**Supplementary Table 1.** NOS risk of bias scale for included cohort studies

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Selection |  |  |  |  | Outcome |  |  |
| First author / Year | Representativeness of the exposed cohort | Selection of the non-exposed cohort | Ascertainment of exposure | Outcome of interest not present at start of study | Comparability | Assessment of outcome | Adequacy of duration of follow-up | Adequacy of completeness of follow-up | Total score  (0-9) |
| Kaya 2017 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Nunez 2015 (Ca125 Gal3) | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Durak-Nalbantic 2013 | 1 | 0 | 1 | 1 | 1 (age) | 1 | 1 | 1 | 7 |
| Nunez 2012 (RS) | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Davutoglu 2010 | 1 | 0 | 1 | 1 | 1 (age) | 1 | 1 | 1 | 7 |
| Nunez 2010 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Mansour 2010 | 1 | 0 | 1 | 1 | 1 (age) | 1 | 1 | 1 | 7 |
| Nunez 2007 | 1 | 0 | 1 | 1 | 1 (age) | 1 | 1 | 1 | 7 |
| Kouris 2006 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Sir 2017 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 5 |
| Jang 2017 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 4 |
| Ratkovic 2016 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 4 |
| Santas 2016 | 1 | 0 | 1 | 1 | 1 (age) | 1 | 1 | 1 | 7 |
| Nunez 2015 (Ca125 BNP) | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 5 |
| Josa-Laorden 2015 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 4 |
| Liu 2012 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 5 |

**Supplementary Table 2.** Characteristics of the 16 studies included in this meta-analysis.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| First author / Year | Study design | CA125 cut-off (U/ml) | Sample size (n) | Male (n) | Age (yrs) | Follow-up (months) | LVEF (%) | Variables in multivariate model | Ref |
| Kaya 2017 | Prospective cohort | 48 | 300 | 184 | 68 | 4 | 37 (10-65) | Atrial fibrillation, sodium, creatinine, age, diabetes mellitus, left atrial diameter, right ventricular dilatation, systolic pulmonary arterial pressure, pericardial effusion, blood urea nitrogen, potassium, albumin, beta blocker, diuretic, positive inotropic support, left ventricular ejection fraction | [1] |
| Nunez 2016 | Randomized controlled trial | 35 | 380 | 212 | 74 | 12 | 46 (30-62) | (Univariate) | [2] |
| Nunez 2015 (Ca125 Gal3) | Prospective cohort | 67 | 264 | 131 | 73 | 24 | 49 (28-70) | Charlson comorbidity index, wide QRS (>120 msec), hemoglobin and Gal-3 | [3] |
| Durak-Nalbantic 2013 | Prospective cohort | - | 50 | 25 | 73 | - | - | - | [4] |
| Davutoglu 2010 | Prospective cohort | 50 | 100 | 59 | 65 | 6 | 33 (27-40) | Smoking, angiotensin converting enzyme, diuretic | [5] |
| Nunez 2010 | Prospective cohort | 60 | 1111 | 544 | 73 | 6 | 51 (41-61) | age (year), gender, prior admission for AHF, AHF category (acute decompensate heart failure vs. others), admission systolic blood pressure (mmHg), admission heart rate (b.p.m.), atrial fibrillation, evidence of pleural effusion, left ventricular ejection fraction, 50%, serum creatinine (mg/dL), serum sodium ≤ 130 mEq/L, and treatment with angiotensin receptor blockers and beta-blockers. | [6] |
| Mansour, 2010 | Prospective cohort | 35 | 172 | 105 | 56 | 40 | 29 (5-54) | Age, ischemic heart disease, glomerular filtration rate, left ventricular ejection fraction | [7] |
| Nunez, 2007 | Prospective cohort | 35 | 529 | 249 | 73 | 6 | - (40% have LVEF (45%) | age, gender, diabetes and their interaction with gender and diabetes, New York Heart Association class III/IV, aetiology of valvular heart disease, systolic blood pressure, serum creatinine and haemoglobin | [8] |
| Kouris 2006 | Prospective cohort | - | 95 | 95 | 70 | 15 | 27 (20-34) | Left ventricular ejection fraction, early filling deceleration time, right ventricular systolic pressure | [9] |
| Sir 2017 | Prospective cohort | 64 | 100 | 59 | 72 | - | - | - | [10] |
| Jang 2017 | Retrospective cohort | continuous | 457 | 236 | 64 | 36 | - | Age, gender, New York Heart Association class, systolic blood pressure, beta blocker, inotropic, NT-proBNP | [11] |
| Ratkovic 2016 | Prospective cohort | - | 86 | - | - | - | - | - | [12] |
| Bosch Campos 2016 | Prospective cohort | 25 | 1869 | - | - | - | - | - | [13] |
| Santas 2016 | Prospective cohort | - | 1827 | 895 | 73 | 12 | 50 (30-70) | - | [14] |
| Nunez 2015 (Ca125 BNP) | Prospective cohort | Continuous | 846 | - | - | 32 | - | Well-established risk factors, NT-proBNP | [15] |
| Josa-Laorden 2015 | Prospective cohort | 60 | 200 | 101 | 79 | 6 | - | - | [16] |
| Liu 2012 | Prospective cohort | 35 | 444 | - | - | 24 | - | Red cell distribution width, NT-proBNP | [17] |

Abbreviations: NT-proBNP: N-terminal pro B-type natriuretic peptide.

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