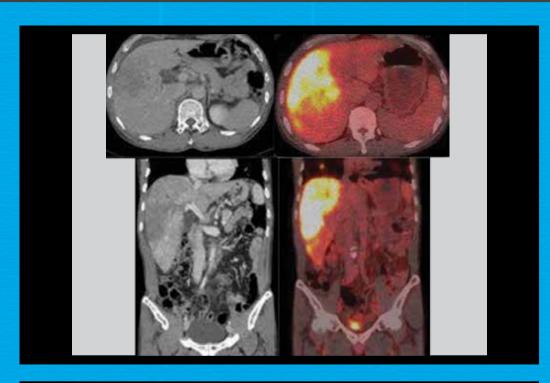


OFFICIAL JOURNAL OF THE TURKISH SOCIETY OF GASTROENTEROLOGY



Hepatocellular carcinoma, SUV, prognosis....

ISSUE HIGHLIGHTS

- Additional BCAA nutrient for cirrhotic patients
- *H. pylori*-dependent cytokine responses in THP1 and HL60
- Vegetarianism and nonalcoholic fatty liver disease
- 18F-FDG PET CT in HCC
- Induction of mucosal healing and prediction by artificial systems
- ◆ Indexed in PubMed/MEDLINE and Science Citation Index Expanded





Onur Baser, USA

Ali Canbay, Germany Marc Giovannini, France

Mouen Kashab, USA

Erwin Santo, Israel

Vikesh Singh, USA

Timucin Taner, USA

Anne Marie Lennon, USA

Edouard Louis, Belgium

Fuat H. Saner, Germany

INTERNATIONAL ADVISORY BOARD

EDITORS

■ Editor in Chief Hakan Şentürk

■ Associate Editors

Mehmet Arhan Ömer Başar Metin Başaranoğlu Billur Canbakan Emel Canbay Şahin Çoban Ahmet Danalıoğlu Ahmet Gürakar Sauid Ishaq Tarkan Karakan Seyfettin Köklü Veysel Tahan

■ Past Editor in Chief

Cihan Yurdaydın

EDITORIAL BOARD

Ulus Salih Akarca Erdem Akbal Meral Akdoğan Hakan Akın Hikmet Akkız Akif Altunbaş Yusuf Bayraktar Fatih Beşişik Yavuz Beyazıt Mehmet Cindoruk İbrahim Doğan Enver Dolar

Fuat Ekiz
Levent Erdem
Selim Gürel
Saadettin Hülagu
Ramazan İdilman
Abdurrahman Kadayıfçı
Çetin Karaca
Zeki Karasu
Sabahattin Kaymakoğlu
Erdem Koçak
Aydın Seref Köksal

Abdülkadir Dökmeci

Ersan Özarslan
Erkan Parlak
Tuğrul Pürnak
Murat Tuncer
İlker Turan
Ahmet Uygun
Yücel Üstündağ
Cihan Yurdaydın
Osman Yüksel

Necati Örmeci



Publisher İbrahim KARA Publication Director Ali ŞAHİN Deputy Publication Director Gökhan ÇİMEN

Publication Coordinators Esra GÖRGÜLÜ Ebru MUTLU Betül ÇİMEN Saniye İNGİN Nihan GÜLTAN İrem Naz GÜVEL Dilşad GÜNEY

Fin ance Coordinator Veysel KARA Project Coordinators Hakan ERTEN

Zeynep YAKIŞIRER

Graphics Department Ünal ÖZER Neslihan YAMAN Merve KURT

Contact

Address: Büyükdere Cad. No: 105/9 34394 Mecidiyeköy, Şişli, İstanbul-Turkey Phone: +90 212 217 17 00 Fax: +90 212 217 22 92

E-mail: info@avesyayincilik.com

Türk Gastroenteroloji Derneği adına sahibi / Owned by on behalf of the Turkish Society of Gastroenterology: Necati Örmeci • Sorumlu Yazı İşleri Müdürü / Executive Editor: Hakan Şentürk • Yayın türü / Publication Type: Yerel süreli / Bimonthly periodical • Basım yeri / Printed at: ADA Ofset, 2. Matbaacılar Sit. E Blok No: (ZE2) 1. Kat Topkapı, İstanbul, Turkey (+90-212-5671242) • Basım tarihi / Printing Date: Temmuz 2015 / June 2015 • Türk Gastroenteroloji Demeği tarafından yayınlanmaktadır / Published by Turkish Society of Gastroenterology, İşçi Blokları Mah. 1536 Sok No: 7, 100. Yıl Belgat, Ankara, Turkey



