



Annual Report 2023

of the Certified Lung Cancer Centres

Audit year 2022 / Indicator year 2021

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General information

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 Indicator No. 13: Post-operative bronchial stump fistula /anastomotic leakage.....
 Indicator No. 14: Local R0 resections in stages IA/B and IIA/B.....
 Indicator No. 15: Local R0 resections in stages IIIA/B.....
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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*
 The quality indicators (QIs) refer to version 1.0 of the S3 GL on prevention, diagnosis, therapy and follow-up of Lung Cancer (2018).

	Definition of indicator	All clinical sites 2019		
		Median	Range	Patients Total
Numerator	Primary cases with stages IB-IIIB after surgical therapy that were presented at the tumour conference	62*	20 - 227	4,142
Denominator	Primary cases with stages IB-IIIB 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 definition of the **numerator**, **denominator** and the **target value** are taken from the data sheet.
 The **median** for numerator and denominator does not refer to an existing centre but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.
Range specifies the value range for the numerator, denominator and ratio of all centres.
 The column **Patients Total** displays the total of all patients treated according to the indicator and the corresponding quota.

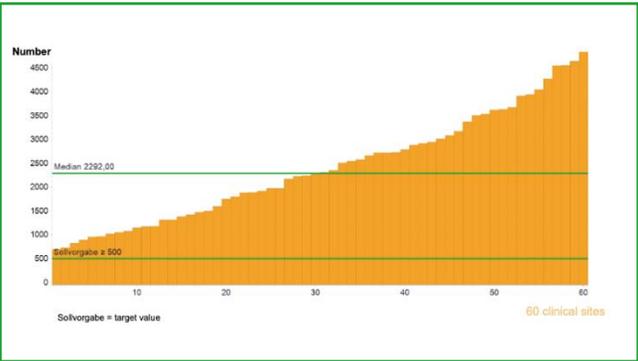
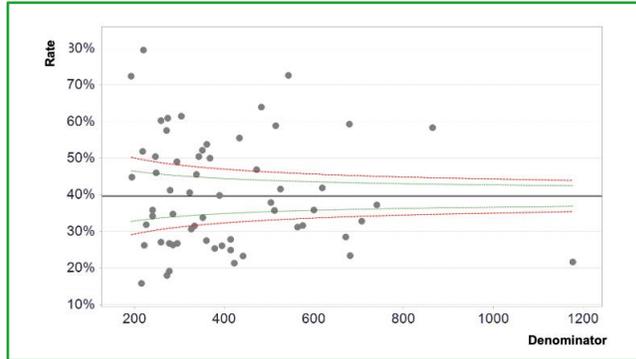


Diagram:

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

*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_2021__Version_3_english_version.pdf)

General information



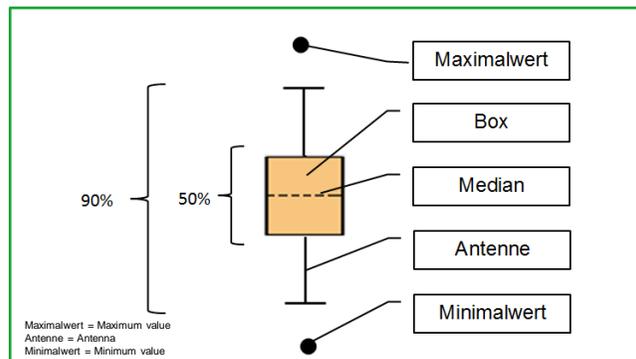
Funnel plots:

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).



Cohort development:

The **Cohort development** in the years **2017, 2018, 2019, 2020** and **2021** 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 cover 90% of the centres. The extreme values are depicted here as dots.

Status of the certification system for Lung Cancer Centres 2022

	31.12.2022	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017
Ongoing certification procedures	6	7	6	4	8	3
Certified centres	73	69	64	59	52	49
Certified clinical sites	89	84	78	75	66	63
Lung cancer centres 1 clinical site	61	57	52	48	42	39
2 clinical sites	8	9	10	7	7	7
3 clinical sites	4	3	2	3	2	2
4 clinical sites	0	0	0	1	1	1

Included certified sites

	31.12.2022	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017
Centres included in the Annual Report	69	64	60	55	50	46
Equivalent to	94.5%	92.8%	93.8%	93.2%	96.2%	93.9%
Primary cases total*	24,563	23,085	22,712	21,364	19,361	18,483
Primary cases per centre (mean)*	356,0	360,7	378,5	388,4	387,2	401,8
Primary cases per centre (median)*	286,0	307,5	333,0	338,0	335,5	344,0

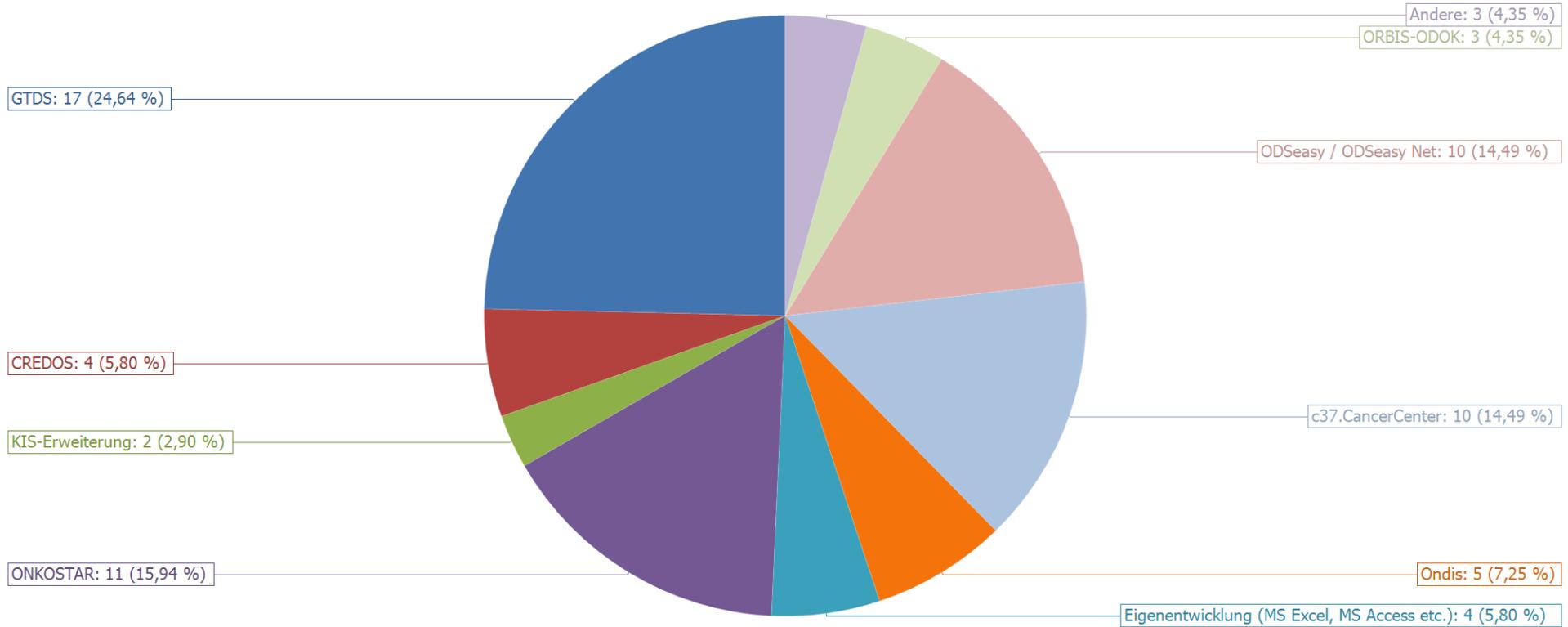
* The figures refer to all certified centres in the Annual Report.

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 69 of 73 Lung Cancer Centres. Excluded are 3 centres that were certified for the first time in 2022 (data mapping complete calendar year not mandatory for first-time certifications). In addition, one clinical site was not taken into account that did not conduct an audit in 2022 and also did not submit a Data Sheet (certificate suspension in Q1 2023). A total of 25,659 patients were treated in all 72 centres. A current overview of all certified sites is shown at www.oncomap.de.

The indicators published here refer to the indicator year 2021. They are the assessment basis for the audits conducted in 2022.

Tumour documentation systems in the Centre's clinical sites



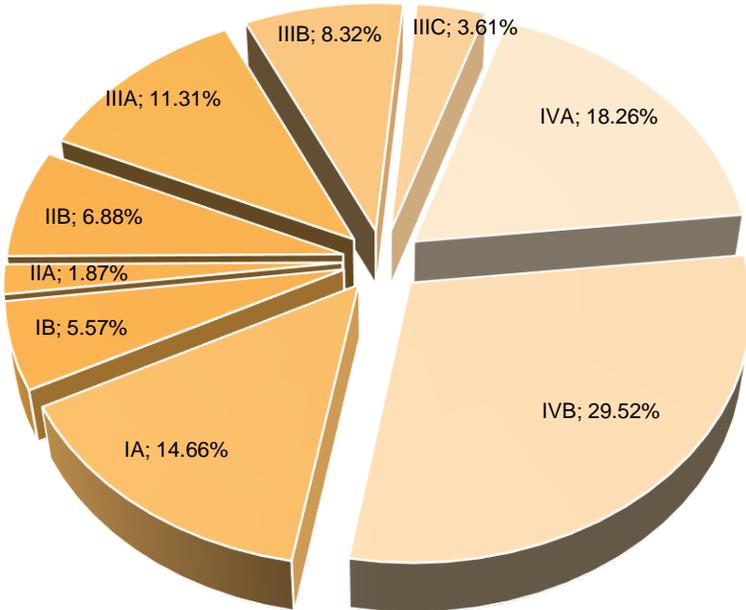
Andere = other
KIS-Erweiterung = KIS enlargement

Legend:	
Other	Systems only used at one clinical site

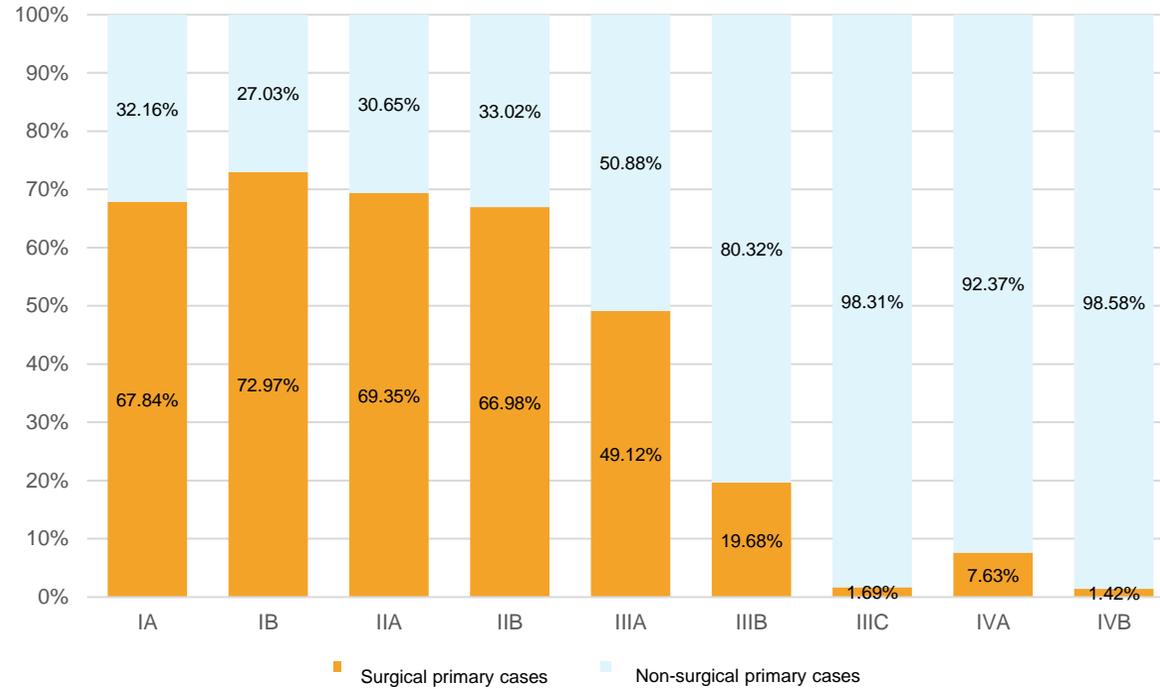
The details on the tumour documentation system was taken from the Data Sheet (Basic Data Sheet). It is not possible to use more than one system. In many cases, support is provided by the cancer registries or there may be a direct link to the cancer registry via a specific tumor documentation system.

Basic data – Stage distribution primary cases lung cancer

Primary cases total

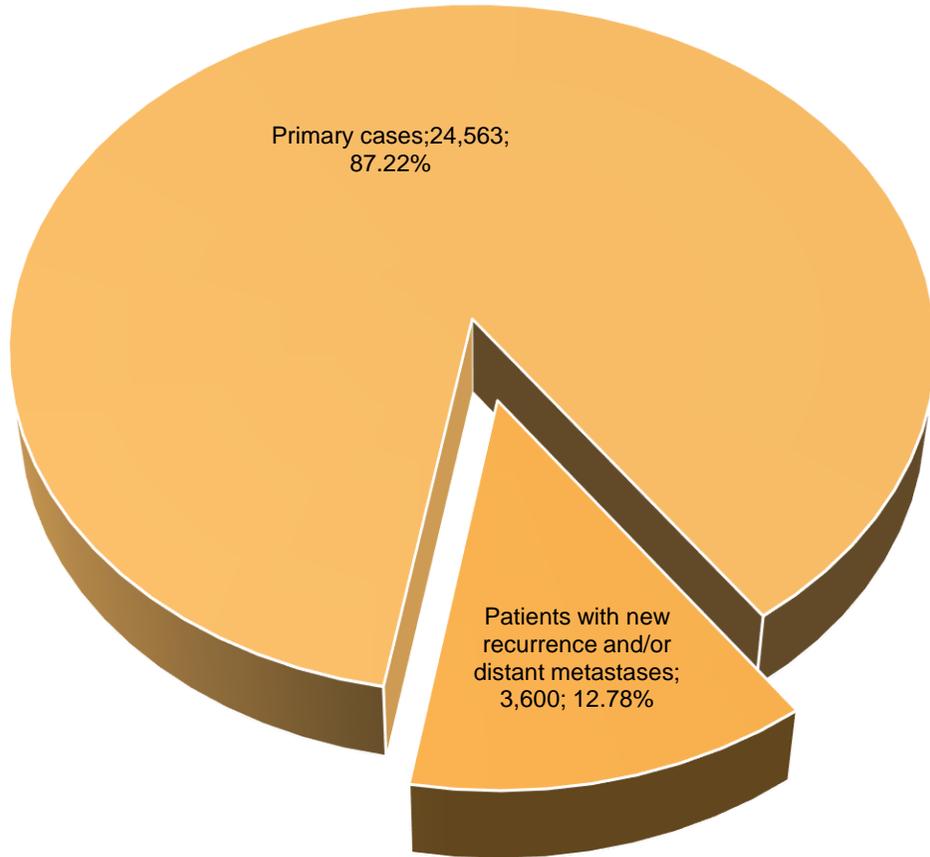


Surgical / non-surgical primary cases



	IA	IB	IIA	IIB	IIIA	IIIB	IIIC	IVA	IVB	Gesamt
Surgical primary cases with anatomical lung resection	2,443 (67.84%)	999 (72.97%)	319 (69.35%)	1,132 (66.98%)	1,365 (49.12%)	402 (19.68%)	15 (1.69%)	342 (7.63%)	103 (1.42%)	7,120
Non-surgical primary cases	1,158 (32.16%)	370 (27.03%)	141 (30.65%)	558 (33.02%)	1,414 (50.88%)	1,641 (80.32%)	872 (98.31%)	4,142 (92.37%)	7,147 (98.58%)	17,443
Primary cases total	3,601 (14.66%)	1,369 (5.57%)	460 (1.87%)	1,690 (6.88%)	2,779 (11.31%)	2,043 (8.32%)	887 (3.61%)	4,484 (18.26%)	7,250 (29.52%)	24,563 (100.00%)

