



Annual Report 2017

of the Certified Lung Cancer Centres

Audit year 2016 / Indicator year 2015

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General information

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Quality indicators of the guidelines (LL 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. The quality indicators identified in this way are based on the strong recommendations of the guidelines and were derived from the guidelines groups of the guidelines programme oncology. Further information: www.leitlinienprogramm-onkologie.de

	Indicator definition	All clinical sites 2014	
		Median	Range
Numerator	Primary cases with stages IB-IIIb after surgical therapy that were presented at the tumour conference	73*	28 - 256
Denominator	Primary cases with stages IB-IIIb after surgical therapy	76*	33 - 266
Rate	Target value ≥ 90%	97.30%	59.57% - 100%

Basic data indicator:

The definitions of **numerator**, **population (=denominator)** and **target value** are taken from the Indicator Sheet. 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. The values for the numerators, populations and rates of all Centres are given under range.

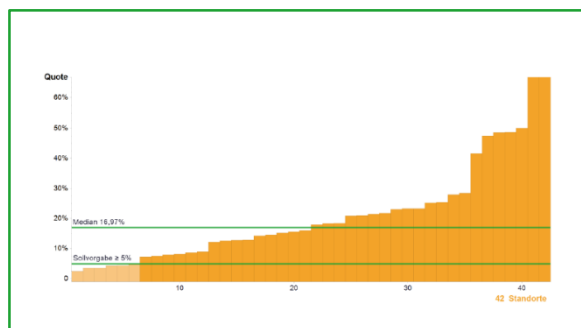
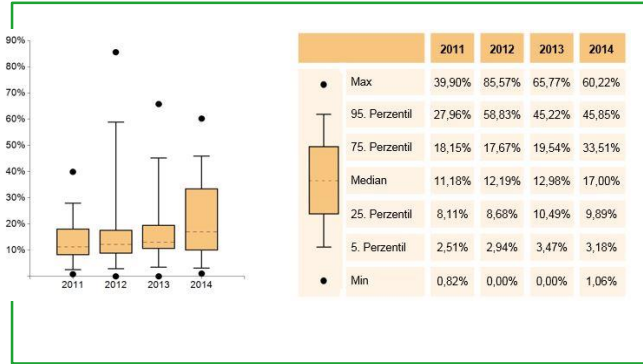


Diagram:

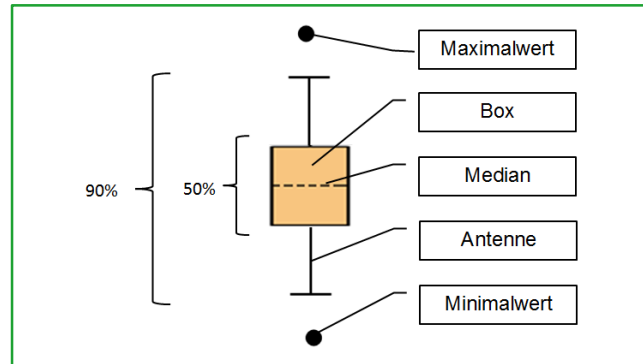
The x-axis indicates the number of Centres, the y-axis gives the values in percent or number (e.g. primary cases). The target value is depicted as a horizontal green line. The median, which is also depicted as a green horizontal line, divides the entire group into two equal halves.

General information



Cohort development:

The **cohort development** in the years **2011**, **2012**, **2013** and **2014** is presented in a box plot diagram.



Box plot:

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

Status of the certification system for Lung Cancer Centres 2015

	31.12.2016	31.12.2015	31.12.2014	31.12.2013	31.12.2012
Ongoing procedures	5	2	2	0	1
Certified Centres	45	42	38	38	34
Certified clinical sites	53	49	44	42	38
Lung Cancer Centres 1 clinical site	37	35	32	34	30
2 clinical sites	8	7	6	4	4
3 clinical sites	0	0	0	0	0
4 clinical sites	0	0	0	0	0

General information

	31.12.2016	31.12.2015	31.12.2014	31.12.2013	31.12.2012
Centres included in the Annual Report	42	41	37	35	24
equivalent to	93,3%	97,6%	97,4%	92,1%	70,6%
Primary cases total*	17343	16362	14623	13483	9739
Primary cases per Centre (mean)*	412,9	399,1	395,2	385,2	405,8
Primary cases per Centre (median)*	351	348	329	344	369

* The figures refer to all certified Centres.

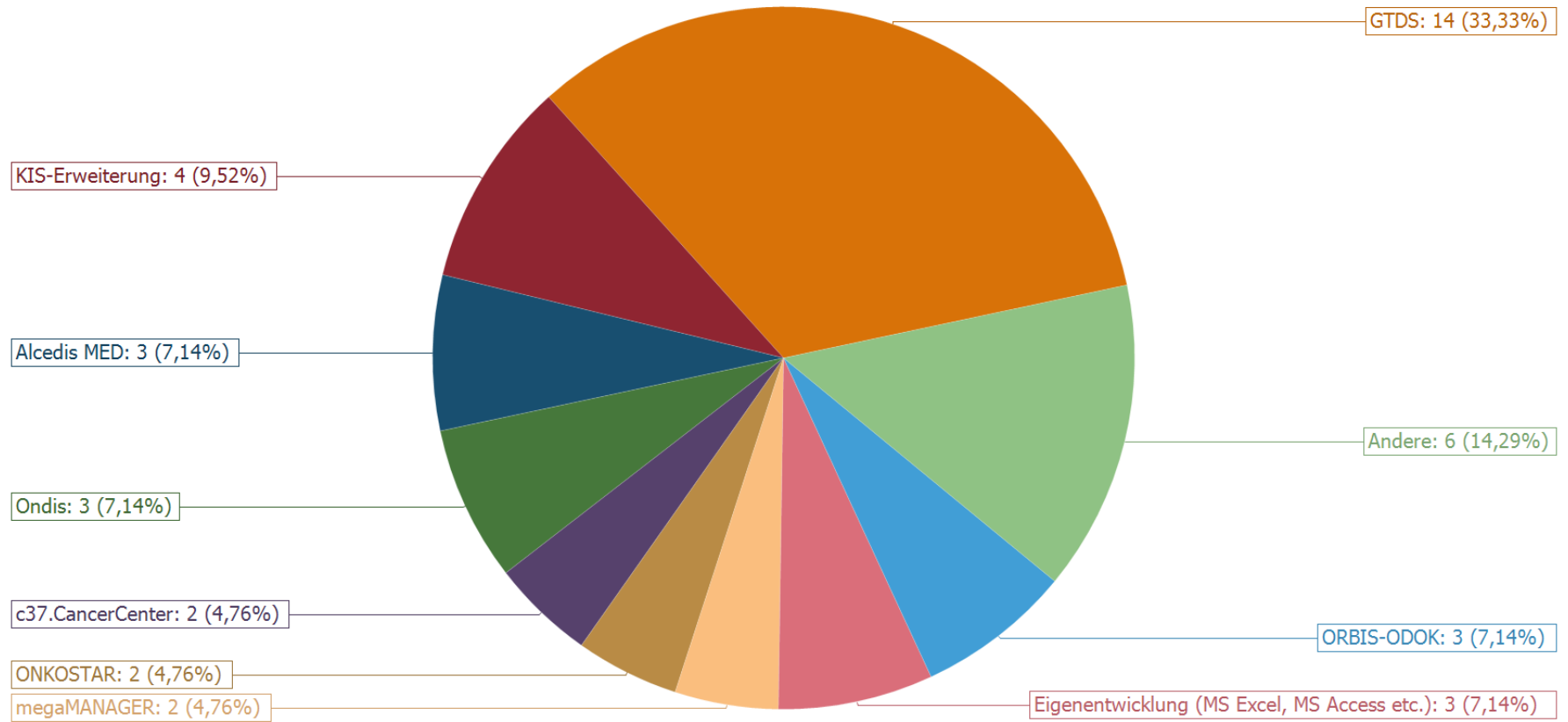
This Annual Report looks at the Lung Cancer Centres in the Certification System of the German Cancer Society. The indicator sheet is the basis for the diagrams.

The Annual Report contains the data of 42 of the 45 Lung Cancer Centres. 2 Lung Cancer Centres, certified for the first time in 2016, are not included (data depiction of a full calendar year is not mandatory for initial certifications). 1 Lung Cancer Centre suspended the certificate (no audit in 2016).

www.oncomap.de provides an updated overview of all certified centres.

The indicators published here refer to the indicator year 2015. They are the assessment basis for the audits conducted in 2016.

Tumour documentation systems in the Centre's clinical sites

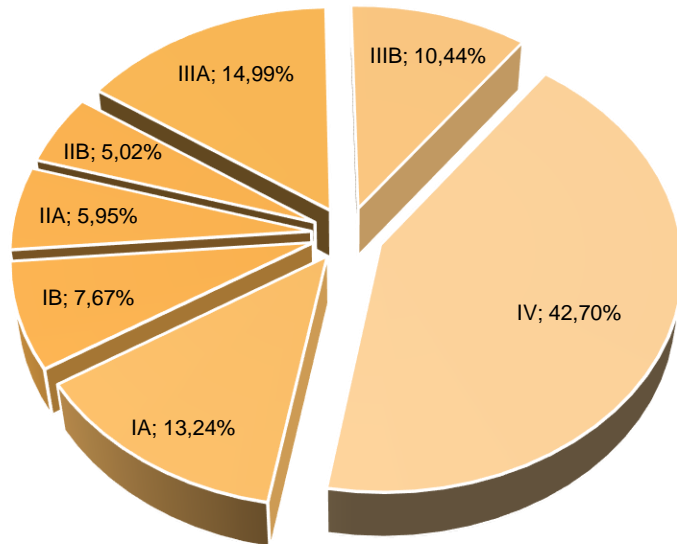


Legend:	
Other	Systems only used at one clinical site

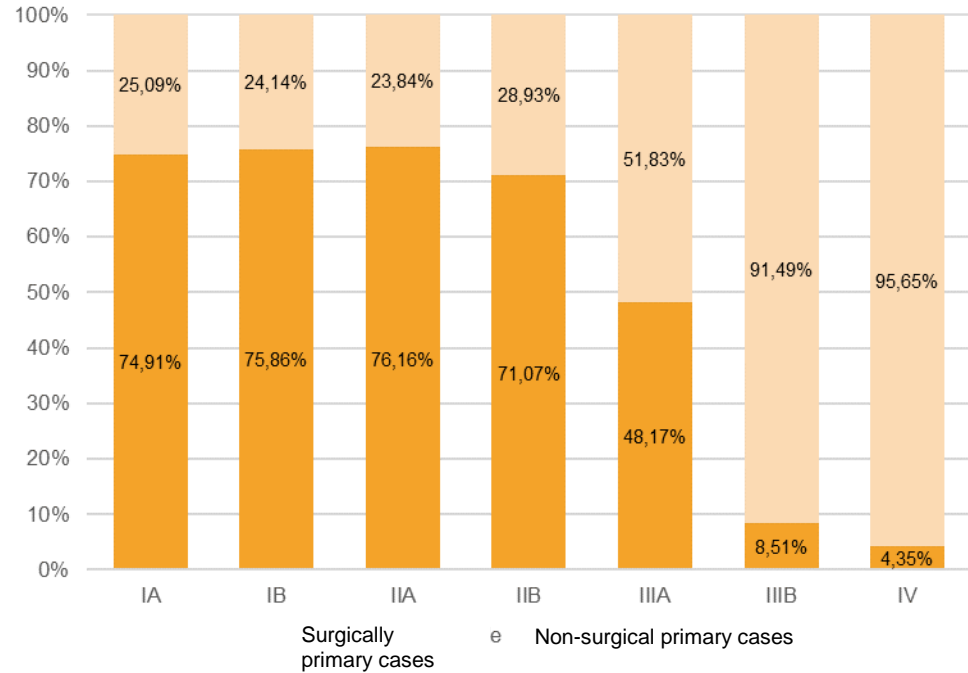
The details on the tumour documentation system were taken from the EXCEL annex to the Indicator Sheet (spreadsheet basic data). It is not possible to depict several systems. In many cases support is provided by the cancer registers or there may be a direct connection to the cancer register via a specific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

