Purpose: To assess the prognostic value of new biomarkers in the prognostic evaluation of patients with PH.

Methods: Prospective cohort study of patients (pts) with PH confirmed by hemodynamic evaluation.

Results: Fifty one pts (75% males, mean age: 54±15 years) belonging to all groups of the WHO PH classification were included. At inclusion, all pts were in WHO functional class II or III. During the study period, 17 pts (33%) died. Baseline NT-proBNP values were significantly higher in the non-survivors group (1327; 1061–2703 pg/ml vs. 353.5; 190–1661 pg/ml; p=0.022). The same did not occur for adrenomedullin, copeptin and proenkephalin baseline levels. The maximum NT-proBNP, adrenomedullin and copeptin levels recorded during the follow-up period were significantly higher in the non-survivors group [2347.5 (1667–5073.25) pg/ml vs. 642.5 (208.25–4109.5) pg/ml, p=0.007; 53.6 (38.8–94.2) pg/ml vs. 33.4 (27–48.8) pg/ml, p=0.0075; 20.69 (13.18–35.69) pmol/L vs. 9.97 (6.18–14.74) pmol/L, p=0.022, respectively]. This did not occur for the maximum proenkephalin level. The NT-proBNP level at admission and adrenomedullin level at 3 months were independent predictors of mortality (HR 2.78; CI95 1.23–6.30, p=0.01; HR 4.36, CI95 1.17–16.2, p=0.03).

Conclusion: The maximum level of NT-proBNP, adrenomedullin and copeptin during the follow up were associated with higher mortality in pts with PH. NT-proBNP level proved to be an independent predictor of mortality in those patients. These results suggest the prognostic importance of these biomarkers in the approach of pts with PH.