



Indicator Analysis 2022

Annual Report of the Certified Pancreatic Cancer Centres

Audit year 2021 / Indicator year 2020

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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: <https://www.leitlinienprogramm-onkologie.de/german-guideline-program-in-oncology/>*

Basic information for indicators:

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 center 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 centers.

The column **Total Patients** 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%** |

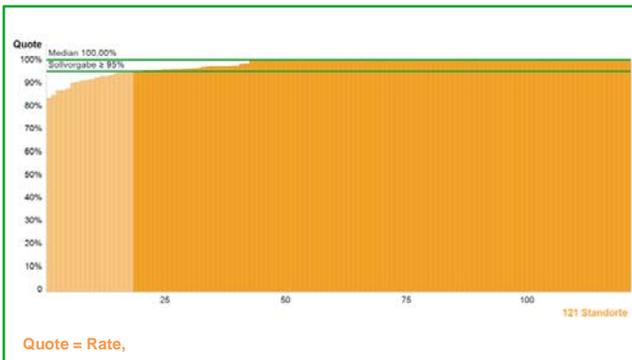
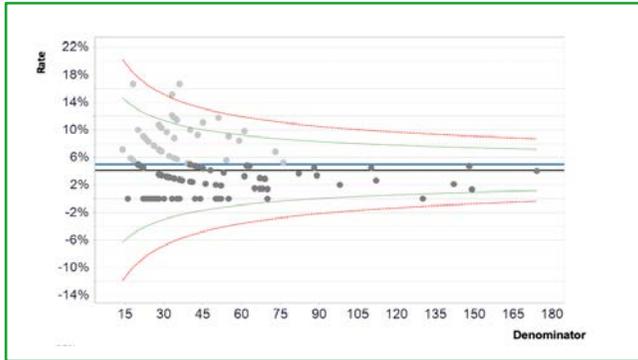


Diagram:

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.

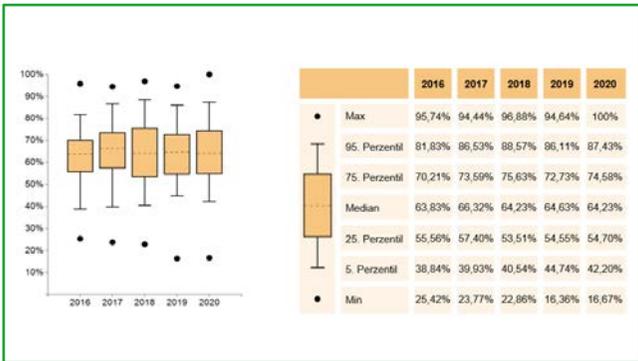
*For further information on the methodological approach see „Development of guideline-based quality indicators“ (https://www.leitlinienprogramm-onkologie.de/fileadmin/user_upload/Downloads/Methodik/QIEP_OL_Version2_english.pdf)

General information



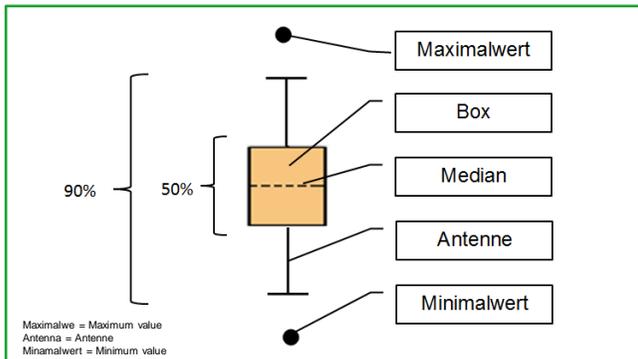
Funnel Plots:

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:

Cohort development in the years **2016, 2017, 2018, 2019 and 2020** is presented in a box plot diagram.



Box plot:

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

Status of the Certification System for Pancreatic Cancer Centres 2021

| | 31.12.2021 | 31.12.2020 | 31.12.2019 | 31.12.2018 | 31.12.2017 | 31.12.2016 |
|----------------------------------|------------|------------|------------|------------|------------|------------|
| Ongoing certification procedures | 6 | 5 | 8 | 5 | 10 | 5 |
| Certified Centres | 133 | 124 | 117 | 112 | 98 | 91 |
| Certified clinical sites | 136 | 127 | 120 | 115 | 100 | 93 |

General information

| | 31.12.2021 | 31.12.2020 | 31.12.2019 | 31.12.2018 | 31.12.2017 | 31.12.2016 |
|--|------------|------------|------------|------------|------------|------------|
| Clinical sites included in the Annual Report | 131 | 121 | 116 | 106 | 93 | 83 |
| equivalent to | 96,3% | 95,3% | 96,7% | 92,2% | 93% | 89,2% |
| Primary cases total* | 6.759 | 6.068 | 5.683 | 5.104 | 4.526 | 3.877 |
| Primary cases per clinical site (mean)* | 52 | 50 | 49 | 48 | 49 | 47 |
| Primary cases per clinical site (median)* | 45 | 49 | 43 | 45 | 44 | 43 |

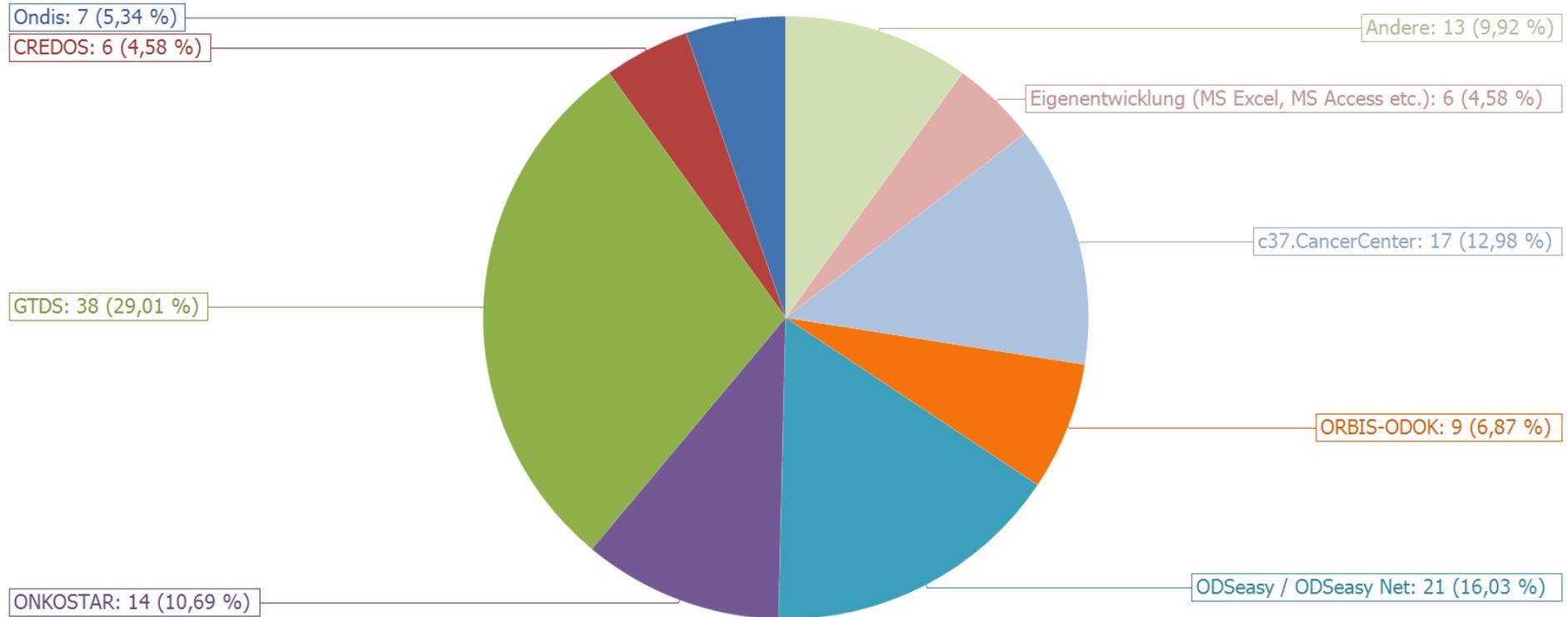
*The figures are based on the clinical sites listed in the Annual Report.

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 131 of the 136 certified center sites. 5 sites were excluded that were certified for the first time in 2021 (data mapping of complete calendar year not mandatory for initial certifications). A total of 6,956 primary cases were treated at 136 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 2020. They are the assessment basis for the audits conducted in 2021.

Tumour documentation systems at the Centre's clinical sites

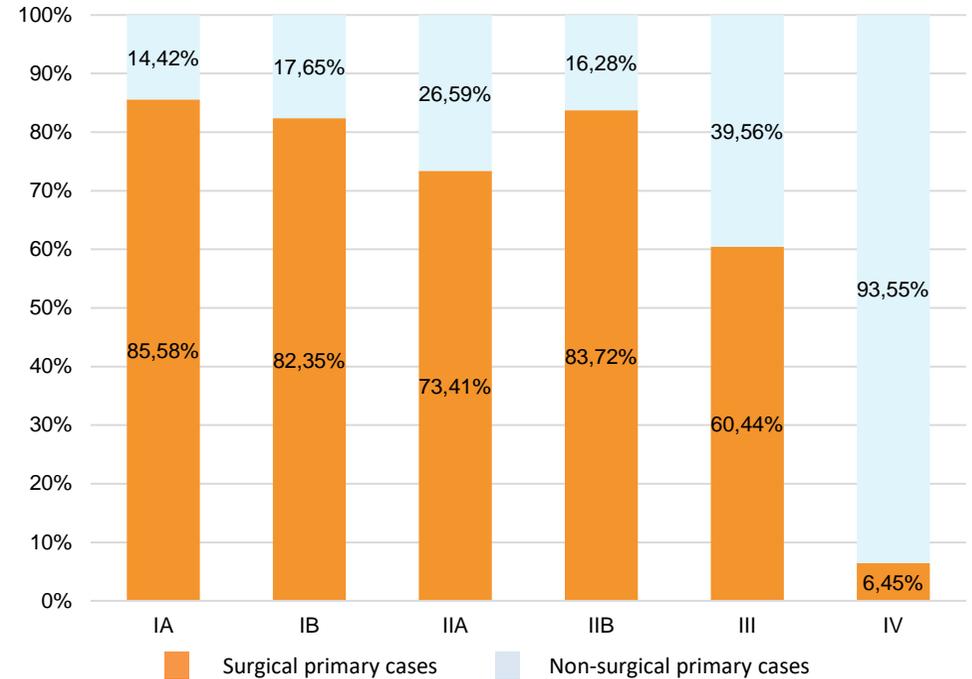
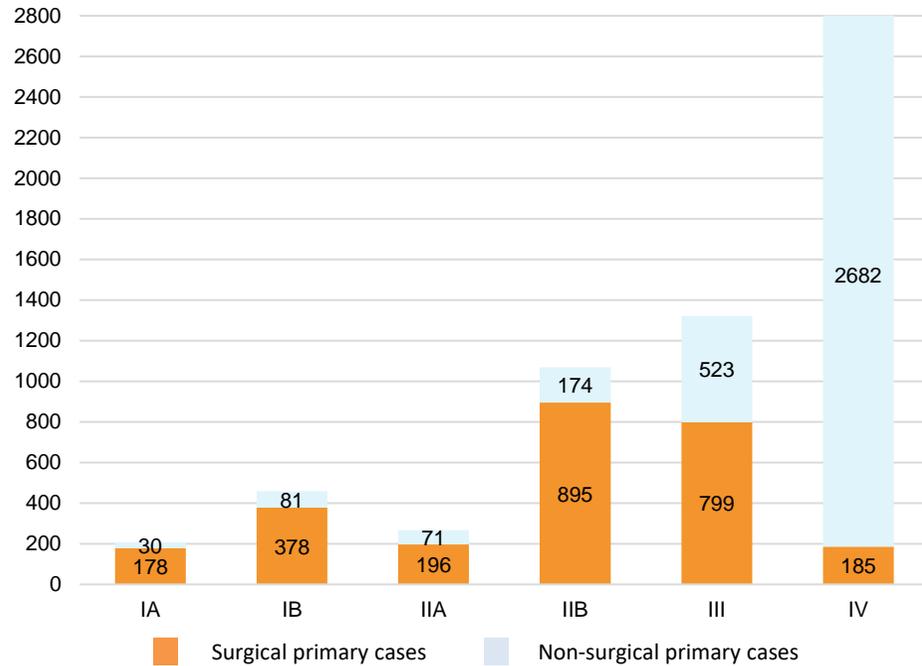


