

Le reti oncologiche: indicatori di qualità validati

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Co-authors: Alice Mannocci, Rosario Andrea Cocchiara, Valeria D'Egidio, Cristina Sestili, Lorenza Lia, Sara Cianfanelli, Insa Backhaus



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iPAAC Meeting Roma, 13 Ottobre 2021

WP10:TASKS



Governance of Integrated and Comprehensive Cancer Care

- Task 1 National Cancer Control Plans
- Task 2 Patient Pathways (PP)
- Task 3 Quality indicators
- Task 4 Patient reported outcome and experience measures (PROMs & PREMs)
- Task 5 Implementation of CCCNs
- Task 6 Support to the Road Map governance of integrated and comprehensive cancer care





The CCCN is an approach to the patient, based on the principle of networking structures that cooperate with each other.

The structure of a CCCN consists of many units belonging to different Institutions specialized in research, diagnosis, care, follow-up, supportive and palliative care and rehabilitation, related to the neoplastic pathology.

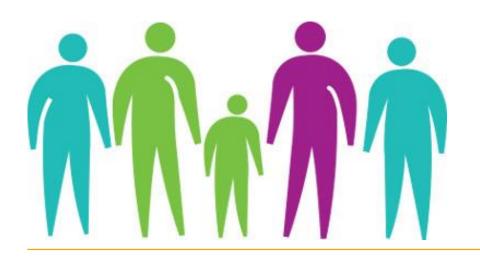
These structures are coordinated to provide comprehensive patient care, with multidisciplinary teams adopting uniform standards of care aligned to tumor-specific pathways.





Not every cancer patient receives the same high-quality care

In order to identify failures and success it is necessary to ensure transparent quality of care









DEFINITIONS

Measures that assess a particular health care process or outcome (Worning et al. 1992).

Quantitative measures that can be used to monitor and evaluate the quality of important governance, management, clinical, and support functions that affect patient outcomes (JCAHO - Characteristics of clinical indicators).



Standardized, evidence-based measures of health care quality that can be used with readily available hospital inpatient administrative data to measure and track clinical performance and outcomes (The Agency for Healthcare Research and Quality's AHRQ).



SYSTEMATIC REVIEW OF THE QUALITY INDICATORS (QIS) TO EVALUATE THE CCCN APPROACH IN THE MANAGEMENT OF ONCOLOGIC PATIENTS



OBJECTIVES

To carry out a systematic review of the scientific literature on existing QIs that evaluate the CCCN practice.

To investigate the methodology that was used to derive these QIs.









This systematic review was performed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement

The following steps were carried out:

- Literature research
- Identification of inclusion and exclusion criteria
- Data extraction
- Synthesis of results

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Literature search strategy

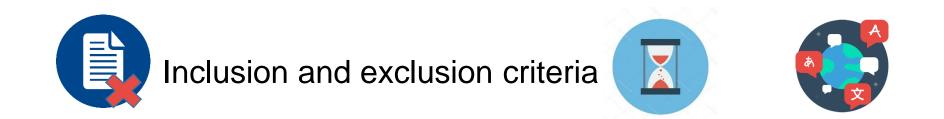
Relevant studies were identified through systematic searches of four electronic databases:



«(cancer* OR carcin* OR tumo* OR neoplasm* OR malign* OR metasta* OR oncolog*) AND [(«quality indicators, health care» [MeSH Terms]) OR («quality outcomes») OR («quality measures»)]»







- Studies about QIs developed for CCCN
- Studies published during the last ten years
- Exclusion of commentaries and editorials

➢ NO LANGUAGE RESTRICTION





Study selection



Duplicate articles were filtered using JabRef 2.10 software

Two researchers independently selected articles identified through the search strategy by analyzing the title and the abstract.



Any articles that were deemed relevant by the reviewers were included in the full-text assessment to determine if they met the inclusion criteria



Any disagreement concerning full-text articles was resolved through discussion with a third investigator until full consensus was obtained.





Data extraction



First author and year of publication



Organization that carried out the study



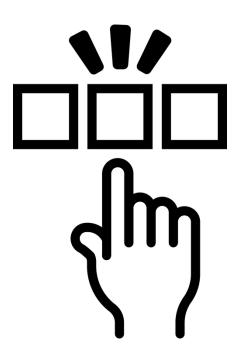
Country of the study



Type of tumor



Objective of the study









Data extraction



QIs data collected

- Definition of quality indicators
- Cancer type
- Intervention area (prevention, diagnosis, treatment, follow-up, palliative care, rehabilitation and research)
- Category of QIs according to the Donabedian's model

