

Supplementary Table S1. Prevalence of COPD in observational heart failure registries/studies

| Study | Characteristics of HF population enrolled | Sample size | COPD diagnosis method used in the study | Prevalence of COPD in the enrolled population (%) |
|---|---|-------------|--|---|
| OPTIMIZE-HF ¹ | Hospitalized with new-onset or worsening HF | 20,118 | Clinical data and/or past medical history of COPD prior to the HF hospitalization | 25 |
| Norwegian Heart Failure registry ² | Ambulatory HF patients | 4,132 | Internationally accepted definition of COPD, GOLD 2007 (FEV ₁ /FVC<0.7) | 16.9 |
| Worcester HF study ³ | Hospitalized patients with acute decompensated heart failure | 9,748 | Clinical or radiographic evidence of COPD | 35.9 |
| Macchia et al. ⁴ | Patients hospitalized with chronic heart failure | 1,020 | Medications History (chronically exposed to inhaled/oral bronchodilators or inhaled steroids, or both) | 23.6 |
| Rusinaru et al. ⁵ | Patients hospitalized for new onset HF | 799 | Medical records and medication use by the patient | 19.5 |
| ESC-HF- LT ⁶ | Patients hospitalized for heart failure | 5,039 | Clinical judgment of each investigator | 20.2 |
| ESC-HF- LT ⁶ | Ambulatory chronic heart failure | 7,401 | Clinical judgment of each investigator | 13.8 |
| EAHFE-COPD ⁷ | Acute heart failure | 8,099 | History of post-bronchodilator FEV ₁ /FVC <0.7 | 26 |
| ARNO ⁸ (Real world study) | Patients discharged for HF and prescribed at least one HF treatment | 41,413 | Hospital discharge records | 30.5 |
| Jong et al. ⁹ | Hospitalization for HF | 38,702 | Medical records | 19.1 |
| IN-HF ¹⁰ | Outpatients with chronic HF (CHF) | 3,755 | Investigator/medical records | 21 |
| IN-HF ¹⁰ | Acute HF | 1,855 | Investigator/medical records | 30 |
| Kamalesh et al. ¹¹ | Outpatient HF | 495 | Clinical diagnosis and medical records | 52 |
| TEMISTOCLE ¹² | HF hospitalization | 2,127 | Clinical diagnosis and medical records | 41 |
| Chamerlain et al. ¹³ | Incident HF patients from 2000–2010 | 1,746 | Database | 36.7 |

COPD: chronic obstructive pulmonary disease; HF: heart failure; GOLD: Global Initiative for Chronic Obstructive Lung Disease; FEV₁: forced expiratory volume at 1 second; FVC: forced vital capacity.

Supplementary Table S2. Prevalence of COPD in randomized controlled trials in HF

| Study | Characteristics of HF population enrolled | Sample size | COPD diagnosis method used in the study | Prevalence of COPD in the enrolled population (%) |
|-----------------------------|---|-------------|--|---|
| Parker et al. ¹⁴ | Reduced left ventricular function or HF | 6,797 | History of COPD or COPD as judged by investigator | 7.1 |
| HF-ACTION ¹⁵ | HF pts with systolic dysfunction (ejection fraction \leq 35%) | 2,311 | Medical record | 11 |
| EVEREST ¹⁶ | Hospitalized worsening HF patients ejection fraction \leq 40% | 4,133 | Clinical evidence and documentation of COPD status | 10 |
| Val-HeFT ¹⁷ | Ambulatory HF | 5,010 | Physician records and prescription data | 12.5 |
| GISSI-HF ¹⁸ | Ambulatory HF patients | 6,975 | Clinical judgment of each investigator | 22 |
| SHIFT ¹⁹ | Ambulatory HF patients with left ventricular ejection fraction \leq 35% | 6,505 | Clinical judgment of each investigator | 11 |

COPD: chronic obstructive pulmonary disease; HF: heart failure.

