**Catalogue of Requirements**

**Neuro-oncology Centres**

in Oncology Centres

**Chairs of the Certification Committee:** Prof. Dr. U. Schlegel, Prof. Dr. W. Stummer

**prepared by the Certification Committee Neuro-oncological Tumours**

**Expert groups involved (in alphabetical order)**

ADT – Association of German Tumour Centres

AIO – Working Group for Internal Oncology

APM – Working Group for Palliative Medicine

ARO – Working Group for Radio-Oncology

ASO – Working Group for Social Work in Oncology

ASORS – Working Group for Supportive Measures in Oncology, Rehabilitation and Social Medicine

BDP – Association of German Pathologists

BNHO – Association of Practice-based Haematologists and Oncologists in Germany

BVDST – German Professional Association of Radiation Therapists

CAO – Surgical Working Group for Oncology

CAO-V – Surgical Working Group for Oncology of the German Association of Visceral Surgery

DeGIR – German Society of Interventional Radiology and Minimal-invasive Therapy

DEGRO – German Society of Radio-Oncology

DGHO – German Society of Haematology and Oncology

DGN – German Society of Neurology

DGNC – German Society of Neurosurgery

DGNN – German Society of Neuropathology and Neuroanatomy

DGNR – German Society of Neuroradiology

DGP – German Society of Palliative Medicine

DHH – German Brain Tumour Association

DRG – German X-Ray Society

DVE – German Association of Occupational Therapists

DVSG – German Association of Social Work in Health Care

GNP – German Society of Neuropsychology

KOK – Conference on Oncological and Paediatric Nursing Staff

NOA – Neuro-oncology Working Group

PRIO – Working Group for Prevention and Integrative Oncology

PSO – Working Group for Psycho-Oncology

**Entry into force on 29 July 2020**

This Catalogue of Requirements (CR) is binding for all audits conducted from 1 January 2021. The changes made to this Catalogue of Requirements are highlighted in turquoise

The following were incorporated:

Brief interdisciplinary DKG guidelines

The technical and medical requirements for organ-specific diagnostics and the treatment of neuro-oncological tumours within the Oncology Centres are laid down in this module.

When the tumour entity described in the available module is part of the Oncology Centre, then the technical and medical requirements specified here are the basis for the certification of the Oncology Centre.

The Catalogue of Requirements is based on the TNM classification of malignant tumours, 8th edition 2017, the ICD classification ICD-O-3 2014 (DIMDI) and the OPS classification OPS 2020 (DIMDI).

**Details of the Neuro-oncology Centre**

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| Neuro-oncology Centre |  |
| Director Neuro-oncology Centre |  |
| Centre Coordinator |  |

**QM system certification**

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| QM system certification |  | yes |  | no |

**Network/Main cooperation partners**

The Centre's cooperation partners are registered in a master data sheet with the certification agency OnkoZert. The details in the master data sheet are published on [www.oncomap.de](http://www.oncomap.de/). Any new or no longer valid cooperation is to be notified immediately to OnkoZert, outside the certification period, too. Other updates (e.g. changes to the head, contact data) must be corrected in the master data sheet prior to the annual surveillance audit. The master data sheet with the registered cooperation partners can be requested from OnkoZert as a file.

**Compilation / Update**

The electronically generated Catalogue of Requirements serves as the basis for the certification of the Neuro-oncology Centre. The correctness and completeness of the information contained therein have been verified.

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| The data refer to the calendar year |  |

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| Preparation/update date of the Catalogue of Requirements |  |

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Data Sheet

**1** **General Details of the Centre**

| **1.1**  **Structure of the network** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 1.1.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 1.1.2 | Cooperation agreements  Main cooperation partners  Neurosurgery, neurology, neuroradiology, neuropathology, radio-oncology, haematology and oncology and medicinal oncology  Cooperation partners  In addition to the cooperation partners mentioned in the Catalogue of Requirements, cooperation agreements are to be entered into with:  pathology, neuropsychology, psychiatry, paediatric haematology and oncology, occupational therapy, ophthalmology, endocrinology and speech therapy. |  |  |
| 1.1.3 | Neurology and neurosurgery  Neurology and neurosurgery units with wards with 24-h on-duty presence, are a mandatory component in Neuro-Oncology Centres. |  |  |
| 1.1.4 | Cooperation with certified Centres for haematological neoplasias  - For the treatment of CNS lymphomas, cooperations with Centres for haematological neoplasias may exist.  - In a cooperation agreement or SOP it has to be defined which treatment stages are provided by which cooperation partner.  - Counting patients with CNS lymphomas is possible for both partners under these conditions.  - The cooperating Centres are to be designated by name. |  |  |
| 1.1.5 | Cooperation with other certified Centres (entities from the network of the Oncology Centre)  The cooperation for the care of patients with cerebral metastatis must be regulated in writing (SOP/ cooperation agreement).  The following points must be regulated:  - Case-related involvement of the neurosurgeon in the tumour conference for patients with cerebral metastatis (telemedicine if necessary)  or  - Presentation of patients with cerebral metastatis in the tumour conference of the Neurooncology Centre  - Consultative neurosurgical presentation of patients with cerebral metastatis according to tumour conference decision  - The implementation must be proven with concrete patient examples |  |  |

