MEDICAL UNIVERSITY OF VIENNA

Training Programme (essential elements)

Clinical Practical Year (CPY)

at Medical University of Vienna, Austria

CPY-Tertial C

Interdisciplinary Oncology

Valid from academic year 2025/26

Responsible for the content

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This training programme applies to the subject of "Interdisciplinary Oncology" within CPY tertial C "Electives". It is designed for a duration of 16 weeks, to be completed in 2x 8-week periods at complementary oncology departments.

Subject-Specific Information

1. Objectives of Interdisciplinary Oncology in the CPY

In the CPY Term C "Interdisciplinary Oncology," students should gradually learn independence in the clinical care of cancer patients. The treatment of oncological patients presents a major challenge for every doctor. The multitude of differential diagnoses and the tumour cell biological and genetic principles underlying diagnostic and therapeutic measures require specific expertise in several areas. A prerequisite for efficient patient care is therefore interdisciplinary cooperation between diagnostic and therapeutic oncological disciplines in clinical practice. The subject "Interdisciplinary Oncology" can consequently only be undertaken at departments that can demonstrate sufficient experience in interdisciplinary cooperation in treating a variety of both common and rare cancer diseases (e.g., the clinical departments at the Comprehensive Cancer Center of the Medical University of Vienna).

In the "Interdisciplinary Oncology" term, students should gain deep insight into these complex diagnostic and therapeutic principles. Through involvement in clinical patient care, students should learn, practise, and gradually learn to independently apply the basic abilities and skills of oncology under the guidance of specialists or doctors in advanced specialist training for oncological disciplines (e.g., Internal Medicine, Surgery, Gynaecology, Urology, Orthopaedics) to individual patients. In particular, knowledge about planning diagnostic and therapeutic steps in cancer diseases, communication with and education of patients, interpretation of molecular pathological findings, and application of supportive and palliative medical measures should be conveyed.

A substantial part of the training involves integration into interdisciplinary oncological treatment teams, where individual therapy decisions are jointly supported by all affected disciplines. In particular, knowledge about interdisciplinary planning of diagnostic and therapeutic steps in cancer diseases, patient education, interpretation of molecular pathological findings, and application of supportive and palliative medical measures should be conveyed. This purpose should be served by participation in all department/ward-specific meetings such as morning meetings and radiological meetings, but especially interdisciplinary meetings (tumour boards), as well as participation in department/ward-specific and interdisciplinary continuing education events. Another central component of the CPY term is the integration of students into the organisation of patient care and collaboration with all involved professional groups. Communication with these, as well as with patients and their relatives, and the associated social and psychological aspects should be intensively learned to obtain optimal preparation for later professional practice.

To ensure in-depth, interdisciplinary training, the elective subject should preferably be completed over 16 weeks. The 16-week term should be completed in two 8-week periods at two different departments. For this rotation, the subjects are divided into 3 groups:

1. Radiotherapy-Radio-oncology
2. Medical Oncology, Haematology
3. Oncological specialties in Surgery, Orthopaedics, Urology, Gynaecology, etc.

To enable students to experience therapeutic approaches from different perspectives, subjects from 2 different groups should be chosen. Assignment is made by an interdisciplinary mentor committee, taking into account students' prior knowledge and interests as well as the feasibility of learning objectives.

2. Clinical Activity Areas in the Subject

The contents listed here should be particularly considered in Mini-CEX (Mini-Clinical Evaluation Exercise), DOPS (Direct Observation of Procedural Skills), and CPY assignments and serve as recommendations, suggestions, and explanations for designing the CPY term.

Areas/Problem Fields (Problems as starting point of training), examples in alphabetical order:

- Acute (incipient) paraplegia
- Anaemia
- Ascites
- Leg oedema
- Assessment and measures for postoperative pain
- Assessment and measures for postoperative wound infection
- Consciousness disorders – Coma
- Bleeding tendency
- B-symptoms
- Dehydration
- Diarrhoea
- Dyspnoea
- Iron deficiency
- Electrolyte disturbances
- Epidemiology of cancer diseases
- Evaluation of a patient with a neoplastic disease for surgical treatment (operability, resectability, additional interdisciplinary treatment)
- Febrile neutropenia
- Fibrosis
- Fever
- Gastrointestinal bleeding
- Weight loss
- Haematopoietic growth factors
- Intracranial pressure
- Hypercalcaemia (tumour-associated)
- Jaundice
- Ileus

