

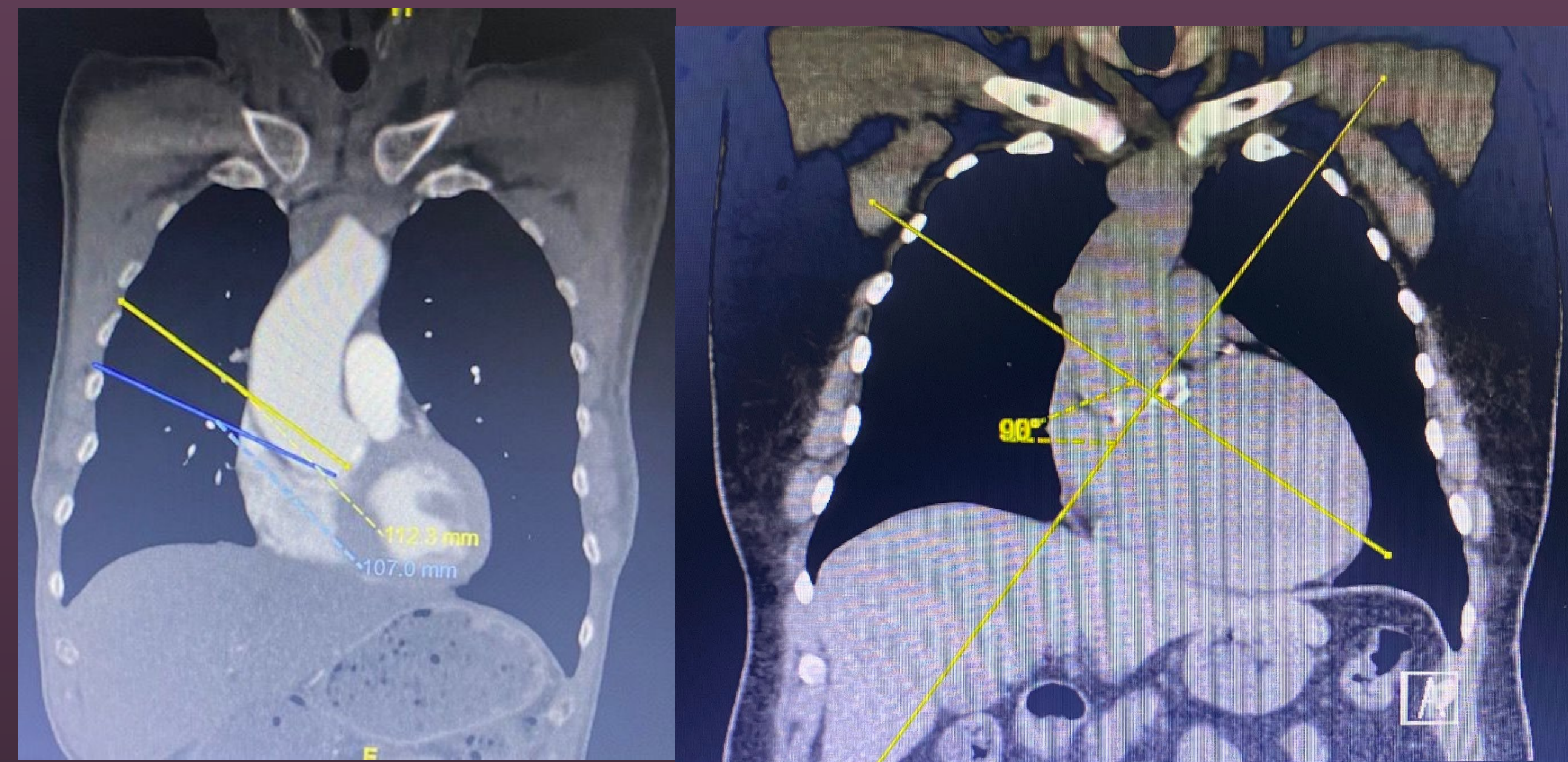
TRANSAXILLARY APPROACH TO AORTIC VALVE REPLACEMENT CRITERIA FOR PATIENT SELECTION

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Introduction:

Surgical Aortic valve replacement (SAVR) via sternotomy is a known surgical treatment for Aortic valve pathologies. Last decade has seen a rise in SAVR via minimally invasive techniques like upper partial sternotomy and Right anterior thoracotomy (RAT). Transaxillary approach has been advocated by few groups of surgeons worldwide. However, all patients are not suitable for SAVR via trans axillary approach. We describe few selection criteria for patients undergoing SAVR so that they can be done via transaxillary approach. Minimal invasive aortic valve replacement via Trans axillary approach has the advantage of early recover, less pain and better cosmesis. Case selection using our criteria will enable surgeons to perform SAVR via Transaxillary approach successfully.

Criteria for selection patients for transaxillary approach: The decision of transaxillary approach is made by CT evaluation. Unfolding of aorta, where aorta is deviated to the right side, distance between the chest wall and the aortic valve less than 15cm, plane of aortic valve oriented more rightward than upright and horizontal.

