

# Health inequality and inequity in HF populations: A call to action



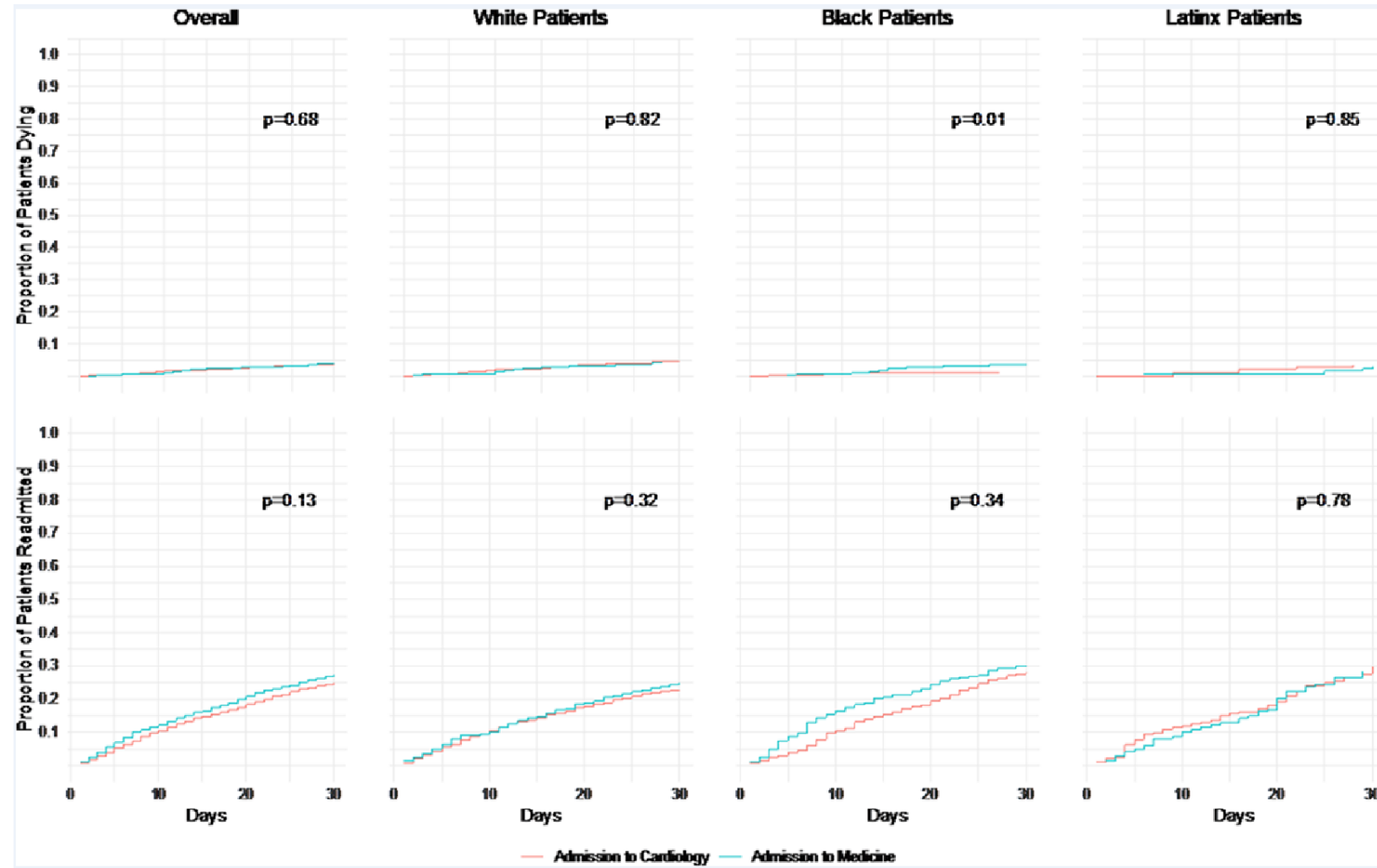
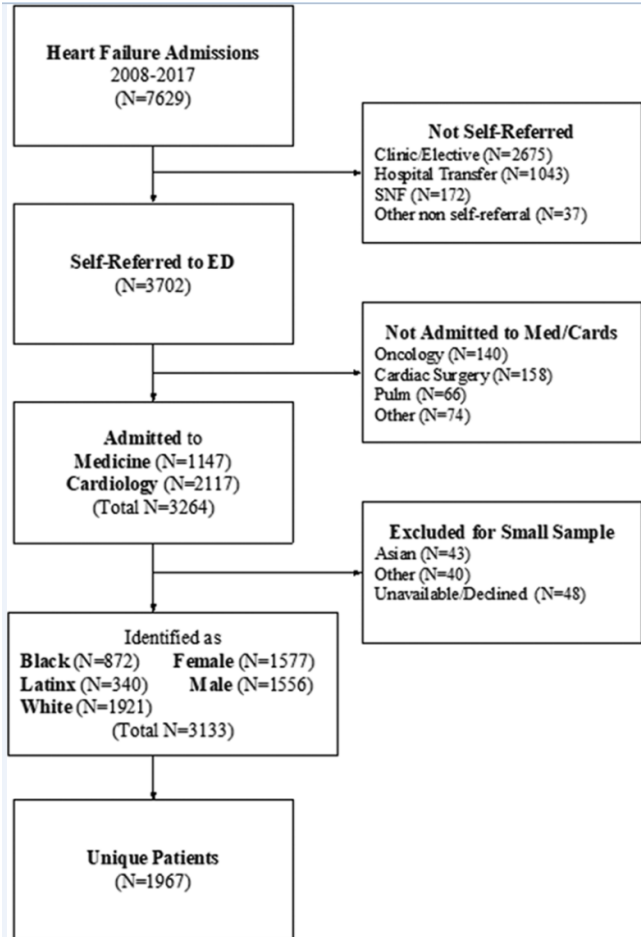
**HEART FAILURE UPDATE 2020** | **VIRTUAL CONFERENCE**  
April 17-18

