

# Generally accepted tools used to select patients for aneurysm treatment in need of further evaluation

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A study released today at the Society of NeuroInterventional Surgery 12th Annual Meeting in San Francisco, California, indicates that strict adherence to two commonly-used tools to weigh the risk of treating unruptured aneurysms may not prevent the majority of morbidity-mortality outcomes associated with ruptured intracranial aneurysms. Thus, the International Study of Unruptured Intracranial Aneurysms (ISUIA) criteria and the PHASES score require additional research to determine their effectiveness.

Published in 2003, the ISUIA study predicted the risk of aneurysmal rupture based primarily upon size and site of the aneurysm. Posterior circulation aneurysms larger than 7mm were reported as having the highest rupture risk when compared to their counterparts in the anterior circulation. A decade later, the PHASES score was developed to calculate aneurysmal rupture risk based upon a myriad of factors, including the patient population, history of hypertension, age, size of aneurysm, history of earlier subarachnoid hemorrhage (SAH), and site of [aneurysm](#). With this tool, a cumulative score of 8 predicts a 5-year risk of rupture of 3.2 percent.

In the recently-released study, entitled A Re-Evaluation of the ISUIA Criteria and the PHASES Score for Predicting Intracranial Aneurysmal Rupture, these standard results were compared to an analysis of 520 ruptured aneurysms (from an institutional database) treated at Emory

University Hospital. When measuring against ISUIA, the study produced different results from standard, showing that approximately 77 percent of ruptured aneurysms measured smaller than 7mm in their largest diameter, regardless of location in either the anterior or posterior circulations. When comparing to PHASES, results indicated that approximately 90 percent of study patients received a score of less than 8, putting their predicted 5-year risk of rupture at 3.2 percent.

"Despite the fact that ISUIA and PHASES standards are widely accepted and used within the field, it is important that we continue to re-evaluate them, and compare them with the data and experience at large academic centers," said Arsalaan Salehani, lead study author and fourth year medical student at Emory University School of Medicine in Atlanta, Georgia. Adds Dr. Raul Nogueira, neuroendovascular division director at Grady Memorial Hospital, "As our database grows, we plan to continually re-analyze our findings not only to broadly contribute to the academic community, but to ultimately ensure that physicians are using the best criteria and guidelines when making decisions about patient selection for treatment."

Provided by Society of NeuroInterventional Surgery

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