ERS - LABA/LAMA combination, exercise and lung hyperinflation in COPD: a meta-analysis

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Background
The ability to exercise is an important clinical outcome in COPD, and the improvement in exercise capacity is recognized to be an important goal in the management of COPD.

Aim
We carried out a meta-analysis to evaluate the impact of LABA/LAMA combination on exercise capacity and lung hyperinflation in COPD.

Methods
Randomized Clinical trials (RCTs) were identified after a search in different databases of published and unpublished trials in order to assess the impact of LABA/LAMA combinations on endurance time (ET) and inspiratory capacity (IC), vs. monocomponents in COPD patients.
Results

Eight RCTs including 1,632 COPD patients were meta-analyzed.

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<th>LABA/LAMA vs.</th>
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<tr>
<td></td>
<td>LABA</td>
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<tr>
<td>Endurance time (sec)</td>
<td>+43</td>
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<tr>
<td>Inspiratory capacity (ml)</td>
<td>+ 107</td>
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LABA/LAMA combinations showed the highest probability of being the best therapy with regard of both ET and IC (100% and 100%, respectively), followed by LAMA (66% and 64%, respectively) and LABA (32% and 36%, respectively), as indicated by the analysis of surface under the cumulative ranking curve (SUCRA).

No publication bias was detected in this meta-analysis.
Conclusions

This synthesis clearly demonstrates that if the goal of the therapy was to enhance exercise capacity in patients with COPD, LABA/LAMA combination consistently met the putative clinically meaningful differences for both ET and IC and, in this respect, was superior to the monocomponents.