Basic data – Stage distribution primary cases lung carcinoma

Primary cases total



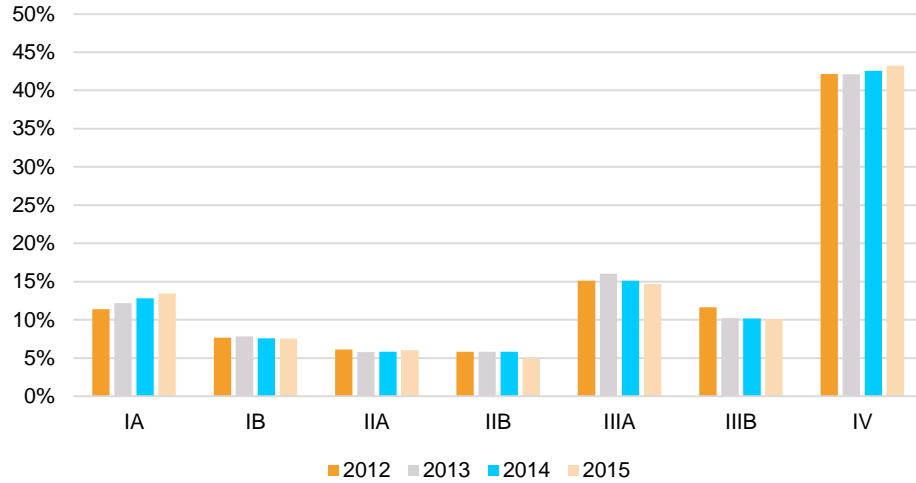
Surgical / non-surgical primary cases



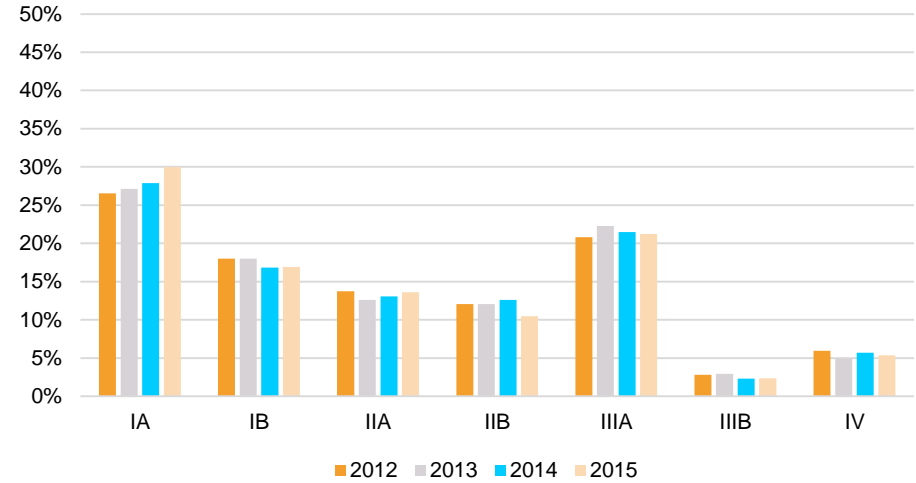
	IA	IB	IIA	IIB	IIIA	IIIB	IV	Total
Surgical primary cases with anatomical lung resection	1.720 (74,91%)	1.009 (75,86%)	786 (76,16%)	619 (71,07%)	1.252 (48,17%)	154 (8,51%)	322 (4,35%)	5.862
Non-surgical primary cases	576 (25,09%)	321 (24,14%)	246 (23,84%)	252 (28,93%)	1.347 (51,83%)	1.656 (91,49%)	7.083 (95,65%)	11.481
Primary cases total	2.296 (13,24%)	1.330 (7,67%)	1.032 (5,95%)	871 (5,02%)	2.599 (14,99%)	1.810 (10,44%)	7.405 (42,70%)	17.343

Basic data – Development 2012-2014

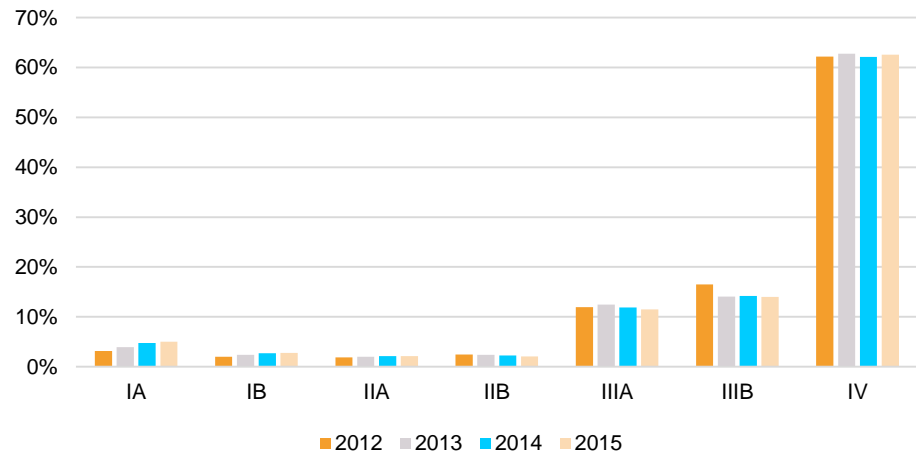
Stage distribution primary cases 2012-2014



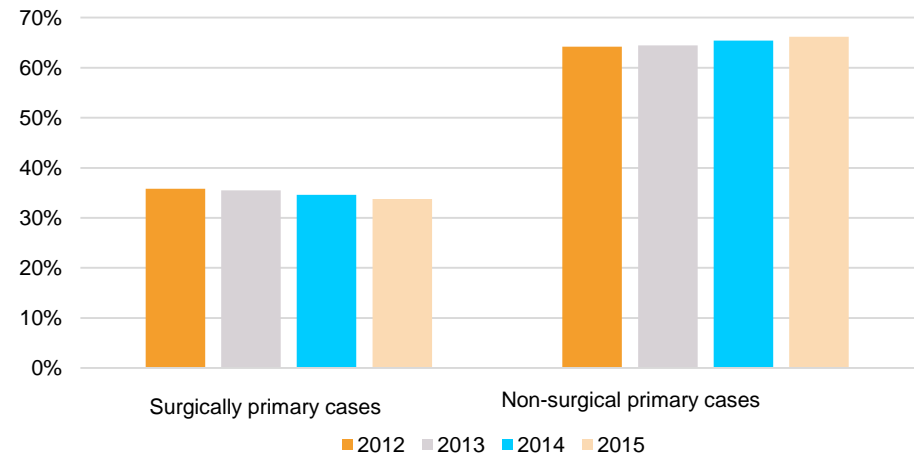
Stage distribution surgical primary cases 2012-2014



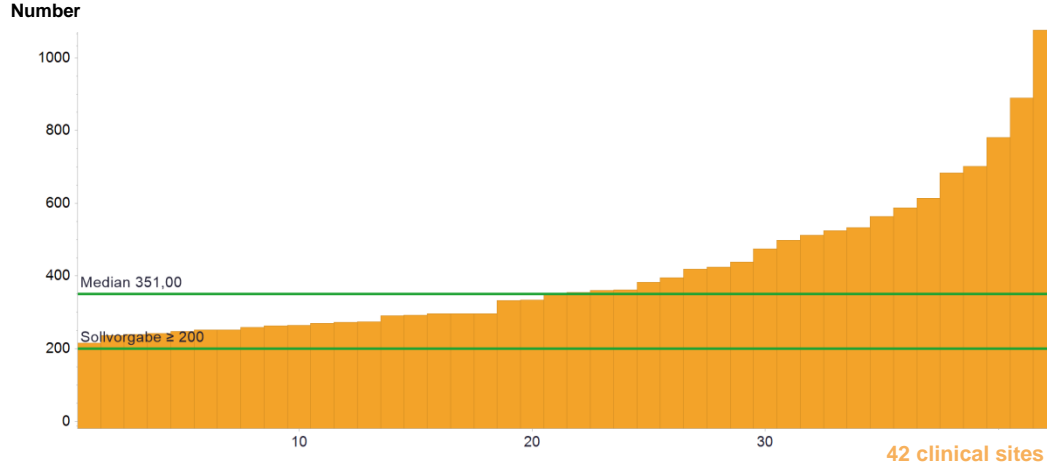
Stage distribution
Non-surgical primary cases 2012-2014



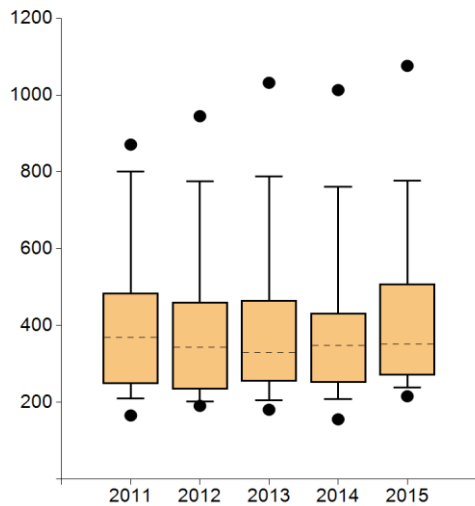
Distribution between surgical and non-surgical primary cases 2012-2014



1. Primary cases of the LCCC



	Definition of indicator	All clinical sites 2015	
		Median	Range
Number	Total number of primary cases of the LCC (definition primary case: Catalogue of requirements 1.2.1)	351	216 - 1076
	Target value ≥ 200		



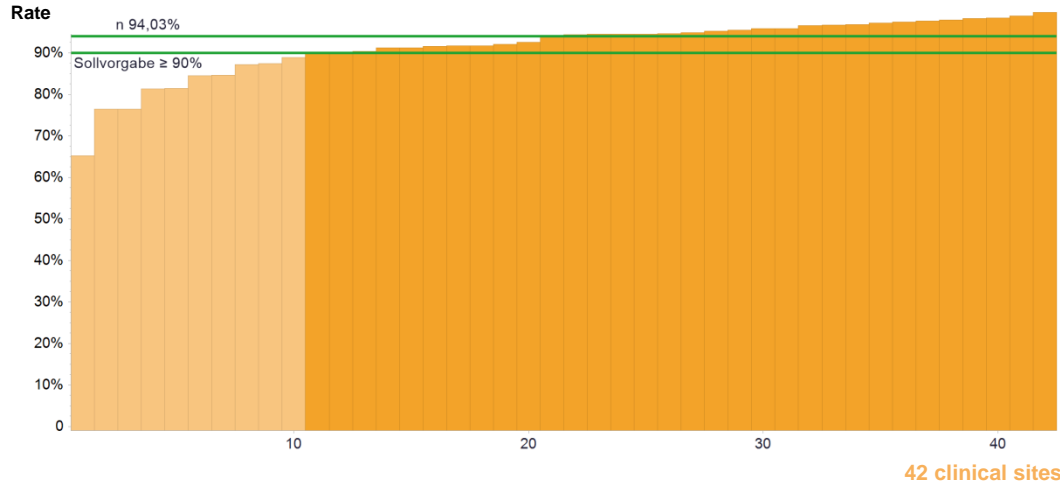
	2011	2012	2013	2014	2015
● Max	-----	100%	100%	100%	100%
95 th percentile	-----	100%	100%	100%	100%
75 th percentile	-----	86,68%	94,07%	98,71%	94,20%
Median	-----	71,50%	78,24%	89,45%	90,59%
25 th percentile	-----	50,37%	57,14%	63,24%	83,33%
5 th percentile	-----	16,87%	34,68%	28,35%	46,72%
● Min	-----	0,00%	0,00%	20,00%	26,32%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	42	100,00%

Comments:

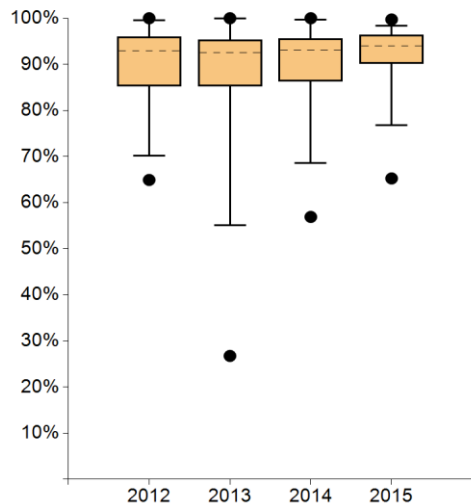
For the first time, all centres met the target value of 200 primary cases. In most of the centres, the primary cases decreased in comparison to last year (26 centres with an increase vs 12 centres with a decrease). When exclusively the centres with certificates for both years are compared, the total number of primary cases treated in the centres also increased in comparison to last year (15.263 to 16.280).

