



Indicator Analysis 2022

Annual Report of the Certified Neuro-oncology Cancer Centres

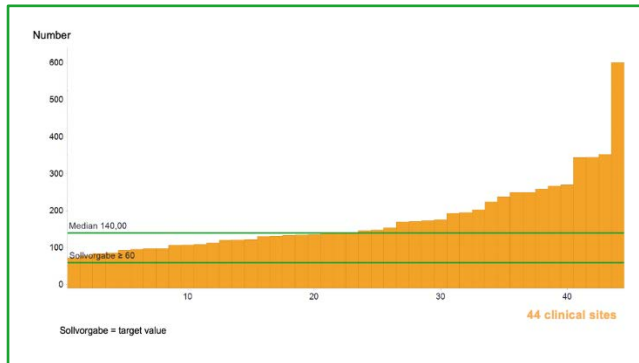
Audit year 2021/ Indicator year 2020

Table of Contents

Introduction	3
General information	3
Status of the certification system for Neuro-oncology Cancer Centres 2021	5
Clinical sites taken into account	6
Tumour documentation systems at the Centres' clinical sites.....	7
Analysis of basic data	8
Analysis of indicators	11
Indicator No. 1a: Number of primary cases	11
Indicator No. 1b: Patient with recurrence/progress.....	12
Indicator No. 1c: Cerebral metastasis.....	13
Indicator No. 2a: Interdisciplinary case discussions.....	14
Indicator No. 2b: Pretherapeutic interdisciplinary case discussions.....	15
Indicator No. 3: Psycho-oncological care	16
Indicator No. 4: Counselling social services	17
Indicator No. 5: Study participation.....	18
Indicator No. 6a: Surgical primary cases	19
Indicator No. 6b: Biopsy.....	20
Indicator No. 6c: Ratio biopsies/resections.....	21
Indicator No. 7a: Revision surgeries	22
Indicator No. 7b: Clinically symptomatic secondary bleeding.....	23
Indicator No. 8: Post-surgical wound infections	24
Indicator No. 9: Assessment palliative symptoms.....	25
Imprint	26

General information

	Indicator definition	All clinical sites 2020		
		Median	Range	Patients total
Numerator	Primary cases (elective patients; pre-intervention, emergency patients; post-intervention) who were presented in the tumour board	164*	61 - 604	10032
Denominator	Primary cases (= Indicator 1a)	178*	106 - 618	10810
Rate	Target value $\geq 95\%$	96,86%	34,46% - 100%	92,80%**



Basic information for indicators:

The definition of the **numerator**, **denominator** and the **target value** are taken from the data sheet.

The **median** for numerator and denominator does not refer to an existing center but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

Range specifies the value range for the numerator, denominator and ratio of all centers.

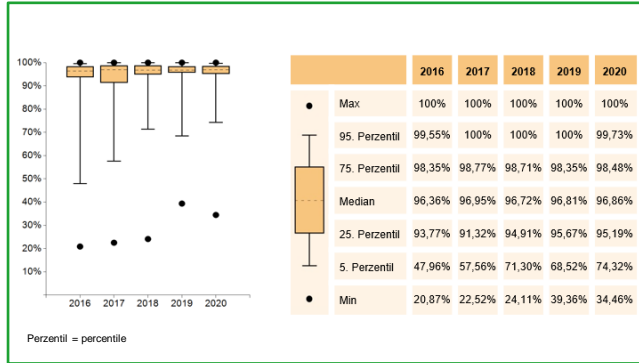
The column **Total Patients** displays the total of all patients treated according to the indicator and the corresponding quota.

Diagram:

The x-axis indicates the number of centres and the y-axis represents the values in percent or number (e.g. primary cases). The target value is depicted as a green horizontal line. The median, which is also depicted as a green horizontal line, divides the entire group into two equal halves.

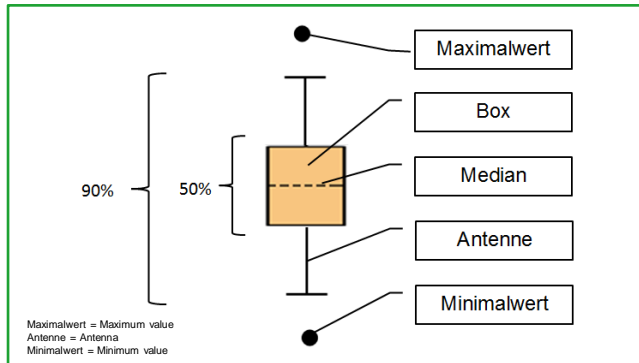


General information



Cohort development:

The **cohort development** in the years **2016**, **2017**, **2018**, **2019** and **2020** is presented in a boxplot diagram.



Boxplot:

The x-axis represents the number of centres, the y-axis represents the range of values in percent or a number (e.g. primary cases). The target is shown as a green horizontal line. The median, also shown as a green horizontal line, divides the entire group into two equal halves.

Status of the certification system for Neuro-oncology Cancer Centres 2021

	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017	31.12.2016
Ongoing certification procedures	3	5	2	2	5	8
Certified Centres	53	46	42	38	32	26
Certified clinical sites	54	47	43	39	33	27
Neuro-oncology Centres with 1 clinical site	52	45	41	37	31	25
2 clinical sites	1	1	1	1	1	1
3 clinical sites	0	0	0	0	0	0
4 clinical sites	0	0	0	0	0	0

Clinical sites taken into account

	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017	31.12.2016
Clinical sites included in the Annual Report	51	44	40	38	30	24
equivalent to	94,4%	93,6%	93,0%	97,4%	90,9%	88,9%
Primary cases total*	10.810	9.914	9.254	8.820	7.219	5.067
Primary cases per clinical site (mean)*	211,9	225,3	231,4	232,1	240,6	211,1
Primary cases per clinical site (median)*	178	184,5	201,5	192,5	214	202,5

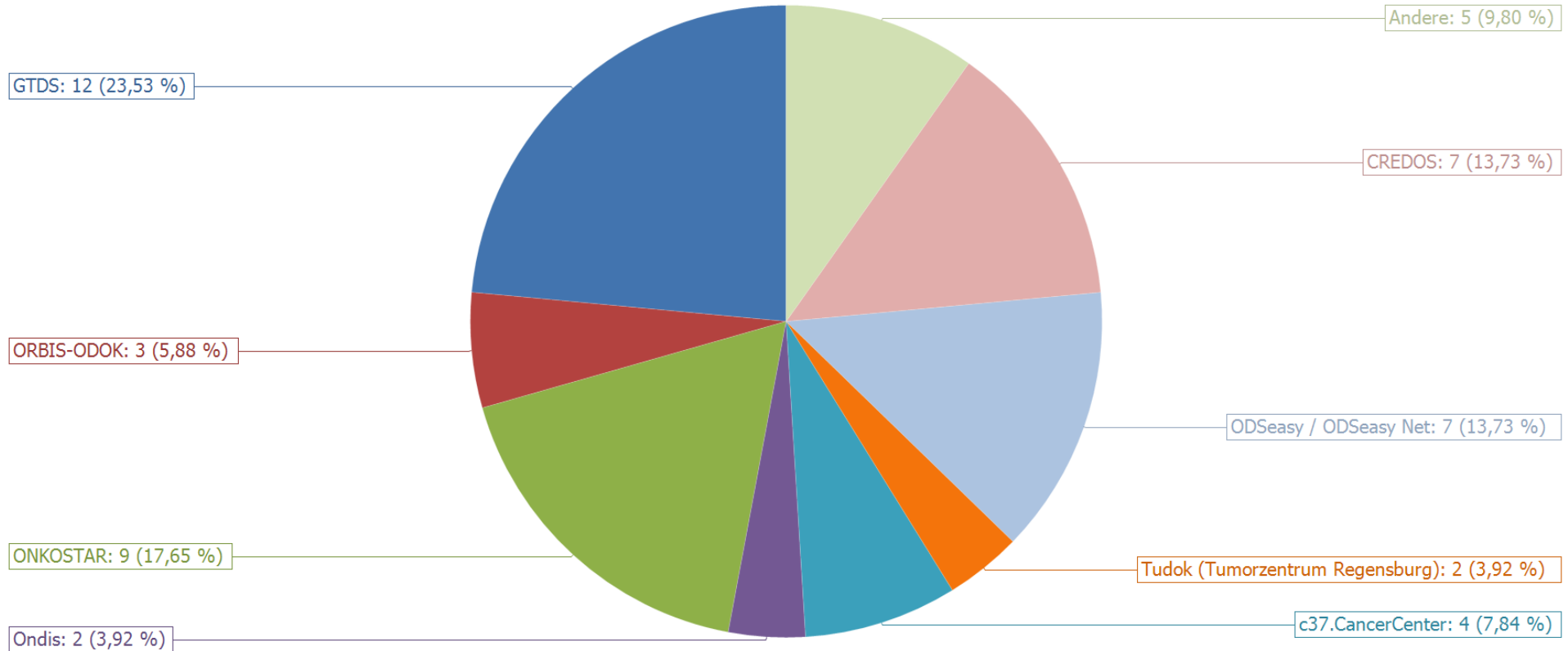
*The figures are based on the clinical sites listed in the Annual Report.

This annual report looks at the neuro-oncological Centers certified in the certification system of the German Cancer Society. The basis for the diagrams in the annual report is the data sheet.

The annual report includes 51 of the 54 certified Center locations. Excluded are 3 sites that were certified for the first time in 2021 (data mapping of the complete calendar year is not mandatory for initial certifications). All 54 sites treated 11,163 primary neuro-oncology cases. A current overview of all certified sites is available at www.oncomap.de

The indicators published here relate to the indicator year 2020 and provide the basis for the audits conducted in 2021.

