

Journal of the British Thoracic Society

Impact Factor: 9.250

**Editors-in-Chief**

N Hart (UK)  
G Jenkins (UK)  
AR Smyth (UK)  
**Deputy Editors**  
R Chambers (UK)  
C Wainwright (Australia)

**Associate Editors**

D Baldwin (UK)	W Lenney (UK)
C Bloom (UK)	O M Kon (UK)
HJ Bogaard (The Netherlands)	B Mokhlesi (USA)
S Christenson (USA)	I Noth (USA)
T Coleman (UK)	J-L Pepin (France)
A Condliffe (UK)	M Polkey (UK)
GJ Criner (USA)	J Quint (UK)
L Donnelly (UK)	N Rahman (UK)
A Floto (UK)	K Robinson (USA)
M Griffiths (UK)	L Rose (UK)
R Halifax (UK)	B Sage (UK)
L Heaney (UK)	S Saglani (UK)
N Hopkinson (UK)	C Scotton (UK)
S Janes (UK)	R Stevens (USA)
DL Jarvis (UK)	P Wark (Australia)
G Kaltsakas (UK)	T Wilkinson (UK)
B Kampman (UK)	P Wolters (USA)

**Guidelines Associate Editor**

I Du Rand (UK)

**Statistical Editors**

A Douiri (UK)  
C Flach (UK)  
S Nevitt (UK)  
L Stanberry (USA)  
S Stanojevic (USA)  
I Stewart (UK)  
R Szczesniak (USA)  
B Wagner (USA)  
Y Wang (UK)

**Journal Club Editor**

P Murphy (UK)

**Multimedia Editor**

R Moses (UK)

**President, British Thoracic Society**

Graham Burns

**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 *BTS* 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:** © 2021 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.

**Airwaves**

**1169** Highlights from this issue  
*The Triumvirate*

**Editorials**

**1170** One-step closer to solve the mystery of predicting disease progression in systemic sclerosis associated interstitial lung disease?  
*A-M Hoffmann-Vold, M Kreuter*

**1172** Drugs without benefits? Confronting the challenges of drug-induced interstitial lung disease  
*E K Denneny, J C Porter*

**Commentary**

**1174** COVID-19 risk and mortality in hospitals: this is not a time to let our guard down  
*J T Collins, B Carter, J Hewitt*

**Critical care**

**1176** Attributable mortality of acute respiratory distress syndrome: a systematic review, meta-analysis and survival analysis using targeted minimum loss-based estimation  
*L K Torres, K L Hoffman, C Oromendia, I Diaz, J S Harrington, E J Schenck, D R Price, L Gomez-Escobar, A Higuera, M P Vera, R M Baron, L E Fredenburgh, J-W Huh, A M K Choi, I I Siempas*

**Interstitial lung disease**

**1186** Peripheral blood leucocyte telomere length is associated with progression of interstitial lung disease in systemic sclerosis  
*S Liu, M P Chung, B Ley, S French, B M Elicker, D F Fiorentino, L S Chung, F Boin, P J Wolters*

**1193** Risk of drug-induced interstitial lung disease in hospitalised patients: a nested case-control study  
*T Jo, N Michihata, H Yamana, K Morita, M Ishimaru, Y Yamauchi, W Hasegawa, H Urushiyama, K Uda, H Matsui, K Fushimi, H Yasunaga, T Nagase*



**1200** Nocturnal hypoxaemia in interstitial lung disease: a systematic review  
*Y H Khor, Y Ng, D Sweeney, C J Ryerson*

**Pulmonary vasculature**

**1209** Loss of immune homeostasis in patients with idiopathic pulmonary arterial hypertension  
*P Heukels, O B J Corneth, D van Uden, J A C van Hulst, L M van den Toorn, A E van den Bosch, M S Wijsenbeek, K A Boomars, M Kool, R W Hendriks*

**Respiratory research**

**1219** Interaction between Genetic Risk Scores for reduced pulmonary function and smoking, asthma and endotoxin  
*S Sikdar, A B Wyss, M K Lee, T T Hoang, M Richards, L E Beane Freeman, C Parks, P S Thorne, J L Hankinson, D M Umbach, A Motsinger-Reif, S J London*

**Brief communications**

**1227** Novel recessive locus for body mass index in childhood asthma  
*S Lee, J Lasky-Su, S Won, C Laurie, J C Celedón, C Lange, S Weiss, J Hecker*

**1231** Circulating microbial cell-free DNA is associated with inflammatory host-responses in severe pneumonia  
*H Yang, G Haidar, N S Al-Yousif, H Zia, D Kotok, A A Ahmed, L Blair, S Dalai, S Bercovici, C Ho, B J McVerry, A Morris, G D Kitsios*

**MORE CONTENTS ►**

**Cover caption:** Pulmonary fibrosis 4 months after COVID-19 is associated with severity of illness and blood leucocyte telomere length (see McGroder CF, *et al.* page 1243)



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.

- 1236** Chronic airflow obstruction and ambient particulate air pollution  
 OPEN ACCESS  
*A F S Amaral, P G J Burney, J Patel, C Minelli, F Mejza, D M Mannino, T A R Seemungal, P A Mahesh, L C Lo, C Janson, S Juvekar, M Denguezli, I Harrabi, E F M Wouters, H Cherkaski, K Mortimer, R Jogi, E D Bateman, E Fuentes, M Al Ghobain, W Tan, D O Obaseki, A El Sony, M Studnicka, A Aquari-Stewart, P Koul, H Lawin, A A Nafees, O Awopetu, G E Erhabor, T Gislason, T Welte, A Gulsvik, R Nielsen, L Gnaniuc, A Kocabas, G B Marks, T Sooronbaev, B H Mbatchou Ngahane, C Barbara, A S Buist, The BOLD (Burden of Obstructive Lung Disease) Collaborative Research Group*

- 1242** Pulmonary fibrosis 4 months after COVID-19 is associated with severity of illness and blood leucocyte telomere length  
 OPEN ACCESS  
*C F McGroder, D Zhang, M A Choudhury, M M Salvatore, B M D'Souza, E A Hoffman, Y Wei, M R Baldwin, C K Garcia*

- 1246** Burden of nosocomial COVID-19 in Wales: results from a multicentre retrospective observational study of 2508 hospitalised adults  
 OPEN ACCESS  
*M J Ponsford, R Jefferies, C Davies, D Farewell, I R Humphreys, S Jolles, S Fairbairn, K Lewis, D Menzies, A Benjamin, F Thairavalappil, C Williams, S M Barry*

---

## Case based discussion

- 1250** Childhood interstitial lung disease: short lessons from telomeres  
*S Salehian, T Semple, R Pabary*

---

## Images in Thorax

- 1253** The curious incident of the cast in the airway  
*Y Ge, E C Bartlett, T Semple, A Rice, A Shah, E A Renzoni*

---

## State of the art review

- 1255** Time to get serious about the detection and monitoring of early lung disease in cystic fibrosis  
*K J Bayfield, T A Douglas, T Rosenow, J C Davies, S J Elborn, M Mall, A Paproki, F Rajen, P D Sly, A R Smyth, S Stick, C E Wainwright, P D Robinson*

---

## Journal club

- 1266** Journal club  
*B Vijayakumar*