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| Table J-3. Studies evaluating independent predictive value of BNP for the outcome of all-cause mortality (2 to 3 months) |
| **Author****Year** | **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,)** |
| Maisel12004REDHOT study | CohortPatients presenting in ED with CHF | n=464mean age:64y(51-76)\*\*53.9% male  | ADM Mean: 766D/C Mean: 976Cutpoint: 200 | logBNP, NYHA, ED disposition (initial intent, actual disposition) | 90dAll-cause mortality(36, 452) | Multivariable logistic regression  | NYHA, ED disposition (initial intent, actual disposition) | ADM: logOR=1.537 (SE = 0.42),  |
| Peacock44 2011BACH | CohortPatients with acute HF | n=466mean age:70.8y(14)58.7% male  | ADM Mean: BNP 764 (402-1,415)D/C Mean: NACutpoint: NA | logBNP, logNT-proBNP, BUN, MR-proANP, systolic BP, pulse oximetry, creatinine, age, troponin, MR-proADM, copeptin, copeptin and MR-proADM | 90d90d mortality(NR) | Cox proportional hazards | logNT-proBNP, BUN, MR-proANP, systolic BP, pulse oximetry, creatinine, age, troponin, MR-proADM, copeptin, copeptin and MR-proADM | ADM: log BNP: Chi-square 12.5 p<0.001 c index 0.636 |
| Maisel402010BACH | CohortPatients with acute HF presenting at ED with dyspnea | n=568mean age:71.2y(13.8)62.5% male  | ADM Mean: NRD/C Mean: NRCutpoint: NR | log BNP, age, gender, BMI, creatinine | 90dAll-cause mortality(65, 568) | Multivariable cox regression | age, gender, BMI, creatinine | ADM: HR=1.3 (0.9-1.9) per increase of 1 IQR |
| log BNP, logMR-proADM, troponin | 90dAll-cause mortality(65, 568) | Multivariable cox regression  | logMR-proADM, troponin, age, gender, BMI, creatinine | ADM: HR=0.9 (0.6 -1.4) (p=NS) per increase of 1 IQR |
| Boisot412008  | CohortPatients admitted to hospital with a diagnosis of acute decompensated HF | n=150mean age:NR99% male  | ADM Mean: 635 (304, 1,501)\*\*D/C Mean: 399 (174, 400)\*\*Cutpoint: decrease of <10% | Decrease BNP<10%, age>65, BUN, ST2 decrease, EF, rales, wheezing murmurs, CAD, MI, AF | 90dAll-cause mortality(24, 150) | Multivariable logistic regression  | Age>65, BUN, ST2 decrease, EF, rales, wheezing murmurs, CAD, MI, AF | Change decrease 10%: OR=1.15 (0.36-3.63), (p =0.817) |

**Abbreviations:** ADM = admission; AF = atrial fibrillation; BACH = Biomarkers in Acute Heart Failure; BMI = body mass index; BNP = B-type natriuretic peptide; BP = blood pressure; BUN=blood urea nitrogen; CAD = coronary artery disease; CHF = congestive heart failure; 95% CI, = confidence interval; d = day(s); D/C = discharge; ED = emergency department; EF = ejection fraction; HF = heart failure; HR = hazard ratio; IQR = interquartile range; MI = myocardial infarction; MR-proADM = midregional pro-adrenomedullin; n=number; NR = not reported; NT-proBNP = N-terminal pro-B-type natriuretic peptide; NYHA = New York Heart Association; OR = odds ratio; pg/mL = picograms per milliliter; REDHOT = Rapid Emergency Department Heart Failure Output Trial; SD = standard deviation; y = year(s)