Tumour documentation systems in the Centre's clinical sites

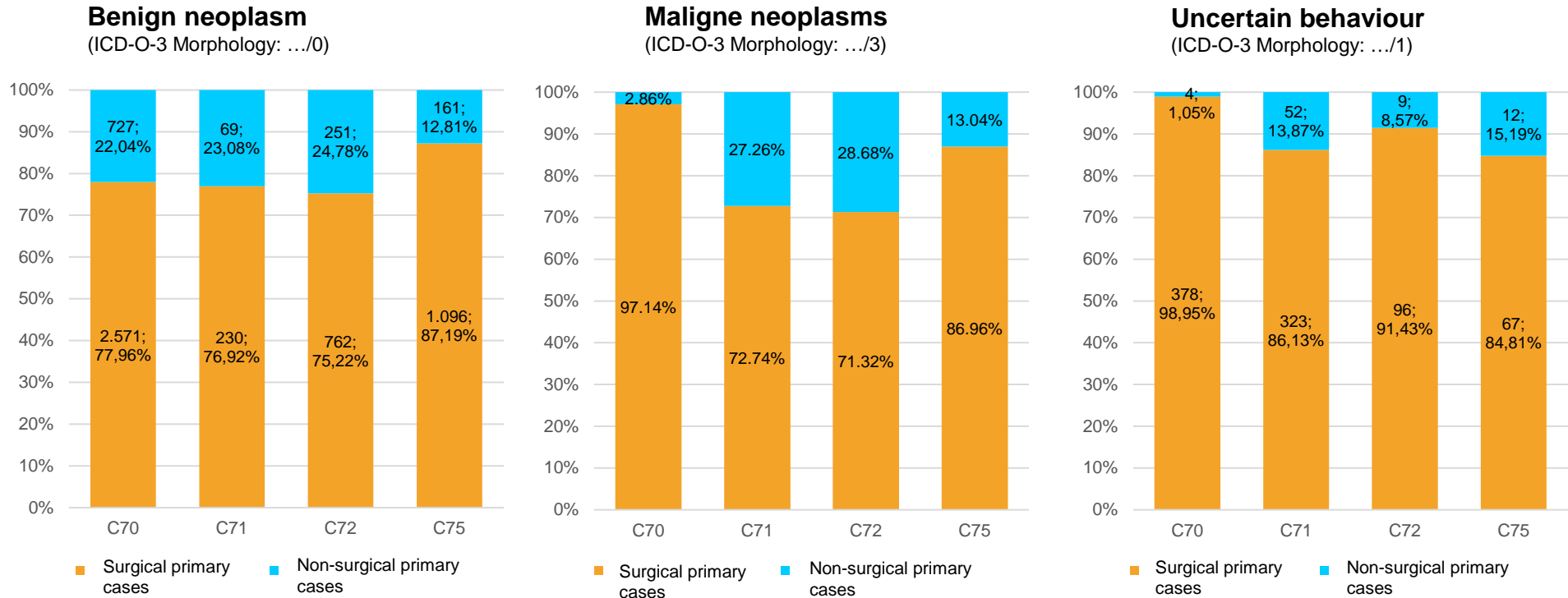


Andere = Other
Eigenentwicklung = Intrinsic development
Tumorzentrum = Tumour centre

Legend:	
Other	Systems that are only used at one location at a time

The information on the tumour documentation system was taken from the data sheet (Basic Data Sheet). It is not possible to use more than one system. In many cases, support is provided by the cancer registries or there may be a direct link to the cancer registry via a specific tumor documentation system.

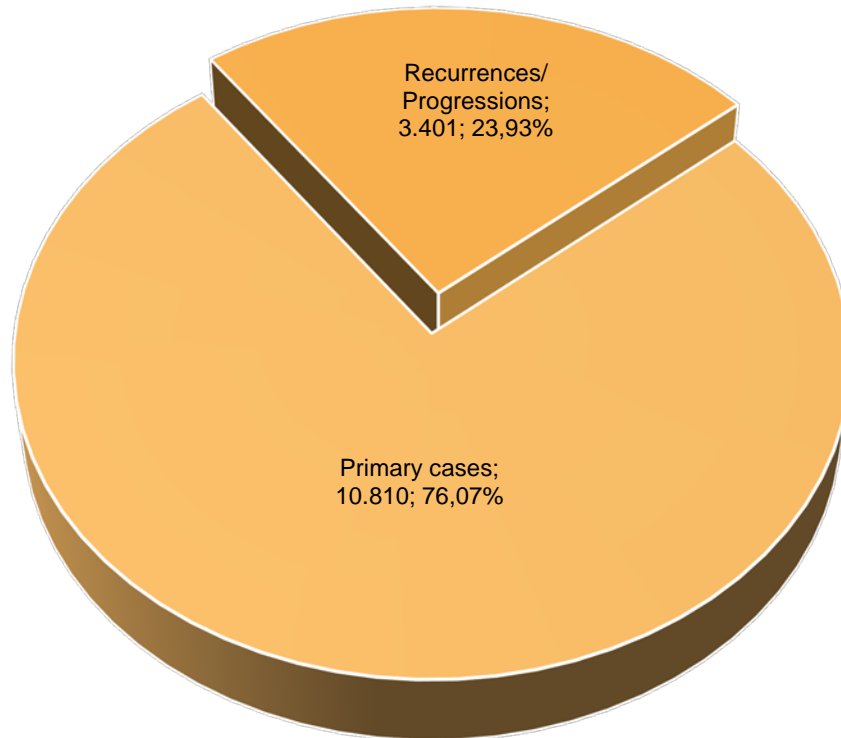
Basic data – Stage distribution primary cases of neuro-oncological tumors



	Benign neoplasms (ICD-O-3 Morphology: .../0)				Malignant neoplasms (ICD-O-3 Morphology: .../3)				Uncertain behaviour (ICD-O-3 Morphology: .../1)				Total
	C70	C71	C72	C75	C70	C71	C72	C75	C70	C71	C72	C75	
Non-surgical	727 (22,04%)	69 (23,08%)	251 (24,78%)	161 (12,81%)	5 (10,00%)	927 (24,58%)	44 (27,33%)	9 (47,37%)	4 (1,05%)	52 (13,87%)	9 (8,57%)	12 (15,19%)	2.270
Surgical	2.571 (77,96%)	230 (76,92%)	762 (75,22%)	1.096 (87,19%)	45 (90,00%)	2.845 (75,42%)	117 (72,67%)	10 (52,63%)	378 (98,95%)	323 (86,13%)	96 (91,43%)	67 (84,81%)	8.540
Primary cases total	3.298 (100%)	299 (100%)	1.013 (100%)	1.257 (100%)	50 (100%)	3.772 (100%)	161 (100%)	19 (100%)	382 (100%)	375 (100%)	105 (100%)	79 (100%)	10.810

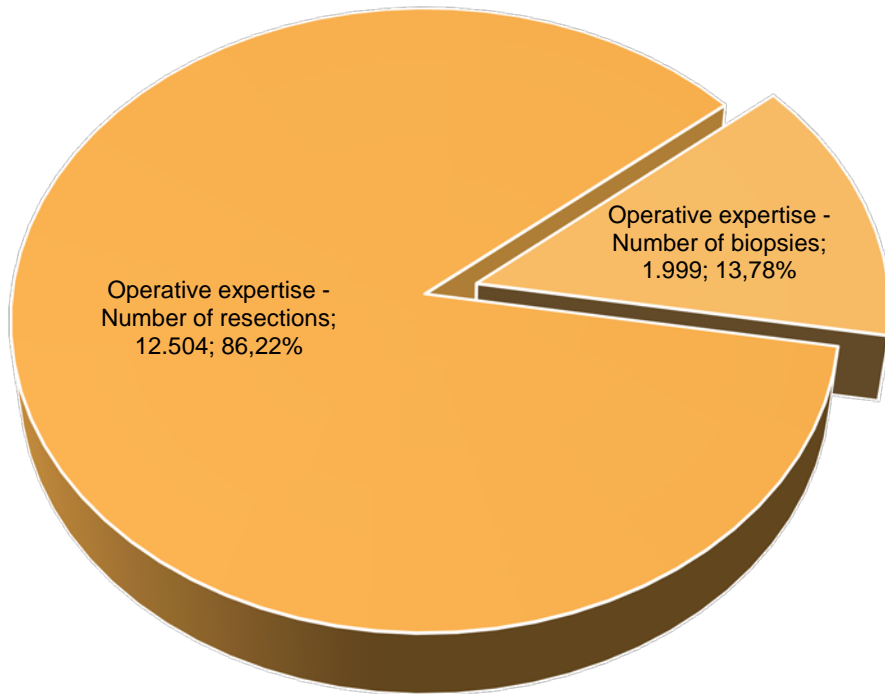
C70: neoplasm of meninges; **C71:** neoplasm of brain; **C72:** neoplasm of medulla and cerebral nerves; **C75:** Other endocrine glands and related structures in line with ICD-O-3 topography

Basic data - Center cases neuro-oncological tumors



Primary cases	Recurrences/ Progressions	Centre cases
10.810 (76,07%)	3.401 (23,93%)	14.211 (100%)

