

# Intracardiac tracings from devices: Rated PG(Y)-13

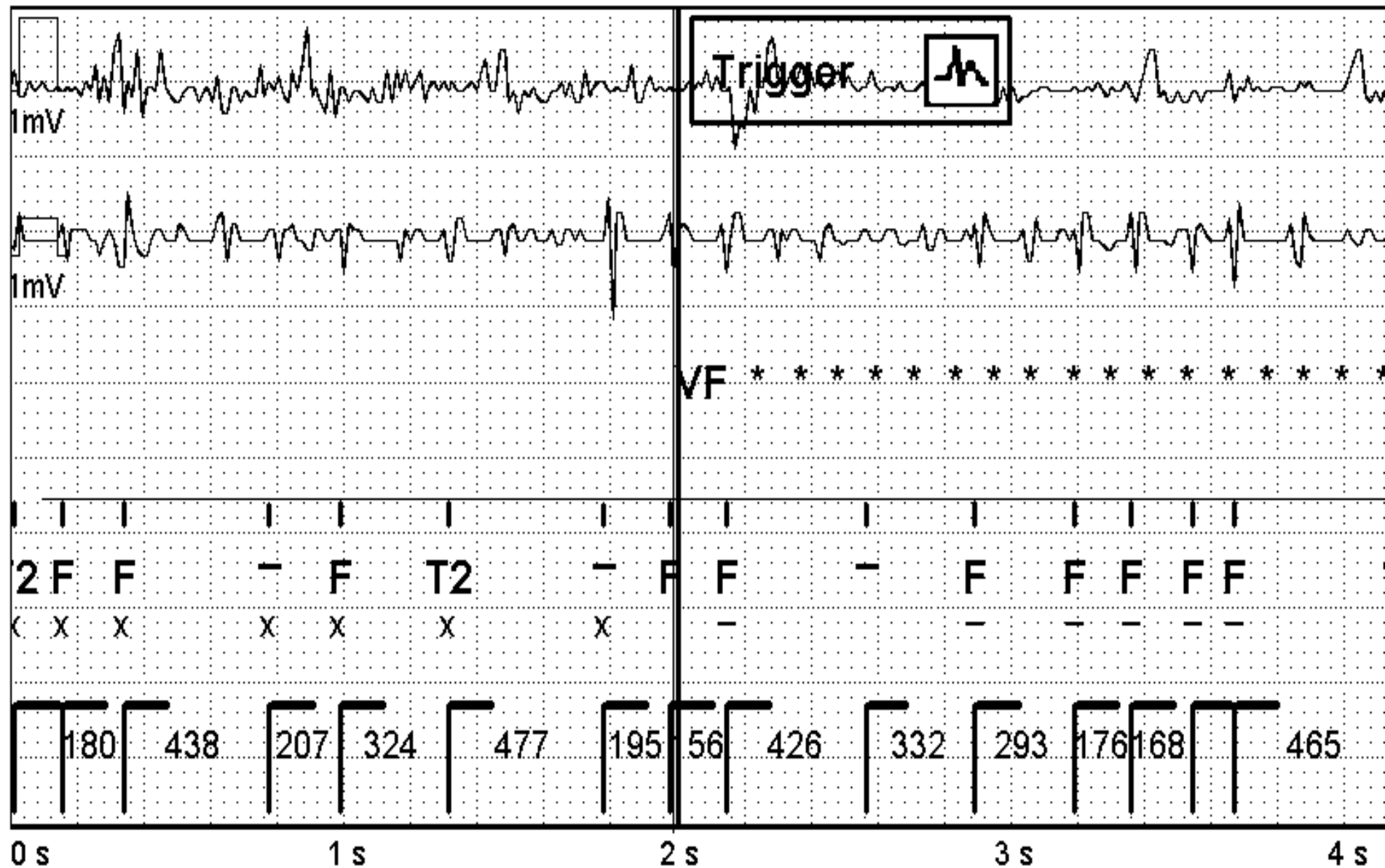
Arnold Pinter  
St. Michael's Hospital

# Case 1

- 76 yo female patient
- Anterior MI 1990
- CABGx4 and aneurysmectomy in 2006
- HTN, DM2, AFib
- LVEF 28% (MUGA)
- VVI ICD implantation for primary prophylaxis
- presents 2 months later with a shock from the ICD

Position 1 Leadless ECG Autogain (5.1 mm/mV)

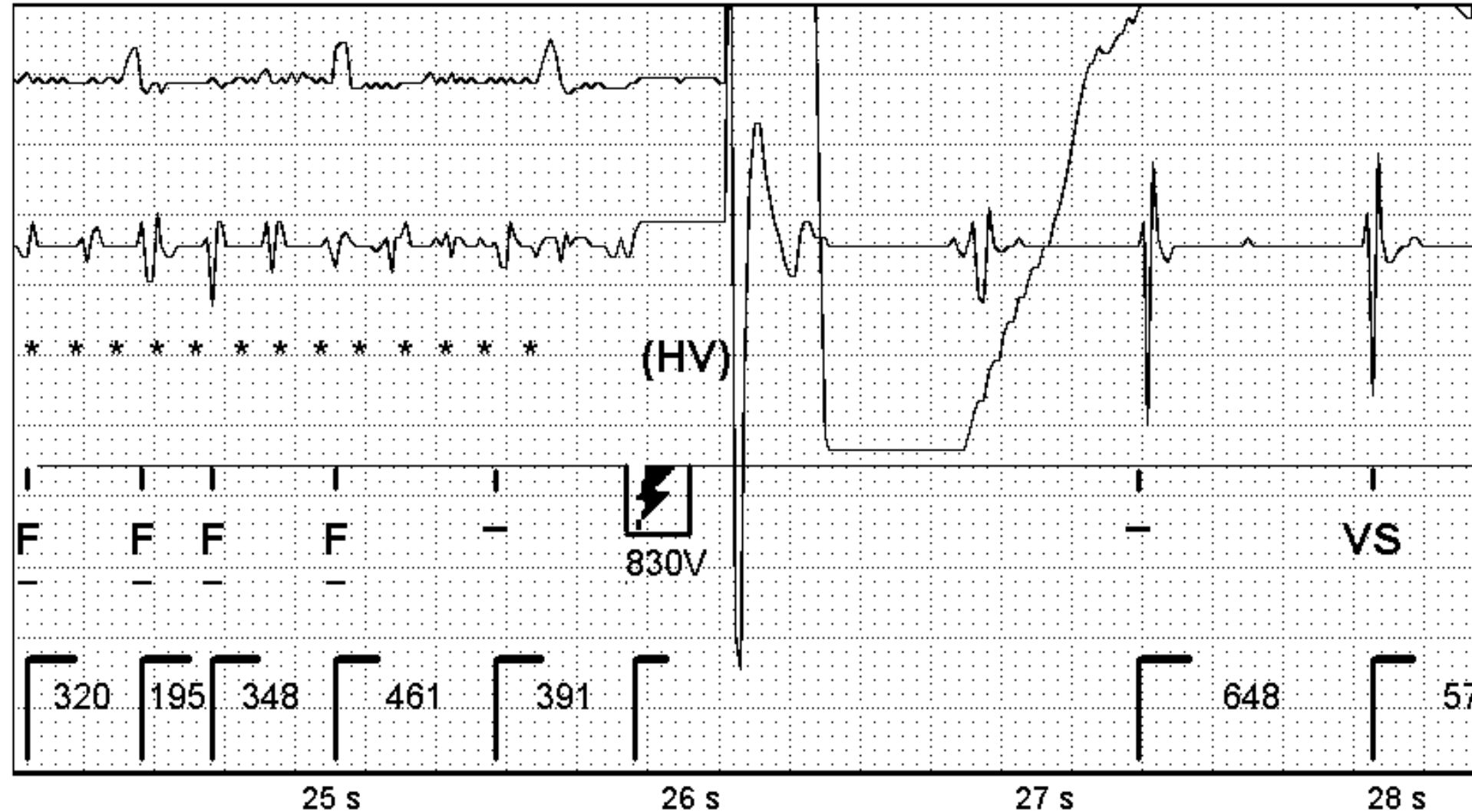
Position 2 V Sense Amp Autogain (2.5 mm/mV)



The therapy was: 1. Appropriate and necessary 2. Appropriate but unnecessary  
3. Inappropriate due to SVT/Afib 4. Inappropriate due to noise/artefact