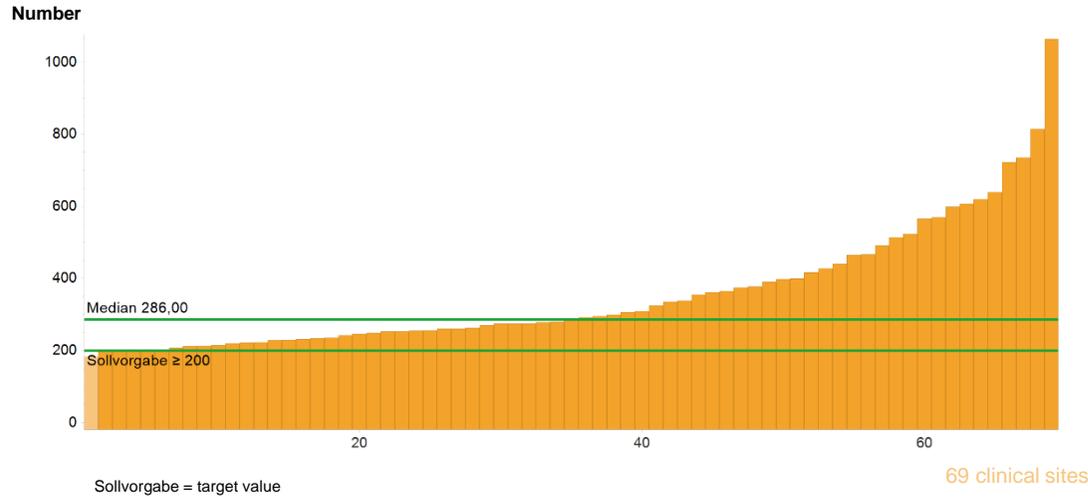
Basic data – Ratio of primary cases to recurrences / metastases of lung cancer



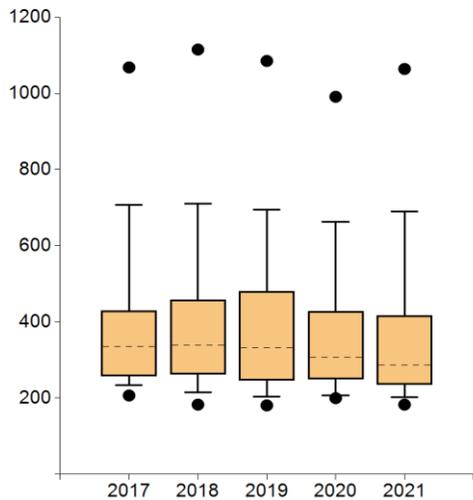
Primary cases	Patients with new recurrence and/or distant metastases*	centre cases
24,563 (87.22%)	3,600 (12.78%)	28,163 (100%)

* Reference to indicator 1b

1a. Primary cases



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Number	Primary cases	286	183 - 1064	24563
	Target value ≥ 200			



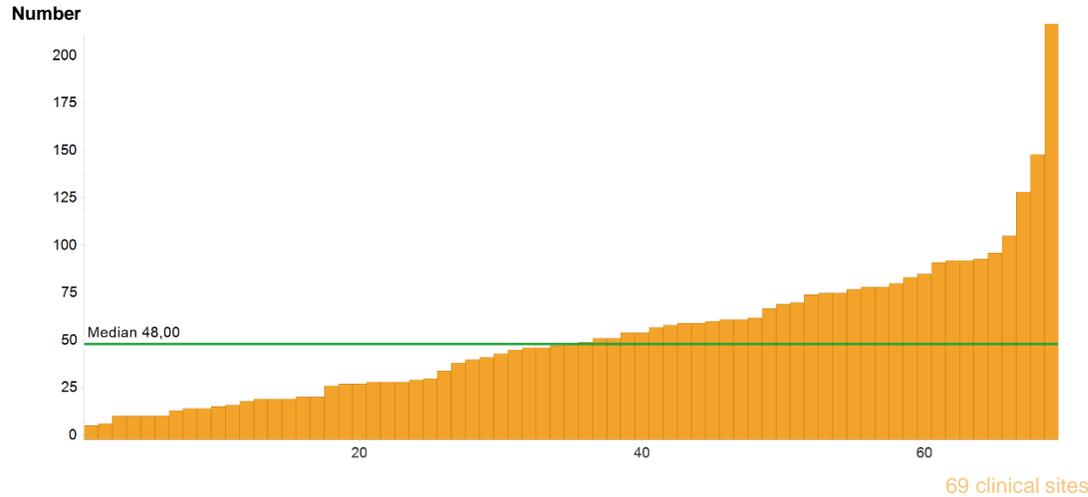
	2017	2018	2019	2020	2021
● Max	1068,00	1115,00	1085,00	991,00	1064,00
95 th percentile	707,40	709,80	695,10	663,35	689,80
75 th percentile	429,50	458,00	480,75	428,00	416,00
Median	335,50	338,00	333,00	307,50	286,00
25 th percentile	258,50	262,50	247,00	250,50	235,00
5 th percentile	233,80	215,40	203,95	207,00	202,40
● Min	207,00	183,00	181,00	200,00	183,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	68	98.55%

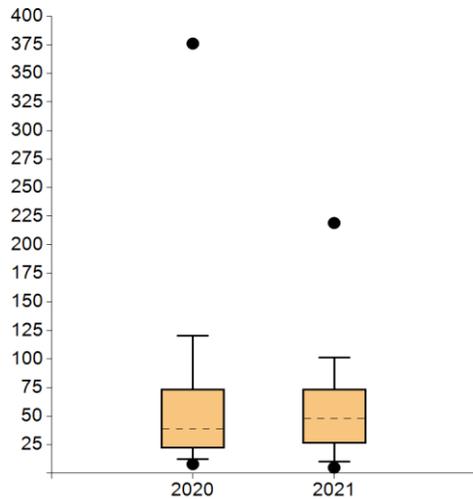
Comments:

The trend towards lower primary case numbers continues across almost the entire range. After a decline in the number of cases in the previous year, presumably due to the pandemic, even in centres with initial certification before 2017, they currently show an increase of 2 cases (median). The decline is thus due to the increasing certification of smaller centres. One centre fell short of the target value in the indicator year with an inconspicuous 3-year average and has responded to this with talks on expanding cooperation. The coverage of primary cases treated in centres in Germany is 39.4% (previous year 38.8%) based on the current incidence from 2019 (source www.krebsdaten.de).

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



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Number	Patients with new recurrence and/or distant metastases	48	5 - 219	3600
	No target value			



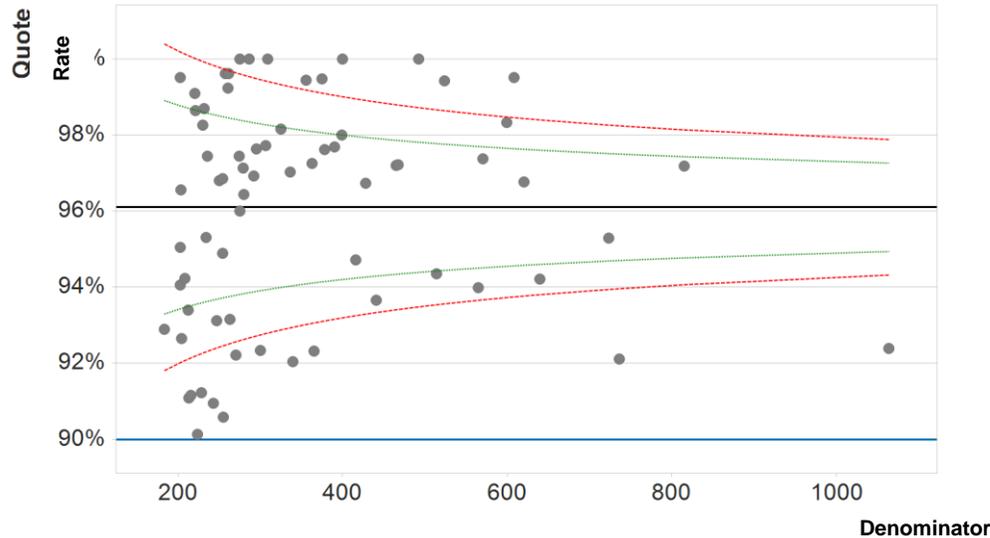
	2017	2018	2019	2020	2021
● Max	----	----	----	376,00	219,00
95 th percentile	----	----	----	120,40	101,40
75 th percentile	----	----	----	73,75	74,00
Median	----	----	----	39,00	48,00
25 th percentile	----	----	----	22,00	26,00
5 th percentile	----	----	----	12,30	10,00
● Min	----	----	----	8,00	5,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100,00%	----	----

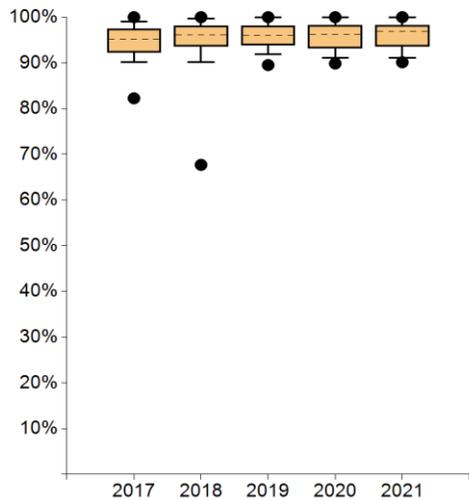
Comments:

Compared to the previous year, 32 centres treated 12 fewer patients (median), while 30 centres were able to increase the number of cases treated by a median of 13.5 patients. The number of all patients treated in the centres with new recurrence and/or distant metastases decreased by a good 4% with a decrease in treatment cases in the upper spectrum.

2a. Pre-therapeutic tumour board



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator presented in the pre-therapeutic tumour board	277*	170 - 983	23605
Denominator	Primary cases (= indicator 1a)	286*	183 - 1064	24563
Rate	Target value $\geq 90\%$	96.85%	90.13% - 100%	96.10%**



	2017	2018	2019	2020	2021
● Max	100%	100%	100%	100%	100%
95 th percentile	98.96%	99.68%	100%	100%	100%
75 th percentile	97.40%	98.05%	98.08%	98.18%	98.26%
Median	95.14%	96.12%	95.99%	96.19%	96.85%
25 th percentile	92.22%	93.59%	93.90%	93.23%	93.65%
5 th percentile	90.11%	90.21%	91.93%	91.04%	91.11%
● Min	82.25%	67.69%	89.52%	89.86%	90.13%

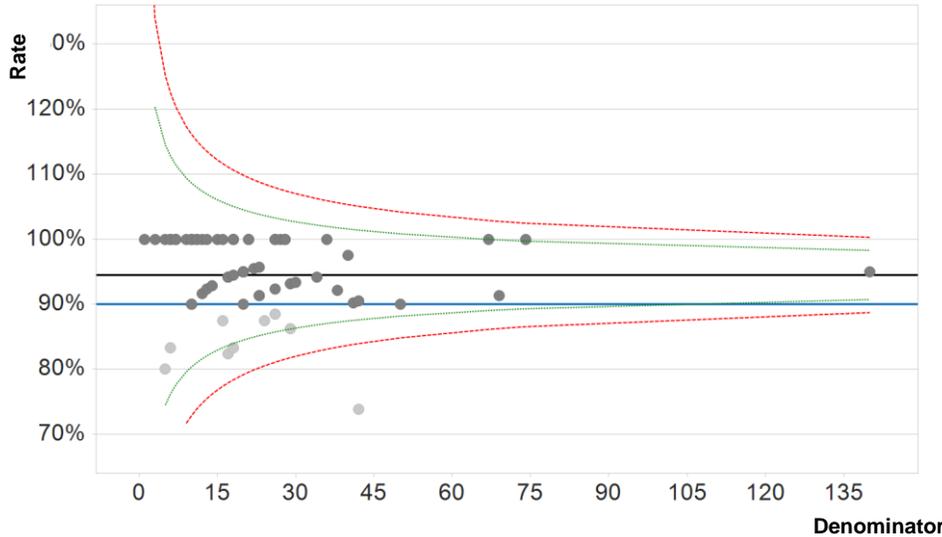
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100,00%	69	100,00%

Comments:

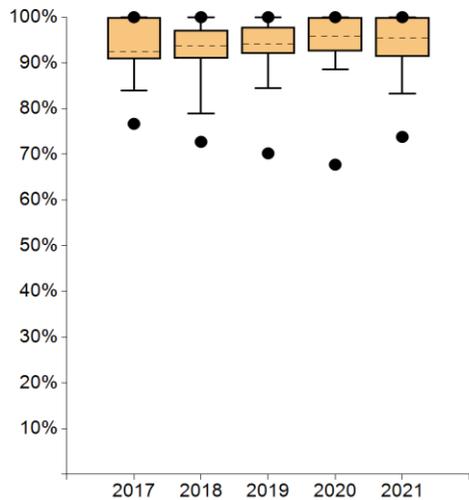
At a very high starting level, the positive development of the indicator continues. Both the overall rate and the median rate have once again increased discreetly. All centres met the target value of $\geq 90\%$; in 5 centres, without exception, all primary cases were presented pre-therapeutically. 38 centres maintained or increased their presentation rate.

* 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 recurrences and/or distant metastases after previous curative treatment in tumour board Certification



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who were presented in the tumour board	18*	1 - 133	1528
Denominator	Patients with new recurrence and/or distant metastases after previous curative treatment (R0 resection)	20*	1 - 140	1617
Rate	Target value $\geq 90\%$	95.45%	73.81% - 100%	94.50%**



	2017	2018	2019	2020	2021
● Max	100%	100%	100%	100%	100%
95 th percentile	100%	100%	100%	100%	100%
75 th percentile	100%	97.17%	97.80%	100%	100%
Median	92.45%	93.75%	94.12%	95.78%	95.45%
25 th percentile	90.78%	90.91%	92.00%	92.52%	91.30%
5 th percentile	83.96%	78.94%	84.48%	88.50%	83.33%
● Min	76.67%	72.73%	70.21%	67.74%	73.81%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100,00%	60	86,96%

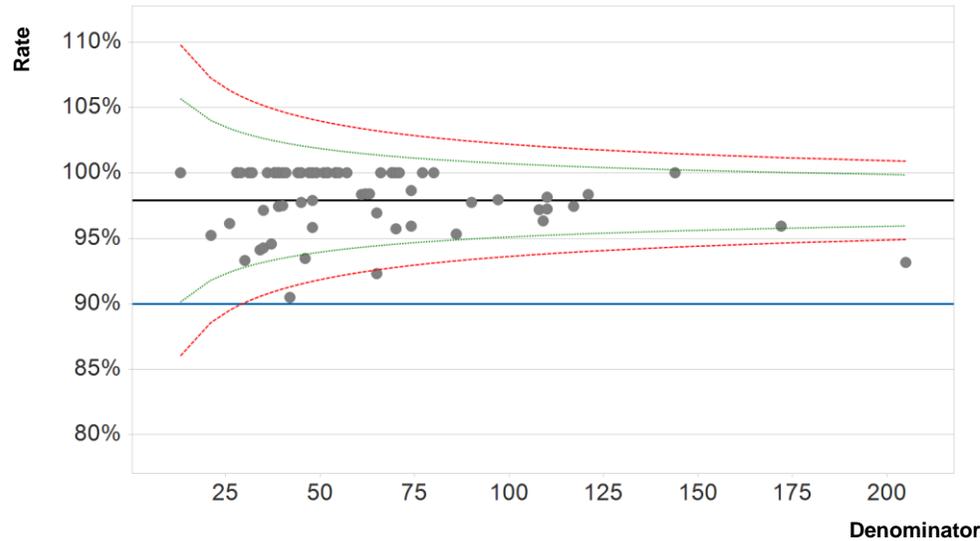
Comments:

The centres are slightly less successful in presenting patients with new occurrences than in presenting primary cases (indicator 2a) or primary surgical cases (indicator 3). As in previous years, a good 95% of patients are discussed in the tumour board. 9 centres (previous year 4) with rates $<90\%$ justified omitted presentations with the early death of the patient (5x), palliative situation (3x), neglect (2x) and high treatment pressure with cerebral filia (1x). One centre identified the lack of awareness of the obligation to present in parts of the treatment network and trained staff accordingly.

