phoenix CHEST 2026 October 18-21

Late-Breaking

SESSION TITLE: Top Late-Breaking Abstracts: New Trial Data from Bench to Bronchoscope
SESSION TYPE: Rapid Fire Original Inv
PRESENTED ON: 10/20/2026 01:45 pm - 02:30 pm

AROXYBUTYNIN AND ATOMOXETINE (AD109) IN POST-MENOPAUSAL WOMEN WITH OBSTRUCTIVE SLEEP APNEA

*REENA MEHRA RASHMI N AURORA JOYCE K LEE-IANNOTTI ELISA PERGER LAURA GELL HUY PHO ANA SANCHEZ AZOFRA LUIGI TARANTO SANJAY R PATEL AND PATRICK J STROLLO

PURPOSE: Obstructive sleep apnea (OSA) remains considerably underdiagnosed in women, with risk increasing after menopause, partly due to hormonal changes that reduce upper airway stability. AD109 is an investigational oral anti-apneic neuromuscular modulator that combines, aroxybutynin (2.3 mg), with atomoxetine (75 mg) in a single tablet. In an exploratory post-hoc analysis, we evaluated the efficacy and safety of AD109 in post-menopausal women with OSA enrolled in the Phase 3 SynAIRgy and LunAIRo trials at week 26.

METHODS: SynAIRgy (NCT05813275; 26-week) and LunAIRo (NCT05811247; 51-week) were randomized, double-blind, placebo (PBO)-controlled, parallel-arm trials evaluating AD109 in adults with mild-to-severe OSA who were intolerant of or refused positive airway pressure therapy. Key inclusion criteria included an apnea-hypopnea index ≥5 events/hr (AHI_4; 4% hypopnea desaturation), a PROMIS-Fatigue raw score ≥17, and a body mass index (BMI) 18.5–42 kg/m^2 for females. Post-menopausal women – defined by menopause-related medical history (artificial menopause hysterosalpingo-oophorectomy, menopausal symptoms, menopause, oophorectomy bilateral, osteoporosis postmenopausal, postmenopausal haemorrhage, postmenopause, salpingo-oophorectomy bilateral) or age ≥55 years – were evaluated as a subgroup and compared with the non-menopausal study population (includes men and non-menopausal women). Descriptive analyses were conducted using the on-treatment population (≥1 post-baseline on-treatment polysomnography, with missing data imputed using the last observation carried forward approach).

RESULTS: Overall, 1,299 participants were enrolled across the Phase 3 trials of AD109 in OSA, including 616 women (47.4%); 492 were classified as post-menopausal (AD109: n=262; PBO: n=230) and 807 as non-menopausal (AD109: n=391; PBO: n=416). Among post-menopausal women, baseline median age was 62.0 years, median BMI was 32.5 kg/m^2, and median AHI_4 was 18.5 events/hr; 387 participants (78.7%) had mild-moderate OSA. AD109 treatment effects in post-menopausal women were numerically greater than those observed in the non-menopausal cohort. In post-menopausal women, AD109 reduced AHI_4 by 6.8 events/hr vs 0.7 events/hr with PBO (geometric mean reduction of 59.6% vs 16.0%), and AD109 AHI_4 response rates (≥50% and ≥70% reduction) were 47.2% and 29.7%, respectively, relative to 20.2% and 8.5% with PBO. In post-menopausal women, AD109 reduced hypoxic burden (HB_4; 4% hypopnea desaturation) by 69.8% vs 20.0% with PBO. In non-menopausal participants, AD109 reduced AHI_4 by 5.3 events/hr vs an increase of 0.7 events/hr with PBO (geometric mean reduction of 44.0% vs 10.6%), and AD109 AHI_4 response rates (≥50% and ≥70% reduction) were 33.0% and 18.1%, respectively, relative to 18.1% and 5.3% with PBO. In non-menopausal participants, AD109 reduced HB_4 by 50.9% vs 12.9% with PBO

AD109 treatment discontinuation due to treatment-emergent adverse events was similar across groups (placebo-subtracted: 17.7% in post-menopausal women vs 17.5% in the non-menopausal cohort).

CONCLUSIONS: In post-menopausal women, AD109 demonstrated numerically greater improvements in airway obstruction and oxygenation relative to the non-menopausal cohort, while maintaining a consistent safety profile.

CLINICAL IMPLICATIONS: In the Phase 3 trials in OSA, AD109 demonstrated efficacy by reduced airway obstruction, and increased oxygenation across all levels of disease severity and a wide range of weight classes. These hypothesis-generating findings suggest that post-menopausal women may derive enhanced therapeutic benefit with AD109 in OSA relative to non-menopausal participants.

DOI: https://doi.org/10.1016/j.chest.2026.09.035
Copyright © 2026 American College of Chest Physicians. Published by Elsevier Inc. All rights are reserved, including those for text and data mining, AI training, and similar technologies.

LATE-BREAKING