

Focus Assessed Transthoracic Echo (FATE)

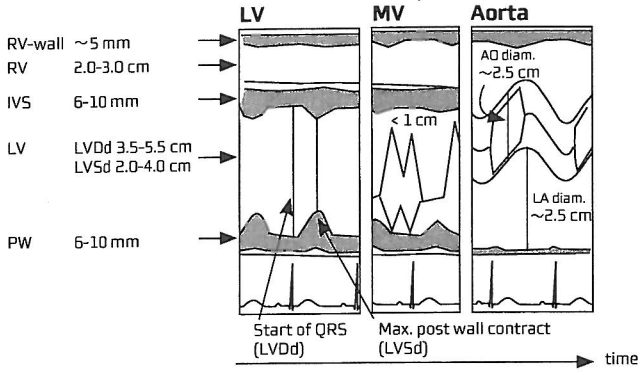
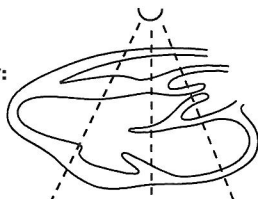
(European Journal of Anaesthesiology 2004; 21: 700-707)

1. Look for obvious pathology
2. Assess wall thickness + chamber dimensions
3. Assess bi-ventricular function
4. Image pleura on both sides
5. Relate the information to the clinical context
6. Apply additional ultrasound

Dimensions and contractility:

$$FS = \frac{(LVd - LVsd)}{LVd}$$

$$EF \sim 2 \times FS$$

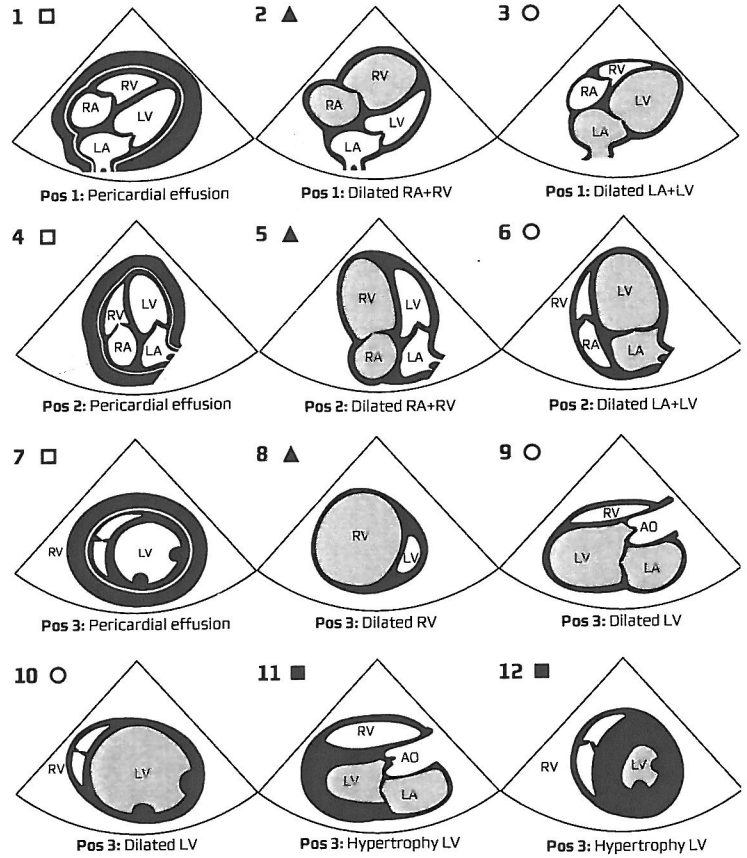


The global function of the heart is determined by the interaction between:

Right ventricle		Left Ventricle	
Systole:	Diastole:	Systole:	Diastole:
Preload	Compliance	Preload	Compliance
Afterload	Relaxation	Afterload	Relaxation
Contractility	Heart rate	Contractility	Heart rate
Heart rate		Heart rate	

Hemodynamic instability, perform a systematic evaluation of these determinants plus concomitant pathology: (e.g. pericardial effusion, pulmonary embolus, pleural effusion, pneumothorax, valvulopathy, dissection, defects)

