

Acute/Complex Myocardial Infarction

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Friday, September 12, 2014**



VALUE-BASED HEALTHCARE: SUMMIT 2014

The Role of Cardiovascular Ultrasound in the New Paradigm

September 12, 2014 | Washington, DC



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No conflicts of interest

Acute Myocardial Infarction

Role of Imaging

- **Diagnosis**
- Location and extent of MI
- Prognosis
- Detecton of complications

Acute Chest Pain

Differential Diagnosis

- Myocardial infarction
- Aortic dissection
- Pericarditis
- Pulmonary embolism

Acute Myocardial Infarction

Role of Imaging

- **Diagnosis**
- **Location and extent of MI**
- **Prognosis**
- **Detecton of complications**

Myocardial Infarction (Heart attack)

Medium-
size



Large

Small

Acute Myocardial Infarction

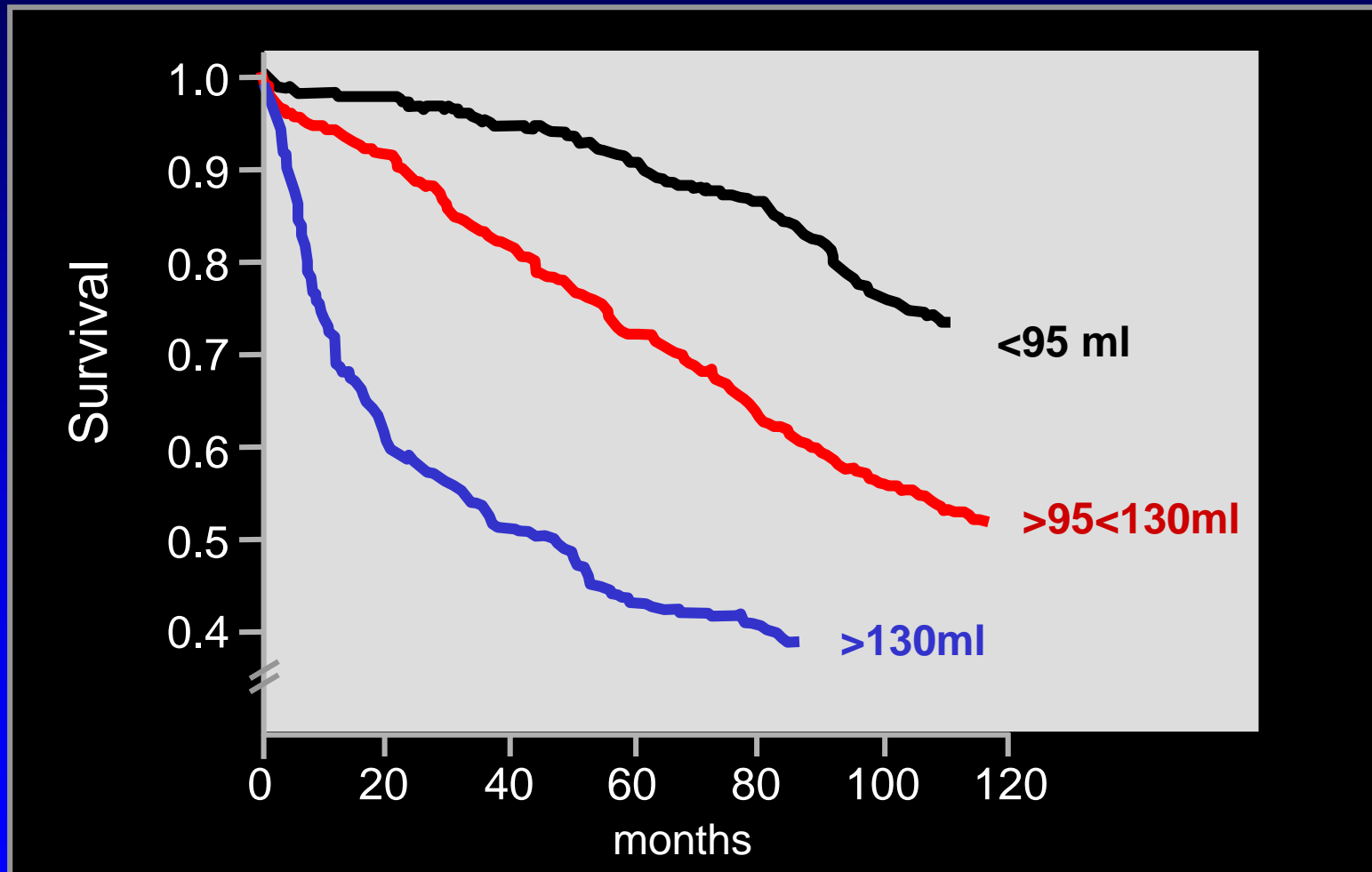
Role of Imaging

- **Diagnosis**
- Location and extent of MI
- **Prognosis**
- Detecton of complications

