



UNIVERSITATEA DE MEDICINĂ ȘI FARMACIE
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Anexa 5

**STANDARDELE MINIMALE, NECESARE ȘI OBLIGATORII
PENTRU ÎNSCRIERE LA CONCURS
pentru ocuparea postului de Asistent Universitar
perioadă nedeterminată**

- Deținerea diplomei de Doctor în domeniul postului¹/Adeverinței Școala Doctorală
Doctor în Medicină confirmat prin Decizie Rector nr. 123/09.02.2026 – Diploma de Doctor seria J, nr. 79954
- Deținerea titlului de medic rezident sau a unui titlu medical superior la disciplinele de concurs cu corespondent în Rețeaua Sanitară, în specialitatea postului
Medic Specialist Stomatologie generală confirmat prin Ordin MS nr. 1001/12.02.2024, Certificat de medic specialist Stomatologie generală nr. 55097/14.02.2024
- Minimum 2 lucrări în reviste din domeniul postului pentru care candidează (medicină, medicină dentară, farmacie sau științe ingineresti, în conformitate cu postul scos la concurs), in extenso, dintre care 1 articol în reviste cotate ISI, prim autor sau autor corespondent, 1 articol în reviste BDI, prim autor.

Lucrări în revistă cotate ISI²

1. **Butnaru, O.-M.** (prim autor), Tatarciuc, M., Luchian, I., Tudorici, T., Balcos, C., Budala, D. G., Sirghe, A., Virvescu, D. I., & Haba, D. (2025). AI EFFICIENCY IN DENTISTRY: COMPARING ARTIFICIAL INTELLIGENCE SYSTEMS WITH HUMAN PRACTITIONERS IN ASSESSING SEVERAL PERIODONTAL PARAMETERS. Medicina, 61(4), 572. <https://doi.org/10.3390/medicina61040572>

FI = 2,4;

[Link către dosarul electronic](#) umfiiasi.ro

2. **Butnaru, O.-M.**, Tatarciuc, D., Haba, M. Ș. C., Budală, D., Sirghe, A., Păsărin, L., Luchian, I., & Haba, D. (2024). EVALUATING THE RISK OF HYPERTENSION DEVELOPMENT

¹ Nume diplomă, serie, număr

² Autori, titlu articol, nume revistă, volum, număr, paginatie, factor de impact al revistei pentru anul publicării articolului, link

IN THE CONTEXT OF PERIODONTITIS. Romanian Journal of Oral Rehabilitation, 16(3), 126–133. <https://doi.org/10.6261/RJOR.2024.3.16.13>

<https://rjor.ro/evaluating-the-risk-of-hypertension-development-in-the-context-of-periodontitis/>

FI= 0,7;

[Link către dosarul electronic](#)

Lucrări în revistă indexată BDI³

1. **Oana BUTNARU** (prim autor), BIDA, F. C., TATARCIUC, D., G. ROTUNDU, SÎRGHE, A., Cătălina LIONTE, I. LUCHIAN, & HABA, D. (2024). RESEARCH ON THE BIDIRECTIONAL RELATIONSHIP BETWEEN PERIODONTAL DISEASE AND HIGH BLOOD PRESSURE. The Medical-Surgical Journal, 128(3), 613–623. <https://www.revmedchir.ro/index.php/revmedchir/article/view/3023>
2. **Oana BUTNARU** (prim autor), TATARCIUC, D., BIDA, F. C., BALCOS, C., CONSTANTIN, V., COJOCARU, C., Teona TUDORICI, G. ROTUNDU, SIRGHE, A., & HABA, D. (2025). THE ACCURACY OF AI-ASSISTED IMAGING DIAGNOSIS VERSUS CONVENTIONAL EVALUATION OF DENTAL PROFESSIONALS. The Medical-Surgical Journal, 129(1), 236–245. <https://doi.org/10.22551/MSJ.2025.01.26>

[Link către dosarul electronic](#)

Pentru posturile de asistent, altele decât cele din domeniul sănătate și științe ingineresti (educație fizică, psihologie, limbi moderne), echivalarea standardelor minime se face conform art.29, al.(9) din Metodologie.

³ Autori, titlu articol, nume revistă, volum, număr, paginație, numele bazei internaționale de date, link

hyperplasia for evaluating the risk of hyperplasia development in the context of

periodontitis

F1=0.75

[Link to the document](#)

1. Oana BUTNARIU (from author), BIDA, F. C., TATARCIUC, D., G. ROTUNDU,

SIRGHE, A., CARMAN CIOBULE, I. LUCHIAN, & HABAB, D. (2024). RESEARCH ON

THE BIDIRECTIONAL RELATIONSHIP BETWEEN PERIODONTAL DISEASE

AND HIGH BLOOD PRESSURE. The Medical-Surgical Journal, 128(3), 613-623.

<https://www.researchgate.net/publication/3812757023>

[Link to the document](#)

2. Oana BUTNARIU (from author), TATARCIUC, D., BIDA, F. C., BALCOS, C.,

CONSTANTIN, V., COJOCARIU, C., TUDORICI, G. ROTUNDU, SIRGHE, A.,

& HABAB, D. (2023). THE ACCURACY OF AI-ASSISTED IMAGING DIAGNOSIS

VERSUS CONVENTIONAL EVALUATION OF DENTAL PROFESSIONALS. The

Medical-Surgical Journal, 129(1), 236-245. <https://doi.org/10.22551/MSJ.2023.01.20>

[Link to the document](#)

From a point of view of assistance, these dental care professionals should be able to identify the most appropriate treatment for each patient, taking into account the patient's medical history, the patient's oral health, and the patient's financial situation.

