

Short Bio

Prof. Dr. Ahmet YAĞCI is a faculty member at the Department of Orthodontics, Faculty of Dentistry, Erciyes University. He completed his undergraduate education at Gazi University Faculty of Dentistry and his Ph.D. at Erciyes University Institute of Health Sciences, Department of Orthodontics, with high honors. He was appointed as an Assistant Professor in 2010, Associate Professor in 2014, and Full Professor in 2019.

His academic and clinical studies focus on digital orthodontics, clear aligner systems, 3D printing technologies, biology of tooth movement, biomechanical force systems, laser and PRP applications, enamel demineralization, growth and development orthodontics, and orthognathic surgery. His publications in the Web of Science cover experimental and clinical research in these fields, particularly focusing on topics such as digital cephalometry, AI-assisted analyses, modified force protocols, self-ligating bracket systems, lesion monitoring with QLF, and post-surgical functional changes.

Prof. Yağcı is the principal investigator of two TÜBİTAK-1001 projects:

“A Comparative In Vivo Randomized Controlled Clinical Study of a Newly Developed, Directly 3D-Printed Clear Aligner System by the Clinician Versus Indirect Clear Aligner Systems and Fixed Orthodontic Treatment in Terms of Treatment Duration, Effectiveness, Quality, and Endocrine-Disrupting Monomer Release”

“Accelerated Tooth Movement with Localized Vibration Technique”

These projects aim to investigate the clinical effectiveness and biological safety of biomechanical and digital approaches in orthodontic treatment.

Prof. Yağcı has published over 60 articles in SCI/SCI-Expanded journals, presented more than 150 papers, and contributed to several book chapters. He is a member of the Turkish, European, American, and Italian Orthodontic Societies and serves as a reviewer, editor, and editorial board member in various international peer-reviewed journals. He currently serves as the Head of the Department of Orthodontics at Erciyes University. He is married and has one child.

Different Vehicles on the Same Road: The Role of Orthodontic Treatment Choices on Duration and Quality

This presentation will comprehensively evaluate the impact of different bracket systems on orthodontic treatment duration, effectiveness, and quality. Conventional bracket systems will be compared with self-ligating brackets. Additionally, the clinical performance, friction levels, torque control, and treatment duration of active and passive self-ligating systems will be discussed.

In the second part of the presentation, current biomechanical and biological approaches aimed at accelerating traditional orthodontic treatments will be covered. The effects of vibration techniques, modified intermittent force protocols, and low-dose

laser applications on the biology of tooth movement will be evaluated based on scientific data in terms of bone remodeling, cellular response, and treatment duration.

The third part will focus on the transition from traditional to digital practices. Clinical studies conducted in our clinic on clear aligner systems will be shared. Comparative analyses of directly 3D-printed clear aligners (by the clinician) versus indirectly thermoformed systems and fixed orthodontic appliances will be presented in terms of treatment duration, patient comfort, clinical effectiveness, and biocompatibility (especially regarding endocrine-disrupting monomer release).

Finally, in cases requiring orthognathic surgery, topics such as surgical planning, surgery-first approaches, and the effects of surgical procedures on the orthodontic treatment process will be discussed. Emphasis will be placed on digital planning, skeletal stability, and post-treatment functional adaptation.