 **CHFS/SCIC** Canadian Heart Failure Society  
Société canadienne d'insuffisance cardiaque

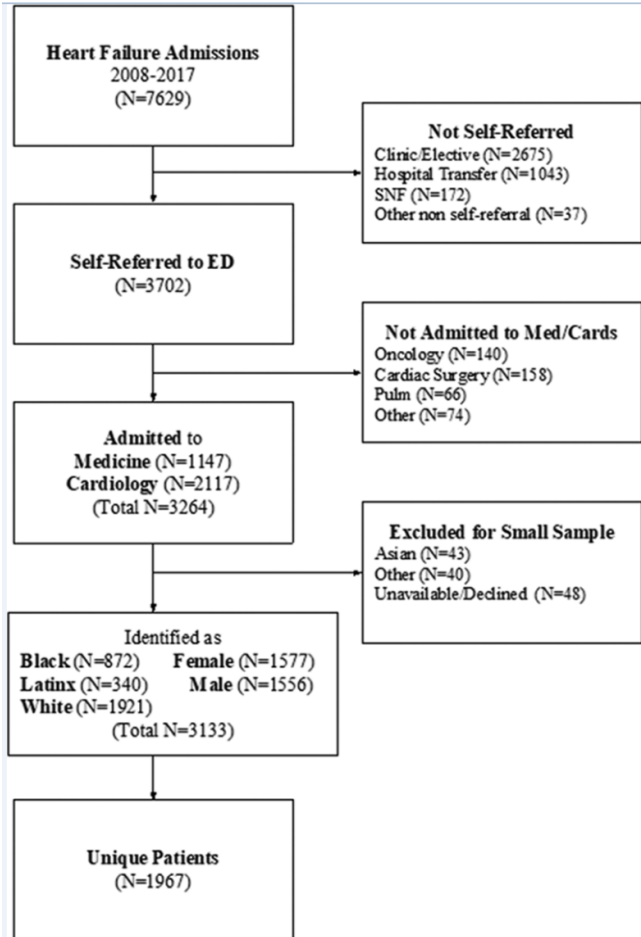
The banner features a red ECG line running horizontally across the bottom. On the left side, there is a stylized red heart icon with an ECG line passing through it.

**Mary Norine Walsh, MD, MACC**  
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St Vincent Heart Center, Indianapolis IN  
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# Identification of Racial Inequities in Access to Specialized Inpatient Heart Failure Care at an Academic Medical Center



# Identification of Racial Inequities in Access to Specialized Inpatient Heart Failure Care at an Academic Medical Center



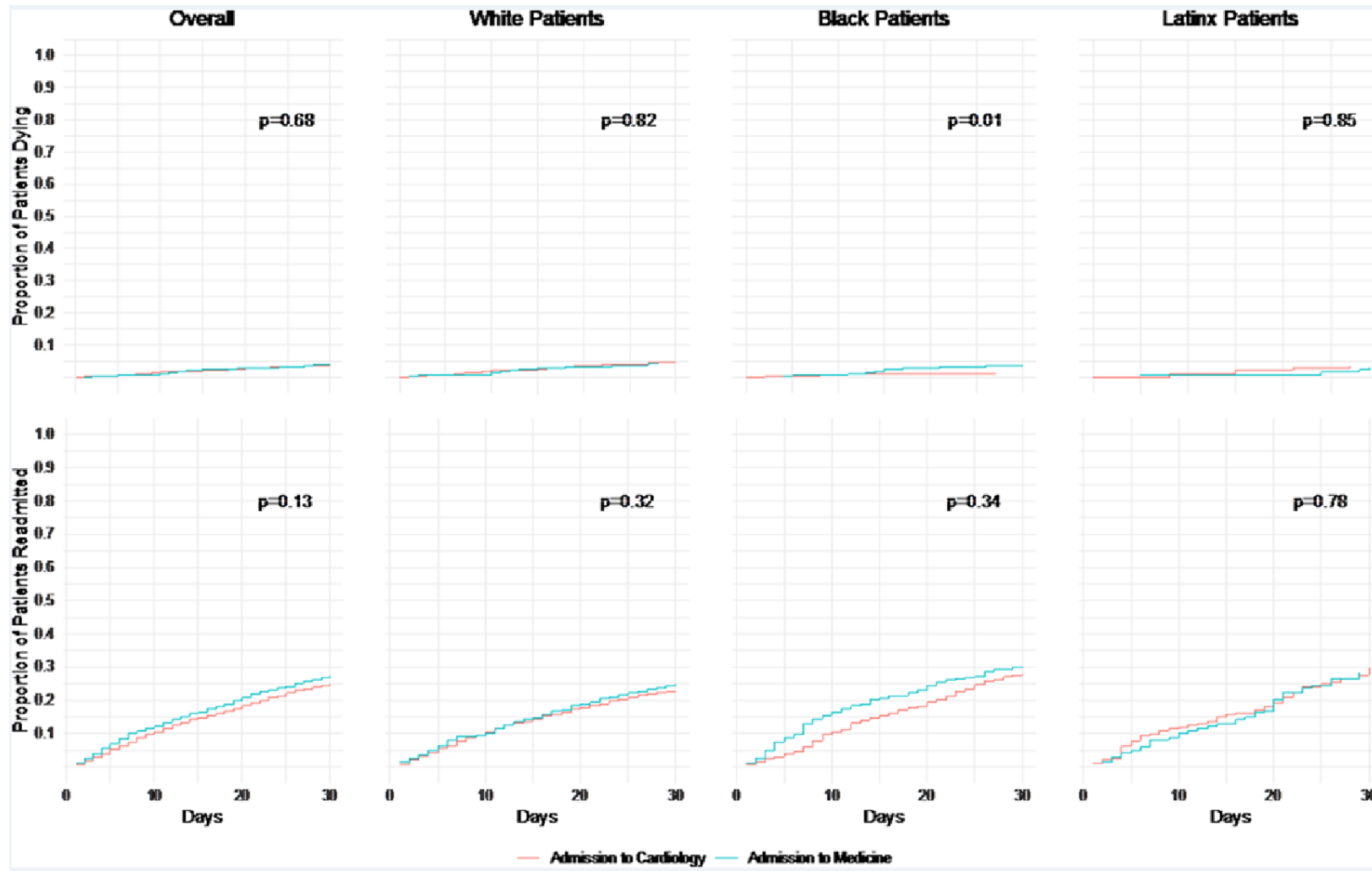
## Admission to Cardiology vs Medicine Service

