



Indicator Analysis 2023

Annual Report of the Certified Pancreatic Cancer Centres

Audit year 2022 / Indicator year 2021

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General information

Indicator No. 12: Post-operative mortality.....
 Indicator No. 13: Local R0 resections pancreas (GL QI 1) ...
 Indicator No. 14: Lymph node examination (GL QI 2)
 Indicator No. 16: Content Pathology Report (GL QI 3)
 Indicator No. 17: Adjuvant chemotherapy (GL QI 4)
 Indicator No. 18: Palliative Chemotherapie (GL QI 5)

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 *

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.

	Indicator definition	All clinical sites 2017		
		Median	Range	Patients Total
Numerator	Revision surgeries after peri-operative complications within 30d of pancreatic resection	4*	0 - 21	555
Denominator	Pancreatic resections (5-524ff and 5-525ff. with and without ICD-10 C25) (= Indicator 9)	35.5*	12 - 180	4,916
Rate	Target value ≤ 10%	9.31%	0.00% - 34.69%	11.29%**

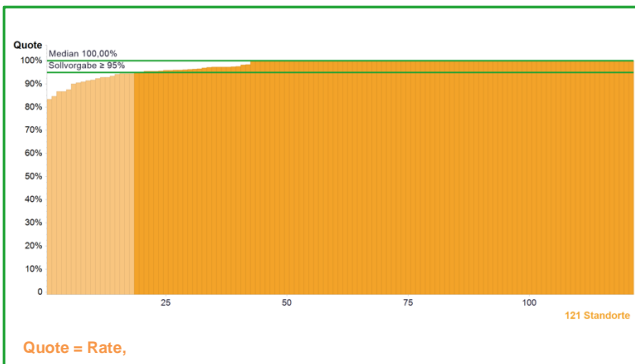
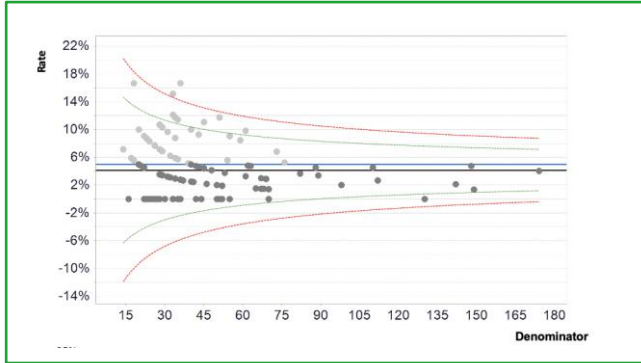


Diagram:

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.

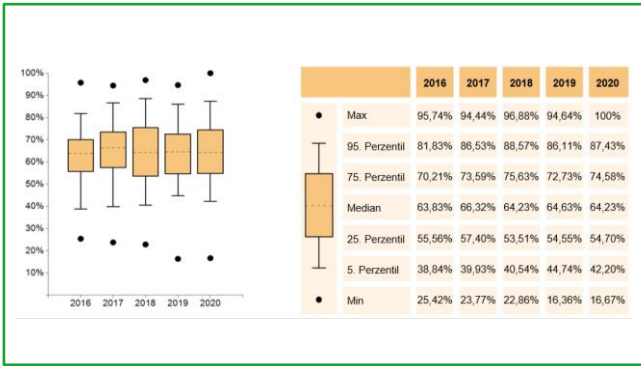
*For further information on the methodological approach see „Development of guideline-based quality indicators“ (https://www.leitlinienprogramm-onkologie.de/fileadmin/user_upload/Downloads/Methodik/QIEP_OL_Version2_english.pdf)

General information



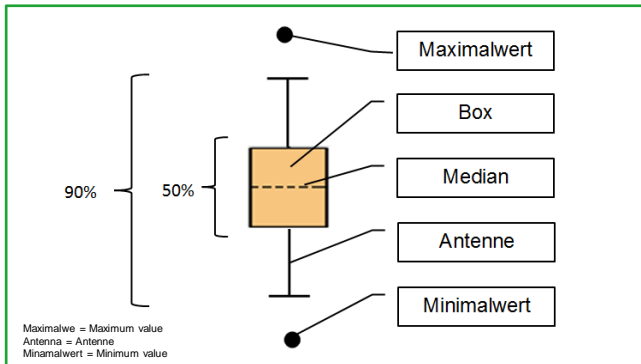
Funnel Plots:

The funnel plots show the ratio of included patient numbers and indicator result for the quality indicators that 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 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), the red dashed lines the 99.7% confidence intervals (3 standard deviations of the mean).



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 encompass a 90th percentile area/range. The extreme values are depicted here as dots.

Status of the Certification System for Pancreatic Cancer Centres 2022

	31.12.2022	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017
Ongoing certification procedures	5	6	5	8	5	10
Certified Centres	143	133	124	117	112	98
Certified clinical sites	145	136	127	120	115	100

General information

	31.12.2022	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017
Clinical sites included in the Annual Report	139	131	121	116	106	93
equivalent to	95.9%	96.3%	95.3%	96.7%	92.2%	93%
Primary cases total*	7,189	6,759	6,068	5,683	5,104	4,526
Primary cases per clinical site (mean)*	52	52	50	49	48	49
Primary cases per clinical site (median)*	46	45	49	43	45	44

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

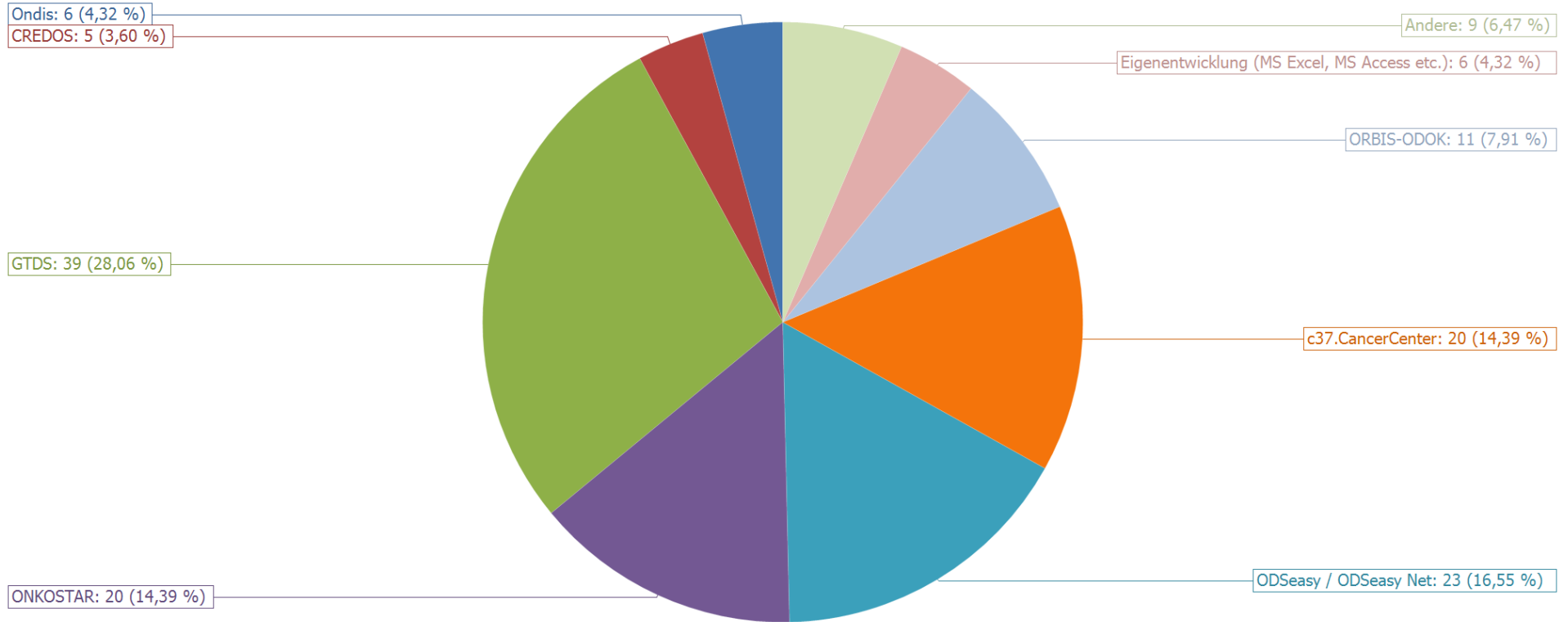
This Annual Report looks at the Pancreatic Cancer Centres certified in the certification system of the German Cancer Society (DKG). The Data Sheet, which is part of the Catalogue of Requirements, is the basis for the diagrams in the annual report.

The annual report includes 139 of the 145 certified centre sites. 4 clinical sites were excluded that were certified for the first time in 2022 (data mapping of complete calendar year not mandatory for initial certifications). 1 clinical site was not included as no approved data sheet was available by the data deadline of 31.01.2023. Another clinical site suspended the certificate in the 1st quarter of 2023, therefore no audit was performed in 2022 and no data sheet was submitted.

A total of 7,372 primary cases were treated at 144 sites with a data sheet available. A current overview of all certified sites is listed 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 at the Centre's clinical sites

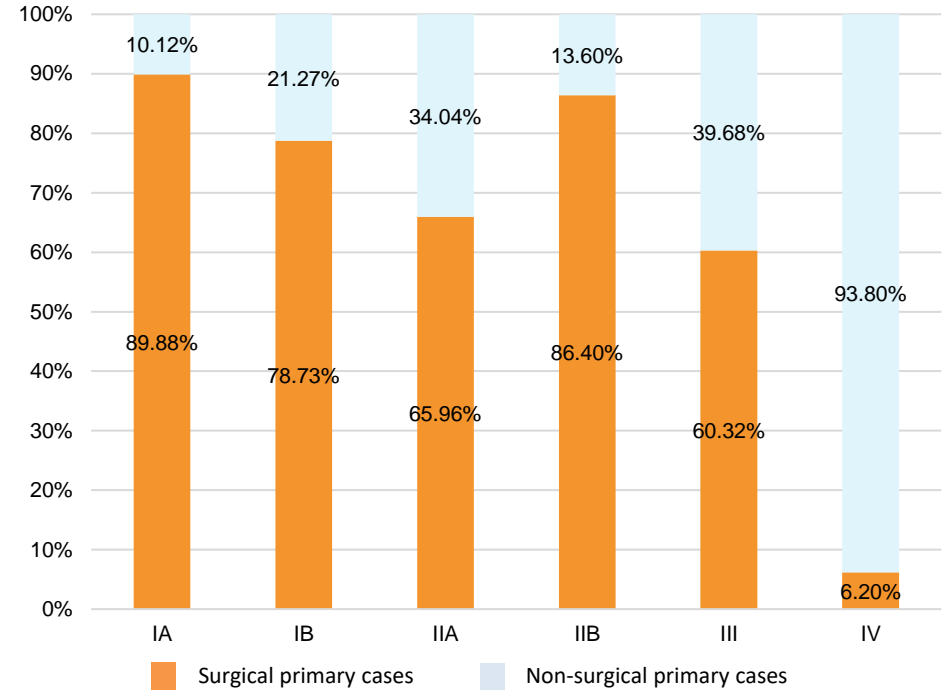
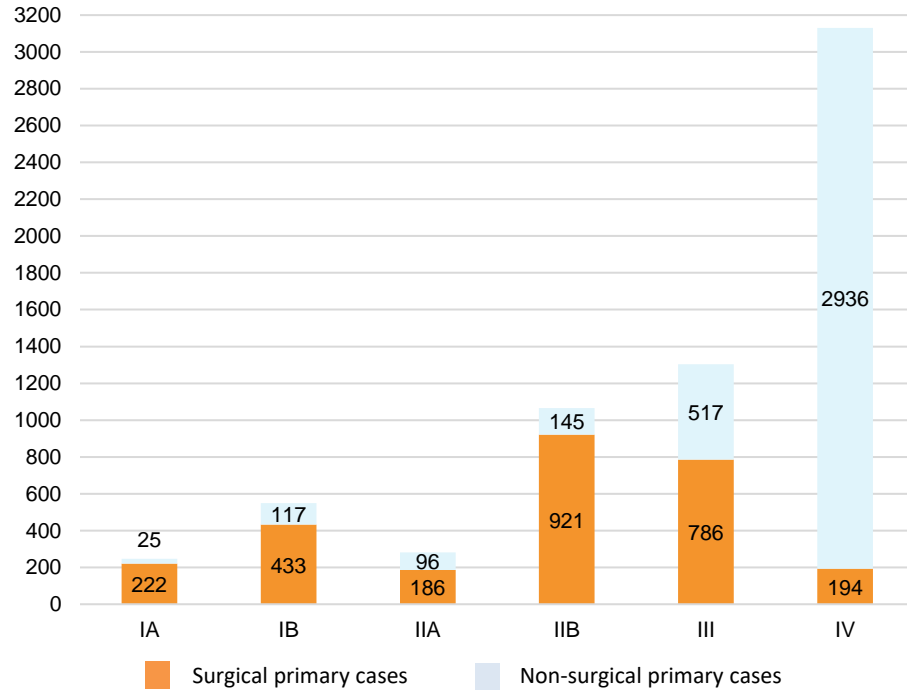