Andere = other

| Legend: | |
|---------|-----------------------------------|
| Other | System used in ≤ 3 clinical sites |

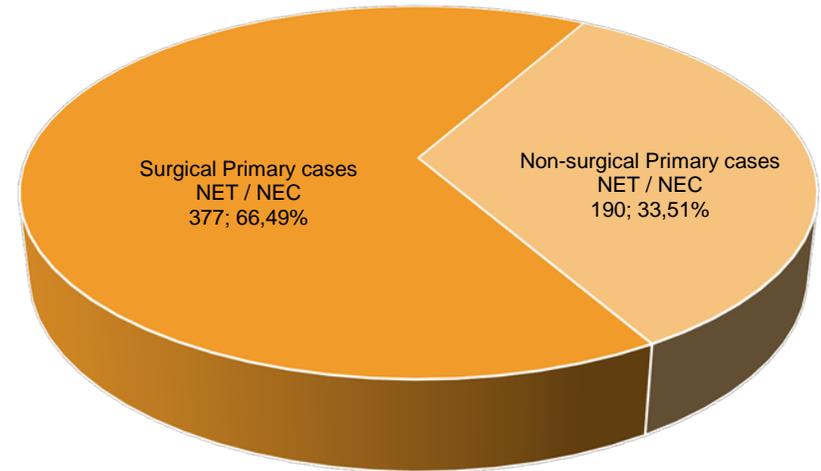
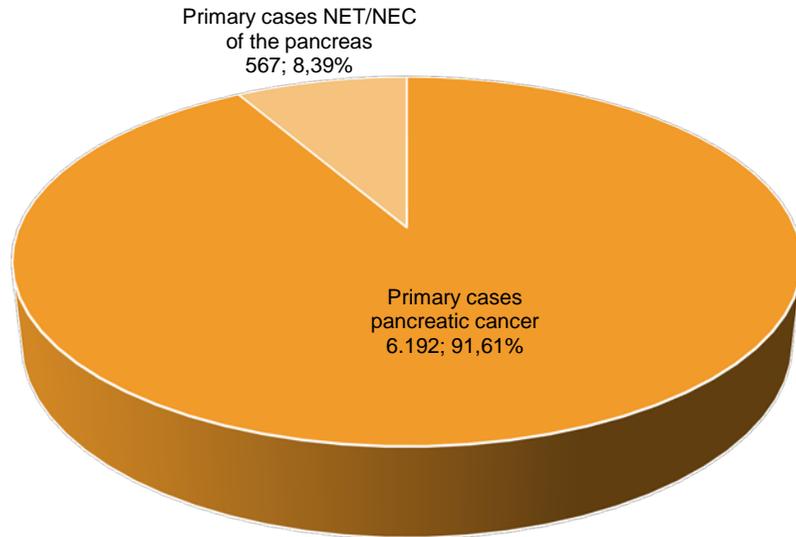
The information on the tumour documentation system was taken from the data sheet (Basic Data Sheet). It is not possible to use more than one system. In many cases, support is provided by the cancer registries or there may be a direct link to the cancer registry via a specific tumor documentation system.

Basic data - Primary cases - Pancreatic cancer



| | IA | IB | IIA | IIB | III | IV | Total |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| Surgical primary cases | 178 (85,58%) | 378 (82,35%) | 196 (73,41%) | 895 (83,72%) | 799 (60,44%) | 185 (6,45%) | 2.631 (42,49%) |
| Non-surgical primary cases | 30 (14,42%) | 81 (17,65%) | 71 (26,59%) | 174 (16,28%) | 523 (39,56%) | 2.682 (93,55%) | 3.561 (57,51%) |
| Primary cases total | 208 (100%) | 459 (100%) | 267 (100%) | 1.069 (100%) | 1.322 (100%) | 2.867 (100%) | 6.192 (100%) |

Basic data - Primary cases Pancreatic cancer

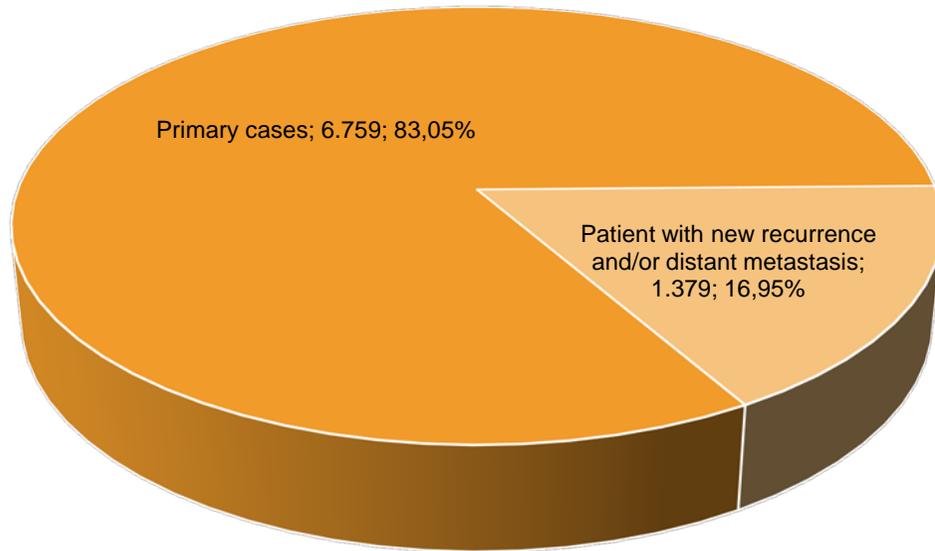


| Primary cases pancreatic cancer | Primary cases NET / NEC of the pancreas | Primary cases Total |
|---------------------------------|---|---------------------|
| 6.192 (91,61%) | 567 (8,39%) | 6.759 (100%) |

| Surgical Primary cases NET / NEC | Non-surgical Primary cases NET / NEC | Primary cases Total NET / NEC |
|----------------------------------|--------------------------------------|-------------------------------|
| 377 (66,49%) | 190 (33,51%) | 567 (100%) |

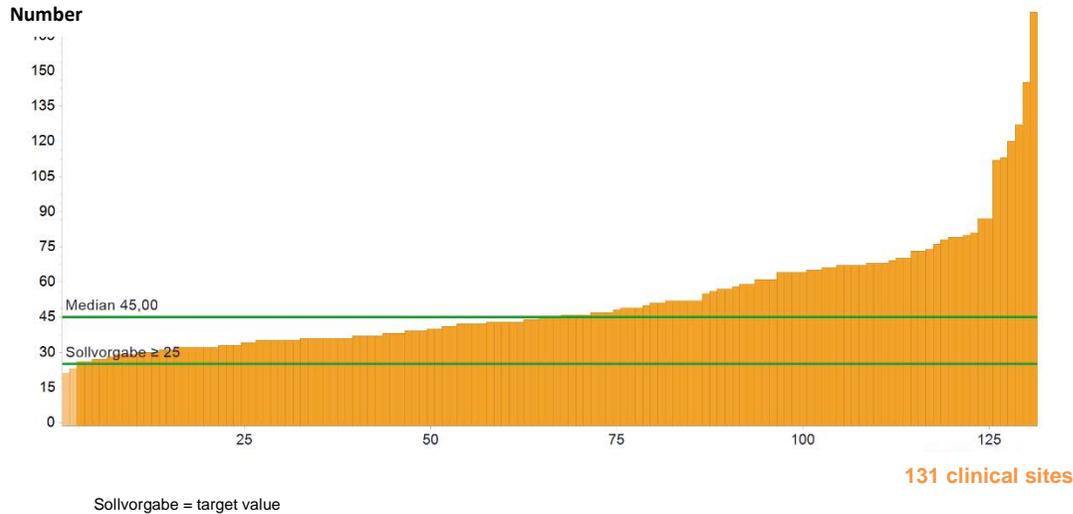
NET = pancreatic neuroendocrine tumor
NEC = Neuroendocrine carcinoma

Basic data – Cancer Cases Pancreatic Cancer Centre

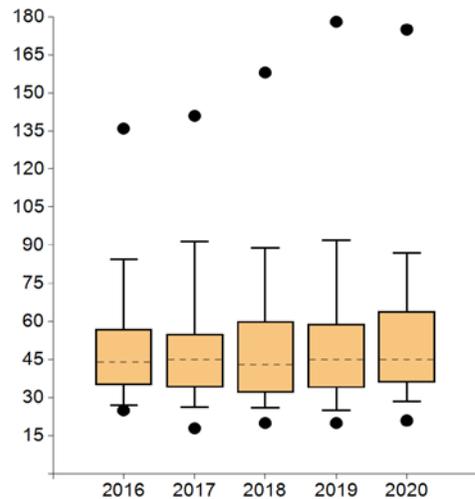


| Primary cases | Pat. with new recurrence and/or distant metastasis | Centre cases |
|----------------|--|--------------|
| 6.759 (83,05%) | 1.379 (16,95%) | 8.138 (100%) |

1a. Primary cases Centre



| | Indicator definition | All clinical sites 2020 | | |
|--------|----------------------|-------------------------|----------|----------------|
| | | Median | Range | Patients Total |
| Number | Primary cases | 45 | 21 - 175 | 6759 |
| | Target value ≥ 25 | | | |



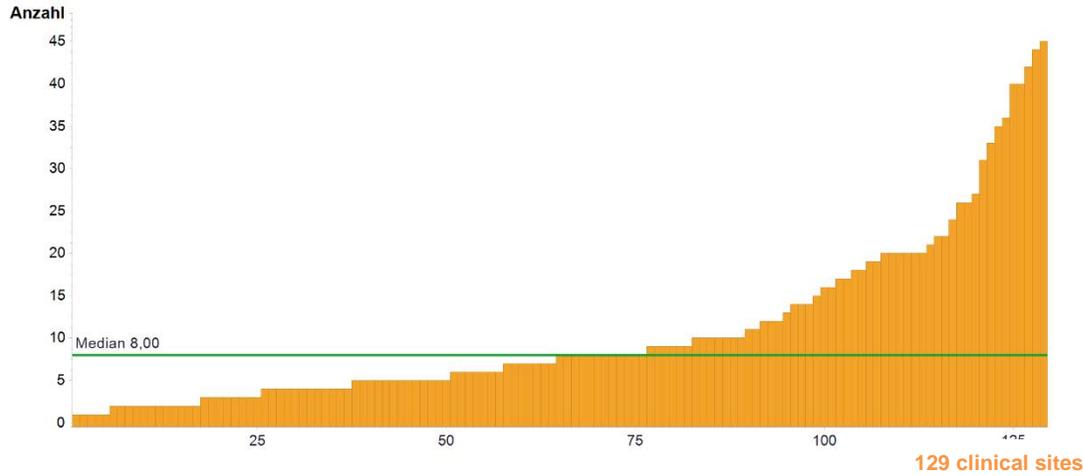
| | 2016 | 2020 |
|-----------------------------|--------|--------|
| max | 136,00 | 175,00 |
| 95 th percentile | 84,40 | 87,00 |
| 75 th percentile | 57,00 | 64,00 |
| Median | 44,00 | 45,00 |
| 25 th percentile | 35,00 | 36,00 |
| 5 th percentile | 27,00 | 28,50 |
| Min | 25,00 | 21,00 |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 129 | 98,47% |

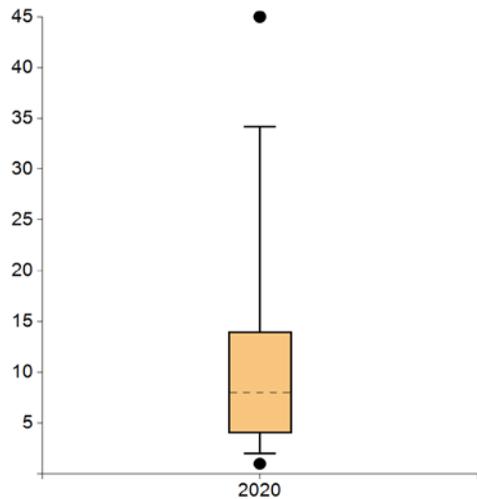
Comments:

Showing a stable median, the total number of primary cases increased by 11.39%. In the German centres, 6,419 primary cases were treated. Compared to the incidence in Germany in 2018 (19,026 new cases with C25), the coverage was 33.74%. The two centres that missed the target of at least 25 primary cases explained this with the Covid 19 pandemic. 1 centre was in the surveillance audit, so that it was possible to fall short of the target. The other centre achieved the average case numbers of the last 3 years in the repeat audit.

