



# Annual Report 2023

## of the Certified Colorectal Cancer Centres (CRCCs)

Audit year 2022 / Indicator year 2021

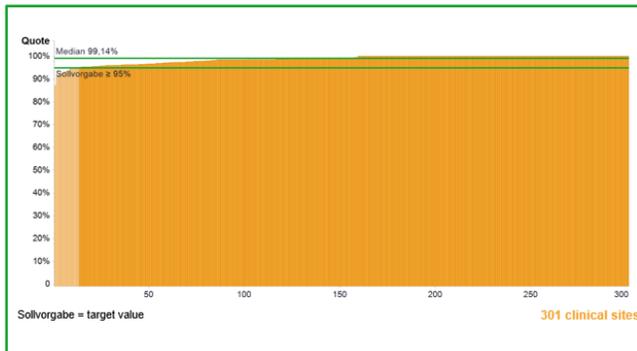
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## General information

Indicator analysis	
Indicator No 1:	Patients with new recurrence and/or distant metastases
Indicator No 2a:	Pre-therapeutic tumour board (GL QI)
Indicator No 2b:	Pre-therapeutic tumour board: recurrences/metachronous metastases
Indicator No 3:	Post-operative tumour board
Indicator No 4:	Psycho-oncological counselling

	Indicator definition	All clinical sites 2020		
		Median	Range	Patients Total
Numerator	Patients presented at an interdisciplinary tumour board before therapy	35*	9 - 101	11471
Denominator	"Elective" patients with rectal carcinoma and "elective" patients with stage IV colon carcinoma	36*	10 - 107	12018
Rate	Target value ≥ 95%	96,55%	69,57% - 100%	95,45%**



### Quality indicators of the guidelines (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](http://www.leitlinienprogramm-onkologie.de)\*

The Quality Indicators (QI's) refer to the version 2.1 of the S3 GGPO Guideline Colorectal Cancer.

### 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.

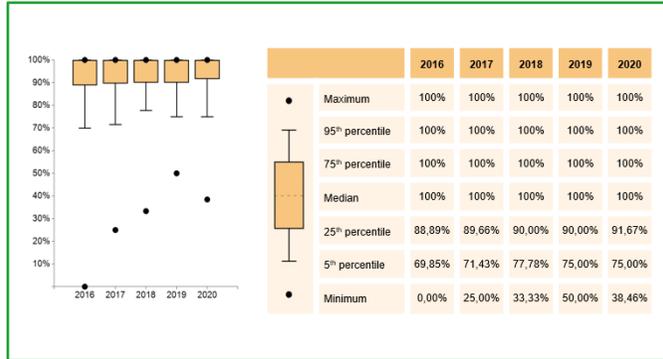
The column **Patients Total** displays the total of all patients treated according to the indicator and the corresponding quota.

### 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.

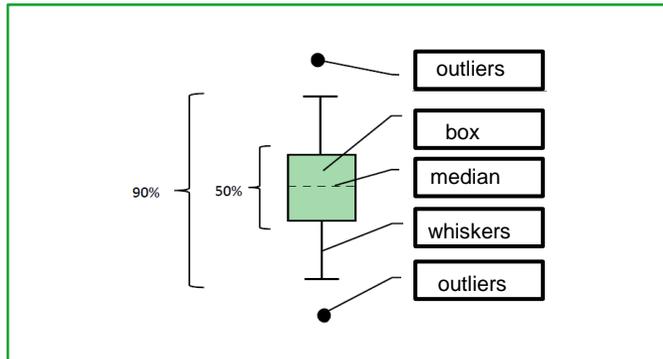
\*For further information on the methodological approach see „Development of guideline-based quality indicators“ ([https://www.leitlinienprogramm-onkologie.de/fileadmin/user\\_upload/Downloads/Methodik/QIEP\\_OL\\_Version2\\_english.pdf](https://www.leitlinienprogramm-onkologie.de/fileadmin/user_upload/Downloads/Methodik/QIEP_OL_Version2_english.pdf))

## General information



### Cohort development:

The **cohort development** in **2017, 2018, 2019, 2020** and **2021** is graphically represented with box plots.



### Box plot:

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

## Status of the certification system for Colorectal Cancer Centres 2022

	31.12.2022	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017
Ongoing certification procedures	10	12	5	9	4	6
Certified centres	310	305	298	285	283	281
Certified clinical sites	315	312	305	292	291	290
CCs with 1 clinical site	307	300	293	280	278	275
2 clinical sites	1	3	3	3	3	4
3 clinical sites	2	2	2	2	1	1
4 clinical sites	0	0	0	0	1	1

## Included clinical sites

	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	297	301	296	284	284	283
Equivalent to	94.3%	96.5%	97.1%	97.3%	97.6%	97.6%
Primary cases total*	26,993	26,998	28,595	27,802	26,804	26,285
Primary cases per centre (mean)*	91	90	97	98	94	93
Primary cases per centre (Median)*	84	83	92	90	88	87

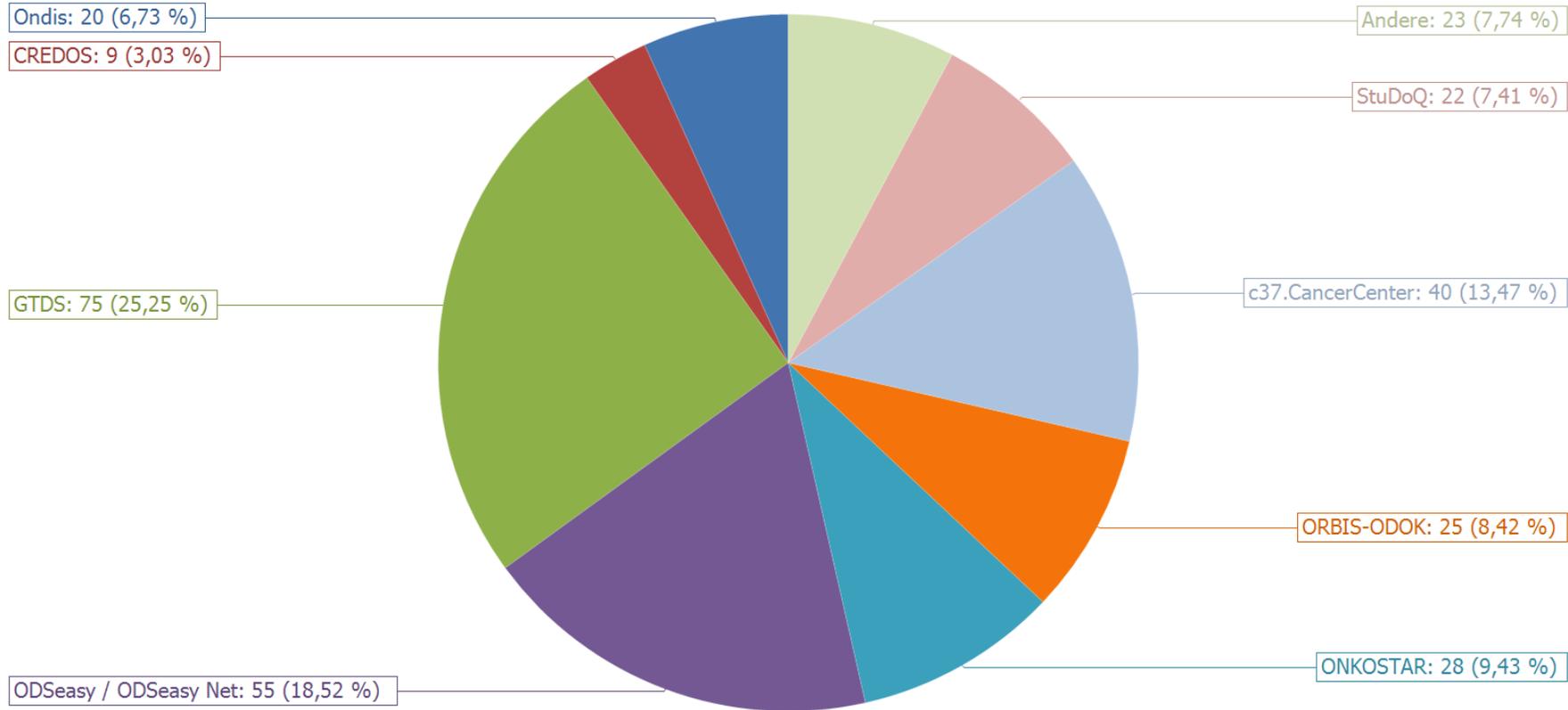
\* The figures refer to all certified centres

This annual report looks at the Colorectal 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.

297 of the 315 certified centre sites are included in the annual report. Excluded are 7 clinical sites that were certified for the first time in 2022 (data mapping of complete calendar year not mandatory for first-time certifications) and 1 clinical site in a non-European country (connection to OncoBox not mandatory). In addition, 2 clinical sites were not taken into account for which no approved data sheet was available by the data deadline of 31.01.2023, as well as 2 further clinical sites for which it was not possible to use the OncoBox (binding OncoBox connection). For 6 clinical sites, the certificate was suspended in the first half of 2023; in 2022, no more audits were carried out and no data sheet was submitted.

A total of 29,154 primary cases were treated at the 309 clinical sites. A current overview of all certified sites is shown at [www.oncomap.de](http://www.oncomap.de). The indicators published here refer to the indicator year 2021. They represent the basis for evaluation for the audits carried out in 2022.

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



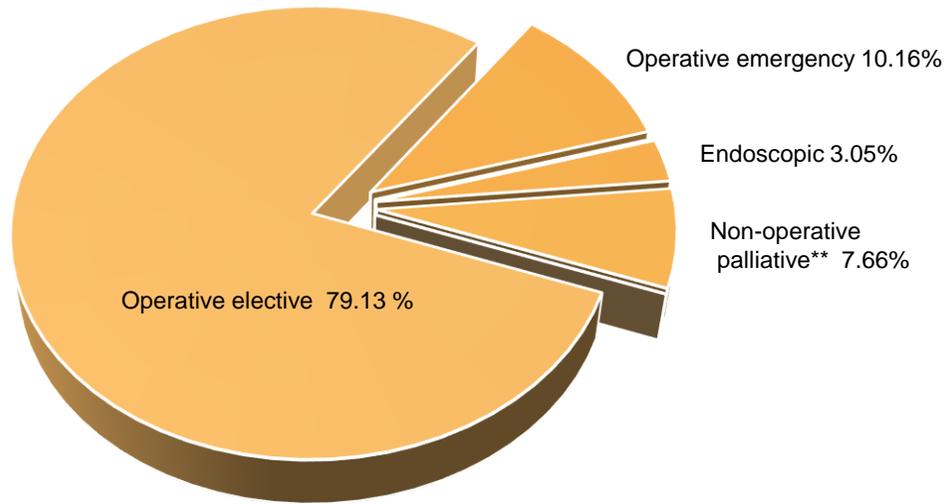
Andere = other

Legend:	
Other	System used in ≤ 4 clinical sites

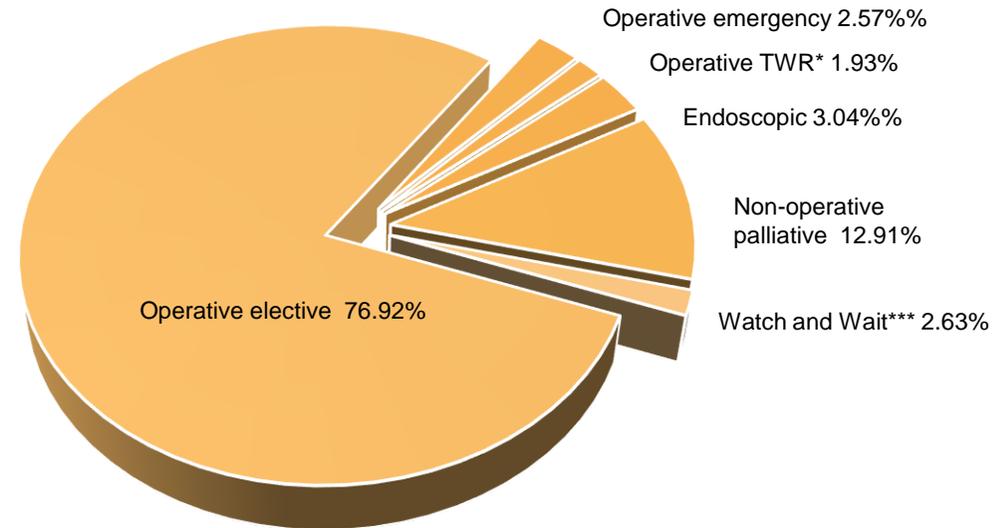
The details on the tumour documentation system was taken from the Data Sheet (Basic Data Sheet). It is not possible to use more than one system. In many cases, support is provided by the cancer registries or there may be a direct link to the cancer registry via a specific tumor documentation system.

## Basic data

### Colon



### Rectum



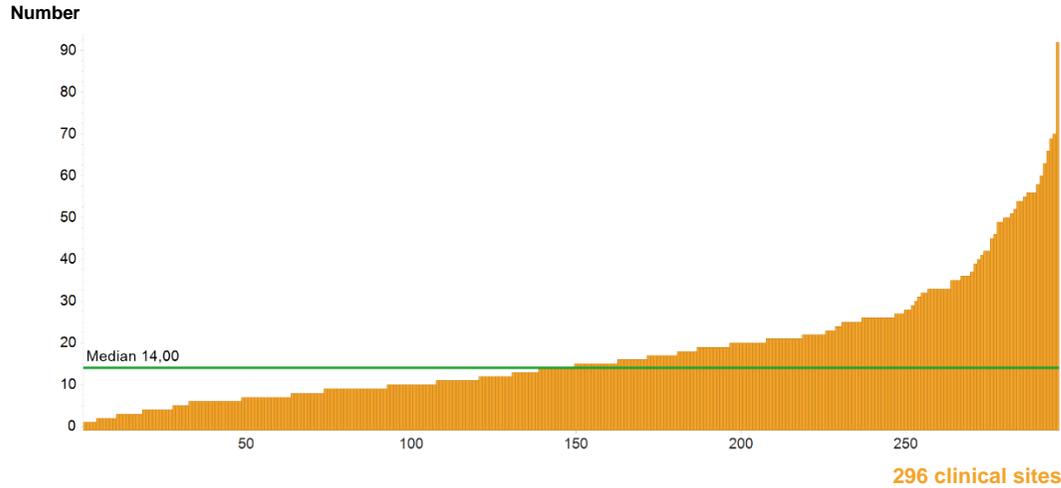
	Operative elective	Operative emergency	Operative TWR*	Endoscopic	Non-operative palliative **	Watch and Wait (Non-operative/non-endoscopic curative) ***	Total
<b>Colon</b>	13,873 (79.13%)	1,781 (10.16%)	---	535 (3.05%)	1,343 (7.66%)	0 (0.00%)	17,532 (100%)
<b>Rectum</b>	7,277 (76.92%)	243 (2.57%)	183 (1.93%)	288 (3.04%)	1,221 (12.91%)	249 (2.63%)	9,461 (100%)
<b>Primary Cases Total</b>	21,150	2,024	183	823	2,564	249	26,993

\* Operative transanal wall resection (TWR)

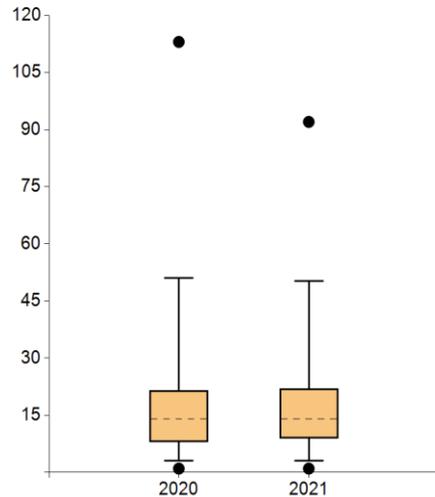
\*\* Non-operative palliative: no tumour resection; palliative radiotherapy/chemotherapy or best supportive care

\*\*\* Watch and Wait (non-operative/non-endoscopic curative): complete tumour remission after planned neoadjuvant therapy and patient's foregoing of surgery

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



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numb	Patients with new recurrence and/or distant metastases	14	1 - 92	5323
	No target value			



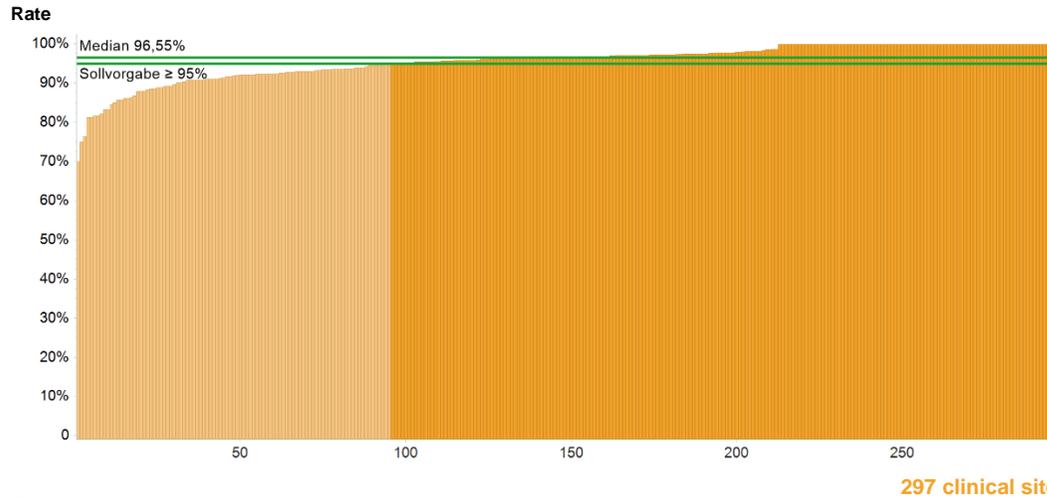
	2017	2018	2019	2020	2021
● Maximum	----	----	----	113,00	92,00
95 <sup>th</sup> percentile	----	----	----	51,00	50,25
75 <sup>th</sup> percentile	----	----	----	21,50	22,00
Median	----	----	----	14,00	14,00
25 <sup>th</sup> percentile	----	----	----	8,00	9,00
5 <sup>th</sup> percentile	----	----	----	3,00	3,00
● Minimum	----	----	----	1,00	1,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
296	99.66%	----	----

**Comments:**

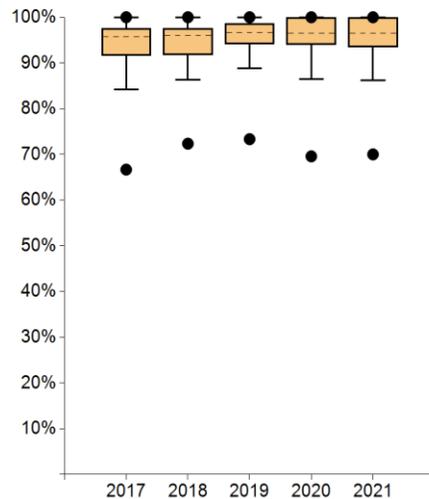
The number of new recurrences and secondary distant metastases has been recorded since the calendar year 2020. There were no significant changes compared to the previous year. On average, a centre treated 14 such patients in the indicator year 2021.