Andere = other

Legend:	
Other	System used in ≤ 3 clinical sites

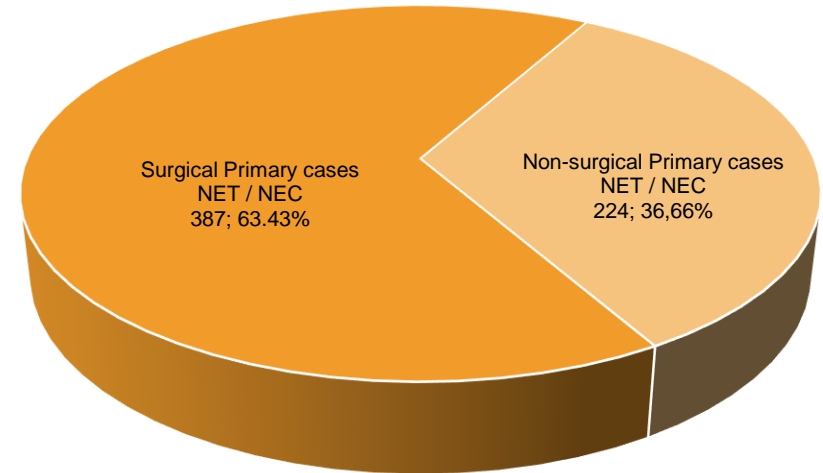
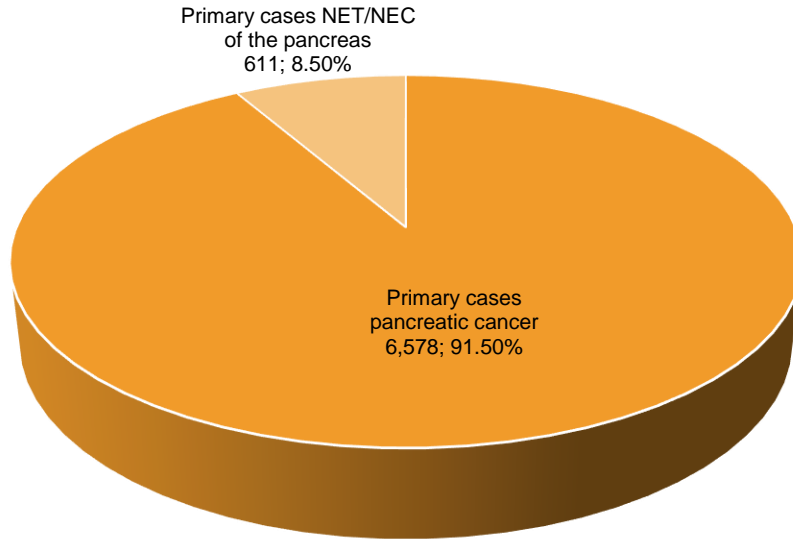
The details on the tumour documentation system was taken from the Data Sheet (Basic Data Sheet). It is not possible to use more than one system. In many cases, support is provided by the cancer registries or there may be a direct link to the cancer registry via a specific tumor documentation system.

Basic data - Primary cases Pancreatic Cancer



	IA	IB	IIA	IIB	III	IV	Total
Surgical primary cases	222 (89.88%)	433 (78.73%)	186 (65.96%)	921 (86.40%)	786 (60.32%)	194 (6.20%)	2,742 (41.68%)
Non-surgical primary cases	25 (10.12%)	117 (21.27%)	96 (34.04%)	145 (13.60%)	517 (39.68%)	2,936 (93.80%)	3,836 (58.32%)
Primary cases total	247 (100%)	550 (100%)	282 (100%)	1,066 (100%)	1,303 (100%)	3,130 (100%)	6,578 (100%)

Basic data - Primary cases Pancreatic Cancer

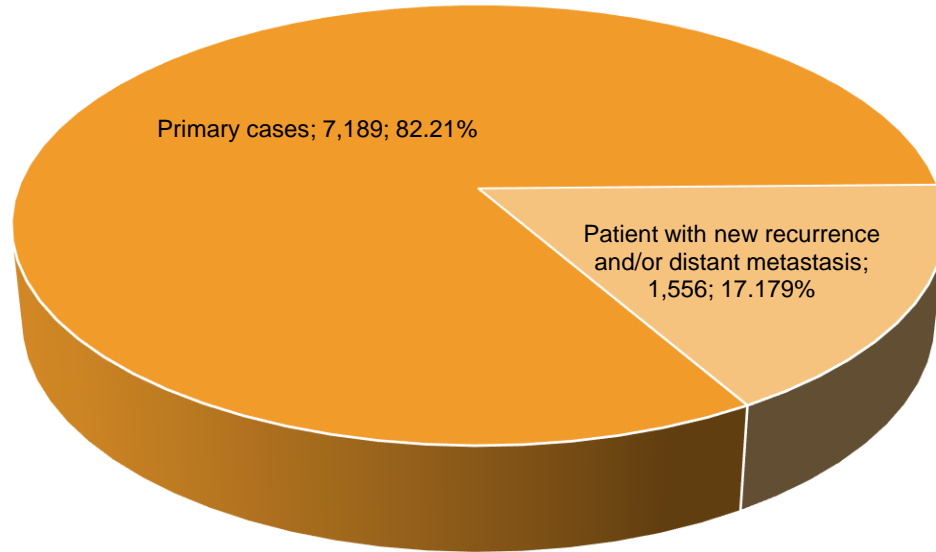


Primary cases pancreatic cancer	Primary cases NET / NEC of the pancreas	Primary cases Total
6,578 (91.50%)	611 (8.50%)	7,189 (100%)

Surgical Primary cases NET / NEC	Non-surgical Primary cases NET / NEC	Primary cases Total NET / NEC
387 (63.34%)	224 (36.66%)	611 (100%)

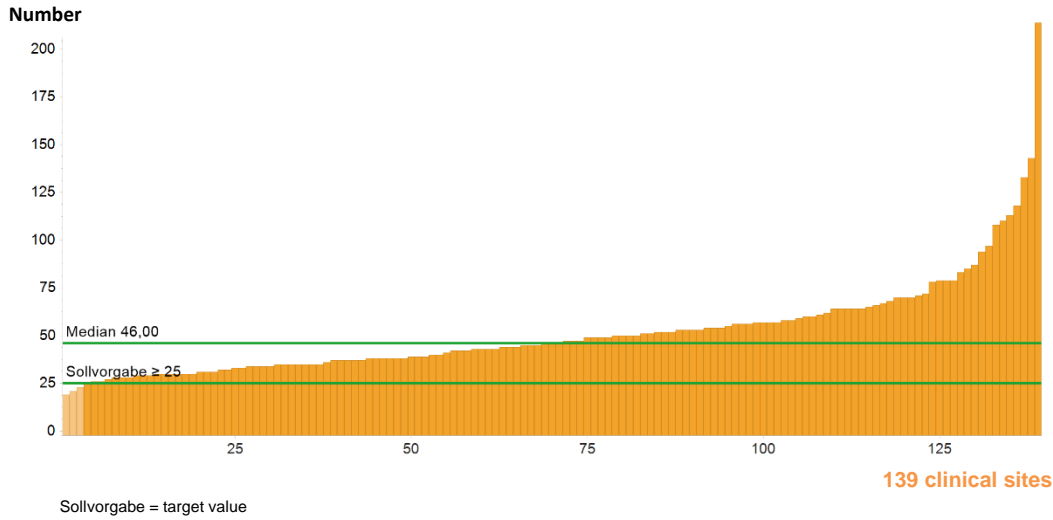
NET = pancreatic neuroendocrine tumor
NEC = Neuroendocrine carcinoma

Basic data – Cancer cases Pancreatic Cancer Centre

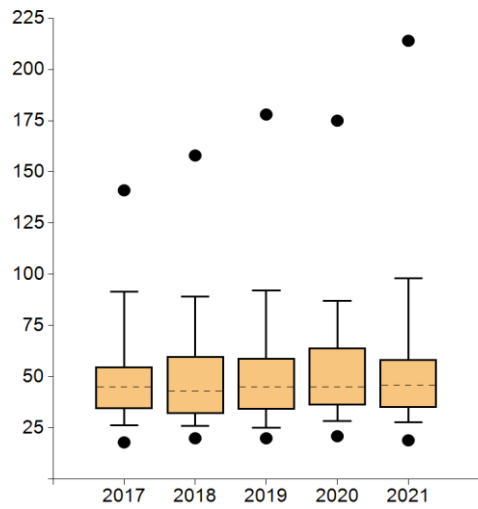


Primary cases	Pat. with new recurrence and/or distant metastasis	Centre cases
7,189 (82.21%)	1,556 (17.79%)	8,745 (100%)

1a. Primary cases



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Number	Primary cases	46	19 - 214	7189
	Target value ≥ 25			

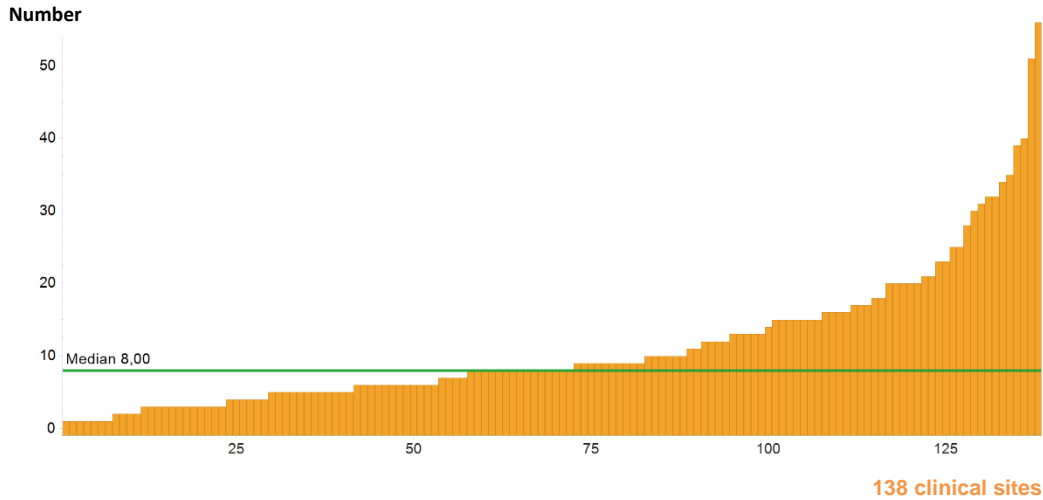


	2017	2018	2019	2020	2021
● max	141,00	158,00	178,00	175,00	214,00
95 th percentile	91,50	89,00	92,00	87,00	98,10
75 th percentile	55,00	60,00	59,00	64,00	58,50
Median	45,00	43,00	45,00	45,00	46,00
25 th percentile	34,25	32,00	34,00	36,00	35,00
5 th percentile	26,25	26,00	25,00	28,50	27,90
● Min	18,00	20,00	20,00	21,00	19,00

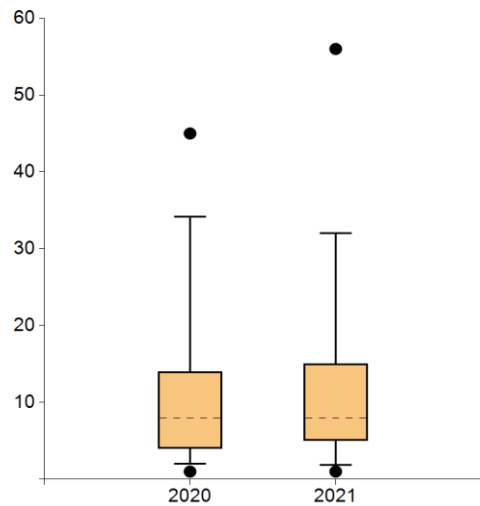
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
139	100.00%	136	97.84%

Comments:
 In 2021, >7,000 primary cases were treated for the first time in all pancreatic cancer centres, and almost 6,800 in the German centres. Based on the incidence rate in Germany 2019 (19,685 new cases C25; source: Robert-Koch-Institut), 34.5% of all patients with a first diagnosis of pancreatic cancer were treated in a certified centre. 3 centres (previous year 2) treated <25 primary cases and justified this, among other things, with reduced bed/surgery capacities due to Covid. In 2 centres the failure to meet had no influence on the certificate, in one centre the certificate was only extended with reduced validity.

