

**3rd IMAGING and PHYSIOLOGY Summit 2009**

**Intracoronary Ultrasound Diagnosis  
of an Aortic Dissection Causing  
Anterior Acute Myocardial Infarction**

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## *Case: a 63-year-old woman*

### **Chief Complaint;**

Severe chest pain radiating to her back

### **History of present illness;**

At 7:30 p.m. on 6/22/2001, she complained of sudden chest pain radiating to her back after having dinner.

At 7:55 p.m., her daughter called the ambulance.

At 8:10 p.m. the ambulance arrived at our hospital.

## **Present status;**

When the ambulance arrived at the emergency room, she was conscious and complained of chest pain with significant clammy sweat.

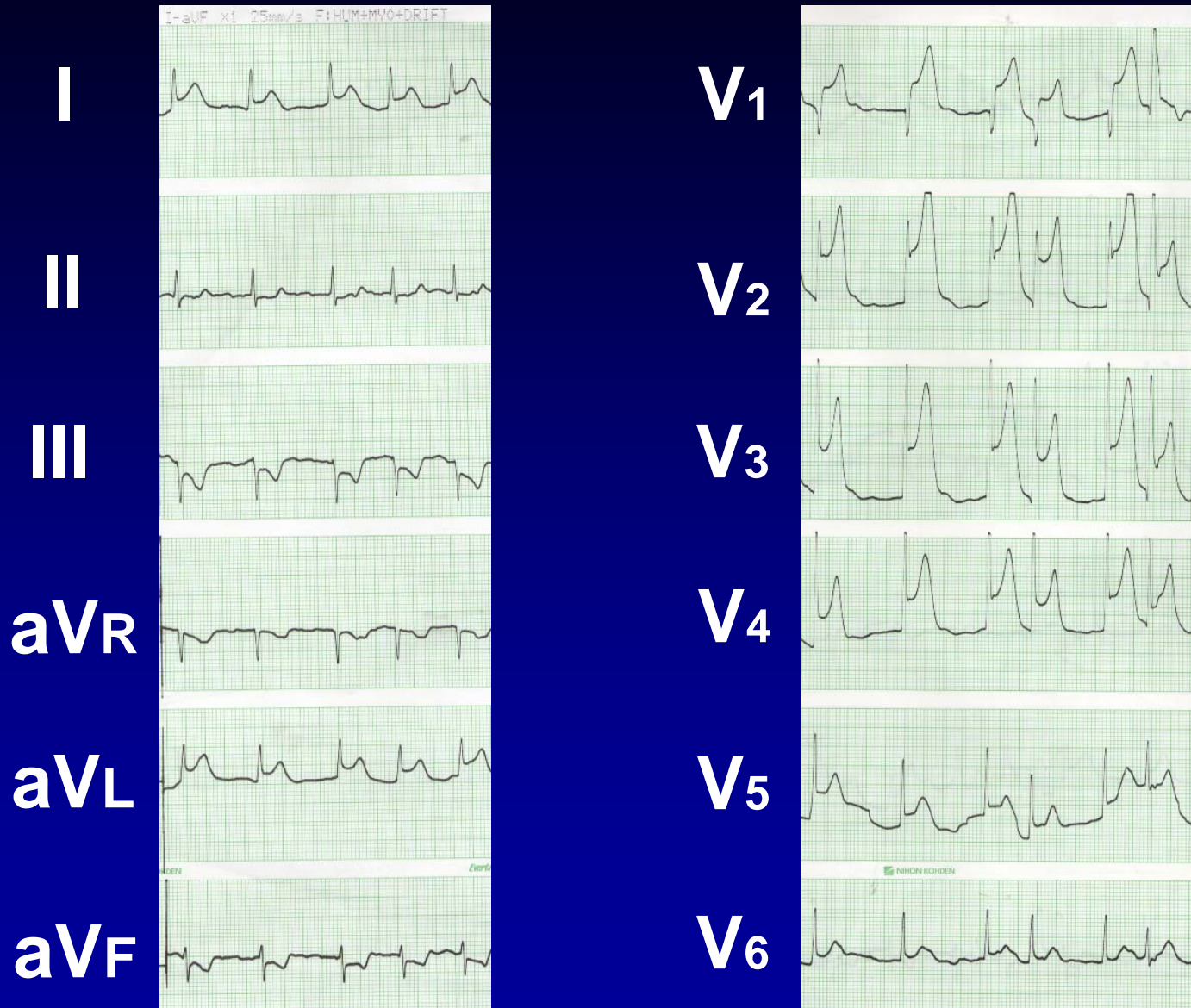
BP 140/80 mmHg; HR 84/min.

## **Coronary risk factor;**

Smoking 20 cigarettes/day

Hypertension (intermittent medication)

# *Electrocardiogram*



## *Echocardiogram*

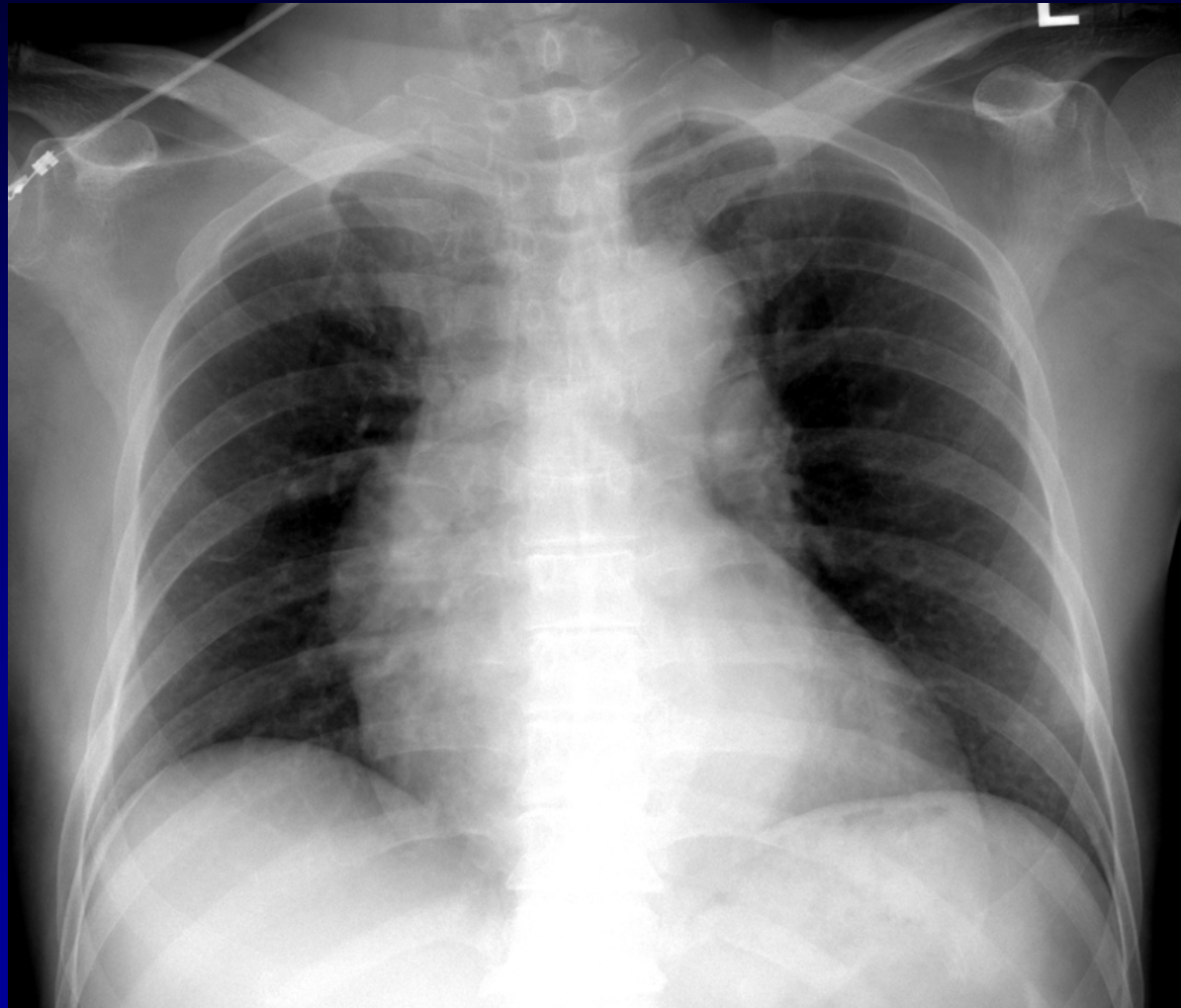
**Reduced LV wall motion from 10 to 2 o'clock in the parasternal short axis view.**