2a. Pretherapeutic tumour conference



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Primary cases presented in the pretherapeutic conference	326*	198 - 941
Denominator	Primary cases of the LCCC (= indicator 1)	351*	216 - 1076
Rate	Target value ≥ 90%	94,03%	65,25% - 99,72%

*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.



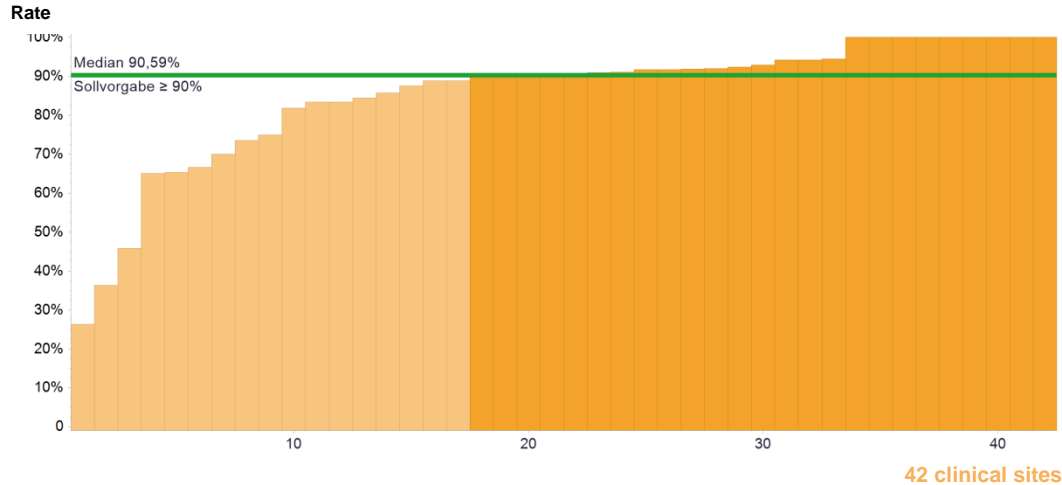
	2011	2012	2013	2014	2015
● Max	-----	100%	100%	100%	99,72%
95 th percentile	-----	99,60%	100%	99,68%	98,39%
75 th percentile	-----	95,94%	95,36%	95,61%	96,39%
Median	-----	92,94%	92,53%	93,08%	94,03%
25 th percentile	-----	85,32%	85,24%	86,27%	90,15%
5 th percentile	-----	70,14%	55,09%	68,58%	76,73%
● Min	-----	64,92%	26,75%	56,90%	65,25%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	32	76,19%

Comments:

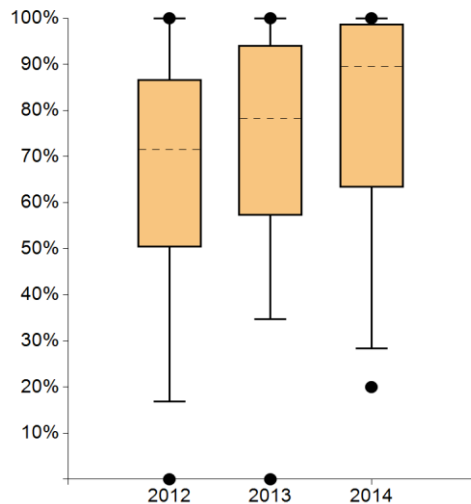
The presentation of primary cases in the pretherapeutic tumour conference is well established in the centres. The centre with the lowest presentation rate also had the lowest rate last year; however, it increased its rate to >95% (2016) after implementing the agreed measures (intensive training of new colleagues, close coordination with the diagnostic and treating departments). Reasons given by the centres for non-presentation were as follows: not until intra-operative confirmation of diagnosis, urgent surgical indication, and only presentation in the post-operating tumour conferences as a frozen section was planned.

2b. Presentation of new recurrence or remote metastasis in the tumour conference



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Patients with new recurrence and/or remote metastasis after previous curative treatment who were presented in the tumour conference	22*	4 - 64
Denominator	Patients with new recurrence and/or remote metastasis after previous curative treatment	24,5*	6 - 87
Rate	Target value ≥ 90%	90,59%	26,32% - 100%

*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.



	2011	2012	2013	2014	2015
● Max	-----	100%	100%	100%	100%
95 th percentile	-----	100%	100%	100%	100%
75 th percentile	-----	86,68%	94,07%	98,71%	94,20%
Median	-----	71,50%	78,24%	89,45%	90,59%
25 th percentile	-----	50,37%	57,14%	63,24%	83,33%
5 th percentile	-----	16,87%	34,68%	28,35%	46,72%
● Min	-----	0,00%	0,00%	20,00%	26,32%

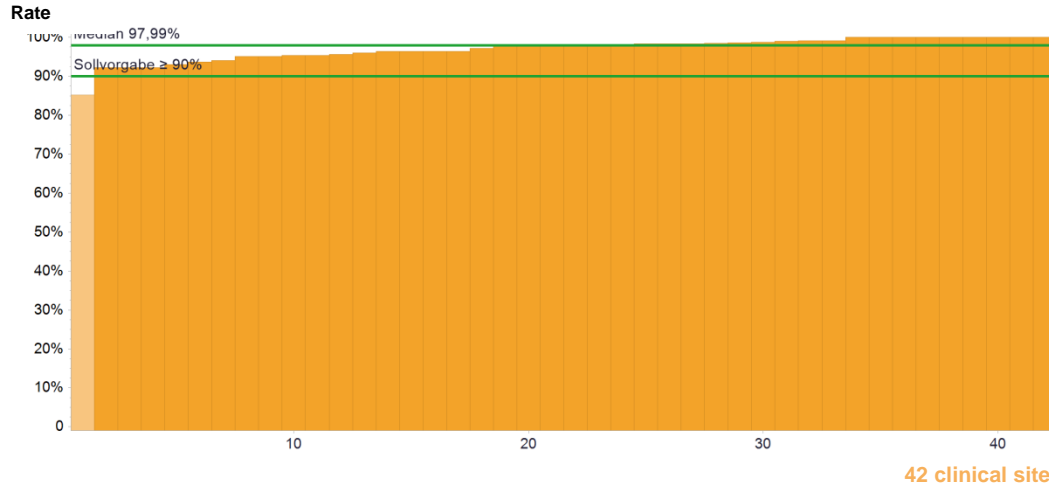
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	25	59,52%

Comments:

The median of the presentation rate of patients with new recurrence or remote metastasis significantly increased over time.

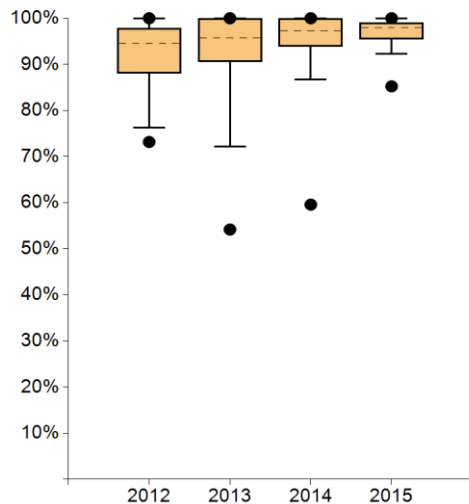
Both centres with the lowest presentation rate also had the lowest rates last year. The auditors left remarks. Reasons for a low presentation rate included coordination difficulties with internal and external specialist departments or cooperation partners. Further, it was explained that patients with an overall poor health status were not presented at the tumour board.

3. Tumour conference after surgical therapy of primary cases stages IB-III B



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Primary cases with stages IB-III B after surgical therapy that were presented at the tumour conference	72*	34 - 275
Denominator	Primary cases with stages IB-III B after surgical therapy	74*	34 - 298
Rate	Target value ≥ 90%	97,99%	85,23% - 100%

*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.



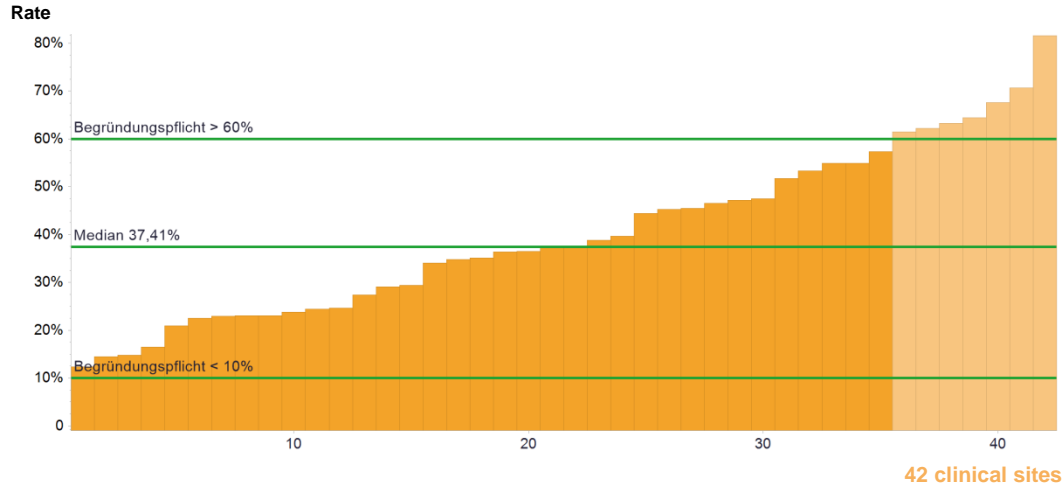
	2011	2012	2013	2014	2015
● Max	-----	100%	100%	100%	100%
95 th percentile	-----	100%	100%	100%	100%
75 th percentile	-----	97,86%	100%	100%	99,04%
Median	-----	94,49%	95,71%	97,30%	97,99%
25 th percentile	-----	88,01%	90,56%	93,86%	95,39%
5 th percentile	-----	76,29%	72,16%	86,75%	92,27%
● Min	-----	73,16%	54,17%	59,57%	85,23%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	41	97,62%

Comments:

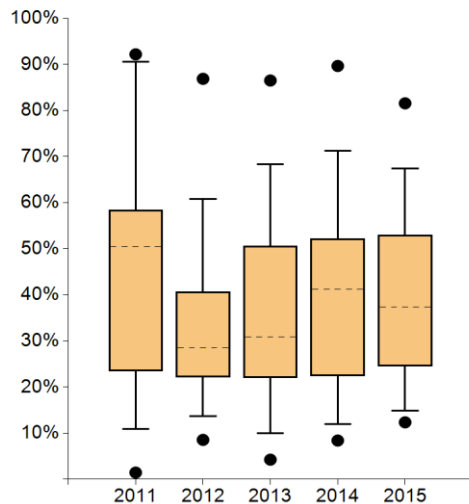
This indicator is implemented very well. Only one centre did not meet the target value of 90%. The explanation given was that patients who died post-op and patients who were treated according to the patient pathways, in the opinion of the centre, did not need to be presented in the tumour conference. The auditor left a remark and documented that the presentation rate in comparison to the 2016 audit had increased to over 90% in the centre.