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



| | Indicator definition | All clinical sites 2020 | | |
|--------|--|-------------------------|--------|----------------|
| | | Median | Range | Patients Total |
| Number | Patients with new recurrence and/or distant metastases | 8 | 1 - 45 | 1379 |
| | No Target value | | | |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|------|------|------|------|-------|
| max | ---- | ---- | ---- | ---- | 45,00 |
| 95 th percentile | ---- | ---- | ---- | ---- | 34,20 |
| 75 th percentile | ---- | ---- | ---- | ---- | 14,00 |
| Median | ---- | ---- | ---- | ---- | 8,00 |
| 25 th percentile | ---- | ---- | ---- | ---- | 4,00 |
| 5 th percentile | ---- | ---- | ---- | ---- | 2,00 |
| Min | ---- | ---- | ---- | ---- | 1,00 |

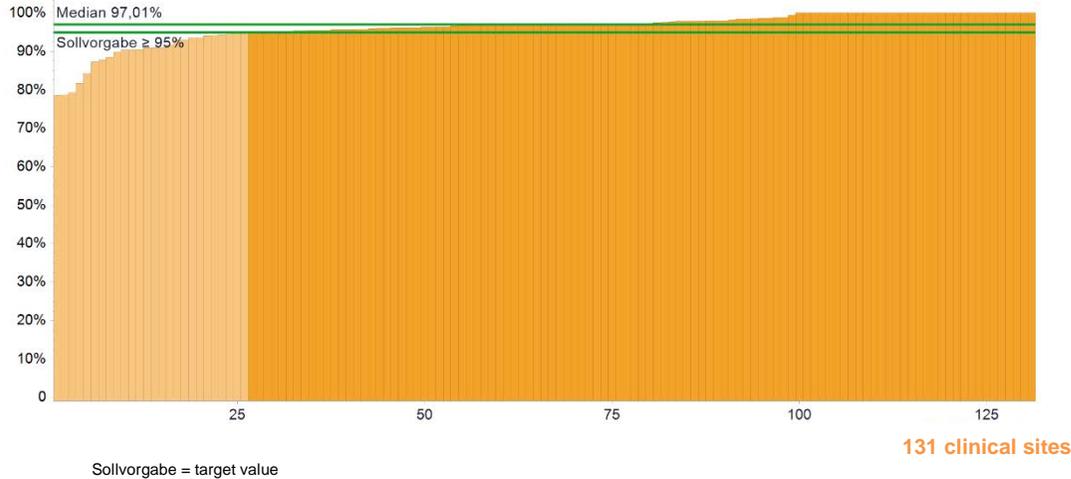
| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|--------|---|------|
| Number | % | Number | % |
| 129 | 98,47% | ---- | ---- |

Comments:

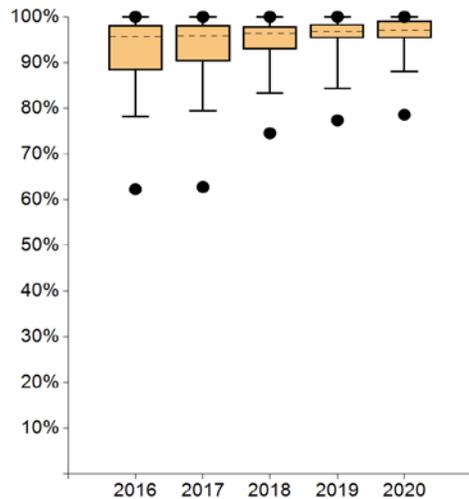
As with the other tumour entities, the number of patients with new recurrence and/or distant metastases is now also collected in a separate indicator in the certification system for pancreatic cancer. On average, each pancreatic cancer centre treated 8 of these patients in 2020.

2. Pretherapeutic tumour board

Rate



| | Indicator definition | All clinical sites 2020 | | |
|-------------|---|-------------------------|---------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Primary cases with pancreatic cancer who were presented at the pre-therapeutic tumour board | 43* | 21 - 174 | 6489 |
| Denominator | Primary cases (= Indicator 1) | 45* | 21 - 175 | 6759 |
| Rate | Target value ≥ 95% | 97,01% | 78,57% - 100% | 96,01%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| ● max | 100% | 100% | 100% | 100% | 100% |
| 95 th percentile | 100% | 100% | 100% | 100% | 100% |
| 75 th percentile | 98,04% | 98,16% | 97,88% | 98,31% | 99,09% |
| Median | 95,74% | 95,88% | 96,43% | 96,72% | 97,01% |
| 25 th percentile | 88,24% | 90,34% | 92,92% | 95,31% | 95,35% |
| 5 th percentile | 78,06% | 79,38% | 83,33% | 84,38% | 88,06% |
| ● Min | 62,26% | 62,75% | 74,55% | 77,36% | 78,57% |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 105 | 80,15% |

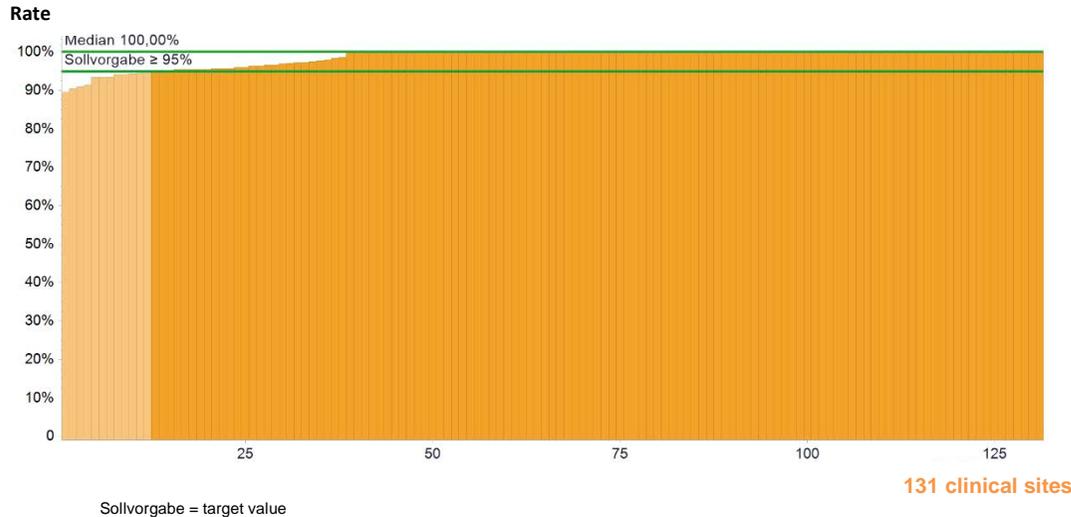
Comments:

The positive development in pre-therapeutic case presentation continues. With an increased basic population, 26 centres (previous year: 27) missed the target. 11 of them reported sporadic failures; in addition, urgent (6 mentions) or emergency interventions (4x) and intraoperative incidental findings (4x) were frequent reasons. In the case of non-operative cases (5x) or patients referred for surgery (4x), the auditors pointed out that these cases should also be presented consistently.

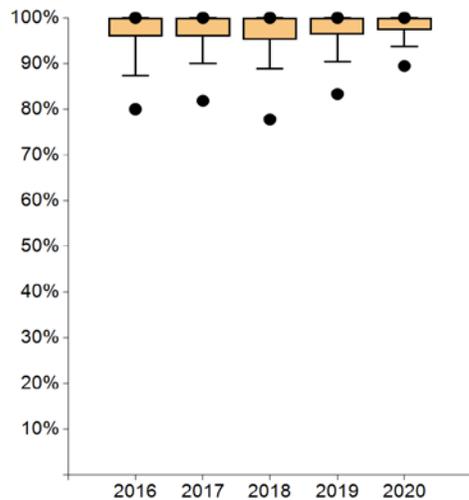
*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

3. Post-operative tumour board



| | Indicator definition | All clinical sites 2020 | | |
|-------------|--|-------------------------|---------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Surgical primary cases pancreas presented in the post-operative tumour board | 18* | 6 - 83 | 2954 |
| Denominator | Surgical primary cases pancreas (5-524ff. 5-525ff with ICD-10 C25) (= Indicator 8) | 18* | 6 - 87 | 3008 |
| Rate | Target value ≥ 95% | 100% | 89,47% - 100% | 98,20%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| ● max | 100% | 100% | 100% | 100% | 100% |
| 95 th percentile | 100% | 100% | 100% | 100% | 100% |
| 75 th percentile | 100% | 100% | 100% | 100% | 100% |
| Median | 100% | 100% | 100% | 100% | 100% |
| 25 th percentile | 96,00% | 95,94% | 95,20% | 96,36% | 97,29% |
| 5 th percentile | 87,36% | 90,00% | 88,89% | 90,48% | 93,73% |
| ● Min | 80,00% | 81,82% | 77,78% | 83,33% | 89,47% |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 119 | 90,84% |

Comments:

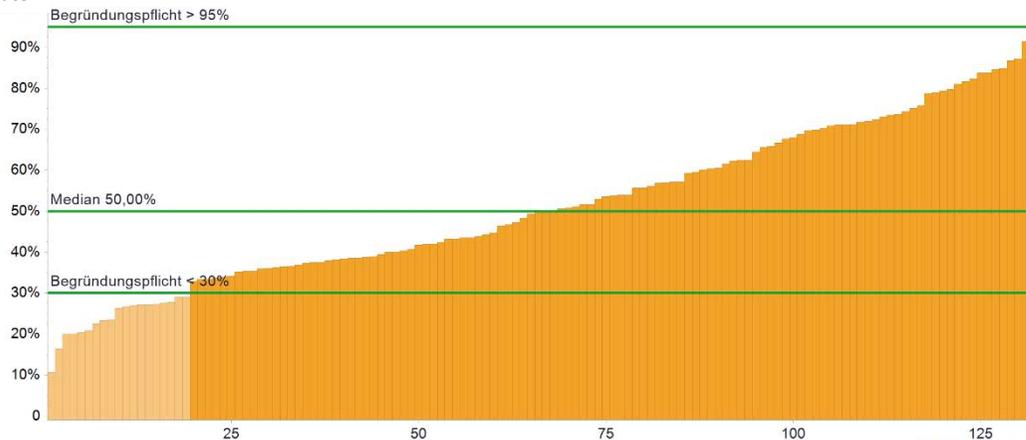
The development in postoperative case presentation also continues to be positive, so that only 12 centres (previous year: 18) still fall short of the target: All of them attributed this to patients who died immediately after surgery and were no longer presented. In some cases, the centres still discussed the corresponding patients in M&M conferences or planned to present patients - as envisaged in the certification system - regardless of the postoperative course.

