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| **Reclassifying bronchodilator response: impact of adopting the updated ATS/ERS standard** |
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| **Introduction/Aim:**  Response to bronchodilator (BDR) is commonly performed during spirometry to assess reversibility of airflow limitation. In 2021 the ATS/ERS published new criteria which defined a positive BDR as ≥10% increase in FEV1 or FVC relative to the individual’s mean predicted value. (Old 2005 criteria: ≥12% and 200mL increase from baseline.) We aimed to understand how implementing the new criterion would affect interpretation of results locally.  **Method:**  Baseline and post-bronchodilator spirometry test data collected at the Northern Hospital, Melbourne, between 01/02/2019 and 01/02/2022 were retrospectively analysed. Data from all referrals were included. Independent t-test was used to assess for difference between groups whose classification changed based on criterion applied. For simplicity the 2005 and 2021 BDR criteria are referred to as ‘OLD’ and ‘NEW’ respectively.  **Results:**  From 9366 spirometry tests, a total of 8295 BDR assessments were analysed. Mean age of the cohort was 59±18 years. The number of positive BDR tests were 1022 (12.3%) vs 934 (11.2%) according to the OLD and NEW criteria respectively.    **Table**: In adopting the NEW criterion, n=217 results would switch from BDR+ve to BDR-ve, and n=129 results would switch from BDR-ve to +ve.  Compared to the NEW BDR+ve group (n=934), the group who lost classification as BDR+ve (n=217) were; taller 167±9 vs 163±11cm, p<0.001, heavier 90.8±27.1 vs 79.8±22.8 kg, p<0.001, had smaller absolute baseline FEV1 1.63±0.54 vs 1.87±0.80L, p<0.001, smaller %predicted baseline FEV1 55.2±15.1 vs 88.2±24.3 %, p<0.001, smaller absolute baseline FVC 2.75 ± 0.84 vs 2.98±1.05 L, p<0.01 and smaller %predicted baseline FVC 72.8±15.4 vs 100.8±19.8 %, p<0.001.  **Conclusion:**  Irrespective of criteria used, over 11% of spirometry results reported were BDR+ve. Implementation of the NEW criterion would reduce the number of BDR+ve results, those no longer defined as BDR+ve were generally taller, heavier and had lower baseline spirometric measures. Further work is required to understand how this change in definitions may influence clinical practice.  **Key Words:** spirometry, bronchodilator response, airflow limitation  **Grant Support:** N/A |