| **1.2** **Interdisciplinary cooperation** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 1.2.1 | Number of primary cases  The Centre must treat 100 patients annually with a primary diagnosis of a neuro-oncological tumour.  Definition:   * Patients and not stays and not operations; in line with the list of primary cases at the end of the Catalogue of Requirements. * Histology report must be available (biopsy or resection). Justified exceptions are to be listed (e.g. acoustic neurinoma, meningeoma, etc.). * Patient with initial disease. * The time of counting is the time of the histological confirmation of diagnosis or the time of clinical diagnosis by way of tumour board decision in the case of non-histologically confirmed tumours (e.g. acoustic neurinoma, meningeoma, etc.).   Patients, who are only presented for the purposes of seeking a second opinion or for the purposes of consultation, are not included.  (see also 5.2.3 Surgical primary cases) |  |  |
| 1.2.2 | Interdisciplinary pre-intervention tumour conference  Cycle  A tumour conference must be staged at least once a week.  Participants:  Neurosurgeon, neurologist, neuroradiologist, neuropathologist, radiotherapist, internal oncologist\*\*.  Related to the indication, e.g. in the case of cerebral metastases the presenting specialties are to be invited to the tumour conference.  \*\*Haematologist/oncologist  If the haematologist/oncologist is unable to attend the conference, he/she may be represented by the neuro-oncologist responsible for chemotherapy (qualification in line with section 6.2). |  |  |
| 1.2.3 | Interdisciplinary tumour conference  All primary case patients should be presented in the interdisciplinary tumour conference: Elective patients: pre-intervention, emergency patients: at least post-intervention (Patient can only be taken into account 1x for the numerator).  Scale of the discussed primary cases ≥95% |  |  |
| 1.2.4 | Further presentation tumour board  (not to be taken into account for the Data Sheet):   * after completion of the neuropathological diagnosis when there was a corresponding recommendation of the tumour board pre-intervention; * after completion of a therapy sequence; * for each change in the clinical/imaging results a renewed presentation should be made in the interdisciplinary tumour conference; * emergency patients who were not discussed pre-intervention. * All patients with recurrences, who have entrusted the Centre with their care, are to be presented.   Details of the number of presentations: |  |  |
| 1.2.5 | Guidelines  In addition to the requirement mentioned in Section 1.2.11 of the CR OC the following applies:   * The main cooperation partners of the Centre must lay down uniform standards for diagnostics, therapy and aftercare (for instance in a quality circle) for neuro-oncological tumours for which there are no evidence-based guidelines. * The standards must be updated and made known by the person responsible for the guidelines (see ER OC 1.2.12). Implementation must be checked by means of suitable measures. The process is to be described. |  |  |
| 1.2.6 | Morbidity /mortality conferences (M&M conferences)   * The invited participants are the participants in the tumour conference and referrers. * The dates of these conferences can be timed to coordinate with the tumour conference or with events for referrers. * Both cases with a negative and a positive course are to be presented. M&M conferences are to be held 2x a year. * M&S conferences are to be minuted. |  |  |

| **1.3** **Cooperation referrers and aftercare** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 1.3.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 1.3.2 | Referrer satisfaction survey   * Every three years a referrer satisfaction survey must be conducted. The results of this survey are to be evaluated and analysed. * The referrer satisfaction survey must be available for the first time for the first surveillance audit (1 year after initial certification). |  |  |

| **1.4** **Psycho-oncology** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 1.4.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 1.4.3 | Psycho-oncology resources  Needs-based a least 1 psycho-oncologist with the above qualifications is available to the Centre (name is to be given). The personnel resources can be kept centrally, the organisation plan must be available. |  |  |
| 1.4.4 | Neuropsychology   * 1 psychologist with the additional designation Clinical Neuropsychologist (GNP) is available to the Centre (if necessary via cooperation). * Cooperation must be presented by way of documented cases during the assessment period. * The following processes are to be described with details of responsibilities: * patient presentation criteria; * communication within the Centre; * participation in events, quality circles, tumour conference and similar events of the Centre. |  |  |

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| **1.5**  **Social work and rehabilitation** | | | |
| Section | Requirements | Explanatory remarks of the Centre |  |
| 1.5.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 1.5.3 | Resources  For patient counselling at least 1 full-time staff member is available for 400 counselled patients (not cases) of the Centre (= primary cases, secondary metastasis, recurrence). Staff resources can be kept centrally, an organisation plan must be available. |  |  |
| 1.5.4 | The need for rehabilitation is to be checked for each patient. |  |  |

| **1.6** **Patient involvement** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 1.6.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 1.6.2 | Patient surveys:   * All patients should be given the opportunity to take part in a patient survey over a period of least three months every three years.   The return rate should be more than ~~50~~30% (to be evaluated if this rate is not reached) |  |  |
| 1.6.3 | Patient information should be made available as needed and preferably in written form. |  |  |
| 1.6.4 | Discharge interview  A conversation is held with each patient upon discharge (short documentation/checklist), in which at least the following topics are addressed and appropriate information is provided:  - Therapy planning and diagnostic check-ups  - Individual aftercare plan (handover of aftercare pass)  - If applicable, "patient guideline" www.leitlinienprogramm-onkologie.de, flyer on self-help |  |  |