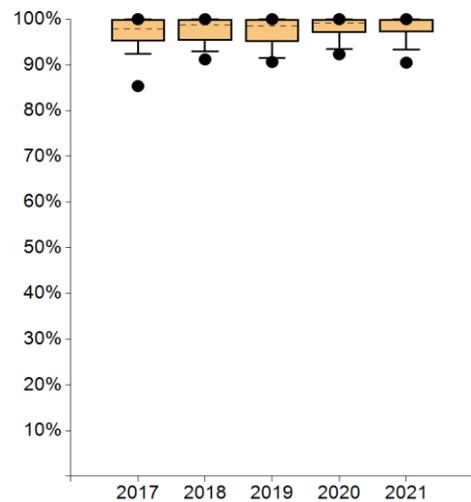
* The median for numerator and denominator does not refer to an existing centre but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

** 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator who were presented in the tumour board	51*	13 - 191	4129
Denominator	Surgical primary cases stad. IB-III B with anatomical lung resection	51*	13 - 205	4217
Rate	Target value $\geq 90\%$	100%	90.48% - 100%	97.91%**



	2017	2018	2019	2020	2021
● Max	100%	100%	100%	100%	100%
95 th percentile	100%	100%	100%	100%	100%
75 th percentile	100%	100%	100%	100%	100%
Median	97.88%	98.73%	98.50%	99.11%	100%
25 th percentile	95.24%	95.28%	94.99%	97.08%	97.14%
5 th percentile	92.34%	92.96%	91.52%	93.50%	93.39%
● Min	85.36%	91.20%	90.63%	92.31%	90.48%

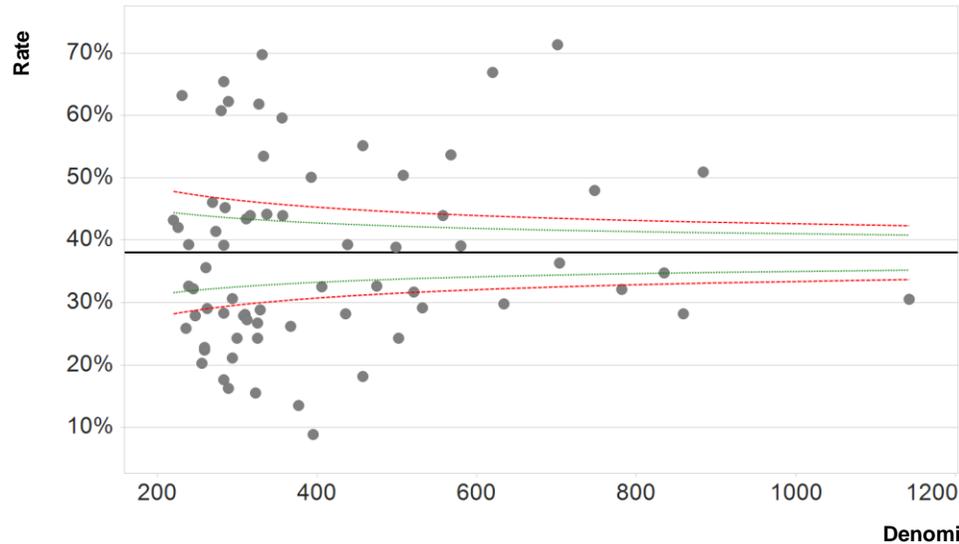
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	69	100.00%

Comments:

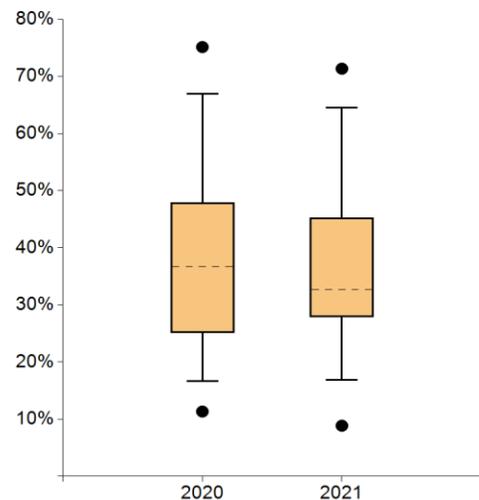
With a very high implementation of indicator, the positive development continues. Almost 98% of primary surgical cases in stage IB-III B and with anatomical resection are presented in the tumour board after surgery. As in previous years, all centres meet the target value; 35 centres discussed all required patients in the tumour board (previous year 28).

* 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 counselling



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who received psycho-oncological counselling on an inpatient or outpatient basis (duration of conversation \geq 25 min.)	129*	35 - 500	10706
Denominator	Primary cases (= indicators 1a) + patients with new recurrence and/or distant metastases (= indicators 1b)	327*	220 - 1142	28163
Rate	Mandatory statement of reasons*** <10% and >60%	32.64%	8.86% - 71.33%	38.01%**



	2017	2018	2019	2020	2021
● Max	----	----	----	75.12%	71.33%
95 th percentile	----	----	----	66.98%	64.50%
75 th percentile	----	----	----	47.89%	45.26%
Median	----	----	----	36.69%	32.64%
25 th percentile	----	----	----	25.10%	27.92%
5 th percentile	----	----	----	16.61%	16.82%
● Min	----	----	----	11.34%	8.86%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
69	100.00%	60	86.96%

Comments:

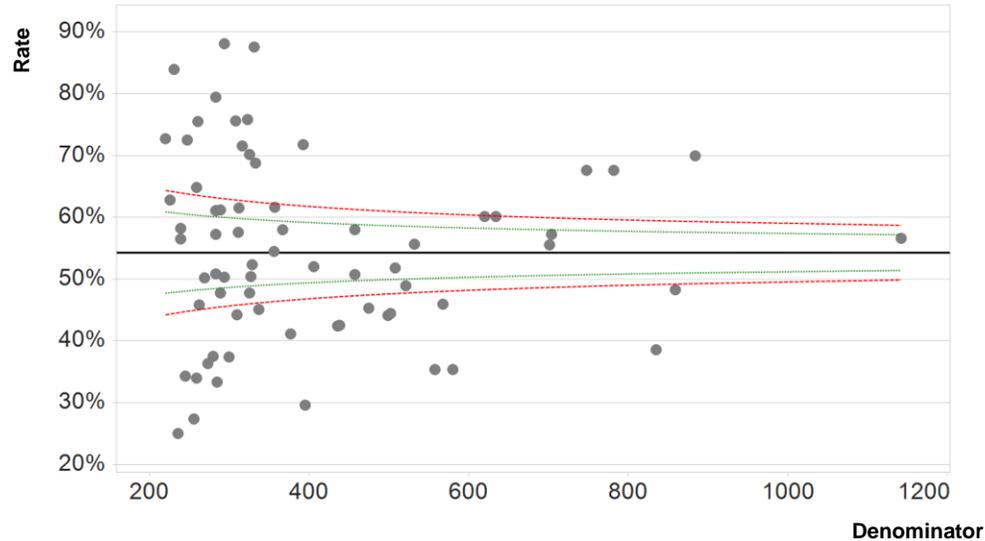
As in the previous year, 38% of the patients in the denominator received psycho-oncological counselling. While 32 centres improved their counselling rate by a median of 5 percentage points, it declined to the same extent in 30 centres. One centre, with a previously inconspicuous rate, fell below the lower plausibility limit of 10% and attributed this to contact restrictions during the Covid pandemic. In 8 centres (previous year 6), more than 60% of the patients were counselled.

* 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.

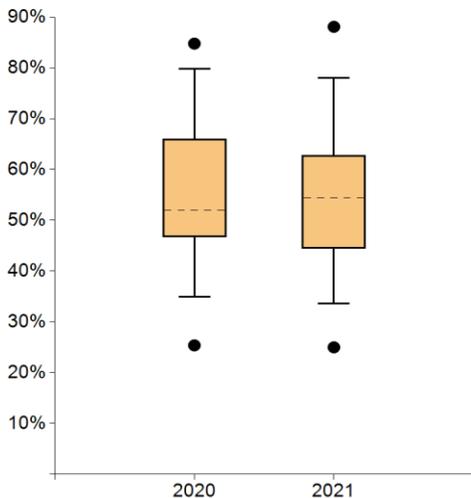
** Percentage of total patients treated in centres according to the numerator.

*** 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 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who received counselling from social services on an inpatient or outpatient basis	194*	59 - 646	15287
Denominator	Primary cases (= indicator 1a) + patients with recent recurrence and/or distant metastases (= indicator 1b)	327*	220 - 1142	28163
Rate	Mandatory statement of reasons*** <50% and >90%	54.49%	25.00% - 88.10%	54.28%**



	2017	2018	2019	2020	2021
● Max	----	----	----	84.79%	88.10%
95 th percentile	----	----	----	79.88%	78.05%
75 th percentile	----	----	----	66.05%	62.83%
Median	----	----	----	51.92%	54.49%
25 th percentile	----	----	----	46.74%	44.42%
5 th percentile	----	----	----	34.96%	33.59%
● Min	----	----	----	25.39%	25.00%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
69	100.00%	43	62.32%

Comments:

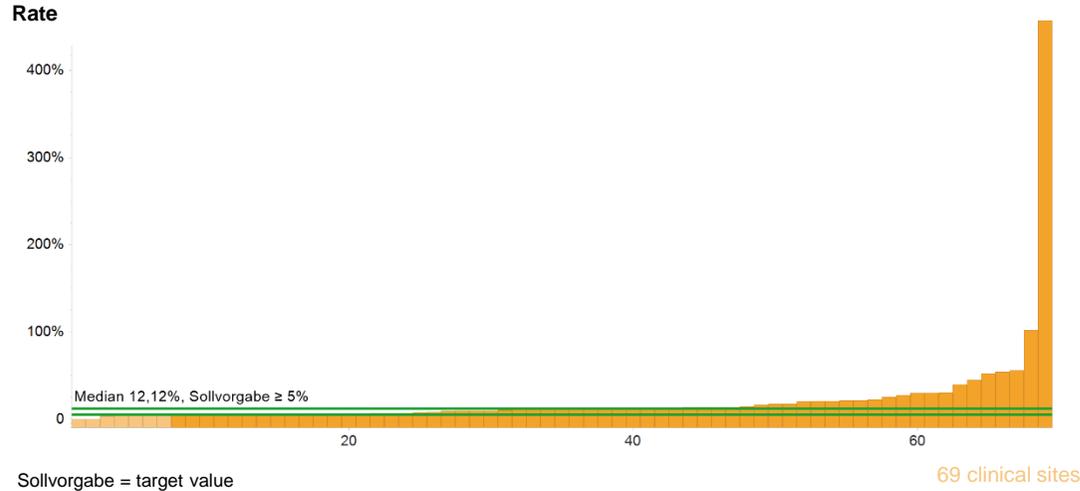
The rate of counselling by social services is unchanged compared to the previous year. 43 centres require a statement of reasons with rates <50%. Covid-related restrictions (9x), lack of use by patients (4x) and short length of stay (2x) were cited by these centres as reasons. Other reasons were staff changes/lack of staff and non-established structures in the outpatient setting. In the audits, the auditors remarked on the need to improve staff resources and outpatient processes.

* 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.

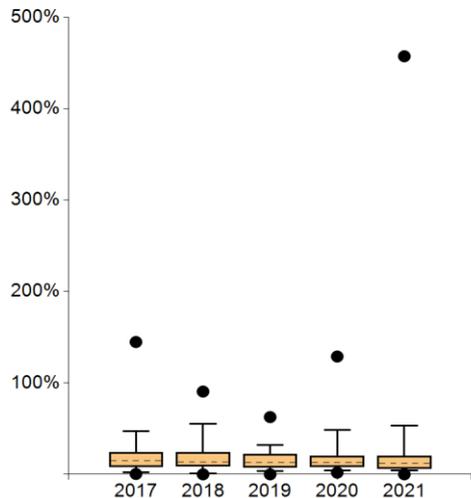
** Percentage of total patients treated in centres according to the numerator.

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

6. Patients enrolled in a study



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients enrolled in a study	40*	0 - 983	5213
Denominator	Primary cases (= indicator 1a)	286*	183 - 1064	24563
Rate	Target value ≥ 5%	12.12%	0.00% - 457.21%	21.22%**



	2017	2018	2019	2020	2021
● Max	144.71%	90.54%	62.62%	128.86%	457.21%
95 th percentile	47.10%	54.85%	31.71%	48.45%	53.49%
75 th percentile	24.05%	24.22%	22.32%	20.32%	20.19%
Median	15.08%	13.57%	12.67%	12.83%	12.12%
25 th percentile	8.06%	8.65%	7.74%	8.38%	6.30%
5 th percentile	2.48%	0.64%	3.43%	4.48%	4.33%
● Min	0.40%	0.00%	0.00%	1.87%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	62	89.86%

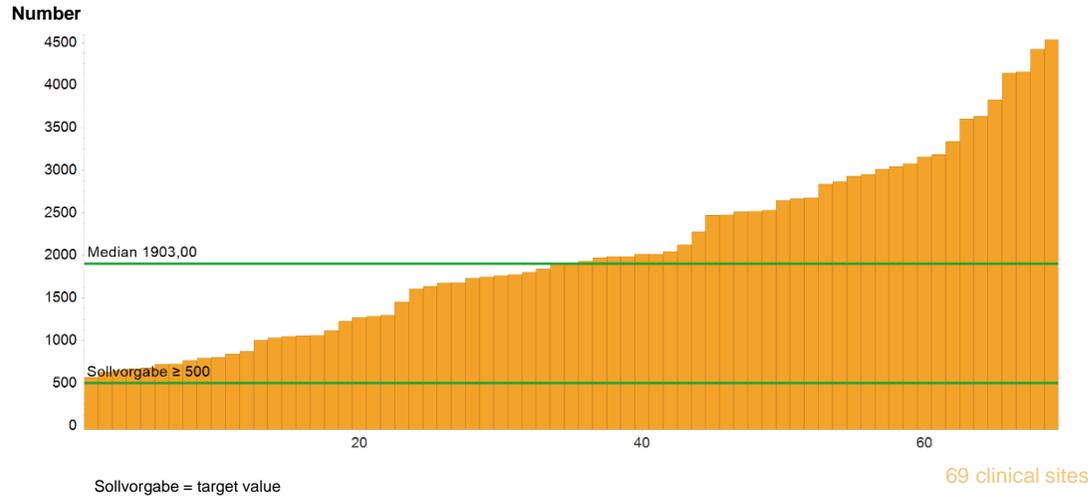
Comments:

The proportion of patients enrolled in studies is at the same level as in previous years. The increase in the overall rate (previous year 18.8%) is due to the disproportionate study recruitment of a single centre. 7 centres did not meet the study quota of 5% and indicated difficulties in the acquisition of studies (non-consideration by organisers), the recruitment of patients (socio-cultural background of the patient collective), but also structural problems in the study office. Furthermore, patients were not included in the indicator due to withdrawal of study consent, screening failure and death.

