

Course title

Immunohistochemical analysis and prognostic significance of molecular markers in oral potentially malignant lesions

Department

Department of Oral medicine

Address

Gundulićeva 5

Total ECTS points

Course leader

Assistant professor Ana Andabak Rogulj

Course associates

Ivana Pavić, PhD, MD

Teaching plan

	No. classes
Lecture	5
Seminar	1
Practical	2
Total	8

1 class = 45 minutes

Course description

The curriculum of this course will include current knowledge of molecular markers examined in oral potentially malignant lesions (OPML) and which correlate with the presence and degree of dysplasia and / or their tendency to malignant transformation into oral squamous cell carcinoma (OSCC). In addition, the course is intended for candidates who plan to use immunohistochemical analysis in their research to better understand the distribution and localization of individual molecular markers in OPML such as oral leukoplakia (OL) and oral lichen planus (OLP).

Learning outcomes

1. Identify potentially malignant lesions in the oral cavity
2. Select the most important molecular markers and evaluate the justification for their use in individual lesions
3. Demonstrate the procedure of sample preparation for immunohistochemistry
4. Demonstrate the procedure of immunohistochemical tissue staining

Course content

Lecture

	Lecture topics	Number of classes/hours
1.	Oral potentially malignant lesions (OPML)	1
2.	Oral carcinogenesis	1
3.	Diagnostic challenge of early detection of oral squamous cell carcinoma (OSCC)	1
4.	Basics of immunohistochemical methods	1
5.	Contemporary knowledge and prognostic significance of molecular markers in OPML	1
6.	-	-
7.	-	-
8.	-	-
9.	-	-
10.	-	-

1 sat = 45 minuta

Seminari

	Seminar topics	Number of classes/hours
1.	Management implications of molecular markers	1
2.	-	-
3.	-	-
4.	-	-
5.	-	-
6.	-	-
7.	-	-
8.	-	-
9.	-	-
10.	-	-

1 sat = 45 minuta

Vježbe

	practicals topics	Number of classes/hours
1.	Sample / tissue preparation in immunohistochemistry	1
2.	Immunohistochemical staining	1
3.	-	-
4.	-	-
5.	-	-
6.	-	-

7.	-	-
8.	-	-
9.	-	-
10.	-	-

1 class = 45 minutes

Literature

1. Vukoja N, Hančić S, Korać P. Razvoj metoda imunohistokemijskog bojenja i optimizacija protokola za detekciju transkripcijskog faktora BACH2. *J. appl. health sci.* 2017; 3(2): 235-245.
2. Kim S-W, Roh J, Park C-S. Immunohistochemistry for Pathologists: Protocols, Pitfalls, and Tips. *Journal of Pathology and Translational Medicine* 2016; 50: 411-418.
3. Pavić I. Značenje imunohistokemijske izraženosti FHIT-a, EGFR-a i Bcl-2 u bolesnika s oralnim lihenom planusom. Doktorska disertacija, Sveučilište u Zagrebu. Dostupno na: <http://medlib.mef.hr/2238>.
4. Žužul I, Andabak Rogulj A, Terlević D, Pavić I, Granić M, Vuletić M, Jerković D. The Role Of Ki-67 In Oral Leukoplakia-Review Article. *RJPBCS.* 2019;10(2);36-40.
5. Tomasović-Lončarić Č, Fučić A, Andabak Rogulj A, Andabak M, Ceppi M, Bruzzone M, Vrdoljak D, Vučićević-Boras V. Androgen Receptor as a Biomarker of Oral Squamous Cell Carcinoma Progression Risk. *Anticancer research* 2019;39(8):4285-9. doi:10.21873/anticancer.13593.
6. Pavić I, Balicević D, Vrdoljak B, Filipović M, Zekić J, Vučićević-Boras V. The significance of FHIT and Bcl-2 in patients with oral lichen planus in comparison to the healthy oral mucosa and oral squamous cell cancer. *Libri Oncol.* 2017;45(1):9–14.
7. Žužul I, Granić M, Kuna T, Kotarac Knežević A, Andabak Rogulj A. The Significance of Ki-67 in Head and Neck Cancers: Review Article. *RJPBCS.* 2018; 9(6):34-8.

CV (*curriculum vitae*) and bibliography of course leader

Assistant professor Ana Andabak Rogulj, oral medicine specialist, was born in 1982 in Zagreb. She graduated from the School of dental medicine in Zagreb in 2007, and in 2008 she enrolled in the Postgraduate Specialist Study of Dental Medicine. Since 01.06.2009. she is employed at the School of dental medicine in Zagreb at the Department of Oral Medicine. She actively participates in teaching, scientific and clinical activities of the Department of Oral Medicine, School of dental medicine, University of Zagreb. In October 2010, she began specialist training in oral medicine at the Clinic of Dentistry of the Clinical Hospital Center Zagreb. She passed the specialist exam in October 2013. She defended her doctoral dissertation in 2014 at the Faculty of Dentistry, University of Zagreb. Since 2021, she is an employee of the Clinic of Dentistry at the University Hospital Center Zagreb.

She is the author and co-author of several scientific and professional papers and co-author of 4 chapters in textbooks and books: "Skin diseases with changes in the face and oral cavity" (Medicinska naklada 2017), "Dental medicine for the elderly in practice" (Medicinska naklada 2018), "Oral side-effect of head and neck irradiation" (Intech 2017) and "Applications of low level laser therapy

”(Intech 2013). Participates in an international multicenter research project led by Prof. Mike Brennan, who examines the impact of drugs on salivation (“Impact of medicines on stimulated and unstimulated salivary flow in patients with Sjogren’s syndrome: a retrospective controlled clinical study”). Since 2014, she has been a member of the working group of the International Society of Oral Oncology (ISOO, MASCC) for the development of guidelines for xerostomia.

She has participated in several congresses and symposiums in the country and abroad and continuously participates as a lecturer in continuing education courses for doctors of dental medicine. She speaks English actively and German passively.

She is a member of the Croatian Chamber of Dental Medicine, the Croatian Medical Association, the Croatian Society for Oral Medicine and Pathology, the Croatian Society for Hospital Dentistry/Dentistry, the European Association of Oral Medicine (EAOM), the Multinational Association of Supportive Care in cancer (MASCC), International Society of Oral Oncology (ISOO).

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