





Acute exacerbation of idiopathic pulmonary fibrosis: international survey and call for harmonisation

Michael Kreuter^{1,2,36}, Markus Polke^{1,36}, Simon L.F. Walsh³, Johannes Krisam⁴, Harold R. Collard⁵, Nazia Chaudhuri⁶, Sergey Avdeev⁷, Jürgen Behr^{8,9}, Gregory Calligaro ¹⁰, Tamera Corte¹¹, Kevin Flaherty¹², Manuela Funke-Chambour¹³, Martin Kolb ¹⁴, Yasuhiro Kondoh¹⁵, Toby M. Maher^{16,17}, Maria Molina Molina^{18,19}, Antonio Morais ²⁰, Catharina C. Moor²¹, Julie Morisset²², Carlos Pereira²³, Silvia Quadrelli^{24,25}, Moises Selman ²⁶, Argyrios Tzouvelekis²⁷, Claudia Valenzuela²⁸, Carlo Vancheri²⁹, Vanesa Vicens-Zygmunt^{30,31}, Julia Wälscher¹, Wim Wuyts ³², Marlies Wijsenbeek^{21,37}, Vincent Cottin ^{33,34,37} and Elisabeth Bendstrup^{35,37}

Affiliations: ¹Center for Interstitial and Rare Lung Diseases, Pneumology, Thoraxklinik, University of Heidelberg, Heidelberg, Germany. ²Member of the German Center for Lung Research (DZL), Germany. ³National Heart and Lung Institute, Imperial College, London, UK. ⁴Institute of Medical Biometry and Informatics, University of Heidelberg, Heidelberg, Germany. ⁵Dept of Medicine, University of California San Francisco, San Francisco, CA, USA. ⁶North West Interstitial Lung Disease Unit, Manchester University NHS Foundation Trust, Manchester, UK. ⁷Sechenov First Moscow State Medical University, Moscow, Russia. ⁸Dept of Internal Medicine V, Ludwig-Maximilians University of Munich, Munich, Germany. ⁹Asklepios Clinic Gauting, Member of the German Center for Lung Research, Gauting, Germany. ¹⁰Division of Pulmonology, Dept of Medicine, University of Cape Town, Cape Town, South Africa. ¹¹Royal Prince Alfred Hospital, University of Sydney, Sydney, Australia. ¹²Dept of Medicine, University of Michigan, Ann Arbor, MI, USA. ¹³Dept of Pulmonary Medicine, Bern University Hospital, University of Bern, Bern, Switzerland. ¹⁴Firestone Institute for Respiratory Health, Research Institute at St Joseph's Healthcare, Dept of Medicine, McMaster University, Hamilton, ON, Canada. ¹⁵Dept of Respiratory Medicine and Allergy, Tosei General Hospital, Seto, Japan. ¹⁶National Heart and Lung Institute, Imperial College London, UK. ¹⁷Interstitial Lung Disease Unit, Royal Brompton and Harefield NHS Foundation Trust, London, UK. ¹⁸Institut d'Investigació Biomèdica de Bellvitge (IDIBELL), University Hospital of Bellvitge, L'Hospitalet de Llobregat, Barcelona, Spain. ¹⁹Centro de (IDIBELL), University Hospital of Bellvitge, L'Hospitalet de Llobregat, Barcelona, Spain. ¹⁹Centro de Investigación Biomédica en Red Enfermedades Respiratorias (CIBERES), Madrid, Spain. ²⁰Pneumology Dept, Centro Hospitalar São João, Faculdade de Medicina, Universidade do Porto, Porto, Portugal. ²¹Centre for Interstitial Lung Diseases and Sarcoidosis, Dept of Respiratory Medicine, Erasmus University Medical Center, Rotterdam, The Netherlands. ²²Département de Médecine, Centre Hospitalier de l'Université de Montréal, Montréal, QC, Canada. ²³Lung Disease Dept, Paulista School of Medicine, Federal University of São Paulo, São Paulo, Brazil. ²⁴Hospital Británico, Buenos Aires, Argentina. ²⁵Sanatorio Güemes, Buenos Aires, Argentina. ²⁶Instituto Nacional de Enfermedades Respiratorias Ismael Cosío Villegas, Tlalpan, Mexico City, Mexico. ²⁷First Academic Respiratory Dept, Sotiria General Hospital for Thoracic Diseases, University of Athens, Athens, Greece. ²⁸Instituto de Investigación Princesa, Hospital Universitario de La Princesa, Madrid, Spain. ²⁹Regional Referral Centre for Rare Lung Diseases, A.O.U. Policlinico-Vittorio Emanuele, University of Catania, Catania, Italy. ³⁰Pneumology Research Group, IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain. ³¹Unit of Interstitial Lung Diseases, Department of Pneumology, University Hospital of Bellvitge, L'Hospitalet de Llobregat, Barcelona, Spain. ³²Unit for Interstitial Lung Diseases, Dept of Respiratory Diseases, University Hospitals Leuven, Leuven, Belgium. ³³National Coordinating Reference Center for Rare Pulmonary Diseases, ³⁴Unit for Interstitial Lung Diseases, Dept of Respiratory Diseases, University Louis Pradel Hospital, Lyon, France. ³⁴Hospices Civils de Lyon, UMR754, University Claude Bernard Lyon 1, Lyon, France. ³⁵Dept of Respiratory Diseases and Allergy, Aarhus University Hospital, Aarhus C, Denmark. ³⁶Equal contribution. ³⁷Shared senior authorship.

Correspondence: Michael Kreuter, Center for Interstitial and Rare Lung Diseases, Thoraxklinik, University of Heidelberg, Röntgenstraße 1, 69126 Heidelberg, Germany. E-mail: kreuter@uni-heidelberg.de

Lack of focussed international guidelines for management of acute exacerbation of IPF results in global variability in prevention, diagnosis and treatment strategies. Global trials are urgently needed

Copyright ©ERS 2020

to inform international specific guidelines for AE-IPF. http://bit.ly/3a8FB5i

Cite this article as: Kreuter M, Polke M, Walsh SLF, *et al.* Acute exacerbation of idiopathic pulmonary fibrosis: international survey and call for harmonisation. *Eur Respir J* 2020; 55: 1901760 [https://doi.org/10.1183/13993003.01760-2019].

This single-page version can be shared freely online.

ABSTRACT Acute exacerbation of idiopathic pulmonary fibrosis (AE-IPF) is an often deadly complication of IPF. No focussed international guidelines for the management of AE-IPF exist. The aim of this international survey was to assess the global variability in prevention, diagnostic and treatment strategies for AE-IPF.

Pulmonologists with ILD expertise were invited to participate in a survey designed by an international expert panel.

509 pulmonologists from 66 countries responded. Significant geographical variability in approaches to manage AE-IPF was found. Common preventive measures included antifibrotic drugs and vaccination. Diagnostic differences were most pronounced regarding use of Krebs von den Lungen-6 and viral testing, while high-resolution computed tomography, brain natriuretic peptide and D-dimer are generally applied. High-dose steroids are widely administered (94%); the use of other immunosuppressant and treatment strategies is highly variable. Very few (4%) responders never use immunosuppression. Antifibrotic treatments are initiated during AE-IPF by 67%. Invasive ventilation or extracorporeal membrane oxygenation are mainly used as a bridge to transplantation. Most physicians educate patients comprehensively on the severity of AE-IPF (82%) and consider palliative care (64%).

Approaches to the prevention, diagnosis and treatment of AE-IPF vary worldwide. Global trials and guidelines to improve the prognosis of AE-IPF are needed.