

Volume 19 • Issue 5 • September–October 2013

ISSN 1305-3825 • EISSN 1305-3612

Diagnostic and Interventional Radiology

Official Journal of the Turkish Society of Radiology



TURKISH SOCIETY OF RADIOLOGY

Electronic publication ahead of print available at

www.dirjournal.org

Editor in Chief

Nevzat Karabulut, MD
Denizli, Turkey

Section Editors and Editorial Board

Abdominal Imaging

Mustafa N. Özmen, MD
Mustafa Seçil, MD

Breast & Musculoskeletal Imaging

Ayşenur Oktay, MD

Cardiovascular Imaging

Mecit Kantarcı, MD

Chest Imaging

Nevzat Karabulut, MD

General Radiology

Utku Şenol, MD

Interventional Radiology

Cüneyt Aytekin, MD
Levent Oğuzkurt, MD
Bora Peynircioğlu, MD

**Neuroradiology and
Head & Neck Imaging**

Kubilay Aydın, MD
Süleyman Men, MD
Kader Karlı Oğuz, MD

Nuclear Medicine

Akın Yıldız, MD

Pediatric Imaging

Suat Fitöz, MD

Biostatistical Consultant

İlker Ercan, PhD

Publication Staff

Graphic Design

Üstün Aydingöz, MD

Copyediting

Editat Ltd., Ankara, Turkey
www.editawriting.com

Publication Services

AVES Ltd., İstanbul, Turkey
www.avesyayincilik.com

Internet Services

DDesign Ltd., İstanbul, Turkey
www.ddesign.com.tr

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 is published bimonthly by the Turkish Society of Radiology. 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 Uniform Requirements for Manuscripts Submitted to Biomedical Journals published by the International Committee of Medical Journal Editors (updated April 2010, www.icmje.org).

An electronic edition of Diagnostic and Interventional Radiology is available at www.dirjournal.org (ISSN 1305-3612 / EISSN 1305-3612).

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 Science Citation Index Expanded, PubMed/MEDLINE, EMBASE®, SCOPUS®, Directory of Open Access Journals (www.doaj.org) and the Turkish Medical Index.

Printed in Turkey

Printed on acid-free paper



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.

Owned by Nevra Elmas on behalf of Turkish Society of Radiology • Executive Editor M. Halil Öztürk • An international scientific journal published bimonthly • Published at Turkish Society of Radiology, Hoşdere Cad., Güzelkent Sok., Çankaya Evleri, F/2, 06540 Ankara, Turkey Printed at ADA Press, 2. Matbaacılar Sit. E Blok No: (ZE2) 1. Kat Topkapı, İstanbul, Turkey (+90-212-5671242) • Printing Date August 25, 2013

Instructions for Authors

Manuscript submission is online at www.dirjournal.org. Please refer to the detailed Instructions for Authors at www.dirjournal.org and use them as a checklist.

Online manuscript submission

Carefully read the Instructions for Authors to the left. Go to the *Diagnostic and Interventional Radiology* website at www.dirjournal.org.

Click Online Manuscript Submission.

If you are a registered user, enter your username and password. If you are not, register by clicking New User. Fill in the form and click Send. Define your username and password. When Author Center opens, enter New Submission. From this point on, follow the steps by clicking on the Next button. Select manuscript category (neuroradiology, abdominal imaging, etc.) and type (original article, review, etc.).

Enter affiliation, city, and country data (do not abbreviate institutional names). Enter author data. Full names of the authors should be given, an e-mail address must be provided, and corresponding author should be identified.

Enter the manuscript title.

Enter the abstract (it should be structured in all Manuscripts, except letter, review, technical note, and pictorial essay).

Enter the key words.

Enter a cover letter.

Upload your manuscript in the following manner:

Name your manuscript, which must be a Word document, as "text". This document should contain, in an orderly fashion, the main text (without any author or affiliation information), references, tables on separate pages, and figure legends. Search for your manuscript document by using the Browse button. After selecting the document, click the Upload button. Upload the figures. Every figure part should be properly named as separate files (e.g., "Figure_1a"), browsed as explained above, and separately uploaded. Drawings and graphs are regarded as figures.

After all has been uploaded, click the Send Manuscript button. If you do not click this button, you may visit later to complete the manuscript submission. Your incomplete submission will be saved for later completion.

Do not forget to sign the Copyright Transfer Form (accessible at www.dirjournal.org) and e-mail (info@dirjournal.org) a scanned version of the signed form once your submission is provisionally accepted. Acceptance of your submission will be pending the receipt of the Copyright Transfer Form, and your manuscript will not be published online or in print form unless the Copyright Transfer Form is received.

stored in EPS format; the EPS file must always contain a preview of the figure in TIFF. Suitable drawing programs include Freehand, Illustrator, Corel Draw, and Designer.

