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# Comprehensive Cancer Care Networks (CCCNs)

## Standard for Lung Cancer Care Networks

Included are Requirements/Standards:

- Joint Action innovative Partnership Action against Cancer (iPAAC), WP 10 Governance of Integrated and Comprehensive Cancer Care (https://www.ipaac.eu/en/work-packages/wp10/)
- European Cancer Centre Certification Programme
    - Catalogue of Requirements Lung Cancer Centres (cr_lcc-l1_ENG_220831) (https://ecc-cert.org/wp-content/uploads/2023/01/cr_lcc-l1_220831-fin.docx)
    - Catalogue of Requirements Radio-Oncology (cr_radio-K1_ENG_220928) (http://dev.ecc-cert.org/wp-content/uploads/2023/01/cr_radio-K1_ENG_220928_fin.docx)
    - Catalogue of Requirements Pathology (cr_pat-L1_ENG_220928) (http://dev.ecc-cert.org/wp-content/uploads/2023/01/cr_pat-L1_ENG_220928_fin.docx)
- European Cancer Organisation Essential Requirements for Quality Cancer Care (ERQCC): Lung Cancer (2020) (https://www.sciencedirect.com/science/article/abs/pii/S0169500220305912)
- OECI Accreditation and Designation Programme European Quality Standards for Cancer Networks Doc00_OECIUserManual_2_0.pdf (https://www.oeci.eu/accreditation/Attachments/Doc00_OECIUserManual_2_0.pdf)
- European Respiratory Society Guideline on various aspects of quality in lung cancer Care (2022) (https://erj.ersjournals.com/content/early/2022/10/13/13993003.03201-2021)

Developed in the context of CraNE from the working group of Work Package 6, based on the previous work done by the Joint Action iPAAC*

*https://www.ipaac.eu/roadmap/detail/112

**Prologue**

This standard sets out the requirements to be met by Comprehensive Cancer Care Networks for Lung Cancer (CCCN Lung Cancer).
This Set of Standards will be piloted in the scope of the Joint Action "Creation of National Comprehensive Cancer and EU-Networking" (CraNE)" and based on the results of Joint Action "Innovative Partnership Action Against Cancer" both financed by the European Commission.

The document is to be used in conjunction with:

- SoS for CCCN (https://www.ipaac.eu/res/file/outputs/wp10/cccn-standard.pdf)
- "Supporting Document Standard for CCCN" (https://www.ipaac.eu/res/file/outputs/wp10/cccn-standard-supporting-document.pdf)
- SoS Radio-oncology
- SoS Pathology

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**Valid from 01 January 2025**

This Set of Standards (SoS) is binding for all peer reviews from 1 January 2025. Interfaces between CCCNs and Comprehensive Cancer Centres (CCCs) are marked in yellow.

## Information on the Lung Cancer CCCN

| | |
|---|---|
| Name of Lung Cancer CCCN (LC CCCN) | |
| Director of Lung Cancer CCCN | |
| Lung Cancer CCCN Coordinator | |

| | | This SoS is valid for |
|---|---|---|
| Clinical site 1 (hospital/clinic) - Thoracic surgery | | |
| Clinical site 2 (hospital/clinic) - Pneumology | | |
| Clinical site 3 (hospital/clinic) - Pneumology | | |

## Network/Main cooperation partners

The Network's cooperation partners are registered in a master data sheet.

## Preparation / Update

| | |
|---|---|
| The data on outcome quality data refer to the calendar year | |
| Preparation/update date of the Set of Standards | |

**Table of Contents**

# 1. General details of the Lung Cancer CCCN

## 1.1 Structure of the network

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.1.1 | The names of the persons holding the following positions are to be given:<br>• Director of the LC CCCN (max. 2 directors/LC CCCN, of whom 1 named contact)<br>• LC CCCN Coordinator<br><br>LC CCCN Coordinator – tasks<br>• Coordination internal/external audits<br>• Monitoring of implementation of Set of Standards and ensuring compliance with them<br>• Communication interface for all network partners<br>• Steering/monitoring of cross department / hospital activities<br><br>The management structures of the lung cancer centre as well as QM responsibilities and centre coordination must be clearly defined.<br>• Rules of procedure<br>• Job description Quality Management<br>• Job description for CCCN coordinator<br><br>This applies in particular to cooperative/multi-site Lung Cancer CCCNs.<br><br>The procedural rules should describe the management structures of the LC CCCN and should set out the services of thoracic surgery, pneumology and medical oncology (see also the contents of the partnership agreements of the main cooperation partners). | | |
| | The main cooperation partners of the LC CCCN are:<br>• Pneumology<br>• Thoracic surgery<br>• Medical oncology<br>• Radiotherapy<br>• Pathology<br>• Radiology<br>• Nuclear medicine | | |
| | The management of the Lung Cancer CCCNs normally assumed by the head of the disciplines pneumology or thoracic surgery. A rotating head is recommended.<br>The management the Lung Cancer CCCN ensures the implementation of standards and statutory regulations. | | |
| | The discipline pneumology is represented by a pneumology department (or area with a focus on | | |

## 1.1 Structure of the network

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | pneumology) with at least two full-time or an equivalent number of part-time pneumology specialists. If a clinic head represents two departments, the performance numbers must be listed for and met separately by each department. | | |
| | The discipline thoracic surgery is represented by a thoracic surgery department (or area with a focus on thoracic surgery) with at least two full-time or an equivalent number of part-time thoracic surgery specialists.<br><br>If a clinic head represents two departments, the quality indicators/key performance indicators must be listed for and met separately by each department (with due consideration of the cooperation models.) | | |
| | Cooperation models<br><br>Cooperation thoracic surgery<br>• Within an LC CCCN, cooperation between several clinics for thoracic surgery is possible if each thoracic surgery clinic independently generates its surgical case numbers.<br><br>Further cooperation possibilities, if the following conditions are fully met:<br>1. all anatomical resections ((1) segment resection and bi-segment resection of the lung, (2) simple/extended lobectomy and bi-lobectomy of the lung, (3) simple/extended (pleuro-)pneum(on)ectomy), for ICD-10 C.34.0 – 9, C78.0 at all locations must be performed by thoracic surgeons named in 5.2.3.<br>2. a 24h/7d on-call service for thoracic surgery specialists must be ensured for all locations.<br>3. the distance of the secondary locations to the main location must not exceed 45 km (special evaluation possible). | | |