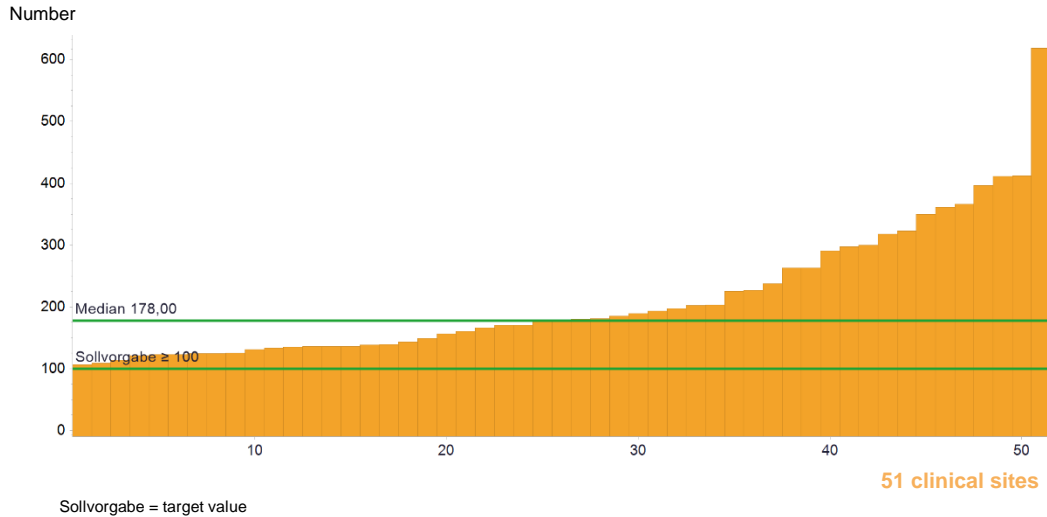
Basic data - Surgical expertise (number of resections - number of biopsies)



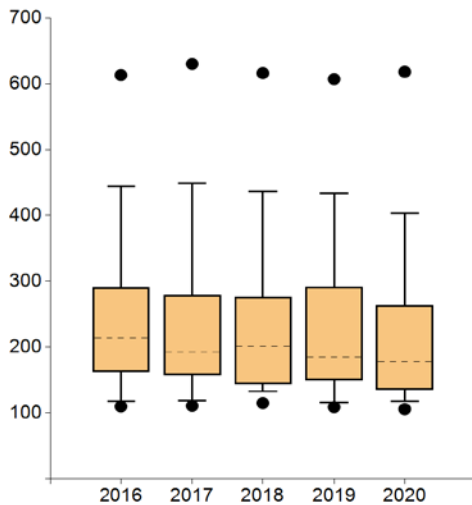
Operative expertise - Number of resections	Operative expertise - Number of biopsies
12.504 (86,22%)	1.999 (13,78%)

*Operative expertise: Resections or biopsies in primary cases, patients with recurrences/progressions and metastases in the calendar year are counted, regardless of primary case status.

1a. Number of primary cases



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Number	Primary cases definition in line with CoR 1.2.1	178	106 – 618	10810
	Target value ≥ 100			



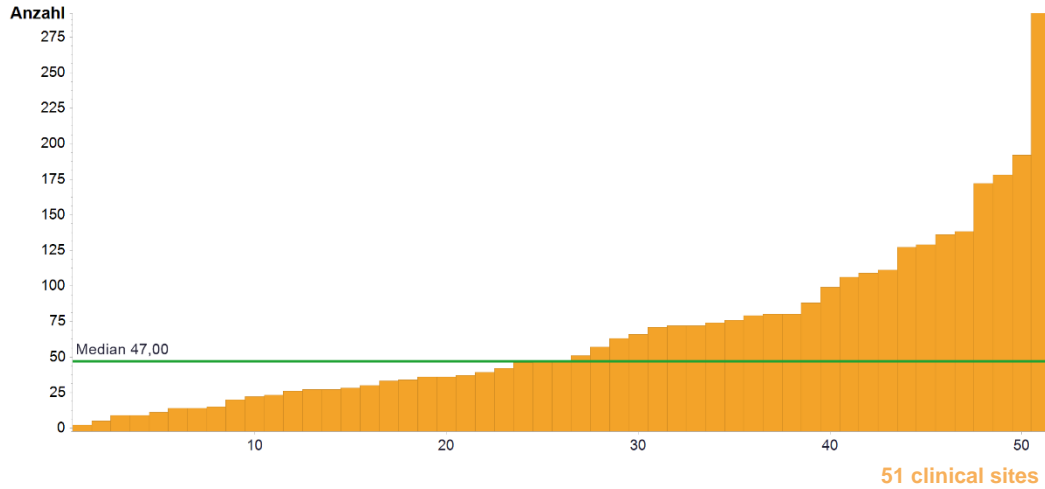
	2016	2017	2018	2019	2020
● Max	613,00	630,00	616,00	607,00	618,00
95 th percentile	444,25	448,35	436,70	434,00	403,50
75 th percentile	290,25	279,50	276,25	291,50	263,00
Median	214,00	192,50	201,50	184,50	178,00
25 th percentile	162,00	158,00	143,75	149,00	136,00
5 th percentile	118,15	118,65	132,85	115,75	117,50
● Min	110,00	111,00	115,00	109,00	106,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
51	100,00%	51	100,00%

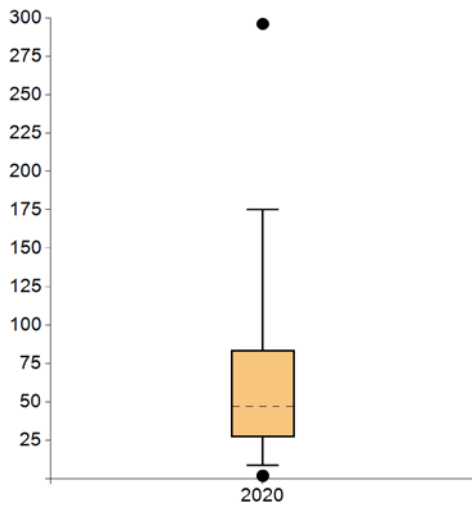
Comments:

Even though the median number of primary cases treated at the centers decreased slightly, the total primary case count for all centers increases by 9.04% compared to the pre-indicator year, exceeding 10,000 for the first time. This increase is entirely due to the newly certified centers, as the others experienced slight decreases of approximately 3% in comparison with the previous year. This decrease is likely related to the Covid pandemic. The minimum target of 100 primary cases was achieved by all Neuro-oncology Centers.

1b. Patients with recurrence/progression



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Number	Patients with recurrence/progression	47	2 - 296	3401
	No target value			



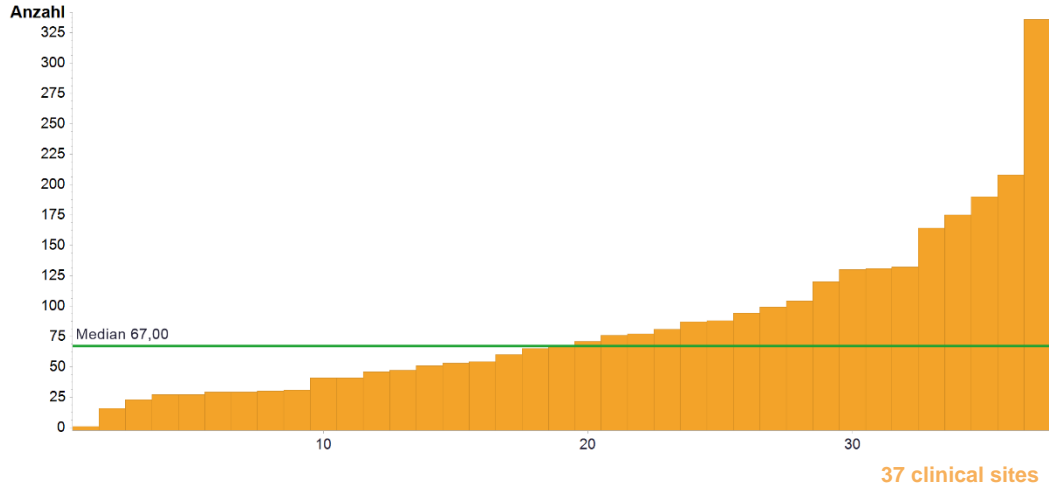
	2016	2017	2018	2019	2020
Max	----	----	----	----	296,00
95 th percentile	----	----	----	----	175,00
75 th percentile	----	----	----	----	84,00
Median	----	----	----	----	47,00
25 th percentile	----	----	----	----	27,00
5 th percentile	----	----	----	----	9,00
Min	----	----	----	----	2,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
51	100,00%	----	----

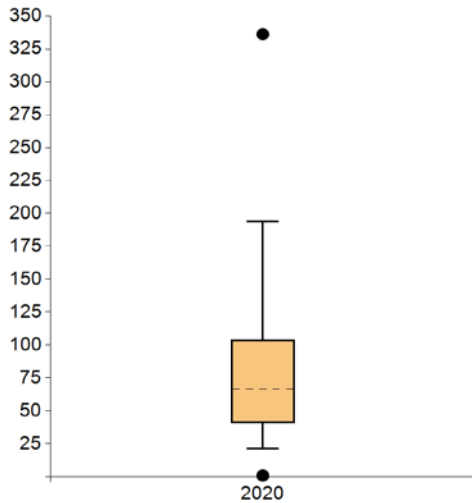
Comments:

In the indicator year 2020, the number of patients with relapse or progression treated in the Neuro-oncology Centers was measured for the first time in a separate indicator. Previously, this indicator was already relevant insofar as it (together with the primary case number) formed the denominator of the indicator for psycho-oncological care or social counseling. The range of the individual values is very large (minimum 2, maximum 296). On median, 47 patients with relapse/progress were treated per center.

