



(Model) CURRICULUM “SPECIALIZED PAIN MANAGEMENT”

**Methodical recommendations and teaching and study content
for the theoretical continuing education course
as part of the Additional Specialist Medical Training
(Zusatz-Weiterbildung) “Specialized Pain Management”**

**according to the (Model) Regulations Governing Specialist Medical Training
((Muster-)Weiterbildungsordnung) 2003 and the (Model) Guidelines for the Content of
Continuing Education ((Muster-)Richtlinien über den Inhalt der Weiterbildung) dated
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Table of contents

Introduction	5
1 Implementation of the course	6
1.1 Structure and timeframe	6
1.2 Admission requirements	6
1.3 Sequence and coordination	6
1.4 Space requirements	6
1.5 Check on attendance	6
1.6 Certifications	7
1.7 Learning targets	7
1.8 Course coordinator	7
1.9 Physician speakers	7
1.10 Other speakers	7
2 Structure of the course	8
3 Contents of the course	9
4 Literature	26
5 Appendix	27

Introduction

Every physician administers some form of pain management every day, e.g., when treating acute pain, colics, injuries, or infections. Pain has a very important warning function for acute illnesses and thus promotes rehabilitation.

Chronic pain, however, has lost its warning function and does therefore require well-matched therapeutical approaches different from acute pain management. These have to take into account the bio-psycho-social conditions of chronic pain and should result in the implementation of long-term therapeutical strategies. Neuropathic pain requires therapeutical treatments that are mechanism-based and for which special knowledge and skills are required. These are taught in the Additional Specialist Medical Training “Specialized Pain Management”.

Adequately trained physicians can provide appropriate counsel and individual therapies to patients with chronic pain and thus counteract further pain chronification.

The practical application of all training and knowledge in outpatient, inpatient as well as rehabilitative settings is a significant aspect of this Additional Specialist Medical Training. The CE course “Specialized Pain Management” teaches the principles and knowledge of specialized pain management that are common to all patient-oriented medical fields.

The medical subspecialty (additional qualification designation) and Additional Specialist Medical Training “Specialized Pain Management” was first introduced into the (Model) Regulations Governing Specialist Medical Training by the 99th German Medical Assembly in 1996, and was retained in the amendment of the Model Regulations by the 106th German Medical Assembly in 2003.

The Additional Specialist Medical Training “Specialized Pain Management” is designed to teach advanced and interdisciplinary knowledge and skills of pain management to physicians in hospitals and in private practice. The additional qualification designation can be attained by medical specialists from all medical fields. According to §6 of the Regulations Governing Specialist Medical Training, the practical training consists of 12 months of full-day CE under expert direction (comparable with a residency) and takes place at a licensed CE institution.

1 Implementation of the course

1.1 Structure and timeframe

The CE course consists of 80 hours or 80 course units (CU). One hour or one CU comprises 45 minutes teaching time and a 15 minutes break.

The CE course can be implemented in

- individual courses of four blocks of 20 CUs (A through D, see below)
- or in one continuous course.

The designated minimum time allotments for theory and case studies (excluding the breaks) are to be observed in both formats. The course is organized in four blocks in order to teach the content in a structured and thematically cohesive form.

The contents of the four blocks are to be practically implemented during the whole CE. In this manner, full pain therapeutical competence is attained by bringing together the theoretical knowledge that is essential for “specialized pain management” and its practical application.

In consideration of the varying specialized core themes and in order to practice the exchange of experience, it is helpful to complete the individual blocks with different instructors.

1.2 Admission requirements

The CE course is open to all licensed physicians as well as physicians with a ‘license for the temporary exercise of the profession’ („Berufserlaubnis zur vorübergehenden Ausübung“ according to §10 of the Federal Medical Practitioners Act (*Bundesärzteordnung BÄO*)).

1.3 Sequence and coordination

Within the curriculum, block A, which encompasses the fundamental teachings, should always be completed first. The temporal order of the other three blocks is variable.

