

Hands-on simulation workshop on Echocardiography -GARC-2024

Echocardiography is a primary tool for comprehensive evaluation in preoperative period, during intra-operative instabilities & in ICU setting.

It is noninvasive, safe, inexpensive, widely available, portable and allows for an anatomical, functional, and hemodynamic assessment of the heart.

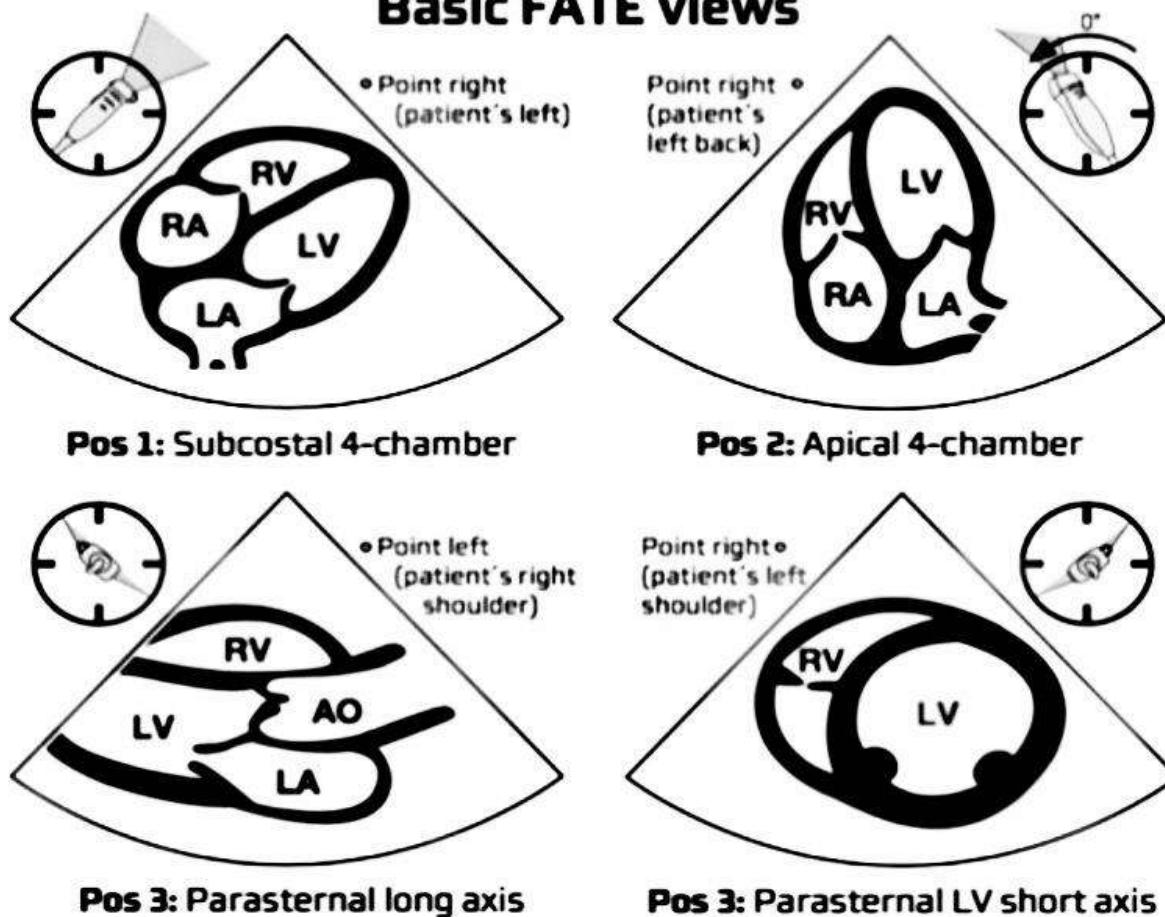
Trans thoracic echocardiography (TTE) provides adequate assessment in most of the patients. When the quality of the ultrasound signal is poor as in obesity, mechanical ventilation, surgical patients with dressings or in certain clinical settings such as acute aortic diseases and valvular diseases, transesophageal echocardiography (TEE) may provide a clearer evaluation.

For TTE assessment, views recommended by FATE protocol are helpful in rapid assessment in most of these situations.

