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Calhoun WJ, Ameredes BT, King TS, et al. Comparison of physician-, biomarker-, and symptom-based strategies for adjustment of inhaled corticosteroid therapy in adults with asthma: the BASALT randomized controlled trial. JAMA 2012;308:987-97. Full Text

No consensus exists for adjusting inhaled corticosteroid therapy in patients with asthma. The authors compared adjustment at outpatient visits guided by physician assessment of asthma control (symptoms, rescue therapy, pulmonary function), based on exhaled nitric oxide, or on a day-to-day basis guided by symptoms in 342 adults with mild to moderate asthma controlled by low-dose inhaled corticosteroid therapy. There were no significant differences in time to treatment failure, the primary end point.

This study was designed to be a superiority study to show that one approach was superior to another. Although these 3 strategies did not demonstrate a difference, we cannot conclude noninferiority or equivalence. The absence of superiority is not the same as equivalence. There were few minority patients and about 17% of the patients dropped out of the study.

Based on this trial it seems unlikely that exhaled nitric oxide adds much to asthma management in patients with mild persistent asthma. It remains to be seen whether patients with moderate or severe asthma might benefit from a biomarker approach such as exhaled nitric oxide.

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