1.4 Space requirements

The course room has to provide sufficient space for the participants and be suitable for presentations. The usual technical requirements have to be met, and a sufficient number of additional meeting rooms have to be available for discussions of case studies.

1.5 Check on attendance

Attendance checks have to be carried out at least twice a day in a suitable and comprehensible manner.

1.6 Certifications

The regular attendance of participants has to be certified by the course coordinator. The certification has to clearly state the location and date of the course, its organizing institution and responsible director as well as the topics and case studies that were discussed. If a participant has missed certain topics or case studies, they cannot be included in the certification. The organizing institution has to provide separate receipts for the course fees.

1.7 Learning targets

Qualified instructors are to teach the topics of the listed learning targets in the context of the required interdisciplinary skills and knowledge.

For each course, the hosting institution is required to observe the relevant up-to-date 'recommendations for further education in the medical profession' („Empfehlungen zur ärztlichen Fortbildung□) of the German Medical Association (see <http://www.bundesaerztekammer.de>). In order for a course to be recognized by the regional medical associations according to §4 Par. 8 of the *(Model) Regulations Governing Specialist Medical Training*, the contents and time frame described in this curriculum have to be completed in full.

1.8 Course coordinator

The coordinator of the CE course and his or her deputy have to be physicians and hold the additional qualification designation “Specialized Pain Management”. The course has to be licensed by the medical association according to §4 Par. 8 of the *(Model) Regulations Governing Specialist Medical Training*.

1.9 Physician speakers

The theoretical and practical content is to be taught by didactically qualified and experienced medical instructors who have several years of professional experience in the specialty that they are teaching. They, as well as the course coordinator, should still be practicing and pursuing continuous education in their specialties.

1.10 Other speakers

All instructors who are not physicians have to be qualified both specifically for the subject and for teaching methodologies.

2 Structure of the course

Blocks A – D		CU	CU
Block A			20
Block A 1:	Basic principles of pathogenesis, diagnostics and therapy	12	
Block A 2:	Mental disorders with pain as guiding symptom and psychosomatic interactions of chronic pain	8	
Block B			20
Block B 1:	Neuropathic pain	10	
Block B 2:	Headache	10	
Block C:	Pain originating from vascular and visceral illnesses, tumor pain, pain in old age or in children and adolescents		20
Block C 1:	Pain originating from vascular illnesses	2	
Block C 2:	Pain originating from visceral illnesses	3	
Block C 3:	Tumor pain	9	
Block C 4:	Pain in old age	3	
Block C 5:	Pain in children and adolescents	3	
Block D:	Muskoskeletal pain		20
Block D 1:	Back pain	7	
Block D 2:	Shoulder and neck pain	3	
Block D 3:	Muscle pain, widespread pain, fibromyalgia	5	
Block D 4:	Arthropathy	5	

3 Contents of the course

Block A

Block A 1: Basic principles of pathogenesis, diagnostics, and therapy (12 CUs)

Contents	Learning targets
1. Epidemiology of chronic pain	<ul style="list-style-type: none"> - Incidence rates, age distribution and costs of chronic pain conditions and the most common localizations of pain (head/face, back, multilocular/somatoform) - Gender specific and genetic correlations
2. Special neurophysiological principles of the development and processing of pain	<ul style="list-style-type: none"> - Neuronal plasticity in the peripheral and central nervous system - Neurobiological principles of pain inhibition, how they are different from the traditional stimulus-reaction model of pain (<i>Descartes</i>)
3. Bio-pyscho-social understanding of pain	<ul style="list-style-type: none"> - Neurobiological principles of biological, stress-related, social and biographical pain processing in the brain - Clinical implementation with regard to the differentiation of diagnostic subgroups as well as to cross-disciplinary cooperations in diagnostics - Knowledge of the sociomedical coherences of chronic pain conditions - Biographical reasons for pain vulnerability - Interactional and relationship-related parameters for the development and communication of pain (physician-patient relationship)
4. Sociocultural differences in the perception and expression of pain	<ul style="list-style-type: none"> - Relationships between pain and the social surroundings - Critical discussion of culture-based variations of pain expression such as the ‚Mittelmeersyndrom‘ (Mediterranean syndrome)
5. Bio-pyscho-social pain anamnesis	<ul style="list-style-type: none"> - Structure and completion of a bio-pycho-social anamnesis for a patient with chronic pain (video-taped example of a patient or case report) - Interviewing techniques and interaction design
6. Measurement and documentation of pain and relevant classification systems	<ul style="list-style-type: none"> - Understanding of the subjectivity of pain and the limits of pain registration procedures - Use and interpretation of pain diaries - Possibilities of standardized documentation, classification according to ICD-10 and IASP - Classification of participation and impairment according to ICF
7. Standardized testing procedures and questionnaires	<ul style="list-style-type: none"> - Possibilities and limitations of the informational value of standardized data collection for quality of life, depressiveness, anxiety, somatization, impairment and processing of pain

