

## Session on Aortic Valve Replacement- Senior Tour

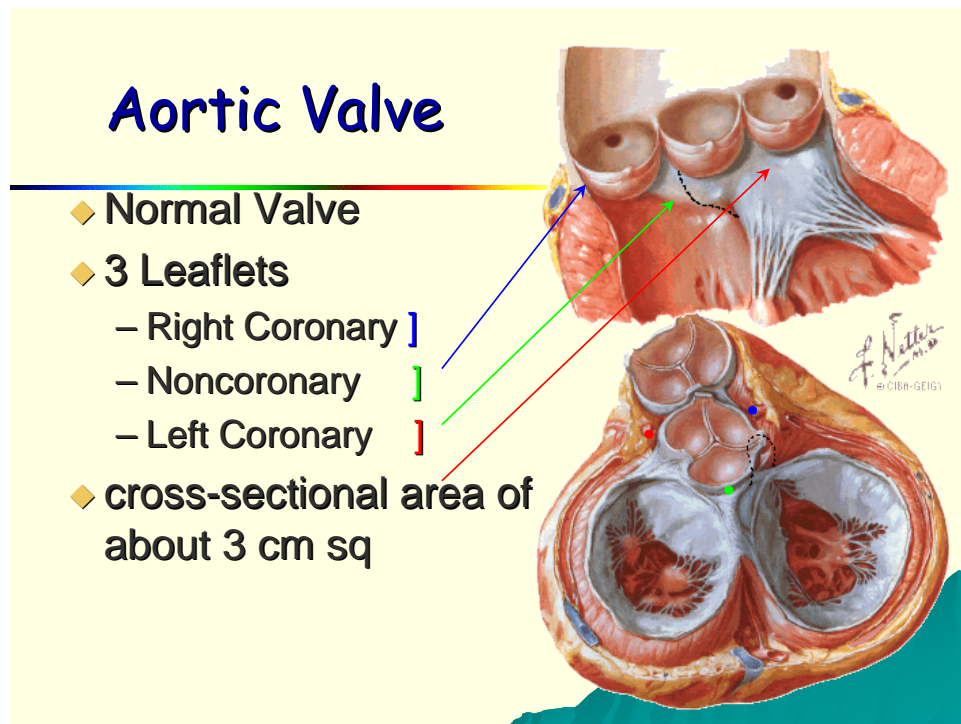
### Goals:

1. Understand the anatomy of the aortic root and LVOT
2. Understand incisions and exposure of the aortic valve
3. Master techniques of suture placement and valve implantation
4. Complete aortic closure
5. Understand and evaluate trouble areas after AVR

Simulator- Pig heart in fixed stand

### Steps for the session

1. Review anatomy of the aortic valve and LVOT



2. Review the use of incisions for aortic valve exposure
  - a. Oblique
  - b. Horizontal
  - c. Annular enlarging approaches
3. Steps for CPB , vent and cardioplegia
4. Steps for AVR
  - a. Place commissural stitches for exposure
  - b. Examine anatomy and position of coronary arteries
  - c. Excise valve leaflets
  - d. Measure the annulus deciding about intra or supra-annular position
  - e. Placement of stitches organized with the ring to avoid disorganization

- f. Placement of sutures into the prosthetic annulus organized into three sections
  - g. Delivery of the valve to the annulus assessing adequate seating
  - h. Sequential tying of sutures starting at the left, then right, then non-coronary cusps
  - i. Assessment of valve seating and function
  - j. Aortic incision closure
5. Steps for deairing and weaning from CPB
  6. Trouble areas to be checked after procedure
    - a. Medial and lateral areas of incision
    - b. Coronary sinus
    - c. RV function for air or coronary coverage
    - d. Prosthesis function by ECHO

Evaluation tool: Each step graded 0-10 with 0 being no understanding or competence of that step and 10 being complete mastery of the task

1. Standard CPB technique tool for going on and coming off CPB
  - a. Place commissural stitches for exposure (0-10)
  - b. Examine anatomy and position of coronary arteries (0-10)
  - c. Excise valve leaflets (0-10)
  - d. Measure the annulus deciding about intra or supra-annular position (0-10)
  - e. Placement of stitches organized with the ring to avoid disorganization (0-10)
  - f. Placement of sutures into the prosthetic annulus organized into three sections (0-10)
  - g. Delivery of the valve to the annulus assessing adequate seating (0-10)
  - h. Sequential tying of sutures starting at the left, then right, then non-coronary cusps (0-10)
  - i. Assessment of valve seating and function (0-10)
  - j. Aortic incision closure (0-10)
2. Steps for deairing and weaning from CPB