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



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Number	Patients with new recurrence and/or distant metastases	8	1 - 56	1556
	No Target value			



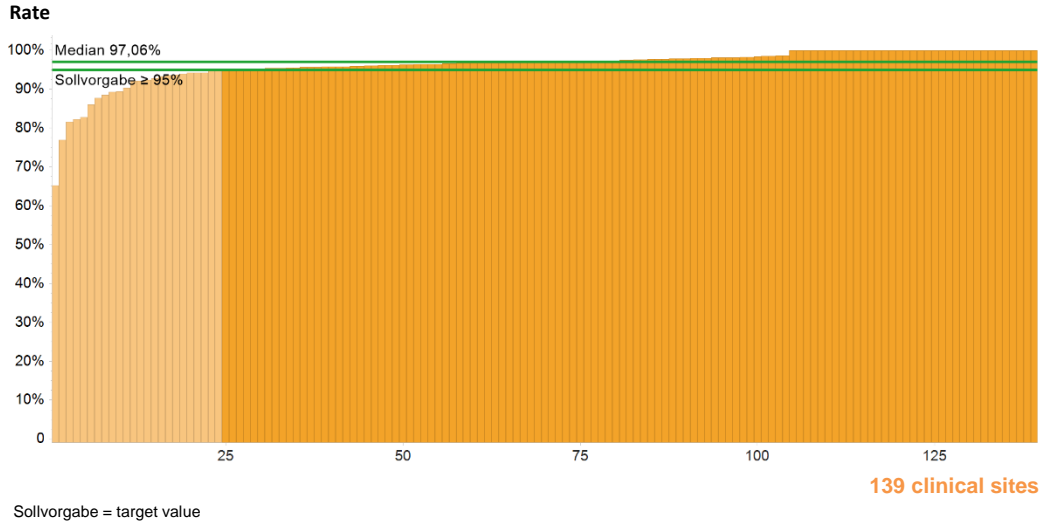
	2017	2018	2019	2020	2021
● max	----	----	----	45,00	56,00
95 th percentile	----	----	----	34,20	32,00
75 th percentile	----	----	----	14,00	15,00
Median	----	----	----	8,00	8,00
25 th percentile	----	----	----	4,00	5,00
5 th percentile	----	----	----	2,00	1,85
● Min	----	----	----	1,00	1,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
138	99.28%	----	----

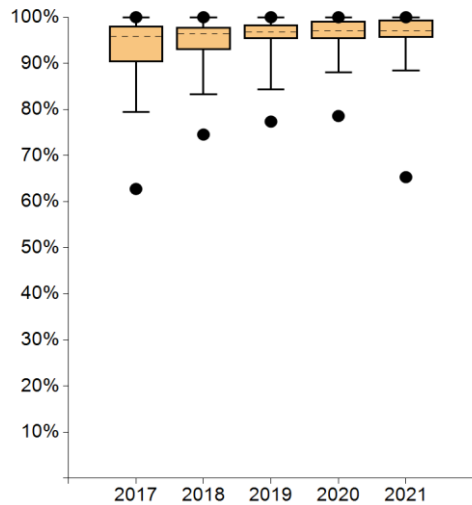
Comments:

The number of patients with new recurrence and/or distant metastases has been recorded since 2020. In the second year of the data collection, the case numbers are at the previous year's level across the entire range. On average, each pancreatic cancer centre treated 8 of these patients in the indicator year 2021.

2. Pretherapeutic tumour board



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with pancreatic cancer that were presented at the pretherapeutic board	44*	19 - 211	6910
Denominator	Primary cases (= Indicator 1)	46*	19 - 214	7189
Rate	Target value ≥ 95%	97.06%	65.31% - 100%	96.12%**



	2017	2018	2019	2020	2021
● max	100%	100%	100%	100%	100%
95 th percentile	100%	100%	100%	100%	100%
75 th percentile	98.16%	97.88%	98.31%	99.09%	99.37%
Median	95.88%	96.43%	96.72%	97.01%	97.06%
25 th percentile	90.34%	92.92%	95.31%	95.35%	95.59%
5 th percentile	79.38%	83.33%	84.38%	88.06%	88.49%
● Min	62.75%	74.55%	77.36%	78.57%	65.31%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
139	100.00%	115	82.73%

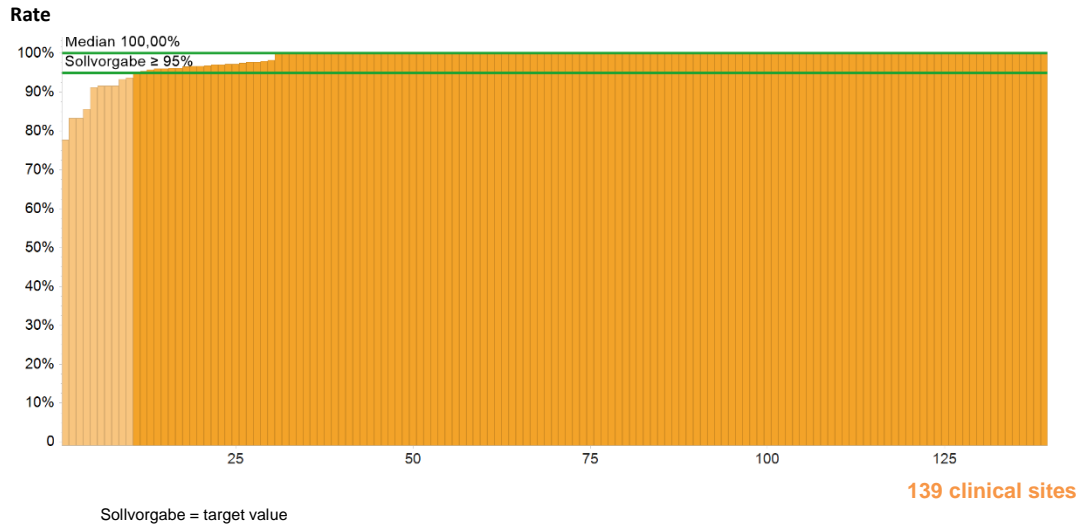
Comments:

The pre-therapeutic presentation rate has been developing positively for years. The proportion of centres meeting the target value rose from 54.7% (2017) to 82.7%. 24 centres (previous year 26) fell short of the target value, among other things due to a direct surgical referral (9x), urgent/emergency surgery (6x), palliative treatment concepts and the rejection of interventional therapies by patients (7x). In addition, omissions were reported in individual cases (7x). In the audits, the auditors made numerous references and (in the case of low presentation rates in the entire centre) 1 deviation.

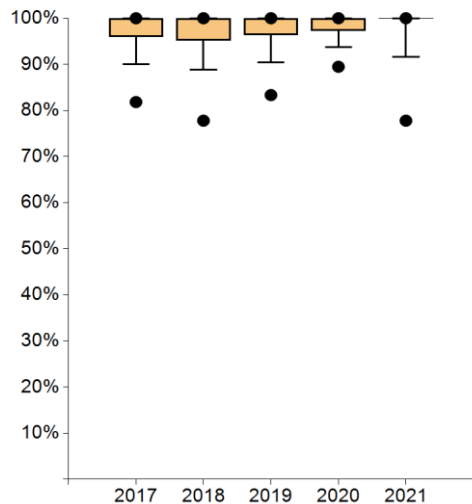
*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

** Percentage of centre patients who were treated according to the indicator

3. Post-operative tumour board



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator presented in the post-operative tumor board	18*	6 - 86	3084
Denominator	Surgical primary cases pancreas (5-524ff. 5-525ff with ICD-10 C25) (= Indicator 8)	18*	6 - 88	3129
Rate	Target value \geq 95%	100%	77.78% - 100%	98.56%**



	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	100%	100%	100%	100%	100%
25 th percentile	95.94%	95.20%	96.36%	97.29%	100%
5 th percentile	90.00%	88.89%	90.48%	93.73%	91.67%
● Min	81.82%	77.78%	83.33%	89.47%	77.78%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
139	100.00%	129	92.81%

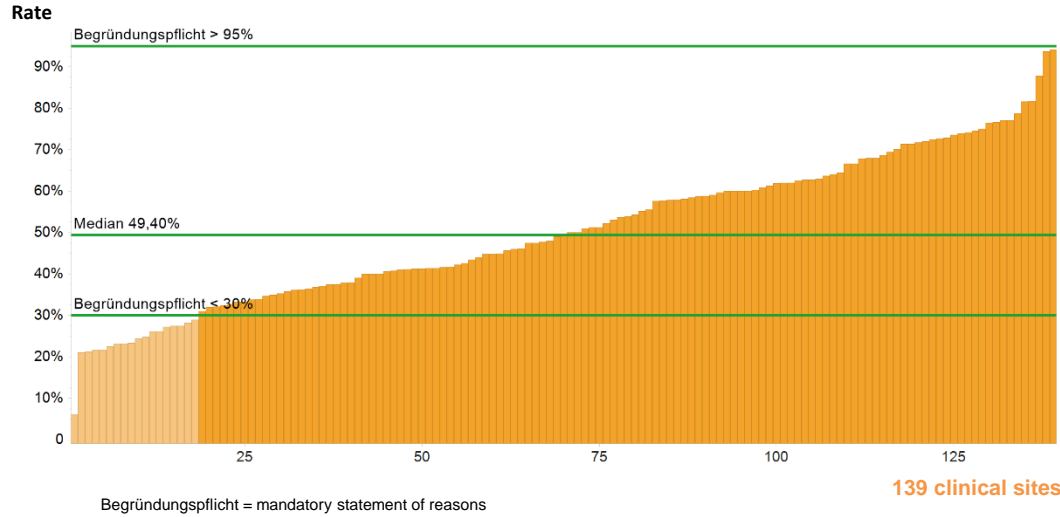
Comments:

This indicator also shows a high degree of fulfilment by the centres. The proportion of centres with an presentation rate \geq 95% has risen continuously over the last 5 years from <80% to almost 93%. 109 centres (= 78.4%) presented all surgical primary cases after resection in the tumour board without exception. 10 centres did not meet the target value and all referred in the audits to the waiving of a tumour board presentation in the case of patients who died postoperatively.

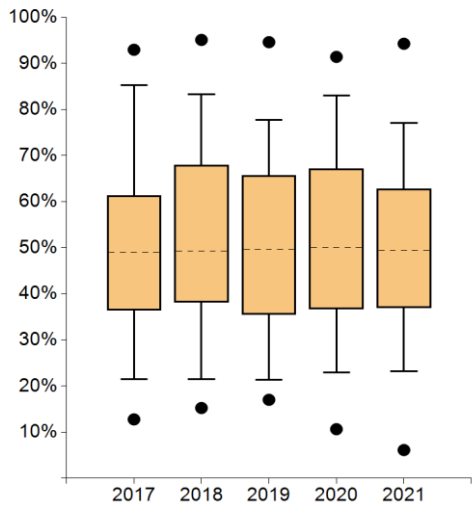
*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

** Percentage of centre patients who were treated according to the indicator.

4. Psycho-oncological counselling



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who received psycho-oncological care (length of consultation ≥ 25 min.)	27*	3 - 101	4158
Denominator	Primary cases (= Indicator 1a) + patients with new recurrence and/or distant metastases (=Indicator 1b)	55*	25 - 229	8745
Rate	Mandatory statement of reasons*** < 30% and >95%	49.40%	6.12% - 94.25%	47.55%**



	2017	2018	2019	2020	2021
● max	92.94%	95.08%	94.59%	91.40%	94.25%
● 95 th percentile	85.32%	83.29%	77.78%	82.99%	77.09%
● 75 th percentile	61.25%	67.97%	65.71%	67.12%	62.73%
● Median	48.98%	49.24%	49.66%	50.00%	49.40%
● 25 th percentile	36.47%	38.19%	35.48%	36.76%	36.99%
● 5 th percentile	21.52%	21.51%	21.31%	22.92%	23.23%
● Min	12.77%	15.24%	17.02%	10.64%	6.12%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
139	100.00%	121	87.05%