	- Knowledge of the diagnostic framework ensuring valid results
8. Sociomedical assessment	- Knowledge of the cross-disciplinary guidelines for the assessment of chronic pain conditions and their application
9. Quality management	- Necessity of interdisciplinary cooperative structures in diagnostics - Possibilities and limitations of pain conferences - Quality circles
10. Concepts of pain chronification	- Competence for the identification and prevention of clinical, social and iatrogenic determinants of chronification
11. Principles of interdisciplinary therapeutic concepts and organizational models	- Understanding of the problems and limitations of mono-disciplinary treatment strategies - Knowledge of the differences between polypragmatic and mechanism-related (interdisciplinary if applicable) pain management
12. Resources for the patient	- Opportunities for stimulating individual patients' resources in support of the therapy, such as psychoeducation and pain control
13. Placebo and nocebo effects	- Neurobiological principles of effect expectations - Importance of the physician-patient relationship - Causes for the increased responsiveness to placebo of pain patients
14. Prevention	- Significance of post-operative pain management - Treatment algorithms for acute back pain, headache or Herpes zoster

Block A 2: Mental disorders with pain as guiding symptom and psychosomatic interactions of chronic pain (8 CUs)

Contents	Learning targets
15. Classification of mental disorders with pain as guiding symptom	- Identification of the range of psychological disorders with pain as potential guiding symptom, differential diagnostic distinctions and differential therapeutic indications
16. Somatoform pain disorder	- Clinical symptoms, diagnostics, differential diagnosis and therapy of somatoform pain disorder (case study)
17. Posttraumatic stress disorder	- Clinical symptoms, diagnostics, differential diagnosis and therapy of posttraumatic stress disorder
18. Anxiety disorder/Hypochondriasis	- Clinical symptoms, diagnostics, differential diagnosis and therapy of various anxiety disorders with pain as guiding symptom
19. Pain and psychological comorbidity	- Knowledge of the prevalence of psychological disorders in the German population with regard to the probability of the occurrence of psychological comorbidity - Modulation of central pain processing due to psychological comorbidity - Treatment planning that accounts for psychological comorbidity (case study)
20. Addiction disorders	- Clinical symptoms, diagnostics, differential diagnosis and treatment planning for addiction as comorbidity
21. Behavior therapy treatments	- Indication, possibilities and limitations of pain control by the means of behavior therapy
22. Relaxation methods	- Indication, possibilities and limitations of relaxation methods and biofeedback
23. Psychodynamic therapy	- Indication, possibilities and limitations of psychodynamic individual and group therapy

Block B

Block B 1: Neuropathic pain (10 CUs)

