|  |
| --- |
| Table J-19. Studies evaluating independent predictive value of NT-proBNP for the outcome of cardiovascular mortality - admission and discharge (all time periods) in patients with decompensated heart failure  |
| **Author****Year****Companion** | **Study Design****Population** | **n****Mean Age (SD)****% male** | **BNP Levels (pg/mL)** | **Prognostic Markers** | **Followup****Outcomes****(#events, #risk)** | **Model** | **Adjusted/Non-adjusted Covariates** | **Measure(s) of Risk****(95% CI,)** |
| Davutoglu592010 | CohortAcute decompensated HF | n=100mean age:65y (10)% male: 41 | ADM mean:no pleural effusion=6,640.8 (13,368.6) g/dlpleural effusion)= 6,737.1 (161,108.2) g/dlD/C mean: NRCutpoint: elevated NT-proBNP (1,000 pg/dl) | NT-proBNP, pleural effusion, CA125 | 6mCardiac mortality(27, 100) | Multivariable cox regression | Pleural effusion, CA125 | ADM: RR=1.049 (0.988-1.113), p=0.119 |
| Marcucci512006 | CohortHF patients | n=214,mean age:71.9y (9.8)% male: 79 | ADM mean: NRD/C mean: NRCutpoint: NR | NT-proBNP, DD, TAT, IL-6, CRP | 8.5m\*\*CV mortality(13, 214) | Multivariable stepwise cox | Age, gender, NYHA, EF, renal failure, HT, hypercholesterolemia, smoking, DM, Hb, Na | ADM: HR=NR, p=NS |
| Bayes-Genis532005Bayes-Genis, 2004 | CohortAcute HF with ventricular dysfunction | n=69mean age:deceased =73.7y (7.5)survivors = 71.4y (10.4)% male: 61 | ADM mean: NRD/C mean: NRCutpoint: 30% decrease | NT-proBNP reduction >30% during hospitalization, 7d NT-proBNP concentration, age, gender, patient history | 12mCV mortality(12, 69) | Multivariable stepwise logistic regression | Age, gender, patient history | Reduction by 30%: OR=4.4 (1.12-17.4), p=0.03 |
| Petretta692007 | CohortPatients with chronic HF admitted to hospital | n=153,mean age:64y (19-87)\*\*% male: 72 | ADM mean:survivors =1,167 (1,694)dead = 3,333 (2,791)D/C mean: NRCutpoint: NR | NT-proBNP, GFR, age, DM, NYHA class, iron, hematocrit | 456d\*\*CV mortality(32, 153) | Multivariable cox regression | GFR, age, DM, NYHA class, iron, hematocrit | ADM: HR=1.002 (1.001-1.003), p=0.001 |
| log NT-proBNP (tertiles), GFR, age, DM, NYHA class, iron, hematocrit | 456d\*\*CV mortality(32, 153) | Multivariable cox regression | GFR, age, DM, NYHA class, iron, hematocrit | ADM: HR=2.27 (1.61-3.19), p=0.001 |

**Abbreviations:** ADM = admission; BNP = B-type natriuretic peptide; CA125 = carbohydrate antigen 125; 95% CI, = confidence interval; CMP = cardiomyopathy; CRP = C-reactive protein; CV = cardiovascular; d = day(s); DD = D-dimer; D/C = discharge; DM = diabetes mellitus; ED = emergency department; EF = ejection fraction; GFR = glomerular filtration rate; Hb = hemoglobin; HF = heart failure; HR = hazard ratio; HT = hypertension; ICU = intensive care unit; IL-6=interleukin-6; ln=natural log; m = month(s); MI = myocardial infarction; n=number; Na = sodium; NR = not reported; NS = non-significant; NT-proBNP = N-terminal pro-B-type natriuretic peptide; NYHA = New York Heart Association; OR = odds ratio; pg/mL = picograms per milliliter; RR = relative risk; SD = standard deviation; TAT = thrombin antithrombin III complex; y = year(s)