

EISSN 1305-3612

DIR


Diagnostic and Interventional Radiology

TSR
1924
TURKISH SOCIETY
OF RADIOLOGY

dirjournal.org

VOLUME 32
ISSUE 3
May 2026

Editor in Chief

 Şükrü Mehmet Ertürk, MD


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

E-mail: smerturk@gmail.com

ORCID ID: 0000-0003-4086-675X

Section Editors and Scientific Editorial Board

Abdominal Imaging

 İlkyay S. İdilman, MD

Department of Radiology, Hacettepe University Faculty of Medicine, Ankara, Türkiye

E-mail: ipolater@yahoo.com

ORCID ID: 0000-0002-1913-2404

 Sonay Aydın, MD

Department of Radiology, Erzincan Binali Yıldırım University Faculty of Medicine, Erzincan, Türkiye

E-mail: sonay.aydin@erzincan.edu.tr


ORCID ID: 0000-0002-3812-6333

 Oğuz Dicle, MD

Dokuz Eylül University Faculty of Medicine, Department of Radiology, İzmir, Türkiye

E-mail: odicle59@gmail.com

ORCID ID: 0000-0001-5269-4903

 Nurullah Dağ, MD

İnönü University Faculty of Medicine, Department of Radiology, Malatya, Türkiye

E-mail: nurullah.dag@inonu.edu.tr, drndag@icloud.com

ORCID ID: 0000-0002-9342-0244

Artificial Intelligence and Informatics


 Tuğba Akıncı D'Antonoli, MD

Division of Diagnostic and Interventional Neuroradiology, Department of Radiology, University Hospital Basel, Basel, Switzerland

Department of Pediatric Radiology, University Children's Hospital Basel, Basel, Switzerland

E-mail: tugba.akincidantonoli@unibas.ch

ORCID ID: 0000-0002-7237-711X

 Ulaş Bağcı, PhD

Northwestern University Faculty of Medicine, Department of Radiology, Chicago, United States

E-mail: ulas.bagci@northwestern.edu

ORCID ID: 0000-0001-7379-6829


Breast Imaging

 Serap Gültekin, MD

Department of Radiology, Gazi University Faculty of Medicine, Ankara, Türkiye

E-mail: sergultekin@yahoo.com

ORCID ID: 0000-0001-6349-3998


 Işıl Başara Akın, MD

Dokuz Eylül University Faculty of Medicine, Department of Radiology, İzmir, Türkiye

E-mail: isilbasara@gmail.com

ORCID ID: 0000-0002-0786-1490

Chest and Cardiovascular Imaging


 Furkan Ufuk, MD

Department of Radiology, The University of Chicago, Chicago, United States of America

E-mail: furkan.ufuk@hotmail.com

ORCID ID: 0000-0002-8614-5387

Hybrid Imaging and Nuclear Medicine

 Zeynep Gözde Özkan, MD

İstanbul University Faculty of Medicine, Division of Nuclear Medicine, Department of Internal Medicine, İstanbul, Türkiye

E-mail: zeynep.ozkan@istanbul.edu.tr, zgozdeozkan@yahoo.com

ORCID ID: 0000-0003-0360-358X

Interventional Radiology

 Barbaros Çil, MD, FCIRES

Department of Radiology, Koç University School of Medicine, İstanbul, Türkiye

E-mail: bcil@ku.edu.tr

ORCID ID: 0000-0003-1079-0088

 Bahri Üstünsöz, MD

Department of Radiology, LSUHSC (Louisiana State University Health Science Center) School of Medicine, New Orleans, United States

E-mail: bustunsoz2000@yahoo.com

ORCID ID: 0000-0003-4308-6708

 Onur Taydaş, MD

Sakarya University Faculty of Medicine, Department of Radiology, Sakarya, Türkiye

E-mail: onurtaydas@sakarya.edu.tr, taydasonur@gmail.com

ORCID ID: 0000-0002-9881-7240

Musculoskeletal Imaging

 Zeynep Maraş Özdemir, MD

Department of Radiology, İnönü University Faculty of Medicine, Malatya, Türkiye

E-mail: zynpmaras@yahoo.com

ORCID ID: 0000-0003-1085-8978


Neuroradiology

 Erkan Gökçe, MD

Department of Radiology, Tokat Gaziosmanpaşa University Faculty of Medicine, Tokat, Türkiye

E-mail: drerkanogkce@gmail.com

ORCID ID: 0000-0003-3947-2972

 Suzan Şaylısoy, MD

Eskişehir Osmangazi University Faculty of Medicine, Department of Radiology, Eskişehir, Türkiye