4. Psycho-oncological care



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Patients who received psycho-oncological care in an inpatient or outpatient setting (duration of consultation ≥ 25 min)	164*	38 - 350
Denominator	Primary cases of the LCC (= indicator 1) + patients with a new recurrence and/or remote metastasis after previous curative treatment	377*	246 - 1098
Rate	No target value	37,41%	12,35% - 81,54%

*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.



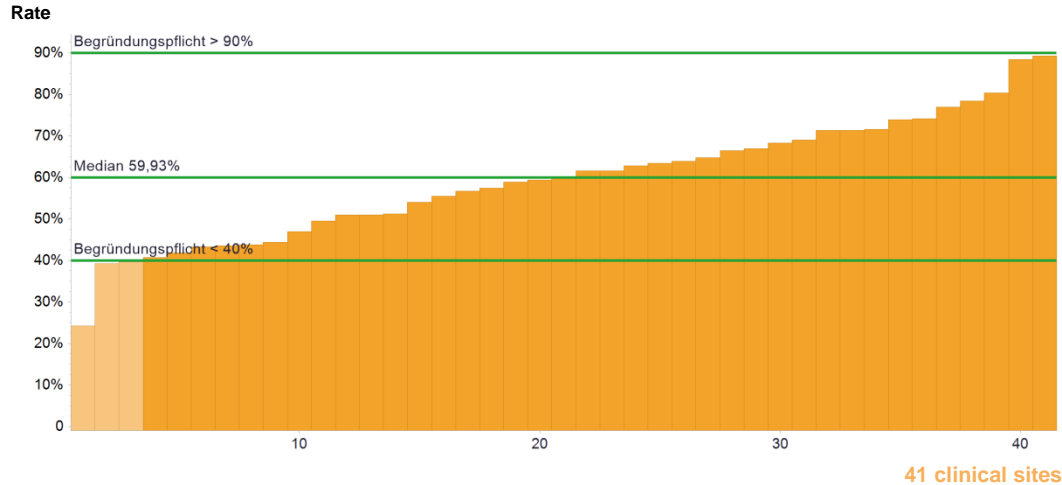
	2011	2012	2013	2014	2015
Max	92,17%	86,86%	86,49%	89,64%	81,54%
95 th percentile	90,50%	60,80%	68,30%	71,22%	67,41%
75 th percentile	58,40%	40,64%	50,58%	52,22%	52,91%
Median	50,48%	28,47%	30,81%	41,24%	37,41%
25 th percentile	23,47%	22,17%	22,04%	22,41%	24,47%
5 th percentile	10,96%	13,72%	10,00%	12,00%	14,90%
Min	1,45%	8,54%	4,25%	8,40%	12,35%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	35	83,33%

Comments:

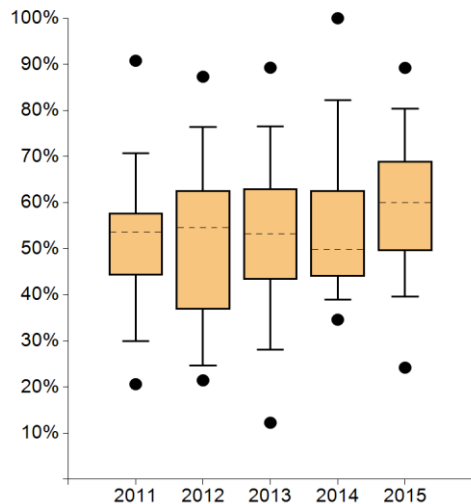
The auditors frequently report the use of screening instruments. Similar to social work, the good involvement and commitment of staff is stressed in particular. The Centre with the lowest value mentions a documentation problem when recording the service, that has since been remedied. The human resources were increased again and are very good according to the auditor.

5. Counselling social services



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Patients who received counselling by the social services in an inpatient or outpatient setting	223*	69 - 861
Denominator	Primary cases of the LCC (= indicator 1) + patients with a new recurrence and/or remote metastasis after previous curative treatment	377*	246 - 1098
Rate	No target value	59,93%	24,21% - 89,23%

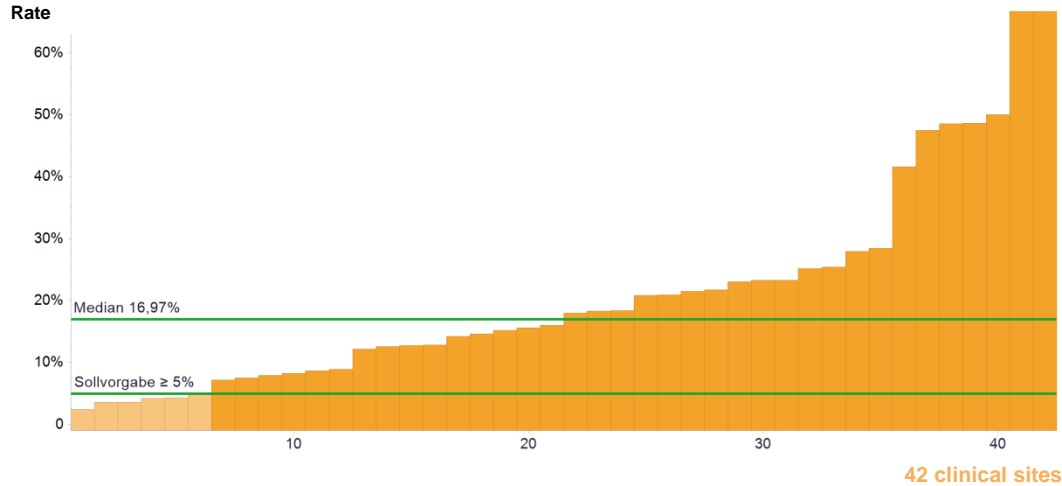
*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.



		2011	2012	2013	2014	2015	Clinical sites with evaluable data		Clinical sites meeting the target value	
							Number	%	Number	%
●	Max	90,78%	87,31%	89,27%	100%	89,23%				
	95 th percentile	70,74%	76,33%	76,48%	82,24%	80,41%				
	75 th percentile	57,68%	62,63%	63,02%	62,61%	68,99%				
	Median	53,66%	54,52%	53,23%	49,75%	59,93%				
	25 th percentile	44,27%	36,85%	43,33%	43,97%	49,48%				
	5 th percentile	29,94%	24,64%	28,16%	38,90%	39,60%				
●	Min	20,62%	21,45%	12,26%	34,61%	24,21%	41	97,62%	38	92,68%

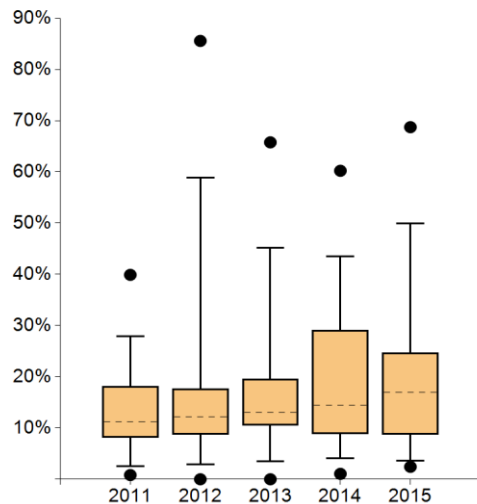
Comments:
The social service counselling rate increased in the median. The centre with the lowest rate is located outside of Germany. Social service counselling is organised differently outside of Germany, as psycho-oncological care is provided exclusively in the ambulatory sector.

6. Study participation



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Patients included in a study	60*	10 - 733
Denominator	Primary cases of the LCC (= indicator 1)	351*	216 - 1076
Rate	Target value ≥ 5%	16,97%	2,43% - 68,73%

*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.



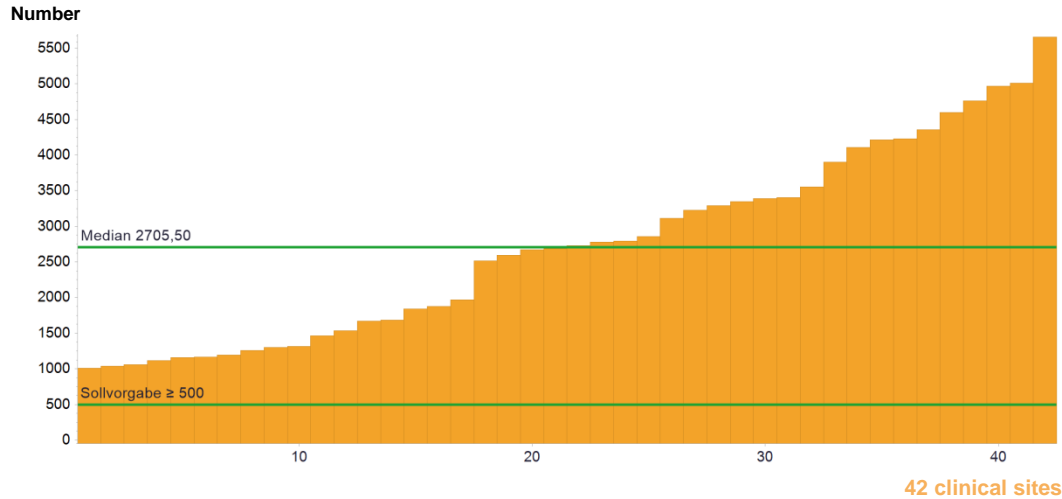
	2011	2012	2013	2014	2015
● Max	39,90%	85,57%	65,77%	60,22%	68,73%
95 th percentile	27,96%	58,83%	45,22%	43,50%	49,93%
75 th percentile	18,15%	17,67%	19,54%	29,06%	24,69%
Median	11,18%	12,19%	12,98%	14,40%	16,97%
25 th percentile	8,11%	8,68%	10,49%	8,80%	8,69%
5 th percentile	2,51%	2,94%	3,47%	4,09%	3,63%
● Min	0,82%	0,00%	0,00%	1,06%	2,43%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	36	85,71%

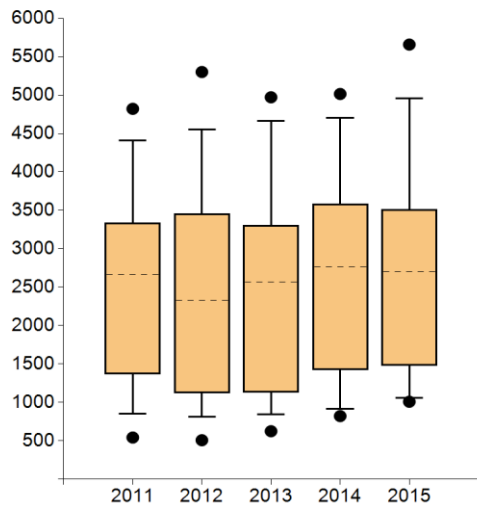
Comments:

The study participation rate was not met by only six centres. These centres provided as reasons, for instance, initiation problems and re-structuring of personnel in the study office. The median has continuously improved over time, and in comparison to last year more patients were included in studies (3,420 vs 2,780).