Comments:

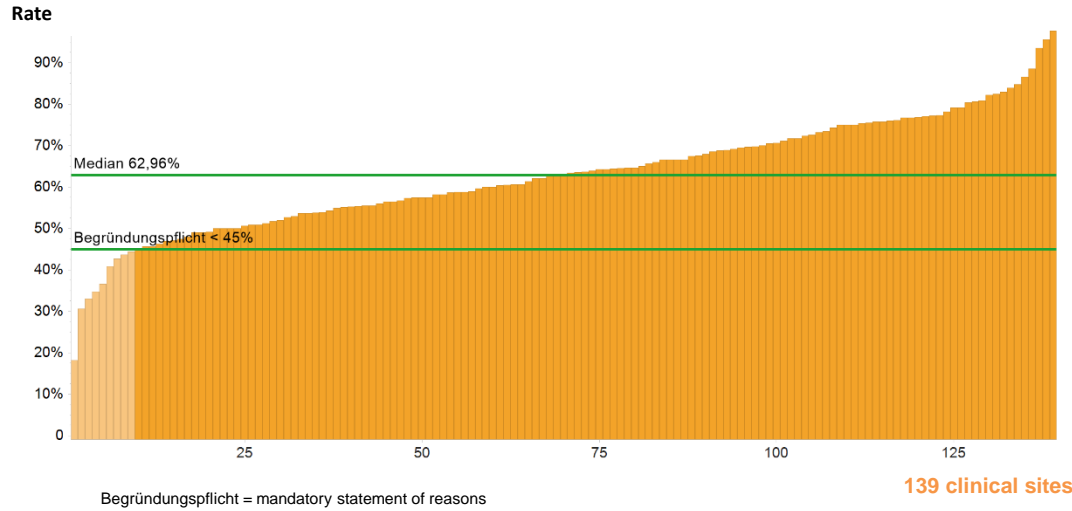
The median rate of psycho-oncological care has been 50% for years. 18 centres (2020: 19) had to give a statement of reasons for a rate of <30% and referred to the fact that patients had not sought counselling despite identified high burden in the screening (7x) or that the duration of counselling was individualized and thus <25 min (2x). 4 centres justified the rate of care with Corona-related restrictions in terms of access and utilisation. One centre identified an overly complicated screening process as a possible cause of the low rate and revised the access to psycho-oncology.

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

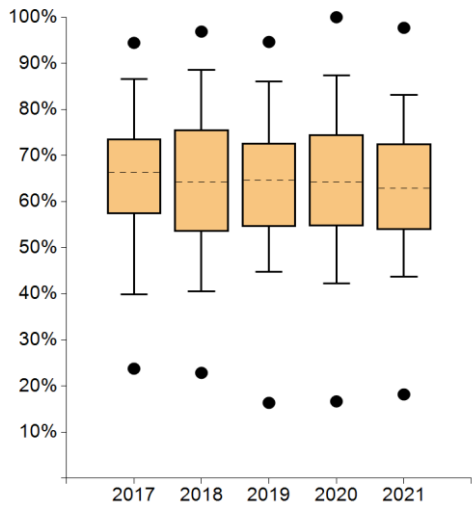
** Percentage of centre patients who were treated according to the indicator.

*** For values outside the plausibility limit(s) the Centres must give the reasons.

5. Social services counselling



	Indicator definition	All clinical sites 2021		
		Median	Range	Patienten Gesamt
Numerator	Patients of the denominator who received counselling by social services in an inpatient or outpatient setting	34*	12 - 123	5421
Denominator	Primary cases (= Indicator 1a) + patients with new recurrence and/or distant metastases (= Indicator 1b)	55*	25 - 229	8745
Rate	Mandatory statement of reasons*** < 45%	62.96%	18.18% - 97.70%	61.99%**



	2017	2018	2019	2020	2021
● max	94.44%	96.88%	94.64%	100%	97.70%
95 th percentile	86.53%	88.57%	86.11%	87.43%	83.12%
75 th percentile	73.59%	75.63%	72.73%	74.58%	72.52%
Median	66.32%	64.23%	64.63%	64.23%	62.96%
25 th percentile	57.40%	53.51%	54.55%	54.70%	53.93%
5 th percentile	39.93%	40.54%	44.74%	42.20%	43.65%
● Min	23.77%	22.86%	16.36%	16.67%	18.18%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
139	100.00%	130	93.53%

Comments:

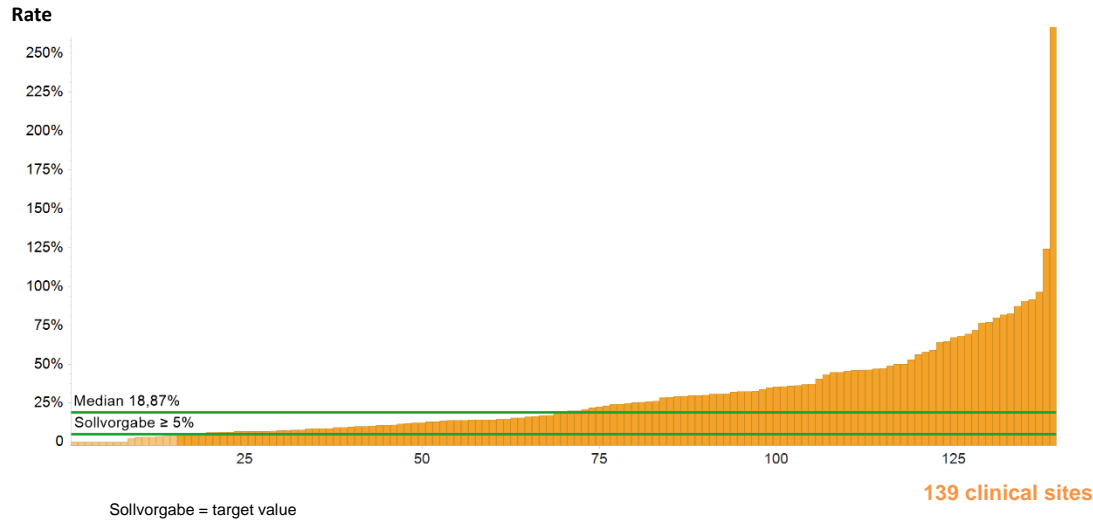
The counselling rate by the Social Services in 2021 shows no significant change compared to previous years and is only slightly below the last previous year's values. 9 centres had to give a statement of reasons with a rate <45%, 5 of which were from German-speaking countries outside Germany where social counselling is provided by other professional groups. 1 centre referred to staff shortages in the second Corona year. 2 centres identified below-average care for patients with a conservative treatment concept and/or progression or recurrence and addressed this in quality circles..

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

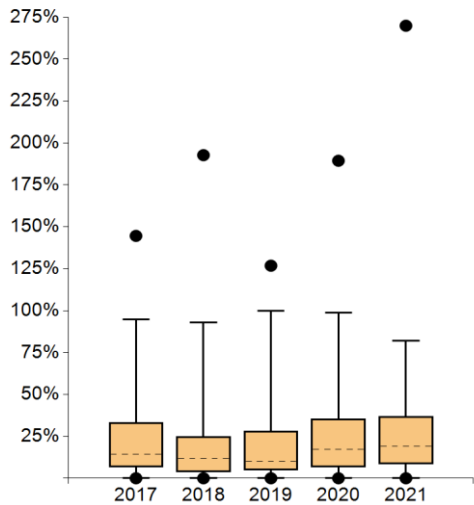
** Percentage of centre patients who were treated according to the indicator

*** For values outside the plausibility limit(s) the centres must give the reasons.

6. Patients enrolled in a study



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients who were enrolled in a study	10*	0 - 386	2554
Denominator	Primary cases (= Indicator 1a)	46*	19 - 214	7189
Rate	Target value ≥ 5%	18.87%	0.00% - 269.93%	35.53%**



	2017	2018	2019	2020	2021
max	144.57%	192.73%	126.79%	189.39%	269.93%
95 th percentile	94.87%	92.97%	100%	98.75%	81.87%
75 th percentile	33.20%	24.72%	28.21%	35.37%	37.03%
Median	14.29%	11.65%	9.84%	17.24%	18.87%
25 th percentile	6.71%	3.81%	5.00%	6.67%	8.57%
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	%
139	100.00%	124	89.21%

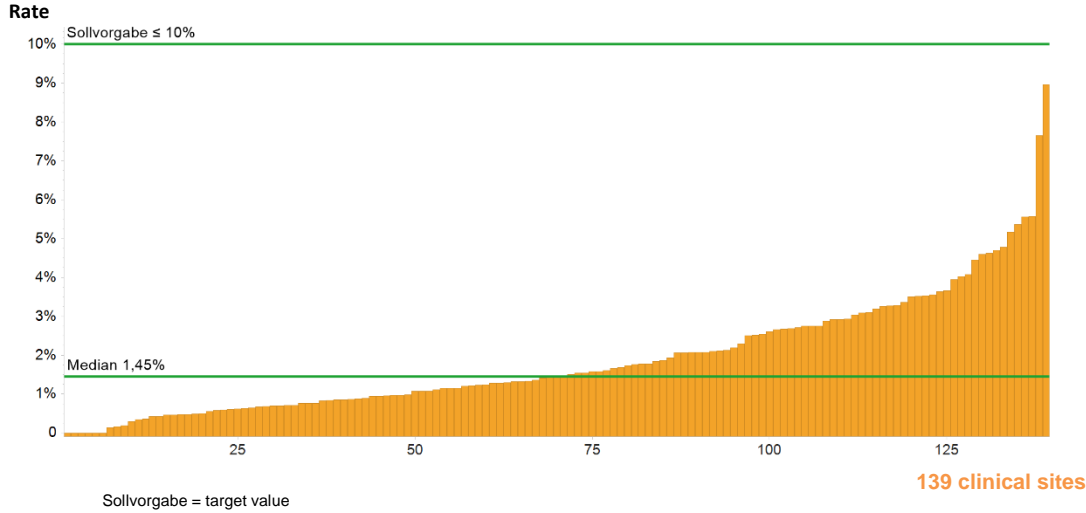
Comments:

The study quota has developed positively in recent years; particularly in the last 3 years, the median, 25th / 75th percentiles and the proportion of centres meeting the target value have increased, in some cases significantly. 15 centres (previous year 24) had a study quota <5% in 2021; the number of centres without patient inclusion was 8, as in the previous year. The majority of the centres cited difficulties in acquiring studies, but also identified structural weaknesses in the integration of outpatients as a reason for low study quotas (2x). In one audit, a deviation was pronounced due to a repeatedly too low study quota by the auditor.

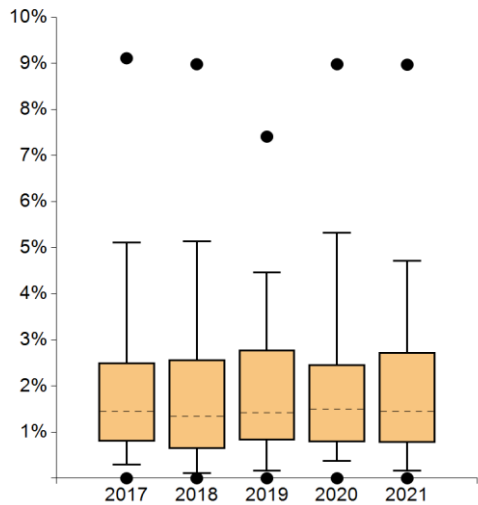
*The medians for numerator and population do not refer to an existing centre but indicate the median of all cohort numerators and the median of all cohort denominators.

