningioma				Rhabdoid meningioma				Anaplastic (malignant) meningioma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	1	1	(0.4)	1	-	1	(11.1)	-	-	-	(-)	-	-	-	(-)
10-14	1	-	1	(12.5)	1	-	1	(0.4)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
15-19	-	1	1	(12.5)	1	1	2	(0.8)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
20-24	-	-	-	(-)	1	-	1	(0.4)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
25-29	-	-	-	(-)	-	5	5	(2.1)	-	-	-	(-)	-	2	2	(40.0)	2	-	2	(4.2)
30-34	-	-	-	(-)	4	2	6	(2.5)	2	-	2	(22.2)	-	-	-	(-)	-	-	-	(-)
35-39	-	-	-	(-)	4	4	8	(3.4)	-	-	-	(-)	-	-	-	(-)	-	1	1	(2.1)
40-44	-	1	1	(12.5)	3	8	11	(4.6)	1	-	1	(11.1)	-	-	-	(-)	4	1	5	(10.4)
45-49	-	1	1	(12.5)	8	6	14	(5.9)	-	-	-	(-)	-	-	-	(-)	-	1	1	(2.1)
50-54	1	-	1	(12.5)	6	6	12	(5.1)	-	-	-	(-)	-	2	2	(40.0)	3	2	5	(10.4)
55-59	-	-	-	(-)	19	17	36	(15.2)	-	2	2	(22.2)	-	-	-	(-)	3	6	9	(18.8)
60-64	-	-	-	(-)	15	14	29	(12.2)	-	-	-	(-)	-	-	-	(-)	5	1	6	(12.5)
65-69	-	-	-	(-)	22	17	39	(16.5)	1	-	1	(11.1)	-	-	-	(-)	2	2	4	(8.3)
70-74	1	-	1	(12.5)	20	12	32	(13.5)	-	-	-	(-)	-	1	1	(20.0)	4	5	9	(18.8)
75-79	-	-	-	(-)	8	17	25	(10.5)	-	-	-	(-)	-	-	-	(-)	3	-	3	(6.3)
80-84	1	1	2	(25.0)	1	11	12	(5.1)	1	1	2	(22.2)	-	-	-	(-)	1	2	3	(6.3)
85-89	-	-	-	(-)	3	-	3	(1.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	4	4	8	(100)	116	121	237	(100)	6	3	9	(100)	-	5	5	(100)	27	21	48	(100)
median	62.5	45.5	49.0		63.0	64.0	63.0		37.0	57.0	55.0		-	50.0	50.0		62.0	59.0	61.0	

age	Lipoma				Liposarcoma				Solitary fibrous tumor				Fibrosarcoma				Malignant fibrous histiocytoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	1	3	4	(26.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(14.3)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
15-19	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
20-24	1	-	1	(6.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
25-29	-	-	-	(-)	-	-	-	(-)	1	-	1	(4.2)	-	-	-	(-)	-	-	-	(-)
30-34	1	1	2	(13.3)	-	-	-	(-)	1	2	3	(12.5)	-	-	-	(-)	-	-	-	(-)
35-39	-	-	-	(-)	-	-	-	(-)	4	2	6	(25.0)	-	-	-	(-)	-	-	-	(-)
40-44	-	1	1	(6.7)	-	-	-	(-)	2	2	4	(16.7)	-	-	-	(-)	-	-	-	(-)
45-49	1	1	2	(13.3)	-	-	-	(-)	-	1	1	(4.2)	-	-	-	(-)	1	-	1	(14.3)
50-54	-	1	1	(6.7)	-	-	-	(-)	-	1	1	(4.2)	-	-	-	(-)	-	-	-	(-)
55-59	-	-	-	(-)	-	-	-	(-)	-	1	1	(4.2)	-	-	-	(-)	-	1	1	(14.3)
60-64	1	1	2	(13.3)	-	-	-	(-)	1	3	4	(16.7)	-	-	-	(-)	2	-	2	(28.6)
65-69	1	-	1	(6.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
70-74	1	-	1	(6.7)	-	-	-	(-)	1	1	2	(8.3)	-	1	1	(100)	-	-	-	(-)
75-79	-	-	-	(-)	-	-	-	(-)	-	1	1	(4.2)	-	-	-	(-)	-	-	-	(-)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(14.3)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(14.3)
total	7	8	15	(100)	-	-	-	(-)	10	14	24	(100)	-	1	1	(100)	3	4	7	(100)
median	49.0	38.0	42.0		-	-	-		38.5	49.0	41.5		-	74.0	74.0		61.0	73.5	61.0	

age	Rhabdomyosarcoma				Chordoma				Chondroma				Chondrosarcoma				Osteoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	1	-	1	(20.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(4.2)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	1	1	(20.0)	1	-	1	(1.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	-	2	2	(2.6)	-	-	-	(-)	-	-	-	(-)	3	2	5	(20.8)
15-19	1	-	1	(20.0)	3	-	3	(3.9)	-	-	-	(-)	1	1	2	(11.1)	4	-	4	(16.7)
20-24	-	-	-	(-)	2	1	3	(3.9)	-	-	-	(-)	-	3	3	(16.7)	1	-	1	(4.2)
25-29	-	-	-	(-)	4	4	8	(10.4)	-	-	-	(-)	-	1	1	(5.6)	-	2	2	(8.3)
30-34	-	-	-	(-)	4	1	5	(6.5)	-	-	-	(-)	1	3	4	(22.2)	-	1	1	(4.2)
35-39	-	-	-	(-)	4	3	7	(9.1)	-	-	-	(-)	1	2	3	(16.7)	2	-	2	(8.3)
40-44	-	-	-	(-)	3	1	4	(5.2)	-	-	-	(-)	1	-	1	(5.6)	-	1	1	(4.2)
45-49	-	-	-	(-)	2	1	3	(3.9)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
50-54	1	-	1	(20.0)	3	4	7	(9.1)	-	-	-	(-)	1	-	1	(5.6)	1	2	3	(12.5)
55-59	-	-	-	(-)	4	6	10	(13.0)	-	-	-	(-)	-	1	1	(5.6)	-	-	-	(-)
60-64	-	-	-	(-)	7	2	9	(11.7)	-	1	1	(33.3)	-	-	-	(-)	-	-	-	(-)
65-69	-	-	-	(-)	6	4	10	(13.0)	1	-	1	(33.3)	1	-	1	(5.6)	-	-	-	(-)
70-74	-	-	-	(-)	1	-	1	(1.3)	-	-	-	(-)	-	-	-	(-)	-	2	2	(8.3)
75-79	-	1	1	(20.0)	-	3	3	(3.9)	1	-	1	(33.3)	-	1	1	(5.6)	-	2	2	(8.3)
80-84	-	-	-	(-)	1	-	1	(1.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	3	2	5	(100)	45	32	77	(100)	2	1	3	(100)	6	12	18	(100)	12	12	24	(100)
median	16.0	41.0	16.0		49.0	53.5	52.0		72.0	61.0	68.0		38.5	31.0	31.5		17.5	46.5	27.0	

age	Osteosarcoma				Osteochondroma				Hemangioma, capillary, cavernous				Epithelioid hemangioendothelioma				Hemangiopericytoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.6)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	4	2	6	(3.4)	-	-	-	(-)	-	-	-	(-)
10-14	-	1	1	(14.3)	-	-	-	(-)	9	2	11	(6.2)	-	-	-	(-)	-	-	-	(-)
15-19	2	-	2	(28.6)	-	-	-	(-)	3	4	7	(4.0)	-	-	-	(-)	-	1	1	(2.9)
20-24	1	-	1	(14.3)	-	-	-	(-)	2	3	5	(2.8)	-	-	-	(-)	1	1	2	(5.7)
25-29	-	-	-	(-)	-	-	-	(-)	6	12	18	(10.2)	-	-	-	(-)	-	-	-	(-)
30-34	-	-	-	(-)	-	-	-	(-)	5	9	14	(7.9)	-	-	-	(-)	-	3	3	(8.6)
35-39	-	-	-	(-)	-	-	-	(-)	6	11	17	(9.6)	-	-	-	(-)	2	2	4	(11.4)
40-44	-	-	-	(-)	-	-	-	(-)	5	9	14	(7.9)	-	-	-	(-)	2	1	3	(8.6)
45-49	-	-	-	(-)	-	-	-	(-)	4	7	11	(6.2)	-	-	-	(-)	2	1	3	(8.6)
50-54	-	-	-	(-)	-	-	-	(-)	3	12	15	(8.5)	-	-	-	(-)	3	3	6	(17.1)
55-59	-	-	-	(-)	-	-	-	(-)	10	9	19	(10.7)	-	-	-	(-)	-	2	2	(5.7)
60-64	1	-	1	(14.3)	-	-	-	(-)	7	7	14	(7.9)	-	-	-	(-)	2	2	4	(11.4)
65-69	-	2	2	(28.6)	-	-	-	(-)	2	7	9	(5.1)	-	-	-	(-)	1	1	2	(5.7)
70-74	-	-	-	(-)	1	-	1	(100)	2	5	7	(4.0)	-	-	-	(-)	1	1	2	(5.7)
75-79	-	-	-	(-)	-	-	-	(-)	3	2	5	(2.8)	-	-	-	(-)	-	1	1	(2.9)
80-84	-	-	-	(-)	-	-	-	(-)	2	1	3	(1.7)	-	-	-	(-)	-	1	1	(2.9)
85-89	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.6)	-	-	-	(-)	1	-	1	(2.9)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	4	3	7	(100)	1	-	1	(100)	73	104	177	(100)	-	-	-	(-)	15	20	35	(100)
median	20.5	66.0	24.0		70	-	70		41.0	44.0	43.0		-	-	-		50.0	51.5	50.0	

age	Anaplastic hemangiopericytoma				Angiosarcoma				Ewing sarcoma -PNET				Melanocytoma				Malignant melanoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	1	-	1	(33.3)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	-	-	-	(-)	1	-	1	(33.3)	-	-	-	(-)	-	-	-	(-)
15-19	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
20-24	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
25-29	-	-	-	(-)	-	-	-	(-)	-	1	1	(33.3)	-	-	-	(-)	-	-	-	(-)
30-34	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(12.5)
35-39	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	2	3	(37.5)
40-44	1	-	1	(50.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(12.5)
45-49	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(12.5)
50-54	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
55-59	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
60-64	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(12.5)
65-69	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
70-74	1	-	1	(50.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
75-79	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(12.5)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	2	-	2	(100)	-	-	-	(-)	2	1	3	(100)	-	-	-	(-)	4	4	8	(100)
median	58.0	-	58.0		-	-	-		7.0	28.0	10.0		-	-	-		42.0	39.0	39.0	

age	Meningeal melanomatosis				Hemangioblastoma				Malignant lymphoma (B cell type)				Malignant lymphoma (T cell type)				Other malignant lymphomas			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.1)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	1	2	3	(1.2)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
15-19	-	-	-	(-)	3	5	8	(3.2)	3	1	4	(0.5)	-	-	-	(-)	-	-	-	(-)
20-24	-	-	-	(-)	6	1	7	(2.8)	3	1	4	(0.5)	1	-	1	(6.7)	-	-	-	(-)
25-29	-	-	-	(-)	9	9	18	(7.2)	3	1	4	(0.5)	-	-	-	(-)	1	-	1	(2.0)
30-34	-	-	-	(-)	10	14	24	(9.6)	2	4	6	(0.8)	-	-	-	(-)	-	-	-	(-)
35-39	-	-	-	(-)	8	7	15	(6.0)	9	5	14	(1.9)	-	-	-	(-)	-	-	-	(-)
40-44	-	-	-	(-)	11	6	17	(6.8)	9	5	14	(1.9)	-	-	-	(-)	2	-	2	(4.0)
45-49	-	1	1	(100)	19	14	33	(13.2)	18	9	27	(3.6)	2	-	2	(13.3)	2	-	2	(4.0)
50-54	-	-	-	(-)	16	6	22	(8.8)	42	30	72	(9.6)	1	-	1	(6.7)	2	2	4	(8.0)
55-59	-	-	-	(-)	17	11	28	(11.2)	55	44	99	(13.2)	2	1	3	(20.0)	3	5	8	(16.0)
60-64	-	-	-	(-)	10	15	25	(10.0)	61	37	98	(13.1)	3	-	3	(20.0)	-	3	3	(6.0)
65-69	-	-	-	(-)	17	10	27	(10.8)	68	69	137	(18.3)	2	1	3	(20.0)	3	3	6	(12.0)
70-74	-	-	-	(-)	8	6	14	(5.6)	68	63	131	(17.5)	1	-	1	(6.7)	4	5	9	(18.0)
75-79	-	-	-	(-)	2	3	5	(2.0)	52	49	101	(13.5)	1	-	1	(6.7)	2	2	4	(8.0)
80-84	-	-	-	(-)	1	3	4	(1.6)	12	19	31	(4.1)	-	-	-	(-)	3	1	4	(8.0)
85-89	-	-	-	(-)	-	-	-	(-)	-	5	5	(0.7)	-	-	-	(-)	3	4	7	(14.0)
90-94	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.1)	-	-	-	(-)	-	-	-	(-)
total	-	1	1	(100)	138	112	250	(100)	406	343	749	(100)	13	2	15	(100)	25	25	50	(100)
median	-	45.0	45.0		51.0	48.5	49.5		64.0	67.0	66.0		61.0	62.0	61.0		69.0	68.0	68.5	

age	Plasmacytoma				Granulocytic sarcoma				Pure germinoma				HCG producing germinoma				Embryonal carcinoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.4)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	12	5	17	(7.6)	1	1	2	(8.0)	1	-	1	(50.0)
10-14	-	-	-	(-)	-	-	-	(-)	50	12	62	(27.7)	8	2	10	(40.0)	1	-	1	(50.0)
15-19	-	-	-	(-)	-	-	-	(-)	53	10	63	(28.1)	2	3	5	(20.0)	-	-	-	(-)
20-24	-	-	-	(-)	-	-	-	(-)	28	5	33	(14.7)	4	-	4	(16.0)	-	-	-	(-)
25-29	-	-	-	(-)	-	-	-	(-)	22	2	24	(10.7)	2	-	2	(8.0)	-	-	-	(-)
30-34	-	-	-	(-)	-	-	-	(-)	11	1	12	(5.4)	1	-	1	(4.0)	-	-	-	(-)
35-39	-	-	-	(-)	-	-	-	(-)	6	1	7	(3.1)	-	-	-	(-)	-	-	-	(-)
40-44	-	-	-	(-)	-	-	-	(-)	2	1	3	(1.3)	1	-	1	(4.0)	-	-	-	(-)
45-49	-	-	-	(-)	-	-	-	(-)	1	1	2	(0.9)	-	-	-	(-)	-	-	-	(-)
50-54	1	-	1	(25.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
55-59	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
60-64	1	1	2	(50.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
65-69	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
70-74	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
75-79	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	-	1	1	(25.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	2	2	4	(100)	-	-	-	(-)	186	38	224	(100)	19	6	25	(100)	2	-	2	(100)
median	58.0	72.5	62.5		-	-	-		18.0	15.0	17.0		15.0	14.5	15.0		10.5	-	10.5	

age	Yolk sac tumor				Choriocarcinoma				Teratoma with malignant transformation				Mature teratoma				Immature teratoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	4	3	7	(7.1)
1	1	-	1	(6.3)	-	-	-	(-)	-	-	-	(-)	-	1	1	(5.3)	-	-	-	(-)
2	1	-	1	(6.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(5.3)	2	-	2	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(5.3)	-	-	-	(-)
5- 9	3	1	4	(25.0)	-	-	-	(-)	-	-	-	(-)	2	2	4	(21.1)	4	-	4	(14.3)
10-14	4	-	4	(25.0)	1	1	2	(33.3)	1	-	1	(100)	2	-	2	(10.5)	7	-	7	(14.3)
15-19	-	-	-	(-)	2	2	4	(66.7)	-	-	-	(-)	2	1	3	(15.8)	4	-	4	(28.6)
20-24	5	1	6	(37.5)	-	-	-	(-)	-	-	-	(-)	2	-	2	(10.5)	-	-	-	(-)
25-29	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	2	2	4	(21.1)	-	-	-	(-)
30-34	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
35-39	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
40-44	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
45-49	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
50-54	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
55-59	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(5.3)	-	-	-	(-)
60-64	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
65-69	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
70-74	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
75-79	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	14	2	16	(100)	3	3	6	(100)	1	-	1	(100)	13	6	19	(100)	21	3	24	(100)
median	12.0	14.0	12.0		17.0	16.0	16.5		12	-	12		16.0	12.0	16.0		10.0	0	8.5	

age	Mixed germ cell tumor				Craniopharyngioma				Adamantinomatous craniopharyngioma				Papillary craniopharyngioma				Granular cell tumor of the neurohypophysis			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	1	1	(0.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	2	4	6	(1.9)	2	1	3	(6.4)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	1	2	3	(1.0)	1	-	1	(2.1)	-	-	-	(-)	-	-	-	(-)
3	-	1	1	(2.9)	7	4	11	(3.5)	1	1	2	(4.3)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	6	2	8	(2.5)	1	1	2	(4.3)	-	-	-	(-)	-	-	-	(-)
5- 9	5	2	7	(20.6)	21	14	35	(11.1)	4	2	6	(12.8)	-	-	-	(-)	-	-	-	(-)
10-14	12	1	13	(38.2)	9	9	18	(5.7)	6	1	7	(14.9)	1	-	1	(9.1)	1	2	3	(42.9)
15-19	6	1	7	(20.6)	4	4	8	(2.5)	-	1	1	(2.1)	-	-	-	(-)	-	-	-	(-)
20-24	3	-	3	(8.8)	5	3	8	(2.5)	1	-	1	(2.1)	-	-	-	(-)	-	-	-	(-)
25-29	1	-	1	(2.9)	7	9	16	(5.1)	-	-	-	(-)	1	-	1	(9.1)	-	-	-	(-)
30-34	-	1	1	(2.9)	11	7	18	(5.7)	1	1	2	(4.3)	-	-	-	(-)	-	-	-	(-)
35-39	-	-	-	(-)	10	3	13	(4.1)	1	1	2	(4.3)	-	-	-	(-)	-	1	1	(14.3)
40-44	-	-	-	(-)	10	7	17	(5.4)	3	-	3	(6.4)	1	2	3	(27.3)	-	-	-	(-)
45-49	-	-	-	(-)	12	8	20	(6.3)	2	1	3	(6.4)	-	-	-	(-)	-	-	-	(-)
50-54	-	-	-	(-)	14	12	26	(8.3)	-	2	2	(4.3)	-	-	-	(-)	-	-	-	(-)
55-59	-	-	-	(-)	20	12	32	(10.2)	3	2	5	(10.6)	2	-	2	(18.2)	2	-	2	(28.6)
60-64	-	-	-	(-)	14	14	28	(8.9)	2	2	4	(8.5)	1	-	1	(9.1)	-	-	-	(-)
65-69	-	-	-	(-)	10	12	22	(7.0)	-	1	1	(2.1)	-	1	1	(9.1)	-	-	-	(-)
70-74	-	-	-	(-)	5	7	12	(3.8)	1	1	2	(4.3)	1	1	2	(18.2)	-	1	1	(14.3)
75-79	-	-	-	(-)	3	5	8	(2.5)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	1	-	1	(2.9)	3	2	5	(1.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	28	6	34	(100)	174	141	315	(100)	29	18	47	(100)	7	4	11	(100)	3	4	7	(100)
median	14.0	9.0	13.5		42.0	45.0	44.0		14.0	47.0	30.0		57.0	55.5	57.0		57.0	24.5	39.0	

age	Pituitaryoma				Rathke's cleft cyst				Null cell adenoma				GH producing adenoma				PRL producing adenoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	1	1	(0.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.2)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	2	-	2	(0.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	3	2	5	(1.6)	-	1	1	(0.1)	-	1	1	(0.2)	2	3	5	(1.3)
15-19	-	-	-	(-)	2	9	11	(3.6)	4	6	10	(0.7)	2	2	4	(0.7)	2	20	22	(5.6)
20-24	-	-	-	(-)	3	19	22	(7.1)	4	15	19	(1.2)	11	3	14	(2.5)	9	58	67	(17.1)
25-29	-	2	2	(11.1)	8	24	32	(10.4)	14	21	35	(2.3)	20	10	30	(5.3)	12	63	75	(19.1)
30-34	-	-	-	(-)	7	20	27	(8.7)	31	24	55	(3.6)	26	13	39	(6.8)	15	52	67	(17.1)
35-39	1	2	3	(16.7)	10	17	27	(8.7)	42	38	80	(5.2)	30	16	46	(8.1)	6	38	44	(11.2)
40-44	1	1	2	(11.1)	12	13	25	(8.1)	52	50	102	(6.7)	36	32	68	(11.9)	4	26	30	(7.7)
45-49	-	-	-	(-)	7	11	18	(5.8)	63	54	117	(7.7)	20	19	39	(6.8)	11	2	13	(3.3)
50-54	1	-	1	(5.6)	13	12	25	(8.1)	72	101	173	(11.3)	28	46	74	(13.0)	10	7	17	(4.3)
55-59	1	3	4	(22.2)	11	17	28	(9.1)	129	110	239	(15.7)	40	72	112	(19.6)	10	4	14	(3.6)
60-64	2	-	2	(11.1)	11	15	26	(8.4)	137	69	206	(13.5)	17	53	70	(12.3)	12	5	17	(4.3)
65-69	1	-	1	(5.6)	8	20	28	(9.1)	114	87	201	(13.2)	15	29	44	(7.7)	6	6	12	(3.1)
70-74	1	1	2	(11.1)	3	12	15	(4.9)	98	69	167	(10.9)	7	13	20	(3.5)	3	4	7	(1.8)
75-79	1	-	1	(5.6)	3	10	13	(4.2)	50	44	94	(6.2)	4	3	7	(1.2)	2	-	2	(0.5)
80-84	-	-	-	(-)	1	1	2	(0.6)	12	6	18	(1.2)	1	-	1	(0.2)	-	-	-	(-)
85-89	-	-	-	(-)	1	-	1	(0.3)	3	5	8	(0.5)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.1)	-	-	-	(-)	-	-	-	(-)
95-	-	-	-	(-)	-	1	1	(0.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	9	9	18	(100)	105	204	309	(100)	826	700	1,526	(100)	258	312	570	(100)	104	288	392	(100)
median	62.0	42.0	55.5		49.0	43.5	45.0		60.0	56.0	58.0		45.0	55.0	53.0		45.0	29.5	31.0	

age	GH-PRL producing adenoma				TSH producing adenoma				ACTH producing adenoma				Gonadotropin producing adenoma				Epidermoid cyst			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.7)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	1	1	2	(4.8)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	2	3	(2.0)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.6)	1	2	3	(2.0)
15-19	-	-	-	(-)	-	-	-	(-)	1	2	3	(1.9)	-	-	-	(-)	1	2	3	(2.0)
20-24	-	-	-	(-)	2	1	3	(7.5)	-	6	6	(3.7)	1	1	2	(1.3)	2	4	6	(4.1)
25-29	-	2	2	(4.8)	-	-	-	(-)	4	7	11	(6.8)	-	1	1	(0.6)	5	12	17	(11.6)
30-34	4	2	6	(14.3)	2	2	4	(10.0)	4	10	14	(8.6)	3	3	6	(3.8)	4	4	8	(5.4)
35-39	1	2	3	(7.1)	-	3	3	(7.5)	6	16	22	(13.6)	5	6	11	(6.9)	2	3	5	(3.4)
40-44	-	4	4	(9.5)	1	1	2	(5.0)	6	14	20	(12.3)	11	5	16	(10.1)	6	6	12	(8.2)
45-49	2	2	4	(9.5)	-	1	1	(2.5)	3	9	12	(7.4)	3	6	9	(5.7)	4	7	11	(7.5)
50-54	2	4	6	(14.3)	6	1	7	(17.5)	4	11	15	(9.3)	11	7	18	(11.3)	8	9	17	(11.6)
55-59	3	4	7	(16.7)	4	3	7	(17.5)	5	13	18	(11.1)	9	9	18	(11.3)	9	11	20	(13.6)
60-64	1	3	4	(9.5)	3	5	8	(20.0)	3	11	14	(8.6)	16	9	25	(15.7)	6	7	13	(8.8)
65-69	1	1	2	(4.8)	1	2	3	(7.5)	3	10	13	(8.0)	11	8	19	(11.9)	7	11	18	(12.2)
70-74	1	-	1	(2.4)	-	2	2	(5.0)	3	5	8	(4.9)	14	6	20	(12.6)	3	3	6	(4.1)
75-79	-	1	1	(2.4)	-	-	-	(-)	2	3	5	(3.1)	7	1	8	(5.0)	2	2	4	(2.7)
80-84	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.6)	3	1	4	(2.5)	-	-	-	(-)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.6)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	16	26	42	(100)	19	21	40	(100)	44	118	162	(100)	94	65	159	(100)	62	85	147	(100)
median	49.5	48.0	49.5		52.0	58.0	55.0		47.5	48.0	48.0		60.0	56.0	59.0		51.0	50.0	51.0	

age	Dermoid cyst				Plurihormonal adenoma				Pseudotumor			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	1	1	2	(8.0)	-	-	-	(-)	-	-	-	(-)
3	-	1	1	(4.0)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	1	-	1	(4.0)	-	-	-	(-)	-	1	1	(4.5)
10-14	-	1	1	(4.0)	-	-	-	(-)	-	-	-	(-)
15-19	-	2	2	(8.0)	-	-	-	(-)	1	-	1	(4.5)
20-24	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
25-29	2	1	3	(12.0)	-	-	-	(-)	1	-	1	(4.5)
30-34	1	-	1	(4.0)	-	-	-	(-)	-	-	-	(-)
35-39	-	1	1	(4.0)	1	-	1	(16.7)	2	-	2	(9.1)
40-44	1	-	1	(4.0)	1	-	1	(16.7)	2	-	2	(9.1)
45-49	1	2	3	(12.0)	-	-	-	(-)	-	2	2	(9.1)
50-54	3	3	6	(24.0)	-	1	1	(16.7)	1	-	1	(4.5)
55-59	-	-	-	(-)	2	-	2	(33.3)	-	3	3	(13.6)
60-64	-	-	-	(-)	-	1	1	(16.7)	2	1	3	(13.6)
65-69	-	1	1	(4.0)	-	-	-	(-)	-	1	1	(4.5)
70-74	1	-	1	(4.0)	-	-	-	(-)	1	1	2	(9.1)
75-79	1	-	1	(4.0)	-	-	-	(-)	2	-	2	(9.1)
80-84	-	-	-	(-)	-	-	-	(-)	-	1	1	(4.5)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	12	13	25	(100)	4	2	6	(100)	12	10	22	(100)
median	43.0	37.0	40.0		50.5	56.5	55.0		48.0	57.0	56.5	

3) Overall survival and progression free survival (months)

ID	Histology	total	Overall survival					Progression free survival				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
1	Pilocytic astrocytoma	222	12	132.1	0.0	NR	94.8	36	132.1	0.0	NR	83.8
2	Pilomyxoid astrocytoma	13	3	127.1	2.0	NR	83.9	7	125.1	0.0	67.0	66.7
3	Subependymal giant cell astrocytoma	17	0	119.0	0.0	NR	100	2	119.0	0.0	NR	90.0
4	Pleomorphic xanthoastrocytoma	28	5	123.1	2.0	NR	77.2	7	123.1	2.0	NR	72.3
5	Diffuse astrocytoma	352	85	131.0	0.0	NR	77.2	150	131.0	0.0	96.1	59.8
6	Fibrillary astrocytoma	37	8	123.1	1.0	NR	77.3	15	117.1	0.0	101.0	53.4
7	Gemistocytic astrocytoma	23	7	119.0	1.9	NR	73.8	14	119.0	1.9	35.0	40.4
8	Protoplasmic astrocytoma	4	2	80.1	16.0	75.1	66.7	2	80.1	16.0	59.0	33.3
9	Anaplastic astrocytoma	545	264	128.1	0.0	41.1	43.2	284	128.1	0.0	26.0	36.3
10	Glioblastoma	2,006	1,241	130.1	0.0	18.0	15.5	1,206	130.1	0.0	11.0	14.2
11	Giant cell glioblastoma	14	7	121.1	3.0	56.1	40.1	9	91.1	1.0	16.0	19.0
12	Gliosarcoma	29	13	111.0	2.0	23.0	37.4	18	70.0	2.0	7.0	23.0
13	Gliomatosis cerebri	67	35	109.1	0.0	36.0	32.3	38	109.1	0.0	20.0	18.4
14	Oligodendroglioma	242	32	130.1	0.0	NR	92.5	109	130.1	0.0	87.1	64.8
15	Anaplastic oligodendroglioma	235	81	129.1	1.0	NR	62.6	113	129.1	0.0	44.0	44.8
16	Oligoastrocytoma	149	19	129.1	0.0	NR	91.0	65	126.1	0.0	106.1	65.0
17	Anaplastic oligoastrocytoma	181	63	129.0	1.0	104.0	62.6	90	129.0	0.0	47.0	42.9
18	Subependymoma	21	0	112.1	3.0	NR	100	0	112.1	3.0	NR	100
19	Myxopapillary ependymoma	3	0	76.0	1.0	NR	100	0	76.0	1.0	NR	100
20	Ependymoma	79	17	130.1	0.0	NR	77.8	23	130.1	0.0	NR	72.2
21	Cellular ependymoma	5	2	124.1	30.0	NR	80.0	3	124.1	18.0	28.0	40.0
23	Clear cell ependymoma	1	0	117.1	117.1	NR	100	0	117.1	117.1	NR	100
24	Tanycytic ependymoma	1	0	10.1	10.1	NR	ND	0	10.1	10.1	NR	ND
25	Anaplastic ependymoma	90	35	126.1	0.0	126.1	63.3	46	118.0	0.0	25.0	44.9
26	Unclassified gliomas	157	61	115.1	0.0	59.0	47.9	52	115.1	0.0	87.0	54.5
27	Choroid plexus papilloma	39	0	132.1	0.0	NR	100	9	124.0	0.0	NR	69.8
28	Atypical choroid plexus papilloma	1	0	77.1	77.1	NR	100	1	16.0	16.0	16.0	0
29	Choroid plexus carcinoma	12	5	113.0	7.0	NR	54.5	9	83.0	5.0	10.0	25.0
30	Astroblastoma	3	1	105.1	13.0	NR	66.7	1	105.1	10.0	NR	66.7
31	Chordoid glioma of the third ventricle	4	1	94.1	36.0	NR	75.0	1	94.1	6.0	NR	75.0
32	Angiocentric glioma	1	0	126.1	126.1	NR	100	0	126.1	126.1	NR	100
33	Dysplastic gangliocytoma of cerebellum (LHermitte-Duclos)	3	0	88.0	31.1	NR	100	0	88.0	31.1	NR	100
34	Desmoplastic infantile astrocytoma/ganglioglioma	3	0	119.0	77.1	NR	100	0	102.0	72.0	NR	100
35	Dysembryoplastic neuroepithelial tumor	23	0	126.1	1.0	NR	100	4	126.1	1.0	NR	83.7
36	Gangliocytoma	12	0	126.1	2.0	NR	100	0	126.1	2.0	NR	100
37	Ganglioglioma	58	2	129.0	1.0	NR	97.7	7	129.0	1.0	NR	84.9
38	Anaplastic ganglioglioma	11	4	117.0	2.9	NR	70.1	5	117.0	2.9	64.0	58.3
39	Central neurocytoma	75	6	128.1	0.0	NR	91.2	4	128.1	0.0	NR	93.7
40	Extraventricular neurocytoma	2	1	69.1	21.0	NR	50.0	1	69.1	7.0	NR	50.0
42	Papillary glioneuronal tumor	2	0	80.0	78.0	NR	100	1	80.0	74.0	NR	100
43	Rosette-forming glioneuronal tumor	2	0	53.1	11.0	NR	ND	0	53.1	11.0	NR	ND
44	Paraganglioma	7	0	111.1	25.0	NR	100	1	111.1	25.0	NR	85.7
45	Pineocytoma	25	0	119.1	0.0	NR	100	2	118.1	0.0	113.1	94.4
46	Pineal parenchymal tumor of intermediate differentiation	15	3	121.1	0.0	NR	78.6	4	121.1	0.0	NR	85.7
47	Pineoblastoma	8	3	132.1	8.0	NR	60.0	3	132.1	2.0	NR	58.3

ID	Histology	total	OS					PFS				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
49	Medulloblastoma	139	44	126.1	0.0	NR	71.2	43	126.1	0.0	NR	67.0
50	Desmoplastic/nodular medulloblastoma	2	1	95.0	62.0	NR	100	1	95.0	11.0	NR	50.0
54	CNS primitive neuroectodermal tumor (CNS PNET)	34	18	128.1	1.0	28.0	35.5	17	126.0	1.0	13.0	34.4
55	CNS neuroblastoma	12	3	120.1	3.0	NR	90.9	5	96.1	3.0	NR	50.0
58	Ependymoblastoma	1	1	0.0	0.0	0	0	0	0.0	0.0	NR	ND
59	Atypical teratoid/rhabdoid tumor	17	14	100.1	0.0	NR	12.5	10	100.1	0.0	4.0	19.4
60	Schwannoma (neurilemoma, neurinoma)	1,437	28	132.1	0.0	NR	98.4	169	132.1	0.0	NR	89.3
61	Cellular schwannoma	4	0	111.1	74.1	NR	100	0	111.1	74.1	NR	100
64	Neurofibroma	9	0	128.1	1.0	NR	100	1	128.1	1.0	NR	85.7
69	Malignant peripheral nerve sheath tumor (MPNST)	2	1	5.0	4.0	5.0	0	1	4.0	4.0	NR	ND
74	Meningioma	1,162	36	130.1	0.0	NR	96.5	78	130.1	0.0	NR	93.0
75	Meningothelial meningioma	1,272	39	132.1	0.0	NR	97.6	152	132.1	0.0	NR	88.5
76	Fibrous (fibroblastic) meningioma	404	11	131.0	0.0	NR	97.4	33	131.0	0.0	NR	92.2
77	Transitional (mixed) meningioma	548	16	132.1	0.0	NR	97.5	61	132.1	0.0	NR	89.6
78	Psammomatous meningioma	76	1	127.0	0.0	NR	100	4	127.0	0.0	NR	93.3
79	Angiomatous meningioma	111	5	126.1	0.0	NR	95.4	11	126.1	0.0	NR	89.8
80	Microcystic meningioma	42	1	125.1	0.0	NR	96.3	0	125.1	0.0	NR	100
81	Secretory meningioma	26	0	121.1	0.0	NR	100	1	121.1	0.0	NR	100
82	Lymphoplasmacyte-rich meningioma	6	0	106.1	1.0	NR	100	1	106.1	1.0	NR	80.0
83	Metaplastic meningioma	2	0	70.1	43.0	NR	100	0	70.1	43.0	NR	100
84	Chordoid meningioma	17	0	114.1	34.1	NR	100	9	113.1	28.0	72.1	62.7
85	Clear cell meningioma	8	0	111.1	4.0	NR	100	2	111.1	2.0	NR	75.0
86	Atypical meningioma	237	33	129.1	0.0	NR	89.1	91	121.1	0.0	72.0	56.3
87	Papillary meningioma	9	1	108.1	2.0	NR	85.7	3	81.1	2.0	NR	50.0
88	Rhabdoid meningioma	5	2	82.0	1.0	NR	50.0	2	82.0	1.0	NR	50.0
89	Anaplastic (malignant) meningioma	48	17	122.1	0.0	71.0	54.2	27	100	0.0	20.0	34.5
90	Lipoma	15	0	116.1	0.0	NR	100	0	116.1	0.0	NR	100
94	Solitary fibrous tumor	24	0	111.1	45.0	NR	100	12	111.1	7.0	72.0	56.3
95	Fibrosarcoma	1	1	10.0	10.0	10.0	0	1	3.0	3.0	3.0	0
96	Malignant fibrous histiocytoma	7	3	81.1	3.0	75.1	68.6	4	81.1	0.0	49.0	38.1
100	Rhabdomyosarcoma	5	1	96.1	1.0	NR	80.0	1	96.1	0.0	NR	80.0
101	Chordoma	77	7	126.1	0.0	NR	90.4	24	126.1	0.0	NR	64.4
102	Chondroma	3	1	111.0	53.1	NR	100	1	111.0	4.0	NR	66.7
103	Chondrosarcoma	18	2	116.1	2.0	113.1	91.7	5	116.1	2.0	NR	64.9
104	Osteoma	24	0	108.1	0.0	NR	100	0	108.1	0.0	NR	100
105	Osteosarcoma	7	2	125.1	0.0	NR	62.5	2	124.1	0.0	NR	80.0
106	Osteochondroma	1	0	103.1	103.1	NR	100	0	103.1	103.1	NR	100
107	Hemangioma, capillary, cavernous	177	3	128.1	0.0	NR	98.1	6	128.1	0.0	NR	96.9
109	Hemangiopericytoma	35	5	122.1	1.0	118.0	95.8	15	118.0	1.0	95.1	66.6
110	Anaplastic hemangiopericytoma	2	1	92.1	40.0	NR	50.0	1	92.1	2.0	NR	50.0
113	Ewing sarcoma -PNET	3	1	20.0	1.0	NR	ND	0	20.0	1.0	NR	ND
116	Malignant melanoma	8	5	30.0	0.0	19.0	ND	4	13.0	0.0	11.0	0
117	Meningeal melanomatosis	1	0	1.0	1.0	NR	ND	0	1.0	1.0	NR	ND
118	Hemangioblastoma	250	12	132.1	0.0	NR	95.2	28	120.1	0.0	NR	88.7
119	Malignant lymphoma (B cell type)	749	320	127.0	0.0	54.0	47.8	315	125.1	0.0	39.0	39.5
120	Malignant lymphoma (T cell type)	15	5	112.1	1.0	NR	55.7	6	112.1	1.0	NR	52.1
121	Other malignant lymphomas	50	16	129.1	0.0	NR	53.3	12	102.1	0.0	72.1	50.5
122	Plasmacytoma	4	0	85.0	0.0	NR	100	2	82.0	0.0	6.0	37.5

ID	Histology	total	OS					PFS				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
124	Pure germinoma	224	4	132.1	0.0	NR	99.1	12	132.1	0.0	NR	95.4
125	HCG producing germinoma	25	2	129.0	20.0	NR	95.0	3	128.1	20.0	NR	91.3
126	Embryonal carcinoma	2	2	10.1	2.0	6.0	0	1	8.1	2.0	8.1	0
127	Yolk sac tumor	16	4	128.1	0.0	NR	71.4	5	124.1	0.0	NR	65.2
128	Choriocarcinoma	6	2	118.0	12.0	NR	83.3	1	118.0	9.1	NR	83.3
129	Teratoma	8	0	118.1	5.0	NR	100	0	118.1	5.0	NR	100
130	Mature teratoma	19	3	126.1	6.0	NR	86.2	2	126.1	6.0	NR	84.4
131	Immature teratoma	24	4	127.0	0.0	NR	91.3	5	123.1	0.0	NR	80.4
133	Mixed germ cell tumor	34	6	126.0	3.0	NR	87.3	10	119.1	3.0	114.0	74.9
134	Craniopharyngioma	315	12	131.0	0.0	NR	96.4	103	131.0	0.0	NR	68.0
135	Adamantinomatous craniopharyngioma	48	0	123.1	0.0	NR	100	14	123.1	0.0	112.1	68.9
136	Papillary craniopharyngioma	11	0	111.1	19.0	NR	100	8	100.1	2.0	67.0	53.0
137	Granular cell tumor of the neurohypophysis	7	1	130.1	1.0	NR	83.3	1	130.1	1.0	NR	83.3
138	Pituicytoma	18	1	110.1	0.0	NR	94.4	5	110.1	0.0	NR	80.0
140	Rathke's cleft cyst	309	6	131.1	0.0	NR	99.3	29	131.1	0.0	NR	91.0
141	GH producing adenoma	570	4	132.1	0.0	NR	99.3	31	132.1	0.0	NR	94.5
142	PRL producing adenoma	393	5	131.0	0.0	NR	98.7	17	131.0	0.0	NR	94.8
143	GH-PRL producing adenoma	42	0	128.1	0.0	NR	100	1	128.1	0.0	NR	100
144	TSH producing adenoma	40	0	132.1	0.0	NR	100	4	122.1	0.0	NR	90.2
145	ACTH producing adenoma	162	2	131.0	0.0	NR	99.2	23	131.0	0.0	NR	86.5
146	Gonadotropin producing adenoma	159	6	132.1	0.0	NR	97.6	28	122.1	0.0	NR	84.5
147	Null cell adenoma	1,526	31	132.1	0.0	NR	98.2	235	132.1	0.0	NR	87.0
148	Epidermoid cyst	147	4	128.0	0.0	NR	96.1	14	126.0	0.0	NR	91.6
149	Dermoid cyst	25	0	109.1	1.0	NR	100	5	107.1	1.0	NR	84.9
150	Plurihormonal adenoma	6	0	112.1	11.0	NR	100	3	109.1	11.0	109.1	53.3
151	Pseudotumor (inflammation)	22	1	128.1	0.0	NR	94.7	0	128.1	0.0	NR	100
All primary brain tumors		16,686	2,838	132.1	0.0	NR	81.1	4,170	132.1	0.0	NR	72.4
Malignant brain tumors		6,112	2,473	132.1	0.0	79.0	53.4	2,879	132.1	0.0	38.0	43.3
Benign brain tumors		9,816	242	132.1	0.0	NR	97.8	1,134	132.1	0.0	NR	88.9

4. General features of top 25 tumors (2005-2008)

1) Definition of top 25 tumors (14,629/ total 16,686 = 87.7%)

		total	ID	histology
1	Pilocytic astrocytoma	222	1	Pilocytic astrocytoma
2	GII DA	416	5-8	Diffuse astrocytoma, Fibrillary astrocytoma, Gemistocytic astrocytoma, Protoplasmic astrocytoma
3	GII OL & OA	391	14, 16	Oligodendroglioma, Oligoastrocytoma
4	GIII AA	545	9	Anaplastic astrocytoma
5	GIII AO & AOA	416	15, 17	Anaplastic oligodendroglioma, Anaplastic oligoastrocytoma
6	Glioblastoma	2,049	10-12	Glioblastoma, Giant cell glioblastoma, Gliosarcoma
7	Ependymoma	85	20-23	Ependymoma, Cellular ependymoma, Papillary ependymoma, Clear cell ependymoma
8	AE	90	25	Anaplastic ependymoma
9	Ganglioglioma	58	37	Ganglioglioma
10	Central neurocytoma	75	39	Central neurocytoma
11	Medulloblastoma	144	49-53	Medulloblastoma, Desmoplastic/nodular medulloblastoma
12	Germinoma	249	124,125	Pure germinoma, HCG producing germinoma
13	PCNSL	814	119-121	Malignant lymphoma-B cell, Malignant lymphoma-T cell, Other malignant lymphoma
14	GI Meningioma	3,649	74-83	Meningioma, Meningothelial, Fibrous (fibroblastic), Transitional (mixed), Psammomatous, Angiomatous, Secretory, Lymphoplasmacyte-rich, Microcystic, Metaplastic
15	GII Meningioma	262	84-86	Chordoid, Clear cell, Atypical
16	GIII Meningioma	62	87-89	Papillary meningioma, Rhabdoid meningioma, Anaplastic
17	Schwannoma	1,444	60-63	Schwannoma, Cellular, Plexiform, Melanotic
18	GH pituitary adenoma	570	141	GH producing pituitary adenoma
19	PRL pituitary adenoma	393	142	PRL producing pituitary adenoma
20	ACTH pituitary adenoma	162	145	ACTH producing pituitary adenoma
21	NF pituitary adenoma	1,685	146, 147	Gonadotropin producing pituitary adenoma, Null cell pituitary adenoma
22	Craniopharyngioma	374	134-136	Craniopharyngioma, Adamantinomatous, Papillary
23	Chordoma	77	101	Chordoma
24	Hemangioblastoma	250	118	Hemangioblastoma
25	Epidermoid	147	148	Epidermoid cyst

