### **Indicator Analysis 2020**

## **Annual Report of the Certified Neuro-oncology Cancer Centres**

Audit year 2019 / Indicator year 2018



### Annual Report Neuro-oncology Cancer Centres 2020 (Audit year 2019 / Indicator year 2018)



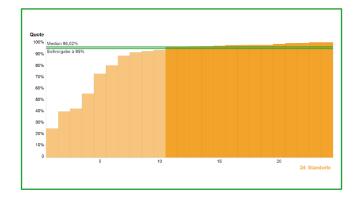
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#### **General information**

	Indicator definition	All clinical	sites 2016
		Median	Range
Numerator	Primary cases (elective patients:pre-intervention, emergency patients: post- intervention) who were presented in the tumour conference	202.5*	24 - 442
Denominator	Primary cases (= Indicator 1)	214*	110 - 613
Rate	Target value ≥ 95%	96.36%	20.87% - 100%



#### **Basic data indicator:**

The definition of the numerator, denominator and the target value are taken from the key figure sheet.

The specification of 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.

Under Range, the value range for the numerator, denominator and ratio of all centers is specified.

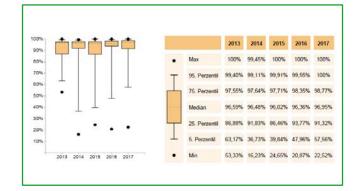
The Total Patients column displays the total of all patients treated according to the key figure and the corresponding quota.

#### Diagram:

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

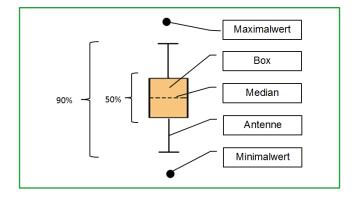


#### **General information**



#### **Cohort development:**

The **cohort development** in the years **2014**, **2015**, **2016**, **2017** and **2018** is presented in a box plot diagram.



#### **Box plot:**

A box plot consists of a **box with median**, **whiskers** and **outliers**. 50 percent of the Centres are within the box. The median divides the entire available cohort into two halves with an equal number of Centres. The whiskers and the box encompass a 90<sup>th</sup> percentile area/range. The extreme values are depicted here as dots.



### **Status of the certification system for Neuro-oncology Cancer Centres 2016**

	31.12.2019	31.12.2018	31.12.2017	31.12.2016	31.12.2015	31.12.2014
Ongoing procedures	2	2	5	8	4	5
Certified Centres	42	38	32	26	21	15
Certified clinical sites	43	39	33	27	22	16
Neuro-oncology Cancer Centres with						
1 clinical site	41	37	31	25	20	14
2 clinical sites	1	1	1	1	1	1
3 clinicial sites	0	0	0	0	0	0
4 clinical sites	0	0	0	0	0	0



#### Clinical sites taken into account

	31.12.2019	31.12.2018	31.12.2017	31.12.2016	31.12.2015	31.12.2014
Clinical sites included in the Annual Report	40	38	30	24	19	12
equivalent to	93.0%	97.4%	90.9%	88.9%	86.4%	75.0%
Primary cases total*	9,254	8,820	7,219	5,067	3,952	2,498
Primary cases per clinical site (mean)*	231.4	232.1	240.6	211.1	208	208.2
Primary cases per clinical site (median)*	201.5	192.5	214	202.5	213	196.5

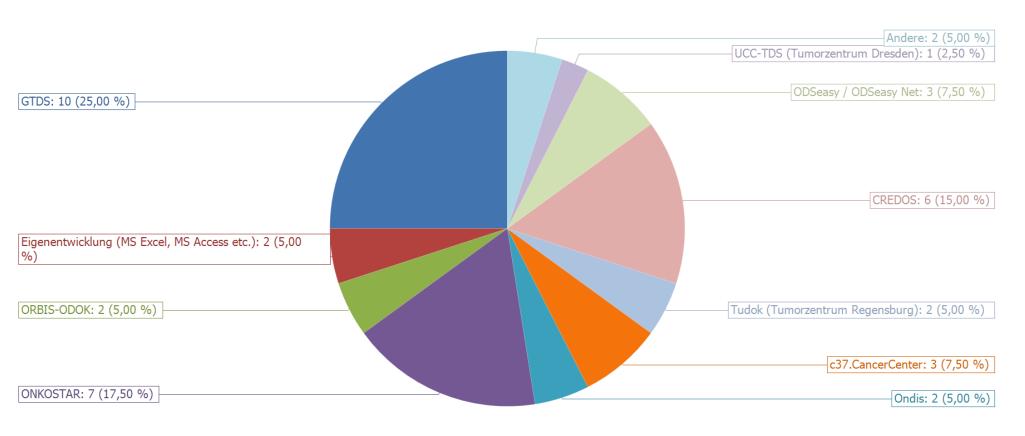
<sup>\*</sup>The figures are based on the clinical sites listed in the Annual Report.