| **1.7** **Study management** | | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  | |
| 1.7.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  | |
| 1.7.2 | - Section not completed - |  |  |
| 1.7.3 | Study leader  The name of the physician in charge of the study is to be given.  Study assistance   * The name of a study assistant is to be included in the "study organisation chart" for "each active study unit". * He/she can work in a parallel manner for several "units conducting studies". |  |  |
| 1.7.4 | Proportion study patients  1. Initial certification: At the time of initial certification ≥1 patient must have been included in studies.  2. after 1 year: at least 5% of malignant primary case number (ICD C70-72, C75.1-3)  Only the inclusion of patients in studies with an ethical vote counts as study participation (non-interventional/diagnostic studies and prevention studies are also recognised, sole biobank collections are excluded).  All study patients can be taken into account when calculating the study rate (share study patients based on the Centre's primary case number).  General preconditions for the definition of the study quota:   * Patients can be counted 1x per study, time: Date of patient's informed consent. * Patients in the palliative and adjuvant situation can be counted, no limitations regarding stage of disease. * Patients who are taking part in several studies simultaneously can be counted several times.   The study rate can also be achieved in cooperation with other active units. |  |  | |

| **1.8** **Nursing care** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 1.8.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 1.8.2 | Specialist oncology nurses   * At least 1 active specialist oncological nurse must be involved in the Centre. * The names of specialist oncology nurses are to be provided. |  |  |

| **1.9** **General service areas (pharmacy, nutritional counselling, speech therapy...)** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 1.9.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 1.9.2 | Speech therapy  At least 1 speech therapist is available to the Centre (possibly in cooperation).  Tasks speech therapy:   * + Provision of further outpatient treatment:   speedy outpatient access to speech, language and swallowing therapies is to be guaranteed via cooperation agreements.   * + Voice and swallowing training, speech, language and swallowing diagnostics and therapy.   + Accompaniment by food intake |  |  |
| 1.9.3 | Occupational therapy  At least 1 occupational therapist is available to the Centre (possibly in cooperation).  Tasks occupational therapy:   * Provision of further outpatient treatment: * Timely outpatient access is to be ensured via cooperation agreements in collaboration with social services. * Regaining and/or maintaining the ability to act and, by extension, the greatest possible self-autonomy and independence. * Sensorimotor-perceptual training. * Cognitive and neuropsychological training. * Advice and provision of aids. |  |  |

**2**  **Organ-specific Diagnostics and Therapy**

| 2.1 Consulting hours | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 2.1.1 | Information / dialogue with the patient  Adequate information must be provided about diagnosis and therapy planning and a dialogue is to be entered into. This includes *inter alia*:   * Presentation of alternative treatment concepts * Offer of and aid in obtaining second opinions * Discharge consultations as a standard procedure   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. |  |  |
| 2.1.2 | Conduct of consulting hours  For the conduct of the consulting hours a   * specialist for neurology or * specialist for neurosurgery   is responsible. |  |  |
| 2.1.3 | Consulting hours in neurology and neurosurgery must be staged at least once a week and they must cover the following topics:   * Initial examination after external suspicion or confirmation of diagnosis * Planning of next diagnostic steps * Passing on to the interdisciplinary tumour conference * Planning of the next therapeutic steps (based on the decision of the tumour conference) * Post-surgical aftercare * Tumour aftercare   Consultative discussion neurosurgery or neurology on a working day  If appropriate, the topics can be covered in special, separate consulting hours. |  |  |
| 2.1.3 | Waiting times during the consulting hours  Requirement: < 60 min (target value)  How long are the waiting times for an appointment  Requirement: < 2 weeks  The waiting times are to be recorded on a random basis and statistically evaluated (recommendation: evaluation period 4 weeks a year). |  |  |
| 2.1.4 | From the consulting hours the following services/methods are to be ensured:   * Access to imaging * Consultative discussion neurosurgery or neurology on a working day * Neuropsychological diagnostics * Neurophysiological diagnostics, e.g. EEC * Fluid diagnostics * Neurological examination |  |  |
| 2.1.5 | The following quality-determining processes are to be described with details of the responsibilities:   * Agreed course of diagnostics * Preparation of patients for the tumour conference * In-patient admission   Sufficient resources must be available to conduct the processes. |  |  |

| 2.2 Diagnostics | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 2.2.1 | Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |

| **3** **Radiology** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 3.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 3.2 | Specialists   * At least 1 specialist for neuroradiology * Cross-over provision of staff with the same qualification is to be documented in writing. * The names of the specialist and cover staff are to be given.   The cooperation partner of neuroradiology may not be more than max 60 km away. |  |  |
| 3.3 | Radiology RTAs:  At least 2 qualified RTAs must be available and their names given. |  |  |
| 3.4 | Necessary examination methods at the location:   * Perfusion MRI * Digital subtraction angiography (DSA) * Optional: MR spectroscopy |  |  |
| 3.5 | Necessary therapeutic techniques (where appropriate via cooperation):   * Interventional catheterisation procedures |  |  |
| 3.6 | Neuroradiological assessment should be undertaken in line with the RANO/ iRANO criteria. |  |  |

| **4** **Nuclear Medicine** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 4.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 4.2 | Necessary examination methods (where appropriate via cooperation):  If no access to MR spectroscopy is ensured:   * Amino acid PET |  |  |