## 2a. Pre-therapeutic tumour board (GL QI)



Sollvorgabe = target value

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator presented at an interdisciplinary tumour board before therapy	35*	10 - 121	11542
Denominator	"Elective" patients with rectal cancer and "elective" all patients with stage IV colon cancer	36*	12 - 121	12080
Rate	Target value ≥ 95%	96.55%	70.00% - 100%	95.55%**



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	97.50%	97.61%	98.58%	100%	100%
Median	95.70%	95.96%	96.67%	96.55%	96.55%
25 <sup>th</sup> percentile	91.67%	91.77%	94.09%	93.94%	93.48%
5 <sup>th</sup> percentile	84.17%	86.36%	88.89%	86.42%	86.21%
Minimum	66.67%	72.34%	73.33%	69.57%	70.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	202	68.01%

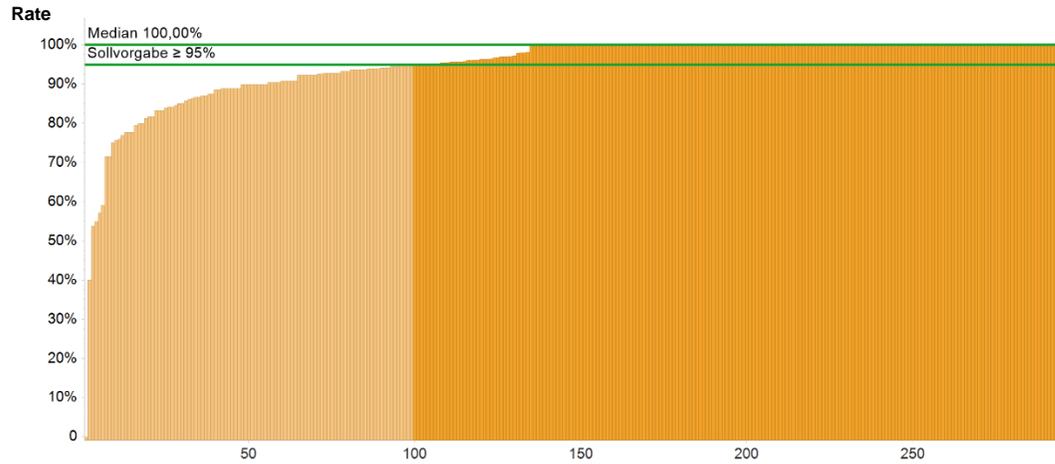
### Comments:

The rate of pre-therapeutic case presentation remained almost unchanged. 95 centres (previous year: 97) failed to meet the target value. 71 of these centres reported malignancies or metastases diagnosed only intra- or postoperatively. Urgent interventions (usually due to signs of stenosis) were reported by 35 centres. In 28 centres, preoperatively diagnosed sigmoid cancers turned out to be rectal cancers intraoperatively. 20x omissions in individual cases were mentioned. In many cases, the auditors made remarks, especially with regard to the introduction of ad hoc conferences, preoperative rigid rectoscopy and training.

\*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.

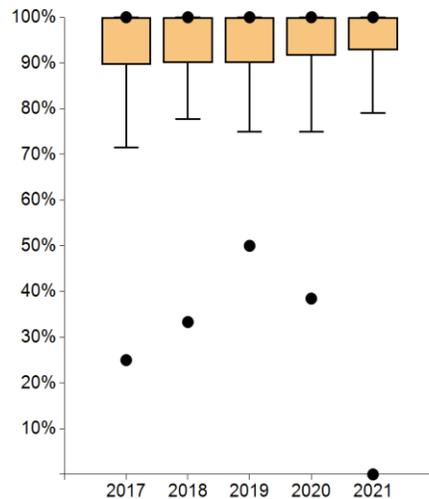
## 2b. Pre-therapeutic tumour board: recurrences/metachronous metastases



Sollvorgabe = target value

296 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator presented at the pre-therapeutic tumour board	14*	0 - 90	5019
Denominator	Patients with new recurrence and/or distant metastases (= Indicator 1)	14*	1 - 92	5323
Rate	Target value $\geq 95\%$	100%	0.00% - 100%	94.29%**



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	100%	100%	100%	100%	100%
Median	100%	100%	100%	100%	100%
25 <sup>th</sup> percentile	89.66%	90.00%	90.00%	91.67%	92.86%
5 <sup>th</sup> percentile	71.43%	77.78%	75.00%	75.00%	79.06%
Minimum	25.00%	33.33%	50.00%	38.46%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
296	99.66%	197	66.55%

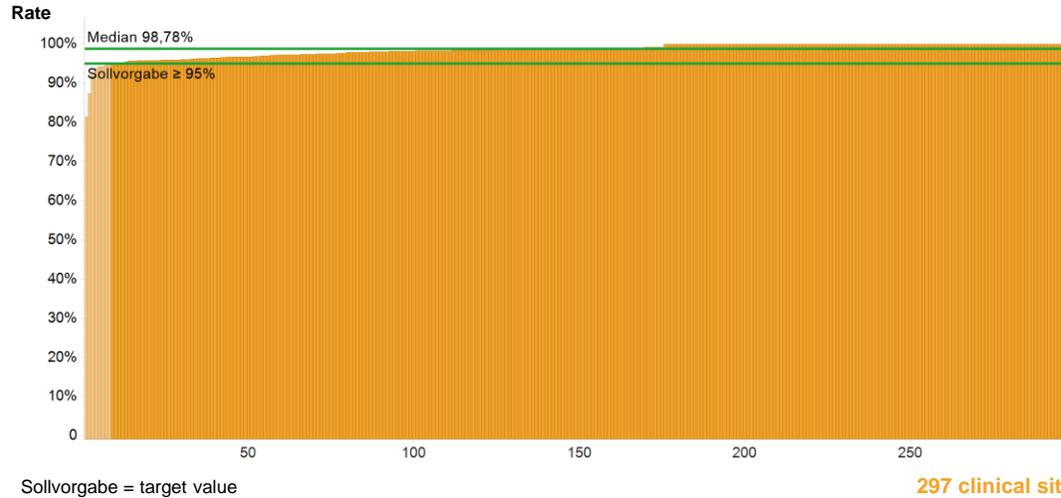
### Comments:

With a slightly improved overall rate, the 5th and 25th percentiles have improved slightly. With 99 centres, 2 more than in the previous year failed to meet the target value. A presentation was omitted primarily in the case of urgent or emergency interventions (22 mentions), omissions in individual cases (21x), incidental findings (19x), rejection of further therapy by the patient (18x) and externally presented patients (10x). The auditors also pointed out the necessity of consistent presentation for this indicator; sometimes the centres also conducted training and quality circles. In addition to many remarks, one centre received a deviation.

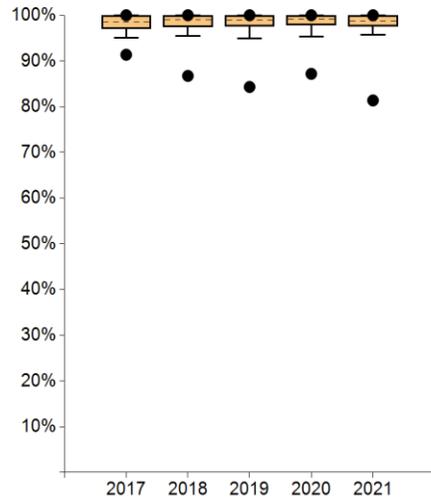
\*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

\*\* 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 at the post-operative tumour board	75*	36 - 224	23816
Denominator	Surgical and endoscopic primary cases	76*	36 - 227	24180
Rate	Target value $\geq 95\%$	98.78%	81.36% - 100%	98.49%**



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	100%	100%	100%	100%	100%
Median	98.45%	98.97%	98.83%	99.14%	98.78%
25 <sup>th</sup> percentile	97.01%	97.45%	97.59%	97.85%	97.53%
5 <sup>th</sup> percentile	95.01%	95.49%	94.93%	95.31%	95.71%
Minimum	91.36%	86.73%	84.31%	87.18%	81.36%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	289	97.31%

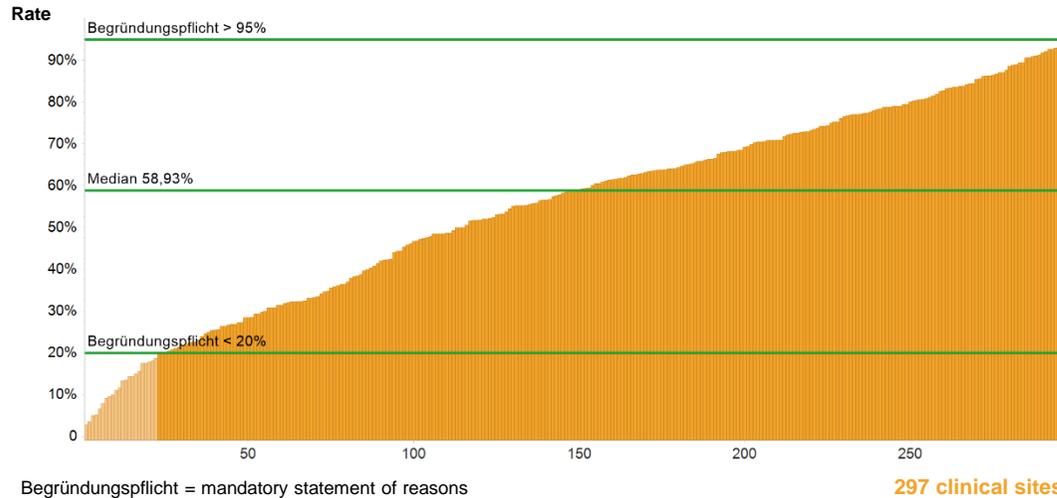
**Comments:**

With 8 centres, 5 fewer than in the previous year failed to meet the target value, while the overall median remained stable. 122 centres achieved a rate of 100%. The centres below the target value mainly referred to patients who died immediately after surgery (7x). 2 centres reported omissions in individual cases. Other reasons were mentioned only rarely.

\*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.

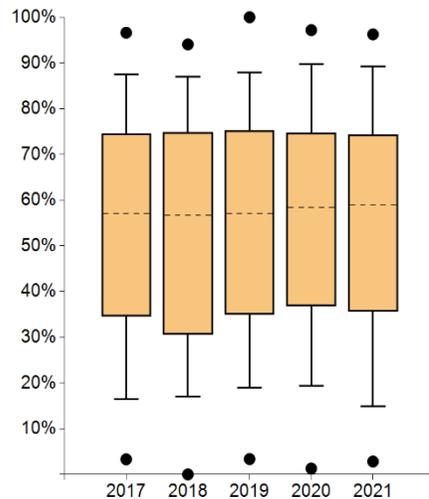
\*\* Percentage of centre patients who were treated according to the indicator.

## 4. Psycho-oncological counselling



Begründungspflicht = mandatory statement of reasons

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who received psycho-oncological counselling in an inpatient or outpatient setting (duration of consultation ≥ 25 min)	56*	2 - 165	17256
Denominator	Total primary cases + patients with new recurrence and/or distant metastases (= Indicator 1)	101*	40 - 336	32316
Rate	Mandatory statement of reasons*** <20% and >95%	58.93%	2.82% - 96.25%	53.40%**



	2017	2018	2019	2020	2021
● Maximum	96.61%	94.05%	100%	97.18%	96.25%
95 <sup>th</sup> percentile	87.50%	86.96%	87.87%	89.77%	89.20%
75 <sup>th</sup> percentile	74.49%	74.75%	75.24%	74.67%	74.32%
Median	57.11%	56.73%	57.05%	58.44%	58.93%
25 <sup>th</sup> percentile	34.58%	30.67%	34.92%	36.84%	35.64%
5 <sup>th</sup> percentile	16.51%	16.92%	19.01%	19.35%	14.89%
● Minimum	3.30%	0.00%	3.36%	1.28%	2.82%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
297	100.00%	274	92.26%

### Comments:

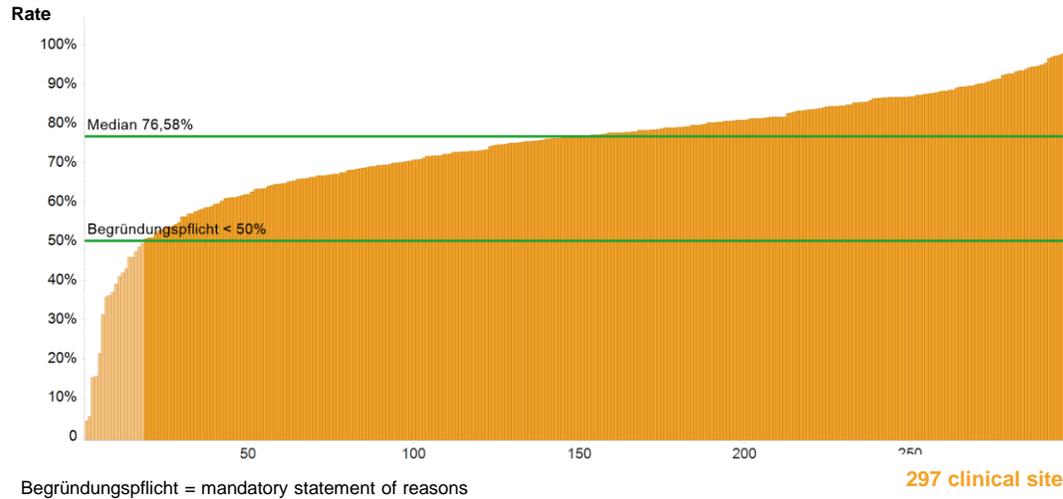
The rate of psycho-oncological counselling is at the same level as the previous year. 23 centres (previous year: 18) had to justify results below 20%. 10 referred to low patient demand, 4 to staff shortages. 2 centres claimed the effects of the Covid19 pandemic. In the audits, measures for intensified screening of those affected and for eliminating staff shortages were discussed first and foremost.

\*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.

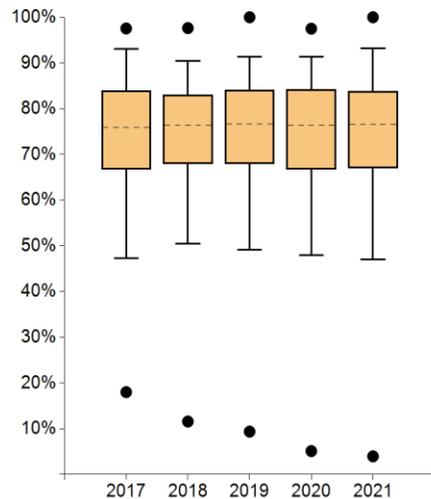
\*\* Percentage of centre patients who were treated according to the indicator.

