



Editor

Tore K Kvien

Associate Editors

Francis Berenbaum
Johannes Bijlsma
Dimitrios Boumpas
Gerd Burmester
Mary Crow
Iain McInnes
David Pisetsky

Editorial office

Annals of the Rheumatic Diseases
BMJ Publishing Group Ltd
BMA House
Tavistock Square
London WC1H 9JR, UK
T: +44 (0)20 7383 6250
F: +44 (0)20 7383 6668
E: ard@bmj.com
Twitter: @ARD_BMJ
ISSN: 0003-4967 (print)
ISSN: 1468-2060 (online)
Impact Factor: 12.384

Disclaimer: ARD is owned and published by BMJ Publishing Group Ltd (a wholly owned subsidiary of the British Medical Association) and the European League Against Rheumatism. The owners grant editorial freedom to the Editor of ARD. ARD follows guidelines on editorial independence produced by the World Association of Medical Editors and the code on good publication practice of the Committee on Publication Ethics.

ARD is intended for medical professionals and is provided without warranty, express or implied. Statements in the journal are the responsibility of their authors and advertisers and not authors' institutions the BMJ Publishing Group, the European League Against Rheumatism or the BMA unless otherwise specified or determined by law. Acceptance of advertising does not imply endorsement.

To the fullest extent permitted by law, the BMJ Publishing Group shall not be liable for any loss, injury or damage resulting from the use of ARD or any information in it whether based on contract, tort, or otherwise. Readers are advised to verify any information they choose to rely on.

Copyright: © 2016 BMJ Publishing Group and European League Against Rheumatism. All rights reserved; no part of this publication may be reproduced stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without prior permission.

ARD is published by BMJ Publishing Group Ltd typeset by Nova Techset Private Limited, Bengaluru & Chennai, India and printed in the UK on acid-free paper.

Annals of the Rheumatic Diseases (ISSN No: 0003-4967) is published monthly by BMJ Publishing Group and distributed in the USA by Air Business Ltd. Periodicals postage paid at Jamaica NY 11431
POSTMASTER: send address changes to *Annals of the Rheumatic Diseases*, Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA.

Editorials

- 1 Checkpoint immunotherapy: good for cancer therapy, bad for rheumatic diseases
L Calabrese, V Velcheti
- 4 Clinical trials of biosimilars should become more similar
J Kay, J D Isaacs

Viewpoint

- 7 Is it time to revisit the role of ultrasound in rheumatoid arthritis management?
MA D'Agostino, M Boers, R J Wakefield, P Emery, P G Conaghan

Criteria

- 9 2016 American College of Rheumatology/European League Against Rheumatism classification criteria for primary Sjögren's syndrome
CH Shiboski, S C Shiboski, R Seror, L A Criswell, M Labetoulle, T M Lietman, A Rasmussen, H Scofield, C Vitali, S J Bowman, X Mariette, the International Sjögren's Syndrome Criteria Working Group

Recommendations

- 17 EULAR recommendations for cardiovascular disease risk management in patients with rheumatoid arthritis and other forms of inflammatory joint disorders: 2015/2016 update
R Agca, S C Heslinga, S Rollefstad, M Heslinga, I B McInnes, M J L Peters, T K Kvien, M Dougados, H Radner, F Atzeni, J Primdahl, A Södergren, S W Jonsson, J van Rompay, C Zabalán, T R Pedersen, L Jacobsson, K de Vlam, M A Gonzalez-Gay, A G Semb, G D Kitas, Y M Smulders, Z Szekanez, N Sattar, D P M Symmons, M T Nurmohamed
- 29 2016 updated EULAR evidence-based recommendations for the management of gout
P Richette, M Doherty, E Pascual, V Barskova, F Bece, J Castañeda-Sanabria, M Coyfish, S Guillo, T L Jansen, H Janssens, F Lioté, C Mallen, G Nuki, F Perez-Ruiz, J Pimentao, L Punzi, T Pywell, A So, A K Tausche, T Uhlig, J Zavada, W Zhang, F Tubach, T Bardin