Prognosis

Effect of End Systolic Volume on Survival

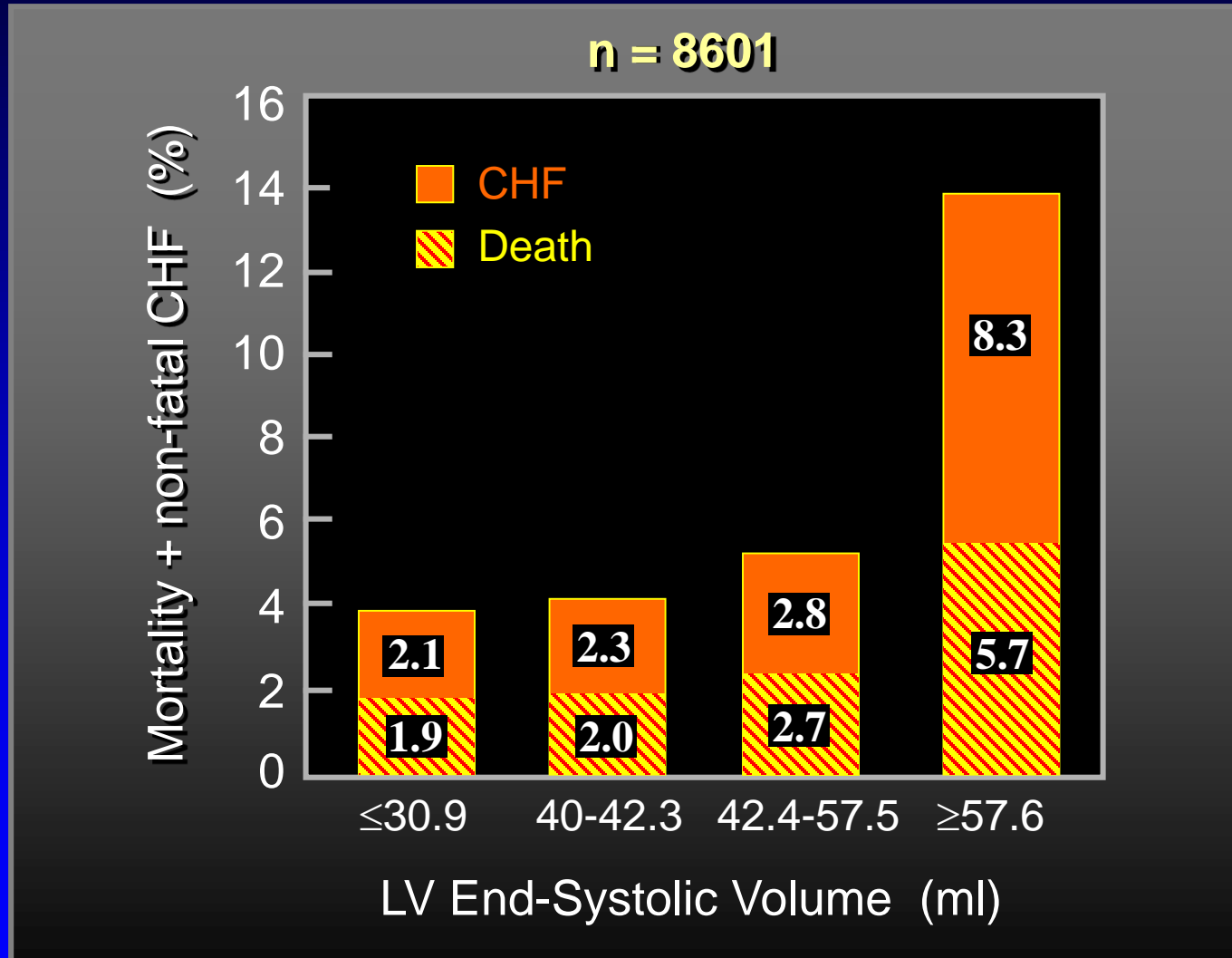
Survival Curve in Post-Infarction Patients According to ESV