\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

## 5. Social service counselling



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who received counselling by social services in an inpatient or outpatient setting	74*	3 - 265	23708
Denominator	Total primary cases + patients with new recurrence and/or metastases (= Indicator 1)	101*	40 - 336	32316
Rate	Mandatory statement of reasons*** <50%	76.58%	3.95% - 100%	73.36%**



	2017	2018	2019	2020	2021
Maximum	97.54%	97.62%	100%	97.50%	100%
95 <sup>th</sup> percentile	93.12%	90.37%	91.28%	91.36%	93.24%
75 <sup>th</sup> percentile	83.90%	83.04%	84.10%	84.21%	83.78%
Median	75.84%	76.45%	76.61%	76.36%	76.58%
25 <sup>th</sup> percentile	66.78%	67.95%	67.93%	66.67%	66.96%
5 <sup>th</sup> percentile	47.29%	50.43%	49.19%	48.00%	46.99%
Minimum	18.00%	11.57%	9.36%	5.10%	3.95%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
297	100.00%	279	93.94%

### Comments:

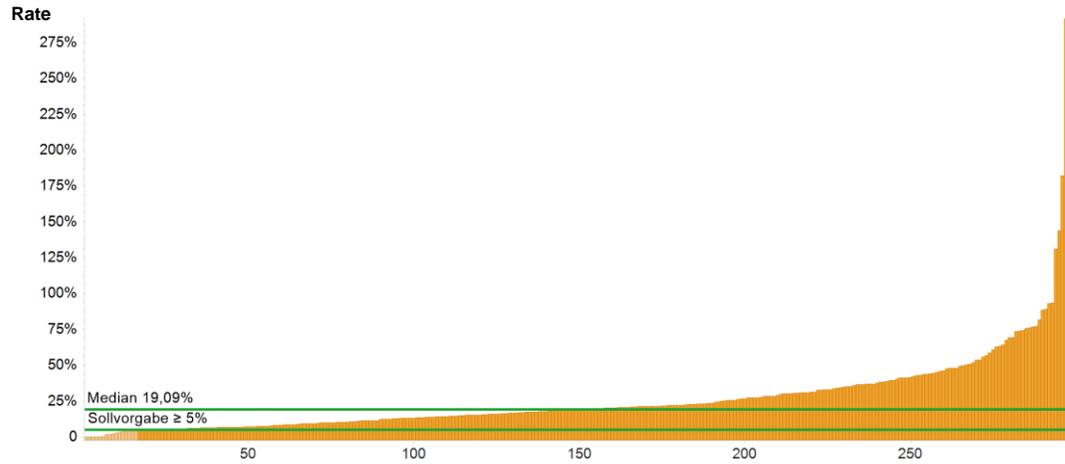
Counselling by the social service also shows fairly constant values. Of the 18 centres outside the plausibility limits (previous year: 17), 9 were located in German-speaking countries where other legal entitlements and responsibilities apply. 5 centres referred to the effects of the Covid19 pandemic, which prevented many patients from having contact with other people. Sometimes (2x) a low need for counselling was also noted. The centres attempted to improve the rates in the future by improving the way they approached patients and by setting up a social service consultation hour.

\*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.

\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

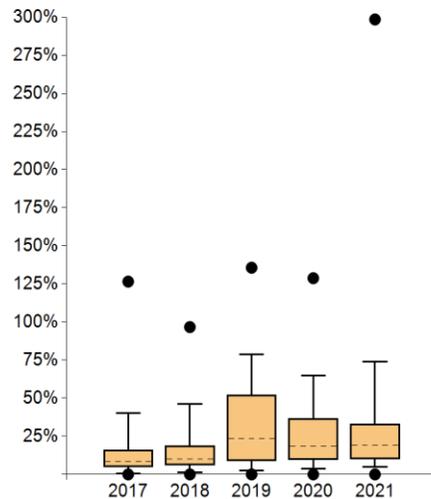
## 6. Patients enrolled in a study



Sollvorgabe = target value

297 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the CrCC included in a study or colorectal prevention study	17*	0 - 301	7091
Denominator	Total primary cases	84*	37 - 267	26993
Rate	Target value $\geq$ 5%	19.09%	0,00% - 298.53%	26.27%**



	2017	2018	2019	2020	2021
Maximum	126,53%	96,67%	135,64%	128,75%	298,53%
95 <sup>th</sup> percentile	40,33%	46,19%	78,65%	64,96%	73,83%
75 <sup>th</sup> percentile	16,18%	18,85%	52,28%	36,54%	32,95%
Median	8,53%	9,93%	23,63%	18,45%	19,09%
25 <sup>th</sup> percentile	5,10%	5,97%	9,02%	9,68%	10,23%
5 <sup>th</sup> percentile	0,48%	1,49%	2,61%	3,65%	4,79%
Minimum	0,00%	0,00%	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	281	94.61%

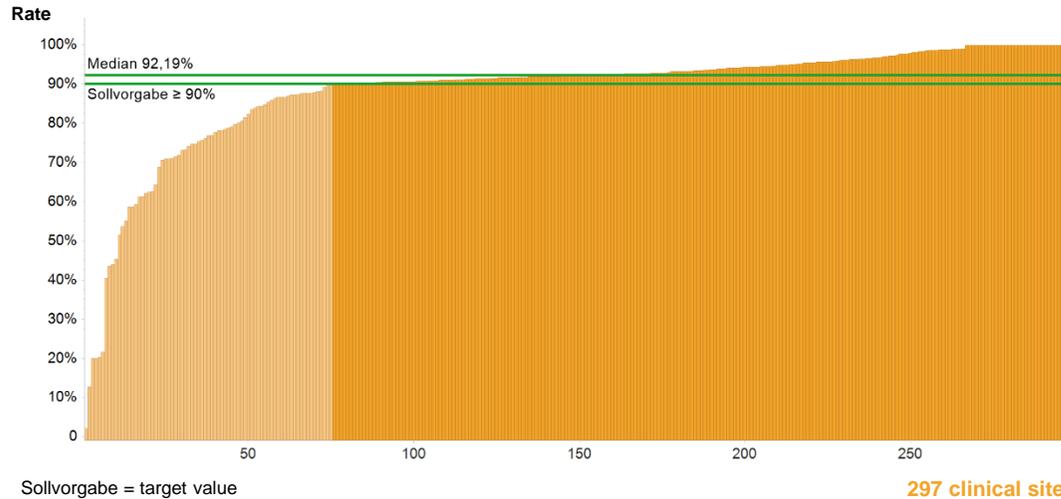
### Comments:

After a significant decline in the 2020 indicator year, the study rate rose slightly again. 16 centres (previous year: 22) missed the target value. 5 centres continued to claim effects of the Covid19 pandemic. In addition, 3 centres each referred to studies not listed in the study box or closed studies (in particular due to insolvency of the study provider). Measures included in particular the timely registration of studies in the StudyBox as well as study and staff recruitment.

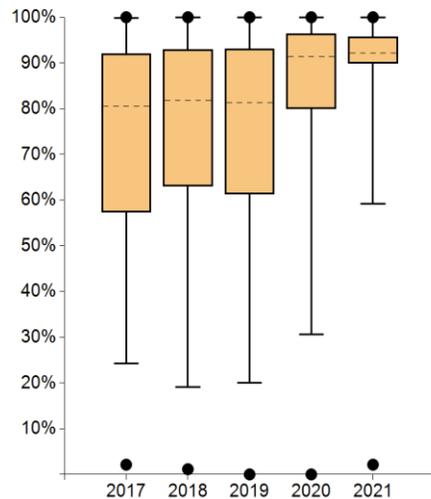
\*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

## 7. Colorectal cancer patients with a recorded family history (GL QI)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary cases of the denominator with completed patient questionnaire ( <a href="https://ecc-cert.org/certification-system/document-collection/in-the-colorectal-cancer-section">https://ecc-cert.org/certification-system/document-collection/in-the-colorectal-cancer-section</a> )	76*	3 - 246	23762
Denominator	Total primary cases	84*	37 - 267	26993
Rate	Target value ≥ 90%	92.19%	2.13% - 100%	88.03%**



	2017	2018	2019	2020	2021
● Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	99.87%	100%	100%	100%	100%
75 <sup>th</sup> percentile	91.99%	92.99%	93.05%	96.33%	95.65%
Median	80.55%	81.82%	81.25%	91.30%	92.19%
25 <sup>th</sup> percentile	57.35%	62.97%	61.33%	80.00%	89.87%
5 <sup>th</sup> percentile	24.22%	19.10%	20.00%	30.56%	59.14%
● Minimum	2.13%	1.14%	0.00%	0.00%	2.13%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
301	100,00%	188	62,46%

### Comments:

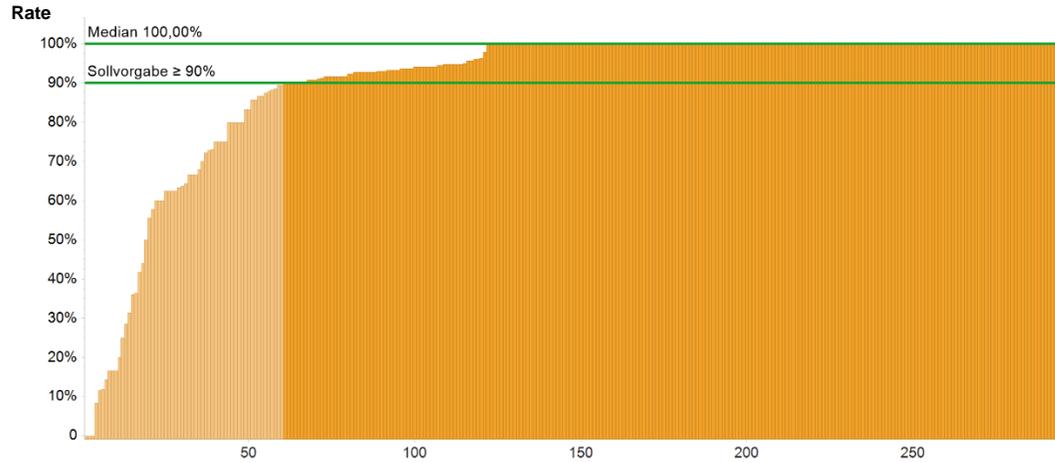
The positive trend in this QI of the guideline continues. With 75 centres, 48 fewer than in the previous year failed to meet the target value. Low rates in relation to family history were most frequently due to omissions (25 mentions), patients who died prematurely (13x) and documentation problems (10x). Accordingly, the bundles of measures included process and IT adjustments, quality circles, SOP, training and much more. 6 centres received a deviation, including the centre with a rate of only 2.13%.

\*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.

\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

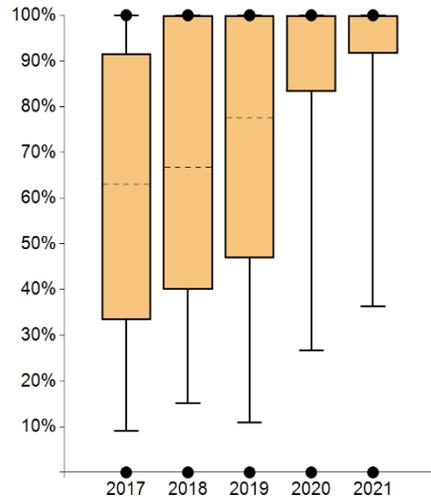
## 8. Genetic counselling



Sollvorgabe = target value

296 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Primary case patients of the denominator advised to seek genetic counselling	10*	0 - 52	3428
Denominator	Primary cases with a positive patient questionnaire	12*	1 - 54	3844
Rate	Target value ≥90%	100%	0.00% - 100%	89.18%**



	2017	2018	2019	2020	2021
● Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	91.58%	100%	100%	100%	100%
Median	63.01%	66.67%	77.53%	100%	100%
25 <sup>th</sup> percentile	33.33%	40.00%	46.83%	83.33%	91.67%
5 <sup>th</sup> percentile	9.10%	15.11%	10.85%	26.70%	36.27%
● Minimum	0.00%	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
296	99.66%	236	79.73%

**Comments:**

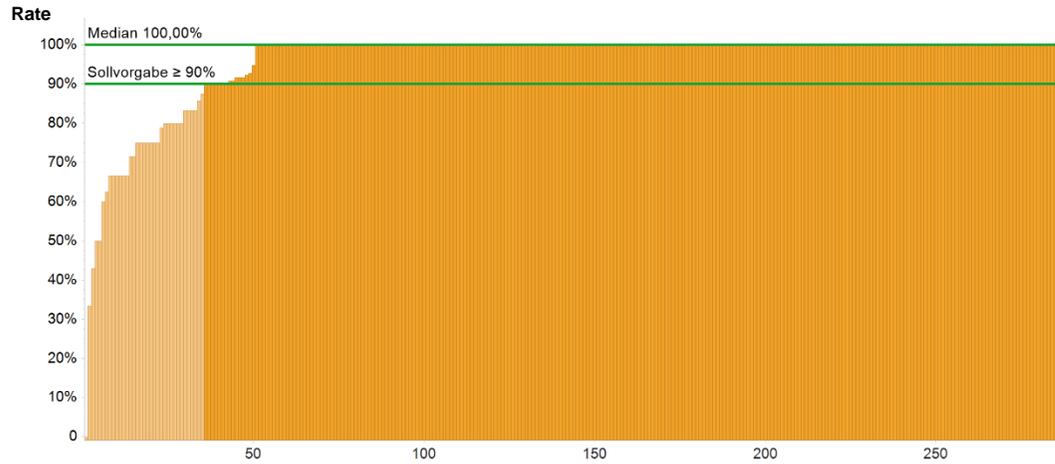
Analogous to the recording of the family history (Indicator 7), there are clear improvements in genetic counselling. The number of centres below the target value drops from 83 to 60. These centres primarily referred to patients without MSI (15x), documentation errors (11x) and omissions (8x). From audit year 2023 onwards, only patients with a positive questionnaire and MSI will be included in the denominator.

\*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.

\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

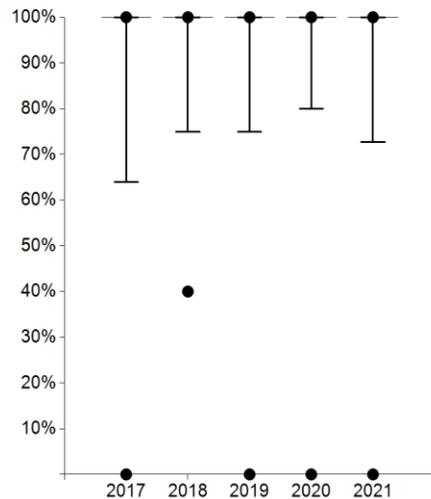
## 9. Immunohistochemical determination of MMR proteins



Sollvorgabe = target value

288 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with immunohisto-chemical assessment of mismatch repair (MMR) proteins.	4*	0 - 29	1529
Denominator	Patients with initial CRC diagnosis < 50 years old	5*	1 - 29	1599
Rate	Target value $\geq 90\%$	100%	0.00% - 100%	95.62%**



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	100%	100%	100%	100%	100%
Median	100%	100%	100%	100%	100%
25 <sup>th</sup> percentile	100%	100%	100%	100%	100%
5 <sup>th</sup> percentile	64.00%	75.00%	75.00%	80.00%	72.68%
Minimum	0.00%	40.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
288	96.97%	253	87.85%

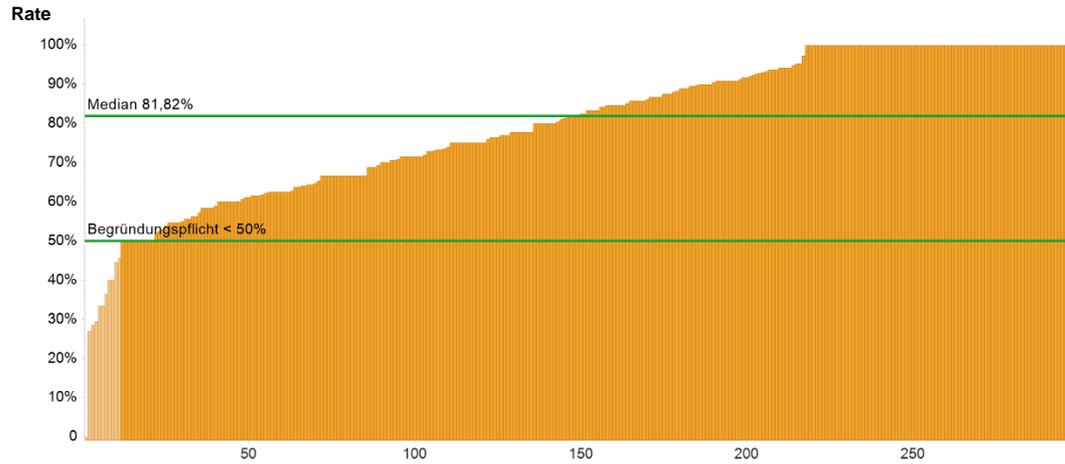
### Comments:

The fulfilment of this indicator is approximately at the previous year's level. While 238 centres determined the MMR proteins in all patients of the denominator, 35 centres (previous year: 36) were below the target value. The most frequent reasons were patients who had received further treatment at another centre (8x), a lack of desire for further diagnosis/treatment (8x) and omissions in individual cases (5x). The centre with a rate of 0% had only one patient in the denominator..

\*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.