** Percentage of centre patients who were treated according to the indicator

7a. Endoscopy complications - Pancreatitis after ERCP (CR 2.1)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	ERCPs of the denominator with specific complications (CR 2.1)	5*	0 - 56	1126
Denominator	ERCPs for each endoscopy unit	365*	113 - 1429	59113
Rate	Target value ≤ 10%	1.45%	0.00% - 8.97%	1.90%**



	2017	2018	2019	2020	2021
● max	9.11%	8.98%	7,41%	8.98%	8.97%
95 th percentile	5.11%	5.14%	4,46%	5.33%	4.72%
75 th percentile	2.50%	2.58%	2,78%	2.47%	2.73%
Median	1.45%	1.34%	1.42%	1.50%	1.45%
25 th percentile	0.80%	0.64%	0.82%	0.79%	0.77%
5 th percentile	0.30%	0.11%	0.16%	0.38%	0.17%
● Min	0.00%	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
139	100.00%	139	100.00%

Comments:

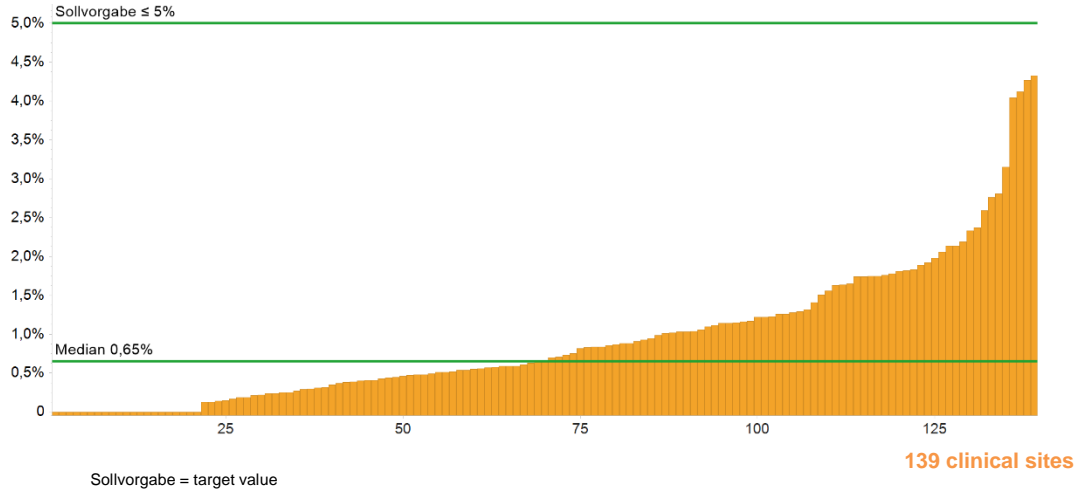
The rate of post-interventional pancreatitis has been consistently low for years. Since adjusting the denominator to the number of all ERCPs performed in the indicator year 2016, all centres have met the target value of ≤10%. In 48 centres (= 34.5%), post-interventional pancreatitis occurred in less than 1% of all ERCPs in 2021.

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

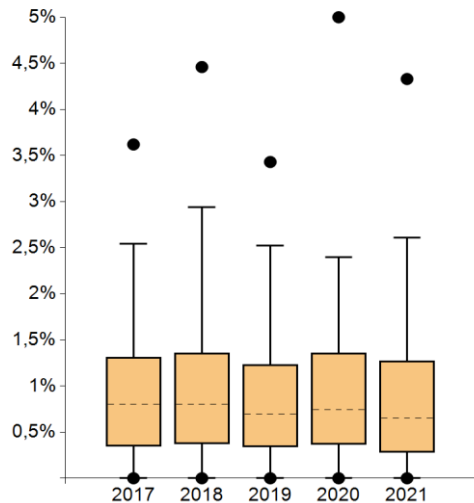
** Percentage of centre patients who were treated according to the indicator

7b. Endoscopy complications - bleeding and perforation after ERCP (CR 2.1)

Rate



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	ERCs of the denominator with specific complications. Bleeding and perforation after ERCP (EB 2.1)	3*	0 - 31	586
Denominator	ERCs for each endoscopy unit	365*	113 - 1429	59113
Rate	Target value ≤ 5%	0.65%	0.00% - 4.33%	0.99%**



	2017	2018	2019	2020	2021
● max	3.62%	4.46%	3.43%	5.00%	4.33%
95 th percentile	2.55%	2.94%	2.52%	2.40%	2.61%
75 th percentile	1.32%	1.36%	1.23%	1.36%	1.27%
Median	0.80%	0.80%	0.70%	0.74%	0.65%
25 th percentile	0.35%	0.37%	0.34%	0.37%	0.28%
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	%
139	100.00%	139	100.00%

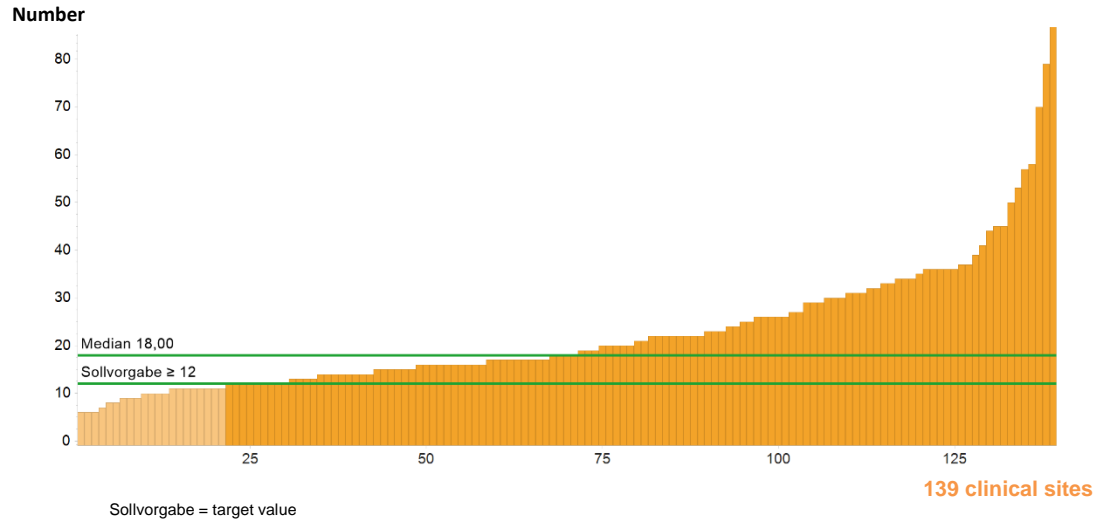
Comments:

The indicator for post-interventional haemorrhages and perforations has also been stable at a low level for years. As in the previous years 2016-2020, all centres met the target value of ≤5% in 2021.

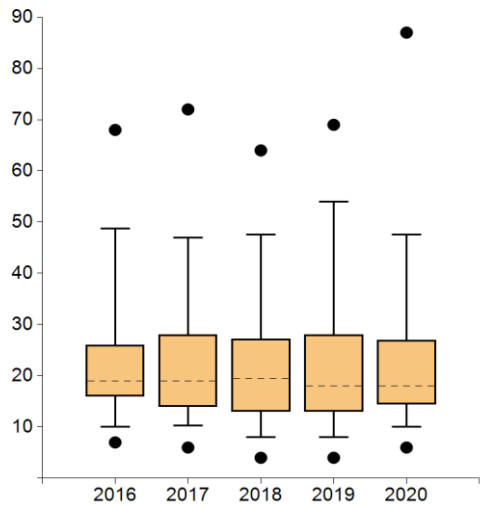
*The medians for numerator and population do not refer to an existing centre but indicate the median of all cohort numerators and the median of all cohort denominators.

** Percentage of centre patients who were treated according to the indicator

8. Surgical primary cases pancreas (only ICD-10 C25 in combination with OPS 5-524* and 5-525**)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Number	Surgical primary cases pancreas (OPS 5-524*. 5-525** only with ICD-10 C25) (Def. 5.2.4)	18	6 - 88	3129
	Target value ≥ 12			



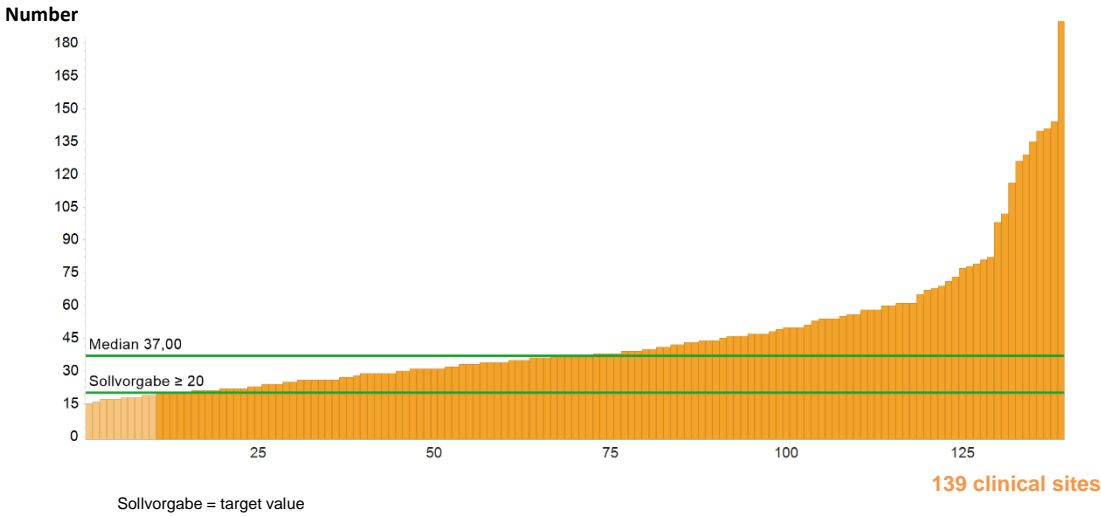
	2017	2018	2019	2020	2021
● max	72,00	64,00	69,00	87,00	88,00
95 th percentile	47,00	47,50	54,00	47,50	45,50
75 th percentile	28,00	27,25	28,00	27,00	29,00
Median	19,00	19,50	18,00	18,00	18,00
25 th percentile	14,00	13,00	13,00	14,50	14,00
5 th percentile	10,25	8,00	8,00	10,00	9,00
● Min	6,00	4,00	4,00	6,00	6,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
139	100.00%	118	84.89%

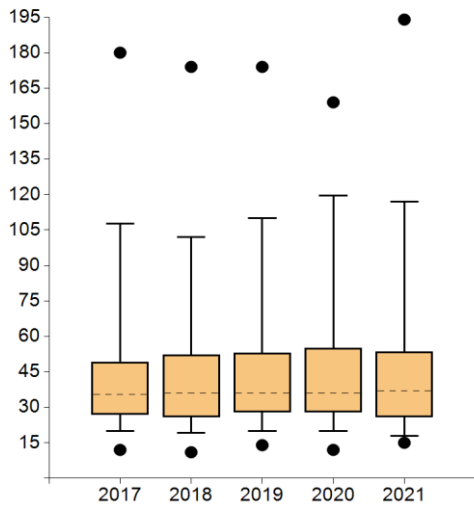
Comments:

In 2021, 2,976 resections of the pancreas were performed in primary cases at the certified pancreatic cancer centres in Germany; this corresponds to 54.8% of all carcinoma-related resections (5,247, source: Destatis). 21 centres (previous year 10) performed <12 resections. In the second Corona year, the centres saw a connection, among other things, with lower primary case numbers overall (7 mentions), the increase in inoperable stages (5x) and structural cuts (3x). Other centres referred to resections for other malignancies and falling short of the target value by 1 surgery when the target value had previously been met.