Table 3. Rate Ratios for Admission to Cardiology for Propensity-Matched Cohorts

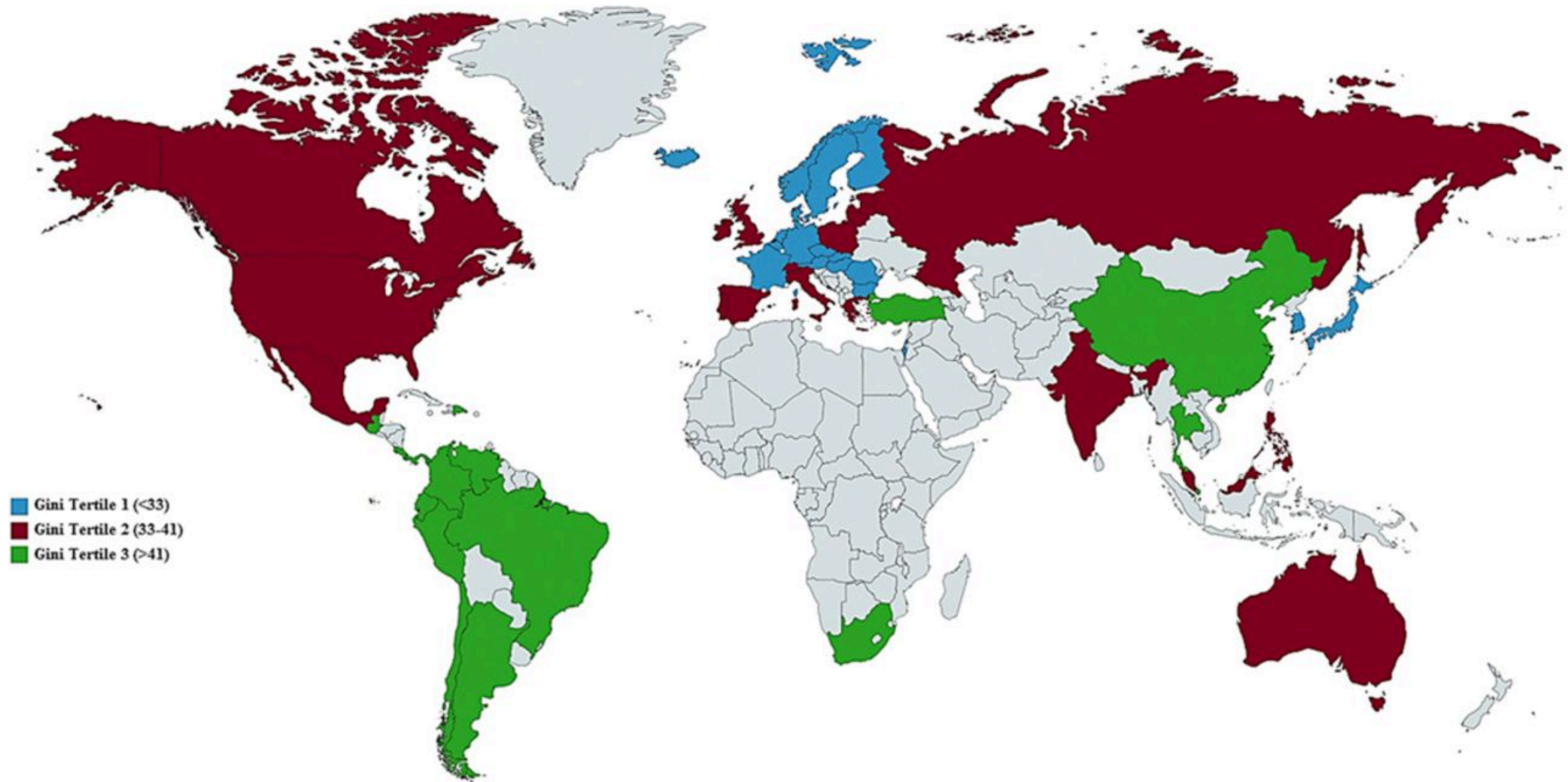
	Rate Ratio of Admission to Cardiology	95% CI	P Value
Black vs white	0.74	0.63–0.87	0.0001
Latinx vs white	0.75	0.60–0.95	0.014
Female vs male	0.86	0.77–0.96	0.0055

# Identification of Racial Inequities in Access to Specialized Inpatient Heart Failure Care at an Academic Medical Center

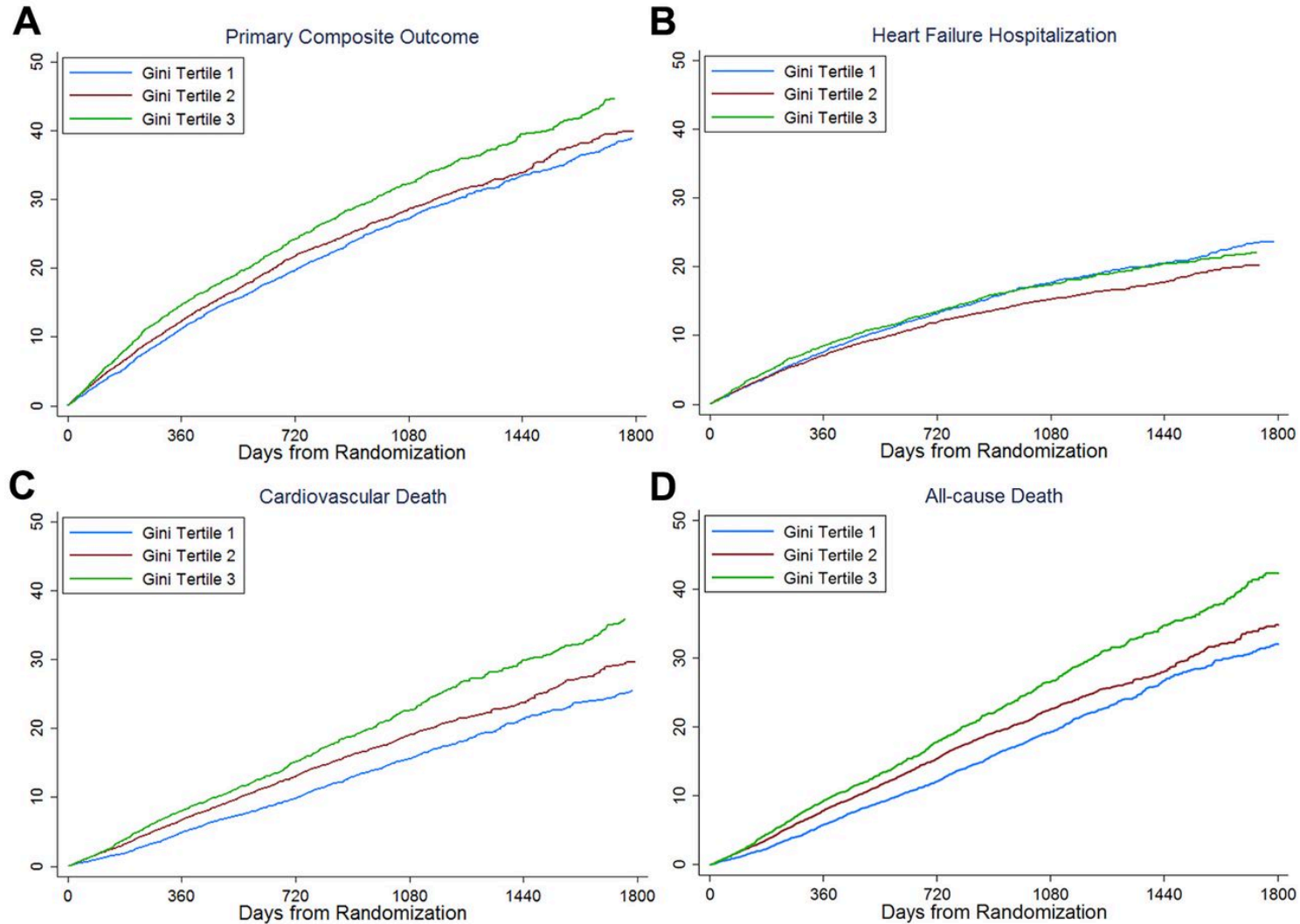
- Despite adjustment for neighborhood disadvantage, comorbidity, dx of HFpEF, & having seen a cardiologist or PCP within the past year, black and Latinx HF pts remained significantly more likely to be admitted to GMS compared to white pts.
- Admission to GMS was independently associated with higher rates of 30-day readmission
- No difference in mortality by admission service after multivariable adjustment.
- Evidence of differential admission decisions based on age and sex