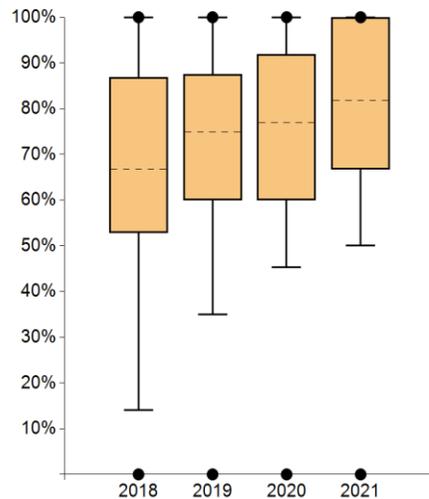
# 10. RAS and BRAF determination at the start of first-line treatment for metastasized CRC (GL QI) Certification



Begründungspflicht = mandatory statement of reasons

296 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with RAS (= KRAS and NRAS mutations) and BRAF mutations at the start of first-line therapy	9*	0 - 101	3193
Denominator	Patients with metastatic CRC and first-line therapy	12*	1 - 109	4050
Rate	Mandatory statement of reasons*** <50%	81.82%	0.00% - 100%	78.84%**



	2017	2018	2019	2020	2021
● Maximum	----	100%	100%	100%	100%
95 <sup>th</sup> percentile	----	100%	100%	100%	100%
75 <sup>th</sup> percentile	----	86.88%	87.50%	91.92%	100%
Median	----	66.67%	75.00%	76.92%	81.82%
25 <sup>th</sup> percentile	----	52.80%	60.00%	60.00%	66.67%
5 <sup>th</sup> percentile	----	14.08%	35.00%	45.30%	50.00%
● Minimum	----	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
296	99.66%	285	96.28%

**Comments:**

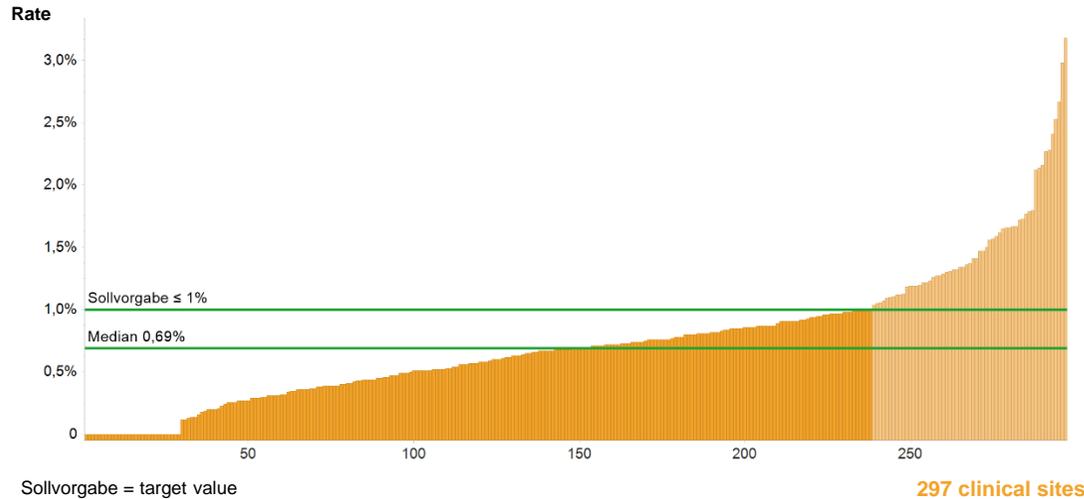
The positive trend in the fulfilment of these indicator continues, the median is now just under 82%. The number of centres requiring a statement of reasons decreases from 16 to 11. The latter referred to the necessity of a rapid start of chemotherapy (5x) and thus determination only after the start of systemic therapy. 3 centres referred to outpatient determinations where the result was not known. Other reasons were early deceased, RAS positive patients (no BRAF determination required) and omissions (2x each). Where necessary, the problems were dealt with 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.

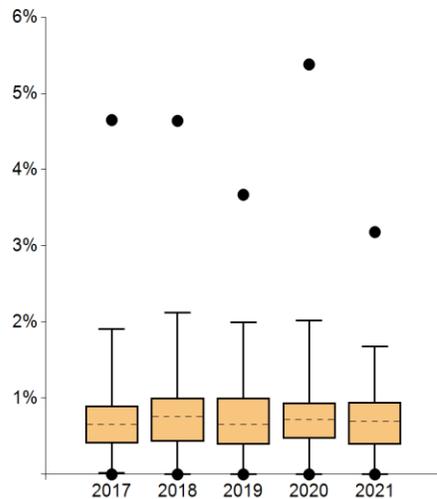
\*\* Percentage of centre patients who were treated according to the indicator.

\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

## 11. Complication rate therapeutic colonoscopies



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Colonoscopies of the denominator with complications (bleeding requiring reintervention (recolonoscopy, operation) or a transfusion and/or perforation)	2*	0 - 29	915
Denominator	Therapeutic colonoscopies with loop polypectomies per colonoscopic unit (not only CrCC patients)	374*	65 - 5065	133233
Rate	Target value ≤1%	0.69%	0.00% - 3.18%	0.69%**



	2017	2018	2019	2020	2021
Maximum	4.65%	4.64%	3.67%	5.38%	3.18%
95 <sup>th</sup> percentile	1.91%	2.12%	1.99%	2.02%	1.68%
75 <sup>th</sup> percentile	0.90%	1.00%	1.00%	0.94%	0.95%
Median	0.65%	0.76%	0.66%	0.72%	0.69%
25 <sup>th</sup> percentile	0.41%	0.43%	0.39%	0.47%	0.39%
5 <sup>th</sup> percentile	0.02%	0.00%	0.00%	0.00%	0.00%
Minimum	0.00%	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	238	80.13%

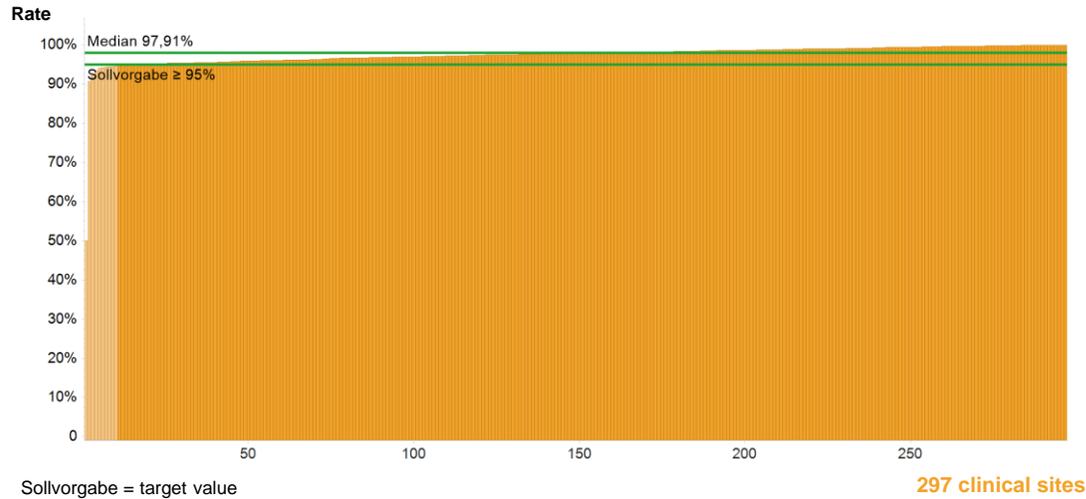
### Comments:

The complication rate continued to decline at a low level. Only 59 centres (previous year: 61) were above 1%. In almost all cases, these centres referred to bleeding (37x) or perforation (30x). 20 centres referred to particularly complex constellations (multiple and/or broad-based polyps (20x), anticoagulation (11x), which could not be colonoscoped in the general practice sector. Measures taken by the centres included, among others, SOP and prophylactic clipping in addition to the discussion of high-complication courses in M&M conferences.

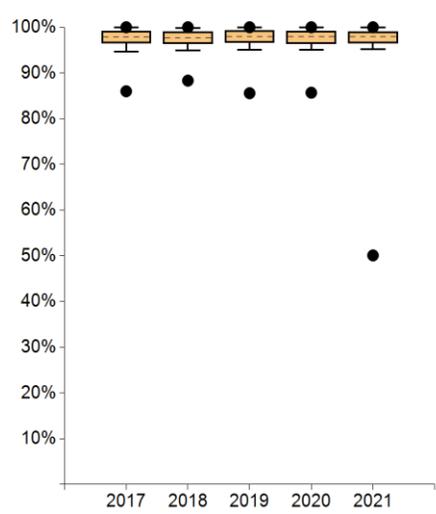
\*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

## 12. Complete elective colonoscopies



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Elective colonoscopies of the denominator which were completed	1271*	364 - 13008	444511
Denominator	Elective colonoscopies for each colonoscopy unit of the CrCC (not only CrCC patients) (Are counted: intention: complete colonoscopy)	1297*	379 - 13049	454974
Rate	Target value ≥ 95%	97.91%	50.09% - 100%	97.70%**



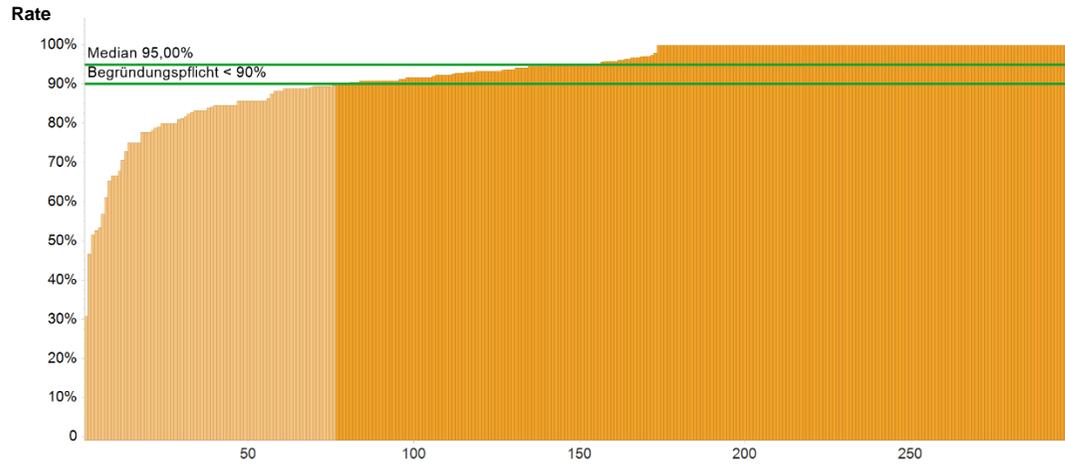
	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	99.88%	99.86%	100%	100%	99.90%
75 <sup>th</sup> percentile	99.17%	99.04%	99.22%	99.11%	99.08%
Median	97.89%	97.68%	97.95%	97.92%	97.91%
25 <sup>th</sup> percentile	96.48%	96.35%	96.61%	96.32%	96.54%
5 <sup>th</sup> percentile	94.71%	94.91%	95.05%	95.07%	95.14%
Minimum	85.99%	88.32%	85.57%	85.68%	50.09%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	287	96.63%

**Comments:**  
 This Indicator continues to be very well met by the centres. The 10 centres below the target value generally missed it by a very small margin and attributed this to stenoses (6x), colon contamination (5x) and risk of perforation (e.g. in colitis) (2x). 3 centres referred to documentation problems, including the centre with a rate of 50.09%. A systematic error could not be identified in the audits. Due to the very good performance, the certification commission has decided to discontinue this indicator in the future.

\*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.

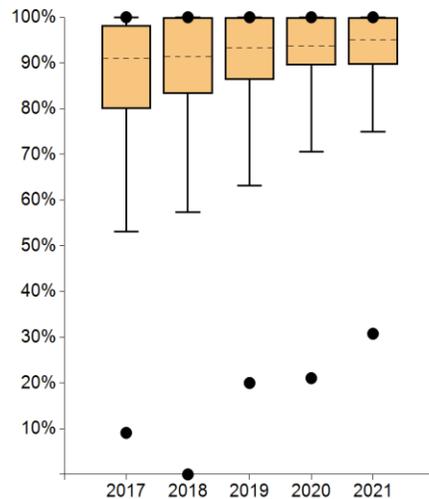
### 13. Information on distance between mesorectal fascia in case of lower and middle third Rectum Cancer (GL QI)



Begründungspflicht = mandatory statement of reasons

297 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with indication of distance to mesorectal fascia in diagnostic report	15*	1 - 48	4874
Denominator	Patients with RC of the middle and lower third and MRI or thin-slice CT of the pelvis	16*	1 - 56	5315
Rate	Mandatory statement of reasons*** <90%	95.00%	30.77% - 100%	91.70%**



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	98.25%	100%	100%	100%	100%
Median	90.91%	91.29%	93.33%	93.75%	95.00%
25 <sup>th</sup> percentile	80.00%	83.33%	86.36%	89.47%	89.58%
5 <sup>th</sup> percentile	53.08%	57.32%	63.12%	70.59%	75.00%
Minimum	9.09%	0.00%	20.00%	21.05%	30.77%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
297	100.00%	221	74.41%

**Comments:**

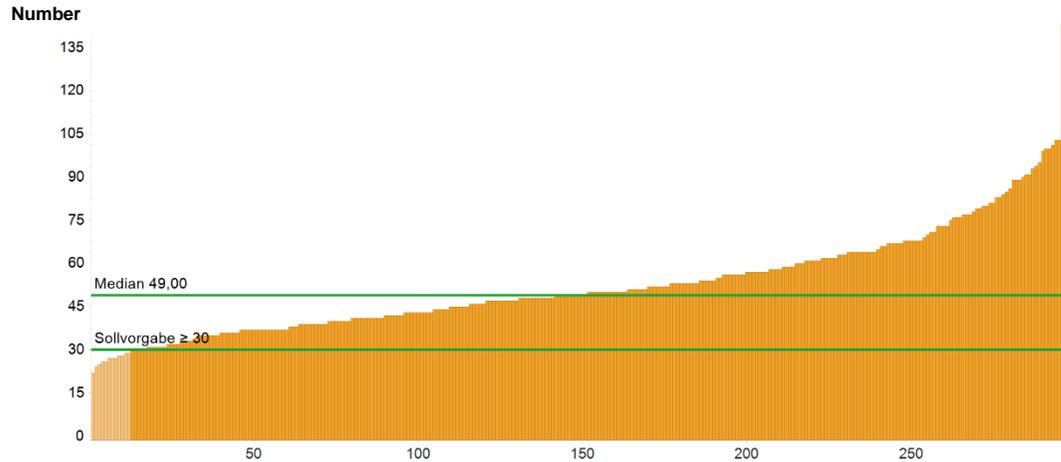
The positive trend in meeting this QI of the guideline, which has been going on for years, continues. As in the previous year, 76 centres are below the 90% mark, 34 of them already in the previous year. By far the most frequently cited reason was external results (32x), some of which were subsequently diagnosed. Other frequent reasons were the already endoscopic ablation or intraoperative diagnosis of the tumour (23x), omissions (16x), lack of visibility in the CT (MRI e.g. not possible due to pacemaker) (12x), non-detectable tumours (11x) and palliative courses without therapeutic consequences (10x). In many cases, SOPs were updated and quality circles organised.

\*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.