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2) Age distribution

age	Pilocytic astrocytoma				GII Diffuse astrocytoma				GII OL&OA				GIII Anaplastic astrocytoma				GIII AO&AOA			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	1	1	2	(0.5)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	4	4	8	(3.6)	-	-	-	(-)	-	1	1	(0.3)	-	-	-	(-)	-	-	-	(-)
2	6	3	9	(4.1)	1	3	4	(1.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	3	5	8	(3.6)	2	-	2	(0.5)	1	-	1	(0.3)	1	-	1	(0.2)	-	-	-	(-)
4	5	2	7	(3.2)	-	1	1	(0.2)	-	-	-	(-)	1	-	1	(0.2)	-	-	-	(-)
05-09	23	19	42	(18.9)	12	5	17	(4.1)	5	2	7	(1.8)	5	3	8	(1.5)	-	-	-	(-)
10-14	21	15	36	(16.2)	7	6	13	(3.1)	3	2	5	(1.3)	6	5	11	(2.0)	6	2	8	(1.9)
15-19	12	17	29	(13.1)	5	6	11	(2.6)	5	-	5	(1.3)	3	5	8	(1.5)	7	1	8	(1.9)
20-24	11	7	18	(8.1)	18	9	27	(6.5)	9	8	17	(4.3)	12	10	22	(4.0)	5	3	8	(1.9)
25-29	8	5	13	(5.9)	18	21	39	(9.4)	12	19	31	(7.9)	17	14	31	(5.7)	11	9	20	(4.8)
30-34	1	3	4	(1.8)	26	21	47	(11.3)	33	17	50	(12.8)	24	30	54	(9.9)	30	10	40	(9.6)
35-39	4	3	7	(3.2)	35	22	57	(13.7)	28	36	64	(16.4)	30	20	50	(9.2)	16	13	29	(7.0)
40-44	5	4	9	(4.1)	27	16	43	(10.3)	27	24	51	(13.0)	26	17	43	(7.9)	16	10	26	(6.3)
45-49	2	7	9	(4.1)	18	11	29	(7.0)	17	18	35	(9.0)	27	20	47	(8.6)	15	11	26	(6.3)
50-54	3	3	6	(2.7)	17	8	25	(6.0)	33	11	44	(11.3)	18	10	28	(5.1)	33	21	54	(13.0)
55-59	1	3	4	(1.8)	21	14	35	(8.4)	20	11	31	(7.9)	27	23	50	(9.2)	31	23	54	(13.0)
60-64	3	1	4	(1.8)	12	14	26	(6.3)	12	13	25	(6.4)	16	20	36	(6.6)	25	16	41	(9.9)
65-69	1	1	2	(0.9)	8	10	18	(4.3)	6	6	12	(3.1)	28	23	51	(9.4)	32	11	43	(10.3)
70-74	2	2	4	(1.8)	3	7	10	(2.4)	5	3	8	(2.0)	24	22	46	(8.4)	21	11	32	(7.7)
75-79	-	2	2	(0.9)	4	6	10	(2.4)	2	-	2	(0.5)	20	23	43	(7.9)	8	7	15	(3.6)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	7	5	12	(2.2)	9	3	12	(2.9)
85-89	-	1	1	(0.5)	-	-	-	(-)	1	1	2	(0.5)	2	1	3	(0.6)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	115	107	222	(100)	235	181	416	(100)	219	172	391	(100)	294	251	545	(100)	265	151	416	(100)
median	14.0	16.0	15.0		38.0	38.0	38.0		42.0	40.0	41.0		49.0	51.0	49.0		53.0	53.0	53.0	

age	Glioblastoma				Ependymoma				Anaplastic ependymoma				Ganglioglioma				Central neurocytoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	1	3	4	(0.2)	-	-	-	(-)	1	3	4	(4.4)	1	-	1	(1.7)	-	-	-	(-)
1	2	-	2	(0.1)	2	1	3	(3.5)	7	3	10	(11.1)	-	-	-	(-)	-	-	-	(-)
2	1	3	4	(0.2)	-	1	1	(1.2)	1	-	1	(1.1)	-	1	1	(1.7)	-	-	-	(-)
3	-	3	3	(0.1)	1	1	2	(2.4)	1	6	7	(7.8)	-	1	1	(1.7)	-	-	-	(-)
4	1	1	2	(0.1)	1	-	1	(1.2)	6	-	6	(6.7)	-	-	-	(-)	-	-	-	(-)
05-09	6	10	16	(0.8)	5	4	9	(10.6)	6	9	15	(16.7)	-	2	2	(3.4)	-	1	1	(1.3)
10-14	15	7	22	(1.1)	-	5	5	(5.9)	10	2	12	(13.3)	3	2	5	(8.6)	-	-	-	(-)
15-19	16	9	25	(1.2)	-	2	2	(2.4)	1	3	4	(4.4)	4	3	7	(12.1)	-	3	3	(4.0)
20-24	23	19	42	(2.1)	2	7	9	(10.6)	2	-	2	(2.2)	3	3	6	(10.3)	8	7	15	(20.0)
25-29	31	22	53	(2.6)	2	-	2	(2.4)	3	1	4	(4.4)	6	5	11	(19.0)	8	7	15	(20.0)
30-34	35	18	53	(2.6)	4	1	5	(5.9)	-	1	1	(1.1)	4	3	7	(12.1)	6	5	11	(14.7)
35-39	37	27	64	(3.1)	3	3	6	(7.1)	3	2	5	(5.6)	2	1	3	(5.2)	4	4	8	(10.7)
40-44	45	42	87	(4.2)	2	2	4	(4.7)	2	1	3	(3.3)	-	2	2	(3.4)	5	1	6	(8.0)
45-49	63	50	113	(5.5)	5	4	9	(10.6)	3	1	4	(4.4)	1	1	2	(3.4)	4	2	6	(8.0)
50-54	76	46	122	(6.0)	2	2	4	(4.7)	1	-	1	(1.1)	-	3	3	(5.2)	2	-	2	(2.7)
55-59	143	119	262	(12.8)	5	2	7	(8.2)	2	1	3	(3.3)	2	2	4	(6.9)	3	1	4	(5.3)
60-64	153	105	258	(12.6)	2	7	9	(10.6)	-	1	1	(1.1)	-	1	1	(1.7)	1	3	4	(5.3)
65-69	203	108	311	(15.2)	1	2	3	(3.5)	5	1	6	(6.7)	1	-	1	(1.7)	-	-	-	(-)
70-74	175	95	270	(13.2)	2	1	3	(3.5)	-	1	1	(1.1)	-	1	1	(1.7)	-	-	-	(-)
75-79	120	112	232	(11.3)	-	1	1	(1.2)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	39	48	87	(4.2)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
85-89	5	8	13	(0.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	2	1	3	(0.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	1192	856	2,048	(100)	39	46	85	(100)	54	36	90	(100)	27	31	58	(100)	41	34	75	(100)
median	63.0	62.0	62.0		39.0	37.0	37.0		11.0	6.5	10.0		27.0	29.0	28.0		32.0	29.0	31.0	

age	Medulloblastoma				Germinoma				PCNSL				GI Meningioma				GII Meningioma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	3	6	9	(6.3)	1	-	1	(0.4)	-	1	1	(0.1)	2	3	5	(0.1)	-	-	-	(-)
1	6	4	10	(6.9)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	4	3	7	(4.9)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	4	1	5	(3.5)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	6	7	13	(9.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	24	21	45	(31.3)	13	6	19	(7.6)	-	-	-	(-)	4	4	8	(0.2)	-	1	1	(0.4)
10-14	14	10	24	(16.7)	58	14	72	(28.9)	-	-	-	(-)	1	4	5	(0.1)	3	-	3	(1.1)
15-19	6	3	9	(6.3)	55	13	68	(27.3)	3	1	4	(0.5)	2	2	4	(0.1)	1	2	3	(1.1)
20-24	5	4	9	(6.3)	32	5	37	(14.9)	4	1	5	(0.6)	6	8	14	(0.4)	1	1	2	(0.8)
25-29	2	1	3	(2.1)	24	2	26	(10.4)	4	1	5	(0.6)	23	21	44	(1.2)	-	5	5	(1.9)
30-34	1	1	2	(1.4)	12	1	13	(5.2)	2	4	6	(0.7)	33	46	79	(2.2)	4	3	7	(2.7)
35-39	2	1	3	(2.1)	6	1	7	(2.8)	9	5	14	(1.7)	30	106	136	(3.7)	5	4	9	(3.4)
40-44	1	-	1	(0.7)	3	1	4	(1.6)	11	5	16	(2.0)	48	156	204	(5.6)	4	10	14	(5.3)
45-49	1	-	1	(0.7)	1	1	2	(0.8)	22	9	31	(3.8)	66	218	284	(7.8)	9	8	17	(6.5)
50-54	-	-	-	(-)	-	-	-	(-)	45	32	77	(9.5)	89	294	383	(10.5)	8	7	15	(5.7)
55-59	-	1	1	(0.7)	-	-	-	(-)	60	50	110	(13.5)	165	485	650	(17.8)	19	17	36	(13.7)
60-64	1	-	1	(0.7)	-	-	-	(-)	64	40	104	(12.8)	168	340	508	(13.9)	15	16	31	(11.8)
65-69	-	-	-	(-)	-	-	-	(-)	73	73	146	(17.9)	134	378	512	(14.0)	23	17	40	(15.3)
70-74	-	-	-	(-)	-	-	-	(-)	73	68	141	(17.3)	122	310	432	(11.8)	23	12	35	(13.4)
75-79	-	1	1	(0.7)	-	-	-	(-)	55	51	106	(13.0)	88	153	241	(6.6)	10	17	27	(10.3)
80-84	-	-	-	(-)	-	-	-	(-)	15	20	35	(4.3)	33	74	107	(2.9)	2	12	14	(5.3)
85-89	-	-	-	(-)	-	-	-	(-)	3	9	12	(1.5)	11	16	27	(0.7)	3	-	3	(1.1)
90-94	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.1)	-	4	4	(0.1)	-	-	-	(-)
95-	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(0.0)	-	-	-	(-)
total	80	64	144	(100)	205	44	249	(100)	444	370	814	(100)	1025	2,623	3,648	(100)	130	132	262	(100)
median	8.0	7.0	8.0		18.0	15.0	17.0		64.0	67.0	66.0		61.0	59.0	60.0		63.0	63.0	63.0	

age	GIII Meningioma				Schwannoma				GH producing adenoma				PRL pituitary adenoma				ACTH pituitary adenoma			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	2	-	2	(0.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.2)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	1	-	1	(1.6)	3	-	3	(0.2)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	1	4	5	(0.3)	-	1	1	(0.2)	2	3	5	(1.3)	-	-	-	(-)
15-19	-	-	-	(-)	5	2	7	(0.5)	2	2	4	(0.7)	2	20	22	(5.6)	1	2	3	(1.9)
20-24	-	-	-	(-)	14	12	26	(1.8)	11	3	14	(2.5)	9	58	67	(17.1)	-	6	6	(3.7)
25-29	2	2	4	(6.5)	28	26	54	(3.7)	20	10	30	(5.3)	12	63	75	(19.1)	4	7	11	(6.8)
30-34	2	-	2	(3.2)	53	50	103	(7.1)	26	13	39	(6.8)	15	52	67	(17.1)	4	10	14	(8.6)
35-39	-	1	1	(1.6)	64	70	134	(9.3)	30	16	46	(8.1)	6	38	44	(11.2)	6	16	22	(13.6)
40-44	5	1	6	(9.7)	66	51	117	(8.1)	36	32	68	(11.9)	4	26	30	(7.7)	6	14	20	(12.3)
45-49	-	1	1	(1.6)	54	65	119	(8.2)	20	19	39	(6.8)	11	2	13	(3.3)	3	9	12	(7.4)
50-54	3	4	7	(11.3)	81	70	151	(10.5)	28	46	74	(13.0)	10	7	17	(4.3)	4	11	15	(9.3)
55-59	3	8	11	(17.7)	92	125	217	(15.0)	40	72	112	(19.6)	10	4	14	(3.6)	5	13	18	(11.1)
60-64	5	1	6	(9.7)	73	98	171	(11.8)	17	53	70	(12.3)	12	5	17	(4.3)	3	11	14	(8.6)
65-69	3	2	5	(8.1)	69	79	148	(10.2)	15	29	44	(7.7)	6	6	12	(3.1)	3	10	13	(8.0)
70-74	4	6	10	(16.1)	50	72	122	(8.4)	7	13	20	(3.5)	3	4	7	(1.8)	3	5	8	(4.9)
75-79	3	-	3	(4.8)	16	29	45	(3.1)	4	3	7	(1.2)	2	-	2	(0.5)	2	3	5	(3.1)
80-84	2	3	5	(8.1)	9	6	15	(1.0)	1	-	1	(0.2)	-	-	-	(-)	-	1	1	(0.6)
85-89	-	-	-	(-)	2	2	4	(0.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	1	-	1	(0.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	33	29	62	(100)	683	761	1,444	(100)	258	312	570	(100)	104	288	392	(100)	44	118	162	(100)
median	60.0	58.0	58.5		53.0	56.0	55.0		45.0	55.0	53.0		45.0	29.5	31.0		47.5	48.0	48.0	

age	NF pituitary adenoma				Craniopharyngioma				Chordoma				Hemangioblastoma				Epidermoid			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	1	1	(0.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	4	5	9	(2.4)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	2	2	4	(1.1)	-	-	-	(-)	-	-	-	(-)	1	-	1	(0.7)
3	-	-	-	(-)	8	5	13	(3.5)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	7	3	10	(2.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	25	16	41	(11.0)	1	-	1	(1.3)	-	-	-	(-)	1	2	3	(2.0)
10-14	-	2	2	(0.1)	16	10	26	(7.0)	-	2	2	(2.6)	1	2	3	(1.2)	1	2	3	(2.0)
15-19	4	6	10	(0.6)	4	5	9	(2.4)	3	-	3	(3.9)	3	5	8	(3.2)	1	2	3	(2.0)
20-24	5	16	21	(1.2)	6	3	9	(2.4)	2	1	3	(3.9)	6	1	7	(2.8)	2	4	6	(4.1)
25-29	14	22	36	(2.1)	8	9	17	(4.5)	4	4	8	(10.4)	9	9	18	(7.2)	5	12	17	(11.6)
30-34	34	27	61	(3.6)	12	8	20	(5.3)	4	1	5	(6.5)	10	14	24	(9.6)	4	4	8	(5.4)
35-39	47	44	91	(5.4)	11	4	15	(4.0)	4	3	7	(9.1)	8	7	15	(6.0)	2	3	5	(3.4)
40-44	63	55	118	(7.0)	14	9	23	(6.1)	3	1	4	(5.2)	11	6	17	(6.8)	6	6	12	(8.2)
45-49	66	60	126	(7.5)	14	9	23	(6.1)	2	1	3	(3.9)	19	14	33	(13.2)	4	7	11	(7.5)
50-54	83	108	191	(11.3)	14	14	28	(7.5)	3	4	7	(9.1)	16	6	22	(8.8)	8	9	17	(11.6)
55-59	138	119	257	(15.3)	25	14	39	(10.4)	4	6	10	(13.0)	17	11	28	(11.2)	9	11	20	(13.6)
60-64	153	78	231	(13.7)	17	16	33	(8.8)	7	2	9	(11.7)	10	15	25	(10.0)	6	7	13	(8.8)
65-69	125	95	220	(13.1)	10	14	24	(6.4)	6	4	10	(13.0)	17	10	27	(10.8)	7	11	18	(12.2)
70-74	112	75	187	(11.1)	7	9	16	(4.3)	1	-	1	(1.3)	8	6	14	(5.6)	3	3	6	(4.1)
75-79	57	45	102	(6.1)	3	6	9	(2.4)	-	3	3	(3.9)	2	3	5	(2.0)	2	2	4	(2.7)
80-84	15	7	22	(1.3)	3	2	5	(1.3)	1	-	1	(1.3)	1	3	4	(1.6)	-	-	-	(-)
85-89	3	6	9	(0.5)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	1	-	1	(0.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	920	765	1,685	(100)	210	164	374	(100)	45	32	77	(100)	138	112	250	(100)	62	85	147	(100)
median	60.0	56.0	58.0		41	46.0	42.0		49.0	53.5	52.0		51.0	48.5	49.5		51.0	50.0	51.0	

3) Initial symptoms

	pt. no.	no clinical symptoms (medical check-up)	no clinical symptoms (detailed test of brain disease)	subjective symptoms (headache etc.)	seizure	focal symptom	intracranial hyper- tension	cons. dis- turbance	cranial nerve symptom	hormonal excess or hormonal decline	intracranial hemorrhage	cerebral infarction	others
GI PA	222	16 (7%)	14 (6%)	72 (32%)	21 (9%)	50 (23%)	55 (25%)	8 (4%)	22 (10%)	2 (0.9%)	- (-)	- (-)	9 (4%)
GII DA	416	27 (6%)	18 (4%)	92 (22%)	166 (40%)	93 (22%)	22 (5%)	22 (5%)	27 (6%)	- (-)	- (-)	- (-)	7 (1.7%)
GII OL&OA	391	37 (9%)	29 (7%)	90 (23%)	195 (50%)	67 (17%)	9 (2%)	10 (3%)	3 (0.8%)	- (-)	1 (0.3%)	- (-)	- (-)
GIII AA	545	14 (3%)	18 (3%)	114 (21%)	142 (26%)	245 (45%)	39 (7%)	52 (10%)	31 (6%)	- (-)	4 (0.7%)	- (-)	7 (1.3%)
GIII AO&AOA	416	24 (6%)	14 (3%)	104 (25%)	155 (37%)	152 (37%)	16 (4%)	33 (8%)	10 (2%)	- (-)	6 (1.4%)	- (-)	12 (3%)
Glioblastoma	2,049	18 (0.9%)	27 (1.3%)	534 (26%)	277 (14%)	1,159 (57%)	197 (10%)	315 (15%)	73 (4%)	2 (0.1%)	21 (1.0%)	- (-)	53 (3%)
Ependymoma	85	6 (7%)	3 (4%)	36 (42%)	- (-)	17 (20%)	26 (31%)	3 (4%)	6 (7%)	- (-)	1 (1.2%)	- (-)	3 (4%)
Anaplastic ependymoma	90	1 (1.1%)	2 (2.2%)	31 (34%)	11 (12%)	27 (30%)	36 (40%)	6 (7%)	4 (4%)	- (-)	- (-)	- (-)	2 (2%)
Ganglioglioma	58	2 (3%)	4 (7%)	10 (17%)	34 (59%)	4 (7%)	1 (2%)	2 (3%)	5 (9%)	1 (1.7%)	- (-)	- (-)	1 (2%)
Central neurocytoma	75	8 (11%)	4 (5.3%)	43 (57%)	1 (1.3%)	7 (9%)	22 (29%)	8 (11%)	1 (1%)	- (-)	- (-)	- (-)	1 (1.3%)
Medulloblastoma	144	- (-)	1 (0.7%)	53 (37%)	- (-)	39 (27%)	77 (53%)	12 (8%)	9 (6%)	- (-)	2 (1.4%)	- (-)	5 (3%)
Germinoma	249	- (-)	3 (1.2%)	68 (27%)	1 (0.4%)	39 (16%)	68 (27%)	15 (6%)	49 (20%)	85 (34%)	- (-)	- (-)	3 (1.2%)
PCNSL	814	6 (0.7%)	13 (1.6%)	172 (21%)	43 (5%)	446 (55%)	43 (5%)	187 (23%)	56 (7%)	6 (0.7%)	3 (0.4%)	1 (0.1%)	52 (6%)
GI Meningioma	3,649	533 (15%)	375 (10%)	1,034 (28%)	325 (9%)	725 (20%)	100 (3%)	118 (3%)	724 (20%)	2 (0.1%)	6 (0.2%)	5 (0.1%)	98 (3%)
GII Meningioma	262	22 (8%)	21 (8%)	59 (23%)	42 (16%)	101 (39%)	11 (4%)	7 (3%)	34 (13%)	- (-)	- (-)	- (-)	6 (2%)
GIII Meningioma	62	4 (6%)	3 (5%)	14 (23%)	5 (8%)	25 (40%)	8 (13%)	5 (8%)	10 (16%)	- (-)	- (-)	- (-)	4 (6%)
Schwannoma	1,444	46 (3%)	41 (3%)	250 (17%)	10 (0.7%)	147 (10%)	27 (2%)	14 (1.0%)	1,043 (72%)	2 (0.1%)	1 (0.1%)	1 (0.1%)	24 (1.7%)
GH pituitary adenoma	570	32 (6%)	14 (2%)	66 (12%)	2 (0.4%)	6 (1.1%)	1 (0.2%)	1 (0.2%)	42 (7%)	431 (76%)	- (-)	- (-)	41 (7%)
PRL pituitary adenoma	392	11 (3%)	11 (3%)	47 (12%)	2 (0.5%)	6 (1.5%)	4 (1.0%)	6 (1.5%)	73 (19%)	274 (70%)	2 (0.5%)	- (-)	8 (2%)
ACTH pituitary adenoma	162	8 (5%)	4 (2%)	14 (9%)	- (-)	1 (0.6%)	2 (1.2%)	1 (0.6%)	15 (9%)	130 (80%)	- (-)	- (-)	4 (2%)
NF pituitary adenoma	393	174 (44%)	133 (34%)	357 (91%)	2 (0.5%)	72 (18%)	11 (2.8%)	23 (5.9%)	898 (228%)	172 (44%)	8 (2.0%)	2 (0.5%)	28 (7.1%)
Craniopharyngioma	374	4 (1.1%)	11 (3%)	95 (25%)	7 (1.9%)	24 (6%)	39 (10%)	31 (8%)	161 (43%)	110 (29%)	1 (0.3%)	1 (0.3%)	10 (3%)
Chordoma	77	7 (9%)	4 (5%)	12 (16%)	1 (1.3%)	6 (8%)	3 (4%)	- (-)	51 (66%)	- (-)	- (-)	- (-)	3 (4%)
Hemangioblastoma	250	11 (4%)	7 (3%)	115 (46%)	- (-)	93 (37%)	32 (13%)	7 (3%)	14 (6%)	- (-)	2 (0.8%)	- (-)	9 (4%)
Epidermoid	147	3 (2%)	11 (7%)	41 (28%)	6 (4.1%)	13 (9%)	- (-)	- (-)	79 (54%)	3 (2%)	- (-)	- (-)	6 (4%)

4) Diagnostic methods

	histology	diagnostic imaging	cerebrospinal fluid cytology diagnosis	blood or cerebrospinal fluid test	genetic diagnosis	autopsy	others	total
Pilocytic astrocytoma	214 (96%)	7 (3%)	- (-)	1 (0.5%)	- (-)	- (-)	- (-)	222 (100%)
GII DA	394 (95%)	20 (5%)	- (-)	- (-)	- (-)	- (-)	2 (0.5%)	416 (100%)
GII OL&OA	390 (100%)	1 (0.3%)	- (-)	- (-)	- (-)	- (-)	- (-)	391 (100%)
GIII AA	528 (97%)	16 (3%)	- (-)	- (-)	- (-)	- (-)	1 (0.2%)	545 (100%)
GIII AO&AOA	415 (100%)	1 (0.2%)	- (-)	- (-)	- (-)	- (-)	- (-)	416 (100%)
Glioblastoma	1,980 (97%)	67 (3%)	1 (0.0%)	- (-)	- (-)	- (-)	- (-)	2,049 (100%)
Ependymoma	83 (98%)	2 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	85 (100%)
Anaplastic ependymoma	89 (99%)	- (-)	1 (1.1%)	- (-)	- (-)	- (-)	- (-)	90 (100%)
Ganglioglioma	57 (98%)	1 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	58 (100%)
Central neurocytoma	73 (97%)	2 (3%)	- (-)	- (-)	- (-)	- (-)	- (-)	75 (100%)
Medulloblastoma	140 (97%)	3 (2%)	1 (0.7%)	- (-)	- (-)	- (-)	- (-)	144 (100%)
Germinoma	209 (84%)	27 (11%)	4 (1.6%)	9 (3.6%)	- (-)	- (-)	- (-)	249 (100%)
PCNSL	744 (91%)	57 (7%)	7 (0.9%)	6 (0.7%)	- (-)	- (-)	- (-)	814 (100%)
GI Meningioma	3,348 (92%)	299 (8%)	- (-)	- (-)	1 (0.0%)	- (-)	1 (0.0%)	3,649 (100%)
GII Meningioma	257 (98%)	5 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	262 (100%)
GIII Meningioma	61 (98%)	1 (1.6%)	- (-)	- (-)	- (-)	- (-)	- (-)	62 (100%)
Schwannoma	1,293 (90%)	149 (10%)	- (-)	- (-)	2 (0.1%)	- (-)	- (-)	1,444 (100%)
GH pituitary adenoma	521 (91%)	12 (2%)	- (-)	7 (1.2%)	- (-)	- (-)	30 (5.3%)	570 (100%)
PRL pituitary adenoma	313 (80%)	44 (11%)	- (-)	22 (5.6%)	- (-)	- (-)	14 (3.6%)	392 (100%)
ACTH pituitary adenoma	145 (90%)	3 (2%)	- (-)	5 (3.1%)	- (-)	- (-)	9 (5.6%)	162 (100%)
NF pituitary adenoma	1,574 (401%)	59 (15%)	- (-)	3 (0.8%)	- (-)	- (-)	49 (12.5%)	393 (100%)
Craniopharyngioma	361 (97%)	13 (3%)	- (-)	- (-)	- (-)	- (-)	- (-)	374 (100%)
Chordoma	74 (96%)	3 (4%)	- (-)	- (-)	- (-)	- (-)	- (-)	77 (100%)
Hemangioblastoma	246 (98%)	2 (1%)	- (-)	- (-)	1 (0.4%)	- (-)	1 (0.4%)	250 (100%)
Epidermoid	138 (94%)	9 (6%)	- (-)	- (-)	- (-)	- (-)	- (-)	147 (100%)

5) Multiplicity

	single	multiple	dissemination	LMM	others	total
Pilocytic astrocytoma	212 (95%)	9 (4%)	1 (0.5%)	- (-)	- (-)	222 (100%)
GII DA	399 (96%)	12 (3%)	- (-)	- (-)	5 (1.2%)	416 (100%)
GII OL&OA	378 (97%)	9 (2%)	- (-)	- (-)	4 (1.0%)	391 (100%)
GIII AA	482 (88%)	48 (9%)	7 (1.3%)	- (-)	7 (1.3%)	545 (100%)
GIII AO&AOA	390 (94%)	23 (6%)	3 (0.7%)	- (-)	- (-)	416 (100%)
Glioblastoma	1,817 (89%)	204 (10%)	19 (0.9%)	1 (0.0%)	8 (0.4%)	2,049 (100%)
Ependymoma	85 (100%)	- (-)	- (-)	- (-)	- (-)	85 (100%)
Anaplastic ependymoma	86 (96%)	3 (3%)	1 (1.1%)	- (-)	- (-)	90 (100%)
Ganglioglioma	58 (100%)	- (-)	- (-)	- (-)	- (-)	58 (100%)
Central neurocytoma	74 (99%)	1 (1.3%)	- (-)	- (-)	- (-)	75 (100%)
Medulloblastoma	133 (92%)	3 (2%)	8 (6%)	- (-)	- (-)	144 (100%)
Germinoma	176 (71%)	61 (24%)	11 (4%)	1 (0.4%)	- (-)	249 (100%)
PCNSL	456 (56%)	325 (40%)	25 (3%)	3 (0.4%)	5 (0.6%)	814 (100%)
GI Meningioma	3,526 (97%)	119 (3%)	3 (0%)	- (-)	1 (0.0%)	3,649 (100%)
GII Meningioma	256 (98%)	6 (2%)	- (-)	- (-)	- (-)	262 (100%)
GIII Meningioma	57 (92%)	5 (8%)	- (-)	- (-)	- (-)	62 (100%)
Schwannoma	1,396 (97%)	48 (3%)	- (-)	- (-)	- (-)	1,444 (100%)
GH pituitary adenoma	569 (100%)	- (-)	- (-)	- (-)	- (-)	570 (100%)
PRL pituitary adenoma	392 (100%)	- (-)	1 (0.3%)	- (-)	- (-)	392 (100%)
ACTH pituitary adenoma	160 (99%)	2 (1.2%)	- (-)	- (-)	- (-)	162 (100%)
NF pituitary adenoma	1,684 (428%)	- (-)	- (-)	- (-)	1 (0.3%)	393 (100%)
Craniopharyngioma	373 (100%)	- (-)	- (-)	- (-)	- (-)	374 (100%)
Chordoma	75 (97%)	2 (3%)	- (-)	- (-)	- (-)	77 (100%)
Hemangioblastoma	220 (88%)	29 (12%)	- (-)	- (-)	1 (0.4%)	250 (100%)
Epidermoid	144 (98%)	2 (1.4%)	1 (1%)	- (-)	- (-)	147 (100%)

6) Laterality

	right	left	across both sides	on both sides	central neuroaxis	others	total
Pilocytic astrocytoma	58 (26%)	59 (27%)	38 (17%)	1 (0.5%)	65 (29%)	1 (0.5%)	222 (100%)
GII DA	173 (42%)	186 (45%)	24 (6%)	- (-)	33 (8%)	- (-)	416 (100%)
GII OL&OA	175 (45%)	204 (52%)	7 (2%)	1 (0.3%)	3 0	1 (0.3%)	391 (100%)
GIII AA	225 (41%)	238 (44%)	47 (9%)	13 (2%)	22 (4%)	- (-)	545 (100%)
GIII AO&AOA	186 (45%)	191 (46%)	30 (7%)	4 (1.0%)	5 (1.2%)	0 (0.0%)	416 (100%)
Glioblastoma	934 (46%)	869 (42%)	148 (7%)	41 (2%)	54 (3%)	3 (0.1%)	2,049 (100%)
Ependymoma	11 (13%)	5 (6%)	6 (7%)	- (-)	62 (73%)	1 (1.2%)	85 (100%)
Anaplastic ependymoma	29 (32%)	23 (26%)	7 (8%)	1 (1.1%)	30 (33%)	- (-)	90 (100%)
Ganglioglioma	26 (45%)	25 (43%)	- (-)	- (-)	7 (12%)	- (-)	58 (100%)
Central neurocytoma	25 (33%)	26 (35%)	14 (19%)	1 (1.3%)	9 (12%)	- (-)	75 (100%)
Medulloblastoma	11 (8%)	11 (8%)	15 (10%)	- (-)	107 (74%)	- (-)	144 (100%)
Germinoma	13 (5%)	14 (6%)	16 (6%)	6 (2%)	197 (79%)	3 (1.2%)	249 (100%)
PCNSL	258 (32%)	244 (30%)	136 (17%)	140 (17%)	26 (3%)	10 (1.2%)	814 (100%)
GI Meningioma	1,453 (40%)	1,557 (43%)	273 (7%)	39 (1%)	318 (9%)	9 (0.2%)	3,649 (100%)
GII Meningioma	105 (40%)	125 (48%)	22 (8%)	2 (0.8%)	8 (3%)	- (-)	262 (100%)
GIII Meningioma	22 (35%)	26 (42%)	7 (11%)	2 (3%)	5 (8%)	- (-)	62 (100%)
Schwannoma	681 (47%)	707 (49%)	7 (0.5%)	38 (3%)	10 (0.7%)	1 (0.1%)	1,444 (100%)
GH pituitary adenoma	10 (1.8%)	6 (1%)	20 (4%)	- (-)	519 (91%)	15 (2.6%)	570 (100%)
PRL pituitary adenoma	6 (2%)	17 (4%)	19 (5%)	- (-)	345 (88%)	6 (1.5%)	392 (100%)
ACTH pituitary adenoma	6 (4%)	- (-)	9 (6%)	2 0	143 (88%)	2 (1.2%)	162 (100%)
NF pituitary adenoma	12 (3.1%)	8 (2.0%)	75 (19%)	- (-)	1,552 (395%)	38 (9.7%)	393 (100%)
Craniopharyngioma	3 (0.8%)	1 (0.3%)	28 (7%)	- (-)	342 (91%)	- (-)	374 (100%)
Chordoma	11 (14%)	12 (16%)	14 (18%)	- (-)	39 (51%)	1 (1.3%)	77 (100%)
Hemangioblastoma	90 (36%)	84 (34%)	22 (9%)	12 (5%)	37 (15%)	5 (2.0%)	250 (100%)
Epidermoid	60 (41%)	53 (36%)	10 (7%)	- (-)	24 (16%)	- (-)	147 (100%)

7) Tumor location of each top 25 tumors

	GI PA	GII DA	GII OL&OA	GIII AA	GIII AO&AOA	GBM	Ependymoma	Anaplastic ependymoma	Ganglioglioma	Central neurocytoma	Medulloblastoma	Germinoma	PCNSL
patient number	222	416	391	545	416	2,049	85	90	58	75	144	249	814
frontal lobe	14 (6.3%)	179 (43.0%)	269 (68.8%)	224 (41.1%)	250 (60.1%)	778 (38.0%)	- (-)	15 (16.7%)	- (-)	- (-)	- (-)	- (-)	281 (34.5%)
temporal lobe	16 (7.2%)	83 (20.0%)	50 (12.8%)	116 (21.3%)	67 (16.1%)	615 (30.0%)	- (-)	- (-)	24 (41.4%)	- (-)	- (-)	- (-)	157 (19.3%)
parietal lobe	- (-)	28 (6.7%)	36 (9.2%)	52 (9.5%)	49 (11.8%)	316 (15.4%)	- (-)	11 (12.2%)	- (-)	- (-)	- (-)	- (-)	106 (13.0%)
occipital lobe	5 (2.3%)	- (-)	12 (3.1%)	14 (2.6%)	8 (1.9%)	117 (5.7%)	- (-)	5 (5.6%)	5 (8.6%)	- (-)	- (-)	- (-)	71 (8.7%)
insular gyri	- (-)	25 (6.0%)	20 (5.1%)	22 (4.0%)	14 (3.4%)	36 (1.8%)	- (-)	- (-)	2 (3.4%)	- (-)	- (-)	- (-)	4 (0.5%)
gliomatosis cerebri	- (-)	1 (0.2%)	1 (0.3%)	3 (0.6%)	- (-)	6 (0.3%)	- (-)	- (-)	1 (1.7%)	- (-)	- (-)	- (-)	- (-)
cerebellum	94 (42.3%)	23 (5.5%)	- (-)	24 (4.4%)	11 (2.6%)	69 (3.4%)	- (-)	11 (12.2%)	- (-)	- (-)	89 (61.8%)	- (-)	88 (10.8%)
midbrain	9 (4.1%)	7 (1.7%)	1 (0.3%)	5 (0.9%)	2 (0.5%)	7 (0.3%)	1 (1.2%)	1 (1.1%)	- (-)	- (-)	- (-)	3 (1.2%)	40 (4.9%)
pons	1 (0.5%)	18 (4.3%)	1 (0.3%)	23 (4.2%)	1 (0.2%)	24 (1.2%)	1 (1.2%)	1 (1.1%)	- (-)	- (-)	- (-)	- (-)	25 (3.1%)
medulla oblongata	14 (6.3%)	13 (3.1%)	- (-)	7 (1.3%)	- (-)	7 (0.3%)	3 (3.5%)	3 (3.3%)	- (-)	- (-)	- (-)	- (-)	8 (1.0%)
lateral ventricle	4 (1.8%)	4 (1.0%)	- (-)	7 (1.3%)	- (-)	24 (1.2%)	- (-)	5 (5.6%)	- (-)	63 (84.0%)	- (-)	18 (7.2%)	66 (8.1%)
third ventricle	8 (3.6%)	4 (1.0%)	- (-)	4 (0.7%)	4 (1.0%)	3 (0.1%)	5 (5.9%)	- (-)	- (-)	4 (5.3%)	- (-)	16 (6.4%)	19 (2.3%)
cerebral aqueduct	2 (0.9%)	2 (0.5%)	- (-)	- (-)	- (-)	1 (0.0%)	1 (1.2%)	- (-)	- (-)	- (-)	- (-)	- (-)	6 (0.7%)
fourth ventricle	7 (3.2%)	3 (0.7%)	- (-)	1 (0.2%)	1 (0.2%)	1 (0.0%)	51 (60.0%)	28 (31.1%)	- (-)	- (-)	52 (36.1%)	5 (2.0%)	17 (2.1%)
basal ganglia	7 (3.2%)	14 (3.4%)	7 (1.8%)	25 (4.6%)	4 (1.0%)	61 (3.0%)	- (-)	1 (1.1%)	- (-)	- (-)	1 (0.7%)	20 (8.0%)	129 (15.8%)
thalamus	6 (2.7%)	16 (3.8%)	4 (1.0%)	49 (9.0%)	13 (3.1%)	79 (3.9%)	- (-)	- (-)	1 (1.7%)	1 (1.3%)	1 (0.7%)	5 (2.0%)	73 (9.0%)
hypothalamus	11 (5.0%)	1 (0.2%)	- (-)	6 (1.1%)	- (-)	6 (0.3%)	- (-)	1 (1.1%)	2 (3.4%)	- (-)	- (-)	17 (6.8%)	17 (2.1%)
corpus callosum	2 (0.9%)	7 (1.7%)	1 (0.3%)	19 (3.5%)	4 (1.0%)	75 (3.7%)	- (-)	- (-)	- (-)	- (-)	1 (0.7%)	2 (0.8%)	108 (13.3%)
pineal region	2 (0.9%)	2 (0.5%)	- (-)	1 (0.2%)	- (-)	8 (0.4%)	- (-)	- (-)	- (-)	- (-)	- (-)	150 (60.2%)	5 (0.6%)
intraorbital	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.0%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	18 (2.2%)
pituitary gland	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	75 (30.1%)	6 (0.7%)
optic nerve	16 (7.2%)	4 (1.0%)	- (-)	1 (0.2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (0.8%)	1 (0.1%)
cerebello-pontine angle	- (-)	- (-)	- (-)	- (-)	- (-)	2 (0.1%)	- (-)	6 (6.7%)	- (-)	- (-)	1 (0.7%)	1 (0.4%)	7 (0.9%)
clivus	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.1%)
cavernous sinus	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.0%)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (0.8%)	5 (0.6%)
cranial nerve	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
other skull base	2 (0.9%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (3.4%)	- (-)	- (-)	6 (2.4%)	5 (0.6%)
skull bone	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	6 (0.7%)
carcinomatous meningitis	- (-)	- (-)	- (-)	1 (0.2%)	- (-)	2 (0.1%)	- (-)	1 (1.1%)	- (-)	- (-)	- (-)	5 (2.0%)	7 (0.9%)

	GI Meningioma	GII Meningioma	GIII Meningioma	Schwannoma	GH pituitary adenoma	PRL pituitary adenoma	ACTH pituitary adenoma	NF pituitary adenoma	Cranio- pharyngioma	Chordoma	Hemangio- blastoma	Epidermoid
patient number	3,649	262	62	1,444	570	393	162	1,685	374	77	250	147
frontal lobe	1,062 (29.1%)	106 (40.5%)	14 (22.6%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
temporal lobe	259 (7.1%)	34 (13.0%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
parietal lobe	347 (9.5%)	35 (13.4%)	15 (24.2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
occipital lobe	113 (3.1%)	7 (2.7%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
insular gyri	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
gliomatosis cerebri	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
cerebellum	170 (4.7%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	221 (88.4%)	- (-)
midbrain	1 (0.0%)	- (-)	- (-)	3 (0.2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.7%)
pons	- (-)	- (-)	- (-)	2 (0.1%)	- (-)	- (-)	- (-)	- (-)	1 (0.3%)	2 (2.6%)	- (-)	3 (2.0%)
medulla oblongata	12 (0.3%)	- (-)	- (-)	4 (0.3%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	20 (8.0%)	- (-)
lateral ventricle	68 (1.9%)	5 (1.9%)	4 (6.5%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
third ventricle	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	40 (10.7%)	- (-)	- (-)	- (-)
cerebral aqueduct	1 (0.0%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
fourth ventricle	- (-)	1 (0.4%)	1 (1.6%)	1 (0.1%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (1.3%)	4 (1.6%)	4 (2.7%)
basal ganglia	1 (0.0%)	- (-)	- (-)	1 (0.1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
thalamus	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	9 (2.4%)	- (-)	- (-)	- (-)
hypothalamus	1 (0.0%)	- (-)	- (-)	- (-)	1 (0.2%)	1 (0.3%)	- (-)	5 (0.3%)	39 (10.4%)	- (-)	- (-)	1 (0.7%)
corpus callosum	6 (0.2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (1.4%)
pineal region	9 (0.2%)	- (-)	2 (3.2%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.3%)	- (-)	1 (0.4%)	2 (1.4%)
intraorbital	18 (0.5%)	- (-)	1 (1.6%)	14 (1.0%)	- (-)	- (-)	- (-)	1 (0.1%)	- (-)	- (-)	- (-)	1 (0.7%)
pituitary gland	50 (1.4%)	- (-)	- (-)	- (-)	569 (99.8%)	392 (99.7%)	160 (98.8%)	1,675 (99.4%)	241 (64.4%)	4 (5.2%)	- (-)	7 (4.8%)
optic nerve	16 (0.4%)	- (-)	- (-)	3 (0.2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
cerebello-pontine angle	370 (10.1%)	9 (3.4%)	2 (3.2%)	1,046 (72.4%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (1.3%)	5 (2.0%)	86 (58.5%)
clivus	139 (3.8%)	1 (0.4%)	- (-)	1 (0.1%)	- (-)	1 (0.3%)	- (-)	- (-)	- (-)	57 (74.0%)	- (-)	6 (4.1%)
cavernous sinus	71 (1.9%)	3 (1.1%)	- (-)	14 (1.0%)	- (-)	- (-)	- (-)	- (-)	- (-)	3 (3.9%)	- (-)	- (-)
cranial nerve	3 (0.1%)	- (-)	- (-)	255 (17.7%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
other skull base	668 (18.3%)	31 (11.8%)	9 (14.5%)	62 (4.3%)	- (-)	- (-)	- (-)	2 (0.1%)	27 (7.2%)	6 (7.8%)	- (-)	11 (7.5%)
skull bone	22 (0.6%)	4 (1.5%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (2.6%)	- (-)	4 (2.7%)
carcinomatous meningitis	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)

8) Ranking of top 25 tumors depending on original region

number of region		1		2		3		4		5	
frontal lobe	3,192	GI Meningioma	1,062 (33%)	Glioblastoma	778 (24%)	PCNSL	281 (9%)	GII OL&OA	269 (8%)	GIII AO&AOA	250 (8%)
temporal lobe	1,421	Glioblastoma	615 (43%)	GI Meningioma	259 (18%)	PCNSL	157 (11%)	GIII AA	116 (8%)	GII DA	83 (6%)
parietal lobe	995	GI Meningioma	347 (35%)	Glioblastoma	316 (32%)	PCNSL	106 (11%)	GIII AA	52 (5%)	GIII AO&AOA	49 (5%)
occipital lobe	357	Glioblastoma	117 (33%)	GI Meningioma	113 (32%)	PCNSL	71 (20%)	GIII AA	14 (4%)	GII OL&OA	12 (3%)
insular gyri	123	Glioblastoma	36 (29%)	GII DA	25 (20%)	GIII AA	22 (18%)	GII OL&OA	20 (16%)	GIII AO&AOA	14 (11%)
gliomatosis cerebri	12	Glioblastoma	6 (50%)	GIII AA	3 (25%)	GII DA	1 (8%)	GII OL&OA	1 (8%)	Ganglioglioma	1 (8%)
cerebellum	800	Hemangioblastoma	221 (28%)	GI Meningioma	170 (21%)	GI PA	94 (12%)	Medulloblastoma	89 (11%)	PCNSL	88 (11%)
midbrain	81	PCNSL	40 (49%)	GI PA	9 (11%)	GII DA	7 (9%)	Glioblastoma	7 (9%)	GIII AA	5 (6%)
pons	103	PCNSL	25 (24%)	Glioblastoma	24 (23%)	GIII AA	23 (22%)	GII DA	18 (17%)	Epidermoid	3 (3%)
medulla oblongata	91	Hemangioblastoma	20 (22%)	GI PA	14 (15%)	GII DA	13 (14%)	GI Meningioma	12 (13%)	PCNSL	8 (9%)
lateral ventricle	268	GI Meningioma	68 (25%)	PCNSL	66 (25%)	Central neurocytoma	63 (24%)	Glioblastoma	24 (9%)	Germinoma	18 (7%)
third ventricle	107	Craniopharyngioma	40 (37%)	PCNSL	19 (18%)	Germinoma	16 (15%)	GI PA	8 (7%)	Ependymoma	5 (5%)
cerebral aqueduct	13	PCNSL	6 (46%)	GI PA	2 (15%)	GII DA	2 (15%)	GI Meningioma	1 (8%)	GBM/Ependymoma	1 (8%)
fourth ventricle	178	Medulloblastoma	52 (29%)	Ependymoma	51 (29%)	Anaplastic ependymoma	28 (16%)	PCNSL	17 (10%)	GI PA	7 (4%)
basal ganglia	271	PCNSL	129 (48%)	Glioblastoma	61 (23%)	GIII AA	25 (9%)	Germinoma	20 (7%)	GII DA	14 (5%)
thalamus	257	Glioblastoma	79 (31%)	PCNSL	73 (28%)	GIII AA	49 (19%)	GII DA	16 (6%)	GIII AO&AOA	13 (5%)
hypothalamus	109	Craniopharyngioma	39 (36%)	Germinoma	17 (16%)	PCNSL	17 (16%)	GI PA	11 (10%)	Glioblastoma	6 (6%)
corpus callosum	227	PCNSL	108 (48%)	Glioblastoma	75 (33%)	GIII AA	19 (8%)	GII DA	7 (3%)	GI Meningioma	5 (2%)
pineal region	183	Germinoma	150 (82%)	GI Meningioma	9 (5%)	Glioblastoma	8 (4%)	PCNSL	4 (2%)	GIII Men./GBM	2 (1%)
intraorbital	54	GI Meningioma	18 (33%)	PCNSL	18 (33%)	Schwannoma	14 (26%)	NF adenoma	1 (2%)	Epidermoid	1 (2%)
pituitary gland	3,179	NF pituitary adenoma	1,675 (53%)	GH pituitary adenoma	569 (18%)	PRL pituitary adenoma	392 (12%)	Craniopharyngioma	241 (8%)	ACTH pituitary adenoma	160 (5%)
optic nerve	43	GI Meningioma	16 (37%)	GI PA	16 (37%)	GII DA	4 (9%)	Schwannoma	3 (7%)	Germinoma	2 (5%)
cerebello-pontine angle	1,536	Schwannoma	1,046 (68%)	GI Meningioma	370 (24%)	Epidermoid	86 (6%)	PCNSL	7 (0.5%)	Anaplastic ependymoma	6 (0%)
clivus	206	GI Meningioma	139 (67%)	Chordoma	57 (28%)	Epidermoid	6 (3%)	GII Meningioma	1 (0%)	Schwannoma	1 (0%)
cavernous sinus	99	GI Meningioma	71 (72%)	Schwannoma	14 (14%)	PCNSL	5 (5%)	GII Meningioma	3 (3%)	Chordoma	3 (3%)
cranial nerve	258	Schwannoma	255 (99%)	GI Meningioma	3 (1%)	-	(-)	-	(-)	-	(-)
other skull base	831	GI Meningioma	668 (80%)	Schwannoma	62 (7%)	GII Meningioma	31 (4%)	Craniopharyngioma	27 (3%)	Epidermoid	11 (1%)
skull bone	38	GI Meningioma	22 (58%)	PCNSL	6 (16%)	GII Meningioma	4 (11%)	Epidermoid	4 (11%)	Chordoma	2 (5%)
LMM	16	PCNSL	7 (44%)	Germinoma	5 (31%)	Glioblastoma	2 (13%)	GIII AA	1 (6%)	Anaplastic ependymoma	1 (6%)