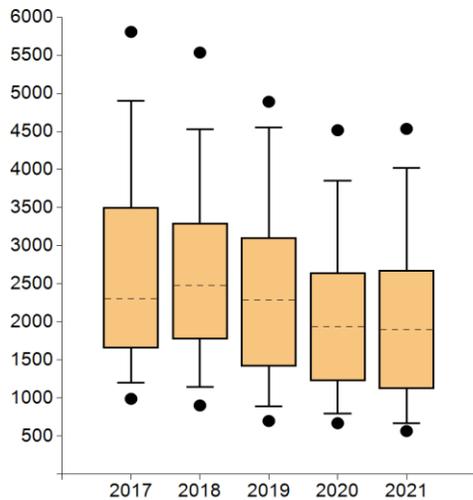
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

7. Flexible bronchoscopy



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Number	Flexible bronchoscopies for each service provider	1903	568 - 4534	140259
	Target value ≥ 500			



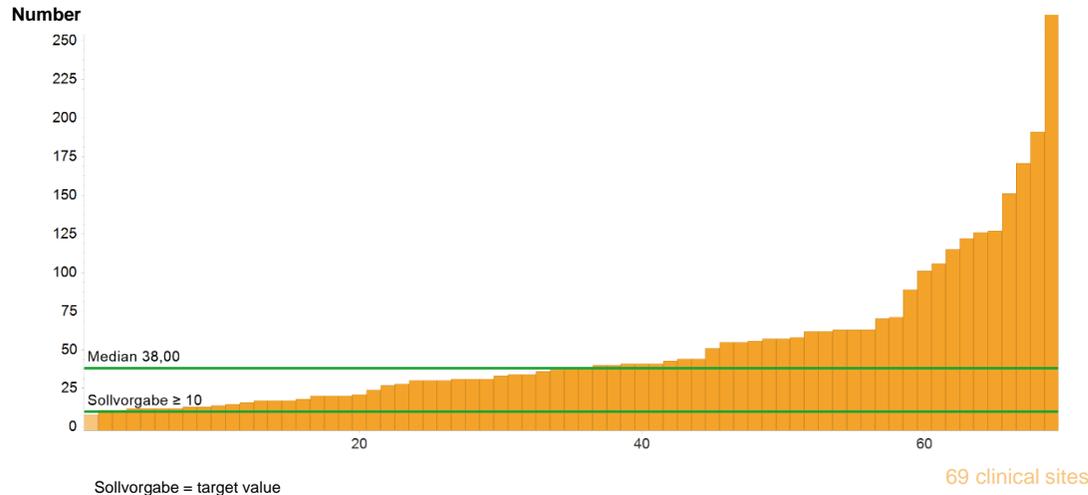
	2017	2018	2019	2020	2021
● Max	5807,00	5535,00	4890,00	4516,00	4534,00
95 th percentile	4900,95	4530,60	4551,10	3856,35	4016,20
75 th percentile	3507,25	3300,00	3108,00	2647,50	2678,00
Median	2301,50	2482,00	2292,00	1937,00	1903,00
25 th percentile	1652,50	1775,50	1414,25	1222,50	1121,00
5 th percentile	1199,75	1148,00	892,15	797,55	670,00
● Min	991,00	904,00	700,00	671,00	568,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	69	100.00%

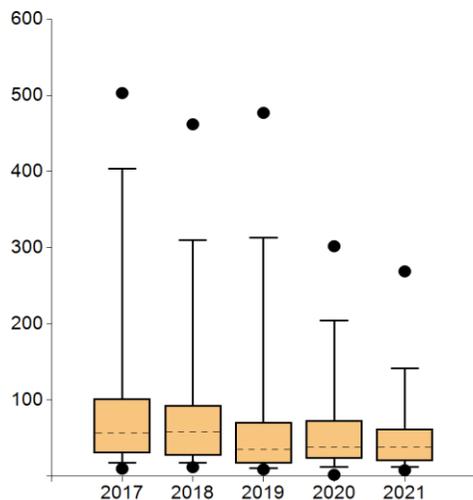
Comments:

After a steady decline in the number of examinations in recent years, the number of flexible bronchoscopies in the indicator year 2021 is in the range of the previous year. All centres performed at least 500 examinations and therefore meet the target value.

8. Interventional bronchoscopic procedures for tumour occlusion or stenosis



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Number	Interventional bronchoscopic procedures for tumour occlusion or stenosis (thermal procedures and stent placement) per provider (OPS: 5-319.14, 5-319.15, 5-320.0)	38	8 - 269	3556
	Target value ≥ 10			



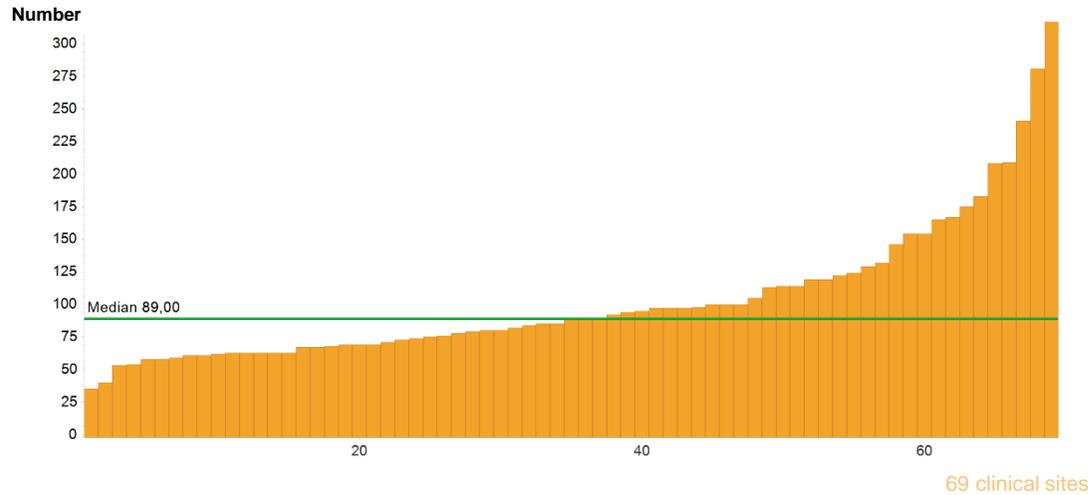
	2017	2018	2019	2020	2021
● Max	503,00	462,00	477,00	302,00	269,00
95 th percentile	403,30	309,90	313,25	203,95	141,40
75 th percentile	101,50	93,00	71,25	73,00	62,00
Median	56,50	58,00	35,00	38,50	38,00
25 th percentile	30,75	27,00	17,00	23,00	20,00
5 th percentile	18,00	17,70	10,95	12,15	12,00
● Min	10,00	12,00	9,00	2,00	8,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	67	97.10%

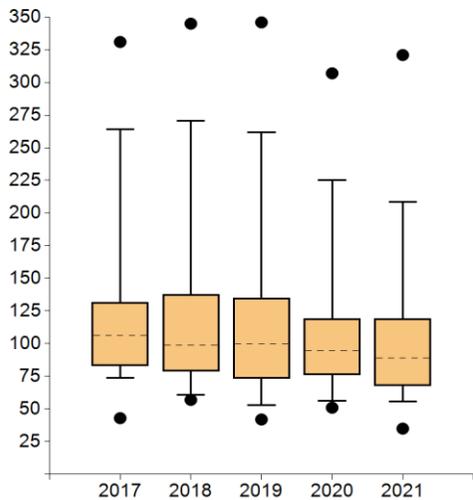
Comments:

The number of bronchoscopic interventions has decreased by 30% in recent years. This trend extends across the entire range of the indicator. 2 clinical sites (previous year 3) did not meet the minimum number of interventional bronchoscopies. 1 centre justified this with the increasing improvement of (radio-oncological) therapies. A second, multi-site centre performs these interventions centrally at one site and meets the minimum quantity across all clinical sites.

9a. Lung resections – surgical primary cases



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Number	Surgical primary cases with anatomical lung resection (OPS: 5-323 to 5-328, 6-digit, ICD-10 C34 only)	89	35 - 321	7120
	No target value			



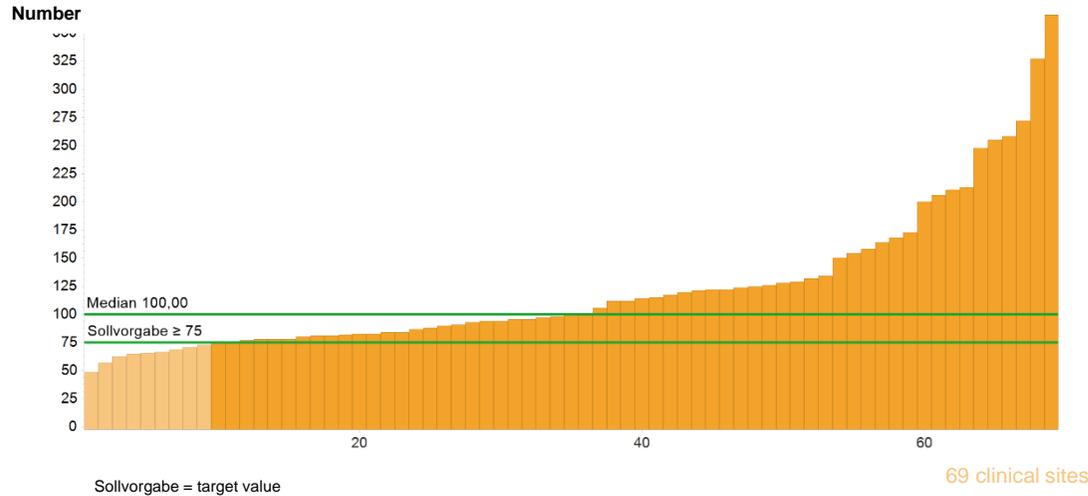
	2017	2018	2019	2020	2021
● Max	331,00	345,00	346,00	307,00	321,00
95 th percentile	264,05	270,40	262,00	225,05	208,60
75 th percentile	131,50	137,50	134,75	119,25	119,00
Median	106,00	99,00	99,50	94,50	89,00
25 th percentile	83,25	79,00	73,50	76,00	68,00
5 th percentile	73,90	61,00	52,90	56,30	55,60
● Min	43,00	57,00	42,00	51,00	35,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	-----	-----

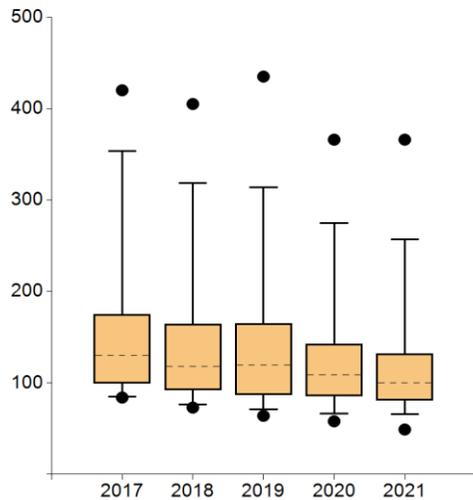
Comments:

The proportion of patients with an initial diagnosis and anatomical resection has been decreasing for years in favour of non-surgical primary cases and is due, among other things, to the increasing proportion of stage IV patients (currently 47.8%). For 2021, there are lower resection rates across the entire range. The decline in the number of primary surgical cases in the two Corona years is also in line with the data from the Federal Statistical Office, which shows a 4% decline in operations for both years. Almost 60% of all anatomical resections for lung cancer in Germany are performed by Lung Cancer Centres.

9b. Lung resections – surgical expertise



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Number	Operative expertise - number of anatomical resections (OPS: 5-323 to 5-328, for each ICD-10 C diagnosis, incl. ICD-10 C34)	100	49 - 366	8507
	Target value ≥ 75			



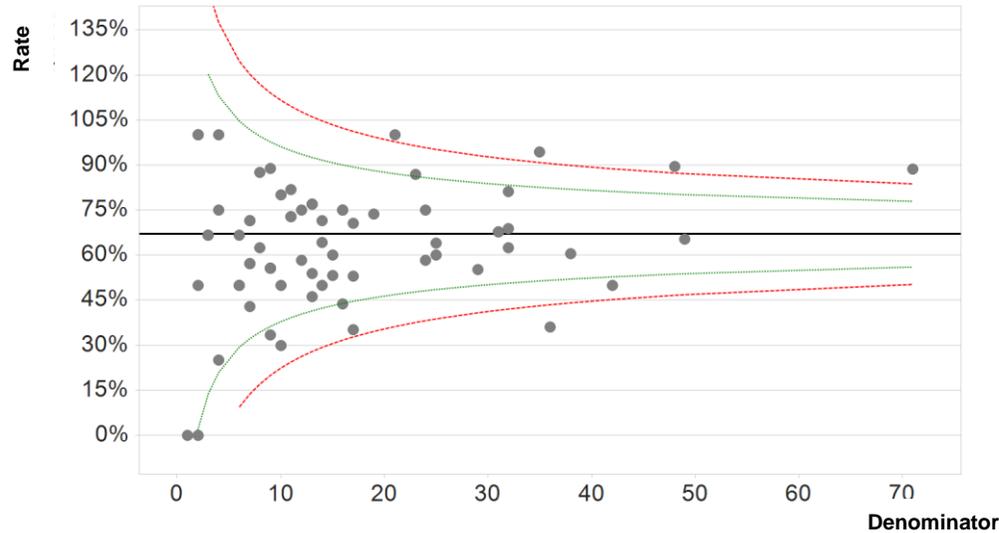
	2017	2018	2019	2020	2021
● Max	420,00	405,00	435,00	366,00	366,00
95 th percentile	353,80	318,20	313,80	274,85	256,80
75 th percentile	174,75	164,00	165,00	142,50	132,00
Median	130,00	118,00	119,50	108,50	100,00
25 th percentile	99,25	92,00	87,00	85,25	81,00
5 th percentile	85,00	76,10	70,75	66,15	65,40
● Min	84,00	73,00	64,00	58,00	49,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	60	86.96%

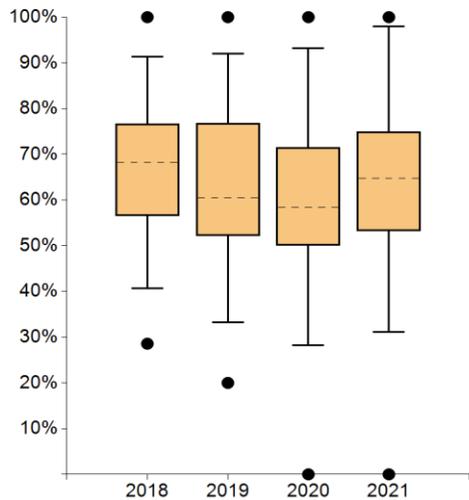
Comments:

The number of anatomical resections for any C-diagnosis has decreased in comparison to previous years, corresponding to indicator 9a. Here, too, the trend extends across the entire range. 9 centres fell short of the minimum quantity in the current indicator year: Of these, 7 centres met the required resection numbers in the 3-year average (3 centres under the special pandemic regulations excluding the first corona year). In two centres, falling below the minimum quantity in the surveillance audit had no influence on the certificate.

10. Ratio of broncho-/angioplastic surgeries to pneumonectomies



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with broncho-/angioplastic surgeries	8*	0 - 63	749
Denominator	Primary cases with pneumonectomies and primary cases with broncho-/angioplastic surgeries	13*	1 - 71	1118
Rate	Mandatory statement of reasons*** <50	64.80%	0.00% - 100%	66.99%**



	2017	2018	2019	2020	2021
● Max	----	100%	100%	100%	100%
95 th percentile	----	91.30%	92.00%	93.13%	98.00%
75 th percentile	----	76.70%	76.76%	71.43%	75.00%
Median	----	68.18%	60.56%	58.44%	64.80%
25 th percentile	----	56.57%	52.17%	50.00%	53.23%
5 th percentile	----	40.73%	33.20%	28.18%	31.17%
● Min	----	28.57%	20.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
68	98.55%	58	85.29%

Comments:

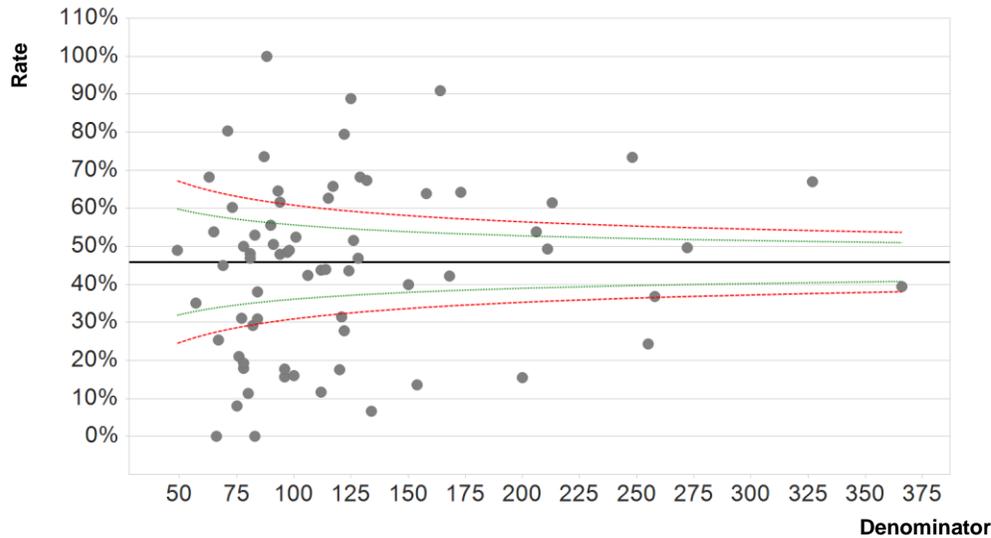
The ratio of plastic surgeries to pneumonectomies developed positively in favour of sleeve resections in the indicator year. In 10 centres (previous year 13) the number of pneumonectomies exceeded that of plastic resections. These centres justified the indication for pneumonectomy with (central) tumour localisation/size, long-range infiltration of the main stem bronchus, tumour detection in the sleeve and the necessity of rescue interventions (salvage pneumonectomies). 3 centres did not perform plastic surgery in the indicator year; in one centre, no pneumonectomy was performed in the same period.