Contents	Learning targets
24. Pathophysiology of neuropathic pain syndromes <ol style="list-style-type: none">1. Classes of nociceptors2. Synaptic plasticity3. Sensitization4. Corticofugal modulation	<ul style="list-style-type: none">- Knowledge of the history of pain theories- IASP classification, definitions- Explanation of the anatomy and physiology of peripheral nociception, of the functionality of the posterior horn, of the conduction and modulation mechanisms on segmental, spinal and central levels as well as of the central signal processing- MRI and PET results
25. Polyneuropathy, mononeuropathy, neuritis <ol style="list-style-type: none">1. Impingement syndromes2. Large fibre neuropathy3. Small fibre neuropathy4. Inflammatory, immunological neuropathies5. Differential diagnosis	<ul style="list-style-type: none">- Knowledge of the anatomy of the motor, sensory and autonomous nervous systems including spinal relays- Explanation of impairment mechanisms, diagnostic possibilities, the differentiation of nociceptive and myofascial components and the 'mixed pain concept'
26. Diagnostics and imaging	<ul style="list-style-type: none">- Description of electrophysiological methods such as nerve conduction studies, evoked potentials, quantitative sensory testing (QST)
27. Stump and phantom-limb pain	<ul style="list-style-type: none">- Peripheral mechanisms, central plasticity
28. Herpetic and postherpetic neuralgia	<ul style="list-style-type: none">- Definition, disease patterns, diagnostics, specialized therapy
29. Complex regional pain syndrome (CRPSI)	<ul style="list-style-type: none">- Definition, disease patterns and pathophysiology of CRPSI I & II, diagnostics- Sympathically maintained pain (SMP), specialized therapy
30. Central pain	<ul style="list-style-type: none">- Post-stroke syndrome, spinal transverse spinal cord syndrome
31. Mechanism-based pharmaceutical and non- pharmaceutical therapy of neuropathic pain	<ul style="list-style-type: none">- Knowledge of the pharmacology of the transmission of nociceptive signals- Mechanisms for the activation and sensitization of nociceptors, changes in impulse conduction, central sensitization, pain modulation through neurotransmitter- Etiology-oriented treatment strategies- Development of graduated treatment strategies- Mismatch concepts, concept of motor or sensory learning
32. Neurosurgical pain management	<ul style="list-style-type: none">- Neuroaugmentative and neuroablative procedures (deep brain, cortical and spinal stimulation)- Neurovascular decompression, dorsal root entry zone, gangliolysis, pump implantation
33. Anesthesiological therapy of neuropathic pain	<ul style="list-style-type: none">- Indications and treatment procedures for cervical, thoracic and lumbal sympathetic blockages, diagnostic/therapeutic nerve blockages, intrathecal

	analgesia and medication
34. Related case studies	

Block B 2: Headache (10 CUs)

Contents	Learning targets
35. Classification of headache disorders	- History, IHS classification, characteristics of the anamnesis, DMKG (<i>German Migraine and Headache Society</i>) guidelines
36. Anamnesis procedures, neurological examination and instrument-based diagnostics for headache and prosopalgia	- Symptomatic clinical and neurological examination - Use of measuring instruments (calendar, MIDAS, etc.) - Knowledge of the indication and assessment of instrument-based and imaging diagnostics including cerebrospinal fluid diagnosis
37. Physiology and pathophysiology of headache syndromes	- Explanation of the anatomy and physiology of the trigeminovascular system, knowledge of the trigeminal-autonomic reflex and trigeminal transmitter systems, relation between occipital and trigeminal innervation - Knowledge of the key genetic, electrophysiological and imaging studies
38. Diagnostics and therapy of primary headache syndromes	
1. Migraine	- Diagnostics and differential diagnostics of migraines with and without aura including existing varieties - Knowledge of the indication and administration of a pharmaceutical acute therapy and of prophylaxis including non-pharmaceutical treatments
2. Tension-type headaches and chronic headaches	- Diagnostics and differential diagnostics of tension-type headaches, <i>hemicrania continua</i> and chronic migraine - Knowledge of the indication and administration of a pharmaceutical acute therapy and of prophylaxis including non-pharmaceutical treatments - Knowledge of the bio-psycho-social context of the development and progress of chronic headaches
3. Trigeminal autonomic headache syndromes	- Pathophysiological concept, diagnostics and differential diagnostics of cluster headache, <i>paroxysmal hemicrania</i> and the SUNCT syndrome - Knowledge of the indication and administration of a pharmaceutical acute therapy and of prophylaxis
4. Benign exertional headaches and idiopathic stabbing headaches	- Diagnostics and differential diagnostics of the grouping of benign exertional headaches (including cough headache and headache associated with sexual activity (<i>coital cephalalgia</i>)) and the grouping of idiopathic stabbing headaches - Knowledge of the indication and administration of a pharmaceutical acute therapy and of prophylaxis
5. Headaches in children and during pregnancy	- Particularities of the diagnostics and treatment of headaches in children and headaches during