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 40 of the 43 certified center locations. Excluded are 3 sites that were certified for the first time in 2019 (data mapping of the complete calendar year is not mandatory for initial certifications). In all 43 sites 9,529 primary neuro-oncological cases were treated. An up-to-date overview of all certified sites is available at <a href="https://www.oncomap.de">www.oncomap.de</a>

The indicators published here relate to the indicator year 2018 and provide the basis for the audits conducted in 2019.

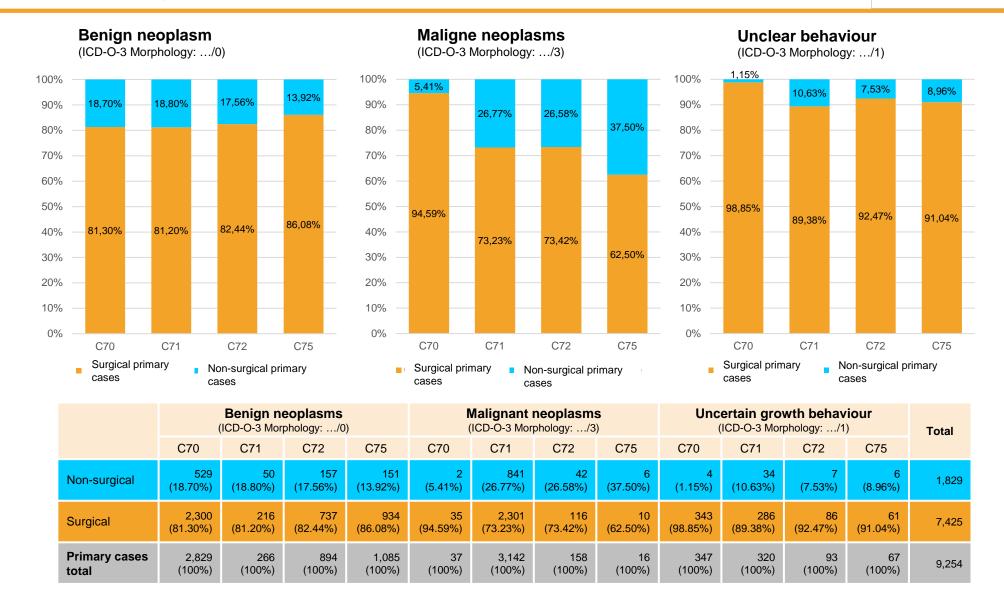
### **Tumour documentation systems in the Centre's clinical sites**



The information on the tumour documentation system was taken from the data sheet (Basic Data Sheet). It is not possible to specify several systems. 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

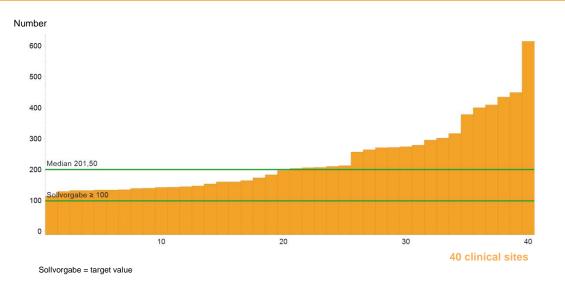


C70: neoplasm of meninges; C71: neoplasm of brain; C72: neoplasm of medulla and cerebral nerves; C75: Other endocrine glands and related structures in line with ICD-O-3 topography

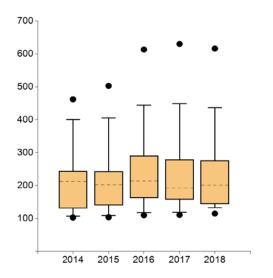




### 1. Number of primary cases



	Indicator definition	All clinical sites 2018		
		Median	Range	Patients Total
Number	Primary cases def. in line with 1.2.1	201.5	115 - 616	9,254
	Target value ≥ 100			





Clinical sites with evaluable data		Clinical sites meeting the target value		
Number	%	Number	%	
40	100.00%	40	100.00%	

