

WHO TO REFER FOR AN ECHOCARDIOGRAM

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HEART FAILURE SOCIETY OF SOUTH AFRICA

**According to the “Guidelines for
Appropriateness Criteria for
Transthoracic
Echocardiography” issued by
ACC and ASE in 2007**

JASE 2007; 20; 7:787-805

✚ Echocardiography is a highly versatile technique, uniquely informative about cardiac structure and function, cost-effective and non-invasive.

✚ Purpose:

- To **screen** a subject for the possibility of disease
- To **investigate** symptoms or abnormal physical findings
- To **evaluate** a known or suspected clinical condition

SCREENING

- ✚ Patients with features of **Marfan Syndrome** and **related connective tissue diseases**
- ✚ Potential **donors** for cardiac transplantation
- ✚ **First-degree relatives** of patients with **hypertrophic cardiomyopathy**
- ✚ **First-degree relatives** of patients with **dilated cardiomyopathy of unknown etiology**

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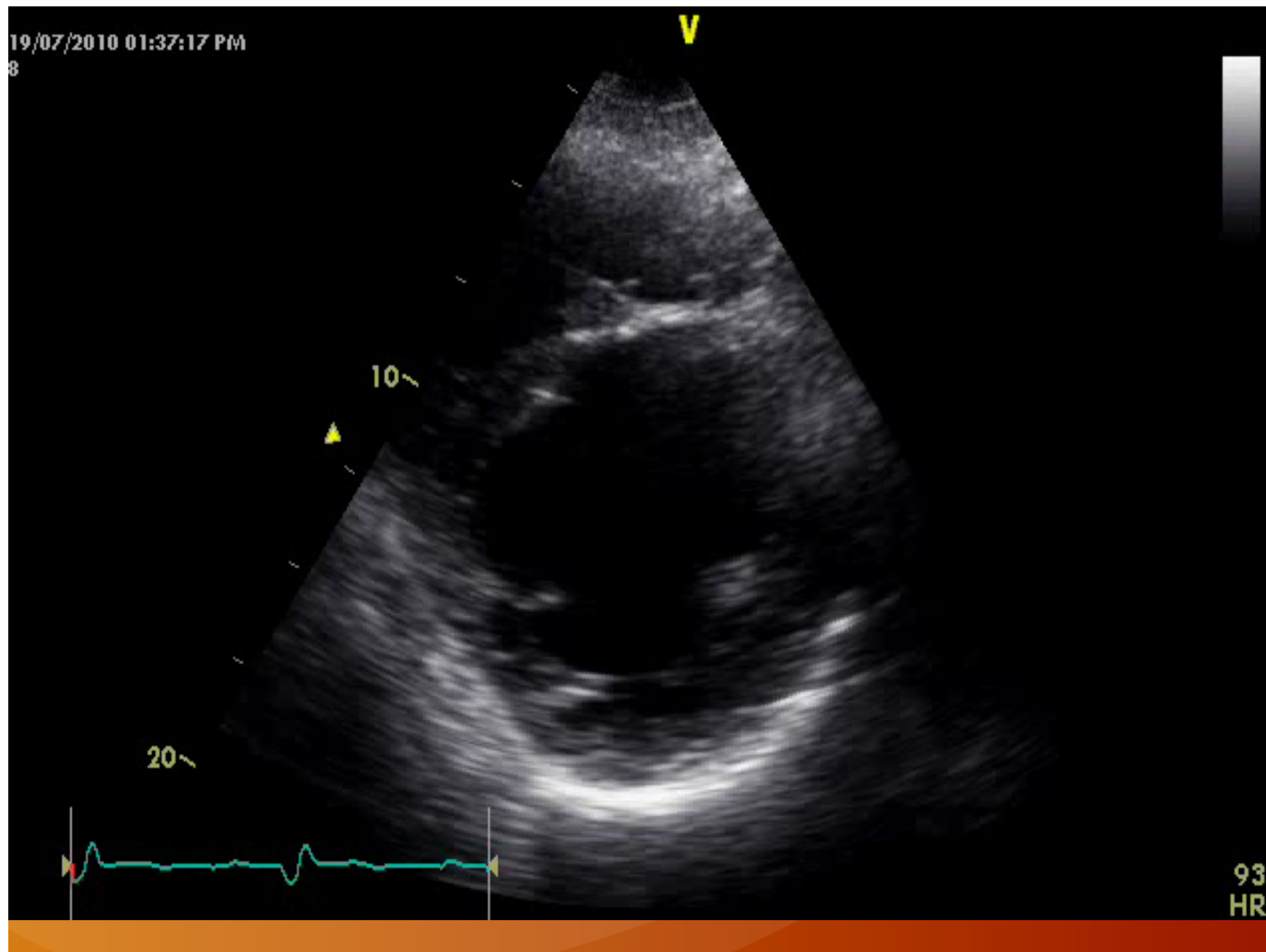
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- ✚ Patients undergoing **chemotherapy** with cardiotoxic agents, baseline and re-evaluation
- ✚ Routine screening for participation in competitive sports in **athletes** without evidence of heart disease
- ✚ Patients with **systemic autoimmune diseases** that may involve the heart
- ✚ Patients with history of **anorectic drug** use

DIABETES MELLITUS

- **Routine** echocardiogram for **pre-clinical** diabetic cardiomyopathy
- **Left ventricular systolic/diastolic dysfunction**
- **Left ventricular hypertrophy**