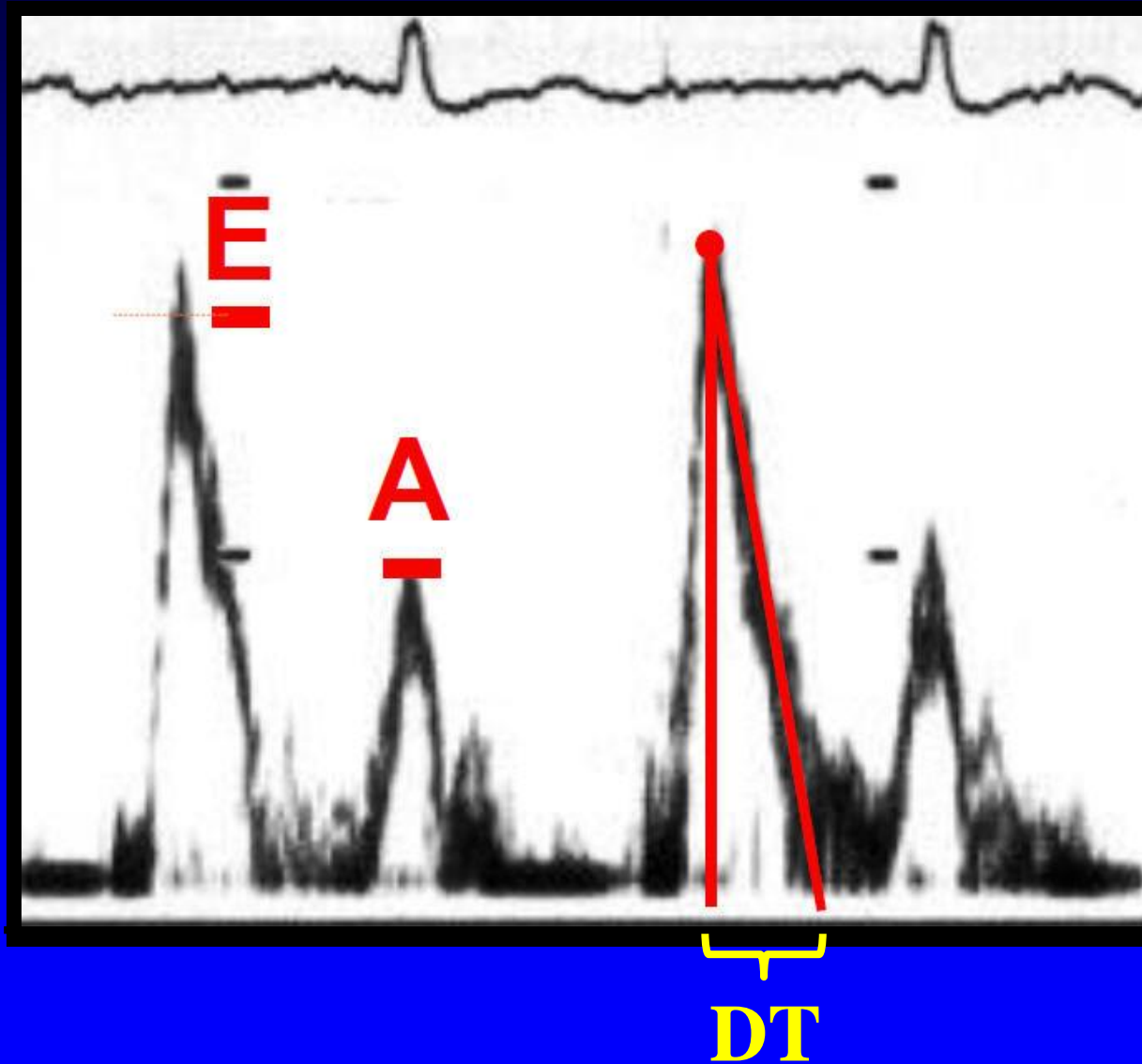
White Circulation 76:44(1987)

Acute MI in GISSI-3

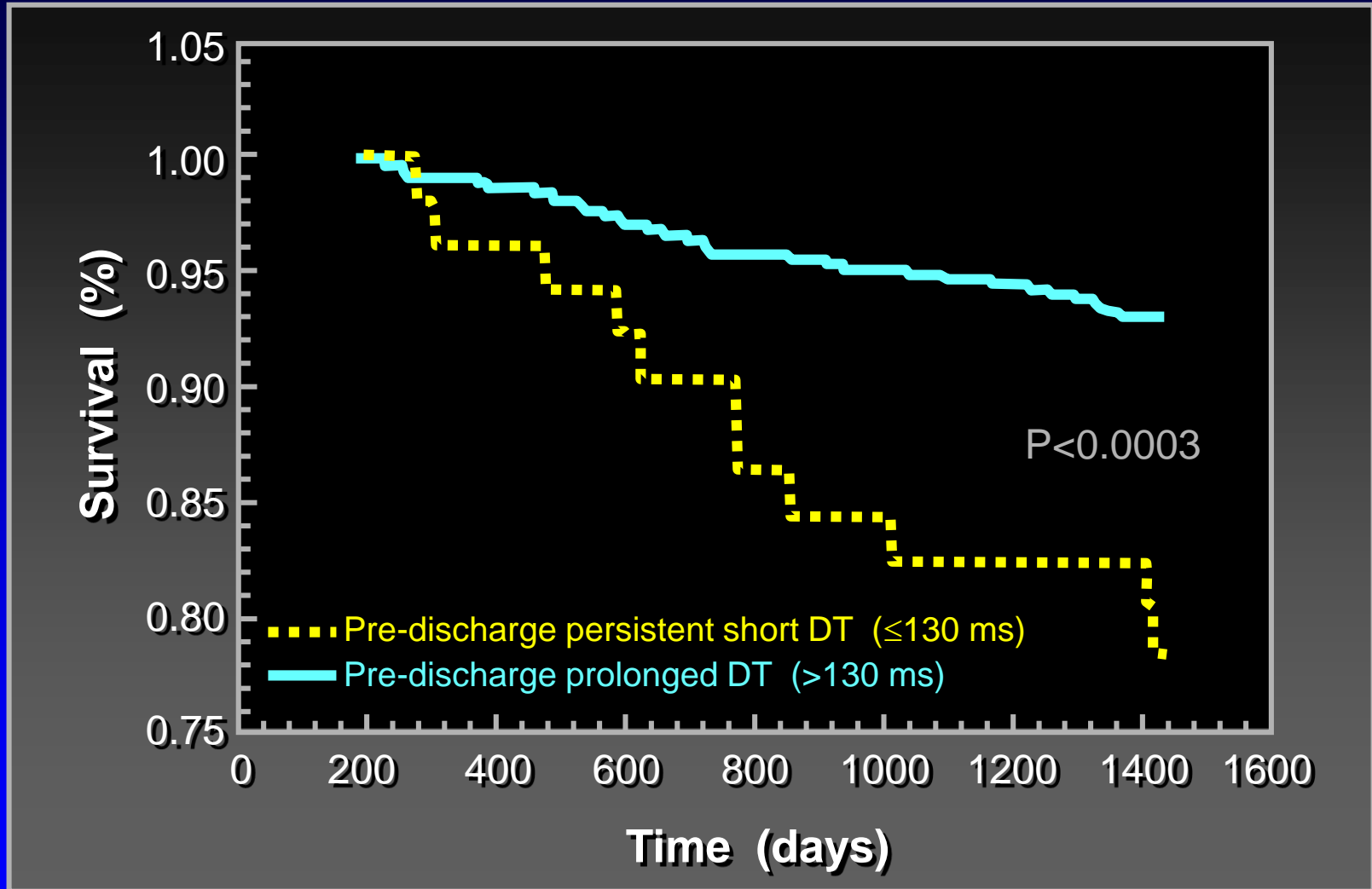
Prognostic Value of Pre-Discharge 2D-Echo



