



Annual Report 2022

of the Certified Lung Cancer Centres

Audit year 2021 / Indicator year 2020

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General information

Indicator No. 12: 30d lethality after anatomical lung resections.....
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Quality indicators of the guidelines (GL QI):

In the table of contents and in the respective headings, the indicators which correspond to the quality indicators of the evidence-based guidelines are specifically identified. These quality indicators are based on the strong recommendations of the guidelines and were derived from the guidelines groups in the context of the German Guideline Programme in Oncology (GGPO). Further information: www.leitlinienprogramm-onkologie.de*

	Definition of indicator	All clinical sites 2019		
		Median	Range	Patients Total
Numerator	Primary cases with stages IB-III B after surgical therapy that were presented at the tumour conference	62*	20 - 227	4,142
Denominator	Primary cases with stages IB-III B after surgical therapy with anatomic lung resection	63.5*	22 - 248	4,268
Rate	Target value ≥ 90%	98.50%	90.63% - 100%	97.05%**

Basic data indicator:

The definitions of **numerator**, **denominator** and **target value** are taken from the Data Sheet.

The **medians** for numerator and denominator do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

The values for the numerators, denominators and rates of all Centres are given under **range**.

The column **Patients Total** shows the sum of all patients treated according to the QI and the corresponding quota.

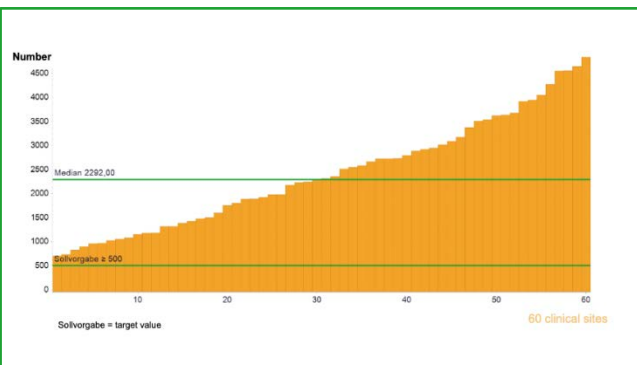
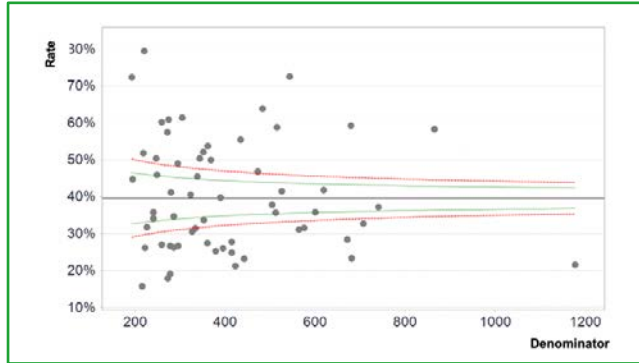


Diagram:

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.

*For further information on the methodological approach see „Development of guideline-based quality indicators“ (https://www.leitlinienprogramm-onkologie.de/fileadmin/user_upload/Downloads/Methodik/QIEP_OL_Version2_english.pdf)

General information



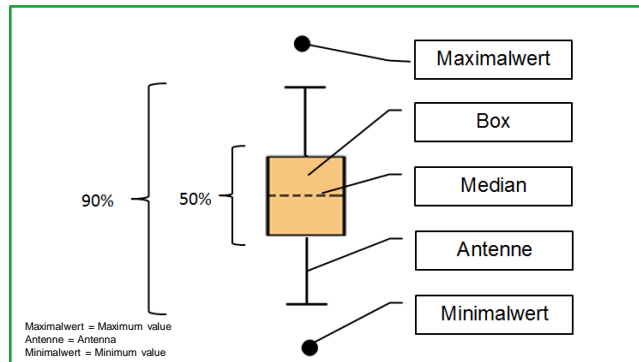
Funnel plots:

The funnel plots indicate the ratio of the number of patients included and the indicator result for the indicators, which are presented as a quotient. The x-axis represents the population of the indicator (numerical value of the denominator), the y-axis the result of the indicator for the respective centre. The target value is shown as a blue solid line. The mean value, shown as a black solid line, divides the group into two halves. The green dotted lines represent the 95% confidence intervals (2 standard deviations of the mean value), the red dotted lines the 99.7% confidence intervals (3 standard deviations of the mean value).

	2015	2016	2017	2018	2019
● Max	100%	100%	100%	100%	100%
95 th percentile	100%	100%	100%	100%	100%
75 th percentile	94,20%	95,91%	100%	97,17%	97,80%
Median	90,59%	91,95%	92,45%	93,75%	94,12%
25 th percentile	83,33%	87,69%	90,78%	90,91%	92,00%
5 th percentile	46,72%	72,32%	83,96%	78,94%	84,48%
● Min	26,32%	59,26%	76,67%	72,73%	70,21%

Cohort development:

The **Cohort development** in the years **2016, 2017, 2018, 2019 and 2020** 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 90th percentile area/range. The extreme values are depicted here as dots.

Status of the certification system for Lung Cancer Centres 2021

	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017	31.12.2016
Ongoing certification procedures	7	6	4	8	3	5
Certified centres	69	64	59	52	49	45
Certified clinical sites	84	78	75	66	63	53
Lung cancer centres 1 clinical site	57	52	48	42	39	37
2 clinical sites	9	10	7	7	7	8
3 clinical sites	3	2	3	2	2	0
4 clinical sites	0	0	1	1	1	0

Included certified sites

	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017	31.12.2016
Centres included in the Annual Report	64	60	55	50	46	42
Equivalent to	92,8%	93,8%	93,2%	96,2%	93,9%	93,3%
Primary cases total*	23.085	22.712	21.364	19.361	18.483	17.343
Primary cases per centre (mean)*	360,7	378,5	388,4	387,2	401,8	412,9
Primary cases per centre (median)*	307,5	333,0	338,0	335,5	344	351

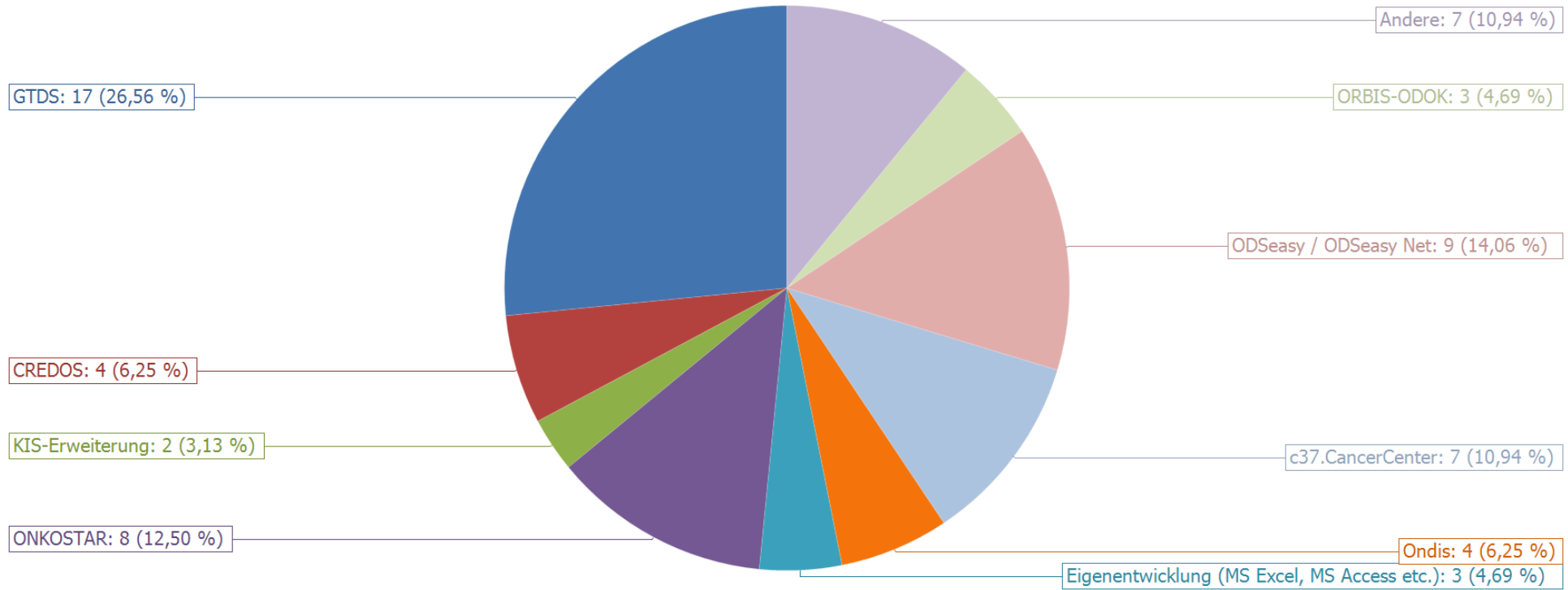
* The figures refer to all certified centres in the Annual Report.

This annual report looks at the lung cancer centres 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 64 of 69 lung cancer centres. Excluded are 5 centres that were certified for the first time in 2021 (data mapping complete calendar year not mandatory for first-time certifications). A total of 24,237 patients were treated in all 69 centres. A current overview of all certified sites is shown at www.oncomap.de.

The indicators published here refer to the indicator year 2020. They are the assessment basis for the audits conducted in 2021.

Tumour documentation systems in the Centre's clinical sites



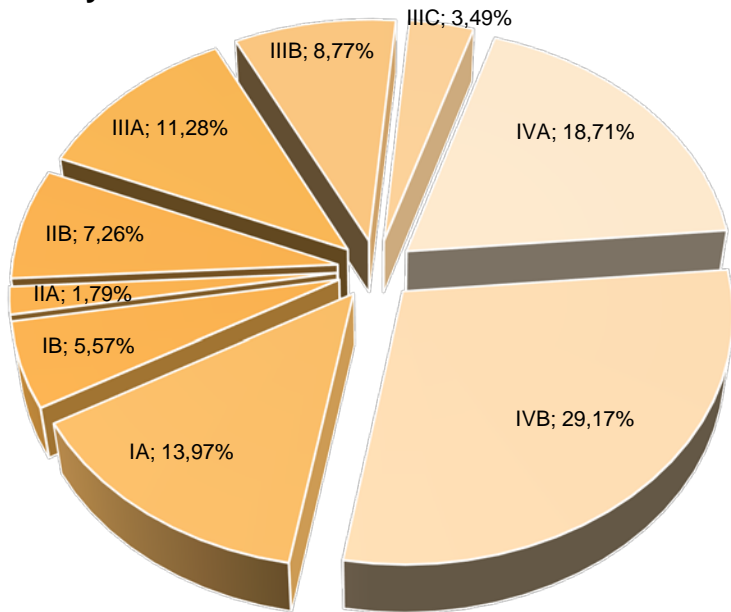
Andere = other
 Eigenentwicklung = intrinsic development
 KIS-Erweiterung = KIS enlargement
 Tumorzentrum = tumour centre

Legend:	
Other	Systems only used at one clinical site

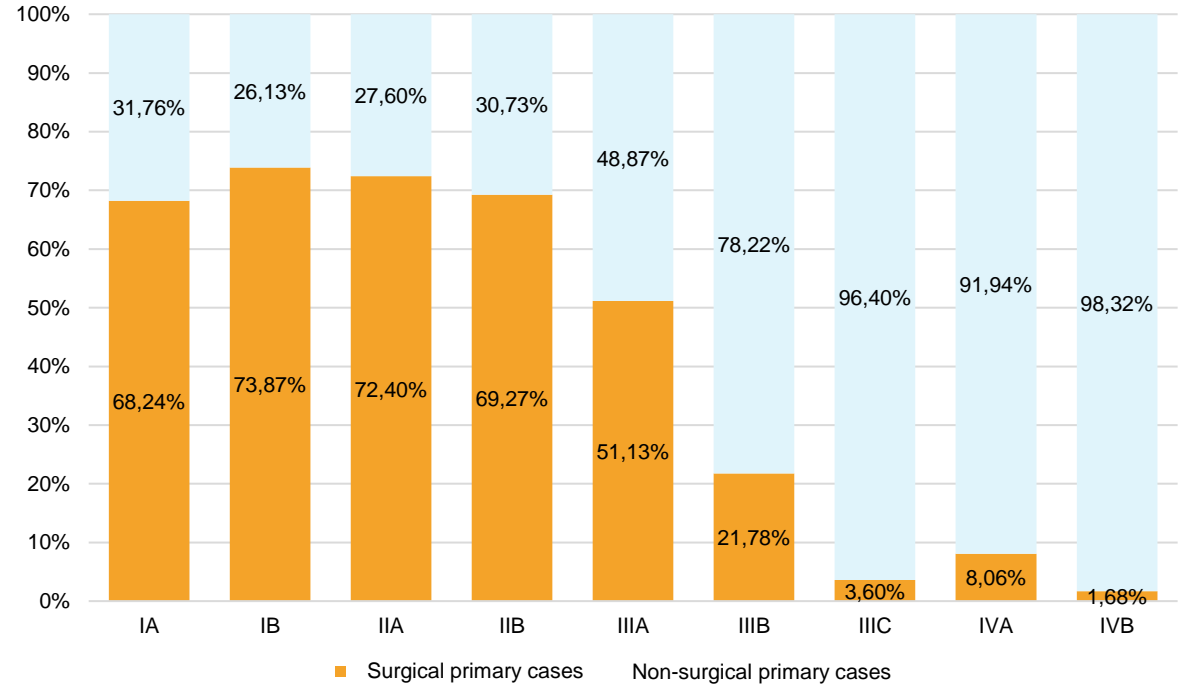
The details on the tumour documentation system were taken from the EXCEL annex to the Data Sheet (spreadsheet basic data). It is not possible to use several systems. In many cases support is provided by the cancer registers or there may be a direct connection to the cancer register via a specific tumour documentation system.

Basic data – Stage distribution primary cases lung carcinoma

Primary cases total

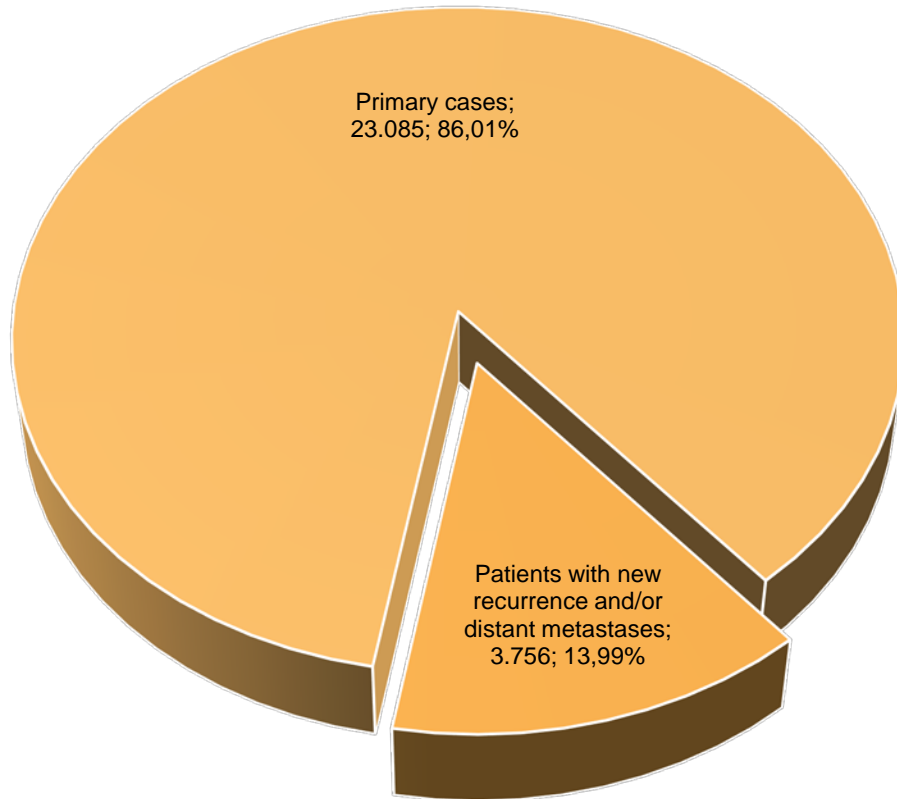


Surgical / non-surgical primary cases



	IA	IB	IIA	IIB	IIIA	IIIB	IIIC	IVA	IVB	Total
Surgical primary cases with anatomical lung resection	2.200 (68,24%)	950 (73,87%)	299 (72,40%)	1.161 (69,27%)	1.331 (51,13%)	441 (21,78%)	29 (3,60%)	348 (8,06%)	113 (1,68%)	6.872
Non-surgical primary cases	1.024 (31,76%)	336 (26,13%)	114 (27,60%)	515 (30,73%)	1.272 (48,87%)	1.584 (78,22%)	776 (96,40%)	3.971 (91,94%)	6.621 (98,32%)	16.213
Primary cases total	3.224 (13,97%)	1.286 (5,57%)	413 (1,79%)	1.676 (7,26%)	2.603 (11,28%)	2.025 (8,77%)	805 (3,49%)	4.319 (18,71%)	6.734 (29,17%)	23.085 (100%)