**Independent of Coronary Artery
Disease and Hypertension**

Eur J Heart Failure June 2010

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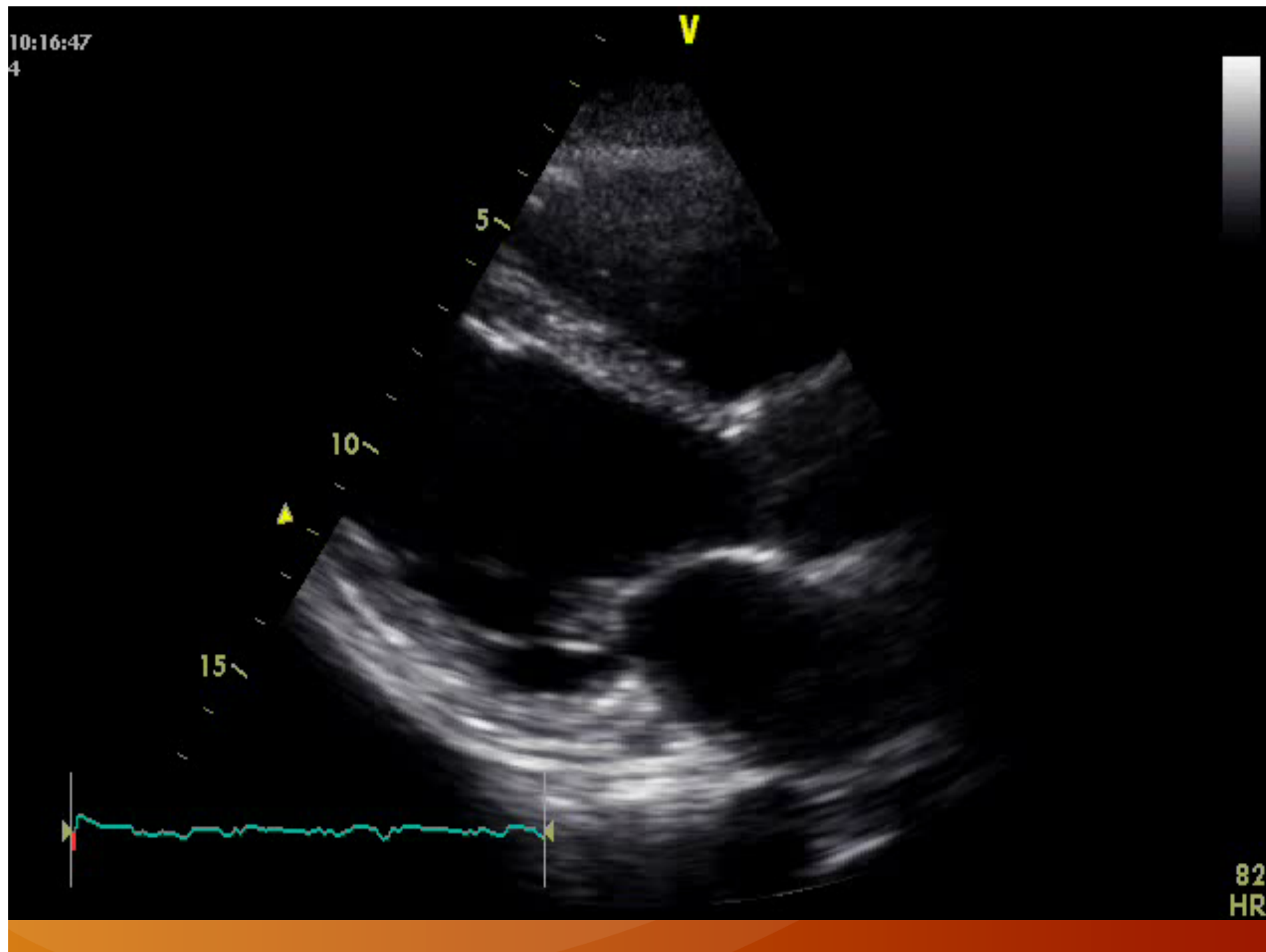
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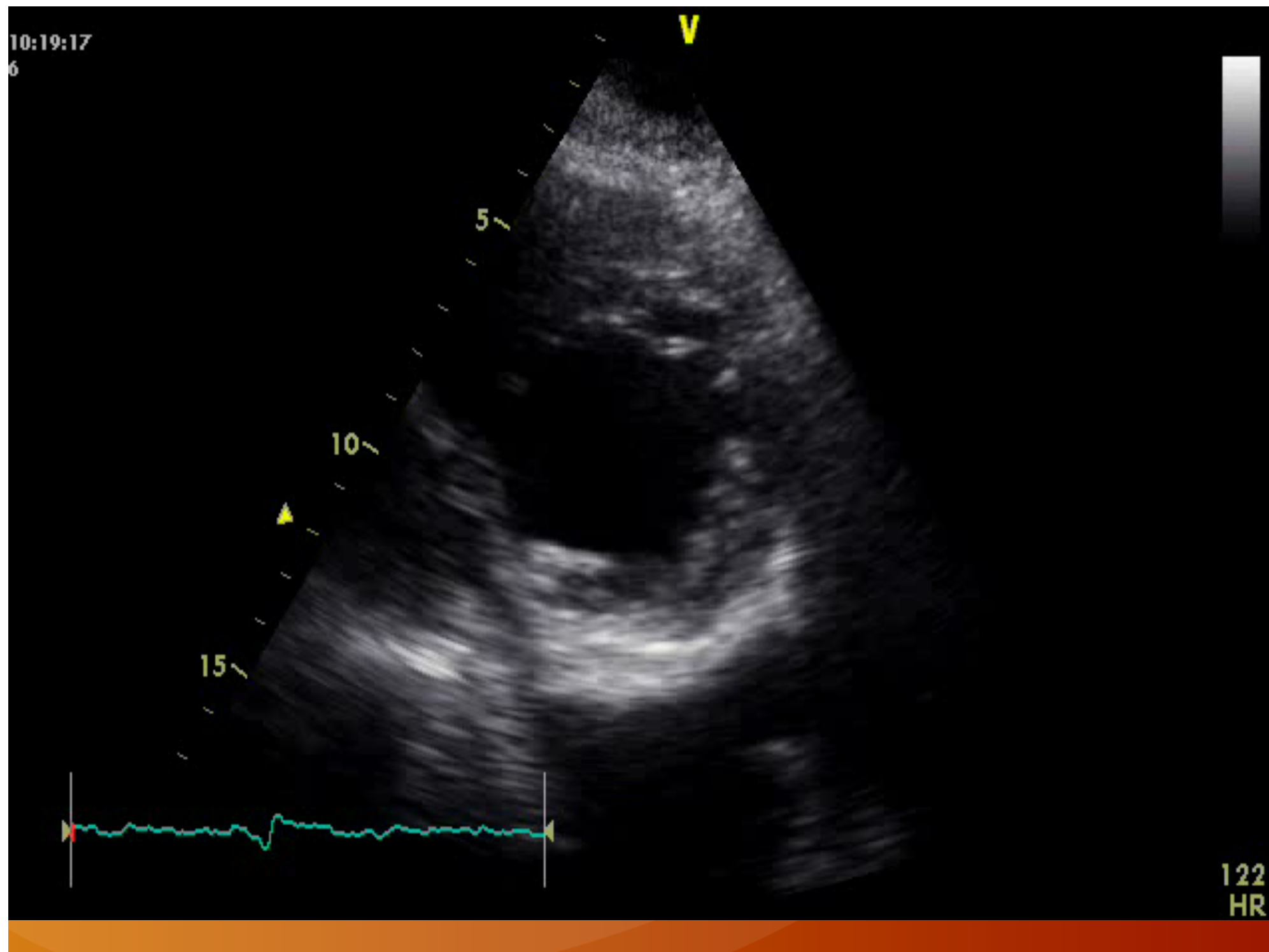
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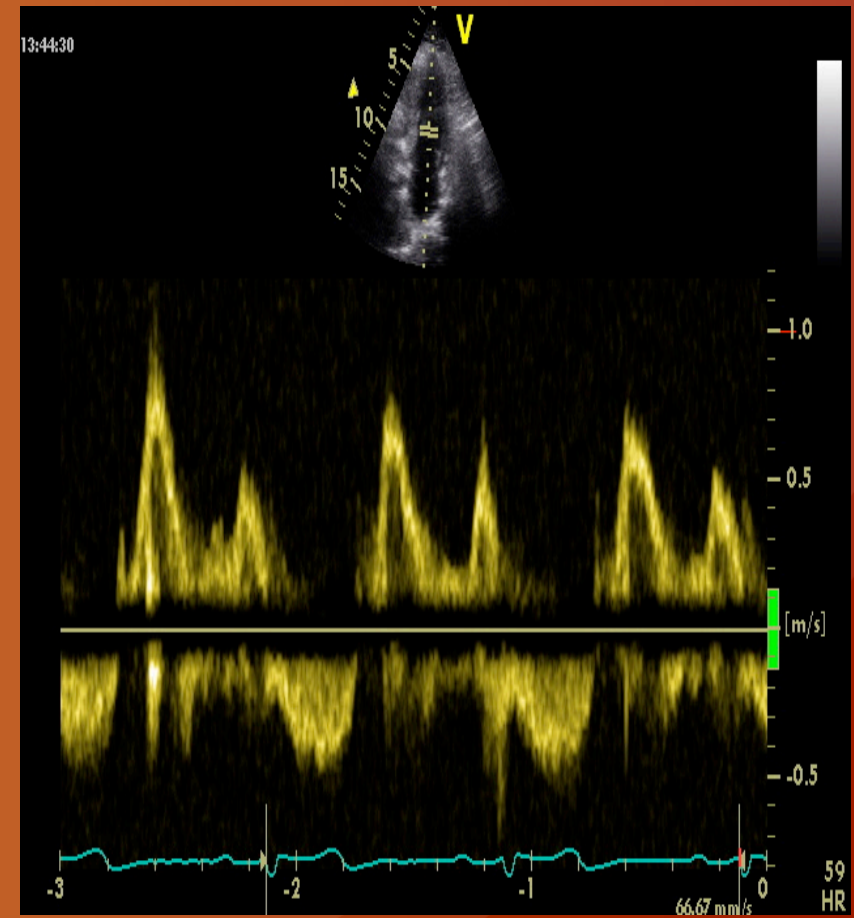
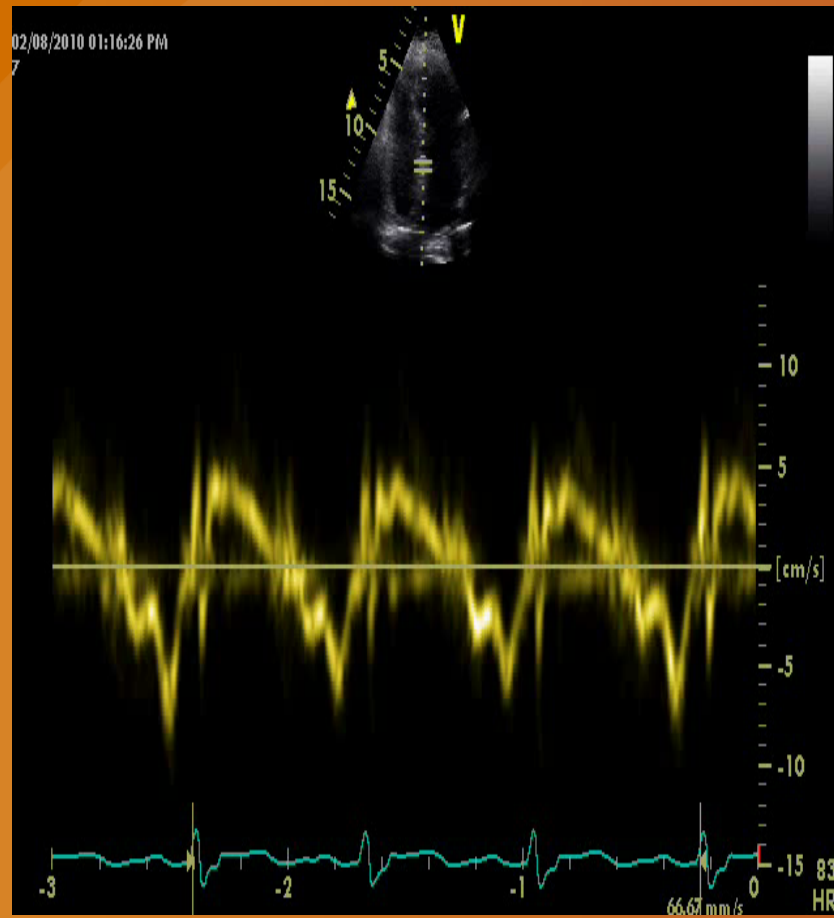
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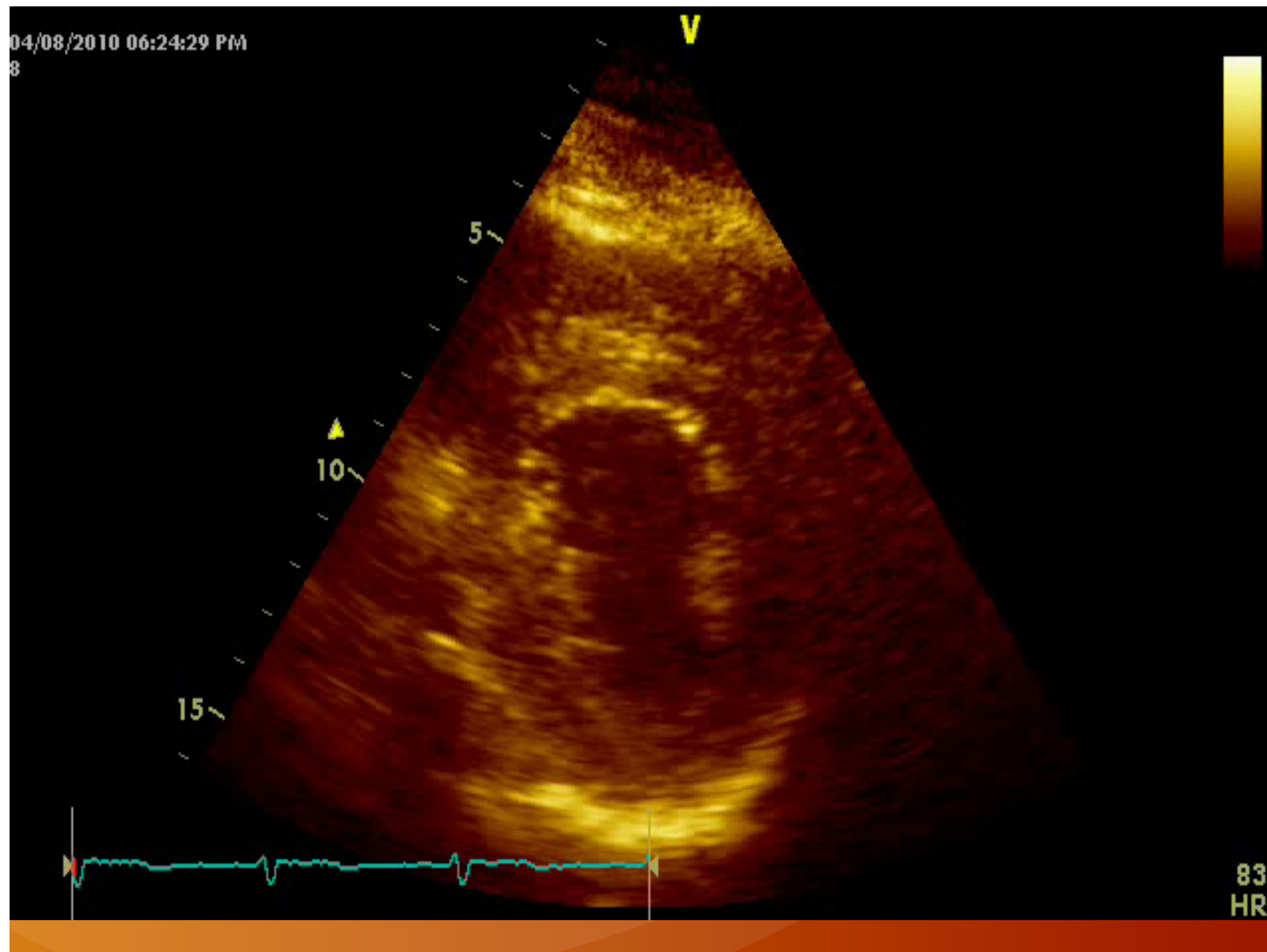
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INVESTIGATE AND EVALUATE

CHEST PAINS

- Wall motion abnormalities
- Evaluation of ventricular function
- Valvular aortic stenosis
- Hypertrophic cardiomyopathy
- Pulmonary embolism