E-mail: ssaylisoy@ogu.edu.tr

ORCID ID: 0000-0002-1560-964X


 Gökçen Çoban, MD

Hacettepe University Faculty of Medicine, Department of Radiology, Ankara, Türkiye

E-mail: drgokcencoban@gmail.com

ORCID ID: 0000-0002-4010-2883

Pediatric Radiology


 Evrim Özmen, MD

Department of Radiology, Koç University Hospital, İstanbul, Türkiye

E-mail: evrimkilicdr@gmail.com

ORCID ID: 0000-0003-3100-4197

Editorial Consultant to Editor-in-Chief


 Mehmet Ruhi Onur, MD

Department of Radiology, Hacettepe University Faculty of Medicine, Ankara, Türkiye

E-mail: ruhionur@yahoo.com

ORCID ID: 0000-0003-1732-7862

Publication Coordinator

 Nermin Tunçbilek, MD

Department of Radiology, Trakya University Faculty of Medicine, Edirne, Türkiye

E-mail: drtuncbilek@hotmail.com

ORCID ID: 0000-0002-8734-1849

Biostatistical Consultant

 İlker Ercan, PhD

Department of Biostatistics, Uludağ University School of Medicine, Bursa, Türkiye

E-mail: iercan@msn.com

ORCID ID: 0000-0002-2382-290X

Social Media Leads

Tümay Bekçi, MD

*Department of Radiology, Giresun University Faculty of
Medicine, Giresun, Türkiye*

Mahmut Bilal Doğan, MD

*Department of Radiology, Marmara University Faculty
of Medicine, İstanbul, Türkiye*

Kendal Erincik, MD

*Department of Radiology, İstanbul Medeniyet
University Faculty of Medicine, İstanbul, Türkiye*

Gürsel Karacaoğlu, MD

*Department of Radiology, İstanbul Medeniyet
University Faculty of Medicine, İstanbul, Türkiye*

Publication Services

Galenos Publishing, İstanbul, Türkiye

Past Editors

Editors in Chief

Mehmet Ruhi Onur, MD (2023-2026)

Mustafa Seçil, MD (2016-2023)

Nevzat Karabulut, MD (2011-2016)

Üstün Aydingöz, MD (2010-2011)

Okan Akhan, MD (2001-2010)

Ferhun Balkancı, MD (1999-2001)

Aytekin Besim, MD (1994-1999)*

* Dr. Aytekin Besim actually served as the
General Coordinator. His work in this capacity,
however, was in effect that of an Editor in
Chief.

Editors

Ayşenur Cila, MD (2001-2002)

Suat Kemal Aytaç, MD (1997-2001)

Erhan Ilgıt, MD (1994-2001)

Okan Akhan, MD (1994-2001)

Ferhun Balkancı, MD (1994-2000)

Serdar Akyar, MD (1994-1997)

Section Editors

Section Editorship was established in 2002 at
the tenure of Dr. Okan Akhan, Editor in Chief.

Abdominal Imaging

Bengi Gürses, MD (2020-2023)

Mehmet Ruhi Onur, MD (2016-2023)

Barış Türkbey, MD (2014-2020)

Mustafa N. Özmen, MD (2012-2018)

Murat Acar, MD (2015-2016)

Mustafa Seçil, MD (2011-2016)

Ahmet Tuncay Turgut, MD (2011)

Deniz Akata, MD (2007-2011)

Ayşe Erden, MD (2002-2011)

Okan Akhan, MD (2002-2010)

Hakan Özdemir, MD (2002-2010)

Artificial Intelligence and Informatics

Burak Koçak, MD (2023-2026)

Barış Türkbey, MD (2020-2023)

Breast Imaging

Mustafa Erkin Arıbal, MD (2016-2023)

Sibel Kul, MD (2015-2018)

Ayşenur Oktay, MD (2009-2014)

Ayşegül Özdemir, MD (2004-2009)

Cardiovascular Imaging

Uğur Bozlar, MD (2016-2023)

Muşturay Karçaaltıncaba, MD (2007-2010)

Mecit Kantarcı, MD (2010-2016)

Chest Imaging

Nevzat Karabulut, MD (2010-2014)

Çetin Atasoy, MD (2007-2010)

Macit Arıyürek, MD (2002-2007)

Figen Demirkazık, MD (2014-2018)

General Radiology

Ersin Öztürk, MD (2014-2017)

Utku Şenol, MD (2010-2013)

Oğuz Dicle, MD (2007-2010)

Interventional Radiology

James Milburn, MD (2023-2026)

Cüneyt Aytekin, MD (2016-2023)

Bora Peynircioğlu, MD (2012-2015)

Levent Oğuzkurt, MD (2011-2014)

Fatih Boyvat, MD (2007-2010)