*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

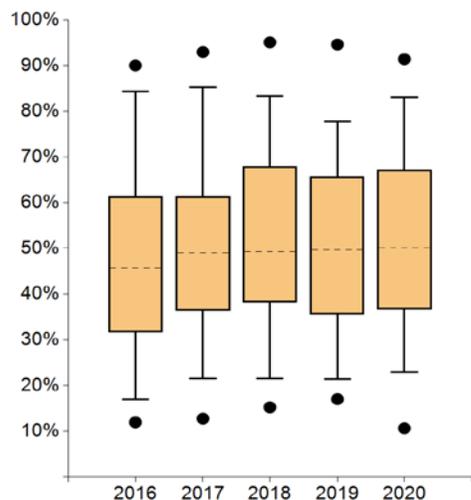
Rate



Begründungspflicht = mandatory statement of reasons

131 clinical sites

| | Indicator definition | All clinical sites 2020 | | |
|-------------|---|-------------------------|-----------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Patients who received psycho-oncological care (length of consultation ≥ 25 min) | 28* | 5 - 139 | 3993 |
| Denominator | Primary cases (= Indicator 1a) + Patients with new recurrence and/or distant metastases (=Indicator 1b) | 52* | 26 - 187 | 8138 |
| Rate | Mandatory statement of reasons*** < 30% and >95% | 50,00% | 10,64% - 91,40% | 49,07%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| max | 90,00% | 92,94% | 95,08% | 94,59% | 91,40% |
| 95 th percentile | 84,28% | 85,32% | 83,29% | 77,78% | 82,99% |
| 75 th percentile | 61,33% | 61,25% | 67,97% | 65,71% | 67,12% |
| Median | 45,71% | 48,98% | 49,24% | 49,66% | 50,00% |
| 25 th percentile | 31,71% | 36,47% | 38,19% | 35,48% | 36,76% |
| 5 th percentile | 17,01% | 21,52% | 21,51% | 21,31% | 22,92% |
| Min | 11,96% | 12,77% | 15,24% | 17,02% | 10,64% |

| Clinical sites with evaluable data | | Clinical sites within the plausibility limits | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 112 | 85,50% |

Comments:

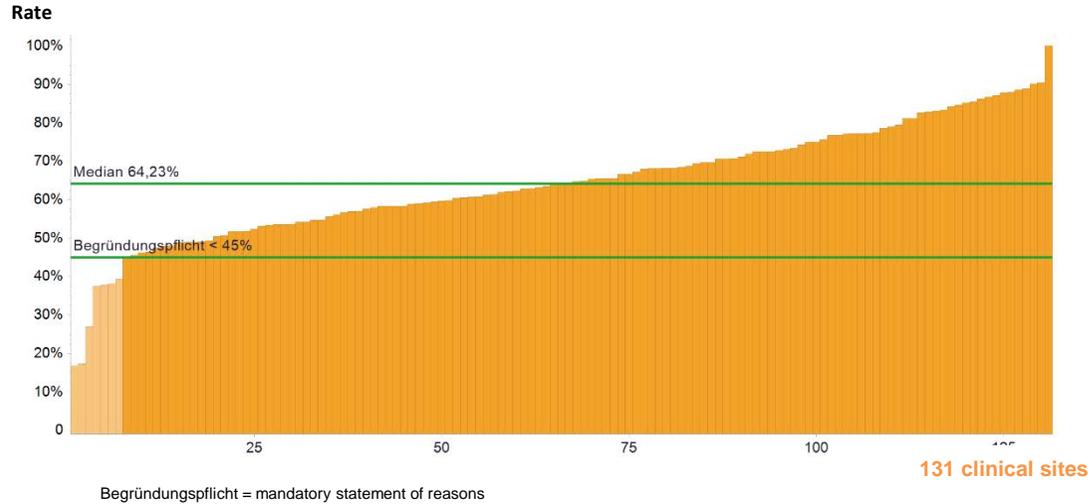
The psycho-oncology counselling rate remained almost unchanged. Of the 19 centers that required justification with rates below 30%, 7 referred to pandemic-related circumstances such as contact restrictions or low acceptance of digital counseling services by older patients. Low need for counseling by patients (7x) and conversations lasting less than 25 min (3x) were also identified as causes. Many centers announced to strive for better standardized screening in the future, as well as to rely more on digital counseling services.

*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

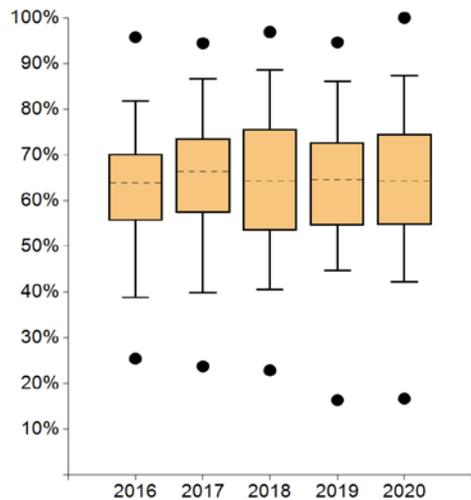
** Percentage of centre patients who were treated according to the indicator.

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

5. Social services counselling



| | Indicator definition | All clinical sites 2020 | | |
|-------------|--|-------------------------|---------------|------------------|
| | | Median | Range | Patienten Gesamt |
| Numerator | Patients who received counselling from the social services | 34* | 8 - 121 | 5166 |
| Denominator | Primary cases (= Indicator 1a) + Patients with new recurrence and/or distant metastases (= Indicator 1b) | 52* | 26 - 187 | 8138 |
| Rate | Mandatory statement of reasons*** < 45% | 64,23% | 16,67% - 100% | 63,48%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| max | 95,74% | 94,44% | 96,88% | 94,64% | 100% |
| 95 th percentile | 81,83% | 86,53% | 88,57% | 86,11% | 87,43% |
| 75 th percentile | 70,21% | 73,59% | 75,63% | 72,73% | 74,58% |
| Median | 63,83% | 66,32% | 64,23% | 64,63% | 64,23% |
| 25 th percentile | 55,56% | 57,40% | 53,51% | 54,55% | 54,70% |
| 5 th percentile | 38,84% | 39,93% | 40,54% | 44,74% | 42,20% |
| Min | 25,42% | 23,77% | 22,86% | 16,36% | 16,67% |

| Clinical sites with evaluable data | | Clinical sites within the plausibility limits | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 124 | 94,66% |

Comments:

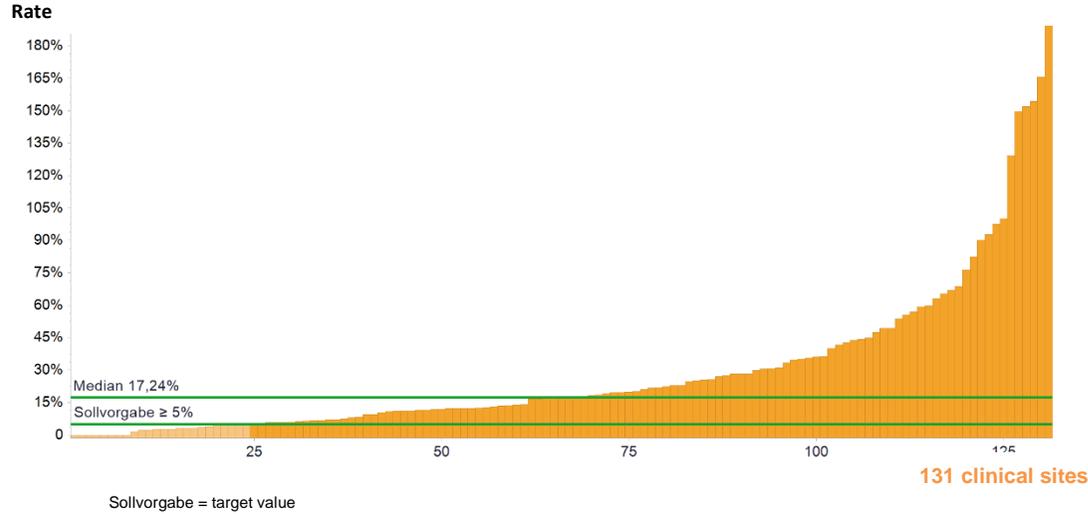
The consultation rate by the social services also remain at a stable level. As in the previous year, 7 centers required justification, including 3 from countries outside of Germany where social counseling is provided by other professional groups. The remaining centers referred, among other things, to documentation problems (2x). Only 1 center referred to pandemic-related restrictions.

*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.

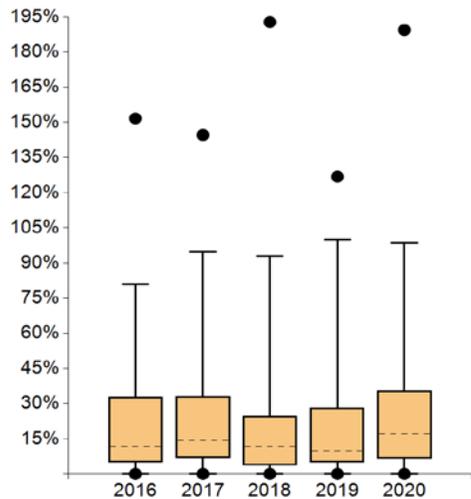
** Percentage of centre patients who were treated according to the indicator

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

6. Study participation



| | Indicator definition | All clinical sites 2020 | | |
|-------------|---------------------------------------|-------------------------|-----------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Patients who were included in a study | 8* | 0 - 217 | 2262 |
| Denominator | Primary cases (= Indicator 1a) | 45* | 21 - 175 | 6759 |
| Rate | Target value ≥ 5% | 17,24% | 0,00% - 189,39% | 33,47%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|---------|---------|---------|---------|---------|
| max | 151,61% | 144,57% | 192,73% | 126,79% | 189,39% |
| 95 th percentile | 80,83% | 94,87% | 92,97% | 100% | 98,75% |
| 75 th percentile | 32,89% | 33,20% | 24,72% | 28,21% | 35,37% |
| Median | 11,76% | 14,29% | 11,65% | 9,84% | 17,24% |
| 25 th percentile | 5,00% | 6,71% | 3,81% | 5,00% | 6,67% |
| 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 | % |
| 131 | 100,00% | 107 | 81,68% |

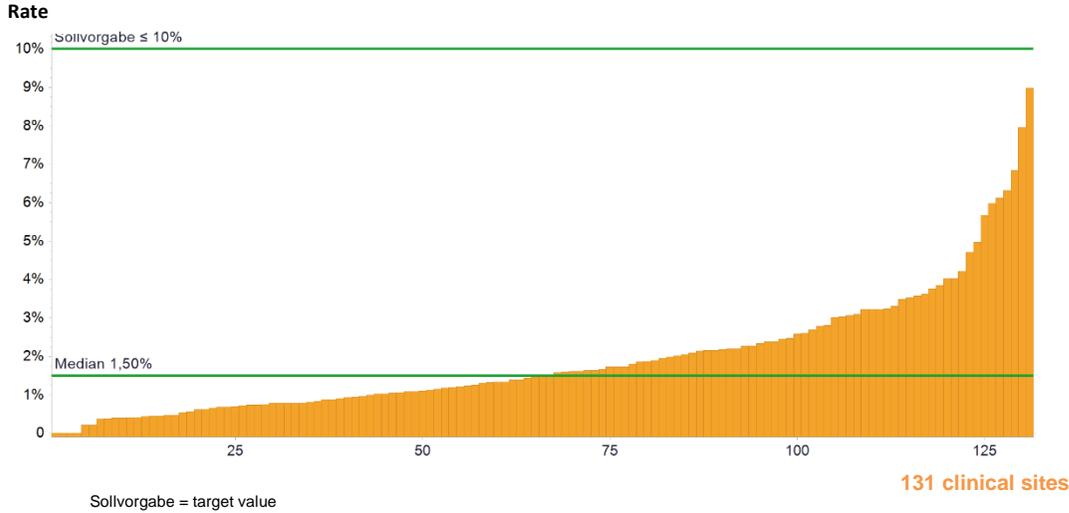
Comments:

The study quota increased significantly compared to the previous year, which also resulted in 6 centers missing the target less than in the previous year. Mostly, the centers could not identify suitable studies (6 mentions), the rate was attributed to pandemic-related circumstances (esp. fewer/postponed studies, 5 x mentioned), or planned studies had not yet started (4x). In the audits, 2 deviations were pronounced. Some centers reacted by establishing a study center or launching their own studies.