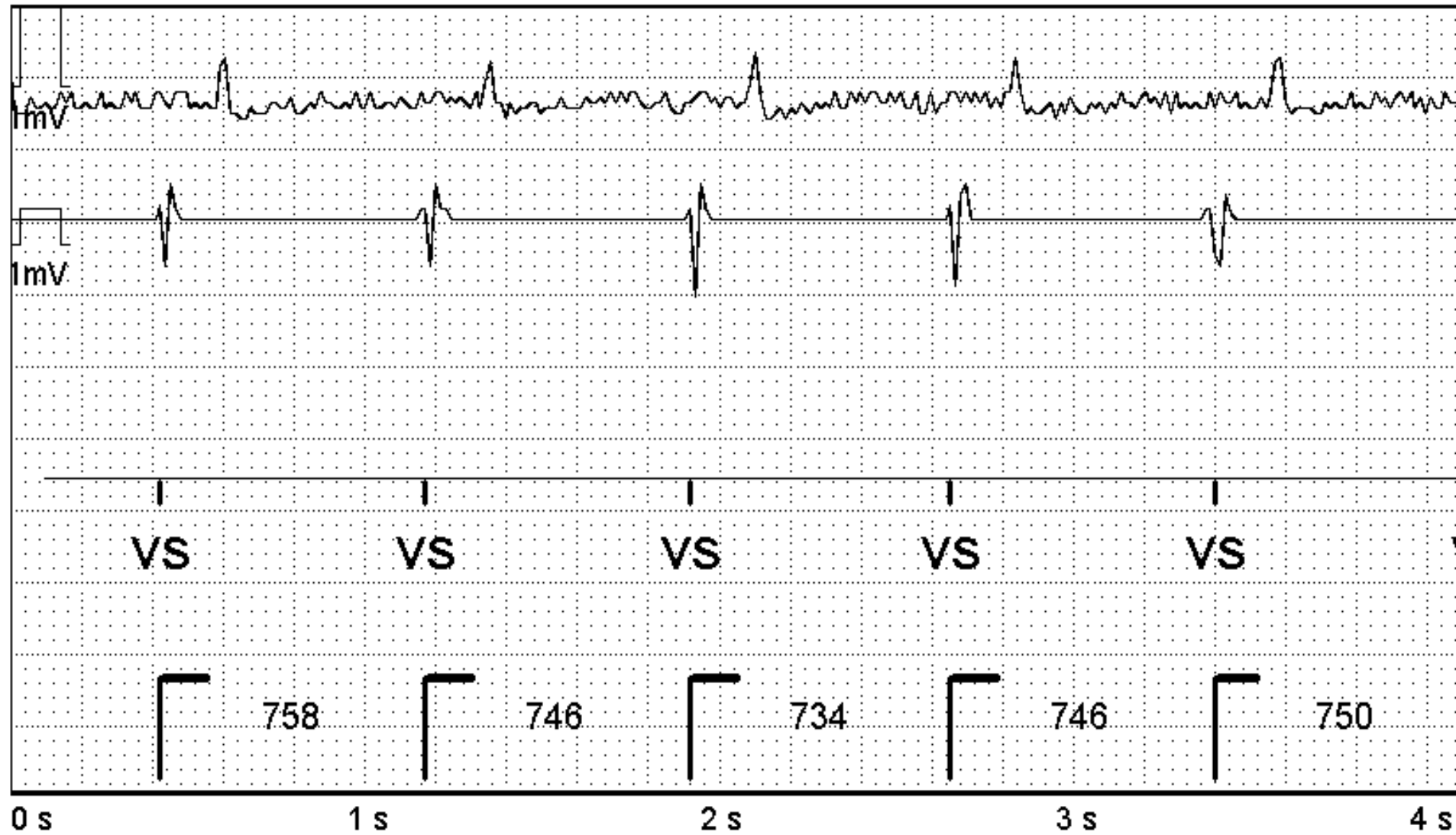
(Continued) **VF** 22 Jun 2010 20:46

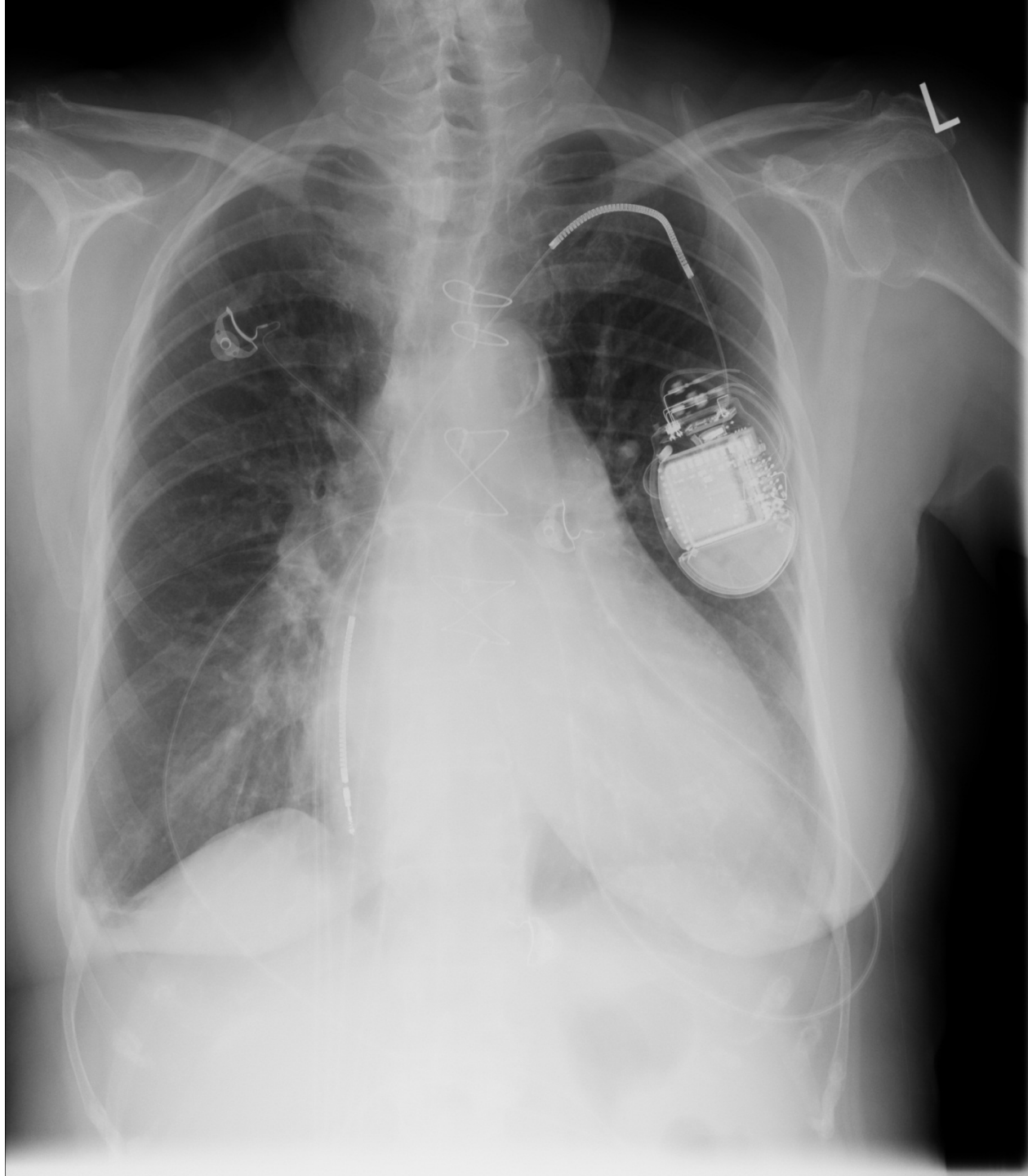
Position 1 Leadless ECG Autogain (5.1 mm/mV) Position 2 V Sense Amp Autogain (2.5 mm/mV)



# Baseline

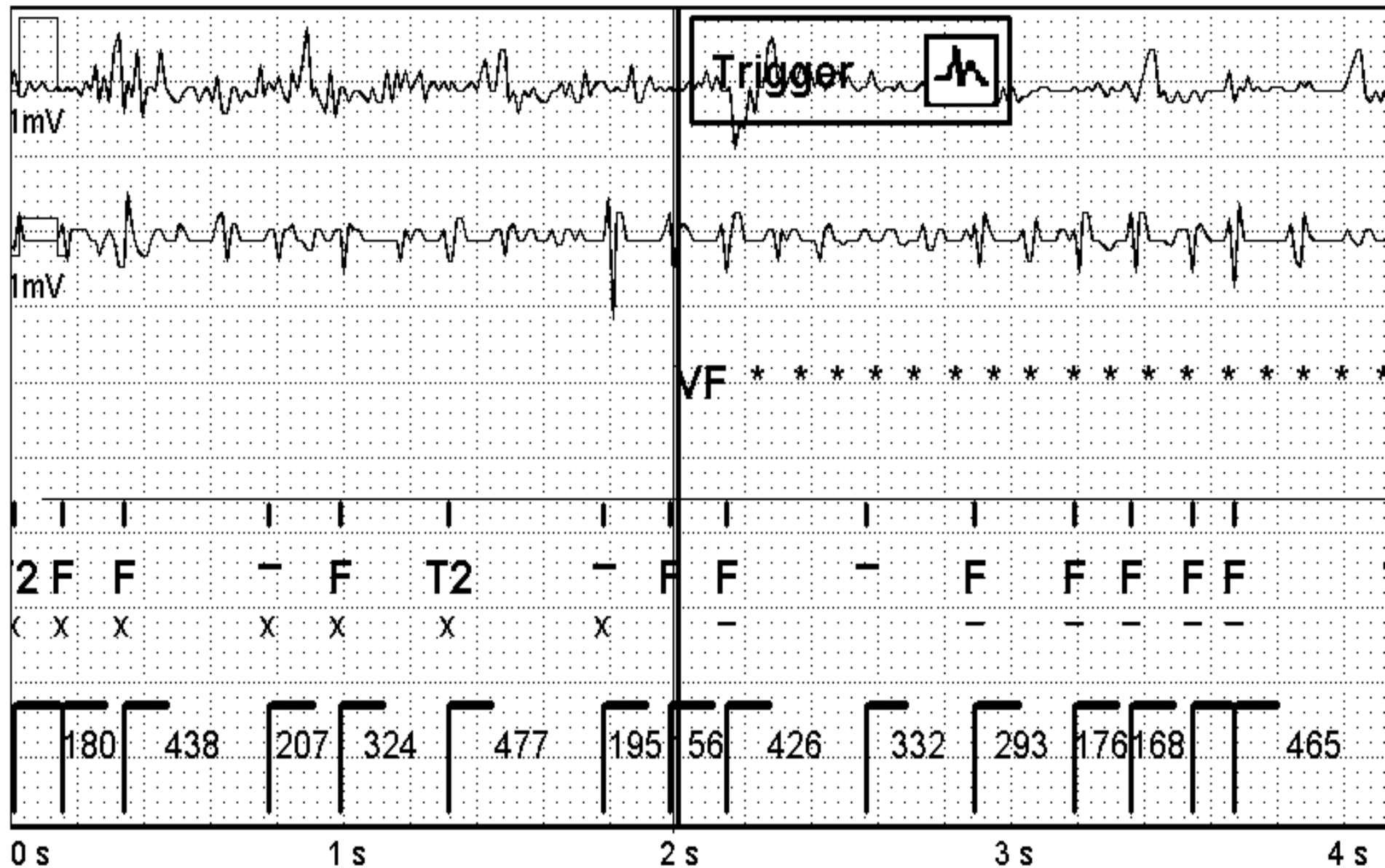
Position 1 Leadless ECG Autogain (10 mm/mV)      Position 2 V Sense Amp Autogain (2.5 mm/mV)





Position 1 Leadless ECG Autogain (5.1 mm/mV)

Position 2 V Sense Amp Autogain (2.5 mm/mV)

