



Turkish  
Respiratory  
Society

Indexed in  
Web of Science

# EURASIAN JOURNAL OF PULMONOLOGY

EURASIAN J PULMONOL

## Coronavirus Disease 2019 (COVID-19) and the Lung: What Pulmonologists Need to Know

### Section I

Preface

Epidemiology of COVID-19

Pathogenesis of COVID-19

Tobacco and COVID-19

Clinical and laboratory findings of COVID-19

Radiological findings of COVID-19

Bronchoscopy and respiratory specimen collection for COVID-19

Molecular and serological tests for COVID-19

Potential treatment of COVID-19

Management of COVID-19 in intensive care units

### Section II

Astma and COVID-19

Chronic obstructive pulmonary disease and COVID-19

Interstitial lung disease and COVID-19

Coagulopathy and COVID-19

Lung cancer and COVID-19

COVID-19 in elderly patients

COVID-19 in children

COVID-19 as an occupational disease

COVID-19 and pulmonary rehabilitation

[www.eurasianjpulmonol.com](http://www.eurasianjpulmonol.com)

VOLUME 22  
SUPPLRMENT 1  
2020



ISSN 2148-5402



Turkish  
Respiratory  
Society

# EURASIAN JOURNAL OF PULMONOLOGY

EURASIAN J PULMONOL

## Editor in Chief

Filiz Koşar

Department of Pulmonary Diseases, University of Health Sciences Yedikule Pulmonary Diseases and Thoracic Surgery Training and Research Hospital, İstanbul, Turkey

Deniz Köksal

Department of Pulmonary Diseases, School of Medicine, Hacettepe University, Ankara, Turkey

## Guest Editor

Güntülü Ak

Department of Chest Diseases, Medical Faculty, Eskisehir Osmangazi University, Eskisehir, Turkey

## Associate Editors

M. Şule Akçay

Department of Pulmonary Diseases, School of Medicine,  
Başkent University, Ankara, Turkey

Ülkü Aka Aktürk

Department of Pulmonary Diseases, Süreyyapaşa Chest Diseases Hospital,  
İstanbul, Turkey

İbrahim Onur Alıcı

Department of Pulmonary Diseases, Dr. Suat Seren Chest Diseases Hospital,  
İzmir, Turkey

Hilal Ermiş

Department of Pulmonary Diseases, İnönü University Turgut Özal Medical  
Center, Malatya, Turkey

Ali Fidan

Department of Pulmonary Diseases, University of Health Sciences Dr. Lütfi  
Kırdar Kartal Training and Research Hospital, İstanbul, Turkey

Sanlı Sadi Kurdak

Department of Physiology, School of Medicine, Çukurova University, Adana, Turkey

Nazan Şen

Department of Pulmonary Diseases, School of Medicine,  
Başkent University, Adana, Turkey

Sevinç Sarıncı Ulaşlı

Department of Pulmonary Diseases, School of Medicine, Hacettepe University,  
Ankara, Turkey

Arzu Didem Yalçın

Department of Pulmonary Diseases, Antalya Training and Research Hospital,  
Antalya, Turkey

## Statistical Advisors

Cengiz Han Açikel

Department of Public Health, Gülhane Military Medical Academy,  
Ankara, Turkey

Pınar Ay

Public Health, School of Medicine, Marmara University,  
İstanbul, Turkey

M. Özgür Dolgun

Department of Actuarial Science, School of Medicine, Hacettepe University,  
Ankara, Turkey

Nurdan Çolakoğlu

Arel University, İstanbul, Turkey

Sevilay Karahan

Department of Biostatistic Hacettepe University, Ankara, Turkey

## National Editorial Board

Adnan Sayar  
Ahmet Ilgazlı  
Ahmet Zafer Çalışkaner  
Akif Turna  
Akin Eraslan Balci  
Ali Nihat Annakkaya  
Arzu Ertürk  
Arzu Mirici  
Atilla Gürses  
Atilla Saygı  
Aykut Çilli  
Ayşe Özsoz  
Ayşe Tana Aslan  
Banu Salepci  
Baykal Tulek