Methodology to develop QIs





Data extraction

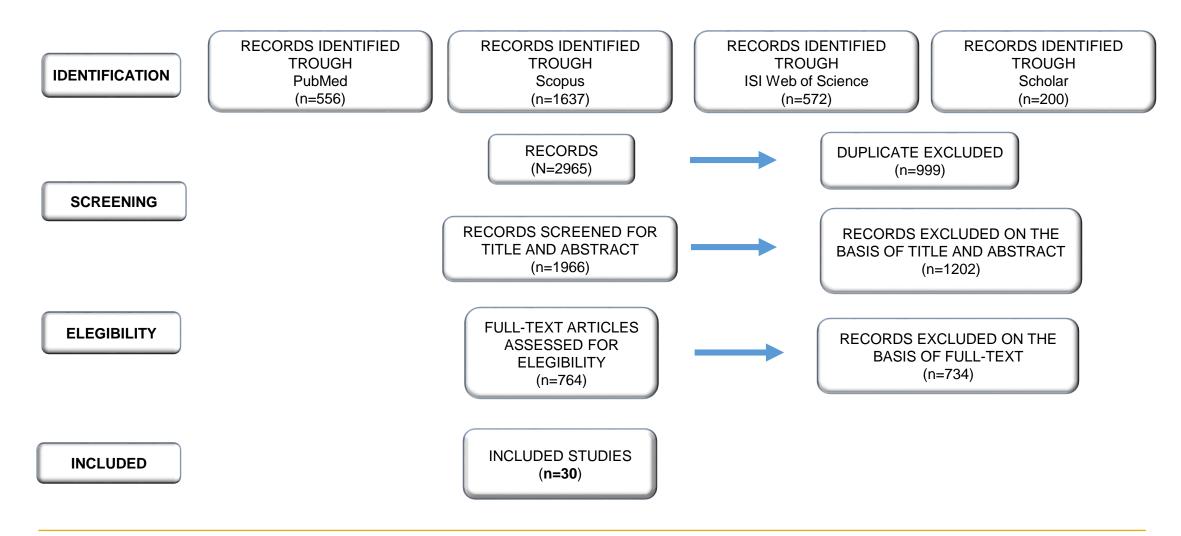
To ensure accurate data collection, for each article two reviewers independently extracted data.

Any discrepancies and disagreements were discussed and solved through consensus session with a third researcher.





PRISMA Flow chart





INCLUDED STUDIES (I)

First Author, Year	Title	Country of the study
Albert US, 2009	Breast Centers in Germany	Germany
Aletti GD, 2016	Quality control in ovarian cancer surgery	Italy
Brucker SY, 2011	Optimizing the quality of breast cancer care at Certified German Breast Centers	Germany
Busweiler LAD, 2016	Early outcomes from the Dutch Upper Gastrointestinal Cancer Audit	The Netherlands
Caldarella A, 2012	Feasibility of evaluating quality cancer care using registry data and electronic health records: a population-based study	Italy
Campion FX, 2011	Advancing Performance Measurement in Oncology: Quality Oncology Practice Initiative Participation and Quality Outcomes	USA
Coyle YM, 2013	Model for the cost-efficient delivery of continuous quality cancer care: a hospital and private-practice collaboration	USA
Van Dam PA, 2015	The effect of EUSOMA certification on quality of Breast Cancer Care	Belgium
van Dam PA, 2017	Time trends (2006-2015) of quality indicators in EUSOMA-certified breast centers	Europe
Demetter P, 2011	Quality of care indicators in rectal cancer	Belgium
Desch CE, 2008	American Society of Clinical Oncology/National Comprehensive Cancer Network Quality Measures	USA
Dy SM, 2010	Cancer Quality –ASSIST Supportive Oncology Quality Indicator Set – Feasibility, Reliability, and Validity Testing	USA
Ferrua M, 2012	Development and feasibility of a set of quality indicators relative to the timeliness and organisation of care for new breast cancer patients undergoing surgery	France
Follmann M, 2013	Quality assurance for care of melanoma patients based on guideline-derived quality indicators and certification	Germany
Giuliani J, 2012	Oncological quality indicators and Colorectal Cancer Program: data from 2009-2010 of University Hospital in Ferrara, Italy	Italy





INCLUDED STUDIES (II)