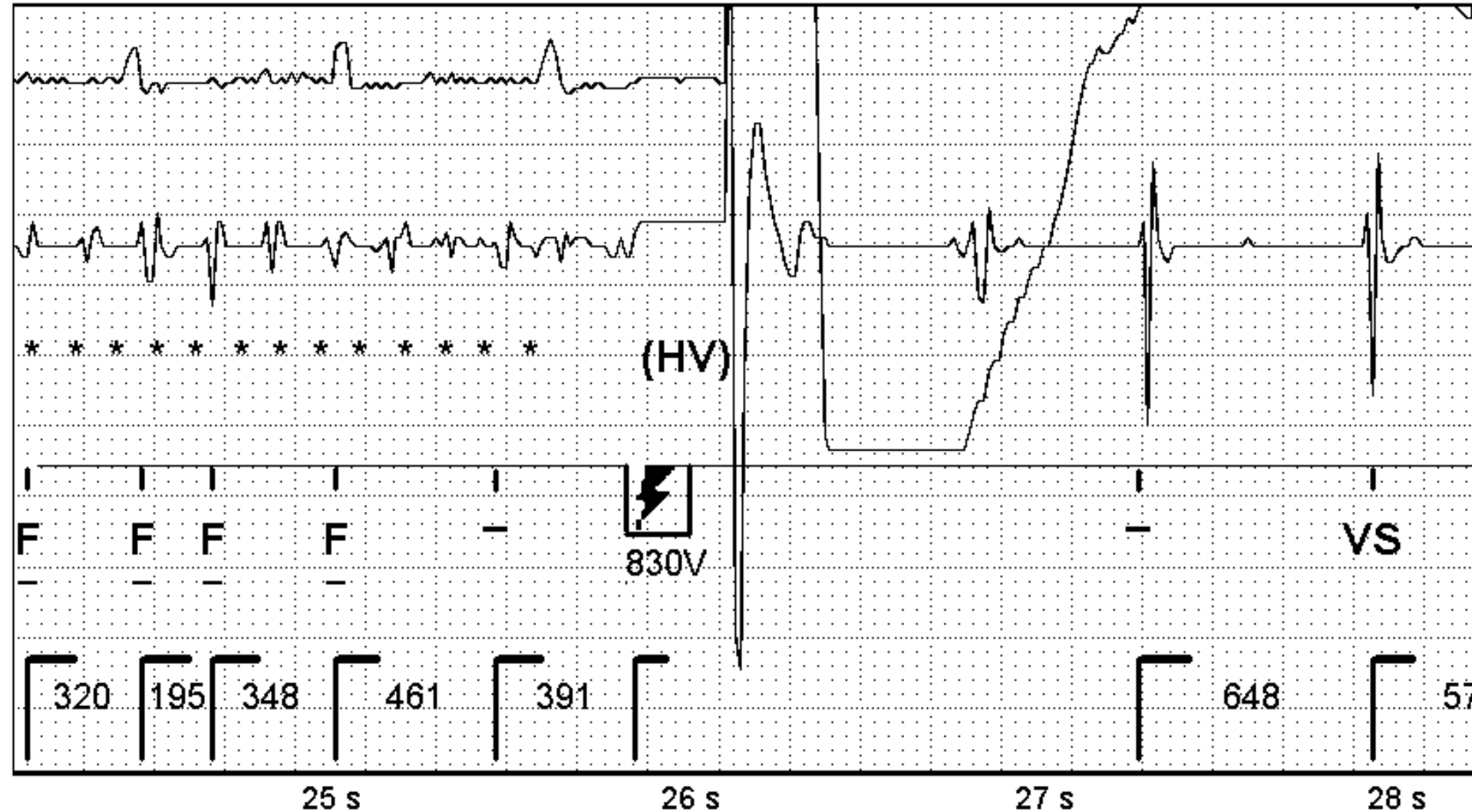


The therapy was: 1. Appropriate and necessary 2. Appropriate but unnecessary  
3. Inappropriate due to SVT/Afib 4. Inappropriate due to noise/artefact

(Continued) **VF** 22 Jun 2010 20:46

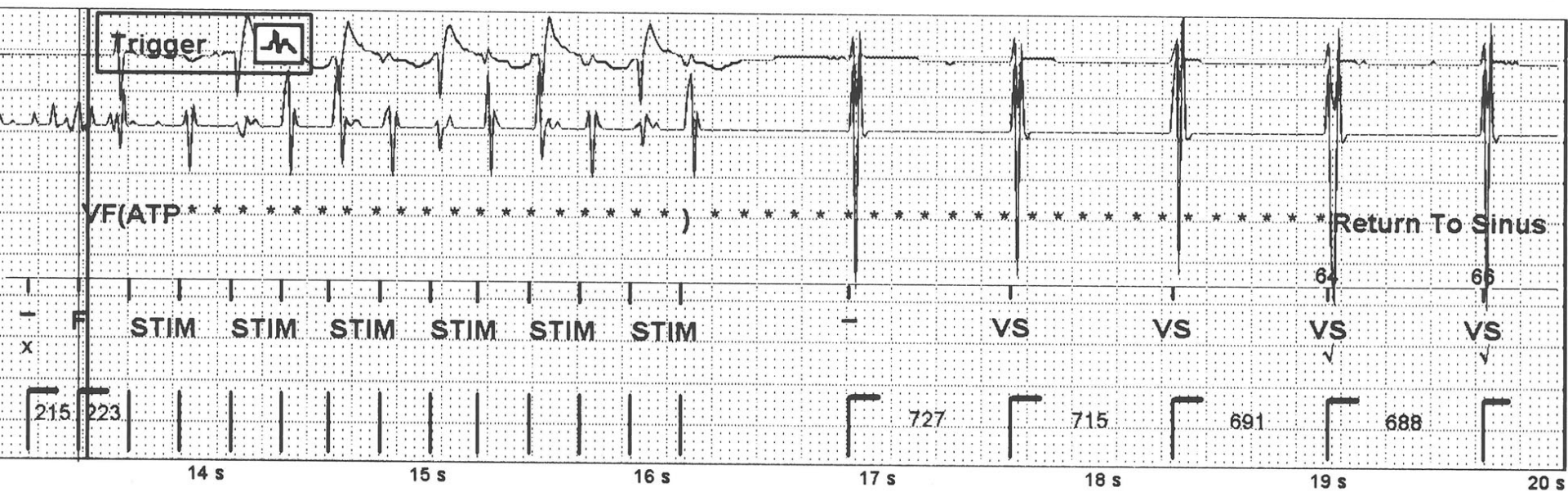
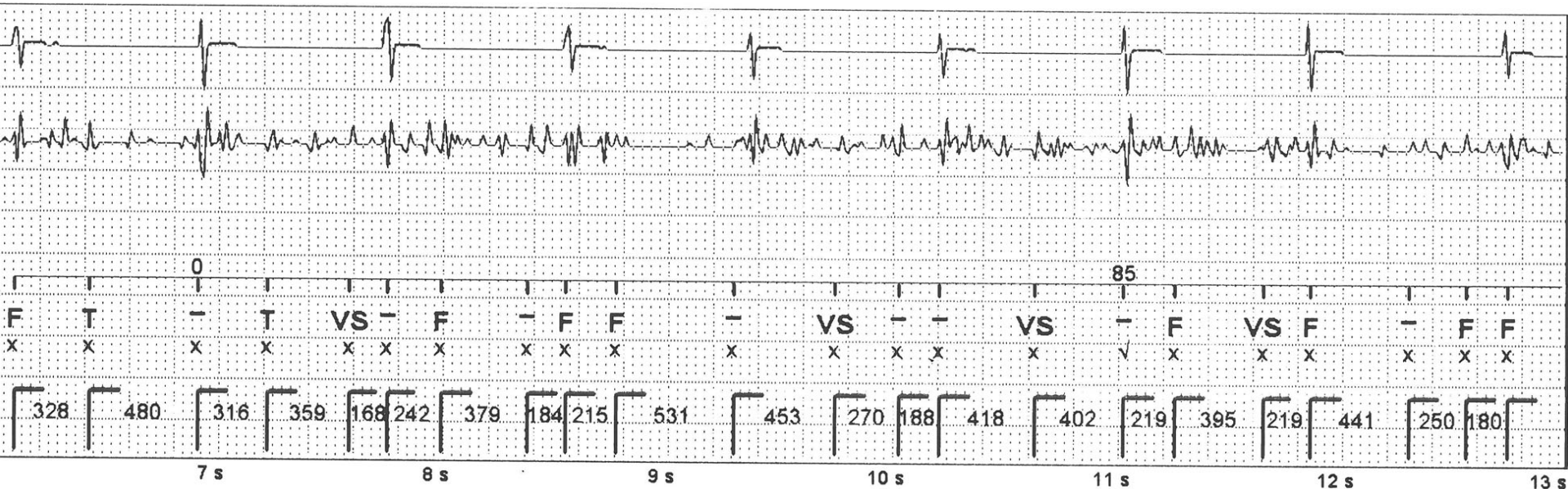
Position 1 Leadless ECG Autogain (5.1 mm/mV)

Position 2 V Sense Amp Autogain (2.5 mm/mV)





## Electrostatic noise reversion with ATP (or shock)



## Case 2

What is the diagnosis?