7. Flexible bronchoscopy



	Definition of indicator	All clinical sites 2015	
		Median	Range
Number	Flexible bronchoscopies for each service provider	2705,5	1009 - 5657
	Target value ≥ 500		



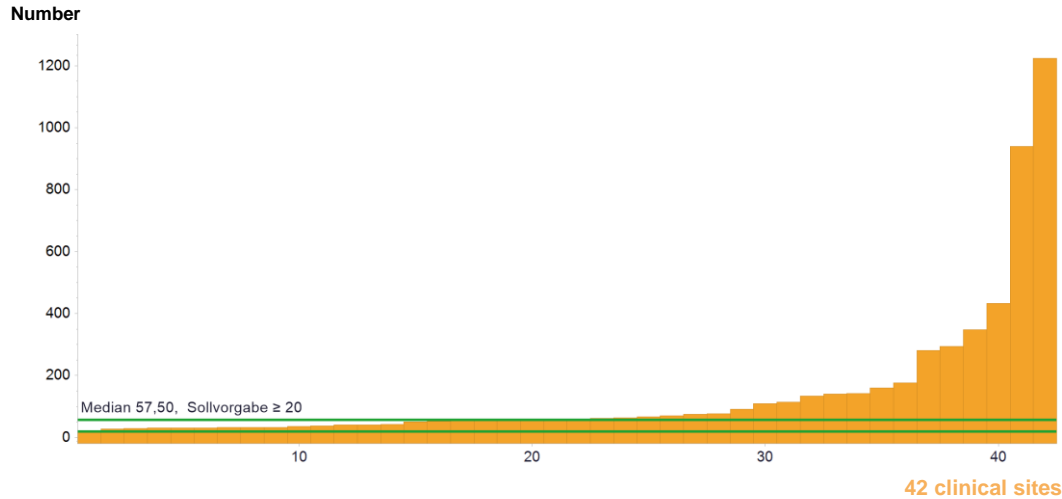
	2011	2012	2013	2014	2015
● Max	4821,00	5300,00	4971,00	5014,00	5657,00
95 th percentile	4405,50	4551,30	4660,00	4701,00	4953,85
75 th percentile	3333,25	3456,00	3304,00	3581,00	3515,00
Median	2661,50	2327,00	2567,00	2764,00	2705,50
25 th percentile	1370,75	1122,50	1128,00	1421,00	1482,50
5 th percentile	852,15	812,10	843,20	912,00	1060,75
● Min	543,00	508,00	625,00	822,00	1009,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	42	100,00%

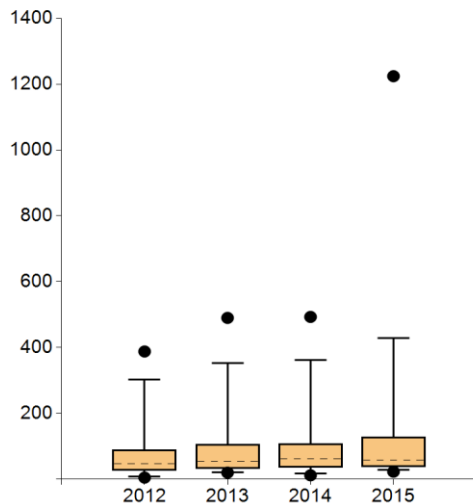
Comments:

All centres met the target value (≥ 500) and were able to prove that they have the expertise to conduct a flexible bronchoscopy.

8. Interventional bronchoscopy (thermal procedures and stenting)



	Definition of indicator	All clinical sites 2015	
		Median	Range
Number	Interventional surgery (thermal procedures and stenting) for each service provider	57,5	23 - 1224
	Target value ≥ 20		



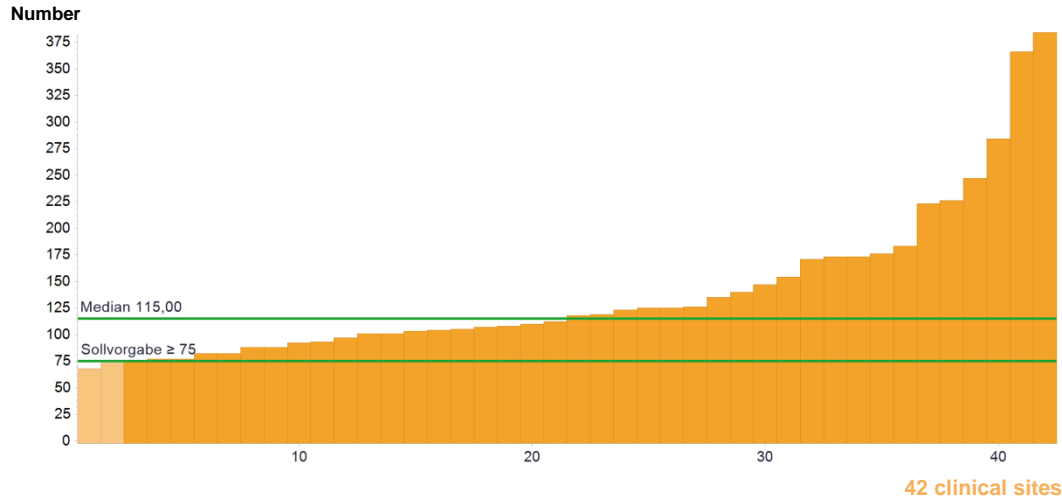
		2011	2012	2013	2014	2015
●	Max	----	388,00	490,00	493,00	1224,00
	95 th percentile	----	302,10	352,40	361,00	427,80
	75 th percentile	----	90,00	106,00	109,00	129,00
	Median	----	47,00	55,00	61,00	57,50
	25 th percentile	----	27,00	32,00	36,00	38,50
	5 th percentile	----	7,70	20,80	17,00	29,05
●	Min	----	5,00	20,00	12,00	23,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	40	95,24%

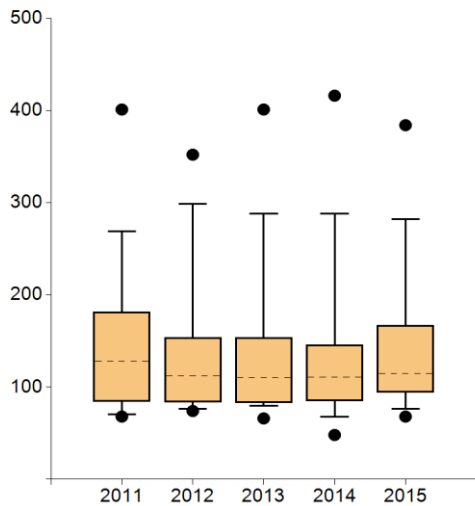
Comments:

All centres met the target value. The increasing median shows that increasingly a reticent indication is given as a consequence of good radiotherapy options.

9. Lung resections



	Definition of indicator	All clinical sites 2015	
		Median	Range
Number	Primary cases with lung resection per department (OPS 5-323 up to 5-328, 6-digit)	115	68 - 384
	Target value ≥ 75		

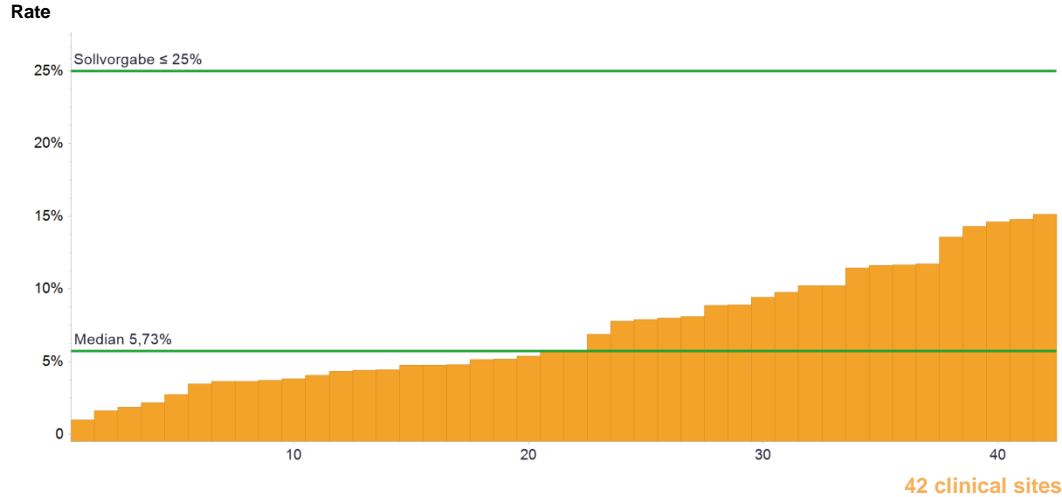


	2011	2012	2013	2014	2015
● Max	401,00	352,00	401,00	416,00	384,00
95 th percentile	268,95	298,60	288,00	288,00	282,15
75 th percentile	181,75	153,50	154,00	146,00	166,75
Median	128,00	112,00	110,00	111,00	115,00
25 th percentile	84,00	83,50	83,00	85,00	94,00
5 th percentile	70,05	76,40	79,80	68,00	76,05
● Min	68,00	74,00	66,00	48,00	68,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	40	95,24%

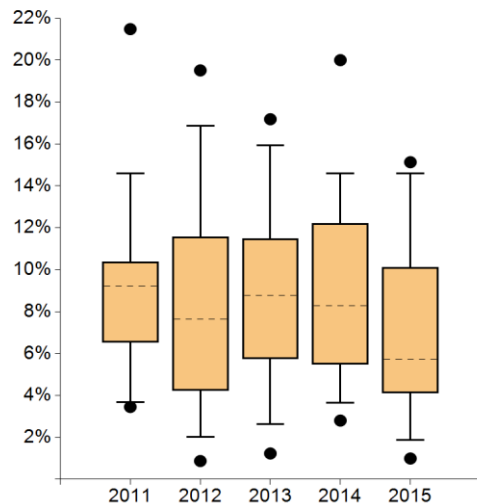
Comments:
increased by 230 resections in comparison to last year (5,552 vs 5,322).
Two centres did not meet the target value. These centres had follow-up audits (the evidence for meeting the target value must be provided for the initial audit and all re-audits).

10. Share of pneumonectomies in lung resections



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Primary cases with pneumonectomies	7*	1 - 45
Denominator	Primary cases with lung resection per department (= indicator 9)	115*	68 - 384
Rate	Target value ≤ 25%	5,73%	0,99% - 15,13%

*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.



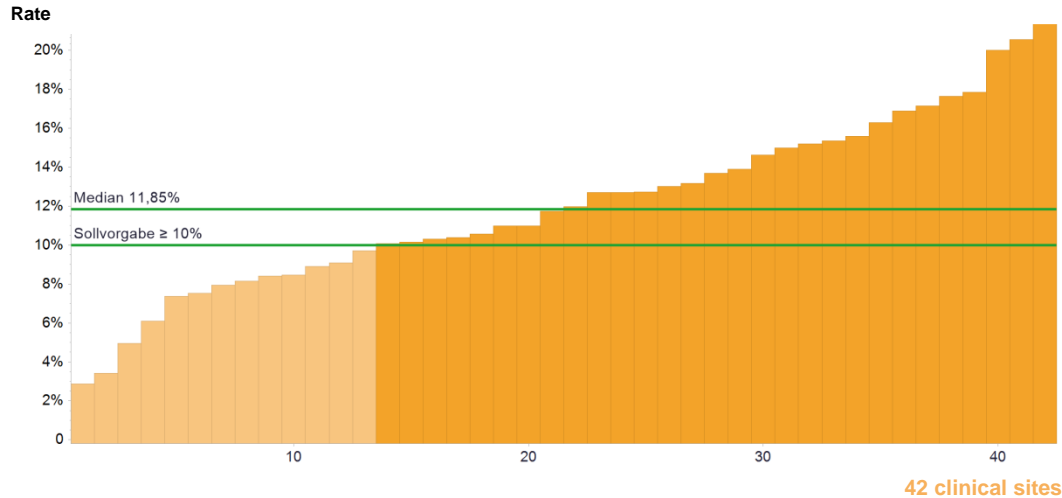
	2011	2012	2013	2014	2015
● Max	21,48%	19,51%	17,18%	20,00%	15,13%
95 th percentile	14,60%	16,88%	15,94%	14,58%	14,60%
75 th percentile	10,38%	11,56%	11,49%	12,20%	10,11%
Median	9,22%	7,64%	8,78%	8,27%	5,73%
25 th percentile	6,54%	4,23%	5,75%	5,48%	4,13%
5 th percentile	3,67%	2,01%	2,63%	3,66%	1,89%
● Min	3,45%	0,87%	1,23%	2,80%	0,99%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	42	100,00%

Comments:

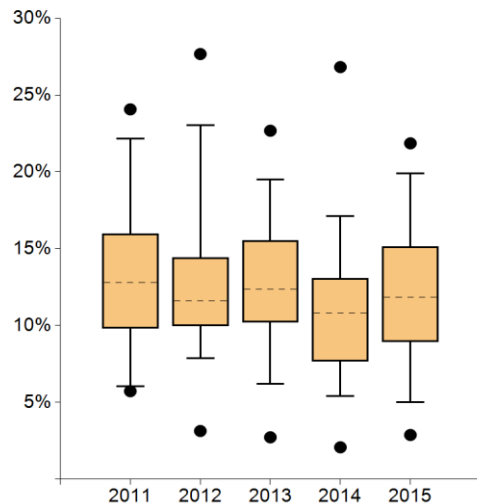
Like in the last year, all centres met the target value. The median of the share of pneumonectomies is decreasing.