## 1.1 Structure of the network

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | Independent Lung Cancer CCCN – Cooperation thoracic surgery<br><br>A LC CCCN with >200 primary cases and fewer than 75 anatomical lung resections can become an independent LC CCCN when it cooperates with an existing LC CCCN, i.e. patients undergo surgery in the thoracic surgery unit of an independent certified Lung Cancer CCCN.<br><br>• All surgical cases of a LC CCCN with < 75 surgeries must be operated on in the cooperating thoracic surgery unit.<br>• The cooperating thoracic surgery unit must assign the surgical cases to the LC CCCNs.<br>• Patients who do not undergo surgery in the cooperating thoracic surgery unit are not patients of the LC CCCN. | | |
| | Precondition for multi-location cooperation models:<br>• At least 1x/month a joint tumour board (TB). In the other weeks, site-specific TB, in which all requirements for the TB must be fulfilled (= among other things, all main treatment partners present according to SoS 1.2).<br>• Patients must be fully documented at the site or assigned to the site responsible for presentation at the tumour board.<br>• Prior structural evaluation is required before the certificate is issued.<br>• Number of cooperating thoracic surgeons/pneumologists: max. 3 pneumologists and 3 thoracic surgeons | | |
| | A clinic for thoracic surgery or a pneumology department can be involved in two independent LC CCCNs when the required thoracic surgery/pneumology case numbers can be met separately by each LC CCCN and when there is a clear assignment of the patients to the respective LC CCCNs. | | |
| | It must be proven that, as a rule, the department for thoracic surgery actually operates on all patients with the corresponding indication in the cooperating pneumology departments. | | |
| 1.1.2 | Written agreements (cooperation agreements) are to be entered into with the main cooperation partners (with the exception of pneumology and thoracic surgery and possibly medical oncology – they set out their services in the procedural rules). The agreements are to be examined annually by the Lung Cancer CCCN management to ensure they are up to date.<br>The following points are to be dealt with in the agreements with the main cooperation partners:<br>• Binding participation in the joint tumour board | | |

## 1.1 Structure of the network

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | • Ensuring availability<br>• Description of the treatment processes of relevance for the Lung Cancer CCCN bearing in mind the interfaces<br>• Obligation to implement indicated guidelines<br>• Description of cooperation on tumour documentation<br>• Declaration of willingness to cooperate on internal/external audits<br>• Undertaking to comply with the relevant criteria of the technical and medical Requirements to be met by Lung Cancer CCCNs (Set of Standards) and with the annual submission of the relevant data<br>• Declaration of consent of the treatment partners to be publicly identified as part of the Lung Cancer CCCN (e.g. homepage)<br>• Other disciplines/specialties, e.g. , psychosocial oncology or others can be called in when necessary.<br>• 24-hour availability of the main clinical cooperation partners (thoracic surgery, radiotherapy, pneumology, medical oncology), e.g. for emergency interventions.<br>• Upholding of medical confidentiality<br>• Participation in specialty training programmes and public relations work | | |
| 1.1.3 | Agreements with other treatment partners:<br>Written agreements are to be entered into for the following cooperation partners in which a willingness to engage in cooperation is declared:<br>• Psycho-oncology<br>• Social services<br>• Advice for smokers / smoking cessation<br>• Physiotherapy<br>• Hospice/palliative medicine<br>• Neurosurgery<br>• Oncology pharmacy<br>• Geriatric oncology<br><br>The following points are to be dealt with, amongst other things, in the agreements with the cooperation partners:<br>• Participation in specialty training programmes and public relations work<br>• Description of cooperation and interfaces<br>• Type of reciprocal communication<br>• Upholding of medical confidentiality | | |

## 1.1 Structure of the network

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | If the treatment partner comes under the disciplinary jurisdiction of the LC CCCN, a written agreement is not required. | | |
| 1.1.5 | The Lung Cancer CCCN has a clear mission statement and quantitative quality goals.<br>Interdisciplinarity and evidence-based medicine are clearly reflected in its statements and are visible in practice.<br>The fundamental orientation of the Lung Cancer CCCN is known to and implemented by its employees. | | |
| 1.1.6 | The achievement of quality goals is measured. The results undergo documented evaluation.<br>Clear strategies, which encourage the achievement of goals, are defined in the annual quality plans under the responsibility of the<br>• LC CCCN head and<br>• LC CCCN coordination. | | |
| 1.1.7 | Contact partners of the Lung Cancer CCCN<br>The names of the contact partners of the Lung Cancer CCCN at the clinical site and for the individual cooperation partners are to be given and published (e.g. on the Internet). In medical areas the responsibilities on the specialist level are to be defined. | | |
| 1.1.8 | The funding body/bodies of the Lung Cancer CCCN make sufficient funds / resources available in order to meet the staffing, spatial and material requirements | | |
| 1.1.9 | Standard Operating Procedures (SOPs) must be defined for patients in which the relevant medical guidelines are set out. Regular checks should be made to ensure they are up to date.<br>The SOPs take into account the interdisciplinarity of the LC CCCN and the networking with practice-based physicians.<br>SOPs are to be specified for:<br>• Diagnostics<br>• Therapy<br>• Aftercare | | |
| 1.1.10 | Continuing education / specialty training<br>• A qualification plan for medical and nursing assistant staff is established which outlines the planned qualification sessions for the period of one year.<br>• Each staff member completes at least 1 dedicated continuing education/specialty training session (duration > 0.5 days) if they carry out quality-relevant activities for the Lung Cancer CCCN. | | |
| 1.1.7 | On-the-job training concept<br>The process of familiarising new members of staff must follow a specified on-the-job training concept | | |

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|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

### 1.2 Multidisciplinary cooperation

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.2.1 | The Lung Cancer CCCN must treat at least 200 patients a year with a primary diagnosis of "lung cancer" in its own LC CCCN.<br><br>Definition primary cases of lung cancer of the LC CCCN:<br>• All patients with newly diagnosed lung cancer, who are presented to the LC CCCN or the tumour board, and receive large parts of their treatment there.<br>• A patient can only be counted as a primary case for 1 LC CCCN; pre-treated patients or patients seeking a second opinion are not counted.<br>• Patients (not contacts/stays, not surgery)<br>• Complete recording in the tumour documentation system<br>• Pathology report must be available (ICD C34.0-34.9)<br>• The time of counting is the time of the pathological confirmation of diagnosis<br>• Patients with no pathological confirmation of diagnosis may be counted if (all of the following apply):<br>  ○ Solitary pulmonary nodule, suspected malignoma<br>  ○ FDG-PET positive<br>  ○ Documented size progression over course of time (at least 8 weeks)<br>  ○ High risk for patients through pathological confirmation<br>  ○ Presentation tumour board and indication radiotherapy without pathological confirmation<br>  ○ Time of counting is date of presentation tumour board<br>• One primary case with synchronous treatment of lung cancer (independent of the side or lobe localisation) | | |

