Biostatistician Review Report: *New generation aspiration catheter: feasibility in the treatment of pulmonary embolism*

Study design: The study design is well described - retrospective review of all procedures involving new generation catheters. The study time frame and description of the patient population is also provided.

Statistical methods: The statistical methods are described in the methods and are appropriate for a study involving small sample sizes for which the assumption of normality would be difficult to verify. The statistical methods also take into account the paired nature of the data (pre-post data). The alpha level is clearly stated, and p-values are specified as two-sided.

Reporting of results: The n for the study and for each analysis are reported. Statistical measures are reported (medians, range, and percentages), and are clearly labeled and appropriate for the data analyzed. The primary endpoint of clinical success is defined. Adverse events and the follow-up status of patients are reported. Figures are appropriately labeled and described.

Limitations: The limitations of a small retrospective series in terms of power and generalizability are mentioned in the statistical methods and discussion sections.

Conclusions: The conclusions are appropriate and not overstated for the study design and analyses.

Shelly Lensing

Statistician, University of Arkansas for Medical Sciences

Little Rock, Arkansas, USA