11. Share of bronchoplasty/angioplasty procedures in lung resections



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Primary cases with bronchoplasty/angioplasty procedures	15*	3 - 40
Denominator	Primary cases with lung resection per department (= indicator 9)	115*	68 - 384
Rate	Target value ≥ 10%	11,85%	2,88% - 21,86%

*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.



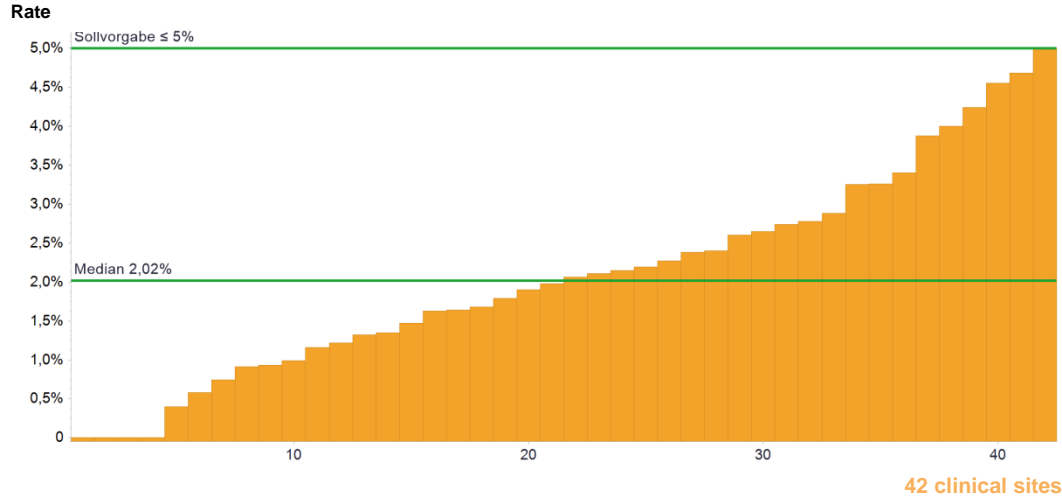
	2011	2012	2013	2014	2015
● Max	24,07%	27,67%	22,68%	26,82%	21,86%
95 th percentile	22,15%	23,02%	19,50%	17,14%	19,89%
75 th percentile	15,97%	14,43%	15,53%	13,08%	15,15%
Median	12,81%	11,61%	12,35%	10,83%	11,85%
25 th percentile	9,83%	9,96%	10,21%	7,69%	8,96%
5 th percentile	6,06%	7,87%	6,22%	5,41%	5,01%
● Min	5,73%	3,14%	2,73%	2,08%	2,88%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	29	69,05%

Comments:

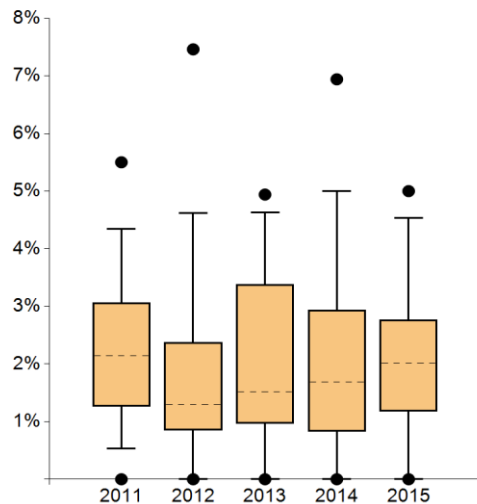
In comparison to last year, more centres met the target value of 10%. Also, the rate of angioplasty procedures increased (23 vs 15 centres with an increase) in more centres. For centres with a low share of bronchoplasty/angioplasty procedures, auditors paid special attention to a low pneumectomy rate in comparison to a high R 0 resection rate.

12. 30d lethality after resections



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Post-operative deceased patients after resection within 30d	2*	0 - 8
Denominator	Primary cases with lung resection per department (= indicator 9)	115*	68 - 384
Rate	Target value ≤ 5%	2,02%	0,00% - 5,00%

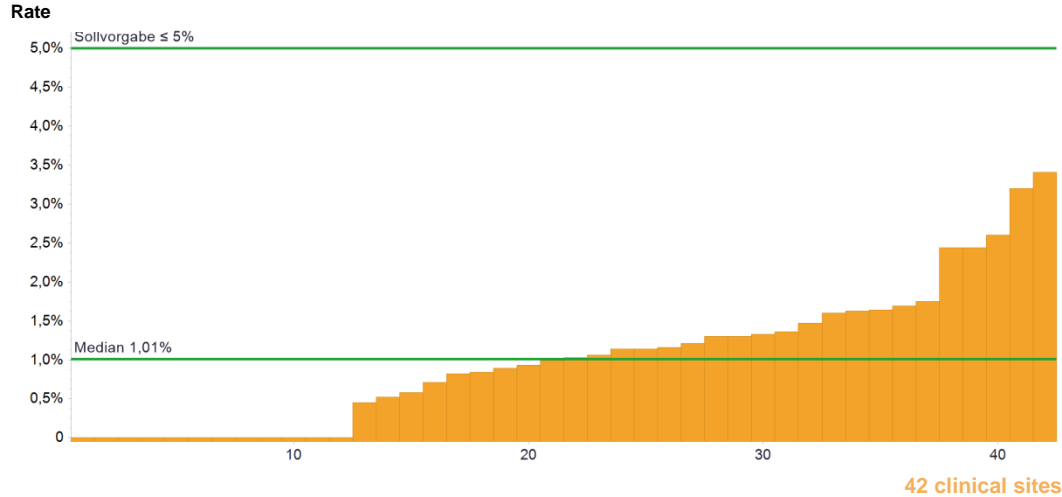
*The medians for numerator and population do not refer to an existing Centre but indicate the median of all cohort numerators and the median of all cohort denominators.



		2011	2012	2013	2014	2015	Clinical sites with evaluable data		Clinical sites meeting the target value	
							Number	%	Number	%
●	Max	5,50%	7,46%	4,94%	6,94%	5,00%	42	100,00%	42	100,00%
	95 th percentile	4,35%	4,62%	4,63%	5,00%	4,53%				
	75 th percentile	3,07%	2,37%	3,38%	2,94%	2,77%				
	Median	2,14%	1,29%	1,52%	1,69%	2,02%				
	25 th percentile	1,27%	0,86%	0,97%	0,83%	1,18%				
	5 th percentile	0,54%	0,00%	0,00%	0,00%	0,00%				
●	Min	0,00%	0,00%	0,00%	0,00%	0,00%				

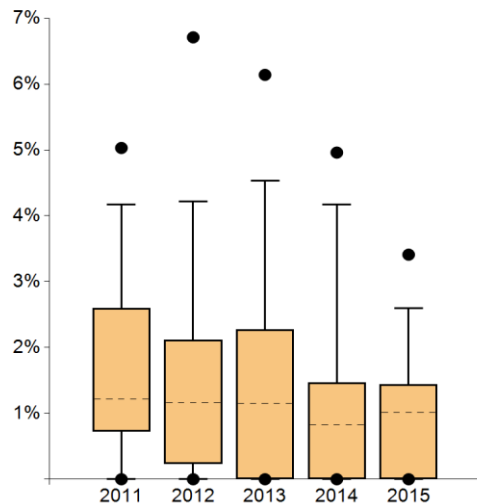
Comments:
All Centres meet the target value of ≤ 5%.

13. Post-operative bronchial stump/anastomosis insufficiency



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Post-operative bronchial stump/anastomosis insufficiency	1*	0 - 6
Denominator	Primary cases with lung resection per department (= indicator 9)	115*	68 - 384
Rate	Target value ≤ 5%	1,01%	0,00% - 3,41%

*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.

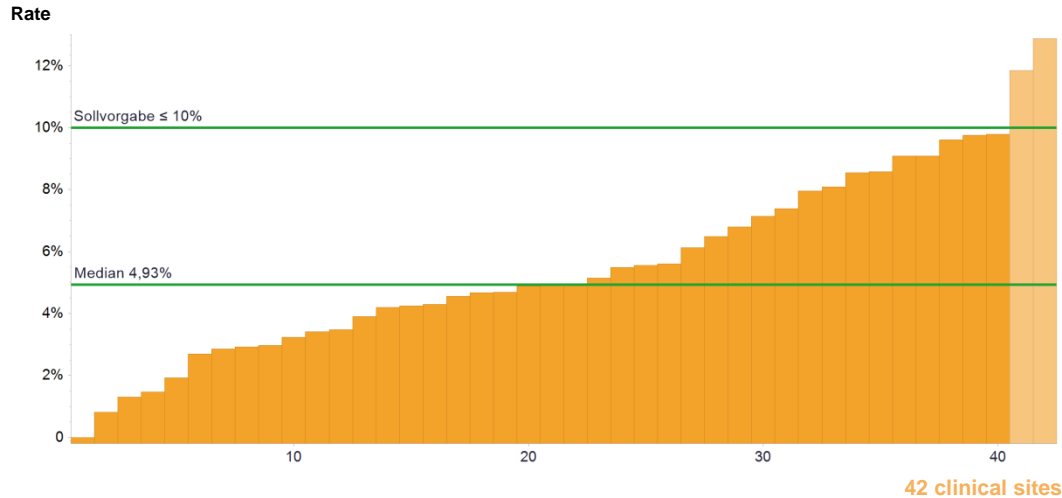


	2011	2012	2013	2014	2015
● Max	5,03%	6,71%	6,14%	4,96%	3,41%
95 th percentile	4,17%	4,22%	4,53%	4,17%	2,59%
75 th percentile	2,60%	2,12%	2,27%	1,47%	1,44%
Median	1,22%	1,16%	1,15%	0,83%	1,01%
25 th percentile	0,73%	0,24%	0,00%	0,00%	0,00%
5 th percentile	0,00%	0,00%	0,00%	0,00%	0,00%
● Min	0,00%	0,00%	0,00%	0,00%	0,00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	42	100,00%

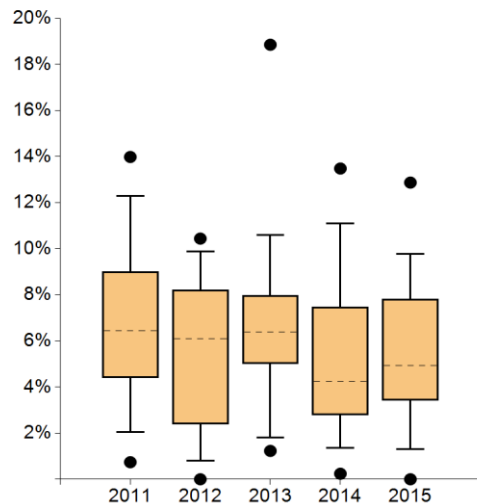
Comments:
All Centres meet the target value of ≤ 5%.

