

SUPPLEMENTAL MATERIAL

Group	AF		no AF		unadj pval	adj pval
	N samples	GDF-15 Median (25, 75)	N samples	GDF-15 Median (25, 75)		
CHF	26	2004 (1352, 5014)	133	1378 (944, 1859)	0.0012	0.0233
VT/VF	36	1476 (823, 2950)	144	1031 (737, 1682)	0.0059	0.06
Controls	69	1681 (989, 2984)	274	984 (733, 1513)	<.0001	0.14

Table S1. Comparison of GDF-15 values for patients with AF versus no AF. Statistically significant increases were seen for the AF group, regardless of subgroup. Adjusted p-values were adjusted for age at implantation, sex, race, hsCRP, and IL-6 in the HF cohorts, and age at implantation, sex, race, and hsCRP levels in the VT/VF cohorts.

Group	Ischemic Cardiomyopathy	GDF-15 Median (25, 75)	Nonischemic Cardiomyopathy	GDF-15 Median (25, 75)	Unadjusted p-value	Adjusted p-value
	N samples		N samples			
CHF	62	1504 (1195, 2250)	97	1313 (893, 2213)	0.09	0.63
VT/VF	89	1463 (908, 1990)	91	866 (672, 1392)	<.0001	0.61
Controls	193	1164 (850, 1990)	150	894 (644, 1421)	<.0001	0.37

Table S2. Ischemic and Nonischemic Cardiomyopathy relationship to GDF-15 values. Adjusted p-values are adjusted for age at implantation, sex, race, hsCRP and IL-6.

Biomarker	Spearman R	P-value
hsIL-6	0.38794	<.0001
hsCRP	0.2389	0.0042
IL-10	0.16573	0.0487
TNF-a	0.46464	<.0001
Pro-BNP	0.36634	<.0001

Table S3. Biomarker correlations with GDF-15 values using the first available GDF-15 measurement.

Parameter	Hazard Ratio	95% Confidence Interval	P-value
Age at device implantation (years)	1.02	0.999 - 1.04	0.06
Male sex	1.42	0.82 - 2.43	0.21
White race	0.63	0.38 - 1.04	0.07
Ischemic cardiomyopathy	0.88	0.51 - 1.50	0.63
Statin use	0.92	0.52 - 1.62	0.77
Aspirin use	1.79	1.05 - 3.06	0.0325
(log) GDF-15 (pg/ml)	3.17	2.33 - 4.30	<.0001

Table S4. Original statistical model with GDF-15 utilized.

Parameter	Hazard Ratio	95% Wald Confidence Limits	P value
Age at device implantation (years)	1.022	1-1.043	0.0484
Male sex	1.559	0.885-2.745	0.12
White race	0.639	0.373-1.094	0.10
Ischemic cardiomyopathy	0.792	0.451-1.391	0.42
Statin use	1.199	0.646-2.226	0.57
Aspirin use	1.721	0.989-2.996	0.05
(log) GDF-15 (pg/ml)	2.951	2.083-4.181	<.0001
(log) IL-6	1.262	0.983-1.62	0.07

Table S5. Statistical model from S4, with IL-6 added.

Parameter	Hazard Ratio	95% Wald Confidence Limits	P value
Age at device implantation (years)	1.022	1.001-1.044	0.0419
Male sex	1.566	0.893-2.747	0.12
White race	0.609	0.357-1.037	0.07
Ischemic cardiomyopathy	0.861	0.489-1.513	0.60
Statin use	1.16	0.631-2.133	0.63
Aspirin use	1.672	0.96-2.914	0.07
(log) GDF-15 (pg/ml)	3.19	2.306-4.412	<.0001
(log) hsCRP	1.222	1.005-1.485	0.0444

Table S6. Statistical model from S4, with hsCRP added.

Parameter	Hazard Ratio	95% Wald Confidence Limits	P value
Age at device implantation (years)	1.021	0.999-1.043	0.06
Male sex	1.5	0.851-2.644	0.16
White race	0.589	0.349-0.996	0.0481
Ischemic cardiomyopathy	0.803	0.463-1.393	0.44
Statin use	1.075	0.592-1.951	0.81
Aspirin use	1.707	0.979-2.976	0.06
(log) GDF-15 (pg/ml)	3.484	2.538-4.784	<.0001
(log) IL-10	1.077	0.895-1.296	0.43

Table S7. Statistical model from S4, with IL-10 added.

Parameter	Hazard Ratio	95% Wald Confidence Limits	P value
Age at device implantation (years)	1.02	0.999-1.042	0.06
Male sex	1.617	0.903-2.897	0.11
White race	0.579	0.342-0.979	0.0415
Ischemic cardiomyopathy	0.823	0.474-1.428	0.49
Statin use	1.028	0.569-1.859	0.93
Aspirin use	1.72	0.992-2.983	0.05
(log) GDF-15 (pg/ml)	3.371	2.452-4.635	<.0001
(log) TNF-alpha	1.306	0.788-2.165	0.30

Table S8 Statistical model from S4, with TNF-alpha added. Note, potential collinearity identified between GDF-15 and TNF-alpha)

Parameter	Hazard Ratio	95% Wald Confidence Limits	P value
Age at device implantation (years)	1.021	0.999-1.043	0.06
Male sex	1.437	0.817-2.527	0.21
White race	0.579	0.341-0.982	0.0427
Ischemic cardiomyopathy	0.802	0.457-1.405	0.44
Statin use	1.082	0.593-1.974	0.80
Aspirin use	1.673	0.961-2.914	0.07
(log) GDF-15 (pg/ml)	3.162	2.267-4.41	<.0001
(log) ProBNP	1.233	0.827-1.838	0.30

Table S9. Statistical model from S4, with ProBNP added.

Figure S1. Retrospective cohort study illustration, showing total patient and sample numbers, along with 90-day subgroups.

