



UČNI NAČRT PREDMETA / COURSE SYLLABUS

Ime predmeta:	Nastanek in vrste bolečine ter primerna obravnava bolnika z bolečino
Course title:	Beginning and the types of pain and appropriate management of the patient with pain

Študijski program in stopnja Study programme and cycle	Študijska smer Study option	Letnik Year of study	Semester Semester
Splošna medicina, enovit magistrski študijski program		Četrty, peti, šesti	7., 9., 11.
General medicine, Uniform master's degree study program		Fourth, fifth, sixth	7th, 9th, 11th

**Vrsta predmeta (obvezni ali izbirni) /
Course type (compulsory or elective)**

izbirni

elective

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial			Klinične vaje Clinical training	Druge oblike študija Other forms of study	Samost. delo Individual work	ECTS
		AV	LV	RV				
5	40						45	3

Nosilec predmeta / Course coordinator:

Doc. dr. Andreja Möller Petrun

Jeziki /Languages:

Predavanja / Lectures: slovenski/slovene

Vaje / Tutorial: slovenski/slovene

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Prerequisites for enrolling in the course or for performing study obligations:

Vsebina (kratak pregled učnega načrta):

1. Uvod: fiziologija in psihologija bolečine, anamneza in pregled
2. Akutna bolečina
3. Bolečina zaradi raka
4. Nevropatska bolečina
5. Razvoj kronične bolečine
6. Specifični bolečinski sindromi

Content (syllabus outline):

1. Introduction: physiology and psychology of pain, history and examination
2. Acute pain
3. Cancer pain
4. Neuropathic pain
5. Development of pain chronicity
6. Specific pain syndromes

Temeljni literatura in viri / Reading materials:

TEMELJNI VIRI::

Cheng J, Rosenquist RW. (Eds.). **Fundamentals of Pain Medicine 1st ed. 2018 Edition, Springer International Publishing AG 2018**

Ballantine JC, Fishman SM, Rathmell JP. *Bonica's management of pain*. LWW: Philadelphia 2018

Gold MS, Pogatzki-Zahn EM, Wallace MS. *Pain 2018: Refresher courses, 17th World Congress on Pain*. Boston :IASP Press 2018

MÖLLER PETRUN, Andreja (Ur). *Urgentna medicina. Modul 1, Analgezija v urgentni medicini : učbenik*. 1. izd. Maribor: Univerzitetni klinični center, 2024. ISBN 978-961-7196-27-6. <https://www.ukc-mb.si/strokovna-srecanja/zborniki>. [COBISS.SI-ID 186003203]

DODATNI VIRI:

Goebel A et al. Standards for diagnosis and management of complex regional pain syndrome. *Eur J Pain* :2019;23(4):641-51. <https://onlinelibrary.wiley.com/doi/10.1002/ejp.1362>

Hauser W et al. European clinical practice recommendations on opioids for chronic noncancer pain- part 1. *Eur J Pain* 2021;25(5):949-968. <https://doi.org/10.1002/ejp.1736>

Krčevski Škvarč N et al. European clinical practice recommendations on opioids for chronic noncancer pain- part 2. *Eur J Pain* 2021;25(5):969-985. <https://doi.org/10.1002/ejp.1744>

Bennet et al. Standards for the management of cancer-related pain across Europe- a position paper from the EFIC Task Force on Cancer. *Eur J Pain* 2019;23(4):660-668. <https://onlinelibrary.wiley.com/doi/full/10.1002/ejp1346>

PS41/G) Position statement on acute pain management 2022. <https://www.anza.edu.au/getattachment/558316c5-ea93-457c-b51f-d57556b0ffa7/PS41-guideline-on-acute-pain-management>

Cilji in kompetence:

Cilji:

Pridobiti osnovno znanje in veščine za diagnosticiranje in zdravljenje bolečine na izčrpen in jasen način.

Kompetence:

Študent bo sposoben opraviti pregled bolnika z bolečino in jo opredeliti po vzroku, patofiziologiji, lokalizaciji in trajanju. Študent bo lahko ocenil bolečino, razumel njen vpliv na kakovost življenja bolnika in bo sposoben oceniti kateri načini zdravljenja so primerni za določeno bolečino.

Objectives and competences:

Objectives:

The students will acquire basic knowledge and core skills for diagnosis and treatment of pain in a comprehensive and coherent fashion.

Competences:

student will be able to perform the examination of patient with pain and to identify pain causes, pathophysiology, localization and duration. Student will be able to measure pain and its implications for the patients' quality of life and will be able to assess the appropriate pain management for the certain pain.

Predvideni študijski rezultati:

Znanje in razumevanje:

- Primarno bodo študenti:

-sposobni pri bolniku ugotoviti in oceniti bolečino

-razumeti bolnikovo bolečino iz vseh videzov kakovosti življenja,

Intended learning outcomes:

Knowledge and understanding:

- Primarily, students should:

-be able to identify patients with pain and measure pain

-learn to understand a patient's pain and all its implications for the patient's quality of life

-uporabiti metode analgezije za doseganje učinkovite kontrole bolečine, klasificirati metode izbirnega zdravljenja po stopnjevalni shemi
 -sposobni oceniti učinkovitost določene obravnave bolečine
 -prepoznati indikacije in uporabiti primerno psihoterapevtsko zdravljenje

- Delno bodo študenti usposobljeni za prepoznavanje in osnovno specifično obravnavo:

-akutne bolečine po poškodbi in operaciji
 -bolečine zaradi raka
 -nevropatske bolečine
 -kronične bolečine, ki ni posledica raka
 -funkcionalnih bolečih sindromov

Prenesljive/ključne spretnosti in drugi atributi:
 Predmet omogoča, da študent spozna pomen celostne obravnave bolnika z bolečino