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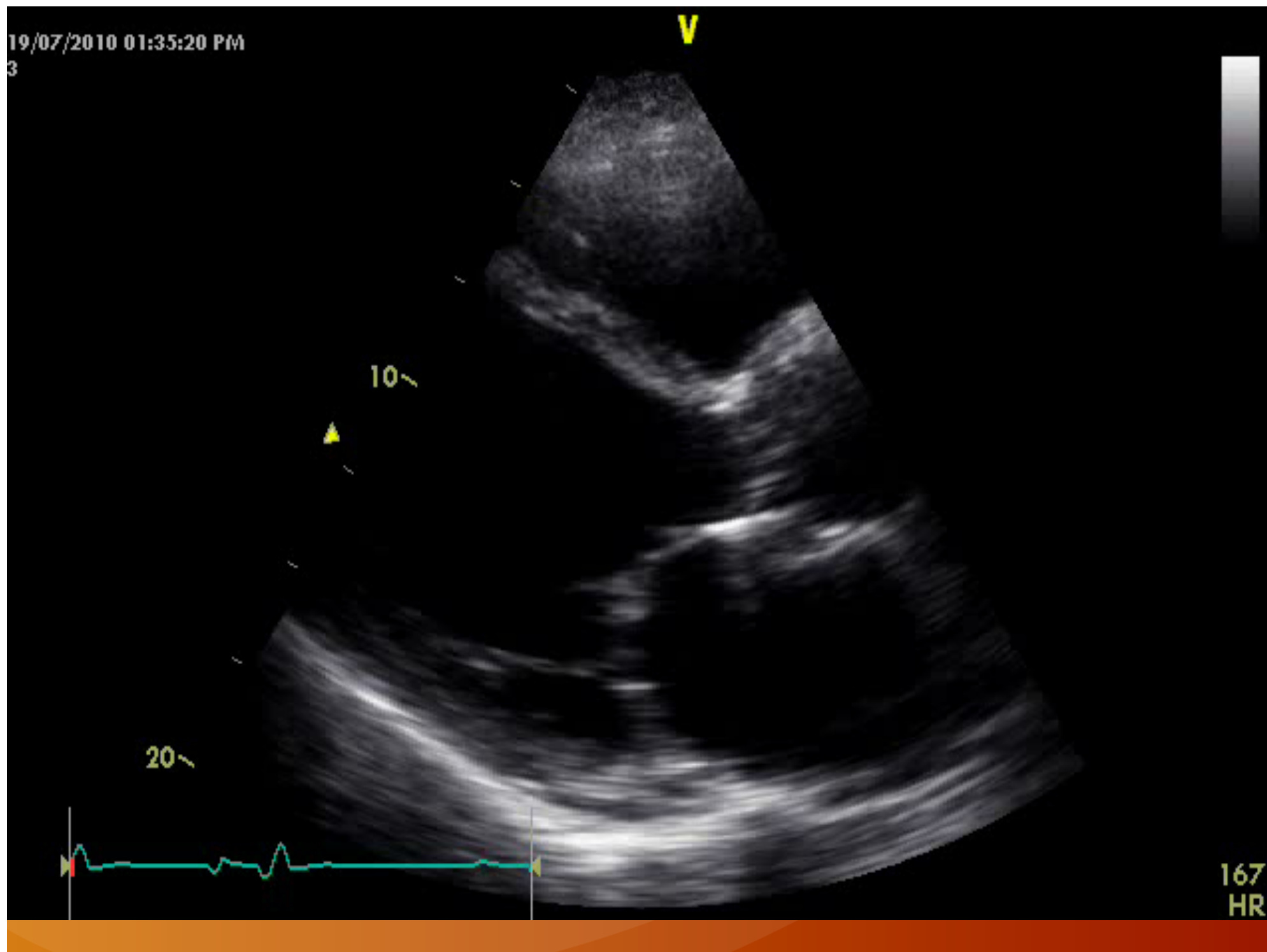
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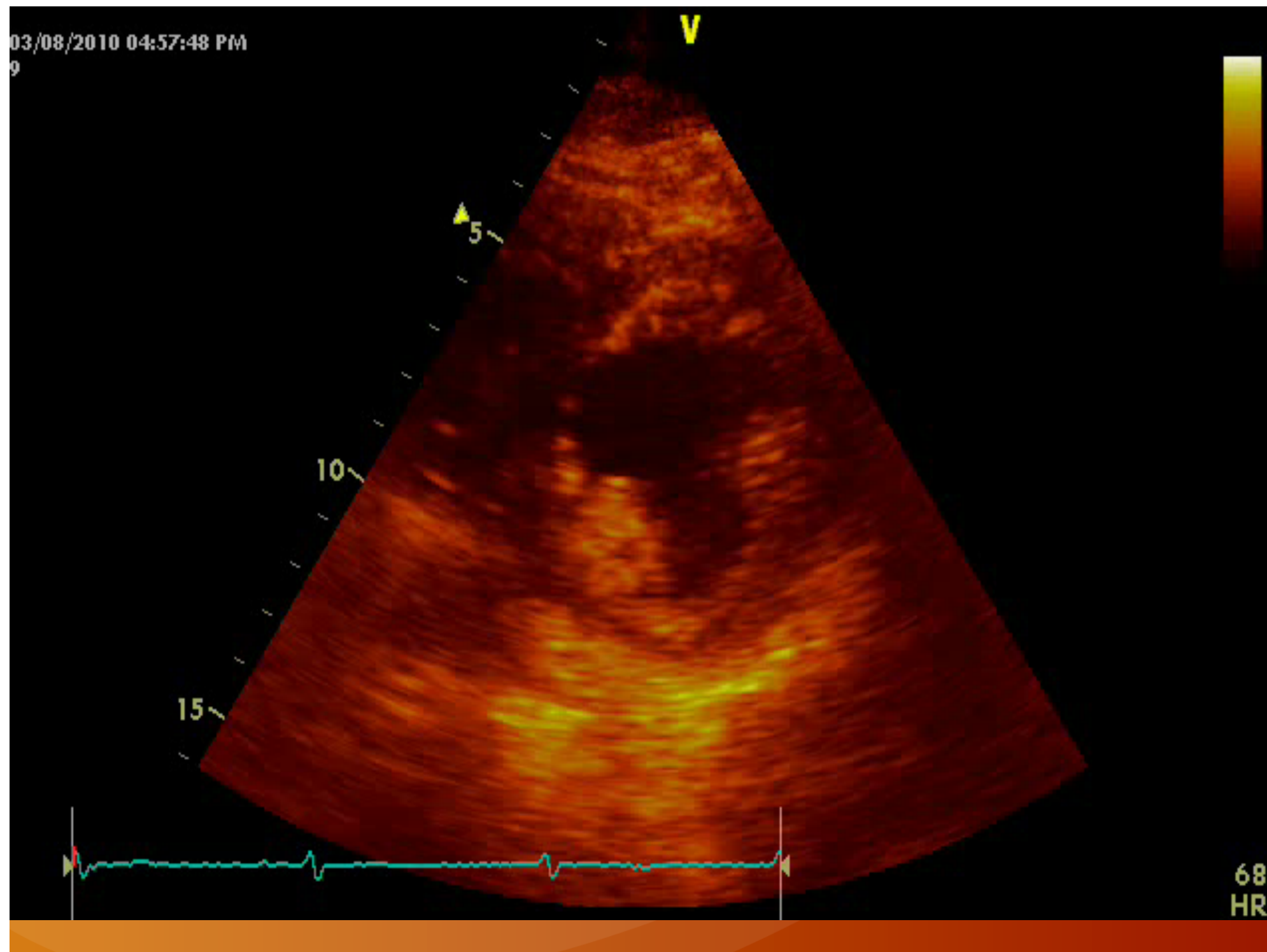
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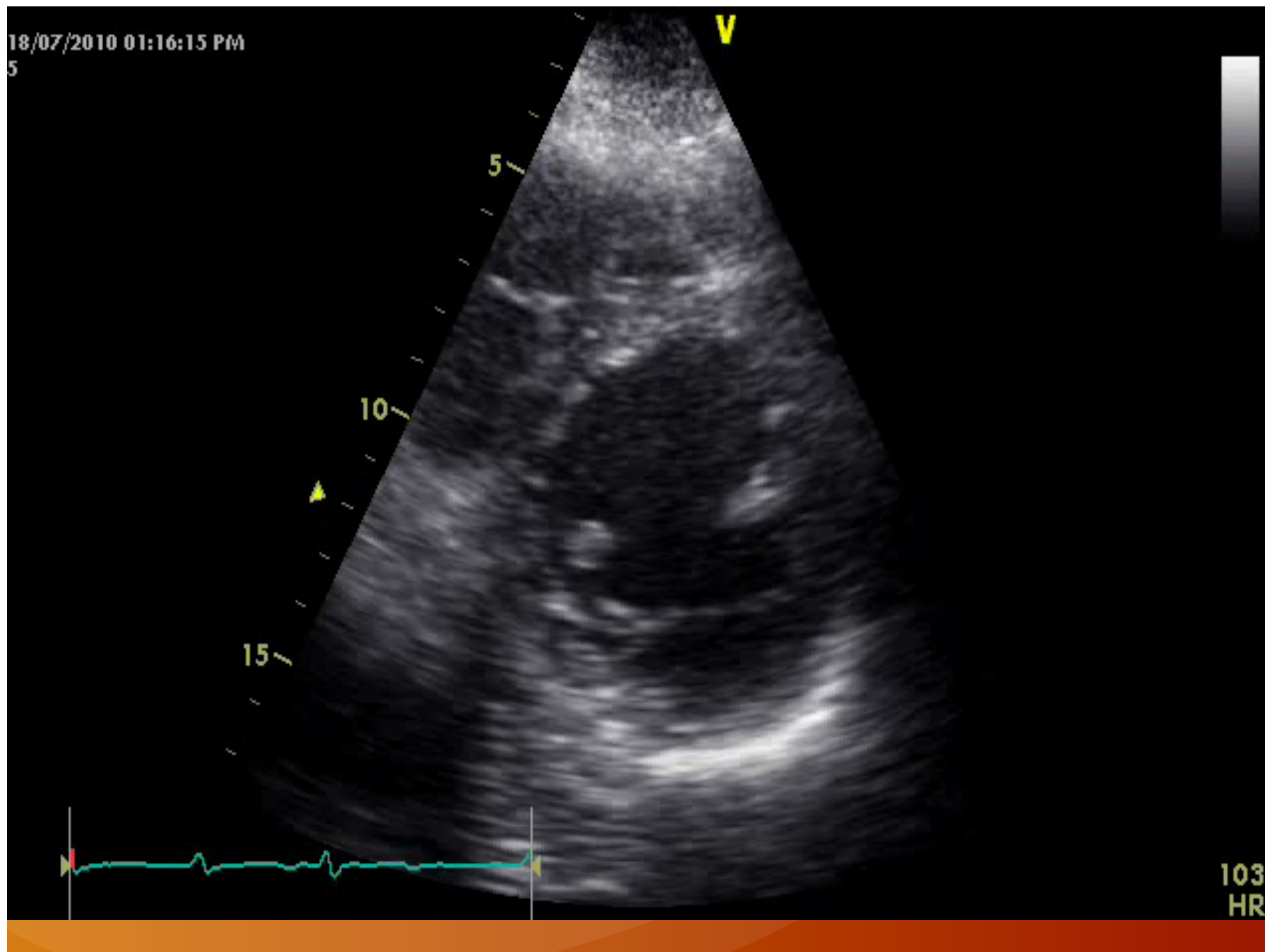
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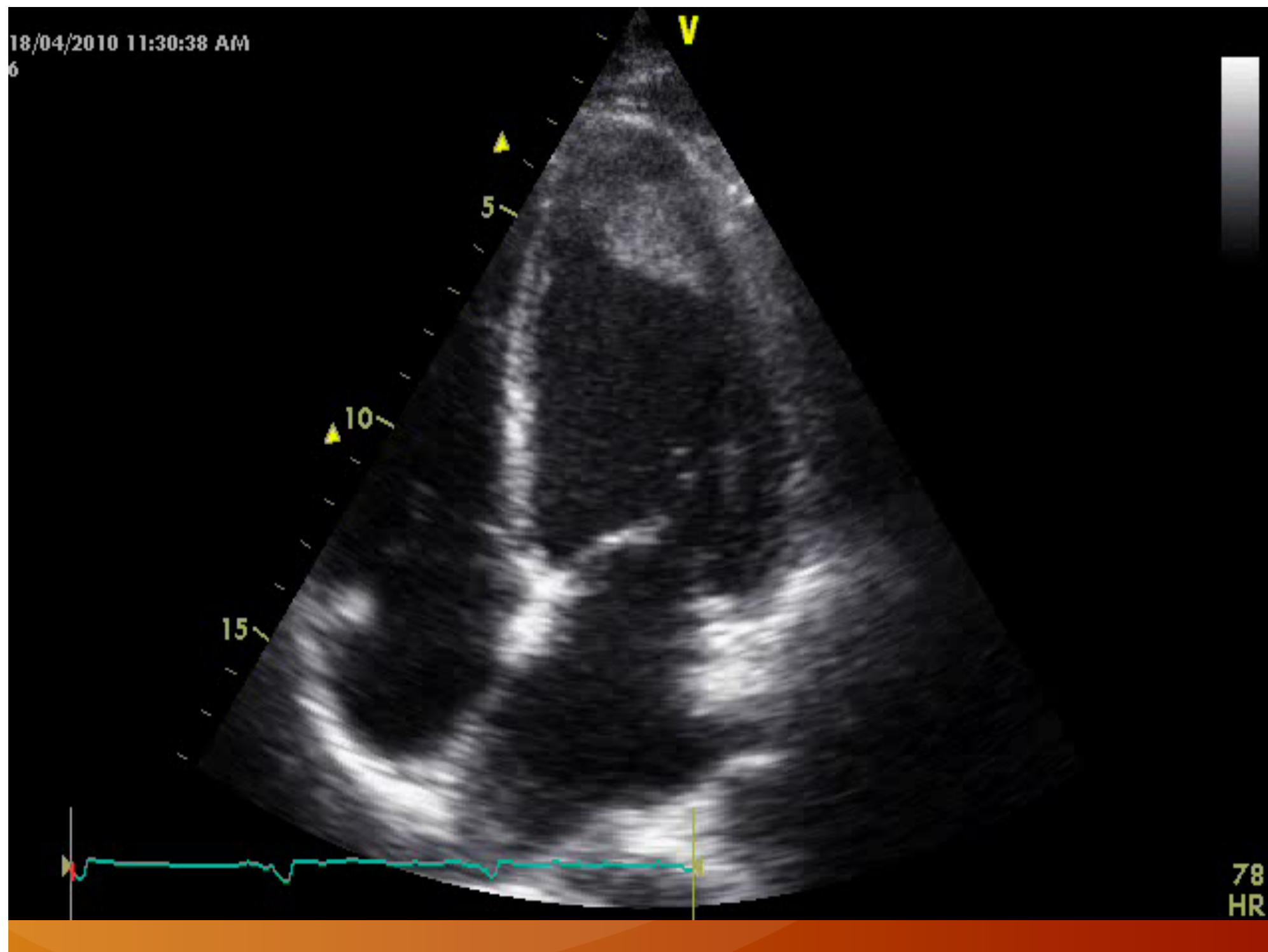
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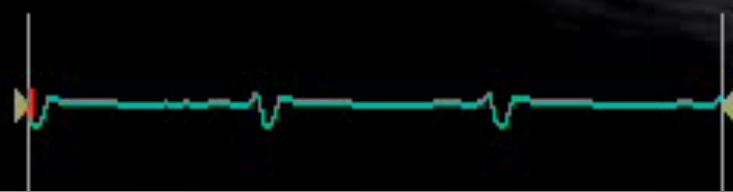
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SYNCOPE