GASTROENTEROLOGY

Aims and Scope

The Turkish Journal of Gastroenterology is the double-blind peer-reviewed, open access, international publication organ of the Turkish Gastroenterology Society. The journal is a bimonthly publication, published on January, March, May, July, September, November and its publication language is English.

The Turkish Journal of Gastroenterology aims to publish manuscripts at the highest clinical and scientific level on original issues of gastroenterology and hepatology at the international level. The journal publishes original papers, review articles, case reports and letters to the editor on clinical gastroenterology and hepatology.

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

The Turkish Journal of Gastroenterology is indexed in Science Citation Index Expanded and PubMed/MEDLINE.

The Turkish Journal of Gastroenterology financial expenses of the journal are covered by the Turkish Gastroenterology Society.

Permissions and Reprints

Permissions for reproduction of materials published and reprints in the Turkish Journal of Gastroenterology should be requested from the editorial office at tgd@tgd.org.tr.

Advertising

For requests concerning advertising, please contact the Publisher.

Publisher: AVES - İbrahim Kara

Address: Büyükdere Cad. 105/9 34394 Mecidiyeköy, Şişli, İstanbul, Turkey

Phone: +90 212 217 17 00 Fax: +90 212 217 22 92

Web page: www.avesyayincilik.com E-mail: info@avesyayincilik.com

Instructions for authors

Instructions for authors are published in the journal pages and could be accessed at the web site of the journal www.turkjgastroenterol.org.

Material Disclaimer

Statements or opinions expressed in the manuscripts published in the Turkish Journal of Gastroenterology reflect the views of the author(s) and not the opinions of the editors, the editorial board and the publisher; the editors, the editorial board and the publisher disclaim any responsibility or liability for such materials.

The journal is printed on an acid-free paper.



Instructions to Authors

The Turkish Journal of Gastroenterology is the double-blind peerreviewed, international open-access publication organ of the Turkish Gastroenterology Society. The Turkish Journal of Gastroenterology publishes original papers, review articles, case reports and letters to the editor on clinical gastroenterology and hepatology. The journal is a monthly periodical and its publication language is English.

The Turkish Journal of Gastroenterology discourages the submission of more than one article dealing with related aspects of the same study. Review articles on selected clinical and basic topics of interest will be solicited by the editors. In exceptional cases, non-invited reviews may be considered for publication.

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

The Turkish Journal of Gastroenterology will only evaluate manuscripts submitted via the journal's self-explanatory online manuscript submission and evaluation system, manuscripts submitted via any other medium will not be evaluated.

Manuscripts are published on the understanding that they are original contributions and do not contain data that have been published elsewhere or are under consideration by another journal. Meeting abstracts are not considered as duplicate publications but should be disclosed in the cover letter accompanying the manuscript.

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. The original source should be cited within the references and below the reprinted material.

The Turkish Journal of Gastroenterology requires each submission to be accompanied by a Copyright Transfer Form, an Author Contributions Form and an ICMJE Form for Disclosure of Potential Conflicts of Interest.

Statements or opinions expressed in the manuscripts published in The Turkish Journal of Gastroenterology 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.

Each individual listed as an author should fulfil the authorship criteria recommended by the International Committee of Medical Journal Editors (Uniform Requirements for Manuscripts Submitted to Biomedical Journals. http://www.icmje.org). Individuals who contributed to the preparation of the manuscript but do not fulfil the authorship criteria should be acknowledged in an acknowledged.

ments section, which should be included in the title page of the manuscript. If the editorial board suspects a case of "gift authorship", the submission will be rejected without further review.

The Turkish Journal of Gastroenterology 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.

