

Figure 1: Transesophageal echocardiography. **A:** Multiple hypermobile vegetations on aortic bioprosthesis (white arrow). **B, C:** Severe regurgitation of the aortic bioprosthesis (yellow arrow). **D:** Continuous Doppler study demonstrated that severe degenerative changes of the aortic valve resulted in severe aortic stenosis with peak gradient: 60 mmHg and mean gradient: 40 mmHg. LV: Left ventricle, RV: Right ventricle, LA: Left atrium, RA: Right atrium.

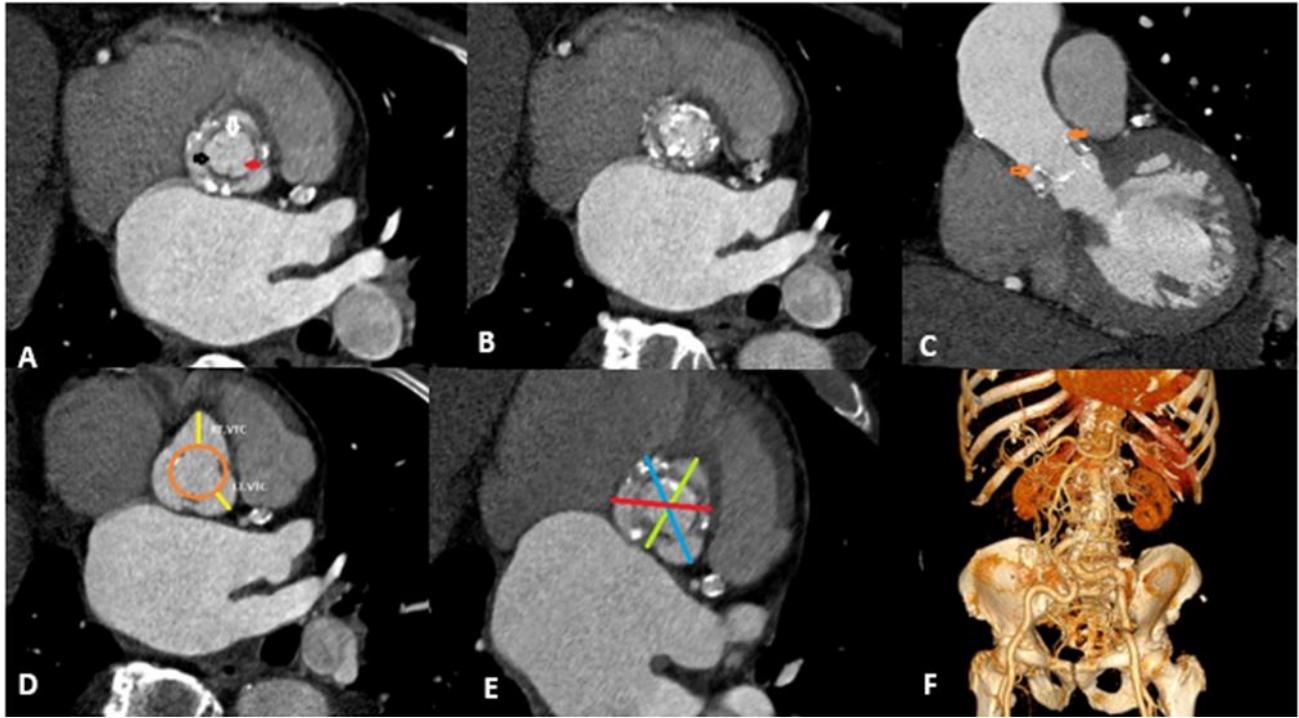


Figure 2: Retrospective ECG-Gated cardiac CT. Multiplanar Reconstruction. **A.** Displays right leaflet (white arrow), left leaflet (red arrow) and non-coronary leaflet (black arrow), and calcification of leaflets (**B**). **C.** Coronal view shows struts (orange arrows) of bioprosthetic valve. **D.** Cross sectional view of aortic bioprosthesis shows distance from origin of left and right coronary arteries (yellow lines) to the virtual valve (orange circle) as a VTC (Virtual valve to coronary). **E.** Axial view at the level of coronary sinuses represents right sinus of Valsalva width (green line), left sinus of Valsalva width (blue line) and non-coronary sinus of Valsalva (red line). **F.** Volume rendered image demonstrates abdominal aorta and bilateral iliac arteries.