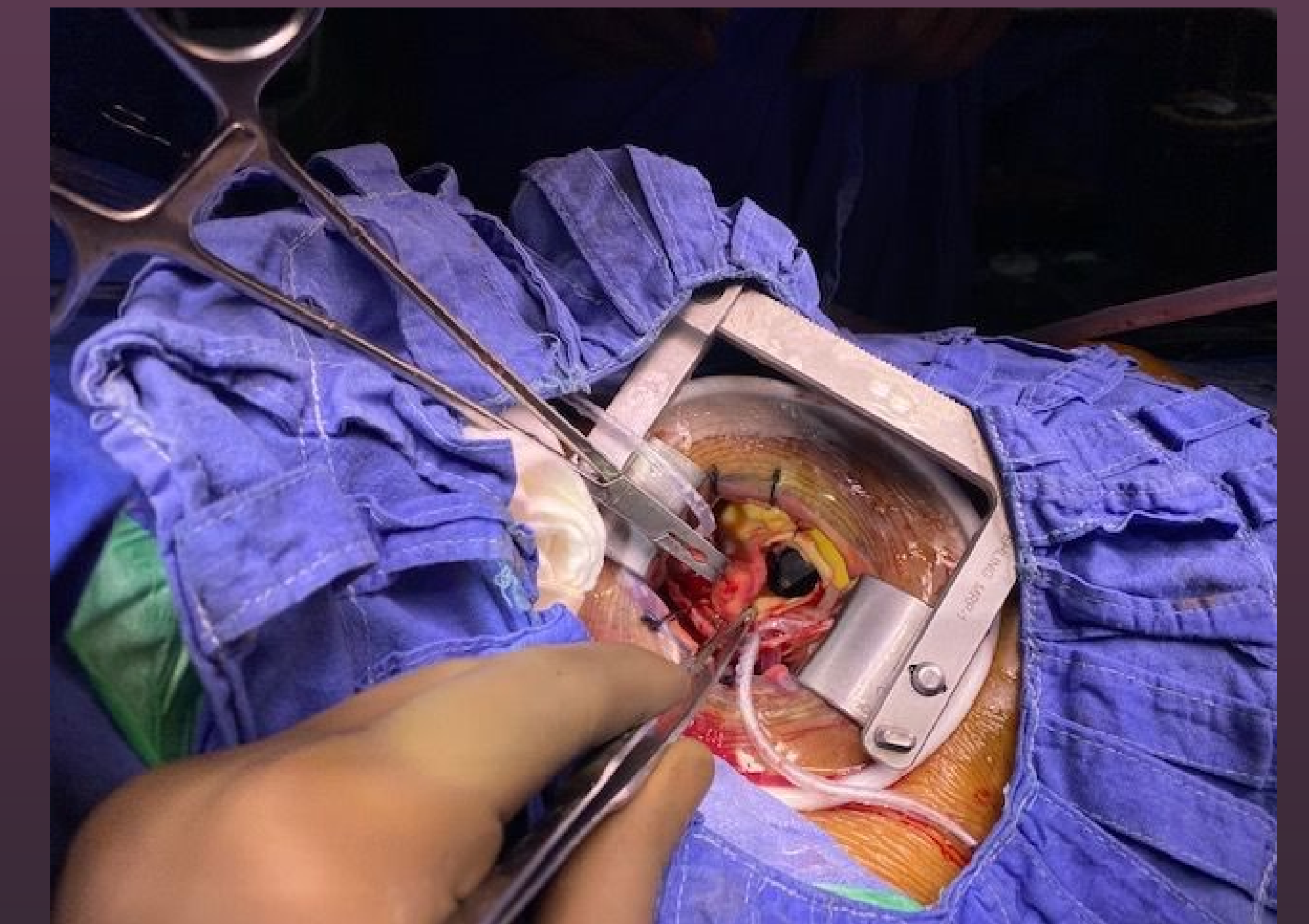


Pic 2 CT thorax – to calculate distance between 3rd and 4th intercostal space and the aortic valve



Pic 3 We use standard mono shafted instruments for this approach

Operative technique: The patient is positioned supine with arm flexed above the head so as to avoid crowding of ribs and helps in retraction of ribs. 2 inch incision is made along the anterior axillary line midway between jugular notch and xyphisternum. Pleural cavity is entered through 3rd or 4th intercostal space and a proper angle to reach the aortic root is created. Then the surgery was performed in a standard fashion. Pics 4 a, b.



Unsuitable subset of patients: 1. Morbid Obesity, 2. Redo surgeries, 3. Emergency situation, 4. Chest deformities

Advantages of TAX AVR: Among the other minimal invasive approaches, transaxillary approach has extra advantages. 1. The right internal mammary artery is preserved, 2. The mammary gland in female is not damaged, 3. pectoral muscles are preserved.