1c. Cerebral metastasis



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Number	Patients with cerebral metastasis who received care at the NOZ.	67	1 - 336	3101
	No target value			



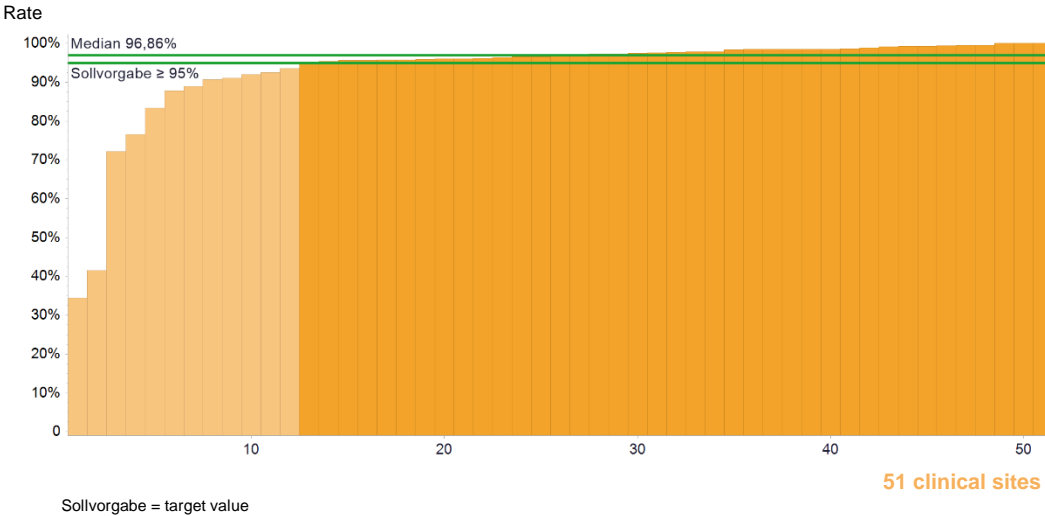
	2016	2017	2018	2019	2020
Max	----	----	----	----	336,00
95 th percentile	----	----	----	----	193,60
75 th percentile	----	----	----	----	104,00
Median	----	----	----	----	67,00
25 th percentile	----	----	----	----	41,00
5 th percentile	----	----	----	----	21,60
Min	----	----	----	----	1,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
37	72,55%	----	----

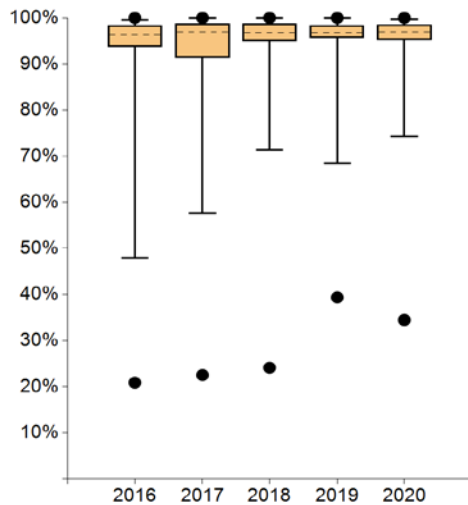
Comments:

Cerebral metastases of tumors that do not primarily fall into the field of neuro-oncology were surveyed for the first time (and thus still voluntarily) in the indicator year 2020. This allows us to show that the spectrum treated by the centers is far broader than the focus on primary cases, recurrences, and progressions of primary neuro-oncologic tumors would suggest. On median, each center treated 67 patients with cerebral metastasis.

2a. Interdisciplinary case discussions



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients total
Numerator	Primary cases (elective patients:pre-intervention. emergency patients: post-intervention) who were presented in the tumour board	164*	61 - 604	10032
Denominator	Primary cases (= Indicator 1a)	178*	106 - 618	10810
Rate	Target value ≥ 95%	96,86%	34,46% - 100%	92,80%**



	2016	2017	2018	2019	2020
● Max	100%	100%	100%	100%	100%
95th percentile	99,55%	100%	100%	100%	99,73%
75th percentile	98,35%	98,77%	98,71%	98,35%	98,48%
Median	96,36%	96,95%	96,72%	96,81%	96,86%
25th percentile	93,77%	91,32%	94,91%	95,67%	95,19%
5th percentile	47,96%	57,56%	71,30%	68,52%	74,32%
● Min	20,87%	22,52%	24,11%	39,36%	34,46%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
51	100,00%	39	76,47%

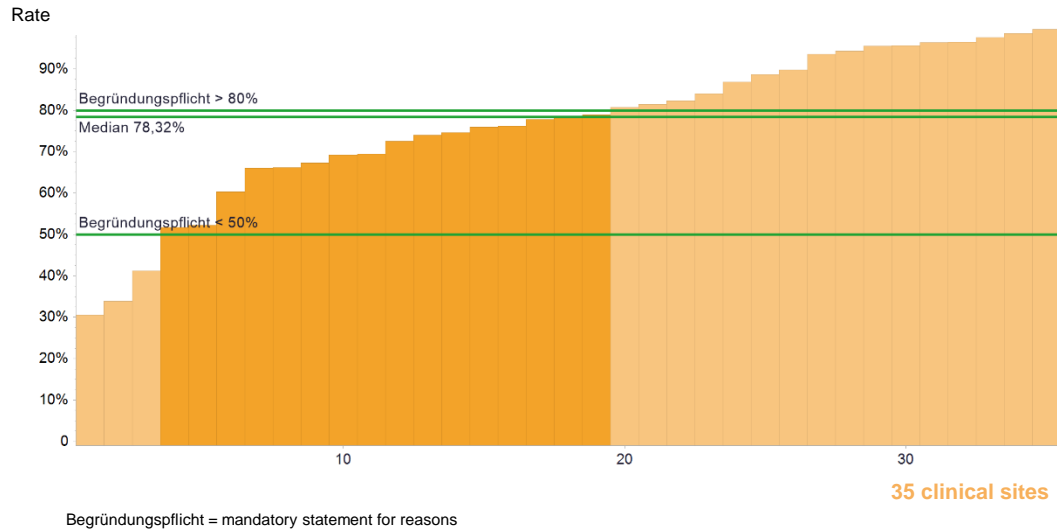
Comments:

The median presentation rate of primary cases in the tumor board is at the previous year's level. With 12 centers, 4 more than in the previous year failed to meet the target. In the audits, organizational problems (e.g., Covid-related displacement of staff familiar with the processes, inadequate information flows) and ignorance of the indicator target in the referral department were primarily responsible for this. Six remarks were issued. One Center received a deviation because elective patients admitted immediately after the weekly tumor board were regularly presented only postinterventional.

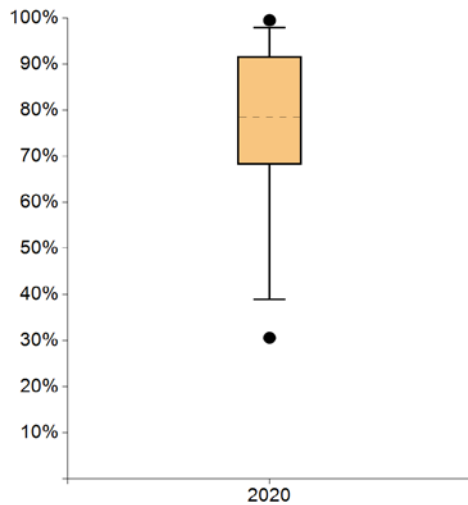
*The median for numerator and denominator does not refer to an existing center but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

** Percentage of total patients treated in centers according to the numerator.

2b. Pretherapeutic interdisciplinary case discussions



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients total
Numerator	Primary cases of the denominator that were preinterventionally presented in tumor board	133*	52 - 596	6061
Denominator	Primary cases (= Indicator 1a)	185*	106 - 618	7818
Rate	Mandatory statement for reasons*** <50% and >80%	78,32%	30,59% - 99,46%	77,53%**



	2016	2017	2018	2019	2020
● Max	----	----	----	----	99,46%
95 th percentile	----	----	----	----	97,86%
75 th percentile	----	----	----	----	91,62%
Median	----	----	----	----	78,32%
25 th percentile	----	----	----	----	68,19%
5 th percentile	----	----	----	----	39,00%
● Min	----	----	----	----	30,59%

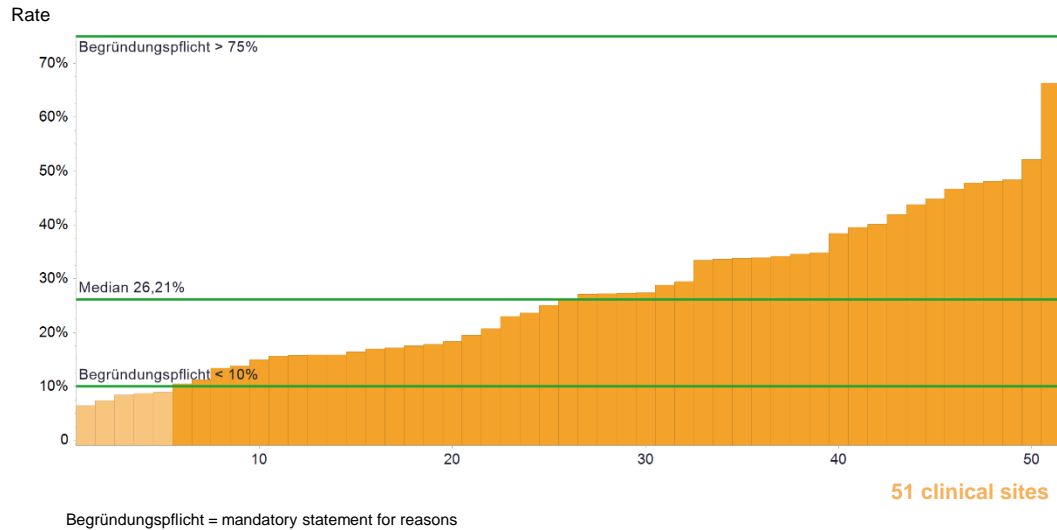
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
35	68,63%	16	45,71%

Comments:

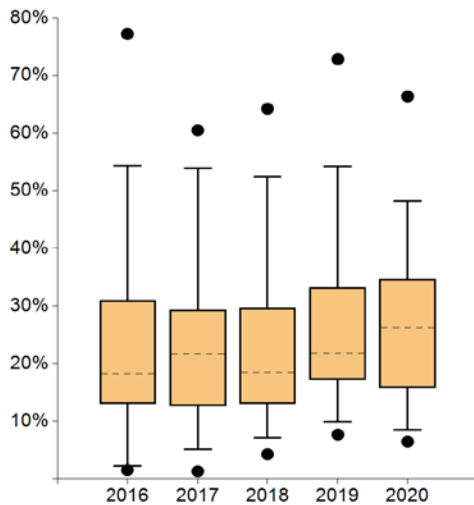
This new indicator serves to differentiate indicator 2a, as the focus here is on pre-therapeutic presentation. Postinterventional presentation is considered appropriate only for emergency interventions. Of the 35 Centers voluntarily providing data, 16 were within the corridor of 50% and 80%. 16 centers were even above 80%. The 3 Centers below the lower plausibility limit explained that "urgent" interventions would also be included under the heading "emergency," or they referred to documentation problems.

