# European Respiratory Society
# Annual Congress 2012

**Title:** Diagnostic accuracy of pleural fluid NTpro-BNP for pleural effusions of cardiac origin

Prof. Dr Juan Antonio 282 Mazzei jamazzei@gmail.com MD [1], Dr. Juan 283 Bourbotte jbourbotte@hotmail.com MD [1], Prof. Dr Marcelo 284 Melero 2011@mmelero.com MD [1], Prof. Dr Daniel 285 Piñeiro djpineiro@gmail.com MD [1], Dr. Griselda 286 Pargament griseldapargament@yahoo.com.ar [2] and Dr. Marcela 287 Catro marcelacastro80@hotmail.com [2]. [1] Medicine Department, Hospital de Clinicas Jose de San Martin - Universidad de Buenos Aires, Argentina and [2] Biochemistry Department, Hospital de Clinicas Jose de San Martin - Universidad de Buenos Aires, Argentina .

**Body:** INTRODUCTION The most frequent cause of a pleural effusion is heart failure. The diagnosis is based on clinical findings and biochemical parameters. RATIONALE The existence of a specific heart biomarker could avoid unnecessary studies for the diagnosis of cardiac origin of pleural fluids. OBJECTIVE The purpose of our study was to evaluate the diagnostic accuracy of pleural fluid aminoterminal fragment N-terminal pro-brain natriurético peptide (NTpro-BNP) for pleural effusions of cardiac origin compared with Framingham criteria. MATERIAL AND METHODS We studied 32 consecutive patients admitted at the work site. Pleural and blood samples were simultaneously obtained NTpro-BNP was measured in blood and pleural fluids (Bio Merieux® Enzyme-Linked Fluorescent Assay). Light criteria and serum-pleural albumin gradient was used to discriminate transudates from exudates. RESULTS The cut-off value of pleural fluid NTpro-BNP level to discriminate between pleural effusions due to heart failure was $\geq$1.791 pg/mL. The sensitivity and specificity was 75.0%(95%CI 47.6-92.6) and 81.2%(95%CI 54.4-95.7) respectively; with a positive predictive value of 80.0%(95%CI 51.9-96.0), negative predictive value 81.8%(95%CI 50.1-93.2), positive likelihood ratio 4.0(95%CI 20.8-5.8) and negative likelihood ratio 0.3(95%CI 0.1-1.2). CONCLUSIONS Pleural fluid NTpro-BNP is a very useful biomarker with high diagnostic accuracy for distinguishing pleural effusions of cardiac origin.