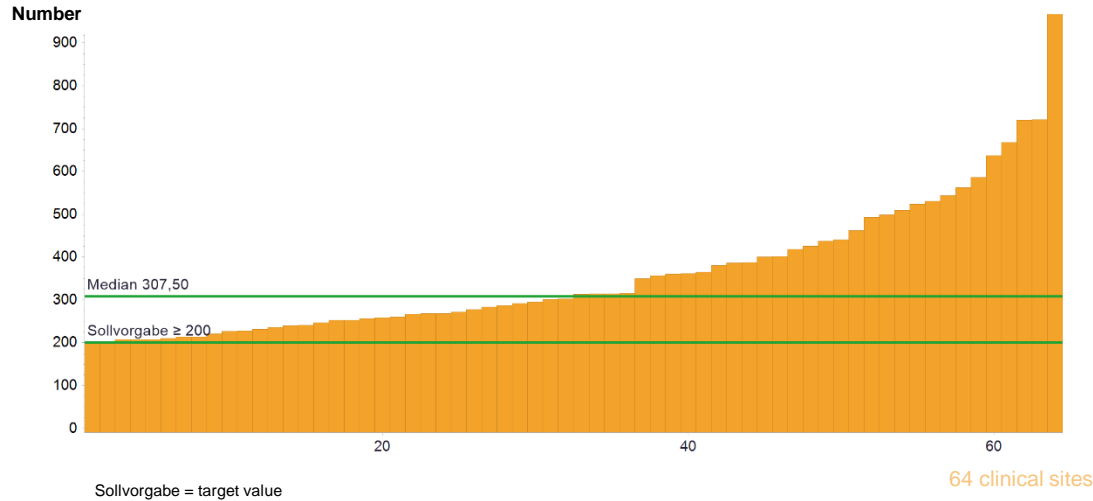
Basic data – Ratio of primary cases to recurrences / metastases of lung cancer



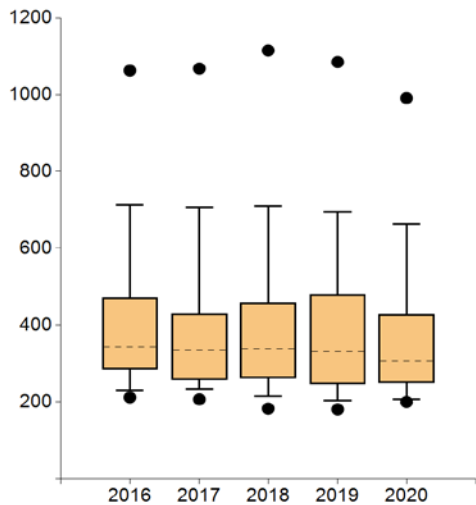
Primary cases	Patients with new recurrence and/or distant metastases*	centre cases
23.085 (86,01%)	3.756 (13,99%)	26.841 (100%)

* Reference to indicator 1b

1a. Primary cases



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Number	Total number of primary cases	307,5	200 - 991	23085
	Target value ≥ 200			



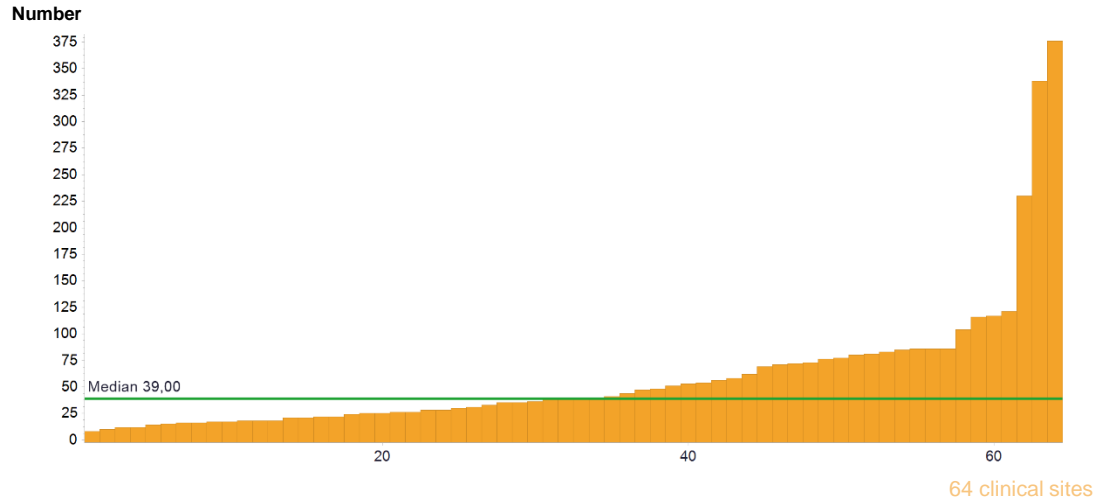
	2016	2017	2018	2019	2020
● Max	1063,00	1068,00	1115,00	1085,00	991,00
95 th percentile	713,50	707,40	709,80	695,10	663,35
75 th percentile	472,25	429,50	458,00	480,75	428,00
Median	344,00	335,50	338,00	333,00	307,50
25 th percentile	285,25	258,50	262,50	247,00	250,50
5 th percentile	231,00	233,80	215,40	203,95	207,00
● Min	212,00	207,00	183,00	181,00	200,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	64	100,00%

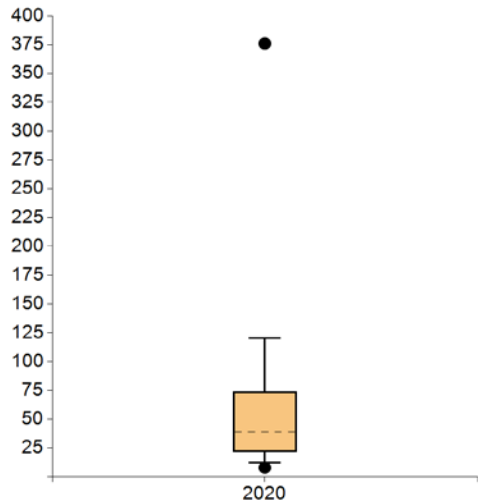
Comments:

For the first time since 2017, all centres again meet the minimum requirement of ≥200 primary cases. While the slight decrease in the median in recent years can be attributed to the initial certification of smaller centres, in 2020, for the first time, even in the centres with a complete data set and initial certification before 2017, declining primary case numbers are recorded on average and are very likely due to the covid pandemic. The coverage of primary cases treated in the German centres, based on the current incidence from 2018 (source www.krebsdaten.de), is 40.1%.

1b. Patients with new recurrence and/or distant metastases



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Number	Patients with new recurrence and/or distant metastases	39	8 - 376	3756
	No target value			



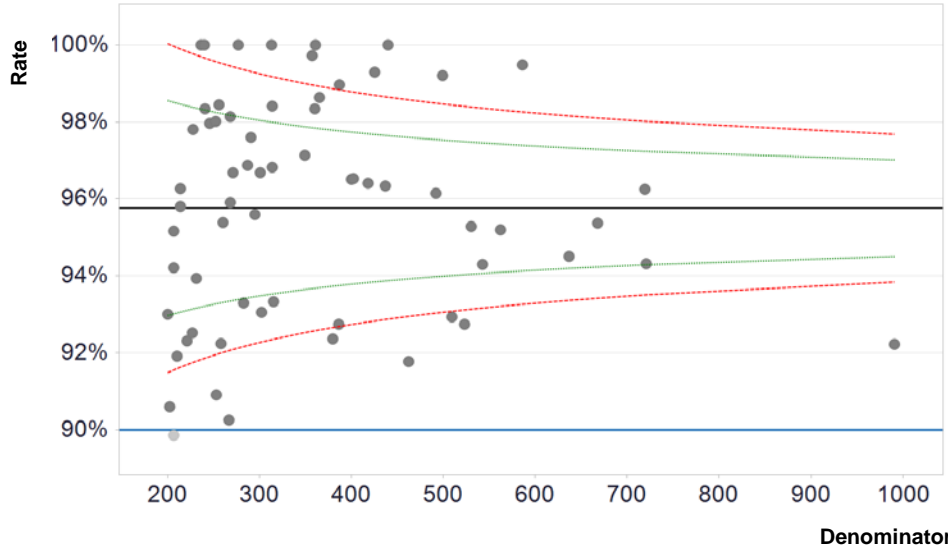
	2016	2017	2018	2019	2020
● Max	----	----	----	----	376,00
95 th percentile	----	----	----	----	120,40
75 th percentile	----	----	----	----	73,75
Median	----	----	----	----	39,00
25 th percentile	----	----	----	----	22,00
5 th percentile	----	----	----	----	12,30
● Min	----	----	----	----	8,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	----	----

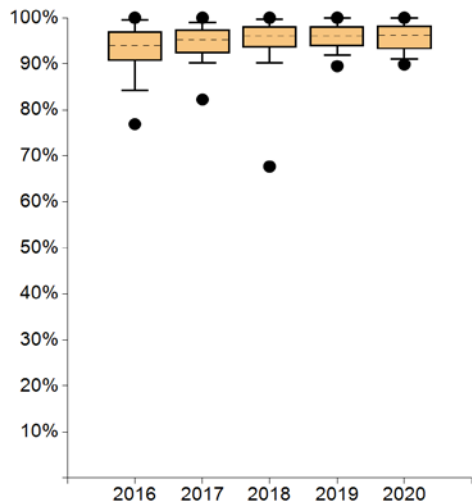
Comments:

This indicator was collected for the first time in 2020 and shows a high degree of dispersion. On average, the centres treated 39 patients with new recurrence and/or distant metastases. There is no clear correlation between the number of primary cases and the number of patients with recurrence and/or metastases.

2a. Pretherapeutic tumour board



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases presented in the pretherapeutic tumour board	292,5*	183 - 914	22106
Denominator	Primary cases (= indicator 1a)	307,5*	200 - 991	23085
Rate	Target value $\geq 90\%$	96,19%	89,86% - 100%	95,76%**



	2016	2017	2018	2019	2020
● Max	100%	100%	100%	100%	100%
95 th percentile	99,48%	98,96%	99,68%	100%	100%
75 th percentile	97,04%	97,40%	98,05%	98,08%	98,18%
Median	93,94%	95,14%	96,12%	95,99%	96,19%
25 th percentile	90,69%	92,22%	93,59%	93,90%	93,23%
5 th percentile	84,15%	90,11%	90,21%	91,93%	91,04%
● Min	76,90%	82,25%	67,69%	89,52%	89,86%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	63	98,44%

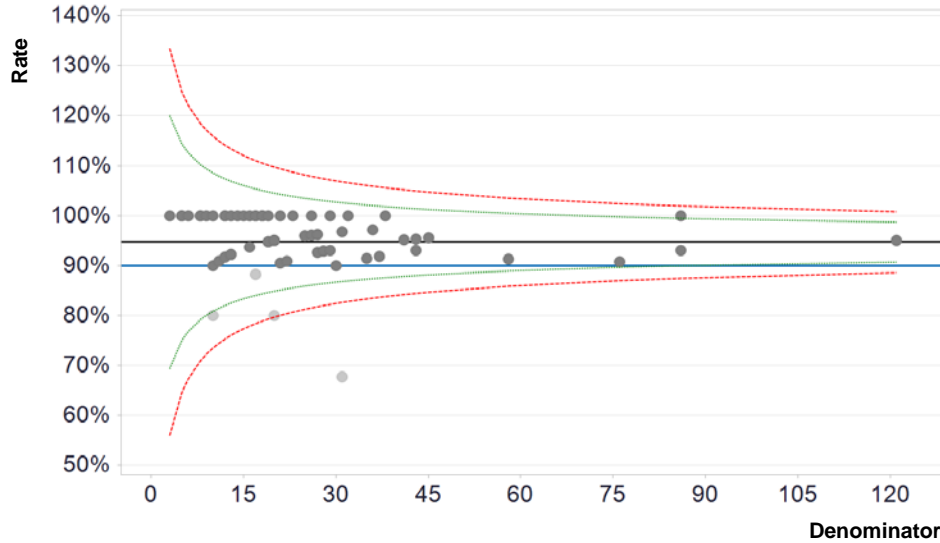
Comments:

The degree of fulfilment of the indicator has been at a high level for years. Moreover, there is a continuous increase in the presentation rate across the entire range. Only one centre did not meet the target of $\geq 90\%$ and justified this with the presentation of primary surgical cases in an external tumour board with the participation of the treating thoracic surgery; in this case, the auditor pointed out that the integration of external patients in the tumour board of the centre will be examined in the follow-up audit.

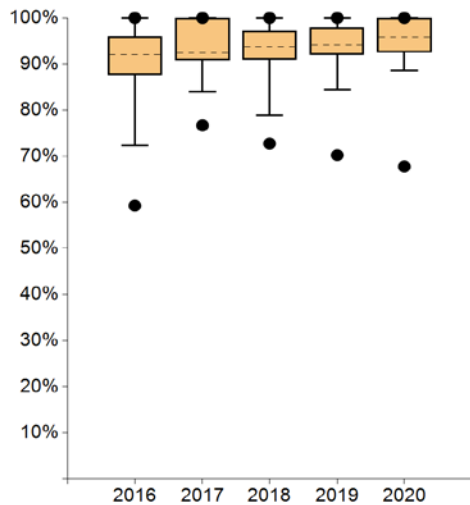
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

2b. Presentation of new recurrence and/or distant metastases the tumour board



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Patients of the denominator who were presented at the tumour board	19*	3 - 115	1576
Denominator	Patients with new recurrence and/or distant metastases after previous curative treatment (R0 resection)	20*	3 - 121	1664
Rate	Target value $\geq 90\%$	95,78%	67,74% - 100%	94,71%**



	2016	2017	2018	2019	2020
● Max	100%	100%	100%	100%	100%
95 th percentile	100%	100%	100%	100%	100%
75 th percentile	95,91%	100%	97,17%	97,80%	100%
Median	91,95%	92,45%	93,75%	94,12%	95,78%
25 th percentile	87,69%	90,78%	90,91%	92,00%	92,52%
5 th percentile	72,32%	83,96%	78,94%	84,48%	88,50%
● Min	59,26%	76,67%	72,73%	70,21%	67,74%

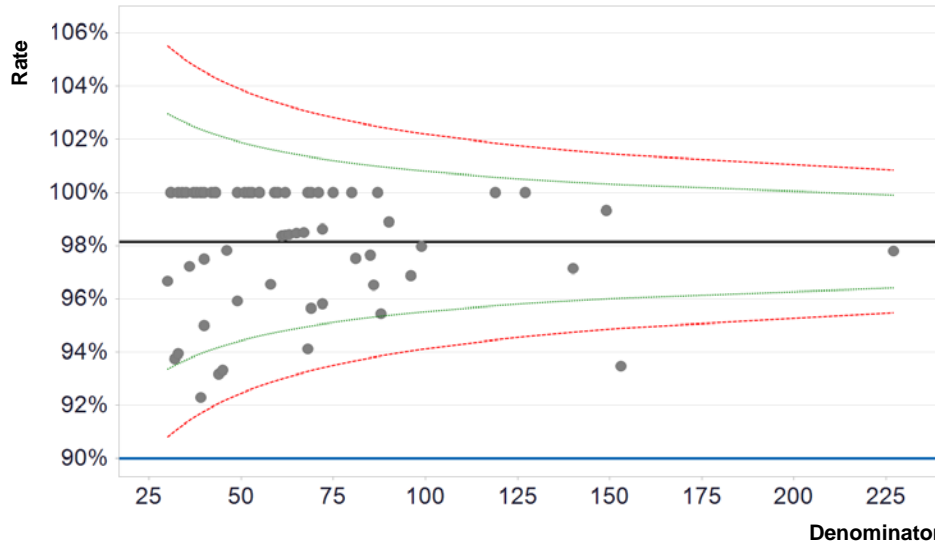
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	60	93,75%

Comments:

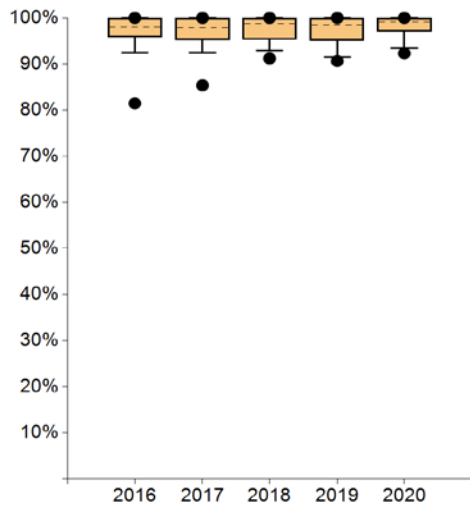
The presentation rate for patients with recurrence and/or distant metastases is also developing very positively. In the lower range, both the 5th and 25th percentiles as well as the median show a continuous increase in the degree of fulfilment. Nevertheless, in 2020 the target of $\geq 90\%$ was not met in 4 centres (previous year 6). Treatment pressure for cerebral filiae with neurological symptoms and palliative treatment concepts were the most common reasons for not presenting. Covid-related impact on tumour boards was not cited by the centres concerned. In two of the four centres, the presentation rate was discussed in quality circles. Deviations were not pronounced by the auditors.