*The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.
 ** Percentage of total patients treated in centers according to the numerator.
 *** In the case of values outside the plausibility limit(s), the centers are required to provide justification.

3. Psycho-oncological care



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases who received psycho-oncological care in an inpatient or outpatient setting (consultation ≥ 25 min)	58*	16 - 212	3545
Denominator	Primary cases (= Indicator 1b) and patients with recurrence	226*	118 – 717	14211
Rate	Mandatory statement for reasons*** < 10% and >75%	26.21%	6.45% - 66.37%	24.95%**



	2016	2017	2018	2019	2020
● Max	77,19%	60,49%	64,23%	72,82%	66,37%
95 th percentile	54,36%	53,87%	52,44%	54,19%	48,21%
75 th percentile	31,00%	29,37%	29,70%	33,14%	34,68%
Median	18,24%	21,63%	18,46%	21,76%	26,21%
25 th percentile	13,03%	12,68%	13,06%	17,18%	15,84%
5 th percentile	2,26%	5,16%	7,09%	9,89%	8,51%
● Min	1,52%	1,31%	4,27%	7,68%	6,45%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
51	100,00%	46	90,20%

Comments:

The psycho-oncology care rate continued to increase and reached a level of just under 25%. Compared to 2019, 2 more Centers were below a rate of 10%. In the audits, the main reasons identified were patient wishes, consultation durations of less than 25 minutes, and the lack of a way to record post-discharge calls. At the time of the audit, 1 center already had significantly higher rates in the current audit year.

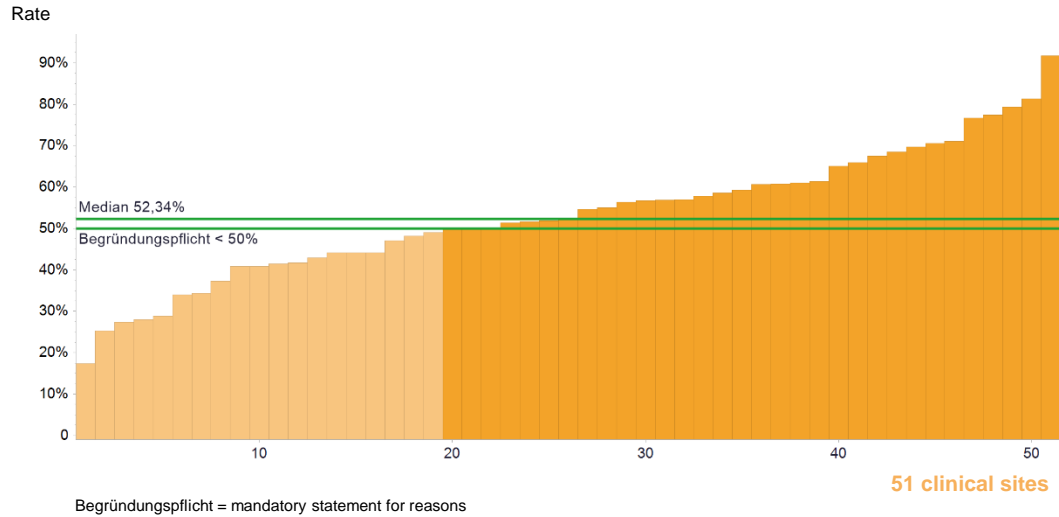
*The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

** Percentage of total patients treated in centers according to the numerator.

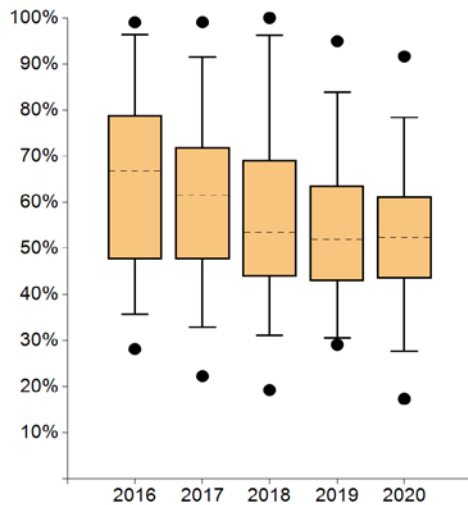
*** For values outside the plausibility limit(s), the centers are required to provide a justification.



4. Counselling social services



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases who received counselling by social services in an inpatient or outpatient setting	129*	33 - 583	7607
Denominator	Primary cases (= Indicator 1a) and patients with recurrence/progress (= Indicator 1b)	226*	118 - 717	14211
Rate	Mandatory statement for reasons*** < 50%	52,34%	17,34% - 91,65%	53,53%**



	2016	2017	2018	2019	2020
● Max	99,01%	99,04%	100%	94,95%	91,65%
95 th percentile	96,35%	91,51%	96,18%	83,80%	78,37%
75 th percentile	78,87%	71,95%	69,13%	63,62%	61,20%
Median	66,75%	61,47%	53,51%	51,96%	52,34%
25 th percentile	47,72%	47,74%	43,81%	42,93%	43,50%
5 th percentile	35,70%	32,92%	31,11%	30,65%	27,65%
● Min	28,14%	22,26%	19,25%	29,10%	17,34%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
51	100,00%	32	62,75%

Comments:

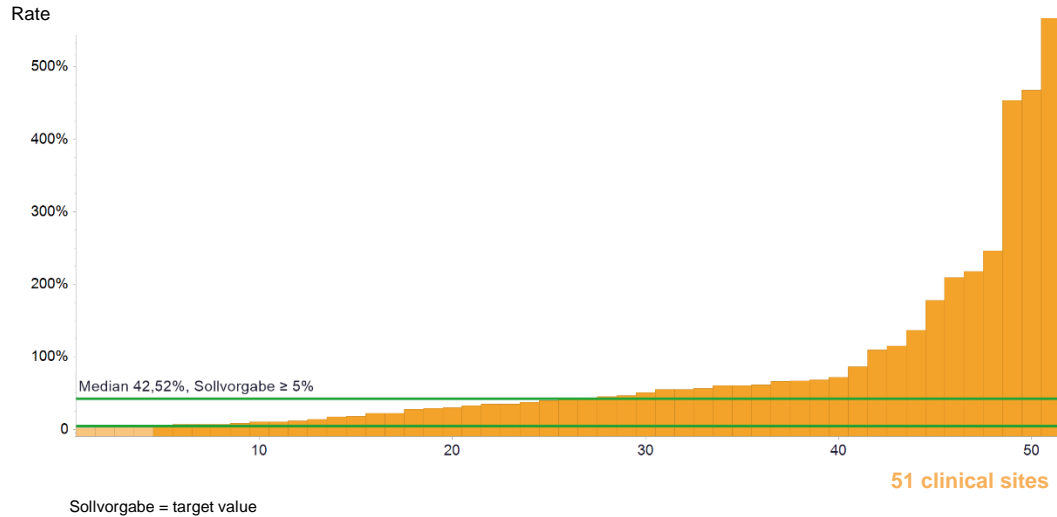
The consultation rate, which had been declining for years, rose again in 2020. Due to the increased limit for the mandatory statement for reasons from 30 to 50%, significantly more Centers (19) had to explain their values than in the previous year: 5 centers were located outside from Germany, where other claims and responsibilities regarding social counseling apply. Other frequent reasons were a high number of outpatients, little need on the part of patients or Covid-related reduced numbers of patient contacts. This was partly addressed with a lower-threshold counseling offer, information folders for the outpatient clinic, and further staff training.

*The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

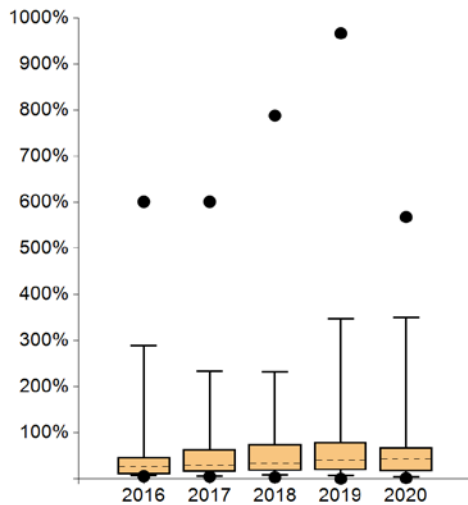
** Percentage of total patients treated in centers according to the numerator.