\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

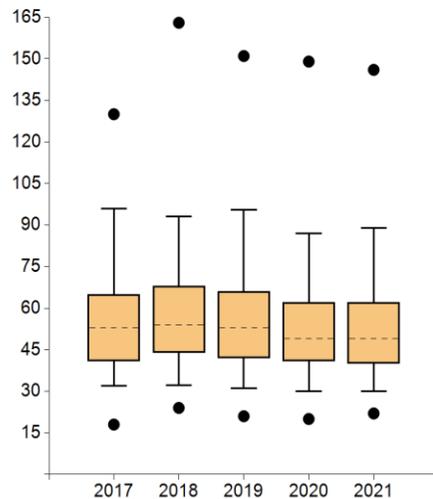
## 14. Surgical primary cases: Colon



Sollvorgabe = target value

297 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Number	Surgical primary cases: colon	49	22 - 146	15654
	Target value $\geq 30$			



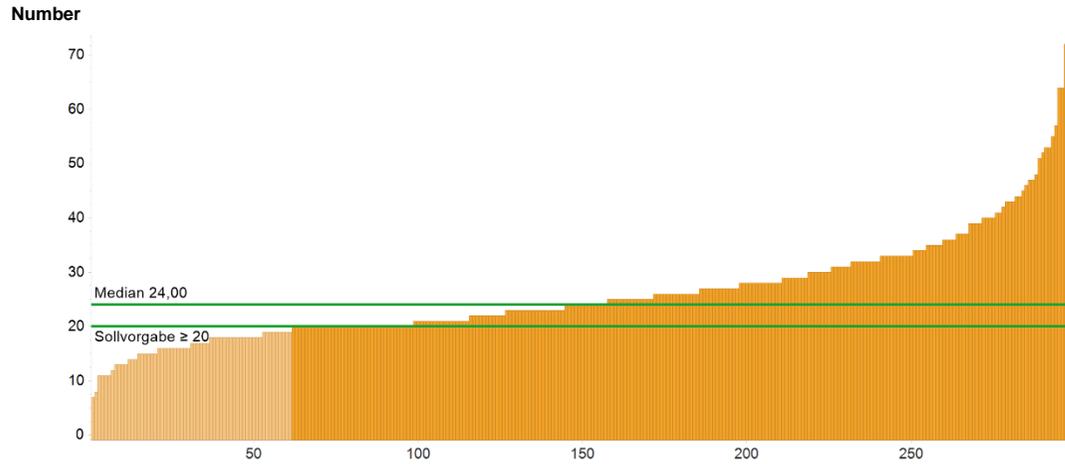
	2017	2018	2019	2020	2021
Maximum	130,00	163,00	151,00	149,00	146,00
95 <sup>th</sup> percentile	95,85	93,00	95,50	87,00	89,00
75 <sup>th</sup> percentile	65,00	68,00	66,00	62,00	62,00
Median	53,00	54,00	53,00	49,00	49,00
25 <sup>th</sup> percentile	41,00	44,00	42,00	41,00	40,00
5 <sup>th</sup> percentile	32,00	32,15	31,00	30,00	30,00
Minimum	18,00	24,00	21,00	20,00	22,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	285	95.96%

### Comments:

The median and total number of cases are at the same low level as in the previous year due to Covid19. With 12 centres, 2 fewer than in the previous year failed to meet the target value. 10 referred to pandemic-related declines in the number of cases, 3 to the reorganisation of departments in this regard. Other reasons (e.g. change of chief physician) were mentioned only in isolated cases. The centres reacted in particular with information events and referral visits. 4 deviations were formulated. 5 centres were under surveillance audit, 7 centres with re-audit achieved the figures on average of the last 3 years (possibly with Covid19 special REDZYG). For 4 of these centres, the certificate could only be extended by 12 months with reduced validity.

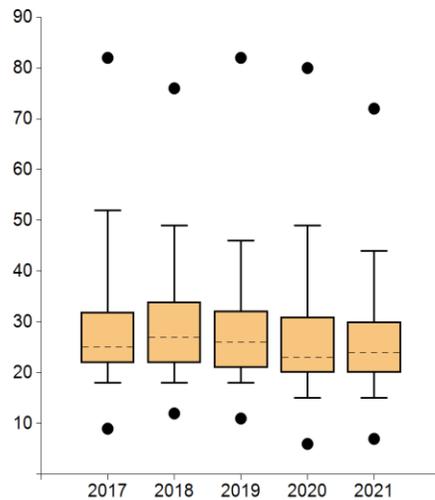
## 15. Surgical primary cases: Rectum



Sollvorgabe = target value

297 clinical sites

	Indicator definition	All clinical sites 202		
		Median	Range	Patients Total
Number	Surgical primary cases: rectum (incl. trans anal wall resection)	24	7 - 72	7703
	Target value $\geq 20$			



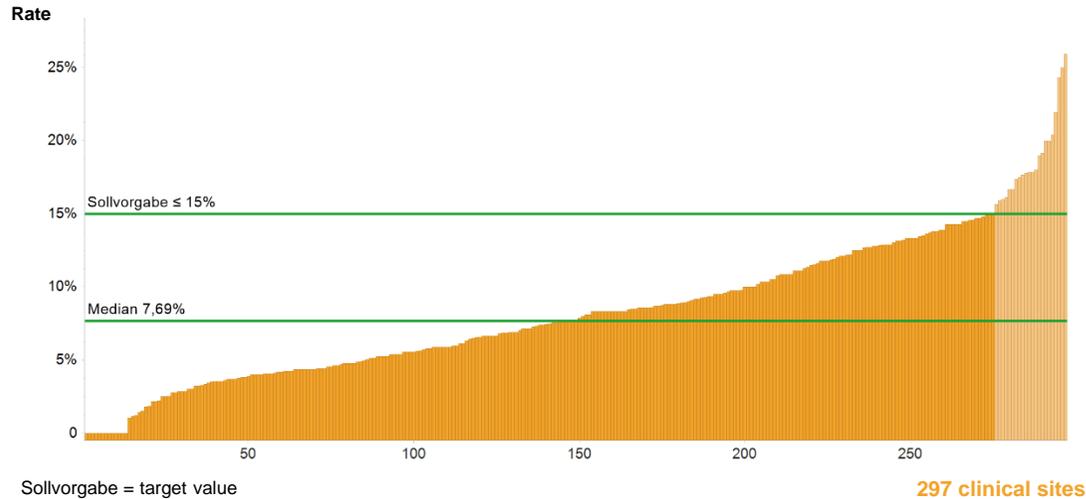
	2017	2018	2019	2020	2021
Maximum	82,00	76,00	82,00	80,00	72,00
95 <sup>th</sup> percentile	52,00	49,00	46,00	49,00	44,00
75 <sup>th</sup> percentile	32,00	34,00	32,25	31,00	30,00
Median	25,00	27,00	26,00	23,00	24,00
25 <sup>th</sup> percentile	22,00	22,00	21,00	20,00	20,00
5 <sup>th</sup> percentile	18,00	18,00	18,00	15,00	15,00
Minimum	9,00	12,00	11,00	6,00	7,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	236	79.46%

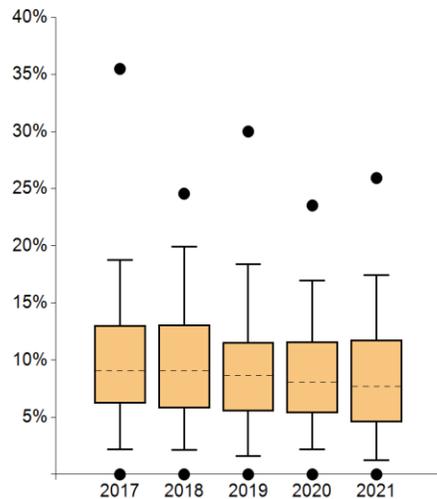
**Comments:**

Similar to indicator 14, the effects of the Covid19 pandemic are also visible in rectal cancer. However, with 61 centres, 16 fewer than in the previous year missed the target value. 42 centres referred to pandemic-related declines in the number of cases, 18 to the increasing importance of total neoadjuvant therapy or watch and wait therapies. 6 centres observed an increasing proportion of advanced stages. The centres reacted with information events, referral visits, better public relations and in some cases the expansion of endoscopy. While 30 centres were in the surveillance audit and were able to fall below the case numbers, 31 centres achieved the numbers on average of the last 3 years (possibly with Covid19-Sonder-Redzyk). For 10 of these centres, the certificate could only be extended by 12 months with reduced validity.

## 16. Revision surgery: Colon



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Surgeries of the denominator with revision surgery due to perioperative complications within 30 d of surgery (not to be counted: diagnostic irrigation laparoscopies)	3*	0 - 17	1150
Denominator	Elective colon surgeries	44*	18 - 134	13873
Rate	Target value ≤ 15%	7,69%	0,00% - 25,93%	8,29%**



	2017	2018	2019	2020	2021
Maximum	35.48%	24.56%	30.00%	23.53%	25.93%
95 <sup>th</sup> percentile	18.75%	19.92%	18.37%	16.98%	17.41%
75 <sup>th</sup> percentile	13.04%	13.07%	11.54%	11.63%	11.76%
Median	9.09%	9.09%	8.62%	8.05%	7.69%
25 <sup>th</sup> percentile	6.22%	5.79%	5.53%	5.36%	4.55%
5 <sup>th</sup> percentile	2.18%	2.14%	1.59%	2.17%	1.21%
Minimum	0.00%	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	275	92.59%

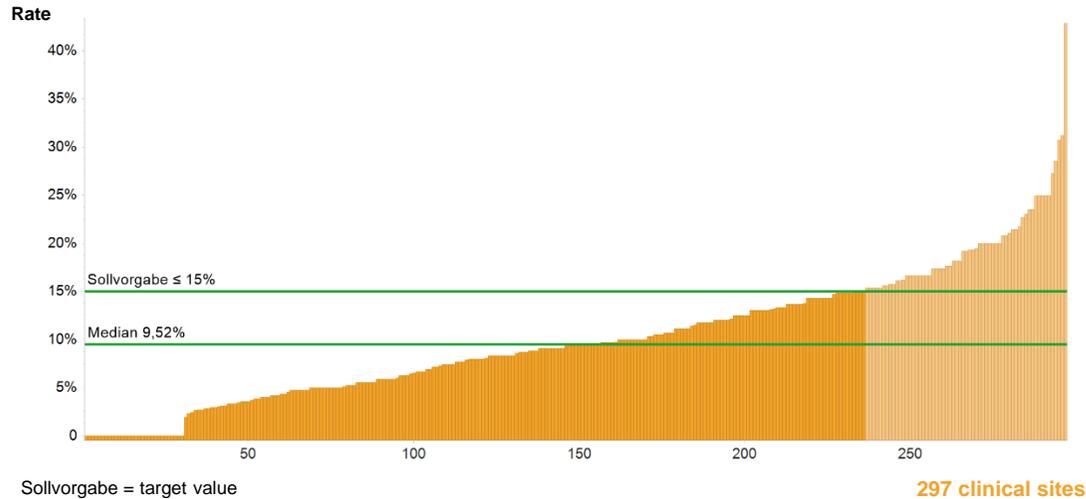
### Comments:

The trend towards decreasing revision rates continues. This is also reflected in the fact that only 22 centres (previous year: 31) failed to meet the target value. 18 centres claimed anastomotics insufficiencies. Other frequently cited reasons were bleeding (11x), multimorbid patients (9x), abdominal obstruction (8x), ileus (7x) and perforations (7x). Most of the cases could be clarified in the audits, so that no systematic problem was identified. However, one centre received a deviation because of a too high postoperative complication rate.

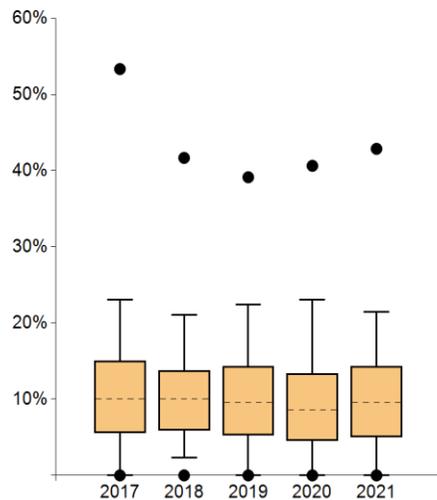
\*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

## 17. Revision surgery: Rectum



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Surgeries of the denominator with revision surgery due to perioperative complications within 30 d of surgery (not to be counted: diagnostic irrigation laparoscopies)	2*	0 - 10	712
Denominator	Elective rectum surgeries (without transanal wall resection)	22*	7 - 68	7277
Rate	Target value ≤ 15%	9.52%	0.00% - 42.86%	9.78%**



	2017	2018	2019	2020	2021
Maximum	53.33%	41.67%	39.13%	40.63%	42.86%
95 <sup>th</sup> percentile	23.03%	21.05%	22.44%	23.08%	21.49%
75 <sup>th</sup> percentile	15.00%	13.79%	14.29%	13.33%	14.29%
Median	10.00%	10.00%	9.52%	8.57%	9.52%
25 <sup>th</sup> percentile	5.56%	5.88%	5.26%	4.55%	5.00%
5 <sup>th</sup> percentile	0.00%	2.31%	0.00%	0.00%	0.00%
Minimum	0.00%	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	236	79.46%

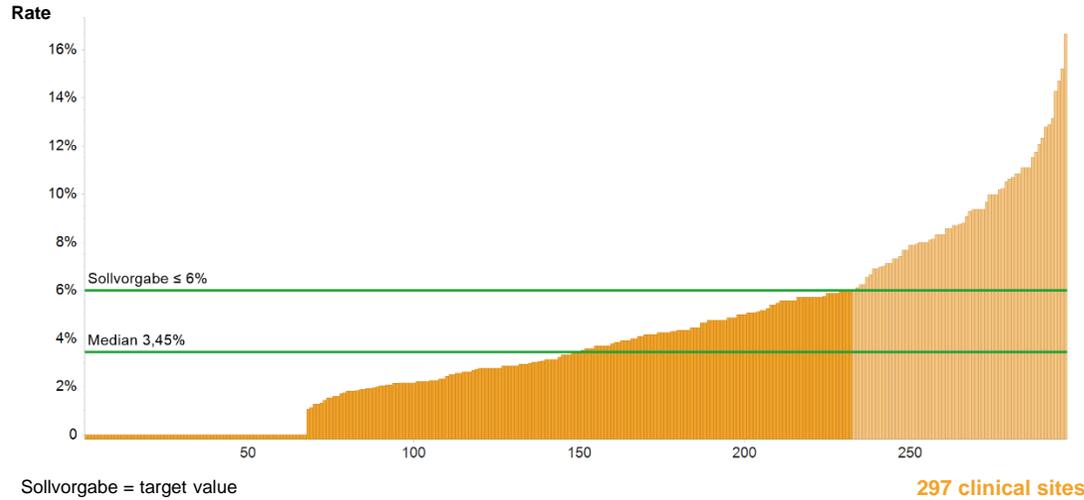
### Comments:

In contrast to the colonic procedures (Indicator 16), the median revision rate for the rectum has increased slightly. The number of centres above the target value increases from 53 to 61. Anastomotic leakages is also the most frequent cause for revisions here with 41 mentions, followed by ileus (24x), fascia dehiscence/ burst abdomen (16x), bleeding (14x), wound infections or wound healing disorder (11x each) and haematoma (10x). The cases were discussed in the audits. Measures included M&M conferences and quality circles as well as specific actions such as the introduction of ICG perfusion imaging.

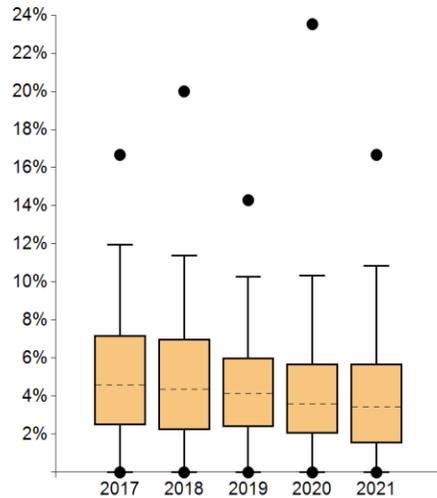
\*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

## 18. Anastomotic leakages: Colon (GL QI)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with colon anastomotic leakages requiring reintervention after surgery	1*	0 - 9	531
Denominator	Patients with CRC in whom anastomosis was performed in an elective tumour resection	42*	18 - 131	13321
Rate	Target value ≤ 6%	3.45%	0.00% - 16.67%	3.99%**



	2017	2018	2019	2020	2021
Maximum	16.67%	20.00%	14.29%	23.53%	16.67%
95 <sup>th</sup> percentile	11.94%	11.38%	10.28%	10.34%	10.85%
75 <sup>th</sup> percentile	7.19%	7.00%	6.00%	5.71%	5.71%
Median	4.59%	4.35%	4.13%	3.61%	3.45%
25 <sup>th</sup> percentile	2.50%	2.24%	2.38%	2.04%	1.54%
5 <sup>th</sup> percentile	0.00%	0.00%	0.00%	0.00%	0.00%
Minimum	0.00%	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	232	78.11%

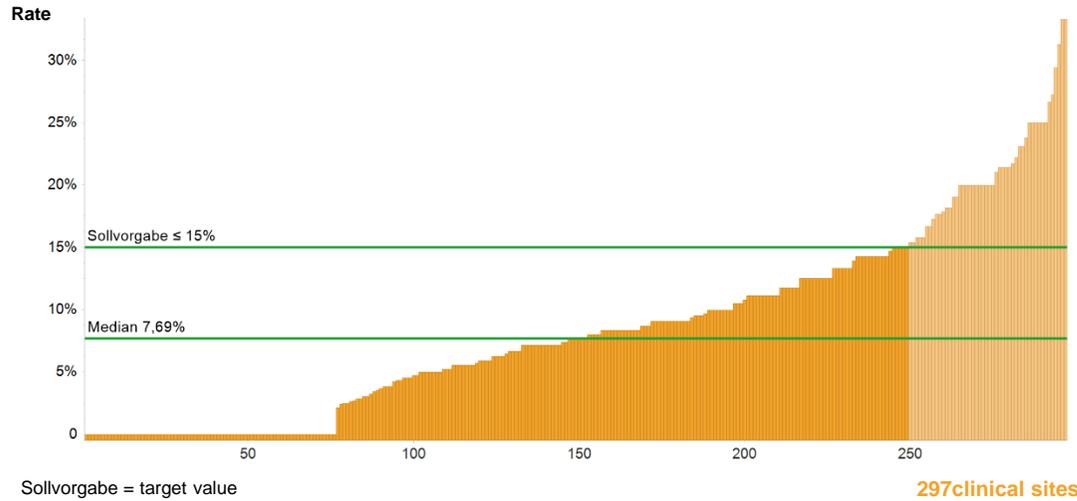
### Comments:

The trend of a dropping median continues. Nevertheless, 65 centres (previous year: 70) were above the target value of max. 6%. This was often justified by risk constellations such as multimorbidity (25x), extensive interventions (14x), old age (12x), subileus surgery (6x) and chronic inflammatory bowel diseases (5x). Sometimes there were also ischaemias (7x) or problems with the stapler (5x). The cases were processed by the centres and discussed in the audits, where in most cases no systematic error was identified. The change of the stapler and the introduction of the ICG method (Indocyanine green method) were frequent specific measures.