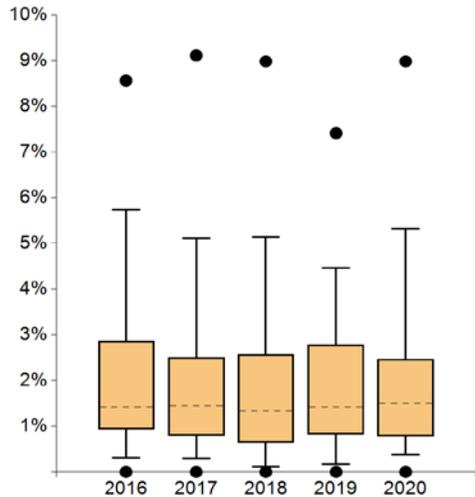
*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

** 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 2020 | | |
|-------------|---|-------------------------|---------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Patients with endoscopy-specific complications Pancreatitis after ERCP (CR 2.1) | 5* | 0 - 48 | 1041 |
| Denominator | ERCPS for each endoscopy unit | 385* | 52 - 1295 | 55270 |
| Rate | Target value ≤ 10% | 1,50% | 0,00% - 8,98% | 1,88%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|-------|-------|-------|-------|-------|
| max | 8,56% | 9,11% | 8,98% | 7,41% | 8,98% |
| 95 th percentile | 5,73% | 5,11% | 5,14% | 4,46% | 5,33% |
| 75 th percentile | 2,86% | 2,50% | 2,58% | 2,78% | 2,47% |
| Median | 1,42% | 1,45% | 1,34% | 1,42% | 1,50% |
| 25 th percentile | 0,93% | 0,80% | 0,64% | 0,82% | 0,79% |
| 5 th percentile | 0,31% | 0,30% | 0,11% | 0,16% | 0,38% |
| Min | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|---------|
| Number | % | Number | % |
| 131 | 100,00% | 131 | 100,00% |

Comments:

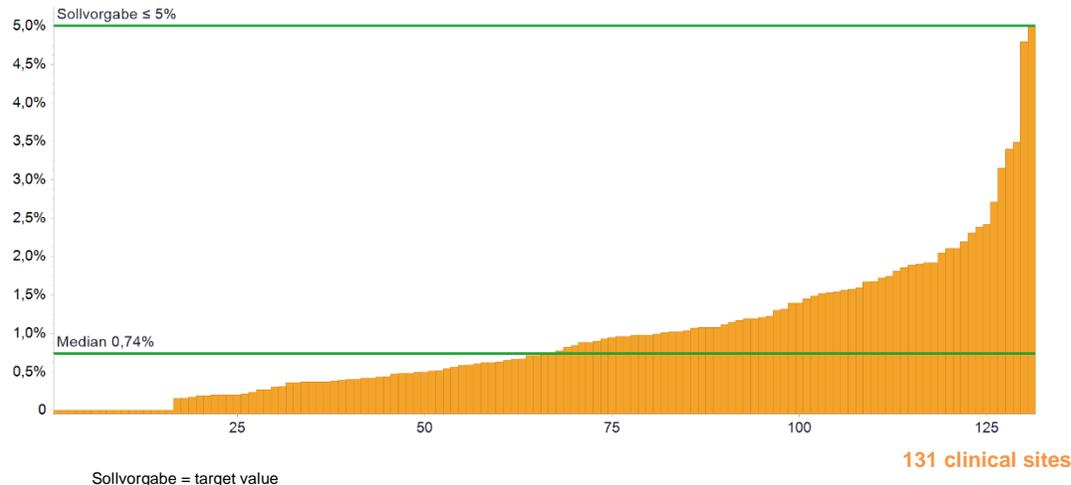
This indicator continues to be implemented very well in the centers, so that in 2020 no center failed to meet the target. 43 centers were even below a rate of 1% pancreatitis in ERCPS.

*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.

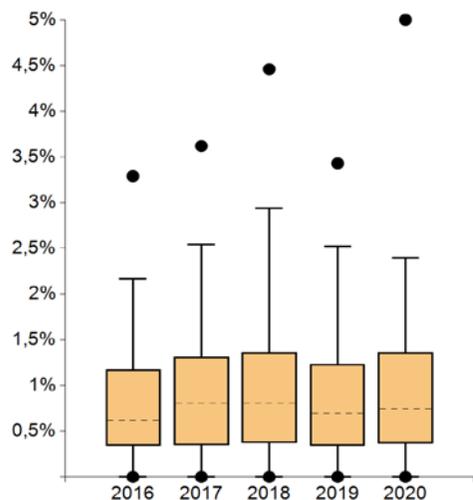
** Percentage of centre patients who were treated according to the indicator

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

Rate



| | Indicator definition | All clinical sites 2020 | | |
|-------------|---|-------------------------|---------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Patients with endoscopy-specific complications bleeding and perforation after ERCP (CR 2.1) | 3* | 0 - 27 | 526 |
| Denominator | ERCPs for each endoscopy unit | 385* | 52 - 1295 | 55270 |
| Rate | Target value ≤ 5% | 0,74% | 0,00% - 5,00% | 0,95%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|-------|-------|-------|-------|-------|
| max | 3,29% | 3,62% | 4,46% | 3,43% | 5,00% |
| 95 th percentile | 2,17% | 2,55% | 2,94% | 2,52% | 2,40% |
| 75 th percentile | 1,17% | 1,32% | 1,36% | 1,23% | 1,36% |
| Median | 0,62% | 0,80% | 0,80% | 0,70% | 0,74% |
| 25 th percentile | 0,34% | 0,35% | 0,37% | 0,34% | 0,37% |
| 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 | % |
| 131 | 100,00% | 131 | 100,00% |

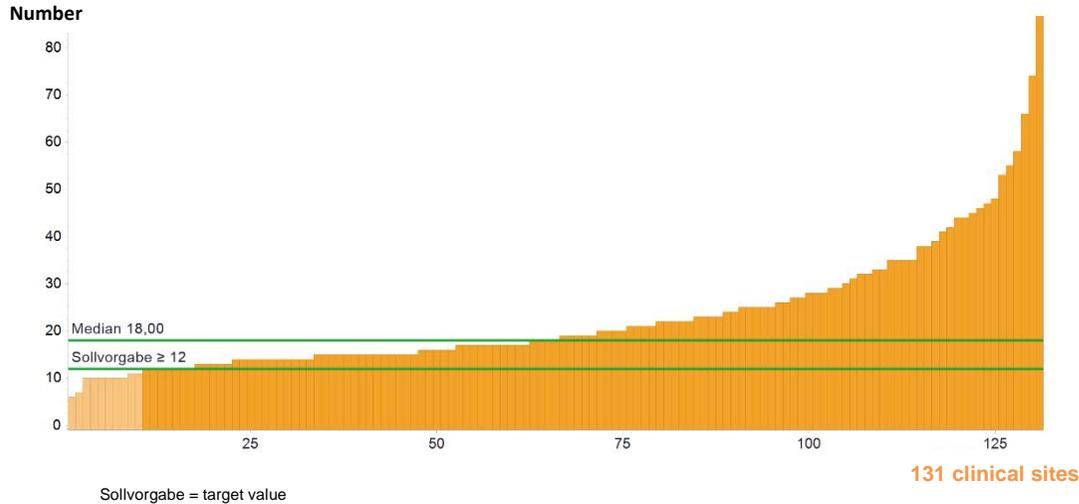
Comments:

No center failed to meet the target value for bleeding and perforation complications. With a slight increase in the median, 81 of the 131 centers providing data had a rate below 1%.

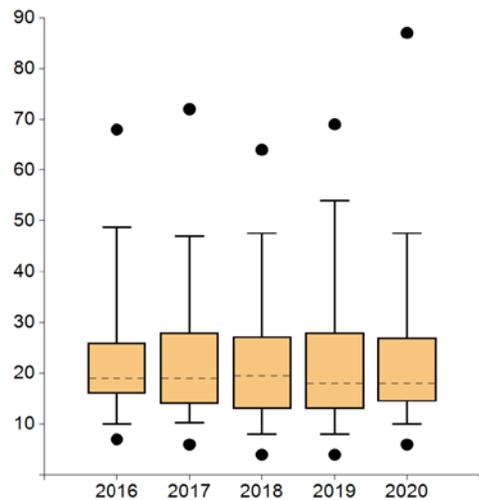
*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

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



| | Indicator definition | All clinical sites 2020 | | |
|--------|--|-------------------------|--------|----------------|
| | | Median | Range | Patients Total |
| Number | Surgical primary cases pancreas (OPS 5-524ff, 5-525ff only with ICD-10 C25) (Def. 5.2.4) | 18 | 6 - 87 | 3008 |
| | Target value ≥ 12 | | | |



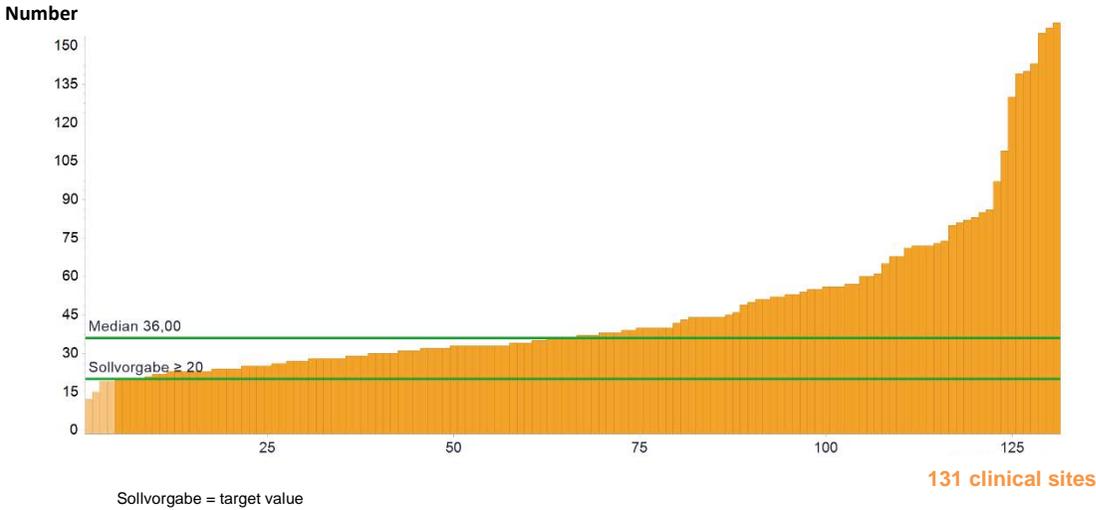
| | 2016 | 2020 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|-------|-------|-------|-------|-------|------|
| max | 68,00 | 72,00 | 64,00 | 69,00 | 87,00 | |
| 95 th percentile | 48,80 | 47,00 | 47,50 | 54,00 | 47,50 | |
| 75 th percentile | 26,00 | 28,00 | 27,25 | 28,00 | 27,00 | |
| Median | 19,00 | 19,00 | 19,50 | 18,00 | 18,00 | |
| 25 th percentile | 16,00 | 14,00 | 13,00 | 13,00 | 14,50 | |
| 5 th percentile | 10,00 | 10,25 | 8,00 | 8,00 | 10,00 | |
| Min | 7,00 | 6,00 | 4,00 | 4,00 | 6,00 | |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 121 | 92,37% |

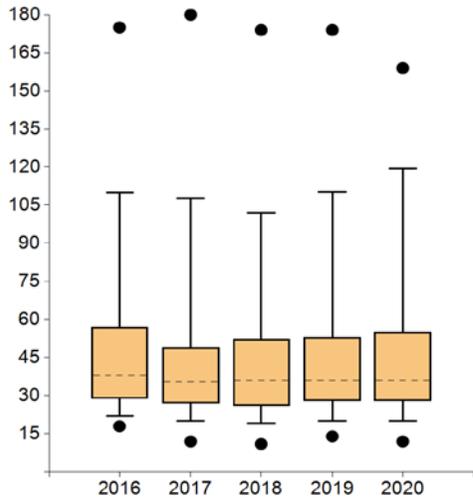
Comments:

Contrary to the trend in other tumor entities, the number of surgical primary cases increased by 11.70% with a stable median. Only 10 centers (previous year: 18) fell short of the target. 8 of them referred to pandemic-related effects (avoidance of inpatient stays by patients, reduced surgical capacity). Less frequently mentioned was an increased proportion of metastatic stages and resections for other indications than pancreatic cancer. Some centers planned improvements in patient acquisition and contact with referring physicians.