İsmail Oran, MD (2015-2019)

Musculoskeletal Imaging

Hatice Tuba Sanal, MD (2016-2023)

Fatih Kantarcı, MD (2014-2016)

Ayşenur Oktay, MD (2011-2013)

Üstün Aydingöz, MD (2002-2011)

Berna Dirim Mete (2016-2017)

Neuroradiology and Head & Neck Imaging

Gülgün Yılmaz Ovalı, MD (2023-2026)

Kubilay Aydın, MD (2016-2023)

Nafi Aygün, MD (2016-2023)

Kader Karlı Oğuz, MD (2011-2015)

Süleyman Men, MD (2007-2013)

Muhteşem Ağıldere, MD (2002-2011)

Nuclear Medicine

Evrin Bengi Türkbey, MD (2023-2026)

A. Cahid Civelek, MD (2016-2023)

Oktay Sarı, MD (2015)

Akın Yıldız, MD (2011-2014)

Pediatric Radiology

Meltem Ceyhan Bilgici, MD (2023-2026)

Korgün Koral, MD (2016-2023)

Murat Kocaoğlu, MD (2016-2023)

Ensar Yekeler, MD (2014-2016)

Suat Fitöz, MD (2007-2013)



Official Journal of the Turkish Society of Radiology

E-ISSN: 1305-3612

www.dirjournal.org

Diagnostic and Interventional Radiology (Diagn Interv Radiol) is a bimonthly periodical of the Turkish Society of Radiology and the content of the journal is available at <https://www.dirjournal.org/>. It is peer-reviewed and adheres to the highest ethical and editorial standards. The editors of the journal endorse the Editorial Policy Statements Approved by the Council of Science Editors Board of Directors (<https://cse.memberclicks.net/>). The journal is in compliance with the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals published by the International Committee of Medical Journal Editors (updated May 2022, www.icmje.org).

First ten volumes of Diagnostic and Interventional Radiology have been published in Turkish under the name of Tanısal ve Girişimsel Radyoloji (MEDLINE abbreviation: Tani Girisim Radyol), the current title's exact Turkish translation.

Diagnostic and Interventional Radiology is an open access publication, and the journal's publication model is based on Budapest Open Access Initiative (BOAI) declaration. All published content is available online, free of charge at <https://www.dirjournal.org/>. Authors retain the copyright of their published work in Diagnostic and Interventional Radiology. The journal's content is licensed under a Creative Commons Attribution-NonCommercial (CC BY-NC) 4.0 International License which permits third parties to share and adapt the content for non-commercial purposes by giving the appropriate credit to the original work.

Please refer to the journal's webpage (<https://dirjournal.org/>) for "Aims and Scope", "Instructions to Authors" and "Instructions to Reviewers".

The editorial and publication processes of the journal are shaped in accordance with the guidelines of the ICMJE, WAME, CSE, COPE, EASE, and NISO.

Diagnostic and Interventional Radiology is indexed in **SCI-Expanded, Pubmed/Medline, Pubmed Central, TUBITAK ULAKBIM TR Index, Scopus, DOAJ, EBSCO, HINARI, EMBASE, CINAHL, ProQuest, Gale and CNKI.**

The journal is published online.

Owner: Turkish Society of Radiology

Responsible Manager: Şükrü Mehmet Ertürk

Contact Information

Diagnostic and Interventional Radiology Turkish Society of Radiology

Hoşdere Cad., Güzelkent Sok., Çankaya Evleri, F/2, 06540
Ankara, Türkiye

E-mail: info@dirjournal.org

Phone: +90 (312) 442 36 53 **Fax:** +90 (312) 442 36 54

Publisher Contact

Address: Molla Gürani Mah. Kaçamak Sk.

No: 21/1 34093 İstanbul, Türkiye

Phone: +90 (530) 177 30 97

E-mail: info@galenos.com.tr/yayin@galenos.com.tr

Web: www.galenos.com.tr **Publisher Certificate Number:** 14521

Online Publication Date: May 2026

EISSN 1305-3612

International scientific journal published bimonthly.



TURKISH SOCIETY OF RADIOLOGY

Turkish Society of Radiology is one of the foremost medical specialty organizations in Türkiye. It was formed by the merger of the two main radiology societies of Türkiye, one of which was founded in 1924. The Society is based in Ankara, Türkiye.

