

## STATISTICAL POWER

Statistical power for the analyses described in the proposal are below, as well as in further detail in “**Research Strategy**” (section D3 and D4).

Specific Aim #1: In this exploratory study, the expected cohort size is 200 participants collected over 10-12 months. We anticipate a maximum of 20% data loss due to poor ECG quality (>20% artifact) or missing psychological data. We do not expect attrition as this is a cross-sectional study. After these reductions we expect a sample size of 160 participants. We expect 25% of participants to have major depression, as our pilot study suggests. With  $\alpha = 0.05$ , and  $1 - \beta = 0.80$ , for  $n = 160$  we would be adequately powered to detect an effect size of Cohen's  $d = 0.59$  (for  $n = 120$ ,  $d = 0.59$ ; for  $n = 200$ ,  $d = 0.45$ ).<sup>57</sup> With  $\alpha = 0.05$  and  $1 - \beta = 0.90$ , for  $n = 160$  we would be adequately powered to detect an effect size of Cohen's  $d = 0.59$  (for  $n = 120$ ,  $d = 0.68$ ; for  $n = 200$ ,  $d = 0.51$ ).

Specific Aim #2: As above, we expect an initial cohort size of 200 patients, with 160 patients with non-missing data. We expect that 75% of patients will have obstructive CAD, similar to the rate seen in our pilot study. With  $\alpha = 0.05$ , and  $1 - \beta = 0.80$ , for  $n = 160$  we would be adequately powered to detect an effect size of Cohen's  $d = 0.59$  (for  $n = 120$ ,  $d = 0.59$ ; for  $n = 200$ ,  $d = 0.45$ ).<sup>57</sup> With  $\alpha = 0.05$  and  $1 - \beta = 0.90$ , for  $n = 160$  we would be adequately powered to detect an effect size of Cohen's  $d = 0.59$  (for  $n = 120$ ,  $d = 0.68$ ; for  $n = 200$ ,  $d = 0.51$ ).