

# Aortic valves & advanced surgical Techniques

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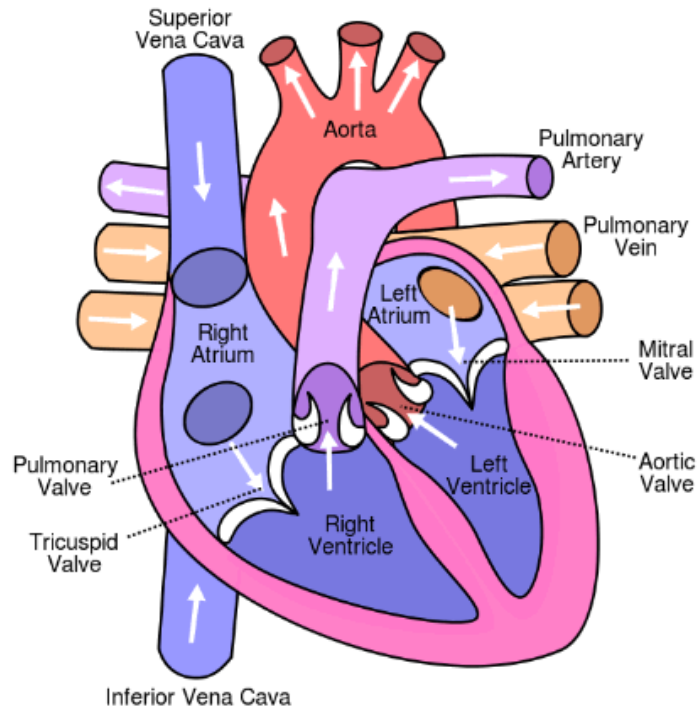
ACHD NS

Freeman Hospital

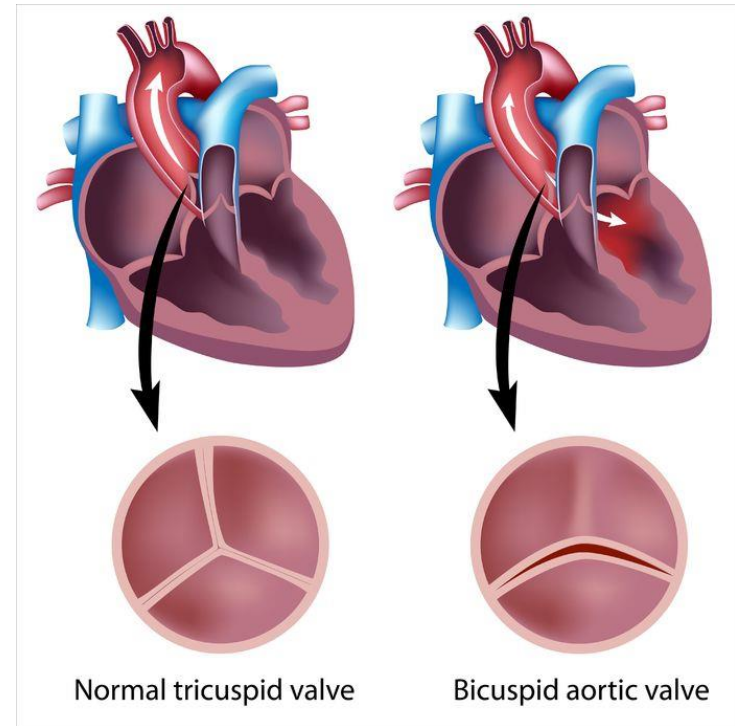
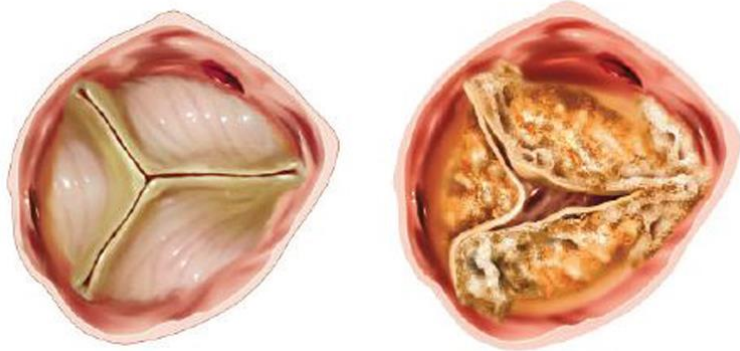
# Aims of session