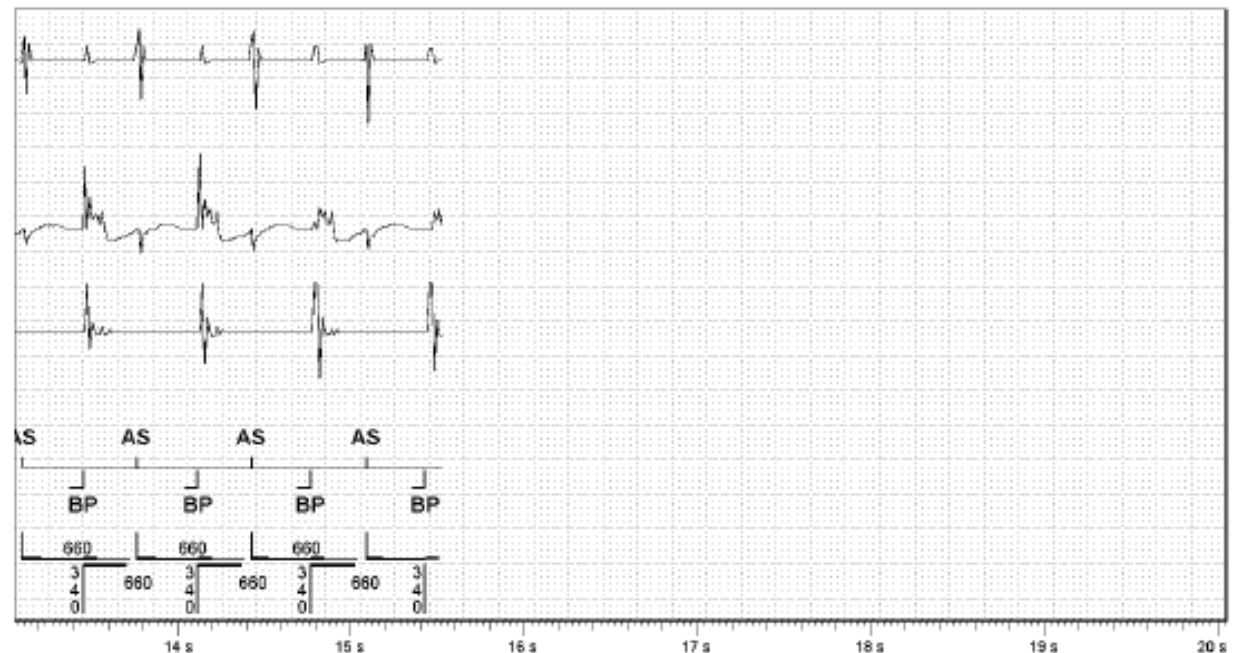
1. Sinus rhythm + AVB
2. 2:1 atrial tachycardia
3. 2:1 atrial flutter
4. PMT



1: A Sense Amp AutoGain (2.9 mm/mV)  
 2: Leadless ECG AutoGain (1.2 mm/mV)  
 3: V Sense Amp AutoGain (0.6 mm/mV)

4: Markers

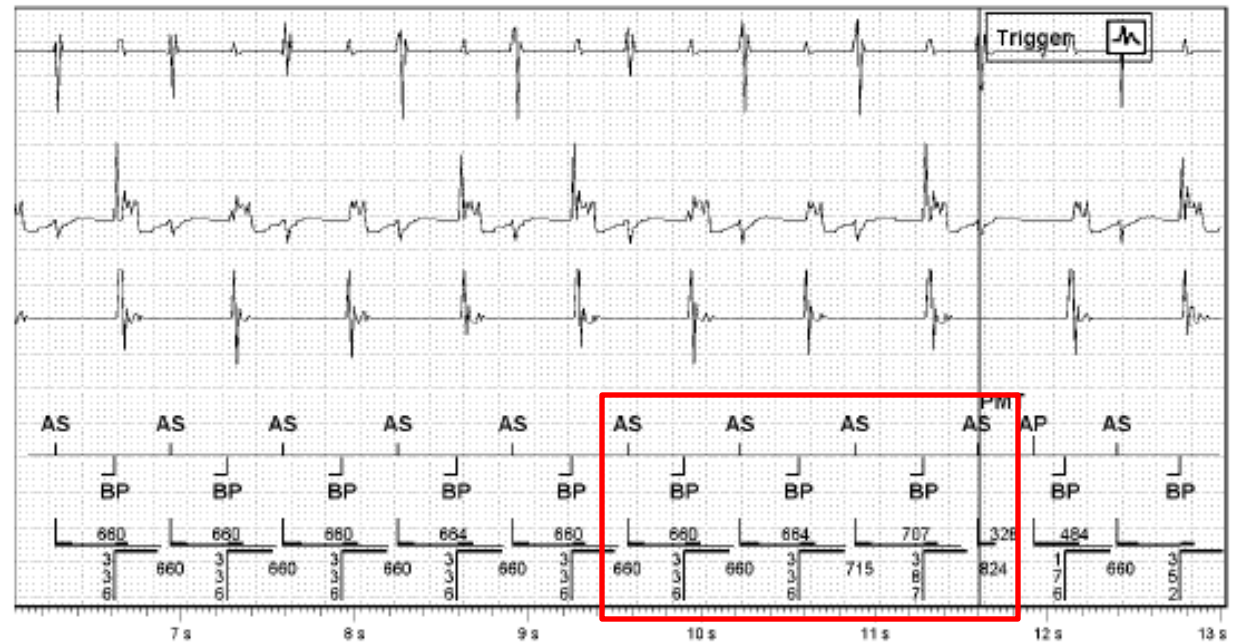
Sweep Speed: 25 mm/s



## Case 2

What is the diagnosis?

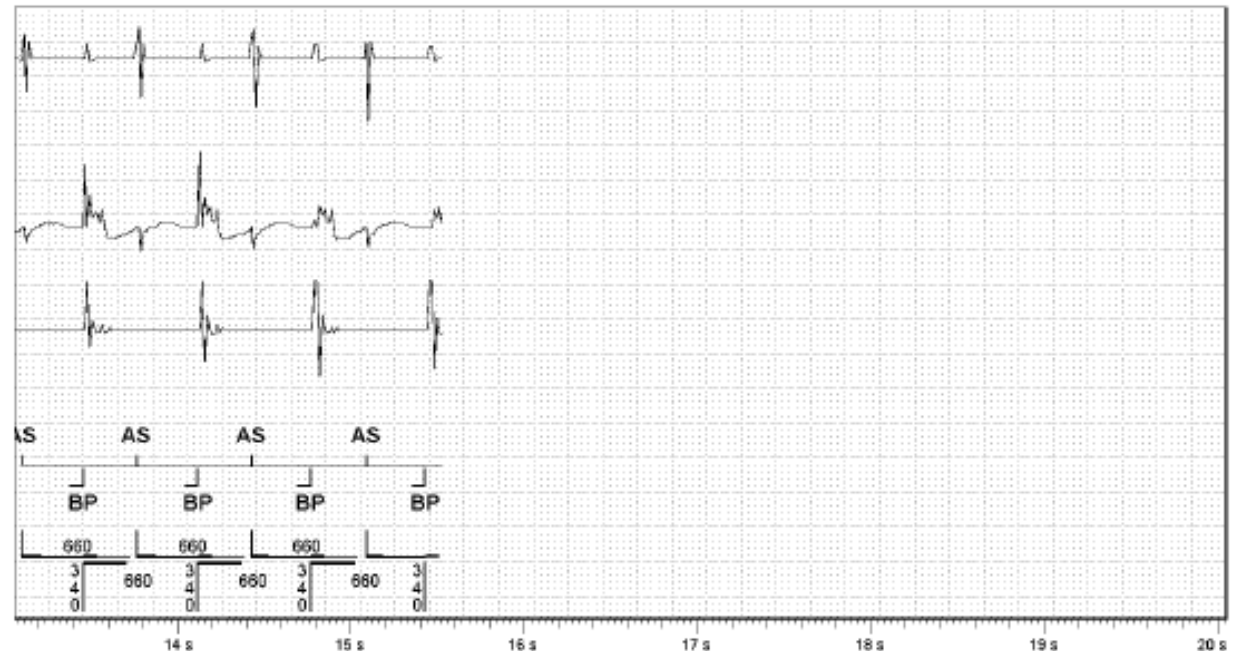
1. Sinus rhythm + AVB
2. 2:1 atrial tachycardia
3. 2:1 atrial flutter
4. PMT



1: A Sense Amp AutoGain (2.9 mm/mV)  
2: Leadless ECG AutoGain (1.2 mm/mV)  
3: V Sense Amp AutoGain (0.6 mm/mV)

4: Markers

Sweep Speed: 25 mm/s



# Case 3. Why is there ventricular pacing?

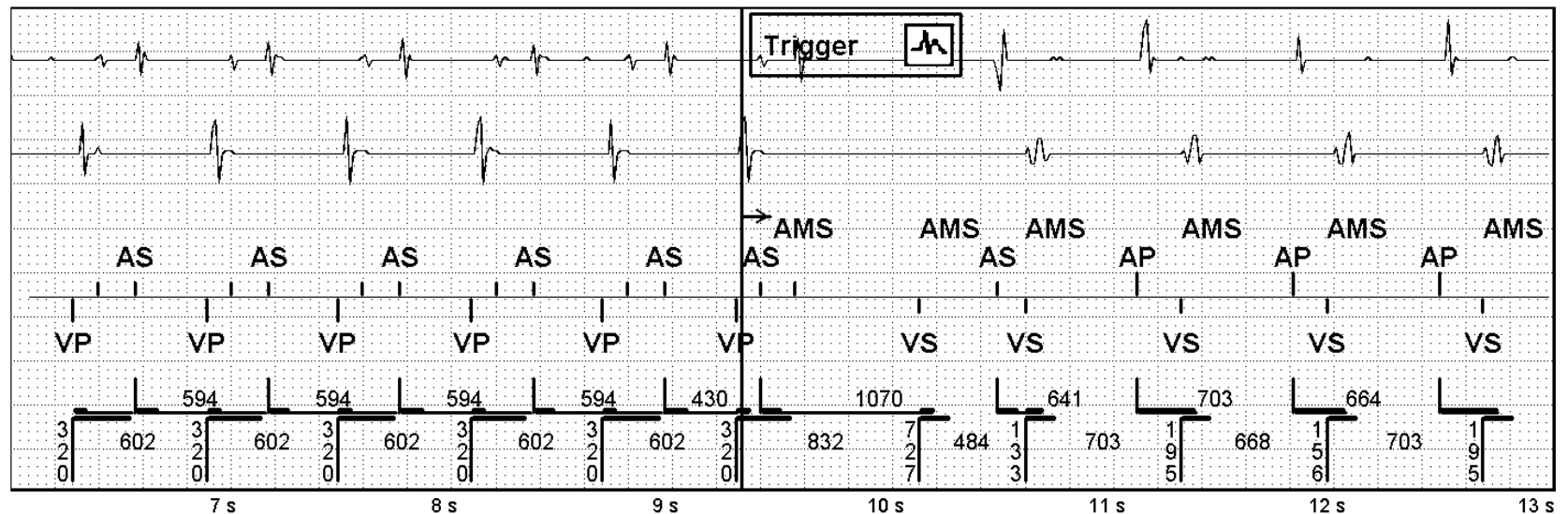
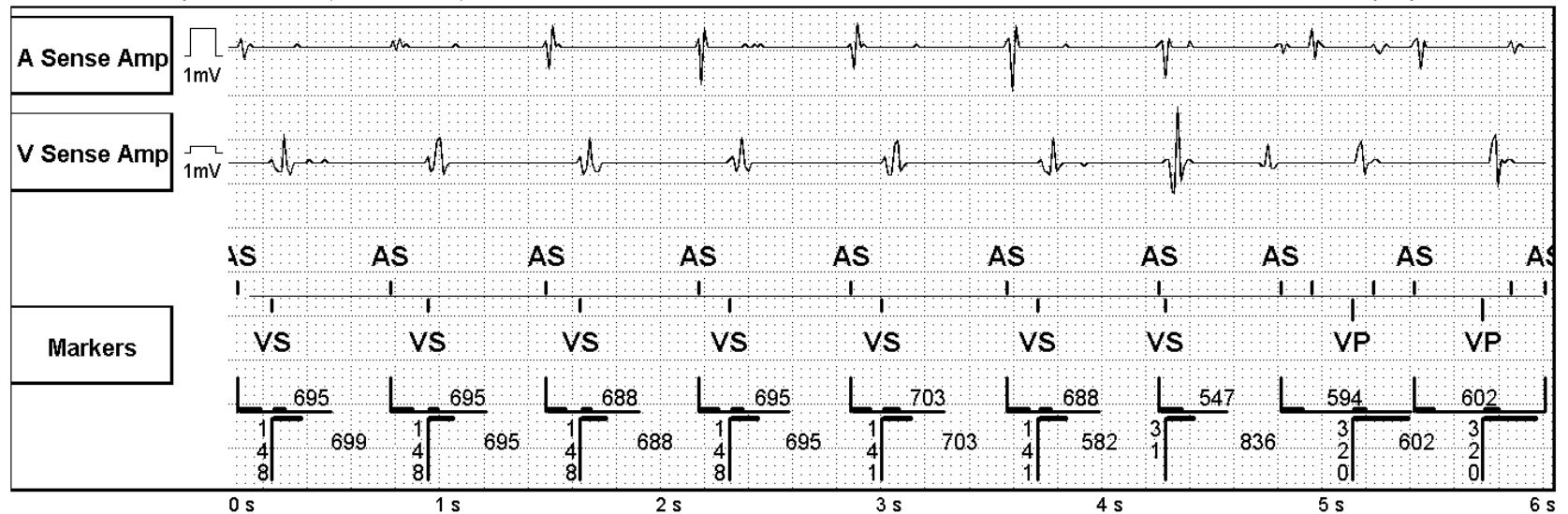
1. Paroxysmal AV block
2. Ventricular safety pacing
3. Mode switch
4. PMT