A submitted manuscript will not be evaluated for publication until a conflict of interest disclosure is submitted. The disclosure should also be included in the main document before the reference list and in the cover letter. The following information must be provided:

- The author acting as the submission's guarantor and the corresponding author must be identified in the letter to the editor
- Any financial or editorial assistance received to support the research and/or article should be cleared.
- Identification of any relationships that provided financial or editorial support for the study which may in potential cause competing interests for the submission.

The authors should state in the Materials and Methods section of the main text that experiments have been performed in compliance with the ethical principles of the assigned institutional board or national committee. Application or approval number/year for the study should also be indicated.

It is the author's responsibility to carefully protect the patients' anonymity and to verify that any experimental investigation with human subjects reported in the submission was performed with informed consent and following all the guidelines for experimental investigation with human subjects required by the institution(s) with which all the authors are affiliated with. For photographs that may reveal the identity of the patients, signed releases of the patient or of his/her legal representative should be enclosed.

When reporting experiments on human subjects, indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) and with the Helsinki Declaration (JAMA 2000;284:3043-3049).

As part of submission of the manuscript, the correspondent author should send a short statement declaring that he/she accepts to undertake all the responsibility for authorship during the submission and review stages of the manuscript.

Originality, high scientific quality and citation potential are the most important criteria for a manuscript to be accepted for publication.

Manuscripts submitted to the journal 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 don't conform the journal's guidelines will be returned to the submitting author with technical correction requests. Manuscripts that conform the journal's guidelines will be reviewed by at least 3 external peer reviewers during the evaluation process. The Editor in Chief is the final authority in the decision making process.

Authors of a paper accepted for publication in the Turkish Journal of Gastroenterology should be in consent of that editors could make corrections without changing the basic meaning of the text of the manuscript.

All submissions are screened by a similarity detection software. In case there is more than 20% similarity with existing studies, the paper is automatically rejected.

MANUSCRIPT PREPARATION

Manuscripts should be prepared in accordance with the ICMJE - Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals (updated in December 2014 – available at www.icmje.org).

Original Investigations and Reviews should be presented according to the guidelines: randomized study - CONSORT, observational study - STROBE, study on diagnostic accuracy - STARD, systematic reviews and meta-analysis PRISMA, nonrandomized behavioural and public health intervention studies - TREND.

Cover letter

A letter of submission must be included in all manuscripts, including revised manuscripts.

This letter may be used to emphasize the importance of the study or new significant points included to the revised manuscript. This letter can be typed or added to the relevant section of the online submission using copy/paste method. In the cover letter of each submission, the authors should briefly state the existing knowledge relevant to the study and the contributions their study make to the existing knowledge.

Title page

A separate title page should be submitted with all submissions and should include the title of the manuscript, name(s), affiliations and major degree(s) of the author(s) and source(s) of the work or study, a short title (running head) of no more than 50 characters. The name, address, telephone (including the mobile phone number) and fax numbers and e-mail address of the corresponding author should be listed on the title page. Grant information and other sources of support should also be included on the Title page. Individuals who contributed to the preparation of the manuscript but do not fulfil the authorship criteria should be acknowledged in the title page.

Main Document Abstract

All manuscripts should be accompanied an abstract. A structured abstract is required with original articles and it should include the following subheadings: Background/Aims, Material and Methods,

Results and Conclusion. A structured abstract is not required with review articles and case reports. The abstract should be limited to 250 words for original articles and review articles and 150 words for case reports.

Keywords

Each submission should be accompanied by 3 to 5 key words which should be picked from the Medical Subject Headings (MeSH) list (www.nlm.nih.gov/mesh/MBrowser.html).

Main Text

Original Articles: Acceptance of original papers will be based upon the originality and importance of the investigation. Turkish Journal of Gastroenterology encourages submission of widely readable clinical studies. The journal does not consider animal experiments for evaluation and only prospective or retrospective clinical studies are evaluated as original papers.

Original Articles should be structured with Introduction, Materials and Methods, Results and Discussion subheadings. The number of references cited should not exceed 35 and the main text should be limited to 4000 words. An original article can be signed by maximum 6 authors unless it is a multi-center study or that it required extensive labour.

Introduction: Provide background information that will orient the general reader.

Materials/Patients and Methods: Materials/Patients and Methods: Provide a level of detail such that another investigator could repeat the work for methods that are used without significant modification. Citation of the original work will suffice. For reports of research using human subjects, state that informed consent was obtained from each patient and that institutional ethic committee approval was obtained.