**No AR.**

**No MR.**

**No pericardial effusion.**

# *Chest X-ray*



*Yokohama City Univ. Medical Center*

## *Treatment and process 1*

**She was diagnosed as acute anterior myocardial infarction.**

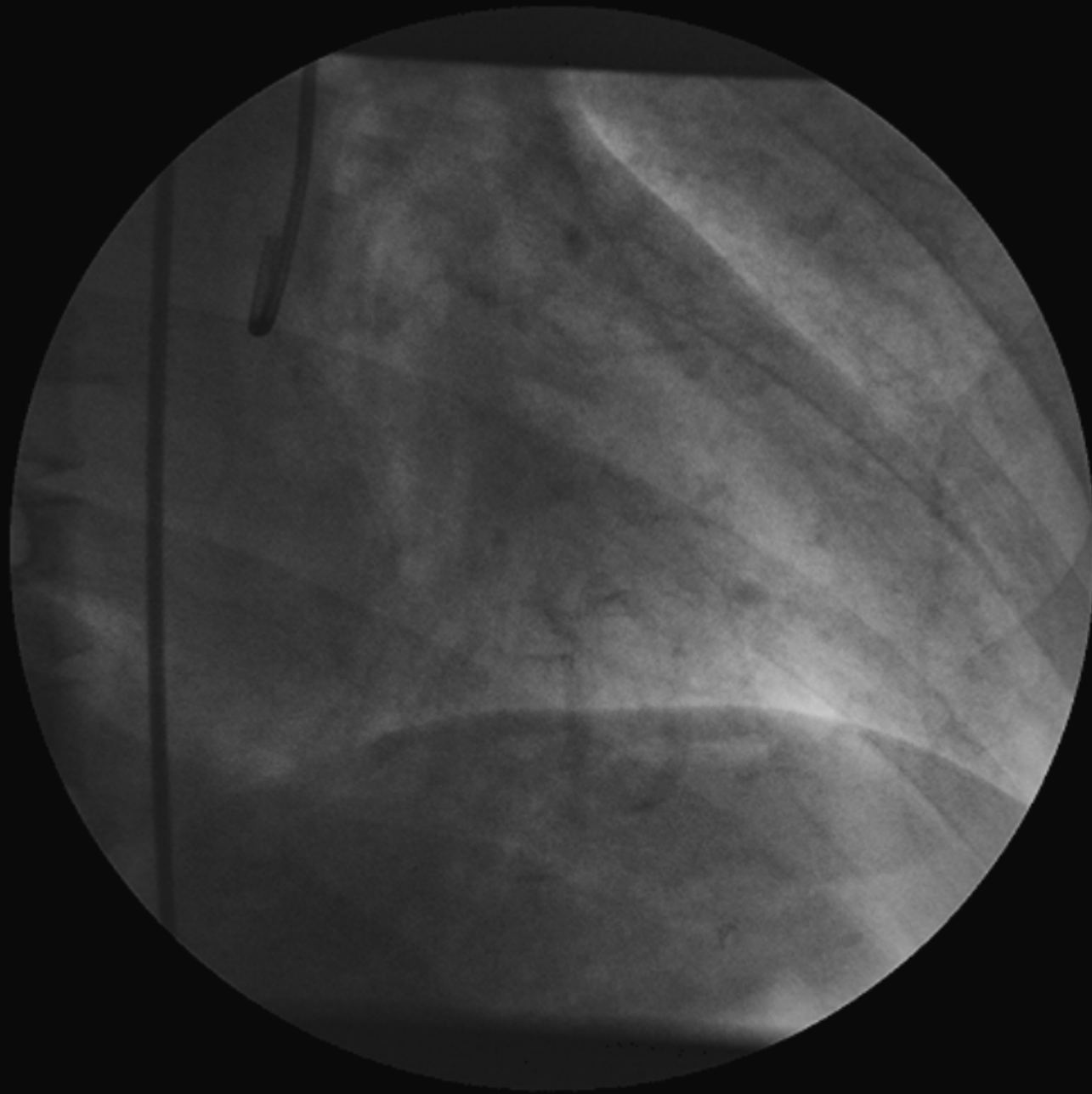
**8:15 p.m. aspirin 200mg p.o., heparin 5000U i.v.,  
and Montepilase 800,000U i.v.**

