

# Jareem

JOURNAL OF ACADEMIC RESEARCH IN MEDICINE

## Original Investigations

Post-operative Transfusion Prediction in Myoma Surgery  
Tercan et al.; Samsun, Eskişehir, Türkiye

Hearing/Balance Knowledge of Turkish and Syrians  
Turan Dizdar et al.; Samsun, Eskişehir, Türkiye

Histological Characterization of the SOOF  
Karip et al.; İstanbul, Türkiye

Effects of Hearing Aid Microphones Directionality  
Yaz and Kara.; İstanbul, Türkiye

Hypermobility and Ulnar Neuropathy: Electrophysiologic Correlates  
Bucak et al.; İstanbul, Türkiye

HCV Viremia Prediction Using Anti-HCV  
Bakir et al.; Ankara, Türkiye

VOLUME: 15 | ISSUE: 3 | December 2025

UNIVERSITY OF HEALTH SCIENCES TÜRKİYE GAZİOSMANPAŞA TRAINING AND RESEARCH HOSPITAL

**Editor in Chief****Prof. Dr. Ömer N. Develioğlu**

Department of Otolaryngology-Head and Neck Surgery, University of Health Sciences Türkiye Gaziosmanpaşa Training and Research Hospital, İstanbul, Türkiye

**Editors****Mine Adaş**

Department of Endocrinology, University of Health Sciences Türkiye Prof. Dr. Cemil Taşçıoğlu City Hospital, İstanbul, Türkiye

**Burak Arslan**

Department of Urology, University of Health Sciences Türkiye Gaziosmanpaşa Training and Research Hospital, İstanbul, Türkiye

**Okcan Basat**

Department of Family Medicine, University of Health Sciences Türkiye Gaziosmanpaşa Training and Research Hospital, İstanbul, Türkiye

**Hakan Başar**

Department of Orthopedics and Traumatology, University of Health Sciences Türkiye Gaziosmanpaşa Training and Research Hospital, İstanbul, Türkiye

**Ayşegül Batıoğlu Karaaltın**

Department of Otorhinolaryngology, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

**Sibel Bektaş**

Department of Medical Pathology, University of Health Sciences Türkiye Gaziosmanpaşa Training and Research Hospital, İstanbul, Türkiye

**Okan Demiray**

Department of General Surgery, University of Health Sciences Türkiye Taksim Training and Research Hospital, İstanbul, Türkiye

**Tiraje Celkan**

Department of Pediatrics, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

**Erdoğan Civelek**

Department of Brain and Nerve Surgery, University of Health Sciences Türkiye Gaziosmanpaşa Training and Research Hospital, İstanbul, Türkiye

**Nevriye Gönüllü**

Department of Medical Microbiology, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

**Seda Geylani Güleç**

Department of Pediatrics, University of Health Sciences Türkiye Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye

**Mustafa Hasbahçeci**

Clinic of General Surgery, Medical Park Fatih Hospital, İstanbul, Türkiye

**Mine Kucur**

Department of Medical Biochemistry, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

**Veli Mihanlı**

Department of Obstetrics and Gynaecology, University of Health Sciences Türkiye Prof. Dr. Cemil Taşçıoğlu City Hospital, İstanbul, Türkiye

**İsmail Mihmanlı**

Department of Radiology, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

**İmran Kurt Ömürlü**

Department of Biostatistics, Aydın Adnan Menderes University Faculty of Medicine, Aydın, Türkiye

**Ufuk Özkaya**

Clinic of Orthopedics and Traumatology, Memorial Bahçelievler Hospital, İstanbul, Türkiye

**Hakan Öztürk**

Department of Biostatistics, Aydın Adnan Menderes University Faculty of Medicine, Aydın, Türkiye

**Ahmet İlker Tekkeşin**

Department of Cardiology, University of Health Sciences Türkiye, Dr. Siyami Ersek Health Practice Research Center, İstanbul, Türkiye

**Ayşe Çiğdem Tütüncü**

Department of Anesthesiology and Reanimation, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

**Sema Uçak Basat**

Department of Internal Medicine, University of Health Sciences Ümraniye Training and Research Hospital, İstanbul, Türkiye

**Serdal Uğurlu**

Department of Internal Diseases, Division of Rheumatology, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