Supplementary Table S3. Prevalence of COPD in HF as diagnosed by FEV₁/FVC ratio

| Study | Characteristics of HF population enrolled | Sample size | COPD Diagnosis method used in the study | Prevalence of COPD in the enrolled population (%) |
|----------------------------------|---|-------------|---|---|
| Bektas et al. ²⁰ | Stable HF | 205 | FEV ₁ /FVC <0.7 | 40 |
| Minasian et al. ²¹ | HF patients | 220 | FEV ₁ /FVC <0.7 | 36.8 |
| Iversen et al. ²² | Patients admitted for HF | 532 | FEV ₁ /FVC <0.7 | 35 |
| Arnaudis et al. ²³ | Patients admitted for HF | 348 | FEV ₁ /FVC <0.7 | 37.9 |
| Macchia et al. ²⁴ | HF with EF <40% | 201 | FEV ₁ /FVC <0.7 | 37.3 |
| Mascarenhas et al. ²⁵ | HF with left ventricular systolic dysfunction | 186 | FEV ₁ /FVC <0.7 | 39.2 |
| Apostolovic et al. ²⁶ | Outpatients (≥65 yr) with stable CHF | 174 | FEV ₁ /FVC <0.7 | 27.6 |
| Brenner et al. ²⁷ | Systolic HF | 619 | FEV ₁ /FVC <0.7 | 23 |
| Boschetto et al. ²⁸ | Stable HF | 118 | FEV ₁ /FVC <0.7 | 30 |

COPD: chronic obstructive pulmonary disease; HF: heart failure; FEV₁: forced expiratory volume at 1 second; FVC: forced vital capacity; CHF: chronic HF.

Supplementary Table S4. Prevalence of COPD in HFpEF and HFrEF

| Study | HF patients enrolled | Prevalence of COPD/ Asthma in HFpEF, n (%) | Prevalence of COPD/ Asthma in HFrEF, n (%) |
|--|--|---|---|
| ADHERE ²⁹ | Discharge diagnosis of heart failure | 26,322 (31) | 25,865 (27) |
| GWTG ³⁰ | Patients hospitalized for acute, decompensated heart failure | 40,354 (33) | 55,083 (27) |
| Ather et al. ³¹ | Ambulatory cohort of veterans with HF | 2,843 (34) | 6,599 (27) |
| Olmsted County 2003-2005 ³² | Inpatients and outpatients with HF | 308 (38) | 248 (30) |
| Masoudi et al. ³³ | HF hospitalization | 6,754 (34) | 12,956 (31) |

COPD: chronic obstructive pulmonary disease; HFpEF: heart failure with preserved ejection fraction; HFrEF: heart Failure with reduced ejection fraction; HF: heart failure.

Supplementary Table S5. Prevalence of COPD in IHD

| Study | Characteristics of HF population enrolled | Sample size | COPD diagnosis method used in the study | Prevalence of COPD in the enrolled population |
|--|---|---------------------------|--|---|
| BIG CAPPS cohort ³⁴ | Outpatients in Sweden who were referred to myocardial perfusion imaging, due to suspected stable myocardial ischemia | 500 | GOLD criteria (FEV ₁ /FVC <0.7) | 30.3% |
| Soriano et al. ³⁵ | Ongoing population-based study. Included population participants without CVD (c1), population participants with CVD (c2), and hospital patients with CAD (c3) | C1=450 C2=52 C3=119 | FEV ₁ /FVC <0.7 | 33.6% In general population, COPD was 17.5%. |
| Das et al. ³⁶ | Stable and ambulatory IHD patients | 86 | FEV ₁ /FVC <0.7 | 51.2% |
| ALICE ³⁷ | Established IHD, and current or former smokers | 3,103 | FEV ₁ /FVC <0.7 | 30.5% |
| Worcester Heart Attack Study ³⁸ | Patients hospitalized with AMI | 6,290 | History of COPD | 17% |
| Agarwal et al. ³⁹ | Nationwide Inpatient sample databases to identify patients with a primary diagnosis of STEMI | 2,120,005 | Database | 13.2% |
| VALIANT ⁴⁰ | Patients with MI | 14,703 | Investigator | 8.6% |
| Bursi et al. ⁴¹ | Patients with MI | 3,438 | Review of medical records, PFT not performed in all patients | 12% |
| Euro Heart Survey ACS ⁴² | Patients with a discharge diagnosis of acute coronary syndromes | 10,484 | Clinical and/or medical history | Prevalence in ST elevation ACS was 8.5%. Prevalence in non-ST elevation ACS was 8.7%. Prevalence in undetermined ECG ACS was 13%. |
| Mannem et al. ⁴³ | Statewide, all-payer hospital discharge database of AMI patients in Hawaii. | 6,520 | Database | 6.2% |
| Enriquez et al. ⁴⁴ | Population from NCDR ACTION Registry -GWTG (patients admitted with acute myocardial infarction in the USA) | 158,890 | History of COPD, chronic bronchitis, or emphysema | Overall prevalence was 14%. COPD was present in 10.1% of STEMI patients and 17.0% of NSTEMI patients. |
| Khandaker et al. ⁴⁵ | Primary diagnosis of NSTEMI | 417,930 | Database | 17.6% |