- Medical antineoplastic therapy (chemotherapy, antibodies, tyrosine kinase inhibitors, etc.)
- Leucopenia
- Lymph node enlargement
- Malnutrition/Tumour cachexia
- Molecular diagnostics
- Mucositis/Stomatitis
- Side effect management of oncological systemic therapy (chemotherapy, immunotherapy)
- Neurocognitive changes
- Superior vena cava syndrome
- Constipation
- Oliguria/Anuria
- Palliative medicine and end-of-life management
- Pleural effusion
- Preoperative medical evaluation
- Prognosis assessment of oncological diseases (e.g., biomarkers)
- Pulmonary embolism
- Radiodermatitis/Erythema/Folliculitis
- Pain
- Screening
- Staging
- Thrombosis
- Thrombocytopenia
- Tumour bleeding
- Tumour lysis syndrome
- Tumour markers
- Nausea/Vomiting
- Nausea/Vomiting (chemotherapy-associated)
- (Tumour) Ulceration

3. Learning objectives (competences)

The following skills must be acquired or deepened in the subject of Interdisciplinary Oncology during the CPY.

3.1 Competences to be achieved (mandatory)

A) History taking
   1. Taking oncological history
   2. Identifying risk factors and dangerous lifestyle including smoking history

B) Performance of examination techniques
    3. Assessing and determining performance status
    4. Assessing acute symptoms
    5. Conducting diagnostic planning
    6. Conducting lymph node examination
    7. Preparing and conducting rectal examination
    8. Examining reproductive organs
    9. Interpreting findings
    10. Recognising therapy side effects and initiating diagnostics
    11. Recognising oncological emergencies
C) Performance of routine skills and procedures
    12. Administering intramuscular and subcutaneous injections
    13. Performing intravenous injections
    14. Removing drains
    15. Removing central venous catheter
    16. Obtaining consent for medical procedures
    17. Assisting with biopsies
    18. Assisting with joint punctures
    19. Inserting nasogastric tube
    20. Conducting surgical preparation
D) Therapeutic measures
    21. Applying principles of evidence-based medicine
    22. Applying therapy guidelines
    23. Applying oncological pharmacotherapy
    24. Understanding systemic therapies
    25. Applying supportive therapy concepts
    26. Understanding fundamentals of radiotherapy
    27. Interpreting radiotherapy planning
    28. Applying radio-oncological supportive therapy
    29. Conducting anticoagulation
    30. Obtaining surgical consent forms
    31. Conducting preoperative assessment
    32. Applying pain therapy and palliative care
    33. Assessing therapy suitability
E) Communication with patient/team
    34. Conducting interdisciplinary communication
    35. Conducting patient education
    36. Conducting telephone communication
    37. Breaking bad news
    38. Conducting lifestyle counselling
    39. Conducting cancer prevention counselling

F) Documentation

40. Accessing patient-specific information in hospital information systems (AKIM, RDA)
41. Documenting findings in patient records
42. Coding diagnoses
43. Creating discharge letters and referral letters
44. Completing death certificate or requesting autopsy (simulated situation)
45. Presentation and discussion of patient case in tumour board
46. Creating diagnostic plan to confirm suspected diagnosis in neoplastic diseases

3.2 Optional competences

In addition to the competences that are mandatory to achieve, further competences from the following list may also be acquired.

For example:

1. Pleural puncture
2. Ascites puncture
3. Bone marrow puncture
4. Lumbar puncture
5. Ultrasound
6. Knowledge of molecular diagnostics
7. Creating growth prognosis for paediatric osteosarcoma patientsThoracentesis

4. Information on verification of performance, on-going assessments

4.1 The following aspects can be assessed in the Mini-CEX:

1. History taking
2. Subject-specific organ and functional status
3. Planning diagnostic approach for suspected cancer and during disease progression
4. Interpretation of radiological, laboratory, and molecular pathological findings
5. Planning therapeutic approach for cancer diseases (creating and justifying treatment proposals; considering possible side effects and interactions)
6. Education about antineoplastic therapies
7. Planning approach for common oncological complications (e.g., neutropenic fever, thrombosis, emesis, drug allergy)
8. Treatment options for pain, palliative care, and end of life
9. Patient education for surgical intervention, endoscopy, intervention
10. Personal registration of examination or intervention (e.g., CT) with explanation of indication and question, current history, and possible risk factors to the responsible doctor
11. Presentation of a patient within a tumour board/teaching round
12. Assessment of possible risk factors for surgery/anaesthesia and appropriate investigation

13. Preoperative assessment of nutritional status and prescription of postoperative nutrition plan
14. Conducting patient safety measures during surgery (Sign-in, Time-out, and Sign-out)
15. Patient education about planned surgical intervention/endoscopy/interventionTaking a medical history

This list can be expanded accordingly.