* The median for numerator and denominator does not refer to an existing centre 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 centres according to the numerator.

3. Tumour board after surgical treatment of primary cases stages IB-III B



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator who were presented at the tumour board	57,5*	29 - 222	4105
Denominator	Primary cases with stages IB-III B after surgical therapy with anatomical lung resection	58,5*	30 - 227	4182
Rate	Target value $\geq 90\%$	99,11%	92,31% - 100%	98,16%**



	2016	2017	2018	2019	2020
● Max	100%	100%	100%	100%	100%
95 th percentile	100%	100%	100%	100%	100%
75 th percentile	100%	100%	100%	100%	100%
Median	97,96%	97,88%	98,73%	98,50%	99,11%
25 th percentile	95,86%	95,24%	95,28%	94,99%	97,08%
5 th percentile	92,39%	92,34%	92,96%	91,52%	93,50%
● Min	81,45%	85,36%	91,20%	90,63%	92,31%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	64	100,00%

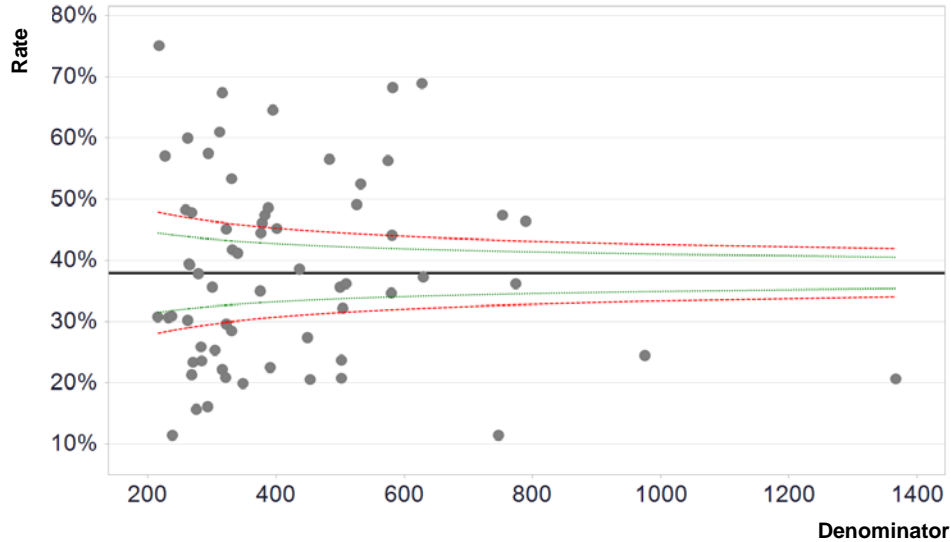
Comments:

The requirement to present surgical primary cases in stage IB-III B after anatomical resection in the tumour board is sufficiently fulfilled by all centres (median 99.1%). 31 centres (previous year 28) achieve a presentation rate of 100%. With an overall very high degree of fulfilment, a steady increase of the indicator can be seen in the lower range.

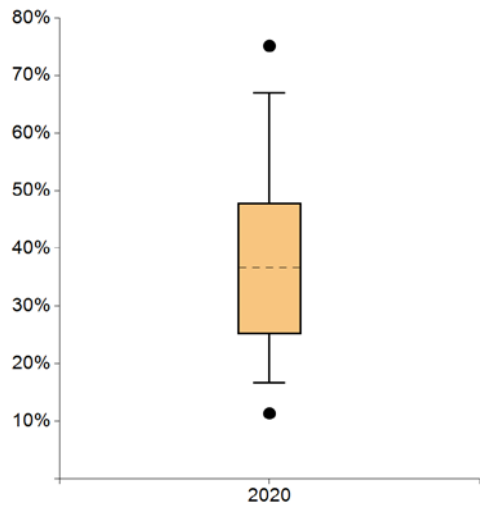
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

4. Psycho-oncological care



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Patients who received psycho-oncological care in an inpatient or outpatient setting (duration of consultation ≥ 25 min)	139*	27 - 432	10188
Denominator	Primary cases (= indicator 1a) + patients with new recurrence and/or distant metastases (= indicator 1b)	344*	215 - 1367	26841
Rate	Explanation mandatory*** <10% and >60%	36,69%	11,34% - 75,12%	37,96%**



	2016	2017	2018	2019	2020
Max	----	----	----	----	75,12%
95 th percentile	----	----	----	----	66,98%
75 th percentile	----	----	----	----	47,89%
Median	----	----	----	----	36,69%
25 th percentile	----	----	----	----	25,10%
5 th percentile	----	----	----	----	16,61%
Min	----	----	----	----	11,34%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	58	90,63%

Comments:

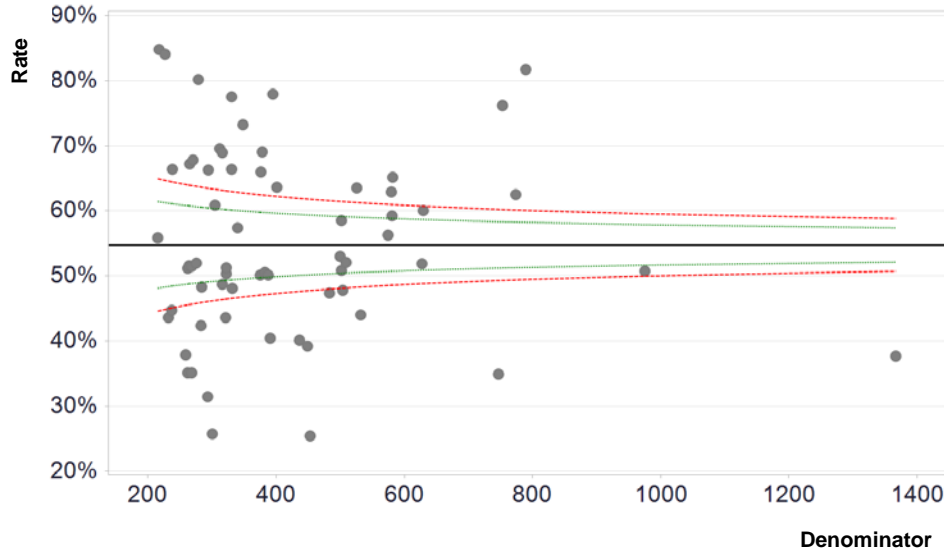
The median rate of psycho-oncological care is 36.7% and thus (with a modified denominator) at the same level as in 2019. Although there is a slight decline across the entire spectrum compared to previous years, no centre fell below the lower plausibility limit of <10%. In 6 centres (previous year 7), more than 60% of patients received psycho-oncological care.

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

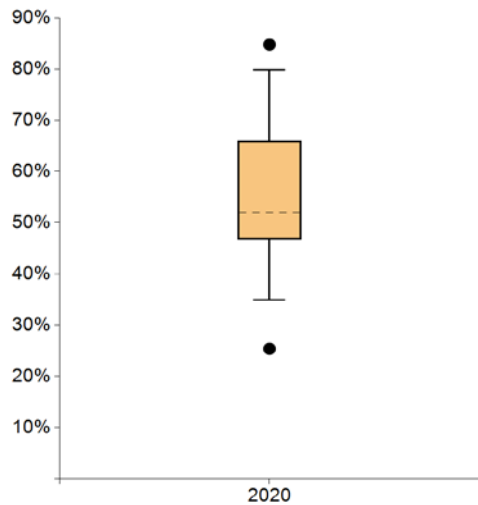
** Percentage of total patients treated in centres according to the numerator.

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

5. Social services counselling



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Patients who received counselling by the social services in an inpatient or outpatient setting	194,5*	77 - 645	14700
Denominator	Primary cases (= indicator 1a) + patients with recent recurrence and/or distant metastases (= indicator 1b)	344*	215 - 1367	26841
Rate	Explanation mandatory*** <40% and >90%	51,92%	25,39% - 84,79%	54,77%**



	2016	2017	2018	2019	2020	Clinical sites with evaluable data		Clinical sites meeting the target value	
● Max	----	----	----	----	84,79%	Number	%	Number	%
95 th percentile	----	----	----	----	79,88%	64	100,00%	43	67,19%
75 th percentile	----	----	----	----	66,05%				
Median	----	----	----	----	51,92%				
25 th percentile	----	----	----	----	46,74%				
5 th percentile	----	----	----	----	34,96%				
● Min	----	----	----	----	25,39%				

Comments:

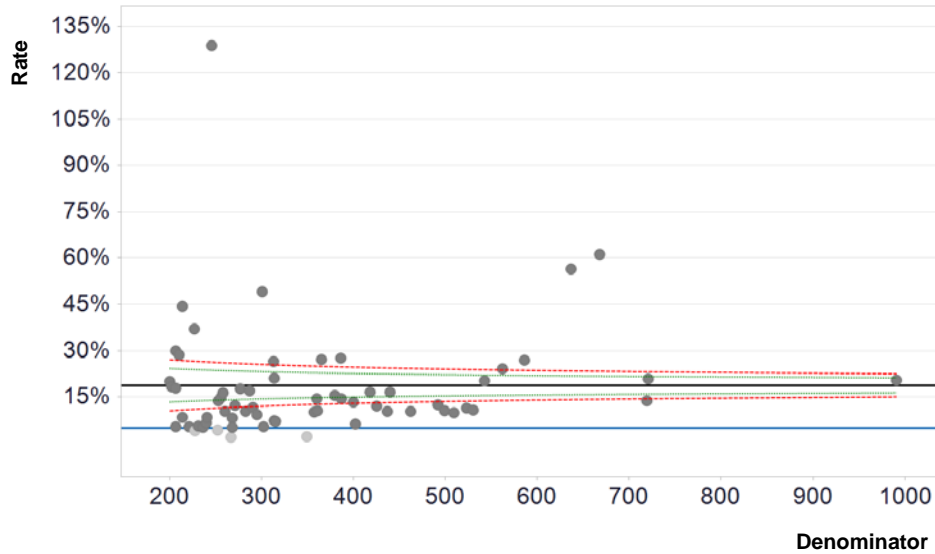
After raising the lower plausibility limit from 40% to 50%, 21 centres (2019: 2 centres) are outside the corridor this year. Particularly in the lower spectrum, the ratio shows lower values compared to the previous year (with modified denominator). In the majority of cases, (contact) restrictions as a result of the covid pandemic were given by the centres as the reason for not providing consultations. Other reasons, apart from short inpatient stays, were also structural deficiencies (personnel resources, lack of stringency in the requirements of the social service).

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

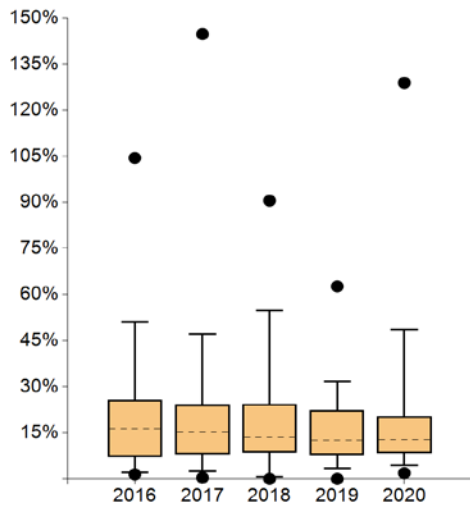
** Percentage of total patients treated in centres according to the numerator.

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

6. Study participation



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Patients included in a study	48,5*	5 - 408	4333
Denominator	Primary cases (= indicator 1a)	307,5*	200 - 991	23085
Rate	Target value $\geq 5\%$	12,83%	1,87% - 128,86%	18,77%**



	2016	2017	2018	2019	2020
● Max	104,42%	144,71%	90,54%	62,62%	128,86%
95 th percentile	51,09%	47,10%	54,85%	31,71%	48,45%
75 th percentile	25,72%	24,05%	24,22%	22,32%	20,32%
Median	16,44%	15,08%	13,57%	12,67%	12,83%
25 th percentile	7,12%	8,06%	8,65%	7,74%	8,38%
5 th percentile	2,10%	2,48%	0,64%	3,43%	4,48%
● Min	1,47%	0,40%	0,00%	0,00%	1,87%

Clinical sites with evaluable data		Clinical sites meeting the target value	
64	100,00%	60	93,75%
64	100,00%	60	93,75%

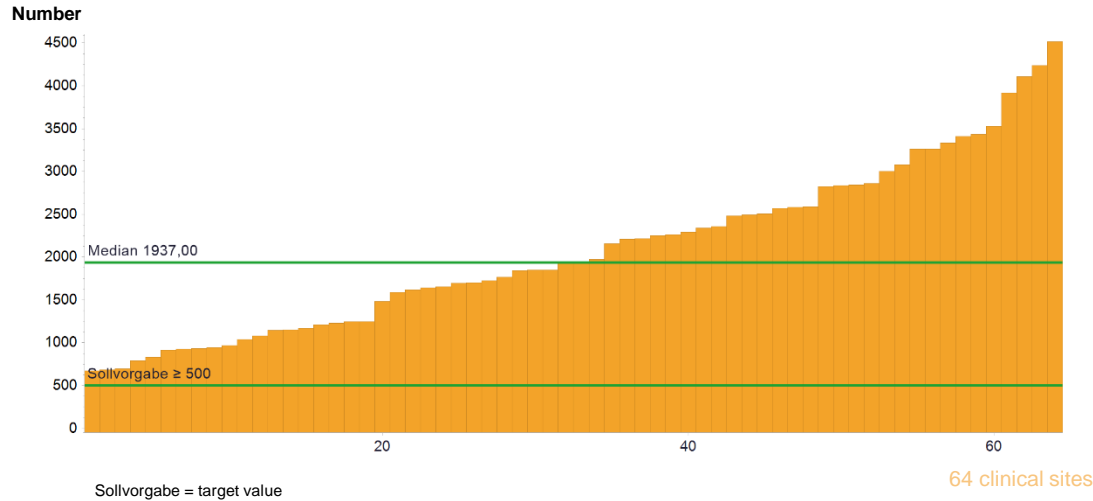
Comments:

The downward trend in the study ratio reversed in audit year 2021. A positive development of the indicator can be seen across the entire range. On median, 12.8% of patients in the centres were included in a study in relation to the primary cases. In three centres (previous year 7), the study quota was below the target; this was justified, among other things, by Covid-related personnel and structural restrictions in the centre or at study partners.