COPD: chronic obstructive pulmonary disease; IHD: ischemic heart disease; HF: heart failure; GOLD: Global Initiative for Chronic Obstructive Lung Disease; FEV₁: forced expiratory volume at 1 second; FVC: forced vital capacity; CVD: cardiovascular disease; AMI: acute myocardial infarction; STEMI: ST-segment elevation myocardial infarction; MI: myocardial infarction; PFT: pulmonary function tests; ACS: acute coronary syndrome; ECG: electrocardiography; NSTEMI: non ST segment elevation myocardial infarction.

Supplementary Table S6. Prevalence of COPD in atrial fibrillation

| Study | Characteristics of HF population enrolled | Sample size | COPD diagnosis method used in the study | Prevalence of COPD in the enrolled population (%) |
|---|---|-------------|--|---|
| EURO-AF General registry ⁴⁶ | AF patients in Europe | 3,119 | Documented medical history of COPD | 11 |
| Mendez-Bailon et al. ⁴⁷ | Admissions for AF in Spain and patients ≥ 40 yr | 210,605 | Documented medical history of COPD | 17 |
| Rodriguez-Manero et al. ⁴⁸ | Database information system of the Galician Healthcare Service Patients with AF | 7,990 | FEV ₁ /FVC $< 0.7\%$ post administration of albuterol | 11.7 |
| Umbria Atrial Fibrillation (Umbria-FA) Registry ⁴⁹ | Patients with non-valvular AF | 2,159 | Documented medical history | 15.6 |
| ARAPACIS study ⁵⁰ | NVAF in the preceding 12 mo | 2,027 | Clinical diagnosis | 9 |
| ARISTOTLE ⁵¹ | Patients with atrial fibrillation from a RCT comparing warfarin and apixiban | 18,134 | Clinical diagnosis | 11 |
| ROCKET AF ⁵² | Nonvalvular atrial fibrillation | 14,171 | Clinical diagnosis | 10 |

COPD: chronic obstructive pulmonary disease; HF: heart failure; AF: atrial fibrillation; FEV₁: forced expiratory volume at 1 second; FVC: forced vital capacity; NVAF: non-valvular atrial fibrillation; RCT: randomized controlled trial.

