

**Cardiotoxicity among socioeconomically marginalized
breast cancer patients**

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SUPPLEMENTARY MATERIALS

Appendix A

Supplementary Table S1 International Classification of Diseases, 9th (ICD-9) or 10th Edition (ICD-10) diagnosis codes used for heart failure or cardiomyopathy

	ICD-9	ICD-10
Heart failure	428.xx	I50.xx
Cardiomyopathy	425.0, 425.1, 425.2, 425.3, 425.4, 425.7, 425.8, 425.9, 425.11, 425.18	I42.0, I42.1, I42.2, I42.3, I42.4, I42.5, I42.7, I42.8, I42.9

Supplementary Table S2 Distribution of cardiovascular disease risk factors among socioeconomically marginalized women diagnosed with first primary invasive breast cancer by cardiotoxicity status within 3 years of trastuzumab or anthracycline initiation

	HER2 positive and initiated trastuzumab		HER2 negative and initiated anthracyclines	
	No cardiotoxicity within 3 years (n=50) n (%)	Cardiotoxicity within 3 years (n=16) n (%)	No cardiotoxicity within 3 years (n=97) n (%)	Cardiotoxicity within 3 years (n=6) n (%)
BMI				
BMI<25	7 (14)	5 (31)	8 (8.3)	1 (17)
25≤BMI<30	11 (22)	1 (6.3)	29 (30)	2 (33)
BMI≥30	32 (64)	10 (63)	59 (61)	3 (50)
Missing	0 (0)	0 (0)	1 (1.0)	0 (0)
Tobacco use				
Never used	33 (66)	9 (56)	59 (61)	3 (50)
Current user	8 (16)	3 (19)	23 (24)	2 (33)
Former user	9 (18)	4 (25)	14 (14)	1 (17)
Missing	0 (0)	0 (0)	1 (1.0)	0 (0)
Alcohol use				
Never used	43 (86)	13 (81)	81 (84)	6 (100)
Current user	6 (12)	3 (19)	13 (13)	0 (0)
Former user	0 (0)	0 (0)	2 (2.1)	0 (0)
Missing	1 (2.0)	0 (0)	1 (1.0)	0 (0)
Hypertension at baseline				
Yes	21 (42)	11 (69)	46 (47)	0 (0)
No	29 (58)	5 (31)	51 (53)	6 (100)
Diabetes at baseline				
Yes	8 (16)	7 (44)	26 (27)	0 (0)
No	42 (84)	9 (56)	71 (73)	6 (100)

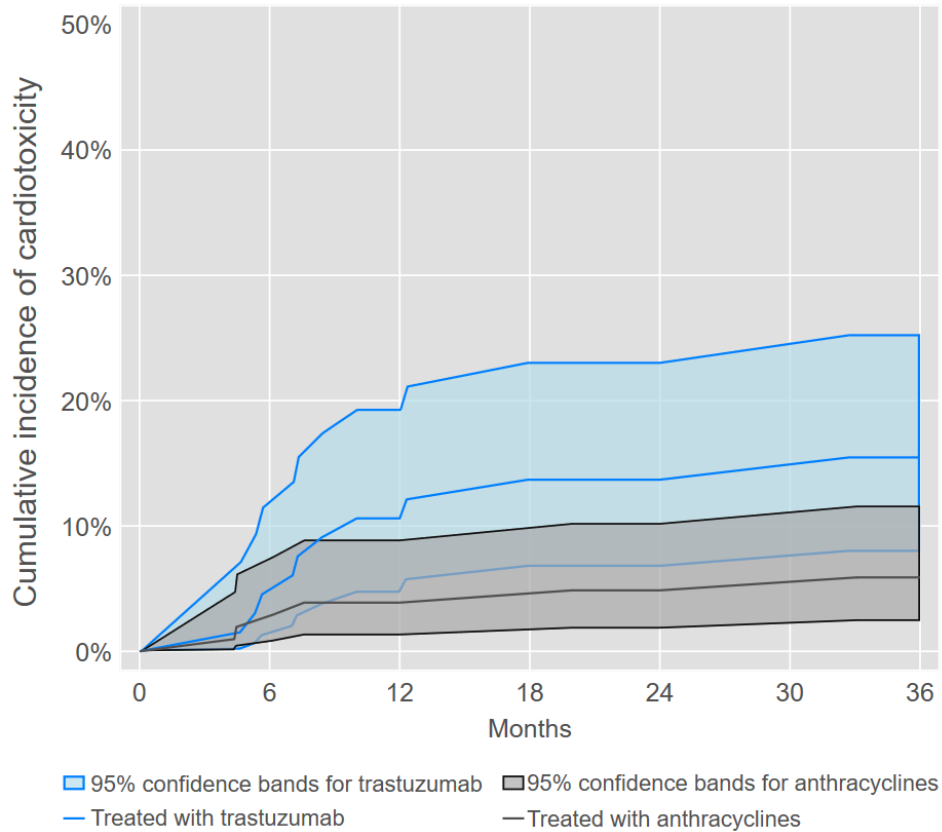
Supplementary Table S3 Cumulative incidence of cardiotoxicity^a for human epidermal growth factor receptor 2 (HER2) positive patients initiated trastuzumab and HER2 negative patients initiated anthracyclines among socioeconomically marginalized women diagnosed with first primary invasive breast cancer

	1-year cumulative incidence (95% CL^b)	2-year cumulative incidence (95% CL^b)	3-year cumulative incidence (95% CL^b)
Overall cardiotoxicity^a			
Trastuzumab	11% (4.7%, 19%)	14% (6.7%, 23%)	15% (7.9%, 25%)
Anthracycline	3.9% (1.3%, 8.9%)	4.9% (1.8%, 10%)	5.9% (2.4%, 12%)

^aCardiotoxicity was defined as heart failure or cardiomyopathy using diagnosis codes that were confirmed by supporting documentation in EHR, or drop of LVEF >15% to <40% after trastuzumab or anthracycline initiation

^bConfidence limits

Supplementary Fig. S1 Cumulative incidence of cardiotoxicity^a curves for human epidermal growth factor receptor 2 (HER2) positive patients who initiated trastuzumab and HER2 negative patients who initiated anthracyclines among socioeconomically marginalized women diagnosed with first primary invasive breast cancer



^a Cardiotoxicity was defined as heart failure or cardiomyopathy using diagnosis codes that were confirmed by supporting documentation in EHR, or drop of LVEF >15% to <40% after trastuzumab or anthracycline initiation

Appendix B

Assessment of primary care use among socioeconomically marginalized cancer patients prior to cancer diagnosis

We linked institutional oncology registry data from JPS Oncology and Infusion Center with JPS Health Network electronic health records (EHR) to assess primary care use prior to cancer diagnosis. Our eligible population included patients aged ≥ 18 years diagnosed with first primary cancer in 2017. The outcome of interest was primary care visit at JPS Health Network, which was defined as at least one completed encounter at any of the 14 primary care clinics of JPS Health Network within two years prior to cancer diagnosis. We estimated overall and breast cancer-specific proportions with 95% confidence limits (CL) of no primary care visit two years prior to cancer diagnosis.

Overall, 57% (95% CL: 54%, 60%) of cancer patients had no primary care visit two years prior to cancer diagnosis. Among women diagnosed with breast cancer, 51% (95% CL: 43%, 58%) had no primary care visit two years prior to cancer diagnosis. These estimates are specific to primary care use at JPS Health Network and do not account for possible primary care use at other health systems.