## 1.2 Multidisciplinary cooperation

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | • Two primary cases with metachronous treatment of LC CCCN, if these occur on different sides (not counted as a second primary case is the occurrence in different lobes on the same side)<br>• Synchronous tumour in another tumour entity can be counted as a primary case for each tumour entity | | |
| | Therapy discontinuations:<br>Can be counted in the case of first treatment as a primary case. Are to be entered in the tumour documentation system. Number of patients is to be indicated. Not recognised when the patient has switched to another LC CCCN after diagnosis or before the commencement of treatment | | |
| 1.2.2 | The thoracic surgery department must prove at least 75 anatomical lung resections a year in patients with diagnosis ICD-10 C.34.0 – 9, C78.0 (Def. surgical spectrum SoS 5.2.2). | | |
| 1.2.3 a) | Cycle<br>The tumour board must be held at least once a week.<br><br>Web/online tumour board<br>• If web tumour boards are used, it must be possible to transmit the sound and documents presented. It must be possible for each main cooperation partner to present its own documents/imaging material.<br>• Telephone tumour boards with no imaging material are not an option. | | |
| b) | Participants tumour board<br>The main cooperation partners (Section 1.1.1.) attend each tumour board. Participation must be proven, for instance in a list of participants.<br>Palliative physicians should regularly attend the tumour board.<br><br>In line with needs, other partners (section 1.1.3) (e.g. psycho-oncology, nursing care) and other specialties (Interventional radiologists, neurology, neurosurgery, surgery, pain therapy, orthopaedics, etc.) are to be included in the tumour board. | | |
| c) | Preparation tumour board<br>The main patient data are to be summed up in writing prior to the tumour boards and distributed to the participants.<br>A pre-appraisal of suitable study patients is to be undertaken. | | |
| d) | Demonstration imaging material<br>Any existing patient-related imaging material (e.g. pathology, radiology) of relevance for the question in hand, must be available at the tumour board and | | |

## 1.2 Multidisciplinary cooperation

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | suitable technical equipment must be provided for the presentation of this material. | | |
| e) | Minutes<br>The results of the tumour board consist, *inter alia*, of a written, interdisciplinary treatment plan ("Minutes tumour board"). The treatment plan must be made available to the tumour board participants and to care and specialty units responsible for further treatment. It must be part of the patient's medical record.<br>Dissenting decisions are documented. Responsibility for treatment lies with the attending physician. | | |
| 1.2.4 | Tumour board<br>All patients, who come to the LC CCCN with a first manifestation, a new recurrence or remote metastasis, must be presented at the pretherapeutic tumour board and/or in the tumour board after conclusion of primary therapy. | | |
| | Oligometastasis in NSCLC<br>Definition of oligometastasis:<br>The stage of oligometastasis is characterized by limited metastasis, in which local ablative therapy of all tumour sites in addition to system therapy pursues a curative therapeutic goal. A limited number of metastases on imaging is used as a surrogate for a limited metastatic capacity. The definitions of oligometastatic NSCLC vary between a solitary distant metastasis according to stage M1b of the UICC classification (8th ed) and a maximum of 3-5 distant metastases as inclusion criteria of prospective studies. The majority of the evidence is based on patients with a maximum of two distant metastases, which should form the basis for the indication of a local ablative therapy in combination with an adequate system therapy of oligometastatic NSCLC.<br>• For oligometastasised patients, information must be available for the pre-therapeutic tumour board:<br>○ number of metastatic foci<br>○ metastasis localisation<br>○ largest diameter of organ metastases<br>• Depending on the location of the metastases, the specialist disciplines neurosurgery, trauma surgery/orthopaedics and/or visceral surgery/urology must be included in the decision-making process, interventional radiology (participation at the tumour board or consultation)<br>• The disciplines consulted should work in a co-operating certified network (CCC or CCCN) | | |
| 1.2.5 | Pretherapeutic tumour board<br>- Primary cases<br>- Local recurrence/distant metastases | | |

## 1.2 Multidisciplinary cooperation

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | Indication tumour board[1]<br>• In LC CCCNs with >500 primary cases, the pre-therapeutic tumour board can be conducted as an indication tumour board.<br>• Participants: Pneumology/medical oncology, thoracic surgery, radiology. Optional: Radiotherapy, palliative medicine | | |
| 1.2.6 | Tumour board after surgical therapy (to examine the indication for adjuvant therapy) | | |
| 1.2.7 | Conduct/recommendation of therapy<br>If, in the course of therapy, there is a deviation from the original therapy recommendation, the case must be presented again at the tumour board. The reasons for the change and the amended therapy are to be documented. | | |
| 1.2.8 | Therapy planning<br>On request, the patient is given the minutes of the tumour board. Alternatively, a separate record can be made for the patient. | | |
| 1.2.9 | Quality circles<br>• Quality circles, in which lung aspects are addressed as one of the foci, are to be conducted at least 3 times a year.<br>• Possible topics: review the activity of the previous period based on the audited metrics, discuss changes in protocols and procedures, and improve the performance of the unit/centre. MDT performance must be quality assured both internally and by external review with demonstration of cost-effectiveness of quality improvements<br>• Participants: mandatory for all main cooperation partners; other partners of the LC CCCN (nursing care, psycho-oncology, etc.) are to be invited in line with the topics to be discussed (at least once a year).<br>• Minutes of quality circles are to be taken. | | |
| 1.2.10 | Morbidity conference<br>• The invited participants are the participants in the tumour board and referrers.<br>• The dates of these conferences can be timed to coordinate with the tumour board or with events for referrers.<br>• At least 2 morbidity conferences are to be held every year and at least 3 cases are to be presented at each conference. | | |

[1] to spare time and human resources, in LC CCCN with >500 primary cases, patients with clear indication for surgery (e.g, stage II and functional operability ->surgery, or stage IV and ECOG III/IV -> palliative treatment, bsc) can be discussed in a smaller circle ("indication conference"). In the former case, pathologists and palliative medicine do not have to take part in these tumorboards, in the latter case palliative medicine is obligatory