**Nurten Uzun Adatepe**

Department of Neurology, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

**Hüseyin Güleç**

University of Health Sciences Türkiye, İstanbul Erenköy Training and Research Hospital for Psychiatric and Neurological Diseases, İstanbul, Türkiye

**Evrin Coşkun**

University of Health Sciences Türkiye, Başakşehir Çam and Sakura City Hospital, Department of Physical Therapy and Rehabilitation, İstanbul, Türkiye

**Ulviye Yiğit**

Haliç University Faculty of Medicine, Department of Ophthalmology, İstanbul, Türkiye

**Erdoğan Bulut**

Department of Audiology, Trakya University Faculty of Health Science, Edirne, Türkiye

**Teoman Akçağ**

Division of Endocrinology and Metabolism, Department of Pediatrics, Üsküdar University Faculty of Medicine; Medical Park Gaziosmanpaşa Hospital, İstanbul, Türkiye

**Ahmet Akıcı**

Department of Medical Pharmacology, Marmara University School of Medicine, İstanbul, Türkiye

**English Language Editors****Kamuran Özlem Üzer**kmrnozlm@gmail.com  
ORCID ID: 0000-0002-0299-1253

**International Editorial Board****Fisun Akdeniz**

Retired Assistant Professor of Ege University, İzmir, Türkiye

**İbrahim Özkan Akıncı**

Department of Anesthesiology and Reanimation, İstanbul University-İstanbul Faculty of Medicine, İstanbul, Türkiye

**Esen K. Akpek**

Wilmer Eye Institute, John Hopkins University, Baltimore, USA

**Ali Akyüz**

Department of General Surgery, İstanbul University-İstanbul Faculty of Medicine, İstanbul, Türkiye

**A. Cemal Aygıt**

Department of Plastic and Reconstructive Surgery, Kemerburgaz University School of Medicine, İstanbul, Türkiye

**M. Derya Balbay**

Clinic of Urology, Koç University Hospital, İstanbul, Türkiye

**M.B. Can Balci**

Department of Urology, University of Health Sciences Türkiye, Taksim Training and Research Hospital, İstanbul, Türkiye

**Gökhan Tolga Adaş**

Department of General Surgery, University of Health Sciences Türkiye, Bakırköy Dr. Sadi Konuk Training and Research Hospital, İstanbul, Türkiye

**Hakan Bingöl**

Clinic of Cardiovascular Surgery, Aksaray Training and Research Hospital, Konya, Türkiye

**Canan Aykut Bingöl**

Department of Neurology, Yeditepe University School of Medicine, İstanbul, Türkiye

**Günseli Bozdoğan**

Department of Pediatrics, Acıbadem University School of Medicine, İstanbul, Türkiye

**Murat Bozkurt**

Department of Obstetrics and Gynaecology, Kafkas University School of Medicine, Kars, Türkiye

**Dursun Buğra**

Department of General Surgery, Private American Hospital, İstanbul, Türkiye

**Berk Burgu**

Department of Urology, Ankara University School of Medicine, Ankara, Türkiye

**Arif Atahan Çağatay**

Department of Infectious Diseases and Clinical Microbiology, İstanbul University Medical School Hospital, İstanbul, Türkiye

**İlyas Çapoğlu**

Department of Internal Medicine, Erzincan University Faculty of Medicine, Erzincan, Türkiye

**Fehmi Çelebi**

Department of General Surgery, Sakarya University School of Medicine, Sakarya, Türkiye

**İsmail Çepni**

Department of Obstetrics and Gynaecology, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

**Ferda Çiftçi**

Department of Ophthalmology, Yeditepe University School of Medicine, İstanbul, Türkiye

**M. Onur Demirkol**

Clinic of Nuclear Medicine and Molecular Imaging, Koç University, İstanbul, Türkiye

**Ali İhsan Dokucu**

Clinic of Pediatric Surgery, University of Health Sciences Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye

**Hayati Durmaz**

Department of Orthopedics and Traumatology, İstanbul University-İstanbul Faculty of Medicine, İstanbul, Türkiye

**Ela Erdem**

Department of Pediatric Pulmonology, Marmara University Pendik Training and Research Hospital, İstanbul, Türkiye

**Vedat Erentuğ**

Clinic of Cardiovascular Surgery, University of Health Sciences Bağırcılar Eğitim ve Araştırma Hastanesi, İstanbul, Türkiye