First Author, Year	Title	Country of the study
Hasset MJ, 2014	High-Priority Topics for Cancer Quality Measure Development: Results of the 2012 American Society of Clinical Oncology High-Priority Topics for Cancer Quality Measure Development: Results of the 2012 American Society of Clinical Oncology Collaborative Cancer Measure Summit	Canada
Hayman AV, 2010	Assessing compliance with national quality measures to improve colorectal cancer care at the VA	USA
Higashi T, 2011	Demonstration of quality of care measurement using the Japanese liver cancer registry	Japan
Hui D, 2015	Indicators of integration of oncology and palliative care programs: an international consensus	USA
Jackisch C, 2014	Disease management project breast cancer in Hesse – 5 year survival data. Successful model of intersectoral communication for Quality Assurance	Germany
Jackson GL, 2013	Utilizing NCCN Practice Guidelines to Measure the Quality of Colorectal Cancer Care in the Veterans Health Administration	USA
Kaufman CS, 2009	National Quality Measures for Breast Centers (NQMBC): A Robust Quality Tool	USA
Khare SR, 2016	Identification of performance indicators across a network of clinical cancer programs	Canada
Kiderlen M, 2015	Variations in compliance to quality indicators by age for 41,871 breast cancer patients across Europe: A European Society of Breast Cancer Specialists database analysis	Netherlands, UK, Italy
Kowalski C, 2015	Quality assessment in prostate cancer centers certified by the German Cancer Society	Germany
Kowalski C, 2017	Shifting cancer care towards multidisciplinarity: the cancer center certification program of the German cancer society	Germany
Kowalski C, 2015	Quality of care in breast cancer centers: Results of benchmarking by the German Cancer Society and German Society for Breast Diseases	Europe
Laronga C, 2014	Florida Initiative for Quality Cancer Care: Improvements in Breast Cancer Quality Indicators During a 3-Year Interval	USA
Liang MI, 2015	Setting the bar: compliance with ovarian cancer quality indicators at a National Cancer Institute-designated Comprehensive Cancer Center.	USA
Manchon- Walsh P, 2016	Improving survival and local ontrol in rectal cancer in Catalonia (Spain) in the context of centralisation: A full cycle audit assessment	Spain





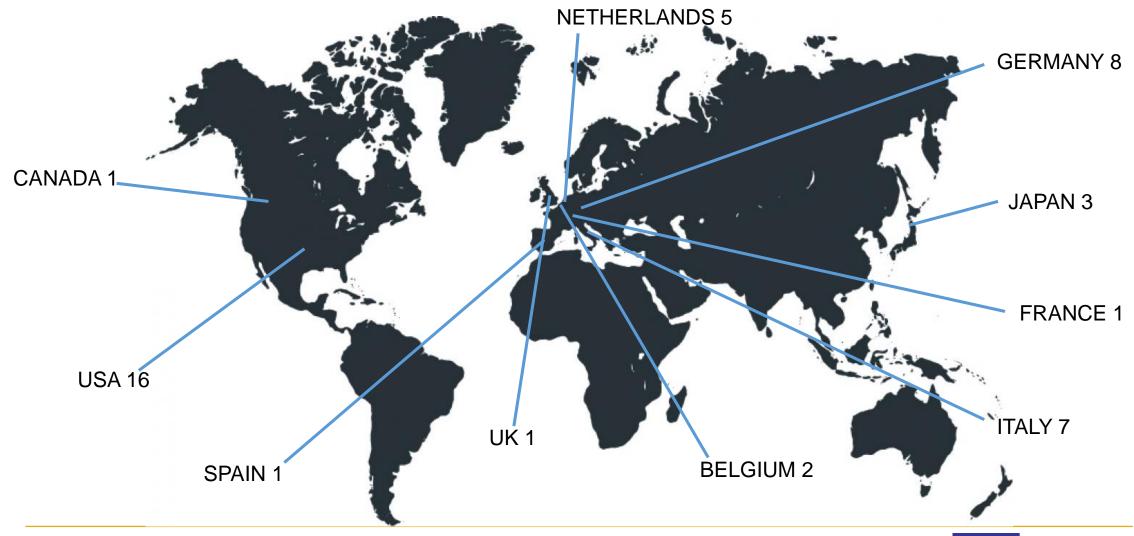
INCLUDED STUDIES (II)