9. Overall surgical expertise pancreas



| | Indicator definition | All clinical sites 2020 | | |
|--------|---|-------------------------|----------|----------------|
| | | Median | Range | Patients Total |
| Number | Pancreas resections (left resection of the pancreas. pancreatic head resection. total pancreatectomy. OPS 5-524ff and 5-525ff with and without ICD-10 C25). | 36 | 12 - 159 | 6123 |
| | Target value ≥ 20 | | | |



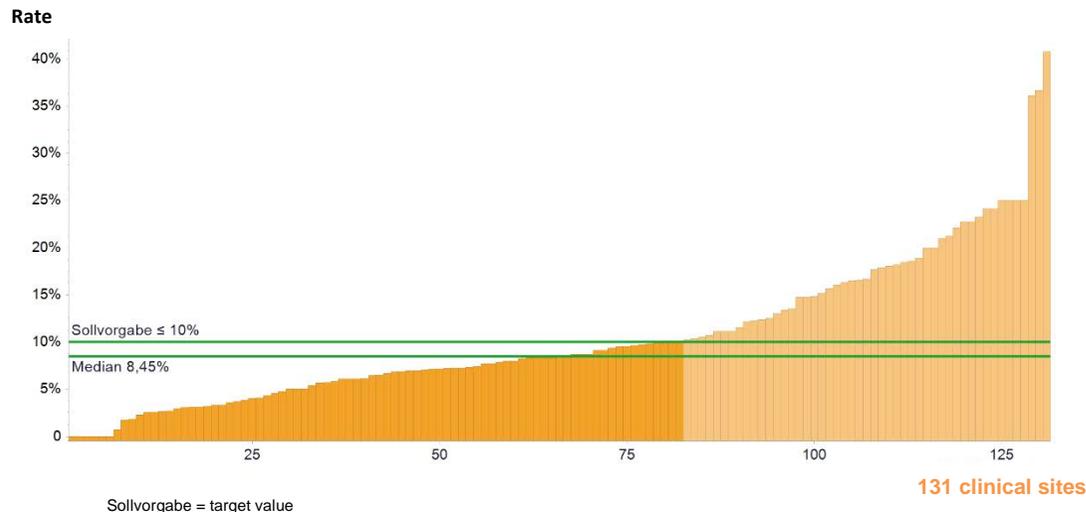
| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| max | 175,00 | 180,00 | 174,00 | 174,00 | 159,00 |
| 95 th percentile | 109,80 | 107,75 | 102,00 | 110,00 | 119,50 |
| 75 th percentile | 57,00 | 49,00 | 52,25 | 53,00 | 55,00 |
| Median | 38,00 | 35,50 | 36,00 | 36,00 | 36,00 |
| 25 th percentile | 29,00 | 27,00 | 26,00 | 28,00 | 28,00 |
| 5 th percentile | 22,00 | 20,00 | 19,25 | 20,00 | 20,00 |
| Min | 18,00 | 12,00 | 11,00 | 14,00 | 12,00 |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 127 | 96,95% |

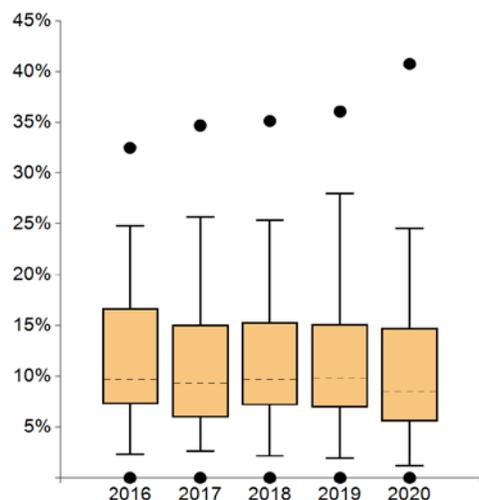
Comments:

1 center less than in the previous year missed the target of at least 20 pancreatic resections. All of these centers cited the impact of the corona pandemic as the reason for the shortfall. 1 center was in re-audit but met the minimum volume on average over the last 3 years

10. Revision surgeries pancreas



| | Indicator definition | All clinical sites 2020 | | |
|-------------|--|-------------------------|----------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Revision surgeries after peri-operative complications within 30d of pancreatic resection | 3* | 0 - 26 | 628 |
| Denominator | Pancreatic resections (OPS 5-524ff and 5-525ff. with and without ICD-10 C25) (= Indicator 9) | 36* | 12 - 159 | 6123 |
| Rate | Target value ≤ 10% | 8,45% | 0,00% - 40,74% | 10,26%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| max | 32,50% | 34,69% | 35,14% | 36,07% | 40,74% |
| 95 th percentile | 24,77% | 25,70% | 25,37% | 28,00% | 24,57% |
| 75 th percentile | 16,67% | 15,11% | 15,31% | 15,15% | 14,73% |
| Median | 9,68% | 9,31% | 9,65% | 9,76% | 8,45% |
| 25 th percentile | 7,27% | 5,97% | 7,14% | 6,90% | 5,54% |
| 5 th percentile | 2,36% | 2,62% | 2,15% | 1,92% | 1,23% |
| Min | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 82 | 62,60% |

Comments:

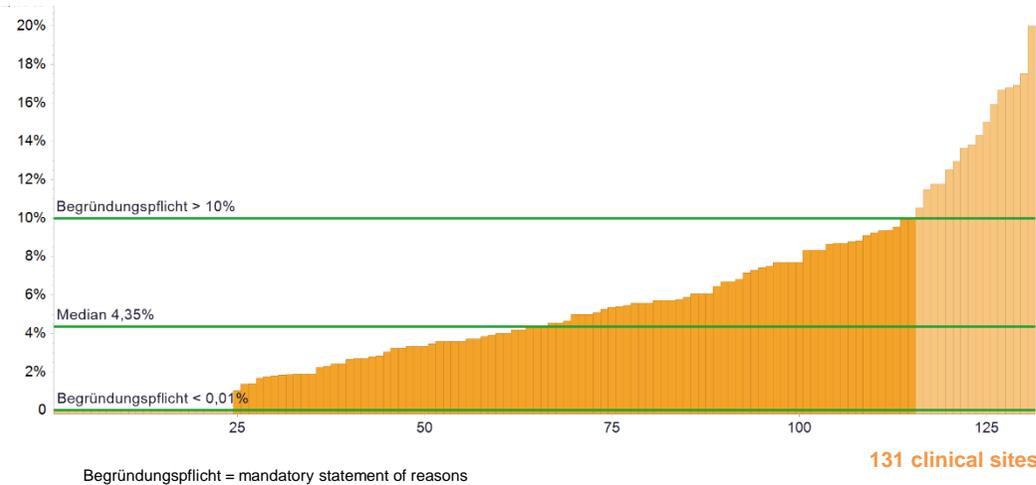
Despite increased dispersion, the overall revision rate decreased slightly. 49 centers (previous year: 53) exceeded the rate of 10%. By far the most frequently cited reasons were anastomotic leakages (33x) and bleeding (30x), followed by ischemia/thrombosis (13x), necrosis (11x), burst abdomen (10x) and fistulae (10x). 8 centers referred to the center's own revision policy with early interventions. Interventions specifically included M&M conferences, peer reviews, and adjustment of surgical techniques when needed. Systematic errors were mostly not identified. In the audits, 4 centers 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.

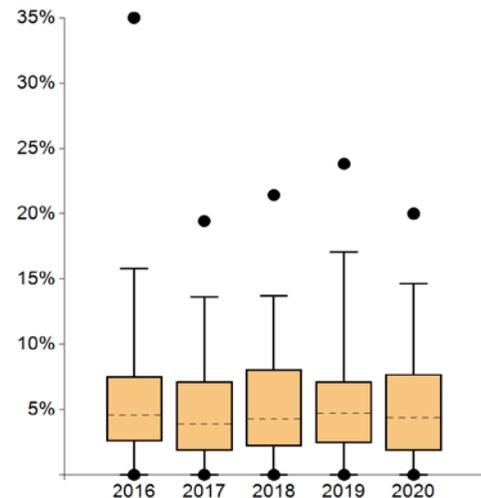
** Percentage of centre patients who were treated according to the indicator

11. Post-operative wound infections

Rate



| | Indicator definition | All clinical sites 2020 | | |
|-------------|--|-------------------------|----------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Resections with post-operative wound infection within 30d of surgery with need for surgical wound revision (flushing, opening, VAC dressing) | 2* | 0 - 26 | 342 |
| Denominator | Pancreatic resections (OPS 5-524ff and 5-525ff, with and without ICD-10 C25) (= Indicator 9) | 36* | 12 - 159 | 6123 |
| Rate | Mandatory statement of reasons*** < 0.01% and >10% | 4,35% | 0,00% - 20,00% | 5,59%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| max | 35,00% | 19,44% | 21,43% | 23,81% | 20,00% |
| 95 th percentile | 15,79% | 13,64% | 13,72% | 17,05% | 14,65% |
| 75 th percentile | 7,50% | 7,14% | 8,09% | 7,14% | 7,69% |
| Median | 4,57% | 3,93% | 4,26% | 4,76% | 4,35% |
| 25 th percentile | 2,56% | 1,85% | 2,19% | 2,44% | 1,89% |
| 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 | % |
| 131 | 100,00% | 91 | 69,47% |

Comments:

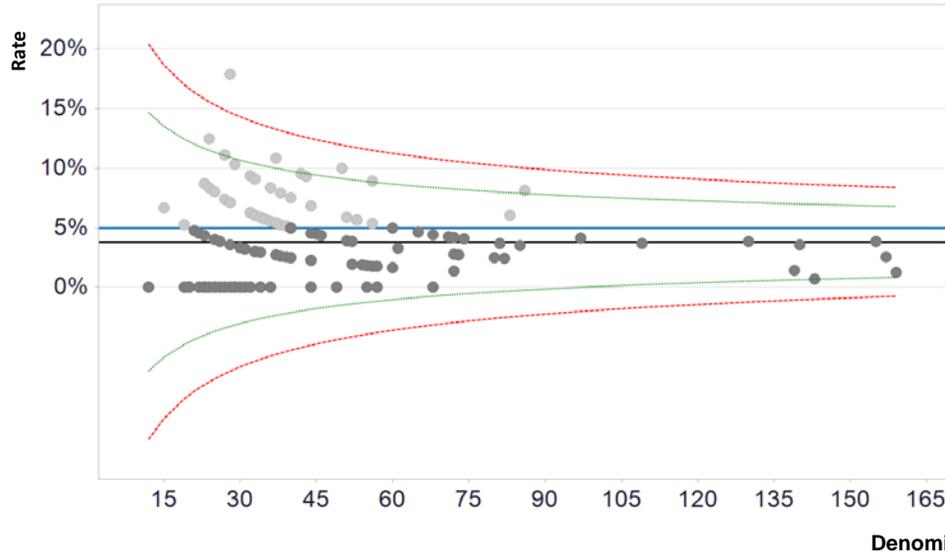
The postoperative wound infection rate is declining. 24 centers reached 0%. With 16 centers, 7 less than in the previous year had to justify a rate above 10%: Wound infections occurred most frequently during revision procedures (5 mentions); the other justifications were very heterogeneous (including infected hematomas, comorbidities favoring infection, and multivisceral resections). Some centers adjusted their surgical procedures (e.g., single-shot antibiotics, skin disinfection) or they considered the relevant cases in M&M conferences or specifically introduced wound dressing visits.