14. Revision surgeries



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Revision surgeries resulting from perioperative complications	7*	0 - 18
Denominator	Primary cases with lung resection per department (= indicator 9)	115*	68 - 384
Rate	Target value ≤ 10%	4,93%	0,00% - 12,87%

*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.



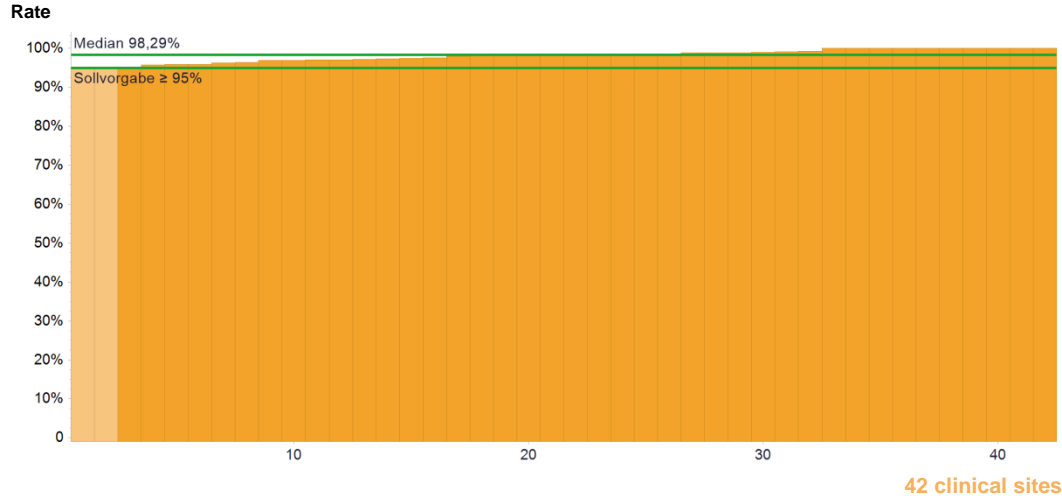
	2011	2012	2013	2014	2015
● Max	13,98%	10,44%	18,85%	13,48%	12,87%
95 th percentile	12,28%	9,89%	10,59%	11,11%	9,78%
75 th percentile	9,01%	8,20%	7,98%	7,46%	7,82%
Median	6,44%	6,09%	6,38%	4,24%	4,93%
25 th percentile	4,40%	2,40%	5,00%	2,80%	3,43%
5 th percentile	2,05%	0,81%	1,81%	1,37%	1,31%
● Min	0,74%	0,00%	1,23%	0,24%	0,00%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	40	95,24%

Comments:

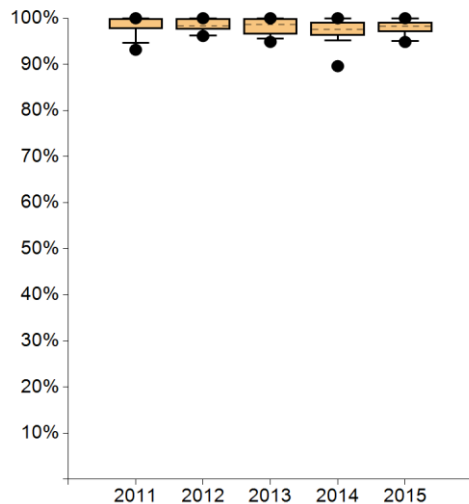
The median of the revision surgeries rate increased slightly in comparison to last year; however, the maximum value decreased slightly. Two centres, less than last year, did not meet the target value. One centre had a revision rate above the target value in the two previous years. The auditors checked the explanations and determined that no systematic deficit occurred. The following reasons were given for the high revision surgery rate: wound infection, post-surgery haemorrhaging, atelectasis, and pleura empyema.

15. Local R0 resections in stages IA/B and IIA/B



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Primary cases with local R0 resections in stages IA/B and IIA/B after conclusion of surgical therapy	79,5*	45 - 263
Denominator	Operated primary cases patients in stages IA/B and IIA/B	80,5*	47 - 273
Rate	Target value \geq 95%	98,29%	94,85% - 100%

*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.



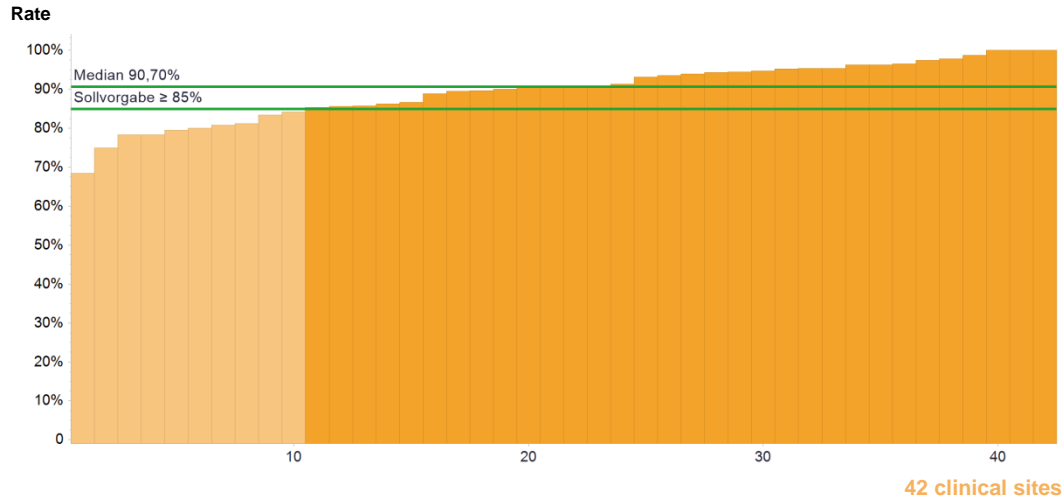
		2011	2012	2013	2014	2015
●	Max	100%	100%	100%	100%	100%
	95 th percentile	100%	100%	100%	100%	100%
	75 th percentile	100%	100%	100%	99,12%	99,20%
	Median	98,02%	98,38%	98,59%	97,59%	98,29%
	25 th percentile	97,72%	97,50%	96,55%	96,20%	97,06%
	5 th percentile	94,60%	96,28%	95,61%	95,14%	95,04%
●	Min	93,16%	96,15%	94,87%	89,61%	94,85%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	40	95,24%

Comments:

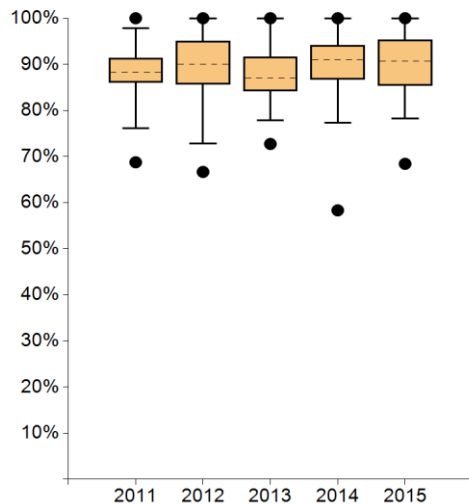
Very good implementation of the indicator. Only two centres did not meet the target value. The following measurements were agreed upon by the auditor: increasing the rate of intra-operative freezing section diagnostics and/or the R1-situation examination has to take place immediately.

16. Local R0 resections in stages IIIA/B



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Primary cases with local R0 resections in stages IIIA/B after conclusion of surgical therapy	25,5*	4 - 101
Denominator	Operated primary cases in stages IIIA/B	27*	5 - 118
Rate	Target value ≥ 85%	90,70%	68,42% - 100%

*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.



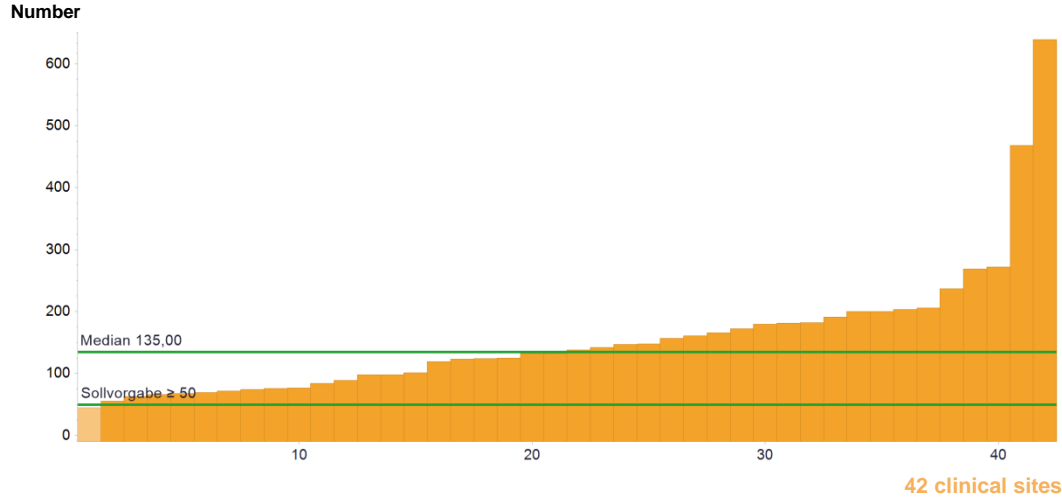
	2011	2012	2013	2014	2015
● Max	100%	100%	100%	100%	100%
95 th percentile	97,80%	100%	100%	100%	99,94%
75 th percentile	91,39%	95,00%	91,67%	94,12%	95,32%
Median	88,24%	90,00%	87,04%	90,91%	90,70%
25 th percentile	86,09%	85,71%	84,21%	86,67%	85,37%
5 th percentile	76,15%	72,78%	77,89%	77,34%	78,26%
● Min	68,75%	66,66%	72,73%	58,33%	68,42%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	32	76,19%

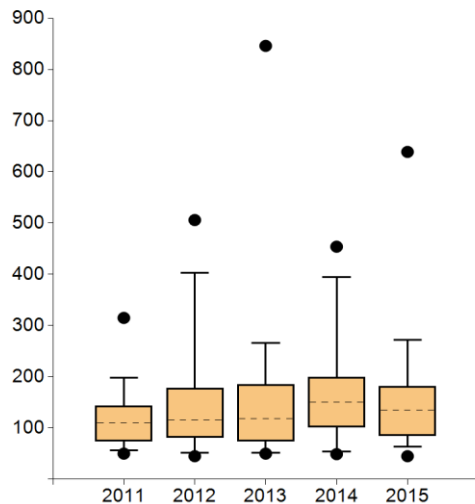
Comments:

The median remains almost unchanged. The centres with the lowest R 0 rate had results above the target value last year. The centres reported the following reason for low rates: primary surgery indication was palliative, for instance, for empyema or bleeding. Further, due to existing comorbidities extension of surgery was not possible. Finally, R1 was on the peri-bronchial fringe. The following was agreed upon as a measure for improvement: acceleration of pathological diagnosis with immediate analysis of the situation and, therefore, the opportunity to identify further resection needs early.

