

EISSN 1305-3612

DIR

Diagnostic and Interventional Radiology

TSR
1924
TURKISH SOCIETY
OF RADIOLOGY

dirjournal.org

VOLUME 24
ISSUE 4
JULY-AUGUST 2018



Official Journal of the Turkish Society of Radiology

EISSN 1305-3612

www.dirjournal.org

Editor in Chief

Mustafa Seçil, MD
İzmir, Turkey

Section Editors and Editorial Board

Abdominal Imaging

Mehmet Ruhi Onur, MD
Mustafa N. Özmen, MD
Barış Türkbey, MD

Breast Imaging

Sibel Kul, MD

Cardiovascular Imaging

Uğur Bozlar, MD

Interventional Radiology

Cüneyt Aytekin, MD
Barbaros Çil, MD
Ramazan Kutlu, MD
İsmail Oran, MD

Musculoskeletal Imaging

Hatice Tuba Sanal, MD

Neuroradiology and Head & Neck Imaging

Kubilay Aydın, MD
Nafi Aygün, MD

Nuclear Medicine & Molecular Imaging

A. Cahid Civelek, MD

Pediatric Imaging

Murat Kocaoğlu, MD
Korgün Koral, MD

Biostatistical Consultants

İlker Ercan, PhD
Mutlu Hayran, MD, PhD

Publication Staff

Copyediting

Beril Tavşanlı Sili, PhD

Publication Services

AVES, İstanbul, Turkey
www.avesyayincilik.com

Contact Information

Diagnostic and Interventional Radiology
Turkish Society of Radiology

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

E-mail info@dirjournal.org

Phone +90-312-4423653 Fax +90-312-4423654

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 <http://www.dirjournal.org/eng/Anasayfa> 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 (www.councilscienceeditors.org/services/draft_approved.cfm). 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 December 2014, www.icmje.org).

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

© All rights of the articles published in Diagnostic and Interventional Radiology and displayed online at www.dirjournal.org are reserved by the Turkish Society of Radiology.

Diagnostic and Interventional Radiology is indexed in SCI Expanded, PubMed/MEDLINE, TUBITAK ULAKBIM TR Index, DOAJ, HINARI, EMBASE, Scopus.



TURKISH SOCIETY OF RADIOLOGY

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

Türk Radyoloji Derneği adına sahibi / Owned by on behalf of the Turkish Society of Radiology: Tamer Kaya - Sorumlu Yazı İşleri Müdürü / Executive Editor: Tuncay Hazıroğlu - Yayın türü / Publication Type: Yerel süreli / Bimonthly periodical - Yayın tarihi / Publication date: 25 Haziran 2018 / June 25, 2018 - Türk Radyoloji Derneği tarafından yayınlanmaktadır / Published by Turkish Society of Radiology, Hoşdere Cad., Güzelkent Sok., Çankaya Evleri, F/2, 06540 Ankara, Turkey

Instructions to Authors

Overview

Diagnostic and Interventional Radiology (Diagn Interv Radiol) is a medium for disseminating scientific information based on research, clinical experience, and observations pertaining to diagnostic and interventional radiology. The journal is the double-blind peer-reviewed, international, bimonthly, open-access publication organ of the Turkish Society of Radiology. *Diagnostic and Interventional Radiology* is currently indexed by Science Citation Index Expanded (2016 IF: 1.892) and PubMed MEDLINE.

Editorial and publication processes of the journal are shaped in accordance with the guidelines of the international organizations such as the International Committee of Medical Journal Editors (ICMJE), the World Association of Medical Editors (WAME), the Council of Science Editors (CSE), the Committee on Publication Ethics (COPE), and the European Association of Science Editors (EASE).

Statements or opinions expressed in the manuscripts published in *Diagnostic and Interventional Radiology* reflect the views of the author(s) and not the opinions of the editors, the editorial board, or the publisher; the editors, the editorial board, and the publisher disclaim any responsibility or liability for such materials. The final responsibility in regard to the published content rests with the authors.

Submitting manuscripts

- Authors should submit manuscripts using the online peer review system that can be accessed through the DIR web site (www.dirjournal.org) or using the direct link at <https://mc04.manuscript-central.com/dir>.
- Detailed DIR Author Guidelines can be viewed or downloaded from DIR web site (www.dirjournal.org).
- *Diagnostic and Interventional Radiology* requires authors to submit an Authorship Contributions

Form during the initial submission which is available for download through the journal's web page.

- Submitted manuscripts should be original contributions; they should not contain any previously published data or be under consideration by another journal.
- Authors are required to make a full statement at the time of submission about all prior reports and submissions that might be considered duplicate or redundant publication and mention any previously published abstracts for meeting presentations that contain partial or similar material in the cover letter.
- Authors must obtain written permission from the copyright owner to reproduce previously published figures, tables, or any other material in both print and electronic formats and present it during submission.