State if informed consent was obtained from each patient and that ethic committee approval was obtained.

Results: Use tables and figures for better understanding. Please refer to the instructions before uploading images to the website.

Discussion: Discuss your results by citations; avoid discussion of other related works. Do not engage in a literature review.

Case Reports: Turkish Journal of Gastroenterology encourages submission of original and interesting case series. Single case reports are not considered for evaluation and publication; however, submission of single case reports in the letter to the editor format is possible and encouraged.

The main text of Case Reports should be limited with 1200 words and should be structured with the following subheadings; Introduction, Case Presentation and Discussion. The maximum number of references cited in a case report should be 10. A case report can be signed by maximum 5 authors unless the report entails a rare disease or condition with a cohort or multi-center.



Review Articles: Mainly, invited reviews on specific topics are published. In exceptional cases, non-invited reviews may be considered for publication. Individuals interested in writing a review article must correspond with the Editorial Office regarding the topic before submitting the entire manuscript. The subheadings of the review articles should be planned by the authors. However, each review article should include a "Conclusion" section. The main text of review articles should be limited with 5000 words. The number of references cited should not exceed 50.

Editorials: Invited brief editorial comments on selected articles are published in The Turkish Journal of Gastroenterology. Editorials should not be longer than 1000 words excluding references.

Letter to the editor: Letters to the editor, containing case reports or brief reports of studies should not be longer than 400 words excluding references. Letters should include no more than 5 references.

Invited Letters to the Editor: Letters related to articles published in recent issues of the Turkish Journal of Gastroenterology or to topics of gastroenterology are welcomed and will be considered for publication. A publication fee will not be requested for the letters in this category.

- Letters to the editors should be sent within 6 months of publication of the commented article. Should not be longer than 400 words excluding references. Commented article should be cited as a reference. Letters should include no more than 5 references.
- Letters to the editor, containing case reports or brief reports of studies should not be longer than 400 words excluding references. Letters should include no more than 5 references.

All acronyms and abbreviations used in the manuscript should be defined at first use, both in the abstract and the main text. The abbreviation should be provided in parenthesis following the definition.

Statistical analysis should be performed in accordance with guidelines on reporting statistics in medical journals (Altman DG, Gore SM, Gardner MJ, Pocock SJ. Statistical guidelines for contributors to medical journals. Br Med J 1983: 7; 1489-93.). Information on the statistical analysis process of the study should be provided within the main text.

When a drug, product, hardware, or software mentioned within the main text product information, including the name of the product, producer of the product, city of the company and the country of the company should be provided in parenthesis in the following format: "Discovery St PET/CT scanner (General Electric, Milwaukee, WI, USA)"

All references, tables and figures should be referred to within the main text and they should be numbered consecutively in the order they are referred to within the main text.

Limitations, drawbacks and shortcomings of original articles should be mentioned in the "Discussion" section before the conclusion paragraph.

References

References should be numbered consecutively in the order they are referred to within the main text and all references listed in the reference list should be referred to within the main text in parenthesis. Style and punctuation of each reference in the reference list should be in accordance with the examples listed below;

Standard journal article: Journal titles should be abbreviated in accordance with journal abbreviations used in Index Medicus (for journal abbreviations consult List of Journals indexed for MEDLINE published annually by NLM at http://www.nlm.nih.gov/tsd/serials/lji.html). When there are six or fewer authors, all authors should be listed. If there are seven or more authors, first 3 should be listed, followed by "et al.". A list of authors should be followed by the full title of the article, journal title, year, volume and page numbers.

Example: Mittal RK, Holloway RH, Penagini R, et al. Transient lower esophageal sphincter relaxation. Gastroenterology 1995; 109: 601-10.

Books:

Chapter in a book: Sherry S. Detection of thrombi. In: Strauss HE, Pitt B, James AE, editors. Cardiovascular Medicine. St Louis: Mosby; 1974.p. 273-85.

Personal author(s): Cohn PF. Silent myocardial ischemia and infarction. 3rd ed. New York: Marcel Dekker; 1993.

