|  |
| --- |
| **Implications of the new lung function guidelines among ILD patients** |
| Andrew Li1,2,3, Alan Teoh3,4, Lauren Troy3,5, Ian Glaspole6, Margaret Wilsher7, Sally de Boer7, Jeremy Wrobel8,9, Yuben Moodley8, Francis Thien10, Henry Gallagher11, Michelle Galbraith11, Daniel Chambers12, John Mackintosh12, Nicole Goh13, Yet Khor13, Adrienne Edwards14, Karen Royals15, Christopher Grainge16, Benjamin Kwan17, Gregory Keir18, Chong Ong19, Paul Reynolds20, Elizabeth Veitch21, Gin Tsen Chai2, Ziqin Ng2, Geak Poh Tan2, Dan Jackson5, \*Tamera Corte3,5, \*Helen Jo3,5 |
| 1Woodlands Health, 2Tan Tock Seng Hospital, 3Royal Prince Alfred Hospital, 4Westmead Hospital, 5Sydney Medical School, University of Sydney, Australia, 6Alfred Hospital, 7Auckland City Hospital, 8Fiona Stanley Hospital, 9Department of Medicine, university of Notre Dame Australia, Fremantle, 10Eastern Health Box Hill Hospital, 11Waikato Hospital, 12The Prince Charles Hospital, 13The Austin Hospital, 14Christchurch Hospital, 15Queen Elizabeth Hospital, 16John Hunter Hospital, 17Sutherland Hospital, 18Princess Alexandra Hospital, 19St Vincent’s Hospital Melbourne, 20Royal Adelaide Hospital, 21Concord Hospital |
| **Introduction/Aim:**  Lung function testing remains a cornerstone in the assessment and management of patients with interstitial lung disease (ILD). The clinical impact of the new guidelines for lung function interpretation using the Global Lung function Initiative (GLI) reference equations remains uncertain.  **Methods:**  Adult ILD patients with baseline forced vital capacity (FVC) were included from the Australasian ILD registry and the National Healthcare Group ILD registry, Singapore. The GLI severity classification proposed in the 2022 lung function guidelines was compared to the 2005 guideline using the European Coal and Steel Community (ECSC) and Miller reference equations. The effect of using these new guidelines in ILD risk prediction models and eligibility for ILD clinical trial enrolment was also assessed.  **Results:**  The lung function results of 2219 patients were analyzed, of which 636 had idiopathic pulmonary fibrosis. Disagreement in lung function severity stratification were low at 9.3% and 7.3% for FVC and diffusing capacity of the lungs for carbon monoxide (DLCO) respectively, including after stratification by ethnicity and gender. Less patients with non-idiopathic pulmonary fibrosis ILD retained clinical trial eligibility. Risk prediction models, including the composite physiological index and ILD-GAP index, performed well in predicting mortality with both reference equations.  **Conclusion:**  The new lung function guideline using GLI reference equations remains a valid toold for the assessment of ILD patients.  **Grant Support:** This project was supported by the Centre of Research Excellence in Pulmonary Fibrosis which is funded by the NHMRC (GNT1116371 and GNT2015613), Lung Foundation Australia, Boehringer Ingelheim, and anonymous philanthropy. |