Appendix 4. Guidelines for Pre-operative Echocardiogram

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A resting echocardiogram in pre-operative test should be requested when:

| Suspected Valvular pathology, especially aortic stenosis and mitral stenosis | The severity of these may not correlate with clinical findings and have significant potential for perioperative morbidity |
| Left ventricular (LV) function needs to be established in patients with proven or suspected LV failure. | - The echo will give some indication of LV and RV function but this does not always correlate well with functional capacity or outcome.  
- An ejection fraction of less than 50% is abnormal and compatible with a diagnosis of systolic heart failure. However 2/3 of patients over age 80 with heart failure will have diastolic dysfunction and a normal LV ejection fraction.  
- Heart failure (either systolic or diastolic dysfunction) is a major perioperative risk factor. The presence of heart failure doubles the risk of dying after major surgery.  
- If LV function alone is in question, clinicians should consider a MUGA scan. |
**Suspected Pulmonary hypertension needs to be demonstrated and quantified.**

Therefore the following patients should have echocardiography considered:

1. **New murmur**
   - Especially if:
   a. Poor functional capacity
   b. Syncope or dizzy spells
   c. Angina
   d. LVH or ST changes on ECG
   e. Major Surgery

2. Known aortic stenosis or mitral stenosis with no recent imaging (12 months) or deterioration in symptoms
3. Patients with suspected heart failure, who are short of breath climbing a flight of stairs (<4METS)
4. Patients with known heart failure with no recent echo and/or a change in symptoms
5. Known ischaemic heart disease in whom LV function has not formally been assessed and have symptoms of shortness of breath

The following patients should **not** routinely have resting echoes:

1. Angina / Ischaemic Heart Disease
2. Mild and moderate regurgitant lesions with normal LV and no change in symptoms, if last echo is within the last 18 months
3. Complex congenital disease or previous cardiac surgery - need discussion with their Cardiologist

Please always discuss echo requests with a consultant anaesthetist where ever possible.

There is a consultant anaesthetic echo service on Friday afternoons, should this be needed.