9) Tumor origin of meningiomas

	ALL Meningioma		GI Meningioma		GII Meningioma		GIII Meningioma	
convexity	970	(24.4%)	861	(23.6%)	89	(34.0%)	20	(32.3%)
parasagittal	451	(11.4%)	393	(10.8%)	46	(17.6%)	12	(19.4%)
falx	391	(9.8%)	362	(9.9%)	26	(9.9%)	3	(4.8%)
sphenoid ridge	437	(11.0%)	401	(11.0%)	29	(11.1%)	7	(11.3%)
olfactory	138	(3.5%)	131	(3.6%)	5	(1.9%)	2	(3.2%)
tuberculum sellae	293	(7.4%)	280	(7.7%)	12	(4.6%)	1	(1.6%)
planum sphenoidale	79	(2.0%)	76	(2.1%)	2	(0.8%)	1	(1.6%)
middle fossa	101	(2.5%)	88	(2.4%)	9	(3.4%)	4	(6.5%)
ventricle	78	(2.0%)	69	(1.9%)	5	(1.9%)	4	(6.5%)
cavernous sinus	70	(1.8%)	66	(1.8%)	4	(1.5%)	-	(-)
CP angle	324	(8.2%)	312	(8.6%)	8	(3.1%)	4	(6.5%)
tentorium	212	(5.3%)	202	(5.5%)	8	(3.1%)	2	(3.2%)
clivus/petroclivus	237	(6.0%)	232	(6.4%)	4	(1.5%)	1	(1.6%)
cerebellar convexity	73	(1.8%)	69	(1.9%)	3	(1.1%)	1	(1.6%)
foramen magnum	56	(1.4%)	54	(1.5%)	2	(0.8%)	-	(-)
optic sheath	25	(0.6%)	25	(0.7%)	-	(-)	-	(-)
others	129	(3.2%)	112	(3.1%)	13	(5.0%)	4	(6.5%)
patient number	3,973	(100%)	3,649	(100%)	262	(100%)	62	(100%)

10) Initial KPS before treatment

Histology/ KPS	0	10	20	30	40	50	60	70	80	90	100	unknown	total
Pilocytic astrocytoma	- (-)	- (-)	3 (1%)	3 (1%)	7 (3%)	8 (4%)	13 (6%)	27 (12%)	41 (18%)	67 (30%)	40 (18%)	13 (6%)	222 (100%)
GII DA	3 (1%)	1 (0.2%)	1 (0.2%)	3 (1%)	7 (2%)	13 (3%)	8 (2%)	27 (6%)	54 (13%)	160 (38%)	117 (28%)	22 (5%)	416 (100%)
GII OL&OA	2 (1%)	- (-)	4 (1%)	- (-)	- (-)	4 (1%)	6 (2%)	16 (4%)	33 (8%)	157 (40%)	154 (39%)	15 (4%)	391 (100%)
GIII AA	- (-)	3 (1%)	6 (1%)	7 (1%)	15 (3%)	43 (8%)	40 (7%)	86 (16%)	106 (19%)	135 (25%)	74 (14%)	30 (6%)	545 (100%)
GIII AO&AOA	- (-)	- (-)	6 (1%)	5 (1%)	18 (4%)	16 (4%)	28 (7%)	47 (11%)	58 (14%)	117 (28%)	88 (21%)	33 (8%)	416 (100%)
Glioblastoma	1 (0.0%)	9 (0.4%)	30 (1%)	50 (2%)	124 (6%)	217 (11%)	267 (13%)	321 (16%)	379 (18%)	397 (19%)	119 (6%)	135 (7%)	2,049 (100%)
Ependymoma	- (-)	- (-)	- (-)	- (-)	5 (6%)	1 (1%)	3 (4%)	10 (12%)	24 (28%)	27 (32%)	13 (15%)	2 (2%)	85 (100%)
Anaplastic ependymoma	- (-)	2 (2%)	2 (2%)	2 (2%)	5 (6%)	7 (8%)	7 (8%)	12 (13%)	10 (11%)	23 (26%)	9 (10%)	11 (12%)	90 (100%)
Ganglioglioma	- (-)	- (-)	1 (2%)	- (-)	- (-)	- (-)	2 (3%)	1 (2%)	11 (19%)	23 (40%)	19 (33%)	1 (2%)	58 (100%)
Central neurocytoma	- (-)	1 (1%)	2 (3%)	- (-)	1 (1%)	1 (1%)	4 (5%)	3 (4%)	18 (24%)	24 (32%)	18 (24%)	3 (4%)	75 (100%)
Medulloblastoma	- (-)	1 (1%)	11 (8%)	3 (2%)	11 (8%)	13 (9%)	13 (9%)	21 (15%)	32 (22%)	22 (15%)	6 (4%)	11 (8%)	144 (100%)
Germinoma	- (-)	- (-)	2 (1%)	2 (1%)	10 (4%)	8 (3%)	10 (4%)	27 (11%)	77 (31%)	89 (36%)	11 (4%)	13 (5%)	249 (100%)
PCNSL	- (-)	- (-)	10 (1%)	22 (3%)	73 (9%)	97 (12%)	110 (14%)	147 (18%)	156 (19%)	121 (15%)	25 (3%)	53 (7%)	814 (100%)
GI Meningioma	8 (0.2%)	4 (0.1%)	13 (0.4%)	9 (0.2%)	36 (1%)	56 (2%)	112 (3%)	183 (5%)	497 (14%)	1,256 (34%)	1,277 (35%)	198 (5%)	3,649 (100%)
GII Meningioma	- (-)	- (-)	- (-)	1 (0.4%)	4 (2%)	7 (3%)	22 (8%)	31 (12%)	46 (18%)	87 (33%)	47 (18%)	17 (6%)	262 (100%)
GIII Meningioma	- (-)	- (-)	- (-)	- (-)	2 (3%)	3 (5%)	11 (18%)	8 (13%)	14 (23%)	12 (19%)	7 (11%)	5 (8%)	62 (100%)
Schwannoma	- (-)	2 (0.1%)	3 (0.2%)	2 (0.1%)	10 (1%)	12 (1%)	27 (2%)	66 (5%)	249 (17%)	717 (50%)	280 (19%)	76 (5%)	1,444 (100%)
GH pituitary adenoma	3 (1%)	- (-)	- (-)	- (-)	- (-)	1 (0.2%)	1 (0.2%)	9 (2%)	66 (12%)	247 (43%)	224 (39%)	19 (3%)	570 (100%)
PRL pituitary adenoma	- (-)	- (-)	- (-)	1 (0.3%)	- (-)	- (-)	3 (1%)	4 (1%)	51 (13%)	160 (41%)	168 (43%)	6 (2%)	393 (100%)
ACTH pituitary adenoma	- (-)	- (-)	1 (1%)	- (-)	- (-)	- (-)	2 (1%)	7 (4%)	35 (22%)	67 (41%)	45 (28%)	5 (3%)	162 (100%)
NF pituitary adenoma	2 (0.1%)	3 (0.2%)	3 (0.2%)	1 (0.1%)	14 (1%)	12 (1%)	15 (1%)	55 (3%)	332 (20%)	719 (43%)	491 (29%)	38 (2%)	1,685 (100%)
Craniopharyngioma	- (-)	1 (0.3%)	4 (1%)	5 (1%)	8 (2%)	11 (3%)	19 (5%)	27 (7%)	72 (19%)	150 (40%)	53 (14%)	24 (6%)	374 (100%)
Chordoma	- (-)	- (-)	- (-)	- (-)	3 (4%)	- (-)	8 (10%)	7 (9%)	15 (19%)	26 (34%)	16 (21%)	2 (3%)	77 (100%)
Hemangioblastoma	- (-)	- (-)	3 (1%)	3 (1%)	5 (2%)	9 (4%)	9 (4%)	25 (10%)	54 (22%)	91 (36%)	41 (16%)	10 (4%)	250 (100%)
Epidermoid	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (1%)	6 (4%)	25 (17%)	73 (50%)	37 (25%)	5 (3%)	147 (100%)

11) KPS after initial treatment

Histology/ KPS	0	10	20	30	40	50	60	70	80	90	100	unknown	total
Pilocytic astrocytoma	- (-)	- (-)	1 (0.5%)	- (-)	2 (1%)	6 (3%)	5 (2%)	13 (6%)	31 (14%)	81 (36%)	68 (31%)	15 (7%)	222 (100%)
GII DA	6 (1%)	1 (0.2%)	1 (0.2%)	2 (0.5%)	4 (1%)	16 (4%)	10 (2%)	19 (5%)	45 (11%)	133 (32%)	149 (36%)	30 (7%)	416 (100%)
GII OL&OA	1 (0.3%)	1 (0.3%)	1 (0.3%)	1 (0.3%)	1 (0.3%)	7 (2%)	11 (3%)	19 (5%)	36 (9%)	128 (33%)	164 (42%)	21 (5%)	391 (100%)
GIII AA	16 (3%)	2 (0.4%)	8 (1%)	11 (2%)	20 (4%)	48 (9%)	34 (6%)	57 (10%)	95 (17%)	133 (24%)	80 (15%)	41 (8%)	545 (100%)
GIII AO&AOA	7 (2%)	- (-)	8 (2%)	2 (0.5%)	13 (3%)	11 (3%)	22 (5%)	34 (8%)	59 (14%)	118 (28%)	103 (25%)	39 (9%)	416 (100%)
Glioblastoma	101 (5%)	14 (1%)	36 (2%)	67 (3%)	137 (7%)	199 (10%)	270 (13%)	235 (11%)	288 (14%)	375 (18%)	150 (7%)	177 (9%)	2,049 (100%)
Ependymoma	2 (2%)	1 (1%)	- (-)	- (-)	2 (2%)	3 (4%)	7 (8%)	6 (7%)	18 (21%)	24 (28%)	20 (24%)	2 (2%)	85 (100%)
Anaplastic ependymoma	3 (3%)	- (-)	- (-)	2 (2%)	1 (1%)	6 (7%)	6 (7%)	11 (12%)	13 (14%)	26 (29%)	10 (11%)	12 (13%)	90 (100%)
Ganglioglioma	- (-)	- (-)	1 (2%)	- (-)	- (-)	1 (2%)	2 (3%)	3 (5%)	9 (16%)	17 (29%)	25 (43%)	- (-)	58 (100%)
Central neurocytoma	4 (5%)	- (-)	- (-)	- (-)	1 (1%)	2 (3%)	4 (5%)	3 (4%)	9 (12%)	21 (28%)	28 (37%)	3 (4%)	75 (100%)
Medulloblastoma	6 (4%)	- (-)	- (-)	1 (1%)	2 (1%)	7 (5%)	9 (6%)	13 (9%)	25 (17%)	48 (33%)	20 (14%)	13 (9%)	144 (100%)
Germinoma	1 (0.4%)	- (-)	1 (0.4%)	0 (0.0%)	1 (0.4%)	2 (1%)	2 (1%)	9 (4%)	39 (16%)	103 (41%)	78 (31%)	13 (5%)	249 (100%)
PCNSL	54 (7%)	1 (0.1%)	5 (1%)	15 (2%)	44 (5%)	71 (9%)	79 (10%)	111 (14%)	137 (17%)	164 (20%)	77 (9%)	56 (7%)	814 (100%)
GI Meningioma	24 (1%)	6 (0.2%)	7 (0.2%)	13 (0.4%)	20 (1%)	49 (1%)	86 (2%)	154 (4%)	387 (11%)	1,127 (31%)	1,574 (43%)	202 (6%)	3,649 (100%)
GII Meningioma	3 (1%)	- (-)	- (-)	2 (1%)	1 (0.4%)	6 (2%)	19 (7%)	17 (6%)	40 (15%)	92 (35%)	65 (25%)	17 (6%)	262 (100%)
GIII Meningioma	2 (3%)	- (-)	- (-)	0 (0.0%)	3 (5%)	4 (6%)	5 (8%)	8 (13%)	17 (27%)	7 (11%)	11 (18%)	5 (8%)	62 (100%)
Schwannoma	3 (0.2%)	2 (0.1%)	1 (0.1%)	1 (0.1%)	14 (1%)	17 (1%)	26 (2%)	51 (4%)	285 (20%)	680 (47%)	280 (19%)	84 (6%)	1,444 (100%)
GH pituitary adenoma	3 (1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	6 (1%)	15 (3%)	230 (40%)	299 (52%)	17 (3%)	570 (100%)
PRL pituitary adenoma	- (-)	- (-)	- (-)	1 (0.3%)	- (-)	- (-)	- (-)	1 (0.3%)	16 (4%)	117 (30%)	248 (63%)	10 (3%)	393 (100%)
ACTH pituitary adenoma	- (-)	- (-)	- (-)	1 (1%)	- (-)	- (-)	3 (2%)	3 (2%)	19 (12%)	66 (41%)	65 (40%)	5 (3%)	162 (100%)
NF pituitary adenoma	5 (0.3%)	3 (0.2%)	5 (0.3%)	3 (0.2%)	4 (0.2%)	8 (0.5%)	13 (1%)	18 (1%)	129 (8%)	606 (36%)	843 (50%)	48 (3%)	1,685 (100%)
Craniopharyngioma	2 (1%)	- (-)	- (-)	3 (1%)	3 (1%)	12 (3%)	18 (5%)	21 (6%)	66 (18%)	152 (41%)	74 (20%)	23 (6%)	374 (100%)
Chordoma	1 (1%)	- (-)	1 (1%)	1 (1%)	1 (1%)	- (-)	3 (4%)	8 (10%)	13 (17%)	27 (35%)	19 (25%)	3 (4%)	77 (100%)
Hemangioblastoma	5 (2%)	- (-)	1 (0.4%)	1 (0.4%)	3 (1%)	10 (4%)	9 (4%)	8 (3%)	29 (12%)	73 (29%)	100 (40%)	11 (4%)	250 (100%)
Epidermoid	1 (1%)	- (-)	- (-)	- (-)	- (-)	1 (1%)	3 (2%)	4 (3%)	13 (9%)	62 (42%)	58 (39%)	5 (3%)	147 (100%)

12) Seizures during the whole treatment

seizure	seizure (+)	seizure (-)	unknown	total
Pilocytic astrocytoma	33 (15%)	172 (77%)	17 (8%)	222 (100%)
GII DA	204 (49%)	183 (44%)	29 (7%)	416 (100%)
GII OL&OA	251 (64%)	118 (30%)	22 (6%)	391 (100%)
GIII AA	230 (42%)	255 (47%)	60 (11%)	545 (100%)
GIII AO&AOA	211 (51%)	159 (38%)	46 (11%)	416 (100%)
Glioblastoma	678 (33%)	1,104 (54%)	267 (13%)	2,049 (100%)
Ependymoma	8 (9%)	72 (85%)	5 (6%)	85 (100%)
Anaplastic ependymoma	26 (29%)	55 (61%)	9 (10%)	90 (100%)
Ganglioglioma	34 (59%)	24 (41%)	- (-)	58 (100%)
Central neurocytoma	4 (5%)	69 (92%)	2 (3%)	75 (100%)
Medulloblastoma	12 (8%)	120 (83%)	12 (8%)	144 (100%)
Germinoma	21 (8%)	212 (85%)	16 (6%)	249 (100%)
PCNSL	133 (16%)	590 (72%)	91 (11%)	814 (100%)
GI Meningioma	538 (15%)	2,853 (78%)	258 (7%)	3,649 (100%)
GII Meningioma	74 (28%)	173 (66%)	15 (6%)	262 (100%)
GIII Meningioma	18 (29%)	40 (65%)	4 (6%)	62 (100%)
Schwannoma	36 (2%)	1,340 (93%)	68 (5%)	1,444 (100%)
GH pituitary adenoma	5 (1%)	549 (96%)	16 (3%)	570 (100%)
PRL pituitary adenoma	9 (2%)	372 (95%)	12 (3%)	393 (100%)
ACTH pituitary adenoma	2 (1%)	157 (97%)	3 (2%)	162 (100%)
NF pituitary adenoma	26 (2%)	1,621 (96%)	38 (2%)	1,685 (100%)
Craniopharyngioma	38 (10%)	313 (84%)	23 (6%)	374 (100%)
Chordoma	4 (5%)	69 (90%)	4 (5%)	77 (100%)
Hemangioblastoma	5 (2%)	233 (93%)	12 (5%)	250 (100%)
Epidermoid	12 (8%)	128 (87%)	7 (5%)	147 (100%)

13) Incidence of other CNS tumor or systemic cancers

	none	other cancers	CNS tumor	Other CNS tumor + cancers	total
Pilocytic astrocytoma	186 (84%)	1 (0%)	2 (1%)	0 (-)	222 (100%)
GII DA	362 (87%)	4 (1%)	5 (1%)	2 (0%)	416 (100%)
GII OL&OA	204 (52%)	4 (1%)	1 (0.3%)	- (-)	391 (100%)
GIII AA	493 (90%)	10 (2%)	2 (0.4%)	- (-)	545 (100%)
GIII AO&AOA	218 (52%)	9 (2%)	1 (0.2%)	- (-)	416 (100%)
Glioblastoma	1,399 (68%)	50 (2%)	9 (0%)	1 (0.0%)	2,049 (100%)
Ependymoma	76 (89%)	- (-)	1 (1%)	- (-)	85 (100%)
Anaplastic ependymoma	52 (58%)	- (-)	2 (2%)	- (-)	90 (100%)
Ganglioglioma	59 (102%)	1 (2%)	- (-)	- (-)	58 (100%)
Central neurocytoma	62 (83%)	- (-)	1 (1%)	- (-)	75 (100%)
Medulloblastoma	96 (67%)	1 (1%)	1 (1%)	- (-)	144 (100%)
Germinoma	227 (91%)	- (-)	- (-)	1 (0.4%)	249 (100%)
PCNSL	424 (52%)	31 (4%)	- (-)	1 (0.1%)	814 (100%)
GI Meningioma	2,812 (77%)	122 (3%)	34 (1%)	3 (0.1%)	3,649 (100%)
GII Meningioma	154 (59%)	12 (5%)	4 (2%)	- (-)	262 (100%)
GIII Meningioma	34 (55%)	3 (5%)	- (-)	- (-)	62 (100%)
Schwannoma	1,277 (88%)	20 (1%)	27 (2%)	2 (0.1%)	1,444 (100%)
GH pituitary adenoma	459 (81%)	16 (3%)	- (-)	- (-)	570 (100%)
PRL pituitary adenoma	382 (97%)	4 (1%)	2 (0.5%)	- (-)	393 (100%)
ACTH pituitary adenoma	129 (80%)	8 (5%)	- (-)	- (-)	162 (100%)
NF pituitary adenoma	1,331 (79%)	42 (2%)	4 (0.2%)	2 (0.1%)	1,685 (100%)
Craniopharyngioma	323 (86%)	6 (2%)	- (-)	- (-)	374 (100%)
Chordoma	55 (71%)	2 (3%)	- (-)	- (-)	77 (100%)
Hemangioblastoma	161 (64%)	12 (5%)	4 (2%)	3 (1%)	250 (100%)
Epidermoid	114 (78%)	2 (1%)	- (-)	- (-)	147 (100%)

14) Incidence of hereditary cancer syndrome (LiFraumeni syndrome and retinoblastoma were not reported)

	none	NF-1	NF-2	VHL	Tuberous Sclerosis	MEN-I	others	unknown	total
Total number	13,552 (92%)	26 (0.2%)	41 (0.3%)	37 (0.3%)	- (-)	9 (0.1%)	24 (0.2%)	940 (6.4%)	14,629 (100%)
Pilocytic astrocytoma	207 (93%)	5 (2%)	- (-)	- (-)	- (-)	- (-)	1 (0.5%)	9 (4%)	222 (100%)
GII DA	386 (93%)	7 (2%)	- (-)	- (-)	- (-)	- (-)	2 (0.5%)	21 (5%)	416 (100%)
GII OL&OA	383 (98%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	8 (2%)	391 (100%)
GIII AA	516 (95%)	2 (0.4%)	- (-)	- (-)	- (-)	- (-)	1 (0.2%)	26 (5%)	545 (100%)
GIII AO&AOA	395 (95%)	- (-)	- (-)	- (-)	- (-)	1 (0.2%)	- (-)	20 (5%)	416 (100%)
Glioblastoma	1,941 (95%)	7 (0.3%)	- (-)	- (-)	- (-)	- (-)	3 (0.1%)	98 (5%)	2,049 (100%)
Ependymoma	80 (94%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	5 (6%)	85 (100%)
Anaplastic ependymoma	87 (97%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	3 (3%)	90 (100%)
Ganglioglioma	54 (93%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	4 (7%)	58 (100%)
Central neurocytoma	73 (97%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (3%)	75 (100%)
Medulloblastoma	136 (94%)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (1.4%)	6 (4%)	144 (100%)
Germinoma	239 (96%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.4%)	9 (4%)	249 (100%)
PCNSL	763 (94%)	- (-)	1 (0.1%)	- (-)	- (-)	- (-)	- (-)	50 (6%)	814 (100%)
GI Meningioma	3,320 (91%)	1 (0.0%)	11 (0.3%)	- (-)	- (-)	1 (0.0%)	4 (0.1%)	312 (9%)	3,649 (100%)
GII Meningioma	244 (93%)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (1%)	16 (6%)	262 (100%)
GIII Meningioma	53 (85%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (1.6%)	8 (13%)	62 (100%)
Schwannoma	1,270 (88%)	4 (0.3%)	29 (2%)	1 (0.1%)	- (-)	- (-)	1 (0.1%)	139 (10%)	1,444 (100%)
GH pituitary adenoma	538 (94%)	- (-)	- (-)	- (-)	- (-)	4 (0.7%)	- (-)	28 (5%)	570 (100%)
PRL pituitary adenoma	361 (92%)	- (-)	- (-)	- (-)	- (-)	2 (0.5%)	- (-)	30 (8%)	393 (100%)
ACTH pituitary adenoma	155 (96%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	7 (4%)	162 (100%)
NF pituitary adenoma	1,588 (94%)	- (-)	- (-)	- (-)	- (-)	1 (0.1%)	4 (0.2%)	92 (5%)	1,685 (100%)
Craniopharyngioma	355 (95%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	19 (5%)	374 (100%)
Chordoma	70 (91%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	7 (9%)	77 (100%)
Hemangioblastoma	199 (80%)	- (-)	- (-)	36 (14%)	- (-)	- (-)	2 (0.8%)	13 (5%)	250 (100%)
Epidermoid	139 (95%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	8 (5%)	147 (100%)

15) Initial treatment

	surgery	surgery + RT	surgery + CRT	surgery + CTX	CRT	RT	CTX	observation alone	others	total
Pilocytic astrocytoma	152 (68%)	8 (4%)	17 (8%)	35 (16%)	- (-)	1 (0.5%)	5 (2%)	4 (2%)	- (-)	222 (100%)
GII DA	161 (39%)	78 (19%)	126 (30%)	27 (6%)	10 (2%)	2 (0.5%)	5 (1%)	7 (2%)	- (-)	416 (100%)
GII OL&OA	150 (38%)	35 (9%)	114 (29%)	82 (21%)	4 (1%)	1 (0.3%)	2 (1%)	1 (0.3%)	1 (0.3%)	390 (100%)
GIII AA	40 (7%)	52 (10%)	394 (72%)	33 (6%)	18 (3%)	4 (1%)	2 (0.4%)	2 (0%)	- (-)	545 (100%)
GIII AO&AOA	12 (3%)	25 (6%)	334 (80%)	36 (9%)	4 (1%)	- (-)	4 (1%)	- (-)	- (-)	415 (100%)
Glioblastoma	124 (6%)	208 (10%)	1,564 (76%)	79 (4%)	22 (1%)	8 (0.4%)	16 (1%)	22 (1%)	6 (0.3%)	2,049 (100%)
Ependymoma	38 (45%)	33 (39%)	9 (11%)	4 (5%)	- (-)	- (-)	- (-)	1 (1%)	- (-)	85 (100%)
Anaplastic ependymoma	10 (11%)	20 (22%)	50 (56%)	10 (11%)	- (-)	- (-)	- (-)	- (-)	- (-)	90 (100%)
Ganglioglioma	51 (88%)	2 (3%)	1 (2%)	3 (5%)	- (-)	- (-)	1 (2%)	- (-)	- (-)	58 (100%)
Central neurocytoma	44 (59%)	26 (35%)	1 (1%)	2 (3%)	- (-)	- (-)	- (-)	1 (1%)	1 (1%)	75 (100%)
Medulloblastoma	6 (4%)	4 (3%)	116 (81%)	14 (10%)	3 (2%)	- (-)	1 (1%)	- (-)	- (-)	144 (100%)
Germinoma	5 (2%)	7 (3%)	191 (77%)	10 (4%)	27 (11%)	3 (1%)	5 (2%)	- (-)	1 (0.4%)	249 (100%)
PCNSL	45 (6%)	95 (12%)	405 (50%)	186 (23%)	35 (4%)	20 (2%)	18 (2%)	8 (1%)	2 (0.2%)	814 (100%)
GI Meningioma	3,071 (84%)	181 (5%)	15 (0%)	119 (3%)	6 (0.2%)	54 (1%)	9 (0.2%)	177 (5%)	16 (0.4%)	3,648 (100%)
GII Meningioma	183 (70%)	57 (22%)	9 (3%)	9 (3%)	- (-)	2 (1%)	- (-)	- (-)	1 (0.4%)	261 (100%)
GIII Meningioma	25 (40%)	30 (48%)	4 (6%)	1 (2%)	- (-)	2 (3%)	- (-)	- (-)	- (-)	62 (100%)
Schwannoma	1,186 (82%)	110 (8%)	3 (0.2%)	11 (1%)	- (-)	85 (6%)	- (-)	47 (3%)	2 (0.1%)	1,444 (100%)
GH pituitary adenoma	372 (65%)	18 (3%)	10 (2%)	159 (28%)	- (-)	1 (0.2%)	7 (1%)	3 (1%)	- (-)	570 (100%)
PRL pituitary adenoma	201 (51%)	1 (0.3%)	2 (1%)	132 (34%)	1 (0.3%)	- (-)	53 (13%)	2 (1%)	1 (0.3%)	393 (100%)
ACTH pituitary adenoma	115 (71%)	8 (5%)	4 (2%)	32 (20%)	- (-)	- (-)	1 (1%)	2 (1%)	- (-)	162 (100%)
NF pituitary adenoma	1,370 (81%)	67 (4%)	10 (1%)	180 (11%)	- (-)	4 (0.2%)	6 (0.4%)	46 (3%)	2 (0.1%)	1,685 (100%)
Craniopharyngioma	232 (62%)	83 (22%)	14 (4%)	36 (10%)	1 (0.3%)	1 (0.3%)	3 (1%)	4 (1%)	- (-)	374 (100%)
Chordoma	36 (47%)	39 (51%)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (3%)	- (-)	77 (100%)
Hemangioblastoma	231 (93%)	13 (5%)	- (-)	4 (2%)	- (-)	- (-)	- (-)	1 (0.4%)	- (-)	249 (100%)
Epidermoid	134 (91%)	2 (1%)	- (-)	3 (2%)	- (-)	- (-)	1 (1%)	7 (5%)	- (-)	147 (100%)

16) Initial surgery

extent of resection	none	decom- pressive craniectomy	biopsy	1-50% resection	50-75% resection	75-95% resection	95-99% resection	100% total resection	extended total resection	shunt	drainage	others	total
Pilocytic astrocytoma	8 (4%)	- (-)	31 (14%)	16 (7%)	15 (7%)	27 (12%)	24 (11%)	99 (45%)	- (-)	2 (1%)	- (-)	- (-)	222 (100%)
GII DA	21 (5%)	- (-)	116 (28%)	38 (9%)	38 (9%)	75 (18%)	54 (13%)	67 (16%)	5 (1%)	1 (0.2%)	- (-)	1 (0.2%)	416 (100%)
GII OL&OA	3 (1%)	- (-)	48 (12%)	30 (8%)	45 (12%)	97 (25%)	66 (17%)	102 (26%)	- (-)	- (-)	- (-)	- (-)	391 (100%)
GIII AA	21 (4%)	- (-)	180 (33%)	58 (11%)	56 (10%)	93 (17%)	83 (15%)	47 (9%)	1 (0.2%)	3 (1%)	2 (0.4%)	- (-)	545 (100%)
GIII AO&AOA	6 (1%)	- (-)	48 (12%)	26 (6%)	54 (13%)	87 (21%)	99 (24%)	87 (21%)	5 (1%)	0 (0.0%)	1 (0.2%)	2 (0.5%)	416 (100%)
Glioblastoma	69 (3%)	4 (0%)	314 (15%)	132 (6%)	210 (10%)	468 (23%)	414 (20%)	400 (20%)	14 (1%)	7 (0.3%)	6 (0.3%)	11 (1%)	2,049 (100%)
Ependymoma	2 (2%)	1 (1%)	5 (6%)	2 (2%)	3 (4%)	22 (26%)	20 (24%)	29 (34%)	- (-)	- (-)	1 (1%)	- (-)	85 (100%)
Anaplastic ependymoma	- (-)	1 (1%)	3 (3%)	4 (4%)	4 (4%)	18 (20%)	22 (24%)	37 (41%)	- (-)	- (-)	1 (1%)	- (-)	90 (100%)
Ganglioglioma	1 (2%)	- (-)	5 (9%)	3 (5%)	3 (5%)	3 (5%)	8 (14%)	35 (60%)	- (-)	- (-)	- (-)	- (-)	58 (100%)
Central neurocytoma	2 (3%)	- (-)	1 (1%)	6 (8%)	5 (7%)	13 (17%)	21 (28%)	27 (36%)	- (-)	- (-)	- (-)	- (-)	75 (100%)
Medulloblastoma	4 (3%)	- (-)	4 (3%)	3 (2%)	5 (3%)	25 (17%)	40 (28%)	62 (43%)	- (-)	- (-)	1 (1%)	- (-)	144 (100%)
Germinoma	36 (14%)	- (-)	175 (70%)	11 (4%)	11 (4%)	3 (1%)	1 (0.4%)	6 (2%)	1 (0.4%)	- (-)	4 (2%)	1 (0.4%)	249 (100%)
PCNSL	65 (8%)	- (-)	617 (76%)	33 (4%)	25 (3%)	20 (2%)	17 (2%)	30 (4%)	1 (0.1%)	1 (0.1%)	4 (0.5%)	1 (0.1%)	814 (100%)
GI Meningioma	283 (8%)	- (-)	14 (0.4%)	75 (2%)	142 (4%)	419 (11%)	776 (21%)	1911 (52%)	7 (0.2%)	5 (0.1%)	1 (0.0%)	16 (0.4%)	3,649 (100%)
GII Meningioma	3 (1%)	- (-)	3 (1%)	3 (1%)	9 (3%)	52 (20%)	65 (25%)	126 (48%)	1 (0.4%)	- (-)	- (-)	- (-)	262 (100%)
GIII Meningioma	1 (2%)	- (-)	- (-)	4 (6%)	6 (10%)	15 (24%)	10 (16%)	25 (40%)	- (-)	1 (2%)	- (-)	- (-)	62 (100%)
Schwannoma	136 (9%)	- (-)	4 (0%)	25 (2%)	103 (7%)	338 (23%)	376 (26%)	442 (31%)	2 (0.1%)	9 (1%)	1 (0.1%)	8 (1%)	1,444 (100%)
GH pituitary adenoma	21 (4%)	- (-)	- (-)	8 (1%)	21 (4%)	85 (15%)	88 (15%)	343 (60%)	- (-)	- (-)	- (-)	4 (1%)	570 (100%)
PRL pituitary adenoma	54 (14%)	- (-)	5 (1%)	11 (3%)	20 (5%)	56 (14%)	51 (13%)	190 (48%)	- (-)	- (-)	1 (0.3%)	5 (1%)	393 (100%)
ACTH pituitary adenoma	5 (3%)	- (-)	1 (1%)	6 (4%)	12 (7%)	20 (12%)	20 (12%)	98 (60%)	- (-)	- (-)	- (-)	- (-)	162 (100%)
NF pituitary adenoma	87 (5%)	- (-)	6 (0%)	74 (4%)	221 (13%)	422 (25%)	312 (19%)	551 (33%)	- (-)	- (-)	2 (0%)	10 (1%)	1,685 (100%)
Craniopharyngioma	11 (3%)	- (-)	6 (2%)	14 (4%)	42 (11%)	89 (24%)	85 (23%)	115 (31%)	- (-)	4 (1%)	3 (1%)	4 (1%)	374 (100%)
Chordoma	2 (3%)	- (-)	3 (4%)	8 (10%)	13 (17%)	29 (38%)	14 (18%)	7 (9%)	- (-)	- (-)	- (-)	1 (1%)	77 (100%)
Hemangioblastoma	2 (1%)	3 (1%)	1 (0.4%)	1 (0.4%)	3 (1%)	13 (5%)	16 (6%)	209 (84%)	1 (0.4%)	- (-)	- (-)	1 (0.4%)	250 (100%)
Epidermoid	9 (6%)	- (-)	1 (1%)	2 (1%)	8 (5%)	31 (21%)	40 (27%)	54 (37%)	- (-)	- (-)	- (-)	2 (1%)	147 (100%)

17) Initial radiotherapy

radiotherapy	none	RT (+)	patient number	timing of radiotherapy				
				before surgery	intra-operative	after surgery	others	unknown
Pilocytic astrocytoma	197 (89%)	25 (11%)	222 (100%)	- (-)	- (-)	24 (11%)	1 (0.5%)	- (-)
GII DA	207 (50%)	209 (50%)	416 (100%)	8 (2%)	- (-)	190 (46%)	10 (2%)	1 (0.2%)
GII OL&OA	250 (64%)	141 (36%)	391 (100%)	- (-)	- (-)	134 (34%)	6 (2%)	1 (0.3%)
GIII AA	80 (15%)	465 (85%)	545 (100%)	13 (2%)	- (-)	446 (82%)	6 (1%)	- (-)
GIII AO&AOA	62 (15%)	354 (85%)	416 (100%)	1 (0.2%)	- (-)	345 (83%)	6 (1%)	2 (0.5%)
Glioblastoma	275 (13%)	1,774 (87%)	2,049 (100%)	28 (1%)	2 (0.1%)	1,717 (84%)	12 (1%)	15 (1%)
Ependymoma	43 (51%)	42 (49%)	85 (100%)	1 (1%)	- (-)	39 (46%)	2 (2%)	- (-)
Anaplastic ependymoma	20 (22%)	70 (78%)	90 (100%)	2 (2%)	- (-)	63 (70%)	4 (4%)	1 (1%)
Ganglioglioma	55 (95%)	3 (5%)	58 (100%)	- (-)	- (-)	3 (5%)	- (-)	- (-)
Central neurocytoma	48 (64%)	27 (36%)	75 (100%)	- (-)	- (-)	27 (36%)	- (-)	- (-)
Medulloblastoma	23 (16%)	121 (84%)	144 (100%)	5 (3%)	1 (1%)	114 (79%)	1 (1%)	- (-)
Germinoma	24 (10%)	225 (90%)	249 (100%)	13 (5%)	- (-)	193 (78%)	18 (7%)	1 (0.4%)
PCNSL	276 (34%)	538 (66%)	814 (100%)	21 (3%)	- (-)	474 (58%)	36 (4%)	7 (1%)
GI Meningioma	3,420 (94%)	229 (6%)	3,649 (100%)	21 (1%)	- (-)	149 (4%)	57 (2%)	2 (0.1%)
GII Meningioma	200 (76%)	62 (24%)	262 (100%)	3 (1%)	- (-)	51 (19%)	7 (3%)	1 (0.4%)
GIII Meningioma	30 (48%)	32 (52%)	62 (100%)	3 (5%)	- (-)	24 (39%)	4 (6%)	1 (2%)
Schwannoma	1,250 (87%)	194 (13%)	1,444 (100%)	54 (4%)	- (-)	84 (6%)	54 (4%)	2 (0%)
GH pituitary adenoma	544 (95%)	26 (5%)	570 (100%)	1 (0.2%)	- (-)	23 (4%)	2 (0.4%)	- (-)
PRL pituitary adenoma	390 (99%)	3 (1%)	393 (100%)	- (-)	- (-)	2 (1%)	1 (0.3%)	- (-)
ACTH pituitary adenoma	151 (93%)	11 (7%)	162 (100%)	- (-)	- (-)	8 (5%)	3 (2%)	- (-)
NF pituitary adenoma	1,614 (96%)	71 (4%)	1,685 (100%)	5 (0.3%)	- (-)	54 (3%)	11 (1%)	1 (0.1%)
Craniopharyngioma	285 (76%)	89 (24%)	374 (100%)	- (-)	- (-)	78 (21%)	11 (3%)	- (-)
Chordoma	38 (49%)	39 (51%)	77 (100%)	2 (3%)	- (-)	35 (45%)	2 (3%)	- (-)
Hemangioblastoma	239 (96%)	11 (4%)	250 (100%)	4 (2%)	- (-)	5 (2%)	2 (1%)	- (-)
Epidermoid	145 (99%)	2 (1%)	147 (100%)	- (-)	- (-)	1 (1%)	1 (1%)	- (-)

18) Mode of initial radiotherapy

mode	pt no.	WBRT	LBRT	WBRT+ LBRT /SRT/SRS	LBRT+ LBRT /SRT/SRS	SRS/SRT	intraope. IRT	particle beam irradiation	others
Pilocytic astrocytoma	222	3 (1%)	18 (8%)	1 (0.5%)	- (-)	5 (2%)	- (-)	- (-)	- (-)
GII DA	416	20 (5%)	183 (44%)	6 (1%)	3 (1%)	7 (2%)	- (-)	1 (0.2%)	1 (0.2%)
GII OL&OA	391	9 (2%)	126 (32%)	3 (1%)	3 (1%)	5 (1%)	- (-)	- (-)	2 (1%)
GIII AA	545	39 (7%)	379 (70%)	24 (4%)	21 (4%)	6 (1%)	- (-)	6 (1%)	3 (1%)
GIII AO&AOA	416	17 (4%)	297 (71%)	12 (3%)	21 (5%)	6 (1%)	- (-)	4 (1%)	2 (0.5%)
Glioblastoma	2,049	141 (7%)	1,339 (65%)	129 (6%)	126 (6%)	36 (2%)	- (-)	18 (1%)	20 (1%)
Ependymoma	85	4 (5%)	34 (40%)	1 (1%)	2 (2%)	3 (4%)	- (-)	- (-)	- (-)
Anaplastic ependymoma	90	3 (3%)	50 (56%)	11 (12%)	4 (4%)	1 (1%)	- (-)	1 (1%)	- (-)
Ganglioglioma	58	- (-)	2 (3%)	- (-)	- (-)	1 (2%)	- (-)	- (-)	- (-)
Central neurocytoma	75	- (-)	19 (25%)	1 (1%)	2 (3%)	4 (5%)	- (-)	- (-)	1 (1%)
Medulloblastoma	144	34 (24%)	17 (12%)	71 (49%)	- (-)	- (-)	- (-)	1 (1%)	- (-)
Germinoma	249	46 (18%)	113 (45%)	38 (15%)	7 (3%)	2 (1%)	- (-)	2 (1%)	22 (9%)
PCNSL	814	289 (36%)	54 (7%)	189 (23%)	7 (1%)	12 (1%)	- (-)	- (-)	9 (1%)
GI Meningioma	3,649	3 (0%)	31 (1%)	- (-)	- (-)	202 (6%)	- (-)	1 (0.0%)	6 (0.2%)
GII Meningioma	262	2 (1%)	30 (11%)	1 (0%)	1 (0%)	30 (11%)	- (-)	2 (1%)	1 (0.4%)
GIII Meningioma	62	2 (3%)	15 (24%)	1 (2%)	- (-)	9 (15%)	- (-)	- (-)	5 (8%)
Schwannoma	1,444	3 (0%)	13 (1%)	- (-)	2 (0%)	181 (13%)	- (-)	- (-)	5 (0.3%)
GH pituitary adenoma	570	2 (0%)	5 (1%)	- (-)	- (-)	20 (4%)	- (-)	- (-)	- (-)
PRL pituitary adenoma	393	1 (0%)	1 (0%)	- (-)	- (-)	2 (1%)	- (-)	- (-)	- (-)
ACTH pituitary adenoma	162	- (-)	4 (2%)	- (-)	- (-)	7 (4%)	- (-)	1 (1%)	- (-)
NF pituitary adenoma	1,685	- (-)	10 (1%)	- (-)	- (-)	60 (4%)	- (-)	3 (0.2%)	- (-)
Craniopharyngioma	374	- (-)	37 (10%)	- (-)	1 (0.3%)	55 (15%)	- (-)	2 (1%)	- (-)
Chordoma	77	- (-)	6 (8%)	- (-)	2 (3%)	15 (19%)	- (-)	16 (21%)	1 (1%)
Hemangioblastoma	250	- (-)	1 (0.4%)	- (-)	- (-)	9 (4%)	- (-)	- (-)	- (-)
Epidermoid	147	- (-)	1 (1%)	- (-)	- (-)	1 (1%)	- (-)	- (-)	- (-)

19) Spinal irradiation in initial treatment

Spinal irradiation	(-)	(+)	unknown	total
Pilocytic astrocytoma	219 (99%)	2 (1%)	1 (0.5%)	222 (100%)
GII DA	411 (99%)	3 (1%)	2 (0.5%)	416 (100%)
GII OL&OA	390 (100%)	1 (0%)	- (-)	391 (100%)
GIII AA	530 (97%)	11 (2%)	4 (1%)	545 (100%)
GIII AO&AOA	413 (99%)	3 (1%)	- (-)	416 (100%)
Glioblastoma	2,001 (98%)	31 (2%)	17 (1%)	2,049 (100%)
Ependymoma	79 (93%)	6 (7%)	- (-)	85 (100%)
AE	76 (84%)	14 (16%)	- (-)	90 (100%)
Ganglioglioma	58 (100%)	- (-)	- (-)	58 (100%)
Central neurocytoma	75 (100%)	- (-)	- (-)	75 (100%)
Medulloblastoma	36 (25%)	105 (73%)	3 (2%)	144 (100%)
Germinoma	210 (84%)	35 (14%)	4 (2%)	249 (100%)
PCNSL	777 (95%)	26 (3%)	11 (1%)	814 (100%)
GI Meningioma	3,647 (100%)	1 (0.0%)	1 (0.0%)	3,649 (100%)
GII Meningioma	262 (100%)	- (-)	- (-)	262 (100%)
GIII Meningioma	61 (98%)	1 (2%)	- (-)	62 (100%)
Schwannoma	1,442 (100%)	2 (0.1%)	- (-)	1,444 (100%)
GH pituitary adenoma	570 (100%)	- (-)	- (-)	570 (100%)
PRL pituitary adenoma	393 (100%)	- (-)	- (-)	393 (100%)
ACTH pituitary adenoma	162 (100%)	- (-)	- (-)	162 (100%)
NF pituitary adenoma	1,685 (100%)	- (-)	- (-)	1,685 (100%)
Craniopharyngioma	373 (100%)	- (-)	1 (0.3%)	374 (100%)
Chordoma	76 (99%)	- (-)	1 (1%)	77 (100%)
Hemangioblastoma	248 (99%)	1 (0.4%)	1 (0.4%)	250 (100%)
Epidermoid	147 (100%)	- (-)	- (-)	147 (100%)

20) Radiotherapy for recurrent tumor

mode	none	WBRT	LBRT	SRS/SRT	spinal cord irradiation	particle beam irradiation	others	unknown	total
Pilocytic astrocytoma	207 (93%)	- (-)	9 (4%)	3 (1%)	- (-)	- (-)	- (-)	3 (1%)	222 (100%)
GII DA	326 (78%)	7 (2%)	52 (13%)	13 (3%)	2 (0.5%)	- (-)	- (-)	15 (4%)	416 (100%)
GII OL&OA	304 (78%)	2 (1%)	62 (16%)	11 (3%)	- (-)	- (-)	1 (0.3%)	11 (3%)	391 (100%)
GIII AA	471 (86%)	3 (1%)	16 (3%)	27 (5%)	3 (1%)	- (-)	2 (0.4%)	18 (3%)	545 (100%)
GIII AO&AOA	349 (84%)	8 (2%)	14 (3%)	27 (6%)	- (-)	- (-)	1 (0.2%)	15 (4%)	416 (100%)
Glioblastoma	1,777 (87%)	11 (1%)	51 (2%)	127 (6%)	6 (0.3%)	1 (0.0%)	- (-)	72 (4%)	2,049 (100%)
Ependymoma	68 (80%)	- (-)	6 (7%)	9 (11%)	- (-)	- (-)	- (-)	2 (2%)	85 (100%)
AE	57 (63%)	3 (3%)	9 (10%)	15 (17%)	- (-)	- (-)	1 (1%)	5 (6%)	90 (100%)
Ganglioglioma	54 (93%)	- (-)	3 (5%)	1 (2%)	- (-)	- (-)	- (-)	- (-)	58 (100%)
Central neurocytoma	74 (99%)	- (-)	- (-)	1 (1%)	- (-)	- (-)	- (-)	- (-)	75 (100%)
Medulloblastoma	115 (80%)	3 (2%)	8 (6%)	7 (5%)	1 (1%)	- (-)	2 (1%)	7 (5%)	144 (100%)
Germinoma	228 (92%)	5 (2%)	1 (0.4%)	- (-)	4 (2%)	- (-)	1 (0.4%)	10 (4%)	249 (100%)
PCNSL	657 (81%)	49 (6%)	16 (2%)	37 (5%)	12 (1%)	- (-)	5 (1%)	38 (5%)	814 (100%)
GI Meningioma	3,459 (95%)	1 (0.0%)	16 (0.4%)	132 (4%)	- (-)	- (-)	3 (0.1%)	38 (1%)	3,649 (100%)
GII Meningioma	201 (77%)	1 (0.4%)	13 (5%)	40 (15%)	- (-)	- (-)	2 (1%)	3 (1%)	262 (100%)
GIII Meningioma	42 (68%)	1 (2%)	5 (8%)	11 (18%)	- (-)	- (-)	- (-)	2 (3%)	62 (100%)
Schwannoma	1,352 (94%)	2 (0.1%)	3 (0.2%)	76 (5%)	- (-)	- (-)	1 (0.1%)	10 (1%)	1,444 (100%)
GH pituitary adenoma	562 (99%)	- (-)	1 (0.2%)	5 (1%)	- (-)	1 (0.2%)	- (-)	1 (0.2%)	570 (100%)
PRL pituitary adenoma	391 (99%)	- (-)	- (-)	2 (1%)	- (-)	- (-)	- (-)	- (-)	393 (100%)
ACTH pituitary adenoma	151 (93%)	- (-)	- (-)	11 (7%)	- (-)	- (-)	- (-)	- (-)	162 (100%)
NF pituitary adenoma	1,617 (96%)	- (-)	7 (0.4%)	55 (3%)	- (-)	- (-)	- (-)	6 (0.4%)	1,685 (100%)
Craniopharyngioma	310 (83%)	- (-)	11 (3%)	46 (12%)	- (-)	- (-)	- (-)	6 (2%)	374 (100%)
Chordoma	63 (82%)	- (-)	1 (1%)	7 (9%)	- (-)	- (-)	- (-)	4 (5%)	77 (100%)
Hemangioblastoma	242 (97%)	- (-)	- (-)	6 (2%)	- (-)	- (-)	- (-)	2 (1%)	250 (100%)
Epidermoid	146 (99%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (1%)	147 (100%)

