

Journal of the British Thoracic Society Impact Factor: 10 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 G Lee (Australia) M Bafadhel (UK) R Masekela (South Africa) B Blackwood (LIK) K Blyth (UK) V Navaratnam (UK) HJ Bogaard M Nikolic (UK) J-L Pepin (France) (The Netherlands) M Polkey (UK) F Brimms (Australia) I Porter (LIK) N Chaudhuri (UK) R Riha (UK) B Connolly (UK) M Sadatsafavi (Canada) M Crooks (UK) S Saglani (UK) C Dean (UK) M Sauler (USA) D Dockrell (UK) C Scotton (UK) D Downey (UK) A Shah (UK) F Gilchrist (UK) S Singh (India) R Hallifax (UK) C Solomon (Australia) N Hopkinson (UK) R Stevens (USA) D Jackson (UK) M Toshner (UK) C Janson (Sweden) K Verhamme G Kaltsakas (UK) (Netherlands) C Wainwright (Australia) H Whittaker (UK) D Kiely (UK) B Kirenga (Uganda) **Guidelines Associate Editor** LDu Band (UK) **Statistical Editors** K Dalrymple (UK) D Meena (UK)

M Taghavi Azar Sharabiani (USA) S Stanojevic (USA) I Stewart (UK) X Sun (UK) F Tydeman (UK) D Wang (UK) Y Wang (UK) M Yadegarfar (UK) Journal Club Editor P Murphy (UK) President, British Thoracic Society Jonathan Bennett

Multimedia Editor Nick Honkinson (LIK) **Editorial Office** Thorax, BMJ Journals, BMA House, Tavistock Square, London, WC1H 9JR, UK

T: +44 (0)20 7383 6373 E: thorax@bmj.com

X: @ThoraxBMJ ISSN: 0040-6376 (print) ISSN: 1468-3296 (online)

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 discretions. *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 warrantees 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* or B/JJ 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). **Copyrint**: © 2024 B/MJ Publishing Group Ltd and

**Copyright:** © 2024 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 Thorax, ISSN No: 0040–6376 (USPS 2143) is published monthly by BNU Publishing Group Ltd, BNA 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 3JR London. Air Business Ltd is acting as our mailing agent.

### **Contents**

#### **Editorials**

- 487 Unravelling the neutrophil enigma: a new insight into RSV-induced bronchiolitis in infants F S Grudzinska, A Scott
- 489 Neutrophils and RSV: differences with age Z Rooke, N Zainal Abidin, C Harris, M Brodlie
- 491 Extensive airway remodelling in severe COPD imparts resiliency to environmental stressors M Ghosh, E K Vladar
- 493 Testosterone and lung function: bigger lungs, slower decline or some combination of both? S Milne

#### Asthma

- Improved childhood asthma control after 495 exposure reduction interventions for desert dust and anthropogenic air pollution: the MEDEA randomised controlled trial
  - P Kouis, E Galanakis, E Michaelidou, P Kinni, A Michanikou, C Pitsios, J Perez, S Achilleos, N Middleton, P Anagnostopoulou, H Dimitriou, E Revvas, G Stamatelatos, H Zacharatos, C Savvides, E Vasiliadou, N Kalivitis, A Chrysanthou, F Tymvios,
  - S I Papatheodorou, P Koutrakis, P K Yiallouros

# Chronic obstructive pulmonary disease

Female reproductive histories and the risk of 508 chronic obstructive pulmonary disease C Liang, H-F Chung, A Dobson, S Sandin, E Weiderpass, G D Mishra

#### **Critical care**

515 Patient stratification using plasma cytokines 6 and their regulators in sepsis: relationship to OPEN ACCESS outcomes, treatment effect and leucocvte transcriptomic subphenotypes

D B Antcliffe, Y Mi, S Santhakumaran, K L Burnham, A T Prevost, J K Ward, T J Marshall, C Bradley, F Al-Beidh, P Hutton, S McKechnie, E E Davenport, CJ Hinds, CM O'Kane, DF McAuley, M Shankar-Hari, A C Gordon, J C Knight

#### **Environmental exposure**

COPD basal cells are primed towards secretory 524 6 to multiciliated cell imbalance driving increased OPEN ACCESS resilience to environmental stressors

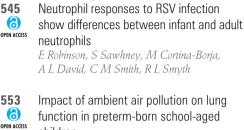
M G Stoleriu, M Ansari, M Strunz, A Schamberger, M Heydarian, Y Ding, C Voss, J J Schneider, M Gerckens, G Burgstaller, A Castelblanco, T Kauke, J Fertmann, C Schneider, J Behr, M Lindner, E Stacher-Priehse, M Irmler, J Beckers, O Eickelberg, B Schubert, S M Hauck, O Schmid, R A Hatz, T Stoeger, H B Schiller, A Hilgendorff

# Interstitial lung disease

- 538 Rheumatoid arthritis and idiopathic OPEN ACCESS pulmonary fibrosis: a bidirectional Mendelian
  - randomisation study

O C Leavy, L Kawano-Dourado, I D Stewart, JK Quint, JJ Solomon, R Borie, B Crestani, L V Wain, G Jenkins, P Dieudé, C Minelli

# **Paediatric lung disease**



children

W J Watkins, C W Course, M Cousins, K Hart, S J Kotecha, S Kotecha

# **Respiratory epidemiology**

- 564 Effects of testosterone and sex hormone
  - binding globulin on lung function in males
- $\checkmark$ and females: a multivariable Mendelian EDITOR'S Randomisation study

D A van der Plaat, A Lenoir, S Dharmage, J Potts, F Gómez Real, S O Shaheen, D Jarvis, C Minelli, B Leynaert

#### Clinical implications of airway obstruction with normal or low FEV, in childhood and adolescence

HJL Koefoed, G Wang, U Gehring, S Ekstrom, I Kull, R Vermeulen, J M A Boer, A Bergstrom, G H Koppelman, E Melén, J M Vonk, J Hallberg

#### MORE CONTENTS

Cover caption: Pulmonary artery-pulmonary artery collaterals in chronic thromboembolic pulmonary hypertension (Gong S, et al. page 589)



573

6

OPEN ACCESS

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/

♦ recycle When you have finished with this magazine please recycle it

#### State of the art review

**581** Invasive versus non-invasive paediatric home mechanical ventilation: review of the international evolution over the past 24 years *M* Toussaint, *O* van Hove, *D* Leduc, *L* Ansay, *N* Deconinck, *B* Fauroux, *S* Khirani

# **Images in Thorax**

**589** Pulmonary artery-pulmonary artery collaterals in chronic thromboembolic pulmonary hypertension *S Gong, H Li, L Wang* 

# Journal club

**592** Journal club *N A Hasan* 

# **Electronic pages**

- e2 Correction: British Thoracic Society Winter Meeting 2023
- e3 Correction: Impact of respiratory muscle training on respiratory muscle strength, respiratory function and quality of life in individuals with tetraplegia: a randomised clinical trial