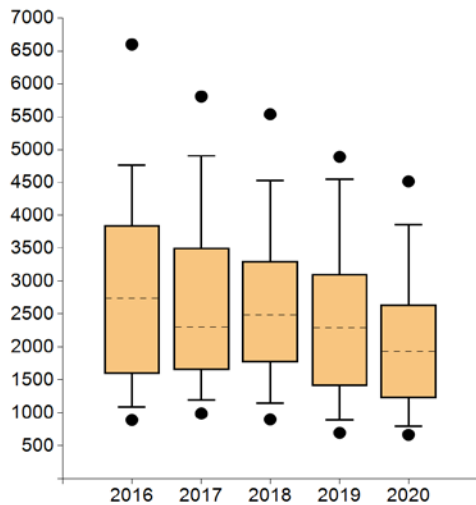
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

7. Flexible bronchoscopy



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Number	Flexible bronchoscopies for each service provider	1937	671 - 4516	132825
	Target value ≥ 500			



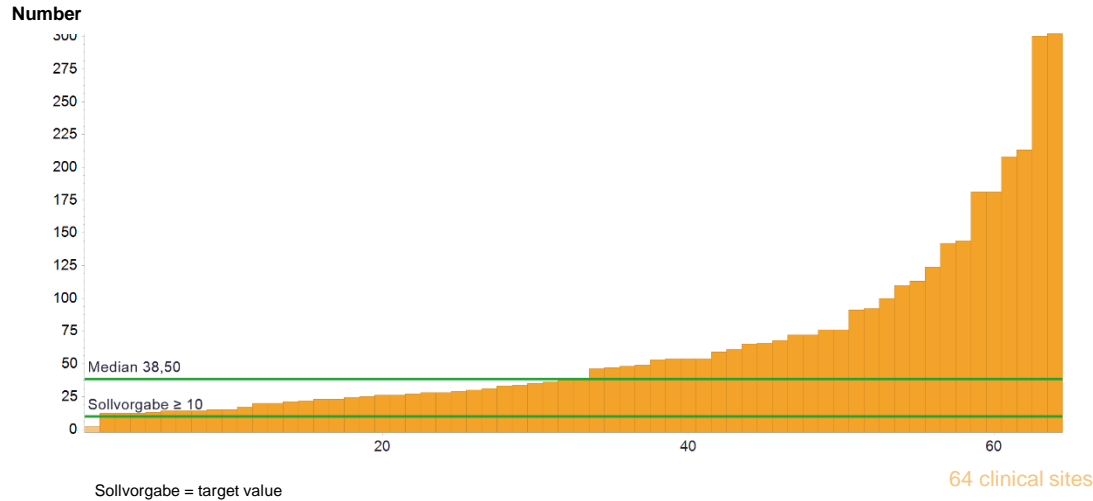
	2016	2017	2018	2019	2020
● Max	6597,00	5807,00	5535,00	4890,00	4516,00
95 th percentile	4761,00	4900,95	4530,60	4551,10	3856,35
75 th percentile	3846,50	3507,25	3300,00	3108,00	2647,50
Median	2742,00	2301,50	2482,00	2292,00	1937,00
25 th percentile	1592,50	1652,50	1775,50	1414,25	1222,50
5 th percentile	1083,00	1199,75	1148,00	892,15	797,55
● Min	896,00	991,00	904,00	700,00	671,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	62	96,88%

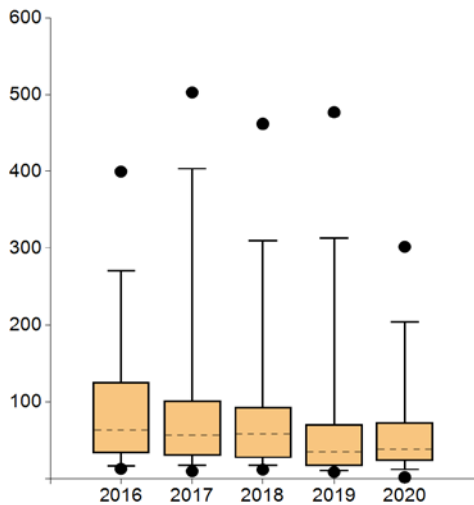
Comments:

The trend towards lower examination numbers observed in recent years has continued across the board in the 2021 audit year. On average, 1937 flexible bronchoscopies were performed in the centres. At least 671 examinations were performed in the centres; at two sites of multi-site centres, the minimum number of ≥ 500 bronchoscopies was not reached.

8. Interventional bronchoscopy in complete or partial malignant stenosis



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Number	Interventional bronchoscopic procedures for complete or partial tumour stenosis (thermal procedures and stent placement) per service provider (OPS: 5-319.14, 5-319.15, 5-320.0)	38,5	2 - 302	4079
	Target value ≥ 10			



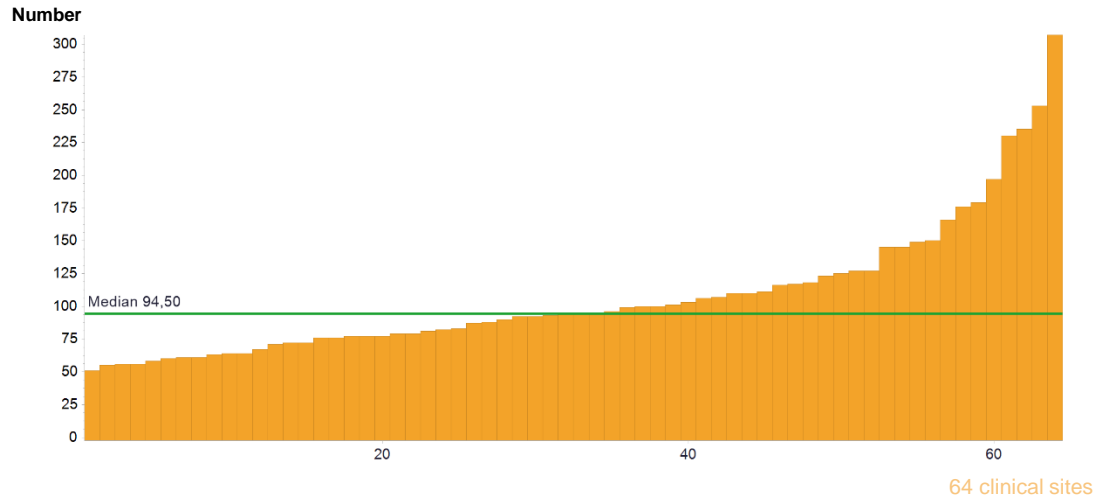
	2016	2017	2018	2019	2020
● Max	400,00	503,00	462,00	477,00	302,00
95 th percentile	270,75	403,30	309,90	313,25	203,95
75 th percentile	125,75	101,50	93,00	71,25	73,00
Median	63,50	56,50	58,00	35,00	38,50
25 th percentile	33,50	30,75	27,00	17,00	23,00
5 th percentile	17,00	18,00	17,70	10,95	12,15
● Min	13,00	10,00	12,00	9,00	2,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	61	95,31%

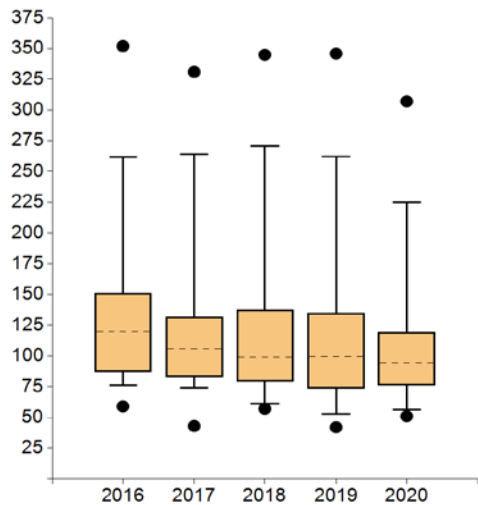
Comments:

Due to the increase in peripheral (adeno)carcinomas, the incidence of symptomatic bronchus obstructions is clinically decreasing. This is reflected in the centres in the declining number of interventional bronchoscopies over the years. In addition, the increasing use of radiooncological therapy options is also the cause of the decreasing interventional activity. As in the previous year, three centres (4.7%) performed fewer than 10 interventions in the calendar year 2020.

9a. Lung resections – surgical primary cases



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Number	Anatomical lung resections in surgical primary cases (OPS: 5-323 to 5-328, 6-digit, exclusively in association with ICD-10 C34)	94,5	51 - 307	6872
	No target value defined			



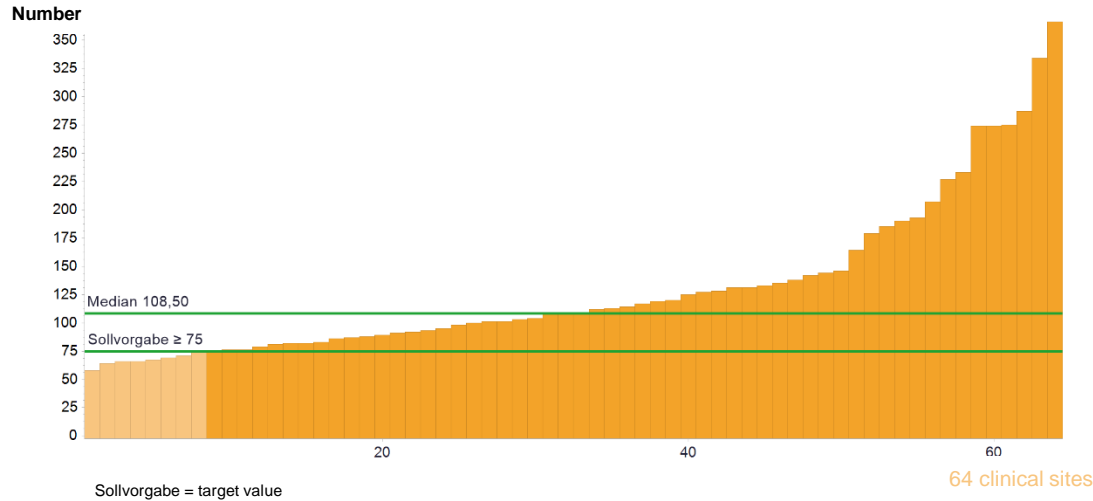
	2016	2017	2018	2019	2020
● Max	352,00	331,00	345,00	346,00	307,00
95 th percentile	261,75	264,05	270,40	262,00	225,05
75 th percentile	151,25	131,50	137,50	134,75	119,25
Median	120,00	106,00	99,00	99,50	94,50
25 th percentile	87,25	83,25	79,00	73,50	76,00
5 th percentile	76,25	73,90	61,00	52,90	56,30
● Min	59,00	43,00	57,00	42,00	51,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	----	----

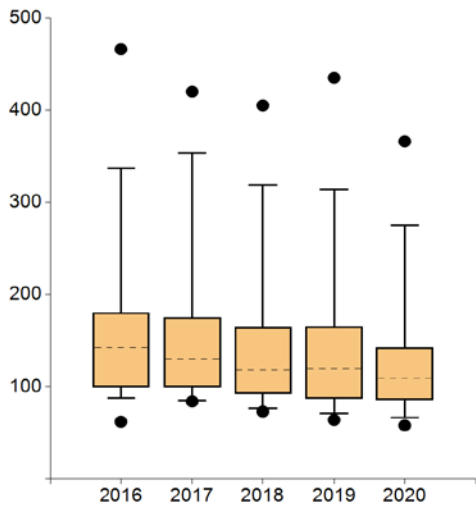
Comments:

The number of anatomical resections for primary lung cancer (ICD-10 C34) is decreasing with a steady increase in patients in stage IVb and an increasing number of centres with lower primary case numbers in the median. In the current year, compared to the last two years, a lower surgical activity is evident in the upper range. This is consistent with the data from the Federal Statistical Office (Destatis), which have shown a continuous increase for 10 years in total, but lower resection figures for 2020. The decline in the number of operations is greater in hospitals with ≥75 anatomical resections than in clinics with <75 operations. A connection with the effects of the covid pandemic is very likely.

9b. Lung resections – surgical expertise



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Number	Operative expertise - number of anatomical resections (OPS: 5-323 to 5-328, for any ICD-10 C diagnosis, incl. ICD-10 C34)	108,5	58 - 366	8385
	Target value ≥ 75			



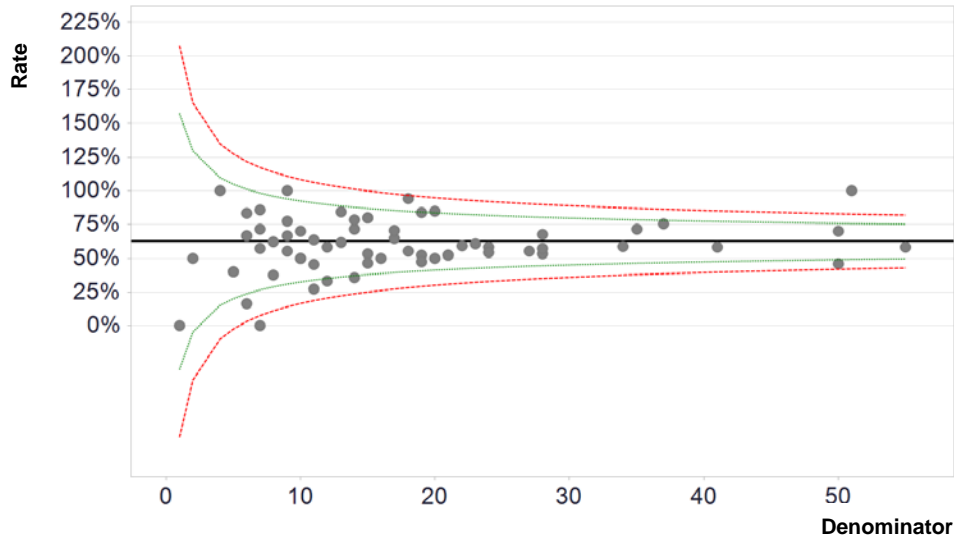
	2016	2017	2018	2019	2020
● Max	466,00	420,00	405,00	435,00	366,00
95 th percentile	337,00	353,80	318,20	313,80	274,85
75 th percentile	180,00	174,75	164,00	165,00	142,50
Median	142,50	130,00	118,00	119,50	108,50
25 th percentile	99,25	99,25	92,00	87,00	85,25
5 th percentile	87,25	85,00	76,10	70,75	66,15
● Min	62,00	84,00	73,00	64,00	58,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	56	87,50%

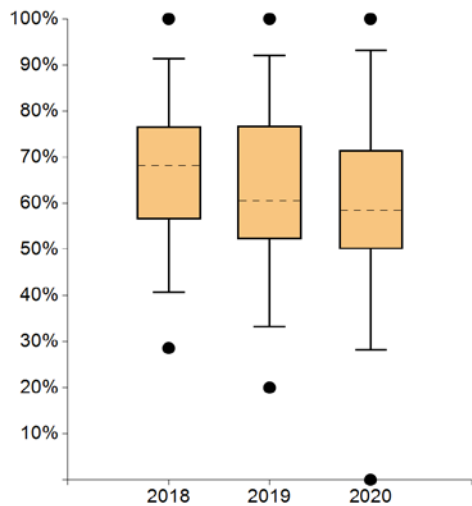
Comments:

The number of anatomical resections for any C-diagnosis shows a continuous decrease over the entire range with an increasing number of smaller centres. As with the number of anatomical resections for lung cancer, the Federal Statistical Office shows a 4.5% decrease in the number of operations for resections for any C diagnosis in 2020 (compared with 2019). Here, too, a connection with the covid pandemic is thus very likely.

10. Ratio of broncho-/ angioplastic resections to pneumonectomies



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases with broncho angioplastic resection	9*	0 - 51	699
Denominator	Primary cases with pneumonectomies and primary cases with broncho-/angioplastic resection	14,5*	1 - 55	1118
Rate	Explanation mandatory*** <50	58,44%	0,00% - 100%	62,52%**



	2016	2017	2018	2019	2020
● Max	----	----	100%	100%	100%
95. Perzentil	----	----	91,30%	92,00%	93,13%
75. Perzentil	----	----	76,70%	76,76%	71,43%
Median	----	----	68,18%	60,56%	58,44%
25. Perzentil	----	----	56,57%	52,17%	50,00%
5. Perzentil	----	----	40,73%	33,20%	28,18%
● Min	----	----	28,57%	20,00%	0,00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	51	79,69%

Comments:

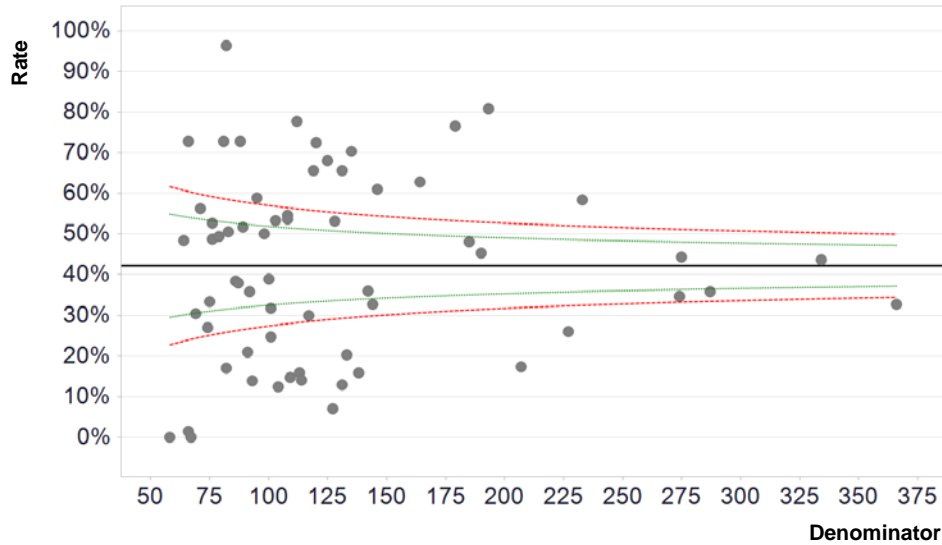
The proportion of broncho-/angioplastic surgery has been declining since the introduction of the indicator. In 13 centres, the number of pneumonectomies exceeded the number of sleeve resections (previous year 9). The necessity for pneumonectomy was justified by the centres on the basis of tumour size and localisation, including infiltration of the central pulmonary artery and growth beyond the lobe. In addition, reference was made to an existing treatment concept. The centre in which no plastic surgery was performed in the calendar year 2020 conducted an individual case analysis.