**Oktay Ergene**

Department of Cardiology, Dokuz Eylül University School of Medicine, İzmir, Türkiye

**Ramon Franco**

Department of Laryngology, Massachusetts Eye and Ear Hospital, Boston, USA

**Cankon Germiyanoglu**

Department of Urology, Ondokuz Mayıs University Faculty of Medicine, Samsun, Türkiye

**Abdülaziz Gül**

Department of Pediatrics, Elazığ Private Hospital, Elazığ, Türkiye

**H. Canan Hasanoğlu**

Clinic of Chest Diseases, University of Health Sciences Atatürk Training and Research Hospital, Ankara, Türkiye

**Hakan İlaslan**

Department of Radiology, Cleveland Clinic, OH, USA

**Ferruh Kemal İşman**

Clinic of Biochemistry, Medeniyet University Göztepe Training and Research Hospital, İstanbul, Türkiye

**Serdar Kabataş**

Department of Brain and Nerve Surgery, University of Health Sciences Türkiye Gaziosmanpaşa Training and Research Hospital, İstanbul, Türkiye

**Tunaya Kalkan**

Retired Assistant Professor of İstanbul University, İstanbul, Türkiye

**Tolga Kapusuz**

Maimonides Medical Center, Department of Anesthesiology, SUNY Downstate Medical School, Brooklyn, NY, USA

**Ayhan Kılıç**

Clinic of Orthopedics and Traumatology, Acıbadem Hospital, İstanbul, Türkiye

**Reyhan Diz Küçükkaya**

Clinic of Hematology and Internal Diseases, Florence Nightingale Hospital, İstanbul, Türkiye

**Metin Küçükkaya**

Clinic of Orthopedics and Traumatology, Florence Nightingale Hospital, İstanbul, Türkiye

**Mehmet Külekçi**

Retired Professor

**Asiye Nuhoğlu**

Clinic of Neonatology, University of Health Sciences Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye

**Barış Nuhoğlu**

Clinic Urology, İstanbul Yeni Yüzyıl University, Gaziosmanpaşa Hospital, İstanbul, Türkiye

**Ayşe Emel Önal**

Department of Public Health, İstanbul University-İstanbul Faculty of Medicine, İstanbul, Türkiye

**Perihan Ergin Özcan**

Department of Anesthesiology and Reanimation, İstanbul University Medical School, İstanbul, Türkiye

**Birol Özkan**

Clinic of Cardiology, University of Health Sciences Kartal Koşuyolu Training and Research Hospital, İstanbul, Türkiye

**Türker Özkan**

Department of Hand Surgery, İstanbul University-İstanbul Faculty of Medicine, İstanbul, Türkiye

**Savaş Öztürk**

Department of Nephrology, İstanbul University, İstanbul Faculty of Medicine, İstanbul, Türkiye

**Cengiz Pata**

Clinic of Gastroenterology, Yeditepe University Hospital, İstanbul, Türkiye

**Gürsel Soybir**

Clinic of General Surgery, Memorial Etiler Medical Centre, İstanbul, Türkiye

**H. Soner Tatlıdede**

Department of Plastic Surgery, University of Health Sciences Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye

**Aylin Tekeş**

Clinic of Pediatric Radiology, Johns Hopkins Hospital, Baltimore, USA

**Serdar Tekgöl**

Department of Urology, Pediatric Surgery Unit, Hacettepe University School of Medicine, Ankara, Türkiye

**Ralph P. Tufano**

Department of Otolaryngology-Head and Neck Surgery, Johns Hopkins Hospital, Baltimore, USA

**Uğur Türe**

Clinic of Neurosurgery, Yeditepe University School of Medicine Hospital, İstanbul, Türkiye

**Ülkü Aygen Turkmen**

Department of Anesthesiology and Reanimation, BHT CLINIC TEMA Hospital, İstanbul, Türkiye

**Sinan Uslu**

Clinic of Neonatology, University of Health Sciences Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye

**Nafiye Urgancı**

Clinic of Pediatrics, Pediatric Gastroenterology, University of Health Sciences Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye

**Ayşe Ayça Vitrinel**

Clinic of Pediatrics, Yeditepe University Medical School Hospital, İstanbul, Türkiye

**Yıldız Yıldırım**

Clinic of Pediatrics, University of Health Sciences Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye

**Orhan Yılmaz**

Department of Otorhinolaryngology, Karabük University Faculty of Medicine, Karabük, Türkiye

**The previous Editor in Chief was Prof. Dr. Barış Nuhoğlu**

İstanbul YeniYüzyıl University, Gaziosmanpaşa Hospital Head of Department of Urology  
(The editor-in-chief duty, which started in September 2011, was transferred to Ömer N Develioğlu in March 2016)



JOURNAL OF ACADEMIC RESEARCH IN MEDICINE

---

"Please refer to the journal's webpage (<https://www.jarem.org/home>) for "Ethical Policy", "Instructions to Authors" and "About Us".

