I would like to thank Dayan et al. for their insightful comments [1] on our recently published manuscript [2]. Moreover, Dayan et al. should be congratulated for their own contributions in the field of BAV-associated aortopathy [3, 4].

The above-discussed manuscript does not give definite answer to the question of predictors for proximal aortic dilatation after AVR surgery in BAV patients [2]. Our multivariate analysis was based on eight (5%) clinically relevant adverse aortic events, which inherently limit the number of variables, which may be reasonably included in the regression analysis. We did not include the variable ‘BAV configuration’ in our statistical analysis, as this morphological information was available retrospectively in only 55% of our study population (i.e. 84 of 152 patients). In contrast to the findings of Dayan et al. [4], we did not find any significant correlation between the body surface area (BSA), family history of BAV and the increased risk of adverse aortic events in our study. One possible explanation for this discrepancy may be the inclusion of BAV patients with an isolated/predominant aortic valve insufficiency (i.e. 17% of the study cohort) in the series of Dayan et al. [3]. This specific subgroup of BAV patients, which may be also defined as a ‘root phenotype’, is predominantly male (i.e. larger BSA) and have often a strong family history of BAV/aortopathy [5]. Recent data from the literature indicate significantly increased risk of late adverse aortic events in this specific cohort of BAV patients after isolated AVR [6]. There is emerging evidence that this phenotype of BAV disease may represent a predominantly congenital/genetic form of BAV/aortopathy [5]. The inclusion of BAV patients with a ‘root phenotype’ in the study of Dayan et al. [4] may reasonably explain the progression of aortic root dimensions late after AVR surgery and the observed correlations with the BSA as well as with the family history of BAV/aortopathy. In contrast to that, we included only BAV patients with an isolated/predominant aortic valve stenosis [2].

Unfortunately, our study was not designed to specifically analyse the protective effects of long-term pharmacological treatment (i.e. effects of beta-blockers and statins). The vast majority of our patients (i.e. 95% of the study cohort) underwent long-term beta-blocker therapy after AVR, whereas only very few of them received statins. Therefore, we were not able to reasonably include these variables in our Cox regression model. Dayan et al. [4] found recently some positive effects of beta-blocker/statin use in the BAV patients in preventing aortic root dilatation between 6 and 8 years after an isolated AVR. However, such data should be interpreted with a caution. Only a small proportion of the initial study cohort received pharmacological treatment postoperatively (i.e. 11 (18%) patients with beta-blockers and 8 (13%) patients with statins postoperatively) [3]. Moreover, only 23 of 60 (38%) patients of the initial study cohort underwent an echocardiographical follow-up examination at 8 years post-AVR [4]. This would result in a very limited number of pharmacologically treated BAV patients at 8 years post-AVR. In summary, the protective effect of long-term beta-blocker/statin therapy in BAV-associated aortopathy is still unclear and should be addressed in future by means of large-scale prospective studies.

REFERENCES