4.2 The following skills can be assessed in the DOPS

1. All simple examination techniques listed under 3.1
2. All routine skills listed under 3.2, e.g.: a. Ascites puncture b. Pleural puncture
3. Accessing patient-specific information in hospital information systems
4. Documenting findings in patient records
5. Diagnosis coding
6. Postoperative wound care
7. Performing skin sutures
8. Preparing body region for surgery (washing and draping)
9. Performing surgical hand disinfection
10. Handling central venous catheterAll examination techniques listed under 3.1

This list can be expanded accordingly.

5. Subject-Specific Explanations for Reflection in Mid-term and Final Interviews

Reflection and final interviews are conducted by assigned mentors, taking into account the CPY students' logbook/portfolio. These should also engage continuously with students and are responsible for supervision, achievement of training objectives, and regular feedback to students.

During training, patient presentations, participation in interdisciplinary case discussions (tumour boards) and continuing education events, and documentation of optional learning objectives, etc., should be documented in the portfolio and discussed in the final interview.

6. E-Learning

http://www.esmo.org/Science-Education/ESMO-E-Learning

7. Literatur

1. http://www.esmo.org/Guidelines-Practice/Clinical-Practice-Guidelines
2. http://www.nccn.org/professionals/physician_gls/f_guidelines.asp
3. http://www.hematology.org/Clinicians/Guidelines-Quality/
4. https://www.astro.org/clinical-practice/guidelines/index.aspx
5. http://www.esmo.org/Guidelines/Gynaecological-Cancers
6. https://www.auanet.org/education/clinical-practice-guidelines.cfm

7. http://www.esmo.org/Guidelines/Sarcoma-and-GIST/
8. http://www.surgonc.org/resources/clinical-guidelines
9. http://uroweb.org/individual-guidelines/oncology-guidelines/
10. MCW Tertial Buch: Luger, Öhler, Preusser, Anvari: Innere Medizin – Symptome und klinische Probleme, Facultas Verlag, Wien.
11. Skripten Block 25 Chirurgie (aktuelle Version).
12. Brodowicz T, Amann G, Leithner A, Sztankay A, Kainberger F, Eisterer W, et al. Consensus diagnosis and therapy of soft tissue sarcoma. Wien Klin Wochenschr. 2012 Feb;124(3-4):85–99.
13. Panotopoulos J, Funovics P, Windhager R. Soft tissue sarcoma. Z Orthop Unfall. Georg Thieme Verlag KG; 2014 Jun;152(3):277–91–quiz292.
14. Leithner A, Maurer-Ertl W, Windhager R. Biopsy of bone and soft tissue tumours: hints and hazards. Recent Results Cancer Res. 2009;179:3–10.
15. Gnant M, Schlag PM. Chirurgische Onkologie. Gnant M, Schlag PM, editors. Vienna: Springer-Verlag; 2009. 1 p.
16. Skriptum zum Ausbildungskurs "Tumororthopädie" der Universitätsklinik für Orthopädie.

Addendum

A) History Taking

1. Taking oncological history
   - Competency level: Shows how
   - The student can independently take a structured oncological history, specifically asking about typical oncological leading symptoms (e.g., weight loss, B-symptoms), family history, subjective disease understanding, and social and cultural background.
   - The student can systematically document and interpret the collected data.
2. Identifying risk factors and dangerous lifestyle including smoking history
   - Competency level: Does
   - The student independently identifies and documents risk behaviour and health-endangering lifestyle in oncological patients.
   - The student can conduct a complete risk history (smoking, alcohol, environmental toxins) and interpret the results in the context of oncological diseases.