Clinical and epidemiological research

- 43 Inflammatory arthritis and sicca syndrome induced by nivolumab and ipilimumab
L C Cappelli, A K Gutierrez, A N Baer, J Albayda, R L Manno, U Haque, E J Lipson, K B Bleich, A A Shah, J Naidoo, J R Brahmer, D Le, C O Bingham III
- 51 A phase III randomised, double-blind, parallel-group study comparing SB4 with etanercept reference product in patients with active rheumatoid arthritis despite methotrexate therapy
P Emery, J Vencovský, A Sylvestrzak, P Leszczynski, W Porawska, A Baranaukaitė, V Tseluyko, V M Zhdan, B Stasiuk, R Milasieni, A A B Rodriguez, S Y Cheong, J Ghit
- 58 A randomised, double-blind, phase III study comparing SB2, an infliximab biosimilar, to the infliximab reference product Remicade in patients with moderate to severe rheumatoid arthritis despite methotrexate therapy
J-Y Choe, N Prodanovic, J Niebrzydowski, I Staykov, E Dokoupilova, A Baranaukaitė, R Yatsyshyn, M Mečić, W Porawska, H Ciferska, K Jedrychowicz-Rosiak, A Zielinska, J Choi, Y H Rho, J S Smolen

- 65 A phase III, multicentre, randomised, double-blind, active-controlled, parallel-group trial comparing safety and efficacy of HD203, with innovator etanercept, in combination with methotrexate, in patients with rheumatoid arthritis: the HERA study
S-C Bae, J Kim, J-Y Choe, W Park, S-H Lee, Y-B Park, S-C Shim, S-S Lee, Y-K Sung, C-B Choi, S-R Lee, HanYu Park, Y Ahn, on behalf of the HERA Study Investigators
- 72 Allopurinol and the risk of atrial fibrillation in the elderly: a study using Medicare data
J A Singh, S Yu
- 79 Ixekizumab, an interleukin-17A specific monoclonal antibody, for the treatment of biologic-naïve patients with active psoriatic arthritis: results from the 24-week randomised, double-blind, placebo-controlled and active (adalimumab)-controlled period of the phase III trial SPIRIT-P1
P J Mease, D van der Heijde, C T Ritchlin, M Okada, R S Cuchacovich, C L Shuler, C-Y Lin, D K Braun, C H Lee, D D Gladman, on behalf of the SPIRIT-P1 Study Group
- 88 Baricitinib in patients with inadequate response or intolerance to conventional synthetic DMARDs: results from the RA-BUILD study
M Dougados, D van der Heijde, Y-C Chen, M Greenwald, E Drescher, J Liu, S Beattie, S Witt, I de la Torre, C Gaich, T Rooney, D Schlichting, S de Bono, P Emery
- 96 Certolizumab pegol in combination with dose-optimised methotrexate in DMARD-naïve patients with early, active rheumatoid arthritis with poor prognostic factors: 1-year results from C-EARLY, a randomised, double-blind, placebo-controlled phase III study
P Emery, C O Bingham III, G R Burmester, V P Bykerk, D E Furst, X Mariette, D van der Heijde, R van Vollenhoven, C Arendt, I Moutian, O Purcaru, D Tatla, B VanLunen, M E Weinblatt
- 105 Cancer risk in patients with spondyloarthritis treated with TNF inhibitors: a collaborative study from the ARTIS and DANBIO registers
K Hellgren, L Dreyer, E V Arkema, B Glinborg, L T H Jacobsson, L-E Kristensen, N Felielius, M L Hetland, J Askeling, For the ARTIS Study Group, For the DANBIO Study Group

MORE CONTENTS ►



EDITOR'S CHOICE

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



OPEN ACCESS

This article has been made freely available online under the BMJ Journals Open Access scheme. See <http://ard.bmj.com/site/about/guidelines.xhtml#open>



Member since 2008

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 please recycle it



The online version of this article contains multiple choice questions hosted on BMJ Learning.