* 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.

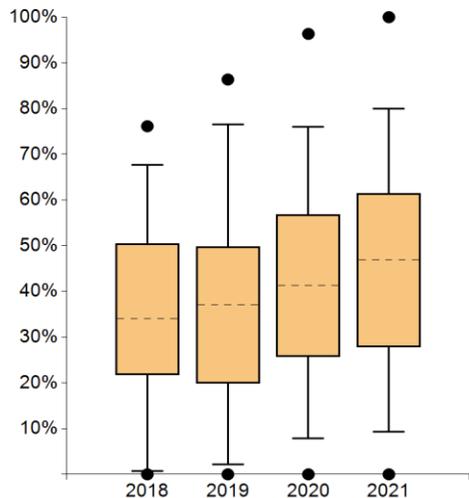
** Percentage of total patients treated in centres according to the numerator.

*** 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 2021		
		Median	Range	Patients Total
Numerator	Surgeries of the denominator that were performed (Video-) thoracoscopically (VATS) and robot-assisted (RATS)	46*	0 - 219	3903
Denominator	Operative expertise - number of anatomical resections (OPS: 5-323 to 5-328 for any ICD-10 C diagnosis, incl. ICD-10 C34)	100*	49 - 366	8507
Rate	No target value	46.91%	0.00% - 100%	45.88%**



	2017	2018	2019	2020	2021
● Max	----	76.14%	86.36%	96.34%	100%
95 th percentile	----	67.72%	76.56%	75.99%	79.97%
75 th percentile	----	50.41%	49.86%	56.85%	61.50%
Median	----	34.01%	37.14%	41.36%	46.91%
25 th percentile	----	21.72%	19.85%	25.68%	27.87%
5 th percentile	----	0.66%	2.22%	7.90%	9.30%
● Min	----	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	----	----

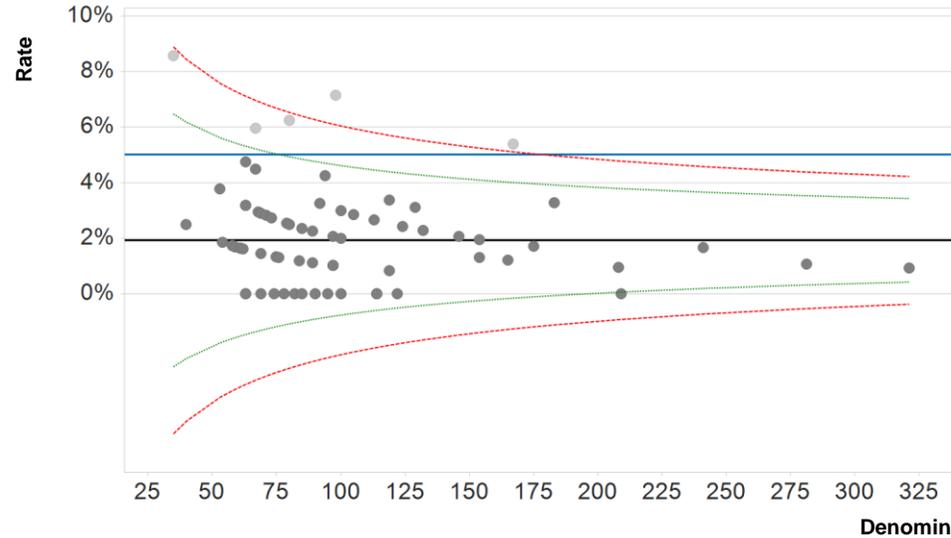
Comments:

The development towards minimally invasive surgery continued in the centres in the indicator year and is reflected in the total range of indicators and the overall rate (previous year 42.2%). As in the previous year, two centres did not perform any anatomical resections for malignancies using minimally invasive surgery (VATS/RATS).

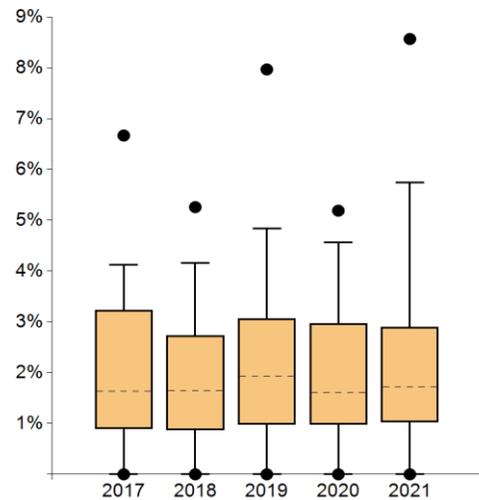
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

12. 30d Lethality after anatomical lung resection



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary denominator cases who died post-operatively within 30d	2*	0 - 9	137
Denominator	Surgical primary cases for each department (= Indicator 9a)	89*	35 - 321	7120
Rate	Target value ≤ 5%	1.72%	0.00% - 8.57%	1.92%**



	2017	2018	2019	2020	2021
● Max	6,67%	5,26%	7,97%	5,19%	8,57%
95 th percentile	4,13%	4,16%	4,84%	4,57%	5,74%
75 th percentile	3,23%	2,74%	3,07%	2,98%	2,90%
Median	1,64%	1,65%	1,94%	1,62%	1,72%
25 th percentile	0,89%	0,87%	0,98%	0,98%	1,03%
5 th percentile	0,00%	0,00%	0,00%	0,00%	0,00%
● Min	0,00%	0,00%	0,00%	0,00%	0,00%

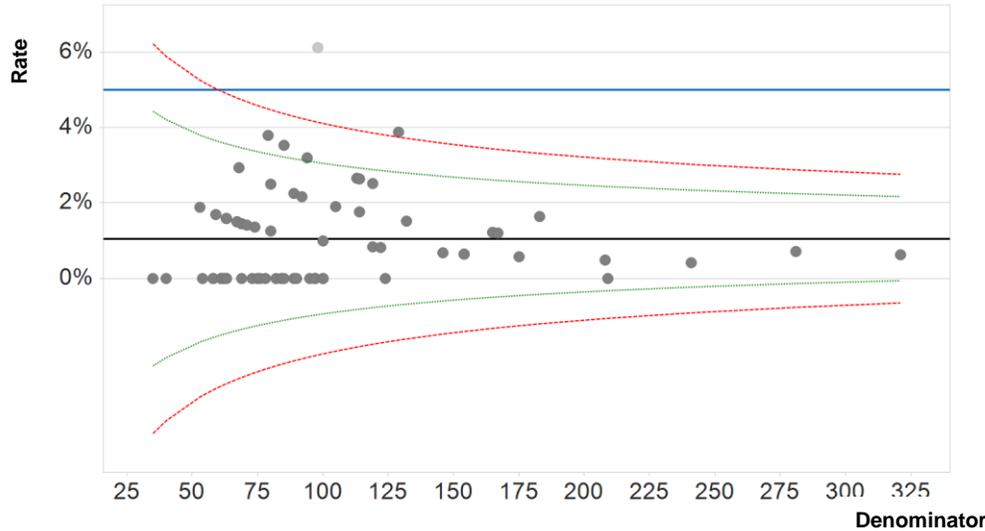
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	64	92.75%

Comments:

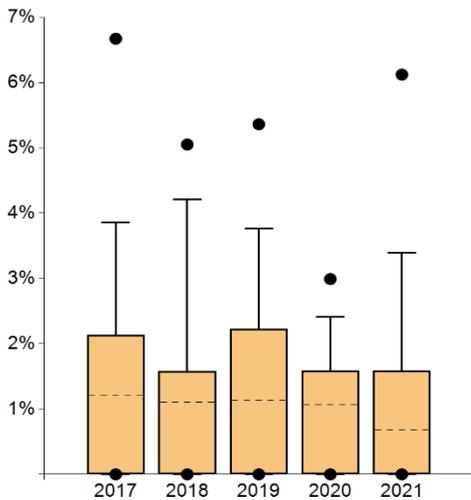
The 30d lethality has shown only minimal fluctuations for years and has remained constant between 1.6% and 1.9% (median) and 1.7% and 2.1% (overall rate) since the indicator year 2017. The 5 centres with a rate > 5% reviewed the individual cases and identified cardiovascular events, covid and pneumonia/ lung failure as the cause of death. In addition, emergency or rescue interventions were referred to. The examination of the cases in the audit did not reveal any remarks for systematic errors in the audits.

* 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/anastomotic leakages



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with post-operative bronchial stump/anastomotic leakages	1*	0 - 6	75
Denominator	Surgical primary cases for each department (= indicator 9a)	89*	35 - 321	7120
Rate	Target value ≤ 5%	0.68%	0.00% - 6.12%	1.05%**



	2017	2018	2019	2020	2021
● Max	6.67%	5.05%	5.36%	2.99%	6.12%
95 th percentile	3.86%	4.21%	3.76%	2.41%	3.39%
75 th percentile	2.14%	1.58%	2.23%	1.59%	1.59%
Median	1.21%	1.11%	1.13%	1.07%	0.68%
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%
● Max	0.00%	0.00%	0.00%	0.00%	0.00%

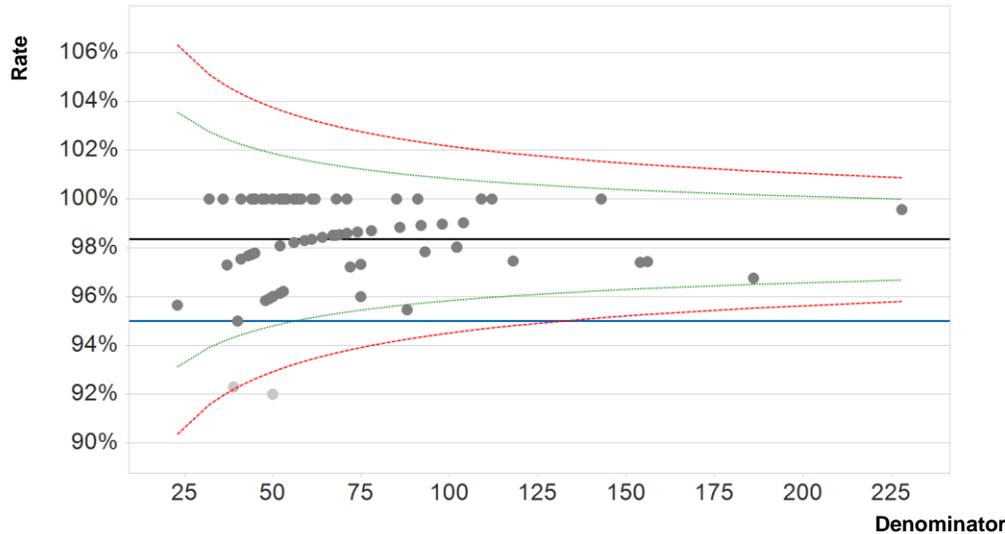
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	68	98.55%

Comments:

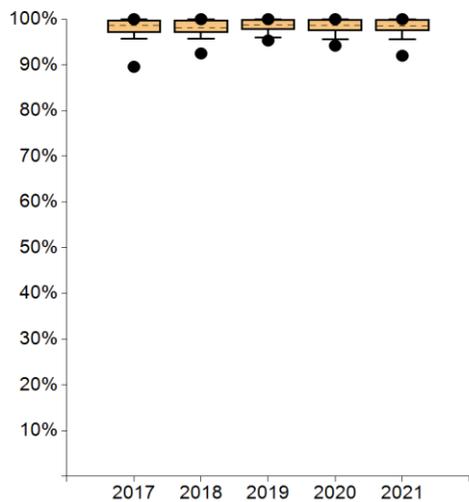
With an unchanged overall rate, the median insufficiency rate is below 1% for the first time. 28 centres (previous year 22) recorded no insufficiency in primary surgical cases. The centre with an insufficiency rate of 6% explained the increased rate with a high proportion of resections in the palliative treatment concept and patients with multiple pre-existing conditions.

* 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with local R0 resections after conclusion of surgical therapy	58*	22 - 227	4812
Denominator	Surgical primary cases with anatomical lung resection in stage IA/B and IIA/B	59*	23 - 228	4893
Rate	Target value ≥ 95%	98.51%	92.00% - 100%	98.34%**



	2017	2018	2019	2020	2021
● Max	100%	100%	100%	100%	100%
95 th percentile	100%	100%	100%	100%	100%
75 th percentile	99.83%	99.77%	100%	100%	100%
Median	98.60%	98.04%	98.78%	98.65%	98.51%
25 th percentile	96.98%	97.01%	97.70%	97.43%	97.40%
5 th percentile	95.77%	95.75%	95.99%	95.62%	95.53%
● Min	89.58%	92.50%	95.33%	94.20%	92.00%

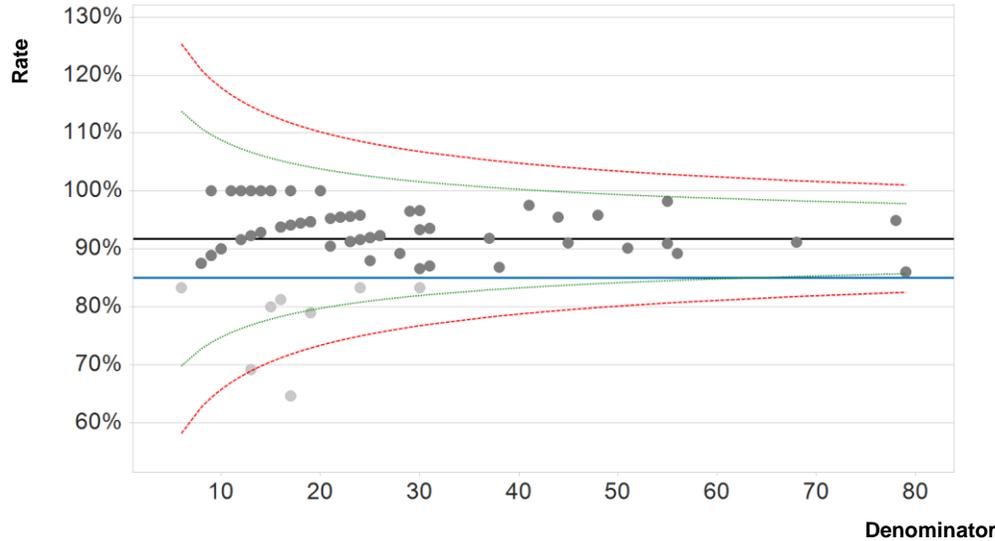
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	67	97.10%

Comments:

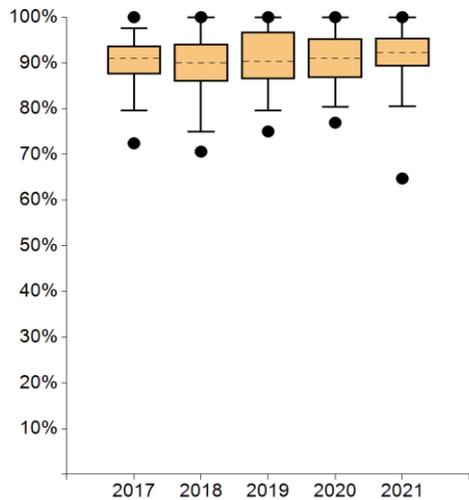
The R0 resection rate in stages I and II has been consistently high for years. Both, the median and the overall rate are > 98%. As in the previous year, 2 centres did not meet the target value. These centres stated that a necessary pneumonectomy was not performed due to insufficient functional reserves or age-related risk. Other reasons were synchronous second or third cancers and the rejection of a second operation/redo-resection.