**8:29 p.m. morphine hydrochloride 2.5mg i.v.**

# *Angiography 1*

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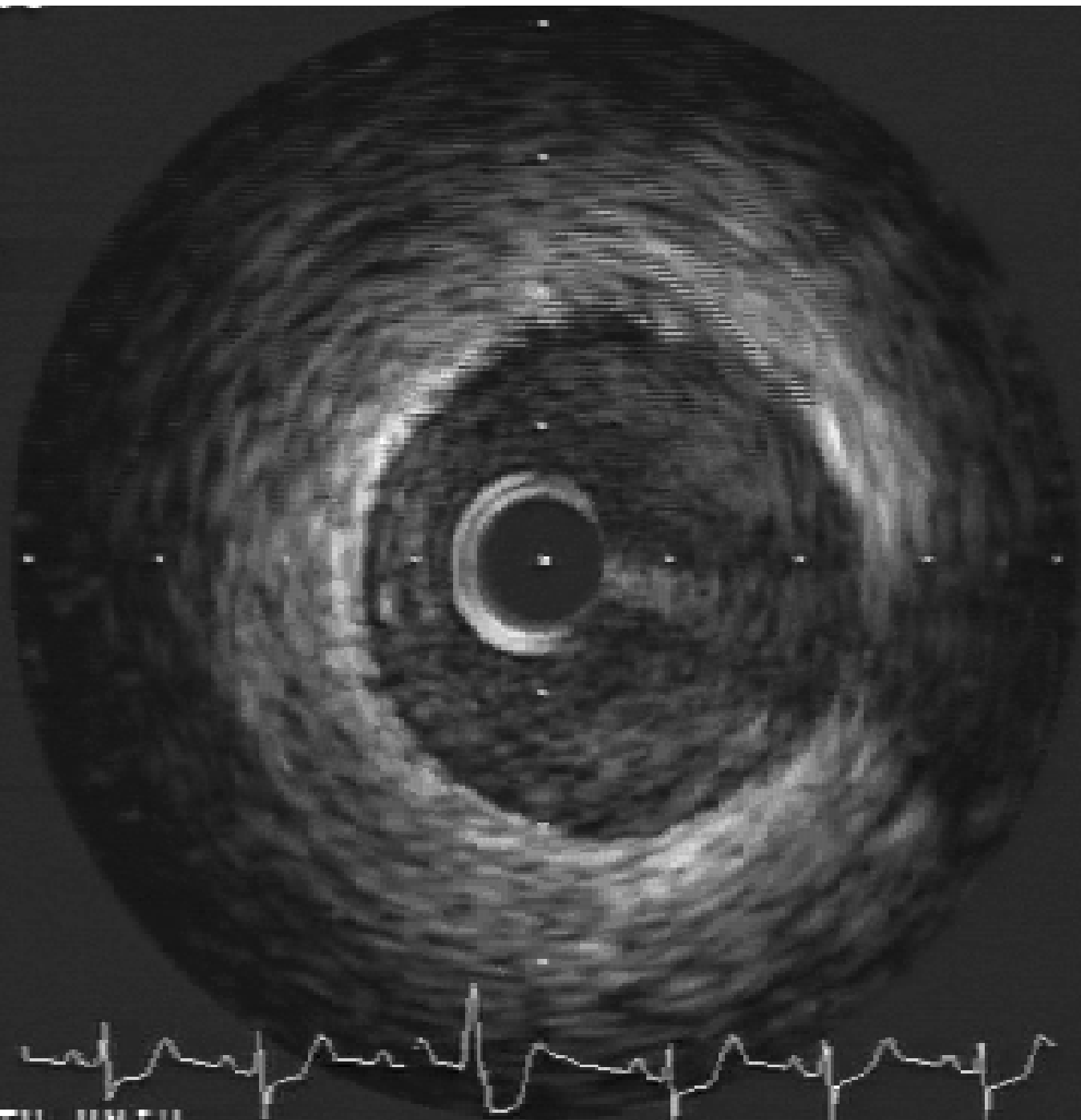


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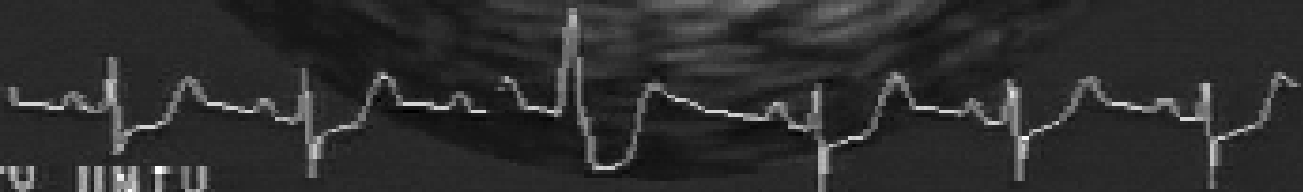
# *Intravascular Ultrasound 1*