References

1. Mentz RJ, Fiuzat M, Wojdyla DM, Chiswell K, Gheorghiadu M, Fonarow GC, et al. Clinical characteristics and outcomes of hospitalized heart failure patients with systolic dysfunction and chronic obstructive pulmonary disease: findings from OPTIMIZE-HF. *Eur J Heart Fail* 2012;14:395-403.
2. De Blois J, Simard S, Atar D, Agewall S, Norwegian Heart Failure R. COPD predicts mortality in HF: the Norwegian Heart Failure Registry. *J Card Fail* 2010;16:225-9.
3. Fisher KA, Stefan MS, Darling C, Lessard D, Goldberg RJ. Impact of COPD on the mortality and treatment of patients hospitalized with acute decompensated heart failure: the Worcester Heart Failure Study. *Chest* 2015;147:637-45.
4. Macchia A, Monte S, Romero M, D'Ettoire A, Tognoni G. The prognostic influence of chronic obstructive pulmonary disease in patients hospitalized for chronic heart failure. *Eur J Heart Fail* 2007;9:942-8.
5. Rusinaru D, Saadi I, Godard S, Mahjoub H, Battle C, Tribouilloy C. Impact of chronic obstructive pulmonary disease on long-term outcome of patients hospitalized for heart failure. *Am J Cardiol* 2008;101:353-8.
6. Maggioni AP, Anker SD, Dahlstrom U, Filippatos G, Ponikowski P, Zannad F, et al. Are hospitalized or ambulatory patients with heart failure treated in accordance with European Society of Cardiology guidelines? Evidence from 12,440 patients of the ESC Heart Failure Long-Term Registry. *Eur J Heart Fail* 2013;15:1173-84.
7. Jacob J, Tost J, Miro O, Herrero P, Martin-Sanchez FJ, Llorens P, et al. Impact of chronic obstructive pulmonary disease on clinical course after an episode of acute heart failure. EAHFE-COPD study. *Int J Cardiol* 2017;227:450-6.
8. Maggioni AP, Orso F, Calabria S, Rossi E, Cinconze E, Baldasseroni S, et al. The real-world evidence of heart failure: findings from 41 413 patients of the ARNO database. *Eur J Heart Fail* 2016;18:402-10.
9. Jong P, Vowinkel E, Liu PP, Gong Y, Tu JV. Prognosis and determinants of survival in patients newly hospitalized for heart failure: a population-based study. *Arch Intern Med* 2002;162:1689-94.
10. Tavazzi L, Senni M, Metra M, Gorini M, Cacciatore G, Chinaglia A, et al. Multicenter prospective observational study on acute and chronic heart failure: one-year follow-up results of IN-HF (Italian Network on Heart Failure) outcome registry. *Circ Heart Fail* 2013;6:473-81.
11. Kamalesh M, Subramanian U, Sawada S, Eckert G, Temkit M, Tierney W. Decreased survival in diabetic patients with heart failure due to systolic dysfunction. *Eur J Heart Fail* 2006;8:404-8.
12. Di Lenarda A, Scherillo M, Maggioni AP, Acquarone N, Ambrosio GB, Annicchiarico M, et al. Current presentation and management of heart failure in cardiology and internal medicine hospital units: a tale of two worlds: the TEMISTOCLE study. *Am Heart J* 2003;146:E12.
13. Chamberlain AM, Boyd CM, Manemann SM, Dunlay SM, Gerber Y, Killian JM, et al. Comorbidities in heart failure: a population-based case-control study. *Circulation* 2015;132:A15693.
14. Parker AB, Yusuf S, Naylor CD. The relevance of subgroup-specific treatment effects: the Studies Of Left Ventricular Dysfunction (SOLVD) revisited. *Am Heart J* 2002;144:941-7.
15. Mentz RJ, Schulte PJ, Fleg JL, Fiuzat M, Kraus WE, Pina IL, et al. Clinical characteristics, response to exercise training, and outcomes in patients with heart failure and chronic obstructive pulmonary disease: findings from Heart Failure and A Controlled Trial Investigating Outcomes of Exercise Training (HF-ACTION). *Am Heart J* 2013;165:193-9.
16. Mentz RJ, Schmidt PH, Kwasny MJ, Ambrosy AP, O'Connor CM, Konstam MA, et al. The impact of chronic obstructive pulmonary disease in patients hospitalized for worsening heart failure with reduced ejection fraction: an analysis of the EVEREST Trial. *J Card Fail* 2012;18:515-23.
17. Staszewsky L, Wong M, Masson S, Barlera S, Carretta E, Maggioni AP, et al. Clinical, neurohormonal, and inflammatory markers and overall prognostic role of chronic obstructive pulmonary disease in patients with heart failure: data from the Val-HeFT heart failure trial. *J Card Fail* 2007;13:797-804.
18. Canepa M, Temporelli PL, Rossi A, Rossi A, Gonzini L, Nicolosi GL, et al. Prevalence and prognostic impact of chronic obstructive pulmonary disease in patients with chronic heart failure: data from the GISSI-HF trial. *Cardiology* 2017;136:128-37.
19. Tavazzi L, Swedberg K, Komajda M, Bohm M, Borer JS, Lainscak M, et al. Clinical profiles and outcomes in patients with chronic heart failure and chronic obstructive pulmonary disease: an efficacy and safety analysis of SHIFT study. *Int J Cardiol* 2013;170:182-8.
20. Bektas S, Franssen FME, van Empel V, Uszko-Lencer N, Boyne J, Knackstedt C, et al. Impact of airflow limitation in chronic heart failure. *Neth Heart J* 2017;25:335-42.
21. Minasian A, Dekhuijzen R, Van den Elshout F, Vos P, Willems F, Van den Bergh P, Heijdra Y. COPD prevalence in chronic heart failure. *Eur Respir J* 2011;38:1019.
22. Iversen KK, Kjaergaard J, Akkan D, Kober L, Torp-Pedersen C, Hassager C, et al. The prognostic importance of lung function in patients admitted with heart failure. *Eur J Heart Fail* 2010;12:685-91.