17. Thoracic radiotherapy



	Definition of indicator	All clinical sites 2015	
		Median	Range
Number	Thoracic radiotherapy (not just referring to primary cases)	135	45 - 639
	Target value ≥ 50		



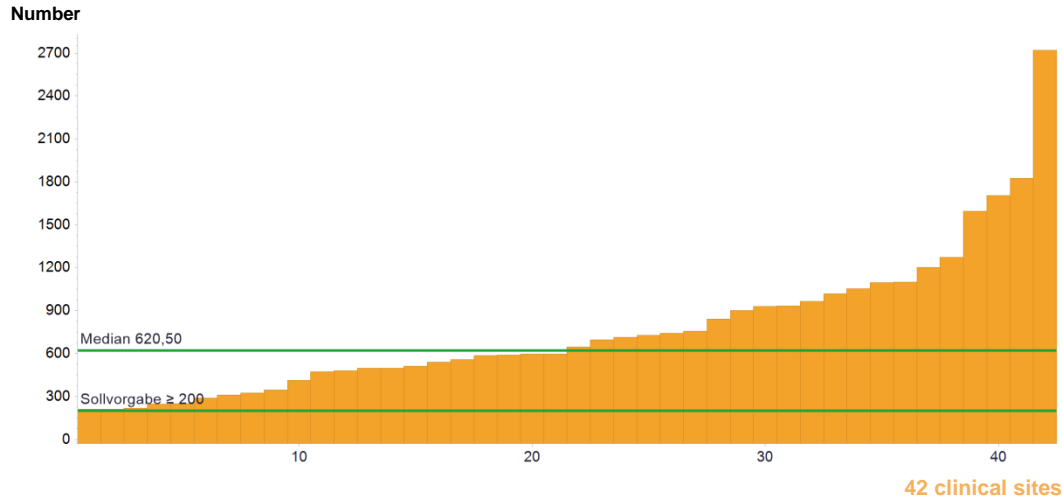
	2011	2012	2013	2014	2015
● Max	315,00	506,00	846,00	454,00	639,00
95 th percentile	198,35	403,25	265,40	394,00	271,85
75 th percentile	143,50	178,25	185,00	199,00	181,75
Median	109,50	115,50	118,00	151,00	135,00
25 th percentile	73,75	81,00	74,00	102,00	85,25
5 th percentile	56,15	52,00	52,00	54,00	63,15
● Min	50,00	45,00	50,00	49,00	45,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	39	92,86%

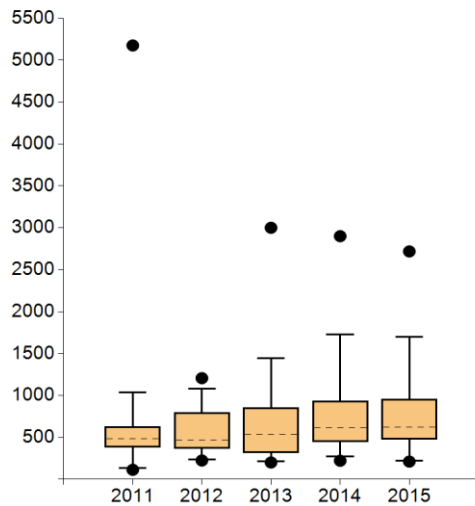
Comments:

Three centres did not meet the target value of ≥ 50 for thoracic radiotherapy. Reasons were logistical problems and that patients mainly receive systemic treatment. The auditors left remarks.

18. Pathology reports



	Definition of indicator	All clinical sites 2015	
		Median	Range
Number	Assessed malignant lung cases	620,5	211 - 2718
	Target value ≥ 200		

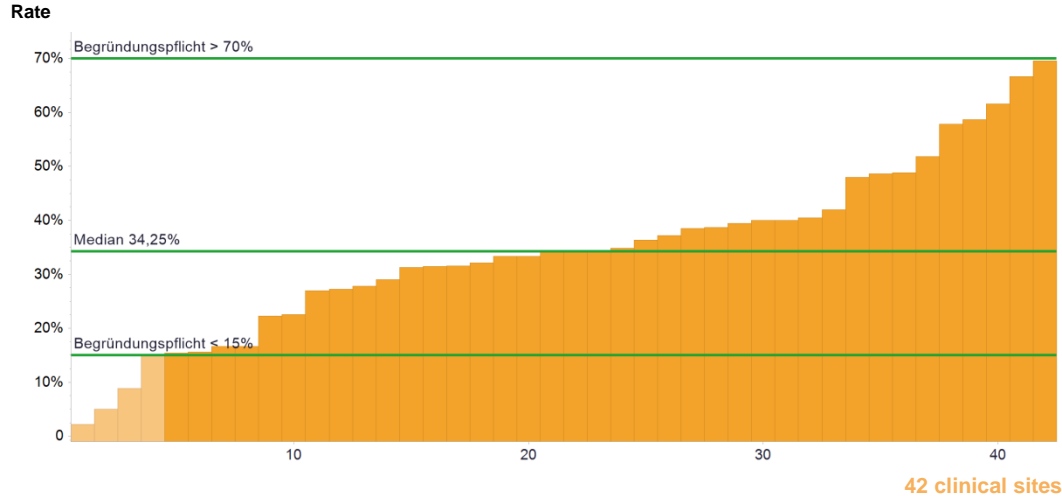


	2011	2012	2013	2014	2015
● Max	5175,00	1206,00	3000,00	2900,00	2718,00
95 th percentile	1034,30	1081,85	1440,00	1724,00	1698,60
75 th percentile	629,50	792,25	854,00	936,00	958,00
Median	483,00	470,00	536,00	613,00	620,50
25 th percentile	384,50	369,00	314,00	445,00	475,50
5 th percentile	134,15	238,30	213,40	275,00	217,55
● Min	113,00	224,00	200,00	221,00	211,00

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	42	100,00%

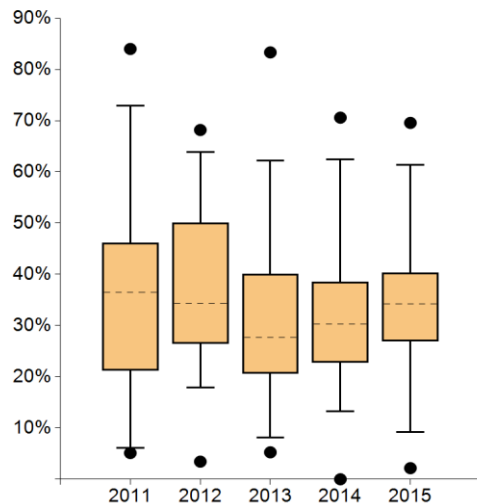
Comments:
All centres met the target value of ≥ 200 assessed for malignant lung cases.

19. Adjuvant cisplatin-containing chemotherapy stages II-III A1/2



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Cisplatin-based chemotherapy to treat primary cases of R0 and lymph node resected NSCLCC stages II-III A1/2 with ECOG 0/1	13*	1 - 38
Denominator	R0 and lymph node NSCLCC primary cases stage II-III A1/2	38,5*	11 - 181
Rate	No target value	34,25%	2,17% - 69,57%

*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.



	2011	2012	2013	2014	2015
● Max	84,00%	68,18%	83,33%	70,59%	69,57%
95th percentile	72,95%	63,83%	62,23%	62,50%	61,39%
75th percentile	46,18%	50,00%	40,00%	38,46%	40,32%
Median	36,47%	34,37%	27,68%	30,23%	34,25%
25th percentile	21,25%	26,50%	20,69%	22,82%	27,01%
5th percentile	6,14%	17,91%	8,16%	13,25%	9,19%
● Min	5,12%	3,44%	5,26%	0,00%	2,17%

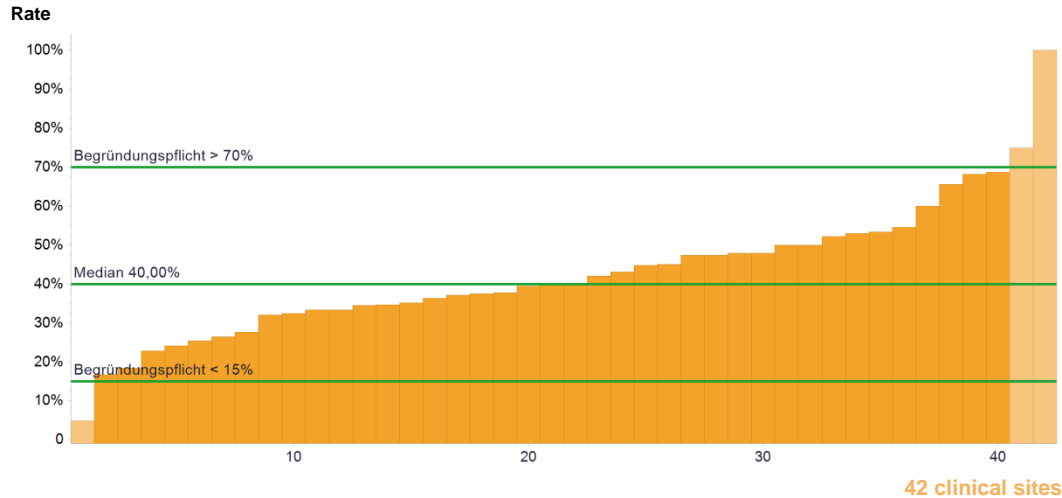
Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	38	90,48%

Comments:

The implementation of this medical guideline indicator remains nearly unchanged over the course of time. The total number of conducted cisplatin-containing chemotherapy increased slightly (608 vs 600 therapies), whereas the population decreased slightly (1,808 vs 1,861 patients in the centres that were certified for both years).

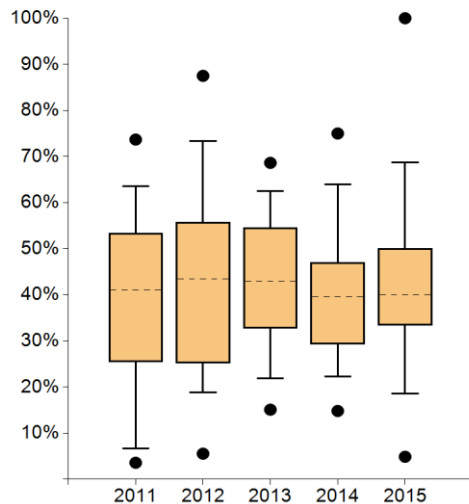
Four centres were below the plausibility corridor of 15% and gave the following reasons for the low rate: they use carboplatin instead of cisplatin, patient refusal, existing comorbidities, and age > 70 years.

20. Combined radio-chemotherapy in stages IIIA4/IIIB



	Definition of indicator	All clinical sites 2015	
		Median	Range
Numerator	Combined radio-chemotherapies for NSCLCC primary cases stages IIIA4/IIIB with ECOG 0/1	15,5*	2 - 73
Denominator	NSCLCC primary cases stages IIIA4/IIIB	41,5*	8 - 206
Rate	No target value	40,00%	4,88% - 100%

*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.



	2011	2012	2013	2014	2015
● Max	73,68%	87,50%	68,63%	75,00%	100%
95 th percentile	63,54%	73,31%	62,47%	64,00%	68,72%
75 th percentile	53,34%	55,80%	54,55%	47,06%	50,00%
Median	41,03%	43,47%	42,86%	39,58%	40,00%
25 th percentile	25,48%	25,12%	32,69%	29,29%	33,33%
5 th percentile	6,68%	18,86%	21,82%	22,22%	18,55%
● Min	3,58%	5,55%	15,09%	14,81%	4,88%

Clinical sites with evaluable data		Clinical sites meeting the target value	
Number	%	Number	%
42	100,00%	39	92,86%

Comments:

This quality indicator of the medical guideline remained nearly unchanged in its implementation. One centre was below the plausibility corridor of 15% and gave as an explanation the inability to conduct in-patient radio-chemotherapy.

WISSEN AUS ERSTER HAND (FIRST-HAND KNOWLEDGE)

Find out more on www.krebsgesellschaft.de

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