First Author, Year	Title	Country of the study
Mandato VD, 2011	Province Wide Clinical Governance Network for Clinical Audit for Quality Improvement in Endometrial Cancer Management	Italy
Mano MP, 2010	Audit system on Quality of breast cancer diagnosis and Treatment (QT): results of quality indicators on screen-detected lesions in Italy, 2007	Italy
Mazzone PJ, 2014	Quality Indicators for the Evaluation of Patients with Lung Cancer	USA
van Overveld LF, 2016	Quality indicators of integrated care for patients with head and neck cancer	The Netherlands
Van Rijssen LB, 2016	National compliance to an evidence-based multidisciplinary guideline on pancreatic and periampullary carcinoma	The Netherlands
Rosselli del Turco MR, 2010	Quality indicators in breast cancer care	Europe
Ryoo JJ, 2014	Facility Characteristics and Quality of Lung Cancer Care in an Integrated Health Care System	USA
Shelton JB, 2014	Validating electronic cancer quality measures at Veterans Health Administration	USA
Siegel EM, 2014	Florida Initiative for Quality Cancer Care: Improvements on Colorectal Cancer Quality of Care Indicators during a 3-year interval	USA
Siegel RD, 2015	Quality Improvement in the National Cancer Institute Community Cancer Centers Program: The Quality Oncology Practice Initiative Experience	USA
Skolarus TA, 2013	Quality of Prostate Cancer Care among rural men in the Veterans Health Administration	USA
Stienen JJC, 2015	Trends in quality of non-Hodgkin's lymphoma care: is it getting better?	The Netherlands
Tomatis M, 2009	Audit system on Quality of breast cancer diagnosis and Treatment (QT): results of quality indicators on screen-detected lesions in Italy for 2006 and preliminary results for 2007	Italy
Wallwiener M, 2012	Multidisciplinary breast centers in Germany: a review and update of quality assurance through benchmarking and certification	Germany
Watanabe T, 2017	Quality indicators for cervical cancer care in Japan	Japan
Wesselman S, 2014	Documented quality of care in certified colorectal cancer centers in Germany: German Cancer Society benchmarking report for 2013	Germany





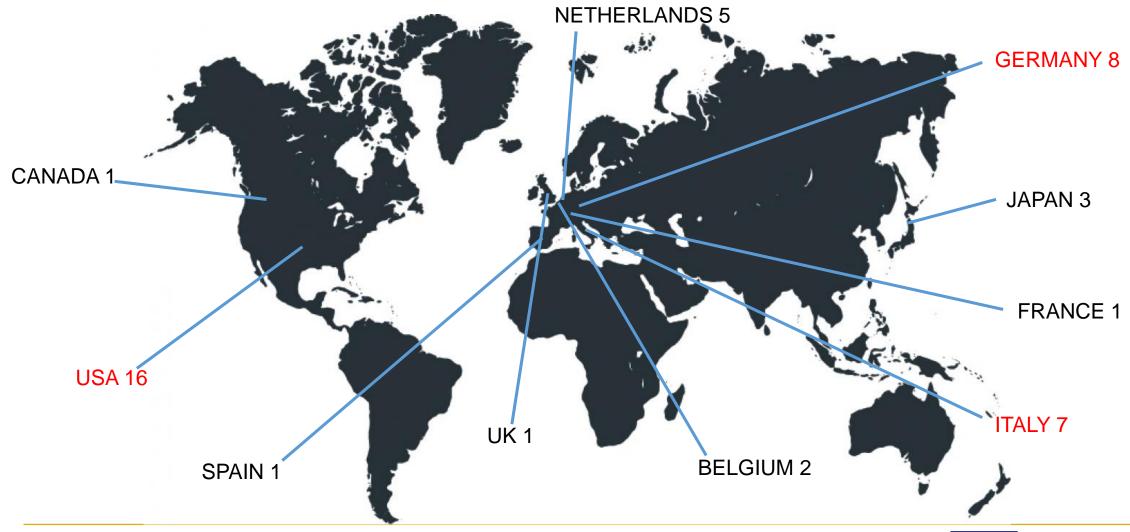
STUDIES' CHARACTERISTICS







STUDIES' CHARACTERISTICS



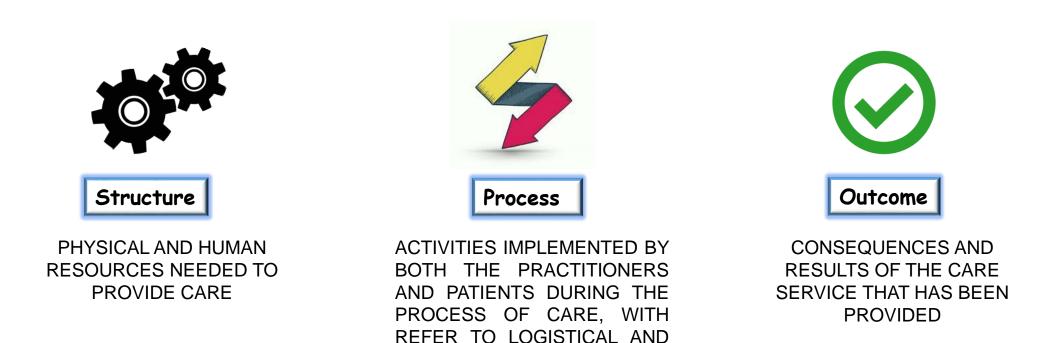


CATEGORIES OF QIS



according to Donabedian

(Donabedian A. The Quality of Care. How can it be assessed? JAMA. 1988)



