

## **APPENDIX**

### **Candidate covariates**

#### Demographics

1. Age, years
2. Race – African American/Hispanic/White/Others
3. Gender – Male/Female
4. Level of Education – Some School/High School Graduate/College Graduate/Post Graduate
5. Payer/Insurance – Medicare or Medicaid/private/Others

#### Medical History

1. Smoking – Current/Recent or Former/Non-smoker
2. Cancer – Yes/No
3. Hypertension – Yes/No
4. Osteoporosis – Yes/No
5. Diabetes – Yes/No
6. Hip Fracture – Yes/No
7. Hyperthyroidism – Yes/No
8. Hypothyroidism – Yes/No
9. GI Bleed – Yes/No
10. Obstructive Sleep Apnea – Yes/No
11. Dialysis – Yes/No
12. Hyperlipidemia – Yes/No
13. Anemia – Yes/No
14. Cognitive Impairment/Dementia – Yes/No
15. Frailty – Yes/No
16. Liver Disease – Yes/No
17. COPD – Yes/No
18. Alcohol Abuse – Yes/No
19. Drug Abuse – Yes/No

#### Cardiovascular History

1. Family History of AF – Yes/No

2. Peripheral Vascular Disease – Yes/No
3. Sinus Node Dysfunction/Sick Sinus Syndrome – Yes/No
4. Stroke or TIA – Yes/No
5. Congestive Heart Failure (CHF) – No CHF/NYHA Class I/NYHA Class II/NYHA Class III or NYHA Class IV
6. Significant Valvular Disease – Yes/No
7. Prior Valve Replacement/Repair – Yes/No

#### Coronary Artery Disease History

1. History of Coronary Artery Disease – Yes/No
2. Prior MI – Yes/No
3. Prior CABG – Yes/No
4. Any PCI – Yes/No

#### Vital Signs & AF status

1. Height, cm
2. Weight, kg
3. Heart Rate, bpm
4. Diastolic Blood Pressure, mmHG
5. Systolic Blood Pressure, mmHG
6. Body Mass Index, kg/m<sup>2</sup>
7. Intraventricular Conduction – RBBB/LBBB/Non-specific IVCD or Unknown-Ventricularly Paced/none

#### Echocardiographic Assessment (TTE or TEE)

1. LVEF – Normal ( $\geq 50\%$ )/Mild dysfunction ( $>40\%$ ,  $<50\%$ )/Moderate dysfunction ( $\geq 30\%$ ,  $\leq 40\%$ )/Severe dysfunction ( $<30\%$ )
2. LAD Type – Normal/Mild enlargement/Moderate enlargement/Severe enlargement

#### Laboratory Data

1. eGFR (MDRD), mg/dl

2. Hemotocrit, %
3. Atrial Fibrillation or Atrial Flutter in the most recent 12 Lead EKG – Yes/No

#### Atrial Fibrillation Diagnosis

1. EHRA Score – No symptoms/Mild/Severe/Disabling
2. AF management strategy – Rate Control/Rhythm Control
3. Prior Cardioversions – Yes/No
4. Prior antiarrhythmic drug – Yes/No
5. Catheter Ablation of AF – Yes/No

#### Functional Status

1. Functional Status – Living independently/Living with assistance or Resides in assisted living facility or Resides in skilled nursing home or Bedbound

#### Provider or Site

1. PI/Site Specialty – Cardiology/Electrophysiology/Family Practice or Internal Medicine

*Table - Predictors of AF progression, including treatment variables*

<b>Risk Factor</b>	<b>Adjusted OR (95% CI)</b>	<b>tValue</b>	<b>P</b>
Atrial Fibrillation or Atrial Flutter on baseline electrocardiogram	2.35 (1.99,2.78)	10.10	<b>&lt;0.0001</b>
Heart Rate ≤ 80, bpm (per 10 decrease)	0.85 (0.80,0.89)	5.61	<b>&lt;0.0001</b>
NYHA Class III/IV vs. No heart failure	1.59 (1.26,2.01)	3.91	<b>&lt;0.0001</b>
Age, years (per 10 increase)	1.13 (1.06,1.20)	3.80	<b>0.0001</b>
NYHA Class II vs. No heart failure	1.38 (1.15,1.65)	3.53	<b>0.0004</b>
Moderate left atrial enlargement vs. No enlargement	1.35 (1.14,1.60)	3.47	<b>0.0005</b>
Prior Cardioversions	1.26 (1.10,1.44)	3.28	<b>0.0010</b>
African American vs. White	0.59 (0.43,0.82)	-3.18	<b>0.0015</b>
Mild left atrial enlargement vs. No enlargement	1.24 (1.08,1.44)	2.97	<b>0.0031</b>
Severe left atrial enlargement vs. No enlargement	1.33 (1.09,1.62)	2.78	<b>0.0061</b>
NYHA Class I vs. No heart failure	1.23 (1.03,1.49)	2.23	<b>0.0256</b>
Sinus Node Dysfunction/Sick Sinus Syndrome	1.24 (1.01,1.50)	2.11	<b>0.0352</b>
Anemia	0.82 (0.68,0.99)	-2.08	<b>0.0374</b>
Persistent AF vs. Paroxysmal AF	0.94 (0.73,1.21)	-0.49	0.6229
Hispanic vs. White	1.07 (0.49,2.31)	0.17	0.8649
Other race vs. White	0.97 (0.59,1.58)	-0.13	0.8977

\*Significant interaction between risk factor and baseline AF type. Odds ratio (OR) and 95%

CI are attained by combining results from the 5 imputed data sets.

AF = atrial fibrillation; BPM = beats per minute; CI=confidence interval; NYHA = New York Heart Association.