9. Overall surgical expertise pancreas



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Number	Pancreas resections (left resection of the pancreas. pancreatic head resection. total pancreatectomy. OPS 5-524* and 5-525** with and without ICD-10 C25).	37	15 - 194	6295
	Target value ≥ 20			



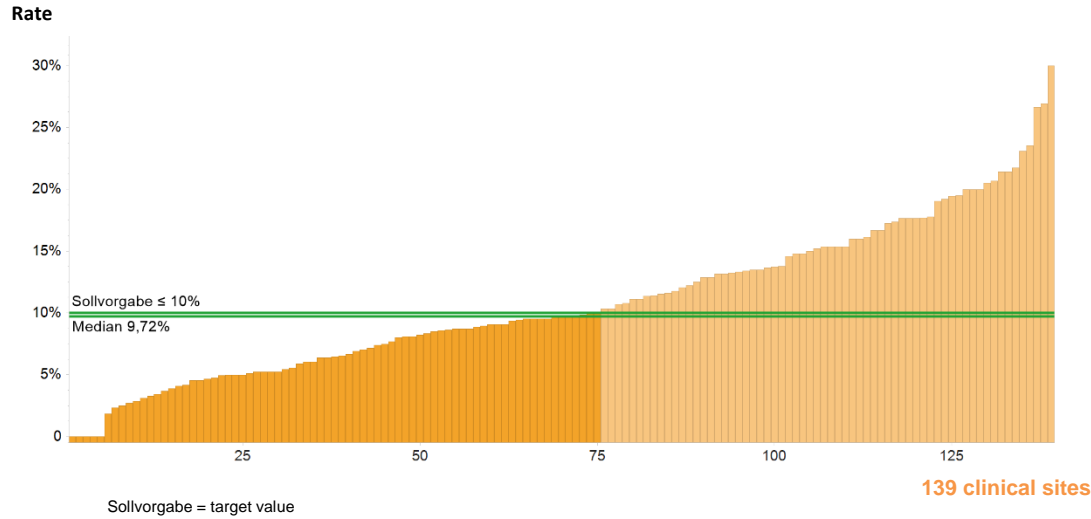
	2017	2018	2019	2020	2021
● max	180,00	174,00	174,00	159,00	194,00
95 th percentile	107,75	102,00	110,00	119,50	117,00
75 th percentile	49,00	52,25	53,00	55,00	53,50
Median	35,50	36,00	36,00	36,00	37,00
25 th percentile	27,00	26,00	28,00	28,00	26,00
5 th percentile	20,00	19,25	20,00	20,00	18,00
● Min	12,00	11,00	14,00	12,00	15,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
139	100.00%	129	9.81%

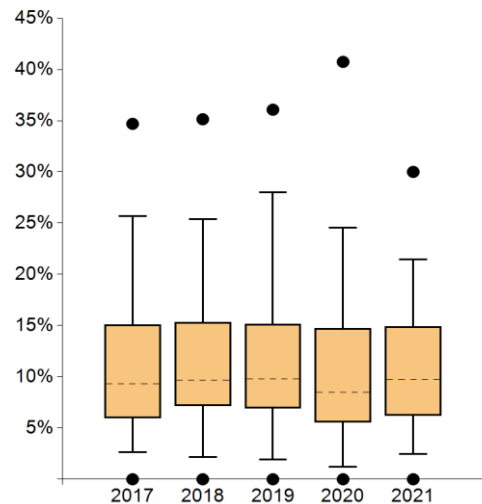
Comments:

The number of centres with <20 pancreas resections increased from 4 to 10 compared to the previous year. 9 of these centres also fell short of the target value of 12 resections for ICD-10 C25. While 8 centres previously had sufficient resection numbers, 2 centres with 15 and 19 resections respectively were already conspicuous in the previous year. Due to the undercutting of the minimum quantities for the indicator 8 and 9 in the current indicator year, a certificate with an fulfilled 3-year average was only extended with reduced validity.

10. Revision surgeries pancreas



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Resections of the denominator with revision surgeries after peri-operative complications within 30d of surgery	4*	0 - 27	697
Denominator	Pancreatic resections (OPS 5-524* and 5-525** with and without ICD-10 C25) (= Indicator 9)	37*	15 - 194	6295
Rate	Target value ≤ 10%	9,72%	0.00% - 30.00%	11.07%**



	2017	2018	2019	2020	2021
● max	34.69%	35.14%	36.07%	40.74%	30.00%
95 th percentile	25.70%	25.37%	28.00%	24.57%	21.43%
75 th percentile	15.11%	15.31%	15.15%	14.73%	14.91%
Median	9.31%	9.65%	9.76%	8.45%	9.72%
25 th percentile	5.97%	7.14%	6.90%	5.54%	6.22%
5 th percentile	2.62%	2.15%	1.92%	1.23%	2.48%
● Min	0.00%	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
139	100.00%	75	53.96%

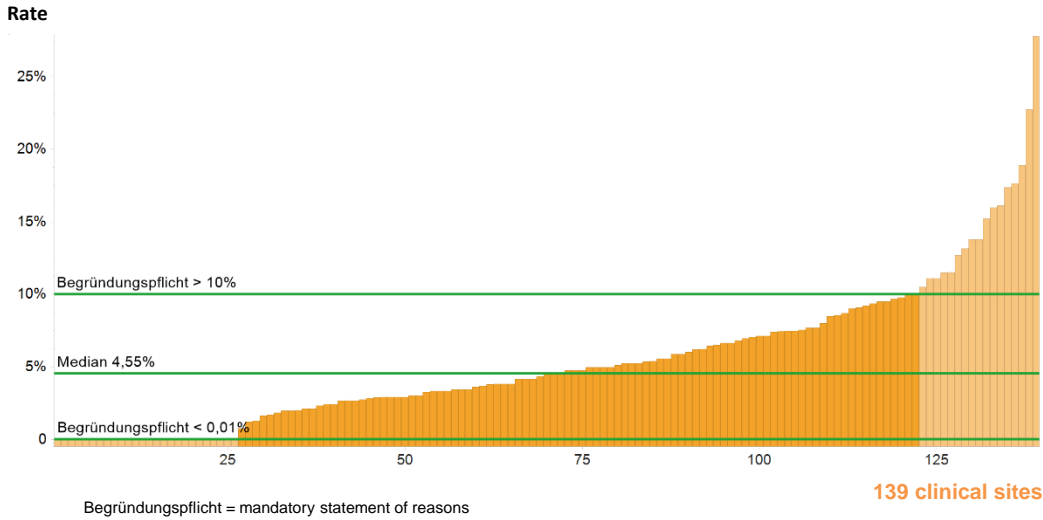
Comments:

After a decline in the revision rate in 2020, the median and overall rate rose again to the level of the previous years. The most frequent reasons for revisions were anastomotic insufficiencies and bleeding, followed by ischaemia and fascia dehiscence/flap abdomen. In order to exclude systematic errors, the centres carried out individual case analyses in morbidity and mortality conferences, reacted according to indication by modifying the surgical technique (e.g. suturing technique, checking blood flow) or the perioperative management (therapy with somatostatin analogues) or carried out hospitation .

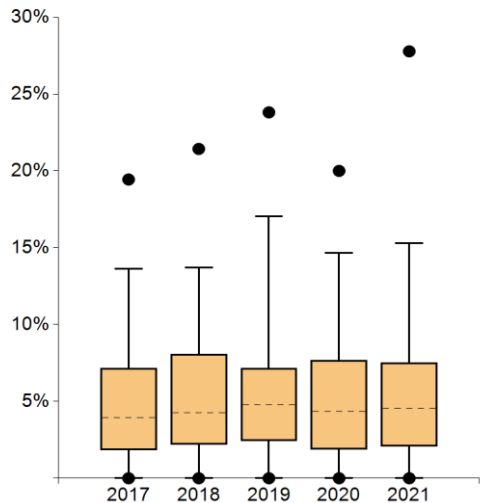
*The medians for numerator and population do not refer to an existing centre but indicate the median of all cohort numerators and the median of all cohort denominators.

** Percentage of centre patients who were treated according to the indicator

11. Post-operative wound infections



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Resections of the denominator with post-operative wound infections within 30 d after surgery and need for surgical wound revision (irrigation, spreading, VAC dressing).	2*	0 - 16	340
Denominator	Pancreatic resections (OPS 5-524* and 5-525** with and without ICD-10 C25) (= Indicator 9)	37*	15 - 194	6295
Rate	Mandatory statement of reasons*** < 0.01% and >10%	4.55%	0.00% - 27.78%	5.40%**



	2017	2018	2019	2020	2021
● max	19.44%	21.43%	23.81%	20.00%	27.78%
95 th percentile	13.64%	13.72%	17.05%	14.65%	15.30%
75 th percentile	7.14%	8.09%	7.14%	7.69%	7.50%
Median	3.93%	4,6%	4.76%	4.35%	4.55%
25 th percentile	1.85%	2.19%	2.44%	1.89%	2.09%
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 within the plausibility limits	
Number	%	Number	%
139	100.00%	96	69.06%

Comments:

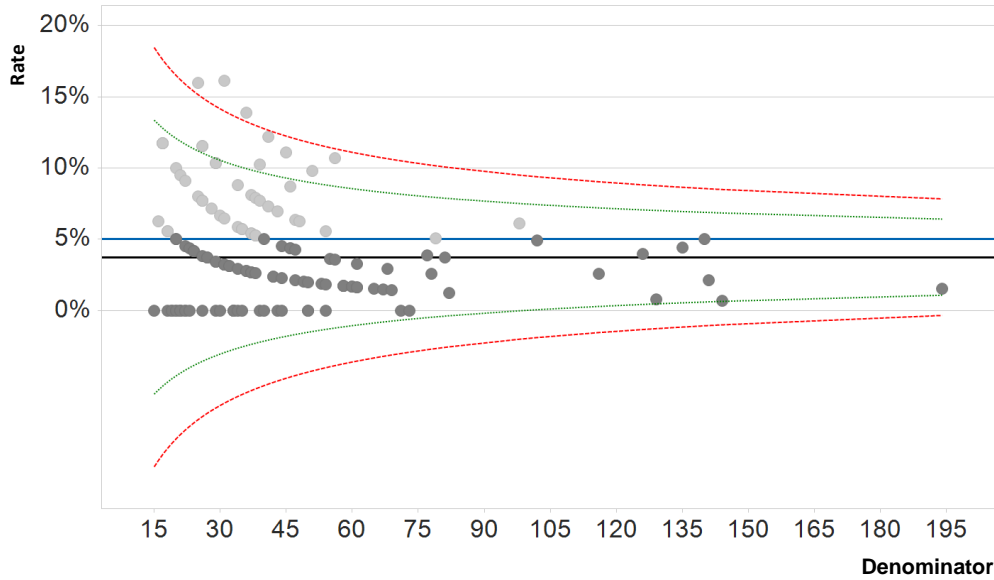
The rate of postoperative wound infections is at the level of previous years. With 26 centres, 2 more centres than in the previous year recorded no wound infection after resection, 17 centres (+1) had an infection rate ≥10% had to give a statement of reasons . The most frequent reasons for wound infections were revision procedures (7x), but also predisposing factors such as obesity (3x), diabetes or therapeutic anticoagulation.

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

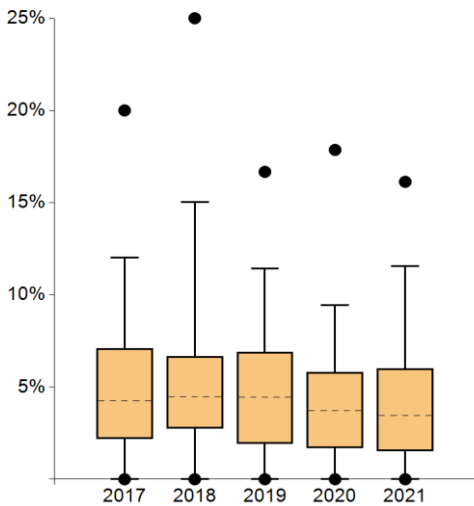
** Percentage of centre patients who were treated according to the indicator

*** For values outside the plausibility limit(s) the centres must give the reasons.

12. Post-operative mortality



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Resections of the denominator in which patients died within 30 d post-operatively	1*	0 - 7	236
Denominator	Pancreatic resections (OPS 5-524* and 5-525** with and without ICD-10 C25) (= Indicator 9)	37*	15 - 194	6295
Rate	Target value ≤ 5%	3.45%	0.00% - 16.13%	3.75%**



	2017	2018	2019	2020	2021
● max	20.00%	25.00%	16.67%	17.86%	16.13%
95 th percentile	12.03%	15.03%	11.43%	9.45%	11.56%
75 th percentile	7.08%	6.67%	6.90%	5.80%	6.00%
Median	4.23%	4.47%	4.44%	3.70%	3.45%
25 th percentile	2.18%	2.77%	1.92%	1.71%	1.55%
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	%
139	100.00%	93	66.91%

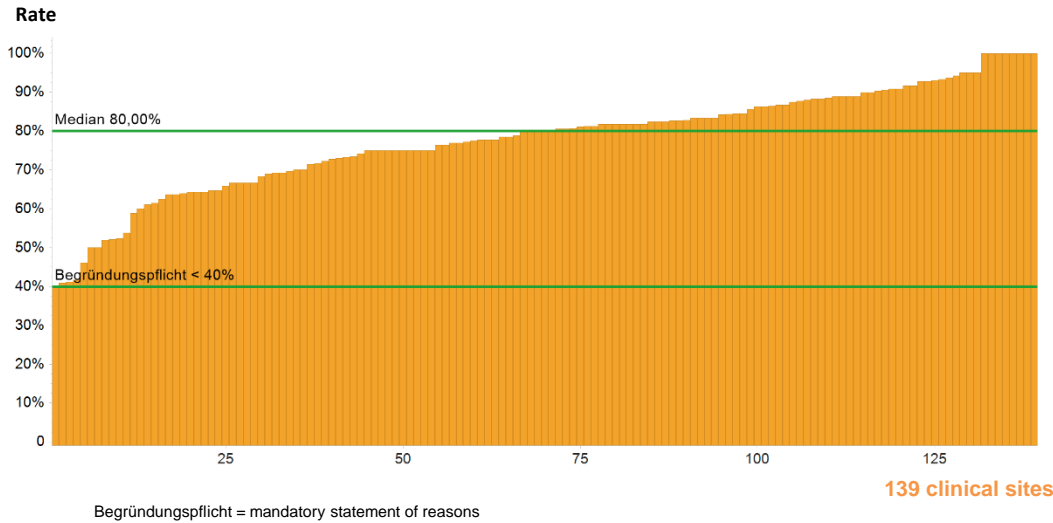
Comments:

At 3.5% and 3.8% respectively, both the median and the overall rate continue to decline compared to the previous year and are significantly lower than the mortality rate of 8.9% for all pancreatic resections performed in Germany in 2019 as determined by Destatis. 46 centres (previous year 44) did not meet the target value of ≤5%. In the individual case analyses, bleeding (21x), followed by liver failure (12x), as well as cardiopulmonary complications (11x each) were most frequently identified as the cause of death. The deaths were usually processed in morbidity and mortality conferences. Numerous referrals were made by the auditors in the audits, no deviation was given.

