Appendix I. Baseline characteristics for men with or without ICD (all eligible men).

| Deseline shewastavistic     | ICD               | No ICD            |  |  |  |  |
|-----------------------------|-------------------|-------------------|--|--|--|--|
| Baseline characteristic     | N=863             | N=4,410           |  |  |  |  |
| Age, years                  | 75 (70, 80)       | 78 (71, 84)       |  |  |  |  |
| White race                  | 84% (709)         | 82% (3481)        |  |  |  |  |
| Presentation                |                   |                   |  |  |  |  |
| Systolic BP                 | 130 (112, 147)    | 133 (117, 152)    |  |  |  |  |
| Heart rate                  | 77 (66, 88)       | 84 (72, 98)       |  |  |  |  |
| LVEF (%)                    | 25 (20, 30)       | 25 (20, 30)       |  |  |  |  |
| BMI                         | 26.3 (23.5, 29.9) | 25.6 (22.6, 29.4) |  |  |  |  |
| QRS duration, ms*           | 120 (98, 154)     | 121 (100, 152)    |  |  |  |  |
| QN3 duration, ms            | (n=234)           | (n=1447)          |  |  |  |  |
| Medical history             | 1                 |                   |  |  |  |  |
| Anemia                      | 8% (70)           | 13% (571)         |  |  |  |  |
| Ischemic heart disease      | 74% (636)         | 67% (2945)        |  |  |  |  |
| Prior atrial arrhythmia     | 32% (274)         | 33% (1462)        |  |  |  |  |
| Diabetes                    | 36% (311)         | 38% (1663)        |  |  |  |  |
| Hypertension                | 67% (579)         | 70% (3094)        |  |  |  |  |
| Smoking in past 12 months   | 15% (133)         | 15% (645)         |  |  |  |  |
| Chronic renal insufficiency | 16% (138)         | 20% (861)         |  |  |  |  |
| Dialysis                    | 2% (14)           | 3% (139)          |  |  |  |  |
| COPD or asthma              | 23% (201)         | 26% (1162)        |  |  |  |  |
| Prior CVA or TIA            | 12% (102)         | 14% (621)         |  |  |  |  |
| PAD                         | 11% (96)          | 15% (655)         |  |  |  |  |
| Depression                  | 5% (47)           | 6% (259)          |  |  |  |  |
| Medications†                | I                 | <u> </u>          |  |  |  |  |
| ACE-inhibitor or ARB        | 91% (665)         | 89% (3076)        |  |  |  |  |
| Anticoagulant therapy       | 42% (317)         | 40% (1460)        |  |  |  |  |
| Beta blocker                | 95% (771)         | 93% (3769)        |  |  |  |  |

| Baseline characteristic    | ICD               | No ICD            |  |
|----------------------------|-------------------|-------------------|--|
| Baseline characteristic    | N=863             | N=4,410           |  |
| Calcium channel blocker    | 13% (101)         | 101) 17% (630)    |  |
| Digoxin                    | 35% (274)         | 29% (1115)        |  |
| Diuretic                   | 77% (599)         | 82% (3183)        |  |
| Statin                     | 47% (385)         | 44% (1757)        |  |
| Labs‡                      |                   | ,                 |  |
| BNP (pg/mL)                | 1092 (426, 1963)  | 1148 (606, 2106)  |  |
| Sodium (mEq/L)             | 138 (136, 141)    | 138 (136, 141)    |  |
| Hemoglobin (g/dL)          | 13.0 (11.7, 14.3) | 12.5 (11.0, 13.9) |  |
| Creatinine (mg/dl)         | 1.3 (1.1, 1.8)    | 1.4 (1.1, 1.9)    |  |
| BUN (mg/dl)                | 25 (18, 35)       | 26 (19, 38)       |  |
| Hospital characteristics   |                   |                   |  |
| Geographic region          |                   |                   |  |
| Northeast                  | 38% (327)         | 29% (1268)        |  |
| Midwest                    | 21% (177)         | 22% (968)         |  |
| South                      | 33% (282)         | 35% (1560)        |  |
| West                       | 9% (77)           | 14% (614)         |  |
| Teaching hospital          | 76% (652)         | 60% (2631)        |  |
| Rural site                 | 1% (12)           | 8% (330)          |  |
| Number of beds             | 475 (348, 601)    | 368 (228, 536)    |  |
| Performs PCI for acute MI  | 94% (763)         | 86% (3522)        |  |
| Performs cardiac surgery   | 92% (765)         | 74% (3037)        |  |
| Performs heart transplants | 23% (195)         | 8% (345)          |  |

Continuous variables are shown as median (25<sup>th</sup>, 75<sup>th</sup> percentiles) and are compared with Wilcoxon rank sum tests. Categorical variables are shown as percent (number) and are compared with Pearson chi-square tests. Only non-imputed values are used. \*QRS duration has been collected in the GWTG-HF registry since February 2008, and has been required since Oct 2011. †Medications are from discharge where available, otherwise from admission. ‡Labs are from admission where available, otherwise from discharge.

Appendix II. Propensity matched model of survival in men and women with and without an ICD that includes those patients with ICD *in situ* at the time of HF hospitalization

|   | Women   |                    | Men                |                    |  |
|---|---|--------------------|--------------------|--------------------|--|
|   | ICD   | No ICD             | ICD                | No ICD             |  |
| N   | 892   | 892                | 2129               | 2129               |  |
| Follow-up duration among survivors (years)      |   |                    |                    |                    |  |
| Median  | 2.8   | 2.8                | 3.0                | 2.6                |  |
| 25 <sup>th</sup> , 75 <sup>th</sup> percentiles | 1.9, 4.8  | 1.7, 4.7           | 1.8, 4.7           | 1.4, 4.2           |  |
| Min, max  | 0.03, 7.8   | 0.01, 7.7          | 0.02, 7.7          | 0.00, 8.0          |  |
| Total deaths                                    | 529   | 553                | 1408               | 1416               |  |
| Mortality rate (KM) at 1 year (95% CI)          | 23.6% (20.9, 26.6)                                    | 28.6% (25.7, 31.7) | 29.6% (27.7, 31.6) | 32.0% (30.0, 34.0) |  |
| Mortality rate (KM) at 3 years (95% CI)         | 50.6% (47.1, 54.2)                                    | 55.9% (52.4, 59.4) | 57.0% (54.7, 59.2) | 59.8% (57.5, 62.1) |  |
| Unadjusted HR (95% CI) for ICD vs. no ICD       | 0.88 (0.76, 1.01), p=0.075 0.92 (0.85, 1.01), p=0.068 |                    |                    |                    |  |
| P-value for interaction of gender with ICD      | 0.46  |                    |                    |                    |  |