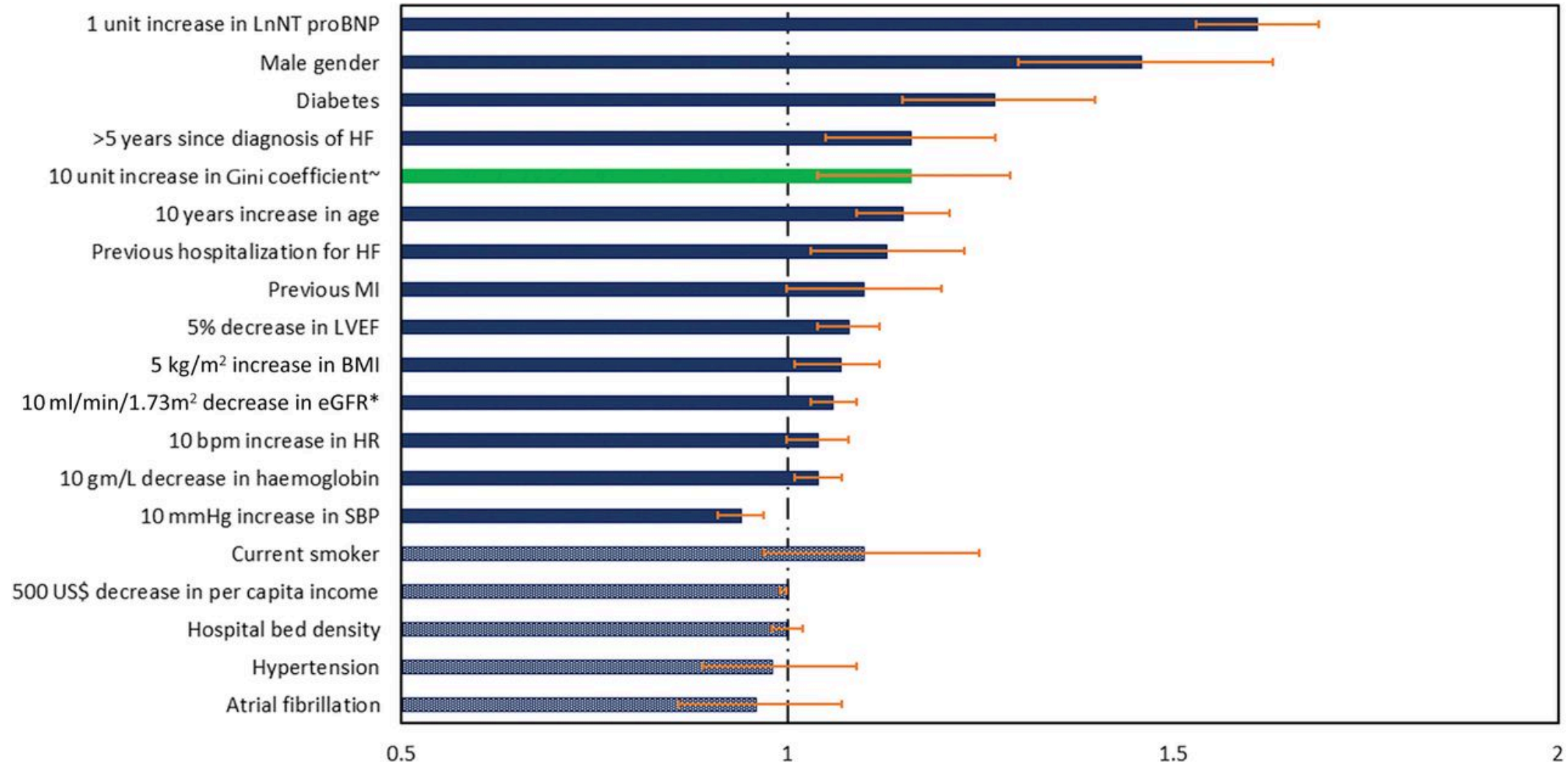
# Income Inequality and Outcomes in Heart Failure



# Cumulative incidence plot of (A) primary composite outcome; (B) hospitalization for HF; (C) cardiovascular death; and (D) Kaplan-Meier plot of all-cause death.

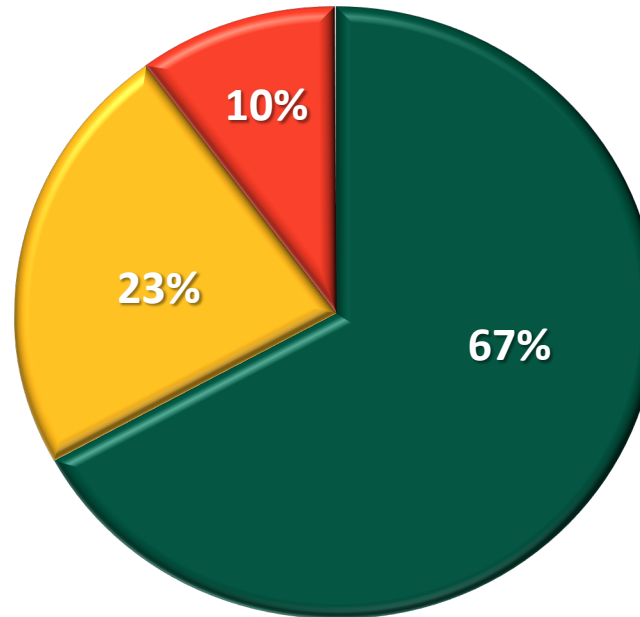
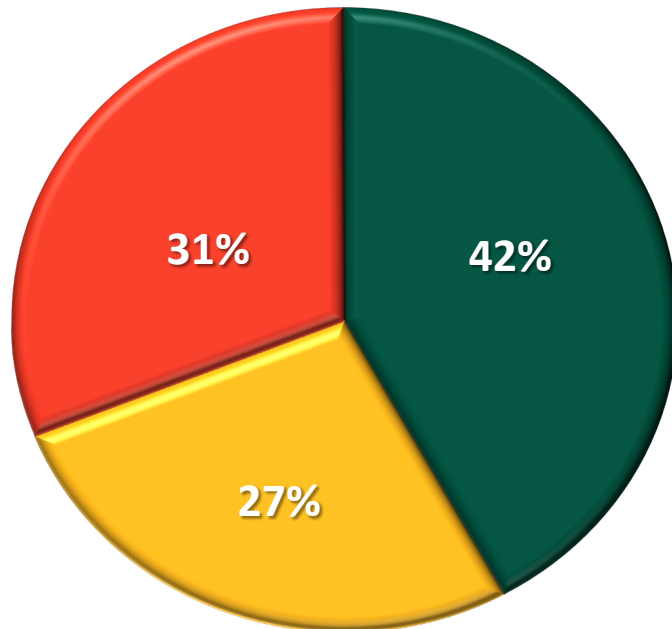