*** For values outside the plausibility limit(s), the centers are required to provide a justification.

5. Study participation



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	All patients (malignant and benign) included in a study with an ethic vote	27*	1 - 589	3595
Denominator	Malignant primary cases	64*	38 - 145	4002
Rate	Target value ≥ 5%	42,52%	1,56% - 567,74%	89,83%**



	2016	2017	2018	2019	2020
● Max	601,06%	601,09%	787,88%	966,22%	567,74%
95 th percentile	288,98%	233,18%	232,51%	346,81%	350,23%
75 th percentile	46,20%	63,76%	74,11%	79,34%	67,31%
Median	26,87%	29,22%	34,13%	40,67%	42,52%
25 th percentile	9,62%	14,95%	17,39%	19,55%	15,78%
5 th percentile	6,44%	6,19%	8,51%	6,46%	4,67%
● Min	5,61%	5,04%	3,39%	0,00%	1,56%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
51	100,00%	47	92,16%

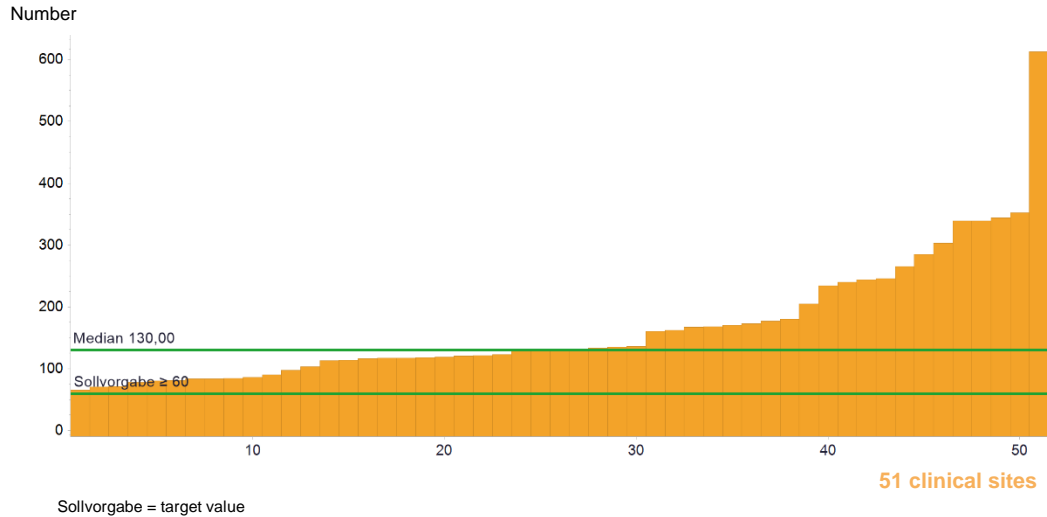
Comments:

The median of the study rates continues to rise. It is noticeable that the maximum value has fallen significantly. This is probably related to the fact that since the 2020 indicator year, pure biobank collections can no longer be counted for the indicator. 4 Centers (previous year: 2) failed to meet the target of 5%. This could be partly explained by the fact that patients with consent to participate ultimately failed the screening or that patients did not want to show up for the examination appointments because of Covid. In the audits, 3 remarks were issued.

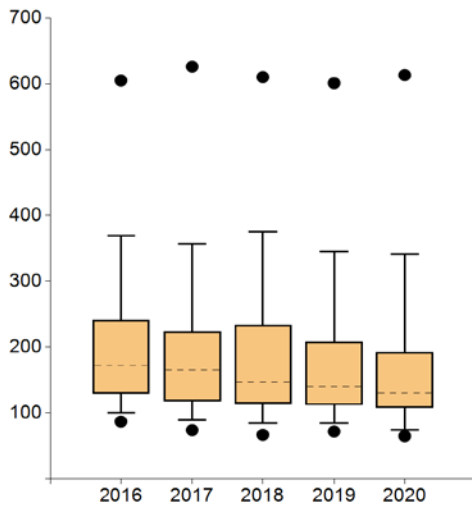
*The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

** Percentage of total patients treated in centers according to the numerator.

6a. Surgical primary cases



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Number	Surgical primary cases definition in line with CoR 5.2.3.a	130	65 - 613	8540
	Target value ≥ 60			



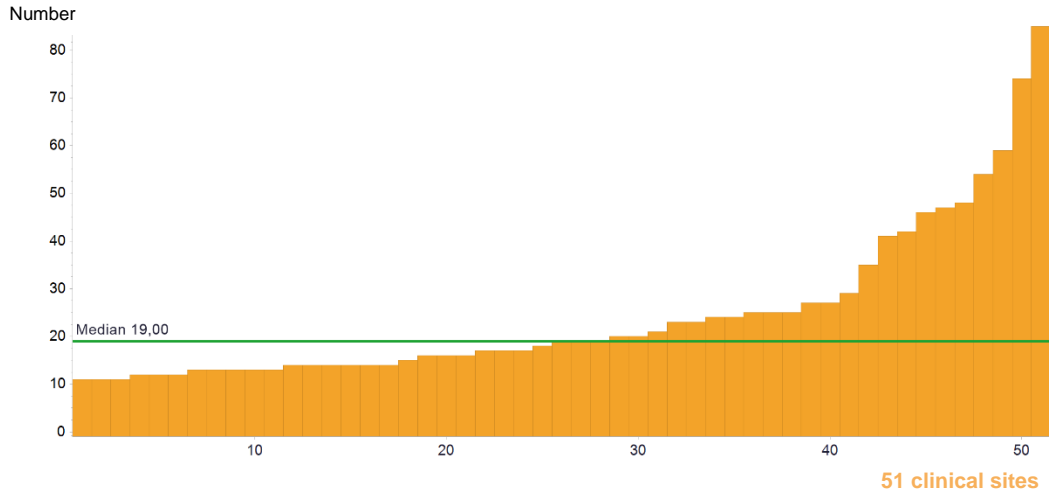
	2016	2017	2018	2019	2020
● Max	605,00	626,00	610,00	601,00	613,00
95 th percentile	368,75	356,75	375,70	344,85	341,50
75 th percentile	241,00	223,50	233,75	208,25	192,50
Median	171,50	165,00	147,00	140,00	130,00
25 th percentile	129,00	118,00	114,25	112,00	108,00
5 th percentile	100,35	89,00	85,00	84,30	74,50
● Min	87,00	74,00	67,00	72,00	65,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
51	100,00%	51	100,00%

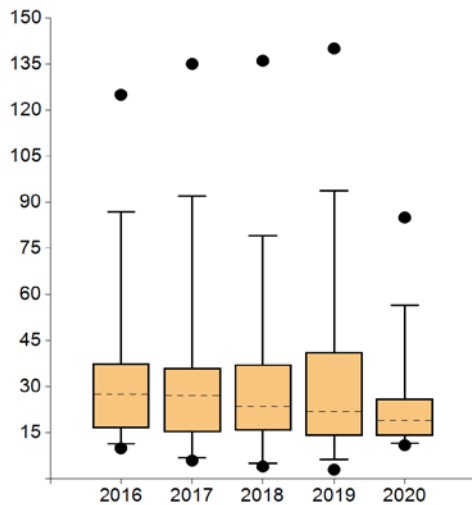
Comments:

The minimum number of 60 primary surgical cases continues to be achieved by all centers without any problems. The median has further decreased, which can be explained by the increasing number of centers (at the beginning usually certification of large hospitals). The total number of surgical primary cases of the centers has increased by 10.67% compared to the pre-indicator year. Similar to the total primary case count (see indicator 1a), this increase is due to new centers, as centers with 2019 and 2020 data available experienced a slight, likely Covid-related, decrease in surgical primary cases.

6b. Biopsy



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Number	Biopsies definition in line with CoR 5.2.3b	19	11 - 85	1251
	No target value			



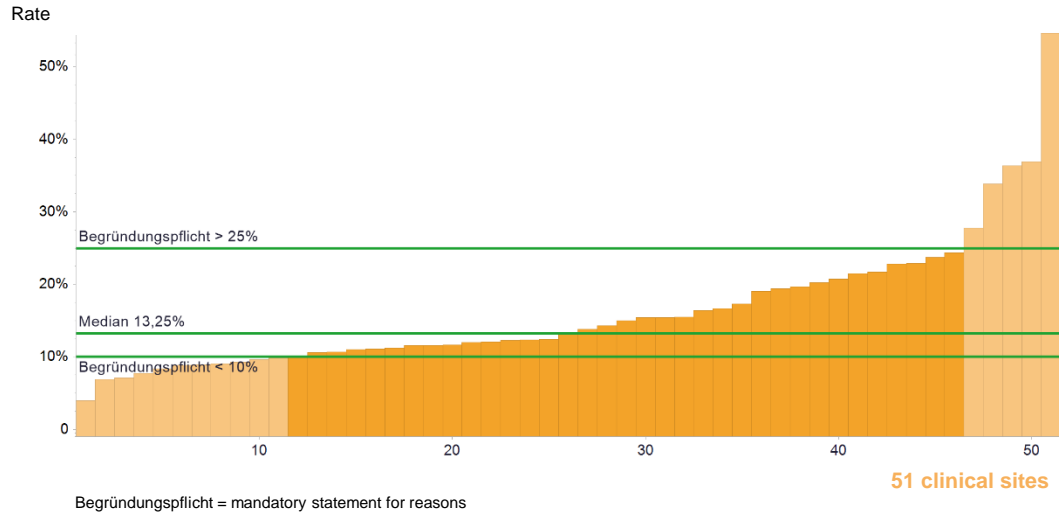
	2016	2017	2018	2019	2020
● Max	125,00	135,00	136,00	140,00	85,00
95 th percentile	86,80	91,90	79,00	93,80	56,50
75 th percentile	37,50	36,00	37,25	41,25	26,00
Median	27,50	27,00	23,50	22,00	19,00
25 th percentile	16,50	15,25	15,75	14,00	14,00
5 th percentile	11,45	6,85	5,00	6,30	11,50
● Min	10,00	6,00	4,00	3,00	11,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
51	100,00%	-----	-----

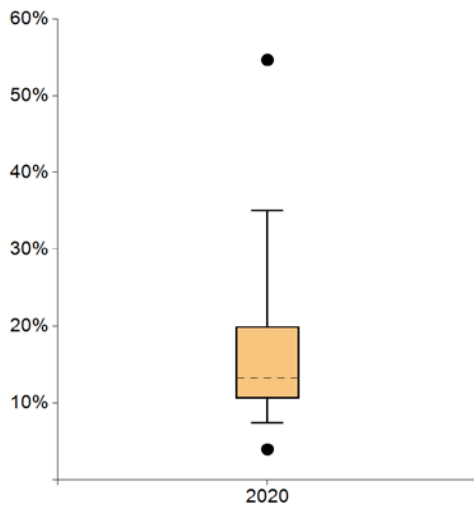
Comments:

There is no existing target value for the number of biopsies in primary cases to date. The total number has decreased by 12.57%. The reasons for this are unclear, as the total number of (surgical) primary cases has increased. In particular, centers with high biopsy numbers have experienced decreases. Due to the lack of a target, the reasons for this are unclear. Covid-related decreases in the number of cases are also likely to play a role here.