Editor (s), compiler(s) as author: Norman IJ, Redfern SJ, editors. Mental health care for elderly people. New York: Churchill Livingstone; 1996.

Conference paper: Bengisson S. Sothemin BG. Enforcement of data protection, privacy and security in medical informatics. In: Lun KC, Degoulet P, Piemme TE, Rienhoff O, editors. MEDINFO 92. Proceedings of the 7th World Congress on Medical Informatics; 1992 Sept 6-10; Geneva, Switzerland. Amsterdam: North-Holland; 1992. P. 1561-5.

Scientific or technical report: Smith P. Golladay K. Payment for durable medical equipment billed during skilled nursing facility stays. Final report. Dallas (TX) Dept. of Health and Human Services (US). Office of Evaluation and Inspections: 1994 Oct. Report No: HHSIGOE 169200860.

Dissertation: Kaplan SI. Post-hospital home health care: the elderly access and utilization (dissertation). St. Louis (MO): Washington Univ. 1995.

Article in electronic format: Morse SS. Factors in the emergence of infectious diseases. Emerg Infect Dis (serial online) 1995 Jan-Mar (cited 1996 June 5): 1(1): (24 screens). Available from: http://www.cdc.gov/ncidodlElD/cid.htm.



Tables

Tables should be included in the main document and should be presented after the reference list. Tables should be numbered consecutively in the order they are referred to within the main text. A descriptive title should be provided for all tables and the titles should be placed above the tables. Abbreviations used in the tables should be defined below the tables by footnotes (even if they are defined within the main text). Tables should be created using the "insert table" command of the word processing software and they should be arranged clearly to provide an easy reading. Data presented in the tables should not be a repetition of the data presented within the main text but should be supporting the main text.

Figures and Figure Legends

Figures, graphics and photographs should be submitted as separate files (in TIFF or JPEG format) through the submission system. The files should not be embedded in a Word document or the main document. When there are figure subunits, the subunits should not be merged to form a single image. Each subunit should be submitted separately through the submission system. Images should not be labelled (a, b, c, etc.) to indicate figure subunits. Thick and thin arrows, arrowheads, stars, asterisks and similar marks can be used on the images to support figure legends. Like the rest of the submission, the figures too should be blind. Any information within the images that may indicate an individual or institution should be blinded. The minimum resolution of each submitted figure should be 300DPI. To prevent delays in the evaluation process all submitted figures should be clear in resolution and large in size (minimum dimensions 100x100 mm)

Figure legends should be listed at the end of the main document.

Once a manuscript is accepted for publication it will be provided with a registered DOI number following the acceptance decision. Manuscripts accepted for publication by the Turkish Journal of Gastroenterology will be published as ahead of print articles prior to the printing date of their scheduled issue. Corresponding author will be provided with a PDF Proof by the publisher once the production process of an accepted manuscript is over. The publisher will request the corresponding author to list their correction requests if there are any and approve the publication of the manuscript.

PUBLICATION FEE

A non-refundable charge of 299 USD (795 TL or 265 Euro) for each accepted manuscript must be paid by the author(s) to the Turkish Society of Gastroenterology (Türk Gastroenteroloji Derneği) (Bank account: Türkiye Halk Bankası, Emek Branch Office). The journal will supply all publication expenses including copy-editing service and statistician's endorsement through these funds.

Account numbers:

Turkish Lira (TL):

IBAN CODE: TR88 0001 2009 4010 0016 0000 63

EURO (€):

IBAN CODE: TR60 0001 2009 4010 0058 000112

SWIFT CODE:TRHBTR2A

US Dollars (\$)

IBAN CODE: TR87 0001 2009 4010 0058 000111

SWIFT CODE: TRHBTR2A

In case of acceptance of a manuscript that contains colour illustrations, an additional fee of 50TL (25USD, 12€) is requested to be paid to the same bank account.

PERMISSIONS AND REPRINTS

Permissions for reproduction of materials published and reprints in the Turkish Journal of Gastroenterology should be requested from the editorial office at tqd@tqd.orq.tr.

INSTRUCTIONS FOR AUTHORS

Instructions for authors are published in the journal pages and could be accessed at the web site of the journal www.turkjgastroenterol.org.

The journal is printed on an acid-free paper.