# Multivariate Model of Predictors of Cardiovascular Death in HF



# Prevalence of HFpEF in Men and Women

## Cardiovascular Health Study



- Normal (LVEF ≥55%)
- Mild (LVEF 45-55%)
- Mod/severe (LVEF <45%)

# Sex and Age Distribution in Heart Failure Trials

Trial	Year	No. of Pts.	No. (%) of Women	Average Age (yr)
Captopril-Digoxin	1988	300	51(17%)	57
SOLVD (prevention)	1992	4,228	486 (11.5%)	59
SOLVD (symptomatic)	1991	2,569	594 (23%)	61
CONSENSUS – I	1987	253	75 (30%)	70
MDC	1993	383	105 (27%)	49
PROMISE	1991	1,088	235 (22%)	64
Vesnarinone	1993	477	63 (13%)	58
RADIANCE	1993	178	42 (24%)	60
DIG	1997	6,800	1,520 (22.4%)	64
Carvedilol	1996	1,094	256 (23%)	48
MERIT HF	1999	3,991	898 (22.5%)	61
CIBIS II	1999	2,467	335 (20%)	61
RALES	1999	1,663	446 (27%)	65
BEST (non-VA)	2001	1791	573 (33%)	58
<b>Total</b>		<b>27,282</b>	<b>5,679 (21%)</b>	<b>62</b>

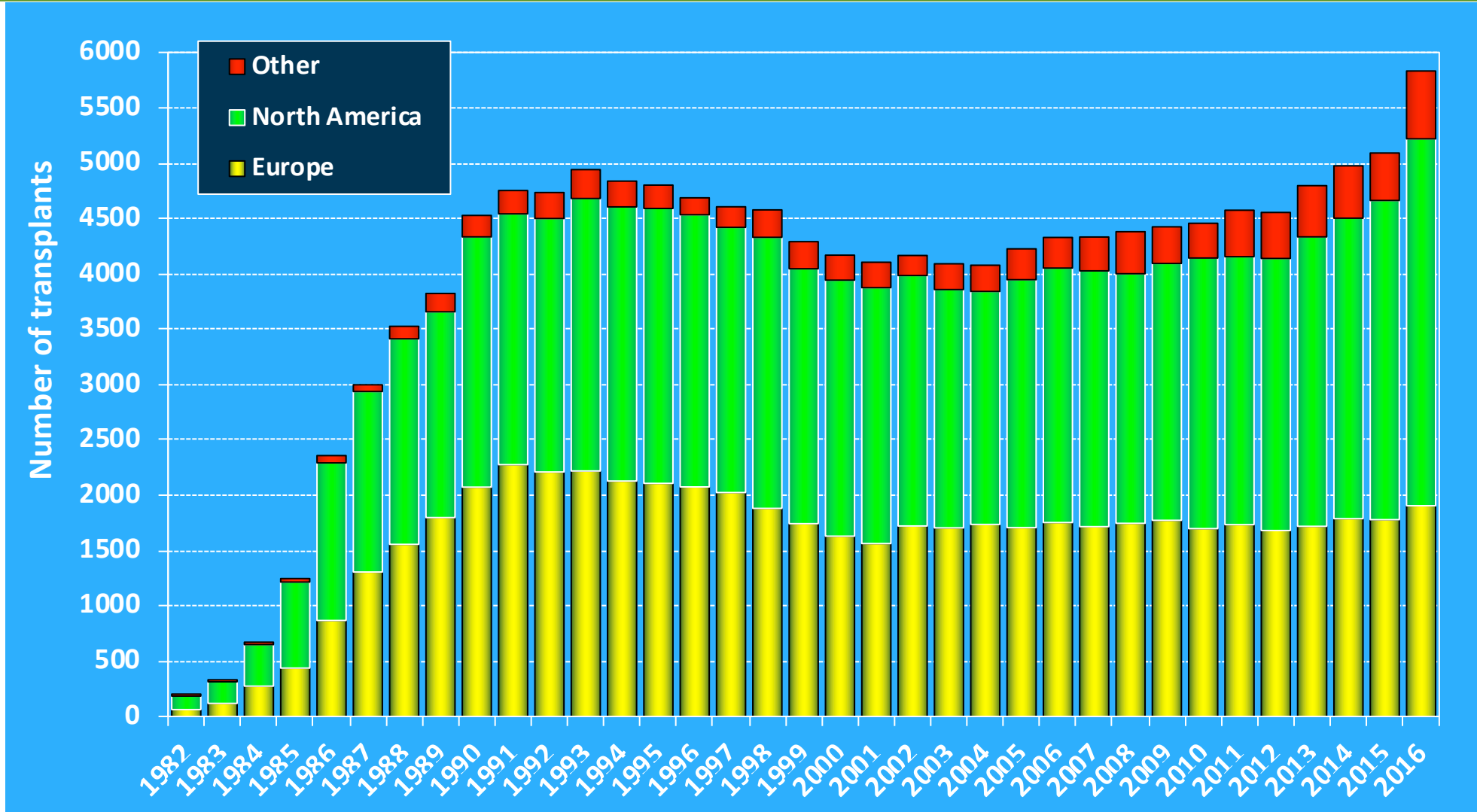
Study	Number of Patients	Number of Women in	Percentage of Women in
V-HeFT-I (7)	0	0	0
V-HeFT-II (8)	0	0	0
CONSENSUS-I (9)	253	75	30
SOLVD-T (10)	2,569	504	23
SOLVD-P (11)	4,228	476	31
ELITE-I (12)	722	240	31
ELITE-II (13)	3,152	966	30
MERIT-HF (14)	3,991	451	23
CIBIS II (15)	2,647	515	20
COPERNICUS (16)	2,287	465	28
Val-HEFT (17)	5,010	1,002	20
RALES (18)	1,663	446	27
SAVE (19)	2,231	390	28
TRACE (20)	1,749	501	22
CHARM (21)	7,599	243	32
SCD HeFT (22)	2,521	580	23
DIG (23)	6,800	1,520	22.4
<b>Total</b>	<b>47,422</b>	<b>10,907</b>	<b>23</b>