21) Drug therapy in initial treatment

number of CTX = 15): (surgery+CRT)+(surgery+CTX)+(CRT alone)+(CTX alone)

Drug	patient number	number of CTX	TMZ	ACNU	other alkylating agents	platinum drugs	vincristine	interferon	etoposide	ifosmide	MTX	molecular targeting drug	hormone therapy	steroid	anti-convulsants	Avastin	Gliadel	5-ALA	Talaporfin	others
Pilocytic astrocytoma	222	57 (26%)	8 (4%)	5 (2%)	1 (0.5%)	26 (12%)	22 (10%)	2 (1%)	7 (3%)	- (-)	2 (1%)	- (-)	1 (0.5%)	12 (5%)	7 (3%)	- (-)	- (-)	1 (0.5%)	- (-)	7 (3%)
GII DA	416	168 (40%)	40 (10%)	76 (18%)	8 (2%)	28 (7%)	35 (8%)	44 (11%)	11 (3%)	4 (1%)	- (-)	- (-)	- (-)	31 (7%)	47 (11%)	1 (0.2%)	2 (0.5%)	2 (0.5%)	- (-)	5 (1%)
GII OL&OA	391	202 (52%)	61 (16%)	110 (28%)	75 (19%)	12 (3%)	91 (23%)	13 (3%)	1 (0.3%)	3 (0.8%)	- (-)	- (-)	- (-)	21 (5%)	65 (17%)	1 (0.3%)	- (-)	4 (1%)	- (-)	7 (2%)
GIII AA	545	447 (82%)	251 (46%)	158 (29%)	40 (7%)	39 (7%)	59 (11%)	89 (16%)	30 (6%)	1 (0.2%)	- (-)	- (-)	- (-)	87 (16%)	117 (21%)	- (-)	- (-)	3 (0.6%)	- (-)	8 (1%)
GIII AO&AOA	416	378 (91%)	172 (41%)	180 (43%)	124 (30%)	14 (3%)	143 (34%)	29 (7%)	8 (2%)	3 (0.7%)	2 (0.5%)	1 (0.2%)	- (-)	74 (18%)	105 (25%)	- (-)	- (-)	8 (2%)	- (-)	10 (2%)
Glioblastoma	2,049	1,681 (82%)	1,012 (49%)	481 (23%)	136 (7%)	108 (5%)	180 (9%)	249 (12%)	92 (4%)	18 (0.9%)	14 (0.7%)	- (-)	3 (0.1%)	444 (22%)	485 (24%)	2 (0.1%)	- (-)	31 (2%)	2 (0.1%)	29 (1%)
Ependymoma	85	13 (15%)	1 (1%)	4 (5%)	1 (1%)	7 (8%)	3 (4%)	3 (4%)	3 (4%)	3 (4%)	- (-)	- (-)	- (-)	5 (6%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
Anaplastic ependymoma	90	60 (67%)	16 (18%)	7 (8%)	13 (14%)	34 (38%)	14 (16%)	2 (2%)	33 (37%)	9 (10%)	5 (6%)	- (-)	- (-)	12 (13%)	10 (11%)	- (-)	- (-)	- (-)	- (-)	5 (6%)
Ganglioglioma	58	5 (9%)	1 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (3%)	- (-)	- (-)	- (-)	- (-)	- (-)
Central neurocytoma	75	3 (4%)	2 (3%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (1%)	1 (1%)	- (-)	- (-)	- (-)	- (-)	- (-)
Medulloblastoma	144	134 (93%)	3 (2%)	4 (3%)	39 (27%)	112 (78%)	63 (44%)	3 (2%)	89 (62%)	46 (32%)	22 (15%)	- (-)	1 (0.7%)	33 (23%)	6 (4%)	1 (0.7%)	- (-)	- (-)	- (-)	11 (8%)
Germinoma	249	233 (94%)	- (-)	- (-)	16 (6%)	215 (86%)	6 (2%)	1 (0.4%)	197 (79%)	53 (21%)	- (-)	- (-)	4 (2%)	35 (14%)	14 (6%)	- (-)	- (-)	- (-)	- (-)	12 (5%)
PCNSL	814	644 (79%)	5 (0.6%)	18 (2%)	78 (10%)	34 (4%)	72 (9%)	1 (0.1%)	32 (4%)	5 (0.6%)	514 (63%)	61 (7%)	2 (0.2%)	315 (39%)	109 (13%)	- (-)	- (-)	2 (0.2%)	- (-)	60 (7%)
GI Meningioma	3,649	149 (4%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.0%)	40 (1%)	82 (2%)	- (-)	- (-)	8 (0.2%)	- (-)	1 (0.0%)
GII Meningioma	262	18 (7%)	1 (0.4%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.4%)	4 (2%)	13 (5%)	- (-)	- (-)	- (-)	- (-)	2 (1%)
GIII Meningioma	62	5 (8%)	- (-)	- (-)	1 (2%)	- (-)	1 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (3%)	6 (10%)	- (-)	- (-)	- (-)	- (-)	1 (2%)
Schwannoma	1,444	14 (1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	5 (0.3%)	3 (0.2%)	- (-)	- (-)	- (-)	- (-)	1 (0.1%)
GH pituitary adenoma	570	176 (31%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	55 (10%)	7 (1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
PRL pituitary adenoma	393	188 (48%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.3%)	- (-)	32 (8%)	9 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	11 (3%)
ACTH pituitary adenoma	162	37 (23%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	4 (2%)	4 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
NF pituitary adenoma	1,685	196 (12%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	46 (3%)	31 (2%)	2 (0.1%)	- (-)	- (-)	- (-)	- (-)	3 (0.2%)
Craniopharyngioma	374	54 (14%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	18 (5%)	17 (5%)	5 (1%)	- (-)	- (-)	- (-)	- (-)	2 (1%)
Chordoma	77	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
Hemangioblastoma	250	4 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.4%)	- (-)	4 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
Epidermoid	147	4 (3%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (1%)	4 (3%)	3 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)

22) Any therapy during the whole treatment

mode of therapy	patient number	none	surgery	WBRT	LBRT	SRS/SRT	particle beam therapy	CTX	molecular targeting drug	dopamine agonist	virus therapy	vaccine therapy	immuno-therapy	activated lymphocyte	steroid	anti-convulsants	others
Pilocytic astrocytoma	222	16 (7%)	196 (88%)	2 (1%)	23 (10%)	9 (4%)	- (-)	48 (22%)	1 (0.5%)	- (-)	- (-)	- (-)	- (-)	- (-)	37 (17%)	26 (12%)	1 (0.5%)
GII DA	416	17 (4%)	355 (85%)	26 (6%)	216 (52%)	16 (4%)	2 (0.5%)	203 (49%)	9 (2%)	- (-)	- (-)	7 (2%)	5 (1.2%)	1 (0.2%)	127 (31%)	215 (52%)	7 (2%)
GII OL&OA	391	5 (1.3%)	357 (91%)	13 (3%)	171 (44%)	16 (4%)	- (-)	236 (60%)	12 (3%)	- (-)	- (-)	5 (1.3%)	3 (0.8%)	- (-)	78 (20%)	257 (66%)	2 (0.5%)
GIII AA	545	8 (1.5%)	482 (88%)	48 (9%)	395 (72%)	38 (7%)	8 (1.5%)	413 (76%)	4 (0.7%)	- (-)	- (-)	7 (1.3%)	4 (0.7%)	2 (0.4%)	252 (46%)	317 (58%)	7 (1.3%)
GIII AO&AOA	416	11 (3%)	379 (91%)	32 (8%)	296 (71%)	40 (10%)	6 (1.4%)	339 (81%)	5 (1.2%)	1 (0.2%)	- (-)	4 (1.0%)	1 (0.2%)	2 (0.5%)	162 (39%)	258 (62%)	7 (1.7%)
Glioblastoma	2,049	46 (2%)	1,835 (90%)	247 (12%)	1,475 (72%)	241 (12%)	24 (1.2%)	1,490 (73%)	25 (1.2%)	- (-)	2 (0.1%)	63 (3%)	29 (1.4%)	8 (0.4%)	1,026 (50%)	1,144 (56%)	44 (2%)
Ependymoma	85	7 (8%)	73 (86%)	4 (5%)	37 (44%)	10 (12%)	- (-)	13 (15%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	23 (27%)	8 (9%)	- (-)
Anaplastic ependymoma	90	- (-)	84 (93%)	15 (17%)	63 (70%)	16 (18%)	1 (1.1%)	60 (67%)	1 (1.1%)	- (-)	- (-)	- (-)	- (-)	- (-)	36 (40%)	29 (32%)	3 (3%)
Ganglioglioma	58	4 (7%)	51 (88%)	- (-)	4 (7%)	1 (2%)	- (-)	2 (3%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	7 (12%)	35 (60%)	- (-)
Central neurocytoma	75	8 (11%)	66 (88%)	1 (1%)	19 (25%)	4 (5%)	- (-)	1 (1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	14 (19%)	22 (29%)	1 (1%)
Medulloblastoma	144	- (-)	130 (90%)	102 (71%)	93 (65%)	9 (6%)	2 (1.4%)	122 (85%)	2 (1.4%)	- (-)	1 (0.7%)	- (-)	2 (1.4%)	1 (0.7%)	59 (41%)	14 (10%)	12 (8%)
Germinoma	249	4 (2%)	204 (82%)	87 (35%)	158 (63%)	5 (2%)	2 (0.8%)	211 (85%)	- (-)	1 (0%)	- (-)	- (-)	- (-)	- (-)	67 (27%)	30 (12%)	10 (4%)
PCNSL	814	14 (2%)	659 (81%)	479 (59%)	233 (29%)	52 (6%)	- (-)	528 (65%)	85 (10%)	- (-)	- (-)	1 (0.1%)	- (-)	2 (0.2%)	480 (59%)	217 (27%)	11 (1.4%)
GI Meningioma	3,649	426 (12%)	3,036 (83%)	3 (0.1%)	41 (1%)	264 (7%)	1 (0.0%)	3 (0.1%)	- (-)	2 (0%)	- (-)	- (-)	- (-)	- (-)	587 (16%)	1,055 (29%)	50 (1%)
GII Meningioma	262	11 (4%)	244 (93%)	6 (2%)	41 (16%)	53 (20%)	5 (2%)	2 (0.8%)	- (-)	- (-)	- (-)	- (-)	1 (0.4%)	- (-)	57 (22%)	108 (41%)	5 (2%)
GIII Meningioma	62	4 (6%)	54 (87%)	3 (5%)	15 (24%)	21 (34%)	1 (2%)	2 (3%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	12 (19%)	24 (39%)	4 (6%)
Schwannoma	1,444	158 (11%)	1,193 (83%)	3 (0%)	17 (1%)	230 (16%)	- (-)	2 (0.1%)	- (-)	1 (0%)	- (-)	- (-)	- (-)	- (-)	209 (14%)	30 (2%)	14 (1%)
GH pituitary adenoma	570	53 (9%)	482 (85%)	- (-)	4 (0.7%)	20 (4%)	- (-)	5 (1%)	- (-)	140 (25%)	- (-)	- (-)	- (-)	- (-)	128 (22%)	4 (0.7%)	12 (2%)
PRL pituitary adenoma	393	40 (10%)	288 (73%)	- (-)	1 (0.3%)	2 (1%)	- (-)	4 (1%)	- (-)	152 (39%)	- (-)	1 (0.3%)	- (-)	- (-)	70 (18%)	4 (1%)	17 (4%)
ACTH pituitary adenoma	162	16 (10%)	139 (86%)	- (-)	1 (0.6%)	14 (9%)	1 (0.6%)	1 (0.6%)	- (-)	23 (14%)	- (-)	- (-)	- (-)	- (-)	63 (39%)	- (-)	3 (2%)
NF pituitary adenoma	1,685	220 (13%)	1,419 (84%)	- (-)	13 (1%)	98 (6%)	2 (0.1%)	11 (0.7%)	1 (0.1%)	55 (3%)	1 (0.1%)	- (-)	- (-)	- (-)	456 (27%)	26 (2%)	39 (2%)
Craniopharyngioma	374	18 (5%)	326 (87%)	- (-)	40 (11%)	82 (22%)	2 (0.5%)	2 (0.5%)	- (-)	13 (3%)	- (-)	- (-)	- (-)	- (-)	143 (38%)	57 (15%)	32 (9%)
Chordoma	77	5 (6%)	72 (94%)	- (-)	9 (12%)	15 (19%)	14 (18%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	9 (12%)	5 (6%)	1 (1%)
Hemangioblastoma	250	28 (11%)	215 (86%)	1 (0.4%)	1 (0.4%)	14 (6%)	- (-)	- (-)	1 (0.4%)	- (-)	- (-)	- (-)	- (-)	- (-)	41 (16%)	5 (2%)	- (-)
Epidermoid	147	22 (15%)	121 (82%)	- (-)	1 (1%)	1 (1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	21 (14%)	18 (12%)	4 (3%)

23) Any drug therapy during the whole treatment

drug therapy	patient number	none	TMZ	ACNU	other alkylating agents	platinum drug	vincristine	IFN	etoposide	ifosmide	MTX	molecular target drug	hormone therapy	steroid	anti-convulsants	dopamine agonist	Avastin	Gliadel	5-ALA	Talapofrin	others
Pilocytic astrocytoma	222	131 (59%)	15 (7%)	6 (3%)	2 (1%)	32 (14%)	23 (10%)	4 (2%)	9 (4%)	- (-)	1 (0.5%)	- (-)	2 (1%)	40 (18%)	27 (12%)	- (-)	1 (0.5%)	- (-)	1 (0.5%)	- (-)	6 (3%)
GII DA	416	69 (17%)	137 (33%)	91 (22%)	12 (3%)	37 (9%)	43 (10%)	56 (13%)	22 (5%)	9 (2%)	- (-)	1 (0.2%)	1 (0.2%)	137 (33%)	233 (56%)	- (-)	12 (3%)	4 (1.0%)	9 (2%)	- (-)	14 (3%)
GII OL&OA	391	42 (11%)	139 (36%)	125 (32%)	83 (21%)	16 (4%)	91 (23%)	18 (5%)	2 (0.5%)	3 (0.8%)	1 (0.3%)	- (-)	- (-)	79 (20%)	279 (71%)	- (-)	22 (6%)	1 (0.3%)	7 (2%)	- (-)	11 (3%)
GIII AA	545	32 (6%)	314 (58%)	162 (30%)	44 (8%)	58 (11%)	66 (12%)	111 (20%)	46 (8%)	8 (1%)	2 (0.4%)	4 (0.7%)	2 (0.4%)	263 (48%)	322 (59%)	- (-)	7 (1.3%)	1 (0.2%)	5 (0.9%)	- (-)	12 (2%)
GIII AO&AOA	416	25 (6%)	250 (60%)	178 (43%)	129 (31%)	20 (5%)	137 (33%)	36 (9%)	14 (3%)	4 (1.0%)	4 (1.0%)	2 (0.5%)	- (-)	166 (40%)	272 (65%)	1 (0.2%)	6 (1.4%)	1 (0.2%)	16 (4%)	- (-)	10 (2%)
Glioblastoma	2,049	127 (6%)	1,197 (58%)	493 (24%)	142 (7%)	159 (8%)	188 (9%)	304 (15%)	138 (7%)	26 (1.3%)	17 (0.8%)	7 (0.3%)	7 (0.3%)	1,056 (52%)	1,220 (60%)	3 (0.1%)	31 (2%)	2 (0.1%)	50 (2%)	9 (0.4%)	80 (4%)
Ependymoma	85	47 (55%)	4 (5%)	5 (6%)	3 (4%)	8 (9%)	5 (6%)	3 (4%)	4 (5%)	4 (5%)	- (-)	- (-)	- (-)	24 (28%)	11 (13%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (1%)
Anaplastic ependymoma	90	12 (13%)	32 (36%)	9 (10%)	16 (18%)	38 (42%)	15 (17%)	2 (2%)	35 (39%)	13 (14%)	8 (9%)	- (-)	- (-)	39 (43%)	29 (32%)	- (-)	3 (3%)	- (-)	- (-)	- (-)	8 (9%)
Ganglioglioma	58	18 (31%)	1 (2%)	3 (5%)	- (-)	- (-)	- (-)	2 (3%)	- (-)	- (-)	- (-)	- (-)	- (-)	7 (12%)	38 (66%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
Central neurocytoma	75	45 (60%)	2 (3%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	16 (21%)	28 (37%)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (3%)
Medulloblastoma	144	7 (5%)	26 (18%)	6 (4%)	39 (27%)	117 (81%)	65 (45%)	5 (3%)	97 (67%)	54 (38%)	27 (19%)	2 (1.4%)	3 (2%)	57 (40%)	14 (10%)	- (-)	5 (3%)	- (-)	- (-)	- (-)	15 (10%)
Germinoma	249	17 (7%)	1 (0.4%)	1 (0.4%)	17 (7%)	208 (84%)	8 (3%)	1 (0.4%)	192 (77%)	55 (22%)	- (-)	- (-)	24 (10%)	72 (29%)	37 (15%)	- (-)	- (-)	- (-)	- (-)	- (-)	21 (8%)
PCNSL	814	68 (8%)	24 (3%)	24 (3%)	100 (12%)	81 (10%)	105 (13%)	4 (0.5%)	81 (10%)	9 (1%)	491 (60%)	94 (12%)	4 (0.5%)	534 (66%)	242 (30%)	- (-)	1 (0.1%)	- (-)	2 (0.2%)	1 (0.1%)	81 (10%)
GI Meningioma	3,649	2,201 (60%)	- (-)	- (-)	- (-)	2 (0.1%)	1 (0.0%)	- (-)	1 (0.0%)	- (-)	- (-)	- (-)	17 (0.5%)	639 (18%)	1,147 (31%)	2 (0.1%)	1 (0.0%)	- (-)	10 (0.3%)	1 (0.0%)	68 (2%)
GII Meningioma	262	116 (44%)	1 (0.4%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.4%)	66 (25%)	125 (48%)	- (-)	- (-)	- (-)	2 (1%)	- (-)	6 (2%)
GIII Meningioma	62	27 (44%)	- (-)	- (-)	1 (2%)	- (-)	1 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	12 (19%)	31 (50%)	- (-)	1 (2%)	- (-)	- (-)	- (-)	2 (3%)
Schwannoma	1,444	1,151 (80%)	- (-)	- (-)	- (-)	- (-)	1 (0.1%)	- (-)	- (-)	- (-)	1 (0.1%)	1 (0.1%)	2 (0.1%)	240 (17%)	39 (3%)	- (-)	3 (0.2%)	- (-)	- (-)	- (-)	32 (2%)
GH pituitary adenoma	570	281 (49%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	123 (22%)	152 (27%)	4 (1%)	46 (8%)	- (-)	- (-)	- (-)	- (-)	31 (5%)
PRL pituitary adenoma	393	154 (39%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	57 (15%)	87 (22%)	4 (1%)	118 (30%)	- (-)	- (-)	- (-)	- (-)	31 (8%)
ACTH pituitary adenoma	162	70 (43%)	1 (1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	37 (23%)	66 (41%)	- (-)	2 (1%)	- (-)	- (-)	- (-)	- (-)	7 (4%)
NF pituitary adenoma	1,685	1,011 (60%)	- (-)	- (-)	1 (0.1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.1%)	190 (11%)	519 (31%)	32 (2%)	13 (1%)	- (-)	- (-)	- (-)	- (-)	51 (3%)
Craniopharyngioma	374	155 (41%)	- (-)	- (-)	- (-)	1 (0.3%)	- (-)	1 (0.3%)	1 (0.3%)	- (-)	- (-)	- (-)	102 (27%)	157 (42%)	60 (16%)	1 (0.3%)	- (-)	- (-)	- (-)	- (-)	14 (4%)
Chordoma	77	59 (77%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (3%)	10 (13%)	6 (8%)	- (-)	- (-)	- (-)	- (-)	- (-)	3 (4%)
Hemangioblastoma	250	196 (78%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.4%)	2 (1%)	49 (20%)	4 (2%)	- (-)	- (-)	- (-)	- (-)	- (-)	6 (2%)
Epidermoid	147	107 (73%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (1%)	22 (15%)	22 (15%)	- (-)	- (-)	- (-)	- (-)	- (-)	5 (3%)

24) Overall survival and progression free survival

	total	Overall survival									Progression free survival									
		event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	
Pilocytic astrocytoma	222	12	132	0	NR	98.6	97.0	97.0	96.0	94.8	36	132	0	NR	93.2	90.6	90.0	87.8	83.8	
GII DA	416	102	131	0	NR	94.5	88.1	83.3	79.8	76.9	181	131	0	87.1	83.7	74.4	67.1	62.1	57.9	
GII OL&OA	391	51	130	0	NR	98.7	97.0	95.6	94.4	91.9	174	130	0	90.1	93.7	88.9	83.7	73.7	64.9	
GIII AA	545	264	128	0	41.1	79.9	62.3	51.6	47.0	43.2	284	128	0	26.0	63.9	50.4	44.6	38.7	36.3	
GIII AO&AOA	416	144	129	1.0	NR	91.0	79.5	72.6	68.3	62.6	203	129	0	47.0	76.4	63.6	56.6	49.4	43.9	
Glioblastoma	2,049	1,261	130	0	18	65.4	36.6	25.2	19.0	16.0	1,233	130	0	11.0	43.3	24.0	18.8	15.9	14.3	
Ependymoma	85	19	130	0	NR	97.5	93.2	82.8	79.7	78.0	26	130	0	NR	88.5	73.3	70.0	70.0	70.0	
Anaplastic ependymoma	90	35	126	0	126	92.9	79.3	71.5	67.4	63.3	46	118	0	25.0	80.1	50.5	44.9	44.9	44.9	
Ganglioglioma	58	2	129	1.0	NR	100	100	100	100	97.7	7	129	1.0	NR	96.2	96.2	94.1	87.3	84.9	
Central neurocytoma	75	6	128	0	NR	96.0	92.9	91.2	91.2	91.2	4	128	0	NR	95.5	95.5	95.5	93.7	93.7	
Medulloblastoma	144	45	126	0	NR	92.0	82.2	77.6	75.2	72.1	44	126	0	NR	90.1	79.3	74.2	69.1	67.3	
Germinoma	249	6	132	0	NR	99.2	99.2	99.2	99.2	98.7	15	132	0	NR	98.3	97.4	96.0	95.0	95.0	
PCNSL	814	341	129	0	54	76.1	66.0	56.5	52.1	48.2	333	125	0	39.0	74.9	61.7	51.8	45.9	40.2	
GI Meningioma	3,649	109	132	0	NR	99.0	98.6	98.2	97.7	97.2	341	132	0	NR	98.0	96.1	94.0	92.6	90.7	
GII Meningioma	262	33	129	0	NR	97.9	96.0	94.0	92.9	90.4	102	121	0	74.1	88.7	79.7	68.3	63.1	57.5	
GIII Meningioma	62	20	122	0	95	86.4	84.3	77.3	72.1	56.8	32	100	0	20.0	63.0	49.1	39.3	36.8	36.8	
Schwannoma	1,444	28	132	0	NR	99.3	99.2	98.8	98.7	98.4	169	132	0	NR	97.4	94.6	93.0	91.2	89.3	
GH pituitary adenoma	570	4	132	0	NR	99.8	99.8	99.8	99.3	99.3	31	132	0	NR	97.1	96.0	95.5	95.0	94.5	
PRL pituitary adenoma	393	5	131	0	NR	99.4	99.4	99.4	99.1	98.7	17	131	0	NR	99.4	98.8	98.4	96.9	94.8	
ACTH pituitary adenoma	162	2	131	0	NR	100	100	99.2	99.2	99.2	23	131	0	NR	95.2	93.6	91.1	89.3	86.5	
NF pituitary adenoma	1,685	37	132	0	NR	99.6	99.5	99.1	98.7	98.2	263	132	0	NR	97.5	94.9	92.0	89.8	86.7	
Craniopharyngioma	374	12	131	0	NR	98.6	98.3	97.7	97.0	97.0	125	131	0	NR	85.8	78.6	75.3	68.8	67.7	
Chordoma	77	7	126	0	NR	94.4	94.4	92.6	92.6	90.4	24	126	0	NR	89.3	80.8	71.0	64.4	64.4	
Hemangioblastoma	250	12	132	0	NR	96.4	95.8	95.2	95.2	95.2	28	120	0	NR	96.4	94.2	93.6	90.9	88.7	
Epidermoid	147	4	128	0	NR	99.2	98.3	97.4	97.4	96.1	14	126	0	NR	98.4	97.5	97.5	92.8	91.6	

25) Outcome at investigation

	alive	dead	unknown	total
Pilocytic astrocytoma	152 (68%)	12 (5%)	58 (26%)	222 (100%)
GII DA	193 (46%)	102 (25%)	121 (29%)	416 (100%)
GII OL&OA	255 (65%)	51 (13%)	85 (22%)	391 (100%)
GIII AA	108 (20%)	264 (48%)	173 (32%)	545 (100%)
GIII AO&AOA	146 (35%)	145 (35%)	125 (30%)	416 (100%)
Glioblastoma	160 (8%)	1,262 (62%)	627 (31%)	2,049 (100%)
Ependymoma	40 (47%)	19 (22%)	26 (31%)	85 (100%)
Anaplastic ependymoma	33 (37%)	35 (39%)	22 (24%)	90 (100%)
Ganglioglioma	40 (69%)	2 (3%)	16 (28%)	58 (100%)
Central neurocytoma	42 (56%)	6 (8%)	27 (36%)	75 (100%)
Medulloblastoma	75 (52%)	45 (31%)	24 (17%)	144 (100%)
Germinoma	189 (76%)	6 (2%)	54 (22%)	249 (100%)
PCNSL	143 (18%)	341 (42%)	330 (41%)	814 (100%)
GI Meningioma	2,046 (56%)	109 (3%)	1,494 (41%)	3,649 (100%)
GII Meningioma	126 (48%)	33 (13%)	103 (39%)	262 (100%)
GIII Meningioma	20 (32%)	20 (32%)	22 (35%)	62 (100%)
Schwannoma	870 (60%)	28 (2%)	546 (38%)	1,444 (100%)
GH pituitary adenoma	330 (58%)	4 (1%)	236 (41%)	570 (100%)
PRL pituitary adenoma	198 (50%)	5 (1%)	190 (48%)	393 (100%)
ACTH pituitary adenoma	88 (54%)	2 (1%)	72 (44%)	162 (100%)
NF pituitary adenoma	1,030 (61%)	37 (2%)	618 (37%)	1,685 (100%)
Craniopharyngioma	251 (67%)	12 (3%)	111 (30%)	374 (100%)
Chordoma	36 (47%)	7 (9%)	34 (44%)	77 (100%)
Hemangioblastoma	130 (52%)	12 (5%)	108 (43%)	250 (100%)
Epidermoid	79 (54%)	4 (3%)	64 (44%)	147 (100%)

26) Pattern of recurrence at investigation

	no recurrence	local recurrence	new lesions	unknown	total
Pilocytic astrocytoma	169 (76%)	34 (15%)	2 (1%)	17 (8%)	222 (100%)
GII DA	182 (44%)	166 (40%)	15 (4%)	53 (13%)	416 (100%)
GII OL&OA	179 (46%)	168 (43%)	6 (2%)	38 (10%)	391 (100%)
GIII AA	147 (27%)	250 (46%)	34 (6%)	114 (21%)	545 (100%)
GIII AO&AOA	154 (37%)	172 (41%)	32 (8%)	58 (14%)	416 (100%)
Glioblastoma	397 (19%)	1,054 (51%)	179 (9%)	419 (20%)	2,049 (100%)
Ependymoma	49 (58%)	21 (25%)	5 (6%)	10 (12%)	85 (100%)
Anaplastic ependymoma	31 (34%)	38 (42%)	8 (9%)	13 (14%)	90 (100%)
Ganglioglioma	49 (84%)	6 (10%)	1 (2%)	2 (3%)	58 (100%)
Central neurocytoma	64 (85%)	4 (5%)	– (–)	7 (9%)	75 (100%)
Medulloblastoma	83 (58%)	18 (13%)	26 (18%)	17 (12%)	144 (100%)
Germinoma	208 (84%)	5 (2%)	10 (4%)	26 (10%)	249 (100%)
PCNSL	283 (35%)	167 (21%)	166 (20%)	198 (24%)	814 (100%)
GI Meningioma	2,822 (77%)	318 (9%)	23 (0.6%)	486 (13%)	3,649 (100%)
GII Meningioma	120 (46%)	93 (35%)	9 (3%)	40 (15%)	262 (100%)
GIII Meningioma	23 (37%)	28 (45%)	4 (6%)	7 (11%)	62 (100%)
Schwannoma	1,074 (74%)	163 (11%)	6 (0.4%)	201 (14%)	1,444 (100%)
GH pituitary adenoma	454 (80%)	31 (5%)	– (–)	85 (15%)	570 (100%)
PRL pituitary adenoma	314 (80%)	17 (4%)	– (–)	62 (16%)	393 (100%)
ACTH pituitary adenoma	114 (70%)	23 (14%)	– (–)	25 (15%)	162 (100%)
NF pituitary adenoma	1,200 (71%)	263 (16%)	– (–)	222 (13%)	1,685 (100%)
Craniopharyngioma	213 (57%)	125 (33%)	– (–)	36 (10%)	374 (100%)
Chordoma	40 (52%)	24 (31%)	– (–)	13 (17%)	77 (100%)
Hemangioblastoma	183 (73%)	22 (9%)	6 (2%)	39 (16%)	250 (100%)
Epidermoid	113 (77%)	14 (10%)	– (–)	20 (14%)	147 (100%)

27) Overall survival and progression free survival depending on initial treatment

		total	Overall survival					Progression free survival				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
Pilocytic astrocytoma	surgery	152	3	132.1	0.0	NR	98.5	16	132.1	0.0	NR	89.7
	surgery + RT	8	0	114.0	3.0	NR	100	1	114.0	3.0	NR	75.0
	surgery + CRT	17	6	117.1	8.0	NR	58.9	8	117.1	2.0	64.0	56.3
	surgery + CTX	35	1	124.1	1.0	NR	97.0	7	124.1	1.0	NR	79.8
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	1	0	5.0	5.0	ND	ND	1	2.0	2.0	2.0	0.0
	CTX	5	1	114.1	15.0	NR	100	1	114.1	15.0	NR	75.0
	observation alone	4	1	106.1	0.0	NR	50.0	2	34.0	0.0	20.0	0.0
GII DA	surgery	161	22	131.0	0.0	NR	89.0	63	131.0	0.0	113.0	62.1
	surgery + RT	78	19	125.1	0.0	NR	71.7	30	125.1	0.0	104	58.5
	surgery + CRT	126	48	128.1	0.0	108	63.9	64	122.1	0.0	65.0	51.7
	surgery + CTX	27	5	119.0	9.0	NR	82.8	14	109.1	5.0	71.1	61.3
	CRT	10	4	113.0	1.0	26.0	42.9	4	97.1	1.0	51.0	37.5
	RT	2	1	94.1	12.0	NR	50.0	2	67.1	7.0	37.0	50.0
	CTX	5	2	95.0	2.0	NR	75.0	3	95.0	0.0	61.1	53.3
	observation alone	7	1	114.1	0.0	NR	83.3	1	114.1	0.0	NR	85.7
GII OL&OA	surgery	150	16	129.1	0.0	NR	95.7	70	129.1	0.0	80.0	63.3
	surgery + RT	35	5	121.1	2.0	NR	89.2	17	118.1	2.0	63.0	52.3
	surgery + CRT	114	17	130.1	3.0	NR	89.7	47	130.1	2.9	103.0	69.4
	surgery + CTX	82	11	129.1	0.0	NR	90.6	36	121.1	0.0	95.0	67.2
	CRT	4	2	109.0	55.1	NR	50.0	2	109.0	39.0	NR	50.0
	RT	1	0	119.1	119	NR	100	0	119.1	119	NR	100
	CTX	2	0	87.1	80.0	NR	100	2	61.1	7.0	34.0	50.0
	observation alone	1	0	70.0	70.0	NR	100	0	70.0	70.0	NR	100
GIII AA	surgery	40	13	128.1	0.0	NR	51.4	12	128.1	0.0	44.1	44.6
	surgery + RT	52	22	127.0	1.0	45.0	42.8	31	127.0	0.0	16.0	20.9
	surgery + CRT	394	193	126.1	0.0	46.0	44.3	214	126.1	0.0	27.0	37.9
	surgery + CTX	33	17	111.1	0.9	23.0	45.0	13	111.1	0.0	41.0	47.6
	CRT	18	13	71.1	1.0	NR	16.7	11	38.0	1.0	13.0	0.0
	RT	4	3	20.0	5.0	12.5	0.0	1	9.1	5.0	NR	ND
	CTX	2	1	81.0	33.0	NR	50.0	2	76.0	24.0	50.0	50.0
	observation alone	2	2	8.1	0.0	4.0	0.0	0	4.0	0.0	ND	ND
GIII AO&AOA	surgery	12	3	128.1	1.0	NR	64.8	5	128.1	1.0	81.0	53.5
	surgery + RT	25	9	111.1	1.0	104.0	57.8	10	111.1	1.0	55.0	45.5
	surgery + CRT	334	115	129.1	1.0	NR	63.1	168	129.1	0.0	45.0	44.2
	surgery + CTX	36	15	127.1	1.0	67.1	57.9	15	93.1	1.0	55.1	43.4
	CRT	4	1	68.1	2.0	68.1	100	3	60.0	2.0	11.0	0.0
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	4	1	104.0	12.9	NR	50.0	2	39.0	12.9	36.0	0.0
	observation alone	0	0	-	-	-	-	0	-	-	-	-
Glioblastoma	surgery	124	72	117.1	0.0	5.0	15.9	36	117.1	0.0	9.0	35.8
	surgery + RT	208	131	121.1	0.0	12.0	2.7	107	66.1	0.0	8.0	4.0
	surgery + CRT	1,564	983	130.1	0.0	20.0	17.9	1,025	130.1	0.0	11.0	14.7
	surgery + CTX	79	45	90.1	0.0	11.0	11.1	39	90.1	0.0	10.1	10.2
	CRT	22	13	97.1	0.0	18.1	14.2	11	97.1	0.0	18.0	20.2
	RT	8	2	88.0	1.9	16.1	40.0	3	88.0	1.9	10.0	28.6
	CTX	16	9	18.1	1.0	6.0	0.0	7	12.0	0.0	8.0	0.0
	observation alone	22	5	40.1	0.0	40.1	0.0	3	11.0	0.0	NR	ND

		total	Overall survival					Progression free survival				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
Ependymoma	surgery	38	8	130.1	2.0	NR	79.2	10	130.1	2.0	NR	81.9
	surgery + RT	33	7	124.1	0.0	NR	78.5	9	124.1	0.0	NR	69.3
	surgery + CRT	9	2	116.1	7.0	NR	87.5	5	110.1	3.0	24.0	38.1
	surgery + CTX	4	2	36.0	20.1	36.0	0.0	2	36.0	1.9	36.0	0.0
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	1	0	2.0	2.0	ND	ND	0	2.0	2.0	ND	ND
Anaplastic ependymoma	surgery	10	2	114.1	0.0	NR	78.8	1	114.1	0.0	NR	75.0
	surgery + RT	20	6	120.1	1.0	NR	82.8	10	117.0	1.0	28.0	44.1
	surgery + CRT	50	23	118.0	2.0	70.1	54.3	30	118.0	0.0	22.0	39.9
	surgery + CTX	10	4	126.1	2.9	126	70.0	5	103.1	0.0	71.0	56.2
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	0	0	-	-	-	-	0	-	-	-	-
Ganglioglioma	surgery	51	0	129.0	1.0	NR	100	4	129.0	1.0	NR	90.2
	surgery + RT	2	1	112.1	63.1	NR	100	2	46.0	12.0	29.0	0.0
	surgery + CRT	1	1	53.0	53.0	53.0	0.0	1	48.0	48.0	48.0	0.0
	surgery + CTX	3	0	107.1	90.1	NR	100	0	97.1	40.0	NR	100
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	1	0	84.0	84.0	NR	100	0	84.0	84.0	NR	100
	observation alone	0	0	-	-	-	-	0	-	-	-	-
Central neurocytoma	surgery	44	4	120.1	0.0	NR	90.4	2	117.0	0.0	NR	94.1
	surgery + RT	26	0	128.1	3.0	NR	100	0	128.1	3.0	NR	100
	surgery + CRT	1	1	14.0	14.0	14.0	0.0	1	8.1	8.1	8.1	0
	surgery + CTX	2	1	87.1	25.0	NR	50.0	1	87.1	8.0	NR	50.0
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	1	0	22.1	22.1	ND	ND	0	22.1	22.1	ND	ND
Medulloblastoma	surgery	6	4	115.1	0.0	13.1	20.0	0	107.0	0.0	NR	100
	surgery + RT	4	1	107.1	7.0	NR	66.7	1	106.1	5.0	NR	75.0
	surgery + CRT	116	31	126.1	1.0	NR	77.6	37	126.1	0.0	NR	68.6
	surgery + CTX	14	6	119.0	5.0	NR	53.4	4	119.0	5.0	NR	50.8
	CRT	3	2	103.1	13.9	66.1	66.7	2	103.1	13.9	33.0	33.3
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	1	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ND	ND
	observation alone	0	0	-	-	-	-	0	-	-	-	-
Germinoma	surgery	5	1	78.0	0.0	NR	66.7	0	71.0	0.0	NR	100
	surgery + RT	7	0	118.1	1.0	NR	100	1	118.1	1.0	NR	80.0
	surgery + CRT	191	3	132.1	1.0	NR	99.3	11	132.1	1.0	NR	95.2
	surgery + CTX	10	0	123.1	1.0	NR	100	1	123.1	1.0	NR	85.7
	CRT	27	0	129.0	33.0	NR	100	1	128.1	33.0	NR	100
	RT	3	1	106.0	9.0	NR	66.7	0	106.0	9.0	NR	100
	CTX	5	1	98.1	63.0	NR	100	1	98.1	1.0	NR	80.0
	observation alone	0	0	-	-	-	-	0	-	-	-	-
PCNSL	surgery	45	10	100.1	0.0	85.1	65.1	4	100.1	0.0	NR	62.8
	surgery + RT	95	42	123.0	1.0	25.0	34.8	25	123.0	1.0	41.0	45.8
	surgery + CRT	405	177	127.0	0.0	63.1	51.6	192	125.1	0.0	39.0	40.1
	surgery + CTX	186	76	129.1	0.0	64.1	51.2	87	119.0	0.0	39.0	38.0
	CRT	35	15	85.0	1.0	43.0	44.6	14	85.0	1.0	34.0	39.1
	RT	20	11	30.0	1.0	9.0	ND	7	30.0	1.0	8.0	ND
	CTX	18	7	109.1	0.0	50.0	41.1	3	109.1	0.0	NR	69.7
	observation alone	8	2	80.0	0.0	NR	66.7	1	30.0	0.0	30.0	0.0

		total	Overall survival					Progression free survival				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
GI Meningioma	surgery	3,071	78	132.1	0.0	NR	97.8	262	132.1	0.0	NR	91.7
	surgery + RT	181	9	131.0	1.0	NR	95.7	50	131.0	0.9	121	74.8
	surgery + CRT	15	1	117.0	9.0	NR	93.3	3	117.0	7.0	NR	77.8
	surgery + CTX	119	4	126.1	0.0	NR	97.1	16	126.1	0.0	NR	89.9
	CRT	6	1	98.1	20.1	NR	80.0	1	98.1	20.1	NR	80.0
	RT	54	4	126.0	0.0	NR	90.6	5	126.0	0.0	NR	92.2
	CTX	9	0	83.0	1.0	NR	100	1	83.0	1.0	NR	50.0
	observation alone	177	10	130.0	0.0	NR	91.9	1	130.0	0.0	NR	99.0
GII Meningioma	surgery	183	21	129.1	0.0	NR	91.8	72	121.1	0.0	79.0	55.0
	surgery + RT	57	9	125.1	1.0	NR	89.3	25	116.1	1.0	72.0	59.0
	surgery + CRT	9	2	111.1	11.0	NR	75.0	4	111.1	6.0	65.0	58.3
	surgery + CTX	9	0	113.1	3.0	NR	100	1	113.1	3.0	NR	100
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	2	1	42.0	17.0	NR	ND	0	42.0	17.0	ND	ND
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	0	0	-	-	-	-	0	-	-	-	-
GIII Meningioma	surgery	25	6	118.1	0.0	NR	69.1	8	100	0.0	NR	60.4
	surgery + RT	30	10	122.1	2.0	71.0	51.0	19	96.1	0.0	19.0	25.9
	surgery + CRT	4	3	34.0	6.0	28.0	0.0	3	14.0	2.9	7.0	0.0
	surgery + CTX	1	0	105.0	105.0	NR	100	1	29.0	29.0	29.0	0.0
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	2	1	8.0	2.0	8.0	0.0	1	4.0	2.0	4.0	0.0
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	0	0	-	-	-	-	0	-	-	-	-
Schwannoma	surgery	1,186	18	132.1	0.0	NR	98.9	132	132.1	0.0	NR	90.0
	surgery + RT	110	2	131.0	1.0	NR	98.8	32	131.0	0.0	NR	72.3
	surgery + CRT	3	0	115.0	91.1	NR	100	1	103.1	83.1	NR	100
	surgery + CTX	11	0	111.1	0.0	NR	100	0	110.1	0.0	NR	100
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	85	3	132.1	0.0	NR	95.8	2	132.1	0.0	NR	100
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	47	5	121.1	0.0	NR	87.0	2	115.0	0.0	NR	96.8
GH pituitary adenoma	surgery	372	3	129.1	0.0	NR	99.3	17	129.0	0.0	NR	95.2
	surgery + RT	18	0	121.1	7.0	NR	100	4	121.1	6.0	NR	74.3
	surgery + CRT	10	0	113.1	47.0	NR	100	1	113.1	9.0	NR	90.0
	surgery + CTX	159	1	132.1	0.0	NR	99.1	9	132.1	0.0	NR	95.2
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	1	0	40.1	40.1	ND	ND	0	40.1	40.1	ND	ND
	CTX	7	0	129.1	2.9	NR	100	0	129.1	2.9	NR	100
	observation alone	3	0	110.0	20.1	NR	100	0	110.0	20.1	NR	100
PRL pituitary adenoma	surgery	201	3	131.0	0.0	NR	98.0	8	131.0	0.0	NR	94.7
	surgery + RT	1	0	96.1	96.1	NR	100	0	96.1	96.1	NR	100
	surgery + CRT	2	2	79.1	57.0	68.0	50.0	2	58.1	32.0	45.0	0
	surgery + CTX	132	0	130.1	0.0	NR	100	6	130.1	0.0	NR	95.5
	CRT	1	0	0	0.0	ND	ND	0	0.0	0.0	ND	ND
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	53	0	129.0	0.0	NR	100	1	129.0	0.0	NR	97.9
	observation alone	2	0	31.1	1.0	ND	ND	0	1.0	1.0	ND	ND

		total	Overall survival					Progression free survival				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
ACTH pituitary adenoma	surgery	115	1	131.0	0.0	NR	100	12	131.0	0.0	NR	90.9
	surgery + RT	8	1	127.1	4.0	NR	85.7	1	127	2.0	NR	87.5
	surgery + CRT	4	0	113.1	58.0	NR	100	4	37.0	9.0	27.5	0.0
	surgery + CTX	32	0	127.1	0.0	NR	100	6	127.1	0.0	NR	83.0
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	1	0	75.0	75.0	NR	100	0	75.0	75.0	NR	100
	observation alone	2	0	53.1	0.0	ND	ND	0	53.1	0.0	ND	ND
NF pituitary adenoma	surgery	1,370	30	132.1	0.0	NR	98.2	212	132.1	0.0	NR	87.2
	surgery + RT	67	2	130.0	4.0	NR	97.0	24	130.0	4.0	NR	72.4
	surgery + CRT	10	0	129.0	28.1	NR	100	2	129.0	24.0	NR	78.8
	surgery + CTX	180	5	132.1	0.0	NR	98.0	21	129	0.0	NR	90.2
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	4	0	86.1	5.0	NR	100	0	86.1	0.0	NR	100
	CTX	6	0	114.0	85.0	NR	100	3	100	17.0	NR	50.0
	observation alone	46	0	116.1	0.0	NR	100	1	116.1	0.0	NR	94.7
Craniopharyngioma	surgery	232	10	131.0	0.0	NR	96.1	81	131.0	0.0	NR	65.1
	surgery + RT	83	2	124.1	3.0	NR	97.4	29	120	2.0	NR	70.5
	surgery + CRT	14	0	119.0	1.9	NR	100	4	103.0	1.9	NR	74.5
	surgery + CTX	36	0	115.0	0.0	NR	100	10	113.1	0.0	105.0	74.5
	CRT	1	0	104.1	104	ND	100	0	104	104	ND	100
	RT	1	0	93.0	93.0	ND	100	0	89.0	89.0	ND	100
	CTX	3	0	44.0	1.0	ND	ND	1	41.0	1.0	41.0	0.0
	observation alone	4	0	122.0	1.0	NR	100	0	122.0	1.0	NR	100
Chordoma	surgery	36	5	126.1	0.0	NR	83.1	10	126.1	0.0	NR	62.9
	surgery + RT	39	2	115.1	0.0	NR	96.8	14	115	0.0	NR	65.9
	surgery + CRT	0	0	-	-	-	-	0	-	-	-	-
	surgery + CTX	0	0	-	-	-	-	0	-	-	-	-
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	2	0	7.1	0.9	ND	ND	0	7.1	0.9	ND	ND
Hemangioblastoma	surgery	231	9	132.1	0.0	NR	96.1	23	119.0	0.0	NR	90.6
	surgery + RT	13	1	124.1	1.0	NR	100	4	120	1.0	NR	67.5
	surgery + CRT	0	0	-	-	-	-	0	-	-	-	-
	surgery + CTX	4	1	48.0	1.0	ND	ND	0	48.0	1.0	ND	ND
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	1	0	3.0	3.0	ND	ND	0	3.0	3.0	ND	ND
Epidermoid	surgery	134	3	128.0	0.0	NR	96.6	14	126.0	0.0	NR	91.1
	surgery + RT	2	0	40.0	18.0	ND	ND	0	40.0	16.0	ND	ND
	surgery + CRT	0	0	-	-	-	-	0	-	-	-	-
	surgery + CTX	3	0	120.1	40.0	NR	100	0	120	40.0	NR	100
	CRT	0	0	-	-	-	-	0	-	-	-	-
	RT	0	0	-	-	-	-	0	-	-	-	-
	CTX	1	1	9.0	9.0	9.0	0.0	0	9.0	9.0	ND	ND
	observation alone	7	0	94.1	0.0	NR	100	0	94.1	0.0	NR	100

