

indeterminate pulmonary nodules into benign and malignant (1). In contrast to our previously published probabilistic graphic model, the Lung Cancer Causal Model derived from the Pittsburgh Lung Screening Study (2), the authors used imaging data only to build their model. They report that clinical variables did not contribute significantly to the performance of the model and were excluded. This is not surprising given the relative homogeneity of the NLST (National Lung Screening Trial) data set that was used for model development. In contrast, our Lung Cancer Causal Model found that the number of nodules and years since quitting smoking, in addition to the imaging data, were significant factors that enhanced predictive accuracy. Did the authors consider these variables? ■

**Author disclosures** are available with the text of this letter at [www.atsjournals.org](http://www.atsjournals.org).

David O. Wilson, M.D., M.P.H.\*  
University of Pittsburgh Medical Center  
Pittsburgh, Pennsylvania

ORCID ID: 0000-0002-2635-7468 (D.O.W.).

\*Corresponding author (e-mail: [wilsondo@upmc.edu](mailto:wilsondo@upmc.edu)).

## References

1. Massion PP, Antic S, Ather S, Arteta C, Brabec J, Chen H, *et al*. Assessing the accuracy of a deep learning method to risk stratify indeterminate pulmonary nodules. *Am J Respir Crit Care Med* 2020; 202:241–249.
2. Raghu VK, Zhao W, Pu J, Leader JK, Wang R, Herman J, *et al*. Feasibility of lung cancer prediction from low-dose CT scan and smoking factors using causal models. *Thorax* 2019;74:643–649.

Copyright © 2021 by the American Thoracic Society



## Reply to Wilson

*From the Author:*

We thank Dr. Wilson for his interest in our work and his insightful question. We agree that, like the Pittsburgh Lung Screening Study on which a Lung Cancer Causal Model was based, the NSLT (National Lung Screening Trial) data on which we trained the Lung Cancer Prediction Convolutional Neural Network (LCP-CNN) model lack breadth in some important clinical parameters such as age and smoking history. This is because all patients came from a relatively narrow age range, and all had a smoking history of at least 30 pack-years. Had we trained on a wider population including younger people and never-smokers, we would expect the model to respond more to these variations. This will be important for incidentally detected pulmonary nodules in lower-risk patients. Although we have some forthcoming work in using

Ⓒ 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](mailto:dgern@thoracic.org)).

Originally Published in Press as DOI: 10.1164/rccm.202008-3370LE on November 3, 2020

clinical parameters, we can confirm that in the case of “number of nodules,” feeding this clinical information into our neural network alongside the visual Digital Imaging and Communications in Medicine image patches does not provide complementary evidence to what the LCP-CNN is already able to derive from the computed tomography image analysis. This is somewhat surprising given that a greater number of nodules should indicate other, nonmalignant, etiologies.

The length of time since the patient has quit smoking is a topic of interest. We have not yet trained a variant of the LCP-CNN to test whether this particular factor appears to add value to our nodule stratification. For the two external validation datasets we used in our publication (1), data came from retrospective collection of incidental nodules. In addition to containing some never-smokers, these collections had incomplete smoking history, information that remains challenging to extract from medical records (2). This also means that the existence of a record of smoking status is possibly linked to the cancer status of the patient, making imputation methods such as the one exploited by the graphical model in the Raghu and colleagues’ work (3) an interesting challenge. ■

**Author disclosures** are available with the text of this letter at [www.atsjournals.org](http://www.atsjournals.org).

Pierre P. Massion, M.D.\*  
Vanderbilt-Ingram Cancer Center  
Nashville, Tennessee

On behalf of all the authors

ORCID ID: 0000-0003-0647-0559 (P.P.M.).

\*Corresponding author (email: [pierre.massion@vmc.org](mailto:pierre.massion@vmc.org)).