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

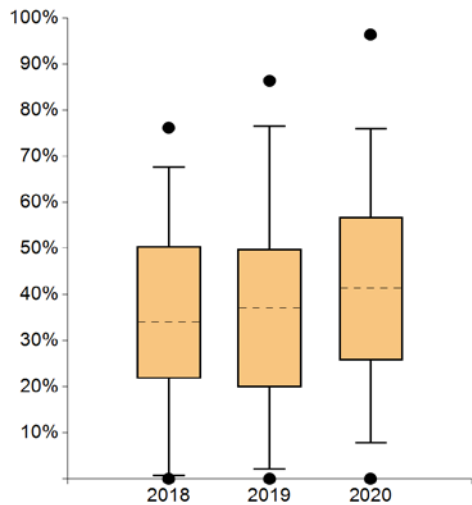
** Percentage of total patients treated in centres according to the numerator.

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

11. Videothoracoscopic (VATS) and robot-assisted (RATS) anatomical lung resection



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Surgeries of the denominator that were performed with (Video-) thoracoscopically (VATS) and robot-assisted (RATS)	46,5*	0 - 156	3539
Denominator	Operative expertise - number of anatomical resections (OPS: 5-323 to 5-328 for any ICD-10 C diagnosis, incl. ICD-10 C34)	108,5*	58 - 366	8385
Rate	No target value	41,36%	0,00% - 96,34%	42,21%**



	2016	2017	2018	2019	2020
● Max	----	----	76,14%	86,36%	96,34%
95. Perzentil	----	----	67,72%	76,56%	75,99%
75. Perzentil	----	----	50,41%	49,86%	56,85%
Median	----	----	34,01%	37,14%	41,36%
25. Perzentil	----	----	21,72%	19,85%	25,68%
5. Perzentil	----	----	0,66%	2,22%	7,90%
● Min	----	----	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	----	----

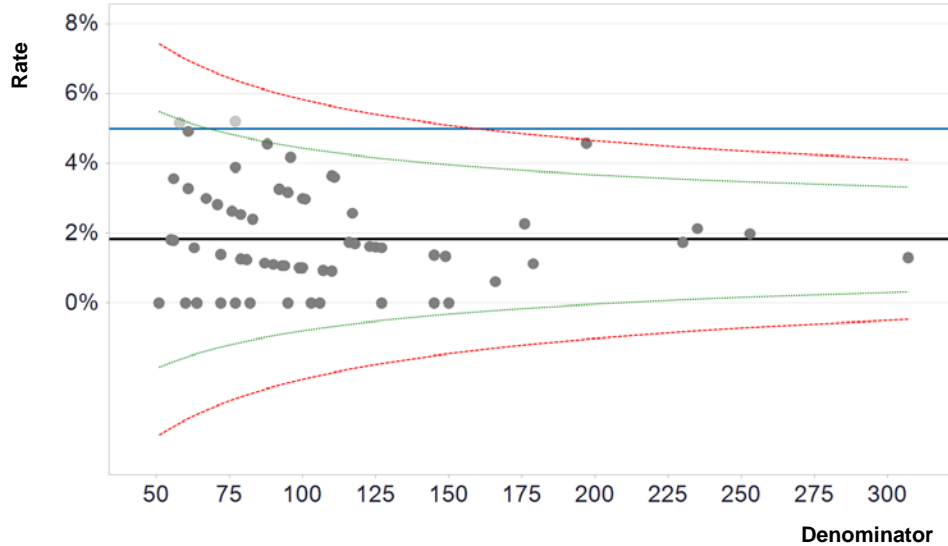
Comments:

The proportion of minimally invasive anatomical resections performed for malignant tumours is steadily increasing across the entire range. In the calendar year 2020, the median proportion of minimally invasive procedures exceeded 41% for the first time. In two centres (previous year 3), no anatomical resections were performed by VATS/RATS in 2020.

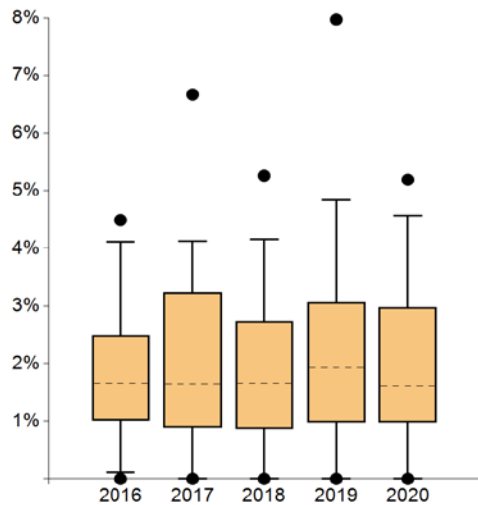
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

12. 30d Lethality after anatomical lung resection



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Post-operative deceased patients after resection within 30d	2*	0 - 9	125
Denominator	Surgical primary cases with anatomical lung resection for each department (= indicator 9a)	94,5*	51 - 307	6872
Rate	Target value ≤ 5%	1,62%	0,00% - 5,19%	1,82%**



	2016	2017	2018	2019	2020
● Max	4,49%	6,67%	5,26%	7,97%	5,19%
95 th percentile	4,12%	4,13%	4,16%	4,84%	4,57%
75 th percentile	2,50%	3,23%	2,74%	3,07%	2,98%
Median	1,65%	1,64%	1,65%	1,94%	1,62%
25 th percentile	1,01%	0,89%	0,87%	0,98%	0,98%
5 th percentile	0,11%	0,00%	0,00%	0,00%	0,00%
● Min	0,00%	0,00%	0,00%	0,00%	0,00%

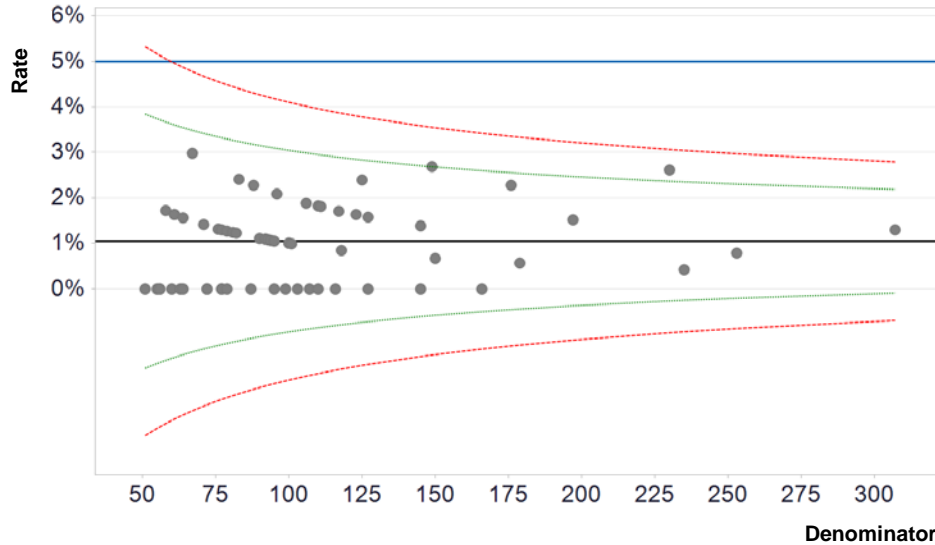
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	62	96,88%

Comments:

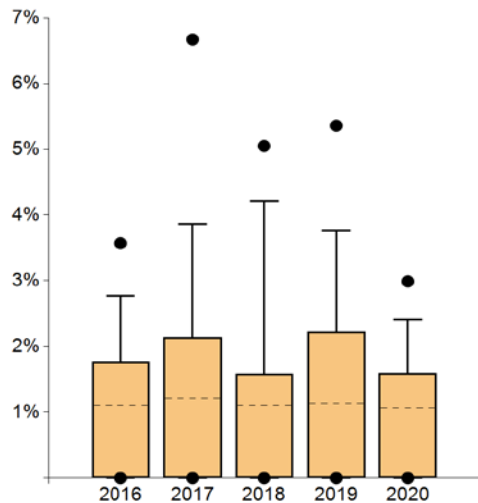
The postoperative 30d lethality rate has been consistently low for years (median 1.6%). In 13 centres (previous year 7) no patient died postoperatively. Two centres slightly exceeded the target of ≤ 5% and processed the deaths in M+M conferences on an interdisciplinary basis; this did not reveal any evidence of systematic errors.

* The median for numerator and denominator does not refer to an existing centre, 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 centres according to the numerator.

13. Post-operative bronchial stump fistula /anastomotic leakage



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Post-operative bronchial stump fistula /anastomotic leakage	1*	0 - 6	72
Denominator	Surgical primary cases for each department (= indicator 9a)	94,5*	51 - 307	6872
Rate	Target value ≤ 5%	1,07%	0,00% - 2,99%	1,05%**



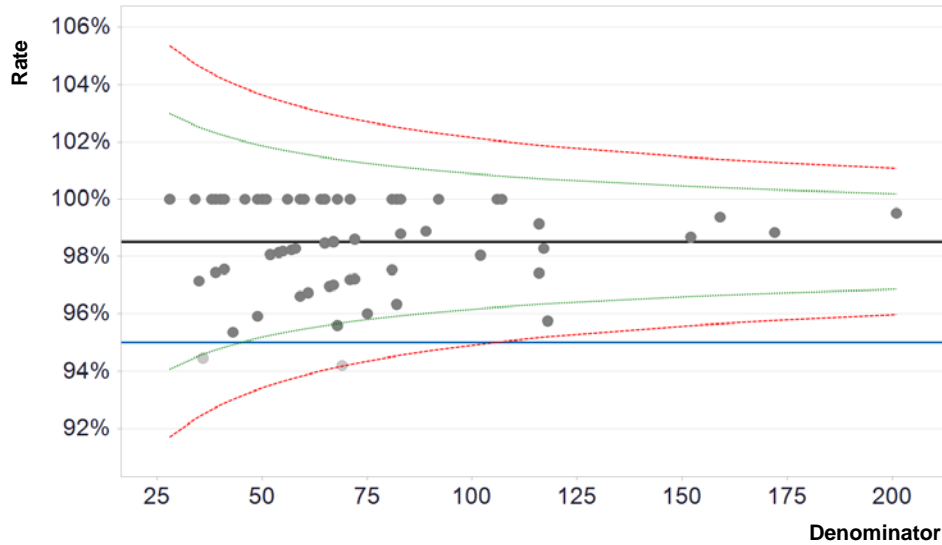
	2016	2017	2018	2019	2020
● Max	3,57%	6,67%	5,05%	5,36%	2,99%
95 th percentile	2,77%	3,86%	4,21%	3,76%	2,41%
75 th percentile	1,77%	2,14%	1,58%	2,23%	1,59%
Median	1,11%	1,21%	1,11%	1,13%	1,07%
25 th percentile	0,00%	0,00%	0,00%	0,00%	0,00%
5 th percentile	0,00%	0,00%	0,00%	0,00%	0,00%
● Min	0,00%	0,00%	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	64	100,00%

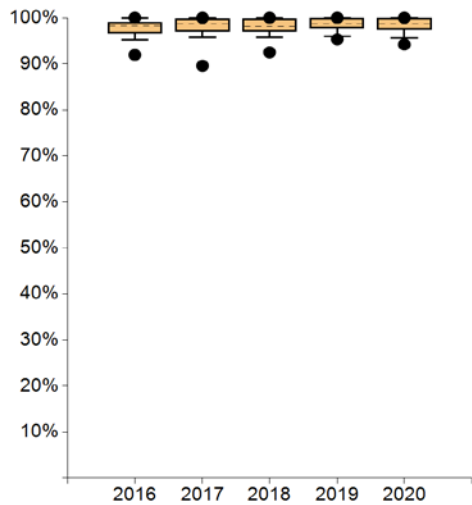
Comments:
This ratio has also been stable at a low level for years, and has even continued to decline in the upper range. All centres meet the target of ≤ 5%, regardless of the number of primary surgical cases.

* The median for numerator and denominator does not refer to an existing centre, 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 centres according to the numerator.

14. Local R0 resections in stage IA/B and IIA/B



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases with local R0 resections in stages IA/B and IIA/B after conclusion of surgical therapy	65*	28 - 200	4542
Denominator	Operated primary cases with anatomical lung resection in stage IA/B and IIA/B	65,5*	28 - 201	4610
Rate	Target value $\geq 95\%$	98,65%	94,20% - 100%	98,52%**



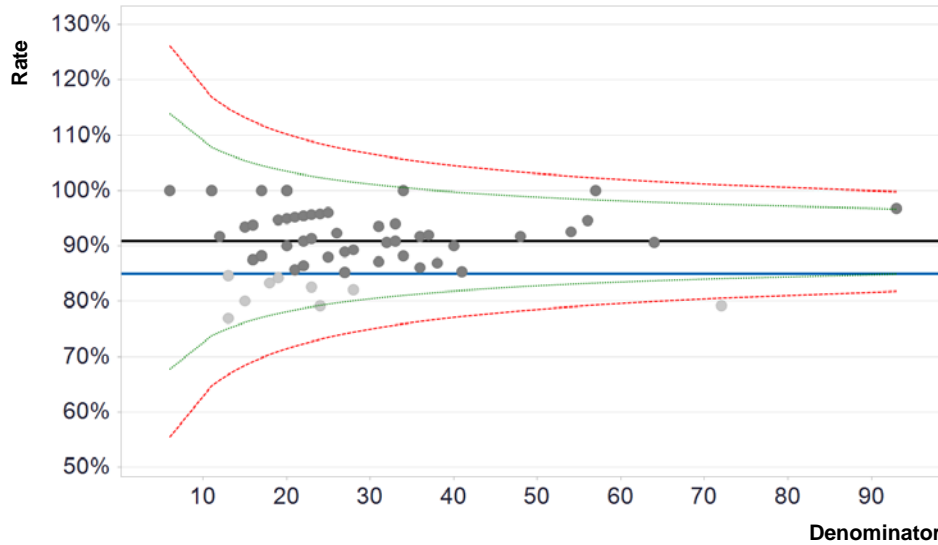
	2016	2017	2018	2019	2020
● Max	100%	100%	100%	100%	100%
95 th percentile	100%	100%	100%	100%	100%
75 th percentile	99,01%	99,83%	99,77%	100%	100%
Median	98,29%	98,60%	98,04%	98,78%	98,65%
25 th percentile	96,64%	96,98%	97,01%	97,70%	97,43%
5 th percentile	95,15%	95,77%	95,75%	95,99%	95,62%
● Min	91,94%	89,58%	92,50%	95,33%	94,20%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	62	96,88%

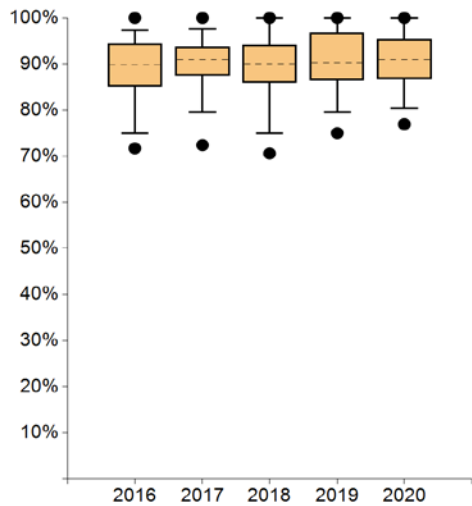
Comments:
The local R0 resection rate in stages I/II has shown a high degree of fulfilment for years. Two centres have fallen just short of the target of $\geq 95\%$. The two centres have refrained from performing resections (in the case of inconspicuous frozen section examinations) due to synchronous second malignancy, comorbidity as well as functional limitations and the necessity of a pneumonectomy.

* The median for numerator and denominator does not refer to an existing centre, 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 centres according to the numerator.