Copyright transfer

Diagnostic and Interventional Radiology requires each submission to be accompanied by a Copyright Transfer Form which can be downloaded from <http://www.dirjournal.org>. By signing the copyright agreement, the authors hand over the copyright of their work to the Turkish Society of Radiology. In case of a rejection decision, copyright of the manuscript will be returned to the authors.

Conflict of interest disclosure

Diagnostic and Interventional Radiology requires and encourages the authors and the individuals involved in the evaluation process to disclose any existing or potential conflicts of interests including financial, consultant, institutional, and other relationships that might lead to bias or a conflict of interest. Each contributing author is required to electronically fill in the *ICMJE Form for Disclosure of Potential Conflicts of Interest* (available at www.icmje.org) and the forms must be submitted during the initial submission.

Initial evaluation and the peer review process

Manuscripts submitted to *Diagnostic and Interventional Radiology* will first go through a technical evaluation process where the editorial office staff will ensure that the manuscript is prepared and submitted in accordance with the journal's guidelines. Submissions that do not conform to the journal's guidelines will be returned to the submitting author with technical correction requests.

All submissions are screened by a similarity detection software (iThenticate by CrossCheck), and those with an overall similarity index of greater than 20%, or duplication rate at or higher than 5% with a single source are returned to the authors without further evaluation along with the similarity report.

Manuscripts that conform to the journal's guidelines will be reviewed by at least two external and independent peer reviewers during the evaluation process. Originality, high scientific quality, and citation potential of the manuscript are the most important criteria to be accepted for publication. The Section Editor and Editor in Chief are the final authority in the decision-making process for all submissions.

Permissions and reprints

Turkish Society of Radiology handles all requests to reproduce material from *Diagnostic and Interventional Radiology*. For your convenience, please fill in the permission request form, available for download at the journal's webpage and e-mail a scanned version to info@dirjournal.org.

Please ensure that you include the full reference of the material you want to use (i.e., year of publication, volume, issue and page numbers, author names, figure numbers where appropriate). Turkish Society of Radiology also requires a detailed overview of how you intend to use the material (i.e., in a book or a journal) and when.

ABDOMINAL IMAGING

- 181 **Original article.** Clinical impact of collateral circulation in patients with median arcuate ligament syndrome. *S. Heo, H. J. Kim, B. Kim, J. H. Lee, J. Kim, J. K. Kim*

BREAST IMAGING

- 187 **Original article.** US and MRI in the evaluation of mammographic BI-RADS 4 and 5 microcalcifications. *A. Hrkac Pustahija, G. Ivanac, B. Brkljacic*

CHEST IMAGING

- 195 **Original article.** Dynamic contrast-enhanced MRI for advanced esophageal cancer response assessment after concurrent chemoradiotherapy. *N.-N. Sun, C. Liu, X.-L. Ge, J. Wang*

CARDIOVASCULAR IMAGING

- 203 **Review.** Imaging features of leadless cardiovascular devices. *J. M. Conyers, P. Rajiah, R. Ahn, S. Abbara, S. S. Saboo*

INTERVENTIONAL RADIOLOGY

- 209 **Original article.** A novel CT-guided technique using medical adhesive for localization of small pulmonary ground-glass nodules and mixed ground-glass nodules (≤ 20 mm) before video-assisted thoracoscopic surgery. *G. Tao, Y. Jingying, G. Tan, D. Xiaotao, C. Min*

- 213 **Original article.** Definitive locoregional therapy (LRT) versus bridging LRT and liver transplantation with wait-and-not-treat approach for very early stage hepatocellular carcinoma. *P. Habibollahi, S. Hunt, T. Bitterman, T. P. Gade, M. C. Soulen, G. Nadolski*

- 219 **Original article.** Combined transarterial chemoembolization and microwave ablation versus transarterial chemoembolization in BCLC stage B hepatocellular carcinoma. *R. Zhang, L. Shen, L. Zhao, Z. Guan, Q. Chen, W. Li*

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

- 225 **Review.** Sonographically indeterminate scrotal masses: how MRI helps in characterization. *A. C. Tsili, M. Bertolotto, L. Rocher, A. T. Turgut, V. Dogra, M. Seçil, S. Freeman, J. Belfield, M. Studniarek, A. Ntorkou, L. E. Derchi, R. Oyen, P. Ramchandani, S. Ramanathan, J. Richenberg*

NEURORADIOLOGY

- 237 **Original article.** Interstudy reproducibility of dark blood high-resolution MRI in evaluating basilar atherosclerotic plaque at 3 Tesla. *L. Chen, Q. Liu, Z. Shi, X. Tian, W. Peng, J. Lu*

RADIOLOGY PHYSICS

- 243 **Original article.** Size-specific dose estimates in chest, abdomen, and pelvis CT examinations of pediatric patients. *İ. Soykal, A. Yurt, K. Akgüngör*