*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.

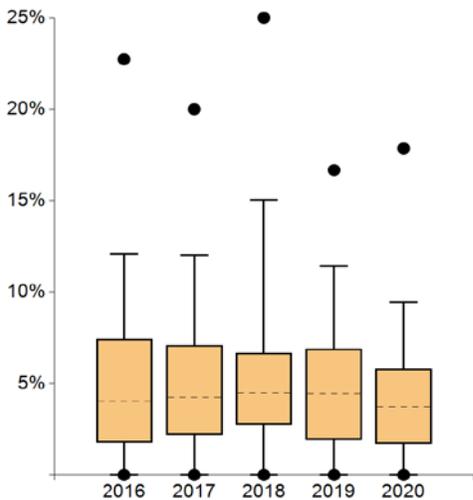
** Percentage of centre patients who were treated according to the indicator

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

12. Post-operative mortality



| | Indicator definition | All clinical sites 2020 | | |
|-------------|--|-------------------------|----------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Post-operative deceased patients after pancreatic resections within 30d | 2* | 0 - 7 | 234 |
| Denominator | Pancreatic resections (OPS 5-524ff and 5-525ff. with and without ICD-10 C25) (= Indicator 9) | 36* | 12 - 159 | 6123 |
| Rate | Target value ≤ 5% | 3,70% | 0,00% - 17,86% | 3,82%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| max | 22,73% | 20,00% | 25,00% | 16,67% | 17,86% |
| 95 th percentile | 12,08% | 12,03% | 15,03% | 11,43% | 9,45% |
| 75 th percentile | 7,41% | 7,08% | 6,67% | 6,90% | 5,80% |
| Median | 4,05% | 4,23% | 4,47% | 4,44% | 3,70% |
| 25 th percentile | 1,75% | 2,18% | 2,77% | 1,92% | 1,71% |
| 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 | % |
| 131 | 100,00% | 87 | 66,41% |

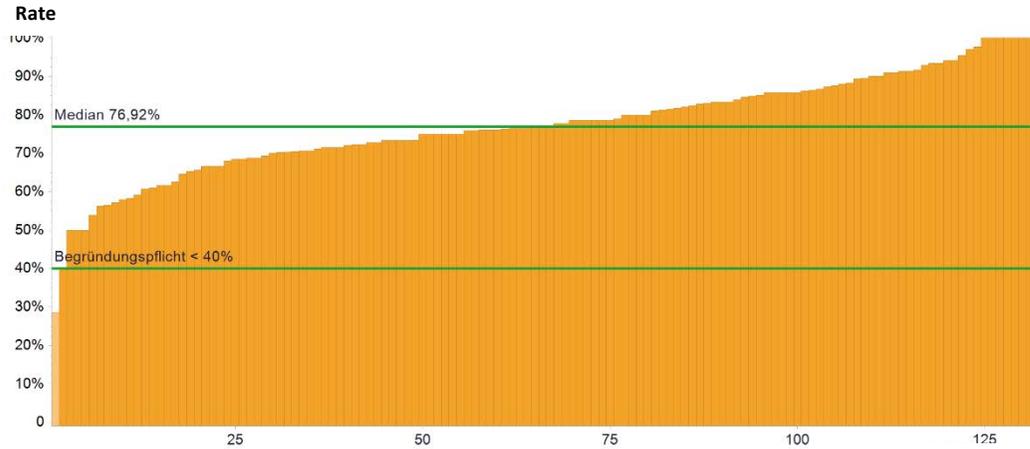
Comments:

The high importance of this indicator is reflected in the 2022 pilot project of coaching for conspicuous centers. In 2020, 44 centers (previous year: 42) recorded a postoperative mortality rate of more than 5%, with median and overall rates declining significantly. Centers prepared causes of death for the audits: Hemorrhage/hemorrhagic shock was cited most frequently (16x), followed by liver failure (13x), multiple organ failure (12x), cardiopulmonary decompensation (11x), anastomotic leakages (9x), sepsis (8x), and ischemia (7x). 2 centers received a deviation. Deaths were generally presented in M&M conferences, and some centers took coaching and/or adjusted preoperative risk stratification.

*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

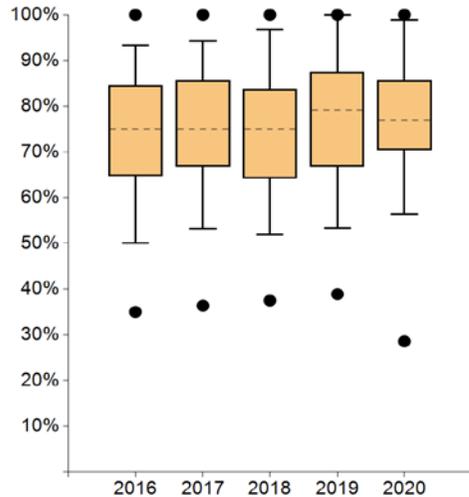
13. Local R0 resections pancreas (GL QI 1)



Begründungspflicht = mandatory statement of reasons

11 131 clinical sites

| | Indicator definition | All clinical sites 2020 | | |
|-------------|---|-------------------------|---------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Local R0 resections pancreas after completion of surgical therapy | 14* | 4 - 61 | 2327 |
| Denominator | Surgical primary cases pancreas (OPS 5-524ff. 5-525ff only with ICD-10 C25) (= Indicator 8) | 18* | 6 - 87 | 3008 |
| Rate | Mandatory statement of reasons*** < 40% | 76,92% | 28,57% - 100% | 77,36 %** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| ● max | 100% | 100% | 100% | 100% | 100% |
| 95 th percentile | 93,26% | 94,27% | 96,74% | 100% | 98,87% |
| 75 th percentile | 84,62% | 85,71% | 83,61% | 87,50% | 85,71% |
| Median | 75,00% | 75,00% | 75,00% | 79,17% | 76,92% |
| 25 th percentile | 64,71% | 66,67% | 64,22% | 66,67% | 70,48% |
| 5 th percentile | 50,00% | 53,26% | 51,97% | 53,33% | 56,39% |
| ● Min | 35,00% | 36,36% | 37,50% | 38,89% | 28,57% |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 130 | 99,24% |

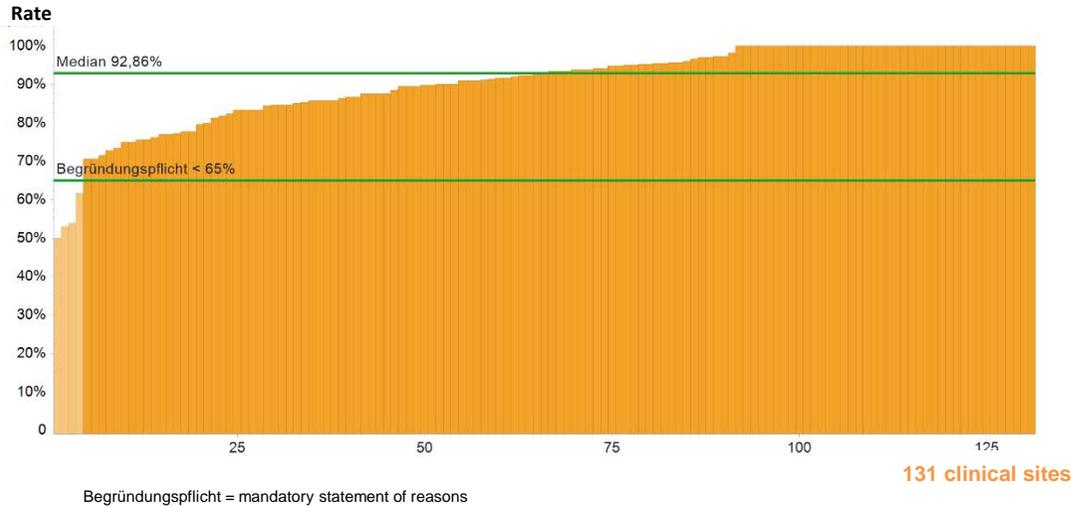
Comments:
The same center as in the previous year missed the target for local R0 resection. The center referred to a high proportion of advanced tumor stages. In the audit, the results were analyzed in detail and the rationale could be confirmed. Relative to all centers, the median has decreased with increased spread. 7 centers consistently recorded local R0 resections.

*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

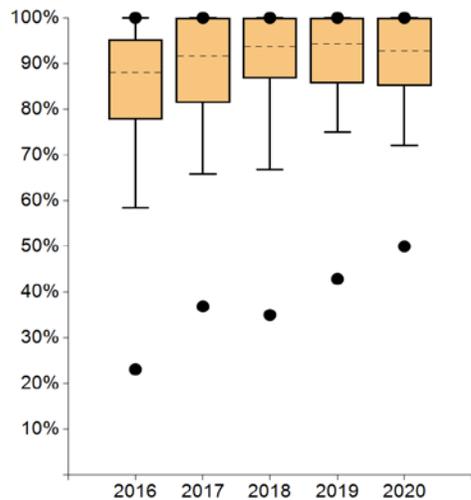
*** For values outside the plausibility limit(s) the Centres must give the reasons.

14. Lymph node resection (GL QI 2)



| | Indicator definition | All clinical sites 2020 | | |
|-------------|---|-------------------------|---------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Surgical primary cases pancreatic cancer with ≥ 12 regional lymph nodes in the surgical preparation after completion of surgical therapy | 14* | 4 - 77 | 2343 |
| Denominator | Surgical primary cases pancreatic cancer (OPS 5-524ff. 5-525ff only with ICD-10 C25) who have undergone a lymphadenectomy | 16* | 4 - 77 | 2597 |
| Rate | Mandatory statement of reasons*** < 65% | 92,86% | 50,00% - 100% | 90,22%** |

Begründungspflicht = mandatory statement of reasons



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| max | 100% | 100% | 100% | 100% | 100% |
| 95 th percentile | 100% | 100% | 100% | 100% | 100% |
| 75 th percentile | 95,24% | 100% | 100% | 100% | 100% |
| Median | 88,00% | 91,67% | 93,75% | 94,29% | 92,86% |
| 25 th percentile | 77,78% | 81,39% | 86,67% | 85,71% | 85,15% |
| 5 th percentile | 58,38% | 65,81% | 66,67% | 75,00% | 72,08% |
| Min | 23,08% | 36,84% | 35,00% | 42,86% | 50,00% |

| Clinical sites with evaluable data | | Clinical sites within the plausibility limits | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 127 | 96,95% |

Comments:

In terms of minimum values, the positive trend of recent years continues, although the median has decreased slightly. Only 4 centers (previous year: 2) found at least 12 lymph nodes in less than 65% of cases. These centers sought discussion with pathology and in some cases agreed on follow-up examinations. In the audits, some auditors advised improved preparation processing and documentation. Overall, it appears that almost all centers implement this quality indicator of the guideline well.