This journal is in compliance with the Uniform Requirements for Manuscripts Submitted to Biomedical Journals, as published by the International Committee of Medical Journal Editors (updated April 2010, www.icmje.org).

Scope

Diagnostic and Interventional Radiology is a medium for disseminating scientific information based on research, clinical experience, and observations pertaining to diagnostic and interventional radiology.

• This journal is in compliance with the Uniform Requirements for Manuscripts Submitted to Biomedical Journals, as published by the International Committee of Medical Journal Editors (updated April 2010, www.icmje.org). Any clinical trials must be registered as outlined in the ICMJE guidelines.

• For studies reporting diagnostic accuracy, please refer to the Standards for Reporting of Diagnostic Accuracy (STARD) checklist at <http://www.stard-statement.org/>.

The author(s) MUST sign, scan and e-mail the Copyright Transfer Form within three days AFTER their manuscript's acceptance for publication (info@dirjournal.org). Otherwise online or print publication will not be made.

Fax +90-312-4423654

Form of manuscript

Papers must be in English and presented in the following order:

- Title of the manuscript
- Abstract (250 words or less, structured for original articles)
- Text of paper
- Acknowledgements
- Conflict of interest disclosure
- References
- Tables (numbered with Arabic numerals; 1, 2, 3, etc.), prepared on separate sheets
- Figure legends (numbered consecutively using Arabic numerals)

Please use appropriate subheadings and arrange your text as follows:

Abstract

The abstract should contain four sections (for original articles only): Purpose; Materials and Methods; Results; Conclusion. Each section should comprise one paragraph, beginning with the name of the section in uppercase letters, followed by a colon: (PURPOSE: To report examples of ...)

Introduction

State briefly the nature and purpose of the work, quoting the relevant literature.

Materials and methods

Include the details of clinical and technical procedures.

Research ethics standards compliance

All manuscripts dealing with human subjects must contain a statement indicating that the study was approved by the Institutional Review

Board or comparable formal research ethics review committee. If none is present at your institution, there should be a statement that the research was performed according to the Declaration of Helsinki principles (www.wma.net/e/policy/b3.htm). There should also be a statement about whether informed consent was obtained from research subjects.

Results

Present these clearly, concisely, and without comment.

Discussion

Explain your results and relate them to those of other authors; define their significance for clinical practice.

References

Only essential references should be cited. If there are six or fewer authors, all should be listed. If there are seven or more, list the first three and then "et al." the rest. The list should be in order of first appearance in the text. Only numerals should be cited in the text. Journal names should be abbreviated according to MEDLINE (<http://www.ncbi.nlm.nih.gov/journals?itool=sidebar>).

Journal article

1. Hoverman IV, Gentry LO, Jones DW, Guerriero WG. Intrarenal abscess: Report of 14 cases. *Arch Int Med* 1980; 140:914–916.

Books

2. Watanabe M, Takeda S, Ikeuchi H. Atlas of arthroscopy. 2nd ed. Tokyo: Igaku Shoin, 1969; 57–59.
3. Hull RD, Hirsh J. Comparative value of tests for the diagnosis of venous thrombosis. In: Bernstein EF, ed. Noninvasive diagnostic techniques in vascular disease. 3rd ed. St. Louis: Mosby, 1985; 779–796.

Tables

Tables should have a title and footnotes explaining any abbreviation used in that table. Lowercase letters (a, b, c, ...) should be used for referenced footnotes.

Figures

All figures should be cited in the text and figure parts should be identified by lowercase letters (e.g., Figure 1a). Graphs and drawings are regarded as figures.

Electronic formats

Scan resolution: Scanned line drawings should be digitized with a minimum resolution of 800 dpi relative to the final figure size. For digital halftones, 300 dpi is usually sufficient.

Color illustrations: Store color illustrations as RGB (8 bits per channel) in TIF format.

Vector graphics: Fonts used in vector graphics must be included. Do not draw with hairlines. The minimum line width is 0.2 mm (i.e., 0.567 pt) relative to the final size. Vector graphics exported from a drawing program should be

Contents

NEURORADIOLOGY

- 349 Original article. **Manganese-enhanced MRI to evaluate neurodegenerative changes in a rat model of kainic acid-induced excitotoxicity.** *M. Apaydin, V. Evren, O. Erbaş, C. Çallı, G. O. Peker, D. Taşkıran*

CHEST IMAGING

- 355 Original article. **CT-based weight assessment of lung lobes: comparison with *ex vivo* measurements.** *N. Sverzellati, J.-M. Kuhnigk, S. Furia, S. Diciotti, P. Scanagatta, A. Marchianò, F. Molinari, C. Stoecker, U. Pastorino*