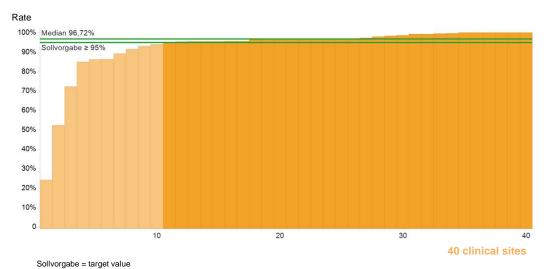
#### Comments:

As in the previous year, the target of at least 100 primary cases per year is met by all centres, and the median number of primary cases rises again to over 200. Of the 9,254 primary cases treated in 2018, 8,524 were treated in German centres. In addition, a further 275 primary cases from German centres have not yet been included in the annual report.

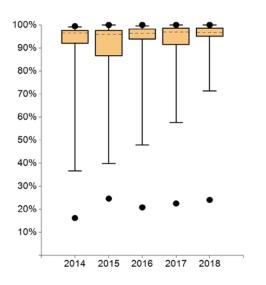


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### 2. Interdisciplinary case reviews



	Indicator definition	All clinical sites 2018		
		Median		Range
Numerator	Primary cases (elective patients:pre-intervention. emergency patients: post-intervention) who were presented in the tumour conference	185.5*	34 - 598	8,587
Denominator	Primary cases (= Indicator 1)	201.5*	115 - 616	9,254
Rate	Target value ≥ 95%	96.72%	24.11% - 100%	92.79%**





Clinical sites with evaluable data		Clinical sites meeting the target value		
Number	%	Number	%	
40	100.00%	30	75.00%	

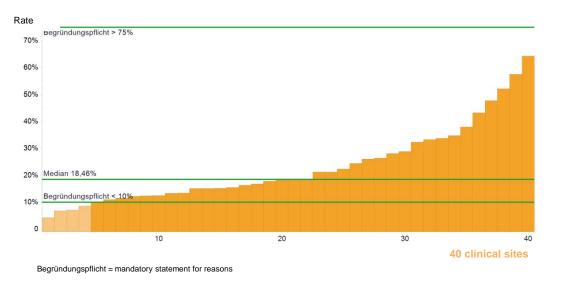
#### Comments:

Especially in the lower percentage ranges, the presentation rate in interdisciplinary case discussions increases. 21 centers are improving their score, 15 are deteriorating. 6 of the 10 centers below the target already fell short of it in the previous year. The main reason for the shortfall was organisational problems (little communication with other departments, insufficient IT solutions, postoperative presentation due to the tumour conference taking place only once a week), which were countered by measures, some of which were interdepartmental, such as consistent communication, formulation of SOPs and the establishment of short-term presentations of urgent cases. The auditors formulated numerous indications in the audits.

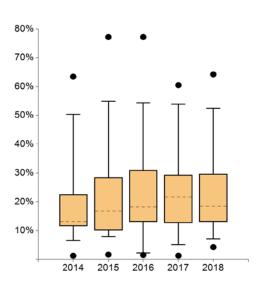
<sup>\*</sup>The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

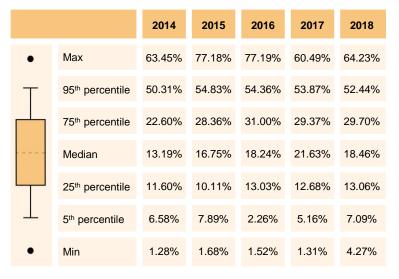
<sup>\*\*</sup> Percentage of total patients treated in centers according to the numerator.

### 3. Psycho-oncological care



	Indicator definition	All clinical si	ites 2018	
		Median	Range	Patients Total
Numerator	Primary cases who received psycho-oncological care in an inpatient or outpatient setting (consultation ≥ 25 min)	45*	7 - 228	2,542
Denominator	Primary cases (= Indicator 1) and patients with recurrence	234*	121 - 762	11,281
Rate	Mandatory statement of reasons*** < 10% and >75%	18.46%	4.27% - 64.23%	22.53%**





Clinical sites with evaluable data		Clinical sites within the plausibility limits		
Number	%	Number	%	
40	100.00%	36	90.00%	