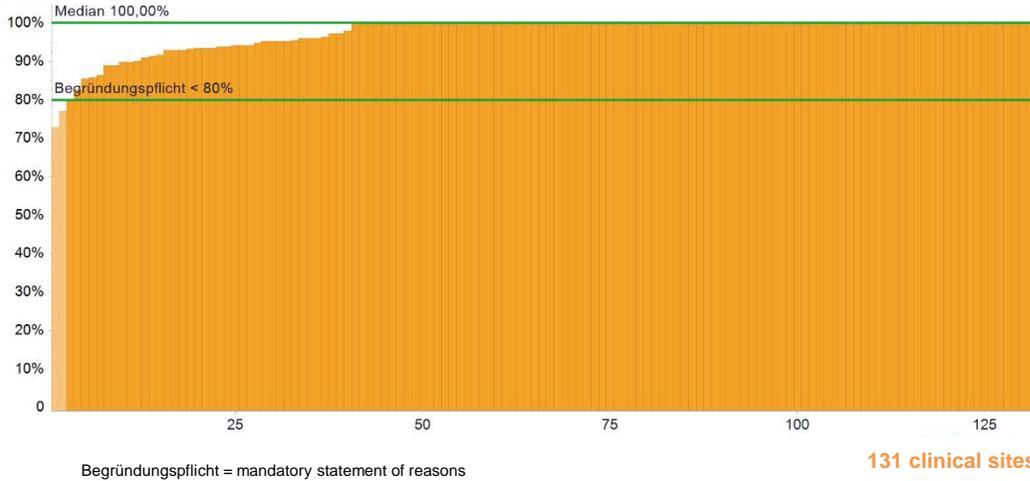
*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.

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

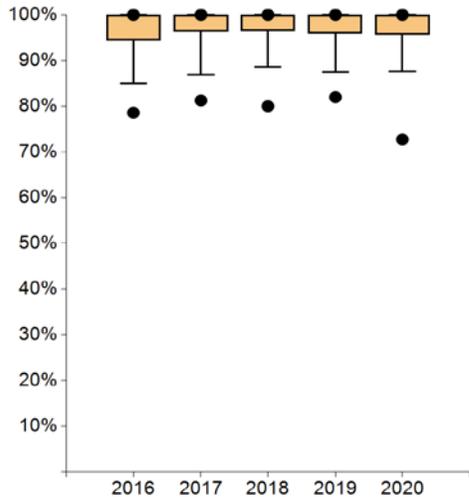
*** For values outside the plausibility limit(s) the Centres must give the reasons.

15. Content Pathology Report (GL QI 3)

Rate



| | Indicator definition | All clinical sites 2020 | | |
|-------------|---|-------------------------|---------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Pathology reports from surgical primary cases with remarks of: pT. pN. M. tumour grading: proportion of lymph nodes affected and non-affected | 18* | 6 - 87 | 2899 |
| Denominator | Pathology report from surgical primary cases | 18* | 6 - 87 | 2982 |
| Rate | Mandatory statement of reasons*** < 80% | 100% | 72,73% - 100% | 97,22%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| max | 100% | 100% | 100% | 100% | 100% |
| 95 th percentile | 100% | 100% | 100% | 100% | 100% |
| 75 th percentile | 100% | 100% | 100% | 100% | 100% |
| Median | 100% | 100% | 100% | 100% | 100% |
| 25 th percentile | 94,44% | 96,36% | 96,45% | 96,00% | 95,70% |
| 5 th percentile | 85,00% | 86,80% | 88,54% | 87,50% | 87,63% |
| Min | 78,57% | 81,25% | 80,00% | 81,97% | 72,73% |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 129 | 98,47% |

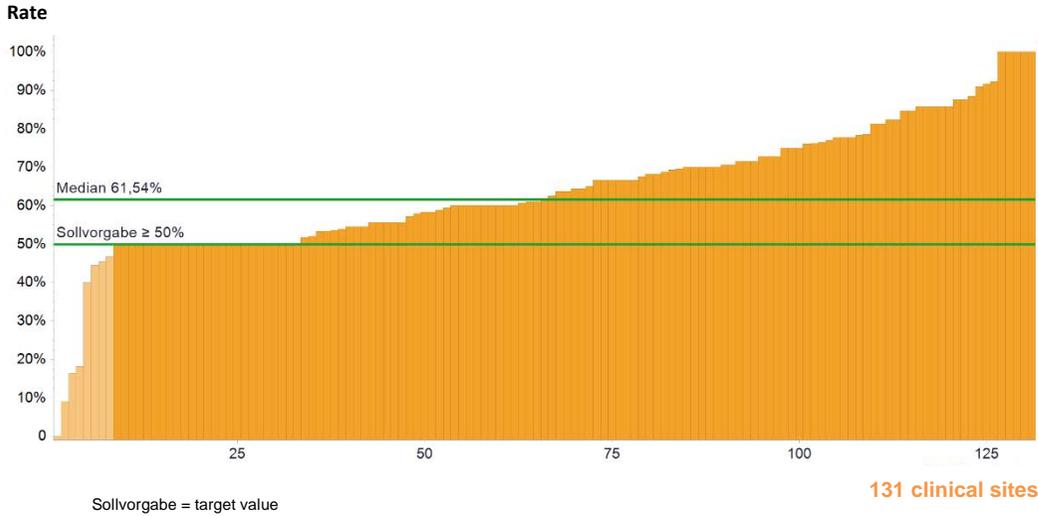
Comments:
 Compared to previous years, 2 centers were again just below the 80% mark associated with a mandatory statement of reaseon. Both centers referred to specifics of the investigated tumors (NET, acinar cell carcinoma and colloid adenocarcinoma without designated grading).

*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.

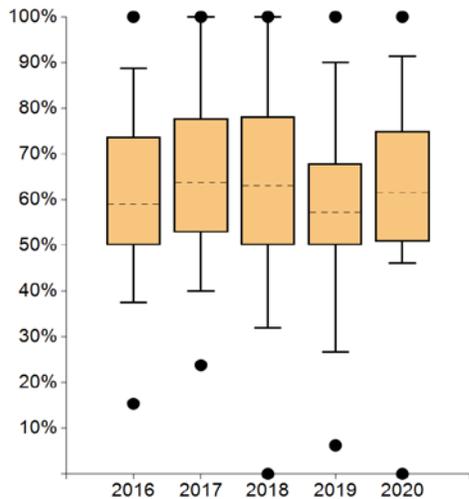
** Percentage of centre patients who were treated according to the indicator

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

16. Adjuvant chemotherapy (GL QI 4)



| | Indicator definition | All clinical sites 2020 | | |
|-------------|--|-------------------------|--------------|----------------|
| | | Median | Range | Patients Total |
| Numerator | Surgical primary cases pancreatic cancer UICC stages I-III, R0 resection and adjuvant chemotherapy with gemcitabine or 5-FU/folinic acid | 7* | 0 - 38 | 1199 |
| Denominator | Surgical primary cases pancreatic cancer UICC stages I-III and R0 resection (without NET and NEC) | 12* | 2 - 50 | 1896 |
| Rate | Target value ≥ 50% | 61,54% | 0,00% - 100% | 63,24%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| max | 100% | 100% | 100% | 100% | 100% |
| 95 th percentile | 88,69% | 100% | 100% | 90,00% | 91,29% |
| 75 th percentile | 73,68% | 77,65% | 78,07% | 67,86% | 75,00% |
| Median | 59,09% | 63,64% | 63,07% | 57,14% | 61,54% |
| 25 th percentile | 50,00% | 52,81% | 50,00% | 50,00% | 50,81% |
| 5 th percentile | 37,48% | 40,00% | 31,94% | 26,67% | 46,06% |
| Min | 15,38% | 23,81% | 0,00% | 6,25% | 0,00% |

| Clinical sites with evaluable data | | Clinical sites meeting the target value | |
|------------------------------------|---------|---|--------|
| Number | % | Number | % |
| 131 | 100,00% | 123 | 93,89% |

Comments:

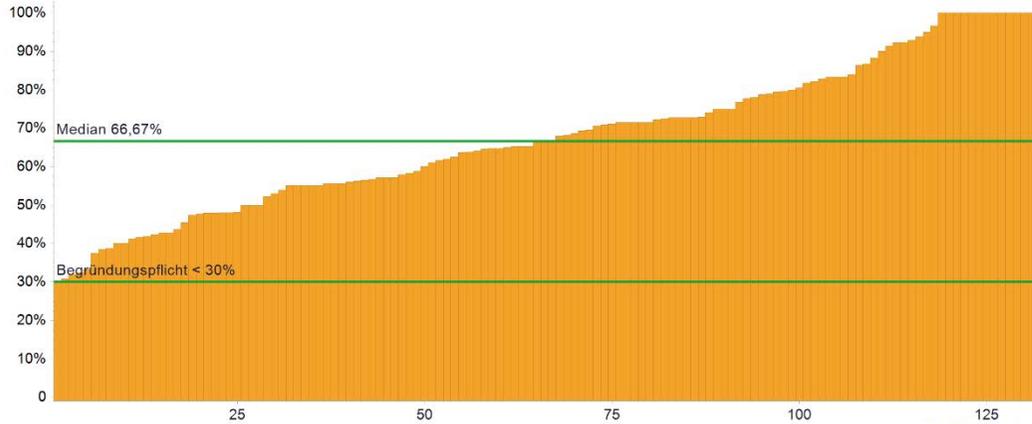
The degree of fulfillment of this QI of the guideline has improved significantly. Only 8 centers (previous year: 24) were below a rate of 50%. Mostly, patients refused chemotherapy (4 mentions), therapy had not yet been started (4x), patients were further treated away from home without further information (3x), or they were already deceased at the start of the planned chemotherapy (3x). The center with a rate of 0% had only 4 patients in the denominator and used a different therapy regimen.

*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 5)

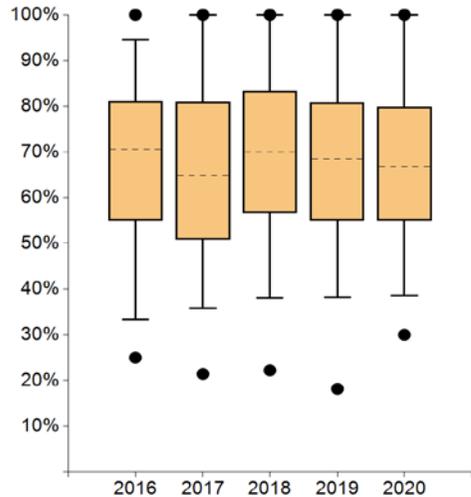
Rate



Begründungspflicht = mandatory statement of reasons

131 clinical sites

| | Indicator definition | All clinical sites 2020 | | |
|-------------|---|-------------------------|---------------|---------------|
| | | Median | Range | Patient Total |
| Numerator | Primary cases with palliative chemotherapy | 12* | 2 - 79 | 1930 |
| Denominator | Primary cases with pancreatic cancer UICC stages III (palliative situation) and IV and ECOG 0-2 (without NET and NEC) | 20* | 2 - 94 | 2892 |
| Rate | Mandatory statement of reasons*** < 30% | 66,67% | 30,00% - 100% | 66,74%** |



| | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------|--------|--------|--------|--------|--------|
| ● max | 100% | 100% | 100% | 100% | 100% |
| 95 th percentile | 94,57% | 100% | 100% | 100% | 100% |
| 75 th percentile | 81,08% | 80,89% | 83,33% | 80,77% | 79,78% |
| Median | 70,59% | 64,86% | 70,00% | 68,42% | 66,67% |
| 25 th percentile | 55,00% | 50,83% | 56,72% | 55,00% | 55,00% |
| 5 th percentile | 33,33% | 35,78% | 38,05% | 38,10% | 38,59% |
| ● Min | 25,00% | 21,43% | 22,22% | 18,18% | 30,00% |

| Clinical sites with evaluable data | | Clinical sites within the plausibility limits | |
|------------------------------------|---------|---|---------|
| Number | % | Number | % |
| 131 | 100,00% | 131 | 100,00% |

Comments:

For the first time, all centers are at a quota of at least 30% palliative chemotherapy in denominator patients. Overall, this was performed in approximately 2/3 of these patients.

*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)



Find out more on www.krebsgesellschaft.de

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