Review

■ 291 Importance of malnutrition in patients with cirrhosis Hüseyin Savaş Göktürk, Haldun Selçuk

Original Articles

- 297 The cytokine response in THP-1 (monocyte) and HL-60 (neutrophil-differentiated) cells infected with different genotypes of *Helicobacter pylori* strains

 Reyhan Çalışkan, Ayça Sayı Yazgan, Hrisi Bahar Tokman, Emre Sofyalı, Yusuf Ziya Erzin, Özer Akgül, Aykut Kurt, Fatma Kalavcı, Tevhide Ziver, Pelin Yüksel, Kadir Bal, Bekir Kocazevbek
- 304 The relationship of recurrent aphthous stomatitis and *Helicobacter pylori*, cytokine gene polymorphism and cobalamin

Tolga Yakar, Ender Serin, Arif Mansur Coşar, Didem Arslan Taş

■ 309 Validity and reliability of the patient assessment of constipation quality of life questionnaire for the Turkish population

Göksel Bengi, Mustafa Yalçın, Hale Akpınar, Pembe Keskinoğlu, Hülya Ellidokuz

- 315 The rate of mucosal healing by azathioprine therapy and prediction by artificial systems
 Firat Hardalaç, Metin Başaranoğlu, Mahmut Yüksel, Uğurhan Kutbay, Mustafa Kaplan, Yasemin Özderin Özin,
 Z. Mesut Yalın Kılıç, Ali E. Demirbağ, Orhan Coşkun, Adem Aksoy, Venkat Gangarapu, Necati Örmeci, Ertuğrul Kayaçetin
- 322 Tenofovir-best hope for treatment of chronic hepatitis B infection?

 Necati Örmeci, Burak Özbaş, Rahmet Güner, Hasan Özkan, Aysun Yalçı, Şahin Çoban, Abdülkadir Dökmeci, Çağdaş Kalkan, Hakan Akıncı, Osman Yüksel, Ömer Başar, İlhami Yüksel, İsmail Balık
- 328 Additional BCAA-enriched nutrient mixture improves the nutritional condition in cirrhotic patients with hypoalbuminemia despite treatment with regular BCAA granules: A pilot study

 Aiko Fukui, Naoto Kawabe, Senju Hashimoto, Michihito Murao, Takuji Nakano, Hiroaki Shimazaki, Toshiki Kan, Kazunori Nakaoka, Masashi Ohki, Yuka Takagawa, Hiroyuki Kamei, Kentaro Yoshioka
- 336 A vegetarian diet does not protect against nonalcoholic fatty liver disease (NAFLD): A cross-sectional study between Buddhist priests and the general population
 Sung Hun Choi, Dong Jun Oh, Ki Hwan Kwon, Jun Kyu Lee, Moon-Soo Koh, Jin Ho Lee, Hyoun Woo Kang
- 344 ¹⁸F-FDG PET CT as a prognostic factor in hepatocellular carcinoma Eunae Cho, Chung-Hwan Jun, Ban-Seok Kim, Dong-Jun Son, Won-Suk Choi, Sung-Kyu Choi
- 351 The Nutritional status of hospitalized children: Has this subject been overlooked? Nermin Kapçı, Mustafa Akçam, Tuğba Koca, Selim Dereci, Mücahit Kapcı

Letters to the Editor

- 356 Blood hemoglobin values are a strong predictor of serum adiponectin levels Erdem Koçak, Yavuz Beyazıt
- 357 Importance of serum hepatitis B surface antigen and hepatitis e antigen quantification among patients with chronic hepatitis B

Ergenekon Karagöz, Alpaslan Tanoğlu

■ 358 A rare solid tumor of the retroperitoneum with venous extension and lung metastasis: Extragastrointestinal stromal tumor

Türker Acar, Duran Efe, Ahmet Okuş, İrfan Öcal, Mustafa Harman

- 360 Importance of ascites adenosine deaminase in diagnosing abdominal tuberculosis with ascites ibrahim Hakkı Köker
- 361 Co-occurrence of inflammatory fibroid polyp in Crohn's disease: A MR enterography study
 Türker Acar, Mustafa Harman, Serkan Güneyli, Nevra Elmas