1: A Sense Amp AutoGain (3.4 mm/mV)

3: Markers

2: V Sense Amp AutoGain (0.9 mm/mV)

Sweep Speed: 25 mm/s



# Case 3. Why is there ventricular pacing?

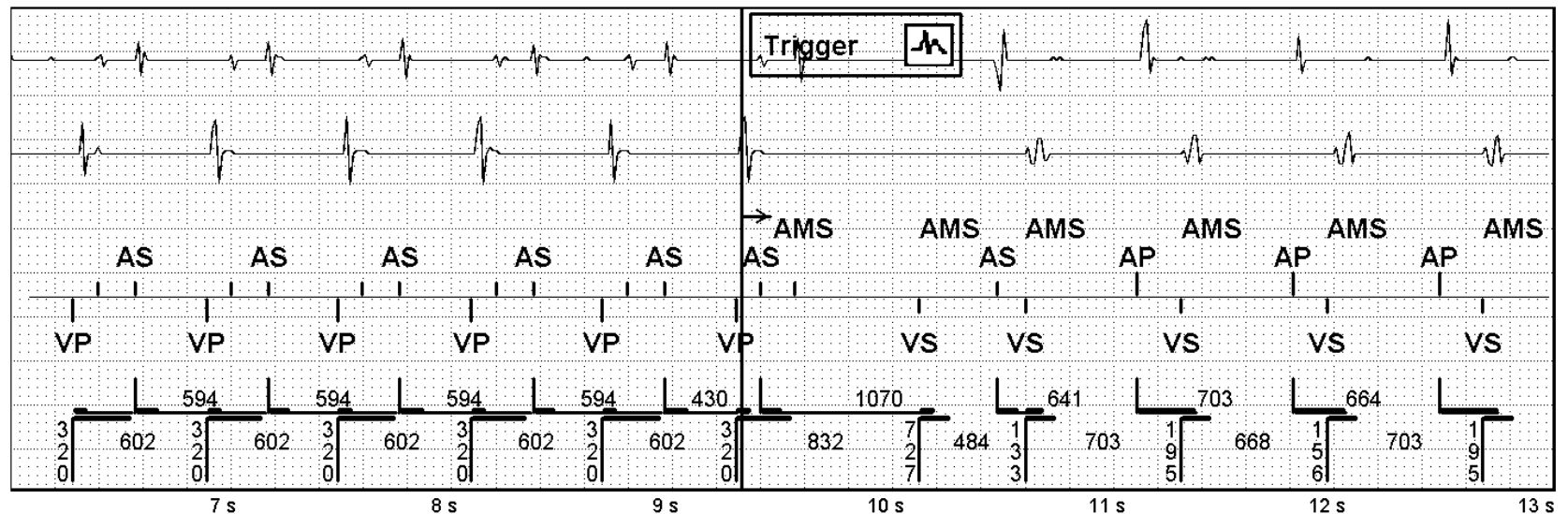
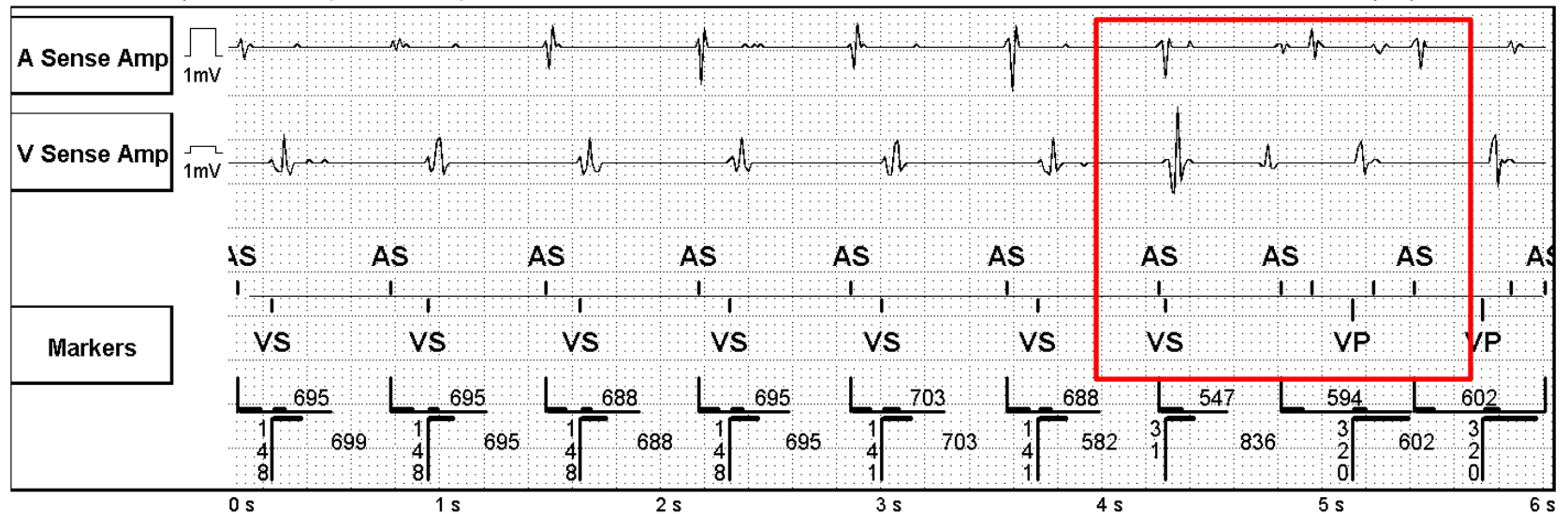
1. Paroxysmal AV block    2. Ventricular safety pacing    3. Mode switch    4. PMT

1: A Sense Amp AutoGain (3.4 mm/mV)

3: Markers

2: V Sense Amp AutoGain (0.9 mm/mV)