---

The Journal of Academic Research in Medicine and/or its editors are members of ICMJE, COPE, WAME, CSE and EASE, and follow their recommendations. Journal of Academic Research in Medicine is indexed in Web of Science-Emerging Sources Citation Index, TÜBİTAK ULAKBİM TR Dizin, EBSCO, Gale, CINAHL, J Gate, Türk Medline, Embase and CAB International (CABI).

The journal is published online.

Owner: University of Health Sciences Türkiye Gaziosmanpaşa Training and Research Hospital

Responsible Manager: Ömer N. Develioğlu



**Publisher Contact**

**Address:** Molla Gürani Mah. Kaçamak Sk. No: 21/1

34093 İstanbul, Türkiye

**Phone:** +90 (530) 177 30 97 / +90 (539) 307 32 03

**E-mail:** [info@galenos.com.tr](mailto:info@galenos.com.tr)/[yayin@galenos.com.tr](mailto:yayin@galenos.com.tr)

**Web:** [www.galenos.com.tr](http://www.galenos.com.tr)

**Publisher Certificate Number:** 14521

**Online Publishing Date:** December 2025

**ISSN:** 2146-6505 E-ISSN: 2147-1894

International scientific journal published quarterly.

## Contents

### Commentaries

- 107** The Evolving Regulatory Landscape of Artificial Intelligence in Healthcare: Balancing Innovation, Regulation, and the Human Factor  
Osman Gazi Güçlütürk; İstanbul, Türkiye

- 109** The Use of Artificial Intelligence by the Administration in Health Services and the Resulting Liability in Turkish Law  
Cihan Yüzbaşıoğlu; İstanbul, Türkiye

### Original Investigations

- 112** Association of Pre-operative Hematological, Inflammatory Markers, and Myoma Characteristics with Post-operative Erythrocyte Suspension Requirement Following Myomectomy: A Retrospective Observational Study  
Can Tercan, Emrah Dağdeviren, Ergün Tercan, Buğra Tunç, Osman Murat Güler, Gazi Güner; İstanbul, Manisa, Türkiye

- 122** Comparison of the Knowledge Levels of Turkish and Syrian Individuals Living in Türkiye Regarding Hearing and Balance  
Handan Turan Dizdar, Arzu Kırbaç, Hanin Hassan, Muhammed Hüseyin, Tesnim Hüseyin; Samsun, Eskişehir, Türkiye

- 132** Anatomical and Histological Characterization of the SOOF: Redefining Midface Support  
Betül Zehra Karip, Burak Karip, Fatma Ok, Fulya Temizsoy Korkmaz; İstanbul, Türkiye

- 137** Comparison of the Effects of Asymmetrical Directionality and Narrow Directionality on Speech Perception in Noise in Hearing Aids  
Gökhan Yaz, Eyyüp Kara; İstanbul, Türkiye

- 146** Frequency of Hypermobility in Patients with Ulnar Entrapment Neuropathy  
Ömer Faruk Bucak, Pınar Öztıp Çiftkaya, Emel Ece Özcan-Ekşi, Demet Ofluoğlu; İstanbul, Türkiye

- 152** Prediction of Hepatitis C Virus Viremia and Determination of Signal-to-cut-off Value Using Roche Elecsys Anti-HCV Screening Test  
Ayfer Bakır, Muhammed Furkan Kürkçü, Gizem Korkut; Ankara, Türkiye

### Letter to the Editor

- 158** Dimethyl Fumarate's Potential in Methanol Toxicity: A Critical Perspective on Future Research Directions  
Mehmet Necmeddin Sutaşır, Murat Özmen; İstanbul, Türkiye

### Index

- 2025 Reviewer Index  
2025 Author Index  
2025 Subject Index