Supplemental Material

Table S1. Candidate covariate list for multivariate modeling.

Demographics
1. Age, years
2. Race – White/Non-White
3. Gender – Male/Female
4. Level of Education – Some School/High School Graduate/College Graduate/Post Graduate
5. Payor/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 use – Yes/No

Cardiovascular History
1. Family History of AF – Yes/No
2. Peripheral Arterial 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. Heart Rate, bpm

2. Diastolic Blood Pressure, mmHG
3. Systolic Blood Pressure, mmHG
4. Body Mass Index, kg/m^2
5. 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. Hematocrit, %

Atrial Fibrillation Diagnosis

1. Type of AF – First Detected or New Onset/Paroxysmal AF/Persistent AF /Permanent AF
2. EHRA Score – No symptoms/Mild/Severe/Disabling
3. Baseline AFEQT score
4. AF management strategy – Rate Control/Rhythm Control
5. Prior Cardioversions – Yes/No
6. Prior antiarrhythmic drug – Yes/No
7. Catheter Ablation of AF – Yes/No
8. AV Node or HIS Bundle Ablation – 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 S2. Events occurring during one-year follow-up by hrQoL improvement status

	Overall N=636	No large improvement in hrQoL N=455	Large improvement in hrQoL N=181	P-Value
AF Interventions	32 (5.0%)	15 (3.3%)	17 (9.4%)	0.0015
Catheter ablation	21 (3.3%)	9 (2.0%)	12 (6.6%)	0.0031
Atrial flutter ablation	3 (0.5%)	2 (0.4%)	1 (0.6%)	0.8513
AV Node/HIS Bundle ablation	6 (0.9%)	4 (0.9%)	2 (1.1%)	0.7905
Surgical/MAZE/Hybrid MAZE	2 (0.3%)	0 (0.0%)	2 (1.1%)	0.0248
Any cardioversion	49 (7.7%)	27 (5.9%)	22 (12.2%)	0.0080
Pharmacologic	5 (0.8%)	5 (1.1%)	0 (0.0%)	0.1571
DC Cardioversion	44 (6.9%)	22 (4.8%)	22 (12.2%)	0.0010
New cardiac device implantation	28 (4.4%)	20 (4.4%)	8 (4.4%)	0.9893
Pacemaker	14 (2.2%)	11 (2.4%)	3 (1.7%)	0.5558
ICD	8 (1.3%)	5 (1.1%)	3 (1.7%)	0.5688
CRT-P	3 (0.5%)	2 (0.4%)	1 (0.6%)	0.8513
CRT-D	4 (0.6%)	3 (0.7%)	1 (0.6%)	0.8779
Adverse Clinical Events				
Major bleeding	27 (4.2%)	22 (4.8%)	5 (2.8%)	0.2424
TIA/Stroke or non-CNS systemic embolism	6 (0.9%)	6 (1.3%)	0 (0.0%)	0.1209
New-onset heart failure	7 (1.6%)	5 (1.6%)	2 (1.5%)	0.9069
All-cause hospitalization	241 (37.9%)	164 (36.0%)	77 (42.5%)	0.1278

Values are presented as n (%).

hrQoL: health-related quality of life; TIA: transient ischemic attack.