## 1.2 Multidisciplinary cooperation

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | • Cases presenting a special development in the course of the disease or cases in need of improvement are discussed.<br>• Minutes of morbidity conferences are to be taken. | | |
| 1.2.11 | For the group of patients with foreseeable limited life expectancy, a written, structured concept of care and communication should be developed at the LC CCCN and presented at the audit.<br><br>(Groups with foreseeably limited life expectancy: among others M1-patients SCLC/NSCLC without treatable molecular alteration and progression after failure of the first line of system therapy) | | |
| 1.2.12 | Access to Molecular Tumour Boards (MTB)<br>For patients with advanced cancer,<br>• who are foreseeably completing guideline-based therapy,<br>• who are able to receive molecular-based therapy according to the assessment of the clinical parameters,<br>• who agree in principle to a possible therapy based on the molecular findings<br>should be referred to an MTB and have advanced molecular diagnostics performed within specialized structures, such as the Comprehensive Cancer Centres<br>The prerequisite for this is of a formal tumour board decision from one of the partners in the CCCN.<br>The MTB recommendation will be made available to the referring partner in the CCCN. | | |

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|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

## 1.3 Cooperation with referrers

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.3.1 | Referrer satisfaction survey<br>• Every three years a referrer satisfaction survey must be conducted. The results of this survey are | *See also 1.3 SoS CCCN* | |

### 1.3 Cooperation with referrers

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | to be evaluated and analysed. A cross-department survey can be recognised.<br>The referrer satisfaction survey must be available for the first time for the first surveillance audit | | |

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|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

### 1.4 Psycho-oncology

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.4.1 | Psycho-oncology<br>A psycho-oncologist is available for the CCCN | *See also 1.4 SoS CCCN* | |
| 1.4.2 | Patients must have psychological assessment by the healthcare team. This can be via a self-administered tool (such as a distress thermometer). Scores below a certain level must be routinely managed by the primary care team; above that level there must be further clinical interviewing and screening for anxiety and depression, and referral to the most appropriate professional, such as a mental health physician. | | |

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|---|---|---|---|
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| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

### 1.5 Social work and rehabilitation

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.5.1 | Social services<br>A social worker is available for the CCCN | *See also 1.5 SoS CCCN* | |

## 1.5 Social work and rehabilitation

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.5.2 | Psychosocial care must be provided at all stages of the disease and its treatment for patients and their partners and families. | | |

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|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

## 1.6 Patient Participation and Empowerment

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.6.1 | Patient surveys<br>A concept for a patient survey must be developed | | |
| 1.6.3 | Patient information (general)<br>• Patient information must be provided. Including information and presentation of the CCCN with all cooperation partners and treatment options<br>• | | |
| 1.6.4 | Information/dialogue with patient:<br>Adequate information must be provided about diagnosis and therapy planning and a dialogue is to be entered into. This includes *inter alia*:<br>• Presentation of alternative treatment concepts<br>• Offer of and aid in obtaining second opinions<br>• Discharge consultation as a standard procedure<br><br>A general description is to be given of the way in which information is provided and the dialogue organised. This is to be documented for each patient in medical reports and minutes/records. | | |
| 1.6.5 | Results tumour board<br>Patient is to be informed of the recommendations of the tumour board.<br>Patient information (case-related):<br>On request, the patient is given a copy of the final medical report. It contains the histology, surgical report and information on the planned therapy (tumour board minutes). | | |
| 1.6.6 | Event for patients | | |

## 1.6 Patient Participation and Empowerment

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | The LC CCCN is to stage an information event for patients and/or interested persons at least once a year. If possible, in cooperation with self-help groups | | |
| 1.6.7 | Complaint management<br>An official procedure for complaint management is in place. The patients are given feedback. Complaints are taken into account in the improvement process. | | |
| 1.6.8 | Self-help groups/patient support groups<br>The self-help groups/patient support groups, with which the CCCN actively cooperates, are to be named. If possible, the self-help group/patient support groups should consider the specific needs of lung cancer patients (keyword - affected by the same condition). | | |
| 1.6.9 | Agreement with self-help groups/patient support groups<br>Written agreements with the self-help groups/patient support groups are to be entered into which cover the following points:<br>• Access to self-help groups/patient support groups at all stages of treatment (initial diagnosis, hospitalisation, chemotherapy…);<br>• Provision of contact data of self-help groups/patient support groups (e.g. in patient brochures, homepage of the LC CCCN)<br>• Options to display information brochures of self-help groups/patient support groups<br>• Regular provision of rooms at the LC CCCN for patient consultations<br>• Quality circles with the participation of representatives of psycho-oncology, self-help groups, social services, pastoral care, nursing care and medicine<br>• Personal discussions between the self-help groups and the Lung Cancer CCCN with a view to jointly staging or mutually agreeing on actions and events. The results of the discussions are to be recorded.<br>• Involvement of medical staff in the events of the self-help group | | |

| | | | |
|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once. | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |

| | | | |
|---|---|---|---|
| | • Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Not applicable | |

### 1.7 Research and Clinical Trials

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.7.1 | Access to studies<br>The patient must have access to studies. The studies conducted at the Lung Cancer CCCN must be listed and published, for instance on the CCCNs homepage. | | |
| | • The LC CCCN must have clinical research programmes (either their own research or as a participant in programmes led by other CCCs or CCCNs).<br>• The interfaces to other CCCs and/or CCCNs must be described.<br>• The research portfolio should have both interventional and non-interventional projects and include academic research. | | |
| 1.7.2 | Proportion of study patients<br>at least 5% of primary cases<br><br>Only the introduction of patients into studies with a positive vote of the ethics committee is counted as study participation | | |

| | | | |
|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

**List of Studies** [1)]

| Responsible cooperation partner [2)] | Study name | Number of LC CCCN's patients recruited in 2022[3)] |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

1) The list of studies must be completed.
2) Responsible cooperation partner: Study unit = department who coordinates the study (e.g. for radiotherapy; medical oncology…)..
3) Only patients that are “LC CCCN patients” and were recruited in 2022 can be counted as “study patients”
(no double counting of patients in more than 1 LC CCCN).