BREAST IMAGING

- 360 Original article. **Performance tests for mammographic film-screen combinations: use of absolute techniques.** *D. Bor, K. Akdur*
- 371 Original article. **Upgrading rate of papillary breast lesions diagnosed by core-needle biopsy.** *C. Wiratkapun, T. Keeratitragoon, P. Lertsithichai, N. Chanplakorn*
- 377 Review. **The current role of radiologists in a multidisciplinary team treating breast cancer.** *R. Cortázar-García, F. Sendra-Portero, M. Acebal-Blanco, J. Aparicio-Camberos, C. Lozano-Calero, F. Fernández-Gutiérrez del Alamo, G. Blanco-Eguren, A. Bellinvia*

ABDOMINAL IMAGING

- 387 Original article. **Clear cell renal cell carcinoma and papillary renal cell carcinoma: differentiation of distinct histological types with multiphase CT.** *P. Bata, J. Gyebnar, D. L. Tarnoki, A. D. Tarnoki, D. Kekesi, A. Szendroi, B. Fejer, A. M. Szasz, P. Nyirady, K. Karlinger, V. Berczi*

MUSCULOSKELETAL IMAGING

- 393 Pictorial essay. **MRI of bone marrow abnormalities in hematological malignancies.** *J. R. Silva Jr., D. Hayashi, T. Yonenaga, K. Fukuda, H. K. Genant, C. Lin, A. Rahmouni, A. Guerhazi*

CARDIOVASCULAR IMAGING

- 400 Original article. **Association between myocardial hypertrophy and apical diverticulum: more than a coincidence?** *A. K. Sivrioğlu, M. Sağlam, E. Öztürk, M. Incedayı, G. Sönmez, H. Mutlu, B. Karaman*

NUCLEAR MEDICINE

- 405 Pictorial essay. **SPECT-CT for characterization of extraosseous uptake of ^{99m}Tc-methylene diphosphonate on bone scintigraphy.** *R. Soundararajan, N. Naswa, P. Sharma, S. Karunanithi, A. H. Nazar, K. J. Das, C. Bal, A. Malhotra, R. Kumar*

INTERVENTIONAL RADIOLOGY

- 411 Original article. **MRI-guided biopsy of the prostate: correlation between the cancer detection rate and the number of previous negative TRUS biopsies.** *T. Durmuş, U. Reichelt, A. Huppertz, B. Hamm, D. Beyersdorff, T. Franke*
- 418 Original article. **Three-dimensional rotational angiography is preferable to conventional two-dimensional techniques for uterine artery embolization.** *A. Gupta, K. Zuurmond, T. Grünhagen, G. Maleux*
- 423 Original article. **Selective arterial embolization with gelatin particles for refractory knee hemarthrosis.** *T. Yamagami, R. Yoshimatsu, H. Miura, Y. Arai, R. Terauchi, S. Nakagawa, K. Yamada*
- 427 Original article. **Fluid preinjection for microwave ablation in an *ex vivo* bovine liver model assessed with volumetry in an open MRI system.** *F. Collettini, H. Rathke, B. Schnackenburg, A. Thomas, L. Albrecht, B. Suttmeier, M. Jonczyk, F. Guettler, U. Teichgräber, T. Kröncke, B. Hamm, M. de Bucourt*

Complete copyright to the article entitled:

(hereinafter, "the article") is hereby transferred to the Turkish Society of Radiology (for United States government employees to the extent transferable), effective if and when the article is accepted for publication in Diagnostic and Interventional Radiology.

The copyright which the authors assign to the Turkish Society of Radiology encompasses all rights to exploit the article in any manner throughout the world. These rights include, but are not limited to, all print reproduction and publication rights and electronic publication rights, such as CD-ROM and online publication, as well as dissemination by any technology now known or later devised.

The author(s) retain all patent and other proprietary rights to the article, with exception of the copyright. If an author wishes to reproduce the article in any medium for distribution purposes, the author must obtain permission from the Turkish Society of Radiology and, if permission is granted, the author must credit the original source of publication when the article is reproduced.

The author(s) certify that:

1. The article does not infringe any personal or proprietary rights of others;
2. The editor-in-chief of Diagnostic and Interventional Radiology has been or will be informed of any proprietary or commercial interest or conflicts of interest the authors may have that relate directly or indirectly to the subject of this article;
3. The scientific content of radiologic images has not been altered, and that disclosure has been made regarding computer enhancement or other electronic manipulation of radiologic images;
4. The authors have made substantive and specific intellectual contributions to this article and assume full responsibility for its content;
5. This article has not been previously published and is not currently under consideration for publication elsewhere; and
6. This agreement has been signed by all of the authors who contributed to the article.

First author's name

Signature

Date

Second author's name

Signature

Date

Third author's name

Signature

Date

Fourth author's name

Signature

Date

Fifth author's name

Signature

Date

Sixth author's name

Signature

Date

Seventh author's name

Signature

Date

Please use additional sheets for more authors.