1. **Surgical Oncology**

| * 1. **Cross-organ surgical therapy** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 5.1.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |

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| * 1. **Cross-organ surgical therapy** | | | |
| Section | Requirements | Explanatory remarks of the Centre |  |
| 5.2.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 5.2.2 | Specialists   * At least 2 neurosurgery specialists * The names of the specialists are to be given. |  |  |
| 5.2.3 | 5.2.3.a Surgical primary cases  At least 60 primary cases (Definition see CR 1.2.1) are operated every year.  All surgeries (primary cases and recurrences) are to be performed under the supervision of the named surgeon (as 1. or 2. surgeon or along the lines of documented supervision).  Definition surgical therapy  German procedure classification (OPS): 5-015.0; 5-015.1; 5-015.3; 5-015.4; 5-016.0; 5-016.2; 5-016.4; 5-016.6; 5-017.1, 5-035, 5-075  5.2.3b Biopsies:  Recording biopsies for primary cases: German procedure classification (OPS): 1-510. - 1-512.; 1-514 - 1-515 |  |  |
| 5.2.4 | Qualification surgeons   * Per surgeon evidence of at least 25 open neuro-oncological operations/year (as 1st or 2nd surgeon as part of training of new surgeons). * The special qualification of surgeons is documented via curricula.   OPS classification:  5-015.0; 5-015.1; 5-015.3; 5-015.4; 5-016.0; 5-016.2; 5-016.4; 5-016.6; 5-017.1; 5-035; 5-075 |  |  |
| 5.2.5 | Approval of new surgeons   * Specialist for neurosurgery * In addition to the specialist title: Proof of at least 50 operations on supra- or infratentorial tumours, 20 surgeries on spinal tumours (including vertebral metastases) and 20 biopsies performed with the support of computer-aided, three dimensional planning systems (e.g. stereotaxy, neuronavigation systems) (submission of surgical reports, performance as 1st surgeon) |  |  |
| 5.2.6 | Stereotaxy   * 1 specialist for neurosurgery with key knowledge on stereotaxy must be available (can be identical with 5.2.2). * Cover staff arrangements must be in place. * Qualifications for frame-based biopsy must be documented in curricula / surgical logbooks.   Requirement: 10 stereotactic operations/year. |  |  |
| 5.2.7 | Training of new surgeons  Per centre and per 50 primary cases the training of further surgeons must be guaranteed and proven. |  |  |
| 5.2.8 | Structures/methods that must be available   * Minimal invasive, stereotactic surgical methods also using neuronavigation * Microsurgery * Intraoperative electrophysiological monitoring (evoked potential, EMG, cortical and subcortical stimulation) * Methods for intraoperative tumour localisation (intra-OP MRI, ultrasound, fluorescence * Early postoperative MRI controls within 72 hours * Intraoperative frozen section diagnosis by neuropathologist |  |  |
| 5.2.9 | On call/reachability neurosurgery  24-hour reachability and surgical emergency care outside normal working hours including weekends and public holidays |  |  |
| 5.2.10 | The following quality-determining processes are to be described with details of the responsibilities:   * Surgical preliminary preparation of patients * Standard of surgical strategies * Surgical aftercare |  |  |
| 5.2.11 | Postoperative complications   * Revision surgeries due to intra- or postoperative complications in own Centre * Postoperative wound infections |  |  |
| 5.2.12 | Postoperative surveillance   * Beds must be available for postoperative surveillance in the intensive care ward or intermediate care station. * The processes for postoperative care and transfer to the normal ward are to be described, including responsibilities. |  |  |

**6** **Medicinal Oncology / Systemic therapy**

| **6.1** **Medical oncology** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 6.1.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 6.1.2 | Doctors' qualifications  Specialist for internal medicine with the focus designation haematology and oncology  Requirements (optional)  Entitlement to specialty training by the competent medical association in the focus haematology and oncology  The name of one representative with the above-mentioned qualification is to be given. |  |  |

| **6.2**  **Organ-specific systemic therapy** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 6.2.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 6.2.2 | Autologous stem cell transplantation  The option of autologous stem cell transplantation must be available, where appropriate, in cooperation. |  |  |

| **7** **Radio-oncology** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 7.0 | The Technical and Medical Requirements to be met by radio-oncology are summed up in the "Catalogue of Requirements Radio-Oncology" in a cross-organ manner. Independently of the number of Organ Cancer Centres / Modules, which work with a radio-oncology unit, this "Catalogue of Requirements 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 "Catalogue of Requirements Radio-Oncology" therefore constitutes an annex to this Catalogue of Requirements.  Download cross-organ "Catalogue of Requirements Radio-Oncology" on www.ecc-cert.org |  |  |

