

# Trans-axillary Access and Right Anterior Thoracotomy – Safe and Feasible Options in Aortic Valve Replacement

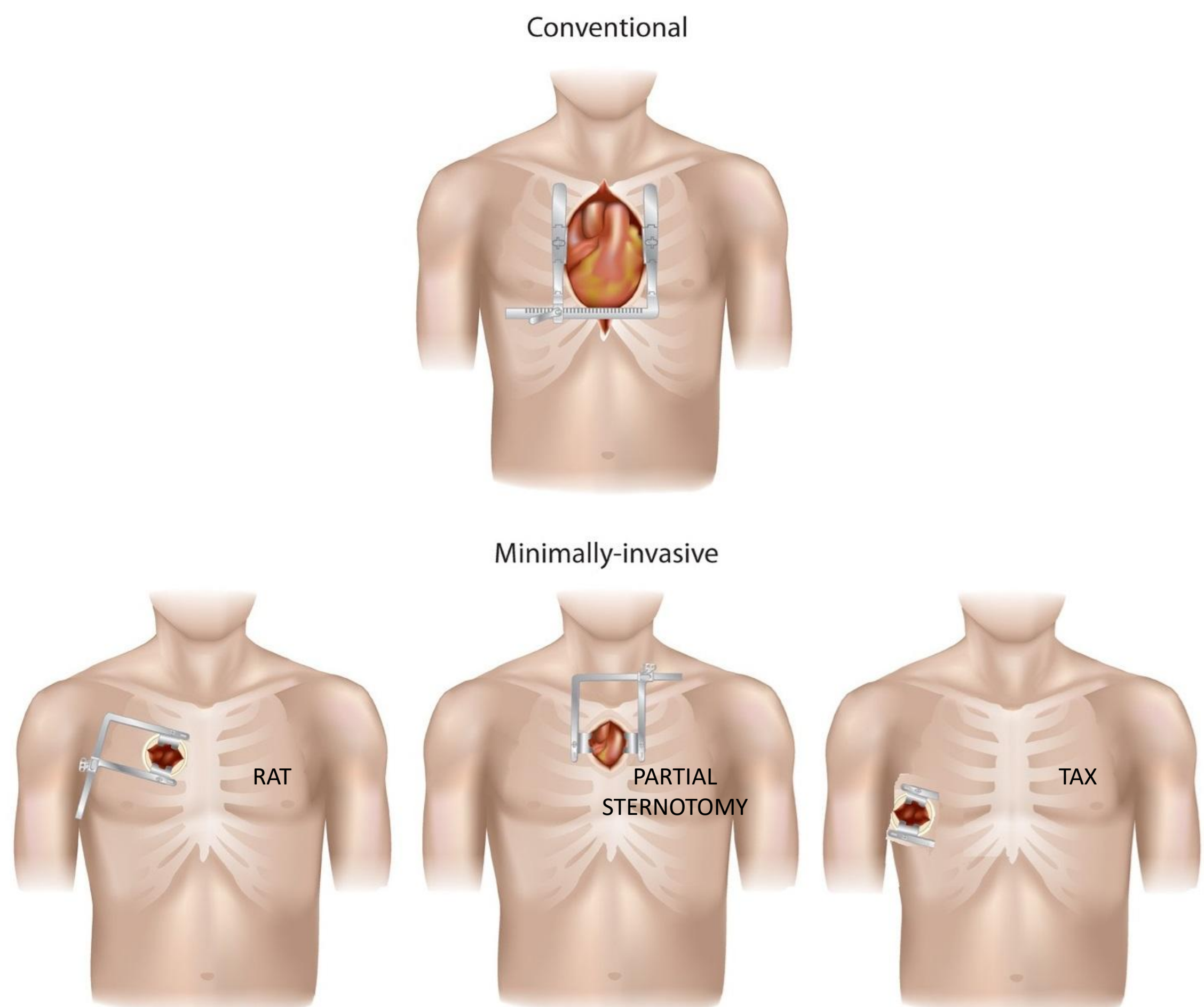
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## INTRODUCTION

Minimally invasive aortic valve replacement is defined as aortic valve replacement avoiding full sternotomy.