Benan Çağlayan  
Büge Öz  
Can Öztürk  
Canan Akman  
Cebrazil Şimşek  
Erdoğan Kunter  
Esra Uzaslan  
Ferah Ece  
Ferhan Özşeker  
Fikret Kanat  
Füsün Kalpaklıoğlu  
Gülderen Şahin  
Gülfem Çelik  
Hatice Türker  
Hospital, İstanbul, Turkey

İbrahim Akkurt  
İlgaz Doğusoy  
Kemal Tahaoğlu  
Kerim Sönmezoğlu  
Levent Elbeyli  
Mecit Süerdem  
Mehmet Ali Bedirhan  
Meral Gülhan  
Metin Akgün  
Mukadder Çalıkoğlu  
Mustafa Yüksel  
Muzaffer Metintaş  
Nazmi Bilir  
Nermin Yelmen  
Nihat Sapan

Nilgün Gürses  
Nural Kiper  
Nurhan Köksal  
Nurhayat Yıldırım  
Oğuz Köksel  
Oğuz Köktürk  
Oğuz Uzun  
Oktay Demirkıran  
Oya Kayacan  
Rengin Demir  
Sadettin Çıkrıkçioğlu  
Salih Emri  
Sami Öztürk  
Sebahat Akoğlu  
Sema Canbakan

Semra Bilaçeroğlu  
Sevda Şener Cömert  
Sevim Bavbek  
Soner Gürsoy  
Tülin Çağatay  
Tunçalp Demir  
Tuncay Göksel  
Ufuk Yılmaz  
Ülkü Yılmaz Turay  
Veysel Yılmaz  
Yurdanur Erdoğan

## International Editorial Board

Arzu Arı  
Demosthenes Bouros  
Henri Colt  
Claudio F. Donner  
Christophe Dooms  
Hervé Dutau  
Ahmed Al Halfawy  
Felix Herth

James Jett  
Dragana Jovanovich  
Pyng Lee  
Y. C. Gary Lee  
Richard Light  
Nick Maskell  
Atul C. Mehta  
Giovanni Battista Migliori

Mohamed Al Moamary  
Sudish Murthy  
Stefano Nava  
Mark Rosen  
Ales Rozman  
Tarek Safwat  
Gerard Silvestri  
Marioara Simon

Daniel Sterman  
Charlie Strange  
Grigoris Stratakou  
Macé M. Schuurmans  
Antoni Torres

## General Information

### The journal

Eurasian Journal of Pulmonology (EJOP) (E-ISSN: 2148-5402) is a publication of Turkish Respiratory Society. The journal publishes articles related to Chest medicine/all relevant scientists, physicians and nurses. The Journal is published in April, August and December.

### Abstracting and indexing information

The journal is registered with the following abstracting partners: Baidu Scholar, CNKI (China National Knowledge Infrastructure), EBSCO Publishing's Electronic Databases, Ex Libris – Primo Central, Google Scholar, Hinari, Infotrieve, Netherlands ISSN center, ProQuest, TdNet, Turkey Citation Index, Wanfang Data

The journal is indexed with, or included in, the following: DOAJ, Emerging Sources Citation Index, Web of Science

### Information for Authors

There are no page charges for EJOP submissions. Please check <http://www.ejoponline.org/contributors.asp>

All manuscripts must be submitted online at <http://www.journalonweb.com/ejop>.

### Advertising policies

The journal accepts display and classified advertising. Frequency discounts and special positions are available. Inquiries about advertising should be sent to Wolters Kluwer India Pvt. Ltd., [advertise@medknow.com](mailto:advertise@medknow.com).

The journal reserves the right to reject any advertisement considered unsuitable according to the set policies of the journal.

The appearance of advertising or product information in the various sections in the journal does not constitute an endorsement or approval by the journal and/or its publisher of the quality or value of the said product or of claims made for it by its manufacturer.

### Copyright

The entire contents of the Eurasian Journal of Pulmonology are protected under Indian and international copyrights. The Journal, however, grants to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, perform and display the work publicly and to make and distribute derivative works in any digital medium for any reasonable non-commercial purpose, subject to proper attribution of authorship and ownership of the rights. The journal also grants the right to make small numbers of printed copies for their personal non-commercial use.

### Permissions

For information on how to request permissions to reproduce articles/information from this journal, please visit [www.medknow.com](http://www.medknow.com).

