| Table J-46. Studies evaluating independent predictive value of NT-proBNP in both decompensated and stable population |
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| **Author****Year** | **Study Design****Population** | **n****Mean Age (SD)****%male** | **BNP, NT-proBNP Levels (pg/ml)** | **Prognostic Markers** | **Followup****(Outcomes)****(#events, #risk)** | **Model** | **Adjusted/Non-adjusted****Covariates** | **Measure(s) of Risk (95% CI,)** |
| Dini,1942012  | CohortPatients with chronic systolic HF and LVEF ≤45% | n=400mean age: 69y(12)78% male | ADM mean: 1,572pg/mL\*\*(725-3,637)D/C mean: NACutpoint: NA | log NT-proBNP age, sex, NYHA class, prior HF hospitalization, absolute and normalized furosemide dose,heart rate, systolic and diastolic BP, AF, diabetes, LV mass index, end-diastolic and end-systolic LV volume indexes, LVEF, mitral E⁄A ratio, E⁄ e0, EDT, moderate to severe MR, LA volume index, right atrial pressure, and pulmonary artery systolic pressure. | 32\*\* monthsAll-cause mortality | cox proportional hazards | age, sex, NYHA class, prior HF hospitalization, absolute and normalized furosemide dose,heart rate, systolic and diastolic BP, AF, diabetes, LV mass index, end-diastolic and end-systolic LV volume indexes, LVEF, mitral E⁄A ratio, E⁄ e0, EDT, moderate to severe MR, LA volume index, right atrial pressure, and pulmonary artery systolic pressure. | HR=2.04 (1.25-3.36) Wald Z-squared 8.0 p=0.005 |
| CohortPatients with stable HF | n=271mean age: 68y(11)81% male | ADM mean: 1,113pg/mL\*\*(522-2,275)D/C mean: NACutpoint: NA | log NT-proBNP age, sex, NYHA class, prior HF hospitalization, absolute and normalized furosemide dose,heart rate, systolic and diastolic BP, AF, diabetes, LV mass index, end-diastolic and end-systolic LV volume indexes, LVEF, mitral E⁄A ratio, E⁄ e0, EDT, moderate to severe MR, LA volume index, right atrial pressure, and pulmonary artery systolic pressure. | 32\*\* monthsAll-cause mortality | cox proportional hazards | age, sex, NYHA class, prior HF hospitalization, absolute and normalized furosemide dose,heart rate, systolic and diastolic BP, AF, diabetes, LV mass index, end-diastolic and end-systolic LV volume indexes, LVEF, mitral E⁄A ratio, E⁄ e0, EDT, moderate to severe MR, LA volume index, right atrial pressure, and pulmonary artery systolic pressure. | NR |

| **Table J-46 Studies Evaluating independent predictive value of NT-proBNP in both decompensated and stable popualtions (continued)** |
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| **Author****Year** | **Study Design****Population** | **n****Mean Age (SD)****%male** | **BNP, NT-proBNP Levels (pg/ml)** | **Prognostic Markers** | **Followup****(Outcomes)****(#events, #risk)** | **Model** | **Adjusted/Non-adjusted****Covariates** | **Measure(s) of Risk (95% CI,)** |
| Dini,1942012(cont’d) | CohortPatients with decompensated HF | n=129mean age: 70y(13)74% male:74 | ADM mean:3,637pg/mL\*\*(2,323-4,149)D/C mean: NACutpoint: NA | log NT-proBNP age, sex, NYHA class, prior HF hospitalization, absolute and normalized furosemide dose, heart rate, systolic and diastolic BP, AF, diabetes, LV mass index, end-diastolic and end-systolic LV volume indexes, LVEF, mitral E⁄A ratio, E⁄ e0, EDT, moderate to severe MR, LA volume index, right atrial pressure, and pulmonary artery systolic pressure. | 32\*\* monthsAll-cause mortality | cox proportional hazards | age, sex, NYHA class, prior HF hospitalization, absolute and normalized furosemide dose, heart rate, systolic and diastolic BP, AF, diabetes, LV mass index, end-diastolic and end-systolic LV volume indexes, LVEF, mitral E⁄A ratio, E⁄ e0, EDT, moderate to severe MR, LA volume index, right atrial pressure, and pulmonary artery systolic pressure. | HR=1.0 (1.00-1.01) p=0.060 |
| Dini,1932008 | CohortOut Patients with chronic HF, and LVEF≤45%  | n=31mean age:69y(11)78% male | ADM mean: 1,492(617 – 3,540)\*\*D/C mean: NRCutpoint: >1,492 | NT-proBNP, age, gender, NYHA class, LVEF, EDT, gender, coronary artery disease, Myocardial E wave velocity | 22 monthsComposite (All-cause mortality + HF hospitalization) (111, 313) | multi-variable cox regression | age, gender, NYHA class, LVEF, EDT, gender, coronary artery disease, Myocardial E wave velocity | HR=2.94 (1.83, 4.72) |
| CohortStabilized Out Patients with chronic HF, and LVEF≤45%  | n=219mean age:69y(11)80% male | ADM mean:1,129(478 – 2,223)\*\*D/C mean: NRCutpoint: >1,129 | NT-proBNP, age, gender, NYHA class, LVEF, EDT, gender, coronary artery disease, Myocardial E wave velocity | 22 monthsComposite (All-cause mortality + HF hospitalization) (NR, 219) | multi-variable cox regression | age, gender, NYHA class, LVEF, EDT, gender, coronary artery disease, Myocardial E wave velocity | HR=2.84 (1.44, 5.62) |
| CohortDecompensated Out Patients with chronic HF, and LVEF≤45%  | n=94mean age:69y(11)73% male | ADM mean:3,430 (1,810 – 8,124)\*\*D/C mean: NRCutpoint: >3,430 | NT-proBNP, age, gender, NYHA class, LVEF, EDT, gender, coronary artery disease, Myocardial E wave velocity | 22 monthsComposite (All-cause mortality + HF hospitalization) (NR, 94) | multi-variable cox regression | age, gender, NYHA class, LVEF, EDT, gender, coronary artery disease, Myocardial E wave velocity | HR=2.06 (1.16, 3.67) |

**Abbreviations:** ADM = admission; AF = AF; BP = blood pressure; EDT = E wave deceleration time; EDT = E wave deceleration time; HF = heart failure; LV = left ventricular; LVEF = left ventricular ejection fraction; MR = mitral regurgitation; NR = not reported; NT-proBNP = N-terminal pro-B-type natriuretic peptide; NYHA = New York Heart Association; y=years