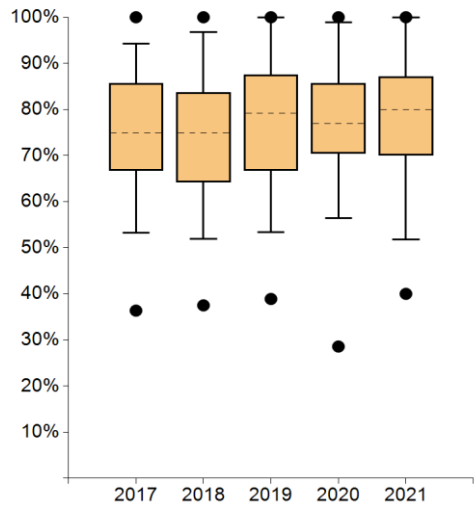
*The medians for numerator and population do not refer to an existing centre but indicate the median of all cohort numerators and the median of all cohort denominators.

** Percentage of centre patients who were treated according to the indicator

13. Local R0 resections pancreas (GL QI)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with local R0 resections after completion of surgical therapy	14*	4 - 66	2441
Denominator	Surgical primary cases pancreas (OPS 5-524*, 5-525** only with ICD-10 C25) (= Indicator 8)	18*	6 - 88	3129
Rate	Mandatory statement of reasons*** < 40%	80.00%	40.00% - 100%	78.01%**



	2017	2018	2019	2020	2021
● max	100%	100%	100%	100%	100%
95 th percentile	94.27%	96.74%	100%	98.87%	100%
75 th percentile	85.71%	83.61%	87.50%	85.71%	87.09%
Median	75.00%	75.00%	79.17%	76.92%	80.00%
25 th percentile	66.67%	64.22%	66.67%	70.48%	70.00%
5 th percentile	53.26%	51.97%	53.33%	56.39%	51.80%
● Min	36.36%	37.50%	38.89%	28.57%	40.00%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
139	100.00%	139	100.00%

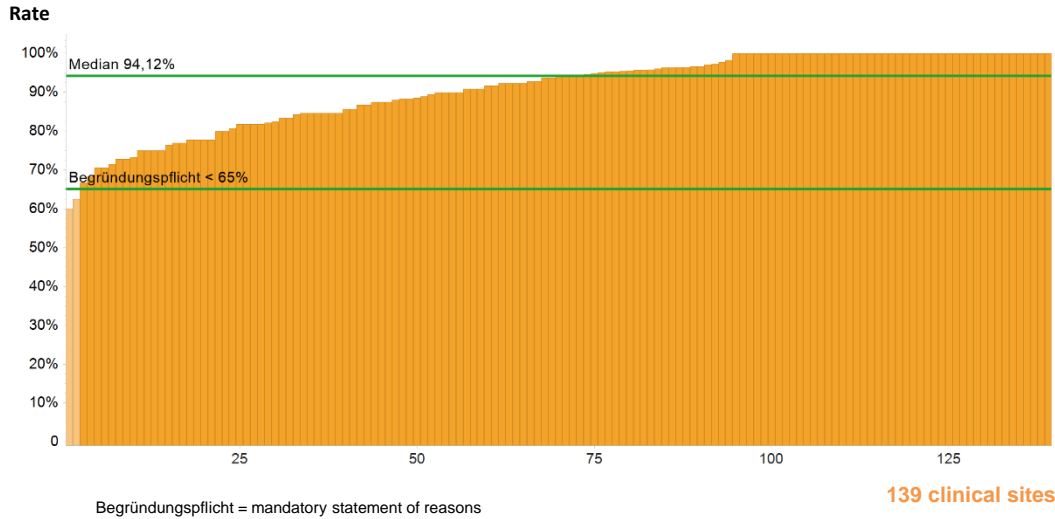
Comments:
The R0 resection rate has increased over the entire range in the last 5 years. For the first time in 2021, not only does the median of all centres exceed the 80% mark, but also all centres without exception are above the mandatory statement of reasons of <40%.

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

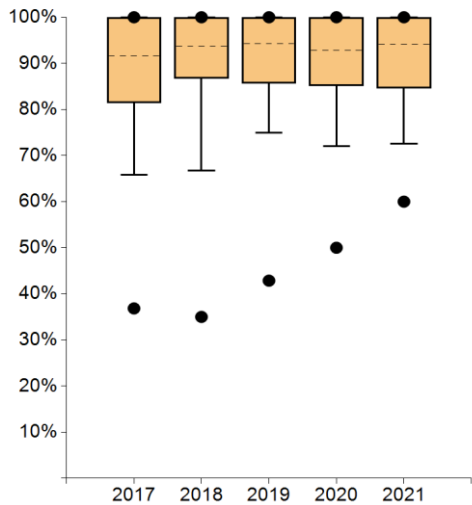
** Percentage of centre patients who were treated according to the indicator

*** For values outside the plausibility limit(s) the centres must give the reasons.

14. Lymph node resection (GL QI)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with ≥ 12 regional lymph nodes in the surgical specimen after conclusion of surgical therapy.	15*	3 - 60	2468
Denominator	Surgical primary cases (OPS: 5-524*, 5-525** only with ICD-10 C25) without NET and NEC, who have undergone a lymphadenectomy.	17*	5 - 64	2694
Rate	Mandatory statement of reasons*** < 65%	94.12%	60.00% - 100%	91.61%**



	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	91.67%	93.75%	94.29%	92.86%	94.12%
25 th percentile	81.39%	86.67%	85.71%	85.15%	84.62%
5 th percentile	65.81%	66.67%	75.00%	72.08%	72.60%
● Min	36.84%	35.00%	42.86%	50.00%	60.00%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
139	100.00%	137	98.56%

Comments:

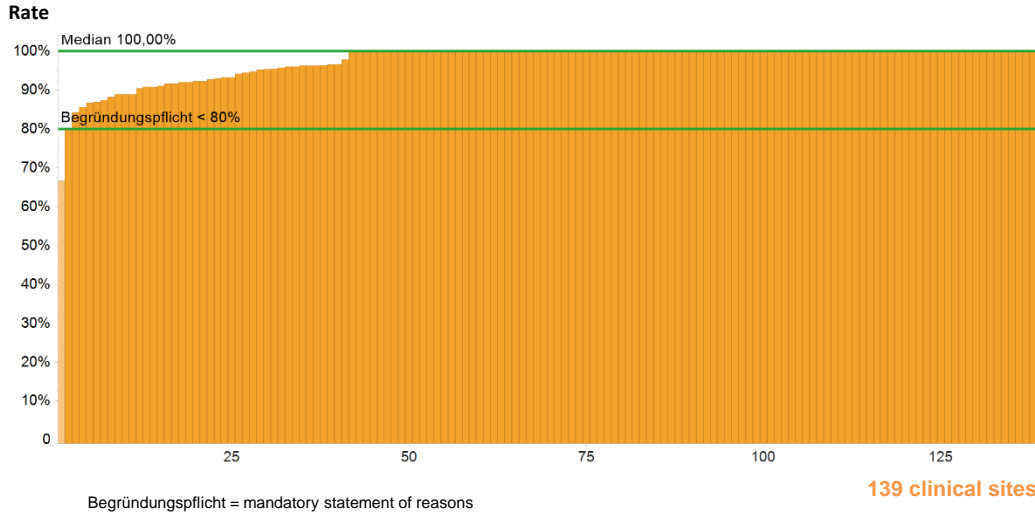
The quality indicator of the guideline is increasingly better implemented by the centres; this is reflected in the positive development of the minimum values, the lower percentiles as well as the median. In 2 centres (previous year 4), a sufficient number of lymph nodes could be confirmed in the surgical specimen in less than 65% of resections. Reasons for this included limited resections with intraoperative evidence of metastases or diagnosis of a malignancy in the final, postoperative assessment.

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

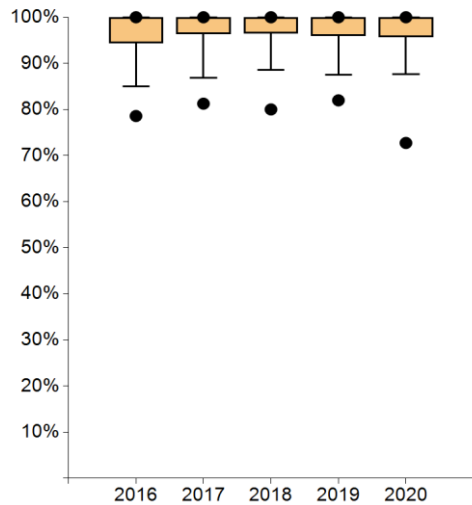
** Percentage of centre patients who were treated according to the indicator

*** For values outside the plausibility limit(s) the centres must give the reasons.

15. Content pathology report (GL QI)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with reports of findings with indication of: pT, pN, M; tumour grading: ratio of affected to removed lymph nodes	16*	5 - 69	2672
Denominator	Surgical primary cases (OPS: 5-524*, 5-525** exclusively with ICD-10 C25) without NET and NEC	17*	5 - 69	2742
Rate	Mandatory statement of reasons*** < 80%	100%	66.67% - 100%	97.45%**



	2017	2018	2019	2020	2021
● max	----	----	----	----	100%
95 th percentile	----	----	----	----	100%
75 th percentile	----	----	----	----	100%
Median	----	----	----	----	100%
25 th percentile	----	----	----	----	96.30%
5 th percentile	----	----	----	----	88.17%
● Min	----	----	----	----	66.67%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
139	100.00%	138	99.28%

Comments:

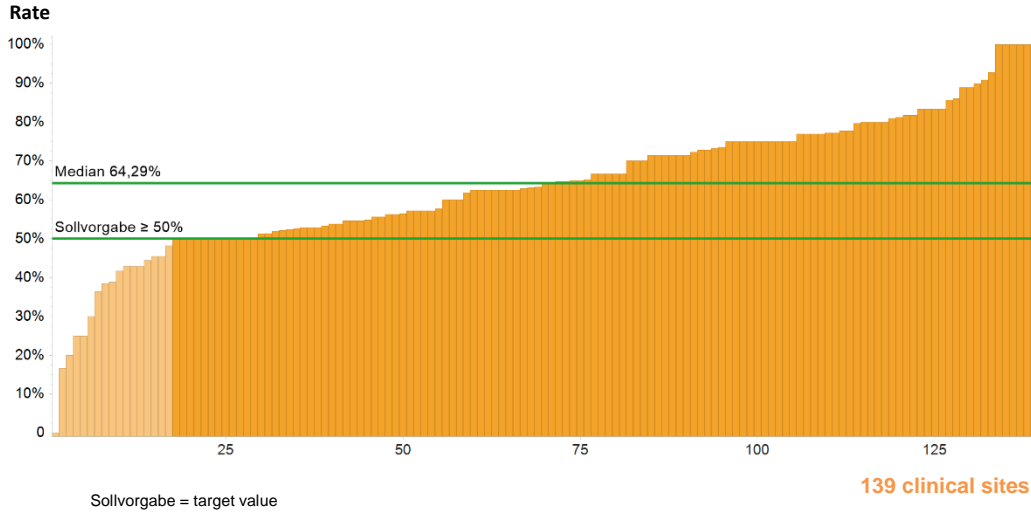
After modification of the 2021 denominator (exclusion of NET/NEC among others), the results are slightly above the level of the former indicator. In 98 centres (= 70.5%) the findings were complete for all primary cases of the denominator, in 127 centres the degree of fulfilment was ≥90%. With one exception, all centres exceeded the lower plausibility limit of 80%; the centre justified the shortfall with missing information on grading in neoadjuvantly pre-treated patients and only residually detectable carcinoma infiltrates.