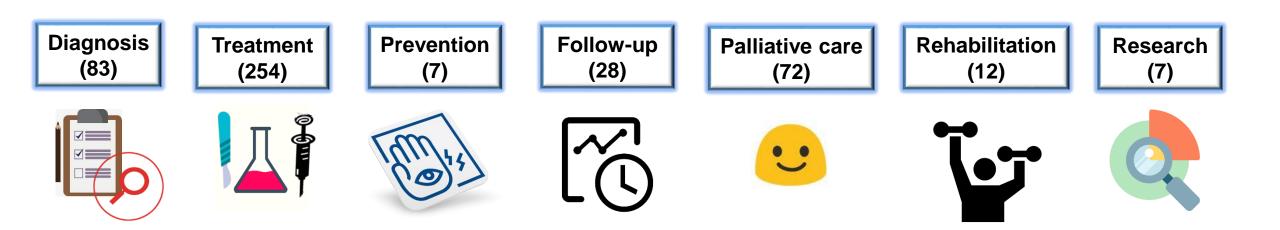
TECHNICAL CRITICALITIES



CLASSIFICATION AND DISTRIBUTION OF QIs



according to intervention area proposed within CANCON guidelines for quality improvement in CCC





Category of QIs	Cancer type	Diagnosis	Prevention	Treatment	Follow-up	Palliative	Rehabilitation	Research
	General	0	0	3	0	24	0	0
	Ovarian	0	0	6	1	0	0	1
	Colorectal	5	0	8	2	1	0	2
	Lung	4	0	5	0	0	0	1
	Liver	0	0	0	0	0	0	0
	Prostate	2	0	1	1	0	0	1
C	Uterus	0	0	0	0	0	0	0
Structure	NHL	3	0	2	0	0	0	0
	Pancreas	0	0	1	0	0	0	0
	Melanoma	0	0	0	0	0	0	0
	Head & Neck	0	0	9	1	0	0	0
	Breast	1	0	9	0	0	1	2
	Esophageal	1	0	2	0	0	0	0
	Gastric	1	0	2	0	0	0	0
	General	0	1	11	3	29	0	0
	Ovarian	1	0	10	0	0	0	0
	Colorectal	14	i	36	2	0	3	0
	Lung	10	ĩ	20	ō	12	ō	0
	Liver	4	0	16	4	0	0	0
	Prostate	3	ő	10	4	ő	2	0
	Uterus	2	ŏ	13	ō	ő	õ	0
Process	NHL	- 9	ő	1	4	ő	ő	0
	Pancreas	ő	ő	3	ō	ő	ő	0
	Melanoma	1	ő	7	2	ő	ő	ő
	Head & Neck	î	ő	1	1	ő	2	0
	Breast	19	2	35	0	ő	4	0
	Esophageal	0	ő	2	0	ő	, , , , , , , , , , , , , , , , , , ,	0
	Gastric	ő	0	2	0	0	0	0
3	General	0	0	3	0	5	0	0
	Ovarian	0	0	ő	ő	õ	ő	0
	Colorectal	0	1	12	0	0	0	0
	Lung	0	0	2	0	1	ő	0
	Liver	0	0	0	0	0	ő	0
	Prostate	0	0	7	2	0	0 0	0
	Uterus	0	0	ó	0	0	0	0
Outcome	NHL	0	0	0	0	0	0	0
	Pancreas	0	0	0	0	0	0	0
	Melanoma	0	0	3	0	0	0	0
	Head & Neck	0	0	3	0	0	0	0
			1			0	0	1000
	Breast	2	0	6 3	1	0	0	0
	Esophageal				1000			0
	Gastric	0	0	3	0	0	0	0



SUMMARY OF THE CHARACTERISTICS OF THE DETECTED QIS

Breast cancer



2.09 million cases (WHO 2018)

Lung cancer



2.09 million cases (WHO 2018)

Colorectal cancer



1.80 million cases (WHO 2018)