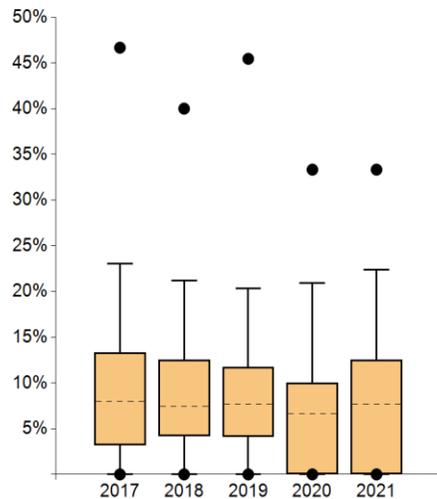
\*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

## 19. Anastomotic leakages: Rectum (GL QI 9)



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with Grade B (requiring antibiotic administration or interventional drainage or transanal lavage/drainage) or Grade C (re-)laparotomy	1*	0 - 9	440
Denominator	Patients with RC in whom anastomosis was performed in an elective tumour resection (without transanal wall resection)	17*	5 - 55	5429
Rate	Target value ≤ 15%	7.69%	0.00% - 33.33%	8.10%**



	2017	2018	2019	2020	2021
Maximum	46.67%	40.00%	45.45%	33.33%	33.33%
95 <sup>th</sup> percentile	23.03%	21.22%	20.36%	20.93%	22.39%
75 <sup>th</sup> percentile	13.33%	12.50%	11.76%	10.00%	12.50%
Median	7.95%	7.42%	7.69%	6.67%	7.69%
25 <sup>th</sup> percentile	3.21%	4.17%	4.13%	0.00%	0.00%
5 <sup>th</sup> percentile	0.00%	0.00%	0.00%	0.00%	0.00%
Minimum	0.00%	0.00%	0.00%	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	249	83.84%

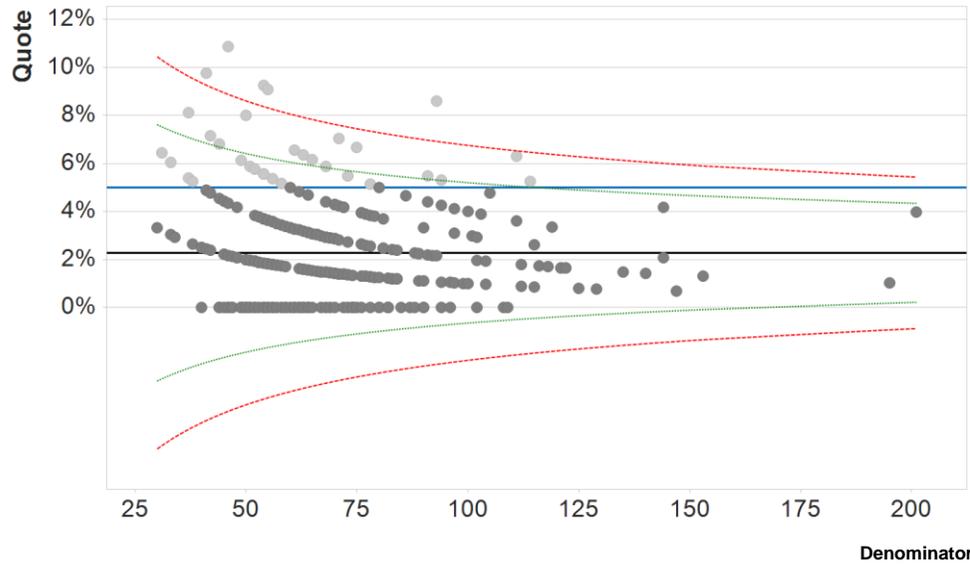
### Comments:

In contrast to the colonic procedures (cf. indicator 18), the median rate of anastomotic leakages increased for rectal surgeries. 48 centres (previous year: 36) were above a rate of 15%. The centres cited co-/multimorbid patients (10x), extensive procedures (8x), procedures with deep anastomosis (6x), neoadjuvant chemotherapy (6x), stapler dysfunctions (4x) and the introduction of robotics technology (4x). They responded to high rates with work-up in M&M conferences or specific measures such as ICG perfusion control.

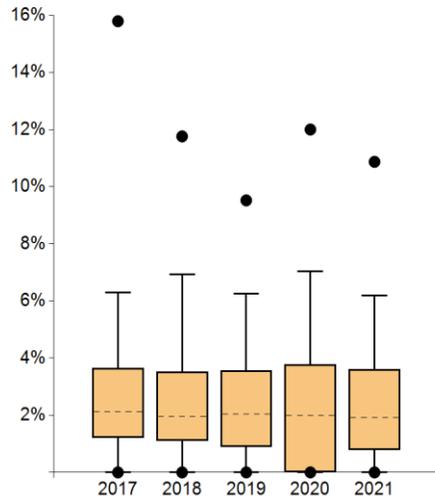
\*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

## 20. Post-operative mortality



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who died within 30d postoperatively	1*	0 - 8	482
Denominator	Electively operated patients (without transanal wall resection)	67*	30 - 201	21150
Rate	Target value $\leq 5\%$	1.92%	0.00% - 10.87%	2.28%**



	2017	2018	2019	2020	2021
Maximum	15,79%	11,76%	9,52%	12,00%	10,87%
95 <sup>th</sup> percentile	6,30%	6,93%	6,25%	7,04%	6,18%
75 <sup>th</sup> percentile	3,64%	3,53%	3,57%	3,77%	3,60%
Median	2,13%	1,96%	2,04%	2,00%	1,92%
25 <sup>th</sup> percentile	1,22%	1,11%	0,89%	0,00%	0,80%
5 <sup>th</sup> percentile	0,00%	0,00%	0,00%	0,00%	0,00%
Minimum	0,00%	0,00%	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	265	89.23%

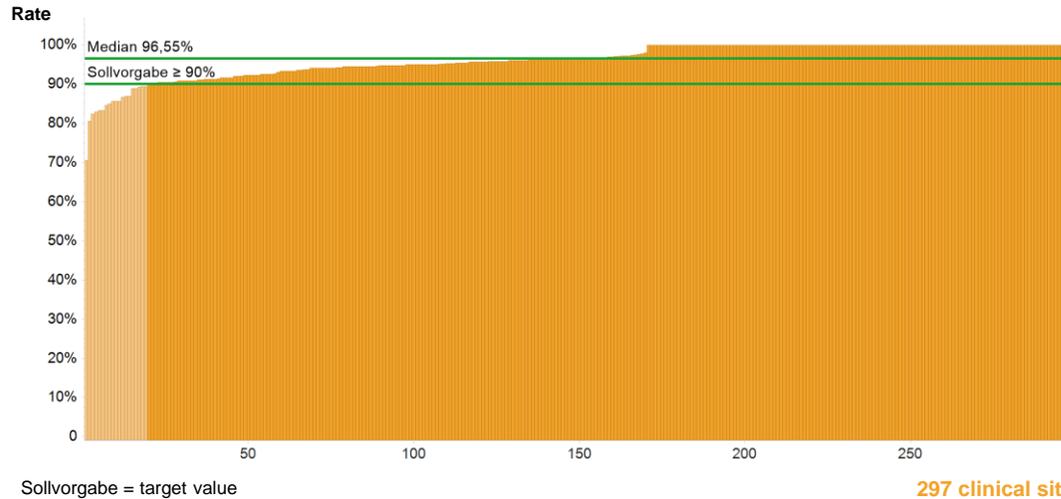
**Comments:**

The median 30-day post-operative mortality rate has fallen to its lowest level within the last 5 years. While 72 centres did not record a single death, 32 centres (previous year: 41) were above 5%. The cases were discussed in the audits. The centres identified septicaemia (12x), cardiopulmonary decompensations (12x), multimorbid patients (10x), pneumonia (9x), pulmonary embolism (6x) and advanced tumour stages (6x) as the main causes of death. These were partly countered with measures such as a stricter indication for surgery or better preconditioning. 8 centres also referred to patients who had refused any further therapy. The auditors made remarks if they saw quality-relevant processes affected.

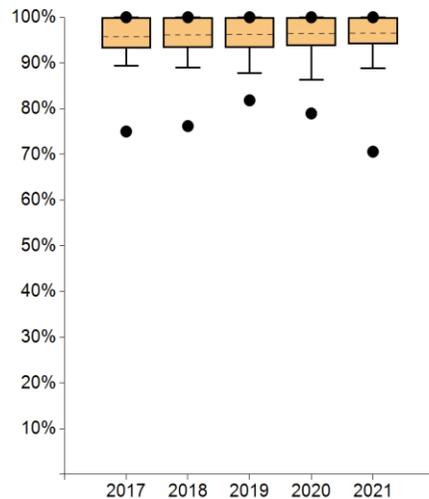
\*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

## 21. Local R0 resections: Rectum



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Surgeries of the denominator with local R0 resections – after completion of surgical treatment	21*	7 - 63	6998
Denominator	Elective rectal-surgeries (surgical) (without transanal wall resection)	22*	7 - 68	7277
Rate	Target value $\geq 90\%$	96.55%	70.59% - 100%	96.17%* *



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	100%	100%	100%	100%	100%
Median	95.65%	96.08%	96.30%	96.43%	96.55%
25 <sup>th</sup> percentile	93.16%	93.29%	93.27%	93.75%	94.12%
5 <sup>th</sup> percentile	89.32%	88.95%	87.79%	86.36%	88.89%
Minimum	75.00%	76.19%	81.82%	78.95%	70.59%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	278	93.60%

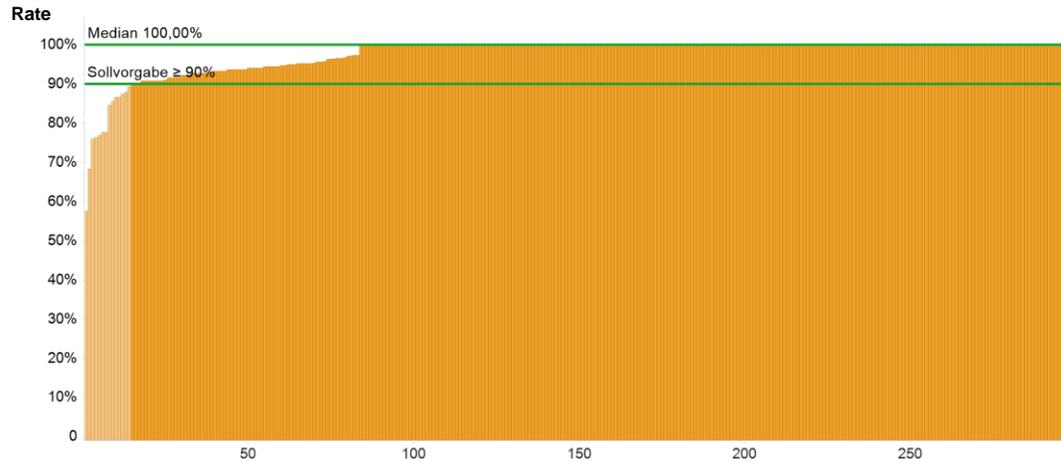
### Comments:

The R0 rate for rectal cancer is approximately at the previous year's level, with 12 fewer centres than in the previous year missing the target value. Of these 19 centres, 14 stated that in the case of advanced and/or metastatic findings, resection (partly planned) was incomplete, especially to improve the quality of life. In some cases, the indication for primary radiochemotherapy or total neoadjuvant therapy was discussed in the audits. Other reasons (e.g. preparation torn) were only mentioned in isolated cases. Systematic errors could not be identified in the audits.

\*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.

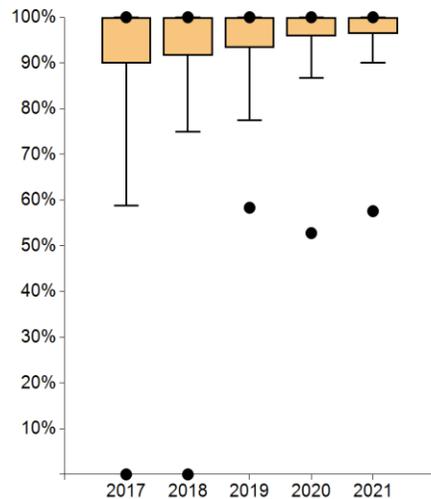
## 22. Marking of stoma position (GL QI)



Sollvorgabe = target value

297 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with preoperative marking of the stoma position	16*	2 - 63	5288
Denominator	Patients with RC who have undergone elective surgery with stoma system (without transanal wall resection)	16*	2 - 63	5434
Rate	Target value $\geq 90\%$	100%	57.58% - 100%	97.31%*



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	100%	100%	100%	100%	100%
Median	100%	100%	100%	100%	100%
25 <sup>th</sup> percentile	89,87%	91,67%	93,33%	95,83%	96,43%
5 <sup>th</sup> percentile	58,81%	75,00%	77,51%	86,67%	90,00%
Minimum	0,00%	0,00%	58,33%	52,78%	57,58%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	283	95.29%

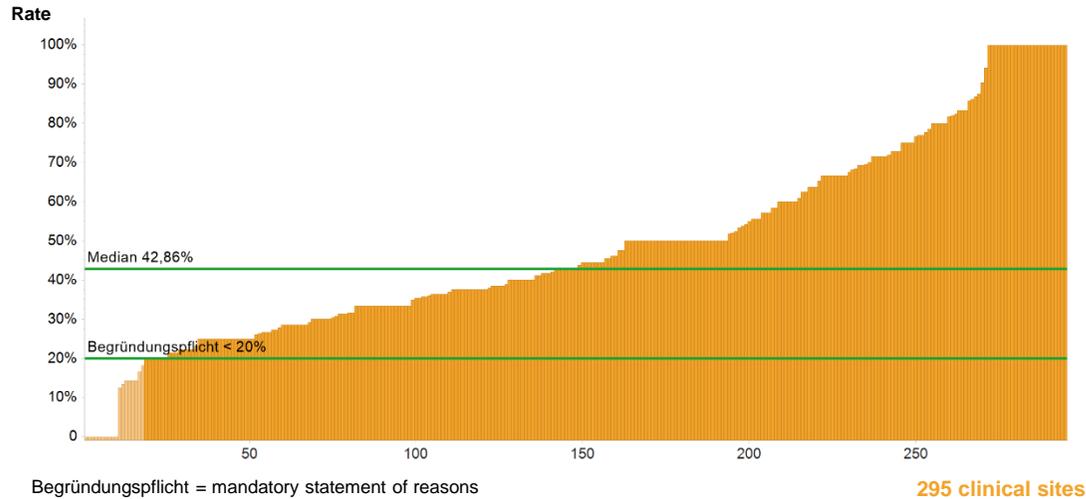
### Comments:

This QI of the guideline is increasingly established in the centres. While 214 centres achieved 100%, only 14 centres (previous year: 18) were below the target value. 6 centres stated that in some cases the decision to place a stoma was only made intraoperatively. 4 claimed documentation deficits and 3 reported omissions in individual cases. Measures included in particular training and better documentation possibilities in the hospital information system. One centre received a deviation due to repeatedly low rates.