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

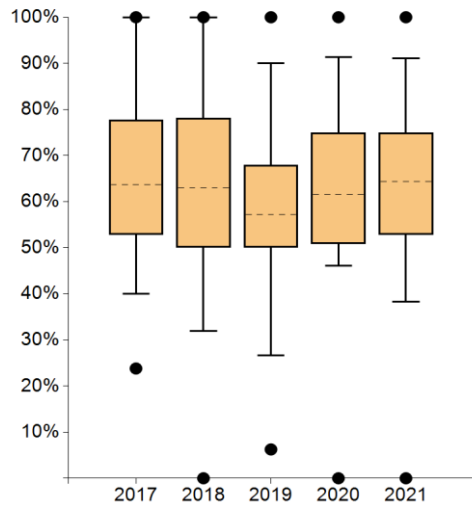
** Percentage of centre patients who were treated according to the indicator

*** For values outside the plausibility limit(s) the centres must give the reasons.

16. Adjuvant chemotherapy (GL QI)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with adjuvant chemotherapy	8*	0 - 43	1277
Denominator	Surgical primary cases pancreatic cancer UICC stages I-III and R0 resection (without NET and NEC)	12*	2 - 54	1997
Rate	Target value ≥ 50%	64.29%	0.00% - 100%	63.95%**



	2017	2018	2019	2020	2021
● max	100%	100%	100%	100%	100%
● 95 th percentile	100%	100%	90.00%	91.29%	91.11%
● 75 th percentile	77.65%	78.07%	67.86%	75.00%	75.00%
● Median	63.64%	63.07%	57.14%	61.54%	64.29%
● 25 th percentile	52.81%	50.00%	50.00%	50.81%	52.79%
● 5 th percentile	40.00%	31.94%	26.67%	46.06%	38.25%
● Min	23.81%	0.00%	6.25%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
139	100.00%	122	87.77%

Comments:

The results show a divergent development with a wide range of the indicator. While the positive development of median, overall rate and upper percentiles has continued, the 5th percentile and the number of sites meeting the target value have declined (previous year 93.9%). The 17 centres (2020: 8) with a rate <50% attributed this to postoperative deaths (13 mentions), rejection of recommended therapy by the patients (12x), and reduced general condition (10x). During the audits, the auditors pointed out that information about adjuvant therapy should be obtained in case of external further treatment.

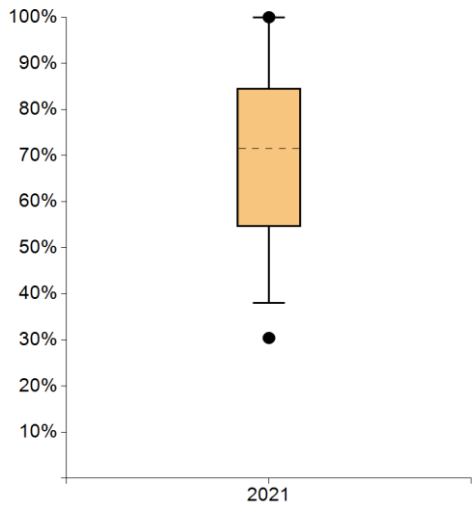
*The medians for numerator and population do not refer to an existing centre but indicate the median of all cohort numerators and the median of all cohort denominators.

** Percentage of centre patients who were treated according to the indicator

17. Palliative chemotherapy (GL QI)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patient Total
Numerator	Patients of the denominator with palliative chemotherapy	14*	1 - 113	2366
Denominator	Non-operative primary cases of pancreatic cancer and ECOG 0-2 (without NET and NEC) Pat. with pancreatic carcinoma with secondary metastasis (M1) without metastasectomy and ECOG 0-2 (without NET/NEC)	22*	1 - 151	3419
Rate	Mandatory statement of reasons*** < 30%	71.43%	30.43% - 100%	69.20%**



	2017	2018	2019	2020	2021
● max	----	----	----	----	100%
95 th percentile	----	----	----	----	100%
75 th percentile	----	----	----	----	84.62%
Median	----	----	----	----	71.43%
25 th percentile	----	----	----	----	54.55%
5 th percentile	----	----	----	----	37.99%
● Min	----	----	----	----	30.43%

Clinical sites with evaluable data		Clinical sites within the plausibility limits	
Number	%	Number	%
139	100.00%	139	100.00%

Comments:

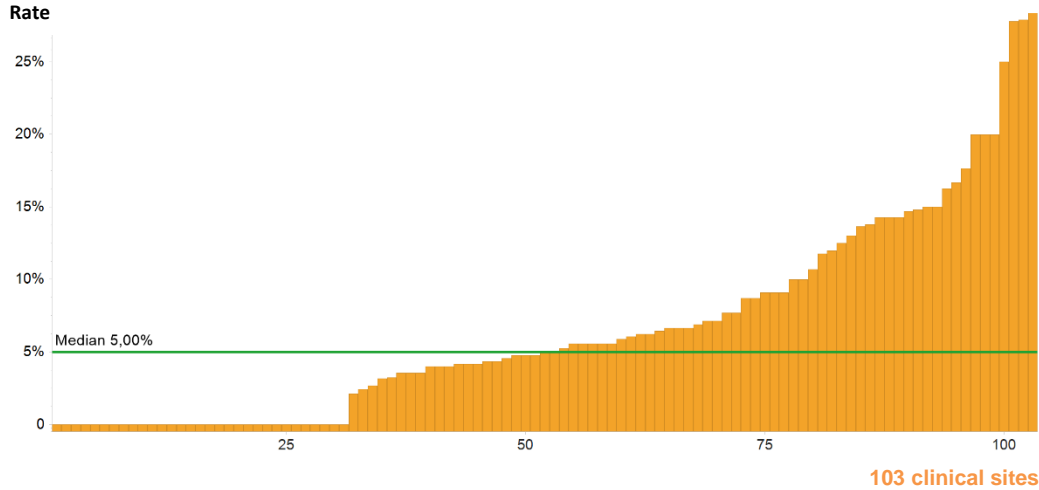
After modification of the QI in the GL update in 2021, the denominator of the indicator year was adjusted in the same year and this was recorded for the first time in a revised form. The results of the modified indicator are slightly above the level of the previous indicator across the entire range. On median, > 70% of index patients received palliative chemotherapy. All 139 centres met the lower plausibility limit of at least 30%.

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

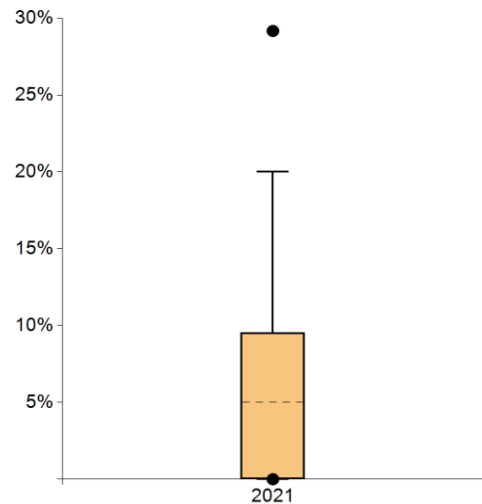
** Percentage of centre patients who were treated according to the indicator.

*** For values outside the plausibility limit(s) the centres must give the reasons.

18. Primary resection for metastatic Pancreatic Cancer (GL QI)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patient Total
Numerator	Primary cases of the denominator with primary resection of the tumour	1*	0 - 12	156
Denominator	Primary cases of pancreatic cancer (without NET/NEC) with distant metastases (=organ metastases, peritoneal carcinomatosis, lymph node metastases considered as distant metastases (M1)).	22*	6 - 79	2428
Rate	No target value	5.00%	0.00% - 29.17%	6.43%**



	2017	2018	2019	2020	2021
max	----	----	----	----	29.17%
95 th percentile	----	----	----	----	20.00%
75 th percentile	----	----	----	----	9.55%
Median	----	----	----	----	5.00%
25 th percentile	----	----	----	----	0.00%
5 th percentile	----	----	----	----	0.00%
Min	----	----	----	----	0.00%

Clinical sites with evaluable data		Clinical sites within the target value	
Number	%	Number	%
103	74.10%	----	----

Comments:

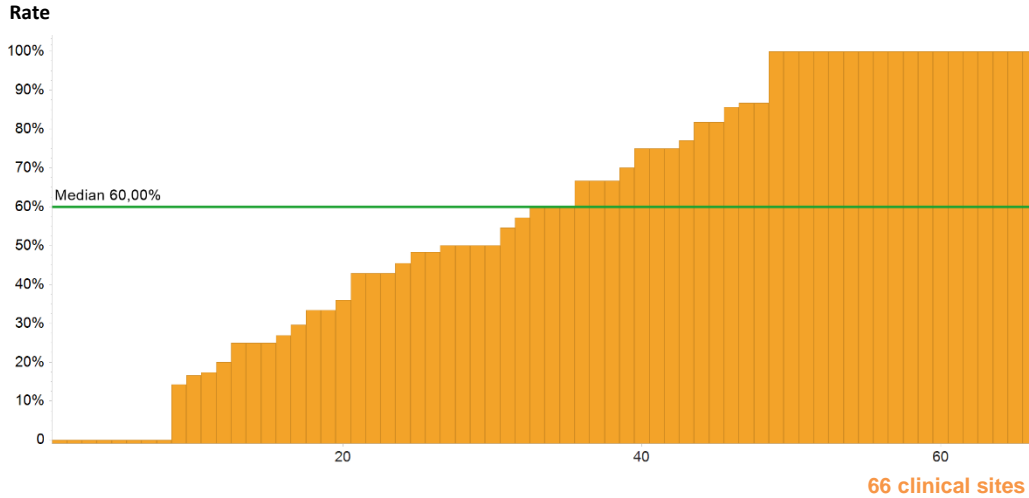
The GL QI on which this indicator is based was redefined as part of the GL update 2021 and was recorded by the centres on a voluntary basis for the first time. In the 103 clinical sites with evaluable data, tumour resections were performed in a median of 5% of primary cases despite distant metastases. In 30 centres, no resections were performed in these primary cases, in 7 centres in more than 20%. Due to the still missing target value, information on the reasons for a resection is missing so far.

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

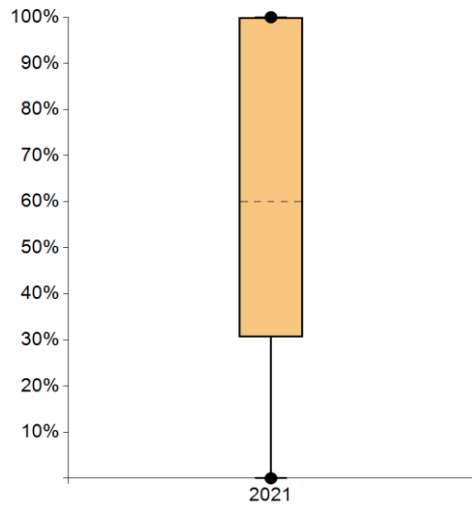
** Percentage of centre patients who were treated according to the indicator.

*** For values outside the plausibility limit(s) the centres must give the reasons.

19. Second-line therapy (GL QI)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patient Total
Numerator	Patients of the denominator with second-line therapy	3*	0 - 27	304
Denominator	Patients with pancreatic cancer (without NET/NEC), ECOG 0-2 and progression under palliative first-line therapy	6*	1 - 35	576
Rate	No target value	60.00%	0.00% - 100%	52.78%**



	2017	2018	2019	2020	2021
● max	----	----	----	----	100%
95 th percentile	----	----	----	----	100%
75 th percentile	----	----	----	----	100%
Median	----	----	----	----	60.00%
25 th percentile	----	----	----	----	30.56%
5 th percentile	----	----	----	----	0.00%
● Min	----	----	----	----	0.00%

Clinical sites with evaluable data		Clinical sites within the target value	
Number	%	Number	%
66	47.48%	----	----

Comments:

The QI for second-line therapy was collected optionally for the first time in 2021 and shows a wide range [0-100%, median 60%] in the 66 centres with evaluable data. In 7 centres, with small denominators [1-9, median 2], no patients with progression under palliative first-line therapy received second-line therapy. In contrary, in 18 centres all of these patients [1-7, median 2] received second-line therapy..

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

** Percentage of centre patients who were treated according to the indicator.

*** For values outside the plausibility limit(s) the centres must give the reasons.

WISSEN AUS ERSTER HAND (FIRST-HAND KNOWLEDGE)

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