15. Local R0 resections in stage IIIA/B



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases with local R0 resections in stages IIIA/B after conclusion of surgical treatment	21*	6 - 90	1609
Denominator	Operated primary cases with stage IIIA/B anatomical lung resection	23*	6 - 93	1772
Rate	Target value $\geq 85\%$	90,91%	76,92% - 100%	90,80%**



	2016	2017	2018	2019	2020
● Max	100%	100%	100%	100%	100%
95 th percentile	97,29%	97,58%	100%	100%	100%
75 th percentile	94,40%	93,70%	94,12%	96,72%	95,29%
Median	89,83%	90,91%	90,00%	90,34%	90,91%
25 th percentile	85,15%	87,50%	85,96%	86,46%	86,72%
5 th percentile	75,00%	79,53%	75,00%	79,54%	80,32%
● Min	71,70%	72,41%	70,59%	75,00%	76,92%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	55	85,94%

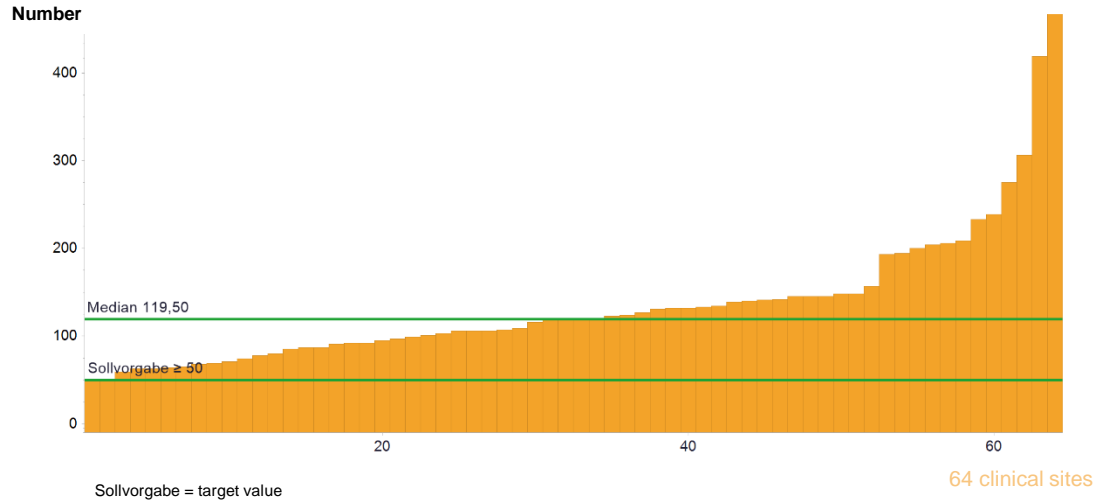
Comments:

The R0 resection rate for locally advanced tumours (stage IIIA/B) is at the high level of previous years (median 90.9%). 55 centres have met the target. Individual case analyses were carried out in all 9 centres with R0 resection rates below 85%.

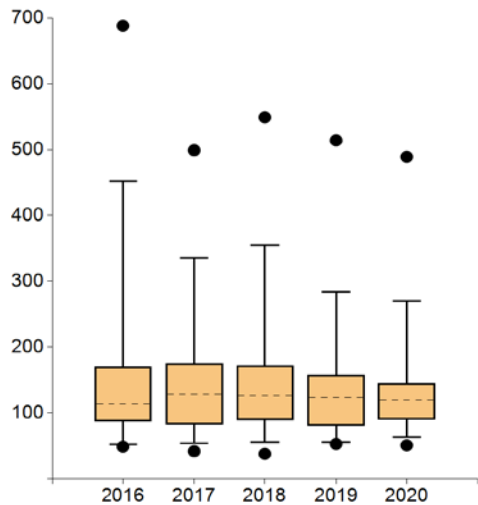
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

16. Thoracic radiotherapy



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Number	Thoracic radiotherapy (not just referring to primary cases)	119,5	51 - 489	8665
	Target value ≥ 50			



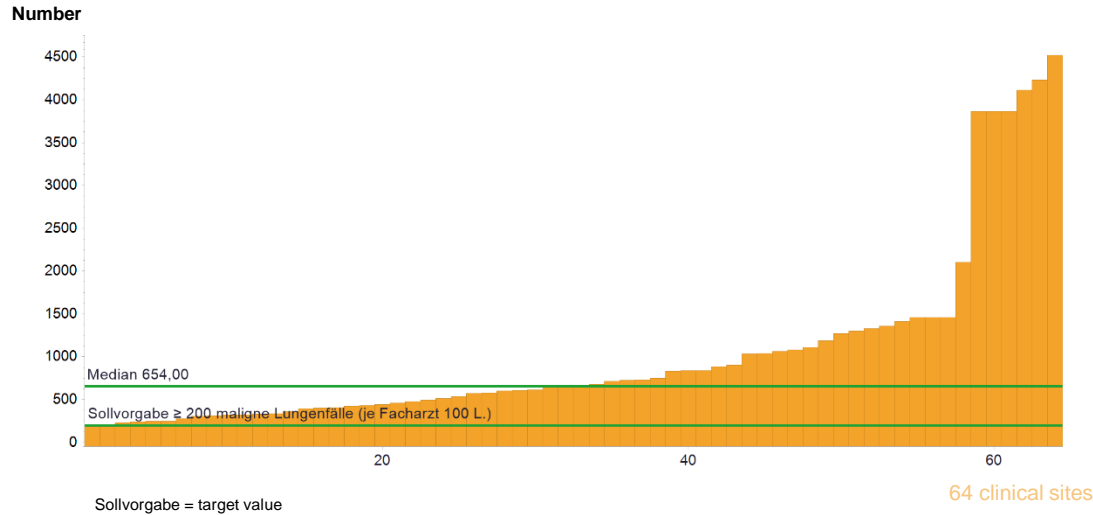
	2016	2017	2018	2019	2020
● Max	688,00	499,00	549,00	514,00	489,00
95 th percentile	452,50	335,70	354,80	283,90	269,60
75 th percentile	170,00	175,25	171,50	158,00	145,00
Median	114,50	128,00	126,00	123,50	119,50
25 th percentile	87,50	83,00	89,50	80,75	90,00
5 th percentile	52,25	53,70	56,10	55,90	63,00
● Min	49,00	42,00	38,00	53,00	51,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	55	85,94%

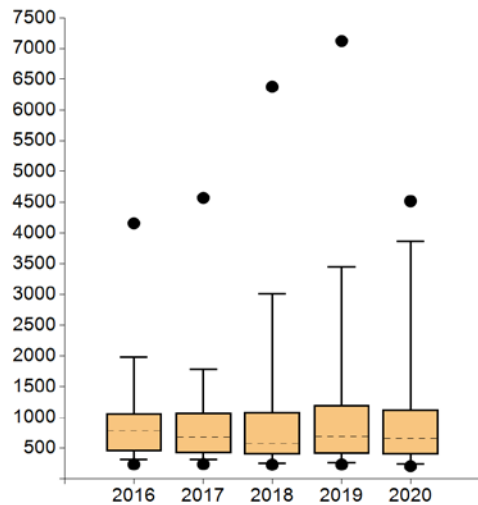
Comments:

The number of thoracic radiotherapy treatments has shown a converging trend since 2017: while the median and the 95th and 75th percentiles show a decreasing trend, the numbers in the lower range have increased slightly since 2017. 4 radiotherapies units did not meet the target of ≥50 thoracic radiotherapy treatments. In a further 5 centres, there are network structures with at least one site with less than 50 thoracic primary treatments; in 4 of these centres, the second site meets the target, in one centre the target is achieved in total.

17. Histopathological examination



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Number	Assessed malignant lung cases	654	204 - 4519	65785
	Target value ≥ 200 malignant lung cases (100 cases per specialist)			



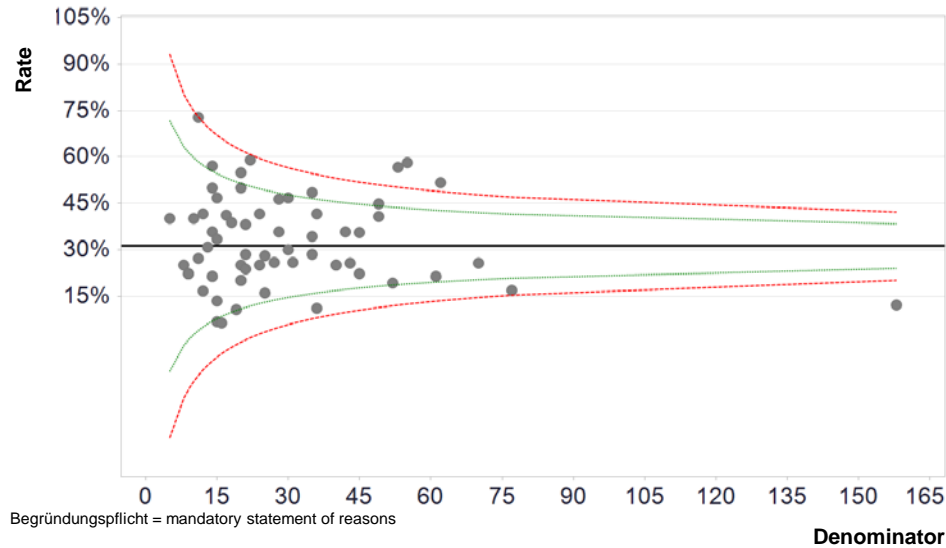
	2016	2017	2018	2019	2020
● Max	4158,00	4572,00	6377,00	7124,00	4519,00
95 th percentile	1976,75	1781,10	3005,50	3443,45	3866,00
75 th percentile	1061,00	1074,50	1081,00	1191,50	1126,50
Median	773,50	678,50	583,00	684,00	654,00
25 th percentile	447,00	423,25	400,00	411,25	403,25
5 th percentile	313,00	313,75	254,00	256,70	239,75
● Min	235,00	238,00	229,00	232,00	204,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	63	98,44%

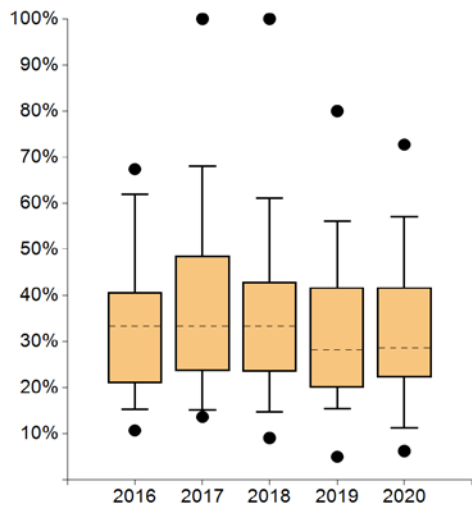
Comments:

With regard to the number of pathological examinations per centre, the median and the lower percentiles are decreasing in line with the declining development of primary cases, while the upper percentiles show an opposite trend. As in the previous year, one of two pathologies belonging to a centre did not meet the target and justified this with changes in the organisational structure.

18. Adjuvant cisplatin-based chemotherapy stages II-III A1/2 (GL QI)



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with cisplatin-based chemotherapy	7,5*	1 - 32	587
Denominator	R0- and LN-resected primary cases with anatomical lung resection (NSCLC, stage II-III A1/2, with ECOG 0/1)	21,5*	5 - 158	1884
Rate	Explanation mandatory*** <15% and >70%	28,57%	6,25% - 72,73%	31,16%**



	2016	2017	2018	2019	2020
● Max	67,39%	100%	100%	80,00%	72,73%
95. Perzentil	61,94%	67,99%	60,99%	56,13%	57,06%
75. Perzentil	40,66%	48,67%	42,86%	41,67%	41,67%
Median	33,33%	33,33%	33,33%	28,18%	28,57%
25. Perzentil	20,96%	23,57%	23,45%	20,00%	22,22%
5. Perzentil	15,26%	15,07%	14,79%	15,35%	11,25%
● Min	10,71%	13,64%	9,09%	5,00%	6,25%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	57	89,06%

Comments:

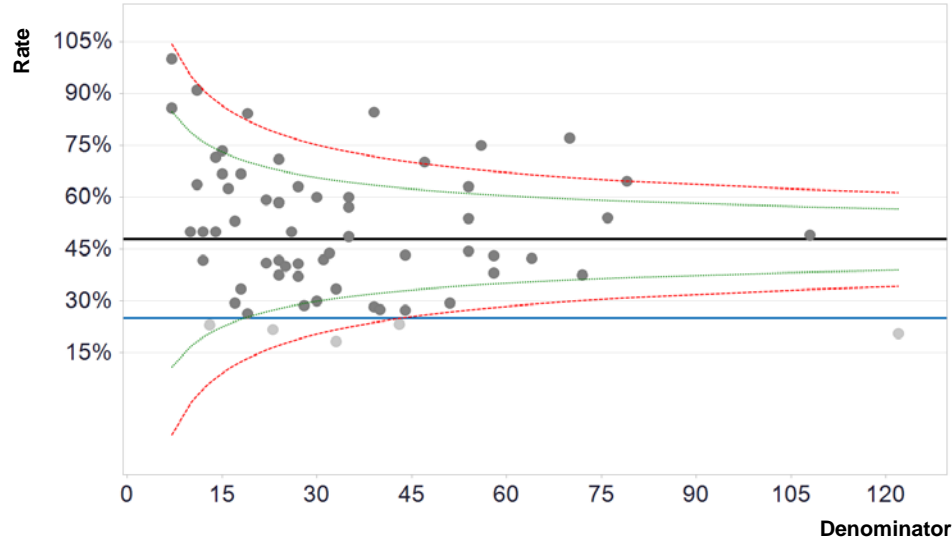
The degree of implementation of the GL-QI has shown a high degree of dispersion and partly divergent development for years. In just under 90% of the centres, the GL-QI is within the plausibility limits. 6 centres have performed adjuvant cisplatin-based chemotherapy in <15%. In the majority of cases, adjuvant (cisplatin-based) therapy was not performed due to secondary diseases or prolonged postoperative course; other reasons were patient wishes and second malignancies. Two centres admitted to deficiencies in documentation, especially in external onward treatment.

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

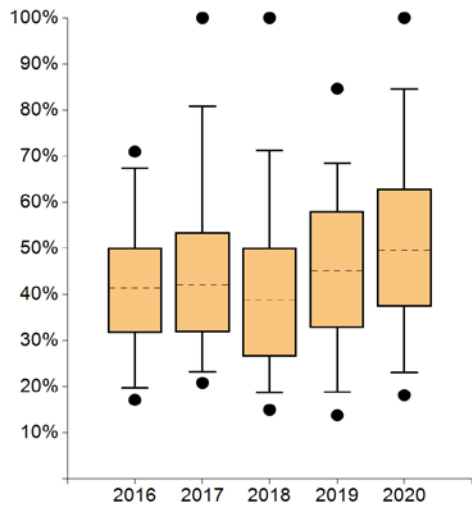
** Percentage of total patients treated in centres according to the numerator.

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

19. Combination radio-chemotherapy in NSCLC stage IIIA4/IIIB/IIIC (GL QI)



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with combination radio-chemotherapy	12*	3 - 54	1051
Denominator	NSCLC primary cases stage IIIA4/IIIB/IIIC, with ECOG 0/1	27*	7 - 122	2202
Rate	Target value $\geq 25\%$	49,54%	18,18% - 100%	47,73%**



	2016	2017	2018	2019	2020
● Max	70,97%	100%	100%	84,62%	100%
95 th percentile	67,40%	80,74%	71,29%	68,44%	84,56%
75 th percentile	50,00%	53,55%	50,00%	57,97%	62,96%
Median	41,38%	42,08%	38,78%	45,14%	49,54%
25 th percentile	31,65%	31,77%	26,51%	32,76%	37,39%
5 th percentile	19,75%	23,22%	18,70%	18,82%	23,11%
● Min	17,12%	20,83%	15,00%	13,79%	18,18%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
64	100,00%	59	92,19%

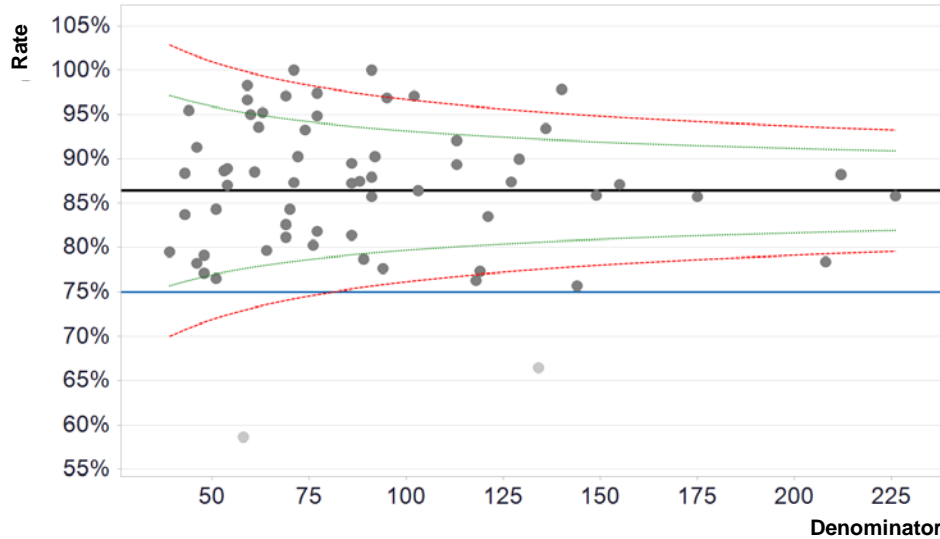
Comments:

The GL-QI shows a positive development over the entire spectrum. At a target of $\geq 25\%$, almost half of the patients were treated with combined radio-chemotherapy. In 5 centres, the proportion of definitive RCTX was below the target due to multimodal surgical therapy concepts. In addition, poor overall condition and secondary diseases were cited as reasons against RCTX. One centre referred to a lack of information regarding further treatment close to home.