*(Lindenfeld J, et al JACC 1997;30:1417-19)*

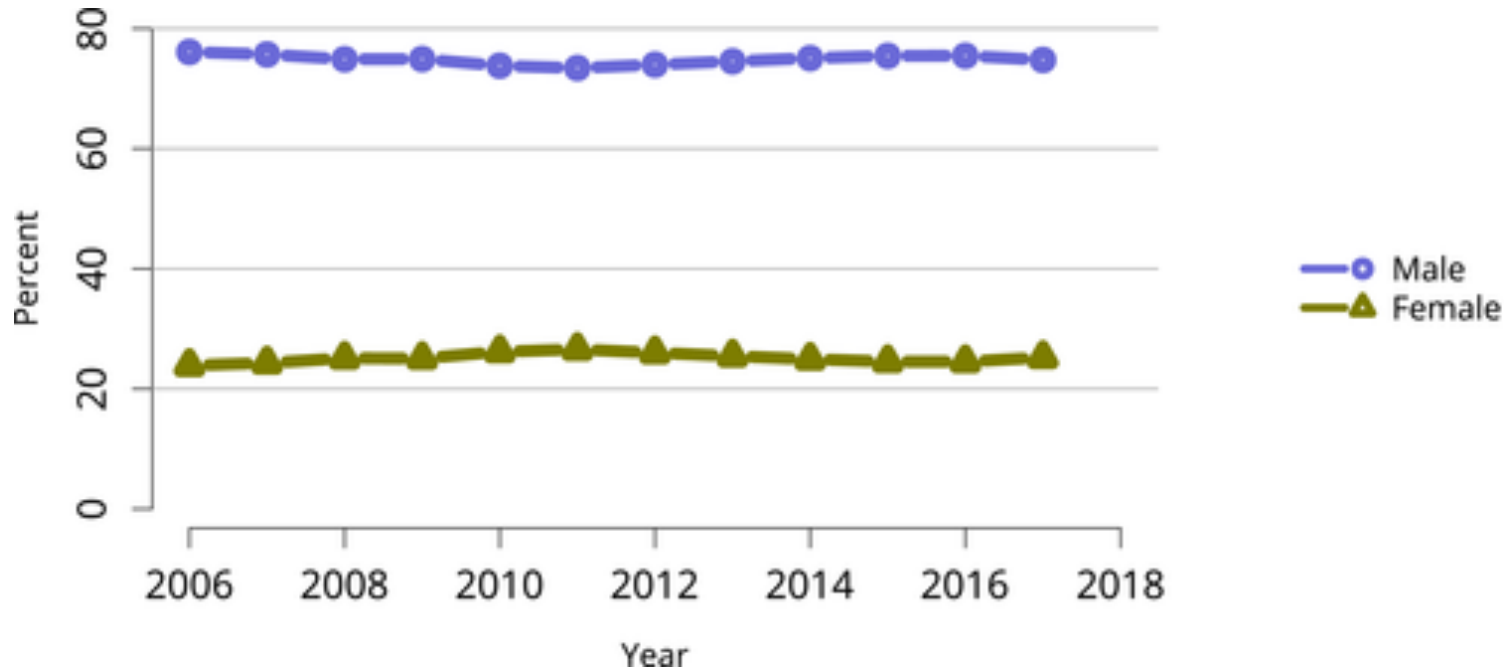
*Piña, I. JACC 2003;42: 2135-2138.*

# Adult and Pediatric Heart Transplants

## Number of Transplants by Year and Location

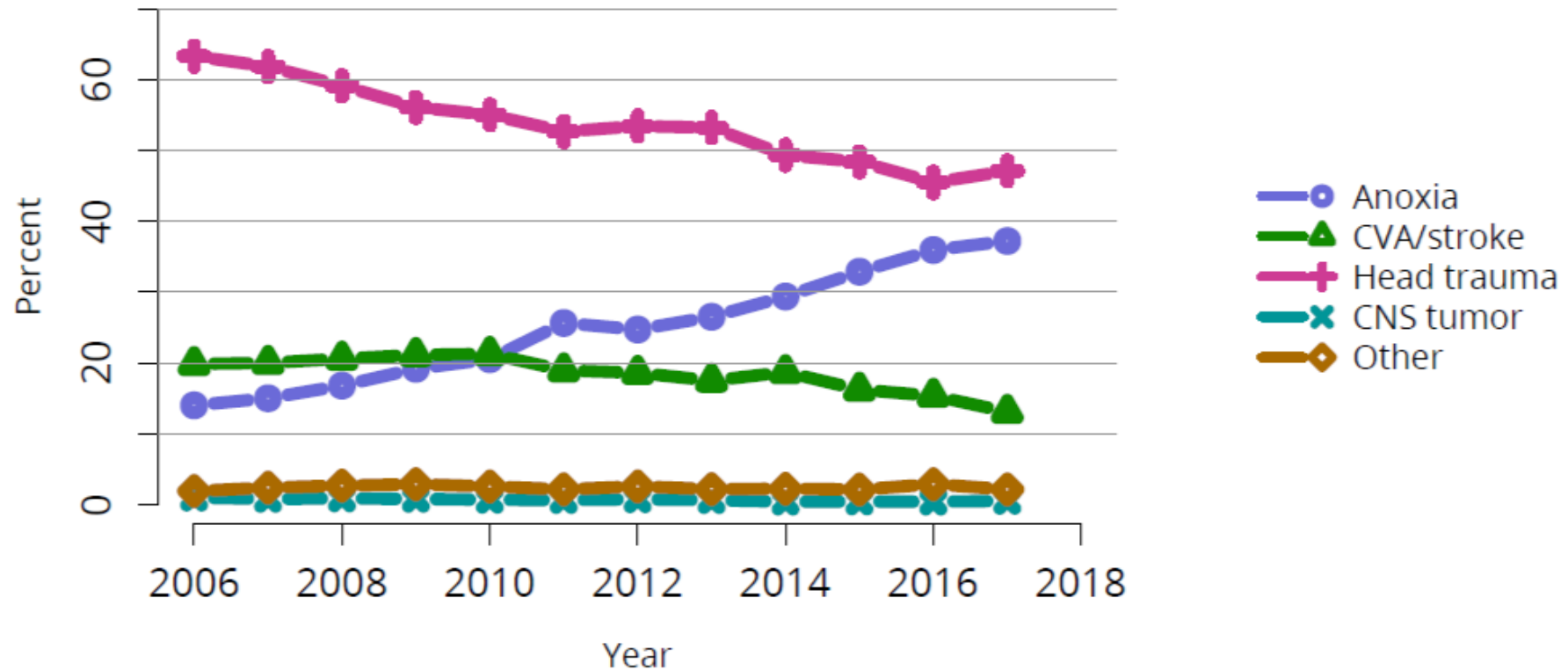