Mitral Inflow – Deceleration Time



Acute Myocardial Infarction Short Deceleration Time and Survival



Acute Myocardial Infarction

Role of Imaging

- **Diagnosis**
- Location and extent of MI
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- **Detecton of complications**

Mechanical Complications

Acute Myocardial Infarction

Mechanical Complications

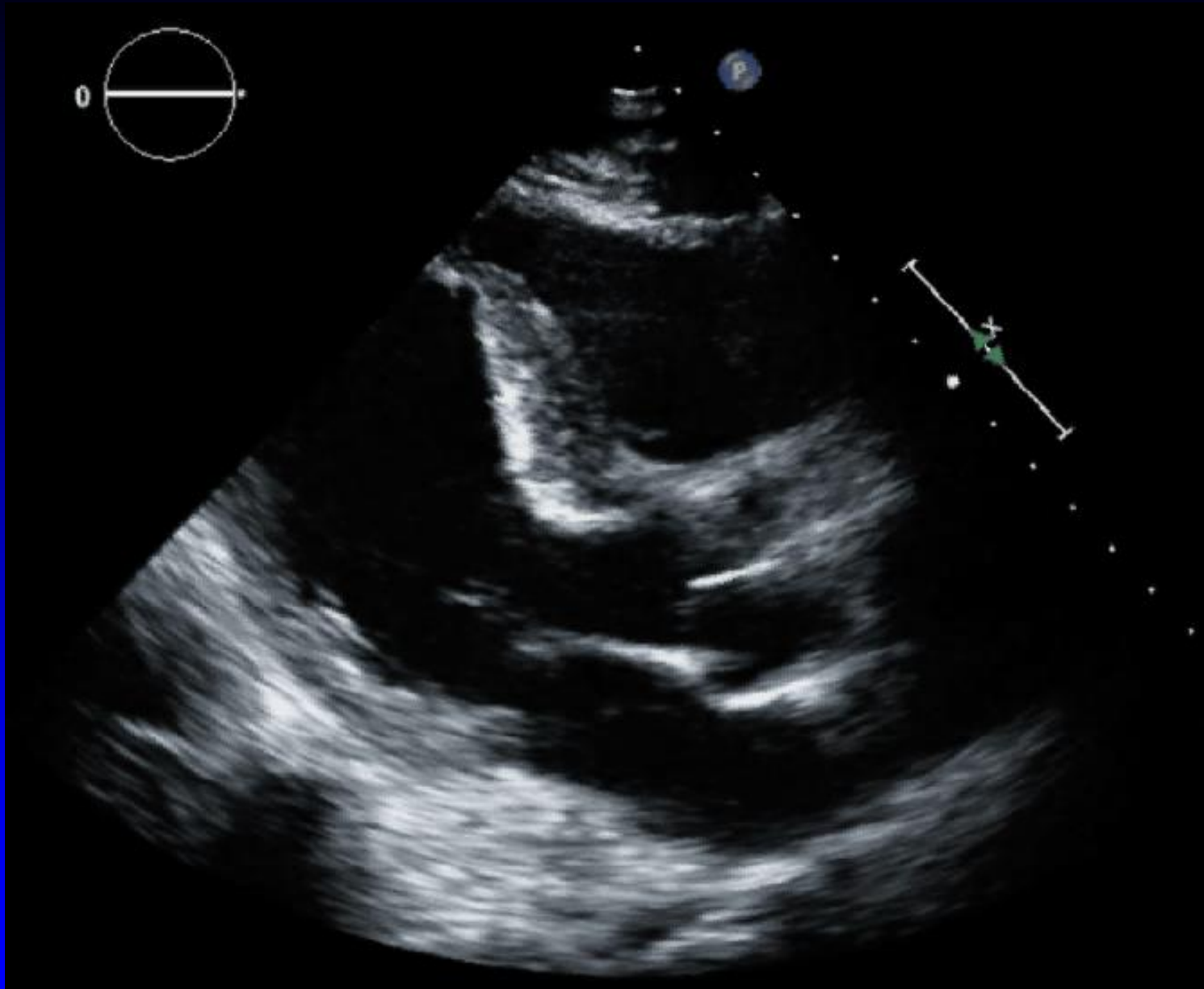
- Free wall rupture
- Ventricular septal rupture
- Papillary muscle rupture
- Aneurysm/pseudoaneurysm
- Right ventricular infarct
- Mural thrombus

