We read with great interest the article by Plass and colleagues [1].

We have the following comments:

1. As mentioned in the text, there is a significant bias in the CT interpretation since a radiologist conducted a preselection of CT images for the surgeons. It is mentioned that the cardiac surgeons were blinded to the patients' medical history but not the radiologist. Moreover, patients with coronary disease had relatively significant disease, while the control group had valvular disease and could be relatively easily identified. This potential bias increases the accuracy of the CT.

   It might be interesting to compare the cardiovascular surgeons and experienced cardiologist/radiologist interpretations in both methods.
2. There was no need to administer B blockers, but the average heart rate was 65 beats/min. How many of the patients were on beta blockers? What was the heart rate of patients in the 23% (11/50) group? How many of the impaired image quality groups were of the control valvular disease group?
3. One of the best qualities of cardiac CT is its ability to rule out coronary artery disease. This was previously found to be useful in the evaluation of patient before aortic valve replacement [2,3]. The negative predictive value in this article is high in both groups.

   This is an important conclusion that we believe should be emphasized.
4. The focus of the article is the coronary evaluation of the cardiac patient performed by a cardiovascular surgeon with two different methods. Although most surgeons are familiar with coronary angiograms, this is not the case for cardiac CT. It is not mentioned what was the training of the surgeons for interpretation of the cardiac CT. We believe it is worth mentioning other data that can be measured from the cardiac CT and is valuable for the cardiovascular surgeon. A cardiac CT is an excellent method for the assessment of the aortic valve area and structure. In patients undergoing reoperative cardiac surgery, the cardiac CT can localize vital mediastinal structures, identify patients at higher risk for injury to the aorta and right ventricle and prevent left internal mammary artery graft injury during sternal reentry [4]. Quantification of RV and LV volumes and systolic function was proved to be accurate with multi detector cardiac CT [5].

   This data is invaluable for the cardiovascular surgeon in order to help the physician tailor the most suitable surgery plane for each patient.

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Reply to the Letter to the Editor

Reply to Lavi and Lavi

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Keywords: 64-Slice computed tomography; Coronary angiography; Coronary artery disease; Cardiovascular surgeon

All comments of Lavi and Lavi [1] are very well taken and debatable.

Already mentioned in the article and also by Lavi and Lavi, the evaluation of the MSCT examination can be influenced by the radiologist who is the inter-station between the patients' examination and the final evaluation by the cardiac surgeon. At present there is no standardized protocol of a complete examination procedure for cardiac surgeons. The radiologist is pre-selecting the images which then already tend to a certain diagnosis.

A possible improved protocol would be the presentation of MSCT images in a way that the reader can choose different images of interest which he is able to scroll through himself.

It is possible that the mixture of patients with diseased and not diseased coronary arteries can improve the accuracy of the MSCT because of the easier evaluation of healthy arteries. However, the identification of valvular disease was not a guarantee for normal coronary arteries. Eleven of the 40 patients of the study group with coronary artery disease also had valvular disease. This means that the identification of valvular disease was not equivalent with no coronary artery disease.

The 10 patients of the control group with no coronary artery disease but with valvular disease were probably easier identifiable. However, also these coronary arteries partly showed wall irregularities and calcifications.

We believe that screening for coronary artery disease with MSCT will play an important role in the future which should be taken into account for the overall accuracy.

The statement 'There was no need to administer B blockers' by Lavi and Lavi is not applicable for this study. Before the start of this study we discussed the application of beta blockers. Although the administration of B blocker for certain patients would have been helpful, it was decided not to add any additional medication. Also for older patients with cardiac disease, for example aortic valve disease combined with coronary artery disease, there is always a potential risk to administer additional B blockers and a medical specialist is necessary for monitoring.

Thirty-seven patients of the study group and five patients of the control group already were on B blockers before the MSCT-examination whereas four of the study group and two of the control group still had higher heart rates than 75 beats/min (bpm) during the MSCT. Overall, nine patients (six of the study group, three of the control group) had a heart rate higher then 75 bpm.

In 5 of the 11 patients with reduced image quality segments was caused at least one segment because of motion artefacts. Three of these patients had a heart rate above 75 bpm.

The 64-MSCT is using a 1-segment algorithm for MSCT examinations to a heart rate of 65 bpm. For a heart rate higher than 65 bpm, a 2-segment algorithm is used whereas to the heart rate of 75 bpm the image quality shows normally no motion artefacts. If the heart rate is higher than 75 bpm the probability for motion artefacts increases which does not mean that automatically motion artefacts will appear. Motion artefacts depend on several factors, i.e., a stable and not moving anatomical position of the heart in the chest and regular heart rate during the ECG gate examination.

It can be assumed that all cardiac surgeons are familiar with coronary angiographies. It is not only a diagnostic tool, but also necessary for the preoperative planning of a CABG.

There was no specific training for the readers. However, both surgeons were already familiar with examinations and evaluations of the 16-MSCT which was necessary for a previous study. However, what criteria should apply for an experienced examiner can be discussed. Also a defined training for MSCT examination for cardiac surgeons as well as for cardiologists should be discussed seriously.

Lavi and Lavi also mentioned additional data which can be collected by a cardiac CT and would be valuable for cardiovascular surgeons.

Indeed, we already elaborated on this matter in the discussion part of this publication [2]. Especially the possibility to diagnose valve pathologies including the identification and quantification of calcifications and morphologic abnormalities are very useful [3]. Additionally, preoperative planning with MSCT for minimally invasive surgeries will be of increased importance in the future [4]. The value for preoperative planning for redo surgeries has already been described in several papers [5].

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Letter to the Editor

Which is more appropriate for right axillary artery cannulation in acute type A aortic dissection — directly or with graft?

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Keywords: Axillary cannulation; Aortic surgery; Acute aortic dissection

We read with interest the article entitled 'Axillary cerebral perfusion for arch surgery in acute type A dissection under moderate hypothermia' by Panos et al. [1]. Open distal aortic repair is still one of the best choices in acute type A aortic dissections [2]. It is still controversial among the vascular surgeons with regard to priority of the side of aortic repair (proximal or distal). We also prefer open distal anastomosis in acute type A dissections in our institute.

In spite of the availability of different suture techniques, there is no report that shows which one is the best. In fact, of the different dissected aortic tissue, to obtain the right kind for the study is almost impossible. In our clinic, we are using interrupted pledgeted suture technique in acute type A dissection procedures and the results are accurate in terms of bleeding [3].

In the present study, the authors performed open aortic arch repair with continuous antegrade brain perfusion by means of direct cannulation of the right axillary artery, under moderate hypothermia, in 25 consecutive patients with acute type A aortic dissection [1]. In one of the patients, post-operative 4th day left arm paralysis developed and was cured with stented graft. Like Coselli and co-workers [4] we believe that instead of axillary artery direct cannulation with a 4% (1/25) additional risk rate, achieving antegrade cerebral perfusion via axillary artery grafting with a suitable graft is more appropriate in patients with acute aortic dissection. In our clinic, in both acute and chronic aortic dissection cases, axillary cannulation is performed via suitable graft, which is always 8 mm, and has no morbidity related to axillary