# Adults listed for cardiac transplantation



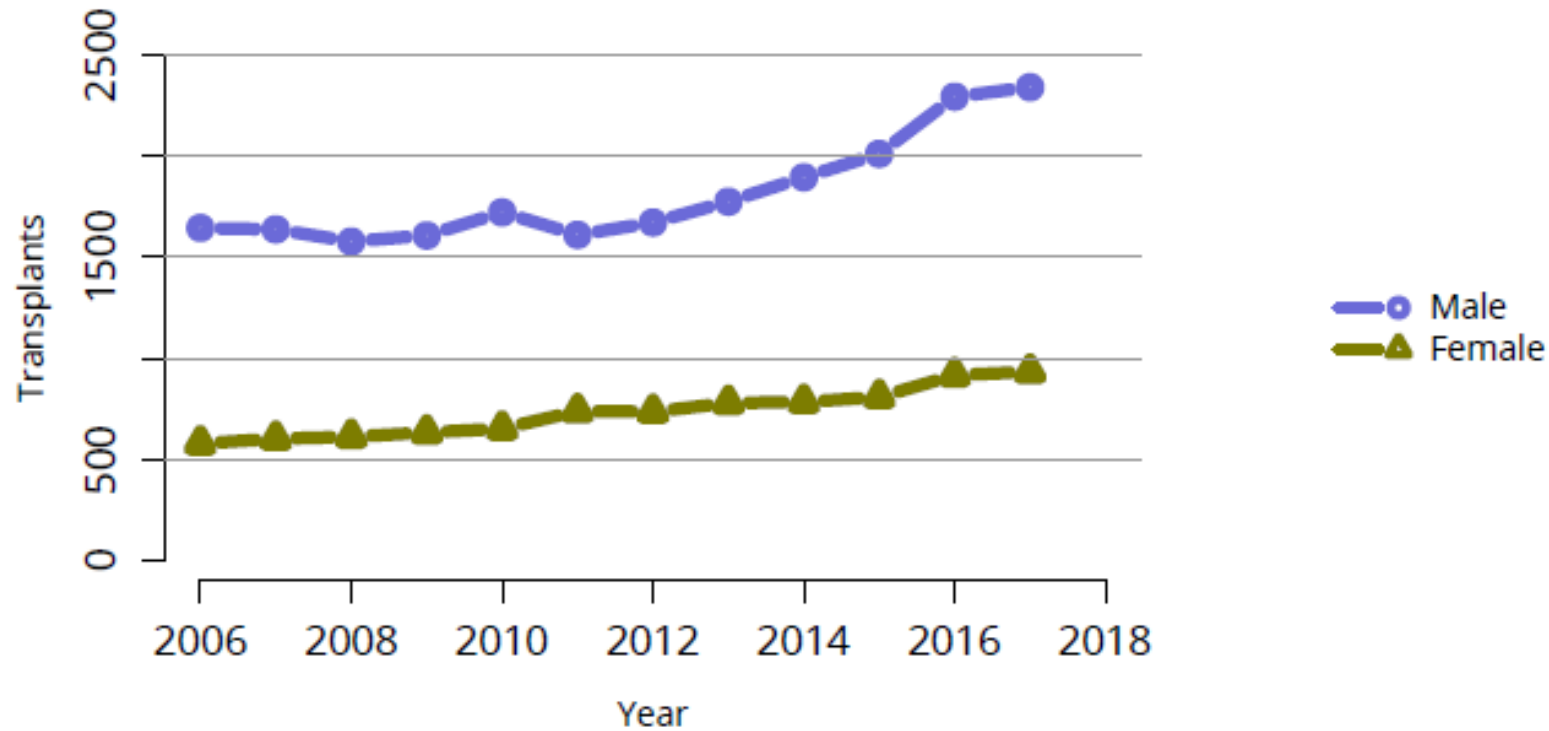
Colvin M, et al. American Journal of Transplantation, 2019 19(S2), 323-403.

# Cause of death among deceased heart donors



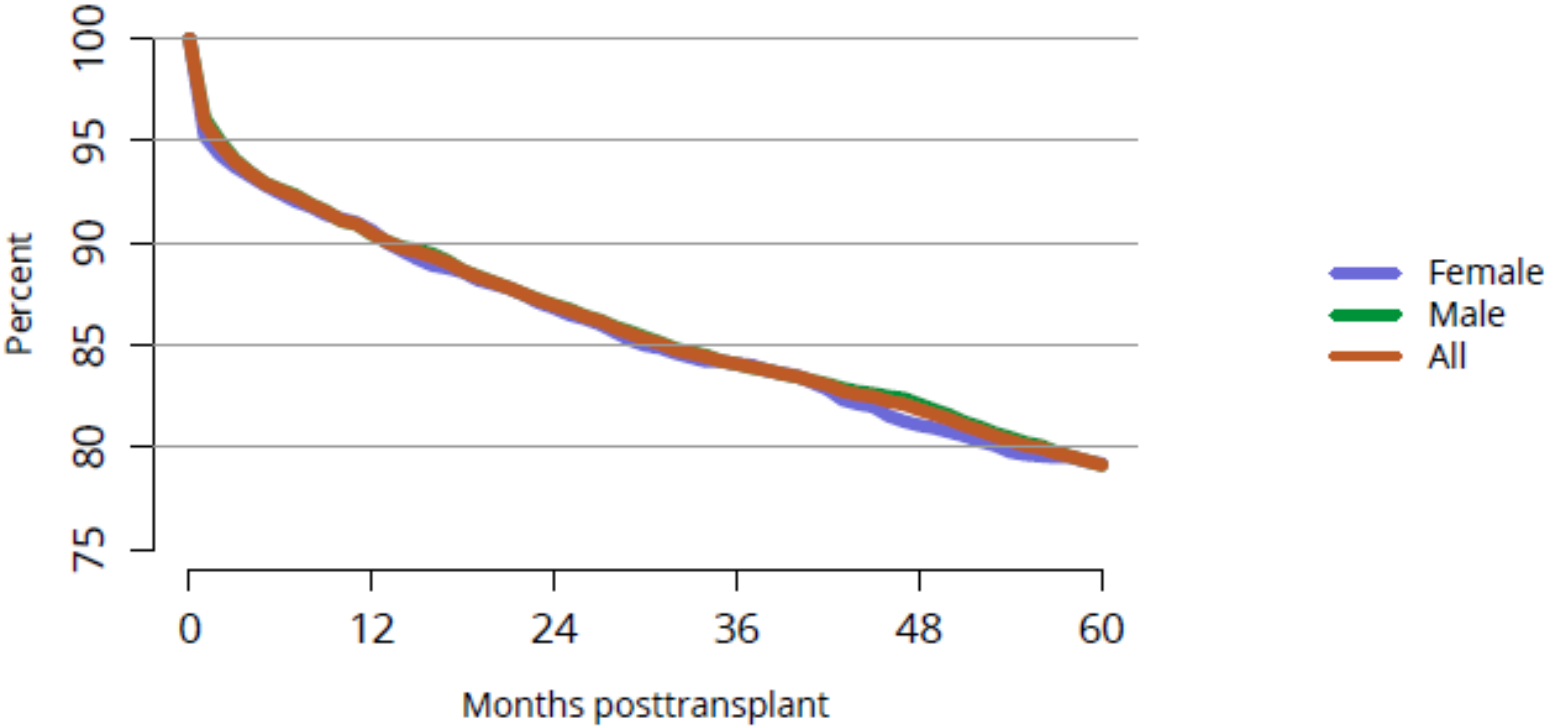
Colvin M, et al. American Journal of Transplantation, 2019 19(S2), 323-403.