Most popular approaches include:

- Right anterior thoracotomy (RAT)
- Upper partial sternotomy
- Trans-axillary access (TAX)



## METHODS

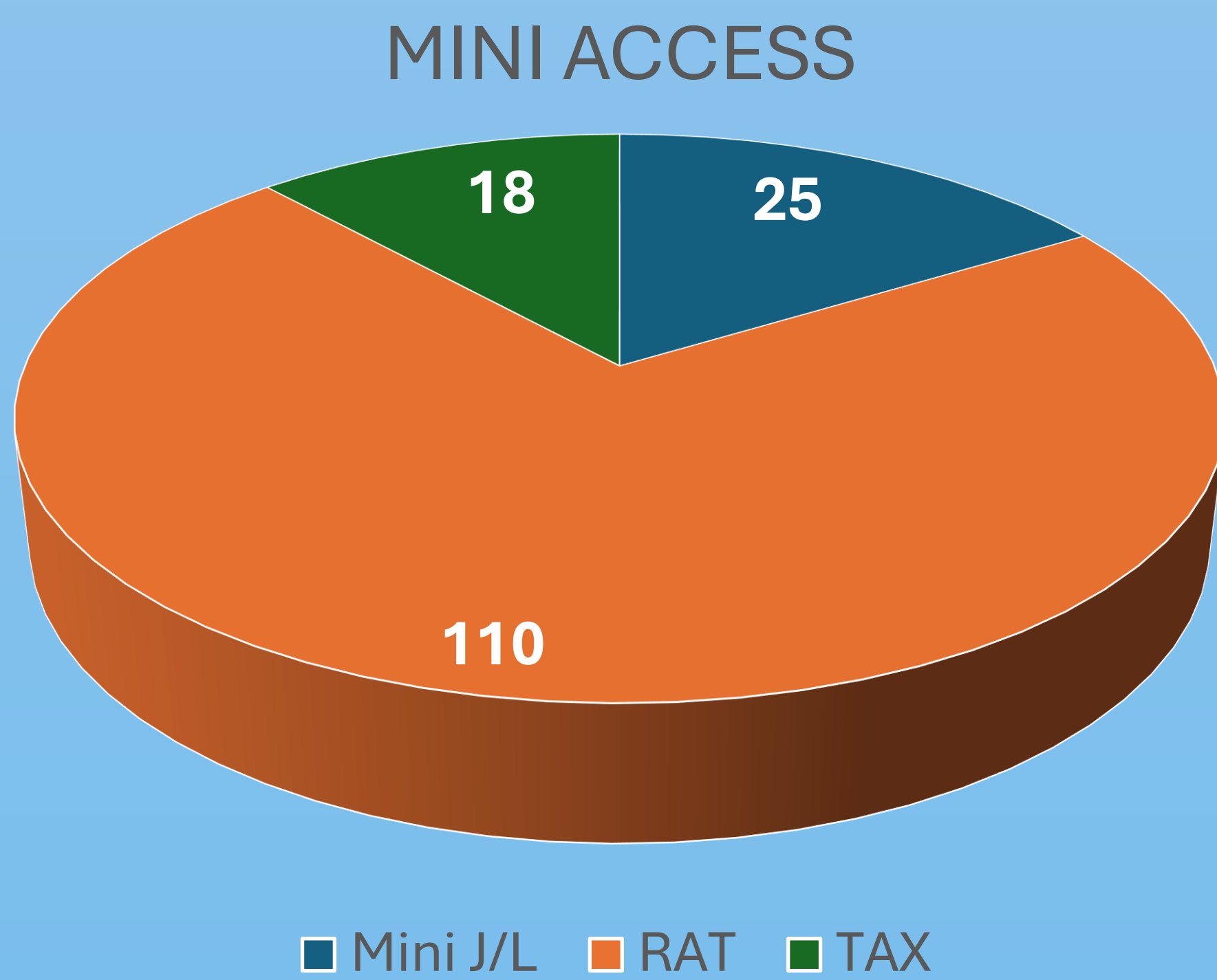
- Surgical aortic valve replacement
- TAVI and complex procedures excluded from study
- Procedures performed 2021 – 2024
- Mechanical, biological, sutureless prosthesis were used
- Peripheral cannulation
- First choice approach for three surgeons
- CT guided choice of access

| AORTIC VALVE REPLACEMENT |          |      |
|--------------------------|----------|------|
|                          | mini (n) | %    |
| 2021                     | 12       | 15   |
| 2022                     | 26       | 27   |
| 2023                     | 34       | 37,1 |
| 2024                     | 81       | 48,6 |

## RESULTS

|                     |             |
|---------------------|-------------|
| Age mean ± SD       | 64,2 (9,3)  |
| Sex (female), n (%) | 61 (37,4)   |
| BMI (mean ± SD)     | 29,7 (9,1)  |
| CPB time (min)      | 112 (23)    |
| ACC time (min)      | 96,2 (20,5) |

|                   |    |    |
|-------------------|----|----|
| Valve size mm (n) | 21 | 24 |
|                   | 23 | 72 |
|                   | 25 | 36 |
|                   | 27 | 11 |
|                   | 29 | 10 |



## CONCLUSIONS

More demanding procedure

A smaller scar and improved appearance

Longer CPB and ACC time

Reduced blood loss and risk of infection during and after the surgery

Reduced post-surgical pain and reliance on pain medications

Faster recovery from surgery

Shorter post-operative recovery with a quicker return to normal activities