SUMMARY OF THE CHARACTERISTICS OF THE DETECTED QIS



 103 Structure QIs
 General

 308 Process QIs
 Vierus

 55 Outcome QIs
 Liver

 Process
 Liver

 Process
 Melanoma

 Head & Neck
 Breast

 Breast
 Esophageal

 Gastric
 General

 Ovarian
 Colorectal

 Liver
 Process

 Melanoma
 Head & Neck

 Breast
 Esophageal

 Gastric
 General

 Ovarian
 Colorectal

 Liver
 Prostate

 Vierus
 NHL

 Pancreas
 Melanoma

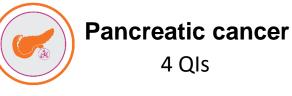
 Head & Neck
 NHL

 Pancreas
 Melanoma

 Head & Neck
 Neck

Category of QIs	Cancer type	Diagnosis	Prevention	Treatment	Follow-up	Palliative	Rehabilitation	Research
	General	0	0	3	0	24	0	0
	Ovarian	0	0	6	1	0	0	1
	Colorectal	5	0	8	2	1	0	2
	Lung	4	0	5	0	0	0	1
	Liver	0	0	0	0	0	0	0
	Prostate	2	0	1	1	0	0	1
Structure	Uterus	0	0	0	0	0	0	0
Suuciare	NHL	3	0	2	0	0	0	0
	Pancreas	0	0	1	0	0	0	0
	Melanoma	0	0	0	0	0	0	0
	Head & Neck	0	0	9	1	0	0	0
	Breast	1	0	9	0	0	1	2
	Esophageal	1	0	2	0	0	0	0
	Gastric	1	0	2	0	0	0	0
	General	0	1	11	3	29	0	0
	Ovarian	1	0	10	0	0	0	0
	Colorectal	14	1	36	2	0	3	0
	Lung	10	1	20	0	12	0	0
	Liver	4	0	16	4	0	0	0
	Prostate	3	0	10	4	0	2	0
D	Uterus	2	0	13	0	0	0	0
Process	NHL	9	0	1	4	0	0	0
	Pancreas	0	0	3	0	0	0	0
	Melanoma	1	0	7	2	0	0	0
	Head & Neck	1	0	1	1	0	2	0
	Breast	19	2	35	0	0	4	0
	Esophageal	0	0	2	0	0	0	0
	Gastric	0	0	2	0	0	0	0
	General	0	0	3	0	5	0	0
	Ovarian	0	0	0	0	0	0	0
	Colorectal	0	1	12	0	0	0	0
	Lung	0	0	2	0	1	0	0
	Liver	0	0	0	0	0	0	0
	Prostate	0	0	7	2	0	0	0
	Uterus	0	0	0	0	0	0	0
Outcome	NHL	0	0	0	0	0	0	0
	Pancreas	õ	ō	õ	ŏ	õ	õ	õ
	Melanoma	õ	õ	3	õ	õ	õ	õ
	Head & Neck	õ	0	3	õ	õ	õ	Ő
	Breast	2	ĩ	6	ů 1	ŏ	ŏ	ő
	Esophageal	õ	ō	3	ō	ŏ	ŏ	ő
	Gastric	ŏ	ő	3	ŏ	ő	ŏ	Ő

