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Methodology for defining quality indicators (QI) in order to monitor and improve oncological care within a Comprehensive Cancer Care Network (CCCN)
– The iPAAC Evaluation Tool for QIs in oncology (iET-QIs)-

Work package 10 Task 3 Quality Indicators

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Content

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Abbreviations

CCCN	Comprehensive Cancer Care Networks
CHAFEA	Consumers, Health, Agriculture and Food Executive Agency
EU	European Union
G I N	Guidelines International Network
iET-QIs	iPAAC Evaluation Tool for QIs in oncology
iPAAC	Innovative Partnership for Action Against Cancer
QI	Quality Indicator
WP 10	Work Package 10

Executive summary

This document is part of the Task 3, Work Package 10 (WP10) within the Joint Action iPAAC. It provides the methodology for defining quality indicators (QIs) in order to monitor and improve structures, processes and results of Comprehensive Cancer Care Networks (CCCNs).

The document describes how this methodology was developed, agreed upon and piloted within the Joint Action. Part A describes the methodology as finally consented and that should be applied for a CCCN setting, while Part B focuses on the results of applying the methodological procedure within task 3 WP 10.

1 Background

In April 2019, a systematic review was performed with two aims. First, to identify QIs already implemented in clinical oncological practice. Second, to retrieve the description of the methodology processes used to derive these QIs (see document “IPAAC 2_Systematic Review Quality Indicators”).

Since the systematic review provided only a limited number of implemented indicators with already reported results, an additional search was conducted on websites of European quality assurance institutions in oncology. The search focused on colorectal and pancreatic carcinoma because the work within WP 10 concentrated on these two tumour entities in order to realize synergies with other iPAAC work packages and European initiatives.

Based on the results of the reported methodology in publications identified by the systematic review and the additional search on homepages of national and international QA organizations, the “iPAAC evaluation tool for QI” (iET-QI) was developed in order to assess the identified QIs. The methodological steps are reported according to the reporting standards for guideline-based performance measures of the Guideline International Network (GIN) (Nothacker M, 2106) [see “2 - Methodology “iPAAC evaluation tool for QI””].

The iET-QI-methodology was used to create the final set of 40 quality indicators [see “3 - Application of the “iPAAC evaluation tool for QI”], which will be implemented in the two pilot CCCNs in the course of WP 10 with the aim of pilot testing the validity of this path for the assessment of quality of care within CCCNs.

2 Methodology of the "iPAAC evaluation tool for QI" (iET-QI)

The goal of the iET-QI tool is defining a set of QIs that can be used for the monitoring of the quality of care in CCCN.

The iET-QI methodology follows the G-I-N reporting standards as far as applicable. In table 1 the G-I-N criteria are outlined and the respective methodological steps for the iET-QI tool described.

Table 1. Criteria according to defined reporting standards [1] and assessment of the proposed methodologic steps

GIN reporting standards	Methodological steps of iET-QI	Comments
1 + 2 Guideline selection and selection of guideline recommendations Not applicable for this process, since the QI candidates are not primarily generated from guideline recommendations	Search for QI International Literature search for implemented QI with published results of the QI application. Additional search on websites of national and international QA organizations. The search can be generic or tumor-specific. The methodology used to define the implemented QI must be described.	Results of the searches for colorectal and pancreatic cancer see documents "IPAAC 2_Systematic Review Quality Indicators"
3 Selection process of performance measures	First step of selection ("First screening") [2] A1) duplication Explanation: There are two or more QI candidates exactly addressing the same topic. Formally, one candidate is kept the others are excluded by criterion A1. A2) lack of understandability Explanation: The wording of the QI candidate is ambiguous. For example, it may not be concluded which population (mentioned in the nominator or denominator) is defined or the intervention is unclear.	The first selection was performed by the steering group of WP 10

	A3) not feasible for the European CCCN setting Explanation: This addresses QI candidates which comprise elements, which are unavailable in an European CCCN setting, such as drugs or non-drug interventions which are unavailable in European countries as well as health care structures (for example specific for setting in the U.S.) which can not be provided. A4) defining of numerator and denominator not possible Explanation: The QI is not univocally defined by a ratio of numerator and denominator elements (for example number of individuals receiving treatment out of the total of the diagnosed patients)	
4 Core attributes of performance measures (appraisal)	Second step of selection (“Second Screening”) [3-7]: Assessment of: 1. Relevance (potential for improvement /clinical relevance) Question: The quality indicator includes the potential for improving relevant patient outcomes. 2. Feasibility (measurability) Question: The data is routinely documented by the service provider or an additional survey requiring a reasonable level of effort. 3. Usability (clarity of definition) Question: The indicator is clearly and unambiguously defined and is related to a supply aspect that can be influenced by the service provider.	Assessment sheet for second screening (see Annex 1) Answer categories: “no” and ”yes” A QI is accepted if the agreement is greater than or equal to 75% for criteria 1,3 and 4. Criterion 2 provides additional relevant information without implication for the selection process. Voting by medical experts