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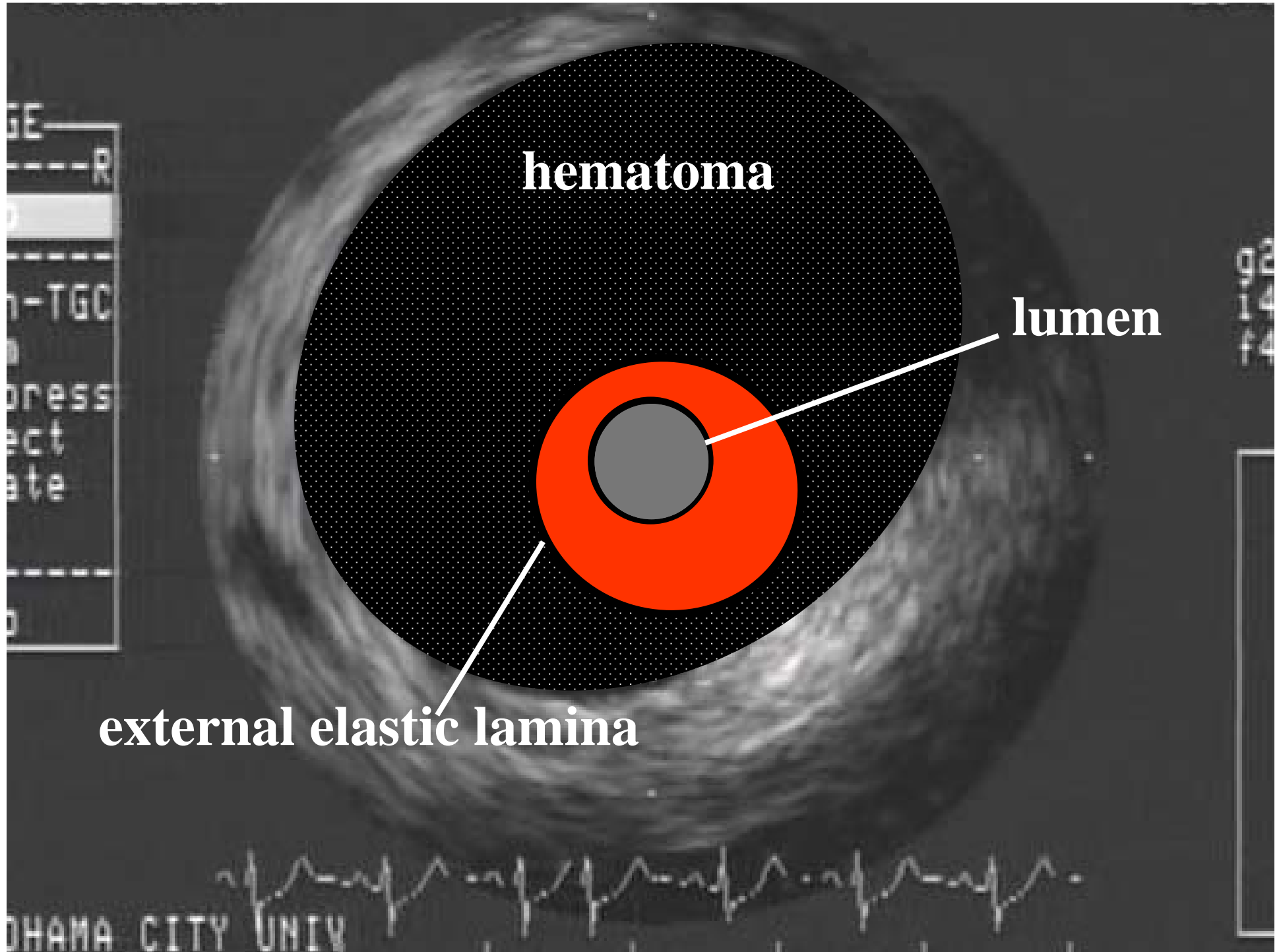
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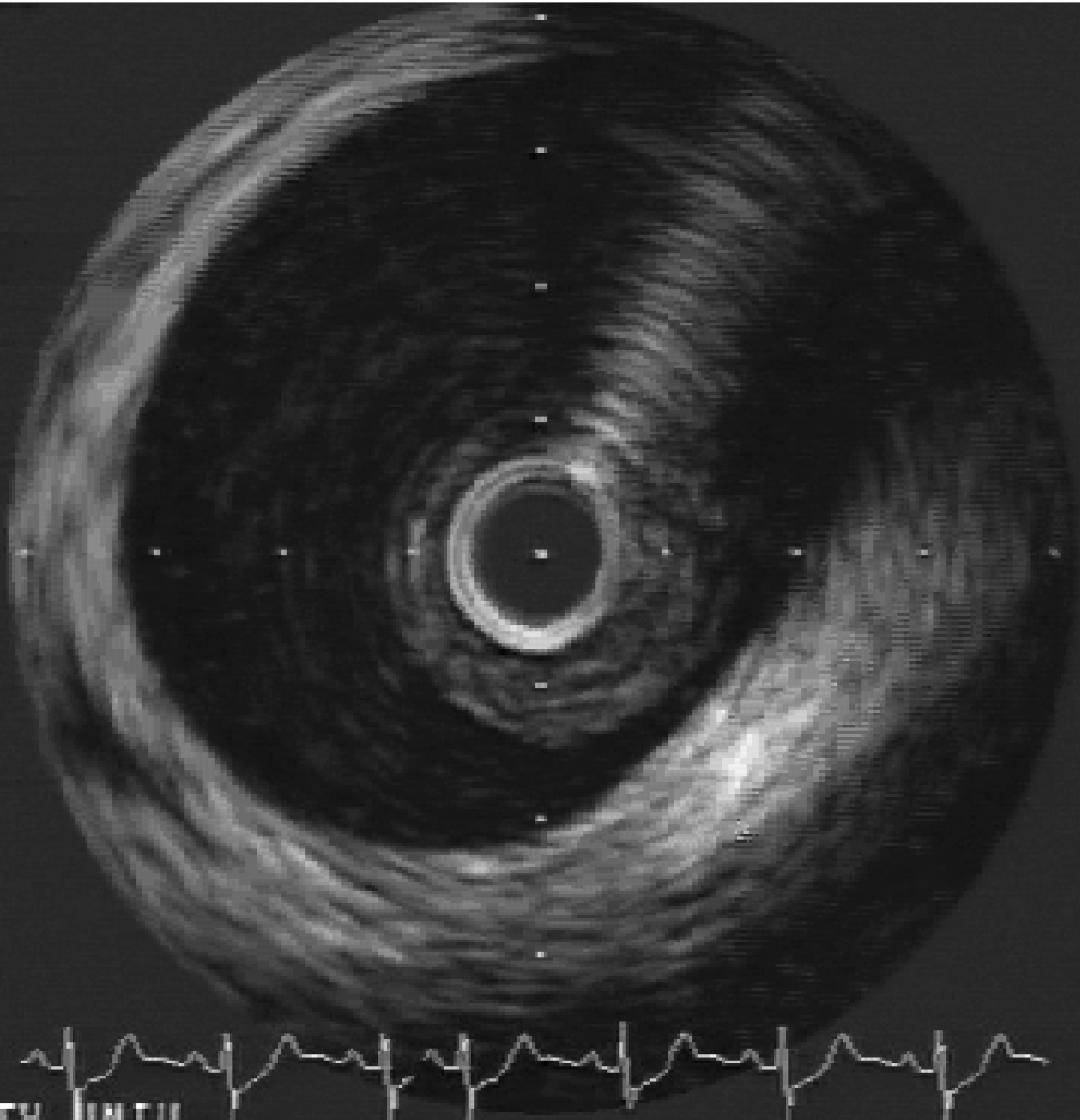
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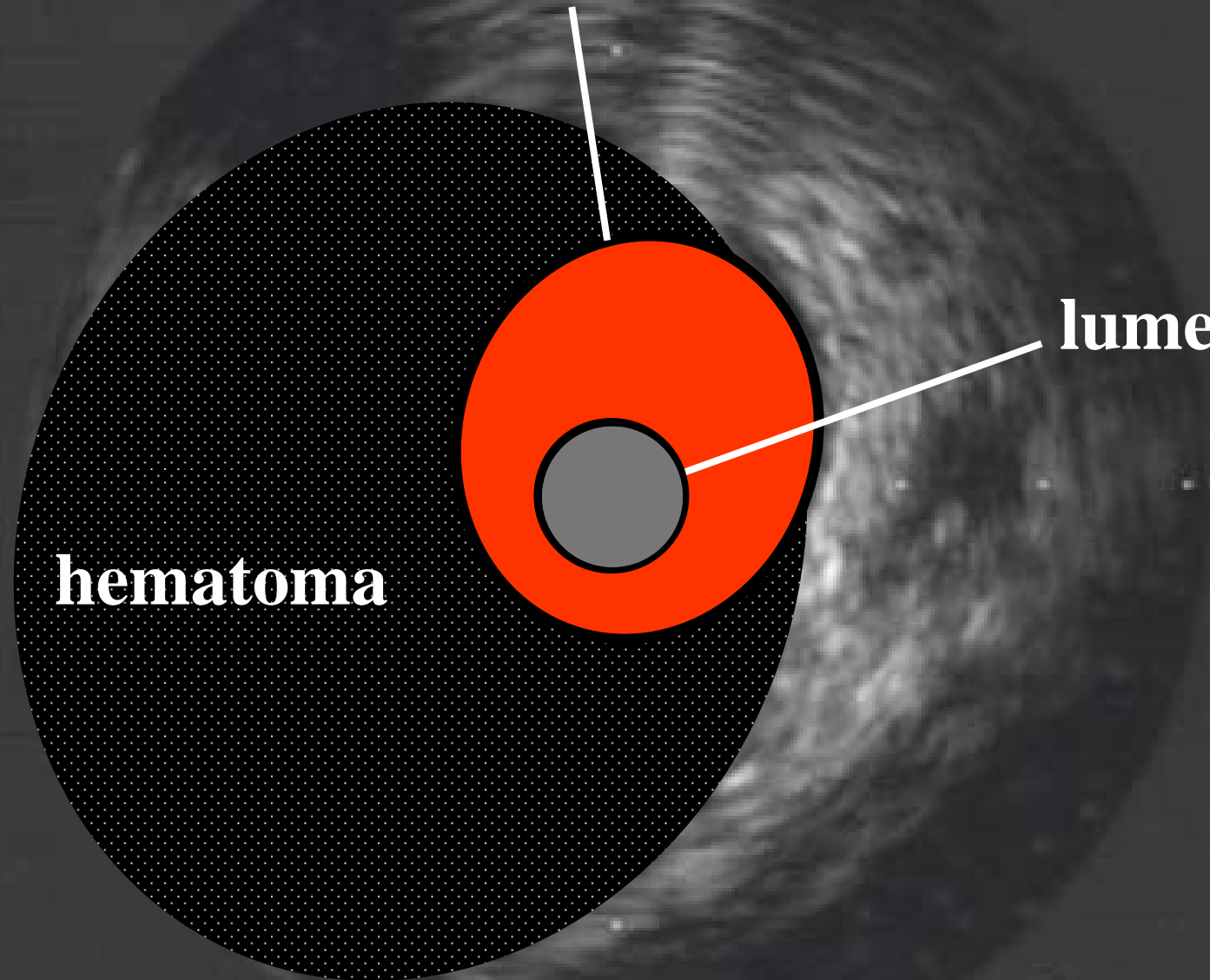
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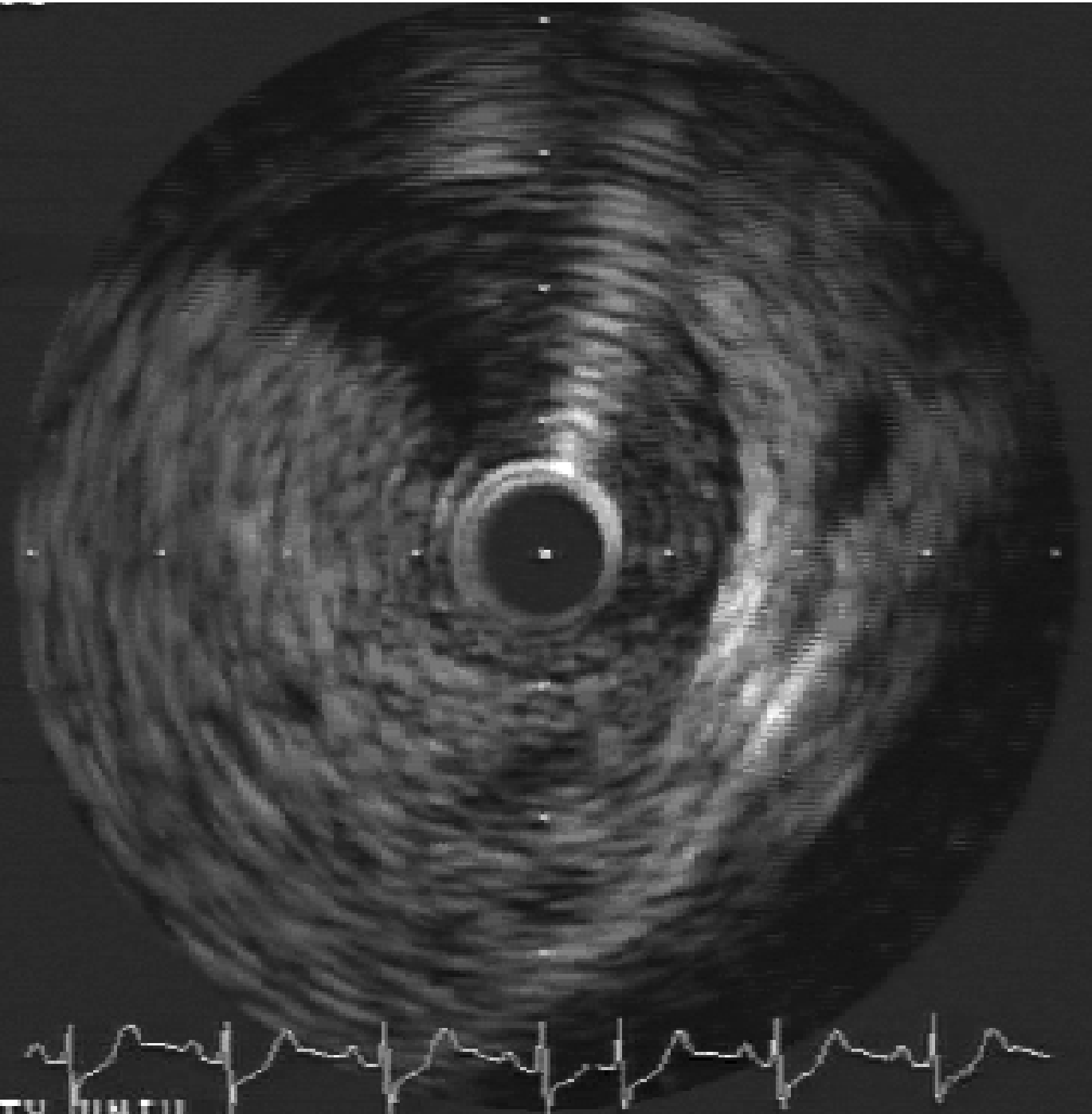
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**left circumflex**