- **Underlying structural heart disease**
 - **Severe aortic stenosis**
 - **Cardiomyopathy**
 - **Systolic dysfunction**
 - **Obstructive cardiac tumours or thrombi**
 - **Aortic dissection**
 - **Pericardial tamponade**

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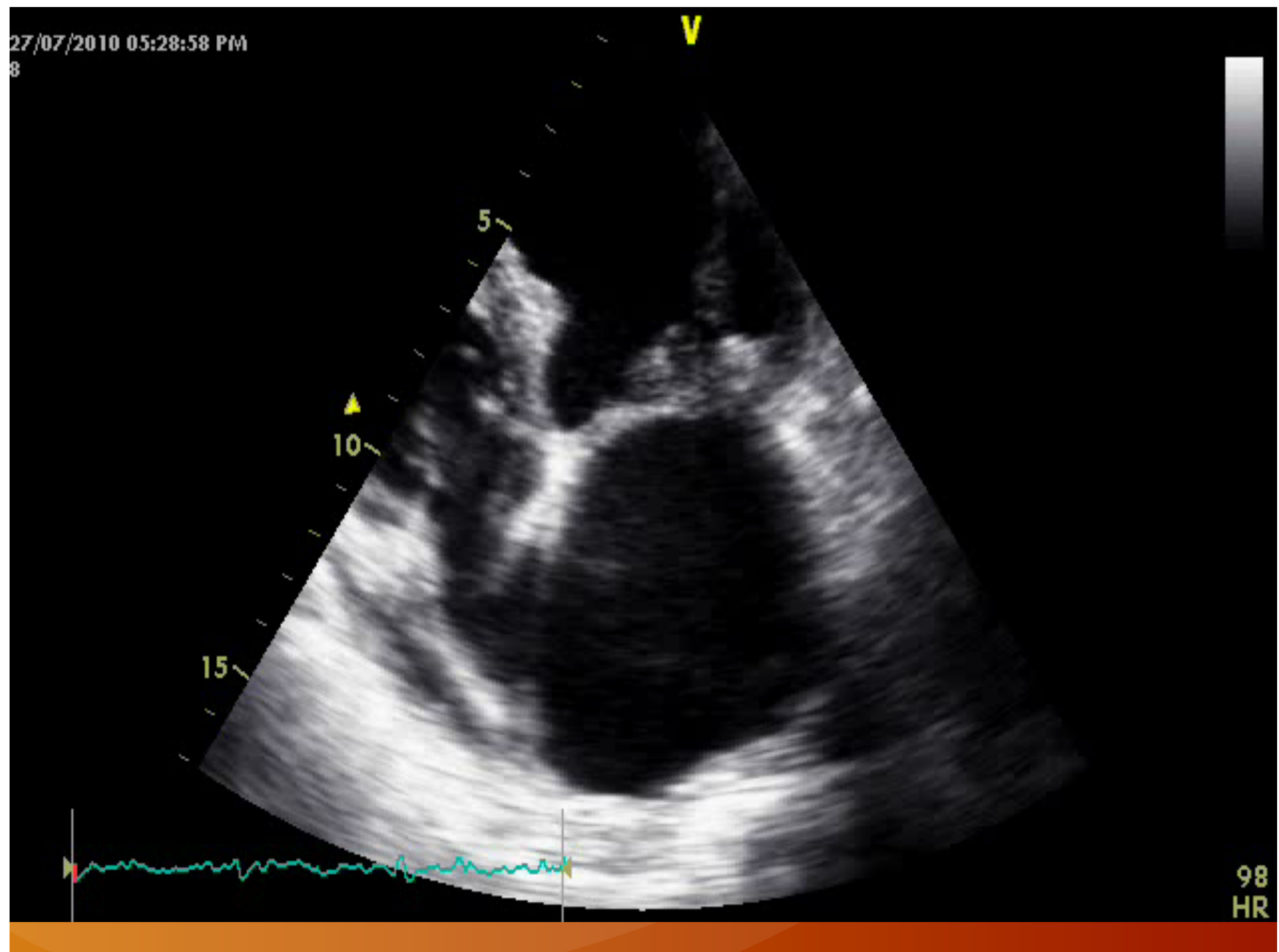
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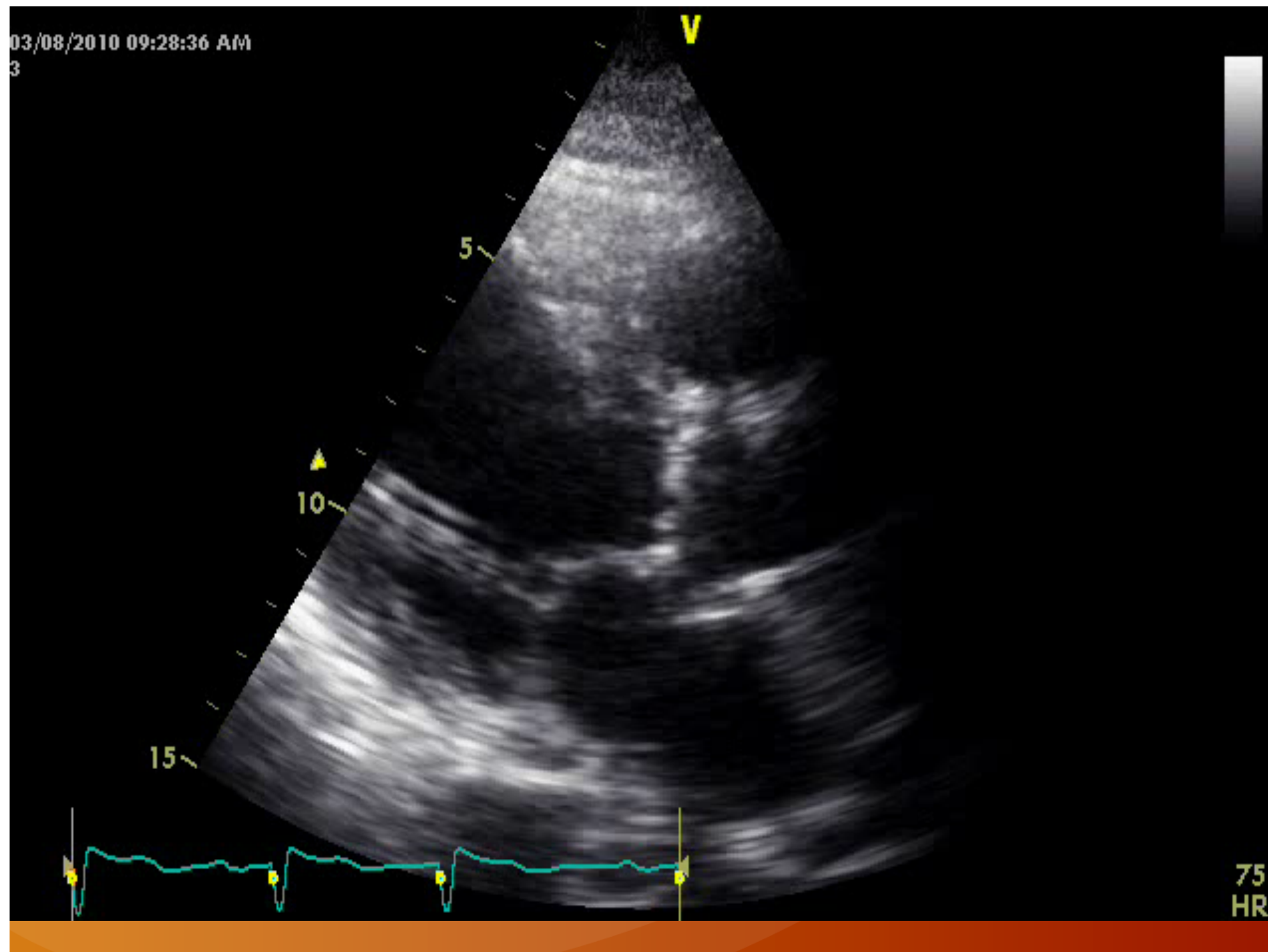
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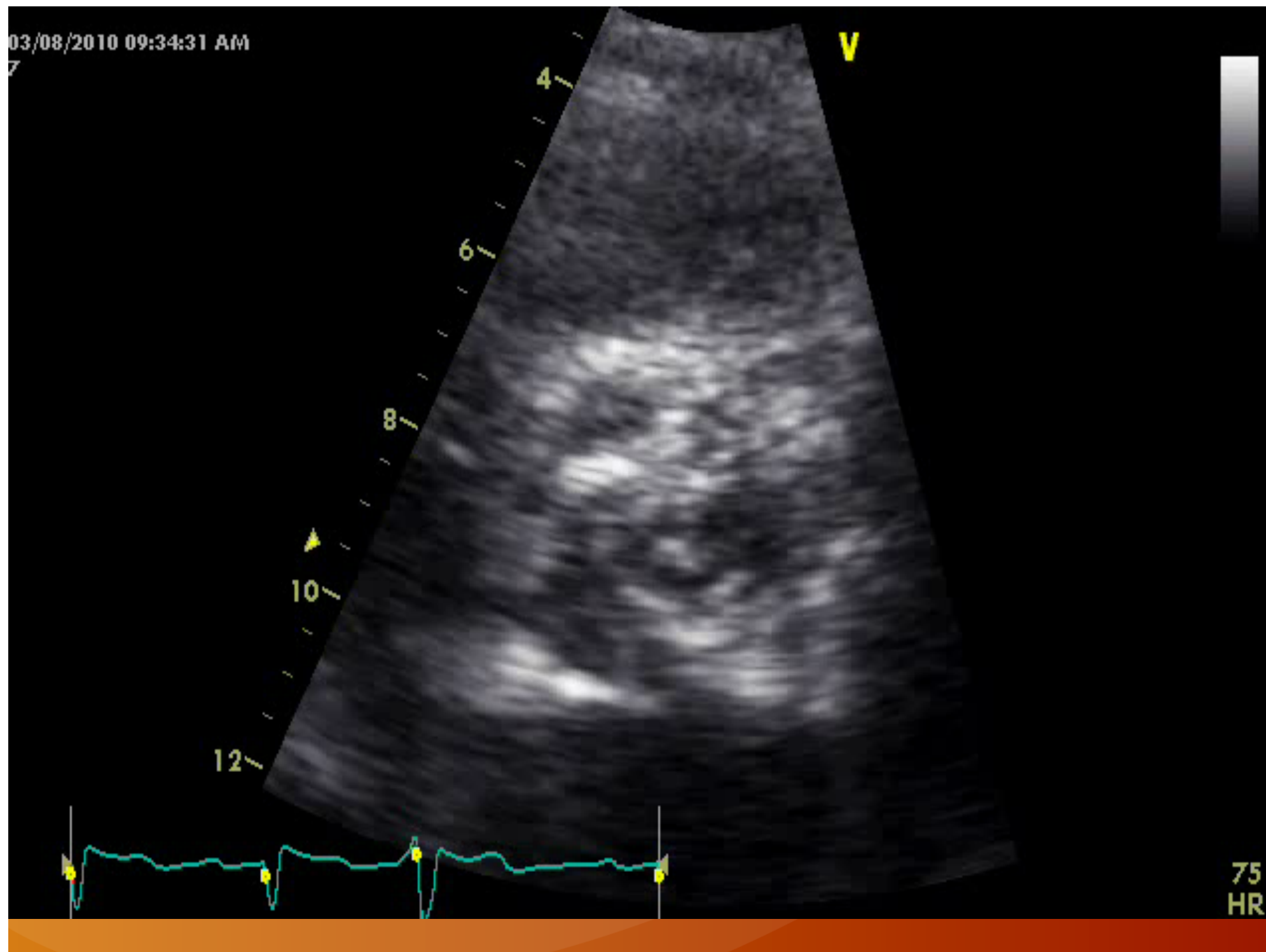
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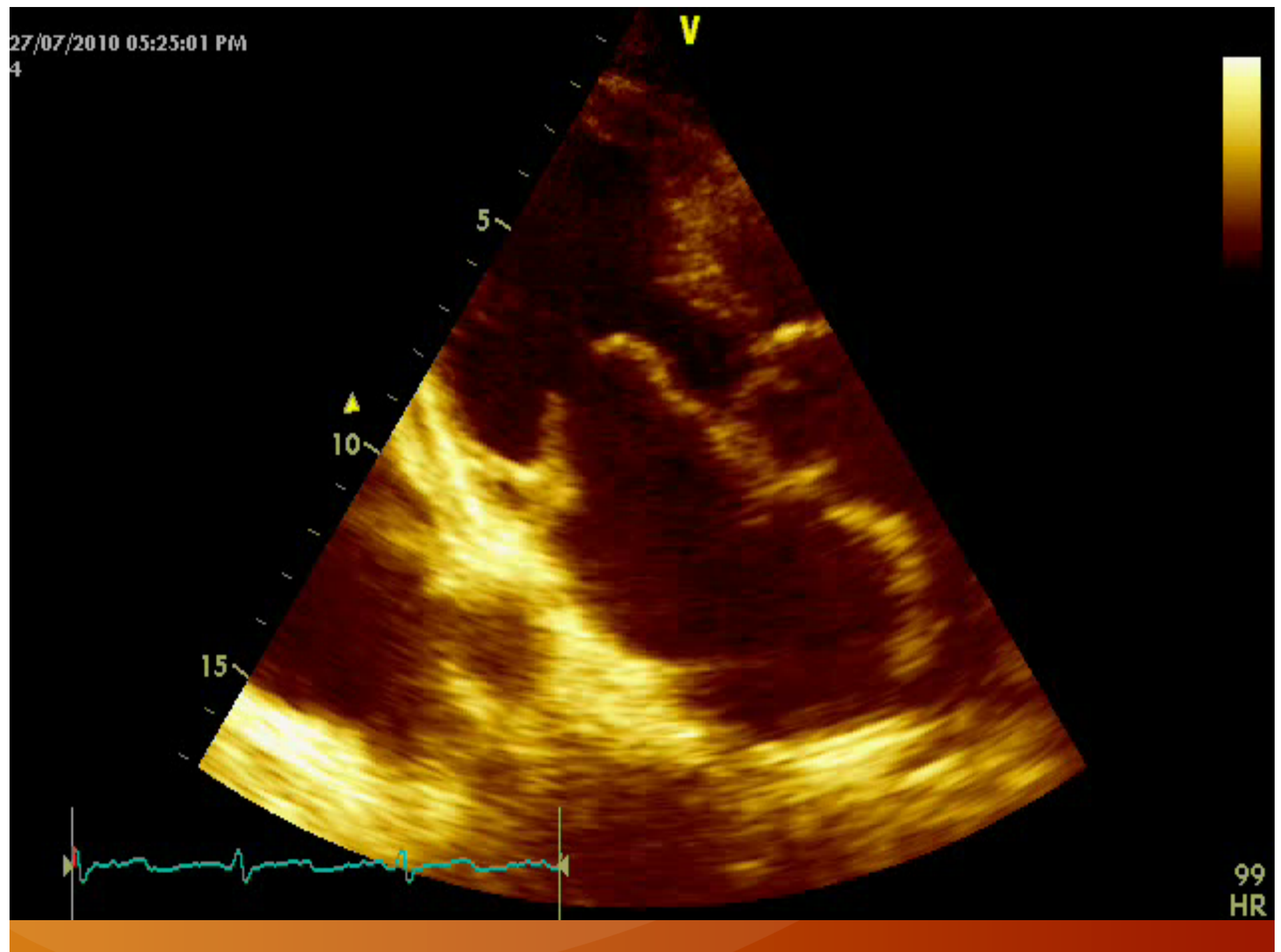