28) Overall survival and progression free survival depending on extent of resection

	extent of resection	total	Overall survival					Progression free survival				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
Pilocytic astrocytoma	none	8	2	130	0	NR	80	2	130	0	NR	71.4
	1-50% (biopsy)	47	5	132.1	0.9	NR	90.2	15	132.1	0	NR	68
	50-75%	15	1	132.1	9.1	NR	92.9	5	107	2	NR	69.6
	75-95%	27	1	129.1	3	NR	95.8	6	129.1	3	NR	74.8
	95-99%	24	1	113.1	2	NR	95.2	5	113.1	2	NR	81.5
	gross total resection	99	2	121.1	0	NR	97.6	2	121.1	0	NR	97.7
GII Diffuse astrocytoma	none	21	7	114.1	0	NR	60.5	7	114.1	0	67.1	66.2
	1-50% (biopsy)	154	55	124.1	0	108	59.7	79	120.1	0	44	43.6
	50-75%	38	12	128.1	5	NR	77.4	22	125.1	2	58	44
	75-95%	75	15	128.1	0	NR	83.6	40	122.1	0	65.1	52.2
	95-99%	54	7	126.1	5	NR	90.1	21	126.1	2	NR	68.9
	gross total resection	72	5	131	1	NR	96.8	12	131	1	NR	88.7
G II OL&OA	none	3	0	119.1	50.1	NR	100	0	119.1	50.1	NR	100
	1-50% (biopsy)	78	12	123.1	3	NR	86.3	43	120.1	2.9	61.1	51.3
	50-75%	45	8	121.1	0	NR	89.4	22	121.1	0	76.1	56.1
	75-95%	97	14	127.1	0	NR	89.6	44	126.1	0	84.1	65.8
	95-99%	66	4	129.1	0	NR	96.5	29	129.1	0	90.1	73.5
	gross total resection	102	13	130.1	1	NR	95.7	36	130.1	1	NR	71
GIII AA	none	21	15	100.1	0	20	23.3	11	100.1	0	15.1	17.3
	1-50% (biopsy)	238	135	117	0	23	26.2	136	117	0	16	24.1
	50-75%	56	27	126.1	1.9	33.1	46.5	31	126.1	0	24	32
	75-95%	93	39	128.1	0	72.1	52.7	50	128.1	0	32	38.4
	95-99%	83	30	127	0	NR	60.8	36	127	0	75.1	51.7
	gross total resection	48	15	119	1	113	71.6	18	119	1	86.1	63.9
GIII AO&AOA	none	6	2	104	14	68.1	66.7	4	60	11	39	0
	1-50% (biopsy)	74	36	127.1	1	36	38.1	42	100.1	1	21.1	29.2
	50-75%	54	18	120.1	1	NR	53.6	29	120.1	0	30.1	38.3
	75-95%	87	26	122.1	1	NR	65.6	41	122.1	1	49	43.2
	95-99%	99	32	128.1	1	NR	68.3	47	128.1	1	50	46.8
	gross total resection	92	28	129.1	1	NR	75.1	36	129.1	0	NR	58.5
Glioblastoma	none	69	28	97.1	0	18.1	10	22	97.1	0	13.1	17.6
	1-50% (biopsy)	446	288	108.1	0	11	5.5	227	93	0	9	9.1
	50-75%	210	128	115.1	0	14	10.4	134	115.1	0	9	7.1
	75-95%	468	285	118.1	0	18	16.6	301	118.1	0	9	11.9
	95-99%	414	248	130.1	0	23	22.2	265	130.1	0	13	18.2
	gross total resection	414	264	130.1	0	25.1	21.5	272	117	0	13	18.4
Ependymoma	none	2	0	2	2	ND	ND	0	2	2	ND	ND
	1-50% (biopsy)	7	1	112.1	0	NR	75	0	82.1	0	NR	100
	50-75%	3	1	31.1	10	31.1	0	0	20	2	ND	ND
	75-95%	22	7	114.1	6	NR	79.2	11	114.1	3	24	49.7
	95-99%	20	4	120.1	11	NR	74.7	8	109.1	1.9	109	68.4
	gross total resection	29	5	130.1	7	NR	84.4	5	130.1	7	NR	87.1
Anaplastic ependymoma	none	0	0	-	-	-	-	0	-	-	-	-
	1-50% (biopsy)	7	2	85.1	1	NR	64.3	3	8	1	5	ND
	50-75%	4	2	102.1	22	48	37.5	3	28	6	22.5	0
	75-95%	18	11	110.1	0	NR	43.8	13	110.1	0	15	11.3
	95-99%	22	11	126.1	2	126	56.7	14	118	2	20.1	35
	gross total resection	37	8	120.1	1	NR	81.7	12	118	1	117	71.9

		total	OS					PFS				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
Ganglioglioma	none	1	0	84	84	ND	100	0	84	84	ND	100
	1-50% (biopsy)	8	2	110.1	4	NR	83.3	3	84	4	NR	50
	50-75%	3	0	81.1	43	NR	100	1	81.1	43	NR	50
	75-95%	3	0	125.1	112.1	NR	100	2	125.1	12	40	33.3
	95-99%	8	0	111.1	46	NR	100	0	108.1	24	NR	100
	gross total resection	35	0	129	1	NR	100	1	129	1	NR	96.9
Central neurocytoma	none	2	0	22.1	1	ND	ND	0	22.1	1	ND	ND
	1-50% (biopsy)	7	3	128.1	0	NR	57.1	1	128.1	0	NR	80
	50-75%	5	0	97.1	1	NR	100	0	97.1	1	NR	100
	75-95%	13	0	104.1	10.1	NR	100	0	104.1	10.1	NR	100
	95-99%	21	2	123.1	10	NR	90	3	123.1	2	NR	84.8
	gross total resection	27	1	120.1	0.9	NR	96.3	0	117	0.9	NR	100
Medulloblastoma	none	4	3	106.1	0	NR	50	2	106.1	0	33	33.3
	1-50% (biopsy)	7	3	123.1	1	NR	68.6	3	117.1	1	29	26.7
	50-75%	5	3	91.1	11	32	26.7	3	91.1	8	21	30
	75-95%	25	8	126.1	7	NR	71.8	6	126.1	7	NR	76.6
	95-99%	40	8	124.1	7	NR	78	12	124.1	0	NR	71.1
	gross total resection	62	20	124.1	1	NR	73.1	18	119.1	1	NR	68.7
Germinoma	none	36	2	128.1	0	NR	97.1	1	128.1	0	NR	97.1
	1-50% (biopsy)	186	3	132.1	0	NR	98.8	13	132.1	0	NR	94.3
	50-75%	11	1	121.1	60	NR	100	1	121.1	12	NR	90.9
	75-95%	3	0	99.1	82.1	NR	100	0	99.1	82.1	NR	100
	95-99%	1	0	88.1	88.1	ND	100	0	84	84	ND	100
	gross total resection	7	0	119	30.1	NR	100	0	119	30.1	NR	100
PCNSL	none	65	26	109.1	0	24	35.2	19	109.1	0	30	38
	1-50% (biopsy)	650	282	129.1	0	54	47.8	275	125.1	0	43.1	40.1
	50-75%	25	6	100.1	1	NR	57.4	6	97.1	1	94	61.8
	75-95%	20	7	104.1	2	94.1	68.7	12	94.1	2	31	23.9
	95-99%	17	7	108.1	2	NR	54	9	102.1	1	40	33.6
	gross total resection	31	11	104.1	0	67	51.6	11	104.1	0	30	42.5
GI Meningioma	none	283	13	130	0	NR	93.7	10	130	0	NR	95.7
	1-50% (biopsy)	89	8	129.1	0	NR	89.9	16	129.1	0	121.1	85.3
	50-75%	142	3	131	0	NR	98.5	47	121.1	0	104.1	67.7
	75-95%	419	13	131	0	NR	97.5	79	131	0	NR	80.4
	95-99%	776	24	132.1	0	NR	97.1	104	132.1	0	NR	88.2
	gross total resection	1,918	45	132.1	0	NR	98.1	83	132.1	0	NR	95.6
GII Meningioma	none	3	1	42	0.9	ND	ND	0	42	0.9	ND	ND
	1-50% (biopsy)	6	1	116	4	NR	75	3	116	2	28.1	31.2
	50-75%	9	1	89.1	1	NR	75	5	89.1	1	32	45
	75-95%	52	8	125.1	0	NR	84.3	31	112.1	0	32	37
	95-99%	65	7	121.1	1	NR	98.1	29	121.1	0	72.1	56.5
	gross total resection	127	15	129.1	0	NR	90.9	34	116.1	0	NR	68.6
GIII Meningioma	none	1	0	2	2	ND	ND	0	2	2	ND	ND
	1-50% (biopsy)	4	2	96.1	3.9	NR	50	2	96.1	3	96.1	75
	50-75%	6	1	59	2	ND	ND	3	59	0	11	ND
	75-95%	15	7	122.1	2	51	28.1	10	43	1	14	ND
	95-99%	10	5	57.1	0	57.1	0	4	54.1	0	14.1	ND
	gross total resection	25	4	118.1	1	NR	82.3	12	100	1	33.1	43.4
Schwannoma	none	136	7	132.1	0	NR	94.3	3	132.1	0	NR	99.1
	1-50% (biopsy)	29	1	118	1	NR	100	10	118	1	111.1	64.9
	50-75%	103	2	121.1	0	NR	100	27	117	0	NR	73.5
	75-95%	338	10	131	0	NR	97.4	64	131	0	NR	79.5
	95-99%	376	2	128.1	0	NR	99.7	46	125.1	0	NR	93.5
	gross total resection	444	5	132.1	0	NR	99	19	132.1	0	NR	95.5

		total	OS					PFS				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
GH pituitary adenoma	none	21	0	129.1	2.9	NR	100	0	129.1	2.9	NR	100
	1-50% (biopsy)	8	0	119.1	25	NR	100	3	119.1	8	89.1	68.6
	50-75%	21	0	127.1	14	NR	100	6	127.1	1	NR	71.4
	75-95%	85	0	132.1	0	NR	100	6	132.1	0	NR	91.4
	95-99%	88	2	129.1	0	NR	97.2	6	129.1	0	NR	91.9
	gross total resection	343	2	130.1	0	NR	99.7	10	130.1	0	NR	97.7
PRL pituitary adenoma	none	54	0	118.1	0	NR	100	0	118.1	0	NR	100
	1-50% (biopsy)	16	0	105.1	1	NR	100	2	105.1	1	NR	86.2
	50-75%	20	2	131	6	NR	90	1	131	6	NR	100
	75-95%	56	3	127.1	0	NR	94.5	7	127.1	0	NR	86.9
	95-99%	51	0	131	0	NR	100	3	131	0	NR	92
	gross total resection	190	0	130.1	0	NR	100	4	130.1	0	NR	97
ACTH pituitary adenoma	none	5	0	111.1	0	NR	100	0	111.1	0	NR	100
	1-50% (biopsy)	7	0	117	17	NR	100	0	117	17	NR	100
	50-75%	12	0	111.1	4	NR	100	3	111.1	4	NR	81.5
	75-95%	20	0	118.1	0	NR	100	5	118.1	0	NR	70.8
	95-99%	20	1	131	1.9	NR	92.9	3	131	1.9	NR	84.2
	gross total resection	98	1	127.1	0	NR	100	12	127.1	0	NR	88.9
NF pituitary adenoma	none	87	0	116.1	0	NR	100	8	116.1	0	NR	88.3
	1-50% (biopsy)	80	2	131	0	NR	96.8	34	130	0	83	65.2
	50-75%	221	4	132.1	0	NR	98.9	69	130	0	114	71.6
	75-95%	422	15	130.1	0	NR	97.3	87	130.1	0	NR	84
	95-99%	312	8	132.1	0	NR	98.4	48	132.1	0	NR	89.2
	gross total resection	551	8	131	0	NR	98.3	17	131	0	NR	96.9
Craniopharyngioma	none	11	0	122	1	NR	100	2	122	1	NR	62.5
	1-50% (biopsy)	20	1	112	0	NR	94.4	9	97.1	0	71	52.2
	50-75%	42	0	126.1	0	NR	100	15	115	0	NR	59.8
	75-95%	89	2	131	0	NR	97.5	44	131	0	69	54.1
	95-99%	85	2	128.1	1	NR	98.7	31	128.1	1	112	66.8
	gross total resection	115	6	130.1	0	NR	95.1	21	130	0	NR	84.9
Chordoma	none	2	0	7.1	0.9	ND	ND	0	7.1	0.9	ND	ND
	1-50% (biopsy)	11	2	103	0	NR	90	2	103	0	NR	74.1
	50-75%	13	2	100	0	NR	83.3	5	100	0	67.1	68.2
	75-95%	29	2	115.1	2	NR	91.7	12	115.1	2	61	53.3
	95-99%	14	1	126.1	1	NR	90.9	5	126.1	1	NR	61.5
	gross total resection	7	0	110.1	5	NR	100	0	105	5	NR	100
Hemangioblastoma	none	2	0	3	2	ND	ND	0	3	2	ND	ND
	1-50% (biopsy)	2	1	19	1	ND	ND	0	19	1	ND	ND
	50-75%	3	1	92.1	3	NR	66.7	2	83	0	83	66.7
	75-95%	13	1	120.1	1	NR	88.9	4	120.1	0	80.1	67.3
	95-99%	16	2	116.1	1	NR	93.8	6	102	1	NR	70.1
	gross total resection	210	5	132.1	0	NR	97.6	16	119	0	NR	91.9
Epidermoid	none	9	1	110	0	NR	83.3	0	110	0	NR	100
	1-50% (biopsy)	3	0	124.1	59	NR	100	0	124.1	59	NR	100
	50-75%	8	0	98.1	1	NR	100	2	81.1	1	NR	55.6
	75-95%	31	2	120.1	1	NR	91.5	5	120.1	1	NR	88.5
	95-99%	40	0	126	0	NR	100	5	126	0	NR	88.7
	gross total resection	54	1	128	1	NR	96.8	2	125	1	NR	97.7

29) Overall survival and progression free survival in adult and juvenile tumor

	age	total	OS					PFS				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
Pilocytic astrocytoma	Under 20	139	3	132.1	0	NR	99.2	21	132.1	0	NR	85
	20 and over	83	9	130	0	NR	86.8	15	130	0	NR	82.1
GII DA	Under 20	50	10	125.1	0	NR	78	9	125.1	0	NR	79.5
	20 and over	366	92	131	0	NR	76.6	172	131	0	73.1	55.2
GII OL&OA	Under 20	19	1	117.1	1	NR	93.8	5	117.1	1	NR	75.3
	20 and over	372	50	130.1	0	NR	91.8	169	130.1	0	84.1	64.4
GIII AA	Under 20	29	14	115.1	1	24	42.1	15	115.1	0	24	45.6
	20 and over	516	250	128.1	0	44	43.2	269	128.1	0	26	35.7
GIII AO&AOA	Under 20	16	6	111	6	NR	56.5	10	111	3	NR	36.5
	20 and over	400	138	129.1	1	NR	62.9	193	129.1	0	47	44.3
Glioblastoma	Under 20	78	56	130.1	0	15.1	17.7	49	130.1	0	12	19.9
	20 and over	1,970	1,204	130.1	0	18	15.9	1184	125	0	11	14
Ependymoma	Under 20	23	11	120.1	2	88.1	51.9	15	120.1	2	24	40.9
	20 and over	62	8	130.1	0	NR	89.4	11	130.1	0	NR	82.5
Anaplastic ependymoma	Under 20	59	19	126.1	0	126.1	71	28	114.1	0	24	47.3
	20 and over	31	16	120.1	1	62	51.1	18	118	0	25	40.4
Ganglioglioma	Under 20	17	0	129	4	NR	100	1	129	4	NR	93.3
	20 and over	41	2	125	1	NR	96.8	6	125	1	NR	81
Central neurocytoma	Under 20	4	0	100.1	73.1	NR	100	0	100.1	73.1	NR	100
	20 and over	71	6	128.1	0	NR	90.7	4	128.1	0	NR	93.2
Medulloblastoma	Under 20	122	38	126.1	0	NR	72.6	34	126.1	0	NR	69.7
	20 and over	22	7	123.1	4	NR	68.4	10	100.1	4	78.1	54.2
Germinoma	Under 20	160	2	132.1	0	NR	98.6	7	132.1	0	NR	97.2
	20 and over	89	4	128.1	0	NR	98.8	8	128.1	0	NR	90.8
PCNSL	Under 20	5	2	114.1	2	NR	60	2	114.1	1	NR	60
	20 and over	809	339	129.1	0	54	48	331	125.1	0	39	39.9
GI Meningioma	Under 20	22	0	114.1	0	NR	100	3	114.1	0	NR	95.2
	20 and over	3,626	109	132.1	0	NR	97.2	338	132.1	0	NR	90.7
GII Meningioma	Under 20	7	0	116.1	67	NR	100	1	116.1	28	NR	85.7
	20 and over	255	33	129.1	0	NR	90.1	101	121.1	0	72	56.4
GIII Meningioma	Under 20	1	0	43	43	NR	+	0	43	43	NR	+
	20 and over	61	20	122.1	0	95	56.4	32	100	0	20	35.4
Schwannoma	Under 20	17	1	116.1	25	NR	100	4	116.1	5	NR	81.9
	20 and over	1,427	27	132.1	0	NR	98.4	165	132.1	0	NR	89.4
GH pituitary adenoma	Under 20	6	0	113	3	NR	100	2	113	3	NR	60
	20 and over	564	4	132.1	0	NR	99.3	29	132.1	0	NR	94.8
PRL pituitary adenoma	Under 20	27	0	125.1	0	NR	100	1	125.1	0	NR	95.5
	20 and over	365	5	131	0	NR	98.5	16	131	0	NR	94.6
ACTH pituitary adenoma	Under 20	3	0	102.1	80.1	NR	100	1	86	2	NR	66.7
	20 and over	159	2	131	0	NR	99.2	22	131	0	NR	86.8
NF pituitary adenoma	Under 20	12	0	127.1	0	NR	100	3	127.1	0	NR	70
	20 and over	1,673	37	132.1	0	NR	98.1	260	132.1	0	NR	86.9
Craniopharyngioma	Under 20	113	1	130.1	0	NR	99.1	41	130	0	NR	67.5
	20 and over	261	11	131	0	NR	96	84	131	0	NR	67.9
Chordoma	Under 20	6	0	104.1	33	NR	100	2	104.1	13	NR	62.5
	20 and over	71	7	126.1	0	NR	89.4	22	126.1	0	NR	64.5
Hemangioblastoma	Under 20	11	0	120.1	4	NR	100	1	120.1	4	NR	100
	20 and over	239	12	132.1	0	NR	95	27	119	0	NR	88.2
Epidermoid	Under 20	10	0	99.1	5	NR	100	0	99.1	5	NR	100
	20 and over	137	4	128	0	NR	95.8	14	126	0	NR	90.9

30) Overall survival and progression free survival in supratentorial and infratentorial region

	region	total	OS									PFS								
			event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)
Pilocytic astrocytoma	total	210	9	132.1	0	NR	99	97.3	97.3	96.2	95	30	132.1	0	NR	93.3	90.5	90	88.2	85.7
	supratent.	84	5	132.1	0	NR	98.7	97.3	97.3	94.3	92.8	11	128.1	0	NR	94.7	90.5	90.5	87.5	87.5
	infratent.	124	4	132.1	0	NR	99.2	97.4	97.4	97.4	96.4	19	132.1	0	NR	92.3	90.5	89.5	88.5	84.5
	both	2	0	47	6	NR	100	100	100	ND	ND	0	47	6	NR	100	100	100	ND	ND
GII DA	total	412	101	131	0	NR	94.8	88.3	83.4	80	77.1	181	131	0	87.1	83.6	74.2	67	62	57.8
	supratent.	348	78	131	0	NR	95.6	91	86.8	83.1	80	152	131	0	87.1	85.9	76.7	68.6	63.5	58.5
	infratent.	62	22	128.1	0	NR	89.8	74	65.7	63.6	61.5	29	122.1	0	67.1	69.8	59.7	57.6	53.1	53.1
	both	2	1	20	6	20	100	0	0	0	0	0	20	6	NR	100	ND	ND	ND	ND
GII OL&OA	total	391	51	130.1	0	NR	98.7	97	95.6	94.4	91.9	174	130.1	0	90.1	93.7	88.9	83.7	73.7	64.9
	supratent.	385	49	130.1	0	NR	98.7	97.3	95.8	94.6	92.4	172	130.1	0	90.1	93.7	89.1	83.7	73.6	65
	infratent.	6	2	95	6	NR	100	80	80	80	60	2	95	6	NR	100	80	80	80	60
	both	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
GIII AA	total	538	261	128.1	0	41.1	80.1	62.4	51.6	47.3	43.4	282	128.1	0	26	64	50.4	44.6	38.7	36.4
	supratent.	484	229	128.1	0	46.1	81.1	63.7	53	49.2	45.2	253	128.1	0	27	64.6	50.9	45.9	39.8	37.3
	infratent.	45	26	117	2	25.1	76.2	51.3	42	34.2	30	25	117	1	19	57.4	44.3	33.2	28.5	28.5
	both	9	6	43.1	2	9	44.4	44.4	22.2	0	0	4	33	1	33	64.8	64.8	0	0	0
GIII AO&AOA	total	415	143	129.1	1	NR	91	79.4	72.9	68.5	62.8	202	129.1	0	47	76.6	63.7	56.8	49.6	44.1
	supratent.	399	129	129.1	1	NR	91.7	81.4	75.5	70.9	65.3	189	129.1	0	50	77.9	66.1	58.8	51.3	45.6
	infratent.	14	12	97.1	8	NR	78.6	42.9	21.4	21.4	10.7	12	97.1	5	12	47.6	7.9	7.9	7.9	7.9
	both	2	2	13	1	7	50	0	0	0	0	1	1	1	ND	ND	ND	ND	ND	ND
Glioblastoma	total	2,041	1,254	130.1	0	18	65.5	36.7	25.2	19.1	16	1,230	130.1	0	11	43.2	23.9	18.8	16	14.3
	supratent.	1,933	1,178	130.1	0	18	66	36.9	25.7	19.3	16.3	1,168	130.1	0	11	43.1	23.7	18.7	15.7	14.1
	infratent.	96	68	90.1	0	15.9	56.8	33.6	17.7	15.9	12.1	54	90.1	0	12	49.2	28.5	22.2	22.2	17.7
	both	12	8	117.1	4	16	61.7	24.7	12.3	12.3	12.3	8	117.1	2	9	21.2	21.2	21.2	21.2	21.2
Ependymoma	total	78	19	130.1	2	NR	97.3	92.6	81.2	77.8	76	26	130.1	1.9	109.1	87.6	70.8	67.1	67.1	67.1
	supratent.	18	2	130.1	2	NR	100	100	100	100	100	6	130.1	2	75.1	93.3	74.2	74.2	74.2	74.2
	infratent.	60	17	124.1	2	NR	96.6	90.9	77.1	73.1	70.9	20	124.1	1.9	NR	86.1	69.8	65.4	65.4	65.4
	both	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
Anaplastic ependymoma	total	90	35	126.1	0	126.1	92.9	79.3	71.5	67.4	63.3	46	118	0	25	80.1	50.5	44.9	44.9	44.9
	supratent.	42	16	120.1	1	NR	92.2	73.8	68.5	63.2	63.2	21	118	0	28	72.9	55.1	45.9	45.9	45.9
	infratent.	47	18	126.1	0	126.1	95.5	86	75.5	72.7	64.2	25	118	0	22	86.1	46.8	44	44	44
	both	1	1	1	1	1	0	0	0	0	0	0	1	1	ND	ND	ND	ND	ND	ND
Ganglioglioma	total	55	2	129	1	NR	100	100	100	100	97.7	7	129	1	NR	96	96	93.8	86.8	84.3
	supratent.	50	2	129	1	NR	100	100	100	100	97.4	6	129	1	NR	97.9	97.9	95.5	87.8	85
	infratent.	5	0	112.1	4	NR	100	100	100	100	100	1	91	4	NR	75	75	75	75	75
	both	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
Medulloblastoma	total	144	45	126.1	0	NR	92	82.2	77.6	75.2	72.1	44	126.1	0	NR	90.1	79.3	74.2	69.1	67.3
	supratent.	5	3	76	0	NR	100	75	50	50	25	1	76	0	NR	100	75	75	75	75
	infratent.	137	41	126.1	0	NR	91.7	82.1	78.1	76.5	74	42	126.1	0	NR	89.6	80.1	74.7	69.4	67.6
	both	2	1	91.1	48	NR	100	100	100	50	50	1	91.1	23	NR	100	50	50	50	50
GI Meningioma	total	3,318	102	132.1	0	NR	99	98.6	98.3	97.6	97.1	315	132.1	0	NR	97.9	96	93.8	92.3	90.6
	supratent.	1,959	67	132.1	0	NR	99	98.6	98.2	97.4	96.8	168	132.1	0	NR	98	96.4	94.2	93	91.3
	infratent.	1,338	34	132.1	0	NR	98.9	98.7	98.3	98	97.5	143	132.1	0	NR	97.8	95.5	93.4	91.6	89.9
	both	21	1	108.1	8	NR	100	100	100	100	100	4	108.1	0.9	NR	100	87.1	87.1	79.1	70.3
GII Meningioma	total	238	31	129.1	0	NR	97.7	96.2	93.9	92.7	90.7	92	117.1	0	82	88.2	79.4	68.6	64.3	58.8
	supratent.	189	27	119	0	NR	97.1	95.1	92.2	91.4	88.8	70	116.1	0	82	89.8	79.8	68.8	64.8	59.4
	infratent.	49	4	129.1	3	NR	100	100	100	97.3	97.3	22	117.1	0	72.1	82.4	77.8	68	62.5	56.8
	both	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
Hemangioblastoma	total	243	12	132.1	0	NR	96.3	95.7	95.1	95.1	95.1	27	120.1	0	NR	96.3	94.1	93.4	90.7	88.5
	supratent.	2	0	118.1	74	NR	100	100	100	100	100	0	118.1	74	NR	100	100	100	100	100
	infratent.	239	11	132.1	0	NR	96.2	95.6	95	95	95	26	120.1	0	NR	96.3	93.9	93.3	91.2	88.9
	both	2	1	85	77	85	100	100	100	100	100	1	77	48	NR	100	100	100	50	50
Epidermoid	total	133	4	128	0	NR	99.1	98.1	97.1	97.1	95.6	14	126	0	NR	98.3	97.2	97.2	92	90.7
	supratent.	21	1	111	0	NR	94.4	94.4	94.4	94.4	94.4	2	111	0	NR	94.4	94.4	94.4	94.4	85.9
	infratent.	109	3	128	0	NR	100	98.8	97.5	97.5	95.8	10	126	0	NR	100	98.8	98.8	92.4	92.4
	both	3	0	99	18	NR	100	100	100	100	100	2	99	4	99	66.7	66.7	66.7	66.7	66.7

31) Cause of death

	neuronal death except pneumonia and LMM	neuronal death with pneumonia	LMM	TRD except pneumonia	TRD (pneumonia)	cancer or other organ metastases	accident or other disease	others	unknown cause of death	number of death
Pilocytic astrocytoma	2 (17%)	4 (33%)	- (-)	- (-)	1 (8.3%)	- (-)	1 (8.3%)	3 (25%)	1 (8%)	12 (100%)
GII DA	33 (32%)	43 (42%)	4 (4%)	5 (5%)	- (-)	2 (2.0%)	6 (6%)	1 (1.0%)	8 (8%)	102 (100%)
GII OL&OA	13 (25%)	21 (41%)	2 (4%)	- (-)	1 (2.0%)	3 (6%)	2 (4%)	4 (8%)	5 (10%)	51 (100%)
GIII AA	103 (39%)	115 (44%)	7 (3%)	7 (3%)	3 (1%)	6 (2%)	5 (2%)	1 (0.4%)	17 (6%)	264 (100%)
GIII AO&AOA	50 (34%)	62 (43%)	3 (2%)	2 (1.4%)	2 (1.4%)	1 (0.7%)	6 (4%)	4 (3%)	15 (10%)	145 (100%)
Glioblastoma	460 (36%)	523 (41%)	38 (3%)	19 (2%)	24 (2%)	36 (3%)	15 (1%)	21 (2%)	126 (10%)	1,262 (100%)
Ependymoma	8 (42%)	3 (16%)	- (-)	- (-)	2 (11%)	1 (5%)	2 (11%)	- (-)	3 (16%)	19 (100%)
Anaplastic ependymoma	19 (54%)	10 (29%)	1 (3%)	3 (9%)	- (-)	1 (3%)	- (-)	- (-)	1 (3%)	35 (100%)
Ganglioglioma	- (-)	2 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (100%)
Central neurocytoma	1 (17%)	2 (33%)	- (-)	2 (33%)	- (-)	- (-)	- (-)	- (-)	1 (17%)	6 (100%)
Medulloblastoma	18 (40%)	12 (27%)	6 (13%)	2 (4%)	2 (4%)	1 (2%)	1 (2%)	1 (2%)	2 (4%)	45 (100%)
Germinoma	3 (50%)	- (-)	2 (33%)	- (-)	- (-)	- (-)	- (-)	1 (16.7%)	- (-)	6 (100%)
PCNSL	73 (21%)	118 (35%)	13 (4%)	14 (4%)	24 (7%)	28 (8%)	13 (4%)	16 (5%)	42 (12%)	341 (100%)
GI Meningioma	10 (9.2%)	12 (11.0%)	1 (0.9%)	4 (3.7%)	4 (3.7%)	18 (16.5%)	27 (25%)	15 (13.8%)	18 (17%)	109 (100%)
GII Meningioma	4 (12%)	9 (27%)	- (-)	- (-)	3 (9%)	1 (3.0%)	4 (12%)	5 (15%)	7 (21%)	33 (100%)
GIII Meningioma	4 (20%)	6 (30%)	1 (5%)	2 (10%)	- (-)	4 (20%)	- (-)	- (-)	3 (15%)	20 (100%)
Schwannoma	6 (21.4%)	2 (7.1%)	- (-)	1 (3.6%)	- (-)	4 (14.3%)	7 (25.0%)	3 (10.7%)	5 (18%)	28 (100%)
GH pituitary adenoma	- (-)	- (-)	- (-)	- (-)	1 (25.0%)	- (-)	- (-)	2 (50.0%)	1 (25%)	4 (100%)
PRL pituitary adenoma	2 (40%)	1 (20.0%)	- (-)	1 (20.0%)	- (-)	- (-)	1 (20.0%)	- (-)	- (-)	5 (100%)
ACTH pituitary adenoma	- (-)	- (-)	1 (50%)	- (-)	- (-)	1 (50%)	- (-)	- (-)	- (-)	2 (100%)
NF pituitary adenoma	1 (2.7%)	- (-)	- (-)	1 (2.7%)	2 (5.4%)	7 (18.9%)	11 (30%)	12 (32%)	3 (8%)	37 (100%)
Craniopharyngioma	- (-)	1 (8.3%)	1 (8.3%)	1 (8.3%)	- (-)	4 (33%)	1 (8.3%)	3 (25%)	1 (8%)	12 (100%)
Chordoma	- (-)	3 (43%)	- (-)	2 (29%)	- (-)	- (-)	- (-)	2 (29%)	- (-)	7 (100%)
Hemangioblastoma	3 (25%)	- (-)	- (-)	3 (25%)	- (-)	2 (17%)	- (-)	3 (25%)	1 (8%)	12 (100%)
Epidermoid	- (-)	- (-)	- (-)	1 (25%)	- (-)	- (-)	1 (25%)	2 (50%)	- (-)	4 (100%)

32) Place of death

place of death	hospital with NSD	hospital without NSD	hospice	nursing home	home	others	unknown	number of death
Pilocytic astrocytoma	7 (58%)	2 (17%)	1 (8.3%)	- (-)	1 (8.3%)	- (-)	1 (8%)	12 (100%)
GII DA	65 (64%)	9 (9%)	10 (10%)	1 (1.0%)	9 (9%)	- (-)	8 (8%)	102 (100%)
GII OL&OA	38 (75%)	1 (2.0%)	4 (8%)	- (-)	6 (12%)	- (-)	2 (4%)	51 (100%)
GIII AA	190 (72%)	26 (10%)	18 (7%)	1 (0.4%)	19 (7%)	1 (0.4%)	9 (3%)	264 (100%)
GIII AO&AOA	100 (69%)	14 (10%)	9 (6%)	- (-)	12 (8%)	1 (0.7%)	9 (6%)	145 (100%)
Glioblastoma	842 (67%)	165 (13%)	101 (8%)	9 (0.7%)	59 (5%)	- (-)	86 (7%)	1,262 (100%)
Ependymoma	15 (79%)	1 (5%)	1 (5%)	- (-)	- (-)	- (-)	2 (11%)	19 (100%)
Anaplastic ependymoma	30 (86%)	2 (6%)	1 (3%)	1 (3%)	1 (3%)	- (-)	- (-)	35 (100%)
Ganglioglioma	2 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (100%)
Central neurocytoma	6 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	6 (100%)
Medulloblastoma	35 (78%)	- (-)	- (-)	- (-)	9 (20%)	- (-)	1 (2%)	45 (100%)
Germinoma	5 (83%)	- (-)	1 (16.7%)	- (-)	- (-)	- (-)	- (-)	6 (100%)
PCNSL	231 (68%)	39 (11%)	28 (8%)	3 (0.9%)	11 (3%)	3 (0.9%)	26 (8%)	341 (100%)
GI Meningioma	74 (68%)	9 (8.3%)	- (-)	- (-)	8 (7.3%)	1 (0.9%)	17 (16%)	109 (100%)
GII Meningioma	17 (52%)	5 (15%)	4 (12%)	- (-)	3 (9%)	- (-)	4 (12%)	33 (100%)
GIII Meningioma	13 (65%)	2 (10%)	2 (10%)	- (-)	- (-)	- (-)	3 (15%)	20 (100%)
Schwannoma	20 (71%)	- (-)	2 (7.1%)	- (-)	3 (10.7%)	1 (3.6%)	2 (7%)	28 (100%)
GH pituitary adenoma	2 (50.0%)	1 (25.0%)	- (-)	- (-)	- (-)	- (-)	1 (25%)	4 (100%)
PRL pituitary adenoma	5 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	5 (100%)
ACTH pituitary adenoma	2 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (100%)
NF pituitary adenoma	26 (70%)	2 (5.4%)	1 (2.7%)	- (-)	3 (8.1%)	- (-)	5 (14%)	37 (100%)
Craniopharyngioma	7 (58%)	2 (17%)	- (-)	- (-)	1 (8.3%)	- (-)	2 (17%)	12 (100%)
Chordoma	6 (86%)	- (-)	- (-)	- (-)	1 (14%)	- (-)	- (-)	7 (100%)
Hemangioblastoma	10 (83%)	- (-)	2 (17%)	- (-)	- (-)	- (-)	- (-)	12 (100%)
Epidermoid	4 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	4 (100%)

33) Autopsy

Autopsy	(-)	(+)	unknown	total death
Pilocytic astrocytoma	11 (92%)	- (-)	1 (8%)	12 (100%)
GII DA	87 (85%)	6 (6%)	9 (9%)	102 (100%)
GII OL&OA	44 (86%)	3 (6%)	4 (8%)	51 (100%)
GIII AA	238 (90%)	10 (4%)	16 (6%)	264 (100%)
GIII AO&AOA	128 (88%)	3 (2%)	14 (10%)	145 (100%)
Glioblastoma	1,093 (87%)	54 (4%)	115 (9%)	1,262 (100%)
Ependymoma	15 (79%)	1 (5%)	3 (16%)	19 (100%)
Anaplastic ependymoma	33 (94%)	2 (6%)	- (-)	35 (100%)
Ganglioglioma	2 (100%)	- (-)	- (-)	2 (100%)
Central neurocytoma	5 (83%)	- (-)	1 (17%)	6 (100%)
Medulloblastoma	35 (78%)	7 (16%)	3 (7%)	45 (100%)
Germinoma	6 (100%)	- (-)	- (-)	6 (100%)
PCNSL	292 (86%)	17 (5%)	32 (9%)	341 (100%)
GI Meningioma	88 (81%)	10 (9.2%)	11 (10%)	109 (100%)
GII Meningioma	28 (85%)	1 (3.0%)	4 (12%)	33 (100%)
GIII Meningioma	16 (80%)	1 (5%)	3 (15%)	20 (100%)
Schwannoma	23 (82%)	1 (3.6%)	4 (14%)	28 (100%)
GH pituitary adenoma	3 (75%)	- (-)	1 (25%)	4 (100%)
PRL pituitary adenoma	3 (60%)	1 (20.0%)	1 (20%)	5 (100%)
ACTH pituitary adenoma	2 (100%)	- (-)	- (-)	2 (100%)
NF pituitary adenoma	27 (73%)	3 (8.1%)	7 (19%)	37 (100%)
Craniopharyngioma	9 (75%)	1 (8.3%)	2 (17%)	12 (100%)
Chordoma	7 (100%)	- (-)	- (-)	7 (100%)
Hemangioblastoma	11 (92%)	- (-)	1 (8%)	12 (100%)
Epidermoid	4 (100%)	- (-)	- (-)	4 (100%)
Total	2,210 (86%)	121 (5%)	232 (9%)	2,563

34) Transfer to another hospital

transfer/reason	none	for further treatment	palliative care	other reasons	total
Pilocytic astrocytoma	184 (83%)	13 (6%)	3 (1%)	22 (10%)	222 (100%)
GII DA	292 (70%)	49 (12%)	35 (8%)	39 (9%)	416 (100%)
GII OL&OA	296 (76%)	49 (13%)	16 (4%)	30 (8%)	391 (100%)
GIII AA	298 (55%)	107 (20%)	95 (17%)	44 (8%)	545 (100%)
GIII AO&AOA	222 (53%)	75 (18%)	67 (16%)	51 (12%)	416 (100%)
Glioblastoma	899 (44%)	404 (20%)	568 (28%)	177 (9%)	2,049 (100%)
Ependymoma	70 (82%)	4 (5%)	5 (6%)	6 (7%)	85 (100%)
Anaplastic ependymoma	65 (72%)	13 (14%)	6 (7%)	6 (7%)	90 (100%)
Ganglioglioma	49 (84%)	3 (5%)	2 (3%)	4 (7%)	58 (100%)
Central neurocytoma	60 (80%)	9 (12%)	1 (1%)	5 (7%)	75 (100%)
Medulloblastoma	110 (76%)	17 (12%)	7 (5%)	9 (6%)	144 (100%)
Germinoma	218 (88%)	16 (6%)	- (-)	15 (6%)	249 (100%)
PCNSL	426 (52%)	159 (20%)	154 (19%)	75 (9%)	814 (100%)
GI Meningioma	3,085 (85%)	265 (7%)	16 (0.4%)	282 (8%)	3,649 (100%)
GII Meningioma	184 (70%)	39 (15%)	13 (5%)	25 (10%)	262 (100%)
GIII Meningioma	34 (55%)	10 (16%)	5 (8%)	13 (21%)	62 (100%)
Schwannoma	1,253 (87%)	103 (7%)	3 (0.2%)	85 (6%)	1,444 (100%)
GH pituitary adenoma	497 (87%)	11 (2%)	- (-)	62 (11%)	570 (100%)
PRL pituitary adenoma	341 (87%)	9 (2%)	1 (0.3%)	42 (11%)	393 (100%)
ACTH pituitary adenoma	134 (83%)	6 (4%)	1 (1%)	21 (13%)	162 (100%)
NF pituitary adenoma	1,494 (89%)	37 (2%)	6 (0.4%)	148 (9%)	1,685 (100%)
Craniopharyngioma	296 (79%)	41 (11%)	2 (1%)	34 (9%)	374 (100%)
Chordoma	57 (74%)	10 (13%)	2 (3%)	8 (10%)	77 (100%)
Hemangioblastoma	210 (84%)	25 (10%)	2 (1%)	13 (5%)	250 (100%)
Epidermoid	135 (92%)	5 (3%)	- (-)	7 (5%)	147 (100%)

35) Complication during the whole treatment

	none	intracranial hemorrhage	cerebral infarction	pneumonia	pulmonary embolization	deep vein thrombosis	bone fracture	second cancer	others	unknown	patient number
Pilocytic astrocytoma	195 (88%)	3 (1%)	2 (1%)	2 (1%)	- (-)	- (-)	1 (0.5%)	- (-)	8 (4%)	12 (5%)	222
GII DA	348 (84%)	6 (1%)	5 (1%)	12 (3%)	1 (0.2%)	3 (1%)	1 (0.2%)	1 (0.2%)	22 (5%)	20 (5%)	416
GII OL&OA	334 (85%)	5 (1%)	6 (2%)	5 (1%)	3 (1%)	5 (1%)	1 (0.3%)	1 (0.3%)	25 (6%)	17 (4%)	391
GIII AA	420 (77%)	11 (2%)	7 (1%)	43 (8%)	- (-)	9 (2%)	1 (0.2%)	2 (0.4%)	38 (7%)	28 (5%)	545
GIII AO&AOA	328 (79%)	13 (3%)	10 (2%)	10 (2%)	3 (1%)	8 (2%)	1 (0.2%)	3 (1%)	29 (7%)	23 (6%)	416
Glioblastoma	1,477 (72%)	80 (4%)	32 (2%)	197 (10%)	16 (1%)	39 (2%)	8 (0.4%)	4 (0.2%)	141 (7%)	127 (6%)	2,049
Ependymoma	66 (78%)	1 (1%)	2 (2%)	3 (4%)	- (-)	1 (1%)	- (-)	- (-)	10 (12%)	4 (5%)	85
Anaplastic ependymoma	73 (81%)	- (-)	2 (2%)	3 (3%)	- (-)	- (-)	- (-)	- (-)	7 (8%)	5 (6%)	90
Ganglioglioma	53 (91%)	1 (2%)	- (-)	- (-)	1 (2%)	- (-)	- (-)	- (-)	2 (3%)	1 (2%)	58
Central neurocytoma	64 (85%)	3 (4%)	3 (4%)	- (-)	- (-)	1 (1%)	- (-)	- (-)	4 (5%)	- (-)	75
Medulloblastoma	110 (76%)	1 (1%)	1 (1%)	10 (7%)	- (-)	- (-)	1 (1%)	1 (1%)	17 (12%)	6 (4%)	144
Germinoma	219 (88%)	2 (1%)	- (-)	1 (0.4%)	- (-)	2 (1%)	- (-)	1 (0.4%)	9 (4%)	16 (6%)	249
PCNSL	586 (72%)	12 (1%)	14 (2%)	80 (10%)	2 (0.2%)	13 (2%)	6 (1%)	1 (0.1%)	74 (9%)	53 (7%)	814
GI Meningioma	3,046 (83%)	51 (1%)	61 (2%)	28 (1%)	8 (0.2%)	17 (0.5%)	4 (0.1%)	5 (0.1%)	275 (8%)	193 (5%)	3,649
GII Meningioma	215 (82%)	3 (1%)	4 (2%)	8 (3%)	1 (0.4%)	5 (2%)	2 (1%)	- (-)	20 (8%)	10 (4%)	262
GIII Meningioma	43 (69%)	1 (2%)	4 (6%)	6 (10%)	- (-)	- (-)	- (-)	1 (2%)	4 (6%)	4 (6%)	62
Schwannoma	1,172 (81%)	19 (1%)	12 (1%)	7 (0.5%)	2 (0.1%)	1 (0.1%)	1 (0.1%)	1 (0.1%)	166 (11%)	71 (5%)	1,444
GH pituitary adenoma	513 (90%)	3 (1%)	1 (0.2%)	- (-)	- (-)	1 (0.2%)	- (-)	- (-)	31 (5%)	27 (5%)	570
PRL pituitary adenoma	356 (91%)	3 (1%)	4 (1%)	- (-)	- (-)	- (-)	- (-)	- (-)	20 (5%)	12 (3%)	393
ACTH pituitary adenoma	138 (85%)	1 (1%)	- (-)	- (-)	- (-)	1 (1%)	3 (2%)	- (-)	15 (9%)	5 (3%)	162
NF pituitary adenoma	1,507 (89%)	20 (1%)	20 (1%)	5 (0.3%)	2 (0.1%)	1 (0.1%)	- (-)	2 (0.1%)	81 (5%)	64 (4%)	1,685
Craniopharyngioma	278 (74%)	8 (2%)	9 (2%)	4 (1%)	1 (0.3%)	1 (0.3%)	- (-)	- (-)	58 (16%)	19 (5%)	374
Chordoma	62 (81%)	2 (3%)	1 (1%)	2 (3%)	1 (1%)	- (-)	- (-)	- (-)	6 (8%)	4 (5%)	77
Hemangioblastoma	208 (83%)	4 (2%)	5 (2%)	3 (1%)	- (-)	1 (0.4%)	- (-)	- (-)	19 (8%)	14 (6%)	250
Epidermoid	123 (84%)	1 (1%)	2 (1%)	- (-)	- (-)	1 (1%)	- (-)	- (-)	13 (9%)	9 (6%)	147

5. Detailed survival data in major primary brain tumors (2005-2008)

1) Definition of major primary brain tumors

All Gliomas: ID 1-59 (see page 13-15)