	pregnancy and breastfeeding
39. Diagnostics and treatment of secondary headache syndromes	- Knowledge of the diagnostics, differential diagnostics and treatment of headaches related to hemorrhages, tumors, sinus thrombosis, <i>pseudotumor cerebri</i> , giant cell arteritis (<i>arteritis cranialis</i>), dissections, meningitis
40. Diagnostics and treatment of primary facial pain syndromes	- Knowledge of the diagnostics and treatment of facial neuralgia and cranial neuralgia and idiopathic persistent facial pain
41. Diagnostics and treatment of secondary facial pain syndromes	- Classification of facial pain - Knowledge of the diagnostics and treatment of post-herpetic neuralgia, dental and ENT-related aspects of facial pain and craniomandibular dysfunction
42. Headache induced by medication or toxic substances	- Diagnostics and treatment of medication-overuse headache - Groups of substances, alcohol, caffeine, drugs - Addiction, dependence, withdrawal problems
43. Non-pharmaceutical treatments	- Bio-psycho-social pain model for cranial and facial pain - Additional psychological diagnostics - Overview of non-pharmaceutical treatment methods, presentation of treatment programs such as concordance therapy and patient training programs (MIPAS)
44. Related case studies	

Block C: Pain originating from vascular and visceral illnesses, tumor pain, pain in old age or in children and adolescents

Block C 1: Pain originating from vascular illnesses (2 CUs)

Contents	Learning targets
45. Epidemiology, pathophysiology	- Pathophysiology of vascular illnesses and pain; particularities of cardiac nociception
46. Symptomatology of chronic arterial circulatory insufficiency <ol style="list-style-type: none"> 1. Heart (<i>angina pectoris</i>) 2. Extremities (peripheral occlusive diseases) 3. Mesenteric vessels (<i>abdominal angina</i>) 4. Angiitis and Raynaud's symptomatology 5. Venous diseases 	- Symptomatology of vascular illnesses with special regard to the chronic forms of diseases progression (aiming for symptom-oriented therapy after exhaustion of all causal treatment therapies)
47. Characteristics of anamnesis, examination, diagnostics, differential diagnostics	- Anamnestic characteristics: concomitant diseases, risk factors, rest pain and pain due to exertion - Significance and special aspects of clinical examinations, e.g., challenge tests, sensitivity, reflexes - Verification of diagnosis
48. Therapy	- Etiology-oriented treatment strategies: elimination of risk factors, treatment of concomitant diseases, interventions for opening vessel lumen and vessel reconstruction - Symptomatic treatment strategies: sympathetic blockades/neurolysis, significance of spinal cord stimulation (SCS), procedures using local anesthesia, analgesics
49. Related case studies	

Block C 2: Pain originating from visceral illnesses (3 CUs)

