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**Title:** Phenotypic characteristics of patients with arterial hypertension and chronic obstructive pulmonary disease

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**Body:** Patients with combination of COPD with arterial hypertension (AH) have a worse clinical course, higher risk of cardiovascular events (CE) than AH without COPD. However, the specific phenotypic characteristics of such comorbidity is still unclear. Objective: To reveal clinical features, risk of CE in patients AH with and without COPD included in clinical trials. Methods: A retrospective analysis of five clinical trials conducted in Russia from 2005 to 2010. The analysis included 3409 patients from 40 to 80 years with essential or isolated systolic AH. Age, sex, risk factors (RF), target organ damage (TOD), the presence of associated clinical conditions (ACC) were evaluated. Results: 2936 from 3409 patients had AH, 385 patients had AH with COPD. In COPD with AH patients had lower age than without COPD (55,4±8,9 and 57,9±9,1, p<0.001, respectively), among them were more males (51.9% and 30.6%, p<0.001), more frequent smoking history (89,1% and 17.9%, p<0.001), higher SBP and DBP (164,6±11,1 and 160,3±12,8 p<0.001; 98.7  $\pm$  7.9 and 96.1  $\pm$  8.1 p<0.001), more HR (76.6 $\pm$ 9.8 and 75.0 $\pm$ 8.8 p=0.001). In COPD group there were more patients with 3 or more RF (91.4% and 76.1%, p<0.001) more often TOD (90.4% and 77.3%, p<0.001). Differences in ACC were not observed. Conclusion: patients COPD with AH phenotypically have lower age, more severe condition and have higher risk of CE. Differences in age are possibly due to the fact that patients with COPD have a worse clinical course and older patients are not included in clinical trials in according to the criteria of inclusion/exclusion, which may affect the representativeness of the results with respect to AH with COPD subgroup of patients.