- \* Cardiac anatomy
- \* Types of aortic valves
- \* Problems requiring surgery
- \* Ross Procedure
- \* Ozaki procedure
- \* Pears procedure

# Normal heart



# Aortic valve



# Aortic valve problems

- \* Aortic stenosis
- \* Aortic regurgitation
- \* Aortic root dilatation

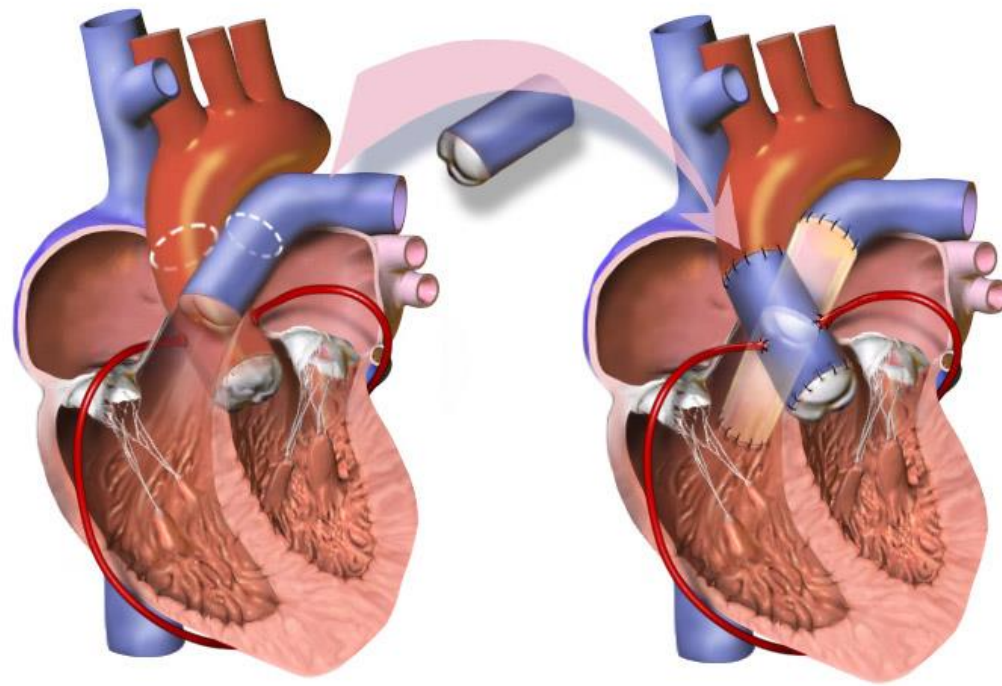
# Surgery

- \* Valvuloplasty
- \* TAVI
- \* Repair
- \* Tissue
- \* Metal

# Ross procedure

- \* Dr Donald Ross & Dr Magdi Yacoub 1967
- \* 2 valve replacement technique
- \* Use patients own pulmonary valve
- \* Cadaver pulmonary valve

# Ross





# Ross

## PRO'S

- \* No anticoagulation
- \* Valve grows with patient
- \* Low rejection risk
- \* Available adults/paeds

