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Response to Letter Regarding Article, "Transesophageal Echocardiography in Cryptogenic Stroke and Patent Foramen Ovale Analysis of Putative High-Risk Features From the Risk of Paradoxical Embolism Database"

Benjamin S. Wessler, MD¹, David E. Thaler, MD, PhD², Robin Ruthazer, MPH³, Christian Weimar, MD⁴, Marco R. Di Tullio, MD⁵, Mitchell S. V. Elkind, MD, MS⁶, Shunichi Homma, MD⁵, Jennifer S. Lutz, MS³, Jean-Louis Mas, MD⁷, Heinrich P. Mattle, MD⁸, Bernhard Meier, MD⁹, Krassen Nedeltchev, MD¹⁰, Federica Papetti, MD¹¹, Emanuele Di Angelantonio, MD, MSc, PhD¹², Mark Reisman, MD¹³, Joaquín Serena, MD, PhD¹⁴, and David M. Kent, MD, CM, MSc^{2,3}

¹Division of Cardiology, Tufts Medical Center, Boston, MA ²Department of Neurology, Tufts Medical Center/Tufts University School of Medicine, Boston, MA ³Predictive Analytics and Comparative Effectiveness (PACE) Center Institute for Clinical Research and Health Policy Studies, Tufts Medical Center/Tufts University School of Medicine, Boston, MA ⁴Department of Neurology, University of Duisburg-Essen, Germany ⁵Division of Cardiology, Columbia University, New York, NY ⁶Departments of Neurology and Epidemiology, Columbia University, New York, NY ⁷Department of Neurology, Hôpital Sainte-Anne, Paris-Descartes University, France ⁸Department of Neurology, Inselspital, University of Bern, Switzerland ⁹Department of Cardiology, Swiss Cardiovascular Center, Inselspital, University of Bern, Switzerland ¹⁰Department of Neurology, Triemli Municipal Hospital, Switzerland ¹¹Department of Cardiology, "Sapienza" University of Rome, Italy ¹²Department of Public Health and Primary Care, Cambridge University, UK ¹³University of Washington, Seattle, WA ¹⁴Department of Neurology, Hospital Universitari Doctor Josep Trueta Institut d'Investigació Biomèdica de Girona, Spain

Dr. Schuchlenz makes important observations that help frame the conclusions we reached through analysis of the transesophageal echocardiography (TEE) data from the Risk of Paradoxical Embolism (RoPE) database, and appropriately highlights some of the limitations of this dataset. Specifically, important anatomic features (presence or absence of a prominent Eustachian Valve) were not routinely reported across the component databases. Additionally, microbubbles were routinely injected via the antecubital vein, a site that Dr. Schuchlenz correctly identifies as correlating less well with anatomic size.

Correspondence to: David M. Kent, MD, CM, MSc, Institute for Clinical Research & Health Policy Studies, Tufts Medical Center, 800 Washington St, Box 63, Boston, MA, 02111, Phone: (617) 636-3234; fax: (617) 636-0022, Dkent1@tuftsmedicalcenter.org.

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To create our RoPE database, ¹ component studies were combined and data were harmonized with the goals of improving on the methodological and statistical limitations of small individual studies. Yet harmonization across databases creates its own challenges and necessarily excludes details that might not be uniformly collected across component studies, including some TEE variables. Our observation that proposed 'high risk' TEE features do not correlate with the significance of an observed PFO for patients with cryptogenic stroke² should be viewed not as a failure of the imaging modality as ideally applied. Instead, we view it as a call for further refining the technique, improving standardization and conducting further research, and as a call too for development of complimentary techniques to better assess risk.

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