ALL Meningioma ID 74-89, ALL grade I, II, III meningioma

ALL Pituitary adenoma ID 141-147, ALL pituitary adenoma

Other major tumors see top 25 primary brain tumors

2) Detailed overall survival and progression free survival in major primary tumors

		total	OS										PFS									
			event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)		
All Gliomas	ALL	4,882	2,038	132.1	0	70	81.3	65.8	58.5	54.5	51.8	2,366	132.1	0	36	67.3	54.7	49.9	45.7	42.5		
	0- 4	200	65	132.1	0	126	84.6	77.7	70	67	65.7	71	126	0	NR	80.9	63.4	62.7	62	59.1		
	5- 9	183	49	126.1	0	NR	91.7	82.4	77.4	77.4	74.7	63	126.1	0	NR	85.8	73.2	71.2	68.4	64.2		
	10-14	176	49	132.1	0	NR	88.4	77	74.5	73.2	71.1	55	132.1	0	NR	80.6	74.7	71.9	69.8	67.5		
	15-19	137	32	129	0	NR	91.9	83.6	79.2	76.4	76.4	45	129	0	NR	86.4	75.9	68.6	65.6	64.5		
	20-29	441	143	132.1	0	NR	89.1	79.6	72.8	69.5	66	199	132.1	0	75	78.9	69.6	64.6	58.2	54.6		
	30-39	624	178	130.1	0	NR	93.1	86.5	80.7	76.4	72.9	287	130.1	0	78.1	83	72.7	66.4	61	57.2		
	40-49	606	214	130.1	0	NR	88.6	75.5	69.6	65.1	62.6	299	130.1	0	49.1	73.2	61.4	55.5	50.3	46.4		
	50-59	788	358	131	0	53.1	83.5	64.3	56.5	51	48.1	458	131	0	21	60.3	46.7	41.9	37.4	33.3		
	60-69	886	476	130.1	0	24	75.1	48.9	37.5	32.6	28.7	495	124.1	0	14	52.6	36.4	30.4	25.6	23.5		
	70-79	703	392	129.1	0	15	57.7	32.1	22.2	17.1	14.5	340	129.1	0	11	46.2	27.3	23.3	20.7	17.5		
	80-89	135	80	99	0	11	42.6	25.6	13.1	11	8.8	54	99	0	12	48.3	32.6	25.4	15.2	15.2		
90-94	3	2	2	2	2	ND	ND	ND	ND	ND	0	2	2	ND	ND	ND	ND	ND	ND			
GII DA	ALL	416	102	131	0	NR	95.4	84.2	78.7	78.0	76.9	181	131	0	87.1	84.0	71.8	66.5	61.6	57.9		
	0- 4	8	4	107.0	0	NR	66.7	66.7	50.0	33.3	33.3	4	107.0	0	NR	50.0	33.3	33.3	33.3	33.3		
	5- 9	18	8	99.0	0	24.0	80.0	46.7	46.7	46.7	46.7	5	98.1	0	NR	86.7	63.0	63.0	63.0	63.0		
	10-14	15	2	105.0	0	NR	100	90.9	81.8	81.8	81.8	3	105.0	0	NR	80.0	80.0	70.0	70.0	70.0		
	15-19	15	4	99.1	0	NR	92.3	76.9	69.2	69.2	69.2	7	99.1	0	43.1	62.3	54.5	54.5	46.8	46.8		
	20-29	75	19	128.1	0	NR	98.5	90.7	84.2	84.2	80.9	34	128.1	0	70.1	89.8	71.5	64.9	61.6	56.4		
	30-39	95	15	118.1	0	NR	98.9	92.9	89.2	89.2	85.2	36	118.1	0	NR	92.9	81.9	75.4	70.1	63.3		
	40-49	58	14	116.1	1.9	NR	100	96.1	90.1	88.0	83.6	23	116.1	1.0	NR	87.3	83.6	75.6	67.4	65.3		
	50-59	48	10	116.0	0	NR	97.8	85.1	81.7	81.7	77.8	18	116.0	0	59.0	78.3	68.1	64.5	56.7	43.9		
	60-69	33	11	112.1	0	36.0	96.7	60.3	49.1	49.1	49.1	11	112.1	0	NR	66.4	52.2	52.2	52.2	52.2		
	70-79	17	7	23.0	0	16.0	37.5	0	0	0	0	6	19.0	0	11.1	44.2	0	0	0	0		

		total	OS										PFS									
			event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)		
GII OL&OA	ALL	391	51	130.1	0	NR	98.0	95.9	93.0	91.2	91.9	174	130.1	0	90.1	94.9	87.6	78.8	76.4	64.9		
	0- 4	1	0	89.1	89.1	NR	100	100	100	100	100	0	89.1	89.1	NR	100	100	100	100	100		
	5- 9	3	0	122.1	14.0	NR	100	100	100	100	100	0	122.1	14.0	NR	100	100	100	100	100		
	10-14	4	0	116.1	57.0	NR	100	100	100	100	100	0	116.1	54.0	NR	100	100	100	100	100		
	15-19	3	0	109.1	63.0	NR	100	100	100	100	100	0	109.1	59.0	NR	100	100	100	100	100		
	20-29	25	1	116.1	2.9	NR	100	100	100	100	100	8	116.1	2.9	NR	100	91.7	79.2	79.2	79.2		
	30-39	65	5	121.1	0.9	NR	100	100	98.1	96.2	96.2	22	116.1	0	109.1	96.8	93.4	86.1	82.5	80.6		
	40-49	44	5	114.1	2.0	NR	100	100	97.1	94.3	91.2	10	114.1	2.0	NR	97.4	91.9	83.3	83.3	80.2		
	50-59	41	9	118.1	1.0	NR	97.6	94.7	88.0	88.0	88.0	16	118.1	0	NR	89.0	76.4	63.7	57.3	54.1		
	60-69	19	5	122.0	1.0	NR	94.7	82.1	74.6	74.6	67.2	6	122.0	0	NR	86.7	73.3	66.0	66.0	66.0		
	70-79	6	4	79.1	8.0	20.1	62.5	41.7	41.7	20.8	20.8	2	23.0	1.0	23.0	83.3	0	0	0	0		
GIII AA	ALL	545	264	128.1	0	41.1	80.8	63.1	51.8	44.8	43.2	284	128.1	0	26	60.7	45.1	36.9	32.8	36.3		
	0- 4	7	2	107.0	2.0	NR	66.7	66.7	66.7	66.7	66.7	2	107.0	2.0	NR	80.0	60.0	60.0	60.0	60.0		
	5- 9	11	6	89.1	3.0	20.1	64.9	26.0	26.0	26.0	26.0	6	89.1	0	10.0	31.8	31.8	15.9	15.9	15.9		
	10-14	9	8	35.0	6.0	23.5	50.0	25.0	0.0	0.0	0.0	8	27.0	0	8.0	44.4	14.8	0	0	0		
	15-19	10	6	88.1	0	15.9	66.7	40.0	20.0	20.0	20.0	7	88.1	0	4.0	22.2	22.2	22.2	22.2	22.2		
	20-29	50	22	118.1	1.0	66.1	91.4	82.4	72.6	60.1	54.3	29	118.1	0	29.0	80.5	63.5	42.5	37.2	31.0		
	30-39	82	38	129.0	1.0	64.1	88.0	72.9	59.9	56.7	51.2	46	129.0	1.0	36.0	73.5	55.1	48.7	43.7	40.2		
	40-49	71	23	121.0	0	87.0	93.5	76.9	70.4	63.8	56.6	36	121.0	0	42.0	68.5	54.4	52.3	43.5	33.9		
	50-59	97	41	109.1	0	41.0	81.4	63.0	54.1	44.3	40.1	49	109.1	0	20.0	62.1	45.8	36.5	32.6	28.8		
	60-69	106	47	121.1	0.9	30.0	80.0	63.2	41.3	30.8	30.8	53	109.1	0	12.0	49.5	35.9	27.4	27.4	24.0		
	70-79	58	30	74.0	0	14.0	60.8	25.3	25.3	20.3	20.3	29	74.0	0	7.1	30.8	17.6	17.6	11.7	11.7		
80-89	12	7	32.0	0	9.1	40.4	40.4	0	0	0	6	26.0	0.0	14.1	61.1	20.4	0	0	0			
GIII AO&AOA	ALL	416	144	129.1	1	NR	92.3	82.5	78.7	75.4	62.6	203	129.1	0	47	79.0	69.9	60.4	55.9	43.9		
	0- 4	2	2	11.0	3.0	7.0	0	0	0	0	0	2	11.0	1.0	6.0	0	0	0	0	0		
	5- 9	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-		
	10-14	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-		
	15-19	2	0	120.1	82.1	NR	100	100	100	100	100	0	120.1	82.1	NR	100	100	100	100	100		
	20-29	17	5	116.1	1.0	NR	100	93.3	93.3	86.7	64.2	8	116.1	1.0	64.1	93.3	80.0	66.7	53.3	53.3		
	30-39	46	10	120.1	0	110.1	97.8	95.3	92.7	92.7	81.1	16	120.1	0	NR	88.2	85.7	75.9	70.7	70.7		
	40-49	53	15	120.1	0	NR	95.5	86.0	86.0	80.8	69.8	28	119.0	0	44.1	71.7	61.0	52.0	49.6	49.6		
	50-59	62	21	120.1	0	102.1	94.8	79.6	73.8	67.4	64.8	25	120.1	0	79.0	85.5	71.8	61.6	61.6	56.5		
	60-69	37	14	112.1	1.0	97.1	87.5	77.6	70.6	70.6	70.6	19	104.1	1.0	71.0	74.9	71.6	60.9	53.7	50.1		
	70-79	11	8	115.0	1.0	21.0	58.3	46.7	35.0	35.0	35.0	8	48.0	1.0	7.0	36.0	24.0	24.0	0	0		
80-89	2	1	19.0	17.0	19.0	100	0	0	0	0	1	17.0	15.0	17.0	100	0	0	0	0			

		total	OS										PFS									
			event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)		
Glioblastoma	ALL	2,049	1,261	130.1	0	18	60.3	25.4	15.9	11.1	16	1233	130.1	0	11	34.7	17.5	13.1	11.9	14.3		
	0- 4	4	3	17.0	4.9	12.0	37.5	0	0	0	0	2	17.0	1.0	NR	50.0	ND	ND	ND	ND		
	5- 9	14	8	108.1	0	18.0	62.9	25.1	12.6	12.6	12.6	10	108.1	0	7.0	22.4	11.2	11.2	11.2	11.2		
	10-14	18	14	57.0	2.0	14.0	54.2	20.3	13.5	6.8	ND	13	57.0	1.0	9.0	32.7	16.3	8.2	8.2	0		
	15-19	14	11	97.1	2.0	18.0	69.2	30.8	30.8	20.5	20.5	11	97.1	0.9	10.0	26.5	17.7	17.7	17.7	17.7		
	20-29	57	40	109.1	0	31.0	74.8	57.8	38.5	34.3	27.8	43	77.1	0	10.0	48.4	32.9	25.8	25.8	11.7		
	30-39	85	53	119.0	0	23.0	71.2	44.5	31.5	18.6	16.7	57	119.0	0	9.0	43.2	25.3	21.1	16.9	10.6		
	40-49	140	85	119.0	0	16.1	67.3	35.0	30.2	21.4	20.1	91	119.0	0	9.0	36.3	24.6	19.1	19.1	17.8		
	50-59	321	200	108.1	0	17.0	69.3	26.2	15.6	13.0	12.4	205	108.1	0	9.0	34.4	17.9	12.0	9.5	7.7		
	60-69	461	305	114.1	0	14.1	59.5	20.9	10.0	5.2	4.7	283	114.1	0	8.0	33.1	12.2	8.3	7.1	7.1		
	70-79	328	190	86.1	0	12.0	44.3	13.5	6.8	3.5	3.5	159	80.1	0	8.0	31.5	11.2	9.3	9.3	9.3		
	80-89	45	20	45.0	0	7.0	24.1	8.0	8.0	ND	ND	14	45.0	0	7.0	27.7	27.7	27.7	ND	ND		
PCNSL	ALL	814	341	129.1	0	54	73.4	64.1	54.4	44.9	48.2	333	125.1	0	39	70.6	56.9	48.4	40.4	40.2		
	0- 4	1	1	57.1	57.1	57.1	100	100	100	100	0	1	54.0	54.0	54.0	100	100	100	100	0.0		
	5- 9	2	0	64.0	2.0	NR	100	100	100	100	100	0	64.0	2.0	NR	100	100	100	100	100		
	10-14	2	0	105.1	77.1	NR	100	100	100	100	100	0	105.1	77.1	NR	100	100	100	100	100		
	15-19	3	0	69.0	2.0	NR	100	100	100	100	100	2	21.0	1.0	21.0	66.7	0	0	0	0		
	20-29	7	3	108.1	9.0	93.0	85.7	71.4	71.4	71.4	71.4	4	85.1	1.9	46.0	57.1	57.1	57.1	42.9	42.9		
	30-39	5	3	88.1	19.0	52.1	100	80.0	60.0	60.0	40.0	4	88.1	6.0	50.1	80.0	60.0	60.0	60.0	20.0		
	40-49	30	7	116.1	3.0	NR	89.1	89.1	83.8	73.0	73.0	13	116.1	3.0	74.0	78.5	73.9	68.6	68.6	68.6		
	50-59	93	36	117.0	0.0	46.1	83.8	77.4	59.9	47.2	40.3	44	117.0	0	26.1	70.7	51.9	42.3	36.1	26.9		
	60-69	157	67	106.1	0.0	41.1	71.1	59.1	55.5	43.5	43.5	63	99.0	0	34.0	66.4	56.4	46.0	35.0	31.0		
	70-79	138	50	108.1	0.0	27.0	62.8	54.7	36.3	29.1	29.1	31	108.1	0	36.0	73.9	57.1	46.3	34.0	34.0		
	80-89	35	13	59.0	0.0	15.1	53.9	27.7	27.7	27.7	ND	6	59.0	0	21.0	79.7	44.3	44.3	44.3	ND		
ALL Meningioma	ALL	3,972	162	132.1	0	NR	98.7	98.3	97.6	97	96.2	475	132.1	0	NR	96.8	94.3	91.5	89.8	87.7		
	0- 4	5	0	114.1	7	NR	100	100	100	100	100	0	114.1	7	NR	100	100	100	100	100		
	5- 9	10	0	111.1	0	NR	100	100	100	100	100	1	111.1	0	NR	100	100	100	100	100		
	10-14	8	0	102.1	27.1	NR	100	100	100	100	100	2	102.1	2	NR	87.5	87.5	72.9	72.9	72.9		
	15-19	7	0	116.1	61.1	NR	100	100	100	100	100	1	116.1	61.1	NR	100	100	100	100	100		
	20-29	69	3	132.1	0	NR	96.8	96.8	96.8	96.8	96.8	16	132.1	0	129	90.7	85.4	83.4	83.4	77.2		
	30-39	234	2	131	0	NR	99.1	99.1	99.1	99.1	99.1	47	130.1	0	NR	95.2	93.7	87.9	86.1	83.5		
	40-49	526	11	131	0	NR	99.2	99.2	98.9	98.7	98.4	66	129.1	0	NR	96.9	95.4	92.6	90.4	88.1		
	50-59	1,102	33	131	0	NR	99.3	99.1	98.6	98	97.5	119	131	0	NR	97.5	95.3	93.3	91.1	89.4		
	60-69	1,102	50	132.1	0	NR	99.1	98.7	97.6	97	95.9	124	132.1	0	NR	97.1	94.1	91	89.8	87.8		
	70-79	748	49	131	0	NR	97.5	96.1	95.7	94.3	92.8	83	131	0	NR	97	94.3	91.3	89.6	87.1		
	80-89	156	14	120.1	0	NR	95.3	94.1	91.5	89.4	87.1	16	120.1	0	120	92.7	88	86.7	86.7	86.7		
90-99	5	0	74	2	NR	100	100	100	100	100	0	74	2	NR	100	100	100	100	100			

		total	OS										PFS									
			event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)		
ALL Pituitary adenoma	ALL	2,891	48	132.1	0	NR	99.7	99.6	99.3	98.9	98.6	339	132.1	0	NR	97.6	95.6	93.6	91.9	89.5		
	0- 4	1	0	113	113	ND	100	100	100	100	100	0	113	113	ND	100	100	100	100	100		
	5- 9	2	0	87.1	0	NR	100	100	100	100	100	0	87.1	0	NR	100	100	100	100	100		
	10-14	8	0	125.1	0	NR	100	100	100	100	100	0	125.1	0	NR	100	100	100	100	100		
	15-19	39	0	127.1	0	NR	100	100	100	100	100	7	127.1	0	NR	88.1	85	78.5	78.5	78.5		
	20-29	265	2	131	0	NR	99.6	99.6	99.6	99.6	99.6	24	131	0	NR	97	94.1	92.4	90	90		
	30-39	400	0	132.1	0	NR	100	100	100	100	100	54	132.1	0	NR	98.6	95.6	93.5	90.9	88.4		
	40-49	437	5	131	0	NR	99.5	99.5	99.2	98.9	98.9	57	131	0	NR	97.3	94.8	92.2	90.1	86.8		
	50-59	725	12	131	0	NR	100	99.8	99.3	99.1	98.7	100	131	0	NR	96.2	94.5	92.4	90.9	88.7		
	60-69	638	12	132.1	0	NR	99.5	99.3	99.3	98.7	98.5	64	132.1	0	NR	98.9	97.4	96.2	95.2	92		
	70-79	342	15	130.1	0	NR	99.3	99.3	98.6	97.7	95.9	32	130.1	0	NR	98.4	97.3	94.9	93.2	91.3		
	80-89	33	2	121.1	1	NR	96.2	96.2	96.2	90.1	90.1	1	106.1	0	NR	100	100	100	100	100		
	90-99	1	0	2	2	ND	ND	ND	ND	ND	ND	0	2	2	ND	ND	ND	ND	ND	ND		
Schwannoma	ALL	1,444	28	132.1	0	NR	99.5	99.4	99.2	99.0	98.4	169	132.1	0	NR	97.7	95.6	93.3	91.2	89.3		
	0- 4	4	0	111.1	40.0	NR	100	100	100	100	100	0	111.1	40.0	NR	100	100	100	100	100		
	5- 9	2	0	109.1	61.0	NR	100	100	100	100	100	1	109.1	17.0	NR	100	50.0	50.0	50.0	50.0		
	10-14	8	0	81.0	1.0	NR	100	100	100	100	100	0	81.0	1.0	NR	100	100	100	100	100		
	15-19	20	2	113.1	0	NR	94.7	94.7	94.7	94.7	94.7	4	102.0	0.0	NR	93.3	86.2	86.2	86.2	86.2		
	20-29	77	0	119.0	0	NR	100	100	100	100	100	16	119.0	0.0	NR	95.3	92.1	86.6	80.5	80.5		
	30-39	184	2	130.1	0	NR	99.4	99.4	98.6	98.6	98.6	21	130.1	0.0	NR	97.4	92.3	90.6	87.1	87.1		
	40-49	238	1	124.1	0	NR	100	100	100	100	100	23	124.1	0.0	NR	95.9	94.2	91.9	91.3	87.9		
	50-59	396	1	127.0	0	NR	99.7	99.7	99.7	99.7	99.7	28	120.1	0.0	NR	98.2	97.2	95.4	94.2	92.5		
	60-69	292	6	121.1	0	NR	99.2	99.2	98.7	97.8	97.2	24	121.1	0.0	NR	99.6	97.7	95.3	91.6	89.9		
	70-79	117	3	126.1	0	NR	99.0	97.8	97.8	97.8	97.8	7	126.1	0.0	NR	97.9	96.5	93.7	93.7	91.6		
	80-89	14	0	79.1	0	NR	100	100	100	100	100	0	79.1	0.0	NR	100	100	100	100	100		
	Craniopharyngioma	ALL	374	12	131	0	NR	98.1	97.3	97.3	96.9	97	125	131	0	NR	88.6	82.7	78.0	73.5	67.7	
0- 4		18	1	114.1	1.0	114.1	100	100	100	100	100	9	102.0	1.0	80.1	88.2	76.5	70.6	64.7	52.9		
5- 9		27	1	116.1	0	NR	96.0	96.0	96.0	96.0	96.0	17	116.1	0	44.0	82.5	58.3	53.4	34.0	34.0		
10-14		24	0	119.0	1.0	NR	100	100	100	100	100	6	102.1	1.0	NR	86.2	86.2	86.2	81.2	75.4		
15-19		12	0	116.1	1.0	NR	100	100	100	100	100	3	116.1	1.0	NR	80.8	80.8	80.8	80.8	80.8		
20-29		27	1	115.1	0	NR	100	95.7	95.7	95.7	95.7	3	114.1	0	NR	100	100	90.0	90.0	84.7		
30-39		34	3	120.1	0	NR	97.1	97.1	97.1	93.0	93.0	11	112.1	0	NR	81.2	78.1	71.0	71.0	62.7		
40-49		43	2	118.1	0	NR	97.6	97.6	97.6	97.6	94.1	7	118.1	0	NR	89.5	89.5	86.1	82.8	82.8		
50-59		54	0	119.0	0	NR	100	100	100	100	100	16	115.1	0	NR	90.0	83.9	79.5	72.8	68.3		
60-69		67	1	122.0	0	NR	98.4	98.4	98.4	98.4	98.4	20	122.0	0	NR	91.2	82.2	76.6	74.5	72.4		
70-79		19	3	89.1	0	NR	92.9	84.4	84.4	84.4	84.4	2	89.1	0	NR	86.7	86.7	86.7	86.7	86.7		
80-89		6	1	96.1	0	NR	80.0	80.0	80.0	80.0	80.0	0	92.1	0	NR	100	100	100	100	100		

6. General features of brainstem gliomas

1) Frequency of gliomas originated in midbrain, pons and medulla oblongata

Tumors which were also located in IVth ventricle, cerebellum, thalamus or hypothalamus were excluded.

	All cases	Midbrain	Pons	Medulla	all regions
Pilocytic astrocytoma	22 (10.3%)	9 (24.3%)	- (-)	12 (21.8%)	1 (14.3%)
Pilomyxoid astrocytoma	- (-)	- (-)	- (-)	- (-)	- (-)
GII DA	36 (16.9%)	6 (16.2%)	17 (14.9%)	12 (21.8%)	1 (14.3%)
GIII AA	27 (12.7%)	2 (5.4%)	19 (16.7%)	4 (7.3%)	2 (28.6%)
GIII AO	1 (0.5%)	1 (2.7%)	- (-)	- (-)	- (-)
Glioblastoma	32 (15.0%)	5 (13.5%)	20 (17.5%)	6 (10.9%)	1 (14.3%)
Unknown Glioma	84 (39.4%)	12 (32.4%)	56 (49.1%)	14 (25.5%)	2 (28.6%)
Ependymoma	5 (2.3%)	1 (2.7%)	1 (0.9%)	3 (5.5%)	- (-)
Anaplastic Ependymoma	4 (1.9%)	1 (2.7%)	1 (0.9%)	2 (3.6%)	- (-)
Ganglioglioma	2 (0.9%)	- (-)	- (-)	2 (3.6%)	- (-)
Total	213 (100%)	37 (100%)	114 (100%)	55 (100%)	7 (100%)

2) Age distribution of brainstem gliomas

Brainstem gliomas in this analyses includes pilomyxoid astrocytoma, GII DA, GIII AA, GIII AO, GBM and unknown gliomas (218 cases).

age	m	f	total	(%)
0	-	-	-	(-)
1	-	1	1	(0.5%)
2	1	2	3	(1%)
3	2	2	4	(2%)
4	8	6	14	(6%)
5-9	15	21	36	(17%)
10-14	12	11	23	(11%)
15-19	6	6	12	(6%)
20-24	6	3	9	(4%)
25-29	7	4	11	(5%)
30-34	10	11	21	(10%)
35-39	9	6	15	(7%)
40-44	9	7	16	(7%)
45-49	8	7	15	(7%)
50-54	5	4	9	(4%)
55-59	4	1	5	(2%)
60-64	5	4	9	(4%)
65-69	6	1	7	(3%)
70-74	2	2	4	(2%)
75-79	2	1	3	(1%)
80-84	1	-	1	(0.5%)
85-90	-	-	-	(-)
90-94	-	-	-	(-)
95-	-	-	-	(-)
total	118	100	218	(100%)
median	31	23	28	

3) Overall survival and progression free survival depending on histology

	no.	Overall survival					Progression free survival				
		event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
All brainstem gliomas	218	103	132.1	0	26	42.2	102	132.1	0	21.1	43.1
GII DA	36	16	120.1	0	45	46.4	20	120.1	0	21.1	39.3
GIII AA	27	15	117	2	24	34.1	16	117	1	11	25
Glioblastoma	32	23	53	0	13.1	ND	16	53	0	11	0
Unknown gliomas	84	43	113	0	19	34.9	38	113	0	17	43.9

4) Overall survival and progression free survival depending on region

	no.	Overall survival					Progression free survival				
		event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
midbrain	39	12	130	1	NR	64.1	15	130	0	96.1	61
pons	116	71	117	0	16	19.1	65	117	0	10.1	24.5
medulla oblongata	56	17	132.1	1	NR	68.7	19	132.1	1	106	65.1

5) Overall survival and progression free survival in adult and juvenile tumor

	no.	Overall survival					Progression free survival				
		event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
under 20	93	54	132.1	0	13	27.3	51	132.1	0	11	28.9
20 and over	125	49	130	0	108.1	52.3	51	130	0	64	52.5

6) Overall survival and progression free survival in initial treatment

	no.	Overall survival					Progression free survival				
		event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
Surgery	21	2	132.1	0	NR	90.5	2	132.1	0	NR	94.1
Surgery + RT	13	6	101.1	0	23	39.5	3	101.1	0	NR	66.7
Surgery + CRT	76	41	120.1	1	22	36.4	47	120.1	0	12	28.4
Surgery + CTX	10	3	116.1	3	NR	68.6	5	91.1	3	71	52.5
CRT	66	42	113	1	15	21.8	34	113	1	11	32.2
RT	14	5	94.1	1.9	NR	52.4	6	79	1.9	67.1	50.6
CTX	6	2	92.1	0	NR	53.3	3	61.1	0	24	33.3
observation alone	12	2	110.1	0	NR	70	2	110.1	0	NR	76.4
others	0	0	-	-	-	-	0	-	-	-	-

7. General features of brain metastases (2005-2008)

1) Origin of brain metastases

origin	total
lung	1,476 (46.1%)
breast	463 (14.5%)
colon	193 (6.0%)
kidney	135 (4.2%)
rectum, anus	96 (3.0%)
stomach	104 (3.3%)
head and neck	53 (1.7%)
esophagus	83 (2.6%)
liver	59 (1.8%)
thyroid	47 (1.5%)
ovary	64 (2.0%)
uterus	73 (2.3%)
skin (melanoma)	27 (0.8%)
bladder	19 (0.6%)
lymphatic gland	28 (0.9%)
hematopoietic	18 (0.6%)
testis	25 (0.8%)
pancreas	7 (0.2%)
bone	17 (0.5%)
soft tissue	13 (0.4%)
optical	5 (0.2%)
nervuos tissue	4 (0.1%)
gall bladder	13 (0.4%)
spleen	1 (0.0%)
unknown primary	114 (3.6%)
others	63 (2.0%)
total	3,200

2) Location of tumor

patient number	3,200
frontal lobe	1,440 (45.0%)
temporal lobe	641 (20.0%)
parietal lobe	868 (27.1%)
occipital lobe	605 (18.9%)
insular cortex	26 (0.8%)
cerebellum	913 (28.5%)
midbrain	38 (1.2%)
pons	66 (2.1%)
medulla oblongata	18 (0.6%)
lateral ventricle	36 (1.1%)
third ventricle	9 (0.3%)
cerebral aqueduct	4 (0.1%)
fourth ventricle	2 (0.1%)
basal ganglia	83 (2.6%)
thalamus·hypothalamus	62 (1.9%)
corpus callosum	20 (0.6%)
pineal region	11 (0.3%)
intraorbital	9 (0.3%)
pituitary gland	23 (0.7%)
optic nerve	3 (0.1%)
cerebello-pontine angle	27 (0.8%)
clivus	10 (0.3%)
cavernous sinus	7 (0.2%)
cranial nerve	2 (0.1%)
other skull base	28 (0.9%)
skull base	78 (2.4%)
LMM	90 (2.8%)
others	38 (1.2%)

3) Histology of brain metastases in the original cancer

	ALL	Lung	Breast	Esophagus	Stomach	Colon	Rectum, Anus	Head and Neck	Unknown primary
adenocarcinoma	1,590 (49.7%)	826 (56.0%)	279 (60.3%)	10 (12.0%)	75 (72.1%)	160 (82.9%)	75 (78.1%)	9 (17.0%)	29 (25.4%)
squamous cell carcinoma	265 (8.3%)	158 (10.7%)	4 (0.9%)	49 (59.0%)	2 (1.9%)	- (-)	- (-)	20 (37.7%)	6 (5.3%)
small cell carcinoma	173 (5.4%)	152 (10.3%)	1 (0.2%)	5 (6.0%)	3 (2.9%)	- (-)	1 (1.0%)	1 (1.9%)	2 (1.8%)
large cell carcinoma	56 (1.8%)	53 (3.6%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	3 (2.6%)
clear cell	57 (1.8%)	1 (0.1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
lymphoma	56 (1.8%)	2 (0.1%)	1 (0.2%)	- (-)	4 (3.8%)	1 (0.5%)	- (-)	5 (9.4%)	4 (3.5%)
melanoma	29 (0.9%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (1.9%)	1 (0.9%)
NSCLC	53 (1.7%)	52 (3.5%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.9%)
sarcoma	33 (1.0%)	1 (0.1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (0.9%)
transitional cell carcinoma	10 (0.3%)	1 (0.1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
neuroblastoma	4 (0.1%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
leukemia	11 (0.3%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
retinoblastoma	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
others	283 (8.8%)	22 (1.5%)	74 (16.0%)	4 (4.8%)	5 (4.8%)	- (-)	1 (1.0%)	9 (17.0%)	8 (7.0%)
unknown	580 (18.1%)	208 (14.1%)	104 (22.5%)	15 (18.1%)	15 (14.4%)	32 (16.6%)	19 (19.8%)	8 (15.1%)	59 (51.8%)
total	3,200	1,476	463	83	104	193	96	53	114

4) Age distribution

age	All brain metastases				lung				breast				esophagus				stomach			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	1	-	1	(0.03)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	1	-	1	(0.03)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	1	-	1	(0.03)	1	-	1	(0.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	2	-	2	(0.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	3	2	5	(0.2)	-	1	1	(0.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
15-19	7	4	11	(0.3)	2	-	2	(0.1)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
20-24	9	4	13	(0.4)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
25-29	5	12	17	(0.5)	-	-	-	(-)	-	3	3	(0.6)	-	-	-	(-)	-	-	-	(-)
30-34	16	30	46	(1.4)	3	7	10	(0.7)	-	14	14	(3.0)	-	-	-	(-)	-	-	-	(-)
35-39	27	44	71	(2.2)	9	5	14	(0.9)	-	28	28	(6.0)	-	-	-	(-)	2	-	2	(1.9)
40-44	42	71	113	(3.5)	26	19	45	(3.0)	-	36	36	(7.8)	-	-	-	(-)	2	-	2	(1.9)
45-49	71	106	177	(5.5)	39	18	57	(3.9)	-	57	57	(12.3)	2	1	3	(3.6)	1	-	1	(1.0)
50-54	132	174	306	(9.6)	69	45	114	(7.7)	1	72	73	(15.8)	4	2	6	(7.2)	6	2	8	(7.7)
55-59	279	238	517	(16.2)	156	70	226	(15.3)	1	94	95	(20.5)	11	1	12	(14.5)	14	4	18	(17.3)
60-64	288	205	493	(15.4)	172	77	249	(16.9)	-	64	64	(13.8)	18	2	20	(24.1)	3	4	7	(6.7)
65-69	283	180	463	(14.5)	151	76	227	(15.4)	1	40	41	(8.9)	15	1	16	(19.3)	19	5	24	(23.1)
70-74	277	160	437	(13.7)	163	78	241	(16.3)	2	23	25	(5.4)	13	2	15	(18.1)	16	4	20	(19.2)
75-79	209	137	346	(10.8)	127	70	197	(13.3)	1	15	16	(3.5)	9	1	10	(12.0)	8	4	12	(11.5)
80-84	93	41	134	(4.2)	57	14	71	(4.8)	-	5	5	(1.1)	1	-	1	(1.2)	5	2	7	(6.7)
85-89	27	12	39	(1.2)	14	2	16	(1.1)	-	6	6	(1.3)	-	-	-	(-)	3	-	3	(2.9)
90-94	2	5	7	(0.2)	2	3	5	(0.3)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
95-	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	1,775	1,425	3,200	(100)	991	485	1,476	(100)	6	457	463	(100)	73	10	83	(100)	79	25	104	(100)
median	65	60	63		65	65	65		69.5	56	56		65	61	65		67	67	67	

age	colon				rectum • anus				liver				gallbladder				pancreas			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
15-19	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
20-24	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
25-29	-	-	-	(-)	-	-	-	(-)	-	1	1	(1.7)	-	-	-	(-)	-	-	-	(-)
30-34	-	-	-	(-)	-	-	-	(-)	-	1	1	(1.7)	-	-	-	(-)	-	-	-	(-)
35-39	3	1	4	(2.1)	-	-	-	(-)	3	1	4	(6.8)	-	-	-	(-)	-	-	-	(-)
40-44	4	-	4	(2.1)	2	-	2	(2.1)	1	-	1	(1.7)	-	-	-	(-)	-	-	-	(-)
45-49	5	5	10	(5.2)	2	-	2	(2.1)	2	-	2	(3.4)	-	-	-	(-)	-	-	-	(-)
50-54	9	9	18	(9.3)	5	2	7	(7.3)	6	-	6	(10.2)	-	2	2	(15.4)	-	-	-	(-)
55-59	17	18	35	(18.1)	11	5	16	(16.7)	6	1	7	(11.9)	-	-	-	(-)	3	-	3	(42.9)
60-64	21	14	35	(18.1)	11	4	15	(15.6)	7	2	9	(15.3)	2	1	3	(23.1)	1	-	1	(14.3)
65-69	22	8	30	(15.5)	13	7	20	(20.8)	6	-	6	(10.2)	1	-	1	(7.7)	-	-	-	(-)
70-74	20	6	26	(13.5)	5	8	13	(13.5)	11	3	14	(23.7)	1	2	3	(23.1)	1	1	2	(28.6)
75-79	10	9	19	(9.8)	10	7	17	(17.7)	3	3	6	(10.2)	-	1	1	(7.7)	-	1	1	(14.3)
80-84	4	3	7	(3.6)	2	-	2	(2.1)	1	1	2	(3.4)	-	3	3	(23.1)	-	-	-	(-)
85-89	2	3	5	(2.6)	1	-	1	(1.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	1	1	(1.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
95-	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	117	76	193	(100)	62	34	96	(100)	46	13	59	(100)	4	9	13	(100)	5	2	7	(100)
median	64	62	64		64.5	69	66		62.5	70	63		66.5	74	70		59	73.5	62	

age	spleen				hematopoietic				bone				soft tissue				skin			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(7.7)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	1	1	2	(11.1)	1	-	1	(5.9)	-	-	-	(-)	-	-	-	(-)
15-19	-	-	-	(-)	-	-	-	(-)	1	3	4	(23.5)	-	-	-	(-)	-	-	-	(-)
20-24	-	-	-	(-)	-	-	-	(-)	-	1	1	(5.9)	-	1	1	(7.7)	1	-	1	(3.7)
25-29	-	-	-	(-)	1	-	1	(5.6)	-	-	-	(-)	-	3	3	(23.1)	-	-	-	(-)
30-34	-	-	-	(-)	1	2	3	(16.7)	1	-	1	(5.9)	2	2	4	(30.8)	1	1	2	(7.4)
35-39	-	-	-	(-)	1	1	2	(11.1)	1	-	1	(5.9)	1	1	2	(15.4)	2	-	2	(7.4)
40-44	-	-	-	(-)	1	1	2	(11.1)	1	-	1	(5.9)	-	-	-	(-)	-	-	-	(-)
45-49	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
50-54	-	-	-	(-)	-	-	-	(-)	1	-	1	(5.9)	-	-	-	(-)	4	1	5	(18.5)
55-59	-	-	-	(-)	1	3	4	(22.2)	2	1	3	(17.6)	-	-	-	(-)	3	2	5	(18.5)
60-64	-	-	-	(-)	-	-	-	(-)	2	-	2	(11.8)	-	1	1	(7.7)	3	-	3	(11.1)
65-69	-	-	-	(-)	-	1	1	(5.6)	1	-	1	(5.9)	1	-	1	(7.7)	2	2	4	(14.8)
70-74	-	1	1	(100)	1	1	2	(11.1)	-	1	1	(5.9)	-	-	-	(-)	3	-	3	(11.1)
75-79	-	-	-	(-)	-	1	1	(5.6)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
80-84	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(3.7)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(3.7)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
95-	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	-	1	1	(100)	7	11	18	(100)	11	6	17	(100)	5	8	13	(100)	21	6	27	(100)
median	-	71	71		37	55	41		52	20.5	44		34	29.5	32		58	56.5	57	

age	head and neck				thyroid				testis				bladder				uterus			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	1	-	1	(1.9)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
15-19	-	-	-	(-)	-	-	-	(-)	2	-	2	(8.0)	-	-	-	(-)	-	-	-	(-)
20-24	-	-	-	(-)	-	-	-	(-)	5	-	5	(20.0)	-	-	-	(-)	-	-	-	(-)
25-29	1	-	1	(1.9)	-	-	-	(-)	1	-	1	(4.0)	-	-	-	(-)	-	3	3	(4.1)
30-34	-	1	1	(1.9)	-	-	-	(-)	7	-	7	(28.0)	-	-	-	(-)	-	2	2	(2.7)
35-39	1	-	1	(1.9)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	3	3	(4.1)
40-44	1	-	1	(1.9)	1	1	2	(4.3)	3	-	3	(12.0)	-	-	-	(-)	-	7	7	(9.6)
45-49	4	-	4	(7.5)	-	2	2	(4.3)	3	-	3	(12.0)	-	-	-	(-)	-	10	10	(13.7)
50-54	1	3	4	(7.5)	1	1	2	(4.3)	-	-	-	(-)	-	-	-	(-)	1	13	14	(19.2)
55-59	4	2	6	(11.3)	6	4	10	(21.3)	2	-	2	(8.0)	3	-	3	(15.8)	-	14	14	(19.2)
60-64	11	3	14	(26.4)	3	3	6	(12.8)	-	-	-	(-)	2	1	3	(15.8)	1	6	7	(9.6)
65-69	8	1	9	(17.0)	2	5	7	(14.9)	1	-	1	(4.0)	4	-	4	(21.1)	-	3	3	(4.1)
70-74	2	1	3	(5.7)	3	2	5	(10.6)	-	-	-	(-)	3	-	3	(15.8)	-	6	6	(8.2)
75-79	3	1	4	(7.5)	2	5	7	(14.9)	1	-	1	(4.0)	1	-	1	(5.3)	-	2	2	(2.7)
80-84	2	1	3	(5.7)	3	3	6	(12.8)	-	-	-	(-)	4	1	5	(26.3)	-	1	1	(1.4)
85-89	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(1.4)
90-94	-	1	1	(1.9)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
95-	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	39	14	53	(100)	21	26	47	(100)	25	-	25	(100)	17	2	19	(100)	2	71	73	(100)
median	63	64	63		62	67	66		32	-	32		68	70.5	68		58	54	54	

age	ovary				kidney				optical				lymph gland				nervous tissue			
	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
2	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
5- 9	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
15-19	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	1	1	(3.6)	-	-	-	(-)
20-24	-	-	-	(-)	-	1	1	(0.7)	-	-	-	(-)	1	-	1	(3.6)	2	1	3	(40.0)
25-29	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	1	-	1	(20.0)
30-34	-	-	-	(-)	1	-	1	(0.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
35-39	-	2	2	(3.1)	1	-	1	(0.7)	1	-	1	(20.0)	-	-	-	(-)	-	-	-	(-)
40-44	-	4	4	(6.3)	-	1	1	(0.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
45-49	-	9	9	(14.1)	3	1	4	(3.0)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
50-54	-	13	13	(20.3)	11	1	12	(8.9)	-	1	1	(20.0)	3	-	3	(10.7)	-	-	-	(-)
55-59	1	9	10	(15.6)	16	4	20	(14.8)	-	-	-	(-)	5	1	6	(21.4)	-	-	-	(-)
60-64	1	7	8	(12.5)	13	7	20	(14.8)	-	-	-	(-)	3	2	5	(17.9)	-	-	-	(-)
65-69	-	10	10	(15.6)	18	10	28	(20.7)	-	3	3	(60.0)	1	2	3	(10.7)	-	-	-	(-)
70-74	-	5	5	(7.8)	15	8	23	(17.0)	-	-	-	(-)	1	1	2	(7.1)	-	-	-	(-)
75-79	-	2	2	(3.1)	13	5	18	(13.3)	-	-	-	(-)	3	2	5	(17.9)	-	-	-	(-)
80-84	-	1	1	(1.6)	3	2	5	(3.7)	-	-	-	(-)	-	2	2	(7.1)	-	-	-	(-)
85-89	-	-	-	(-)	1	-	1	(0.7)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
90-94	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
95-	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)	-	-	-	(-)
total	2	62	64	(100)	95	40	135	(100)	1	4	5	(100)	17	11	28	(100)	3	1	4	(100)
median	60	55.5	56.5		65	66	66		37	66	66		58	69	61.5		24	23	23.5	

age	unknown primary				others			
	m	f	total	(%)	m	f	total	(%)
0	-	-	-	(-)	-	-	-	(-)
1	-	-	-	(-)	1	-	1	(1.6)
2	-	-	-	(-)	-	-	-	(-)
3	-	-	-	(-)	-	-	-	(-)
4	-	-	-	(-)	1	-	1	(1.6)
5- 9	-	-	-	(-)	-	-	-	(-)
10-14	-	-	-	(-)	1	-	1	(1.6)
15-19	-	-	-	(-)	2	-	2	(3.2)
20-24	-	-	-	(-)	-	-	-	(-)
25-29	-	-	-	(-)	1	2	3	(4.8)
30-34	-	-	-	(-)	-	-	-	(-)
35-39	1	1	2	(1.8)	1	1	2	(3.2)
40-44	-	2	2	(1.8)	-	-	-	(-)
45-49	7	2	9	(7.9)	3	1	4	(6.3)
50-54	7	3	10	(8.8)	3	4	7	(11.1)
55-59	14	5	19	(16.7)	3	-	3	(4.8)
60-64	8	3	11	(9.6)	6	4	10	(15.9)
65-69	9	4	13	(11.4)	8	2	10	(15.9)
70-74	9	5	14	(12.3)	8	2	10	(15.9)
75-79	13	6	19	(16.7)	5	2	7	(11.1)
80-84	9	2	11	(9.6)	1	-	1	(1.6)
85-89	4	-	4	(3.5)	1	-	1	(1.6)
90-94	-	-	-	(-)	-	-	-	(-)
95-	-	-	-	(-)	-	-	-	(-)
total	81	33	114	(100)	45	18	63	(100)
median	67	65	66		66	60.5	63	

5) Initial symptoms

patient number	3,200
no clinical symptoms (medical check-up)	400 (12.5%)
no clinical symptoms (detailed test of brain disease)	96 (3.0%)
subjective symptoms (headache etc)	693 (21.7%)
seizures	243 (7.6%)
focal symptoms	1,554 (48.6%)
intracranial hypertension	245 (7.7%)
disturbance of consciousness	263 (8.2%)
cranial nerve symptoms	154 (4.8%)
hormone degradation · excess	9 (0.3%)
intracerebral hemorrhage	42 (1.3%)
cerebral infarction	3 (0.1%)
others	105 (3.3%)

6) Seizures during the whole treatment

patient number	3,200	(100%)
(+)	547	(17%)
(-)	2,281	(71%)
unknown	372	(12%)

7) Diagnostic methods

patient number	3,200	(100%)
histopathology	1,871	(58%)
diagnostic imaging	1,268	(40%)
cerebrospinal fluid cytology diagnosis	47	(1%)
biochemical test of cerebrospinal fluid or blood	5	(0.2%)
genetic diagnosis	-	(-)
autopsy	1	(0.0%)
others	8	(0.3%)

8) Number of brain metastases

pt. no.	3,200	(100%)
Single	1,731	(54%)
2-4	980	(31%)
5-9	258	(8%)
10-	157	(5%)
LMM	74	(2%)

9) Laterality

patient number	3,200	(100%)
right	1,019	(32%)
left	993	(31%)
across both sides	147	(5%)
on both sides	879	(27%)
central neuroaxis	89	(3%)
others	35	(1%)
unknown	38	(1%)

10) Maximum tumor diameter

Diameter (mm)	1-9	10-19	20-29	30-39	40-49	50-59	60-100	total	Unknown
All brain metastases	103 (3%)	352 (11%)	563 (18%)	664 (21%)	401 (13%)	196 (6%)	135 (4%)	3,200 (100%)	786
lung	69 (5%)	207 (14%)	259 (18%)	274 (19%)	164 (11%)	89 (6%)	57 (4%)	1,476 (100%)	357
breast	16 (3%)	34 (7%)	79 (17%)	105 (23%)	74 (16%)	25 (5%)	24 (5%)	463 (100%)	106
esophagus	3 (4%)	4 (5%)	9 (11%)	15 (18%)	13 (16%)	10 (12%)	9 (11%)	83 (100%)	20
stomach	2 (2%)	8 (8%)	10 (10%)	25 (24%)	16 (15%)	5 (5%)	- (-)	104 (100%)	38
colon	2 (1%)	18 (9%)	39 (20%)	55 (28%)	28 (15%)	5 (3%)	2 (1%)	193 (100%)	44
rectum, anus	- (-)	9 (9%)	15 (16%)	34 (35%)	12 (13%)	7 (7%)	1 (1%)	96 (100%)	18
liver	- (-)	5 (8%)	13 (22%)	13 (22%)	4 (7%)	4 (7%)	4 (7%)	59 (100%)	16
skin (melanoma)	- (-)	4 (15%)	8 (30%)	1 (4%)	5 (19%)	1 (4%)	- (-)	27 (100%)	8
head and neck	- (-)	2 (4%)	4 (8%)	12 (23%)	6 (11%)	8 (15%)	8 (15%)	53 (100%)	13
thyroid	- (-)	2 (4%)	13 (28%)	11 (23%)	5 (11%)	3 (6%)	3 (6%)	47 (100%)	10
bladder	- (-)	2 (11%)	3 (16%)	4 (21%)	3 (16%)	1 (5%)	1 (5%)	19 (100%)	5
uterus	- (-)	4 (5%)	13 (18%)	15 (21%)	8 (11%)	8 (11%)	3 (4%)	73 (100%)	22
ovary	- (-)	5 (8%)	13 (20%)	16 (25%)	12 (19%)	5 (8%)	3 (5%)	64 (100%)	10
kidney	6 (4%)	25 (19%)	32 (24%)	24 (18%)	12 (9%)	3 (2%)	2 (1%)	135 (100%)	31
unknown primary	1 (1%)	9 (8%)	20 (18%)	21 (18%)	12 (11%)	10 (9%)	3 (3%)	114 (100%)	38