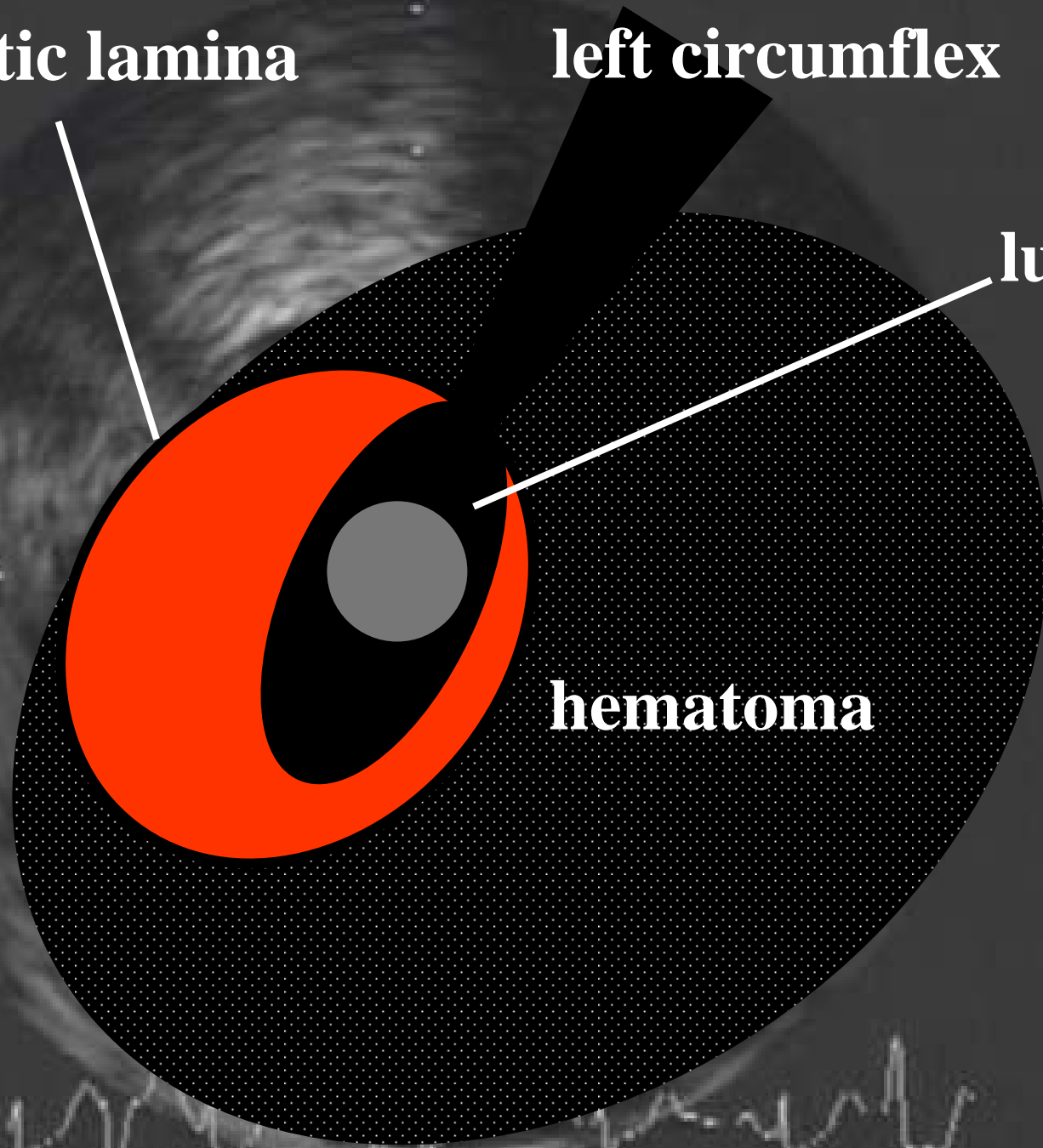
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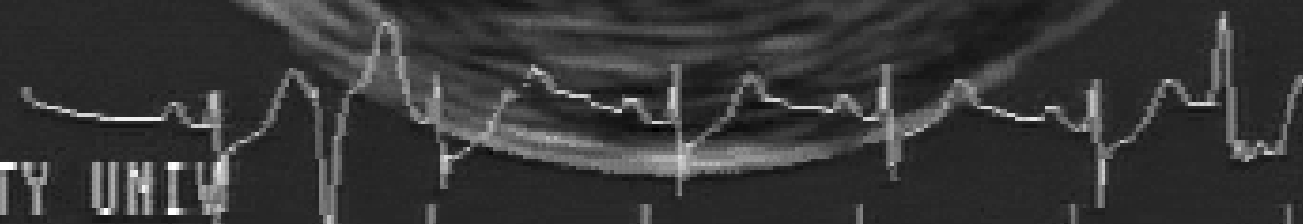