- 112** The association between anti-carbamylated protein (anti-CarP) antibodies and radiographic progression in early rheumatoid arthritis: a study exploring replication and the added value to ACPA and rheumatoid factor
S Ajeganova, H W van Steenberghe, M K Verheul, K Forslund, I Hafström, R E M Toes, T W J Huizinga, B Svensson, L A Trouw, A H M van der Helm-van Mil
- 119** How well do ACPA discriminate and predict RA in the general population: a study based on 12 590 population-representative Swedish twins
A H Hensvold, T Frisell, P K E Magnusson, R Holmdahl, J Asklöf, A I Catrina
- 126** Economic considerations and patients' preferences affect treatment selection for patients with rheumatoid arthritis: a discrete choice experiment among European rheumatologists
M Hifinger, M Hilgsmann, S Ramiro, V Watson, J L Severens, B Faurel, T Uhlig, R van Vollenhoven, P Jacques, J Detert, J Canas da Silva, C A Scirè, F Bergheda, L Carmona, M Péntek, A Keat, A Boonen
- 133** Are allopurinol dose and duration of use nephroprotective in the elderly? A Medicare claims study of allopurinol use and incident renal failure
J A Singh, S Yu
- 140** Does knee replacement surgery for osteoarthritis improve survival? The jury is still out
D Misra, N Lu, D Felson, H K Choi, J Seeger, T Einhorn, T Neogi, Y Zhang
- 147** Omega-3 fatty acids are associated with a lower prevalence of autoantibodies in shared epitope-positive subjects at risk for rheumatoid arthritis
R W Gan, M K Demoruelle, K D Deane, M H Weisman, J H Buckner, P K Gregersen, T R Mikuls, J R O'Dell, R M Keating, T E Fingerlin, G O Zerbe, M J Clare-Salzler, V M Holers, J M Norris
- 153** Combined role of vitamin D status and *CYP24A1* in the transition to systemic lupus erythematosus
K A Young, M E Munroe, J M Guthridge, D L Kamen, T B Niewold, G S Gilkeson, M H Weisman, M L Ishimori, J Kelly, P M Gaffney, K H Sivels, R Lu, D J Wallace, D R Karp, J B Harley, J A James, J M Norris
- 159** Long-term outcome in juvenile-onset mixed connective tissue disease: a nationwide Norwegian study
S O Hetlevik, B Flatø, M Rygg, E B Nordal, C Brumborg, H Hetland, V Lilleby
- 166** Elevated circulating levels of interferon- γ and interferon- β -induced chemokines characterise patients with macrophage activation syndrome complicating systemic juvenile idiopathic arthritis
C Bracaglia, K de Graaf, D P Marafon, F Guilhot, W Ferlin, G Prencipe, I Caiello, S Davi, G Schuleri, A Ravelli, A A Grom, C de Min, F De Benedetti
- 173** Canakinumab treatment for patients with active recurrent or chronic TNF receptor-associated periodic syndrome (TRAPS): an open-label, phase II study
M Gattorno, L Obici, M Catalini, V Tormey, K Abrams, N Davis, A Speziale, S G Bhansali, A Martini, H J Lachmann
- 179** Establishment of reference intervals for osteoarthritis-related soluble biomarkers: the FNIH/OARSI OA Biomarkers Consortium
V B Kraus, D E Hargrove, D J Hunter, J B Renner, J M Jordan
- 186** Predictive validity of biochemical biomarkers in knee osteoarthritis: data from the FNIH OA Biomarkers Consortium
V B Kraus, J E Collins, D Hargrove, E Losina, M Nevitt, J N Katz, S X Wang, L J Sandell, S C Hoffmann, D J Hunter, for the OA Biomarkers Consortium
- 196** Intravenous administration of expanded allogeneic adipose-derived mesenchymal stem cells in refractory rheumatoid arthritis (Cx611): results of a multicentre, dose escalation, randomised, single-blind, placebo-controlled phase Ib/IIa clinical trial
J M Álvaro-Gracia, J A Jover, R García-Vicuña, L Carreño, A Alonso, S Marsal, F Blanco, V M Martínez-Taboada, P Taylor, C Martín-Martín, O DelaRosa, I Tagaró, F Díaz-González
- 203** Secukinumab improves patient-reported outcomes in subjects with active psoriatic arthritis: results from a randomised phase III trial (FUTURE 1)
V Strand, P Mease, L Gossec, O Elkayam, F van den Bosch, J Zuazo, L Pricop, S Mpofu, on behalf of the FUTURE 1 study group
- 208** High frequency of antidrug antibodies and association of random drug levels with efficacy in certolizumab pegol-treated patients with rheumatoid arthritis: results from the BRAGGSS cohort
M Jani, J D Isaacs, A W Morgan, A G Wilson, D Plant, K L Hyrich, H Chinoy, A Barton, on behalf of BRAGGSS
- 214** Bone marrow lesions and synovitis on MRI associate with radiographic progression after 2 years in hand osteoarthritis
W Damman, R Liu, J L Bloem, FR Rosendaal, M Reijnen, M Kloppenburg