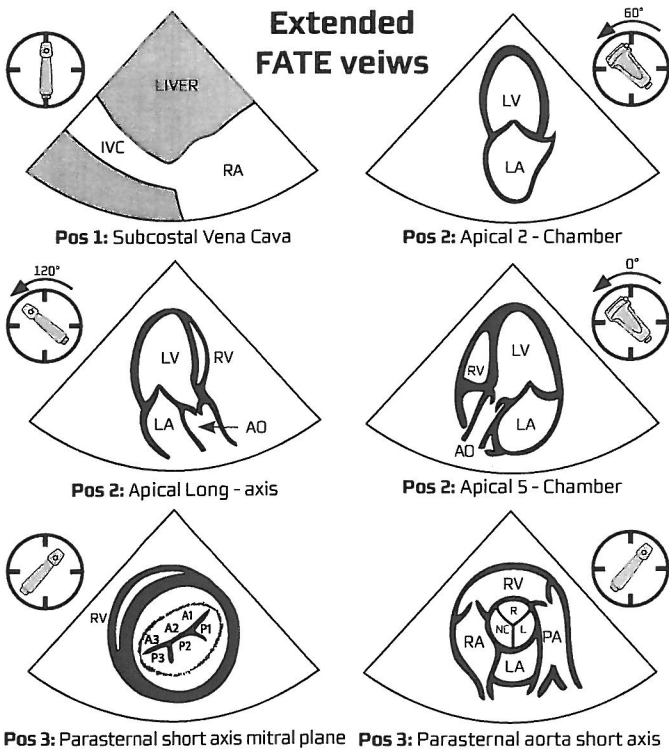
Important pathology



PATHOLOGY TO BE CONSIDERED IN PARTICULAR:

- Post OP cardiac surgery, following cardiac catheterisation, trauma, renal failure, infection.
- ▲ Pulmonary embolus, RV infarction, pulmonary hypertension, volume overload.
- Ischemic heart disease, dilated cardiomyopathy, sepsis, volume overload, aorta insufficiency.
- Aorta stenosis, arterial hypertension, LV outflow tract obstruction, hypertrophic cardiomyopathy, myocardial deposit diseases.

Extended FATE veiwis



CW: Peak pressure: V² x 4; AD < 2 m/s; PA < 1 m/s; TI < 2.5 m/s
PW: Mitral Inflow desc. time 140 - 240 m/s; MAX E < 1.2 m/s; E/A > 1
TVI: E/e' < 12; IVC < 20 mm

Systolic Ventricular Function

Ventricle	M-Mode	Normal	Mild ↓	Moderately ↓	Severely ↓
LV	EF (Teich) (%)	≥ 55	45 - 54	30 - 44	< 30
LV	FS (%)	≥ 25	20 - 24	15 - 19	< 15
LV	MSS (mm)	< 10	7 - 12	13 - 24	> 24
LV	Mapse (mm)	≥ 11	9 - 10	6 - 8	< 6
RV	Tapse (mm)	16 - 20	11 - 15	6 - 10	< 6

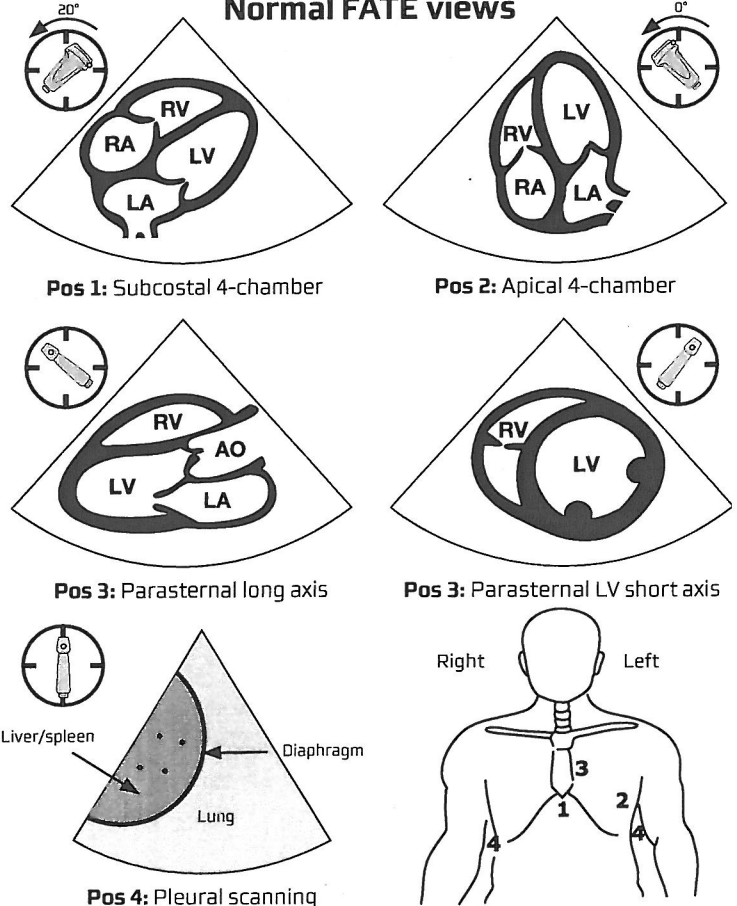
For additional information: www.usabcd.org