23. Arnaudis B, Lairez O, Escamilla R, Fouilloux A, Fournier P, Monteil B, et al. Impact of chronic obstructive pulmonary disease severity on symptoms and prognosis in patients with systolic heart failure. *Clin Res Cardiol* 2012;101:717-26.
24. Macchia A, Rodriguez Moncalvo JJ, Kleinert M, Comignani PD, Gimeno G, Arakaki D, et al. Unrecognised ventricular dysfunction in COPD. *Eur Respir J* 2012;39:51-8.
25. Mascarenhas J, Lourenco P, Lopes R, Azevedo A, Bettencourt P. Chronic obstructive pulmonary disease in heart failure. Prevalence, therapeutic and prognostic implications. *Am Heart J* 2008;155:521-5.
26. Apostolovic S, Jankovic-Tomasevic R, Salinger-Martinovic S, Djordjevic-Radojkovic D, Stanojevic D, Pavlovic M, et al. Frequency and significance of unrecognized chronic obstructive pulmonary disease in elderly patients with stable heart failure. *Aging Clin Exp Res* 2011;23:337-42.
27. Brenner S, Guder G, Berliner D, Deubner N, Frohlich K, Ertl G, et al. Airway obstruction in systolic heart failure: COPD or congestion? *Int J Cardiol* 2013;168:1910-6.
28. Boschetto P, Fucili A, Stendardo M, Malagu M, Parrinello G, Casimirri E, et al. Occurrence and impact of chronic obstructive pulmonary disease in elderly patients with stable heart failure. *Respirology* 2013;18:125-30.
29. Yancy CW, Lopatin M, Stevenson LW, De Marco T, Fonarow GC, Committee ASA, et al. Clinical presentation, management, and in-hospital outcomes of patients admitted with acute decompensated heart failure with preserved systolic function: a report from the Acute Decompensated Heart Failure National Registry (ADHERE) Database. *J Am Coll Cardiol* 2006;47:76-84.
30. Steinberg BA, Zhao X, Heidenreich PA, Peterson ED, Bhatt DL, Cannon CP, et al. Trends in patients hospitalized with heart failure and preserved left ventricular ejection fraction: prevalence, therapies, and outcomes. *Circulation* 2012;126:65-75.
31. Ather S, Chan W, Bozkurt B, Aguilar D, Ramasubbu K, Zachariah AA, et al. Impact of noncardiac comorbidities on morbidity and mortality in a predominantly male population with heart failure and preserved versus reduced ejection fraction. *J Am Coll Cardiol* 2012;59:998-1005.
32. Mentz RJ, Kelly JP, von Lueder TG, Voors AA, Lam CS, Cowie MR, et al. Noncardiac comorbidities in heart failure with reduced versus preserved ejection fraction. *J Am Coll Cardiol* 2014;64:2281-93.
33. Masoudi FA, Havranek EP, Smith G, Fish RH, Steiner JF, Ordin DL, et al. Gender, age, and heart failure with preserved left ventricular systolic function. *J Am Coll Cardiol* 2003;41:217-23.
34. Jonsson A, Fedorowski A, Engstrom G, Wollmer P, Hamrefors V. High prevalence of undiagnosed COPD in Swedish patients evaluated for suspected stable myocardial ischemia: the BIG CAPPs cohort. *Eur Heart J* 2018;39(Suppl_1):ehy566.P6410.
35. Soriano JB, Rigo F, Guerrero D, Yanez A, Forteza JF, Frontera G, et al. High prevalence of undiagnosed airflow limitation in patients with cardiovascular disease. *Chest* 2010;137:333-40.
36. Das S, Mukherjee S, Kundu S, Mukherjee D, Ghoshal AG, Paul D. Presence and severity of COPD among patients attending cardiology OPD of a tertiary healthcare centre. *J Indian Med Assoc* 2010;108:406-9.
37. Franssen FM, Soriano JB, Roche N, Bloomfield PH, Brusselle G, Fabbri LM, et al. Lung function abnormalities in smokers with ischemic heart disease. *Am J Respir Crit Care Med* 2016;194:568-76.
38. Stefan MS, Bannuru RR, Lessard D, Gore JM, Lindenauer PK, Goldberg RJ. The impact of COPD on management and outcomes of patients hospitalized with acute myocardial infarction: a 10-year retrospective observational study. *Chest* 2012;141:1441-8.
39. Agarwal M, Agrawal S, Garg L, Garg A, Bhatia N, Kadaria D, et al. Effect of chronic obstructive pulmonary disease on in-hospital mortality and clinical outcomes after ST-segment elevation myocardial infarction. *Am J Cardiol* 2017;119:1555-9.
40. Hawkins NM, Huang Z, Pieper KS, Solomon SD, Kober L, Velazquez EJ, et al. Chronic obstructive pulmonary disease is an independent predictor of death but not atherosclerotic events in patients with myocardial infarction: analysis of the Valsartan in Acute Myocardial Infarction Trial (VALIANT). *Eur J Heart Fail* 2009;11:292-8.
41. Bursi F, Vassallo R, Weston SA, Killian JM, Roger VL. Chronic obstructive pulmonary disease after myocardial infarction in the community. *Am Heart J* 2010;160:95-101.
42. Hasdai D, Behar S, Wallentin L, Danchin N, Gitt AK, Boersma E, et al. A prospective survey of the characteristics, treatments and outcomes of patients with acute coronary syndromes in Europe and the Mediterranean basin; the Euro Heart Survey of Acute Coronary Syndromes (Euro Heart Survey ACS). *Eur Heart J* 2002;23:1190-201.
43. Mannem SR, Ahn HJ, Miyamura J, Juarez D, Chen J, Seto T. Impact of COPD on patients with cardiovascular disease. *Circulation: Cardiovascular Quality and Outcomes*. 2015;8:A133.
44. Enriquez JR, de Lemos JA, Parikh SV, Peng SA, Spertus JA, Holper EM, et al. Association of chronic lung disease with treatments and outcomes patients with acute myocardial infarction. *Am Heart J* 2013;165:43-9.
45. Khandaker M, Khandker Z, Yue B, Wei X, Garg N, Herzog E, et al. The effect of chronic obstructive pulmonary disease on patients with non-ST-segment elevation myocardial infarction: a 2014 nationwide analysis. *J Am Coll Cardiol* 2018;72 (13 Supple 8):B64.
46. Proietti M, Laroche C, Drozd M, Vijgen J, Cozma DC, Drozd J, et al. Impact of chronic obstructive pulmonary disease on prognosis in atrial fibrillation: A report from the EURObservational Research Programme Pilot Survey on Atrial Fibrillation (EORP-AF) General