# Total heart transplants by sex



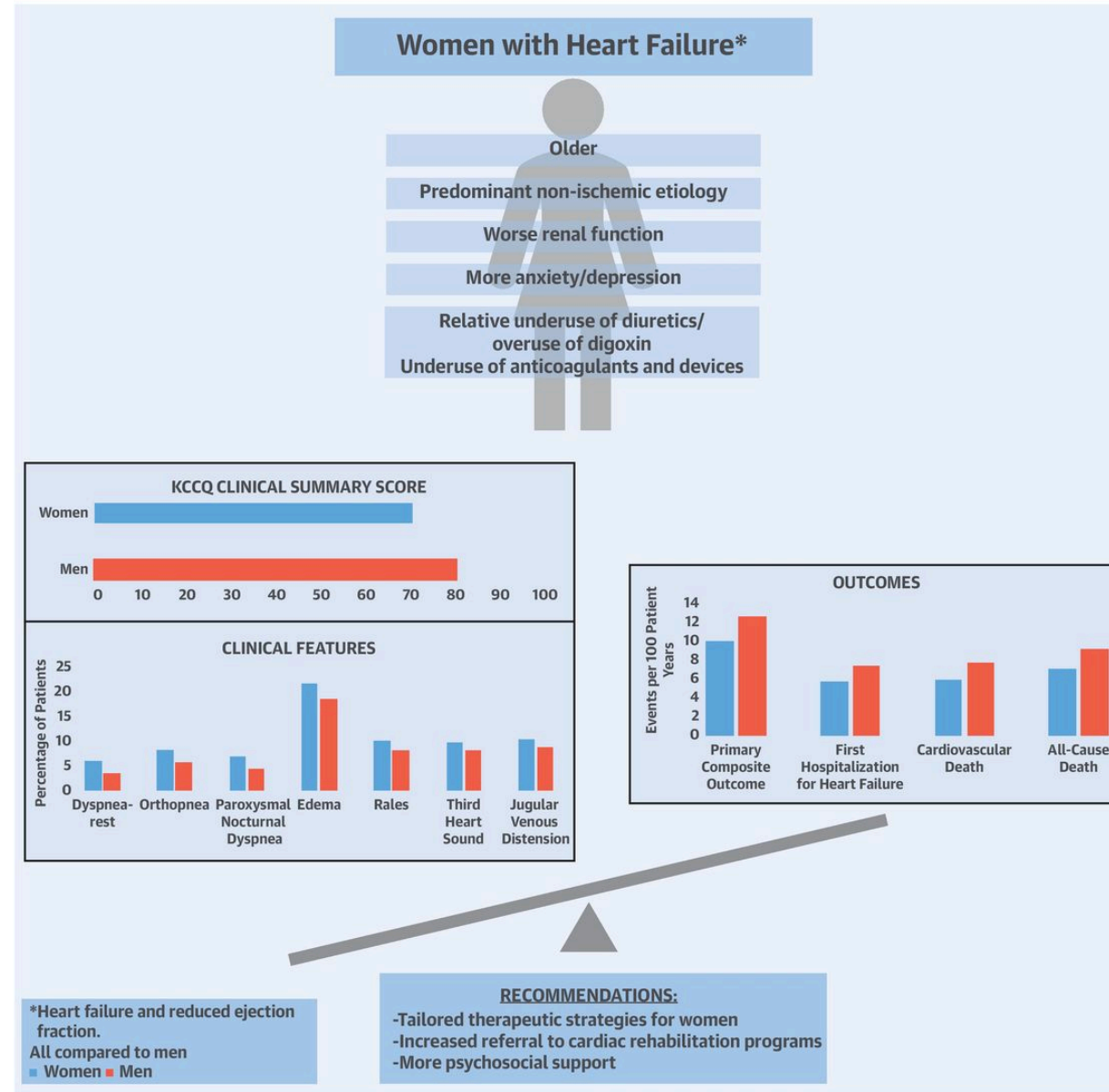
Colvin M, et al. American Journal of Transplantation, 2019 19(S2), 323-403.

# Patient survival among adult heart transplant recipients, 2010-2012, by sex



Colvin M, et al. American Journal of Transplantation, 2019 19(S2), 323-403.

# CENTRAL ILLUSTRATION: Women With Heart Failure With Reduced Ejection Fraction



# Women With Heart Failure: Unheard, Untreated, and Unstudied

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## EDITORIAL COMMENT

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# Women With Heart Failure

## Unheard, Untreated, and Unstudied\*



Mary Norine Walsh, MD,<sup>a</sup> Mariell Jessup, MD,<sup>b</sup> JoAnn Lindenfeld, MD<sup>c</sup>

# Women With Heart Failure: Unheard, Untreated, and Unstudied

In the PARADIGM-HF and ATMOSPHERE trials:

- women were less likely to be treated with statins, aspirin, and indicated anticoagulants
- women were less likely to have received an implantable cardioverter-defibrillator and cardiac resynchronization therapy
- women were also less likely:
  - to have received an influenza vaccination in the 12 months before trial enrollment
  - been enrolled in a disease management program
  - or been prescribed an exercise regimen

# Women With Heart Failure: Unheard, Untreated, and Unstudied

- Patients enrolled in clinical trials do not represent the average patient with the same disease.
- It is not surprising that the authors found that women and men were both well treated with HF-indicated medications, as trial enrollment stipulated such treatment.
- But the continued demonstration of undertreatment of women with other pharmacological, device, and exercise therapies even in the setting of randomized trials is appalling.
- Even the less frequent hospitalization of women may reflect differential treatment.
- If patients in the care of experienced investigators remain undertreated and inadequately referred, the average patient faces impossible odds.

Walsh MN, Jessup M, Lindenfeld J.

J Amer Coll Card 2019, 73 (1) 41-43; DOI:10.1016/j.jacc.2018.10.041



# African Americans by percentage of population and share of coronavirus deaths

Only a few jurisdictions publicly report coronavirus cases and deaths by race.

Percentage  
of population

Percentage  
of deaths