### 1.8 Nursing care

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.8.1 | Specialist oncology nurses<br>• At least one full-time specialist oncology nurse must work on day duty in the LC CCCN CCCN.<br>• The names of specialist oncology nurses are to be given.<br>• In areas in which patients are treated, the activity of a specialist oncology nurse is to be documented.<br>• The performance of tasks/staff cover arrangements are to be laid down in writing and documented.<br>• | *See also 1.8 SoS CCCN* | |

| | | | |
|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

### 1.9 General service areas

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 1.9.1 | The LC CCCN must offer the following conservative treatment methods:<br>• speech therapy<br>• breathing therapy<br>• physiotherapy<br>• nutritional counselling<br><br>Responsibilities must be clearly defined for all procedures. Descriptions of the procedures must be available. | | |
| 1.9.2 | Smoking cessation programmes<br>• All patients who smoke should be offered a professional smoking cessation programme with documented motivational sessions. | | |

## 1.9 General service areas

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | • at least 1 person from the medical and 1 person from the non-medical area should have a certified qualification in smoking cessation (The names of the persons are to be given.<br>• Stocks of medication for smoking cessation (nicotine replacement therapy, varenicline) must be kept in the hospital.<br>• Cooperation with an outpatient, multi-modal smoking cessation programme should be in place. | | |
| 1.9.3 | Supportive therapy and symptom relief<br>• The possibilities for supportive / palliative inpatient therapy are to be described (process description / algorithm).<br>• A pain therapist must be available. The process for pain therapy (algorithm) shall be described and demonstrated on documented cases for the period under consideration.<br>Expertise for pain therapy:<br>• 50 / per year for patients with lung cancer; 100 / per year in total<br>• Nutritional counselling must be an integral part of the LC CCCN, an SOP should be available.<br>• The need for nutritional counselling must be actively determined and carried out in relation to the patient´s need.<br>• The metabolic risk ("Nutritional Risk") should be determined at the latest during hospitalization by means of Nutritional Risk Screening (NRS), e.g. according to Kondrup 2003.<br>• Access to psycho-oncological and psychosocial care and pastoral care shall be described.<br>• In the case of implementation via cooperation partners, a cooperation agreement must be agreed for the above-mentioned requirements. | | |
| 1.9.5 | Pharmaceutical care qualification<br>Qualified Oncology pharmacist | | |
| 1.9.6 | Offer and access<br>If required, the pharmacist is to provide doctors, nursing staff and patients with information and advice (proof required). | | |
| 1.9.7 | Pharmacy – task profile<br>Objectives and tasks of pharmaceutical care and support:<br>• Daily centralised quality-assured production of the active ingredients needed for intravenous tumour therapy<br>• Monitoring of stability and compatibility of therapy regimens | | |

### 1.9 General service areas

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | • Plausibility analysis of dosage taking into account individual patient laboratory parameters, liver and kidney function and drug interaction with concomitant medication<br>• Support for risk assessment, staff instruction, decontamination, extravasation and disposal of cytostatic drugs<br>• Correct reception, storage, production or preparation, distribution and disposal of the experimental drugs | | |
| 1.9.8 | Geriatric oncology:<br>• All older patients (70+) must be screened with a simple frailty screening tool, such as the adapted Geriatric-8 (G8) | | |

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|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

## 2. Organ-specific diagnostics

### 2.1 Consultations

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | | | |
| 2.1.2 | The lung consultations must be held at least once a week and cover the following topics:<br>• Lung cancer detection<br>• Therapy planning<br>• Aftercare<br>• Counselling in the case of benign respiratory disorders<br>• Offers for smoking cessation programmes<br>• Recording of smoker status (the following breakdown is recommended: year of commencement, year of discontinuation, packs and pack years and breakdown into current smoker, ex heavy smoker, light smoker and never a smoker)<br><br>If appropriate, the topics can be covered in special, separate consulting hours. | | |

## 2.1 Consultations

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 2.1.3 | How long are the waiting times for an appointment<br>Requirement: < 2 weeks<br><br>Emergency consultation possible daily.<br><br>The waiting times are to be recorded on a random basis and statistically evaluated (recommendation: evaluation period 4 weeks a year). | | |
| 2.1.4 | In the case of (special) lung consulting hours, the following services are to be provided:<br>• Lung function laboratory<br>• Ergospirometry<br>• X-ray (conventional)<br>• Computer tomography/MRI<br>• Laboratory (haematology, clinical chemistry, ...)<br>• Sonography (pleura, upper abdominal ultrasound, echocardiography)<br>• Possibility for outpatient bronchoscopy<br>• Nuclear medicine examinations | | |
| 2.1.5 | Time to first pathology report (primary diagnosis)<br>Requirement: ≤ 3 working days | | |
| 2.1.6 | Diagnosis communication dignity<br>• Communication of a diagnosis, particularly in the case of malignant findings, must be done personally by and in direct contact with a physician.<br>• Time to diagnosis communication: < 1 week | | |
| 2.1.7 | Repeated presentation of patient is to be organised in the event of therapeutic side effects. | | |
| 2.1.8 | Information / dialogue with the patient<br>Adequate information must be provided about diagnosis and therapy planning and a dialogue is to be entered into. This includes *inter alia*:<br>• Presentation of alternative treatment concepts<br>• Offer of and aid in obtaining second opinions<br>• Discharge consultation as a standard procedure<br><br>A general description is to be given of the way in which information is provided and the dialogue organised in a protected room. This is to be documented for each patient in medical reports and minutes/records. | | |

| | | | |
|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once. | Yes | |
| | | Mostly | |
| | | Partially | |

| | | | |
|---|---|---|---|
| | • Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | No | |
| | | Not applicable | |

## 2.2 Diagnosis

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 2.2.1 | The LC CCCN must offer the following functional diagnostic procedures:<br>• Lung function with whole body plethysmography, measurement of diffusion capacity, measurement of muscle function and exercise test (6-minute walk test)<br>• Blood gas test at rest and during exertion<br>• Spiroergometry<br>• Echocardiography<br>• Quantifiable lung ventilation-perfusion scintigraphy<br><br>Descriptions of the procedures used must be available. | | |
| 2.2.2 | The LC CCCN must offer the following procedures for endoscopy and interventional bronchoscopy:<br>• Rigid and flexible bronchoscopy (video chip technology)<br>• Pneumothorax therapy<br>• Thorascopy<br>• Lung biopsy and lung puncture<br>• Pleural puncture<br>• Lymph node biopsy and puncture - transbronchial and transtracheal<br>• Radioscopy<br>• Endobronchial/endoluminal ultrasound with needle puncture with ultrasound control<br>• CT-controlled biopsy and puncture<br>• Thermal recanalisation procedures (ND:Yag laser or Argon plasma beamer or electric cautery<br>• Stent implantation in the trachea and bronchial tubes<br>• Electronic imaging documentation and archiving for diagnostic endoscopic procedures<br><br>Responsibilities must be clearly defined for all procedures. Descriptions of the procedures must be available.<br>A list must be kept of all necessary equipment. | | |
| 2.2.3 | Expertise for endoscopic / interventional procedures: | | |
| | • Flexible bronchoscopy: >=500 bronchoscopies/ year in the LC | | |

