

## **Description of app:**

This R Shiny application was developed to execute some of the calculations discussed in the following paper:

*... JNCI, pending ...*

When a quantitative imaging biomarker (QIB) will be involved in one of the scientific objectives of a clinical trial, this app allows users to adjust the required sample size to account for the measurement error in the QIB. When a QIB will be used as an integral biomarker in a clinical trial (for example to determine a subject's eligibility), the app allows users to adjust the decision criteria to account for the measurement error in the QIB. In both situations, either a QIB value at a single point in time or the change in a QIB value over time may be considered.

## **To open the app:**

First, download the Shiny app (app.R) and the accompanying directory (www) into the same folder on your computer. Do not rename the 'www' folder (Shiny will only recognize it when it is called 'www'). Before you run the app, make sure you have R ([link](#)) and RStudio ([link](#)) downloaded on your computer. You will also need to have the following R packages installed: 'shiny' and 'shinythemes'. To run the app, simply open app.R in RStudio and click the 'Run App' button. A popup window with the app should appear. You will also have the option to view the app in a browser.

Note: If the formulas are not displaying properly in the app, this is most likely because the 'www' folder (which contains images of the formulas) is not in the correct location or has been renamed.

## **To use the app:**

To use the app, simply enter the input (all fields are required) and click 'CALCULATE'.