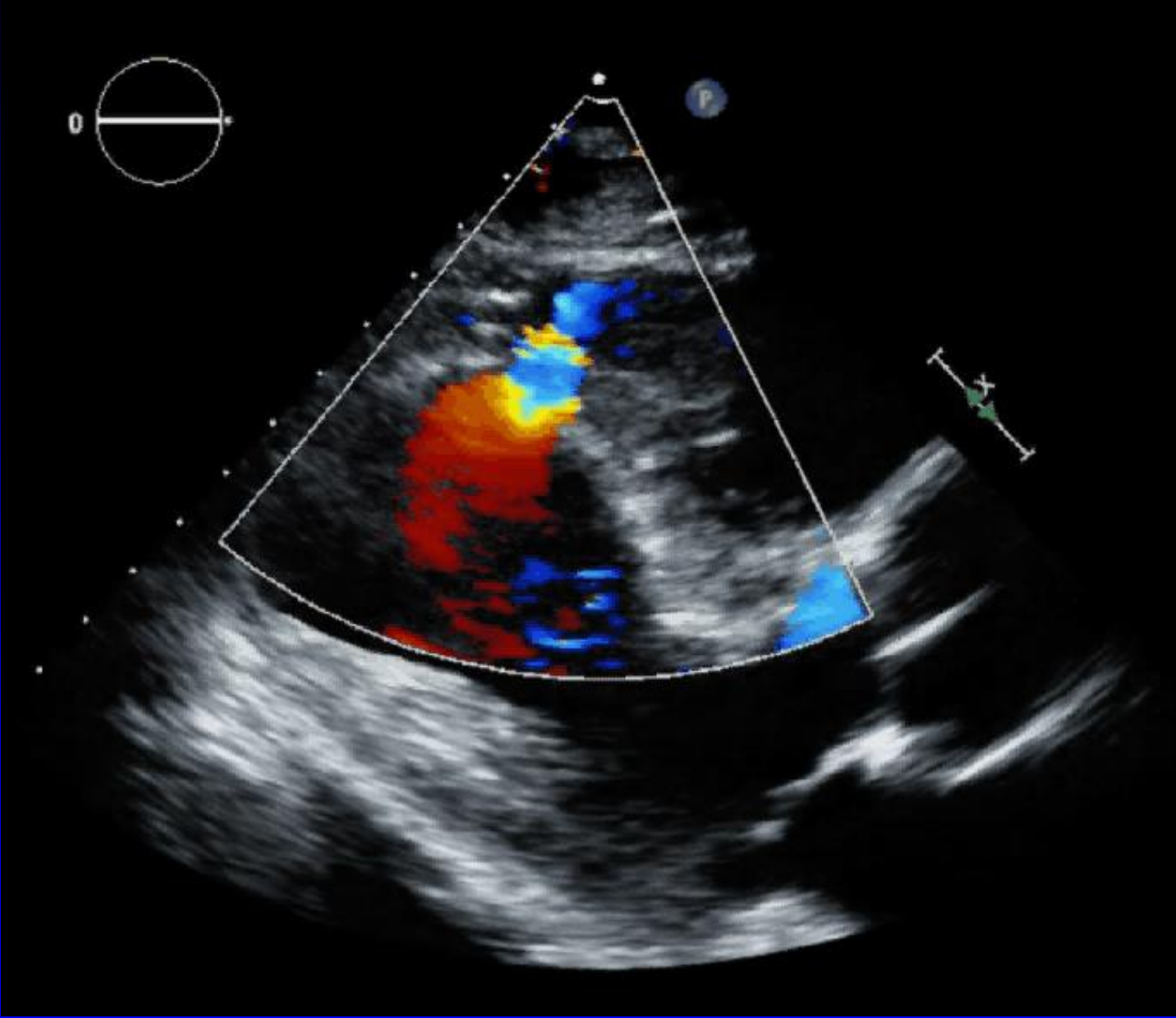
Case

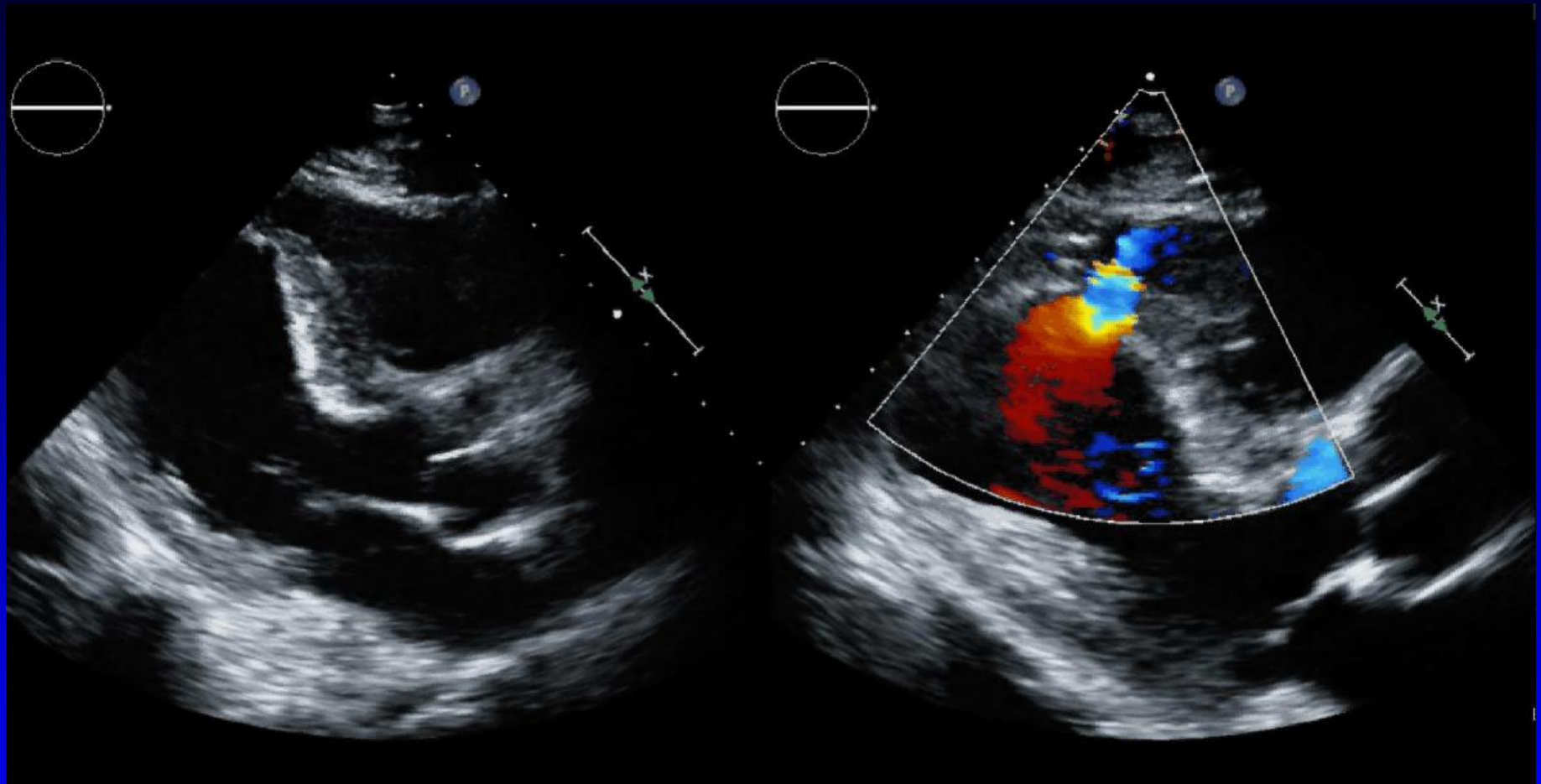
56 year-old man