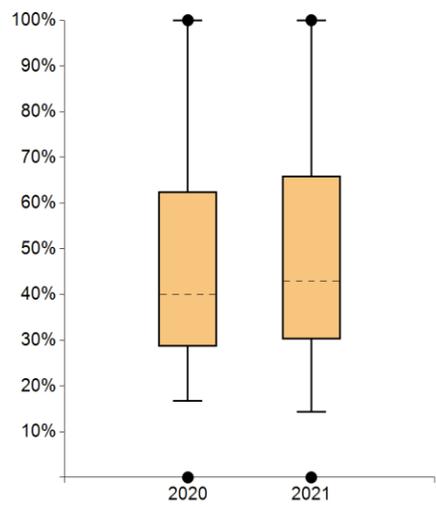
\*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

## 23a. Liver metastasis resection



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who had a liver metastasis resection	4*	0 - 33	1568
Denominator	Patients of the Centre with metastatic colon rectal cancer and 1. exclusive liver metastasis without liver-specific chemotherapy or 2. exclusive liver metastasis, who have received chemotherapy for liver metastasis	10*	1 - 46	3252
Rate	Mandatory statement of reasons*** <20%	42.86%	0.00% - 100%	48.22%* *



	2017	2018	2019	2020	2021
● Maximum	----	----	----	100%	100%
95 <sup>th</sup> percentile	----	----	----	100%	100%
75 <sup>th</sup> percentile	----	----	----	62.50%	65.95%
Median	----	----	----	40.00%	42.86%
25 <sup>th</sup> percentile	----	----	----	28.57%	30.22%
5 <sup>th</sup> percentile	----	----	----	16.67%	14.29%
● Minimum	----	----	----	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
295	99.33%	277	93.90%

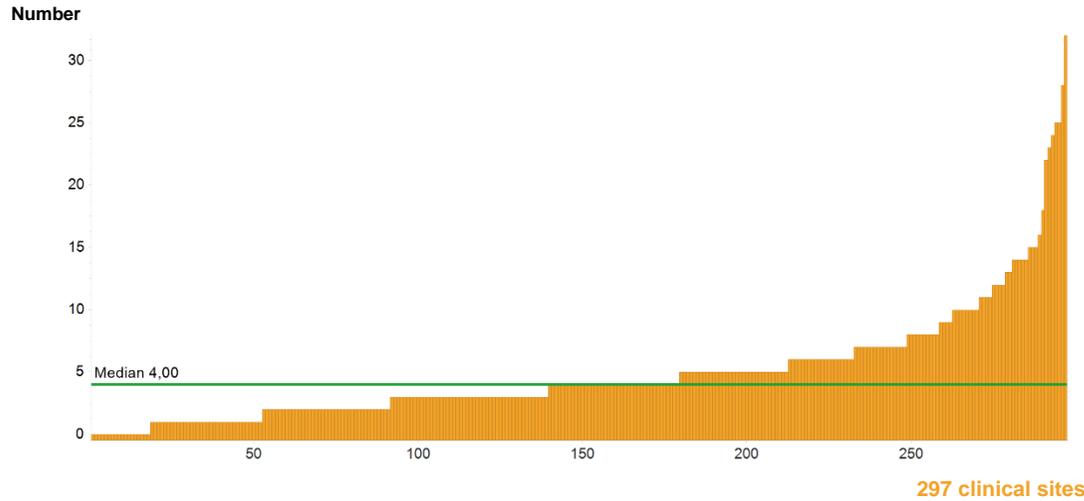
**Comments:**  
The Indicator was compulsorily collected for the first time in all centres. 18 centres achieved values <20% and had to give a reason. These centres tended to have low patient numbers in the denominator. 13 centres reported not having recommended surgery because of diffuse/multiple metastases. In 4 cases, patients had already died before surgery. 3 centres reported patients who had refused resection. The cases could be plausibilised in the audits.

\*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.

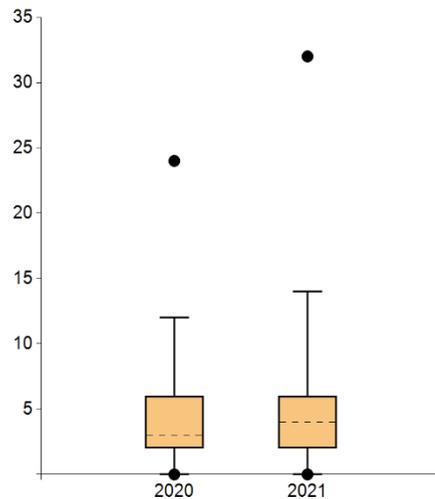
\*\* Percentage of centre patients who were treated according to the indicator.

\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

## 23b. Liver metastasis resection at the surgical site of the CRCC



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Liver metastasis resection performed at the surgical site of the Colorectal Cancer Centre (subset of numerator 23a)	4	0 - 32	1455
	No target value			



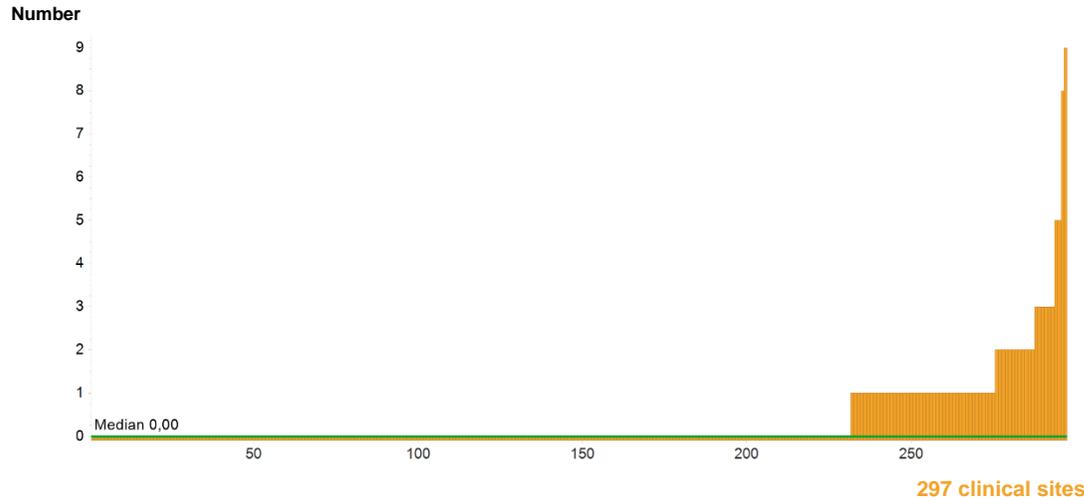
	2017	2018	2019	2020	2021
Maximum	----	----	----	24,00	32,00
95 <sup>th</sup> percentile	----	----	----	12,00	14,00
75 <sup>th</sup> percentile	----	----	----	6,00	6,00
Median	----	----	----	3,00	4,00
25 <sup>th</sup> percentile	----	----	----	2,00	2,00
5 <sup>th</sup> percentile	----	----	----	0,00	0,00
Minimum	----	----	----	0,00	0,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	----	----

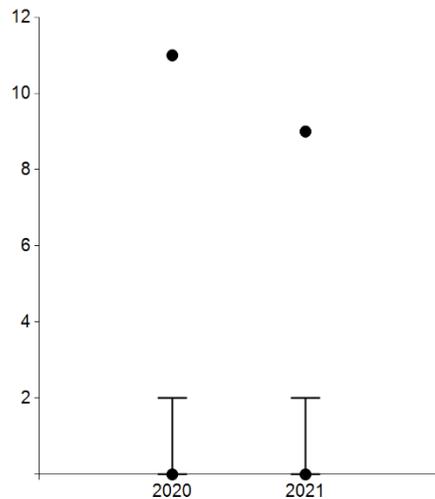
**Comments:**

Of the 297 centres with evaluable data, 279 performed liver metastasis resections at their own clinical site. This was a median of 4 surgeries in the indicator year, and 1,455 resections across all centres. This indicator was also collected from the centres for the first time.

### 23c. Liver metastasis resection outside the surgical site the CRCC



	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Liver metastasis resection performed outside the surgical site of the Colorectal Cancer Centre (subset of numerator 23a)	0	0 - 9	113
	No target value			



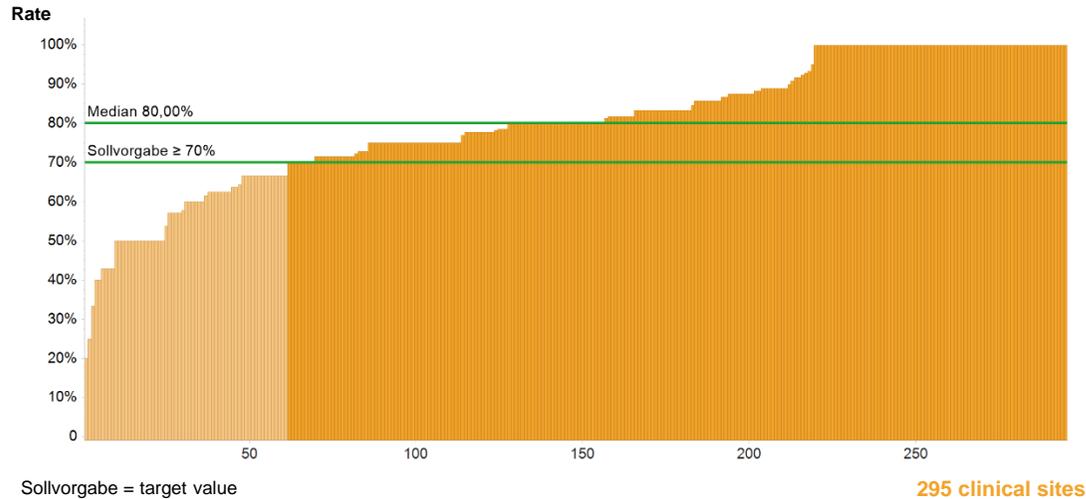
	2017	2018	2019	2020	2021
Maximum	----	----	----	11,00	9,00
95 <sup>th</sup> percentile	----	----	----	2,00	2,00
75 <sup>th</sup> percentile	----	----	----	0,00	0,00
Median	----	----	----	0,00	0,00
25 <sup>th</sup> percentile	----	----	----	0,00	0,00
5 <sup>th</sup> percentile	----	----	----	0,00	0,00
Minimum	----	----	----	0,00	0,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	----	----

**Comments:**

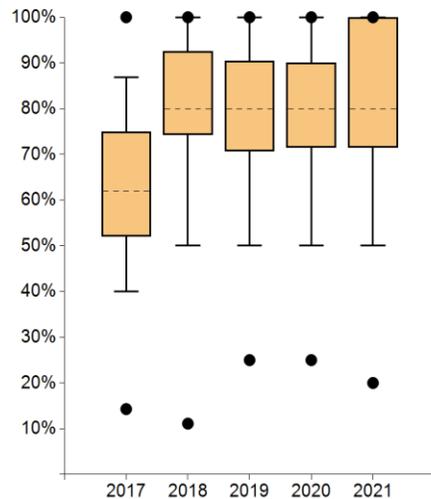
Only 66 centres referred patients to another hospital for liver metastases resection. In total, this involved 113 procedures and thus 7.2% of liver metastases resections (cf. indicator 23a).

## 24. Adjuvant chemotherapies: Colon (UICC stage III) (GL QI)



Sollvorgabe = target value

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who have received adjuvant chemotherapy	6*	1 - 19	1828
Denominator	Patients ≤ 75 years with a colon cancer UICC Stad. III, in whom an R0 resection of the primary tumour was performed	7*	1 - 23	2296
Rate	Target value ≥ 70%	80.00%	20.00% - 100%	79.62%* *



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	86.87%	100%	100%	100%	100%
75 <sup>th</sup> percentile	75.00%	92.59%	90.46%	90.00%	100%
Median	62.02%	80.00%	80.00%	80.00%	80.00%
25 <sup>th</sup> percentile	52.03%	74.34%	70.72%	71.43%	71.43%
5 <sup>th</sup> percentile	40.00%	50.00%	50.00%	50.00%	50.00%
Minimum	14.29%	11.11%	25.00%	25.00%	20.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
295	99.33%	234	79.32%

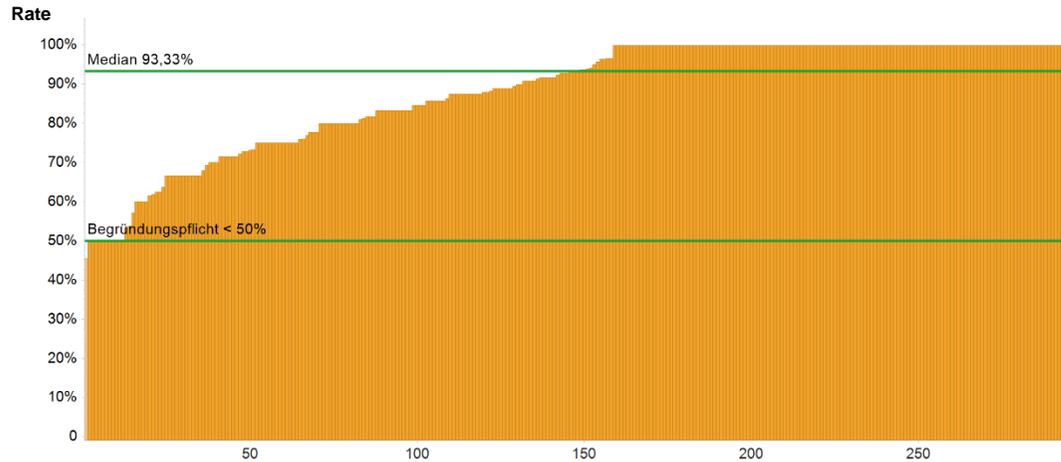
### Comments:

The overall fulfilment of these indicator, like the median, remains at about 80%. 61 centres (previous year: 56) failed to meet the target value. The reasons given by the centres were all plausible in the audits. These included primarily patient refusal (38x), co-morbidity/multimorbidity (24x), death before the start of chemotherapy (18x), post-operative complications (e.g. abscess, myocardial infarction, abdomen) (16x) and second malignancy leading to therapy (12x).

\*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.

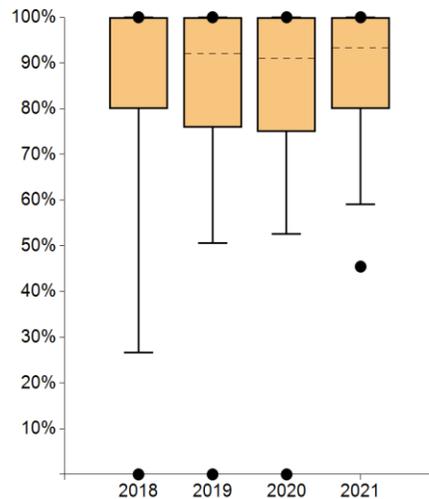
## 25. Combination chemotherapy for metastasised CRC with systemic first-line treatment (GL QI)



Begründungspflicht = mandatory statement of reasons

294 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with combination chemotherapy	7*	1 - 98	2663
Denominator	Patients with metastatic CRC, ECOG 0-1 and systemic first-line chemotherapy	8.5*	1 - 105	3065
Rate	Mandatory statement of reasons*** <50%	93.33%	45.45% - 100%	86.88%*



	2017	2018	2019	2020	2021
Maximum	----	100%	100%	100%	100%
95 <sup>th</sup> percentile	----	100%	100%	100%	100%
75 <sup>th</sup> percentile	----	100%	100%	100%	100%
Median	----	100%	91.99%	90.91%	93.33%
25 <sup>th</sup> percentile	----	80.00%	75.89%	75.00%	80.00%
5 <sup>th</sup> percentile	----	26.66%	50.60%	52.59%	59.00%
Minimum	----	0.00%	0.00%	0.00%	45.45%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
294	98.99%	293	99.66%

### Comments:

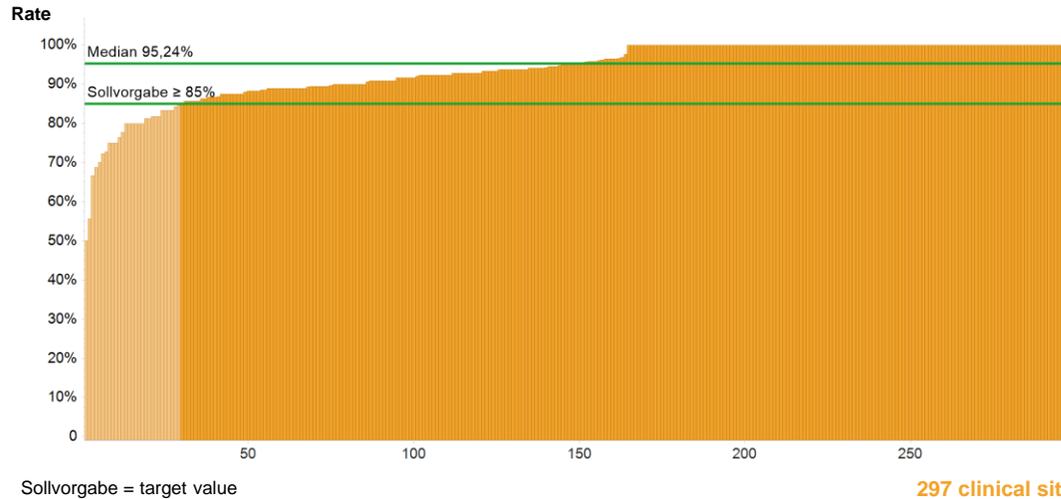
The median and the overall rate for this QI of the guideline have risen further. Only one centre (previous year: 5) was still required a statement of reasons. The affected centre was able to plausibly explain why combination chemotherapy was not used for the patients in question (discontinuation required, second malignancy leading for the therapy, premature death, rejected)..

