## Author`s Reply

To the Editor,

We thank the reader for his interest in our study (1) on the influence of the morphological and pathophysiological factors upon graft patency. We agree that the diameter of normal saphenous veins is superior to that of normal coronary arteries. At the same time, there are also anatomical variations related to the studied population, harvested segment, and postoperative time interval.

In our case, 163 (91.06%) of saphenous vein grafts (SVGs) were harvested below the knee. Patent SVGs had a mean diameter of 3.55±0.76 (1.8–6) mm compared to a mean diameter of 2.14±0.52 (1–5) mm for the target coronary artery at 139.78±36.64 months post-coronary artery bypass grafting (CABG). In case of patent grafts, the diameter mismatch is inferior to the one suggested by the reader. Indeed, we found that a target vessel <1.5 mm is a significant risk factor for the occlusion of venous and arterial grafts. We do not exclude the possibility of an increased diameter mismatch in case of occluded SVGs, but this aspect cannot be evaluated using computed tomography angiography. Regarding the length of the graft, we used the ratio between graft length and patient height because we considered it more relevant than absolute graft length. No difference between these ratios were found when comparing patent and occluded grafts for the following configurations: SVG-MO (marginal obtuse artery), SVG-diagonal artery, SVG-PDA (posterior descending artery), and SVG-RCA (right coronary artery).

The above-mentioned results could be biased by an aspect that we were unable to estimate and is still incompletely clarified in the international literature, namely postoperative morphological and histological changes of SVGs.

According to Fitzgibbon et al. (2), approximately 10% of SVGs occlude in the first year after which there is a continued attrition, which accelerates as grafts age. Fan et al. (3) who compared the long-term failure of SVGs with the left internal mammary artery (LIMA) graft, affirm that there is a decrease in lumen size in the entire SVG and anastomosis of different patients in a sequence of ~1, 5, and 10 years postoperatively despite negligible changes in the size of the LIMA. Suzuki et al. (4) evaluated 65 SVGs at 1 year after CABG and found that minimal and mean lumen diameters together with SVGs length significantly decreased. The graft shortening rate was reported to be >5% in 51% of cases and >10% in 35% of cases.

In conclusion, there is a possibility that SVG length and diameter decrease in the long-term due to wall changes and hemodynamic adaptation as well as the presented results do not reflect SVGs parameters during surgery.

We will further investigate the aspects suggested by the reader by reviewing the early postoperative angiograms of the analyzed patients (where available) and comparing the results with those obtained in the current study to assess SVG attrition mechanism and causes.

**Grigore Tinica[1,2], Raluca Ozana Chistol[3], Mihail Enache[1,2], Maria Magdalena Leon Constantin[4,5], Manuela Ciocoiu[6], Cristina Furnica[7,8]**

**[1]Department of Cardiovascular Surgery, "Prof. Dr. George I.M. Georgescu" Cardiovascular Diseases Institute; Iasi-*Romania***
**[2]Department of Cardiac Surgery, "Grigore T. Popa" University of Medicine and Pharmacy; Iasi-*Romania***
**[3]Department of Medical Imaging, "Prof. Dr. George I.M. Georgescu" Cardiovascular Diseases Institute; Iasi-*Romania***
**[4]Department of Medical Rehabilitation, Clinical Rehabilitation Hospital; Iasi-*Romania***
**[5]Department of Internal Medicine, "Grigore T. Popa" University of Medicine and Pharmacy; Iasi-*Romania***
**[6]Department of Physiopathology, "Grigore T. Popa" University of Medicine and Pharmacy; Iasi-*Romania***
**[7]Institute of Forensic Medicine; Iasi-*Romania***
**[8]Department of Anatomy, "Grigore T. Popa" University of Medicine and Pharmacy; Iasi-*Romania***

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**Address for Correspondence:** Raluca Ozana Chistol, MD,
Department of Medical Imaging,
"Prof. Dr. George I.M. Georgescu" Cardiovascular Diseases Institute;
50 Carol I Bvd., 700503,
Iasi-*Romania*
Phone: 0040-740-811802
Fax: 0040-232-410280
E-mail: ralucachistol@gmail.com