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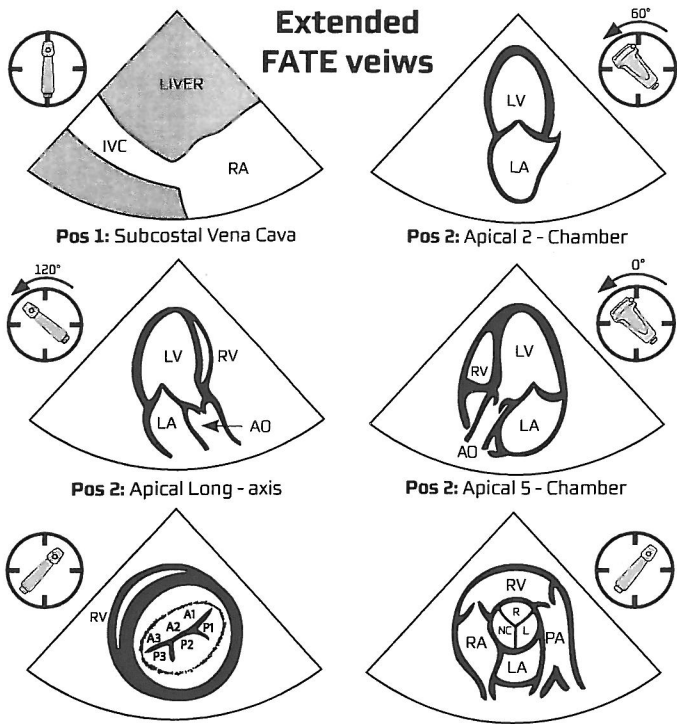
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Scanning through position 1-4 in the most favourable sequence

Normal FATE views



Disclaimer: The authors do not assume any responsibility for the use of this FATE Card. Layout: Department of Communication, Aarhus University Hospital, Slegby - ES64.10.14



Pos 1: Subcostal Vena Cava **Pos 2: Apical 2 - Chamber**
Pos 2: Apical Long - axis **Pos 2: Apical 5 - Chamber**
Pos 3: Parasternal short axis mitral plane **Pos 3: Parasternal aorta short axis**

CW: Peak pressure: $V^2 \times 4$; AO < 2 m/s; PA < 1 m/s; TI < 2.5 m/s
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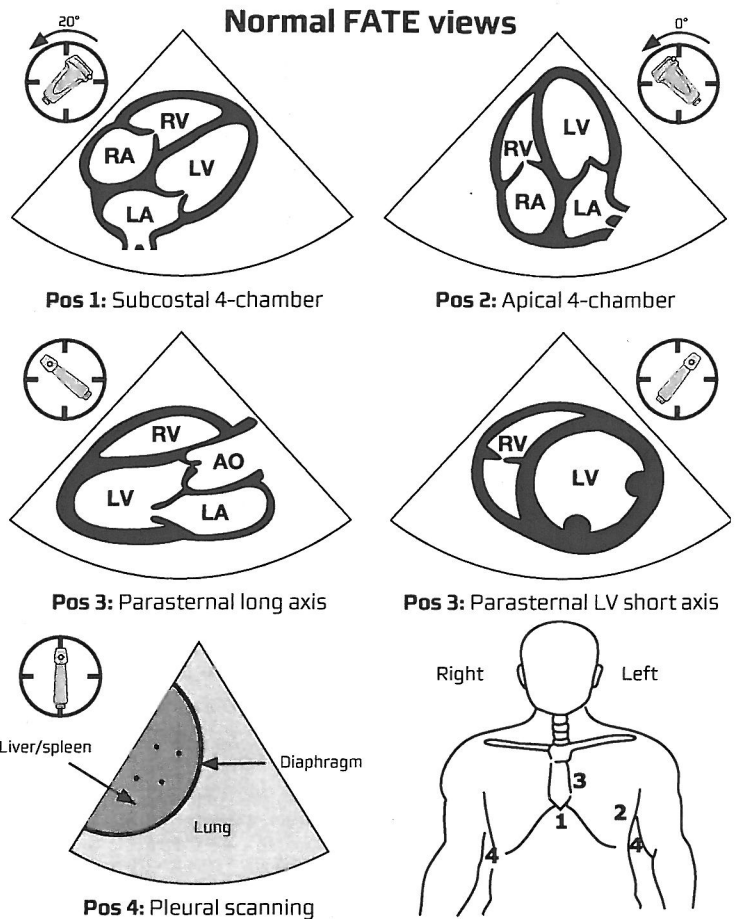
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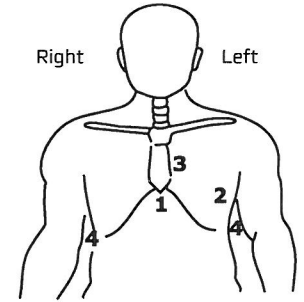
Scanning through position 1-4 in the most favourable sequence