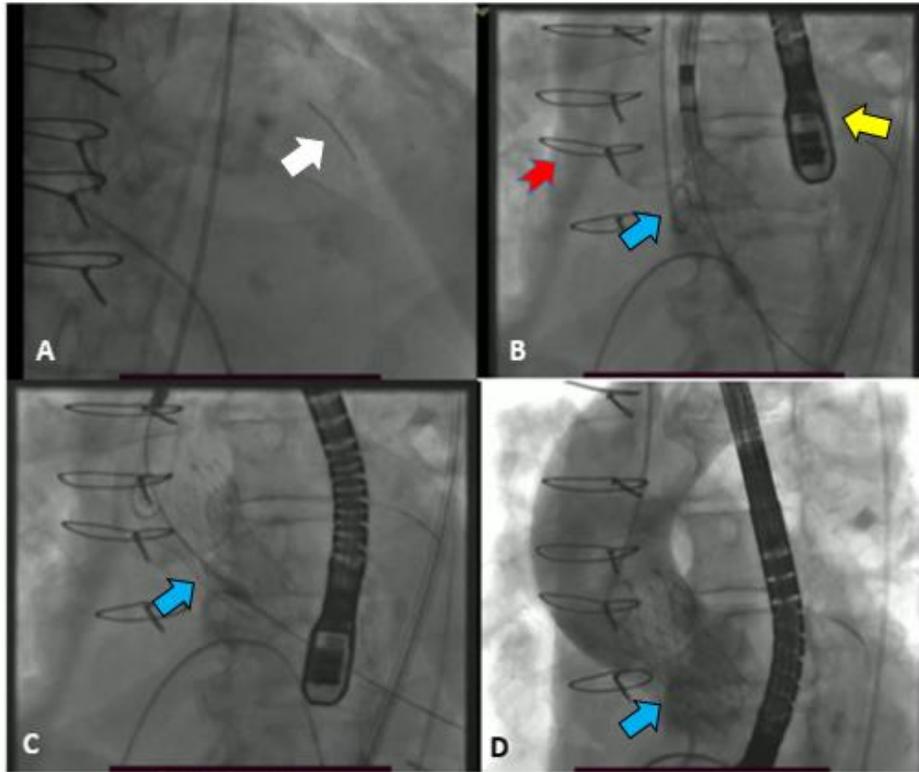


Figure 3: Fluoroscopy of the valve-in valve procedure. **A:** Wiring the left anterior descending artery and a stent is parked (white arrow). **B, C:** Implanting the aortic valve (blue arrow), red notched arrow points to the previous sternotomy wires and yellow arrow points to the transesophageal echocardiography probe. **D:** Aortic root injection showed appropriate position of the valve with no significant regurgitation.

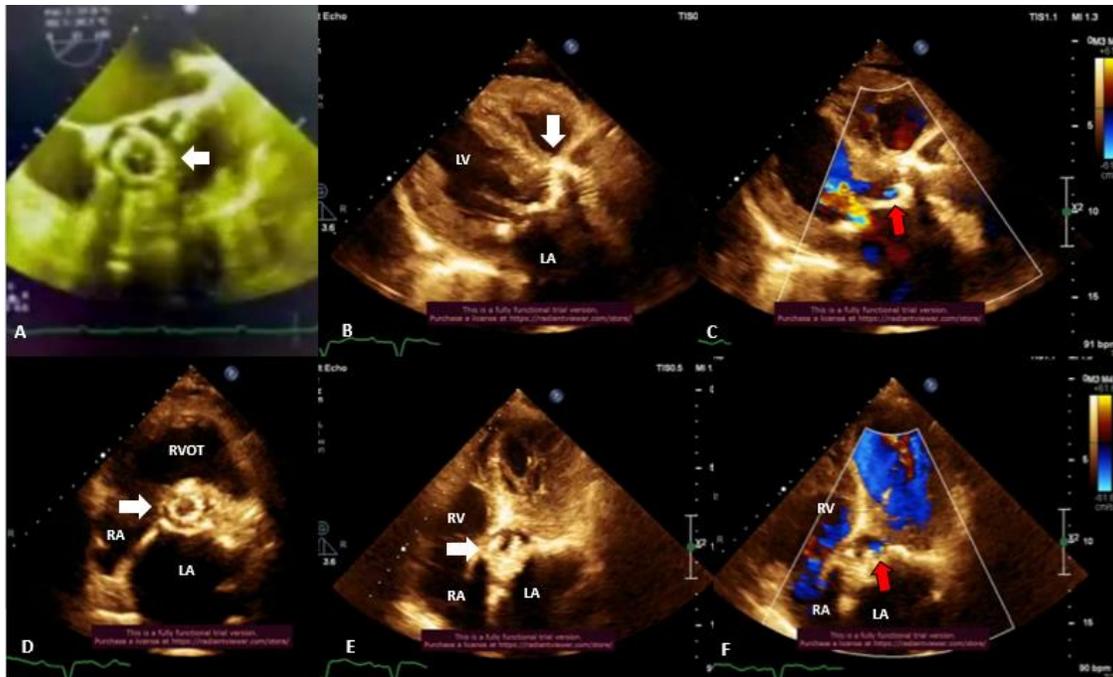


Figure 4: **A:** Intraoperative transesophageal echocardiography after implantation of the valve showed the valve in proper position (white arrow). **B-F:** Follow up transthoracic echocardiography showed appropriate position and function of the valve (white arrow) with mild paravalvular regurgitation (red arrow). LV: Left ventricle, LA: Left atrium, RA; Right atrium, RVOT: Right ventricular outflow tract, RV: Right ventricle.