**REPLY: Transradial PCI in Women: Zeroing in on Crossovers**

We thank Drs. Chugh and Chugh for their interest in our work (1) and for their comments. We agree that access failure remains a limitation of transradial intervention (TRI). As demonstrated in SAFE-PCI for Women (Study of Access Site for Enhancement of PCI for Women) trial, radial artery spasm (RAS) is a major contributor to access site crossover from radial to femoral. Women generally have smaller radial arteries, and as the authors suggest, arterial-sheath size mismatch might cause RAS. Our protocol did not recommend sizes for sheaths/catheters, nor did we routinely collect this information, limiting our ability to explore this hypothesis in our female population. Data suggest that most U.S. operators use 5-F or 6-F sheaths for diagnostic catheterization and 6-F sheaths for coronary intervention (2). More slender equipment might reduce RAS in women. However, our access site crossover rate was consistent with that from the RIVAL (Radial versus Femoral Access for Coronary Intervention) trial, which studied a predominantly male population (3), suggesting that factors other than arterial diameter contribute to access site failure. We have demonstrated that a radial learning curve exists (4), and variables such as operator experience, catheter manipulation, multiple arterial punctures, catheter exchanges, and use of sedation/vasodilator therapy can all impact RAS and crossover rates.

The authors propose using pre-procedural ultrasound to aid in access site decisions. Although not routinely used in the United States and not included in the SAFE-PCI for Women trial protocol, pre-procedural ultrasound may provide valuable information using relatively inexpensive, portable, and noninvasive technology. Theoretically, ultrasound might also reduce access-related trauma. However, arterial size is dynamic and is affected by variables such as the degree of patient sympathetic tone and use of intra-arterial vasodilators. The timing of use of imaging and ultrasound-based triaging of patients to access site strategy should account for these factors. Furthermore, the risks/benefits of recommending a “femoral first” strategy to avoid risk of radial access failure should be weighed carefully against the added bleeding risk associated with femoral access. For example, in obese, short females with small radial arteries, one might still attempt TRI first. Further understanding of the correlation between radial artery size, spasm, and access failure should be pursued before routine use of ultrasound to guide access decisions. The use of imaging for preemptive crossover risk stratification and to optimize contemporary TRI should also be systematically investigated in future studies.

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**REFERENCES**


**Safety and Feasibility of Transradial Catheterization in Breast Cancer Survivors**

A 2-Center International Experience

The technical feasibility of transradial access (TRA) in breast cancer survivors is usually not a concern; even so, the perceived fear of lymphedema, both on the part of the survivor and medical staff, is the limiting factor. Cardiac catheterization and percutaneous coronary intervention using TRA is associated with lower rates of vascular and bleeding complications (1-3). However, relegating breast cancer survivors to only femoral access denies these benefits of TRA to a large group of predominantly female patients. Therefore, the aim of this report is to describe the safety and feasibility of TRA in patients with prior ipsilateral breast cancer undergoing cardiac catheterization.

We retrospectively analyzed all breast cancer patients who underwent coronary catheterizations over a 4-year (2009 to 2013) period from 2 academic,