

Aortic Stenosis

V max >4.0 m/s or EOA < 1.0cm² every 6 months + consider annual ETT
 V max 3.5 – 4.0 m/s + AV calcium every 6 months
 V max 3.0 – 4.0 m/s or EOA 1.0 – 1.5cm² every year + ETT at baseline, when becomes severe and consider every year after this if early surgery clinically appropriate
 V max 2.5 – 3.0 m/s every 3 years

Echocardiographic Alerts

- Any reduction in LV ejection fraction
- EOA \leq 0.6cm²
- V max \geq 5.0m/s
- Rapid progression of V max > 0.3 m/s per year
- New diastolic dysfunction (pseudonormal or restrictive)
- Aortic root dilated to 45 mm (Marfan), 55 mm (other)

Other Alerts

- Spontaneous symptoms
- New arrhythmia
- Patient request
- Suggestion of endocarditis

Mitral Stenosis

Severe: every 6 months (ETT annually)
Moderate: every year
Mild: every 2 years

Echocardiographic alerts:

- New PA hypertension or rise in PA systolic pressure towards 50 mmHg
- RV dysfunction

Other alerts:

- Symptoms
- INR > 4.0 or < 1.5 in last 6 months
- New atrial fibrillation
- TIA or stroke
- Patient request
- Suggestion of endocarditis

Pulmonary Stenosis

Severe: every year
Moderate: every year
Mild: no follow up unless indicated

Echocardiographic alerts:

- New RV dilation
- Velocity > 3.5 m/s

Other alerts:

- Spontaneous symptoms
- New arrhythmia
- Suggestion of endocarditis
- Patient request

Aortic Regurgitation

Severe: every 6 months or every 3 months at request of cardiologist if LV significantly dilated. (consider ETT annually)
Moderate: every year
Mild: not unless aortic root dilated

Echocardiographic alerts:

- LVSD approaching 50 mm or LVDD 70 mm
- LVSD change (>5mm from previous study) or volume increase since last study
- LVEF approaching 50%

Other alerts:

- Spontaneous symptoms
- New arrhythmia
- Patient request
- Suggestion of endocarditis

Mitral Regurgitation

Severe: every 6 months + annual ETT
Moderate: every year
Mild: not followed

Echocardiographic alerts:

- LVSD approaching 40 mm
- LV EF approaching 60%
- PA systolic pressure approaching 50mmHg

Other alerts:

- Symptoms
- New arrhythmia
- Patient request
- Suggestion of endocarditis

Tricuspid / Pulmonary Regurgitation

Severe: every 6 months
Moderate: every year

Echocardiographic alerts:

- Progressive RV dilatation
- New RV hypokinesia

Other alerts:

- Spontaneous symptoms
- New arrhythmia
- Suggestion of endocarditis
- Patient request

Aortic Root Dilatation

Marfan: annually unless dilated to > 40 mm, then every 6 months
Non-Marfan: annually
Bicuspid: annually

Echocardiographic alerts:

- Marfan 45 mm or change > 3 mm in one year
- Bicuspid valve 55 mm or change > 3 mm in one year
- Non-Marfan 55 mm or change > 3 mm in one year
- Worsening AR

Other alerts:

- Chest pain, dysphagia or change in voice
- New arrhythmia
- Patient request
- Suggestion of endocarditis

Mitral & Tricuspid Valve Repair

– Echo at 12 months –
 If repair, competent, continue clinical surveillance annually in nurse-led clinic.

If repair impaired, continue echo surveillance per native dysfunction.

Echocardiographic alerts:

- Worsening regurgitation – see MR/TR sections
- Systolic anterior motion

Other alerts:

- Spontaneous symptoms
- New arrhythmia
- Patient request
- Suggestion of endocarditis

Post-Endocarditis (non-operated)

Echocardiogram at 1, 3, and 6 months
 Then according to residual pathology

Bicuspid Valve (no AS/AR)

Every 3 years

Post AVR**AVR native root monitoring (previous Bicuspid AV)**

(Dimensions on post-op echo)
 <40 mm No routine surveillance
 40 – 45 mm Echo at 5 years then review
 >45 mm Annual echo

AVR with Aortic Root Replacement (Marfans/Ehlers Danlos)

Per valve type below

2 yearly CMR scanning (renal bloods needed prior to scan)

Replacement Heart Valves

Every valve once postoperatively if not performed before discharge

Mechanical valves annually only if there is any of the following:

- Associated root dilatation (see specific guide)
- LV dilatation
- More than mild paraprosthesis regurgitation
- More than moderate TR

New designs of biological aortic valve every year after 5 years (e.g. Trifecta)

Established aortic biological designs (including homografts) every year after 10 years

Biological mitral valves every year after 5 years

Ross procedures every year

Echocardiographic alerts:

- New or worsening regurgitation
- Obstruction – reduction of EOA by 25%
- Change in LV or systolic function (or RV for right-sided valves)

Other alerts:

- Exertional symptoms