#### Comments:

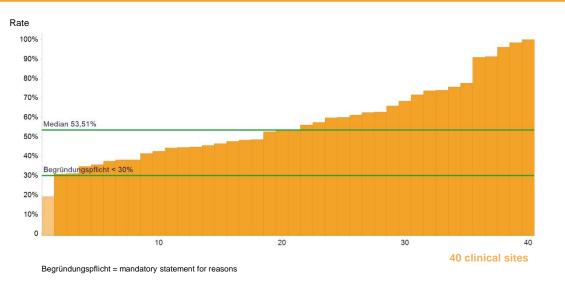
Due to an extension of the upper plausibility limit from 50 to 75%, only centres below a care rate of 10% fell under the obligation to provide justification. Their number has also decreased from 7 in the previous year to 4. These centres explained their low rates with low personnel resources or problems in filling vacancies as well as low care requirements on the part of the patients (curative treatment, psychoncological care close to home). They planned to counter this with new hires, low-threshold care services and cooperation in supra-regional networks. The centre with the lowest rate already improved to 10% in the first half of 2019.



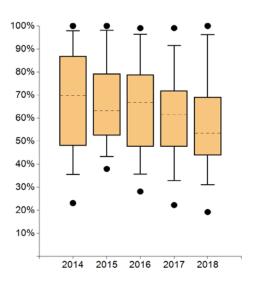
<sup>\*\*</sup> Percentage of total patients treated in centers according to the numerator.

<sup>\*\*\*</sup> For values outside the plausibility limit(s), the centers are required to provide a justification.

### 4. Counselling social services



	Indicator definition	All clinical sites 2018		
		Median	Range	Patients Total
Numerator	Primary cases who received counselling by social services in an inpatient or outpatient setting	135.5*	31 - 732	6,403
Denominator	Primary cases (= Indicator 1) and patients with recurrence	234*	121 - 762	11,281
Rate	Mandatory statement of reasons*** < 30%	53.51%	19.25% - 100%	56.76%**





Clinical sites with evaluable data		Clinical sites within the plausibility limits		
Number	%	Number	%	
40	100.00%	39	97.50%	

#### Comments:

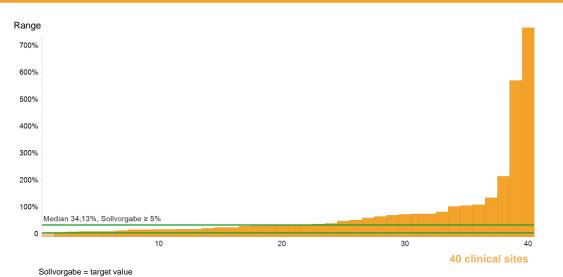
This indicator continues to be met to a large extent by the centres, with a considerable spread. At the same time, both the median and the total number of consultations will decrease slightly (2017: 60.86%). As in the previous year, only 1 centre is below the rate of 30% which is associated with the obligation to provide a justification. However, these are different centres. The centre concerned in the key figure year 2018 claimed to fulfil the quota in relation to inpatients. In the audit, reference was again made to the specified recording of outpatients advised on an outpatient basis.

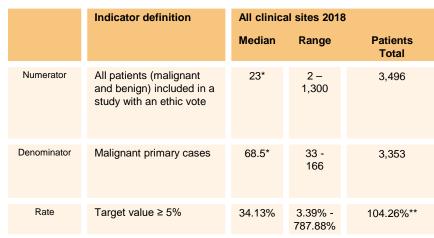


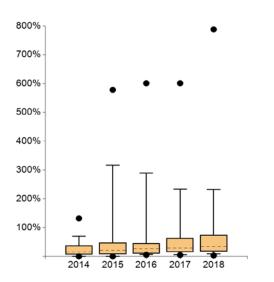
<sup>\*\*</sup> Percentage of total patients treated in centers according to the numerator.

<sup>\*\*\*</sup> For values outside the plausibility limit(s), the centers are required to provide a justification.

### 5. Study participation









Clinical sites with evaluable data		Clinical sites meeting the target value		
Number	%	Number	%	
40	100.00%	39	97.50%	

#### Comments:

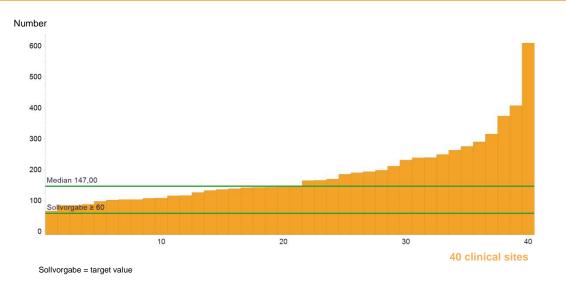
Note: Quotas above 100% are possible for this indicator due to the possible participation in several studies. If the maximum value increases significantly, only 1 center will miss the target value of at least 5%. In the previous year, the target was achieved by all centers. In the centre concerned, 2 planned studies had not yet been started. Centres with a very high study rate achieve this in particular by participating in biobank collections.