## 2.2 Diagnosis

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | • Surgical bronchoscopic interventions in the event of tumour occlusion or stenosis (also in the case of non-oncological patients): ≥ 10/year (thermal methods and stenting) | | |
| | The number per year must be given for the following procedures (no minimum number specified): | | |
| | • Rigid bronchoscopy (1620.1) | | |
| | • Transbronchial lung biopsies (1430.2) | | |
| | • EBUS tests | | |
| | • CT-controlled lung biopsies | | |
| | The responsibilities for the functional procedures used must be clearly defined. | | |
| 2.2.4 | Physicians working for the LC CCCN in endoscopic/interventional diagnostics<br>• The specialist standard (with qualified staff cover arrangements) is to be ensured for each of the procedures used.<br>• The names of the physicians are to be given.<br>• 2 years' experience in the conduct and interpretation/analysis of the results of the functional procedures used<br>• Description of the special expertise in the conduct of the procedures and interpretation/analysis of the results | | |
| 2.2.5 | Assistance staff (nurses or MTAs)<br>• At least 2 qualified staff members for each procedure<br>• The names of the staff members are to be given. | | |
| 2.2.6 | Timeline for the provision of the necessary information to the co-attending physicians<br>(If possible immediately, always < 24 h after test) | | |
| 2.2.7 | The option of inpatient admission must be available. | | |
| | • | | |

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|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

## 3. Radiology

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 3.1 | Specialists<br>• At least 1 specialist for radiology<br>• Cover arrangements for staff with the same qualification is to be documented in writing.<br>• The names of the specialist and cover staff are to be given. | | |
| 3.2 | Radiology Technical Assistan (RTAs):<br>At least 2 qualified RTAs must be available and their names given. | | |
| 3.3 | Procedures available in radiology:<br>• Spiral-CT<br>• MRI<br>• X-ray<br>• Interventional radiology (Image-guided biopsies, cava stent, embolisation, abscess drainage...)<br><br>Responsibilities must be clearly defined for all procedures.<br>A list of equipment must be kept.<br>If the LC CCCN does not offer these procedures itself, the corresponding cooperation agreements must be in place. | | |
| 3.4 | Description of radiology procedures (SOPs)<br>The imaging techniques are to be described and checked once a year to ensure they are up to date. Including des description when and how to refer a patient to nuclear medicine for PET/CT. | | |
| 3.5 | Diagnosis<br>The written report of the radiologists must be available to the co-attending doctors at the latest 24 h after the test. | | |
| 3.6 | The option of inpatient admission must be available. | | |

| | | | |
|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

## 4. Nuclear medicine

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 4.1 | Nuclear medicine specialists | | |

## 4. Nuclear medicine

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | • At least 1 specialist for nuclear medicine is available.<br>• Cover arrangements for staff with the same qualification is to be documented in writing.<br>• The names of the specialist and cover staff are to be given. | | |
| 4.2 | MTAs of nuclear medicine:<br>At least 2 qualified MTAs must be available and their names given. | | |
| 4.3 | Procedures available in nuclear medicine:<br>• Bone scintigraphy<br>• Lung scintigraphy<br>• FDG-PET/CT<br><br>Conduct PET-CT<br>When a PET-CT is to be carried out, it is to be carried out pre-therapeutically prior to curative therapy (and not post-operatively).<br>If OMD is suspected in the primary diagnosis: PET-CT pre-therapeutic | | |
| | Conduct of PET-CT<br>If a PET-CT procedure is to be conducted, it must be done prior to surgery (and not after). | | |
| 4.4 | Process descriptions (SOPs)<br>The imaging techniques in nuclear medicine are to be described and checked once a year to ensure they are up to date.<br><br>Special features PET-CTs<br>A specialist for radiology must be on hand when conducting PET-CTs. | | |
| 4.5 | Diagnosis<br>The written report of the nuclear medicine specialist must be available to the co-attending doctors at the latest 24 h after the test. | | |

## 5. Surgical oncology

### 5.1 Trans-organ surgical therapy

Not applicable

### 5.2 Organ-specific surgical therapy

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 5.2.1 | Operating theatres<br>At least 1 operating theatre must be regularly available for the whole day, 7 days a week for lung surgery. | | |

## 5.2 Organ-specific surgical therapy

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 5.2.2 | For each department at least 75 anatomical lung resections/year (i.e. segment resection and bi-segment resection of the lung, simple/extended lobectomy and bi-lobectomy of the lung, simple/extended (pleuro-)pneum(on)ectomy)) are to be conducted for patients with diagnosis ICD-10: C34.0-9, C78<br>With a share of ≤75 C34 diagnoses in the total number of anatomical resections, it must be demonstrated on a case-by-case basis that the characteristics of anatomical lung resections ("Definition Anatomical Lung Resection") are fulfilled for all surgeries performed on non-C34 patients.<br><br><u>Definition of surgical therapy:</u><br>- Anatomical resections (anatomical segment resection, lobectomy, pneumectomy, bronchio- and angioplasty).<br>- Atypical resections (wedge resections) cannot be counted among the primary surgical cases or among the operated patients with diagnosis ICD-10: C34.0-9, C78.0.<br><br><u>Definition anatomical lung resection:</u><br>• Separate surgical treatment of vessels (arteries and veins) and bronchus independently of parenchyma section with documentation in the surgical report.<br>• Parenchymal incision along the anatomical segment<br>• Separate pathological examination of the resection margins: artery/ies, vein(s), bronchus, parenchyma<br><br>VATS/RATS anatomical resection in addition:<br>• Surgical intervention video-assisted (minimal-invasive)<br>• Ancillary incision max. 7cm long<br>• No rib spreading | | |
| 5.2.3 | Thoracic surgeons for the Lung Cancer CCCN:<br>At least two full-time or a corresponding number of part-time thoracic surgery specialists working for the Lung Cancer CCCN in line with the staffing schedule. The names of the specialists are to be given. | | |
| 5.2.4 | Curricula are used to describe the qualifications of the thoracic surgeons named in Section 5.2.3.<br><br>The following parameters must be fulfilled:<br>• Holding of a specialist title with the focus on thoracic surgery | | |