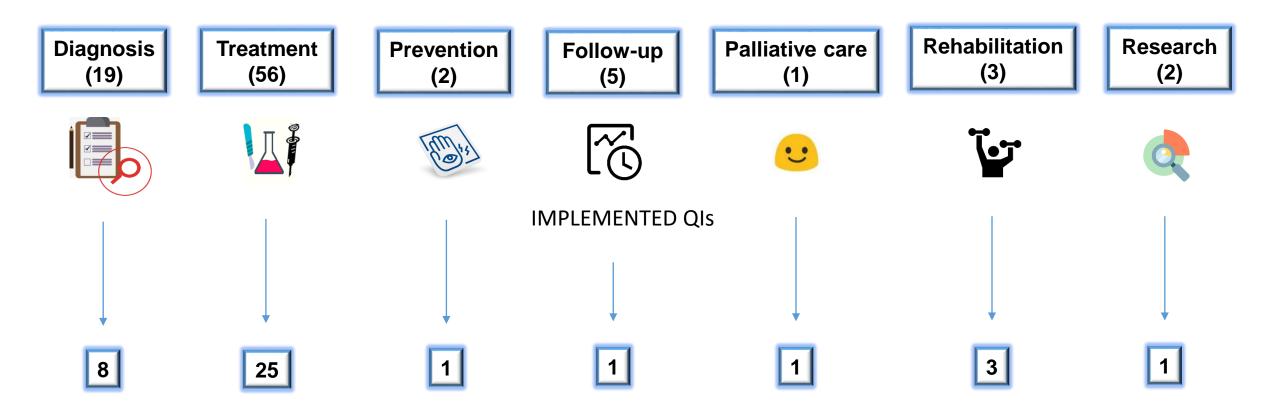










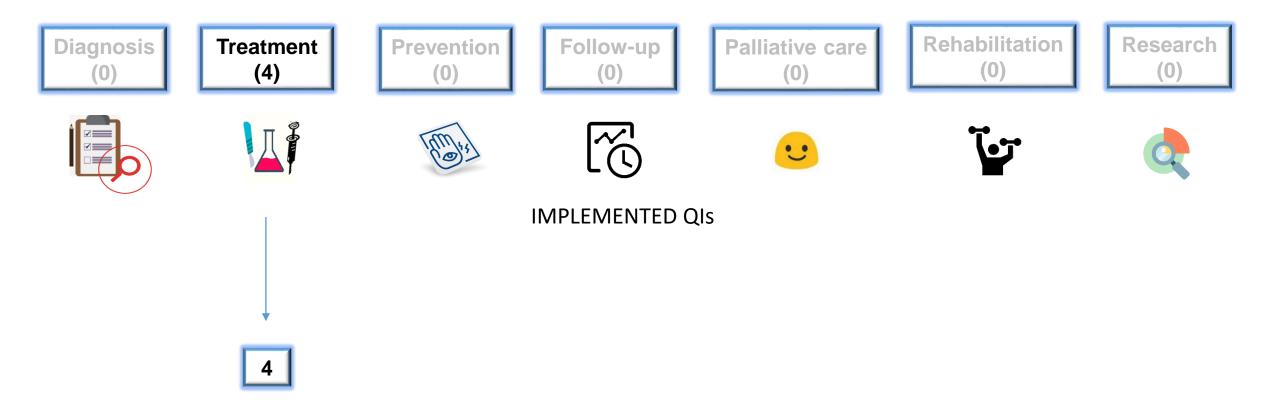


















Co-funded by the Health Programme of the European Union



https://www.ipaac.eu/res/file/outputs/wp10/qualityindicators-colorectal-pancreatic-cancer-care.pdf

Quality Indicators for Colorectal and Pancreatic Cancer to monitor and improve oncological care within Comprehensive Cancer Care Networks (CCCN)

Work package 10 Task 3 Quality Indicators





Quality Indicator Reference Further supporting references

QI 3 Colorectal: Complete elective colonoscopies - colorectal cancer center

	Numerator: Colonoscopies of the denominator which have been completed	European Cancer Centre Certification Programme Annual Report Colorectal Cancer Centres (2019) <u>http://ecc-</u>
]	Denominator:	cert.org/fileadmin/user_upload/Ann ual_Report_Colorectal_2019.pdf
	All elective colonoscopies	
	for each colonoscopy unit	
	of the colorectal cancer	
•	center	





QI 4 Colorectal: CEA blood test - colon cancer

Numerator:

Patients of the denominator with CEA blood test prior to treatment

Denominator:

All patients with colon cancer stage IV and rectal cancer and any treatment Siegel EM, Jacobsen PB, Lee JH, Malafa M, Fulp W, Fletcher M et al. Florida Initiative for Quality Cancer Care: improvements on colorectal cancer quality of care indicators during a 3-year interval. J Am Coll Surg. 2014 Jan;218(1):16-25.e1-4. Giuliani J, Marzola M, Indelli M, Frassoldati A.: Oncological quality indicators and Colorectal Cancer Program: data from 2009-2010 of University Hospital in Ferrara, Italy. Recenti Prog Med. 2012 Feb;103(2):56-61

Jackson GL, Zullig LL, Zafar SY, Powell AA, Ordin DL, Gellad ZF et al. Utilizing NCCN Practice Guidelines to Measure the Quality of Colorectal Cancer Care in the Veterans Health Administration. J Natl Compr Canc Netw 2013;11:431–41.

Hayman et al: Assessing compliance with national quality measures to improve colorectal cancer care at the VA., Am J Surgery (2010) 200:572–576





Quality Indicator	Reference	Further supporting references
QI 9 Colorectal: Revision s	surgery - colon cancer	
Numerator: Revision surgeries of the denominator due to peri- operative complications within 30 days from elective surgery	European Cancer Centre Certification Programme Annual Report Colorectal Cancer Centres (2019) <u>http://ecc- cert.org/fileadmin/user_upload/Ann</u> ual_Report_Colorectal_2019.pdf	
Denominator: All elective colon cancer surgeries		





Quality IndicatorReferenceFurther supporting reference	ıces
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QI 13 Colorectal: Post-operative wound infection - colorectal cancer

Numerator:

Surgeries of the denominator with postoperative wound infection within 30 days from surgery requiring surgical wound revision (rinsing. spreading. VAC bandage)

Denominator: All elective colorectal cancer surgeries European Cancer Centre Certification Programme Annual Report Colorectal Cancer Centres (2019) <u>http://ecc-</u> <u>cert.org/fileadmin/user_upload/Ann</u> <u>ual_Report_Colorectal_2019.pdf</u>