* 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with local R0 resections after completion of surgical treatment	20*	5 - 74	1622
Denominator	Operated primary cases with stage IIIA/B	22*	6 - 79	1767
Rate	Target value $\geq 85\%$	92,31%	64,71% - 100%	91,79%**



	2017	2018	2019	2020	2021
● Max	100%	100%	100%	100%	100%
95 th percentile	97,58%	100%	100%	100%	100%
75 th percentile	93,70%	94,12%	96,72%	95,29%	95,45%
Median	90,91%	90,00%	90,34%	90,91%	92,31%
25 th percentile	87,50%	85,96%	86,46%	86,72%	89,29%
5 th percentile	79,53%	75,00%	79,54%	80,32%	80,50%
● Min	72,41%	70,59%	75,00%	76,92%	64,71%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	61	88.41%

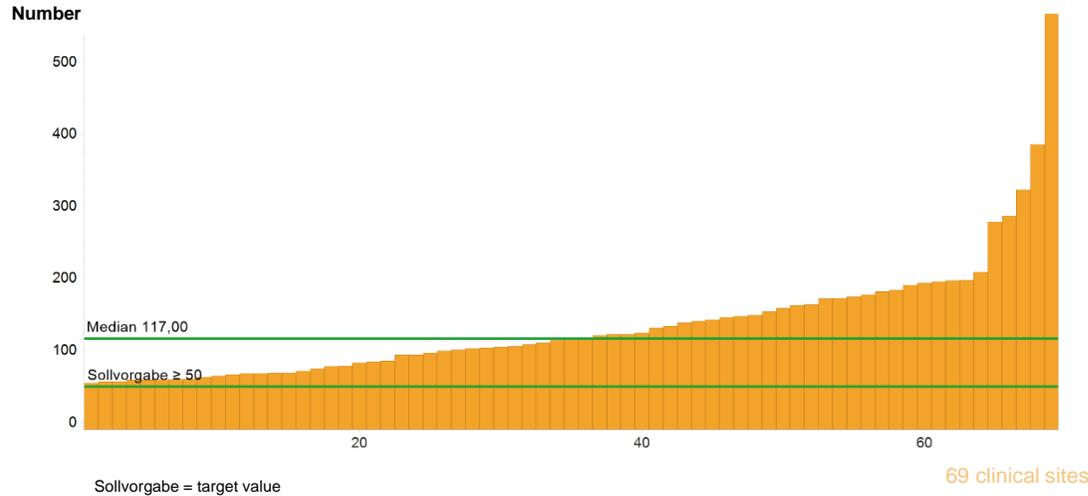
Comments:

The median and overall rates have risen decently compared to previous years. Of the 9 centres that had an indicator below the target value in the previous year, 7 were able to increase their resection rate and currently meet the target value. The 8 centres with R0 resection rates <85% related, among other things, to rescue operations / palliative concept, impossibility of subsequent resection in the case of insufficient functional reserve and perineural/bronchial tumour detection with inconspicuous frozen section. The individual case analyses in the audits revealed no evidence of systematic errors.

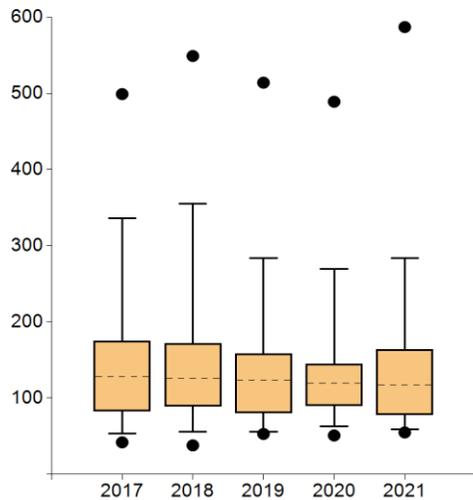
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

16. Thoracic radiotherapy



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Number	Thoracic radiotherapy (not just referring to primary cases)	117	55 - 587	9342
	Target value ≥ 50			



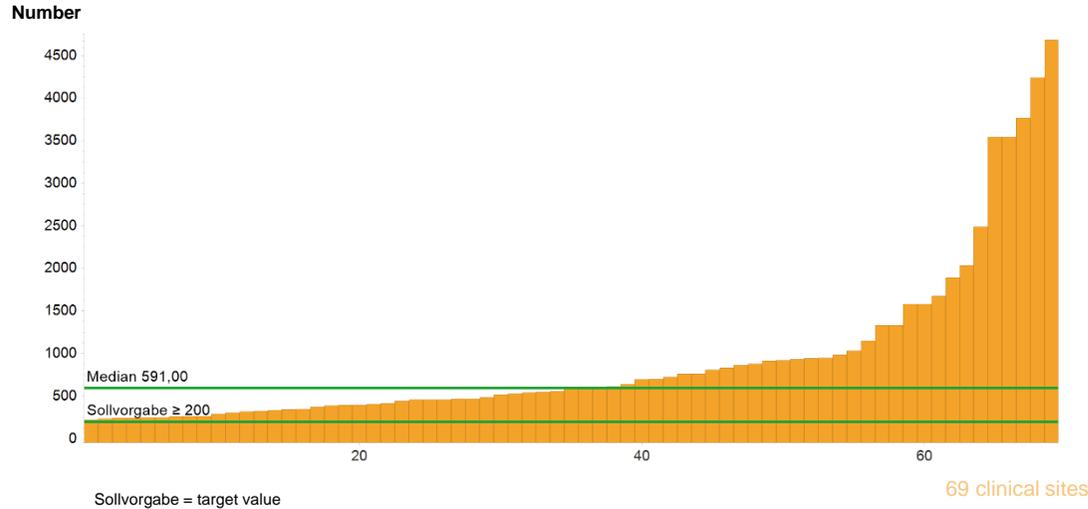
	2017	2018	2019	2020	2021
● Max	499,00	549,00	514,00	489,00	587,00
95 th percentile	335,70	354,80	283,90	269,60	283,80
75 th percentile	175,25	171,50	158,00	145,00	164,00
Median	128,00	126,00	123,50	119,50	117,00
25 th percentile	83,00	89,50	80,75	90,00	78,00
5 th percentile	53,70	56,10	55,90	63,00	59,00
● Min	42,00	38,00	53,00	51,00	55,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	63	91.30%

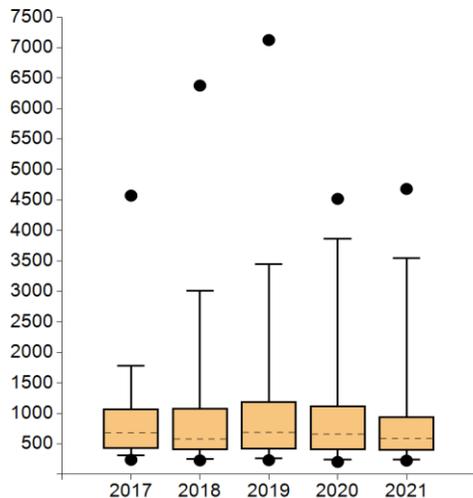
Comments:

After a convergent development in previous years, the current indicators again show a significantly wider range. All centres carried out a total of at least 55 radiation treatments. In 6 centres, <50 patients underwent thoracic irradiation at individual cooperation partners, partly due to the suspension of practice operations after the flood disaster. 1 radiooncology centre will be transferred into a network of radio-oncological institutes in future, for which special rules apply. Currently, in 3 other centres there are network structures with at least 1 site with <50 irradiations; in 2 of these centres the second site fulfils the target value, in one centre the target value is achieved in total.

17. Histopathological examination



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Number	Assessed malignant lung cases	591	225 - 4682	64370
	Target value ≥ 200			



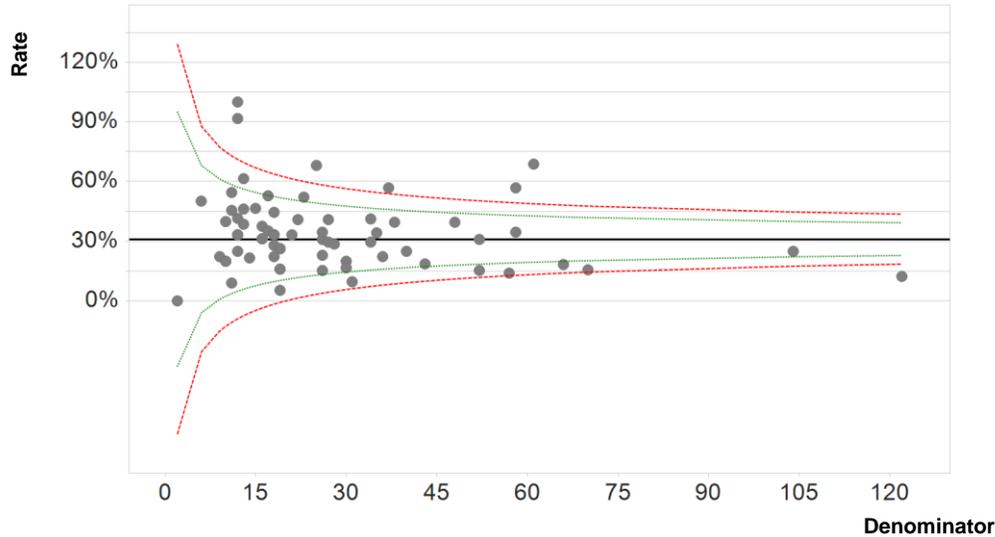
	2017	2018	2019	2020	2021
● Max	4572,00	6377,00	7124,00	4519,00	4682,00
95 th percentile	1781,10	3005,50	3443,45	3866,00	3542,00
75 th percentile	1074,50	1081,00	1191,50	1126,50	943,00
Median	678,50	583,00	684,00	654,00	591,00
25 th percentile	423,25	400,00	411,25	403,25	388,00
5 th percentile	313,75	254,00	256,70	239,75	244,80
● Min	238,00	229,00	232,00	204,00	225,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	69	100.00%

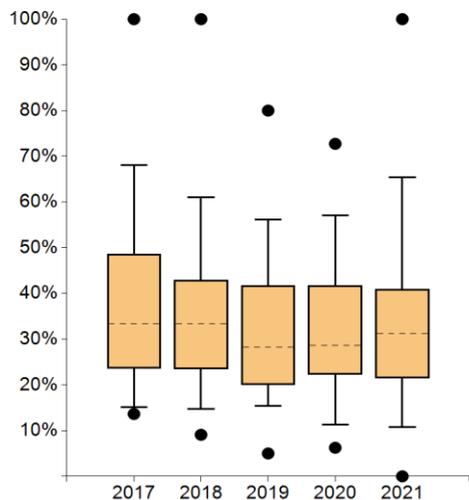
Comments:

The number of pathological examinations has further decreased, corresponding to the lower number of primary cases. All centres meet the target value of at least 200 examinations.

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



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with cisplatin-containing chemotherapy	6*	0 - 42	596
Denominator	R0- and LN-resected primary cases with anatomical lung resection stage II-III A1/2, with ECOG 0/1	19*	2 - 122	1919
Rate	Mandatory statement of reasons*** <15% and >70%	31.25%	0.00% - 100%	31.06%**



	2017	2018	2019	2020	2021
● Max	100%	100%	80,00%	72.73%	100%
● 95 th percentile	67.99%	60.99%	56.13%	57.06%	65.42%
● 75 th percentile	48.67%	42.86%	41.67%	41.67%	40.91%
● Median	33.33%	33.33%	28.18%	28.57%	31.25%
● 25 th percentile	23.57%	23.45%	20.00%	22.22%	21.43%
● 5 th percentile	15.07%	14.79%	15.35%	11.25%	10.73%
● Min	13.64%	9.09%	5.00%	6.25%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
69	100.00%	61	88.41%

Comments:

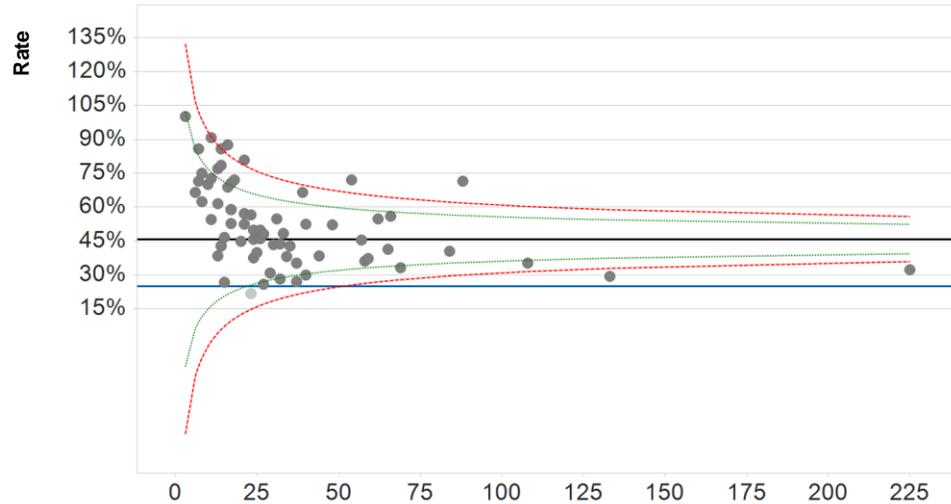
The GL-QI for adjuvant chemotherapy has been implemented by the centres at a stable level for years. With a constant overall rate, the median has increased in the current indicator year. In 6 centres (previous year 6), ≤15% of the denominator's primary cases received a cisplatin-containing adjuvant. These centres justified this with neoadjuvant pre-treatment, other therapy concepts (TKI, immunotherapy) and patient's death before therapy initiation. Two centres stated that they preferred a carboplatin-based therapy due to the lower side effect profile.

* 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.

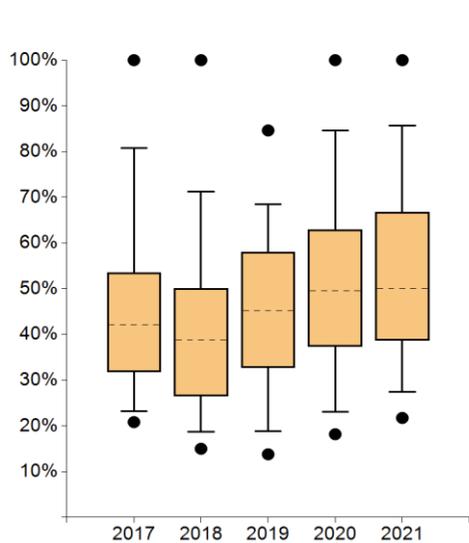
** Percentage of total patients treated in centres according to the numerator.

*** 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with combination radio-chemotherapy	12*	3 - 73	1081
Denominator	NSCLC primary cases stage IIIA4/IIIB/IIIC, with ECOG 0/1	24*	3 - 225	2353
Rate	Target value \geq 25%	50.00%	21.74% - 100%	45.94%**



	2017	2018	2019	2020	2021
● Max	100%	100%	84.62%	100%	100%
95 th percentile	80.74%	71.29%	68.44%	84.56%	85.71%
75 th percentile	53.55%	50.00%	57.97%	62.96%	66.67%
Median	42.08%	38.78%	45.14%	49.54%	50.00%
25 th percentile	31.77%	26.51%	32.76%	37.39%	38.64%
5 th percentile	23.22%	18.70%	18.82%	23.11%	27.47%
● Min	20.83%	15.00%	13.79%	18.18%	21.74%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
69	100.00%	68	98.55%

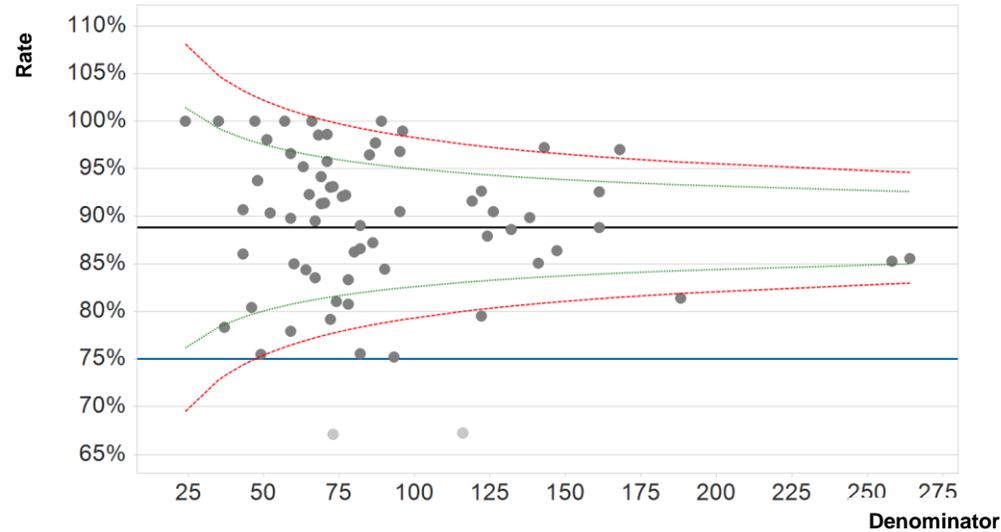
Comments:

The GL-QI for combined radiochemotherapy is at about the same level as in the previous year, with a slightly lower overall rate (previous year 47.7%). 68 centres met the target value. The centre with a rate of <25% referred to a high proportion of neoadjuvant therapy concepts, but also the increased initiation of immuno(chemo)therapies, as well as patients in reduced general health condition who were exclusively irradiated. The treatment concepts were checked for plausibility in the audit by the auditors.