### Disclaimer

The information and opinions presented in the Journal reflect the views of the authors and not of the Journal or its Editorial Board or the Publisher. Publication does not constitute endorsement by the journal. Neither the Eurasian Journal of Pulmonology nor its publishers nor anyone else involved in creating, producing or delivering the Eurasian Journal of Pulmonology or the materials contained therein, assumes any liability or responsibility for the accuracy, completeness, or usefulness of any information provided in the Eurasian Journal of Pulmonology, nor shall they be liable for any direct, indirect, incidental, special, consequential or punitive damages arising out of the use of the Eurasian Journal of Pulmonology. The Eurasian Journal of Pulmonology, nor its publishers, nor any other party involved in the preparation of material contained in the Eurasian Journal of Pulmonology represents or warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from the use of such material. Readers are encouraged to confirm the information contained herein with other sources.

### Addresses:

#### Editorial Office

Prof. Dr. Filiz Kosar

Editor in Chief,

Sahrayıcedit Mh. Atatürk cad. Aslan Kaptan Çıkmaızı Sk.

No:1 K:3 D:5 Kadıköy/İSTANBUL, Turkey.

Deniz Köksal,

Editor in Chief,

Department of Pulmonary Diseases, School of Medicine, Hacettepe University, Ankara, Turkey

Phone: +90 (216) 410 22 58 / +90 (216) 410 22 59.

Fax: +90 (216) 410 22 60

### Published by

#### Wolters Kluwer India Pvt. Ltd.

A-202, 2<sup>nd</sup> Floor, The Qube, C.T.S. No.1498A/2

Village Marol, Andheri (East), Mumbai - 400 059, India.

Phone: 91-22-66491818

Website: [www.medknow.com](http://www.medknow.com)

### Printed at:

Dhote Offset Technokrafts Pvt. Ltd., Mumbai

We are glad to share about our planting partnership with "Grow Trees" to reduce carbon emission and help the world to be a greener environment!

## CONTENTS

### Preface

#### Preface

Guntulu Ak S1

### Review Articles

#### Epidemiology of COVID-19

Selma Metintas S2

#### Pathogenesis of COVID-19

Evrin Eylem Akpınar S8

#### Tobacco and COVID-19

Özlem Sönmez, Zeynep Atam Taşdemir, H. Volkan Kara, Sule Akçay S12

#### Clinical and laboratory findings of COVID-19

Berna Komurcuoglu S16

#### Radiological findings of COVID-19 pneumonia

Naim Ceylan, Recep Savas S19

#### Bronchoscopy and respiratory specimen collection for COVID-19

Ayperi Öztürk, Levent Dalar S25

#### Molecular and serological tests for COVID-19

Melahat Gurbuz S29

#### Potential treatment of COVID-19

Ömer Ayten, Cengiz Özdemir, Ülkü Aka Aktürk, Nazan Şen S35

#### Management of COVID-19 in intensive care units

Pervin Hanci S45

#### Astma and COVID-19

Zeynep Ferhan Ozseker S52

#### Chronic obstructive pulmonary disease and COVID-19

Onur Turan, Arzu Mirici S56

#### Interstitial lung diseases and COVID-19

Pinar Yıldız Gulhan, Nilgun Demirci, Fulsen Bozkus, Onur Yazıcı, Funda Coskun, TUSAD DPAH-PVH Working Group S61

#### Coagulopathy and COVID-19

Onur Yazıcı, Fulsen Bozkuş, Nilgün Demirci, Pınar Yıldız Gülhan, Funda Coşkun S67

#### Lung cancer and COVID-19

Celal Satıcı, Pinar Akin Kabalak, Ufuk Yılmaz S70

# Eurasian Journal of Pulmonology

Volume 22, Supplement 1, 2020

## **COVID-19 in elderly patients**

Serap Duru

S76

## **COVID-19 in children**

Zeynep Reyhan Onay, Tuğba Şişmanlar Eyüboğlu, Ayşe Tana Aslan

S82

## **COVID-19 as an occupational disease**

Nur Safak Alici, Ayse Coskun Beyan, Cebrail Simsek

S90

## **COVID-19 and pulmonary rehabilitation**

Aysegül Beykümül, Gazi Gülbaz

S101