Basic and translational research

- 218** WNT16 antagonises excessive canonical WNT activation and protects cartilage in osteoarthritis
G Nalesso, B L Thomas, J C Sherwood, J Yu, O Addimanda, S E Eldridge, A-S Thorup, L Dale, G Schett, J Zwerina, N Eltawil, C Pitzalis, F Dell'Accio
- 227** Autologous tolerogenic dendritic cells for rheumatoid and inflammatory arthritis
G M Bell, A E Anderson, J Diboll, R Reece, O Eltherington, R A Harry, T Fouweather, C MacDonald, T Chadwick, E McColl, J Dunn, A M Dickinson, C M U Hilekens, J D Isaacs
- 235** Ectopic expression of CXCL13, BAFF, APRIL and LT- β is associated with artery tertiary lymphoid organs in giant cell arteritis
F Ciccà, A Rizzo, R Maugeri, R Alessandro, S Croci, G Guggino, A Cavazza, S Raimondo, A Cannizzaro, D G Iacopino, C Salvarani, G Triolo
- 244** Composition of TWIST1 dimers regulates fibroblast activation and tissue fibrosis
K Palumbo-Zerr, A Soare, P Zerr, A Liebl, R Mancuso, M Tomcik, B Sumova, C Dees, C-W Chen, T Wohlfahrt, T Mallano, A Distler, A Ramming, K Gelse, C Mihai, O Distler, G Schett, J H W Distler
- 252** Transient receptor potential canonical 5 (TRPC5) protects against pain and vascular inflammation in arthritis and joint inflammation
K M Alawi, F A Russell, A A Aubdool, S Srivastava, Y Riffó-Vasquez, L Baldissera Jr, P Thakore, N Saleque, E S Fernandes, D A Walsh, S D Brain

- 261** Genetic association of ankylosing spondylitis with *TBX21* influences T-bet and pro-inflammatory cytokine expression in humans and SKG mice as a model of spondyloarthritis

M C Lau, P Keith, M-E Costello, L A Bradbury, K A Hollis, R Thomas, G P Thomas, M A Brown, T J Kenna

- 270** The European Scleroderma Trials and Research group (EUSTAR) task force for the development of revised activity criteria for systemic sclerosis: derivation and validation of a preliminarily revised EUSTAR activity index

G Valentini, M Iudici, U A Walker, V K Jaeger, M Baron, P Carreira, L Czirjak, C P Denton, O Distler, E Hachulla, A L Herrick, O Kowal-Bielecka, J Pope, U Müller-Ladner, G Riemekasten, J Avouac, M Frerix, S Jordan, T Mimier, E Siegert, V H Ong, S Vettori, Y Allano

- 277** Histone deacetylase 3 regulates the inflammatory gene expression programme of rheumatoid arthritis fibroblast-like synoviocytes



C Angiolilli, P A Kabala, A M Grabiec, I M Van Baarsen, B S Ferguson, S García, B M Fernandez, T A McKinsey, P P Tak, G Fossati, P Mascagni, D L Baeten, K A Reedquist

- 286** A combined large-scale meta-analysis identifies *COG6* as a novel shared risk locus for rheumatoid arthritis and systemic lupus erythematosus

A Márquez, L Vidal-Bralo, L Rodríguez-Rodríguez, M A González-Gay, A Balsa, I González-Álvarez, P Carreira, N Ortego-Centeno, M M Ayala-Gutiérrez, F J García-Hernández, M Francisca González-Escribano, J M Sabio, C Tolosa, A Suárez, A González, L Padyukov, J Worthington, T Vyse, M E Alarcón-Riquelme, J Martín

- 295** Nerve growth factor inhibition with tanezumab influences weight-bearing and subsequent cartilage damage in the rat medial meniscal tear model



T P LaBranche, A M Bendele, B C Omura, K E Gropp, S I Hurst, C M Bagi, T R Cummings, L E Grantham II, D L Shelton, M A Zorbas

- 303** Canakinumab reverses overexpression of inflammatory response genes in tumour necrosis factor receptor-associated periodic syndrome



R Torene, N Nirmala, L Obici, M Cattalini, V Tormey, R Caorsi, S Starck-Schwartz, M Letzkeus, N Hartmann, K Abrams, H Lachmann, M Gattorno

- 310** A family-based genome-wide association study reveals an association of spondyloarthritis with *MAPK14*

F Costantino, A Talpin, R Said-Nahal, A Leboime, E Zinovieva, D Zelenika, I Gut, C Charon, B Izac, M Weissman, G Chiochia, J Reveille, M Breban, H-J Garchon

Correction

- 314** Erratum: *Differences and similarities in rheumatology speciality training programmes across European countries*

Electronic pages

Correspondence

- e1** Renal dosing of allopurinol results in suboptimal gout care
T Neogi, N Dalbeth, L Stamp, G Castelar, J Fitzgerald, A Gaffo, T R Mikuls, J Singh, J Vázquez-Mellado, N L Edwards
- e2** Response: Renal dosing of allopurinol results in suboptimal gout care by T Neogi *et al*
P Richette, M Doherty, E Pascual, T Bardin