-know and apply the methods of analgesia which offer effective pain control for the majority of patients, and to classify those methods in a graded scheme
 -be able to evaluate the effectiveness of a particular pain management
 -know and be able to apply the indications for appropriate psychotherapeutic treatment for pain

- In particular, student should be able to differentiate between and to know the basic principles of specific treatment of main syndromes:

-acute post-traumatic and post-operative pain
 -cancer pain
 -neuropathic pain
 -chronic non-cancer pain
 -functional pain syndromes

Transferable/Key Skills and other attributes:
 The course will enable student to recognize the importance of integral pain management

Metode poučevanja in učenja:

- Predavanja
- Klinični primeri
- Seminarji

Learning and teaching methods:

- Lectures
- Clinical cases
- Seminars

Načini ocenjevanja:	Delež (v %) / Share (in %)	Assessment methods:
<p>Način (pisni izpit, ustno izpraševanje, naloge, projekt)</p> <ul style="list-style-type: none"> • Seminar • Pisni izpit <p>ŠTUDIJSKE OBVEZNOSTI ŠTUDENTOV: Obvezna prisotnost na seminarjih in kliničnih vajah</p> <p>POGOJI ZA PRISTOP K POSAMEZNEMU PREVERJANJU ZNANJA: Seminarska naloga je pogoj za pisni izpit</p>	<p>50 50</p>	<p>Type (examination, oral, coursework, project):</p> <ul style="list-style-type: none"> • Seminar • Written exam <p>ACADEMIC OBLIGATIONS OF STUDENTS: Obligatory presence at seminars and clinical cases</p> <p>REQUIREMENTS FOR ACCESS TO INDIVIDUAL KNOWLEDGE CHECKING: Coursework is prerequisite for written exam</p>

Reference nosilca / Course coordinator's references:

1. ZARBOCK, Alexander, WEISS, Raphael, ALBERT, Felix, RUTLEDGE, Kristen, KELLUM, John A., GRIGORYEV, Evgeny, CANDELA-TOHA, Angel M., DEMIR, Z. Asli, LEGROS, Vincent, ROSENBERGER, Peter, et al., MOLLER PETRUN, Andreja (927), GREGORCIC, Irena (927), SOK, Vesna (927), et al. Epidemiology of surgery associated acute kidney injury (EPIS-AKI) : a prospective international observational multi-center clinical study. Intensive care medicine. [Online ed.]. 2023, [v tisku][15 str.], ilustr. ISSN 1432-1238. <https://doi.org/10.1007/s00134-023-07169-7>, <https://link.springer.com/article/10.1007/s00134-023-07169-7>, DOI: 10.1007/s00134-023-07169-7. [COBISS.SI-ID 160363523], [JCR, SNIP, WoS do 27. 11. 2023: št. citatov (TC): 1, čistih citatov (CI): 1, čistih citatov na avtorja (CIAu): 0.04, Scopus do 3. 1. 2024: št. citatov (TC): 3, čistih citatov (CI): 3, čistih citatov na avtorja (CIAu): 0.12]

2. WEISS, Raphael, SAADAT-GILANI, Khaschayar, KERSCHKE, Laura, WEMPE, Carola, MEERSCH, Melanie, ZARBOCK, Alexander, MOLLER PETRUN, Andreja (927), GREGORCIC, Irena (927), SOK, Vesna (927), et al. Epidemiology of

surgery-associated acute kidney injury (EPIS-AKI) : study protocol for a multicentre, observational trial. *BMJ open*. 2021, vol. 11, issue 12, str. 1-9, ilustr. ISSN 2044-6055. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8718477/>, DOI: 10.1136/bmjopen-2021-055705. [COBISS.SI-ID 98439683], [JCR, SNIP, Scopus do 24. 10. 2023: št. citatov (TC): 4, čistih citatov (CI): 3, čistih citatov na avtorja (CIAu): 0.11]

3. MOLLER PETRUN, Andreja, SELINŠEK, Jasna, MEKIŠ, Dušan. Neurological complications during pregnancy, delivery and puerperium requiring intensive therapy management. *Signa vitae*. 2023, [v tisku][str. 1-9]. ISSN 1845-206X. <https://www.signavitae.com/articles/10.22514/sv.2023.120>, DOI: 10.22514/sv.2023.120. [COBISS.SI-ID 176998403], [JCR, SNIP]

4. MOLLER PETRUN, Andreja, ZDRAVKOVIĆ, Marko, BERGER, Robert, SRAKA, Denis, MEKIŠ, Dušan. Perioperative right ventricular dysfunction in adult patients undergoing non-complex cardiac surgery: diagnosis and management. *Signa vitae*. 2023, [v tisku][str. 1-12], ilustr. ISSN 1845-206X. <https://www.signavitae.com/articles/10.22514/sv.2023.047>, DOI: 10.22514/sv.2023.047. [COBISS.SI-ID 157260035], [JCR, SNIP, WoS, Scopus]

5. MOLLER PETRUN, Andreja. Ocenjevanje analgezije, sedacije, delirija in motenj spanja v enotah intenzivne terapije ter opis nefarmakoloških ukrepov = Assessment of analgesia, sedation, delirium and sleep disturbance in the intensive therapy unit and description of non-pharmacological interventions. *Zdravniški vestnik : glasilo Slovenskega zdravniškega društva*. [Tiskana izd.]. maj-jun. 2021, letn. 90, št. 5/6, str. 288-306, ilustr. ISSN 1318-0347. <https://vestnik.szd.si/index.php/ZdravVest/article/view/3055/3252>, <http://www.dlib.si/details/URN:NBN:SI:doc-ZETK6DJ4>. [COBISS.SI-ID 71589891], [SNIP]