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

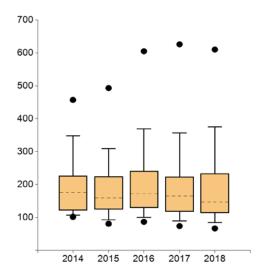
<sup>\*</sup>The median for numerator and denominator does not refer to an existing center, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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### 6a. Surgical primary cases



	Indicator definition	All clinical sites 2018		
		Median	Range	Patients Total
Number	Surgical primary cases def. in line with 5.2.3.a	147	67 - 610	7,425
	Target value ≥ 60			





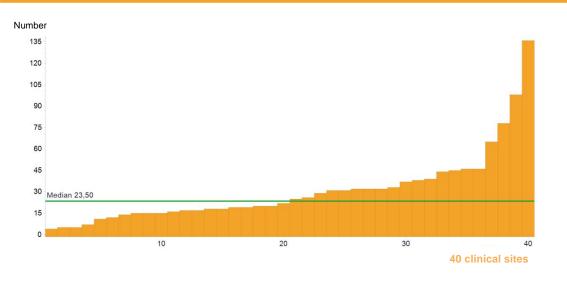
Clinical sites with evaluable data		Clinical sites meeting the target value		
Number	%	Number	%	
40	100.00%	40	100.00%	

#### Comments:

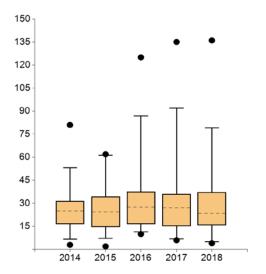
The number of primary cases operated on in the certified centres has increased by 2.51% to 7,425 and, as in the previous year, all centres easily reach the minimum number of 60 primary surgical cases. The tendency for the median to decrease over time is a phenomenon frequently observed with the increasing establishment of certification systems. This can be explained by the fact that large centres strive for certification at an earlier stage than smaller ones.



### 6b. Biopsy



	Indicator definition	All clinical sites 2018		
		Median	Range	Patients Total
Number	Biopsies def. in line with 5.2.3b	23.5	4 - 136	1,232
	No target value			





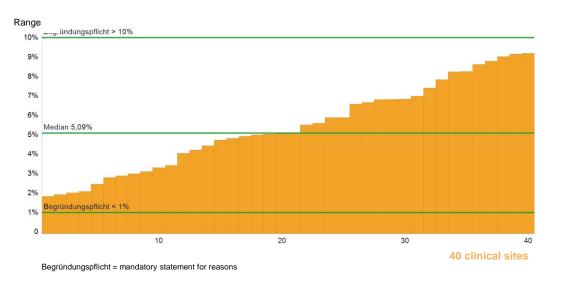
Clinical sites with evaluable data		Clinical sites meeting the target value		
Number	%	Number	%	
40	100.00%			

#### Comments:

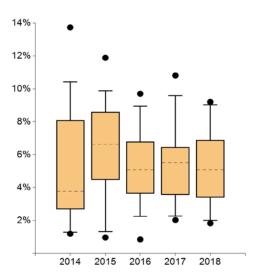
The total number of biopsies performed remained at the previous year's level (1,230). Due to the additional 2 centres in the annual report, the median falls. Despite a range of primary cases between 115 and 616 (cf. indicator 1), the large variation in the number of biopsies cannot be explained on this basis alone, although 9 of the 10 centres with a maximum of 15 biopsies treated fewer than 175 primary cases. As there is no target figure for this indicator, the centres did not have to justify their figures.