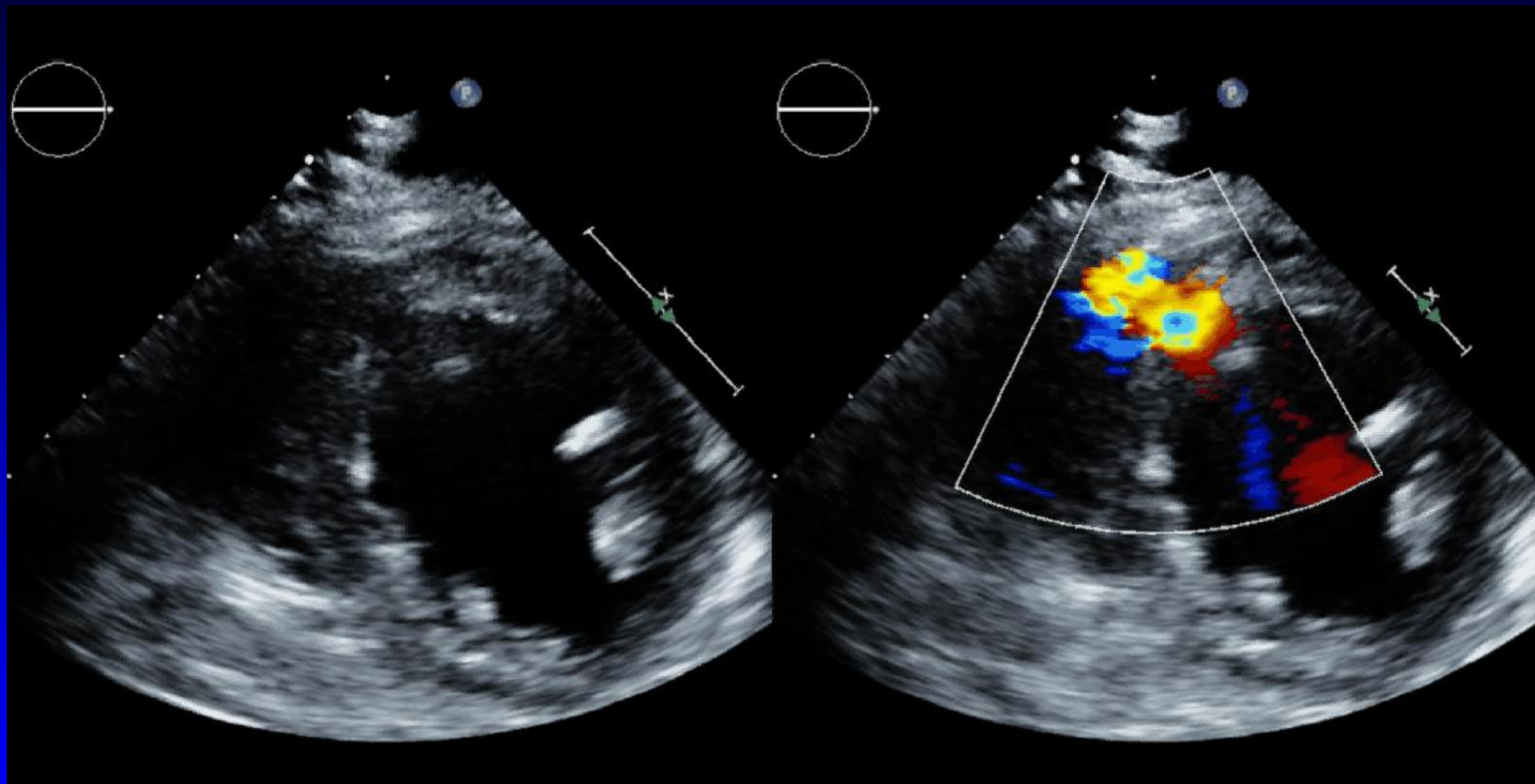
Acute myocardial infarction

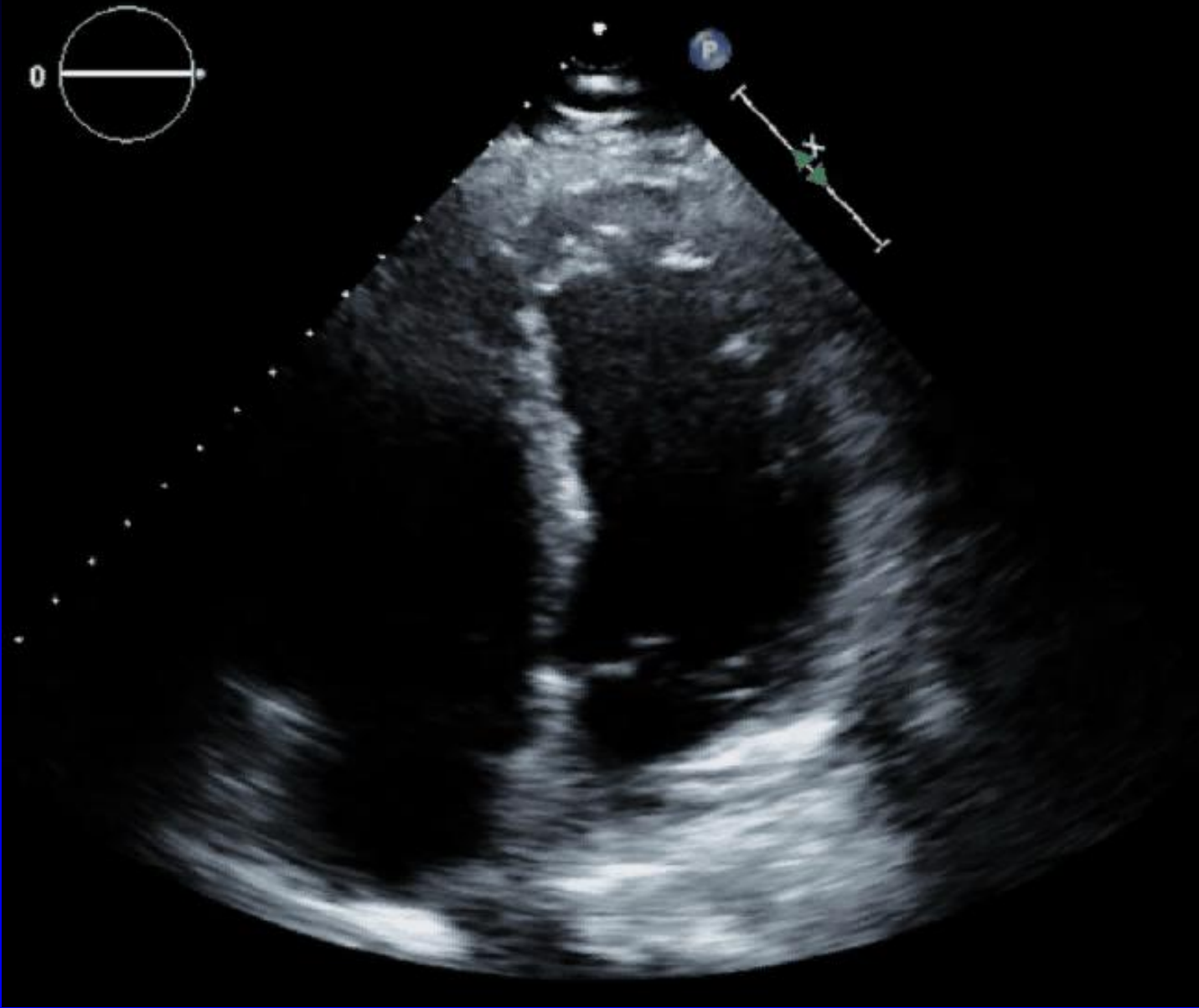
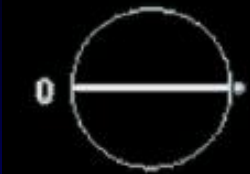
3 days later → acute dyspnea
(shortness of breath)