6c. Ratio biopsies/resections



	Indicator definition	All clinical sites 2020		
		Median	Range	Patienten Gesamt
Numerator	Biopsies (= Indicator 6b)	19*	11 - 85	1251
Denominator	Surgical primary cases (= Indicator 6a)	130*	65 - 613	8540
Rate	Mandatory statement for reasons*** <10% and >25%	13,25%	3,98% - 54,65%	14,65%**



	2016	2017	2018	2019	2020
● Max	----	----	----	----	54,65%
95 th percentile	----	----	----	----	35,07%
75 th percentile	----	----	----	----	19,95%
Median	----	----	----	----	13,25%
25 th percentile	----	----	----	----	10,63%
5 th percentile	----	----	----	----	7,41%
● Min	----	----	----	----	3,98%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
51	100,00%	35	68,63%

Comments:

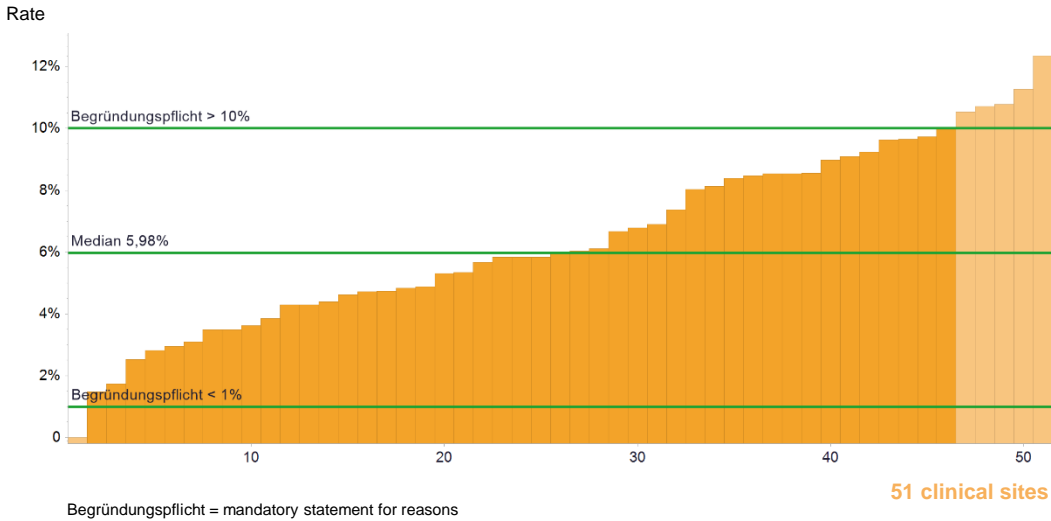
This ratio was newly introduced to estimate the ratio of biopsies to surgical primary cases. 11 centers were below a ratio of 0.1, i.e., had comparatively many surgeries. The centers justified this, among other things, with a high number of benign or resectable tumors and many patients assigned to surgery (and biopsied externally). In contrast, 5 centers had a ratio of more than 0.25, which was attributed to the establishment of a new department for stereotaxy and the patient's request for initial histological confirmation.

* The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

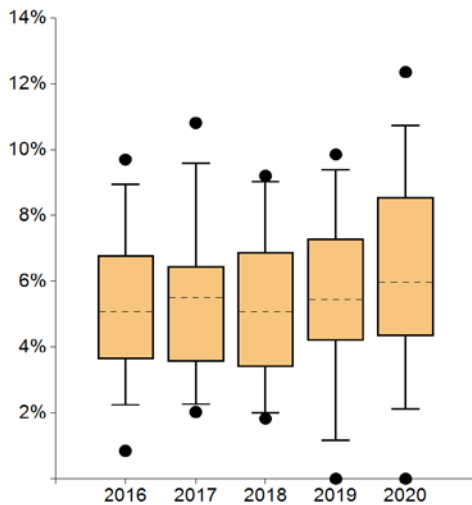
** Percentage of total patients treated in centers according to the numerator.

*** For values outside the plausibility limit(s), the centers are required to provide a justification.

7a. Revision surgeries



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Revision surgeries as a consequence of post-surgical complications within 30d after surgery (for surgical primary cases)	9*	0 - 29	506
Denominator	Surgical primary cases (= Indicator 6a)	130*	65 - 613	8540
Rate	Mandatory statement for reasons*** < 1% and >10%	5,98%	0,00% - 12,35%	5,93%**



	2016	2017	2018	2019	2020
● Max	9,70%	10,81%	9,20%	9,85%	12,35%
95th percentile	8,94%	9,59%	9,03%	9,38%	10,74%
75th percentile	6,79%	6,45%	6,88%	7,29%	8,55%
Median	5,09%	5,51%	5,09%	5,45%	5,98%
25th percentile	3,64%	3,57%	3,39%	4,19%	4,34%
5th percentile	2,26%	2,28%	2,01%	1,18%	2,13%
● Min	0,85%	2,03%	1,83%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
51	100,00%	45	88,24%

Comments:

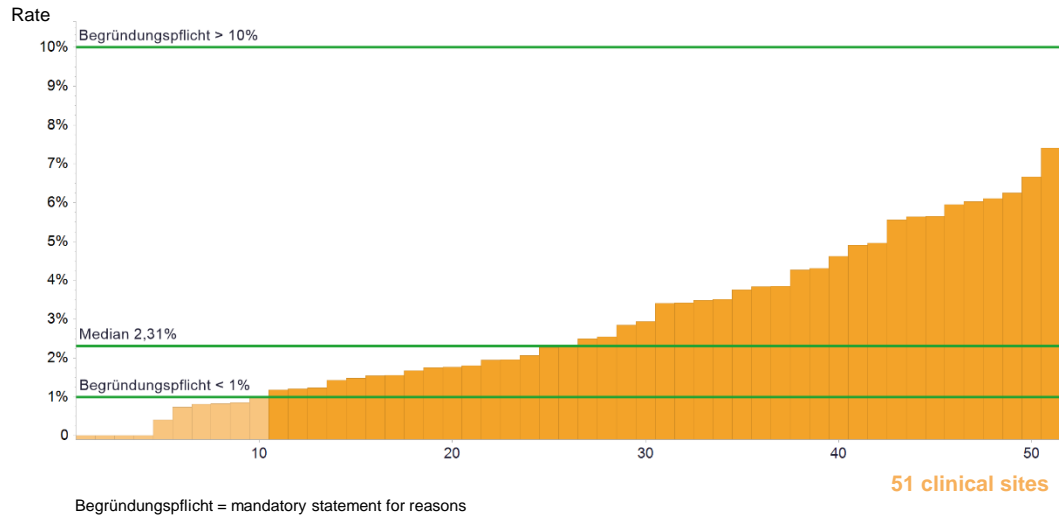
The overall revision rate and the median of the centers have increased slightly. For the first time again since the indicator year 2017 (n=1), there were centers (n=5) that exceeded the limit for the mandatory statement of reasons. The affected patients mostly had to be revised due to postoperative bleeding, wound infections, and CSF (cerebrospinal fluid) fistulas. In many cases, the complications were worked up in morbidity and mortality conferences. The auditors could not identify any systematic errors.

*The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

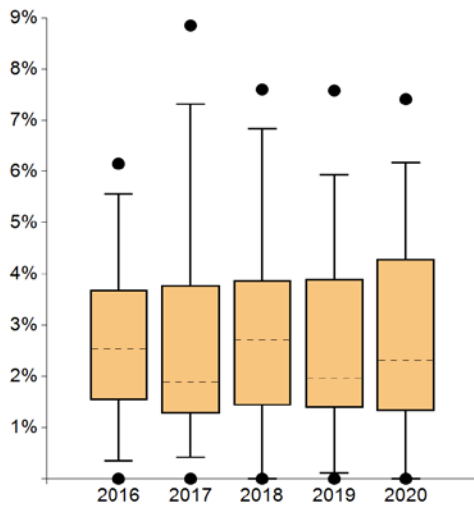
** Percentage of total patients treated in centers according to the numerator.