## References

1. Massion PP, Antic S, Ather S, Arteta C, Brabec J, Chen H, *et al*. Assessing the accuracy of a deep learning method to risk stratify indeterminate pulmonary nodules. *Am J Respir Crit Care Med* 2020; 202:241–249.
2. Patel N, Miller DP Jr, Snaveley AC, Bellinger C, Foley KL, Case D, *et al*. A comparison of smoking history in the electronic health record with self-report. *Am J Prev Med* 2020;58:591–595.
3. Raghu VK, Zhao W, Pu J, Leader JK, Wang R, Herman J, *et al*. Feasibility of lung cancer prediction from low-dose CT scan and smoking factors using causal models. *Thorax* 2019;74:643–649.

Copyright © 2021 by the American Thoracic Society



## Erratum: Diagnosis of Hypersensitivity Pneumonitis Ⓒ in Adults: An Official ATS/JRS/ALAT Clinical Practice Guideline

There are errors in the clinical practice guideline on the diagnosis of hypersensitivity pneumonitis in adults, published in the August

Ⓒ 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](mailto:dgern@thoracic.org)).

1, 2020, issue of the *Journal*. In the second section (FIBROTIC HP [hypersensitivity pneumonitis]) of Table 7, the initial phrases are incorrect in all three columns. The initial phrase of the first column (HP) in the fibrotic HP section should read “Typical histopathological features of fibrotic HP; **1, 2 and 3** in at least one biopsy site” (not “1 or 2 and 3”); the initial phrase of the second column (PROBABLE HP) in the fibrotic HP section should read “Both of the following features (**1 and 2** from first column) in at least one biopsy site” (not “1 or 2”); and the initial phrase of the third column (INDETERMINATE FOR HP) should read “The following features in at least one biopsy site” (not “Either one of the following features in at least one biopsy site”). These corrections apply to Table 7 in both the full document and the executive summary.

For the convenience of our readers, the *Journal* is replacing the online versions of the article with corrected versions. ■

## Reference

1. Raghu G, Remy-Jardin M, Ryerson CJ, Myers JL, Kreuter M, Vasakova M, Bargagli E, Chung JH, Collins BF, Bendstrup E, Chami HA, Chua AT, Corte TJ, Dalphin JC, Danoff SK, Diaz-Mendoza J, Duggal A, Egashira R, Ewing T, Gulati M, Inoue Y, Jenkins AR, Johannson KA, Johkoh T, Tamae-Kakazu M, Kitaichi M, Knight SL, Koschel D, Lederer DJ, Mageto Y, Maier LA, Matiz C, Morell F, Nicholson AG, Patolia S, Pereira CA, Renzoni EA, Salisbury ML, Selman M, Walsh SLF, Wuyts WA, Wilson KC. Diagnosis of hypersensitivity pneumonitis in adults. An official ATS/JRS/ALAT clinical

practice guideline. *Am J Respir Crit Care Med* 2020;202:e36–e69.

Copyright © 2021 by the American Thoracic Society



## Erratum: Severe Acute Kidney Injury in Patients with COVID-19 and Acute Respiratory Distress Syndrome

The letter by Chaibi and colleagues (1) published in the November 1, 2020, issue of the *Journal* contains errors in the authors' institutional affiliations. Because of a typesetting error, Drs. Myriam Dao and Didier Dreyfuss were incorrectly listed as being affiliated with the Hôpital de Bicêtre; in addition, their affiliation with CORAKID, UMR-S 1151 at the Sorbonne Université, Paris, France was omitted. Both authors are also associated with the Hôpital Louis Mourier, Colombes, France; Dr. Dreyfuss is additionally affiliated with the Université de Paris. The *Journal* has replaced the online version of the article with a corrected version. ■

## Reference

1. Chaibi K, Dao M, Pham T, Gumucio-Sanguino VD, Di Paolo FA, Pavot A, Cohen Y, Dreyfuss D, Pérez-Fernandez X, Gaudry S. Severe acute kidney injury in patients with COVID-19 and acute respiratory distress syndrome. *Am J Respir Crit Care Med* 2020;202:1299–1301.

Copyright © 2021 by the American Thoracic Society

Ⓢ 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](mailto:dgern@thoracic.org)).