## 5.2 Organ-specific surgical therapy

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | • Proof of the following operations:<br>at least 100 independently conducted lung resections with systematic lymphadenectomy after training as a specialist, including at least 15 pneumonectomies, 10 bronchio/angioplastic resections, 10 extended resections<br>• At least 1 lung-specific specialty training course per surgeon and year | | |
| 5.2.5 | Outcome quality lung cancer:<br>• 30-day lethality after resection < 5% | | ✓ |
| | • Bronchial stump/anastomosis insufficiency < 5% | | |
| | • R-0 resections in stages I and II > 95% | | |
| | • R-0 resections in stage III > 85 % | | |
| | If a number is exceeded, submission of an individual case analysis with a corresponding action plan | | |
| 5.2.6 | The following quality-determining processes are to be described with details of the responsibilities:<br>• (Pre-)inpatient admission<br>• Therapy planning (timing pre-operative)<br>• Peri-operative management<br>• Surgery management (surgical procedures, reprocessing material, documentation)<br>• Post-operative pain management<br>• Ward management<br>• Discharge management<br><br>Sufficient resources must be available to conduct the processes.<br><br>Average values for the waiting time between conclusion of diagnosis / registration for surgery by the practice-based physician / decision in the tumour board and inpatient admission for surgery and post-operative time in hospital is to be recorded. | | |
| 5.2.8 | Qualifications Staff – nursing staff on surgical ward<br>• at least 1 quality circle (chapter 1) with the participation of one experienced thoracic surgery nurse<br>• Every year at least 1 continuing education course with a link to activity for the Lung Cancer CCCN in cooperation with the medical area | | |
| 5.2.9 | Intensive medicine<br>Number of intensive care beds for the Lung Cancer CCCN is to be given (intensive medicine and intermediate care) | | |

### 5.2 Organ-specific surgical therapy

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | If the intensive medicine unit is not under the management of the Lung Cancer CCCN, a cooperation agreement is to be entered into. | | |
| 5.2.10 | A description is to be given of the surgical ward and the beds (monitoring). | | |
| 5.2.11 | The frequency of nosocomial infections is to be recorded and evaluated —– | | |
| 5.2.12 | The following quality-determining processes are to be described with details of the responsibilities:<br>• Post-operative care of lung patients<br>• Weaning<br>• Transfer to normal ward<br>Sufficient resources must be available to conduct the processes. | | |

| | | | |
|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

## 6. Medicinal Oncology / Systemic therapy

### 6.1 Medical oncology

Not applicable

### 6.2 Organ-specific systemic therapy

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 6.2.1 | Conduct of medical oncological therapy (chemotherapy, , targeted therapeutics):<br><br>a) Specialist for medical oncology or<br>b) Specialist for pneumology or<br>c) Specialist for radiotherapy (only radiochemotherapy) | See also chapter 6 SoS CCCN | |
| | The above-mentioned specialists must prove the active conduct of medicinal tumour therapy. | | |
| | After acquisition of the specialist title, a 2-year ongoing activity in the field of oncological systemic therapy with evidence of the conduct and treatment of complications and side effects must be proven. For sole systemic therapy (for specialists | | |

## 6.2 Organ-specific systemic therapy

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | a) and b)), the indication must have been made, within a 2-year period, for a total of 100 chemotherapy series consisting of on average 4-6 chemotherapy cycles, including at least 50 chemotherapy series with thoracic-oncological clinical pictures, and the information and the management of patients as well as their control and monitoring must have been undertaken and documented. | | |
| | For specialists from group c) 80 patients with simultaneous radio-chemotherapy must be proven in 2 years, including at least 1/3 with thoracic-oncological clinical pictures.<br>At the time of certification/recertification the period of proof of the above-mentioned expertise may not date back more than four years. | | |
| 6.2.2 | Specialist nurse Inpatient, day patient or clinic outpatient settings in which medicinal oncological therapies are carried out by non-medical staff must be under the specialist direction of a specialist oncology nurse. Cooperating practices are not affected by this rule.<br>The preconditions for the specialist nurse / specialist medical assistant who is responsible for administering chemotherapy:<br>• at least 1 year's professional experience in oncology<br>• 50 chemotherapy administrations (for initial certification an estimate is possible, in the ensuing years proof must be provided.)<br>• Proof of training –<br>• Active involvement in the implementation of the requirements to be met by emergency treatment and therapy of comorbidities and secondary diseases<br>• Documentary proof is to be provided of care counselling and/or education of patients. | | |
| 6.2.3 | The LC CCCN must offer the following procedures:<br>• Chemotherapy (neoadjuvant, adjuvant, palliative), including supportive therapy<br>• Systemic therapies with targeted therapeutics (monoclonal antibodies, angiogenesis inhibitors, what are known as "small molecules") also in combination with systemic chemotherapy<br>• Combined radio-chemotherapy, (sequential and simultaneous) including supportive therapy<br><br>Responsibilities must be clearly defined for all procedures. Descriptions of the procedures must be available. | | |

## 6.2 Organ-specific systemic therapy

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | A list must be kept of all necessary equipment. | | |
| 6.2.4 | Qualification of the respective treatment unit<br>a) 150 drug therapies for tumours (cytostatic therapies and/or targeted therapeutics and/or AB/immune therapies, no hormone therapies) a year with lung carcinoma patients or<br>b) 50 drug therapies for tumours (cytostatic therapies and/or targeted therapeutics and/or AB/immune therapies, no hormone therapies) a year for primary cases of the LC CCCN<br>or<br>200 drug therapies for tumours (cytostatic therapies and/or targeted therapeutics and/or AB/immune therapies, no hormone therapies) in total<br>(various tumour entities)<br><br>• Counting method: completed systemic/cytostatic/ targeted therapy per patient (consisting of **several** cycles or applications, combination therapies count as 1 therapy). In the case of multi-year therapies, the therapy started in the year of the collection of data counts. 1 therapy per patient = 1 therapy line per disease per patient<br>• If the value falls below this level, expertise cannot be proven through cooperation (to be demonstrated individually by each treatment unit). | | |
| | For simultaneous radio-chemotherapy by radio-oncologists the following applies:<br>At least 30 lung cancer patients with simultaneous thoracic radio-chemotherapy/year. | | |
| 6.2.5 | Process descriptions<br>• The procedure for medicinal oncological therapy is to be described for all phases (start, conduct and conclusion of therapy).<br>• Supportive measures in line with the guidelines are to be described for the individual therapeutic concepts (e.g. antiemesis, procedure in cases of anaemia, mucosal and dermal toxicity, administration of growth factors, bisphosphonates, nutrition, handling port systems) and documented for each patient. | | |
| 6.2.6 | Standards comorbidities and secondary diseases<br>Standards are to be drawn up for the treatment of comorbidities and secondary diseases, in particular for the treatment of extravasations, infections and thromboembolic complications. | | |
| 6.2.7 | Emergency treatment<br>Available emergency equipment and written action plan for emergencies | | |