B) Examination Techniques

3. Assessing and determining performance status
   - Competency level: Does
   - The student can independently assess the clinical performance status according to Karnofsky and WHO/ECOG, correctly document it, and draw conclusions for oncological management.
4. Assessing acute symptoms
   - Competency level: Shows how
   - The student conducts a symptom-oriented examination of acutely ill oncological patients under supervision.
   - The student can suggest and justify appropriate further diagnostics.
5. Conducting diagnostic planning
   - Competency level: Knows how
   - The student can select suitable clinical, laboratory (including tumour markers), and radiological examinations for initial diagnosis and follow-up assessment of oncological diseases and justify their use.
   - The student knows the indications and limitations of various imaging procedures (ultrasound, CT, MRI, nuclear medicine examinations).
6. Conducting lymph node examination
   - Competency level: Does
   - The student can independently and systematically examine all relevant lymph node regions, recognise abnormalities, and document them.
7. Preparing and conducting rectal examination
   - Competency level: Shows how
   - The student can conduct a rectal examination under supervision and interpret the findings in an oncological context.
8. Examining reproductive organs
   - Competency level: Shows how

- The student can conduct inspection and palpation of male or female reproductive organs under guidance and recognise pathological findings.

9. Interpreting findings
   - Competency level: Knows how
   - The student can interpret laboratory, radiological, and molecular pathological findings in oncological diseases and explain their relevance for therapy planning.
10. Recognising therapy side effects and initiating diagnostics
    - Competency level: Knows how
    - The student can suggest suitable diagnostic measures for detecting side effects of systemic oncological therapies and radiotherapeutic treatments and justify their selection.
11. Recognising oncological emergencies
    - Competency level: Shows how
    - The student can suspect oncological emergencies (febrile neutropenia, hypercalcaemia, malignant paraplegia, superior vena cava syndrome, SIADH, tumour lysis syndrome) based on history, physical examination, or laboratory investigations. Further diagnostic measures can be suggested and initiated by students. The principles of therapeutic measures are applied by students and demonstrated using patient vignettes.

C) Routine Skills (Procedures)

12. Administering intramuscular and subcutaneous injections
    - Competency level: Does
    - The student independently and safely performs intramuscular and subcutaneous injections whilst observing correct technique and hygienic standards.
13. Performing intravenous injections
    - Competency level: Does
    - The student can independently perform an intravenous injection considering all safety aspects.
14. Removing drains
    - Competency level: Shows how
    - The student can correctly and safely remove various types of drains under supervision.
15. Removing central venous catheter
    - Competency level: Shows how
    - The student can professionally remove a central venous catheter under guidance and knows possible complications and their management.
16. Obtaining consent for medical procedures
    - Competency level: Shows how
    - The student can conduct education about oncological procedures (operations, interventions, systemic therapy) under supervision and obtain patient consent.
17. Assisting with biopsies
    - Competency level: Shows how

- The student assists with tissue sampling (e.g., needle biopsy) and knows the procedure and possible complications.

18. Assisting with joint punctures
    - Competency level: Shows how
    - The student can assist with joint puncture and knows the indications, contraindications, and potential complications.
19. Inserting nasogastric tube
    - Competency level: Does
    - The student can independently and correctly place a nasogastric tube and verify correct positioning.
20. Conducting surgical preparation
    - Competency level: Does
    - The student can independently prepare patients for surgical intervention (washing, draping) whilst maintaining hygienic standards.

D) Therapeutic Measures (Therapy)

21. Applying principles of evidence-based medicine
    - Competency level: Does
    - The student can independently formulate clinical questions and conduct targeted literature searches to develop evidence-based solutions.
22. Applying therapy guidelines
    - Competency level: Knows how
    - The student can apply internal, national, and international oncological protocols and guidelines to specific case examples and critically evaluate their relevance.
23. Applying oncological pharmacotherapy
    - Competency level: Knows how
    - The student can indicate medical-oncological therapeutics and supportive therapies and identify possible drug interactions.
24. Understanding systemic therapies
    - Competency level: Knows how
    - The student knows the mechanisms of action, side effect profiles, indications, and contraindications of various systemic oncological therapy forms and can recognise occurring side effects and suggest management strategies.
25. Applying supportive therapy concepts
    - Competency level: Knows how
    - The student can suggest suitable measures for prophylaxis and treatment of side effects of systemic and radiotherapeutic treatments, including correct application of antiemetics, anti-infectives, and haematopoietic growth factors.
26. Understanding fundamentals of radiotherapy
    - Competency level: Knows
    - The student knows the indications, dosing concepts, and side effect profiles of radiotherapy for various tumour entities and irradiation areas.
27. Interpreting radiotherapy planning
    - Competency level: Knows

- The student knows the basic principles of radiotherapy planning and radio-oncological special techniques as well as quality assurance procedures during radiotherapy.

