

challenge tests [editorial]. *Am J Respir Crit Care Med* 2018;198:988–990.

- Coates AL, Wanger J, Cockcroft DW, Culver BH, Carlsen KH, Diamant Z, et al. ERS technical standard on bronchial challenge testing: general considerations and performance of methacholine challenge tests. *Eur Respir J* 2017;49:1601526.

Copyright © 2019 by the American Thoracic Society

Reply to Amirav and Newhouse

From the Authors:

We thank Drs. Amirav and Newhouse for their letter and interest in our editorial on characterizing nebulizer performance for methacholine challenge tests (1). We respectfully disagree with the premise of their letter. We believe that the science and clinical relevance of the previous 1999 guidelines need to be updated. The main problem is that the English-Wright nebulizer is no longer widely available, and if pulmonary function labs were to use as a substitute currently available nebulizers that have much higher aerosol output than the English-Wright nebulizer, every concentration step would deliver a much higher stimulus dose than intended by the 1999 guidelines.

Regarding the need to calculate a delivered methacholine dose, the authors state that we offered no mechanism for how to compel nebulizer manufacturers to characterize the performance of their nebulizer. This was, in fact, the main purpose of our letter: to call out to the manufacturers to provide this essential service. We acknowledged that this would be beyond the capabilities of most pulmonary function labs, but it should be very much achievable by nebulizer manufacturers and aerosol scientists. Our hope was that this letter would emphasize to manufacturers that the American Thoracic Society and European Respiratory Society are counting on them to help the pulmonary function lab community.

The authors also suggest that the data cited regarding the comparison of the English-Wright nebulizer with other nebulizers should include information about other commonly used nebulizers. We certainly agree, and remain hopeful that such data will be forthcoming. The data we cited, including those obtained with a vibrating mesh nebulizer, were simply meant as examples of how dose, not concentration, should be the common unit of measurement across devices.

Regarding the point made about how the current recommendations might not provide more clinically relevant information, we would like to emphasize that at present there is significant variability in the way methacholine challenge tests are performed, resulting in the potential for imprecision and diagnostic error. No other diagnostic test in modern medicine would allow such a lack of rigorous standards or interlaboratory variation. With

better defined and updated methodology, physicians can now have more confidence in the results of testing. ■

Author disclosures are available with the text of this letter at www.atsjournals.org.

David Kaminsky, M.D.*
University of Vermont College of Medicine
Burlington, Vermont

Allan Coates, M.D.
University of Toronto
Toronto, Ontario, Canada

Bruce Culver, M.D.
University of Washington
Seattle, Washington

Donald Cockcroft, M.D.
University of Saskatchewan
Saskatoon, Saskatchewan, Canada

Teal Hallstrand, M.D., M.P.H.
University of Washington
Seattle, Washington

Jeffrey Haynes, R.R.T., R.P.F.T.
St. Joseph Hospital
Nashua, New Hampshire

Neil MacIntyre, M.D.
Duke University Medical Center
Durham, North Carolina

Jack Wanger, M.Sc., R.R.T., R.P.F.T.
Pulmonary Function Testing and Clinical Trials Consultant
Rochester, Minnesota

*Corresponding author (e-mail: david.kaminsky@uvm.edu).

Reference

- Coates A, Culver B, Cockcroft D, Hallstrand T, Haynes J, Kaminsky D, et al. Characterizing nebulizer performance for methacholine challenge tests [editorial]. *Am J Respir Crit Care Med* 2018;198:988–990.

Copyright © 2019 by the American Thoracic Society

Interstitial Lung Disease and Mediastinal Lymph Nodes: A Computed Tomography–based Biomarker beyond Nosological and Etiological Borders?

To the Editor:

We read with great interest the article by Adegunsoye and colleagues (1) recently published in the *Journal*. Using a rigorous

Ⓒ This article is open access and distributed under the terms of the Creative Commons Attribution Non-Commercial No Derivatives License 4.0 (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). For commercial usage and reprints, please contact Diane Gern (dgern@thoracic.org).

Originally Published in Press as DOI: 10.1164/rccm.201811-2216LE on January 14, 2019

Ⓒ This article is open access and distributed under the terms of the Creative Commons Attribution Non-Commercial No Derivatives License 4.0 (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). For commercial usage and reprints, please contact Diane Gern (dgern@thoracic.org).

Originally Published in Press as DOI: 10.1164/rccm.201811-2123LE on January 17, 2019