PALPITATIONS

- **Left ventricular systolic dysfunction**
- **Mitral valve prolapse**
- **Congenital heart disease**
 - **ASD**
 - **Ebstein's anomaly**
 - **Tetralogy of Fallot**

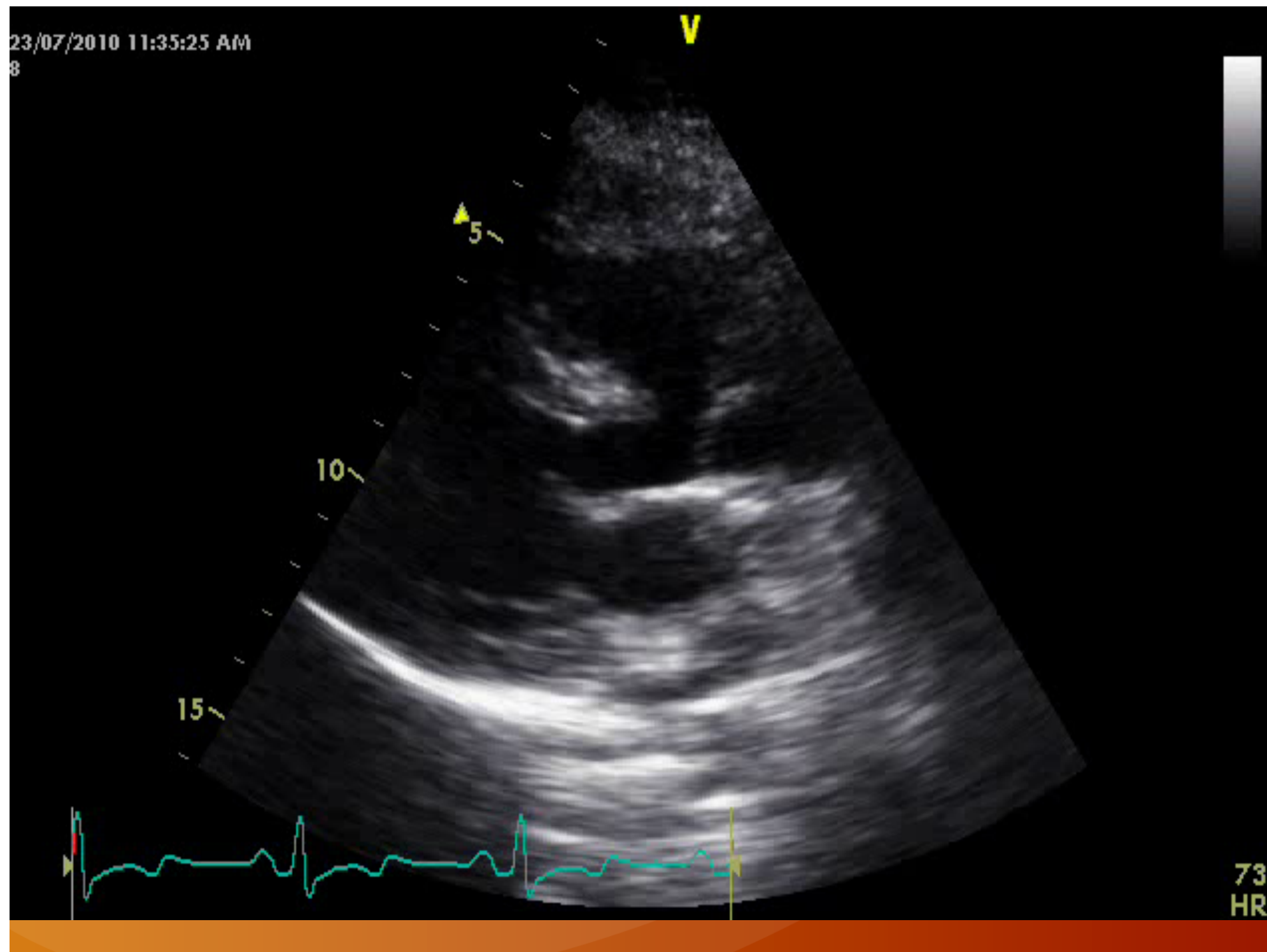
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CARDIAC MURMUR

- **Valvular regurgitation**
- **Valvular stenosis**
- **Hypertrophic obstructive cardiomyopathy**
- **Ventricular septal defect**