Focus Assessed Transthoracic Echo (FATE)

Scanning through position 1-4 in the most favourable sequence

Basic FATE views



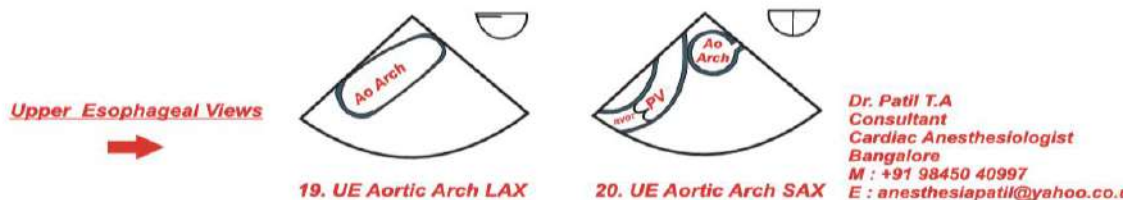
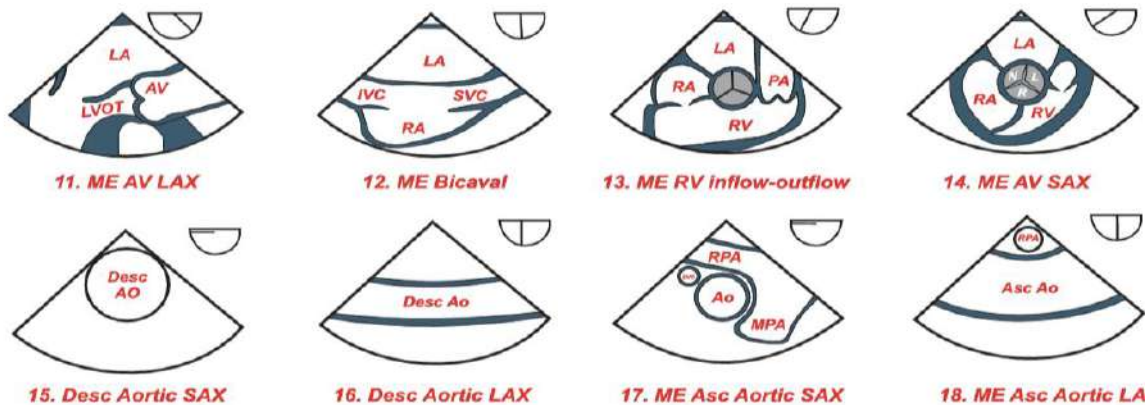
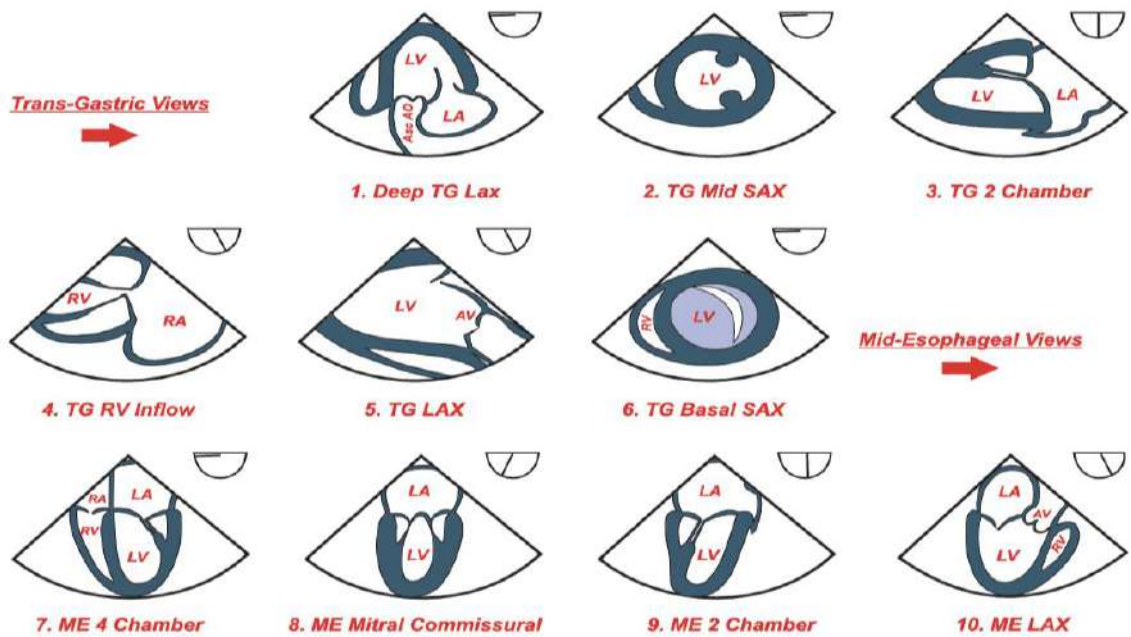
RUSH exam provides a prudent work flow to make early diagnosis. It can be found in the below link.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3485910/pdf/CCRP2012-503254.pdf>

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For TEE assessment, 20 views recommended by American society of echocardiography can be utilised.

TEE - Comprehensive Views



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Pathologies that can be assessed include Cardiac tamponade, pulmonary embolism, air embolism, hypovolemia, peri-operative MI, HOCM, failing LV & RV, poor oxygenation secondary to PFO, aortic dissection, valvular lesions and others.

Candidates are advised to go through this study material to make best use of the hands-on simulation workshop session.