Answers to the unanswered questions during the live

1. In terms of clinical end-point outcomes - with respect to scans - is C.T. better than Magnetic Resonance Imaging?

   ⇒ The comparison can not be made in the sense of better or worse, depends on the patient, clinical indication, availability of imaging modality and expertise. Difficult to generalize but as a general line of thinking, CT is great for anatomy, MRI for Function ad tissue Characterization. In the context of TAVI, CT is better for getting the anatomy of the aortic root and the peripheries.

2. In a high B.P. patient with a known PHAEOCHROMOCYTOMA what spec' precautions need to be taken?

   ⇒ In the context of precautions pre-CT imaging, the caution is related to kidney functions, if they are normal then no special precautions.

3. Does the presence of a pacemaker C.R.T. device or an I.C.D. influence your peri-procedural considerations?

   ⇒ Presence of devices generally would not influence peri-procedural imaging considerations for CT. Devices might cause artifacts that usually with careful acquisition would not impact diagnostic image quality.

4. If our patient displays new significant inter-arm B.P. differences - post-procedure - what would constitute safe follow-up?

   ⇒ This depends on the clinical picture I would say. Depending on the position of the pathology (I assume Stenosis/Dissection) either CT or Ultrasound. If the patient is asymptomatic then its probably sensible to watch and wait.
5. Could you explain how do you preserve coronary ostia during TAVI?

⇒ The best way to preserve them is to start with a cautious look on the anatomy in CT. If the relationship and the anatomy of the leaflet to the ostia is critical, then the best way to preserve them is to avoid a TAVI procedure in such patients. Although patients with this anatomy is rather rare. Some implanters would place a wire in the coronary artery in case of obstruction, although it is not uncommon to have to go thorough the struts of the valve to re-intubate the artery. Other implanters would perform an aortography during valvuloplasty, to sort of see how the calcium of the valve would behave as far as the coronaries are concerned, although during balloon valvuloplasty the leaflets will probably behave in a different fashion compared to having the valve placed and deployed in the aortic root.

6. Is the post-TAVI cusp thickening more often seen in rheumatic arthritis patients?

⇒ There is no data to support this, I think generally speaking the post-TAVI cusp thickening is more often than one might think and the clinical relevance is still unknown.

7. In a presence of significant calcification is pre-stenting (with covered stent) an option?

⇒ I don’t think pre-stenting should be performed, depending on the anatomy, if the obstruction risk is quite clear from CT, I personally would abstain from going on to a TAVI procedure, if the risk is possible, I would go on for TAVI knowing the possible risks, careful performing the procedure (may be a little bit lower implantation for some valve-types), selective angiography of the coronaries to make sure everything is o.k. and prepare the team for a possible intervention. If obstruction occurs, then stenting should be performed with normal stents, they don’t have to be covered in this scenario.
8. For a RV mass which is better CT or CMR?

⇒ Please refer to question number 1. Furthermore, if CT is to be performed for an RV-Mass, caution has to be taken to have some contrast in the right side (either by having a saline push with e.g. 60% saline 40% contrast and sometimes a second scan would be necessary to allow for good contrast mixing in the right side). Adjusting the delay or the contrast timing is very important for this indication.

9. If coronary obstruction occurred after TAVI procedure what is the management? What would you do to solve this complication?

⇒ Please refer to question number 8.