28. Applying radio-oncological supportive therapy
    - Competency level: Knows how
    - The student can suggest suitable accompanying and supportive measures for radiotherapeutic treatments and justify their use.
29. Conducting anticoagulation
    - Competency level: Knows how
    - The student can indicate parenteral and oral anticoagulation in oncological patients, suggest suitable preparations and dosages, and plan monitoring.
30. Obtaining surgical consent forms
    - Competency level: Shows how
    - The student can obtain consent forms for oncological operations under supervision and explain associated risks and complications in a patient-appropriate manner.
31. Conducting preoperative assessment
    - Competency level: Knows how
    - The student can assess the operability of oncological patients based on clinical and instrumental parameters and suggest necessary preoperative measures.
32. Applying pain therapy and palliative care
    - Competency level: Shows how
    - The student can conduct basic treatment measures for pain and palliative care under guidance and particularly knows the fundamentals of opioid therapy.
33. Assessing therapy suitability
    - Competency level: Knows how
    - The student can assess the suitability of patients for systemic oncological therapies or radiotherapy based on clinical, laboratory, and instrumental parameters.

E) Communication with Patient/Team (Information/Management)

34. Conducting interdisciplinary communication
    - Competency level: Does
    - The student communicates effectively in the multidisciplinary team, adequately informs colleagues and medical staff, and ensures a common understanding of the situation exists.
35. Conducting patient education
    - Competency level: Shows how
    - The student can educate patients and their relatives about their oncological disease, disease stage, and proposed treatment measures in an ethically correct and professional manner under supervision, ensuring the information is understood.
36. Conducting telephone communication
    - Competency level: Knows how

- The student knows the principles of ethically correct and professional telephone communication with patients and third parties, observing legal requirements.

37. Breaking bad news
    - Competency level: Shows how
    - The student can conduct difficult conversations with seriously ill patients in simulated situations and appropriately convey bad news.
38. Conducting lifestyle counselling
    - Competency level: Knows how
    - The student knows the principles of counselling on lifestyle factors (nutrition, physical activity, smoking, alcohol, drugs) in the oncological context and can convey these in a patient-oriented manner.
39. Conducting cancer prevention counselling
    - Competency level: Knows how
    - The student can advise patients about suitable screening examinations for early detection of cancer diseases and explain the individual benefits and limitations of various screening procedures.

F) Documentation (Information/Management)

40. Accessing patient-specific information in hospital information systems (AKIM, RDA)
    - Competency level: Does
    - The student can independently access and retrieve patient-specific information in hospital information systems, observing data protection regulations and confidentiality requirements.
    - The student can efficiently navigate electronic medical records and extract relevant clinical information for patient care decisions.
41. Documenting findings in patient records
    - Competency level: Does
    - The student can systematically and comprehensively document examination findings, treatment measures, and patient progress in patient records according to legal and institutional standards.
    - The student ensures that documentation is timely, accurate, legible, and contains all relevant information for treatment continuity.
42. Coding diagnoses
    - Competency level: Knows how
    - The student knows the principles of medical diagnosis coding (ICD-10) and can apply relevant coding systems in the oncological context.
    - The student can correctly assign primary and secondary diagnosis codes for oncological diseases and understands their significance for health administration and quality assurance.
43. Creating discharge letters and referral letters
    - Competency level: Shows how
    - The student can create structured discharge letters and referral letters under supervision that contain all relevant information for continued treatment.
    - The student ensures that essential information regarding diagnosis, treatment course, current medication, follow-up requirements, and

recommendations for ongoing care is clearly communicated to continuing healthcare providers.

44. Completing death certificate or requesting autopsy (simulated situation)
    - Competency level: Knows how
    - The student knows the legal requirements and procedures for completing death certificates in oncological cases and understands when and how to request post-mortem examinations.
    - The student can identify situations requiring forensic referral and understands the importance of accurate cause of death certification in oncology.
45. Presentation and discussion of patient case in tumour board
    - Competency level: Shows how
    - The student can present patient cases in an interdisciplinary tumour board setting under supervision, systematically discussing tumour localisation, extent and metastasis, resectability, and therapy options.
    - The student demonstrates the ability to synthesise complex oncological information and meaningfully contribute to interdisciplinary treatment planning discussions.
46. Creating diagnostic plan to confirm suspected diagnosis in neoplastic diseases
    - Competency level: Knows how
    - The student can develop structured diagnostic algorithms for suspected oncological diseases, considering cost-effectiveness, patient burden, diagnostic accuracy, and clinical urgency.
    - The student can appropriately prioritise examinations and justify the diagnostic approach based on clinical presentation and suspected tumour type.