NEW CARDIAC MURMUR

- **Infective endocarditis**

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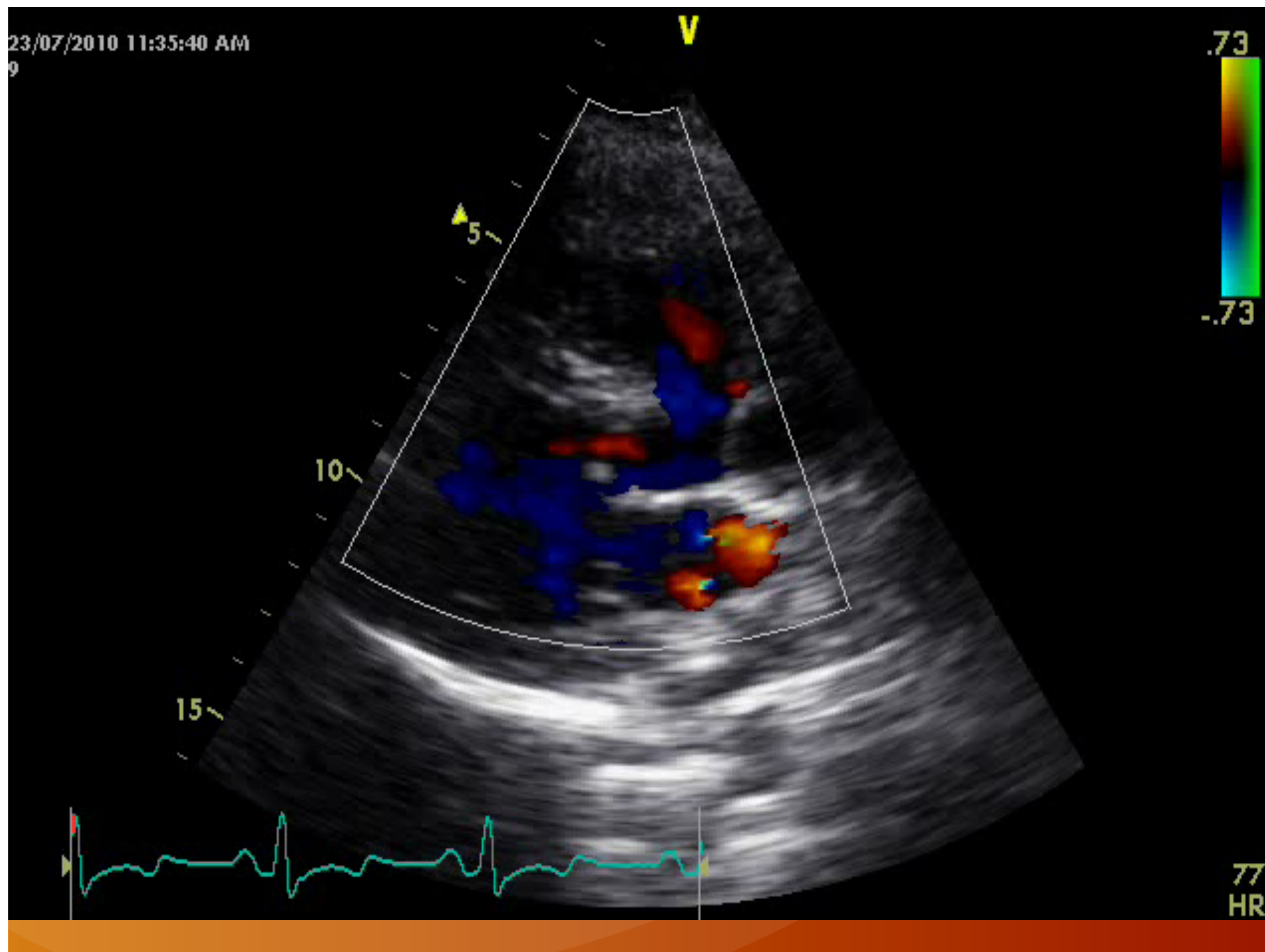
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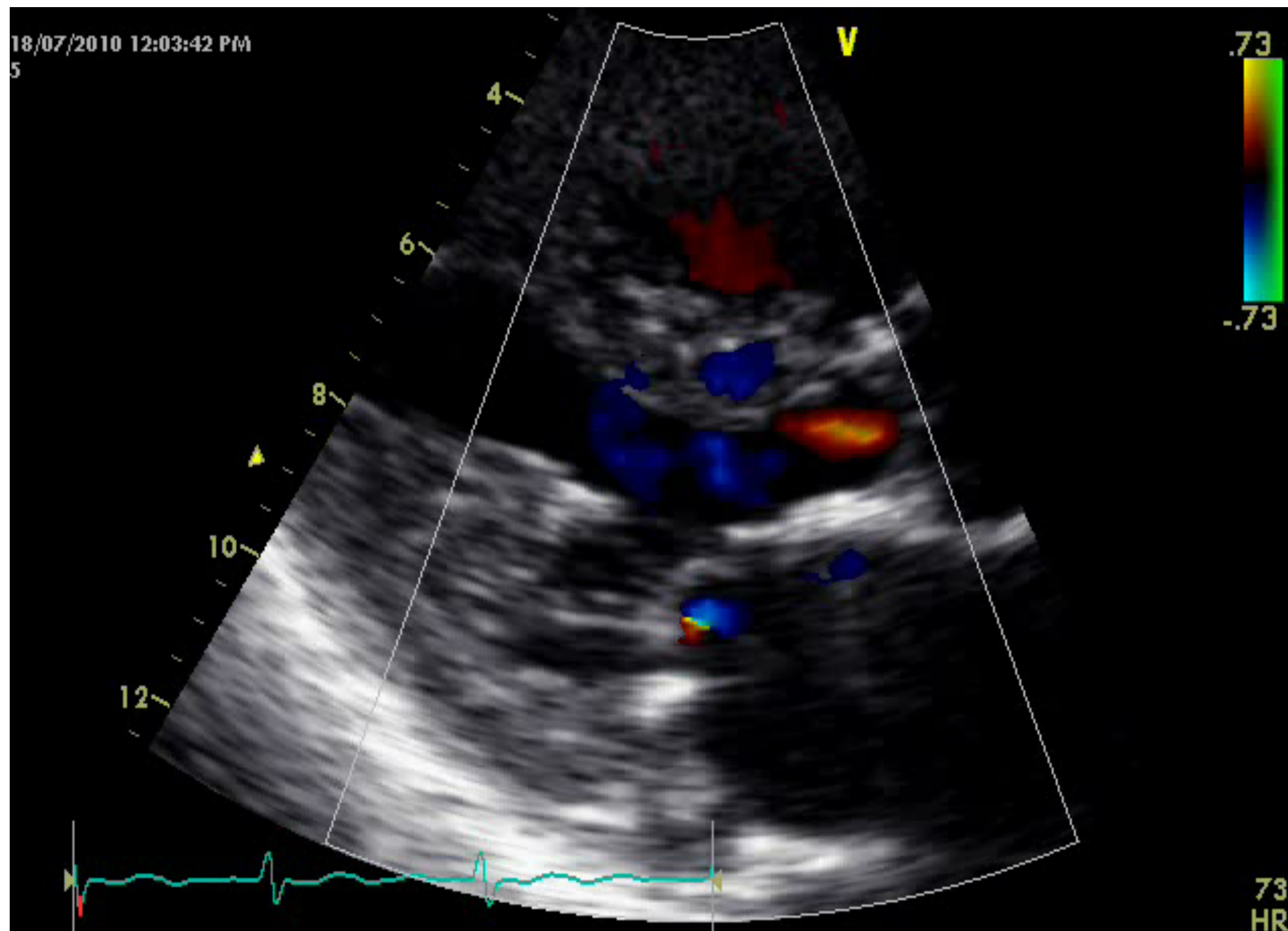
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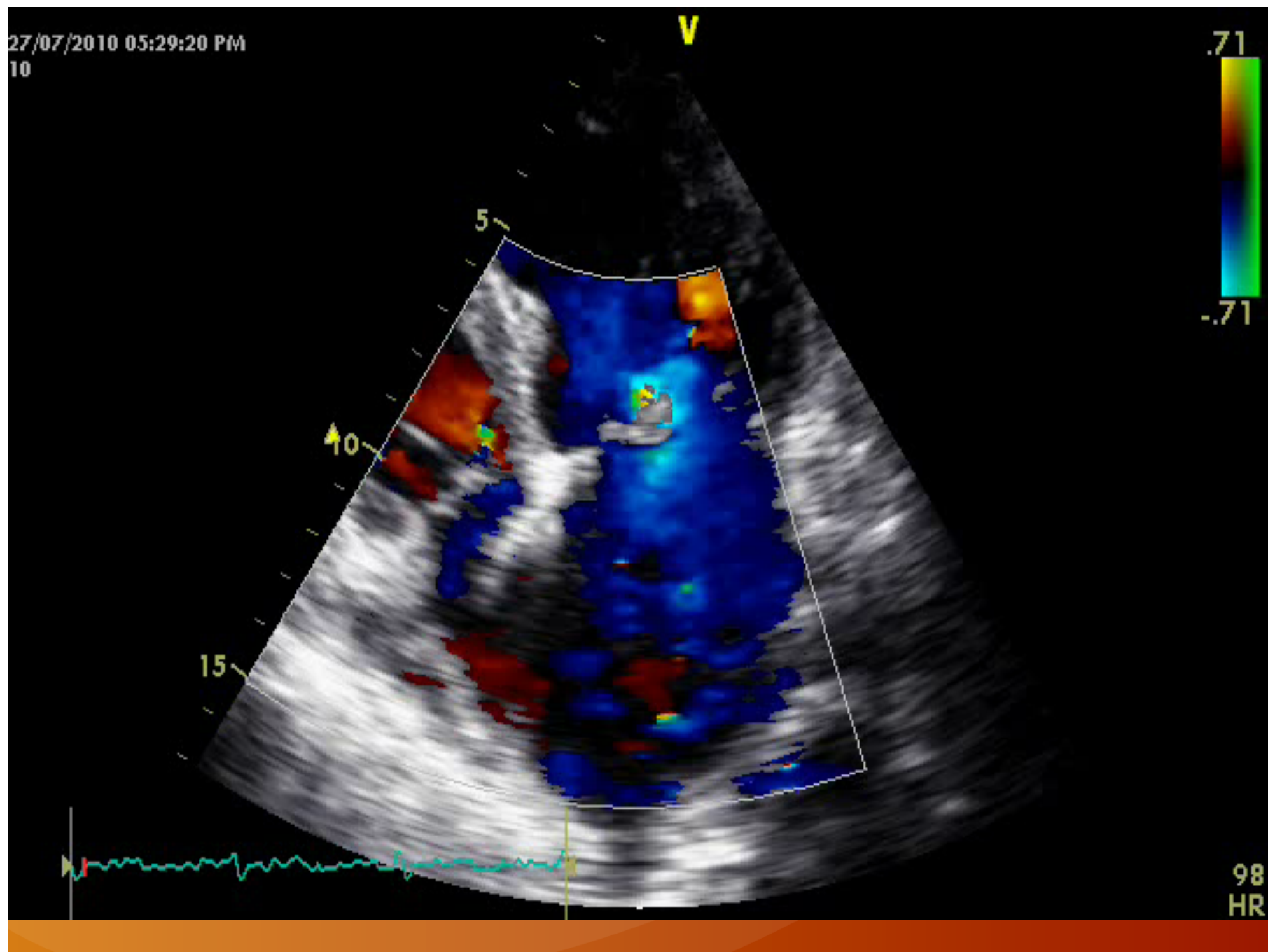
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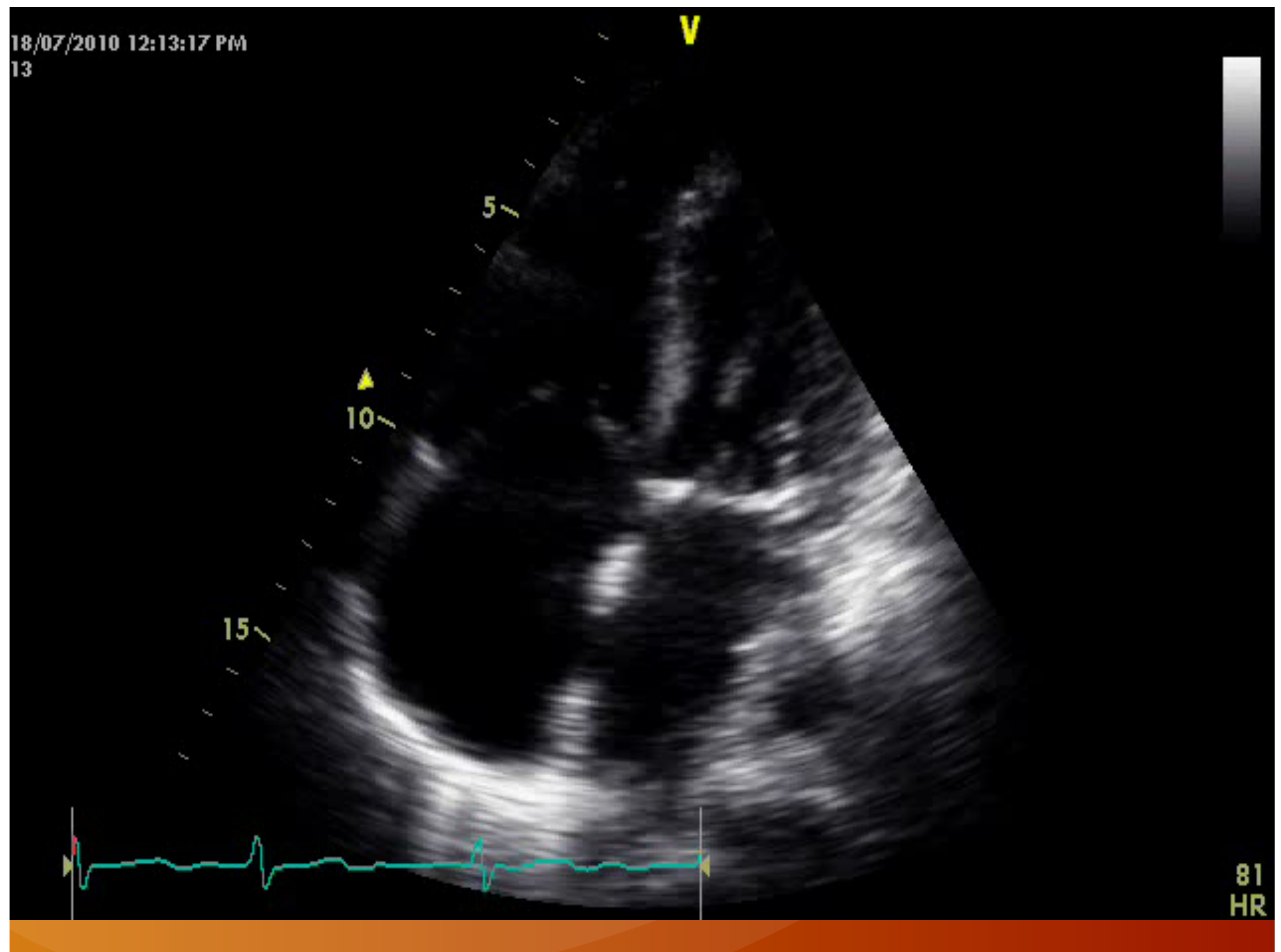
CARDIOMEGALY