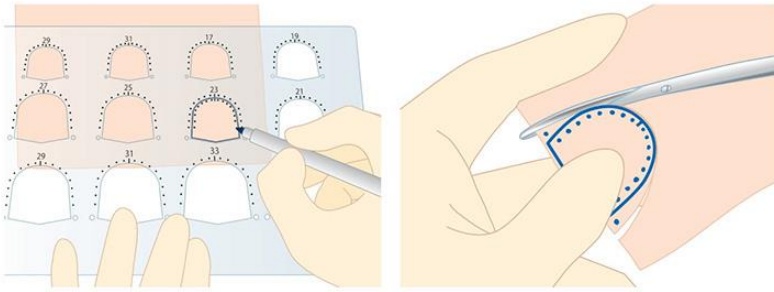
## CON'S

- \* Replace 2 valves
- \* Future intervention
- \* Infection, stroke, blood clots, arrhythmia

# Ozaki Procedure

- \* Prof Ozaki , Japan
- \* Alternative to Ross
- \* Ross in future
- \* Patients own tissue

# Ozaki



# Ozaki

## PRO's

- \* Further surgery available
- \* No anticoagulation
- \* Less chance rejection
- \* Available adults/paeds

## CON's

- \* Not much data in UK
- \* Long term outcomes unknown
- \* Infection, stroke, blood clots, arrhythmia

# Pears Procedure

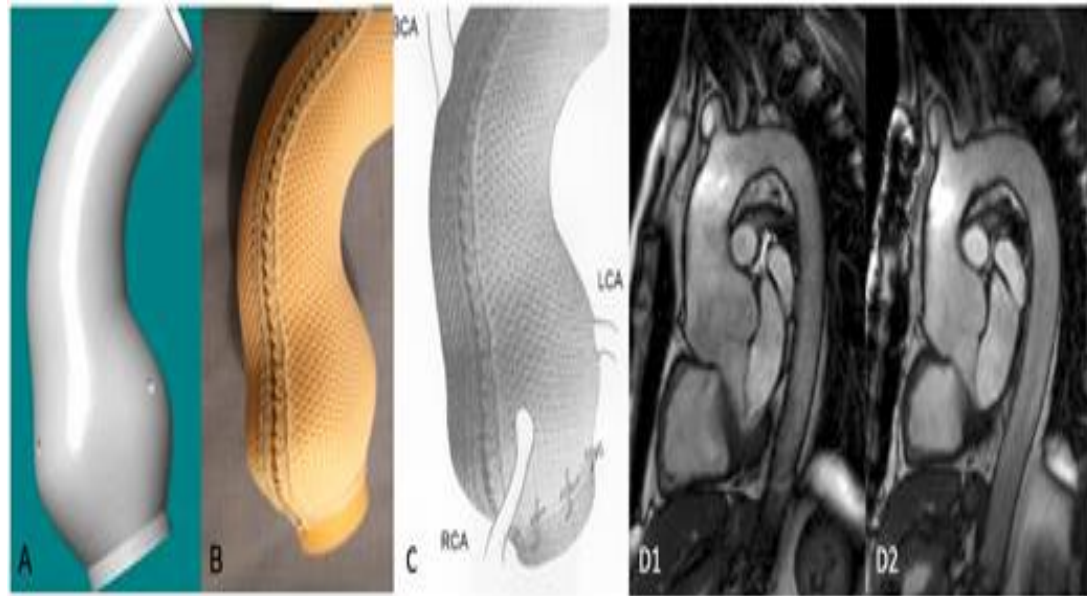
- \* Aortic root support
- \* Tal Goldsworthy 2004-2014
- \* Personalised external aortic root support
- \* 3D Imaging
- \* Textile sleeve

# PEARS

- \* Marfans syndrome / loeys dietz syndrome
- \* Bicuspid aortic valves
- \* TGA
- \* TOF
- \* Turners
- \* Dilatation from AVR

# PEARS

- \* Limited data
- \* New technique
- \* Minimally invasive
- \* Patients unsure!



# Summary

- \* Lots options available
- \* Less invasive
- \* Explore all options not just 'old' techniques
- \* Sit in on surgical discussions



Questions????