Contents	Learning targets
50. Epidemiology, pathophysiology	- Pathophysiology of visceral pain; peripheral and central mechanisms (phenomenon of projection and convergence: Head's zones; myofascial projections)
51. Symptomatology 1. Chronic urogenital pain syndromes (e.g., interstitial cystitis) including pelvic floor pain 2. Chronic abdominal pain syndromes 3. Chronic thoracic pain	- Symptomatology of visceral pain, especially urogenital pain syndromes, chronic abdominal pain, chronic thoracic pain - Differentiation between nociceptive and neuropathic pain, functional somatic pain syndromes, mental disorders with pain as guiding symptom and mixed forms
52. Characteristics of anamnesis, examination, diagnostics, differential diagnostics	- Anamnestic characteristics in particular regarding warning signs ('red flags') and psychological (concomitant) symptoms ('yellow flags') - Significance and special aspects of clinical examinations - Rational possibilities offered by diagnostics by exclusion and further diagnostics for verification of diagnosis or for differential diagnosis
53. Therapy	- Use and efficacy of analgesics, co-analgesics, special drugs - Sensible use of invasive procedures (e.g., SCS for CHD, pudendal anesthesia) and psychotherapeutic interventions - Significance of interdisciplinary multimodal group therapy
54. Bio-psycho-social interaction of vascular and visceral pain	- Effects of psychosocial stress, sickness behavior, coping with illness and restricted quality of life
55. Somatoform autonomous functional disorders	- Knowledge of mental disorders with the guiding symptom pain in the case of abdominal, thoracic and urogenital pain syndromes
56. Related case studies	

Block C 3: Tumor pain (9 CUs)

Contents	Learning targets
57. Epidemiology of tumor pain, pathophysiology	<ul style="list-style-type: none"> - Differentiation between tumor-induced, tumor-associated, therapy-induced and tumor-independent pain - Overview of nociceptive and neuropathic pain - Bone pain, myofascial pain - Soft tissue pain, visceral pain, (radiogenic) plexus injury - Hypotheses regarding nociceptive and neuropathic pain related to tumors
58. Characteristics of anamnesis, examination, diagnostics	<ul style="list-style-type: none"> - Identification of intensifying psycho-social factors such as depression or anxiety - Examination and diagnostics of nociceptive and neuropathic pain
59. Pharmaceutical therapies for tumor pain <ol style="list-style-type: none"> 1. Non-opioid analgesics, opioids 2. Co-analgesics, non-analgesics 3. Side effects and complications of analgesics 	<ul style="list-style-type: none"> - Effects, side effects and use of non-opioid and opioid analgesics, equianalgesic dosages, treatment of side effects - Effects, side effects and use of antidepressants, anticonvulsants, myotonolytic agents, NMDA antagonists, glucocorticoids, cannabinoids, psychostimulants - Prescription of opioids and co-analgesics regulated under the prescription regulations for narcotics - WHO Pain Relief Ladder and application principles - Concepts for the differentiated application of the various application forms (e.g., oral, rectal, transdermal, buccal, intravenous, subcutaneous)
60. Non-pharmaceutical therapies	<ul style="list-style-type: none"> - Importance and application of non-pharmaceutical treatments, i.e., TENS, acupuncture, therapies used in physical medicine
61. Difficult pain problems <ol style="list-style-type: none"> 1. Excessive side effects, decreased sensitivity to opioids 2. Episodic pain, perforation pain 3. Bone pain 4. Neuropathic pain 5. Visceral pain (e.g., in the case of the affection of an organ, peritoneal carcinomatosis, ascites, ileus, preileus) 	<ul style="list-style-type: none"> - Concepts of tolerance and hyperalgesia, opioid rotation and the differential indication of opioids, NMDA antagonists - Concepts and treatment of episodic pain (basic therapy and treatment of an attack), bone pain including vertebroplasty and radionuclides, neuropathic pain syndromes, difficult visceral pain - Indications for an epidural, intrathecal therapy
62. Interventional pain management	<ul style="list-style-type: none"> - Indication, application and monitoring of epidural, intrathecal pain pumps, ganglion coeliacæ neurolysis, chordotomy
63. Palliative medicine, hospice	<ul style="list-style-type: none"> - Objectives of palliative medicine and their

care, symptom control, ethics	<p>implementation/realization, its differentiation from hospice and hospice care</p> <ul style="list-style-type: none"> - Control of dyspnea and gastrointestinal symptoms - Significance of antitumor therapies for analgesia - Communication, supportive psychological measures and spiritual needs - Medical decisions at the end of life - Health care proxy, living will
64. Related case studies	