Pos 1: Subcostal 4-chamber **Pos 2: Apical 4-chamber**

Pos 3: Parasternal long axis **Pos 3: Parasternal LV short axis**

Pos 4: Pleural scanning



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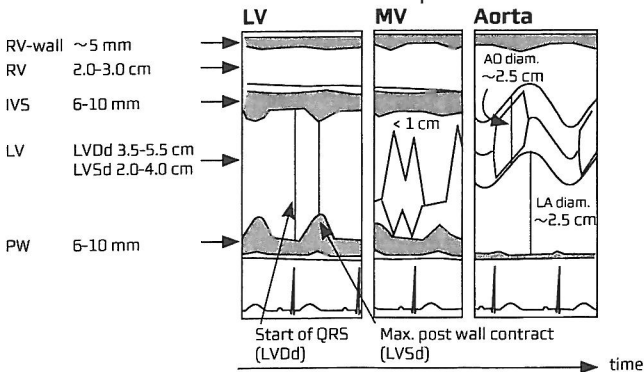
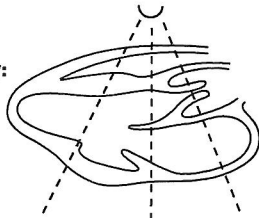
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EF ~ 2 x FS

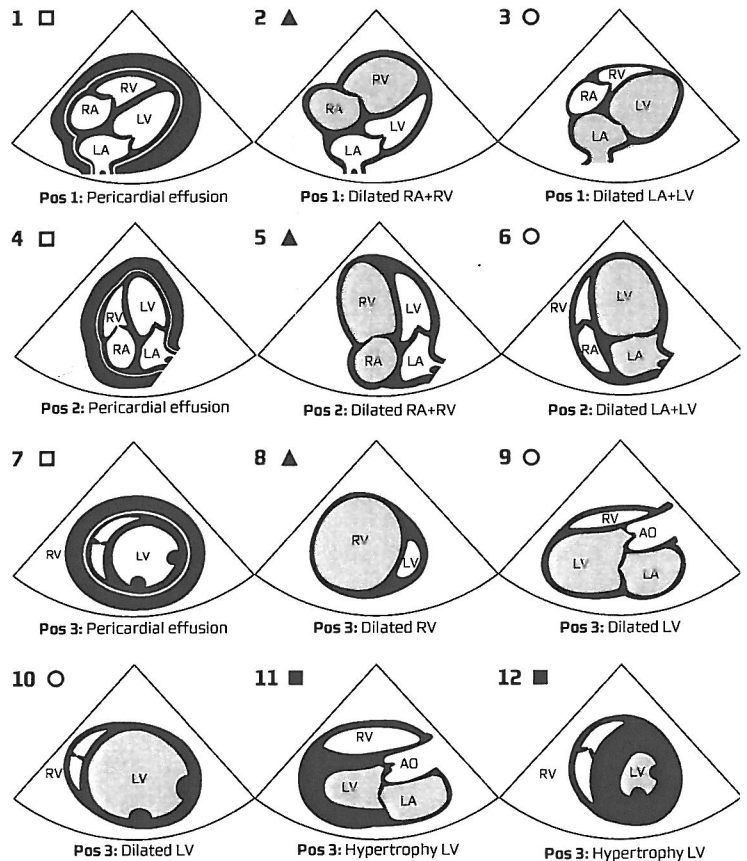


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