\*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

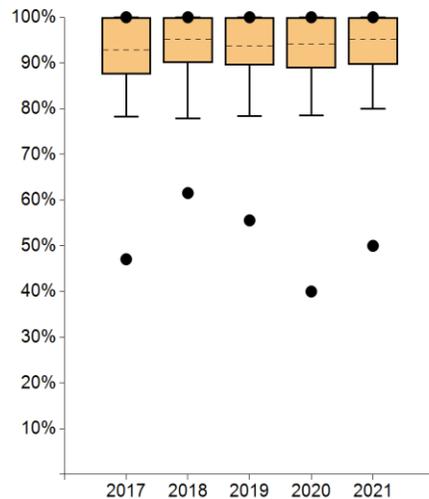
\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

## 26. Quality of the TME rectum specimen (information from pathology) (GL QI)



Sollvorgabe = target value

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with TME rectum specimen from good to moderate quality (grade 1: mesorectal fascia or grade 2: intramesorectal excisions) of TME	14*	1 - 48	4463
Denominator	Patients with elective radically operated RC (without transanal wall resection)	15*	2 - 53	4759
Rate	Target value ≥ 85%	95.24%	50.00% - 100%	93.78%* *



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	100%	100%	100%	100%	100%
Median	92.86%	95.24%	93.75%	94.12%	95.24%
25 <sup>th</sup> percentile	87.50%	90.00%	89.47%	88.89%	89.66%
5 <sup>th</sup> percentile	78.31%	77.90%	78.37%	78.57%	80.00%
Minimum	47.06%	61.54%	55.56%	40.00%	50.00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	268	90.24%

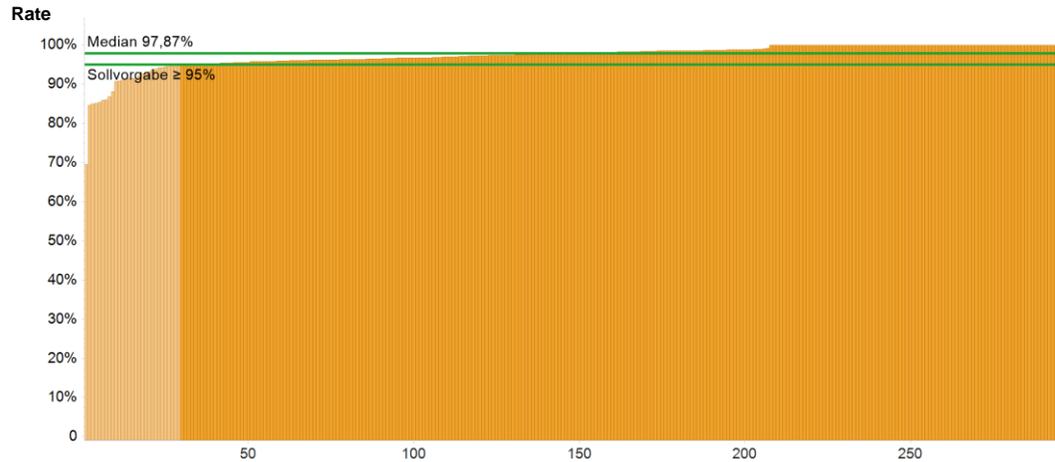
### Comments:

This QI of the guideline shows largely stable results. 5 centres less than in the pre-indicator year (now 29) missed the target value. The most frequent reason was perforating, abscessing and/or infiltrating tumours (18x). Sometimes the operation conditions (especially due to adhesions after radio- and/or chemotherapy, pre-operations or difficult anatomical conditions) were difficult (23x). 7 centres reported damage to specimens during salvage. The centres reacted here in particular by processing the cases in quality circles and M&M conferences.

\*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.

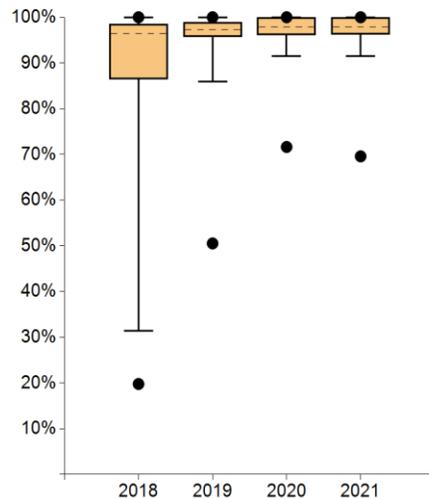
## 27. Pathology report after surgical resection of colorectal cancer (GL QI)



Sollvorgabe = target value

297 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with complete pathology report	70*	35 - 208	22521
Denominator	Patients with CRC and surgical resection	72*	35 - 217	23155
Rate	Target value $\geq$ 95%	97,87%	69,57% - 100%	97,26%**



	2017	2018	2019	2020	2021
Maximum	-----	100%	100%	100%	100%
95 <sup>th</sup> percentile	-----	100%	100%	100%	100%
75 <sup>th</sup> percentile	-----	98.53%	98.83%	100%	100%
Median	-----	96.35%	97.29%	97.85%	97.87%
25 <sup>th</sup> percentile	-----	86.45%	95.71%	96.12%	96.20%
5 <sup>th</sup> percentile	-----	31.35%	85.96%	91.43%	91.54%
Minimum	-----	19.78%	50.52%	71.62%	69.57%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	268	90.24%

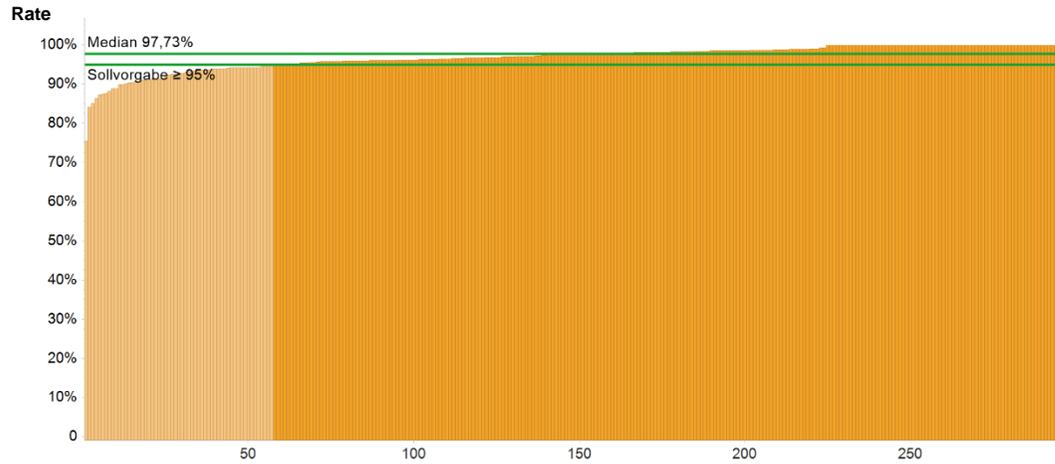
### Comments:

Complete pathology report have become established at a high level in the centres. Only 29 centres (previous year: 31) fell short off the target value - in most cases just barely. Most frequently (15x) the information on the resection margin was missing (e.g. in the case of pT0 or missing mm information), followed by RX (especially in the case of perforation or peritoneal carcinomatosis) (12x), GX after neoadjuvant therapy (11x), no longer detectable tumour (9x) and missing differentiation between oral and aboral resection margin (5x). The centres reacted by training the surgeons and pathologists and in some cases adapted the report templates.

\*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.

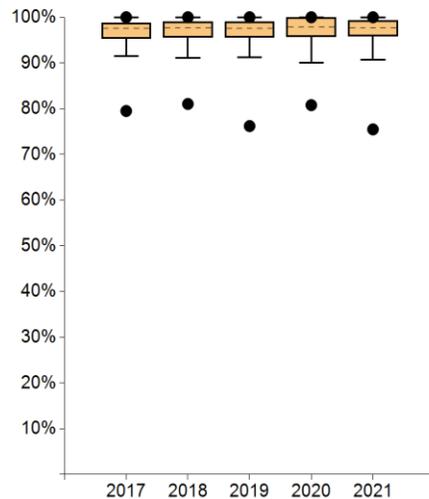
## 28. Lymph node examination (GL QI 2)



Sollvorgabe = target value

297 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with $\geq 12$ pathologically examined lymph nodes	65*	27 - 195	20408
Denominator	Patients with CRC who have had elective surgery with lymphadenectomy (without TVE)	67*	30 - 201	21055
Rate	Target value $\geq 95\%$	97.73%	75.47% - 100%	96.93%**



	2017	2018	2019	2020	2021
● Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	98.78%	99.00%	98.98%	100%	99.31%
Median	97.58%	97.66%	97.61%	97.89%	97.73%
25 <sup>th</sup> percentile	95.34%	95.56%	95.58%	95.74%	95.83%
5 <sup>th</sup> percentile	91.44%	91.13%	91.15%	90.00%	90.70%
● Minimum	79.49%	81.03%	76.19%	80.77%	75.47%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
297	100.00%	240	80.81%

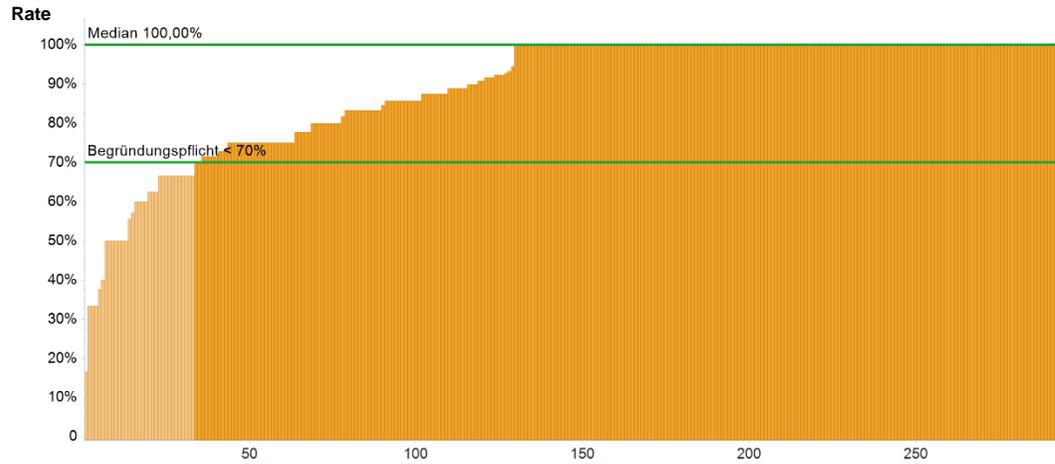
### Comments:

This QI of the guideline also shows hardly any changes. 73 centres achieved a rate of 100%. With 57 centres, 3 fewer than in the pre-indicator or year missed the target value. The most frequent reason for a low number of lymph nodes was neoadjuvant pre-treated patients (39x). 28 centres reported not being able to find more lymph nodes despite efforts (e.g. acetone treatment). Frequently, a limited resection was also planned (e.g. in the case of metastasis) (14x). Measures include quality circles as well as consultations with and follow-up findings by the pathology department.

\*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.

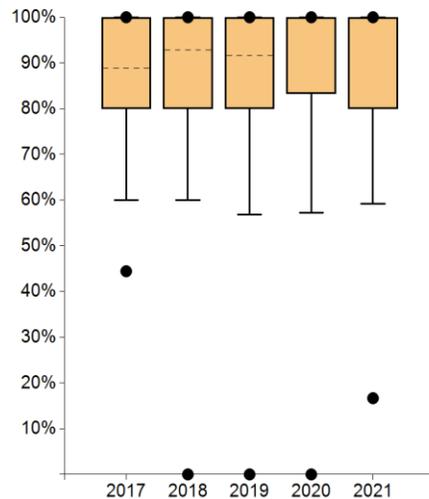
## 29. Start of adjuvant chemotherapy



Begründungspflicht = mandatory statement of reasons

295 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator with start of chemotherapy within 8 weeks of surgery	5*	1 - 17	1627
Denominator	Patients with colon cancer UICC stad. III who received adjuvant chemotherapy (= numerator indicator 24)	6*	1 - 19	1828
Rate	Mandatory statement of reasons*** <math>< 70\%</math>	100%	16.67% - 100%	89.00%**



	2017	2018	2019	2020	2021
Maximum	100%	100%	100%	100%	100%
95 <sup>th</sup> percentile	100%	100%	100%	100%	100%
75 <sup>th</sup> percentile	100%	100%	100%	100%	100%
Median	88.89%	92.86%	91.67%	100%	100%
25 <sup>th</sup> percentile	80.00%	80.00%	80.00%	83.33%	80.00%
5 <sup>th</sup> percentile	60.00%	60.00%	56.87%	57.14%	59.14%
Minimum	44.44%	0.00%	0.00%	0.00%	16.67%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
295	99.33%	262	88.81%

### Comments:

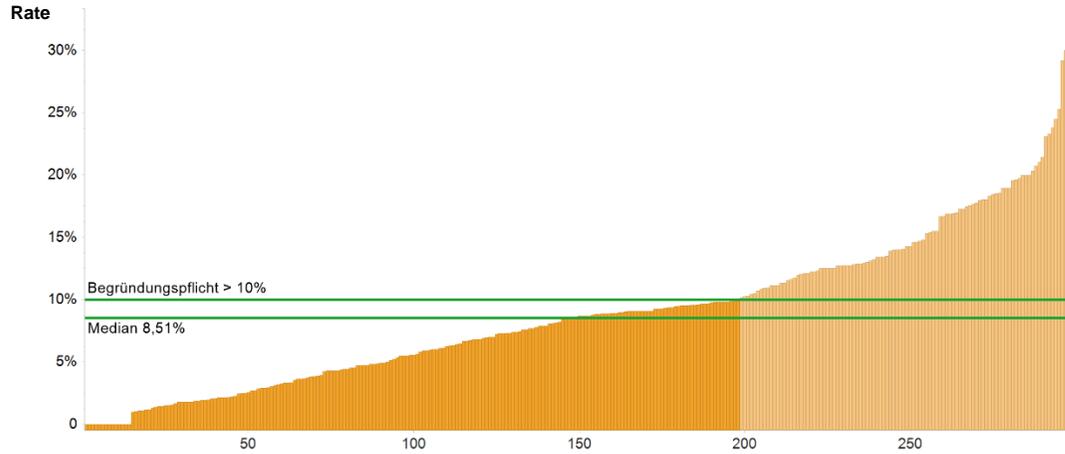
The degree of fulfilment remains at a high level. 33 centres had to justify why they were able to comply with the time requirement of the denominator in less than 70% of the cases. By far the most frequent reason (17x) was a complicated post-operative course or delayed convalescence. 9 centres referred to the explicit wish of the patients. Other reasons (e.g. covid infection, second malignancy) were only mentioned in a few cases. The information provided by the centres could be plausibilised in the audits.

\*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.

\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

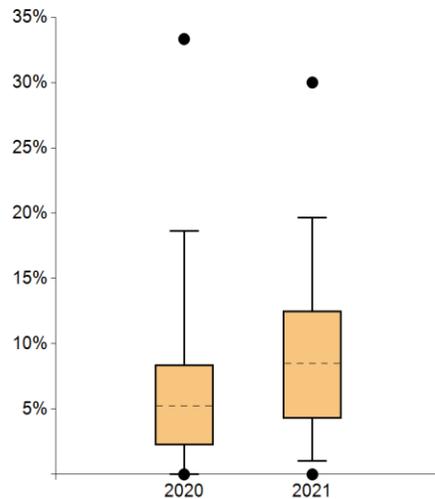
### 30. MTL22 Indicator (mortality, transfer, hospital stay)



Begründungspflicht = mandatory statement of reasons

297 clinical sites

	Indicator definition	All clinical sites 2021		
		Median	Range	Patients Total
Numerator	Patients of the denominator who - died within 30 d postoperatively (numerator of indicator 20) or - were transferred to another acute care hospital, or - had a hospital stay > 22d after tumour resection	6*	0 - 26	1832
Denominator	Electively operated patients (= denominator of indicator 20)	67*	30 - 201	21150
Rate	Mandatory statement of reasons*** >10%	8.51%	0.00% - 30.00%	8.66%**



	2017	2018	2019	2020	2021
Maximum	----	----	----	33.33%	30.00%
95 <sup>th</sup> percentile	----	----	----	18.65%	19.66%
75 <sup>th</sup> percentile	----	----	----	8.40%	12.50%
Median	----	----	----	5.26%	8.51%
25 <sup>th</sup> percentile	----	----	----	2.26%	4.29%
5 <sup>th</sup> percentile	----	----	----	0.00%	1.03%
Minimum	----	----	----	0.00%	0.00%

Clinical sites with evaluable data		Clinical sites meeting the plausibility limits	
Number	%	Number	%
297	100.00%	198	66.67%

**Comments :**

This new type of indicator was collected for the first time on a mandatory basis in all centres. One third of the centres (99) were above the 10% mark and thus required a statement of reasons. 58 centres referred to post-operative deaths. In fact, all centres requiring a statement of reasons had cases with a long length of stay, mainly due to complicated post-operative course (72x), comorbidity/multimorbidity (33x), old age (14x), Covid disease (12x), delayed transfer to rehabilitation or short-term care (12x) and second malignancies (5x). Only 13 centres reported transfers to another acute hospital, with only gynaecologists (5x) being mentioned more than sporadically here.

\*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.

\*\*\* If value is outside the plausibility corridor, centres have to give an explanation.

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## Imprint

Publisher and responsibility for content:  
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Kuno-Fischer-Straße 8  
DE-14057 Berlin  
Tel.: +49 (030) 322 93 29 0  
Association Register District Court Charlottenburg.  
Association Register No.: VR 27661 B  
Responsible in accordance with press law:  
Dr Johannes Bruns

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Version A1; status 29.06.2023

ISBN: 978-3-910336-36-0



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