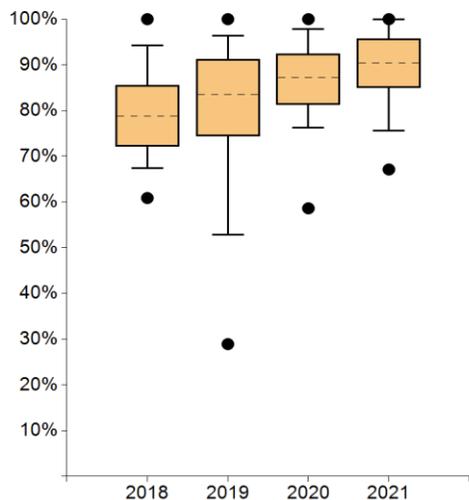
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

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

20. Molecular-pathological examination of patients NSCLC stage IV with adeno- or adenosquamous carcinoma (GL QI)



	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with examination of at least EGFR mutations in exons 18-21 and/or ALK fusions and/or ROS1 fusions and/or BRAF mutation	68*	24 - 226	5470
Denominator	Primary cases with adenocarcinoma or adenosquamous carcinoma of the lung stage IV	76*	24 - 264	6159
Rate	Target value $\geq 75\%$	90.48%	67.12% - 100%	88.81%**



	2017	2018	2019	2020	2021
● Max	----	100%	100%	100%	100%
95 th percentile	----	94.22%	96.32%	97.79%	100%
75 th percentile	----	85.48%	91.17%	92.34%	95.77%
Median	----	78.72%	83.59%	87.27%	90.48%
25 th percentile	----	72.22%	74.34%	81.34%	85.00%
5 th percentile	----	67.45%	52.79%	76.30%	75.55%
● Min	----	60.87%	28.92%	58.62%	67.12%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
69	100.00%	67	97.10%

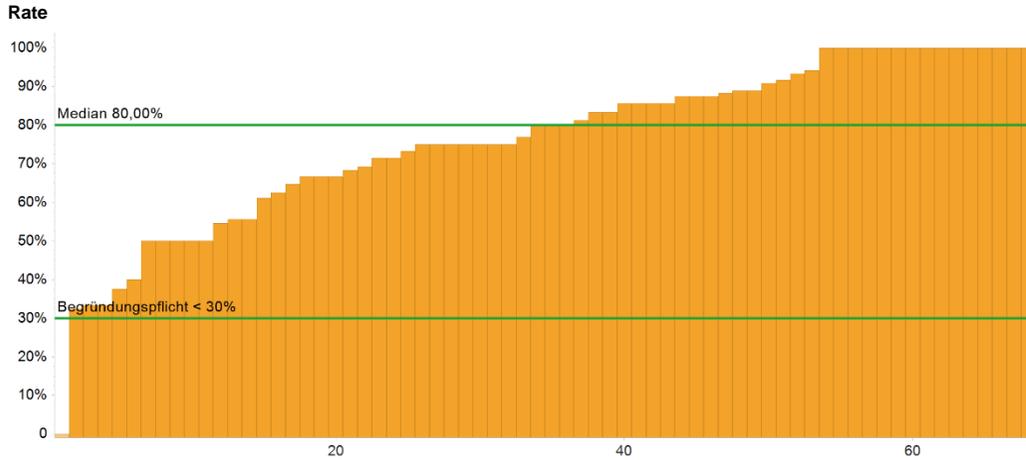
Comments:

The positive development of the GL-QI has continued over the entire range: Almost 89% (previous year 86.4%) of all primary cases of the denominator were examined by molecular pathology. 2 centres carried out the examination in <75% of cases due to lack of relevance in patients not eligible for treatment, palliative treatment concepts and patients who died early. One centre changed the registration process when molecular pathology examinations were ordered in a re-presentation that was often not noticed by the patient.

* 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.

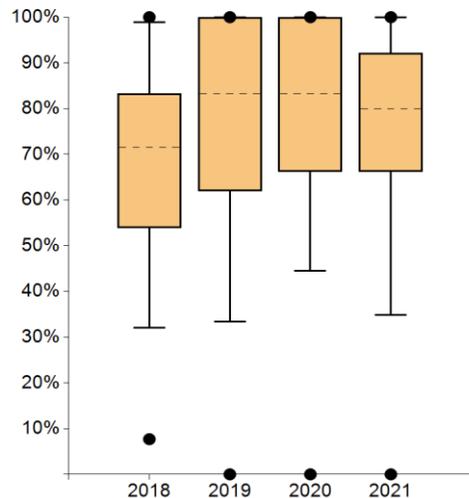
21. First-line therapy with EGFR-TKI in patients NSCLC stage IV with activating EGFR mutation and ECOG 0-2 (GL QI) Certification



Begründungspflicht = mandatory statement of reasons

68 clinical sites

	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with the start of a first-line therapy with EGFR-TKI	6*	0 - 27	503
Denominator	Primary cases with NSCLC stage IV, activating EGFR mutation and ECOG 0-2	8*	1 - 68	692
Rate	Mandatory statement of reasons*** <30%	80.00%	0.00% - 100%	72.69%**



	2017	2018	2019	2020	2021
● Max	----	100%	100%	100%	100%
95 th percentile	----	98.95%	100%	100%	100%
75 th percentile	----	83.33%	100%	100%	92.09%
Median	----	71.43%	83.33%	83.33%	80.00%
25 th percentile	----	53.85%	62.02%	66.25%	66.18%
5 th percentile	----	32.12%	33.33%	44.54%	34.79%
● Min	----	7.69%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
68	98,55%	67	98,53%

Comments:

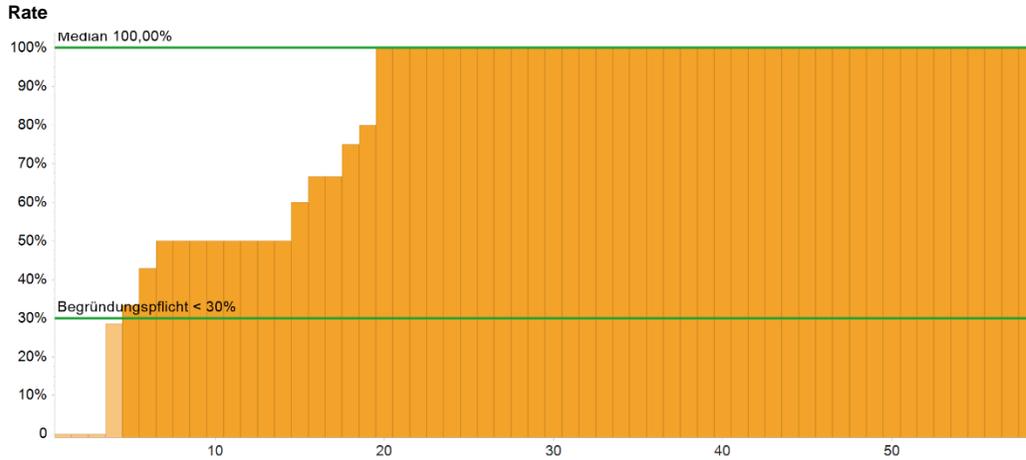
The rates for first-line therapy with EGFR TKIs are slightly below those of the two previous years. In 15 centres, all primary cases of the denominator received EGFR-specific TKI therapy as first-line. One centre (previous year: 2) is outside the plausibility corridor and has justified this in an individual case with the initiation of immunochemotherapy under 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.

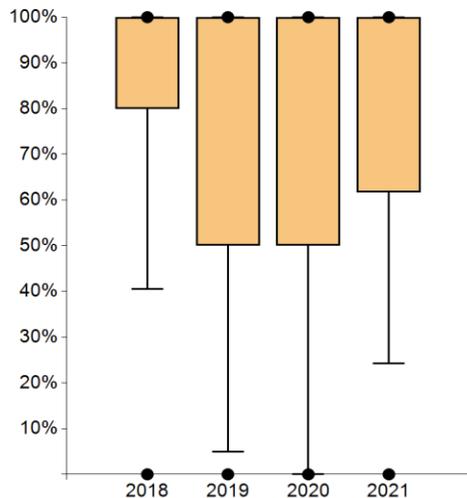
*** For values outside the plausibility limit(s), the centres are required to provide a justification.

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



58 clinical sites

Begründungspflicht = mandatory statement of reasons



	2017	2018	2019	2020	2021
● Max	----	100%	100%	100%	100%
95 th percentile	----	100%	100%	100%	100%
75 th percentile	----	100%	100%	100%	100%
Median	----	100%	100%	100%	100%
25 th percentile	----	80.00%	50.00%	50.00%	61.67%
5 th percentile	----	40.50%	5.00%	0.00%	24.28%
● Min	----	0.00%	0.00%	0.00%	0.00%

	Definition of indicator	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with start of ALK specific TKI therapy	2*	0 - 8	137
Denominator	Primary cases with NSCLC stage IV, ALK positive	2*	1 - 9	172
Rate	Mandatory statement of reasons*** <30	100%	0.00% - 100%	79.65%**

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
58	84.06%	54	93.10%

Comments:

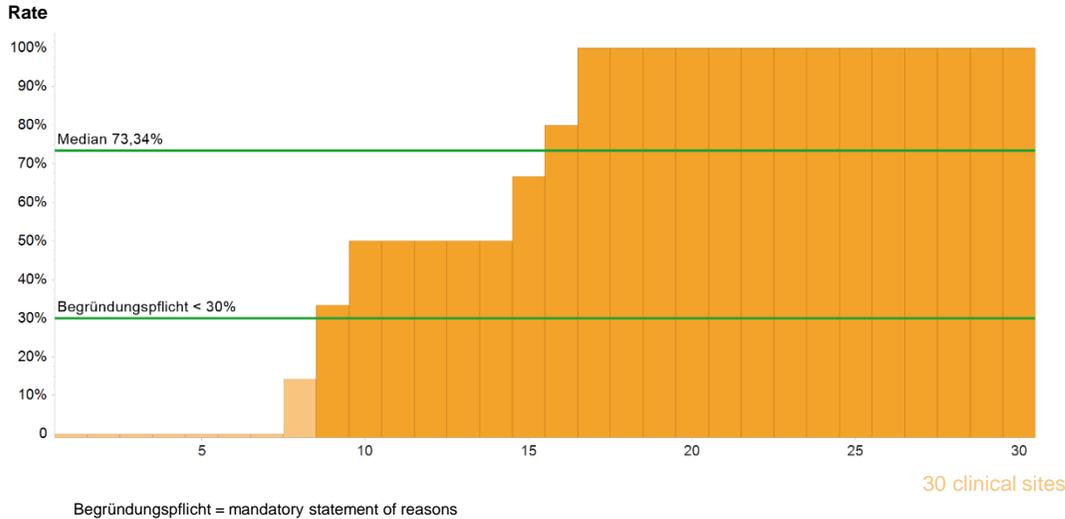
The implementation of the GL-QI is increasingly successful in the centres in the lower range and is reflected in higher rates from the 5th and 25th percentiles. In 58 centres (previous year 49) 172 ALK-positive primary cases (previous year 147) were treated at stage IV. 4 centres had rates <30% and justified this, among other things, with discrepant findings in IHC and NGS (3x), high treatment pressure (2x) and simultaneous second cancer. Two centres stated that they had not received any feedback on the therapy carried out in the case of external further treatment, resulting in low rates for indicators 22 and 23..

* 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.

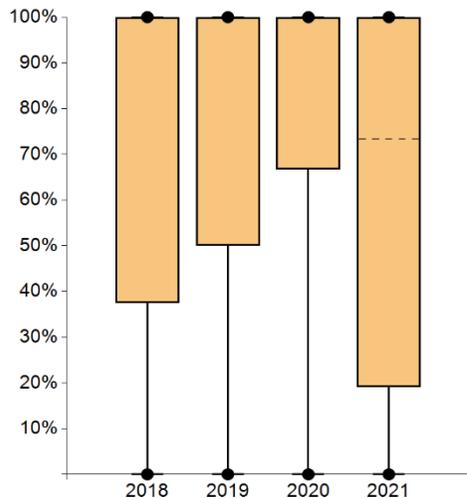
** Percentage of total patients treated in centres according to the numerator.

*** 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with start of ROS1-specific TKI therapy	1*	0 - 4	32
Denominator	Primary cases with NSCLC stage IV, ROS1- positive	2*	1 - 14	64
Rate	Mandatory statement of reasons*** <30	73.34%	0.00% - 100%	50.00%**



	2017	2018	2019	2020	2021
● Max	----	100%	100%	100%	100%
95 th percentile	----	100%	100%	100%	100%
75 th percentile	----	100%	100%	100%	100%
Median	----	100%	100%	100%	73.34%
25 th percentile	----	37.50%	50.00%	66.67%	19.05%
5 th percentile	----	0.00%	0.00%	0.00%	0.00%
● Min	----	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
30	43.48%	22	73.33%

Comments:

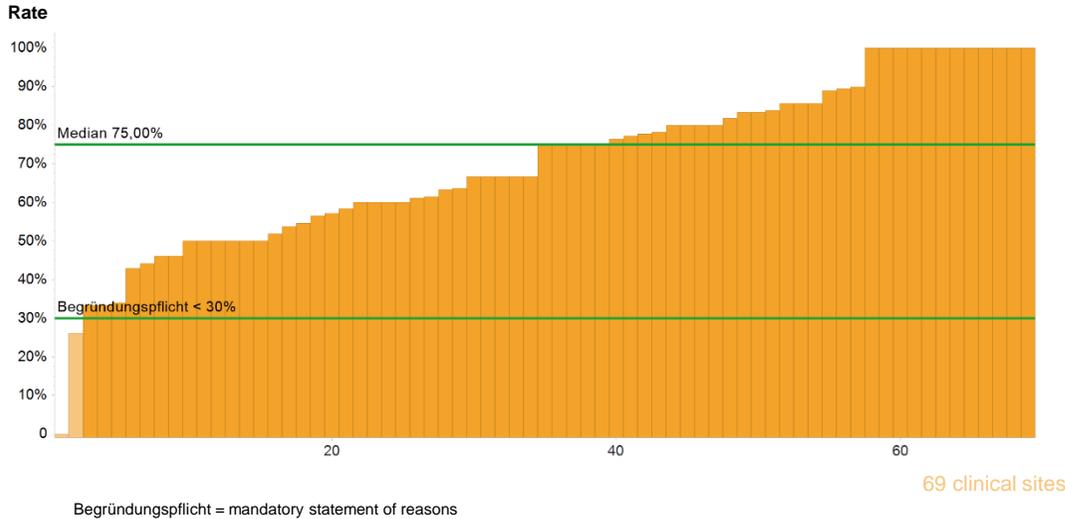
As in the previous year, a total of 64 primary cases with ROS1-positive NSCLC (stage IV) were treated in 2021: specific TKI therapy was started in 32 patients (previous year 43). The centres with a rate <30% justified the decision against TKI therapy with the patient's decision against any systemic therapy, early death of the patient or palliative treatment concept and the initiation of chemotherapy for simultaneous oesophageal carcinoma. Two centres did not perform ROS1-directed therapy in the case of ROS1 mutations of unknown significance.

* 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.

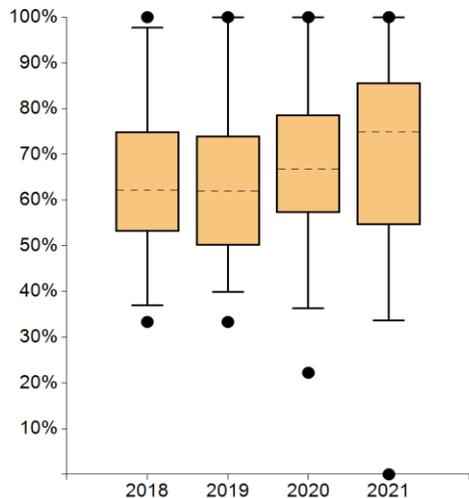
** Percentage of total patients treated in centres according to the numerator.

