



Journal of the British Thoracic Society

Impact Factor: 9.203

**Editors-in-Chief**

M Griffiths (UK)  
C O'Kane (UK)  
J Quint (UK)

**Deputy Editors**

A Bottle (UK)  
R Chambers (UK)  
M Shankar-Hari (UK)

**Associate Editors**

M Bafadel (UK)  
D Baldwin (UK)  
B Barratt (UK)  
B Blackwood (UK)  
K Blythe (UK)  
HJ Bogaard (The Netherlands)  
F Brimms (Australia)  
N Chaudhuri (UK)  
B Connolly (UK)  
GJ Criner (USA)  
C Dean (UK)  
D Dockrell (UK)  
A Floto (UK)  
J Honda (USA)  
N Hopkinson (UK)  
D Jackson (UK)  
C Janson (Sweden)  
G Kaltsakas (UK)  
D Kiely (UK)  
B Kirenga (Uganda)  
M Knauer (UK)  
G Lee (Australia)  
W Lenney (UK)  
M Loebinger (UK)  
R Masekela (South Africa)  
I Mudway (UK)  
V Navaratnam (UK)  
M Nikolic (UK)  
J-L Pepin (France)  
M Polkey (UK)  
J Porter (UK)  
R Riha (UK)  
M Sadatsafavi (Canada)  
S Saglani (UK)  
E Sapey (UK)  
M Sauler (USA)  
C Scotton (UK)  
A Shah (UK)  
S Singh (India)  
R Stevens (USA)  
M Toshner (UK)  
K Verhamme (Netherlands)  
C Wainwright (Australia)

**Guidelines Associate Editor**

I Du Rand (UK)

**Statistical Editors**

A Douiri (UK)  
E Gecili (USA)  
M Taghavi Azar Sharabiani (USA)  
S Stanojevic (USA)  
I Stewart (UK)  
R Szczesniak (USA)  
Y Wang (UK)

**Journal Club Editor**

P Murphy (UK)

**President, British Thoracic Society**

Onn Min Koon

**Multimedia Editor**

Nick Hopkinson (UK)

**Editorial Office**

Thorax, BMJ Journals, BMA House, Tavistock Square, London, WC1H 9JR, UK  
T: +44 (0)20 7383 6373  
E: thorax@bmj.com

Twitter: @ThoraxBMJ

ISSN: 0040-6376 (print)

ISSN: 1468-3296 (online)

**Disclaimer:** The Editor of *Thorax* has been granted editorial freedom and *Thorax* is published in accordance with editorial guidelines issued by the World Association of Medical Editors and the Committee on Publication Ethics. *Thorax* is primarily intended for healthcare professionals and its content is for information only. The Journal is published without any guarantee as to its accuracy or completeness and any representations or warranties are expressly excluded to the fullest extent permitted by law. Readers are advised to independently verify any information on which they choose to rely. Acceptance of advertising by *Thorax* does not imply endorsement. Neither *BMJ* nor *BMJ Publishing Group Limited* shall have any liability for any loss, injury or damage howsoever arising from *Thorax* (except for liability which cannot be legally excluded).

**Copyright:** © 2023 BMJ Publishing Group Ltd and the British Thoracic Society. All rights reserved; no part of this publication may be reproduced in any form without permission

*Thorax* is published by BMJ Publishing Group Ltd, typeset by Exeter Premedia Services Private Ltd, Chennai, India and printed in the UK on acid-free paper.

*Thorax*, ISSN No: 0040-6376 (USPS 2143) is published monthly by BMJ Publishing Group Ltd, BMA House, Tavistock Square, WC1H 9JR London. Airfreight and mailing in the USA by agent named World Container Inc, 150-15, 183rd Street, Jamaica, NY 11413, USA. Periodicals postage paid at Brooklyn, NY 11256. US Postmaster: Send address changes to *Thorax*, World Container Inc, 150-15, 183rd Street, Jamaica, NY 11413, USA. Subscription records are maintained at BMA House, Tavistock Square, WC1H 9JR London. Air Business Ltd is acting as our mailing agent.

**Editorials**

**321** High-flow nasal oxygen: benefits are hard to show in COVID-19 patients with mild hypoxaemia  
*A W Thille, J-P Frat*

**323** Inhaled corticosteroid responses in COPD: do mast cells hold the answer?  
*A Higham, D Singh*

**325** Artificial intelligence in differentiating malignant from benign pleural effusion: a step beyond conventional methods  
*Y Jung, E Y Kim*

**Chronic obstructive pulmonary disease**

**326** Automatic oxygen titration versus constant oxygen flow rates during walking in COPD: a randomised controlled, double-blind, crossover trial  
*T Schneeberger, I Jaroš, D Leil, R Gloeckel, W Hitzl, C J Dennis, T Geyer, C-P Criée, A R Koczulla, K Kenn*