11) Other metastases

original cancer	me	none	lung	liver	abdominal organ	lymph node	bone	others	unknown	patient number
All brain metastases		979 (31%)	836 (26%)	339 (11%)	207 (6%)	635 (20%)	491 (15%)	192 (6%)	530 (17%)	3,200
lung		594 (40%)	192 (13%)	71 (5%)	91 (6%)	275 (19%)	180 (12%)	84 (6%)	292 (20%)	1,476
breast		89 (19%)	161 (35%)	84 (18%)	12 (3%)	123 (27%)	153 (33%)	34 (7%)	59 (13%)	463
esophagus		26 (31%)	24 (29%)	10 (12%)	4 (5%)	17 (20%)	6 (7%)	2 (2%)	11 (13%)	83
stomach		20 (19%)	21 (20%)	16 (15%)	13 (13%)	32 (31%)	8 (8%)	8 (8%)	19 (18%)	104
colon		26 (13%)	119 (62%)	64 (33%)	12 (6%)	28 (15%)	20 (10%)	7 (4%)	17 (9%)	193
rectum·anus		12 (13%)	53 (55%)	25 (26%)	7 (7%)	16 (17%)	6 (6%)	3 (3%)	13 (14%)	96
liver		14 (24%)	20 (34%)	9 (15%)	6 (10%)	5 (8%)	12 (20%)	1 (2%)	7 (12%)	59
gall bladder		1 (8%)	3 (23%)	5 (38%)	1 (8%)	3 (23%)	3 (23%)	1 (8%)	2 (15%)	13
pancreas		- (-)	2 (29%)	1 (14%)	3 (43%)	1 (14%)	1 (14%)	- (-)	1 (14%)	7
spleen		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (100%)	- (-)	1
hematopoietic		11 (61%)	1 (6%)	- (-)	- (-)	2 (11%)	2 (11%)	1 (6%)	4 (22%)	18
bone		2 (12%)	9 (53%)	1 (6%)	- (-)	2 (12%)	5 (29%)	- (-)	2 (12%)	17
soft tissue		2 (15%)	11 (85%)	1 (8%)	- (-)	- (-)	1 (8%)	- (-)	- (-)	13
skin		4 (15%)	10 (37%)	4 (15%)	1 (4%)	9 (33%)	4 (15%)	2 (7%)	4 (15%)	27
head and neck		23 (43%)	9 (17%)	4 (8%)	2 (4%)	7 (13%)	8 (15%)	6 (11%)	7 (13%)	53
thyroid		12 (26%)	18 (38%)	2 (4%)	3 (6%)	9 (19%)	11 (23%)	2 (4%)	11 (23%)	47
testis		4 (16%)	18 (72%)	2 (8%)	1 (4%)	8 (32%)	2 (8%)	1 (4%)	1 (4%)	25
bladder		3 (16%)	5 (26%)	1 (5%)	4 (21%)	5 (26%)	3 (16%)	1 (5%)	3 (16%)	19
uterus		14 (19%)	35 (48%)	6 (8%)	5 (7%)	18 (25%)	8 (11%)	5 (7%)	11 (15%)	73
ovary		20 (31%)	9 (14%)	6 (9%)	14 (22%)	19 (30%)	5 (8%)	2 (3%)	8 (13%)	64
kidney		27 (20%)	75 (56%)	11 (8%)	11 (8%)	14 (10%)	24 (18%)	13 (10%)	10 (7%)	135
optical		3 (60%)	1 (20%)	1 (20%)	- (-)	1 (20%)	- (-)	- (-)	1 (20%)	5
lymphatic gland		12 (43%)	3 (11%)	1 (4%)	3 (11%)	10 (36%)	2 (7%)	1 (4%)	2 (7%)	28
nervous tissue		2 (50%)	1 (25%)	- (-)	1 (25%)	1 (25%)	1 (25%)	1 (25%)	- (-)	4
unknown primary		41 (36%)	19 (17%)	9 (8%)	9 (8%)	15 (13%)	14 (12%)	8 (7%)	34 (30%)	114
others		17 (27%)	17 (27%)	5 (8%)	4 (6%)	15 (24%)	12 (19%)	8 (13%)	11 (17%)	63

12) Initial KPS before treatment

Origin/ KPS	0	10	20	30	40	50	60	70	80	90	100	unknown	total
All brain metastases	- (-)	18 (1%)	44 (1%)	59 (2%)	190 (6%)	285 (9%)	349 (11%)	492 (15%)	642 (20%)	629 (20%)	261 (8%)	231 (7%)	3,200 (100%)
lung	- (-)	4 (0.3%)	11 (1%)	23 (2%)	80 (5%)	115 (8%)	152 (10%)	220 (15%)	299 (20%)	323 (22%)	144 (10%)	105 (7%)	1,476 (100%)
breast	- (-)	3 (1%)	9 (2%)	10 (2%)	25 (5%)	43 (9%)	52 (11%)	65 (14%)	101 (22%)	94 (20%)	31 (7%)	30 (6%)	463 (100%)
esophagus	- (-)	1 (1%)	3 (4%)	1 (1%)	5 (6%)	9 (11%)	13 (16%)	20 (24%)	11 (13%)	12 (14%)	1 (1%)	7 (8%)	83 (100%)
stomach	- (-)	- (-)	2 (2%)	2 (2%)	8 (8%)	15 (14%)	12 (12%)	19 (18%)	19 (18%)	15 (14%)	7 (7%)	5 (5%)	104 (100%)
colon	- (-)	2 (1%)	2 (1%)	3 (2%)	15 (8%)	21 (11%)	31 (16%)	38 (20%)	36 (19%)	24 (12%)	13 (7%)	8 (4%)	193 (100%)
rectum • anus	- (-)	1 (1%)	1 (1%)	4 (4%)	4 (4%)	8 (8%)	17 (18%)	13 (14%)	20 (21%)	16 (17%)	5 (5%)	7 (7%)	96 (100%)
liver	- (-)	1 (2%)	3 (5%)	2 (3%)	6 (10%)	7 (12%)	1 (2%)	6 (10%)	9 (15%)	14 (24%)	4 (7%)	6 (10%)	59 (100%)
gall bladder	- (-)	- (-)	- (-)	2 (15%)	1 (8%)	3 (23%)	1 (8%)	2 (15%)	1 (8%)	1 (8%)	1 (8%)	1 (8%)	13 (100%)
pancreas	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (29%)	1 (14%)	1 (14%)	2 (29%)	- (-)	1 (14%)	7 (100%)
spleen	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (100%)	- (-)	- (-)	- (-)	1 (100%)
hematopoietic	- (-)	- (-)	- (-)	1 (6%)	- (-)	1 (6%)	- (-)	3 (17%)	6 (33%)	2 (11%)	4 (22%)	1 (6%)	18 (100%)
bone	- (-)	- (-)	- (-)	- (-)	- (-)	1 (6%)	1 (6%)	3 (18%)	3 (18%)	5 (29%)	3 (18%)	1 (6%)	17 (100%)
soft tissue	- (-)	- (-)	1 (8%)	- (-)	- (-)	- (-)	2 (15%)	1 (8%)	1 (8%)	4 (31%)	1 (8%)	3 (23%)	13 (100%)
skin	- (-)	- (-)	- (-)	- (-)	4 (15%)	3 (11%)	4 (15%)	- (-)	6 (22%)	6 (22%)	1 (4%)	3 (11%)	27 (100%)
head and neck	- (-)	1 (2%)	4 (8%)	1 (2%)	4 (8%)	10 (19%)	2 (4%)	11 (21%)	6 (11%)	9 (17%)	- (-)	5 (9%)	53 (100%)
thyroid	- (-)	- (-)	1 (2%)	2 (4%)	1 (2%)	2 (4%)	1 (2%)	8 (17%)	11 (23%)	12 (26%)	6 (13%)	3 (6%)	47 (100%)
testis	- (-)	- (-)	1 (4%)	- (-)	1 (4%)	5 (20%)	4 (16%)	8 (32%)	2 (8%)	3 (12%)	- (-)	1 (4%)	25 (100%)
bladder	- (-)	- (-)	- (-)	- (-)	1 (5%)	1 (5%)	3 (16%)	1 (5%)	4 (21%)	4 (21%)	1 (5%)	4 (21%)	19 (100%)
uterus	- (-)	1 (1%)	1 (1%)	2 (3%)	5 (7%)	9 (12%)	11 (15%)	10 (14%)	14 (19%)	9 (12%)	5 (7%)	6 (8%)	73 (100%)
ovary	- (-)	- (-)	- (-)	- (-)	2 (3%)	5 (8%)	7 (11%)	14 (22%)	20 (31%)	10 (16%)	5 (8%)	1 (2%)	64 (100%)
kidney	- (-)	1 (1%)	1 (1%)	2 (1%)	13 (10%)	10 (7%)	10 (7%)	23 (17%)	31 (23%)	23 (17%)	9 (7%)	12 (9%)	135 (100%)
optical	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (20%)	- (-)	2 (40%)	2 (40%)	5 (100%)
lymphatic gland	- (-)	- (-)	1 (4%)	1 (4%)	- (-)	2 (7%)	9 (32%)	1 (4%)	5 (18%)	5 (18%)	2 (7%)	2 (7%)	28 (100%)
nervous tissue	- (-)	- (-)	- (-)	- (-)	- (-)	2 (50%)	- (-)	- (-)	1 (25%)	1 (25%)	- (-)	- (-)	4 (100%)
unknown primary	- (-)	1 (1%)	3 (3%)	2 (2%)	13 (11%)	8 (7%)	9 (8%)	16 (14%)	18 (16%)	23 (20%)	6 (5%)	15 (13%)	114 (100%)
others	- (-)	2 (3%)	- (-)	1 (2%)	2 (3%)	5 (8%)	5 (8%)	9 (14%)	15 (24%)	12 (19%)	10 (16%)	2 (3%)	63 (100%)

13) KPS after initial treatment

Origin/ KPS	0	10	20	30	40	50	60	70	80	90	100	unknown	total
All brain metastases	111 (3%)	17 (1%)	28 (1%)	32 (1%)	102 (3%)	210 (7%)	290 (9%)	398 (12%)	596 (19%)	774 (24%)	366 (11%)	276 (9%)	3,200 (100%)
lung	47 (3%)	2 (0.1%)	16 (1%)	12 (1%)	39 (3%)	102 (7%)	126 (9%)	178 (12%)	277 (19%)	373 (25%)	179 (12%)	125 (8%)	1,476 (100%)
breast	16 (3%)	2 (0.4%)	2 (0.4%)	5 (1%)	14 (3%)	20 (4%)	38 (8%)	57 (12%)	89 (19%)	124 (27%)	58 (13%)	38 (8%)	463 (100%)
esophagus	3 (4%)	1 (1%)	3 (4%)	- (-)	2 (2%)	3 (4%)	14 (17%)	10 (12%)	17 (20%)	19 (23%)	4 (5%)	7 (8%)	83 (100%)
stomach	9 (9%)	1 (1%)	- (-)	1 (1%)	4 (4%)	10 (10%)	11 (11%)	13 (13%)	17 (16%)	21 (20%)	10 (10%)	7 (7%)	104 (100%)
colon	4 (2%)	1 (1%)	- (-)	3 (2%)	8 (4%)	14 (7%)	22 (11%)	35 (18%)	41 (21%)	32 (17%)	20 (10%)	13 (7%)	193 (100%)
rectum•anus	2 (2%)	2 (2%)	- (-)	- (-)	3 (3%)	3 (3%)	10 (10%)	16 (17%)	17 (18%)	25 (26%)	8 (8%)	10 (10%)	96 (100%)
liver	2 (3%)	2 (3%)	2 (3%)	1 (2%)	5 (8%)	5 (8%)	5 (8%)	3 (5%)	10 (17%)	12 (20%)	5 (8%)	7 (12%)	59 (100%)
gall bladder	1 (8%)	- (-)	1 (8%)	- (-)	- (-)	1 (8%)	2 (15%)	2 (15%)	2 (15%)	1 (8%)	2 (15%)	1 (8%)	13 (100%)
pancreas	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (29%)	1 (14%)	1 (14%)	2 (29%)	- (-)	1 (14%)	7 (100%)
spleen	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (100%)	- (-)	- (-)	- (-)	1 (100%)
hematopoietic	1 (6%)	- (-)	- (-)	1 (6%)	- (-)	2 (11%)	- (-)	- (-)	6 (33%)	4 (22%)	3 (17%)	1 (6%)	18 (100%)
bone	1 (6%)	- (-)	- (-)	- (-)	- (-)	1 (6%)	1 (6%)	2 (12%)	4 (24%)	5 (29%)	2 (12%)	1 (6%)	17 (100%)
soft tissue	1 (8%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (8%)	1 (8%)	1 (8%)	4 (31%)	2 (15%)	3 (23%)	13 (100%)
skin	- (-)	- (-)	- (-)	- (-)	2 (7%)	4 (15%)	2 (7%)	1 (4%)	3 (11%)	7 (26%)	2 (7%)	6 (22%)	27 (100%)
head and neck	4 (8%)	- (-)	2 (4%)	1 (2%)	1 (2%)	8 (15%)	4 (8%)	7 (13%)	10 (19%)	10 (19%)	1 (2%)	5 (9%)	53 (100%)
thyroid	1 (2%)	1 (2%)	- (-)	1 (2%)	1 (2%)	1 (2%)	1 (2%)	6 (13%)	13 (28%)	13 (28%)	7 (15%)	2 (4%)	47 (100%)
testis	1 (4%)	1 (4%)	- (-)	- (-)	1 (4%)	2 (8%)	2 (8%)	6 (24%)	5 (20%)	5 (20%)	1 (4%)	1 (4%)	25 (100%)
bladder	1 (5%)	- (-)	- (-)	- (-)	- (-)	0 (0%)	2 (11%)	3 (16%)	5 (26%)	4 (21%)	1 (5%)	3 (16%)	19 (100%)
uterus	2 (3%)	- (-)	1 (1%)	- (-)	2 (3%)	5 (7%)	8 (11%)	15 (21%)	10 (14%)	14 (19%)	10 (14%)	6 (8%)	73 (100%)
ovary	1 (2%)	- (-)	- (-)	- (-)	1 (2%)	5 (8%)	6 (9%)	5 (8%)	15 (23%)	19 (30%)	9 (14%)	3 (5%)	64 (100%)
kidney	3 (2%)	- (-)	- (-)	1 (1%)	7 (5%)	7 (5%)	19 (14%)	15 (11%)	27 (20%)	32 (24%)	14 (10%)	10 (7%)	135 (100%)
optical	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (20%)	- (-)	2 (40%)	2 (40%)	5 (100%)
lymphatic gland	4 (14%)	- (-)	- (-)	1 (4%)	2 (7%)	1 (4%)	5 (18%)	1 (4%)	3 (11%)	8 (29%)	1 (4%)	2 (7%)	28 (100%)
nervous tissue	- (-)	1 (25%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (25%)	1 (25%)	1 (25%)	- (-)	4 (100%)
unknown primary	6 (5%)	1 (1%)	1 (1%)	4 (4%)	9 (8%)	10 (9%)	3 (3%)	17 (15%)	9 (8%)	23 (20%)	13 (11%)	18 (16%)	114 (100%)
others	1 (2%)	2 (3%)	- (-)	1 (2%)	1 (2%)	6 (10%)	6 (10%)	4 (6%)	11 (17%)	16 (25%)	11 (17%)	4 (6%)	63 (100%)

14) Initial treatment

patient number	3,200 (100%)
surgery	503 (16%)
surgery + RT	998 (31%)
surgery + CRT	349 (11%)
surgery + CTX	131 (4%)
CRT	217 (7%)
RT	839 (26%)
CT	54 (2%)
observation alone	90 (3%)
others	19 (1%)

15) Initial surgery

patient number	3,200 (100%)
none	1,183 (37%)
decompressive craniectomy	6 (0.2%)
biopsy	125 (4%)
1-50% resection	50 (2%)
50-75% resection	55 (2%)
75-95% resection	134 (4%)
95-99% resection	292 (9%)
100% resection	1,154 (36%)
extended tumor resection	6 (0.2%)
shunt	23 (1%)
drainage	100 (3%)
others	72 (2%)

16) Initial radiotherapy

radiotherapy	none	RT (+)	total	timing of radiotherapy					
				before surgery	intra-operative	after surgery	recurrence	others	unknown
All brain metastases	862 (27%)	2,338 (73%)	3,200 (100%)	382 (12%)	4 (0.1%)	1,188 (37%)	25 (1%)	647 (20%)	647 (20%)
lung	359 (24%)	1,117 (76%)	1,476 (100%)	189 (13%)	3 (0.2%)	503 (34%)	17 (1%)	360 (24%)	45 (3%)
breast	88 (19%)	375 (81%)	463 (100%)	57 (12%)	1 (0.2%)	218 (47%)	- (-)	83 (18%)	16 (3%)
esophagus	20 (24%)	63 (76%)	83 (100%)	11 (13%)	- (-)	38 (46%)	- (-)	11 (13%)	3 (4%)
stomach	38 (37%)	66 (63%)	104 (100%)	7 (7%)	- (-)	43 (41%)	- (-)	13 (13%)	3 (3%)
colon	48 (25%)	145 (75%)	193 (100%)	25 (13%)	- (-)	76 (39%)	1 (1%)	37 (19%)	6 (3%)
rectum • anus	32 (33%)	64 (67%)	96 (100%)	6 (6%)	- (-)	37 (39%)	1 (1%)	18 (19%)	2 (2%)
liver	23 (39%)	36 (61%)	59 (100%)	5 (8%)	- (-)	16 (27%)	- (-)	14 (24%)	1 (2%)
gall bladder	4 (31%)	9 (69%)	13 (100%)	1 (8%)	- (-)	4 (31%)	- (-)	3 (23%)	1 (8%)
pancreas	3 (43%)	4 (57%)	7 (100%)	- (-)	- (-)	1 (14%)	- (-)	3 (43%)	- (-)
spleen	- (-)	1 (100%)	1 (100%)	- (-)	- (-)	- (-)	- (-)	1 (100%)	- (-)
hematopoietic	12 (67%)	6 (33%)	18 (100%)	2 (11%)	- (-)	3 (17%)	- (-)	1 (6%)	- (-)
bone	10 (59%)	7 (41%)	17 (100%)	1 (6%)	- (-)	4 (24%)	- (-)	2 (12%)	- (-)
soft tissue	5 (38%)	8 (62%)	13 (100%)	2 (15%)	- (-)	3 (23%)	1 (8%)	1 (8%)	1 (8%)
skin	9 (33%)	18 (67%)	27 (100%)	6 (22%)	- (-)	8 (30%)	- (-)	2 (7%)	2 (7%)
head and neck	15 (28%)	38 (72%)	53 (100%)	8 (15%)	- (-)	26 (49%)	- (-)	4 (8%)	- (-)
thyroid	21 (45%)	26 (55%)	47 (100%)	4 (9%)	- (-)	17 (36%)	- (-)	4 (9%)	1 (2%)
testis	6 (24%)	19 (76%)	25 (100%)	3 (12%)	- (-)	14 (56%)	1 (4%)	1 (4%)	- (-)
bladder	3 (16%)	16 (84%)	19 (100%)	6 (32%)	- (-)	7 (37%)	- (-)	3 (16%)	- (-)
uterus	23 (32%)	50 (68%)	73 (100%)	8 (11%)	- (-)	31 (42%)	- (-)	11 (15%)	- (-)
ovary	16 (25%)	48 (75%)	64 (100%)	4 (6%)	- (-)	33 (52%)	2 (3%)	8 (13%)	1 (2%)
kidney	40 (30%)	95 (70%)	135 (100%)	23 (17%)	- (-)	34 (25%)	- (-)	34 (25%)	4 (3%)
optical	3 (60%)	2 (40%)	5 (100%)	- (-)	- (-)	- (-)	1 (20%)	- (-)	1 (20%)
lymphatic gland	13 (46%)	15 (54%)	28 (100%)	- (-)	- (-)	9 (32%)	- (-)	6 (21%)	- (-)
nervous tissue	2 (50%)	2 (50%)	4 (100%)	- (-)	- (-)	1 (25%)	- (-)	1 (25%)	- (-)
unknown primary	46 (40%)	68 (60%)	114 (100%)	12 (11%)	- (-)	37 (32%)	- (-)	16 (14%)	3 (3%)
others	23 (37%)	40 (63%)	63 (100%)	2 (3%)	- (-)	25 (40%)	1 (2%)	10 (16%)	2 (3%)

17) Mode of initial radiotherapy

	pt. No.	WBRT	LBRT	WBRT+ LBRT /SRT/SRS	LBRT+ SRT/SRS	SRS/SRT	internal RT	heavy particles irradiation	blank	others
All brain metastases	3,200	786 (25%)	176 (6%)	149 (5%)	9 (0.3%)	1,240 (39%)	2 (0.1%)	3 (0.1%)	814 (25%)	21 (1%)
lung	1,476	364 (25%)	67 (5%)	62 (4%)	3 (0.2%)	638 (43%)	- (-)	- (-)	335 (23%)	7 (0.5%)
breast	463	164 (35%)	28 (6%)	36 (8%)	3 (1%)	145 (31%)	- (-)	- (-)	82 (18%)	5 (1%)
esophagus	83	31 (37%)	3 (4%)	- (-)	- (-)	31 (37%)	- (-)	- (-)	18 (22%)	- (-)
stomach	104	27 (26%)	5 (5%)	4 (4%)	1 (1%)	32 (31%)	- (-)	- (-)	34 (33%)	1 (1%)
colon	193	44 (23%)	9 (5%)	10 (5%)	- (-)	85 (44%)	- (-)	- (-)	45 (23%)	- (-)
rectum • anus	96	15 (16%)	4 (4%)	3 (3%)	- (-)	42 (44%)	- (-)	- (-)	30 (31%)	2 (2%)
liver	59	12 (20%)	4 (7%)	1 (2%)	- (-)	19 (32%)	- (-)	1 (2%)	22 (37%)	- (-)
gall bladder	13	1 (8%)	2 (15%)	- (-)	- (-)	5 (38%)	- (-)	- (-)	4 (31%)	1 (8%)
pancreas	7	- (-)	- (-)	- (-)	- (-)	4 (57%)	- (-)	- (-)	3 (43%)	- (-)
spleen	1	- (-)	- (-)	- (-)	- (-)	1 (100%)	- (-)	- (-)	- (-)	- (-)
hematopoietic	18	4 (22%)	1 (6%)	- (-)	- (-)	1 (6%)	- (-)	- (-)	12 (67%)	- (-)
bone	17	- (-)	1 (6%)	2 (12%)	- (-)	4 (24%)	- (-)	- (-)	10 (59%)	- (-)
soft tissue	13	2 (15%)	1 (8%)	1 (8%)	- (-)	4 (31%)	- (-)	- (-)	5 (38%)	- (-)
skin	27	4 (15%)	3 (11%)	2 (7%)	- (-)	9 (33%)	- (-)	- (-)	9 (33%)	- (-)
head and neck	53	11 (21%)	9 (17%)	2 (4%)	1 (2%)	13 (25%)	- (-)	2 (4%)	15 (28%)	- (-)
thyroid	47	4 (9%)	3 (6%)	1 (2%)	- (-)	14 (30%)	2 (4%)	- (-)	21 (45%)	2 (4%)
testis	25	10 (40%)	2 (8%)	2 (8%)	- (-)	5 (20%)	- (-)	- (-)	6 (24%)	- (-)
bladder	19	9 (47%)	- (-)	1 (5%)	- (-)	6 (32%)	- (-)	- (-)	3 (16%)	- (-)
uterus	73	24 (33%)	6 (8%)	1 (1%)	- (-)	19 (26%)	- (-)	- (-)	22 (30%)	1 (1%)
ovary	64	12 (19%)	6 (9%)	7 (11%)	1 (2%)	22 (34%)	- (-)	- (-)	16 (25%)	- (-)
kidney	135	12 (9%)	4 (3%)	3 (2%)	- (-)	75 (56%)	- (-)	- (-)	39 (29%)	2 (1%)
optical	5	1 (20%)	- (-)	- (-)	- (-)	2 (40%)	- (-)	- (-)	2 (40%)	- (-)
lymphatic gland	28	6 (21%)	3 (11%)	2 (7%)	- (-)	5 (18%)	- (-)	- (-)	12 (43%)	- (-)
nervous tissue	4	- (-)	1 (25%)	- (-)	- (-)	1 (25%)	- (-)	- (-)	2 (50%)	- (-)
unknown primary	114	18 (16%)	7 (6%)	5 (4%)	- (-)	38 (33%)	- (-)	- (-)	46 (40%)	- (-)
others	63	11 (17%)	7 (11%)	4 (6%)	- (-)	20 (32%)	- (-)	- (-)	21 (33%)	- (-)

18) Any therapy during the whole treatment

mode of therapy	patient number	surgery	WBRT	LBRT	SRS/SRT	particle beam therapy	CTX	molecular targeting drug	immuno-therapy	steroid	anti-convulsants
All brain metastases	3,200	1,835 (57%)	948 (30%)	279 (9%)	1,307 (41%)	4 (0.1%)	539 (17%)	158 (5%)	13 (0.4%)	1,430 (45%)	1,028 (32%)
lung	1,476	776 (53%)	440 (30%)	115 (8%)	642 (43%)	1 (0.1%)	246 (17%)	85 (6%)	1 (0.1%)	675 (46%)	476 (32%)
breast	463	290 (63%)	196 (42%)	37 (8%)	194 (42%)	- (-)	79 (17%)	41 (9%)	3 (0.6%)	203 (44%)	162 (35%)
esophagus	83	55 (66%)	30 (36%)	5 (6%)	26 (31%)	- (-)	9 (11%)	- (-)	- (-)	38 (46%)	31 (37%)
stomach	104	63 (61%)	27 (26%)	6 (6%)	35 (34%)	- (-)	21 (20%)	- (-)	- (-)	47 (45%)	24 (23%)
colon	193	116 (60%)	62 (32%)	22 (11%)	93 (48%)	- (-)	30 (16%)	5 (3%)	2 (1%)	100 (52%)	60 (31%)
rectum·anus	96	58 (60%)	19 (20%)	11 (11%)	45 (47%)	- (-)	15 (16%)	1 (1%)	2 (2%)	42 (44%)	28 (29%)
liver	59	34 (58%)	12 (20%)	7 (12%)	20 (34%)	1 (1.7%)	6 (10%)	1 (2%)	- (-)	13 (22%)	12 (20%)
gall bladder	13	8 (62%)	1 (8%)	2 (15%)	3 (23%)	- (-)	1 (8%)	- (-)	- (-)	1 (8%)	- (-)
pancreas	7	2 (29%)	- (-)	- (-)	5 (71%)	- (-)	- (-)	- (-)	- (-)	3 (43%)	3 (43%)
spleen	1	- (-)	- (-)	- (-)	1 (100%)	- (-)	- (-)	1 (100%)	- (-)	- (-)	- (-)
hematopoietic	18	13 (72%)	6 (33%)	3 (17%)	1 (6%)	- (-)	15 (83%)	2 (11%)	- (-)	7 (39%)	7 (39%)
bone	17	13 (76%)	2 (12%)	2 (12%)	3 (18%)	- (-)	3 (18%)	- (-)	1 (6%)	6 (35%)	5 (29%)
soft tissue	13	10 (77%)	3 (23%)	2 (15%)	2 (15%)	- (-)	2 (15%)	- (-)	- (-)	5 (38%)	3 (23%)
skin	27	16 (59%)	6 (22%)	2 (7%)	9 (33%)	- (-)	10 (37%)	- (-)	2 (7%)	15 (56%)	13 (48%)
head and neck	53	38 (72%)	8 (15%)	10 (19%)	17 (32%)	1 (2%)	13 (25%)	2 (4%)	- (-)	24 (45%)	21 (40%)
thyroid	47	34 (72%)	8 (17%)	7 (15%)	17 (36%)	- (-)	- (-)	- (-)	- (-)	18 (38%)	8 (17%)
testis	25	18 (72%)	13 (52%)	4 (16%)	5 (20%)	- (-)	9 (36%)	1 (4%)	- (-)	9 (36%)	10 (40%)
bladder	19	10 (53%)	8 (42%)	1 (5%)	6 (32%)	- (-)	1 (5%)	- (-)	- (-)	10 (53%)	7 (37%)
uterus	73	48 (66%)	28 (38%)	5 (7%)	17 (23%)	- (-)	13 (18%)	2 (3%)	- (-)	33 (45%)	24 (33%)
ovary	64	45 (70%)	19 (30%)	10 (16%)	33 (52%)	- (-)	16 (25%)	- (-)	- (-)	37 (58%)	30 (47%)
kidney	135	64 (47%)	14 (10%)	5 (4%)	68 (50%)	- (-)	16 (12%)	10 (7%)	2 (1%)	53 (39%)	41 (30%)
optical	5	3 (60%)	- (-)	- (-)	1 (20%)	- (-)	3 (60%)	- (-)	- (-)	1 (20%)	1 (20%)
lymphatic gland	28	19 (68%)	9 (32%)	4 (14%)	5 (18%)	- (-)	15 (54%)	4 (14%)	- (-)	12 (43%)	6 (21%)
nervous tissue	4	2 (50%)	- (-)	- (-)	1 (25%)	1 (25%)	1 (25%)	- (-)	- (-)	1 (25%)	1 (25%)
unknown primary	114	62 (54%)	23 (20%)	11 (10%)	35 (31%)	- (-)	7 (6%)	2 (2%)	- (-)	52 (46%)	33 (29%)
others	63	38 (60%)	14 (22%)	8 (13%)	23 (37%)	- (-)	8 (13%)	1 (2%)	- (-)	25 (40%)	22 (35%)

19) Overall survival and progression free survival

	total	Overall survival										Progression free survival									
		event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)		
All brain metastases	3,200	1,536	131	0	18	58.2	40.8	32.1	27.1	23.9	1,027	131	0	19	59.5	43.1	37.2	34.6	32.6		
lung	1,476	693	131	0	18	59.2	40.5	32.5	26.9	23.9	472	126.1	0	19	58.5	43.7	36.8	32.7	31.3		
adenocarcinoma	826	387	131	0	22	65	46.5	37.8	31.4	27.9	270	126.1	0	23	63.1	47.8	41.3	36.5	35		
squamous cell carcinoma	158	81	113	0	13	50.6	30.9	22.4	20.1	17.6	53	110.1	0	18	52	39.9	29.3	24.4	19.5		
small cell carcinoma	152	80	125.1	0	13.1	53.5	22.7	19.2	12	9	58	125.1	0	11	43.8	25.9	12.9	12.9	12.9		
breast	463	234	119	0	21	65.3	45.9	32.2	26.1	22.4	174	108.1	0	18	60.9	41	32.3	29.5	27.2		
esophagus	83	41	112	0	10	49.2	26.7	23.4	19.5	19.5	21	112	0	NR	59.1	50.1	50.1	50.1	50.1		
stomach	104	48	114.1	0	12	49.6	33	29.3	24.4	18.3	21	114.1	0	19	70.2	48.2	38.6	38.6	38.6		
colon	193	113	107	0	10	40.4	25.7	14.9	9.6	9.6	73	107	0	9	43.1	21.9	19.5	19.5	19.5		
rectum·anus	96	48	126.1	0	10	41.6	22.9	18.3	18.3	18.3	30	126.1	0	13	52.2	22.4	22.4	22.4	22.4		
liver	59	36	114.1	0	6	27.9	24.4	16.8	11.2	11.2	13	114.1	0	17	54.4	45.4	36.3	36.3	36.3		
gall bladder	13	6	38	0	7	46.7	23.3	23.3	ND	ND	0	38	0	NR	100	100	100	ND	ND		
pancreas	7	3	7	0	5	ND	ND	ND	ND	ND	1	7	0	NR	ND	ND	ND	ND	ND		
spleen	1	1	17	17	17	100	0	0	0	0	1	12	12	12	0	0	0	0	0		
hematopoietic	18	6	115.1	1	102.1	69.1	59.3	59.3	59.3	59.3	5	115.1	1	72.1	60.8	60.8	60.8	60.8	60.8		
bone	17	7	84.1	0	11.1	42.9	21.4	21.4	21.4	21.4	7	84.1	0	17	50.8	25.4	25.4	25.4	25.4		
soft tissue	13	8	84.1	0.9	28	50.8	50.8	40.6	40.6	27.1	6	84.1	0	11	41	41	41	41	41		
skin	27	15	112.1	0	10	48.1	28.8	19.2	19.2	9.6	11	112.1	0	7	49.1	24.6	24.6	24.6	24.6		
head and neck	53	25	119	0	38	64.1	52.4	52.4	44.6	29.7	18	119	0	23	64	47.4	47.4	42.1	26.3		
thyroid	47	18	125.1	0	51	82.6	64.2	56.2	51.1	39.7	21	106.1	0	22.1	68.6	43.7	32.8	26.2	26.2		
testis	25	12	117	0	18	59.7	41.4	41.4	41.4	41.4	7	117	0	26	85	59.5	49.6	49.6	49.6		
bladder	19	9	19	0	15	59.3	0	0	0	0	7	19	0	5	31.7	ND	ND	ND	ND		
uterus	73	36	117.1	0	14	52.5	35.7	33	29.7	26.4	22	115	0	NR	62.8	50.8	50.8	50.8	50.8		
ovary	64	30	112	0	26	71.7	51.4	40.4	40.4	36.3	23	98.1	0	21	66.7	41.1	41.1	41.1	41.1		
kidney	135	58	131	0	32	62.7	56.4	46.2	36.9	36.9	42	131	0	29	67.8	56.7	46.6	46.6	43.3		
optical	5	1	81	1	NR	75	75	75	75	75	2	52	1	29	66.7	66.7	33.3	33.3	ND		
lymphatic gland	28	11	104.1	0	22	55	47.1	37.7	37.7	37.7	5	104.1	0	NR	66.1	66.1	66.1	66.1	66.1		
nervous tissue	4	2	124.1	5	40.1	75	75	75	37.5	37.5	3	75.1	1	22	75	37.5	37.5	37.5	37.5		
unknown primary	114	42	108.1	0	15.9	58.6	41.7	29.5	29.5	21.5	22	108.1	0	21	66.3	49.8	44.2	44.2	35.4		
others	63	33	100.1	0	24	69.3	48.4	35.2	28.8	25.2	20	100.1	0	55	61.4	50.8	50.8	50.8	43.6		

20) Outcome at investigation

patient number	3,200 (100%)
alive	268 (9%)
dead	1,536 (53%)
unknown	1,396 (48%)

21) Pattern of recurrence at investigation

patient number	3,200 (100%)
none	1,209 (42%)
local recurrence	429 (15%)
new lesions	598 (21%)
unknown	964 (33%)

22) Overall survival and progression free survival depending on number of tumors

	total	Overall survival					Progression free survival				
		event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
All brain metastases	3,200	1,536	131	0	18	23.9	1,027	131	0	19	32.6
single	1,731	775	131	0	23	30.3	557	131	0	23	37.3
2-4	980	485	115.1	0	15	16.8	331	115.1	0	14	26.1
5-9	258	139	111.1	0	10	12.2	84	92.1	0	11	16.4
10-	157	88	124.1	0	8	10.5	45	107	0	15	14
LMM	74	49	119	0	4.9	9.3	10	119	0	17	38.3

23) Overall survival and progression free survival depending on mode of radiotherapy

	total	Overall survival					Progression free survival				
		event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
WBRT	786	459	121.1	0	14	18.7	221	121.1	0	23	41.2
WBRT + SRS/SRT	149	87	115.1	0	16	15.1	49	115.1	0	20	38.7
LBRT	176	87	131	0	25	25.9	50	124.1	0	73	50.8
LBRT + SRS/SRT	9	6	49	1	24	ND	7	19	1	9	0
SRS/SRT	1,240	558	131	0	19	24.3	490	131	0	13	21.3
internal radiation therapy	2	0	29	12	NR	ND	1	12	1.9	NR	ND
particle beam irradiation	3	2	70	19	51	33.3	3	49	17	19	0

24) Overall survival and progression free survival depending on initial treatment

		total	Overall survival					Progression free survival				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
All brain metastases	surgery	503	173	125.1	0.0	28.0	41.9	129	114.1	0.0	29.0	40.2
	surgery + RT	998	515	131.0	0.0	18.0	23.1	340	131.0	0.0	20.0	34.6
	surgery + CRT	349	199	124.1	0.0	22.0	26.6	145	124.1	0.0	18.0	35.4
	surgery + CTX	131	78	114.1	0.0	17.1	22.2	45	114.1	0.0	23.0	42.9
	CRT	217	139	107.0	0.0	12.0	14.1	94	107.0	0.0	16.0	16.2
	RT alone	839	364	126.1	0.0	16.0	18.5	256	125.1	0.0	15.9	24.8
	*WBRT alone	118	60	89.1	0.0	11.0	10.7	22	73.1	0.0	24.0	40.5
	*SRS/SRT alone	650	260	126.1	0.0	17.0	22.5	214	125.1	0.0	14.0	23.8
	CTX	54	29	112.0	0.0	4.0	23.6	10	98.1	0.0	29.0	20.9
	observation alone	90	30	89.1	0.0	5.0	19.2	6	89.1	0.0	NR	68.5
Lung ALL	surgery	200	69	116.0	0.0	21.0	37.8	50	109.1	0.0	23.0	38.7
	surgery + RT	428	193	131.0	0.0	22.0	28.4	144	126.1	0.0	22.0	35.0
	surgery + CRT	154	90	124.1	0.0	21.0	24.0	67	124.1	0.0	17.0	30.5
	surgery + CTX	51	29	114.1	1.0	20.0	19.7	18	114.1	0.0	23.0	37.2
	CRT	118	79	103.0	0.0	13.1	14.1	50	92.1	0.0	17.0	16.4
	RT alone	453	205	125.1	0.0	15.1	20.6	139	125.1	0.0	16.0	27.4
	*WBRT alone	74	37	89.1	0.0	11.0	15.2	12	73.1	0.0	24.0	48.2
	*SRS/SRT alone	345	146	125.1	0.0	19.0	23.4	121	125.1	0.0	15.1	24.2
	CTX	19	11	43.0	0.0	3.0	ND	2	43.0	0.0	29.0	ND
	observation alone	47	14	25.0	0.0	7.1	0.0	2	25.0	0.0	ND	ND
Lung adenocarcinoma	surgery	103	35	109.1	0.0	33.1	44.4	25	109.1	0.0	35.0	42.0
	surgery + RT	257	112	131.0	0.0	28.0	30.9	83	126.1	0.0	27.0	38.1
	surgery + CRT	89	53	124.1	0.0	23.0	27.0	42	124.1	0.0	17.0	32.9
	surgery + CTX	33	18	114.1	1.0	25.0	26.6	9	114.1	1.0	NR	51.0
	CRT	65	45	103.0	0.0	17.0	19.1	29	92.1	0.0	19.0	17.8
	RT alone	251	112	112.1	0.0	20.0	24.9	81	90.0	0.0	21.1	31.5
	*WBRT alone	34	21	89.1	0.0	12.0	18.4	6	73.1	0.0	NR	68.3
	*SRS/SRT alone	203	82	112.1	0.0	22.0	27.5	72	90.0	0.0	18.1	27.2
	CTX	8	5	43.0	0.0	1.0	ND	0	43.0	0.0	ND	ND
	observation alone	17	5	25.0	0.0	12.0	0.0	1	25.0	0.0	ND	ND
Lung squamous cell carcinoma	surgery	25	7	97.1	0.0	16.0	33.2	7	95.1	0.0	NR	50.4
	surgery + RT	58	25	113.0	1.0	21.0	31.2	21	110.1	0.0	25.1	19.8
	surgery + CRT	18	12	95.0	2.0	14.0	15.9	8	26.0	0.0	18.0	0.0
	surgery + CTX	7	5	13.0	2.0	8.1	0.0	3	11.0	1.0	11.0	0.0
	CRT	14	10	12.0	0.0	5.0	0.0	7	6.0	0.0	5.0	ND
	RT alone	35	22	33.1	0.0	7.0	0.0	7	25.1	0.0	20.0	ND
	*WBRT alone	6	4	33.1	0.0	9.0	0.0	1	24.0	0.0	24.0	0.0
	*SRS/SRT alone	24	14	25.1	0.0	7.0	0.0	4	25.1	0.0	20.0	ND
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	1	0	1.0	1.0	ND	ND	0	1.0	1.0	ND	ND
Lung small cell carcinoma	surgery	22	2	29.0	0.0	ND	ND	4	29.0	0.0	23.0	0.0
	surgery + RT	41	22	56.0	0.0	14.0	ND	15	56.0	0.0	14.0	ND
	surgery + CRT	17	11	78.0	2.0	23.0	10.1	8	78.0	1.0	11.1	17.8
	surgery + CTX	3	2	49.0	1.0	28.6	0.0	1	35.0	1.0	35.0	0.0
	CRT	14	10	24.0	1.0	9.0	0.0	6	15.0	1.0	8.0	ND
	RT alone	50	30	125.1	0.0	13.0	10.7	23	125.1	0.0	9.1	26.2
	*WBRT alone	8	4	46.0	1.0	15.1	ND	3	10.0	1.0	10.0	ND
	*SRS/SRT alone	37	22	125.1	0.0	13.0	9.1	19	125.1	0.0	7.0	24.2
	CTX	1	0	0.0	0.0	ND	ND	0	0.0	0.0	ND	ND
	observation alone	4	3	8.0	0.0	7.1	0.0	1	7.1	0.0	ND	ND

		total	Overall survival					Progression free survival				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
Breast	surgery	48	16	107.1	0.0	66.0	52.6	12	107.1	0.0	29.0	36.8
	surgery + RT	179	92	119.0	0.0	19.0	24.1	64	108.1	0.0	18.0	29.6
	surgery + CRT	73	47	94.1	0.0	25.0	17.1	33	94.1	0.0	19.0	39.4
	surgery + CTX	21	12	97.1	0.0	17.0	29.1	7	97.1	0.0	11.1	49.0
	CRT	29	20	107.0	1.0	14.0	13.4	18	107.0	1.0	13.0	7.1
	RT alone	100	44	113.1	0.0	20.0	16.3	37	41.0	0.0	13.0	0.0
	*WBRT alone	19	12	22.0	0.0	15.9	0.0	6	21.0	0.0	5.0	ND
	*SRS/SRT alone	62	18	113.1	0.0	28.0	37.2	25	34.0	0.0	15.0	0.0
	CTX	4	1	111.1	1.0	NR	50.0	2	56.1	1.0	32.0	0.0
	observation alone	6	1	1.0	0.0	ND	ND	1	1.0	0.0	ND	ND
Esophagus	surgery	15	7	31.1	0.0	10.0	0.0	4	31.1	0.0	20.0	ND
	surgery + RT	38	22	93.0	0.0	14.0	19.7	10	93.0	0.0	NR	54.0
	surgery + CRT	4	1	112.0	2.0	NR	75.0	1	112.0	1.0	NR	75.0
	surgery + CTX	1	1	5.0	5.0	5.0	0.0	1	3.0	3.0	3.0	0.0
	CRT	5	3	4.0	1.0	4.0	0.0	0	4.0	1.0	ND	ND
	RT alone	17	4	17.0	0.0	17.0	0.0	5	16.0	0.0	5.0	ND
	*WBRT alone	2	1	2.0	0.0	2.0	0.0	1	2.0	0.0	2.0	0.0
	*SRS/SRT alone	15	3	17.0	0.0	17.0	0.0	4	16.0	0.0	5.0	ND
	CTX	1	1	0.0	0.0	0.0	0.0	0	0.0	0.0	ND	ND
	observation alone	2	2	2.0	1.0	1.5	0.0	0	2.0	1.0	ND	ND
Stomach	surgery	24	6	29.1	0.0	ND	ND	2	29.1	0.0	17.0	ND
	surgery + RT	32	19	101.1	0.0	13.1	6.9	6	40.1	0.0	NR	ND
	surgery + CRT	15	8	114.1	0.0	18.0	30.5	3	114.1	0.0	NR	55.4
	surgery + CTX	4	3	6.0	0.0	3.5	0.0	1	6.0	1.0	6.0	0.0
	CRT	5	3	39.0	1.9	ND	ND	2	31.0	0.9	31.0	0.0
	RT alone	18	6	43.1	0.0	8.1	ND	6	43.1	0.0	11.0	ND
	*WBRT alone	1	1	2.0	2.0	2.0	0.0	0	0.0	0.0	ND	ND
	*SRS/SRT alone	15	4	43.1	0.0	NR	ND	4	43.1	0.0	11.0	ND
	CTX	1	1	3.0	3.0	3.0	0.0	0	3.0	3.0	ND	ND
	observation alone	5	2	3.0	0.0	3.0	0.0	1	3.0	0.0	3.0	0.0
Colon	surgery	27	10	99.1	0.0	22.1	22.9	11	45.0	0.0	5.0	ND
	surgery + RT	70	51	87.0	0.0	9.0	4.9	31	85.0	0.0	9.0	22.5
	surgery + CRT	14	10	105.1	1.0	10.0	22.6	4	17.0	1.0	17.0	0.0
	surgery + CTX	9	8	107.0	3.0	9.0	11.1	5	107.0	1.0	14.0	21.6
	CRT	9	6	24.0	0.0	9.0	ND	5	17.0	0.0	8.0	0.0
	RT alone	57	24	39.0	0.0	10.0	0.0	16	39.0	0.0	10.1	ND
	*WBRT alone	3	1	7.0	1.0	ND	ND	0	7.0	1.0	ND	ND
	*SRS/SRT alone	51	22	36.0	0.0	9.0	0.0	15	25.0	0.0	10.1	ND
	CTX	2	2	40.0	3.0	21.5	0.0	1	18.1	3.0	18.1	0.0
	observation alone	4	2	6.0	0.0	6.0	0.0	0	6.0	0.0	ND	ND
Rectum Anus	surgery	18	6	48.0	0.0	10.1	ND	7	18.0	0.0	13.0	0.0
	surgery + RT	29	15	126.1	0.0	10.0	29.1	10	126.1	0.0	14.0	32.4
	surgery + CRT	11	9	19.0	1.0	12.5	0.0	5	16.0	1.0	7.0	0.0
	surgery + CTX	5	5	26.0	9.0	17.1	0.0	2	21.1	2.0	21.1	0.0
	CRT	2	0	2.0	2.0	ND	ND	0	2.0	1.0	ND	ND
	RT	23	9	98.1	0.0	8.1	11.3	5	98.1	0.0	11.0	20.8
	*WBRT	1	0	3.0	3.0	ND	ND	0	3.0	3.0	ND	ND
	*SRS/SRT	20	8	98.1	0.0	7.0	11.4	4	98.1	0.0	NR	25.0
	CTX	5	4	2.0	0.0	1.0	0.0	1	2.0	0.0	ND	ND
	observation alone	3	0	89.1	0.0	NR	100	0	89.1	0.0	NR	100

		total	Overall survival					Progression free survival				
			event	max	min	med	5-y (%)	event	max	min	med	5-y (%)
Liver	surgery	16	8	114.1	0.0	12.0	27.9	1	114.1	0.0	NR	80.0
	surgery + RT	17	13	37.0	1.0	7.0	0.0	5	37.0	1.0	10.0	ND
	surgery + CRT	2	0	16.0	9.0	ND	ND	1	9.0	2.0	ND	ND
	surgery + CTX	1	1	4.0	4.0	4.0	0.0	0	4.0	4.0	ND	ND
	CRT	3	2	2.0	1.0	2.0	ND	1	2.0	1.0	ND	ND
	RT	15	9	19.0	0.0	4.0	0.0	4	17.0	0.0	4.0	0.0
	*WBRT	4	3	6.0	0.9	3.0	0.0	0	6.0	0.9	ND	ND
	*SRS/SRT	10	5	8.0	0.0	4.0	0.0	3	4.0	0.0	2.0	0.0
	CTX	1	1	0.0	0.0	0.0	0.0	0	0.0	0.0	ND	ND
	observation alone	2	1	2.0	1.0	2.0	0.0	0	2.0	1.0	ND	ND
Head and Neck	surgery	9	1	50.0	0.0	ND	ND	2	50.0	0.0	ND	ND
	surgery + RT	17	9	119.0	0.0	14.0	30.1	6	119.0	0.0	NR	25.0
	surgery + CRT	12	8	77.1	3.0	38.0	27.0	7	49.0	0.0	11.0	0.0
	surgery + CTX	2	2	54.0	1.0	27.5	0.0	1	23.0	1.0	23.0	0.0
	CRT	6	4	43.1	0.9	16.0	0.0	1	43.1	0.9	ND	ND
	RT	5	1	1.0	0.0	ND	ND	1	1.0	0.0	ND	ND
	*WBRT	1	0	0.9	0.9	ND	ND	0	0.9	0.9	ND	ND
	*SRS/SRT	3	0	1.0	0.0	ND	ND	1	1.0	0.0	1.0	0.0
	CTX	0	0	-	-	-	-	0	-	-	-	-
	observation alone	2	0	80.1	1.9	NR	100	0	80.1	1.9	NR	100
Kidney	surgery	25	8	104.1	1.0	38.0	49.2	6	104.1	1.0	NR	61.2
	surgery + RT	32	20	131.0	0.0	32.0	35.9	8	131.0	0.0	NR	53.3
	surgery + CRT	12	3	108.1	3.0	NR	66.7	8	108.1	0.0	16.0	22.9
	surgery + CTX	6	2	80.0	1.0	10.0	37.5	1	80.0	0.0	NR	83.3
	CRT	10	7	20.1	1.0	7.0	0.0	2	17.0	1.0	17.0	ND
	RT	46	16	126.1	0.0	31.0	31.1	17	107.1	0.0	14.0	27.9
	*WBRT	1	0	2.0	2.0	ND	ND	0	2.0	2.0	ND	ND
	*SRS/SRT	44	15	126.1	0.0	31.0	32.3	17	107.1	0.0	14.0	27.8
	CTX	1	1	8.0	8.0	8.0	0.0	0	8.0	8.0	ND	ND
	observation alone	3	1	4.0	0.0	ND	ND	0	0.0	0.0	ND	ND
Unknown primary	surgery	30	13	108.1	0.0	14.0	42.5	4	108.1	0.0	57.1	47.9
	surgery + RT	30	8	64.0	0.0	25.1	22.2	7	64.0	0.0	NR	55.5
	surgery + CRT	5	2	90.0	0.9	15.9	33.3	1	90.0	0.9	NR	50.0
	surgery + CTX	2	1	6.0	1.0	6.0	0.0	0	6.0	1.0	ND	ND
	CRT	6	6	55.0	3.0	32.5	0.0	5	21.0	0.0	7.0	0.0
	RT	27	10	34.1	0.0	10.1	0.0	5	29.0	0.0	14.0	0.0
	*WBRT	4	2	2.0	0.0	2.0	0.0	0	1.0	0.0	ND	ND
	*SRS/SRT	22	8	34.1	0.0	10.1	0.0	5	29.0	0.0	14.0	0.0
	CTX	5	0	2.0	0.0	ND	ND	0	1.0	0.0	ND	ND
	observation alone	6	1	3.0	0.0	3.0	0.0	0	3.0	0.0	ND	ND