- Registry. *Am Heart J* 2016;181:83-91.
47. Mendez-Bailon M, Lopez-de-Andres A, de Miguel-Diez J, de Miguel-Yanes JM, Hernandez-Barrera V, Munoz-Rivas N, et al. Chronic obstructive pulmonary disease predicts higher incidence and in hospital mortality for atrial fibrillation: an observational study using hospital discharge data in Spain (2004-2013). *Int J Cardiol* 2017;236:209-15.
 48. Rodriguez-Manero M, Lopez-Pardo E, Cordero A, Ruano-Ravina A, Novo-Platas J, Pereira-Vazquez M, et al. A prospective study of the clinical outcomes and prognosis associated with comorbid COPD in the atrial fibrillation population. *Int J Chron Obstruct Pulmon Dis* 2019;14:371-80.
 49. Angeli F, Reboldi G, Trapasso M, Aita A, Ambrosio G, Verdecchia P. Detrimental impact of chronic obstructive pulmonary disease in atrial fibrillation: new insights from Umbria Atrial Fibrillation Registry. *Medicina (Kaunas)* 2019;55:358.
 50. Raparelli V, Pastori D, Pignataro SF, Vestri AR, Pignatelli P, Cangemi R, et al. Major adverse cardiovascular events in non-valvular atrial fibrillation with chronic obstructive pulmonary disease: the ARAPACIS study. *Intern Emerg Med* 2018;13:651-60.
 51. Durham MT, Cyr DD, Lopes RD, Thomas LE, Tsuang WM, Gersh BJ, et al. Chronic obstructive pulmonary disease in patients with atrial fibrillation: Insights from the ARISTOTLE trial. *Int J Cardiol* 2016;202:589-94.
 52. Pokorney SD, Piccini JP, Stevens SR, Patel MR, Pieper KS, Halperin JL, et al. Cause of death and predictors of all-cause mortality in anticoagulated patients with nonvalvular atrial fibrillation: data from ROCKET AF. *J Am Heart Assoc* 2016;5:e002197.