## 6.2 Organ-specific systemic therapy

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 6.2.8 | Chemotherapy must be possible in an outpatient, day clinic or in an inpatient facility. | | |
| 6.2.9 | Cytostatic preparation<br>• The preparation of the cytostatic solutions by the pharmacy must be possible within 48h (where necessary in cooperation)<br>• Preparation is done with due consideration of all statutory provisions.<br>• It must be possible to speak to the unit responsible for preparation during the period in which the therapy is administered.<br>• Procedural description is available for preparation. | | |
| 6.2.10 | Medicinal therapy in the metastasised situation<br>• The procedures for the care (diagnosis/therapy) of patients with local recurrence/metastasis are to be described (presentation of the patient pathways).<br>• A regular toxicity assessment of therapy must be undertaken using selected and documented measurement parameters (symptoms, indicator metastasis, or the like).<br>• An evaluation of the therapeutic effect must be documented for each patient every 3 months. | | |
| | In the case of stage IV NSCLC patients a PD-L1 expression assay is to be carried out prior to commencement of medicinal systemic therapy. | | |
| 6.2.11 | Information / dialogue with the patient<br>Adequate information must be provided about diagnosis and therapy planning and this must be explained to the patient during a medical consultation. This includes *inter alia*:<br>• Presentation of alternative treatment concepts<br>• Offer of and aid in obtaining second opinions<br>• Discharge consultation as a standard procedure<br><br>A general description is to be given of the way in which information is provided and the dialogue organised. This is to be documented for each patient in medical reports and minutes/records. | | |
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|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once. | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |

| | | | |
|---|---|---|---|
| | • Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Not applicable | |

## 7 Radio-oncology

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 7.0 | The Technical and Medical Requirements to be met by radio-oncology are summed up in the "Set of Standards Radio-Oncology" in a cross-organ manner. Independently of the number of CCCNs, which work with a radio-oncology unit, this "Set of Standards Radio-Oncology" is only to be processed once and also only updated once per audit year (goal: no multiple presentations or on-site inspections within one audit year). The "Set of Standards Radio-Oncology" therefore constitutes an annex to this Set of Standard. | | ✓ |

## 8 Pathology

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 8.0 | The Technical and Medical Requirements to be met by pathology are summed up in the "Set of Standards Pathology" in a cross-organ manner. Independently of the number of CCCNs, which work with a pathology, this "Set of Standards Pathology" is only to be processed once and also only updated once per audit year (goal: no multiple presentations or on-site inspections within one audit year). The "Set of Standards Pathology" therefore constitutes an annex to this Set of Standards.<br>. | | |

## 9. Palliative care

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 9.1 | Palliative care<br>Proof is to be provided of cooperation agreements with specialised inpatient and outpatient palliative care teams, palliative medicine consultation services, inpatient hospices and palliative wards. Regional care concepts for the integration of palliative care are to be described | *See also chapter 9 SoS CCCN* | |

## 9. Palliative care

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 9.2 | Palliative care<br>• A physician with additional specialty training for palliative care must be available for consultations and tumour boards.<br>• The group of patients with incurable cancer is to be defined. They are to be informed in a timely manner about palliative medical support services (SOPs).<br>• To identify the need for treatment, it is necessary to carry out a screening to record symptoms and stress (MIDOS or IPOS).<br>• Access to palliative care is to be offered to patients with an incurable cancer disease in parallel to tumour-specific therapy. The procedure in the LC CCCN is to be described in a standard operating procedure (SOP).<br>• The number of primary cases with an incurable LC CCCN is to be documented.<br>• Palliative counselling and care should be offered within the first 2 months of diagnosis of an incurable LC CCCN. | | |
| 9.3 | The LC CCCN must offer the following palliative therapies:<br>• Pleurodesis procedure (conservative by means of drainage and invasive procedures involving thoracoscopy)<br>• Palliative pain therapy<br>• Long-term oxygen therapy<br><br>Responsibilities must be clearly defined for all procedures. Descriptions of the procedures must be available.<br>A list must be kept of all necessary equipment. | | |

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|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

## 10. Tumour documentation and Patient Registry

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| 10.1 | Tumour documentation system<br>A system of tumour documentation that contains patient data for a period of at least 3 months | *See also chapter 10 SoS CCCN* | |

## 10. Tumour documentation and Patient Registry

| Section | Requirements | Explanatory remarks of the Lung Cancer CCCN | |
|---|---|---|---|
| | should be in place at the time of initial certification | | |
| 10.2 | Period covered by the data<br>The full data are to be presented for the respective last calendar year. | | |
| 10.3 | Documentation officer<br>The name of at least 1 documentation officer is to be given, name/function:<br><br>Tasks documentation officer:<br>• Ensuring and monitoring the timely, full, complete and correct transfer and quality of the patient data that are relevant for certification by all cooperation partners to the cancer registry.<br>• Motivation of trans-sectoral cooperation with participating specialty units in the cancer registry (pathology reports, radiotherapy and medicinal treatments).<br>• Qualification and support for the staff involved in data collection<br>• Regular analysis of evaluations particularly over the course of time. | | |

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|---|---|---|---|
| Self-Assessment | • Yes – the chapter has been implemented on a wide scale, and the Deming cycle has been completed twice.<br>• Mostly – the chapter has been implemented in critical places, the Deming cycle completed once.<br>• Partially – the chapter has been only partly implemented, or only recently introduced and not evaluated.<br>• No – the chapter has not been implemented<br>• Not Applicable (rare). | Yes | |
| | | Mostly | |
| | | Partially | |
| | | No | |
| | | Not applicable | |

Annex **Key Figures (see details in attached and corresponding Excel sheets)**