

## Online Resource 2: Analysis for RACHS Score

### INTRODUCTION

This supplement provides the full analysis for RACHS scores. A similar analysis for STAT scores is provided in the text of the manuscript.

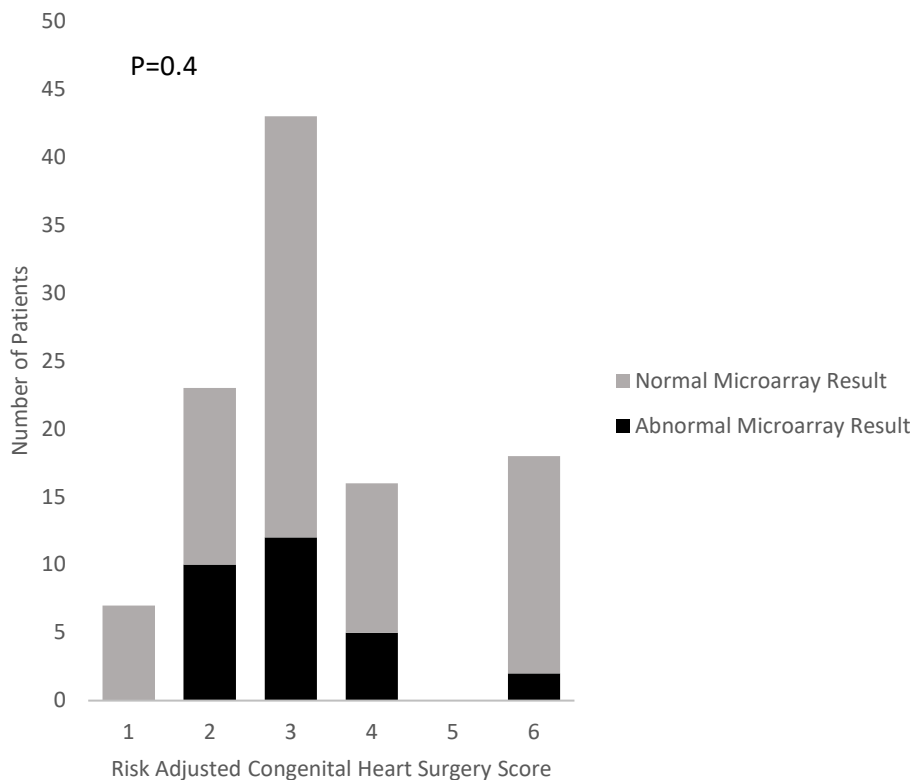
### METHODS

The analytic cohort for the primary analysis included all patients in the PC4 database with chromosomal microarray analysis (CMA) results and a RACHS risk category. Descriptive statistics summarized demographic and clinical variables overall and by CMA result. Associations between demographics and clinical outcomes with CMA results, as well as associations of cardiac arrest with CMA results and history of cardiac surgery were tested using chi-squared tests or a Fisher's exact test, in the case of low cell counts. A logistic regression model was used to assess the association between RACHS risk category and CMA result. Specifically, we considered a dichotomized version of the RACHS risk category due to low cell counts at individual score levels. Sensitivity and specificity were estimated at each possible cut-point for STAT mortality category, and the optimal threshold for dichotomization was determined to be less than or equal to 2 via Youden's index. A multivariable logistic regression model was constructed to control for sex and race as biologically plausible confounders in the multivariable model. A Hosmer-Lemeshow test was used to assess the goodness of fit.

## RESULTS

RACHS score was present in 107/168 patients with microarray results. Supplemental Figure 1 shows the distribution of microarray results within the six RACHS classifications.

**Supplemental Figure S1:** Histogram of RACHS score by microarray result



An unadjusted model found no statistical association between RACHS risk category (dichotomized as 1, 2 vs. 3, 4, 5, 6) and abnormal CMA (odds ratio 0.66, CI<sub>95</sub> 0.26-1.68, p=0.37). A multivariable model including race and sex as possible confounders confirmed this finding (odds ratio 0.65, CI<sub>95</sub> 0.26-1.69, p=0.37).

### Supplemental Table S1: Multivariable Logistic Regression Results - RACHS

Variable	Negative Microarray N (%)	Positive Microarray N (%)	Unadjusted Model		Adjusted Model	
			OR (95%)	P-value	OR 95% CI	P-value
<b>RACHS</b>						
1-2	20 (66.6)	10 (33.3)	Reference		Reference	
3-6	58 (75.3)	19 (24.7)	0.66 (0.26,1.68)	0.3672	0.65 (0.26, 1.69)	0.369
<b>Sex</b>						
Male	44 (72.1)	17 (27.9)	--	--	Reference	
Female	34 (73.9)	12 (26.1)			0.94 (0.39, 2.24)	0.890
<b>Race</b>						
Caucasian	40 (74.1)	14 (25.9)	--	--	Reference	
Non-Caucasian	38 (71.7)	15 (28.3)			1.15 (0.49, 2.72)	0.755

### Additional Information, Online Supplement 2

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