| **8** **(Neuro-) pathology** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 8.0 | Alternatively, the Technical and Medical Requirements to be met by pathology can be presented in the "Catalogue of Requirements Pathology". This is especially recommended when the pathology unit is named as a cooperation partner (one-off, cross-organ presentation) for further certified Organ Cancer Centres. In this case the Catalogue of Requirements "Pathology" is an annex to the Catalogue of Requirements and, consequently, is to be submitted, too.  Download cross-organ "Catalogue of Requirements Pathology" on www.ecc-cert.org |  |  |
| 8.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 8.2 | Specialists   * At least 2 neuropathologists are available to the Centre (possibly in cooperation). * The names of the specialists are to be given. |  |  |
| 8.3 | MTAs  A sufficient number of qualified MTAs / technical assistants must be available. |  |  |
| 8.4 | Case numbers Institute/Department of Neuropathology  Every year at least 1,000 histological, including cytological and immunohistochemical, tests (case numbers, proof via journal no.) |  |  |
| 8.5 | Histological classification   * In line with the criteria of the current WHO classification of tumours of the central nervous system * The histological, cytological, histochemical and immunohistochemical methods required under the WHO criteria must be established. |  |  |
| 8.6 | Stereotactic brain biopsies  Possibility of processing and gaining experience in the microscopic assessment of stereotactic brain biopsies must be available. |  |  |
| 8.6.1 | Assessment frozen sections / specimens   * All frozen sections / sections are to be diagnosed by neuropathologists (as a rule on site, possibly via cooperation; cooperations > 45km are to be justified). * In exceptional cases the cutting of the frozen section may be undertaken by pathologists on site. In these cases, the telemedical microscopic assessment of the frozen sections must be done by the neuropathology specialist. |  |  |
| 8.7 | Cytopathological assessment  Possibility of processing and gaining experience in the microscopic assessment of liquor-cytological specimens must be available. |  |  |
| 8.8 | Molecular diagnostics  Possibility to determine relevant neuro-oncological markers in line with WHO classification 2016 (e.g. MGMT promoter methylation, 1p/ 19q deletion, mutations in the IDH1 gene) (possibly in cooperation) and to gain experience in the assessment of molecular pathological findings must be available. |  |  |
| 8.9 | Asservation of tissue samples  In addition to the asservation of the paraffin blocks and sliced specimens, there must be a possibility of asservation of shock-frozen tissue samples at at least -80oC. |  |  |
| 8.10 | Participation in clinical trials and translational research projects   * Provision/dispatch of tissue samples for reference histological evaluation as part of clinical trials * Asservation, provision and possibly dispatch of tissue samples for translational research projects as part of clinical trials. |  |  |

| **9** **Palliative Care and Hospice Work** | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 9.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |

| 10 Tumour Documentation / Outcome Quality | | | |
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| Section | Requirements | Explanatory remarks of the Centre |  |
| 10.1 | The requirements of the Catalogue of Requirements Oncology Centres are to be met.  Any special features of neuro-oncological tumours are to be described here with details of responsibilities. |  |  |
| 10.2 | Tumour documentation system   * Tumour documentation, which contains the patient data for a minimum period of 3 months, must be in place at the time of initial certification. * The patients with neuro-oncological tumours must be recorded in one tumour documentation system.   Name of the tumour documentation system in a cancer registry and/or Centre  A data set in line with the Uniform Oncological Basic Data Set (*Einheitlicher Onkologischer Basisdatensatz*) and its modules of the Working Group of German Tumour Centres (*Arbeitsgemeinschaft Deutscher Tumorzentren* - ADT) and the Association of Population-based Cancer Registries in Germany (*Gesellschaft der epidemiologischen Krebsregister in Deutschland* - GEKID) must be used.  The Centre must ensure that the data transfer to the competent cancer registry is done in a timely manner. Any existing federal state laws for notification deadlines are to be complied with. |  |  |

**Data sheet**

A structured EXCEL template is available to Centres to record the indicators and data on outcome quality. This EXCEL template also contains an automatic evaluation of data quality. Only those presentations of indicators are eligible for certification which are undertaken on the basis of the EXCEL template made available by OnkoZert. The EXCEL template may not be changed.

The EXCEL template can be downloaded from www.ecc-cert.org

**Primary cases in Neuro-Oncology Centres**

Tumours can be counted as primary cases that correspond to an ICD-O topography code **AND** an ICD-O morphology code from the enclosed list. CNS lymphomas are counted separately.