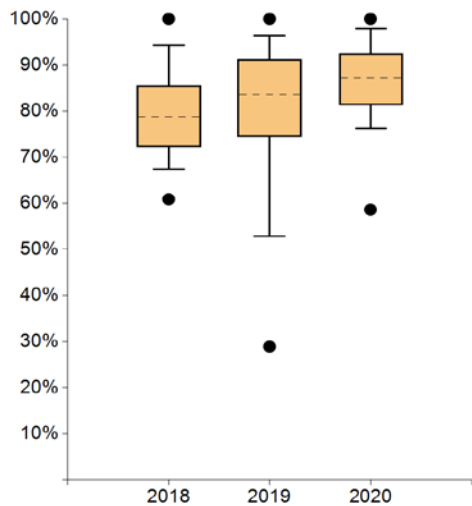
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

20. Molecular profiling NSCLC stage IV with Adeno-Ca. or adenosquamous Ca. (GL QI)



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases with examination of at least EGFR mutations in exons 18-21 and/or ALK fusions and/or ROS1 fusions and/or BRAF mutation	70*	31 - 194	4955
Denominator	Primary cases with adenocarcinoma or adenosquamous carcinoma of the lung stage IV	77*	39 - 226	5734
Rate	Target value $\geq 75\%$	87,27%	58,62% - 100%	86,41%**



	2016	2017	2018	2019	2020
● Max	-----	-----	100%	100%	100%
95 th percentile	-----	-----	94,22%	96,32%	97,79%
75 th percentile	-----	-----	85,48%	91,17%	92,34%
Median	-----	-----	78,72%	83,59%	87,27%
25 th percentile	-----	-----	72,22%	74,34%	81,34%
5 th percentile	-----	-----	67,45%	52,79%	76,30%
● Min	-----	-----	60,87%	28,92%	58,62%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
64	100,00%	62	96,88%

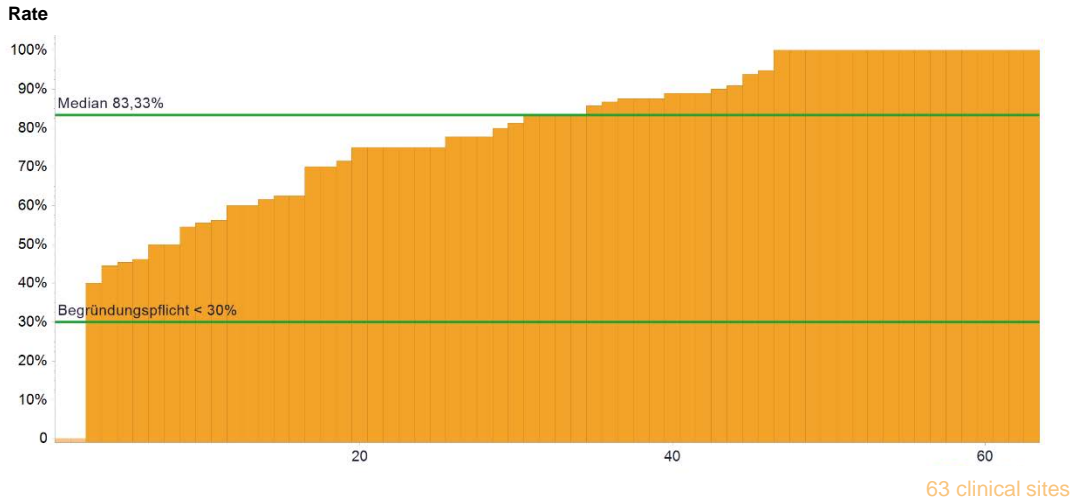
Comments:

The implementation of the GL-QI continues to show a very positive development. In 87% (median) of primary cases with adenocarcinoma or adenosquamous carcinoma (stage IV) a molecular profiling is performed. Two centres carried out the examination only to an insufficient extent and justified this with far-advanced tumours and a lack of therapeutic implication or blamed deficits in the cooperation with outpatient structures. In addition, the audit revealed deficiencies in the documentation.

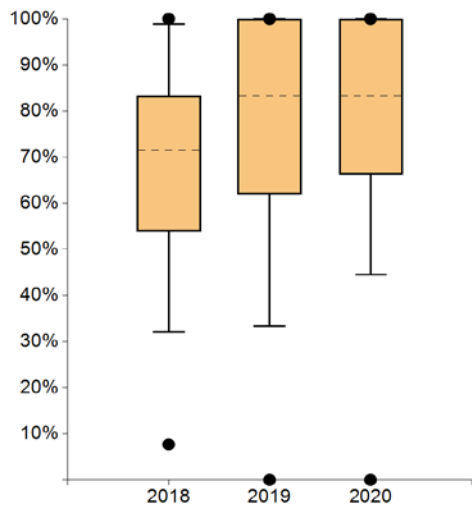
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

21. First-line therapy with EGFR-specific TKI, NSCLC stage IV with activating EGFR mutation and ECOG 0-2 (GL QI)



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases with the start of a first-line therapy with EGFR-specific TKI	6*	0 - 24	436
Denominator	Primary cases with NSCLC stage IV, activating EGFR mutation and ECOG 0-2	9*	1 - 32	550
Rate	Explanation mandatory*** <30%	83,33%	0,00% - 100%	79,27%**



	2016	2017	2018	2019	2020
● Max	-----	-----	100%	100%	100%
95 th percentile	-----	-----	98,95%	100%	100%
75 th percentile	-----	-----	83,33%	100%	100%
Median	-----	-----	71,43%	83,33%	83,33%
25 th percentile	-----	-----	53,85%	62,02%	66,25%
5 th percentile	-----	-----	32,12%	33,33%	44,54%
● Min	-----	-----	7,69%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
63	98,44%	61	96,83%

Comments:

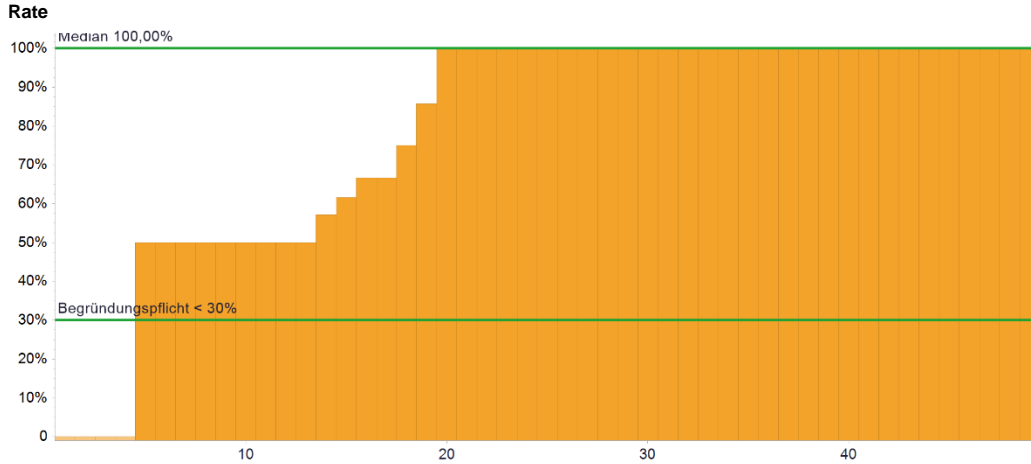
First-line therapy with an EGFR-specific TKI has shown a positive development since the introduction of the GL QI. In 17 centres, all patients with activating mutation have received targeted therapy. The two centres with quotas below the plausibility limit of <30% each had only one patient with EGFR gene mutation. Due to high treatment pressure, chemotherapy was initially initiated in one patient before therapy was switched, and in the second case an atypical mutation (uncommon mutation) was present.

* The median for numerator and denominator does not refer to an existing centre, 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 centres according to the numerator.

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

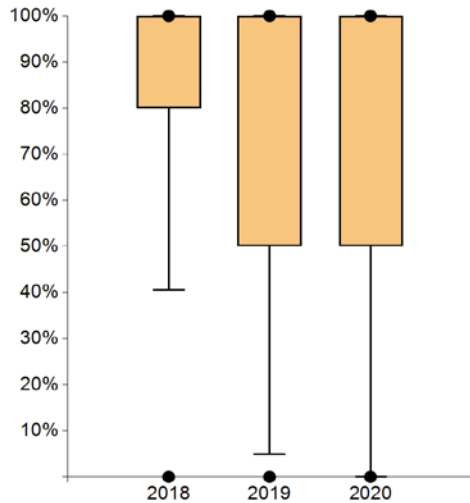
22. First-line therapy with ALK specific TKI therapy for pat. with ALK pos. NSCLC stage IV (GL QI)



49 clinical sites

Begründungspflicht = mandatory statement of reasons

	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases with start of ALK specific TKI therapy	2*	0 - 8	115
Denominator	Primary cases with NSCLC stage IV, ALK positive	2*	1 - 14	147
Rate	Explanation mandatory*** <30	100%	0,00% - 100%	78,23%**



	2016	2017	2018	2019	2020
● Max	----	----	100%	100%	100%
95 th percentile	----	----	100%	100%	100%
75 th percentile	----	----	100%	100%	100%
Median	----	----	100%	100%	100%
25 th percentile	----	----	80,00%	50,00%	50,00%
5 th percentile	----	----	40,50%	5,00%	0,00%
● Min	----	----	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
49	76,56%	45	91,84%

Comments:

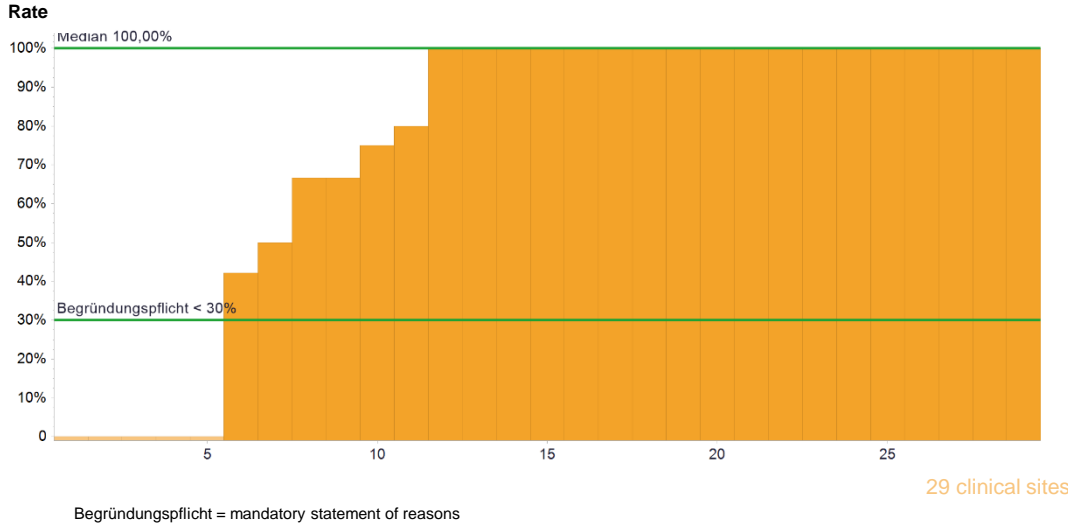
The indicator is unchanged compared to the previous year. Patients with ALK-positive stage IV NSCLC were treated in 49 centres; of these, all patients received specific TKI therapy in 30 centres. In the 4 centres where the plausibility limit was not reached, individual cases received a chemotherapy or treated externally or died before initiation of TKI therapy due to high treatment pressure.

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

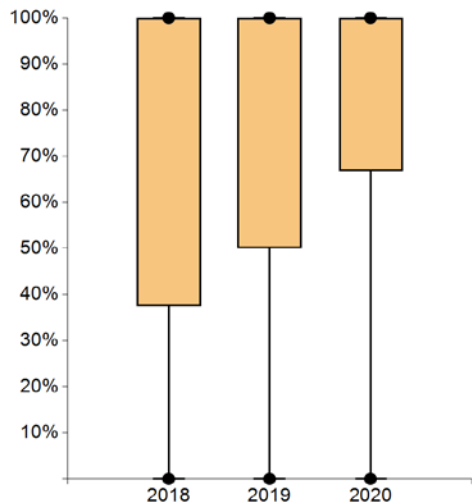
** Percentage of total patients treated in centres according to the numerator.

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

23. First-line therapy with ROS1 specific TKI therapy for pat. with ROS1 pos. NSCLC stage IV (GL QI)



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases with start of ROS1-specific TKI therapy	1*	0 - 8	43
Denominator	Primary cases with NSCLC stage IV, ROS1- positive	1*	1 - 19	64
Rate	Explanation mandatory*** <30	100%	0,00% - 100%	67,19%**



	2016	2017	2018	2019	2020
● Max	----	----	100%	100%	100%
95 th percentile	----	----	100%	100%	100%
75 th percentile	----	----	100%	100%	100%
Median	----	----	100%	100%	100%
25 th percentile	----	----	37,50%	50,00%	66,67%
5 th percentile	----	----	0,00%	0,00%	0,00%
● Min	----	----	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
29	45,31%	24	82,76%

Comments:

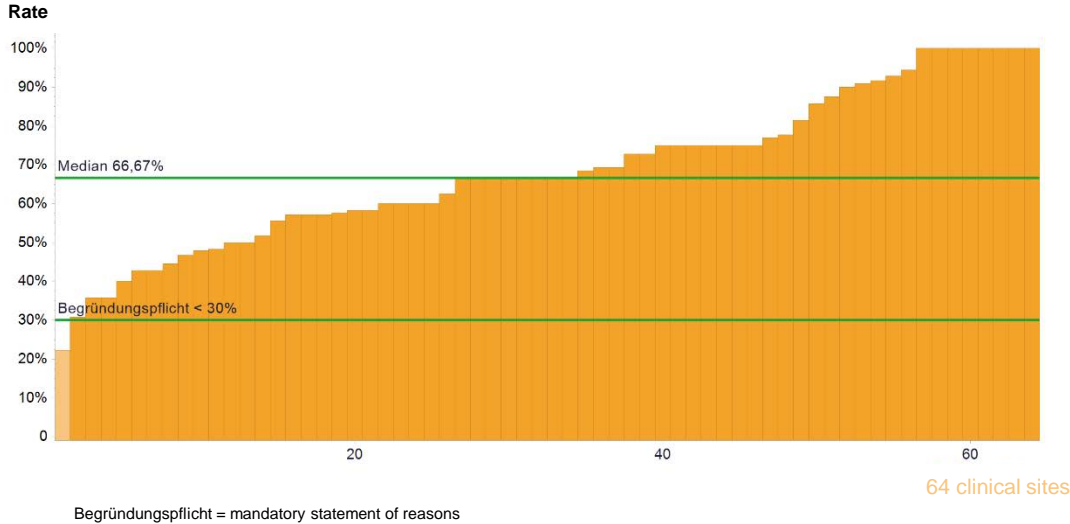
In 29 centres (previous year 30), 43 of a total of 64 patients with ROS1 mutation were treated with a specific TKI. In 18 centres, all patients (n=23), in 5 centres no patients (n=5) were treated with targeted therapy: In two patients, chemoimmunotherapy was administered at the responsibility of the pneumooncologist who continued treatment or after frustrated screening. Three patients died before therapy was initiated.