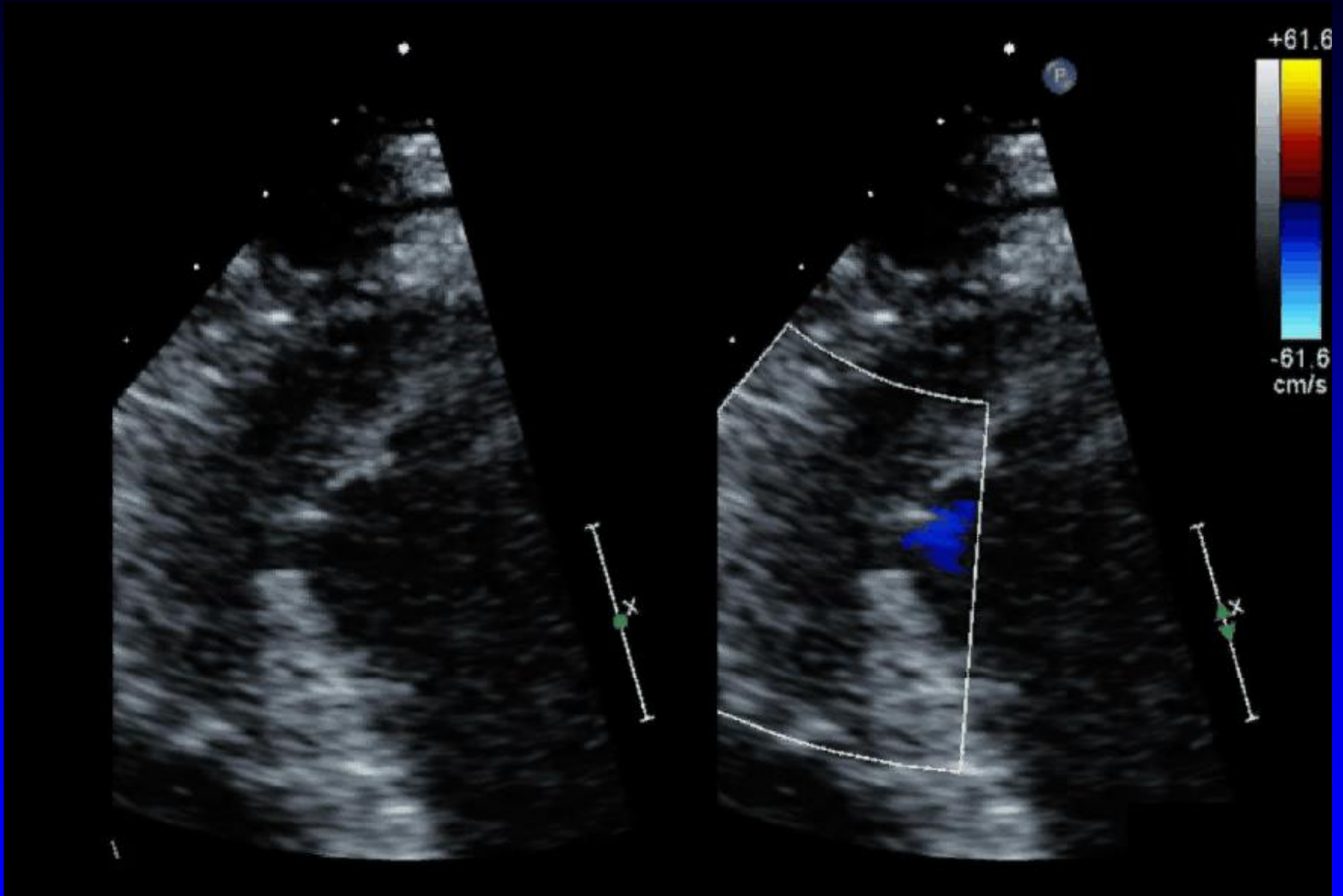








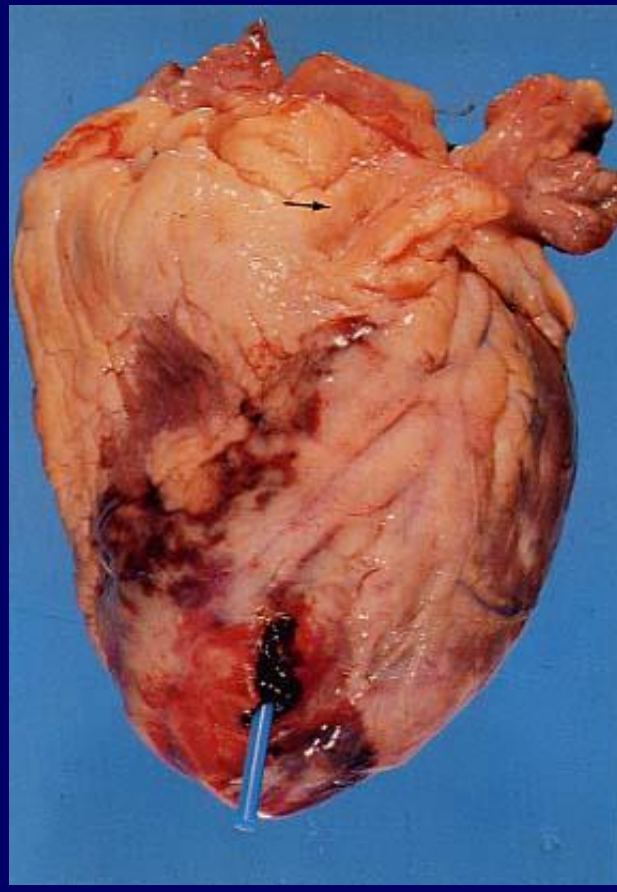




Papillary Muscle Rupture



Free-Wall Rupture



The End