|  |  |
| --- | --- |
| **ICO-O Topography** | |
| **C70 Meninges** | |
|  | **C70.0 Cranial meninges** |
|  | Arachnoidea encephali |
|  | Dura mater encephali |
|  | Falx cerebelli |
|  | Falx cerebri |
|  | Falx, NOS |
|  | Pia mater encephali |
|  | Tentorium cerebelli |
|  | Tentorium no further details |
|  | **C70.1 Spinal meninges** |
|  | Arachnoidea spinalis |
|  | Dura mater spinalis |
|  | Pia mater spinalis |
|  | **C70.9 Meninges, NOS** |
|  | Arachnoidea, NOS |
|  | Dura mater, NOS |
|  | Dura, NOS |
|  | Pia mater, NOS |
| **C71 Brain** | |
|  | **C71.0 Cerebrum** |
|  | Basal ganglia |
|  | Capsula interna |
|  | Corpus striatum |
|  | Cortex cerebri |
|  | Brain, supratentorial, NOS |
|  | Globus pallidus |
|  | Pallidum |
|  | Cerebrum |
|  | Cerebral hemispheres |
|  | Hypothalamus |
|  | Island |
|  | Operculum |
|  | Pallium |
|  | Putamen |
|  | Insula |
|  | Rhinencephalon |
|  | Thalamus |
|  | White substance of the cerebrum |
|  | Central white substance |
|  | **C71.1 Frontal lobes** |
|  | Polus frontalis |
|  | **C71.2 Temporal lobes** |
|  | Hippocampus |
|  | Uncus |
|  | **C71.3 Parietal lobes** |
|  | **C71.4 Occipital lobes** |
|  | Polus occipitalis |
|  | **C71.5 Ventrical, NOS** |
|  | Third ventricle, NOS |
|  | Ependyma |
|  | Cerebral ventricle |
|  | Plexus chorioideus, third ventricle |
|  | Plexus chorioideus, NOS |
|  | Plexus chorioideus, lateral ventricle |
|  | Lateral ventricle, NOS |
|  | **C71.6 Cerebellum, NOS** |
|  | Cerebellum |
|  | Cerebellopontine angle |
|  | Vermis (cerebellum) |
|  | **C71.7 Brain stem** |
|  | Infratentorial parts of the brain |
|  | Medulla oblongata |
|  | Mesencephalon |
|  | Olive |
|  | Pedunculus cerbri |
|  | Ammonshorn |
|  | Plexus chorioideus, fourth ventricle |
|  | Pons |
|  | Pyramids |
|  | Fourth ventricle no further details |
|  |  |
|  | **C71.8 Brain, Several Overlapping Sub-areas** |
|  | Corpus callosum |
|  | Tapetum |
|  | **C71.9 Brain, NOS** |
|  | Posterior cranial fossa |
|  | Intracranial position |
|  | Middle cranial fossa |
|  | Cranial fossa, NOS |
|  | Suprasellär |
|  | **C72 Medulla, Cerebral Nerves and other parts of the CNS** |
|  | **C072.0 Medulla** |
|  | **C72.2 N. olfactorius** |
|  | **C72.3 N. opticus** |
|  | Chiasma opticum |
|  | Tractus opticus |
|  | **C72.4 N. acusticus** |
|  | **C72.5 Cranial nerves, NOS** |
|  | N. abducens |
|  | N. accessorius o.n.A. |
|  | N. facialis |
|  | N. glossopharyngeus |
|  | N. hypoglossus |
|  | N. oculomotorius |
|  | N. trigeminus |
|  | N. trochlearis |
|  | N. vagus |
|  | **C72.8 Brain and Other Parts of the CNS, several overlapping sub-areas** |
|  | Remarks: Neoplasias of the nervous system whose origin cannot be attributed to any of the categories [C70](http://www.dimdi.de/dynamic/de/klassi/icdo3/kodesuche/onlinefassungen/icdo3rev1html/block-c69-c72.htm#C70) up to [C72.5](http://www.dimdi.de/dynamic/de/klassi/icdo3/kodesuche/onlinefassungen/icdo3rev1html/block-c69-c72.htm#C72.5) |
|  | **C72.9 Nervous System** |
|  | Epidural |
|  | Extradural |
|  | Parasellar |
|  | Zentralnervensystem |
|  | N. trochlearis |
|  | N. vagus |
| **C75 Other endocrine glands and related structures** | |
|  | **C75.1 Pituitary gland**  Pituitary  Hypophysis |
|  | Fossa hypophysialis |
|  | Rathke's pouch |
|  | Sella turcica |
|  | **C75.2 Ductus craniopharyngealis** |
|  | **C75.3 Glandula pinealis** |