25) Cause of death

	neuronal death except pneumonia and LMM	neuronal death with pneumonia	LMM	TRD except pneumoniae	TRD (pneumoniae)	primary cancer	accident or other disease	others	unknown	number of death
All brain metastases	128 (8%)	110 (7%)	108 (7%)	32 (2%)	70 (5%)	875 (57%)	16 (1%)	24 (2%)	173 (11%)	1,536 (100%)
lung	46 (7%)	48 (7%)	44 (6%)	9 (1%)	37 (5%)	422 (61%)	4 (0.6%)	10 (1%)	73 (11%)	693 (100%)
breast	20 (9%)	12 (5%)	32 (14%)	2 (1%)	7 (3%)	137 (59%)	2 (0.9%)	- (-)	22 (9%)	234 (100%)
esophagus	4 (10%)	2 (5%)	3 (7%)	- (-)	1 (2%)	24 (59%)	1 (2.4%)	1 (2%)	5 (12%)	41 (100%)
stomach	4 (8%)	5 (10%)	6 (13%)	1 (2%)	2 (4%)	19 (40%)	- (-)	1 (2%)	10 (21%)	48 (100%)
colon	6 (5%)	6 (5%)	2 (2%)	3 (3%)	3 (3%)	73 (65%)	1 (0.9%)	5 (4%)	14 (12%)	113 (100%)
rectum•anus	6 (13%)	4 (8%)	2 (4%)	1 (2%)	4 (8%)	24 (50%)	- (-)	- (-)	7 (15%)	48 (100%)
liver	- (-)	5 (14%)	1 (3%)	1 (3%)	- (-)	25 (69%)	2 (5.6%)	- (-)	2 (6%)	36 (100%)
gall bladder	1 (17%)	- (-)	- (-)	- (-)	1 (17%)	3 (50%)	- (-)	- (-)	1 (17%)	6 (100%)
pancreas	1 (33%)	- (-)	- (-)	- (-)	- (-)	1 (33%)	- (-)	- (-)	1 (33%)	3 (100%)
spleen	- (-)	1 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (100%)
hematopoietic	- (-)	- (-)	1 (17%)	1 (17%)	1 (17%)	1 (17%)	- (-)	1 (17%)	1 (17%)	6 (100%)
bone	1 (14%)	1 (14%)	- (-)	- (-)	- (-)	4 (57%)	1 (14.3%)	- (-)	- (-)	7 (100%)
soft tissue	2 (25%)	2 (25%)	- (-)	1 (13%)	- (-)	2 (25%)	- (-)	- (-)	1 (13%)	8 (100%)
skin	4 (27%)	3 (20%)	2 (13%)	- (-)	- (-)	4 (27%)	1 (6.7%)	- (-)	1 (7%)	15 (100%)
head and neck	6 (24%)	4 (16%)	- (-)	2 (8%)	- (-)	11 (44%)	- (-)	- (-)	2 (8%)	25 (100%)
thyroid	4 (22%)	- (-)	2 (11%)	- (-)	- (-)	7 (39%)	- (-)	1 (6%)	4 (22%)	18 (100%)
testis	1 (8%)	2 (17%)	1 (8%)	- (-)	1 (8%)	4 (33%)	- (-)	- (-)	3 (25%)	12 (100%)
bladder	1 (11%)	- (-)	- (-)	1 (11%)	- (-)	6 (67%)	- (-)	- (-)	1 (11%)	9 (100%)
uterus	3 (8%)	2 (6%)	3 (8%)	1 (3%)	1 (3%)	20 (56%)	1 (2.8%)	1 (3%)	4 (11%)	36 (100%)
ovary	3 (10%)	- (-)	- (-)	2 (7%)	1 (3%)	17 (57%)	- (-)	- (-)	7 (23%)	30 (100%)
kidney	6 (10%)	2 (3%)	3 (5%)	1 (2%)	5 (9%)	33 (57%)	1 (1.7%)	2 (3%)	5 (9%)	58 (100%)
optical	- (-)	- (-)	- (-)	1 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (100%)
lymphatic gland	- (-)	- (-)	2 (18%)	1 (9%)	3 (27%)	2 (18%)	1 (9.1%)	- (-)	2 (18%)	11 (100%)
nervous tissue	1 (50%)	- (-)	- (-)	- (-)	- (-)	1 (50%)	- (-)	- (-)	- (-)	2 (100%)
unknown primary	6 (14%)	8 (19%)	3 (7%)	1 (2%)	- (-)	16 (38%)	1 (2.4%)	1 (2%)	6 (14%)	42 (100%)
others	2 (6%)	3 (9%)	1 (3%)	3 (9%)	3 (9%)	19 (58%)	- (-)	1 (3%)	1 (3%)	33 (100%)

26) Place of death

	hospital with NSD	hospital without NSD	hospice	nursing home	home	others	unknown	number of death
All brain metastases	1,142 (74%)	114 (7%)	114 (7%)	6 (0.4%)	42 (3%)	1 (0.1%)	117 (8%)	1,536 (100%)
lung	521 (75%)	52 (8%)	56 (8%)	1 (0.1%)	12 (2%)	- (-)	51 (7%)	693 (100%)
breast	174 (74%)	12 (5%)	20 (9%)	1 (0.4%)	13 (6%)	- (-)	14 (6%)	234 (100%)
esophagus	28 (68%)	3 (7%)	4 (10%)	1 (2%)	2 (5%)	- (-)	3 (7%)	41 (100%)
stomach	37 (77%)	3 (6%)	3 (6%)	- (-)	1 (2%)	- (-)	4 (8%)	48 (100%)
colon	84 (74%)	9 (8%)	4 (4%)	- (-)	3 (3%)	1 (1%)	12 (11%)	113 (100%)
rectum·anus	35 (73%)	4 (8%)	8 (17%)	- (-)	1 (2%)	- (-)	- (-)	48 (100%)
liver	27 (75%)	4 (11%)	2 (6%)	- (-)	1 (3%)	- (-)	2 (6%)	36 (100%)
gall bladder	4 (67%)	2 (33%)	- (-)	- (-)	- (-)	- (-)	0 (0%)	6 (100%)
pancreas	2 (67%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (33%)	3 (100%)
spleen	1 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (100%)
hematopoietic	6 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	6 (100%)
bone	6 (86%)	- (-)	- (-)	- (-)	1 (14%)	- (-)	- (-)	7 (100%)
soft tissue	6 (75%)	1 (13%)	- (-)	- (-)	- (-)	- (-)	1 (13%)	8 (100%)
skin	12 (80%)	1 (7%)	1 (7%)	- (-)	1 (7%)	- (-)	- (-)	15 (100%)
head and neck	20 (80%)	2 (8%)	1 (4%)	- (-)	1 (4%)	- (-)	1 (4%)	25 (100%)
thyroid	12 (67%)	1 (6%)	2 (11%)	- (-)	- (-)	- (-)	3 (17%)	18 (100%)
testis	7 (58%)	2 (17%)	- (-)	- (-)	- (-)	- (-)	3 (25%)	12 (100%)
bladder	6 (67%)	- (-)	1 (11%)	- (-)	- (-)	- (-)	2 (22%)	9 (100%)
uterus	28 (78%)	2 (6%)	3 (8%)	- (-)	- (-)	- (-)	3 (8%)	36 (100%)
ovary	18 (60%)	4 (13%)	2 (7%)	1 (3%)	- (-)	- (-)	5 (17%)	30 (100%)
kidney	43 (74%)	5 (9%)	3 (5%)	2 (3%)	2 (3%)	- (-)	3 (5%)	58 (100%)
optical	1 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (100%)
lymphatic gland	10 (91%)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (9%)	11 (100%)
nervous tissue	2 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (100%)
unknown primary	29 (69%)	4 (10%)	1 (2%)	- (-)	3 (7%)	- (-)	5 (12%)	42 (100%)
others	23 (70%)	3 (9%)	3 (9%)	- (-)	1 (3%)	- (-)	3 (9%)	33 (100%)

27) Autopsy

Autopsy	(-)	(+)	unknown	death
All brain metastases	979 (64%)	31 (2%)	526 (34%)	1,536 (100%)
lung	562 (81%)	21 (3%)	110 (16%)	693 (100%)
breast	196 (84%)	3 (1%)	35 (15%)	234 (100%)
esophagus	35 (85%)	- (-)	6 (15%)	41 (100%)
stomach	41 (85%)	- (-)	7 (15%)	48 (100%)
colon	84 (74%)	1 (1%)	28 (25%)	113 (100%)
rectum·anus	42 (88%)	- (-)	6 (13%)	48 (100%)
liver	30 (83%)	- (-)	6 (17%)	36 (100%)
gall bladder	6 (100%)	- (-)	- (-)	6 (100%)
pancreas	3 (100%)	- (-)	- (-)	3 (100%)
spleen	1 (100%)	- (-)	- (-)	1 (100%)
hematopoietic	6 (100%)	- (-)	- (-)	6 (100%)
bone	7 (100%)	- (-)	- (-)	7 (100%)
soft tissue	6 (75%)	- (-)	2 (25%)	8 (100%)
skin	13 (87%)	- (-)	2 (13%)	15 (100%)
head and neck	24 (96%)	- (-)	1 (4%)	25 (100%)
thyroid	14 (78%)	1 (6%)	3 (17%)	18 (100%)
testis	9 (75%)	1 (8%)	2 (17%)	12 (100%)
bladder	7 (78%)	- (-)	2 (22%)	9 (100%)
uterus	30 (83%)	1 (3%)	5 (14%)	36 (100%)
ovary	23 (77%)	- (-)	7 (23%)	30 (100%)
kidney	48 (83%)	1 (2%)	9 (16%)	58 (100%)
optical	1 (100%)	- (-)	- (-)	1 (100%)
lymphatic gland	9 (82%)	1 (9%)	1 (9%)	11 (100%)
nervous tissue	2 (100%)	- (-)	- (-)	2 (100%)
unknown primary	29 (69%)	1 (2%)	12 (29%)	42 (100%)
others	26 (79%)	2 (6%)	5 (15%)	33 (100%)

28) Transfer to another hospital

	none	for further treatment	Palliative care	other reasons	total
All brain metastases	1,876 (59%)	552 (17%)	569 (18%)	203 (6%)	3,200 (100%)
lung	881 (60%)	237 (16%)	271 (18%)	87 (6%)	1,476 (100%)
breast	268 (58%)	95 (21%)	77 (17%)	23 (5%)	463 (100%)
esophagus	49 (59%)	10 (12%)	16 (19%)	8 (10%)	83 (100%)
stomach	55 (53%)	20 (19%)	21 (20%)	8 (8%)	104 (100%)
colon	105 (54%)	33 (17%)	38 (20%)	17 (9%)	193 (100%)
rectum • anus	49 (51%)	16 (17%)	21 (22%)	10 (10%)	96 (100%)
liver	35 (59%)	12 (20%)	10 (17%)	- (-)	59 (100%)
gall bladder	7 (54%)	4 (31%)	2 (15%)	- (-)	13 (100%)
pancreas	2 (29%)	2 (29%)	2 (29%)	1 (14%)	7 (100%)
spleen	1 (100%)	- (-)	- (-)	- (-)	1 (100%)
hematopoietic	12 (67%)	3 (17%)	2 (11%)	1 (6%)	18 (100%)
bone	12 (71%)	5 (29%)	- (-)	- (-)	17 (100%)
soft tissue	10 (77%)	1 (8%)	1 (8%)	1 (8%)	13 (100%)
skin	19 (70%)	4 (15%)	4 (15%)	- (-)	27 (100%)
head and neck	33 (62%)	8 (15%)	9 (17%)	3 (6%)	53 (100%)
thyroid	26 (55%)	8 (17%)	8 (17%)	5 (11%)	47 (100%)
testis	16 (64%)	5 (20%)	4 (16%)	- (-)	25 (100%)
bladder	10 (53%)	2 (11%)	2 (11%)	5 (26%)	19 (100%)
uterus	51 (70%)	8 (11%)	10 (14%)	4 (5%)	73 (100%)
ovary	40 (63%)	10 (16%)	12 (19%)	2 (3%)	64 (100%)
kidney	82 (61%)	28 (21%)	16 (12%)	9 (7%)	135 (100%)
optical	3 (60%)	1 (20%)	1 (20%)	- (-)	5 (100%)
lymphatic gland	16 (57%)	3 (11%)	6 (21%)	3 (11%)	28 (100%)
nervous tissue	3 (75%)	1 (25%)	- (-)	- (-)	4 (100%)
unknown primary	57 (50%)	24 (21%)	21 (18%)	12 (11%)	114 (100%)
others	34 (54%)	12 (19%)	15 (24%)	2 (3%)	63 (100%)

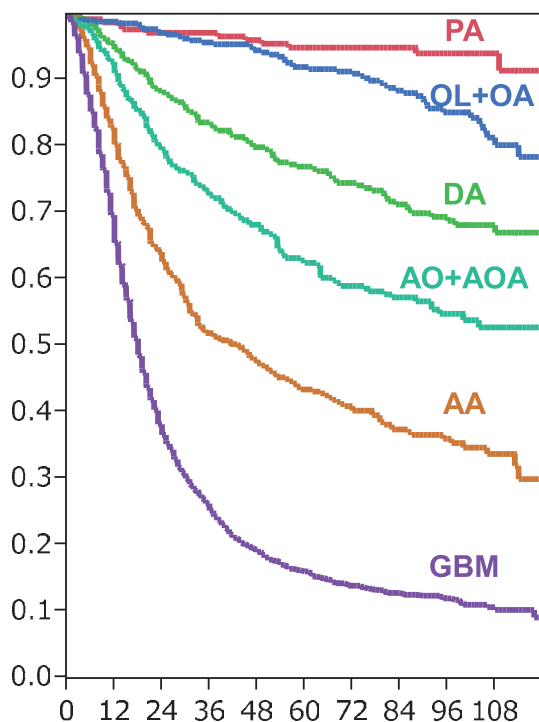
29) Complication during the whole treatment

	none	intracranial hemorrhage	cerebral infarction	pneumonia	pulmonary embolization	deep vein thrombosis	bone fracture	second cancer	others	unknown	patient number
All brain metastases	2,402 (75%)	74 (2%)	27 (1%)	168 (5%)	8 (0.3%)	16 (1%)	19 (1%)	12 (0.4%)	130 (4%)	408 (13%)	3,200
lung	1,111 (75%)	25 (2%)	13 (1%)	92 (6%)	3 (0.2%)	9 (1%)	9 (1%)	4 (0.3%)	56 (4%)	183 (12%)	1,476
breast	359 (78%)	4 (1%)	3 (1%)	10 (2%)	2 (0.4%)	2 (0.4%)	3 (1%)	1 (0.2%)	18 (4%)	63 (14%)	463
esophagus	65 (78%)	1 (1%)	- (-)	4 (5%)	- (-)	- (-)	- (-)	- (-)	2 (2%)	12 (14%)	83
stomach	77 (74%)	4 (4%)	- (-)	8 (8%)	1 (1%)	- (-)	- (-)	- (-)	1 (1%)	16 (15%)	104
colon	144 (75%)	3 (2%)	2 (1%)	9 (5%)	1 (1%)	- (-)	2 (1%)	- (-)	8 (4%)	28 (15%)	193
rectum • anus	74 (77%)	- (-)	- (-)	4 (4%)	- (-)	- (-)	1 (1%)	- (-)	1 (1%)	16 (17%)	96
liver	43 (73%)	6 (10%)	1 (2%)	2 (3%)	- (-)	- (-)	1 (2%)	1 (2%)	3 (5%)	3 (5%)	59
gall bladder	7 (54%)	2 (15%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	4 (31%)	13
pancreas	6 (86%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (14%)	- (-)	- (-)	7
spleen	1 (100%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1
hematopoietic	15 (83%)	- (-)	- (-)	2 (11%)	- (-)	- (-)	- (-)	- (-)	1 (6%)	2 (11%)	18
bone	12 (71%)	- (-)	1 (6%)	- (-)	- (-)	- (-)	1 (6%)	- (-)	2 (12%)	3 (18%)	17
soft tissue	9 (69%)	2 (15%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	1 (8%)	1 (8%)	13
skin	21 (78%)	2 (7%)	- (-)	1 (4%)	- (-)	1 (4%)	- (-)	- (-)	- (-)	2 (7%)	27
head and neck	38 (72%)	- (-)	- (-)	7 (13%)	- (-)	- (-)	- (-)	- (-)	4 (8%)	4 (8%)	53
thyroid	28 (60%)	5 (11%)	- (-)	4 (9%)	- (-)	- (-)	- (-)	1 (2%)	1 (2%)	9 (19%)	47
testis	17 (68%)	5 (20%)	- (-)	2 (8%)	- (-)	- (-)	- (-)	1 (4%)	2 (8%)	- (-)	25
bladder	15 (79%)	- (-)	1 (5%)	1 (5%)	- (-)	1 (5%)	- (-)	- (-)	1 (5%)	1 (5%)	19
uterus	59 (81%)	4 (5%)	1 (1%)	2 (3%)	- (-)	1 (1%)	- (-)	- (-)	2 (3%)	7 (10%)	73
ovary	46 (72%)	2 (3%)	2 (3%)	1 (2%)	- (-)	- (-)	- (-)	- (-)	4 (6%)	9 (14%)	64
kidney	102 (76%)	6 (4%)	2 (1%)	7 (5%)	- (-)	- (-)	2 (1%)	1 (1%)	9 (7%)	12 (9%)	135
optical	3 (60%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	2 (40%)	5
lymphatic gland	17 (61%)	1 (4%)	- (-)	1 (4%)	1 (4%)	1 (4%)	- (-)	- (-)	1 (4%)	7 (25%)	28
nervous tissue	3 (75%)	1 (25%)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	4
unknown primary	83 (73%)	1 (1%)	- (-)	5 (4%)	- (-)	1 (1%)	- (-)	1 (1%)	9 (8%)	18 (16%)	114
others	47 (75%)	- (-)	1 (2%)	6 (10%)	- (-)	- (-)	- (-)	1 (2%)	4 (6%)	6 (10%)	63

8. Kaplan-Meier survival curve (OS and PFS)

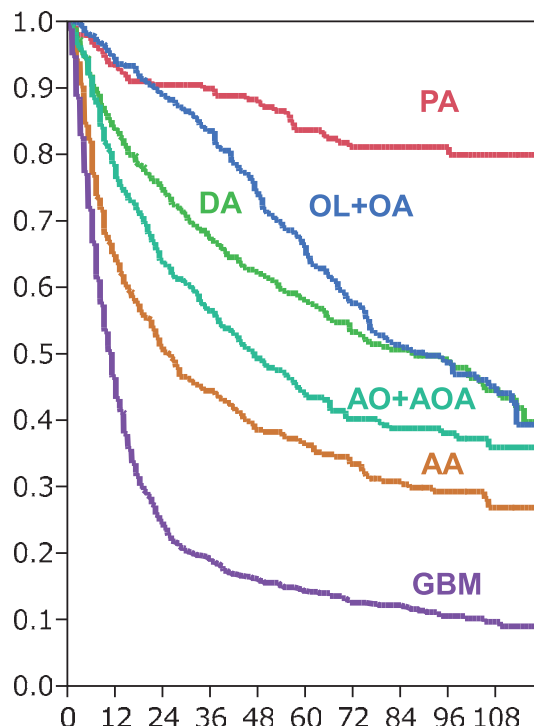
Overall survival

Astrocytic and Oligodendroglial tumors



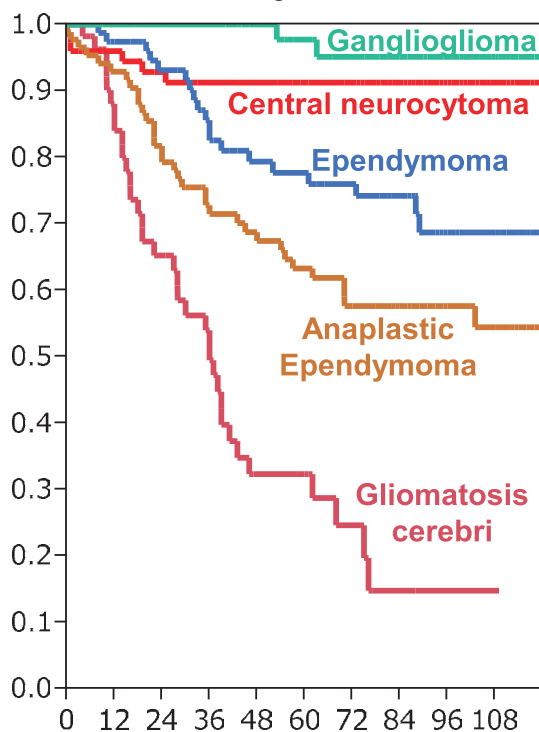
Progression-free survival

Astrocytic and Oligodendroglial tumors



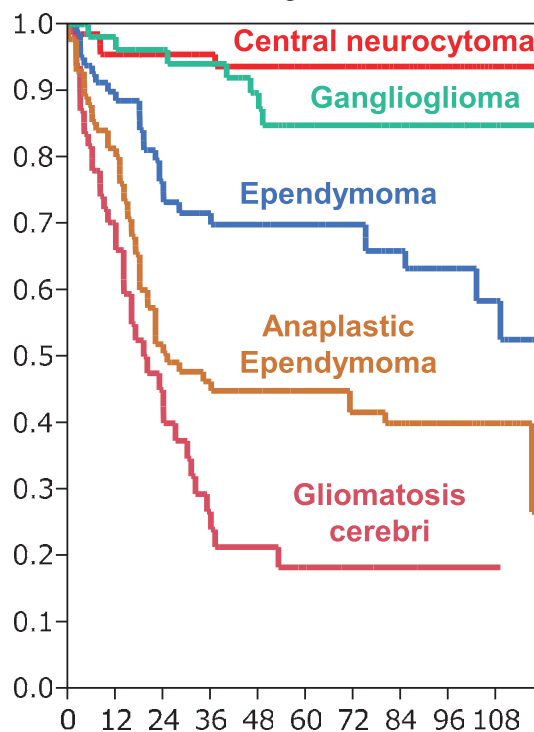
Overall survival

Other gliomas



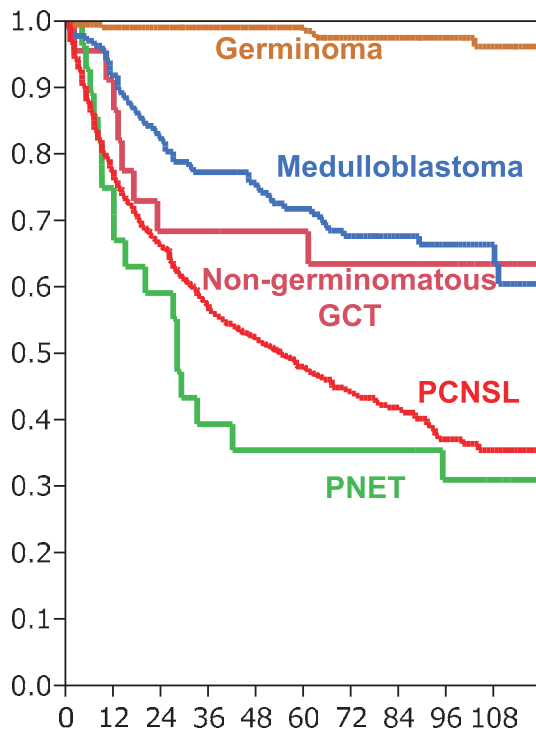
Progression-free survival

Other gliomas



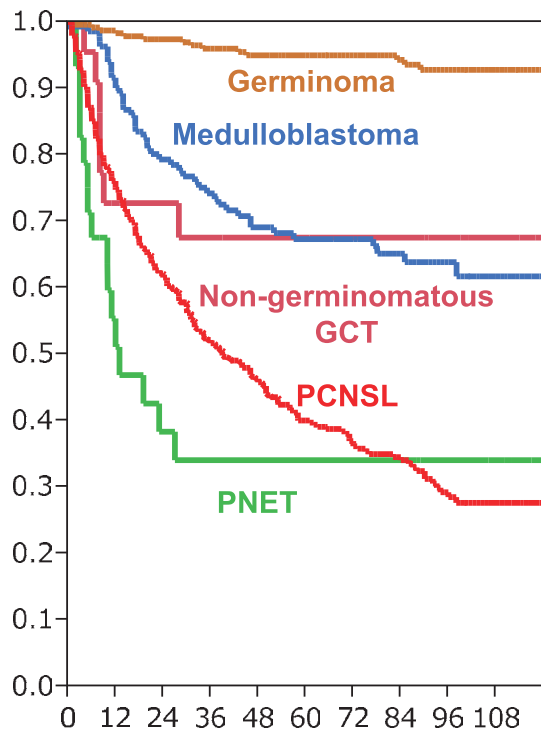
Overall survival

Germinoma, Medulloblastoma, PCNSL



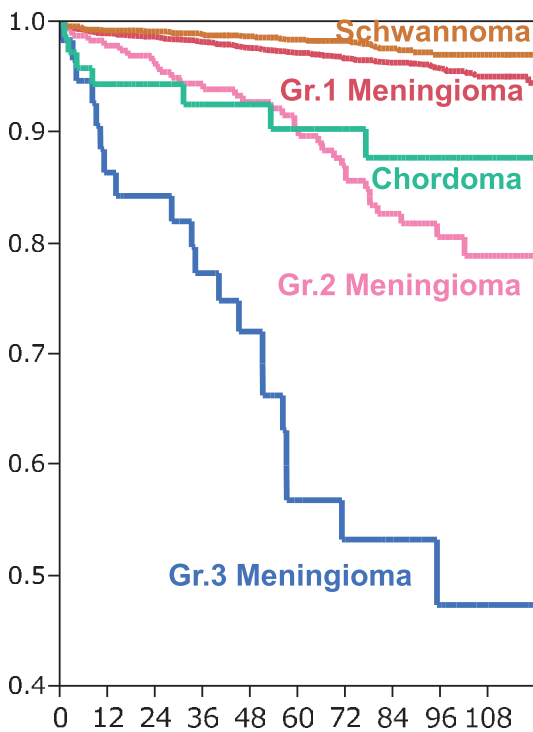
Progression-free survival

Germinoma, Medulloblastoma, PCNSL



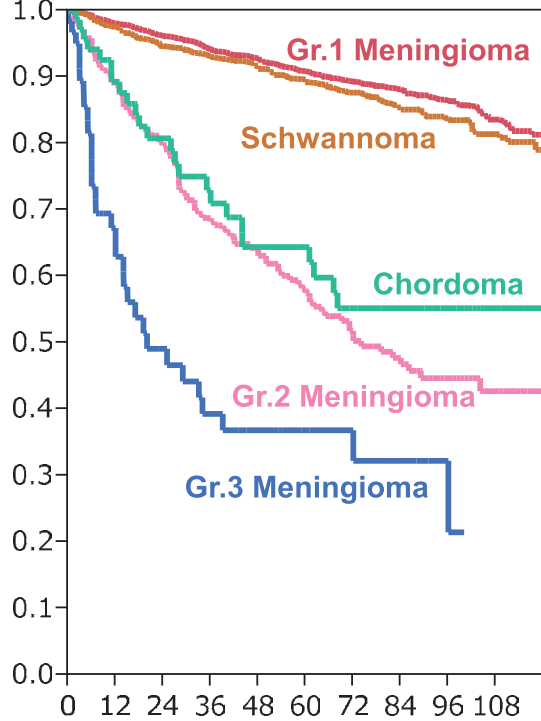
Overall survival

Meningioma, Schwannoma, Chordoma



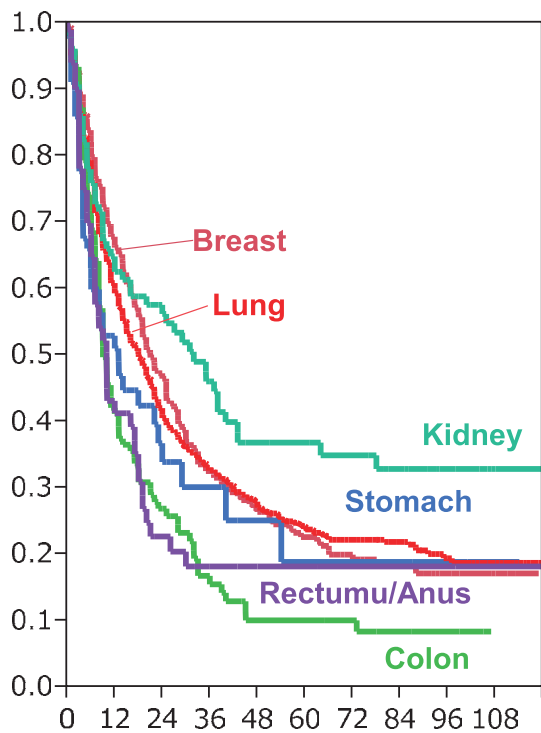
Progression-free survival

Meningioma, Schwannoma, Chordoma



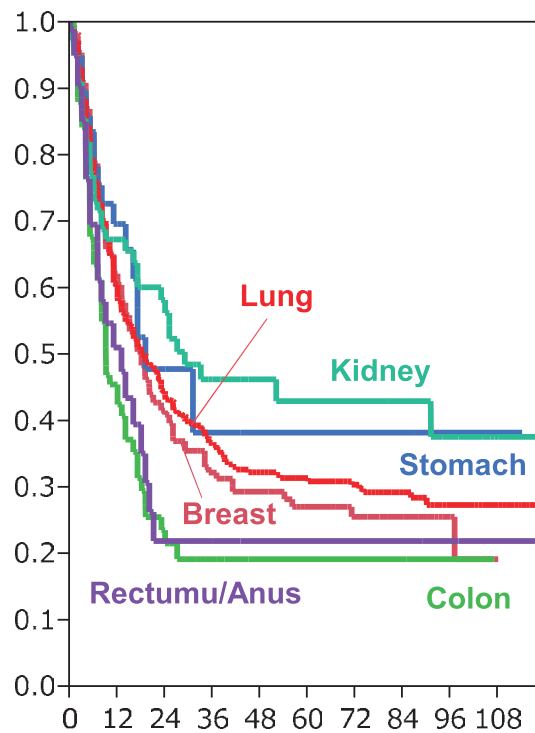
Overall survival

Brain metastases



Progression-free survival

Brain metastases



9.REGISTERED HOSPITALS(2005-2008)

No.	Hospitals	2005	2006	2007	2008
1	Aichi Medical University	10	18	21	17
2	Akita University	83	105	120	115
3	Asahikawa Medical University	3	1	4	4
4	Chiba Rosai Hospital	1	0	0	0
5	Chiba University	18	3	4	8
6	Chuno Kosei Hospital	10	13	9	13
7	Dokkyo Medical University	7	0	0	0
8	Ehime University	68	69	74	85
9	Fujita Health University	59	69	76	62
10	Fukushima Medical University	25	19	10	25
11	Gifu University	48	56	64	48
12	Gunma University	84	53	44	65
13	Hakodate Central General Hospital	11	28	26	31
14	Hamamatsu University School of	44	28	28	28
15	Hirosaki University	43	62	52	54
16	Hiroshima City Hospital	28	26	30	39
17	Hiroshima University	126	130	148	140
18	Hokkaido University	57	65	88	59
19	Hyogo College of Medicine	1	0	0	0
20	IIDA Municipal Hospital	4	5	5	3
21	INA Central Hospital	20	13	10	11
22	Iwate Medical University	38	28	13	19
23	JA Toride Medical Center	1	0	0	0
24	Juntendo Tokyo Koto Geriatric Medical Center	6	7	5	9
25	Juntendo University	110	58	77	79
26	Juntendo University Sizuoka Hospital	47	42	44	54
27	Kagawa University	48	63	58	64
28	Kagoshima University	63	120	136	153
29	Kanazawa Medical University	49	55	35	42
30	Kanazawa University	16	32	38	64

No.	Hospitals	2005	2006	2007	2008
31	Kansai Medical University Hospital	0	20	44	43
32	Kashiwaba Neurosurgical Hospital	40	35	28	39
33	Kawasaki medical school	21	20	20	21
34	Kawasaki Saiwai Hospital	0	0	1	10
35	Keio University	154	111	137	134
36	Kinki University	43	19	30	23
37	Kitano Hospital	2	0	1	12
38	Kitasato University	108	115	110	126
39	Kobe University	82	86	102	114
40	Kochi University	17	13	18	13
41	Kumamoto University	12	5	10	9
42	Kyorin University	71	64	91	90
43	Kyoto Prefectural University of Medicine	48	31	49	37
44	Kyoto University	106	122	129	104
45	Kyushu University	97	90	80	59
46	Maebashi Red Cross Hospital	32	27	21	22
47	Mie University	25	15	12	29
48	Miyakonojo Medical Association Hospital	12	12	3	2
49	Miyoshi Central Hospital	10	8	5	5
50	Nagasaki Prefecture Shimabara Hospital	5	10	6	6
51	Nagasaki University	36	41	35	37
52	Nagoya University	49	82	98	78
53	Nara Medical University	47	15	16	15
54	National Cancer Center Hospital	103	108	101	95
55	National Defense Medical College	72	43	14	48
56	National Hospital Organization Osaka National Hospital	0	35	42	25
57	Nihon University Itabashi Hospital	65	65	76	67
58	Niigata Prefectural Shibata Hospital	5	5	5	4
59	Niigata University	32	44	32	34
60	Nippon Medical School	68	123	135	49

No.	Hospitals	2005	2006	2007	2008
61	Nippon Medical School Chiba Hokusoh Hospital	28	32	41	37
62	Nippon Medical School Musashi Kosugi Hospital	34	26	24	30
63	Nippon Medical School Tamanagayama Hospital	4	0	0	0
64	NTT Medical Center Tokyo	251	2	0	0
65	Ohkawara Neurosurgical Hospital	2	0	0	0
66	Oita University	0	12	29	27
67	Okayama Medical Center	17	16	13	0
68	Okayama University	89	77	70	66
69	Osaka City University	16	0	0	0
70	Osaka Medical Center for Cancer and Cardiovascular Diseases	23	16	21	11
71	Osaka Medical College	83	92	85	92
72	Osaka University	139	128	138	123
73	Saga University	48	62	47	56
74	Saiseikai Matsusaka General Hospital	15	22	20	18
75	Saitama Cancer Center	35	41	44	28
76	Saitama Children's Medical Center	10	1	0	0
77	Saitama City Hospital	4	6	6	4
78	Saitama Medical University	1	15	0	0
79	Saitama Medical University International Medical Center	35	59	54	5
80	Sapporo IGRT Clinic	0	5	16	31
81	Sapporo Medical University	86	71	77	61
82	Shiga University of Medical Science	43	34	42	51
83	Shimane University	14	13	16	11
84	Shinshu University	30	58	54	49
85	Shizuoka Cancer Center	52	61	68	66
86	Showa University	36	38	42	35
87	St. Marianna University School of Medicine	57	33	49	60
88	Suzuka Kaisei Hospital	7	6	8	6
89	Tamakyuryo Hospital	2	0	1	0
90	The Jikei University School of Medicine	14	17	39	25

No.	Hospitals	2005	2006	2007	2008
91	The University of Tokushima	56	53	49	53
92	The University of Tokyo	99	118	120	104
93	Toho University, Ohashi Medical Center	24	16	10	17
94	Toho University, Omori Medical Center	78	92	96	79
95	Tohoku University	58	97	96	103
96	Tokai University	47	59	63	64
97	Tokyo Medical and Dental University	57	60	62	66
98	Tokyo Medical University	41	49	38	41
99	Tokyo Metropolitan Health and Medical Corporation Toshima Hospital	7	10	11	7
100	Tokyo Shinjyuku Medical Center	17	14	14	15
101	Tokyo Women's Medical University	272	290	271	245
102	Tottori Seikyo Hospital	1	5	3	2
103	Toyama Prefectural Central Hospital	30	33	33	23
104	University of Fukui	40	19	23	14
105	University of Miyazaki	61	71	76	73
106	University of Occupational and Environmental Health	23	29	45	44
107	University of the Ryukyus	43	38	24	33
108	University of Tsukuba	70	80	90	92
109	University of Yamanashi	34	41	43	40
110	Wakayama Medical University	65	70	73	76
111	Wakayama Rosai Hospital	20	24	20	25
112	Yaizu City Hospital	17	14	11	15
113	Yamagata University	61	63	48	70
114	Yamaguchi Grand Medical Center	43	35	38	37
115	Yamaguchi University	34	36	31	39
116	Yokohama City University	9	18	21	12
total		4,972	4,909	5,083	4,922

10. Appendix: OS and PFS data of brain tumors in brain tumor registry of Japan 2001-2004, vol. 13

	total	Overall survival									Progression free survival									
		event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	event	max	min	med	1-y (%)	2-y (%)	3-y (%)	4-y (%)	5-y (%)	
Pilocytic astrocytoma	193	14	124	0.0	NR	98.2	96.3	93.6	92.9	92.1	45	124	0.0	NR	91.5	82.5	77.8	76.3	73.8	
GII DA	382	94	128	0.0	NR	95.4	84.2	78.7	78.0	75.0	147	128	0.0	84.1	84.0	71.8	66.5	61.6	57.0	
GII OL&OA	211	29	122	0.9	NR	98.0	95.9	93.0	91.2	90.0	64	122	0.0	NR	94.9	87.6	78.8	76.4	74.6	
GIII AA	513	230	129.0	0.0	38.0	80.8	63.1	51.8	44.8	41.1	271	129.0	0.0	19.0	60.7	45.1	36.9	32.8	28.7	
GIII AO&AOA	232	76	120	0.0	NR	92.3	82.5	78.7	75.4	68.2	107	120	0.0	71.0	79.0	69.9	60.4	55.9	54.0	
Glioblastoma	1,489	929	119.0	0.0	15.0	60.3	25.4	15.9	11.1	10.1	888	119.0	0.0	8.1	34.7	17.5	13.1	11.9	9.2	
Ependymoma	78	9	123	0.0	NR	92.7	92.7	90.9	90.9	86.3	18	123	0.0	117.0	89.2	78.7	76.8	74.7	72.5	
Anaplastic ependymoma	55	19	119.0	0.0	NR	86.0	70.6	68.3	60.8	58.1	29	119.0	0.0	22.0	70.4	49.4	37.6	37.6	35.1	
Ganglioglioma	60	3	123	0.0	NR	100.0	98.1	98.1	98.1	98.1	10	119.0	0.0	NR	94.5	92.5	86.4	84.0	78.9	
Central neurocytoma	65	1	123	0.0	NR	98.4	98.4	98.4	98.4	98.4	15	123	0.0	NR	87.1	85.2	79.0	79.0	79.0	
Medulloblastoma	101	28	121.0	0.0	NR	93.6	86.7	77.3	74.9	68.7	34	121.0	0.0	NR	84.8	74.2	69.2	65.5	62.9	
Germinoma	235	9	120	0.0	NR	98.7	98.7	98.2	98.2	97.1	26	120	0.0	NR	97.6	95.7	92.6	91.5	89.9	
PCNSL	475	181	117.0	0.0	41.1	73.4	64.1	54.4	44.9	42.3	168	117.0	0.0	35.0	70.6	56.9	48.4	40.4	34.7	
GI Meningioma	3,065	67	129	0.0	NR	99.2	98.7	98.6	98.4	97.9	263	129.0	0.0	NR	98.1	96.4	93.8	92.4	90.5	
GII Meningioma	173	15	122	0.0	NR	96.7	94.6	93.0	91.2	91.2	61	121.0	0.0	87.0	87.1	79.7	71.8	64.2	60.6	
GIII Meningioma	40	5	115	0.0	NR	90.2	90.2	86.6	86.6	86.6	17	112	0.0	65.1	85.2	68.1	57.5	53.4	53.4	
Schwannoma	1,352	15	130	0.0	NR	99.5	99.4	99.2	99.0	98.8	124	130	0.0	NR	97.7	95.6	93.3	91.2	89.5	
GH pituitary adenoma	480	4	121.0	0.0	NR	99.8	99.8	99.5	99.5	99.2	19	121.0	0.0	NR	97.6	96.8	96.5	95.7	95.7	
PRL pituitary adenoma	487	3	120	0.0	NR	100.0	99.7	99.7	99.4	99.4	24	120	0.0	NR	98.0	97.0	96.1	94.5	94.2	
ACTH pituitary adenoma	139	6	119	0.0	NR	99.2	98.2	98.2	97.2	97.2	21	119	0.0	NR	97.4	92.5	90.5	87.2	85.0	
NF pituitary adenoma	1,402	27	130	0.0	NR	99.5	99.0	98.9	98.5	98.3	197	130	0.0	NR	96.7	94.4	92.5	88.7	85.1	
Craniopharyngioma	331	13	122.0	0.0	NR	98.1	97.3	97.3	96.9	96.5	94	122.0	0.0	NR	88.6	82.7	78.0	73.5	69.7	
Chordoma	58	6	120	0.0	NR	100.0	97.6	95.1	95.1	89.1	26	107	0.0	50.1	69.1	59.9	53.0	50.6	48.1	
Hemangioblastoma	187	4	122	0.0	NR	100.0	99.2	96.3	96.3	96.3	20	120	0.0	NR	96.3	94.5	91.4	89.2	86.8	
Epidermoid	122	1	122	0.0	NR	98.8	98.8	98.8	98.8	98.8	6	122	0.0	NR	98.8	97.5	96.1	93.0	93.0	