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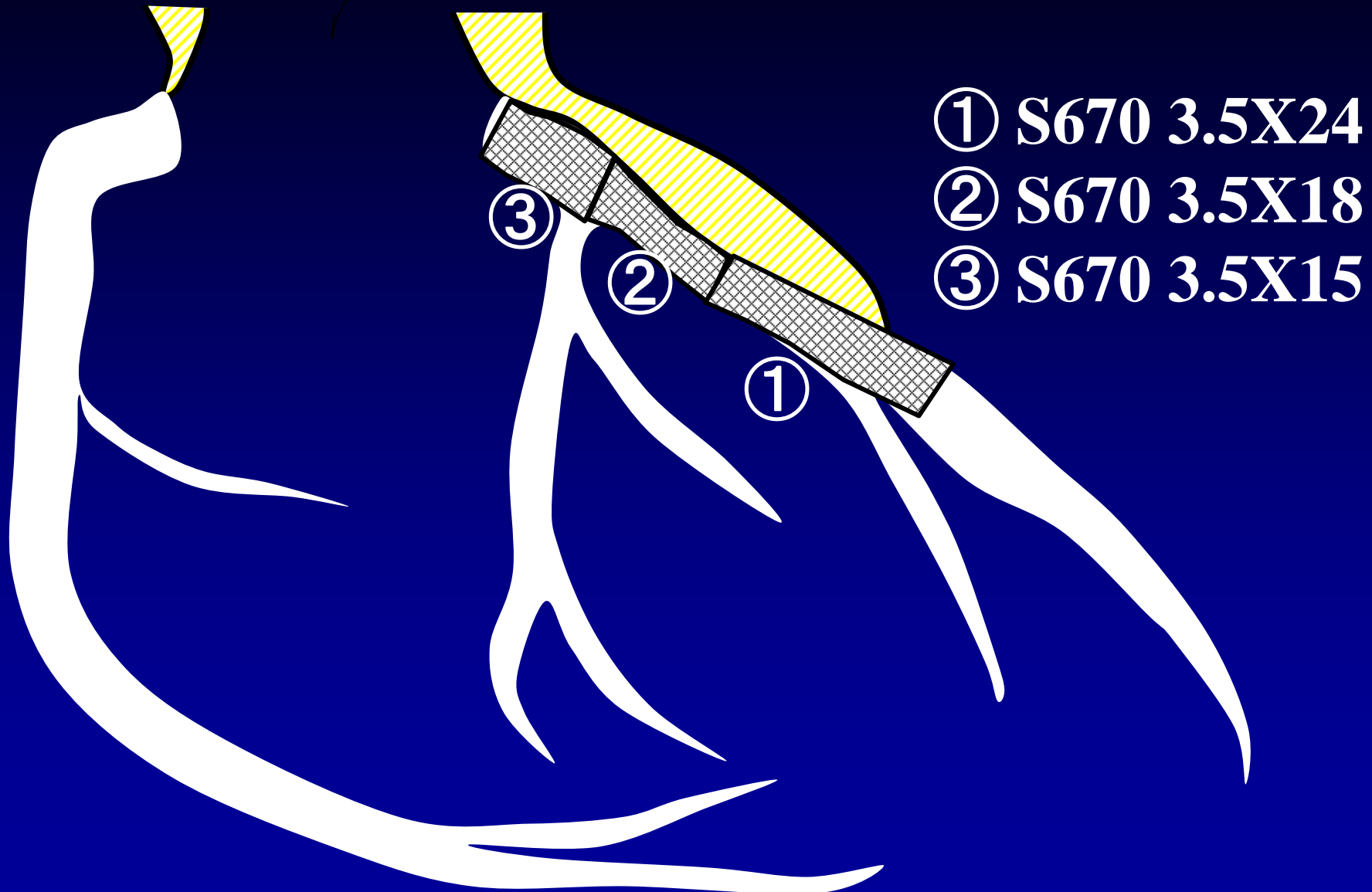