Contents

ABDOMINAL IMAGING

242 **Original Article** Comparison of three-tesla magnetic resonance imaging with pathology in detecting deep myometrial invasion in endometrial cancer and revealing causes of discrepancy. *Murat Ağırlar, İlkay Çamlıdağ, Murat Danacı*

249 **Original Article** Evaluation of the congenital absence of the vas deferens with magnetic resonance imaging: preliminary findings. *Hakan İmamoğlu, Erdem Sarı, Özgür Karabıyık, Emre Can Akınsal, Gökmen Zararsız, Oğuz Ekmekçioğlu*

255 **Letter to the Editor** Solitary plasmacytoma: a rare and unusual tumor of the liver. *Ayşe Erden, Koray Ceyhan*

258 **Letter to the Editor** Reply: Solitary plasmacytoma: a rare and unusual tumor of the liver. *Nir Stanietzky, Khaled M. Elsayes*

ARTIFICIAL INTELLIGENCE AND INFORMATICS

259 **Review** Foundation models for radiology: fundamentals, applications, opportunities, challenges, risks, and prospects. *Tugba Akinci D'Antonoli, Christian Bluethgen, Renato Cuocolo, Michail E. Klontzas, Andrea Ponsiglione, Burak Kocak*

273 **Commentary** The AI Act: responsibilities and obligations for healthcare professionals and organizations. *Kicky Gerhilde van Leeuwen, Leon Doorn, Erik Gelderblom*

276 **Commentary** When AI reviews your work: author-centered reflections on LLMs in peer review. *Burak Koçak, Mehmet Ruhi Onur*

BREAST IMAGING

279 **Original Article** Comparison of changes in dynamic contrast-enhanced magnetic resonance imaging and fluorine-18 fluorodeoxyglucose positron emission tomography/computed tomography parameters from baseline to post-neoadjuvant therapy in predicting pathological response in breast cancer. *Hüseyin Akkaya, Aygül Polat Kelle, Tuba Dalğalar Akkaya, Selim Özdemir, Kübra Karaaslan Erişen, Bozkurt Gülek*

287 **Letter to the Editor** Letter to the Editor: Perinodal signal in breast magnetic resonance imaging: flare sign and extracapsular spread. *Deniz Esin Tekcan Şanlı, Ahmet Necati Şanlı*

289 **Letter to the Editor** Reply: Diagnostic value of the flare sign in predicting extracapsular extension in metastatic axillary lymph nodes and nodal status on breast magnetic resonance imaging. *Cihan Özgür, Baran Serdar Sunal, Savaş Hereklioğlu, Meltem Öznur*

CHEST IMAGING

291 **Invited Review** Imaging in chronic thromboembolic pulmonary hypertension: review of the current literature. *Koray Hekimoglu, Deepa Gopalan, Mehmet Ruhi Onur, Gökhan Kahraman, Tankut Akay*

CONTRAST MEDIA

304 **Letter to the Editor** Reply: Radiologists' tendency to collaborate with referring physicians in managing contrast media-related risk factors. *Burak Öztürk, Özgür Karabıyık*

EMERGENCY RADIOLOGY

306 **Original Article** Analysis of the baseline multiphase computed tomographic angiography findings to predict clinical outcomes in patients with middle cerebral artery M1 occlusion treated with mechanical thrombectomy. *Esra Çıvgın, Hasan Bayındır*

HEAD AND NECK IMAGING

315 **Original Article** Vascularity assessment in Hashimoto's thyroiditis: a prospective comparative study with power Doppler and superb microvascular imaging. *Tuba Selçuk Can, Sevim Özdemir, Türkan İkizceli, Behice Kaniye Yılmaz, Mehmet Akif Sarı, Rüştü Türkay, Özlem Doğan*

INTERVENTIONAL RADIOLOGY

322 **Original Article** Preoperative arterial and venous embolization of heterotopic ossification of the hip: a case-control study. *Thomas Le Tat, Fabien Cale, Mostafa El Hajjam, François Genêt, Robert-Yves Carlier, Raphaël Amar*

328 **Original Article** Diagnostic performance of magnetic resonance imaging-targeted biopsy for PI-RADS ≥ 3 peripheral zone lesions in multiparametric prostate magnetic resonance imaging: correlation with clinically significant prostate cancer. *Serdar Aslan, Emrah Sülün, Ertuğrul Çakır, Ural Oğuz, Tümay Bekçi*

338 **Technical Note** Minimally invasive management of a post-cholecystectomy bile leak using a microvascular plug. *Mohammed Misbahuddin-Leis, Andreas R. R. Weiß, Yazan Amin, Robert Grützmann, Axel Schmid*

MODALITY-BASED (US, CT, MRI, PET-CT) IMAGING

342 **Original Article** Automated calculation of slice-specific volume computed tomography dose index, water-equivalent diameter, and size-specific dose estimation for computed tomography scans. *Supawitoo Sookpeng, Rosario Lopez-Gonzalez, Suwapim Chanlaor, Boriphat Kadman*