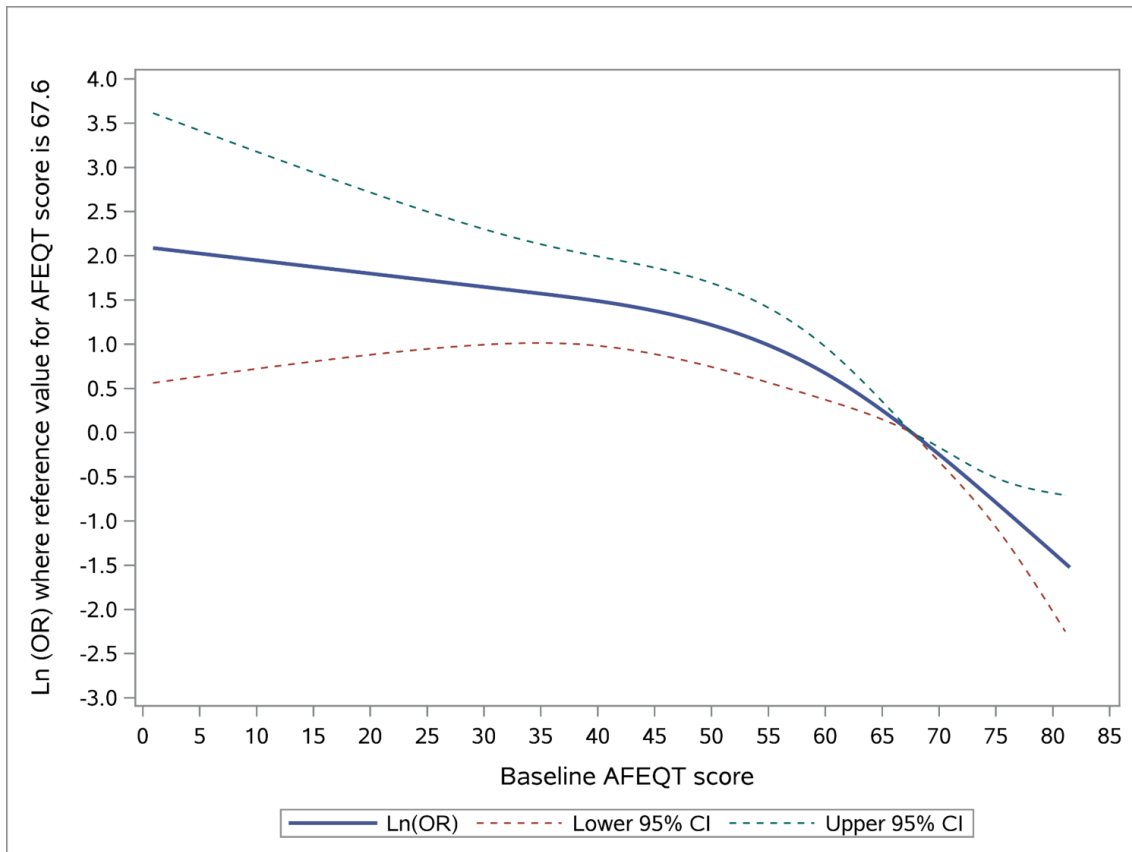**Figure S1. Adjusted odds ratio of large hrQoL improvement (log scale), according to baseline AFEQT.**

Table S3. Subsequent events by hrQoL improvement status.

Outcome	No large improvement in hrQoL N=432	Large improvement in hrQoL N=172	P-value
Major bleeding	20 (3.05)	7 (2.63)	0.7366
Stroke/non-CNS embolism or TIA	14 (2.11)	3 (1.11)	0.3143
New-onset HF diagnosis	6 (1.32)	2 (1.00)	0.7295
All-cause hospitalization	182 (35.90)	70 (32.86)	0.5303

The incidence rate represents the number of events per 100 subject years. Patients with

negative follow-up time or without any follow-up after 1 year were excluded (N=32). For new-

onset HF, patients with CHF at baseline were excluded (N=189).

hrQoL: health-related quality of life.

Table S4. Factors associated with significant hrQoL improvement, including patients that

died without significant hrQoL improvement (n=741)

	OR (95% CI)	P-value
Baseline AFEQT score (per 5 point increase & > 50)	0.69 (0.63-0.76)	<.0001
Living with assistance vs. no assistance	0.28 (0.13-0.63)	0.0021
Prior stroke/TIA	0.44 (0.26-0.74)	0.0022
Diastolic blood pressure (per 10 point increase & > 65)	1.32 (1.09-1.61)	0.0042
Peripheral arterial disease	0.51 (0.30-0.90)	0.0188

hrQoL: health-related quality of life; AFEQT: Atrial Fibrillation Effect on QualiTy-of-Life

Table S5. Factors associated with large hrQoL improvement status among patients

diagnosed with AF more 1 year prior to baseline (n=448)*

Variable	OR (95% CI)	P-value
Baseline AFEQT score (per 5 point increase & > 50)	0.72 (0.64-0.81)	<.0001
Anemia	2.11 (1.25-3.55)	0.0051
Prior stroke/TIA	0.45 (0.24-0.84)	0.0132
Peripheral arterial disease	0.45 (0.24-0.87)	0.0173