5 Specification of performance measures	See first screening, A4: Possibility to create a numerator and denominator is a base for a QI candidate to proceed to the assessment process.	
6 Intended use of performance measures	The use should be defined as within the CCCN setting	
7 Praxis test of performance measures	A praxis test should be performed within selected CCCN	
8 Review and reevaluation of performance measures	After QI implementation, generating and analyzing data a process should be defined in order to assess whether a QI should be kept, retired or modified.	
9 Composition of the panel deciding on performance measures	Panels are composed by multidisciplinary experts, stakeholders in the field, experts in quality measurements and patient representatives.	In this project two different groups had been involved: The steering group for the first screening, a multidisciplinary group of external experts for the second screening

3 Application of the "iPAAC evaluation tool for QI" (iET-QI)

The methodology for defining a set of Qis in order to monitor and improve health care in Comprehensive Cancer Care Networks (CCCNs) have been successfully applied in the course of iPAAC, after the methodology was approved in the third iPAAC meeting.

In the following parapraphs the application of the iET-QI is explained in detail.

3.1.1 Search and compilation of potential QI to be assessed

As described above, searches had been performed in literature databases and on eligible homepages of QA institutions (see "Background").

The systematic review included 46 studies reporting on 468 QIs. The detailed results are described in the document "IPAAC 2_Systematic Review Quality Indicators". Only these QIs of the 468 QI were used for the list of potential QIs, for which the methodology of their definition was described in the corresponding publication.

The additional search on websites of European Quality Assurance institutions for pancreatic and colorectal cancer identified 111 potential QIs. Only these QIs were used for the list of potential QIs, for which the methodology of their definition was described on the website. The results of the QIs search are reported in the document "IPAAC 2_Systematic Review Quality Indicators".

3.1.2 Specification and description of the intended use of QI

For the first screening an excel document was prepared. The numerators and denominators of the potential QIs were taken from the publications or, if necessary, redefined. In addition, the area of application of the QIs (screening, diagnostics, therapy, etc.) was defined. The prepared Excel document consisted of a total of 158 QIs for colorectal cancer and 32 QIs for pancreatic cancer.

3.1.3 Pre-selection of potential QI ("First screening")

The first screening of potential QIs was carried out by the steering group (6 persons from task 3 WP 10 iPAAC) based on the criteria described in table 1. After the steering group assessment, which was conducted within 10 days, 48 out of 158 QIs candidates for colorectal cancer and 16 out of 32 QIs candidates for pancreatic cancer were selected.

3.1.4 QI appraisal ("Second Screening")

The second phase of selection according to the above described criteria was delegated to an expert panel group.

Members of this committee were identified among experts active in colorectal and pancreatic cancer care. Each member organization of iPAAC WP 10 had the opportunity to nominate experts to participate to the panel group. The selection of the expert members was performed by the steering group members after evaluation of their CVs. Approval or denial of each member's participation proposal was expressed by the members of the steering group. Approval to the application of the expert to the panel was given when the majority of the steering group voted in favour of the candidate. All 13 proposed candidates were approved for the panel by the majority of the steering group members.

Expert panel members were required to assess each QI in correspondence with the above mentioned criteria (relevance, scientific soundness, feasibility and usability) per each QI by answering yes or no (see Annex 1 "Expert panel assessment sheet for Second Screening"). Based on the written assessment of all members of the expert panel who are entitled to vote a QI is accepted if the agreement is greater than or equal to 75% for each criterion.

3.1.5 Final set of QI

The list of potential QIs was evaluated by 6 of the 13 panel members. The expert panel assessment lasted 8 days and for the final set of QIs 26 for colorectal cancer and 14 for pancreatic cancer were accepted.

3.1.6 Piloting

A practice test of consented QIs will be implemented in the two pilot CCCN of WP 10, Lower Silesian Oncology Centre, Wroclaw, Poland and Charité, Berlin, Germany.

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