- **Dilated cardiomyopathy**
- **Pericardial effusion**
- **Specific chamber enlargement**

ABNORMAL ECG FINDINGS

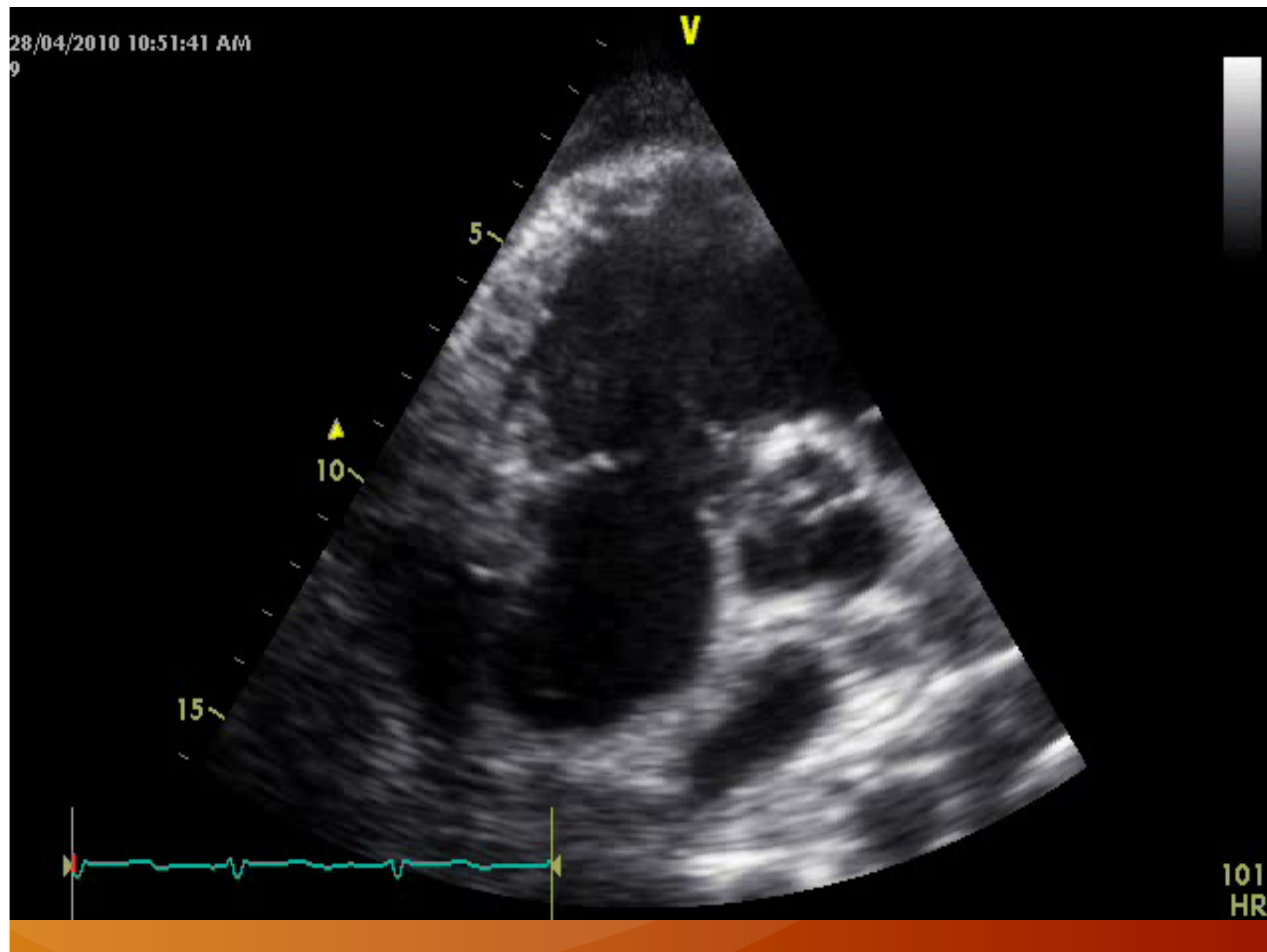
- **Arrhythmias**
- **Conduction disturbances**
- **Left ventricular hypertrophy**
- **ST/T changes**

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DYSPNOEA AND OEDEMA

Echocardiography : single most useful tool for diagnosis, aetiology, risk stratification, monitoring treatment response in **Heart Failure**

- **Cardiac anatomy: volumes, geometry, mass**
- **Wall motion abnormalities**
- **Valvular function**
- **Left Ventricular systolic dysfunction**
 - **LVEF/Global longitudinal strain**
- **Left ventricular diastolic dysfunction**

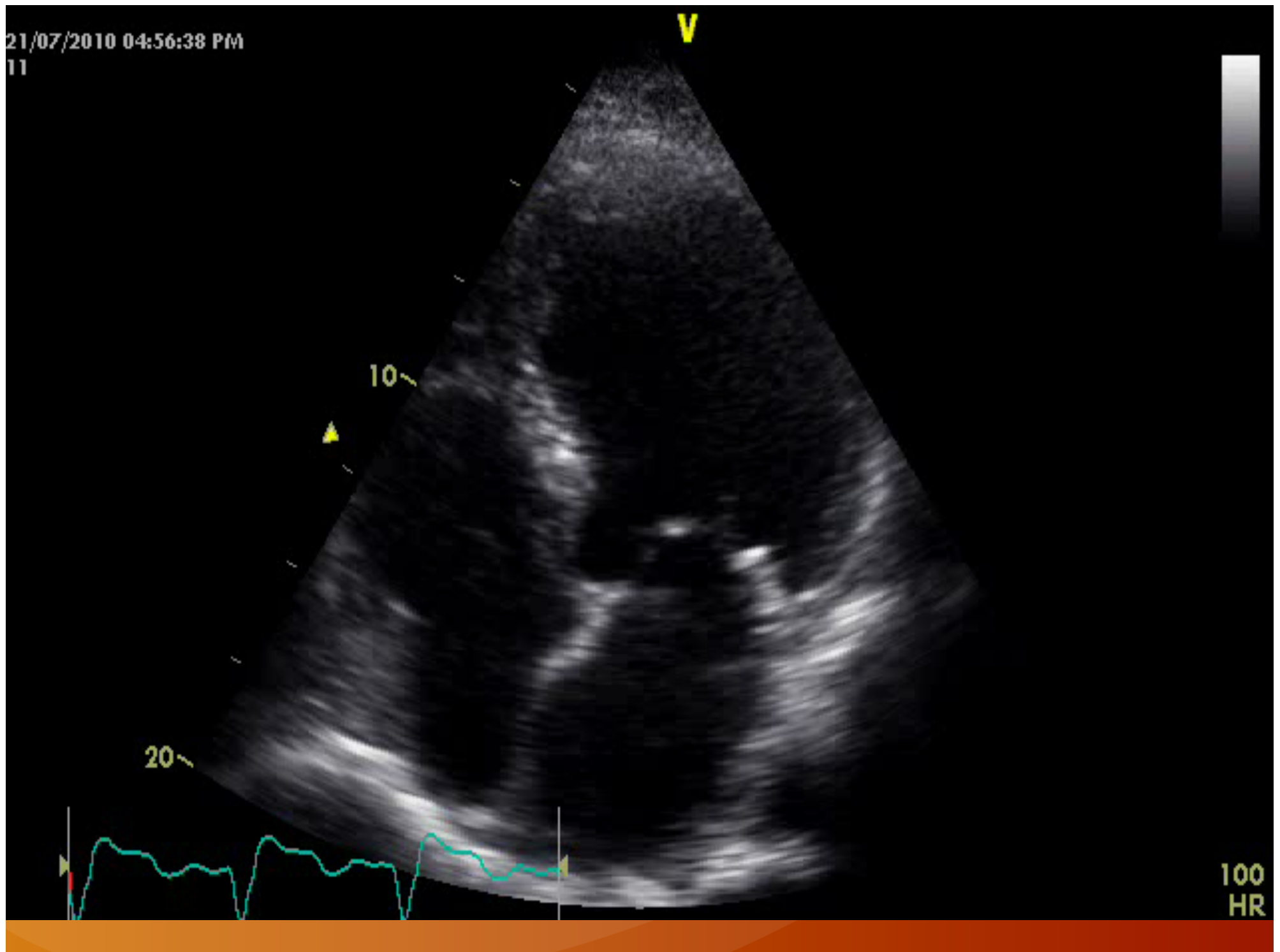
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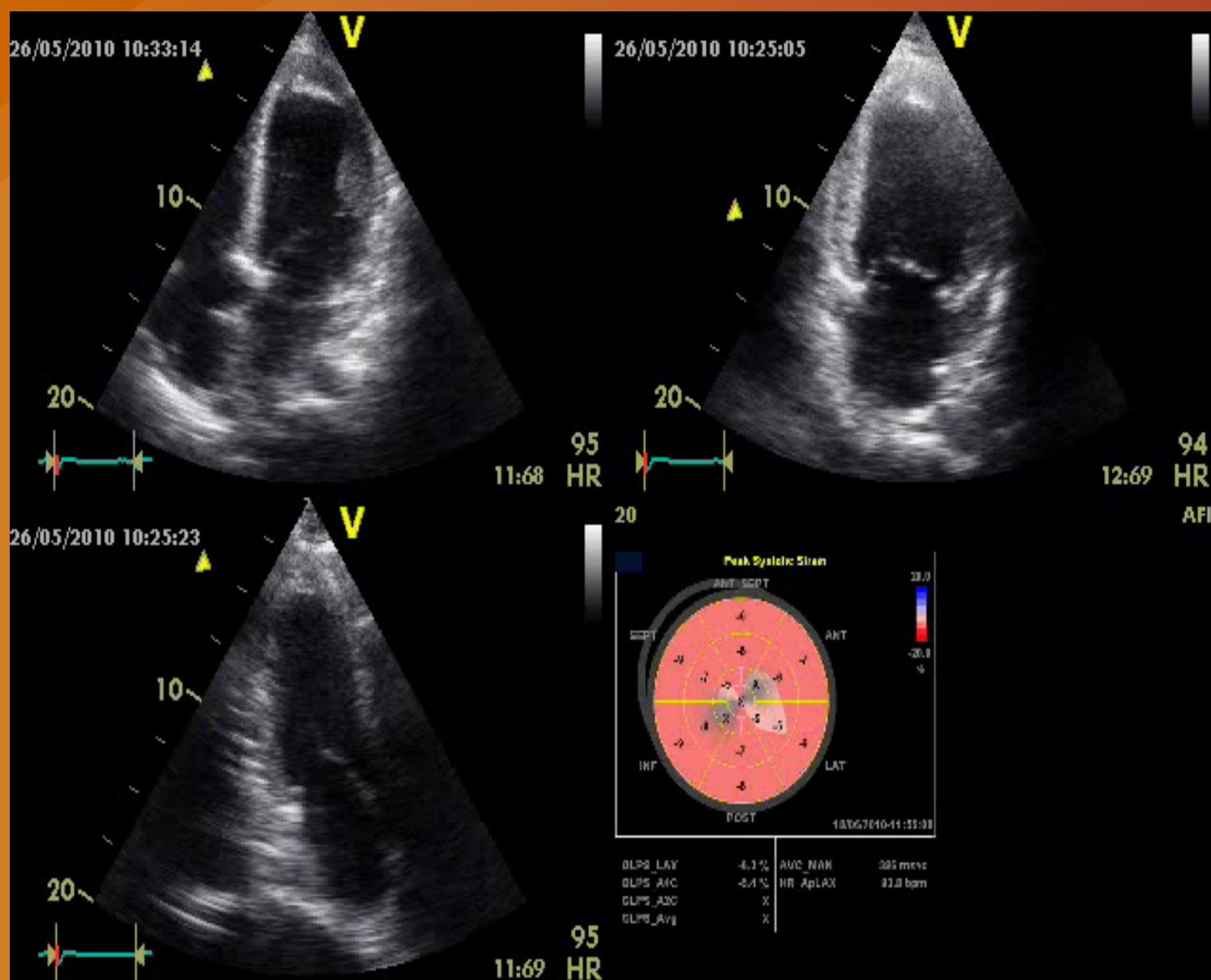
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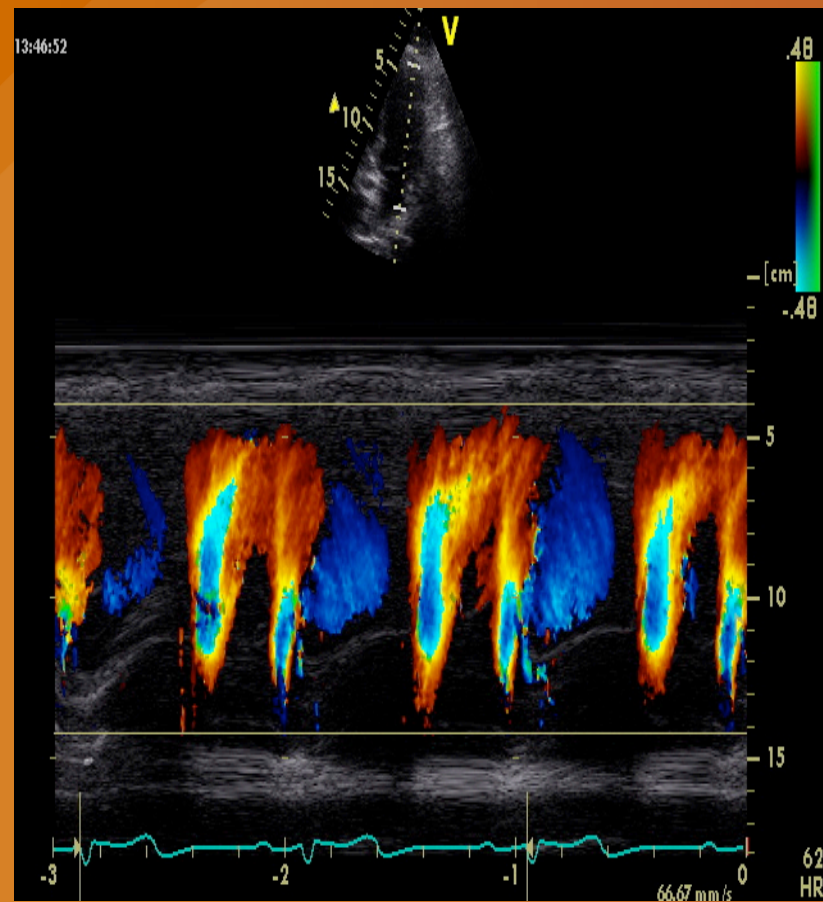
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HYPERTENSION