Article

AI Efficiency in Dentistry: Comparing Artificial Intelligence Systems with Human Practitioners in Assessing Several Periodontal Parameters

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Abstract: Artificial intelligence (AI) is increasingly used in healthcare, including dental and periodontal diagnostics, due to its ability to analyze complex datasets with speed and precision. **Backgrounds and Objectives:** This study aimed to evaluate the reliability of AI-assisted dental–periodontal diagnoses compared to diagnoses made by senior specialists, specialists, and general dentists. **Material and Methods:** A comparative study was conducted involving 60 practitioners divided into three groups—general dentists, specialists, and senior specialists—along with an AI diagnostic system (Planmeca Romexis 6.4.7 software). Participants evaluated six high-quality panoramic radiographic images representing various dental and periodontal conditions. Diagnoses were compared against a reference “gold standard” validated by a dental imaging expert and senior clinician. A statistical analysis was performed using SPSS 26.0, applying chi-square tests, ANOVA, and Bonferroni correction to ensure robust results. **Results:** AI’s consistency in identifying subtle conditions was comparable to that of senior specialists, while general dentists showed greater variability in their evaluations. The key findings revealed that AI and senior specialists consistently demonstrated the highest performance in detecting attachment loss and alveolar bone loss, with AI achieving a mean score of 6.12 in identifying teeth with attachment loss, compared to 5.43 for senior specialists, 4.58 for specialists, and 3.65 for general dentists. The ANOVA highlighted statistically significant differences between groups, particularly in the detection of attachment loss on the maxillary arch ($F = 3.820$, $p = 0.014$). Additionally, AI showed high consistency in detecting alveolar bone loss, with comparable performance to senior specialists. **Conclusions:** AI systems exhibit significant potential as reliable tools for dental and periodontal assessment, complementing the expertise of human practitioners. However, further validation in clinical settings is necessary to address limitations such as algorithmic bias and atypical cases. AI integration in dentistry can enhance diagnostic precision and patient outcomes while reducing variability in clinical assessments.

Keywords: periodontal status; alveolar bone resorption; bone loss; periodontal pocket; AI; dental imaging; periodontitis

1. Introduction

By providing new resources for helping doctors in diagnosis and treatment, artificial intelligence (AI) is revolutionizing the healthcare industry [1]. These developments have not escaped the dentistry field, especially in the domains of periodontal and dental diagnostics [2,3]. Effective patient care relies on accurate diagnoses, consistent results, and little wasted time; AI holds great potential in this area [4]. However, serious doubts regarding AI's reliability in contrast to human knowledge have been raised by its integration into clinical practice [5].

In recent years, AI has demonstrated significant potential in various branches of dentistry, from caries detection to orthodontic treatment planning and periodontal disease management [6]. AI algorithms, particularly those based on deep learning and neural networks, are adept at analyzing large datasets, including radiographs, intraoral scans, and histological images [7,8]. In periodontal care, these systems can identify patterns and markers indicative of conditions such as gingivitis, periodontitis, and bone loss, often with remarkable speed and accuracy [9]. Algorithms that can quickly analyze and understand complicated clinical data, such as radiographic pictures and patient records, have emerged as a consequence of the fast development of AI technology [10–12]. When it comes to managing chronic illnesses, this expertise is invaluable. Precise monitoring and early identification are of the utmost importance [13].

Beyond periodontal diagnosis, AI has been successfully applied in multiple fields of dentistry, significantly contributing to improved patient outcomes and clinical efficiency [14]. In restorative and prosthetic dentistry, AI is used to assist in the design of dental prostheses, ensuring better adaptation and function [15]. In endodontics, AI-based systems help in detecting periapical lesions, classifying root canal morphology, and predicting treatment success [16]. In orthodontics, AI plays a crucial role in cephalometric analysis and treatment simulation, providing personalized treatment plans for patients [17]. Furthermore, in oral and maxillofacial surgery, AI aids in diagnosing cysts, tumors, and fractures, facilitating surgical planning and precision [18].

Another important contribution of AI in dentistry is its role in predictive analytics and personalized treatment [19]. Machine learning models can analyze a patient's medical history, lifestyle factors, and genetic predisposition to estimate the risk of developing dental diseases, allowing for early intervention and tailored prevention strategies [20]. AI is also used in the automation of administrative tasks, optimizing appointment scheduling, patient record management, and workflow efficiency in dental clinics [21].

Through its diverse applications, AI continues to enhance the accuracy, efficiency, and accessibility of dental care. While its integration into daily clinical practice is still evolving, the growing body of research demonstrates that AI has the potential to revolutionize modern dentistry by reducing diagnostic errors, improving treatment planning, and increasing overall patient satisfaction [22].

Despite these developments, implementing AI in dentistry presents obstacles to overcome [23]. Significant challenges continue to exist, including algorithmic bias, poor generalizing across different patient groups, and the necessity for high-quality, labeled training data [24]. Furthermore, while AI systems excel in pattern recognition, they may struggle with unique cases or complicated clinical circumstances that need nuanced judgment [25]. These limitations highlight the need to compare AI technologies to the knowledge of human