## *Treatment and process 2*

**Thus, IVUS before intervention revealed a huge hematoma originating from the aorta and extending into the LAD, diagnostic of type A aortic dissection.**

**Primary angioplasty was performed successfully with implantation of three stents.**

# *Stent Implantation*



# *Angiography 2*

*Yokohama City Univ. Medical Center*

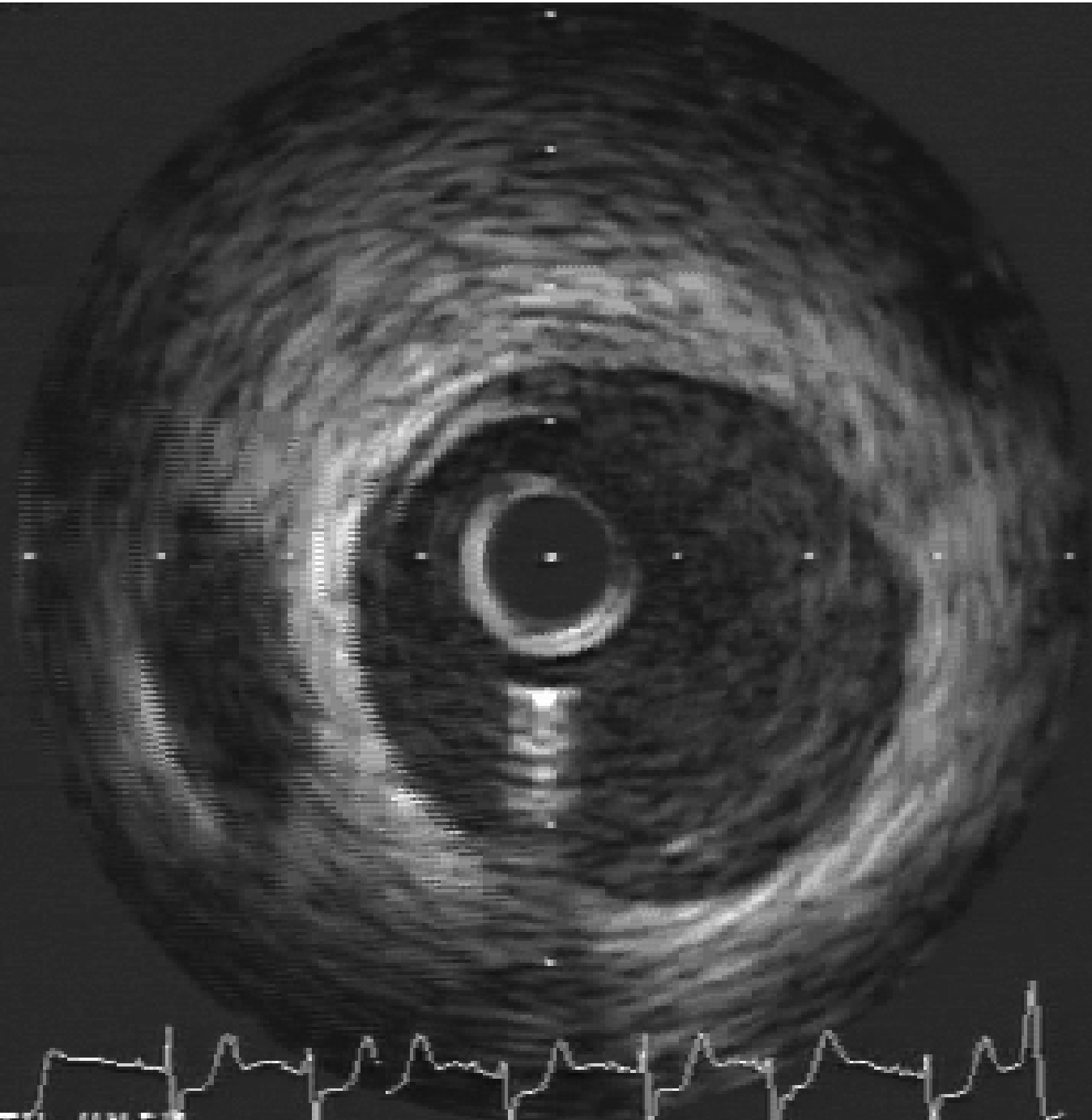


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# *Intravascular Ultrasound 2*