PANCREATIC CANCER



QI 4 Pancreatic: Adjuvant chemotherapy - pancreatic cancer

 Numerator: Patients of the denominator with adjuvant chemotherapy Denominator: All patients with pancreatic cancer and resection 	van Rijssen LB, van der Geest LG, Bollen TL, Bruno MJ, van der gaast A, Veerbek L et al.National compliance to an evidence-based multidisciplinary guideline on pancreatic and periampullary carcinoma. Pancreatology, 16 (2016) http://dx.doi.org/10.1016/j.pan.201 5.10.002	European Cancer Centre Certification Programme Annual Report Pancreatic Cancer Centres (2019) http://ecc- cert.org/fileadmin/user_upload/Annual_R eport_Pancreatic_Cancer_2019.pdf Karl Y. Bilimoria, David J. Bentrem, Keith D. Lillemoe, Mark S. Talamonti, Clifford Y. Ko, on behalf of the American College of Surgeons' Pancreatic Cancer Quality Indicator Development Expert Panel, Assessment of Pancreatic Cancer Care in the United States Based on Formally Developed Quality Indicators, JNCI: Journal of the National Cancer Institute, Volume 101, Issue 12, 16 June 2009, Pages 848–859;
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PANCREATIC CANCER



QI 11 Pancreatic: Post-operative mortality – pancreas

Numerator: Patients of the denominator who died within 30 days from pancreatic resection Denominator: All patients with pancreatic resections	European Cancer Centre Certification Programme Annual Report Pancreatic Cancer Centres (2019) http://ecc- cert.org/fileadmin/user_upload/Ann ual_Report_Pancreatic_Cancer_20 19.pdf	 Bilimoria, K. et al (2009): Assessment of Pancreatic Cancer Care in the United States Based on Formally Developed Qulaity Indicators, JNCI, Volume 1010, Issue 12, pages 848-859. <u>https://academic.oup.com/jnci/article/101</u> /12/848/2515610 Agency for Healthcare Research and Quality
		Quality https://www.qualityindica- tors.ahrq.gov/Downloads/Modules/IQI/V 2019/Ver-si- on 2019 Benchmark Tables IQI.pdf





 Both our pilot CCCN – Charité and Lower Silesian Oncology Centre - have been successfully certified as Comprehensive Cancer Care Network with a focus on colorectal and pancreatic cancer care.



CERTIFICATE AWARDING PROTOCOL





Certificate Awarding Protocol

CCCN Name	CCCN Charité Berlin		
Location	Berlin, Germany		
Auditor(s) name	Dr Maggie Banys-Paluchowski, Dr Kay Kohlhaw, Dr Alexandre Pelzer		
Committee (Chair / Members)	Dr Miriam Dalmas, <u>Dr Nikolai Goncharenko</u> , Dr Hannes Schlieter		
Initial certification	16.09.2021	Audit date	07-08.06.2021

Evaluation from the Certificate Award Committee

As part of the certification award, the individual phases of the audit are evaluated by the Certification Awarding Committee on the basis of the available audit documentation. In particular, the formally correct execution of the audit by the auditor as well as the fulfilment of the technical and medical requirements by the CCCN are considered.

The evaluation is based on the following records



Audit form





Notes

16.09.2021

The certificate is granted without any conditions.

The CCCN has excellent processes and quality of outcomes. Interdisciplinarity, process organisation and structures are exemplary. Internal learning exchanges between different units are well noted. In view of the size and scope of care of the CCCN, the resources dedicated to palliative care should be expanded.

The conclusiveness of the audit report is possibly limited, as the core statements are only based on the online presentations of the representatives of the respective domains as only an online audit was possible due to covid regulations. The full implementation level cannot be assessed because of this limitation, and the analysis of particular cases was also only possible on a superficial level.





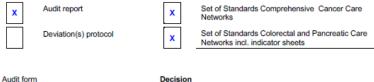
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CCCN Name	CCCN Lower Silesian Oncology Centre			
Location	Wroclaw, Poland			
Auditor(s) name	Dr Maggie Banys-Paluchowski, Dr Kay Kohlhaw, Dr Alexandre Pelzer			
Committee (Chair / Members)	Dr Miriam Dalmas, Dr Nikolai Goncharenko, Dr Hannes Schlieter			
Initial certification	16.09.2021	Audit date	01-02.07.2021	

Evaluation from the Certificate Award Committee

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The evaluation is based on the following records



m		Decision	
	Initial certification	X	Certificate awarded
	Extension		Certificate awarded (with conditions)
	Re-certification		Withdrawal / Suspension / Not award

Notes

х

The certificate is issued without any conditions.

Strong engagement and commitment of stakeholders have been noted. Further engagement of external partners via the network is desirable. Nursing care and psycho-oncology have been identified as particular strengths, Various remarks from the on-site initial certification audit should be taken into account in an action plan; they will be the focus of the follow-up audit.

The follow-up audit will also focus on the quality of data (esp. the quality of the indicator sheet), data integration, social counselling and interdisciplinarity.



THANK YOU FOR YOUR ATTENTION

iPAAC Meeting. Roma, 13 Ottobre 2021