Block C 4: Pain in old age (3 CUs)

Contents	Learning targets
65. Epidemiology	- Frequency of pain in old age, medical treatment situation
66. Nociception and individual pain perception	- Effects of chronic pain in old patients, functional impairments, cognitive impairments, emotional and social effects, quality of life
67. Comorbidity	- Altered structures of organs in old age (neuronal structures, gastrointestinal tract, plasma protein binding, liver function, kidney function, fat and water content) and their implications for pharmaceutical therapies
68. Age-specific diagnostics	- Special instruments for pain registration and documentation
69. Age-specific therapy	- Physical therapy, customized training methods, psychological treatments - Particularities of drug application (starting dosage, dosage increases and reductions, extension of application intervals), side effects - Interactions due to multi-medication

Block C 5: Pain in children and adolescents (3 CUs)

Contents	Learning targets
70. Pathophysiology of the nociceptive system of children with special regard to premature babies and newborns	<ul style="list-style-type: none"> - Particularities of the nociceptive system of premature and newborn babies with regard to neurotransmitter structure and opioid receptors - Effects of strong pain stimuli (temporary and long term)
71. Differential diagnosis of the causes of pain	<ul style="list-style-type: none"> - Chronic pain is less frequent in children than in adults - Cause-oriented treatment is more often possible if the organic causes of childhood pain are known and can be excluded
72. Measurement of pain Registration and measurement of pain	<ul style="list-style-type: none"> - Understanding of pain measuring in relation to age and developmental stages - Observation of newborns, infants, toddlers after surgery, in ICU, during artificial respiration and of children with multiple disabilities - Self-assessment of acute and chronic pain using smiley scales and questionnaires - Pain diaries
73. Pain management Clinical pharmacological principles	<ul style="list-style-type: none"> - Pediatric particularities of the development of opioid receptors - Pharmacokinetics (absorption, protein binding, distribution, elimination) - Dosage calculation (e.g., based on body weight) - Side effects (e.g., Reye syndrome for ASS) - Registration of analgesics - Dosage forms - Pediatric characteristics of the most important analgesics and local anesthetics
74. Pain management in pediatric hemato-oncology	<ul style="list-style-type: none"> - Special methods for the measurement of pain - Pain management for therapy and tumor associated pain - Selection and dosage of opioids, non-opioids, co-analgesics and supportive medication - Neuropathic pain - Pain management and care in palliative situations - PCA in pediatric oncology

Block D: Muscoskeletal pain

Block D 1: Back pain (7 CUs)

Contents	Learning targets
75. Differential diagnostics	<ul style="list-style-type: none">- Specific and non-specific pain: local back pain, radicular and pseudo-radicular symptoms, spinal stenosis, osteoporotic spondylodiscitis, myopathy, myositis- Spontaneous course: crossings and similarities with muscle pain, widespread pain and fibromyalgia
76. Diagnostics	<ul style="list-style-type: none">- Bio-psycho-social anamnesis: functional disorders, structural causes- Physical examination: inspection, manual diagnostics, neurological diagnostics- Significance of imaging diagnostics- Interdisciplinary assessment- Significance and consideration of factors for chronification
77. Therapy	<ul style="list-style-type: none">- Guideline-informed proceedings, patient information, pharmaceutical therapy, manual therapy- Physical medicine: physical therapy, physiotherapy and training therapy- Acupuncture (TCM)- Psychotherapy, biofeedback- Interventional treatments- Interdisciplinary multimodal therapy programs- Surgical therapy options
78. Prevention	<ul style="list-style-type: none">- Risk factors- Patient education- Ergonomical treatments
79. Related case studies	

Block D 2: Shoulder and neck pain (3 CUs)