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| **ICD-O Morphology** | | |
| **Diffuse astrocytic and oligodendroglial tumours** | | |
| 9385/3 | Diffuse midline glioma, H3 K27M-mutant |  |
| 9400/3 | Diffuse astrocytoma, IDH-mutant/ Diffuse astrocytoma, IDH-wildtype/ Diffuse astrocytoma, NOS | WHO grade II |
| 9411/3 | Gemistocytic astrocytoma, IDH-mutant |  |
| 9401/3 | Anaplastic astrocytoma, IDH-mutant/  Anaplastic astrocytoma, IDH-wildtype/  Anaplastic astrocytoma, NOS | WHO grade III |
| 9440/3 | Glioblastoma, IDH-wildtype/ Epithelioid glioblastoma/ Glioblastoma, NOS | WHO grade IV |
| 9441/3 | Giant cell glioblastoma | WHO grade IV |
| 9442/3 | Gliosarcoma | WHO grade IV |
| 9445/3 | Glioblastoma, IDH-mutant | WHO grade IV |
| 9450/3 | Oligodendroglioma, IDH-mutant and 1p/19q-codeleted/  Oligodendroglioma, NOS | WHO grade II |
| 9451/3 | Anaplastic oligodendroglioma, IDH-mutant and 1p/19q-codeleted/  Anaplastic oligodendroglioma, NOS | WHO grade III |
| 9382/3 | Oligoastrocytoma, NOS | WHO grade II |
| 9382/3 | Anaplastic oligoastrocytoma, NOS | WHO grade III |
| **Other astrocytic tumours** | | |
| 9421/1 | Pilocytic astrocytoma | WHO grade I |
| 9425/3 | Pilomyxoid astrocytoma |  |
| 9384/1 | Subependymal giant cell astrocytoma | WHO grade I |
| 9424/3 | Pleomorphic xanthoastrocytoma | WHO grade II |
| 9424/3 | Anaplastic pleomorphic  xanthoastrocytoma | WHO grade III |
| **Ependymal Tumors** | | |
| 9383/1 | Subependymoma | WHO grade I |
| 9394/1 | Myxopapillary Ependymoma | WHO grade I |
| 9391/3 | Ependymoma | WHO grade II |
| 9393/3 | Papillary | WHO grade II |
| 9391/3 | Clear Cell | WHO grade II |
| 9391/3 | Tanycytic | WHO grade II |
| 9396/3 | Ependymoma, RELA fusion-positive | WHO grade II or III |
| 9392/3 | Anaplastic ependymoma | WHO grade III |
| **Other gliomas** | | |
| 9430/3 | Astroblastoma |  |
| 9444/1 | Chordoid glioma of the third ventricle | WHO grade II |
| 9431/1 | Angiocentric glioma | WHO grade I |
| **Choroid plexus tumours** | | |
| 9390/0 | Choroid plexus papilloma | WHO grade I |
| 9390/1 | Atypical choroid plexus papilloma | WHO grade II |
| 9390/3 | Choroid plexus carcinoma | WHO grade III |
| **Neuronal and mixed neuronal-glial Tumors** | | |
| 9493/0 | Dysplastic cerebellar gangliocytoma (Lhermitte-Duclos disease) | WHO grade I |
| 9412/1 | Desmoplastic infantile astrocytoma/ganglioglioma | WHO grade I |
| 9413/0 | Dysembryoplastic neuroepithelial tumour | WHO grade I |
| 9492/0 | Gangliocytoma | WHO grade I |
| 9505/1 | Ganglioglioma | WHO grade I |
| 9505/3 | Anaplastic ganglioglioma | WHO grade III |
| 9506/1 | Central neurocytoma | WHO grade II |
| 9506/1 | Extraventricular neurocytoma | WHO grade II |
| 9506/1 | Cerebellar liponeurocytoma | WHO grade II |
| 9509/1 | Papillary glioneuronal tumour | WHO grade I |
| 9509/1 | Rosette-forming glioneuronal tumour of the fourth ventricle | WHO grade I |
|  | Diffuse leptomeningeal glioneuronal tumour |  |
| 8693/1 | Paraganglioma | WHO grade I |
| **Tumors of the Pineal Region** | | |
| 9361/1 | Pineocytoma | WHO grade I |
| 9362/3 | Pineal parenchymal tumour of intermediate differentiation | WHO grade II, III |
| 9362/3 | Pineoblastoma | WHO grade IV |
| 9395/3 | Papillary tumour of the pineal region | WHO grade II, III |
| **Embryonal Tumors** | | |
| 9475/3 | Medulloblastomas, WNT-activated | WHO grade IV |
| 9476/3 | Medulloblastomas, SHH-activated and TP53-mutant | WHO grade IV |
| 9471/3 | Medulloblastoma SHH-activated and TP53-wildtype | WHO grade IV |
| 9477/3 | Medulloblastoma, non-WNT/non-SHH (Group 3/ Group 4) | WHO grade IV |
| 9470/3 | Medulloblastoma, classic/  Medulloblastoma, NOS | WHO grade IV |
| 9471/3 | Medulloblastoma, desmoplastic/nodular | WHO grade IV |
| 9471/3 | Medulloblastoma with extensive nodularity | WHO grade IV |
| 9474/3 | Medulloblastoma, large cell/anaplastic | WHO grade IV |
| 9478/3 | Embryonal tumour with multilayered rosettes, C19MC-altered/  Embryonal tumour with multilayered rosettes, NOS | WHO grade IV |
| 9501/3 | Medulloepithelioma | WHO grade IV |
| 9500/3 | CNS neuroblastoma | WHO grade IV |
| 9490/3 | CNS ganglioneuroblastoma | WHO grade IV |
| 9473/3 | CNS embryonal tumour, NOS | WHO grade IV |
| 9508/3 | Atypical teratoid/rhabdoid tumour | WHO grade IV |
| 9508/3 | CNS embroynal tumour with rhabdoid features | WHO grade IV |
| **Tumors of cranial and paraspinal nerves** | | |