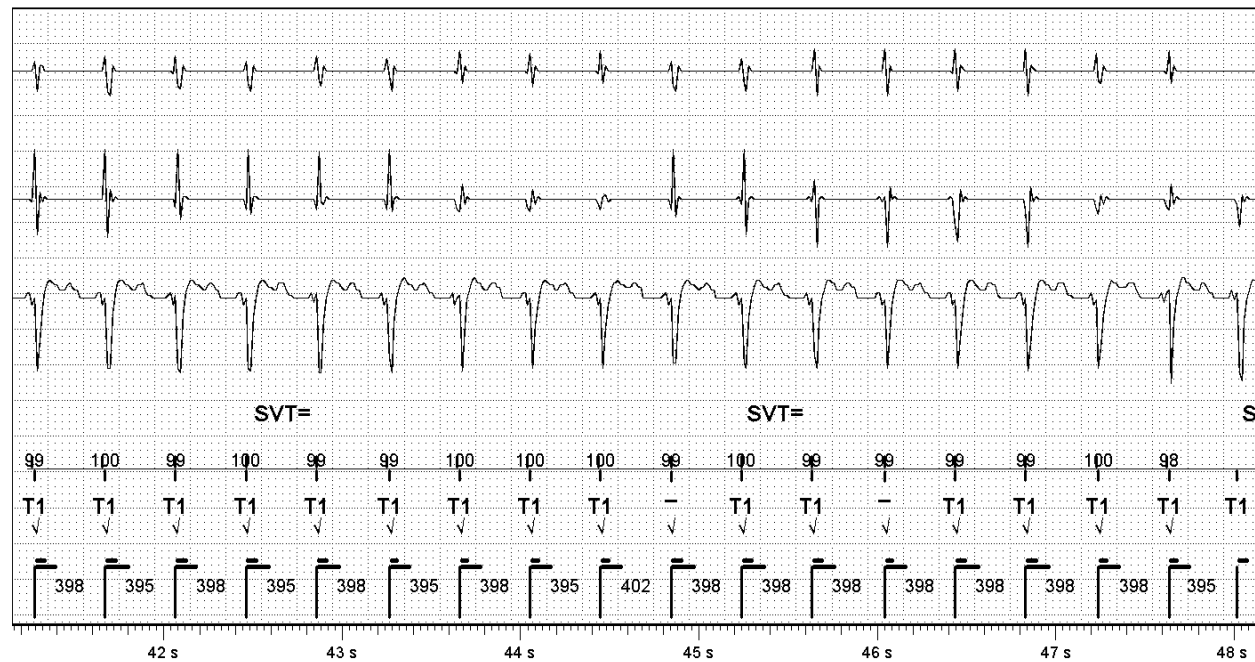
Sweep Speed: 25 mm/s



# Case 4

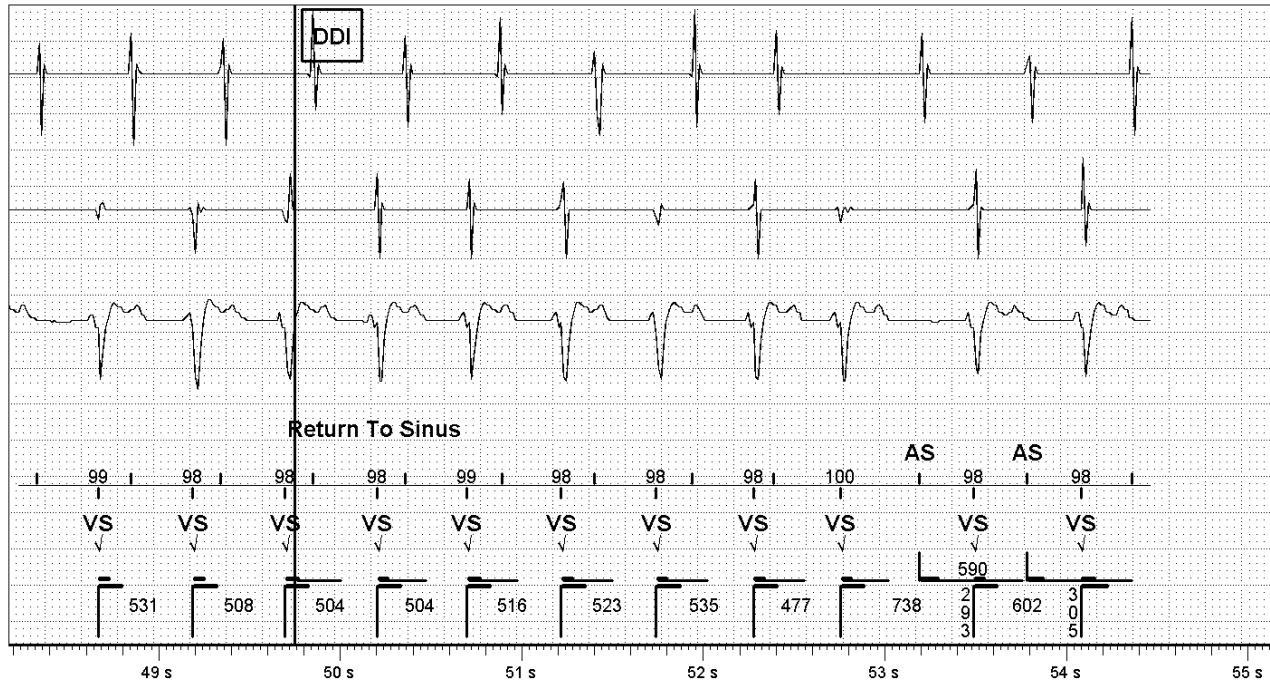
## Diagnosis?

1. VT
2. SVT



1: A Sense Amp AutoGain (2.3 mm/mV)  
2: V Sense Amp AutoGain (0.6 mm/mV)  
3: Discrimination AutoGain (1.9 mm/mV)  
4: Markers

Sweep Speed: 25 mm/s

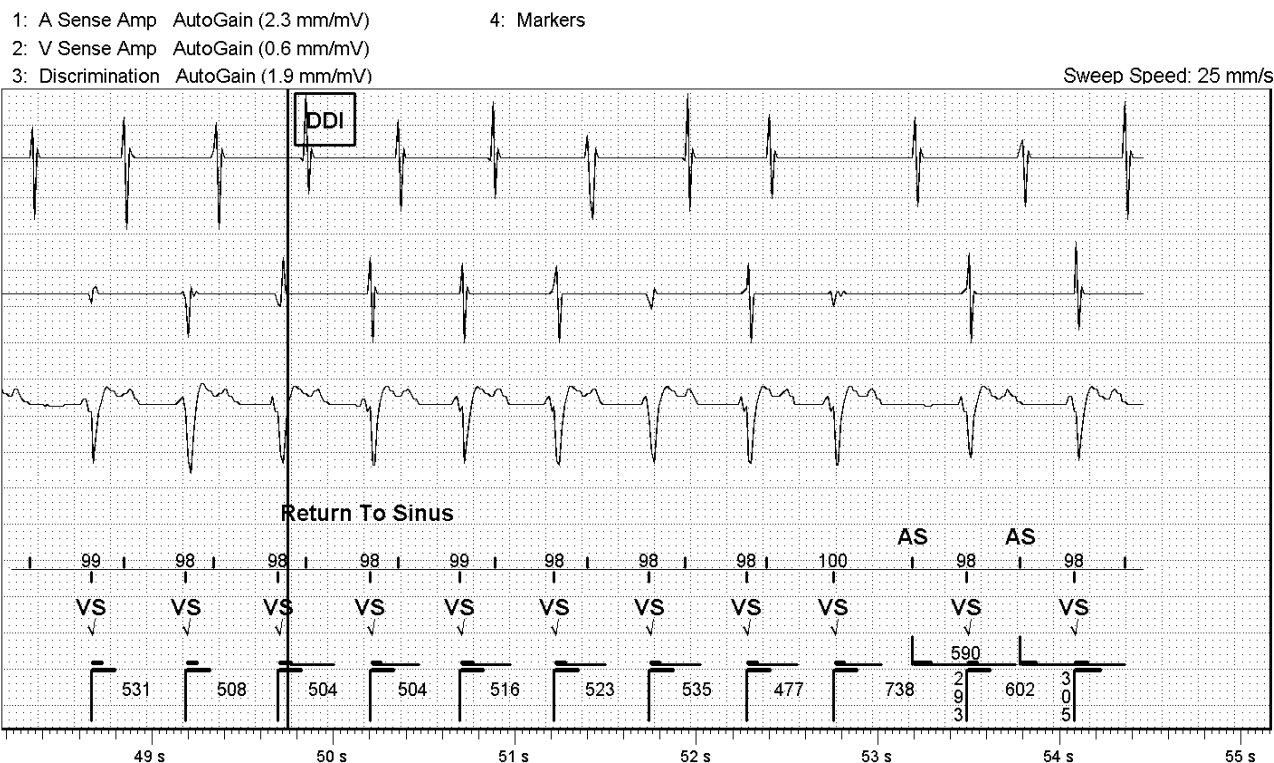
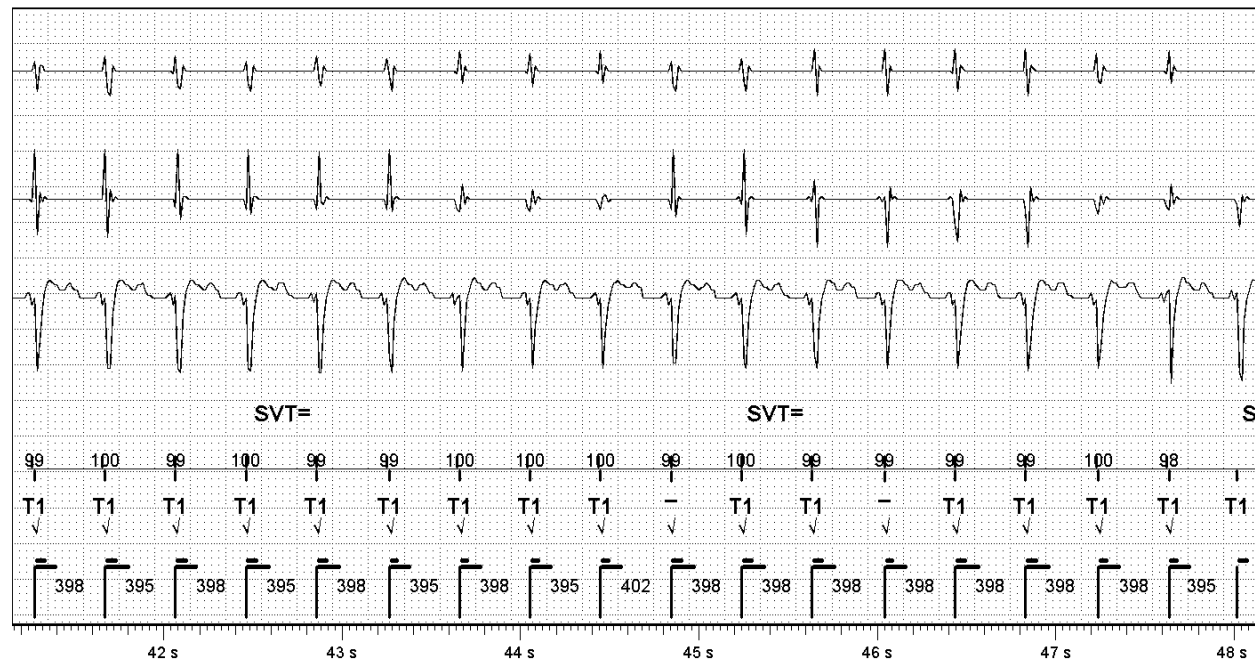