*Yokohama City Univ. Medical Center*

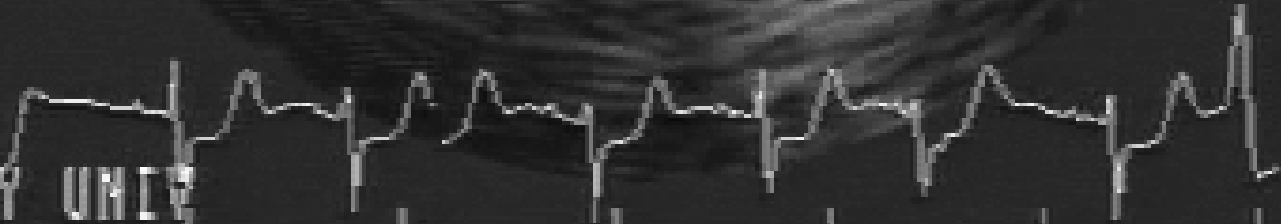
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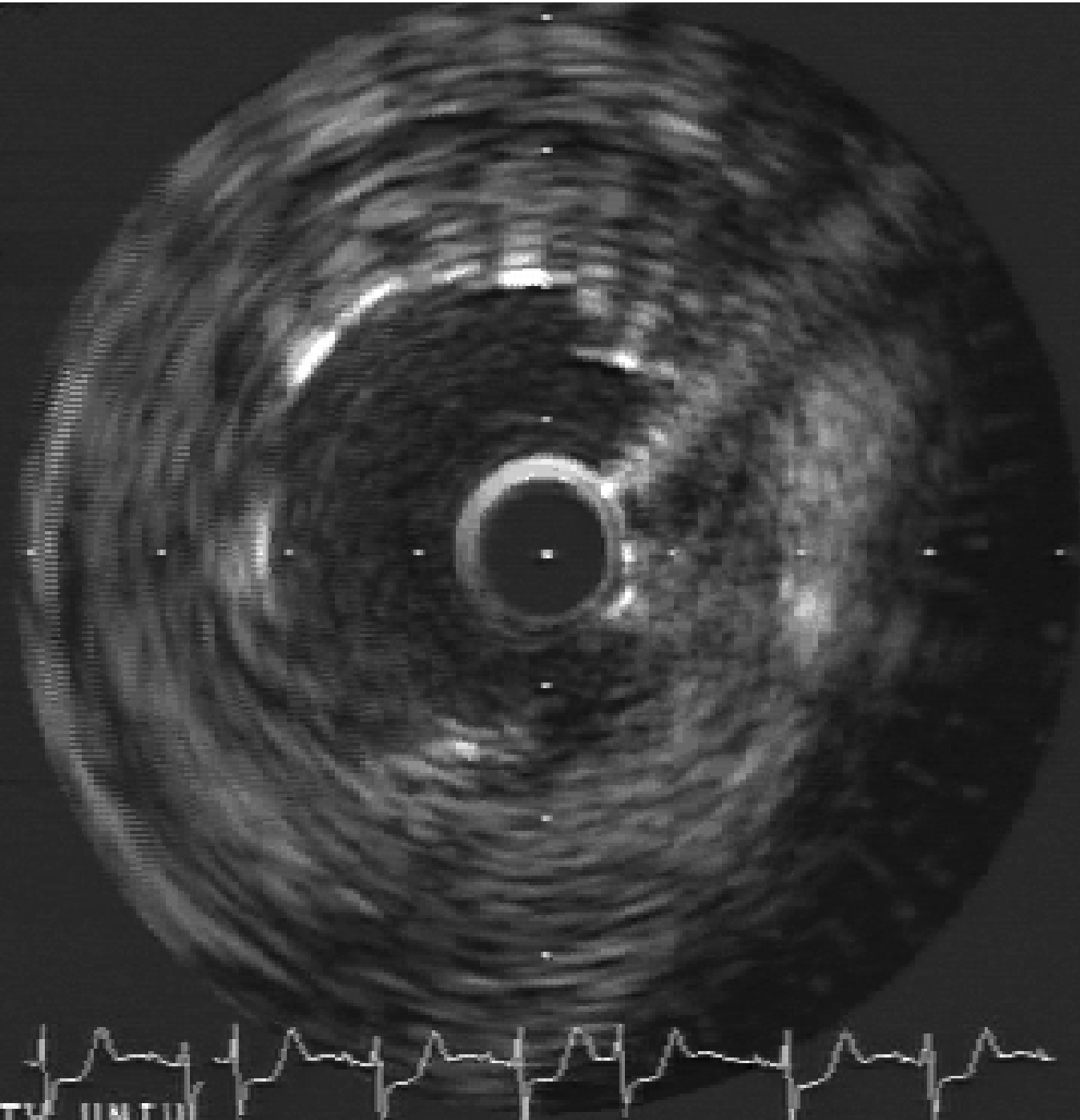
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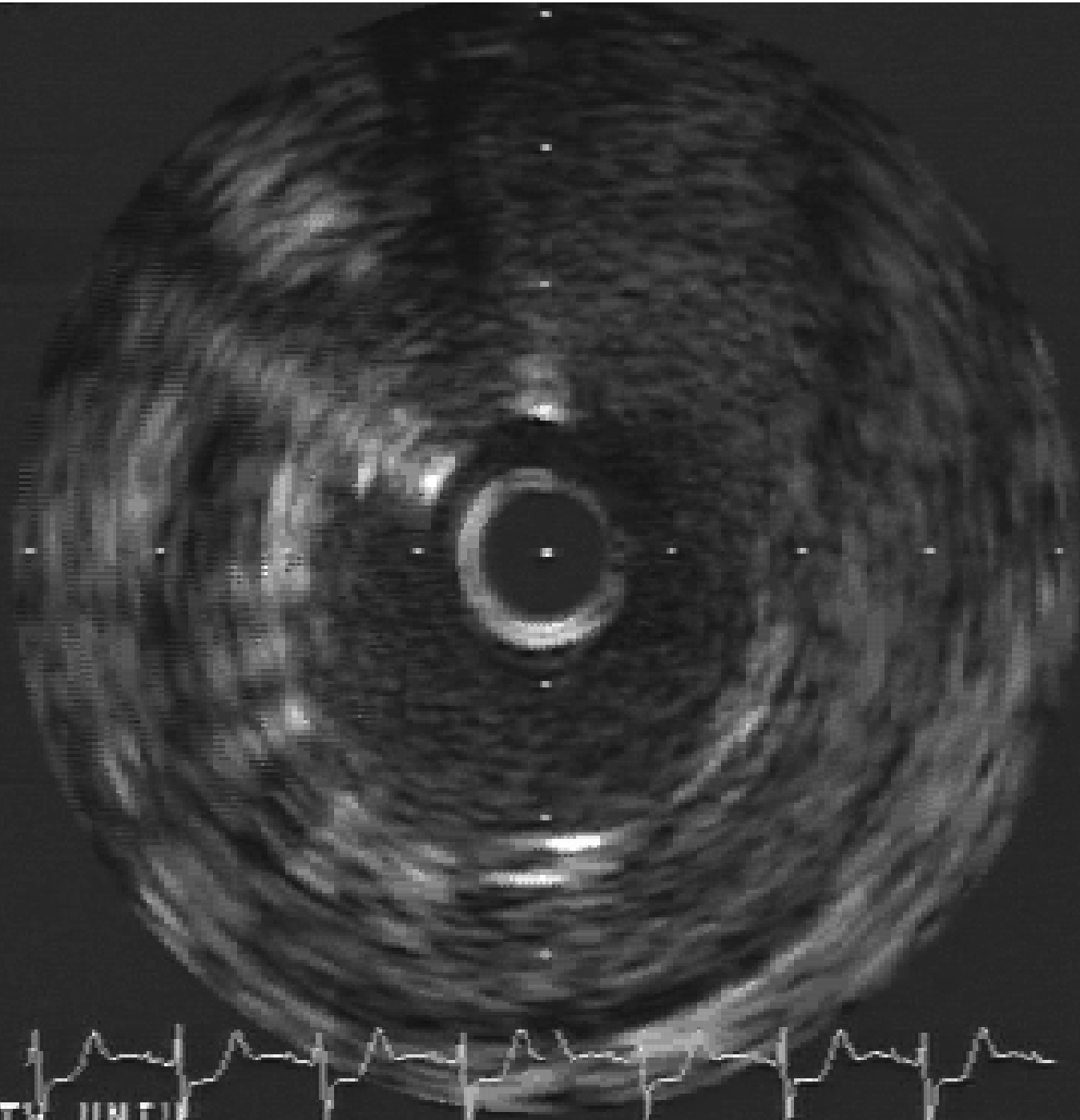


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## *Outcome*

**After percutaneous coronary intervention, the patient's hemodynamics stabilized.**

**She underwent repair of the aortic dissection with reconstruction of the ascending aorta.**

## *Summary*

- **We experienced a case of aortic dissection causing anterior acute myocardial infarction.**
- **IVUS revealed a huge hematoma originating from the aorta and extending into the LAD, permitting the accurate diagnosis of type A aortic dissection as well as the following optimal treatment.**