| 9560/0 | Schwannoma (Neurilemoma, Neurinoma) | WHO grade I |
| 9560/0 | Cellular schwannoma |  |
| 9560/0 | Plexiform schwannoma |  |
| 9560/1 | Melanotic schwannoma |  |
| 9540/0 | Neurofibroma | WHO grade I |
| 9540/0 | Atypical neurofibroma |  |
| 9550/0 | Plexiform neurofibroma |  |
| 9571/0 | Perineurioma | WHO grade I |
|  | Hybrid nerve sheath tumours |  |
| 9540/3 | Malignant Peripheral Nerve Sheath Tumor (MPNST) | WHO grade II, III, IV |
| 9540/3 | Epithelioid MPNST |  |
| 9540/3 | MPNST with perineurial differentiation |  |
| **Meningiomas** | | |
| 9531/0 | Meningothelial meningioma | WHO grade I |
| 9532/0 | Fibrous meningioma | WHO grade I |
| 9537/0 | Transitional meningioma | WHO grade I |
| 9533/0 | Psammomatous meningioma | WHO grade I |
| 9534/0 | Angiomatous meningioma | WHO grade I |
| 9530/0 | Microcystic meningioma | WHO grade I |
| 9530/0 | Secretory meningioma | WHO grade I |
| 9530/0 | Lymphoplasmacyte-rich meningioma | WHO grade I |
| 9530/0 | Metaplastic meningioma | WHO grade I |
| 9538/1 | Chordoid meningioma | WHO grade II |
| 9538/1 | Clear Cell meningioma | WHO grade II |
| 9539/1 | Atypical meningioma | WHO grade II |
| 9538/3 | Papillary meningioma | WHO grade III |
| 9538/3 | Rhabdoid meningioma | WHO grade III |
| 9530/3 | Anaplastic (Malignant) meningioma | WHO grade III |
| **Mesenchymal, non-meningothelial Tumours** | | |
| 8802/3 | Undifferentiated pleomorphic sarcoma/ Malignant fibrous histiocytoma |  |
| 8815/0 | Solitary fibrous tumour/ haemangiopericytoma |  |
| 8815/0 | Grade 1 |  |
| 8815/1 | Grade 2 |  |
| 8815/3 | Grade 3 |  |
| 8821/1 | Desmoid-type fibromatosis |  |
| 8825/0 | Myofibroblastoma |  |
| 8825/1 | Inflammatory myofibroblastic tumour |  |
| 8850/0 | Lipoma |  |
| 8861/0 | Angiolipoma |  |
| 8880/0 | Hibernoma |  |
| 8850/3 | Liposarcoma |  |
| 8810/3 | Fibrosarcoma |  |
| 8830/0 | Benign fibrous Histiocytoma |  |
| 8890/0 | Leiomyoma |  |
| 8890/3 | Leiomyosarcoma |  |
| 8900/0 | Rhabdomyoma |  |
| 8900/3 | Rhabdomyosarcoma |  |
| 9220/0 | Chondroma |  |
| 9220/3 | Chondrosarcoma |  |
| 9180/0 | Osteoma |  |
| 9180/3 | Osteosarcoma |  |
| 9210/0 | Osteochondroma |  |
| 9120/0 | Haemangioma |  |
| 9161/1 | Haemangioblastoma | WHO grade I |
| 9133/3 | Epithelioid haemangioendothelioma |  |
| 9120/3 | Angiosarcoma |  |
| 9140/3 | Kaposi sarcoma |  |
| 9364/3 | Ewing sarcoma / PNET |  |
| **Melanocytic Tumours** | | |
| 8728/0 | Meningeal melanocytosis |  |
| 8728/1 | Meningeal melanocytoma |  |
| 8720/3 | Meningeal melanoma |  |
| 8728/3 | Meningeal melanomatosis |  |
| **Lymphomas** | | |
| 9680/3 | Diffuse large B-cell lymphoma of the CNS |  |
| 9766/1 | Lymphomatoid granulomatosis |  |
|  | Immunodeficiency-associated CNS lymphomas |  |
|  | AIDS-related diffuse large B-cell lymphoma |  |
|  | EBV-positive diffuse large B-cell lymphoma, NOS |  |
| 9712/3 | Intravascular large B-cell lymphoma |  |
|  | Low-grade B-cell lymphomas of the CNS |  |
|  | T-cell and NK/T-cell lymphomas of the CNS |  |
| 9714/3 | Anaplastic large cell lymphoma, ALK-positive |  |
| 9702/3 | Anaplastic large cell lymphoma, ALK-negative |  |
| 9699/3 | MALT-Lymphoma of the Dura |  |
| **Histiocytic Tumours** | | |
| 9751/3 | Langerhans cell histiocytosis |  |
| 9750/1 | Erdheim-Chester disease |  |
|  | Rosai-Dorfman disease |  |
|  | Juvenile xanthogranuloma |  |
| 9755/3 | Histiocytic sarcoma |  |
| **Germ Cell Tumours** | | |
| 9064/3 | Germinoma |  |
| 9070/3 | Embryonal Carcinoma |  |
| 9071/3 | Yolk Sac Tumour |  |
| 9100/3 | Choriocarcinoma |  |
| 9080/1 | Teratoma |  |
| 9080/0 | Mature teratoma |  |
| 9080/3 | Immature teratoma |  |
| 9084/3 | Teratoma with malignant transformation |  |
| 9085/3 | Mixed germ cell tumour |  |
| **Tumours of the sellar region** | | |
| 9350/1 | Craniopharyngioma |  |
| 9351/1 | Adamantinomatous craniopharyngioma |  |
| 9352/1 | Papillary craniopharyngioma |  |
| 9582/0 | Granular cell tumour of the sellar region |  |
| 9432/1 | Pituicytoma |  |
| 8290/0 | Spindle cell oncocytoma |  |
| 8272/0 | Pituitary adenoma Somatotroph adenoma Thyrotroph adenoma Corticotroph adenoma Gonadotroph adenoma Null cell adenoma Plurihormonal and double adenomas |  |
| 8271/0 | Lactotroph adenoma |  |
| 8272/3 | Pituitary carcinoma |  |
| 8273/3 | Pituitary blastoma |  |
| **Chordoma** | | |
| 9370/3 | Chordoma NOS |  |
| 9371/3 | Chordoma, chondroid |  |
| 9372/3 | Chordoma, dedifferentiated |  |