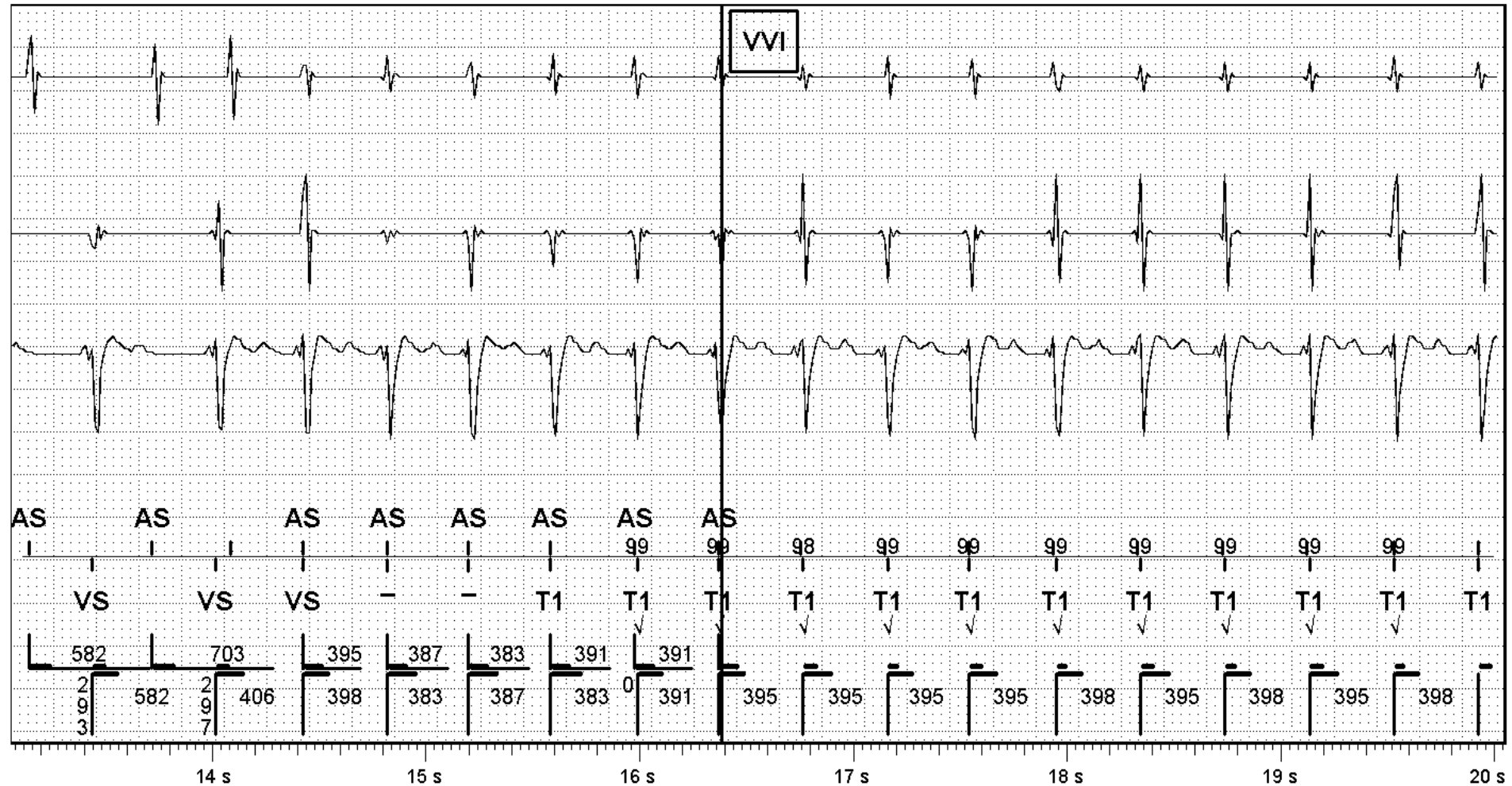
# Case 4

## Your dg is based on:

1. Narrow QRS tachy
2. QRS morphology same as baseline
3. A/V numerical relationship
4. A/V temporal relationship



# Tachycardia initiation



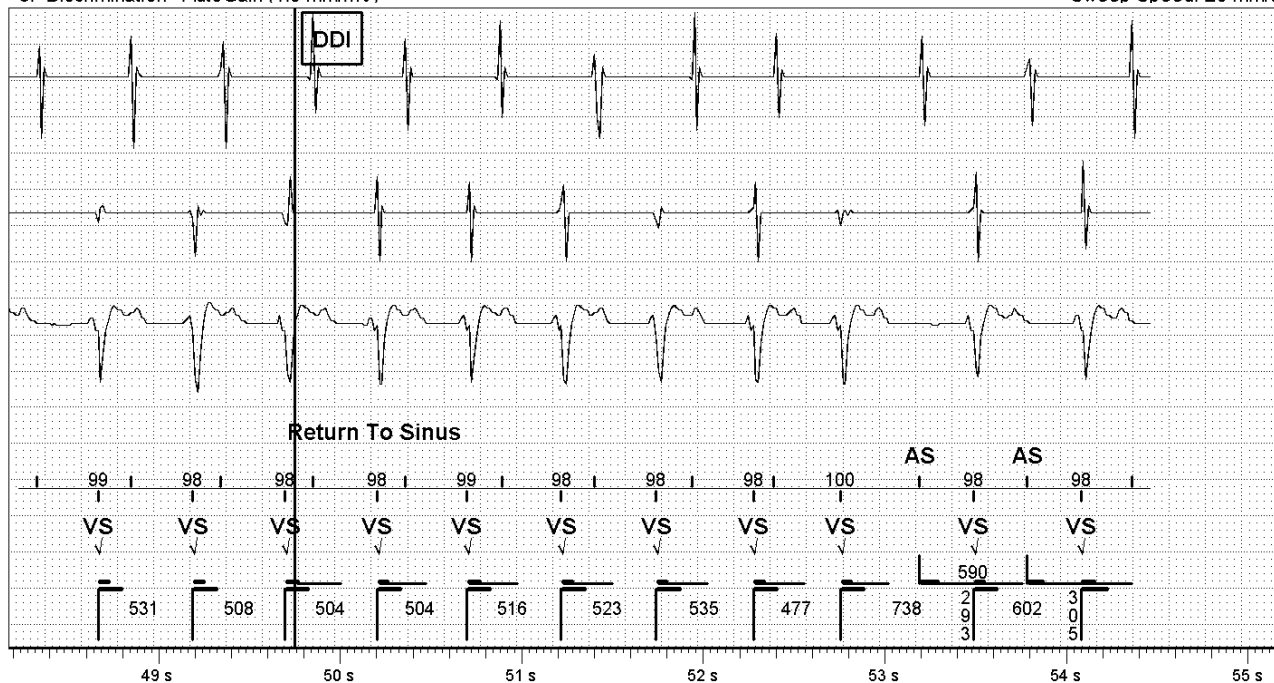
- 1: A Sense Amp AutoGain (1.3 mm/mV)
- 2: V Sense Amp AutoGain (0.6 mm/mV)
- 3: Discrimination AutoGain (1.4 mm/mV)