Contents	Learning targets
80. Differential diagnostics	<ul style="list-style-type: none">- Specific disorders of the cervical spine and shoulders- Cervical myelopathy- Whiplash injury- Functional disorders and myofascial pain- Rotator cuffs disorders, arthrosis of the shoulder joint, acromion or sternoclavicular arthrosis, unstable or frozen shoulder, polymyalgia rheumatica, myopathy, myositis
81. Diagnostics	<ul style="list-style-type: none">- Bio-psycho-social anamnesis- Differential diagnostics: functional disorders (trigger points, projected pain), structural causes- Physical examination: inspection, manual diagnostics, neurological diagnostics- Significance of imaging diagnostics

Block D 3: Muscle pain, widespread pain, fibromyalgia (5 CUs)

Contents	Learning targets
82. Definition, epidemiology	<ul style="list-style-type: none"> - Spontaneous course and bio-psycho-social chronification model: risk factors, pathogenesis - Characteristics of muscle pain - Muscle pain and hyperalgesia
83. Differential diagnostics	<ul style="list-style-type: none"> - Transition from peripheral (muscle) pain to central widespread pain: myofascial pain, widespread (generalized) pain, trigger and tender points, transitions, similarities, facultative symptoms, somatic complaints, comorbidities - Myopathy, myositis - Periarticular pain - Neuro-orthopedic symptoms - Similarities of widespread pain, fibromyalgia, somatoform and depressive disorders
84. Diagnostics	<ul style="list-style-type: none"> - Arthrogenic vs. radicular vs. pseudo-radicular and projected pain - Clinical criteria, facultative symptoms, somatic complaints - Manual diagnostics, functional diagnostics (muscle testing), neurological diagnostics - Diagnostic value of laboratory and mechanical procedures - Differentiation of patient subgroups
85. Therapy	<ul style="list-style-type: none"> - Decision over local vs. global treatment - Treatment of trigger points - Therapeutic local anesthetics (TLA) - Physical medicine: physical therapy, physio and training therapy - Acupuncture (TCM) - Pharmaceutical treatments - Interdisciplinary multimodal therapy programs - Therapeutic prognosis
86. Related case studies	

Block D 4: Muscle pain, widespread pain, fibromyalgia (5 CUs)

Contents	Learning targets
87. Differential diagnostics	<ul style="list-style-type: none">- Arthrosis and arthritis- Post-traumatic arthrosis- Inflammatory rheumatic diseases- Periarticular pain
88. Diagnostics	<ul style="list-style-type: none">- Anamnestic evidence, physical examination, functional diagnostics, manual diagnostics, laboratory differential diagnostics, imaging diagnostics and their therapeutical significance- Joint blockages- Algorithm for the investigation of joint pain
89. Therapy	<ul style="list-style-type: none">- Possible therapeutical approaches: Pharmaceutical treatments, manual therapy- Physical medicine: physical therapy, physiotherapy and training therapy- Acupuncture (TCM)- Interdisciplinary complex treatment- Interventional and surgical therapy options
90. Related case studies	

4 Bibliographical Reference

Core Curriculum for Professional Education in Pain
3rd Edition
Taskforce on Professional Education
Editor: J. E. Charlton
IASP Press
2005

5 Appendix

Up-to-date versions of the *(Model) Regulations Governing Specialist Medical Training* and the below listed publications are available online from www.bundesaerztekammer.de:

- * *(Muster-)Weiterbildungsordnung (MWBO)* [(Model) Regulations Governing Specialist Medical Training]
- * Allgemeine Bestimmungen für den Abschnitt C der *(Muster-)Weiterbildungsordnung* [General Regulations for Section C of the *(Model) Regulations Governing Specialist Medical Training*]
- * *Zusatz-Weiterbildung „Spezielle Schmerztherapie“* [Additional Specialist Medical Training “Specialized Pain Management”]
- * *(Muster-)Richtlinien über den Inhalt der Zusatz-Weiterbildung „Spezielle Schmerztherapie“* [(Model) Guidelines for the Content of the Additional Specialist Medical Training “Specialized Pain Management”]
- * *(Muster-)Logbuch über die Zusatz-Weiterbildung „Spezielle Schmerztherapie“* [(Model) Logbook for the Additional Specialist Medical Training “Specialized Pain Management”]

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