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Reply to the Editor—More awareness less risk—interpretation of ablation risk caused by coronary arterial anatomy

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We are grateful to Dr. Wu and colleagues for their interest in our article and the fact that they found it a valuable study. We agree with them that the heart is in constant motion, and therefore, measuring distances from still images has limitations. In patients who underwent coronary angiography during the electrophysiological study in this series, it was the closest distance on two views (left and right anterior oblique) that was used for the measurement of the proximity of the vessels to the coronary sinus (CS) and the decision to ablate at a specific site within the CS. Furthermore, although in diastole the coronary vessels may be pulled further away from the CS, they also dilate, bringing them closer to the CS. The reverse would be true in systole when venous filling of the CS occurs, moving the CS closer to the arteries. Given the location of these vessels at the fibrous trigone of the heart, their motion may indeed be less than other cardiac structures. We completely agree that the proximity of the vessels to the CS warrants coronary angiography before ablation within the proximal CS. Cooling within the coronary arteries can theoretically decrease the risk of complications, and perfusion of cold saline through coronary arteries is an option. Furthermore, the option of cryoablation is an important one. But we presume that the safety concerns about coronary proximity would still be relevant. Although not quantified in this study, mechanical perturbation of coronary arteries causing spasm is also a concern (we have noted coronary artery spasm with percutaneous epicardial catheter manipulation during mapping and ablation).

With regard to the valuable point made regarding the anatomy of inferoparaseptal pathways, we concur that the endocardial aspect of the left atrium should be mapped via transseptal or retrograde approaches before mapping and ablation in the CS. In fact, the patients reported in this series had mapping performed in regions corresponding to the CS in the left atrium via a transseptal approach, and the endocardial sites were either late during activation mapping or unsuccessful in terminating arrhythmia.