*** For values outside the plausibility limit(s), the centers are required to provide a justification.

7b. Clinically symptomatic secondary bleeding



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Surgical primary cases with clinically symptomatic secondary bleeding (= new onset or worsening of an existing neurological disorder)	3*	0 - 15	234
Denominator	Surgical primary cases (= Indicator 6a)	130*	65 - 613	8540
Rate	Mandatory statement for reasons*** < 1% and >10%	2,31%	0,00% - 7,41%	2,74%**



	2016	2017	2018	2019	2020
● Max	6,15%	8,85%	7,60%	7,58%	7,41%
95 th percentile	5,56%	7,32%	6,84%	5,93%	6,18%
75 th percentile	3,68%	3,78%	3,87%	3,90%	4,29%
Median	2,54%	1,88%	2,71%	1,96%	2,31%
25 th percentile	1,54%	1,28%	1,43%	1,38%	1,33%
5 th percentile	0,35%	0,43%	0,00%	0,11%	0,00%
● Min	0,00%	0,00%	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
51	100,00%	41	80,39%

Comments:

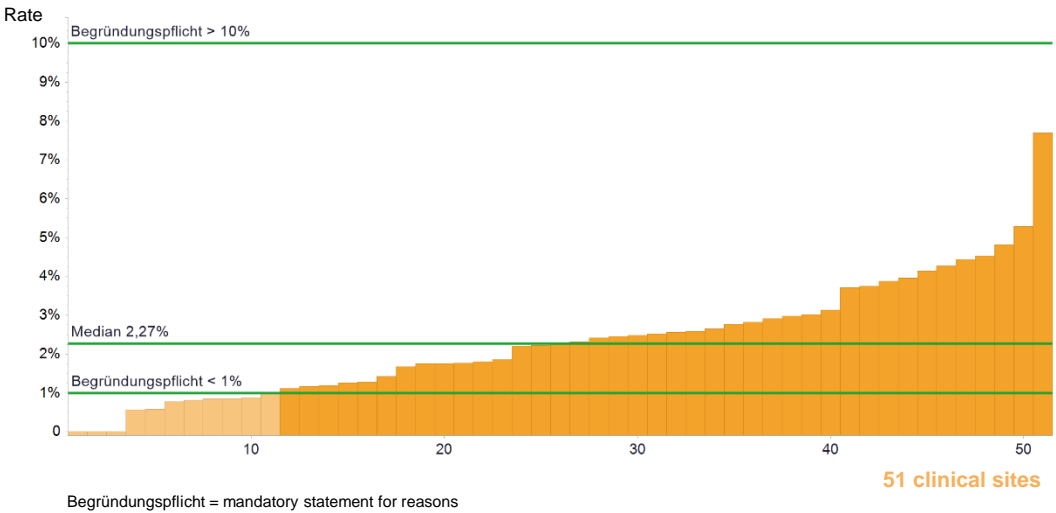
All 10 Centers outside the plausibility corridor had an exceptionally low rate of rebleeding of less than 1%. In fact, 4 Centers did not experience a single rebleed.

*The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

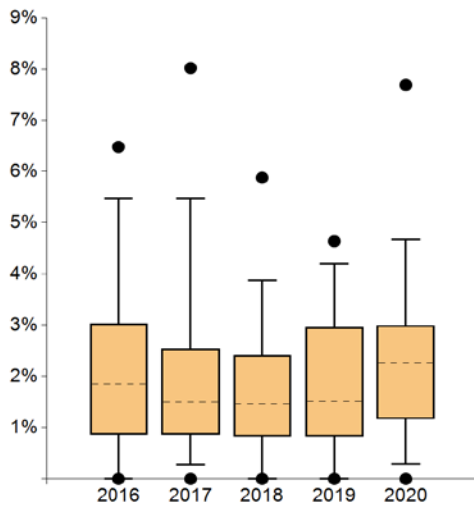
** Percentage of total patients treated in centers according to the numerator.

*** For values outside the plausibility limit(s), the centers are required to provide a justification.

8. Post-surgical wound infections



	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Surgical primary cases with post-surgical meningitis confirmed by laboratory tests and/or a wound infection requiring surgical revision within 30d of surgery	3*	0 - 17	189
Denominator	Surgical primary cases (= Indicator 6a)	130*	65 - 613	8540
Rate	Mandatory statement for reasons*** < 1% and >10%	2,27%	0,00% - 7,69%	2,21%**



	2016	2017	2018	2019	2020
● Max	6,48%	8,02%	5,88%	4,64%	7,69%
95 th percentile	5,47%	5,47%	3,88%	4,19%	4,68%
75 th percentile	3,03%	2,54%	2,41%	2,96%	3,00%
Median	1,85%	1,51%	1,47%	1,52%	2,27%
25 th percentile	0,86%	0,86%	0,82%	0,82%	1,18%
5 th percentile	0,00%	0,28%	0,00%	0,00%	0,29%
● Min	0,00%	0,00%	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
51	100,00%	40	78,43%

Comments:

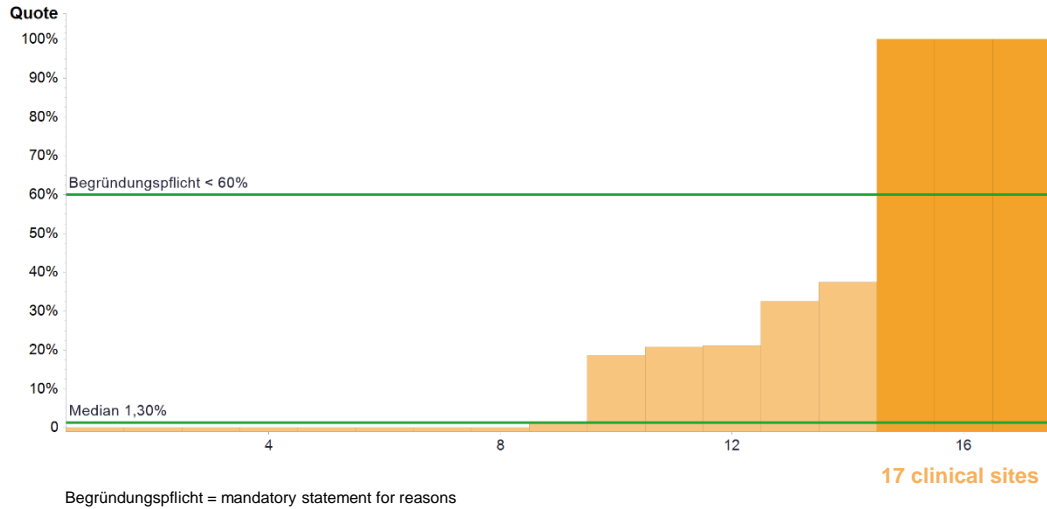
Similar good results to indicator 7b were also observed for postoperative wound infections. In the 11 Centers outside the plausibility corridor, this was observed only in individual cases, if at all. Not a single center required justification due to a postoperative wound infection rate above 10%. The rate overall increased slightly at a low level.

*The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

** Percentage of total patients treated in centers according to the numerator.

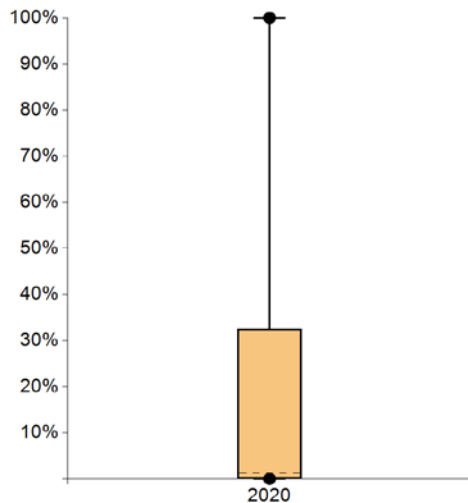
*** For values outside the plausibility limit(s), the centers are required to provide a justification.

9. Assessment palliative symptoms



	Indicator definition	All clinical sites 2020		
		Median	Range	Patienten Total
Numerator	Patients with symptom assessment using MIDOS or IPOS	1*	0 - 139	299
Denominator	Patients with ICD-O topography C71 and ICD-O morphology /03	77*	4 - 245	1605
Rate	Mandatory statement for reasons*** <60%	1,30%	0,00% - 100%	18,63%**

IPOS = Integrated Palliative care Outcome Scale



	2016	2017	2018	2019	2020
● Max	----	----	----	----	100%
95 th percentile	----	----	----	----	100%
75 th percentile	----	----	----	----	32,46%
Median	----	----	----	----	1,30%
25 th percentile	----	----	----	----	0,00%
5 th percentile	----	----	----	----	0,00%
● Min	----	----	----	----	0,00%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
17	33,33%	3	17,65%

Comments:

The indicator was newly included to look at the recording of palliative symptoms in malignant brain tumors. 17 centers voluntarily participated in the initial survey. While 3 centers performed symptom recording in all cases, the majority of centers (14) succeeded in doing so in less than 60% of cases. In most cases, this was because structured symptom recording was still under development.

*The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

** Percentage of total patients treated in centers according to the numerator.

*** For values outside the plausibility limit(s), the centers are required to provide a justification.



WISSEN AUS ERSTER HAND (FIRST-HAND KNOWLEDGE)



Find out more on www.krebsgesellschaft.de

Authors

German Cancer Society (DKG)
Certification Committee for Neuro-oncology Cancer Centres
Uwe Schlegel, Spokesman Certification Committee
Walter Stummer, Deputy Spokesman Certification Committee
Simone Wesselmann, German Cancer Society (DKG)
Johannes Rückher, German Cancer Society (DKG)
Martin Utzig, German Cancer Society (DKG)
Ellen Griesshammer, German Cancer Society (DKG)
Viktoria Sonnentag, OnkoZert GmbH
Florina Dudu, OnkoZert GmbH

Imprint

Publisher and responsible for content:
Deutsche Krebsgesellschaft (DKG)
Kuno-Fischer-Straße 8
14057 Berlin
Tel.: +49 (030) 322 93 29 0
Vereinsregister Amtsgericht Charlottenburg,
Vereinsregister-Nr.: VR 27661 B
V.i.S.d.P.: Dr. Johannes Bruns

in cooperation with:
OnkoZert, Neu-Ulm
www.onkozert.de

Version e-A1-de; Stand 07.03.2022

ISBN: 978-3-910336-00-1