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

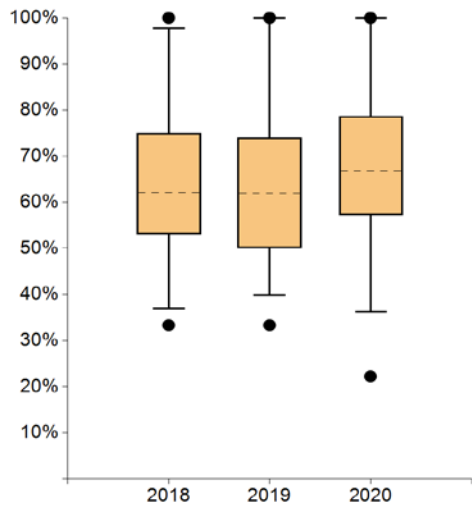
** Percentage of total patients treated in centres according to the numerator.

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

24. Combination radio-chemotherapy for SCLC stage IIB - IIIB (GL QI)



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases with radio-chemotherapy	6*	2 - 27	485
Denominator	Primary cases SCLC stage IIB [T3] - IIIC [TNM: cT1/2 N2-3 M0, cT3/4 N0-3 M0] and ECOG 0/1	10*	2 - 56	747
Rate	Explanation mandatory*** <30%	66,67%	22,22% - 100%	64,93%**



	2016	2017	2018	2019	2020
● Max	-----	-----	100%	100%	100%
95 th percentile	-----	-----	97,71%	100%	100%
75 th percentile	-----	-----	75,00%	74,01%	78,71%
Median	-----	-----	62,15%	62,02%	66,67%
25 th percentile	-----	-----	53,13%	50,00%	57,14%
5 th percentile	-----	-----	37,00%	39,92%	36,35%
● Min	-----	-----	33,33%	33,33%	22,22%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
64	100,00%	63	98,44%

Comments:

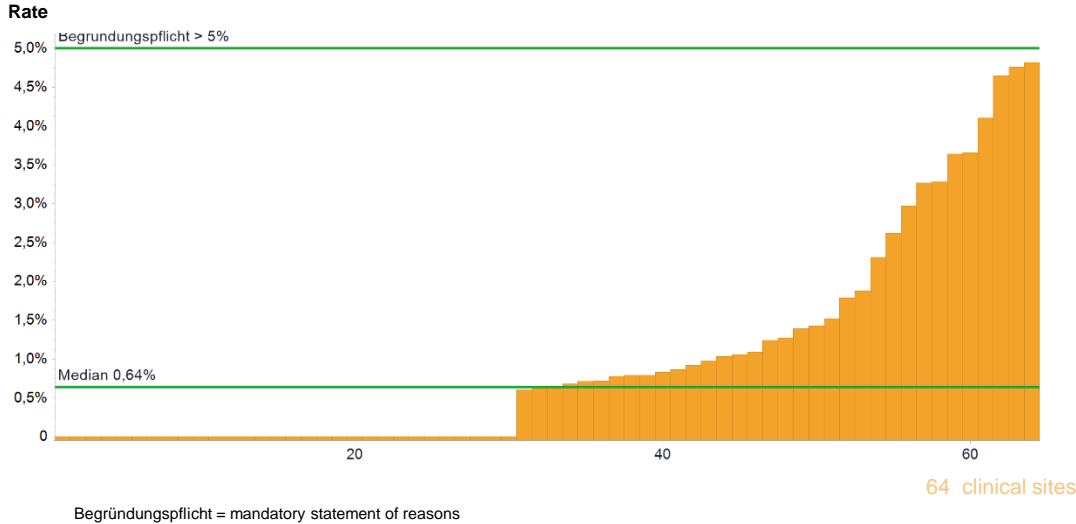
The GL-QI for the treatment of small cell lung cancer shows a positive trend. On median, 66.67% of patients with limited disease received combination radio-chemotherapy. Only one centre fell below the lower plausibility limit with 22.22%. The centre justified this with rapid tumour progression or death of the patients; in addition, the therapy was sequential in individual cases.

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

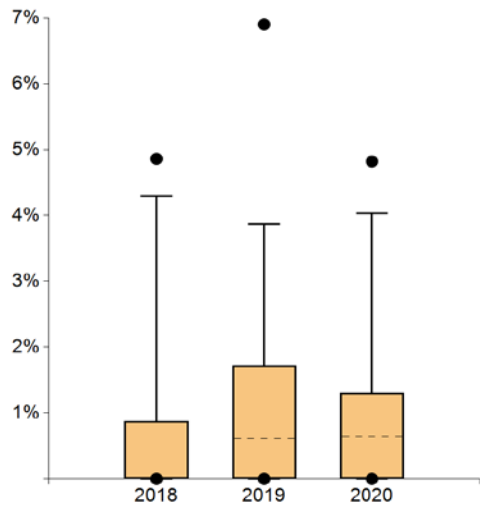
** Percentage of total patients treated in centres according to the numerator.

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

25. CTCAE grade V on systemic therapy



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases with CTCAE grade V on systemic therapy	1*	0 - 8	98
Denominator	Primary cases stage III or IV with systemic therapy	154,5*	47 - 471	10897
Rate	Explanation mandatory*** >5%	0,64%	0,00% - 4,82%	0,90%**



	2016	2017	2018	2019	2020
● Max	----	----	4,86%	6,90%	4,82%
95 th percentile	----	----	4,29%	3,86%	4,03%
75 th percentile	----	----	0,87%	1,72%	1,30%
Median	----	----	0,00%	0,62%	0,64%
25 th percentile	----	----	0,00%	0,00%	0,00%
5 th percentile	----	----	0,00%	0,00%	0,00%
● Min	----	----	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
64	100,00%	64	100,00%

Comments:

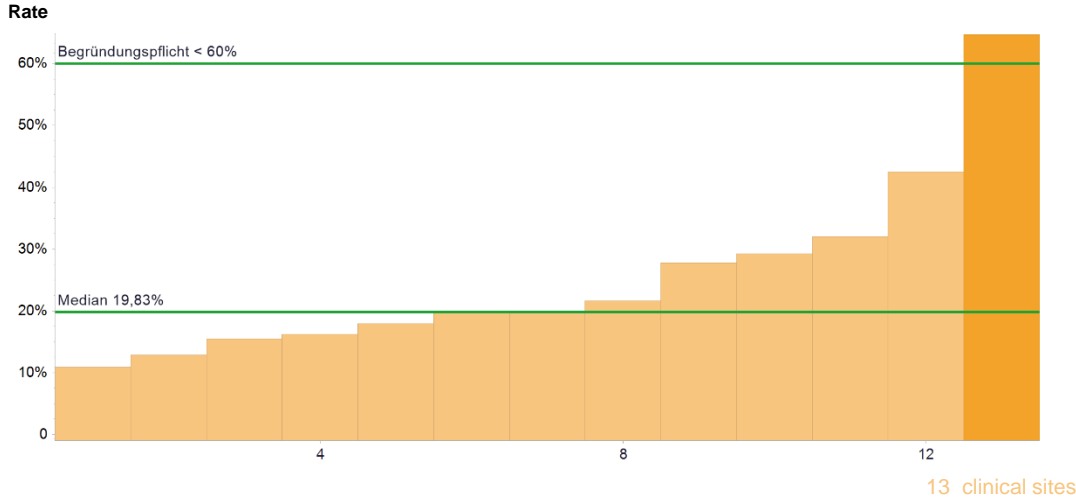
The side-effect-related mortality rate under systemic therapy is within the corridor of the previous years and lies at a median of 0.64%. The justification requirement is not exceeded by any centre (previous year: 1). In 30 centres (2019: 24), no patient died under system therapy due to side effects.

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

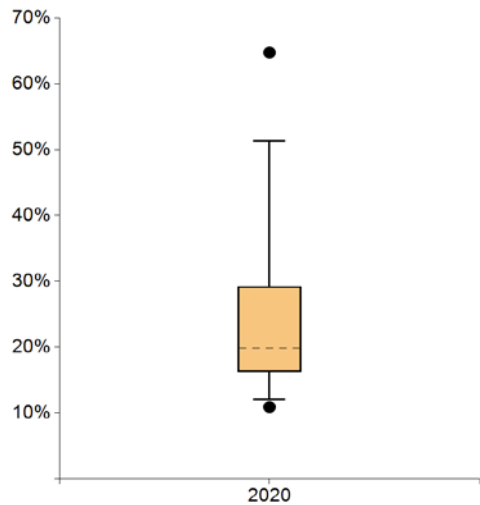
** Percentage of total patients treated in centres according to the numerator.

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

26. Recording of symptoms using MIDOS/ IPOS in stage IV



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with symptom recording by MIDOS or IPOS	31*	18 - 101	576
Denominator	Primary cases stage IV	156*	111 - 439	2322
Rate	Explanation mandatory*** <60%	19,83%	10,91% - 64,74%	24,81%**



	2016	2017	2018	2019	2020
● Max	----	----	----	----	64,74%
95 th percentile	----	----	----	----	51,37%
75 th percentile	----	----	----	----	29,21%
Median	----	----	----	----	19,83%
25 th percentile	----	----	----	----	16,22%
5 th percentile	----	----	----	----	12,08%
● Min	----	----	----	----	10,91%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
13	20,31%	1	7,69%

Comments:

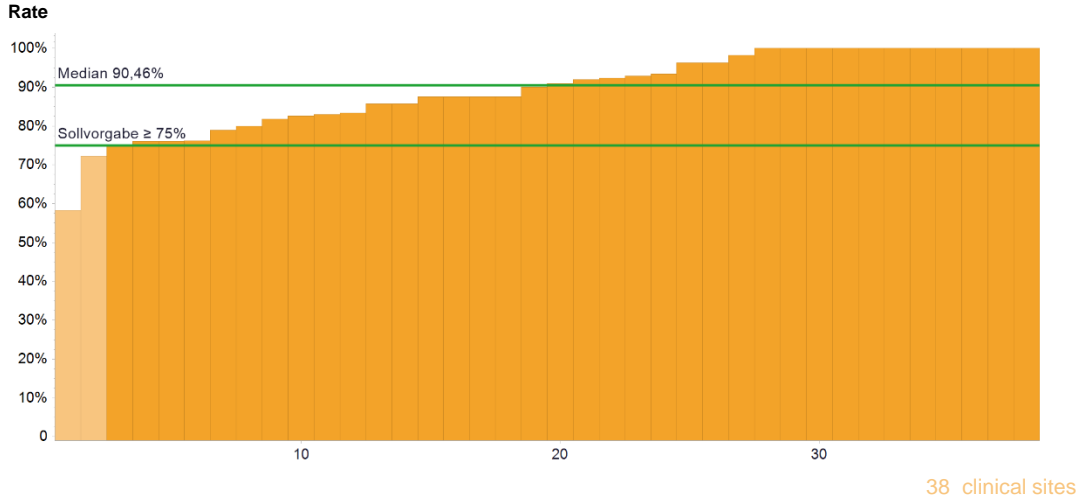
The indicator was recorded on a voluntary basis in the 2021 audit year, so that data is only available from 13 centres. In the first evaluation, 12 centres are below the justification requirement of 60%. The centres have stated that they have not yet implemented the structural recording with the above-mentioned instruments, especially outside the palliative units.

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

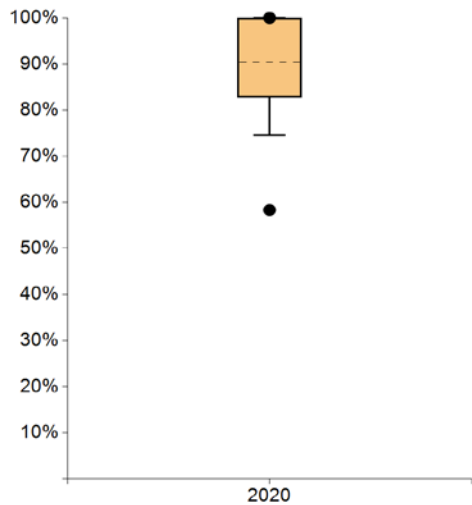
** Percentage of total patients treated in centres according to the numerator.

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

27. PD-L1 testing in stage III NSCLC with radio-chemotherapy



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with PD-L1 testing before starting radio-chemotherapy	15,5*	4 - 79	823
Denominator	Primary cases with NSCLC stage III with radio-chemotherapy	20,5*	4 - 79	916
Rate	Target value ≥ 75%	90,46%	58,33% - 100%	89,85%**



	2016	2017	2018	2019	2020
● Max	----	----	----	----	100%
95 th percentile	----	----	----	----	100%
75 th percentile	----	----	----	----	100%
Median	----	----	----	----	90,46%
25 th percentile	----	----	----	----	82,69%
5 th percentile	----	----	----	----	74,58%
● Min	----	----	----	----	58,33%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
38	59,38%	36	94,74%

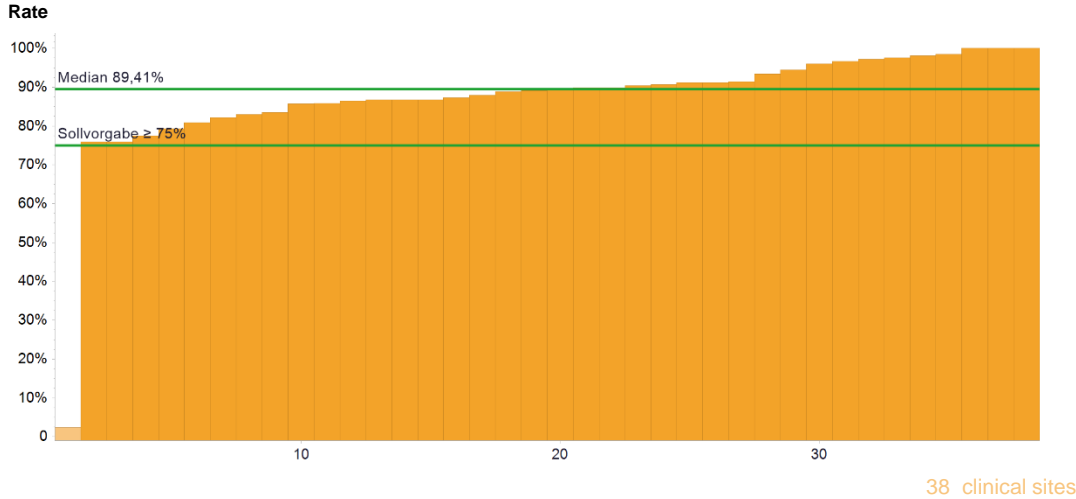
Comments:

PD-L1 testing in stage III non-small cell lung cancer with radio-chemotherapy is also analysed for the first time in this annual report. 38 centres have submitted results for indices 27 and 28 on a voluntary basis. In 11 centres, the required examination has been performed for all index patients (median 90.5%). Two centres fell short of the target: here, in numerous cases, the testing only took place during or at the end of the radio-chemotherapy.

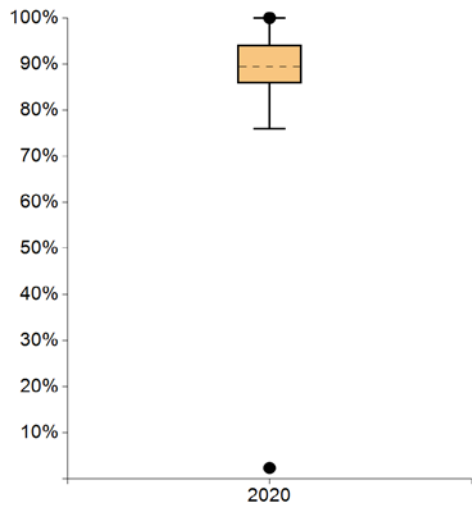
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

28. PD-L1 testing in stage IV NSCLC



	Definition of indicator	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with PD-L1 testing	102,5*	2 - 398	4669
Denominator	Primary cases NSCLC stage IV	117*	29 - 439	5281
Rate	Target value ≥ 75%	89,41%	2,35% - 100%	88,41%**



	2016	2017	2018	2019	2020
● Max	----	----	----	----	100%
95 th percentile	----	----	----	----	100%
75 th percentile	----	----	----	----	94,12%
Median	----	----	----	----	89,41%
25 th percentile	----	----	----	----	85,74%
5 th percentile	----	----	----	----	75,95%
● Min	----	----	----	----	2,35%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
38	59,38%	37	97,37%

Comments:

The results of PD-L1 testing in stage IV are comparable to those before radio-chemotherapy in stage III (median 89.4%). Here, too, data are available from 38 centres: In 16 centres, testing has been performed in >90% of stage IV patients. In one centre, the examination has so far only been carried out in individual cases (2.25%).

* The median for numerator and denominator does not refer to an existing centre, 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 centres according to the numerator.

WISSEN AUS ERSTER HAND (FIRST-HAND KNOWLEDGE)



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Imprint

Publisher and responsible for content:
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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-en; 01.06.2022

ISBN: 978-3-910336-07-0