### 7a. Revision surgeries



	Indicator definition	All clinical sites 2018		
		Median	Range	Patients Total
Numerator	Revision surgeries as a consequence of post-surgical complications within 30d after surgery (for surgical primary cases)	8.5*	2 - 23	385
Denominator	Surgical primary cases (= Indicator 6a)	147*	67 - 610	7,425
Rate	Mandatory statement of reasons*** < 1% and >10%	5.09%	1.83% - 9.20%	5.19%**





Clinical sites with evaluable data		Clinical sites within the plausibility limits		
Number	%	Number	%	
40	100.00%	40	100.00%	

#### Comments:

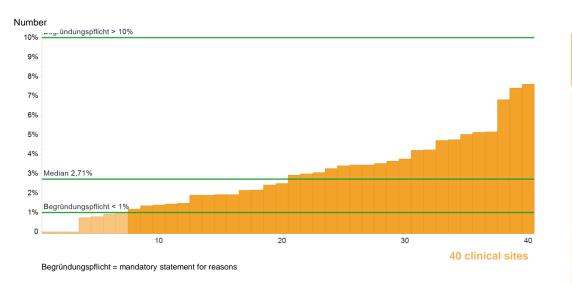
The median of the share of revision operations in primary operative cases is slightly lower compared to the previous year. All centres are within the plausibility limits. In the previous year, one centre had been at just under 11%, but this ratio fell to below 7% in the key figure year 2018. Overall, the rate of revision operations fell at 23 centres, while it rose at 15.

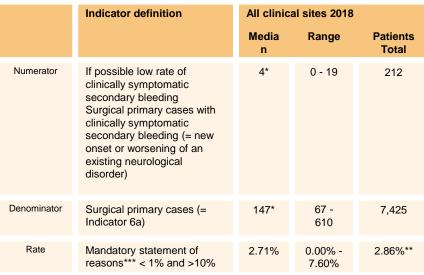


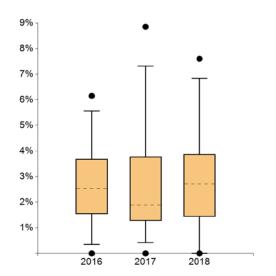
<sup>\*\*</sup> Percentage of total patients treated in centers according to the numerator.

<sup>\*\*\*</sup> For values outside the plausibility limit(s), the centers are required to provide a justification.

### 7b. Clinically symptomatic secondary bleeding









Clinical sites with evaluable data		Clinical sites within the plausibility limits		
Number	%	Number	%	
40	100.00%	33	82.50%	

#### Comments:

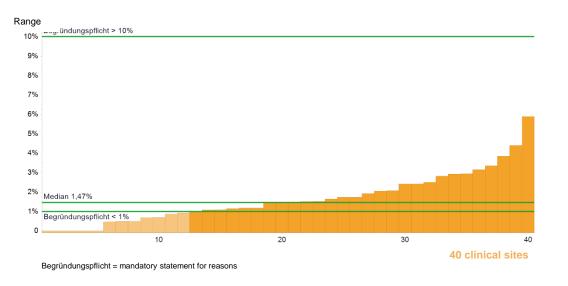
With a rising median, the overall rate of clinically symptomatic secondary bleeding in primary surgical cases remains at about the same level as the previous year (2.90%). As in the previous year, 7 centres were able to plausibly establish a rate of less than 1% with an actually very low rate of symptomatic secondary bleeding. This was positively highlighted in the audits.



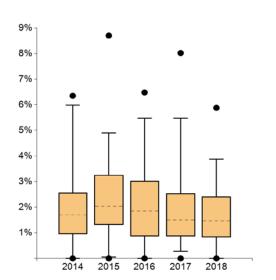
<sup>\*\*</sup> Percentage of total patients treated in centers according to the numerator.

<sup>\*\*\*</sup> 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 2018		
		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	2*	0 - 11	119
Denominator	Surgical primary cases (= Indicator 6a)	147*	67 - 610	7,425
Rate	Mandatory statement of reasons*** < 1% and >10%	1.47%	0.00% - 5.88%	1.60%**





Clinical sites with evaluable data		Clinical sites within the plausibility limits		
Number	%	Number	%	
40	100.00%	28	70.00%	

#### Comments:

Especially in the upper percentage ranges the rate of postoperative wound infections decreases: 3 of the 4 centres which had rates of at least 5% in the previous year were able to reduce them. The overall rate drops from 2.20 to now 1.60%. 5 of the 12 centres below the plausibility limit of 1% did not record any postoperative wound infection within 30 days after surgery in the key figure year 2018. A total of 21 centres reduced their rate, 17 increased it.



<sup>\*\*</sup> Percentage of total patients treated in centers according to the numerator.

<sup>\*\*\*</sup> For values outside the plausibility limit(s), the centers are required to provide a justification.

## WISSEN AUS ERSTER HAND (FIRST-HAND KNOWLEDGE)



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