- Echocardiogram **routinely** in all patients
- Estimation of **total cardiovascular risk**
- Identification of **subclinical target organ damage**
 - **Left ventricular hypertrophy (concentric)**
 - **Left ventricular systolic/diastolic function**



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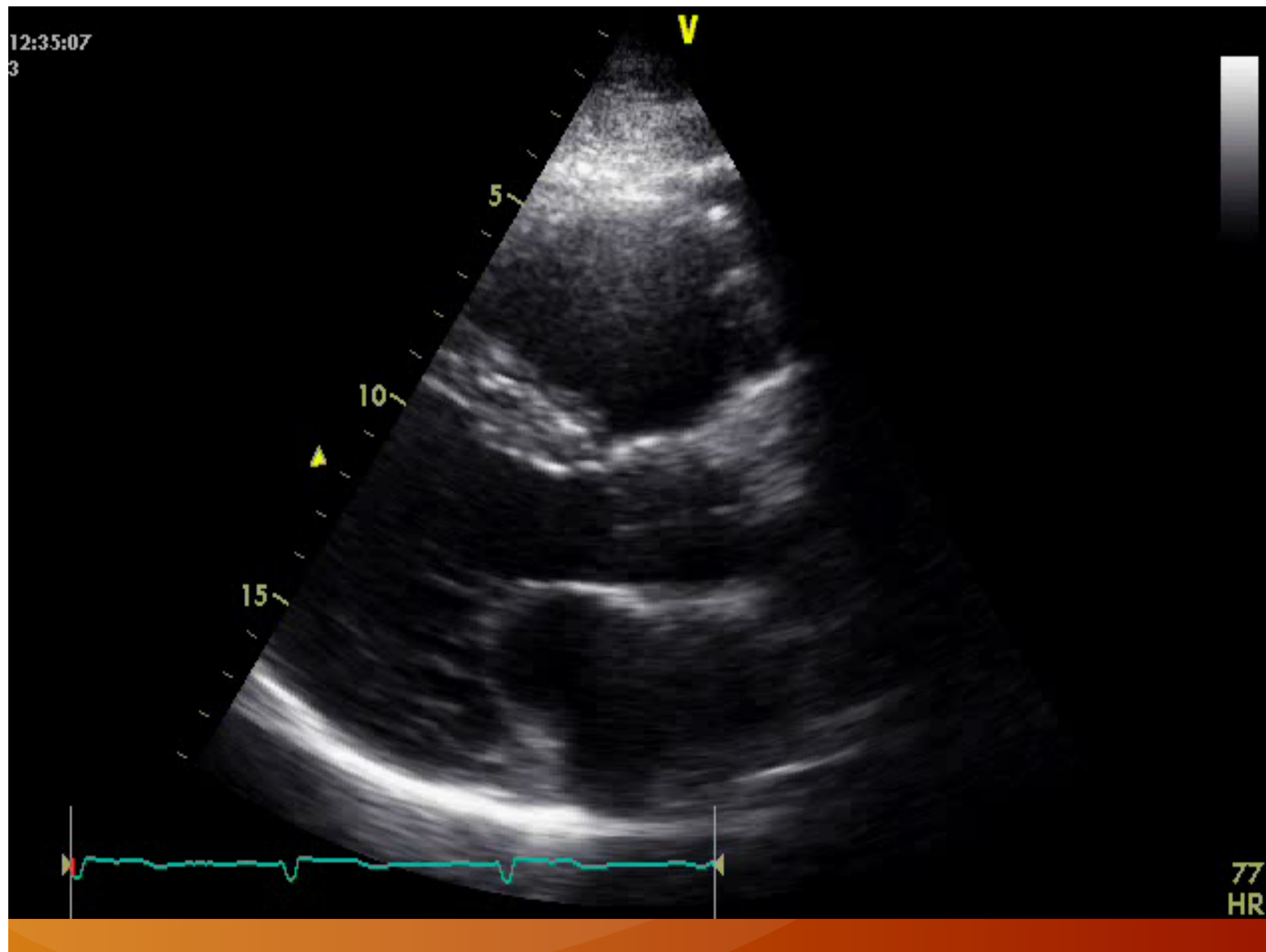
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CARDIOVASCULAR EVALUATION IN ACUTE SETTING

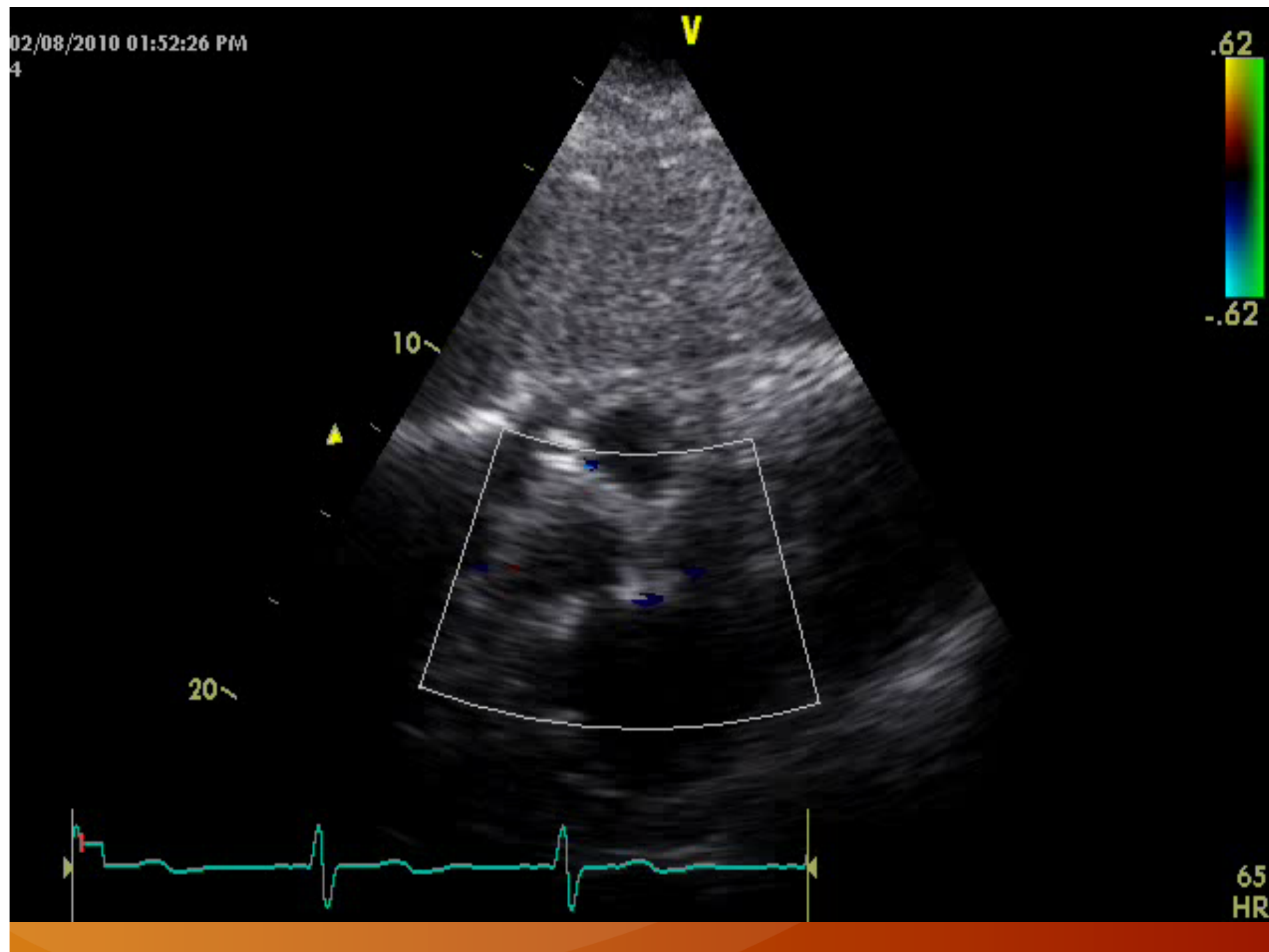
- **Hypotension or hemodynamic instability**
- **Acute chest pain**
- **Respiratory failure**
- **Acute embolism/Pulmonary embolism**
- **Cerebrovascular event/Stroke**
 - **Patent Foramen Ovale**
 - **Atrial septal aneurysm**

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THANK YOU