*** 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with radio-chemotherapy	6*	0 - 31	538
Denominator	Primary cases SCLC stage IIB [T3] - IIIC [TNM: cT1/2 N2-3 M0, cT3/4 N0-3 M0] and ECOG 0/1	9*	1 - 49	809
Rate	Mandatory statement of reasons*** <30%	75.00%	0.00% - 100%	66.50%**



	2017	2018	2019	2020	2021
● Max	----	100%	100%	100%	100%
95 th percentile	----	97.71%	100%	100%	100%
75 th percentile	----	75.00%	74.01%	78.71%	85.71%
Median	----	62.15%	62.02%	66.67%	75.00%
25 th percentile	----	53.13%	50.00%	57.14%	54.55%
5 th percentile	----	37.00%	39.92%	36.35%	33.61%
● Min	----	33.33%	33.33%	22.22%	0.00%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
69	100.00%	67	97.10%

Comments:

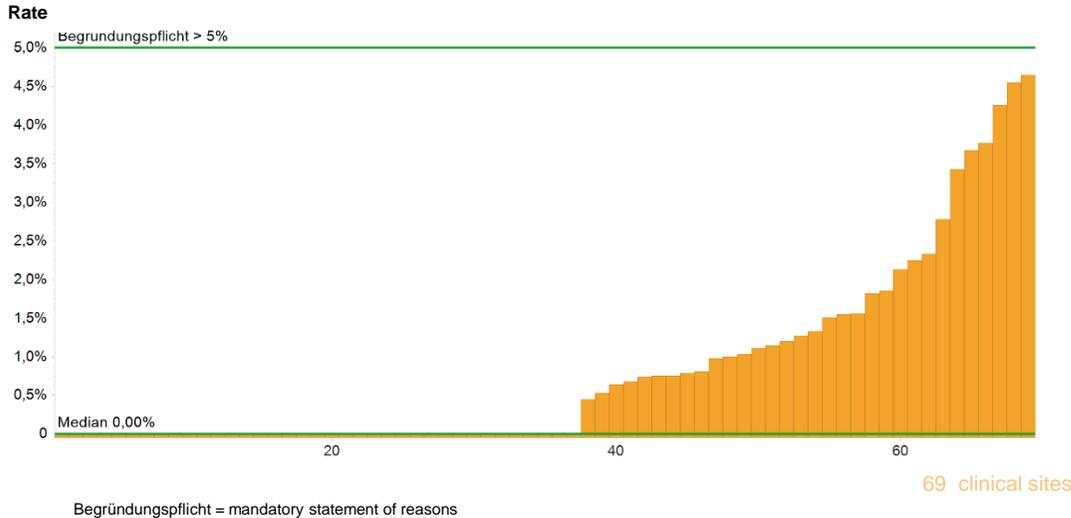
The improved implementation of the GL-QI is reflected in both an increased median and a higher overall rate (previous year: 64.9%). In 2 centres, <30% of primary cases with SCLC (limited disease) received combined radiochemotherapy due to reduced general condition, second malignancies, patient decision against radiotherapy and palliative treatment concept (BSC).

* 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.

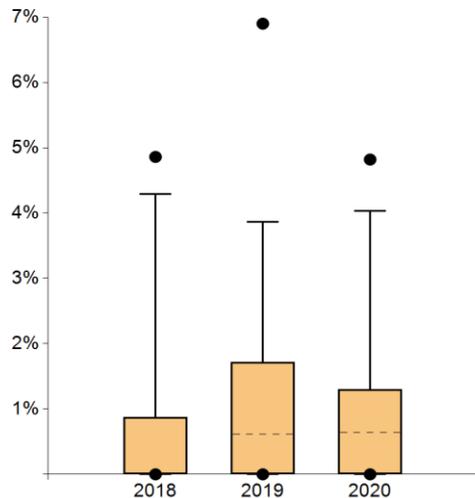
** Percentage of total patients treated in centres according to the numerator.

*** 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with CTCAE grade V on systemic therapy	0*	0 - 10	89
Denominator	Primary cases stage III or IV with systemic therapy	134*	52 - 480	10833
Rate	Mandatory statement of reasons*** >5%	0.00%	0.00% - 4.65%	0.82%**



	2017	2018	2019	2020	2021
● Max	----	4.86%	6.90%	4.82%	4.65%
95 th percentile	----	4.29%	3.86%	4.03%	3.73%
75 th percentile	----	0.87%	1.72%	1.30%	1.20%
Median	----	0.00%	0.62%	0.64%	0.00%
25 th percentile	----	0.00%	0.00%	0.00%	0.00%
5 th percentile	----	0.00%	0.00%	0.00%	0.00%
● Min	----	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
69	100.00%	69	100.00%

Comments:

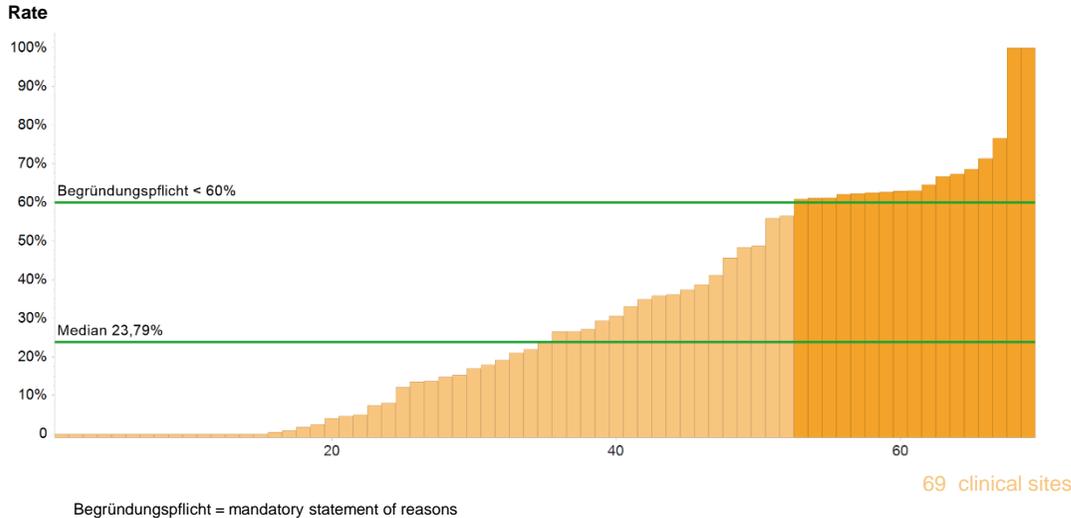
The side-effect-related mortality rate under systemic therapy continues to decline (overall rate 2020: 0.9%). As in the previous year, all centres are below the plausibility limit of 5%. In 37 centres (= 53.6%) no patient died due to SAEs (previous year 46.9%).

* 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.

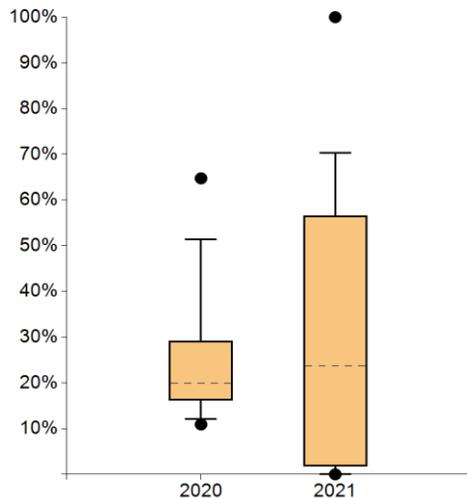
** Percentage of total patients treated in centres according to the numerator.

*** 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with symptom recording by MIDOS or IPOS	37*	0 - 319	3417
Denominator	Primary cases stage IV	149*	81 - 480	11734
Rate	Mandatory statement of reasons*** <60%	23.79%	0.00% - 100%	29.12%**



	2017	2018	2019	2020	2021
● Max	----	----	----	64.74%	100%
95 th percentile	----	----	----	51.37%	70.26%
75 th percentile	----	----	----	29.21%	56.48%
Median	----	----	----	19.83%	23.79%
25 th percentile	----	----	----	16.22%	1.80%
5 th percentile	----	----	----	12.08%	0.00%
● Min	----	----	----	10.91%	0.00%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
69	100.00%	17	24.64%

Comments:

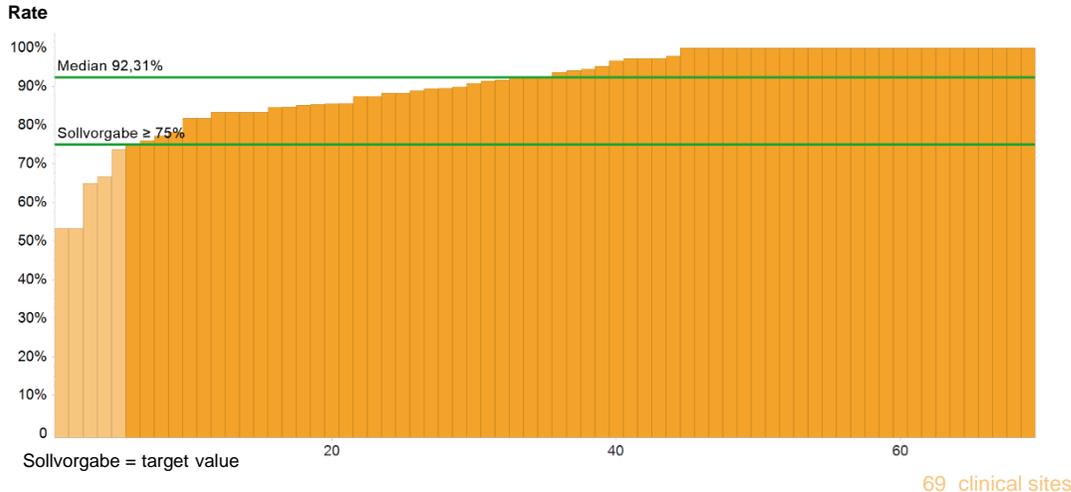
The implementation of the indicator for symptom recording by means of MIDOS / IPOS was decided in the meeting of the Certification Commission 2020, so that data were only available for 13 centres in the last Annual Report. The current report is based on results from 69 centres and shows a wide range. Since most centres have only carried out symptom recording with the required instruments in palliative units/ wards and are currently still establishing this across the board, only 17 centres are above the plausibility threshold.

* 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.

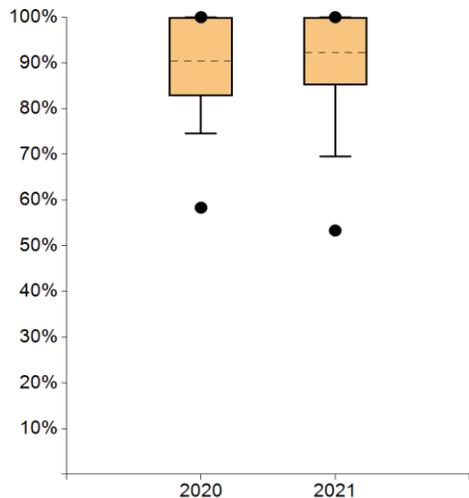
** Percentage of total patients treated in centres according to the numerator.

*** 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with PD-L1 testing before starting radio-chemotherapy	15*	5 - 71	1348
Denominator	Primary cases with NSCLC stage III with radio-chemotherapy	17*	5 - 83	1498
Rate	Target value $\geq 75\%$	92.31%	53.33% - 100%	89.99%**



	2017	2018	2019	2020	2021
● Max	----	----	----	100%	100%
95 th percentile	----	----	----	100%	100%
75 th percentile	----	----	----	100%	100%
Median	----	----	----	90.46%	92.31%
25 th percentile	----	----	----	82.69%	85.11%
5 th percentile	----	----	----	74.58%	69.47%
● Min	----	----	----	58.33%	53.33%

Clinical sites with evaluable data		Clinical sites within the plausibility corridor	
Number	%	Number	%
69	100.00%	64	92.75%

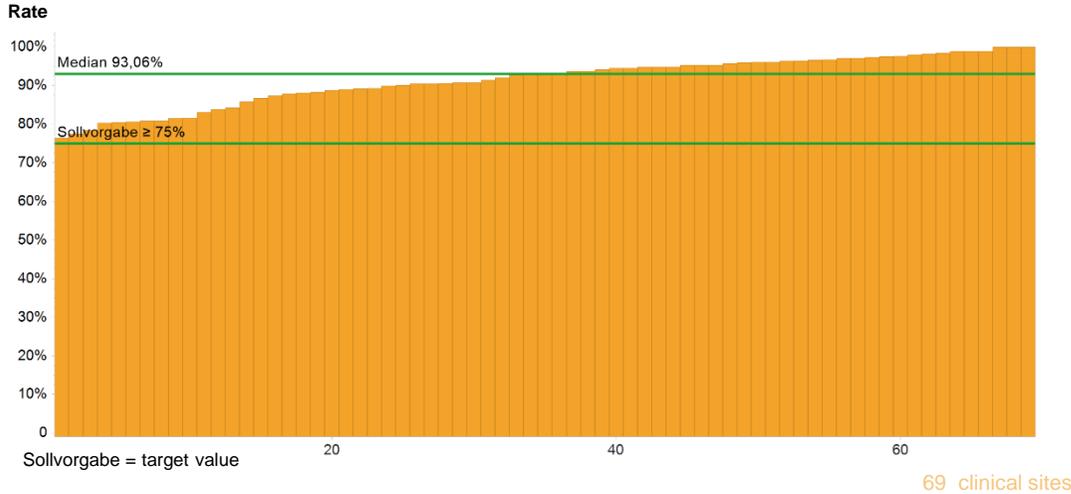
Comments:

The indicator for testing PD-L1 in primary stage III cases (RCTx) shows a positive trend. Both the overall rate (previous year 89.5%) and the median rate have increased. 5 centres carried out testing in <75% of cases before therapy initiation. The centres justified this in particular with high treatment pressure, initiation of RCTx with too little examination material and change of the therapy concept (initially RCTx in neoadjuvant intention). One centre referred to the approval of Durvalumab abroad, which is independent of the PD-L1 status.

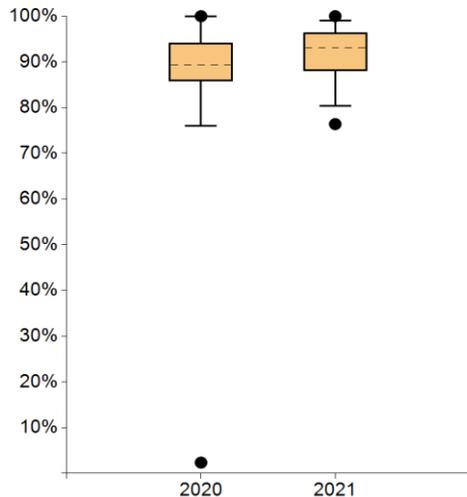
* The median for numerator and denominator does not refer to an existing centre, but reflects the median of all numerators of the cohort and the median of all denominators of the cohort.

** 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 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with PD-L1 testing	102*	30 - 337	8264
Denominator	Primary cases NSCLC stage IV	110*	34 - 385	9021
Rate	Target value $\geq 75\%$	93.06%	76.39% - 100%	91.61%**



	2017	2018	2019	2020	2021
● Max	----	----	----	100%	100%
95 th percentile	----	----	----	100%	98.95%
75 th percentile	----	----	----	94.12%	96.34%
Median	----	----	----	89.41%	93.06%
25 th percentile	----	----	----	85.74%	88.10%
5 th percentile	----	----	----	75.95%	80.39%
● Min	----	----	----	2.35%	76.39%

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

Comments:

After the recording of PD-L1 testing in primary cases (both in stage III (with radiochemotherapy, indicator 27) and in stage IV) was carried out on a voluntary basis in 2020 (38 centres), results are now available from all clinical sites. This shows a positive development compared to the previous year: both the median and the overall rate have increased (previous year: 88.4%). All centres meet the target value of $\geq 75\%$.

* 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.

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