Author`s Reply

To the Editor,

We thank the authors for their constructive criticisms about our paper (1) in this issue. It was known that both sexes exhibit great differences with regard to hospital admission, symptomatology, accuracy of diagnostic tests, and therapeutic efficacy and outcomes. Although various studies have provided abundant evidence for diagnostic evaluation of coronary artery disease (CAD) among women in recent decades, we used an old consensus statement published in 2005 to guide us during the preparation of our review (2). However, an updated version of this consensus statement was published recently (3). As authors outlined in their letter, we have defined myocardial perfusion imaging (MPI) techniques under the title of functional tests for evaluation of CAD. It was shown that MPI techniques provide us both functional and prognostic data in patients with suspicion or diagnosis of CAD (2, 3). In addition, it has been clearly defined in the consensus statements that stress MPI with single-photon emission computed tomography (SPECT) or positron emission tomography (PET) provides information on the extent and severity of myocardial perfusion and wall-motion abnormalities as well as left ventricular ejection fraction and volumes assessment at rest and after stress.

We thought that the statement of "Also, technetium Tc 99m sestamibi (MIBI), thallous chloride TL-201 (thallium) and fluorodeoxyglucose are the most commonly used radioactive materials in nuclear medicine for cardiovascular system." was correctly written, but its title must be corrected to "Nuclear-based imaging techniques." Stress MPI PET, with superior spatial resolution, has been reported to improve image quality and diagnostic accuracy data for women, particularly for obese subjects (4). It also provides absolute coronary blood flow at rest and stress, which aided us to calculate myocardial flow reserve. Rubidium-82 is the more commonly used radioisotope, but 13N-ammonia MPI is also used in some laboratories for PET (3).

Radiation exposure is one of the most commonly encountered issues when suggesting a non-invasive test for women. The average

radiation exposure doses for rest-stress MPI Tc-99m SPECT (≈11 mSv), stress-only MPI SPECT (≈3 mSv), rest-stress MPI PET Rubidium-82 (≈3 mSv), and rest-stress MPI PET 13N (≈2 mSv) are represented in the recent consensus document (3). In addition, as defined by the authors, novel SPECT camera technology may allow us to reduce radiation doses with SPECT imaging (5). Stress-only MPI use may be encouraged whenever possible to reduce radiation exposure. Finally, in figure 1, the statement of "TM" should be corrected as "ETT" as this was a typographical error.

In conclusion, stress MPI SPECT and PET imaging performed with currently available techniques have a high diagnostic accuracy in the assessment of symptomatic women with intermediate and intermediate-high CAD risk. In addition, technological advancements in nuclear cardiology including novel cameras and coronary flow reserve calculation by PET hold promise in reducing the radiation exposure and risk stratification of women with CAD.

Uğur Canpolat, Necla Özer[1]
Cardiology Clinic, Türkiye Yüksek İhtisas Training and Research Hospital; Ankara-*Turkey*
[1]Department of Cardiology, Faculty of Medicine Hacettepe University; Ankara-*Turkey*

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Address for Correspondence: Dr. Necla Özer,
Hacettepe Üniversitesi Tıp Fakültesi,
Kardiyoloji Anabilim Dalı, Ankara-*Türkiye*
E-mail: neclaozer@hotmail.com