**335** Th2 high and mast cell gene signatures are associated with corticosteroid sensitivity in COPD  
*A Faiz, S Pavlidis, C-H Kuo, A Rowe, P S Hiemstra, W Timens, M Berg, M Wisman, Y-K Guo, R Djukanović, P Sterk, K B Meyer, M C Nawijn, I Adcock, K F Chung, M van den Berge*

**344** Subtyping emphysematous COPD by respiratory volume change distributions on CT  
*H Shima, N Tanabe, A Oguma, K Shimizu, S Kaji, K Terada, T Oguma, T Kubo, M Suzuki, H Makita, A Sato, M Nishimura, S Sato, S Konno, T Hirai*

**Critical care**

**354** High-flow nasal oxygen versus conventional oxygen therapy in patients with COVID-19 pneumonia and mild hypoxaemia: a randomised controlled trial  
*C Crimi, A Noto, F Madotto, M Ippolito, S Nolasco, R Campisi, S De Vuono, G Fiorentino, I Pantazopoulos, A Chalkias, A Libra, A Mattei, R Scala, E M Cini, B Ergaz, M Lujan, J C Winck, A Giaratano, A Carlucci, C Gregoretti, P Groff, A Cortegiani, on behalf of the COVID-HIGH Investigators*

**Cystic fibrosis**

**362** Evaluation of clinically relevant changes in the lung clearance index in children with cystic fibrosis and healthy controls  
*L Perrem, S Stanojevic, M Solomon, H Grasemann, N Sweezey, V Waters, D B Sanders, S D Davis, F Ratjen*

**Interstitial lung disease**

**368** Derivation and validation of a simple multidimensional index incorporating exercise capacity parameters for survival prediction in idiopathic pulmonary fibrosis  
*A Chandel, J Pastre, S Valery, C S King, S D Nathan*

**Pleural disease**

**376** Differentiation of malignant from benign pleural effusions based on artificial intelligence  
*S Wang, X Tan, P Li, Q Fan, H Xia, S Tian, F Pan, N Zhan, R Yu, L Zhang, Y Duan, J Xu, Y Ma, W Chen, Y Li, Z Zhao, C Liu, Q Bao, L Yang, Y Jin*

**Respiratory infection**

**383** Protein arginine N-methyltransferase 4 (PRMT4) contributes to lymphopenia in experimental sepsis  
*Y Lai, X Li, T Li, X Li, T Nyunoya, K Chen, G Kitsios, M Nouraei, Y Zhang, B J McVerry, J S Lee, R K Mallmapalli, C Zou*

**Skeletal muscle**

**394** CT pectoralis muscle area is associated with DXA lean mass and correlates with emphysema progression in a tobacco-exposed cohort  
*M E O'Brien, R H Zou, N Hyre, J K Leader, C R Fuhrman, F C Sciruba, M Nouraei, J Bon*

**Smoking**

**402** Cigarette smoking is a secondary cause of folliculin loss  
*X Li, Y Lai, Z Lane, H Strollo, K Tanimura, J C Sembrat, C Zou, M M Myerburg, M Rojas, S Shapiro, Y Jiang, T Nyunoya*

**MORE CONTENTS ►**

**Cover caption:** Longitudinal follow-up of postacute COVID-19 syndrome: DL<sub>CO</sub>, quality-of-life and MRI pulmonary gas-exchange abnormalities (see Matheson AM, *et al.* page 420)



This article has been chosen by the Editors to be of special interest or importance and is freely available online.



This article has been made freely available online under the BMJ Journals open access scheme. See <http://authors.bmj.com/open-access/>



This journal is a member of and subscribes to the principles of the Committee on Publication Ethics

<http://publicationethics.org/>



When you have finished with this magazine please recycle it.

---

**Thoracic surgery**

- 409** Cytoreductive surgery with hyperthermic intrathoracic chemotherapy for malignant pleural mesothelioma: a systematic review  
*A G Dawson, K Kuttywayo, S B Mohammed, D A Fennell, A Nakas*
- 

**Brief communication**

- 418** Longitudinal follow-up of postacute COVID-19 syndrome: DL<sub>CO</sub>, quality-of-life and MRI pulmonary gas-exchange abnormalities  
*A M Matheson, M J McIntosh, H K Kooner, M Abdelrazek, M S Albert, I Dhaliwal, J M Nicholson, A Ouriadov, S Svenningsen, G Parraga*
- 

**Images in Thorax**

- 423** Unresectable undifferentiated sarcoma of the pulmonary artery  
*A Shalabi, T Graeter, C Velandia, J Kuon, A Ehab*
- 

- 424** Spontaneous intrapulmonary haemorrhage in vascular Ehlers-Danlos syndrome  
*P Wang, Z Meng, R Feng, J Shi, W Xu*
- 

**Journal club**

- 426** Journal club  
*R Tyagi*
- 

**Electronic page**

- e1** Review of the British Thoracic Society Winter Meeting 23 November 2022 23–25 November 2022  
*T Ward, A Jha, E Daynes, J Ackland, J D Chalmers*
-