#### 4: Markers

Sweep Speed: 25 mm/s



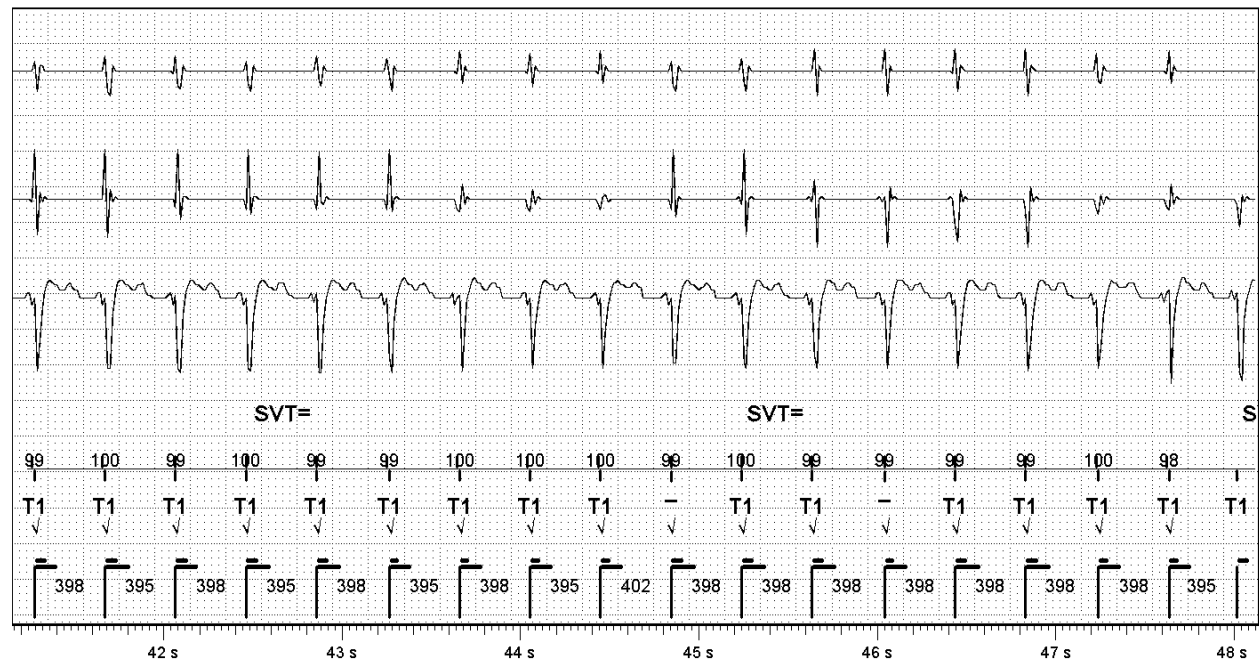
1. VT
2. SVT



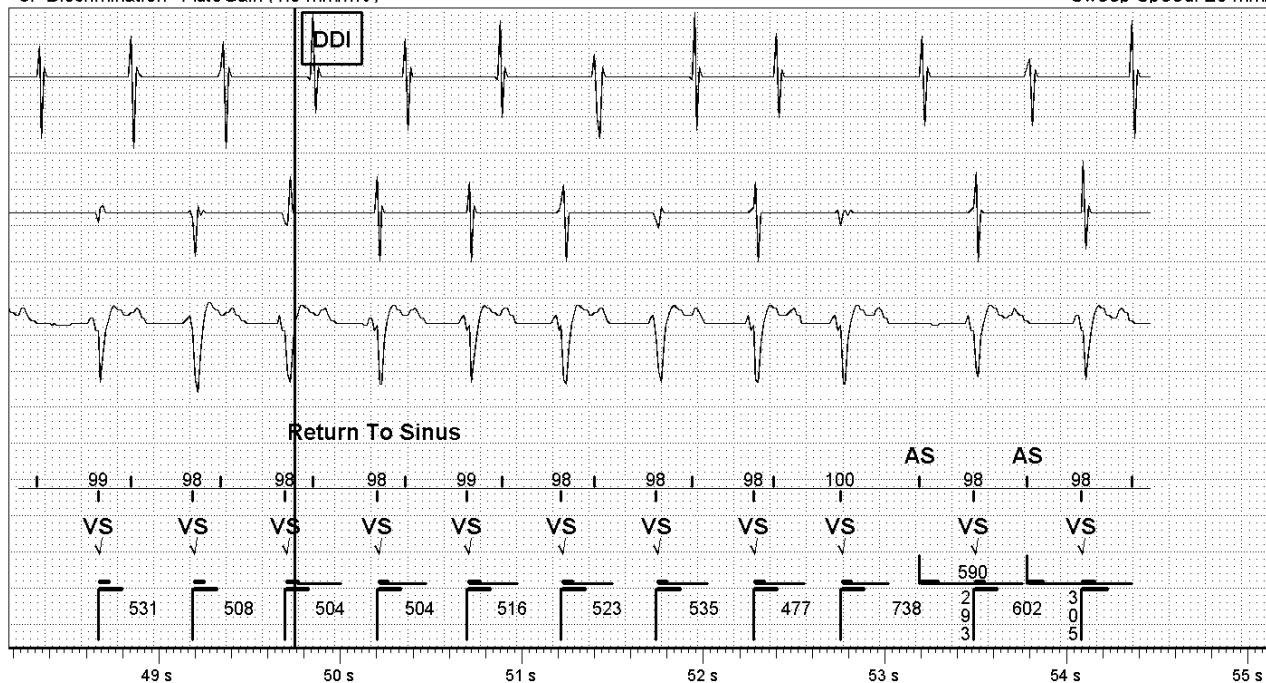
# Case 4

## Your dg is based on:

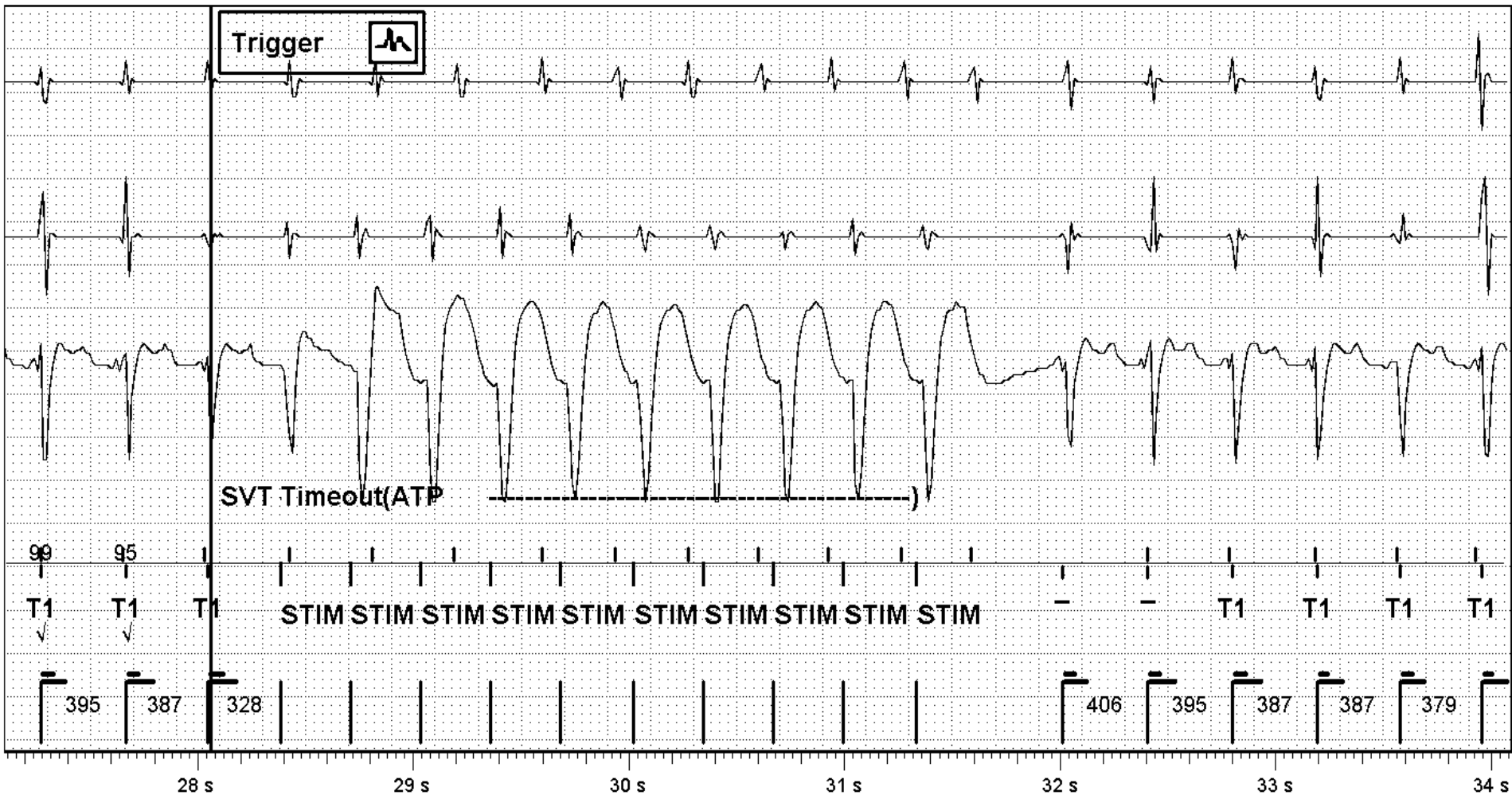
1. Narrow QRS tachy
2. QRS morphology same as baseline
3. A/V numerical relationship
4. A/V temporal relationship



1: A Sense Amp AutoGain (2.3 mm/mV)  
 2: V Sense Amp AutoGain (0.6 mm/mV)  
 3: Discrimination AutoGain (1.9 mm/mV)  
 4: Markers  
 Sweep Speed: 25 mm/s



# Diff dg: 1. AT 2. AVNRT

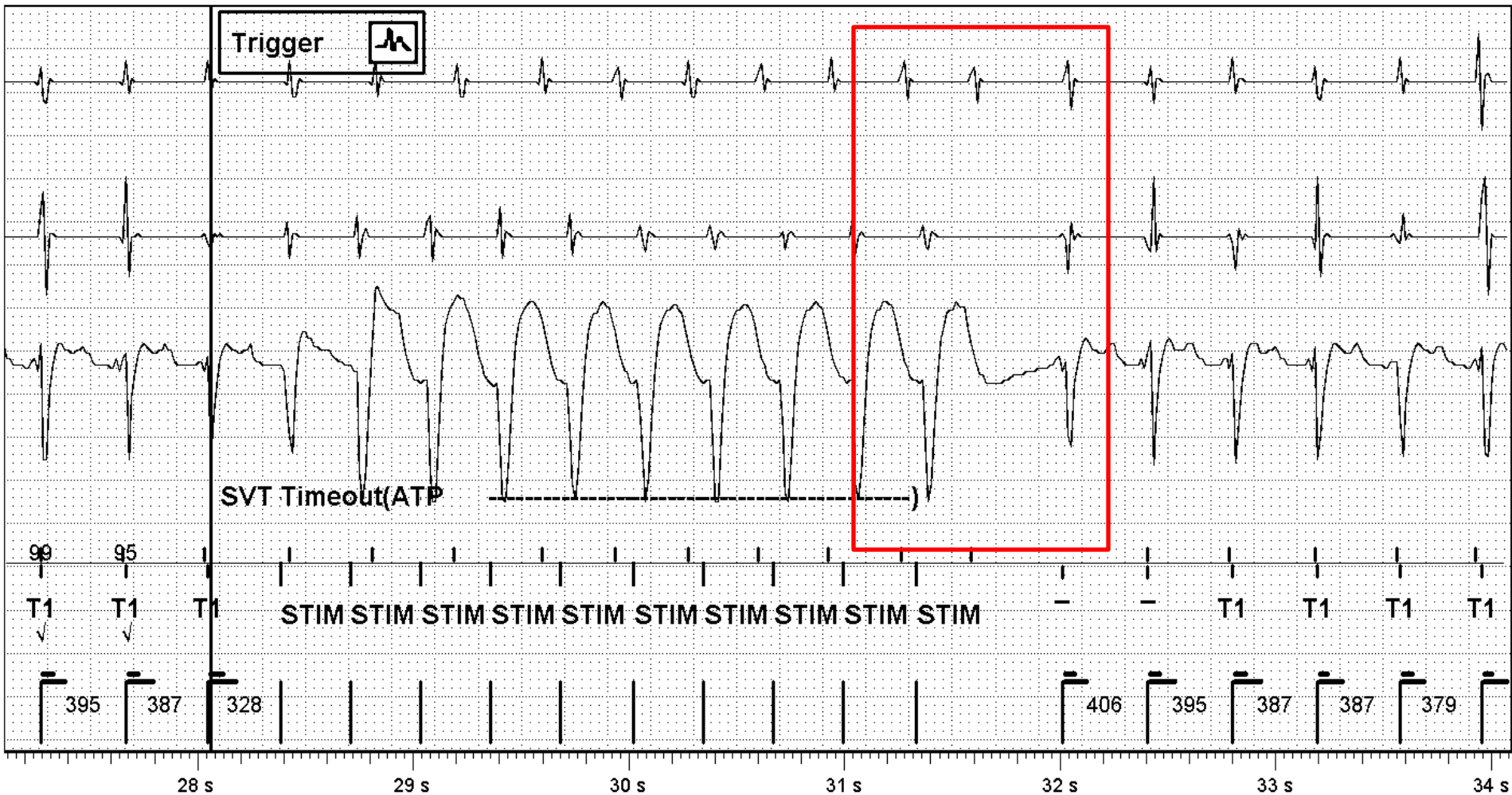


1: A Sense Amp AutoGain (1.7 mm/mV)  
2: V Sense Amp AutoGain (0.6 mm/mV)  
3: Discrimination AutoGain (1.6 mm/mV)

4: Markers

Sweep Speed: 25 mm/s

# Diff dg: 1. AT 2. AVNRT



1: A Sense Amp AutoGain (1.7 mm/mV)  
2: V Sense Amp AutoGain (0.6 mm/mV)  
3: Discrimination AutoGain (1.6 mm/mV)

4: Markers

Sweep Speed: 25 mm/s