

Atrial Tachycardia



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Korean Heart Rhythm Society COI Disclosure

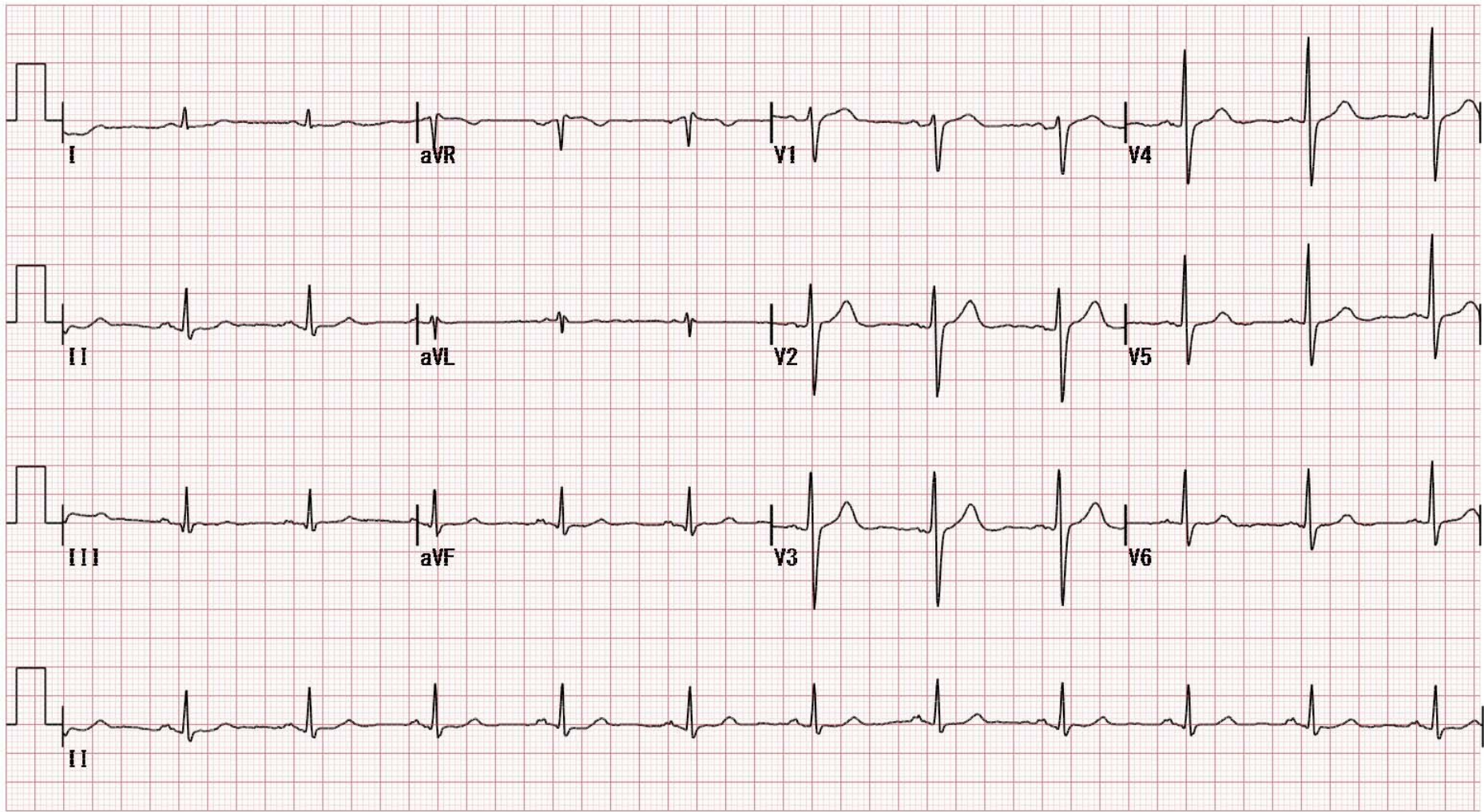
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The authors have no financial conflicts of interest
to disclose concerning the presentation

Case

- F/52
- Visited out-patient clinic complaining intermittent palpitation for several years
 - Usually during exercise
 - Lasting 30 minutes, resolved at rest
 - No effect with verapamil 40mg bid
 - Moderate effect with bisoprolol 2.5mg qd
- Recurrent tachycardia despite medication → Referred for RFCA

Baseline ECG

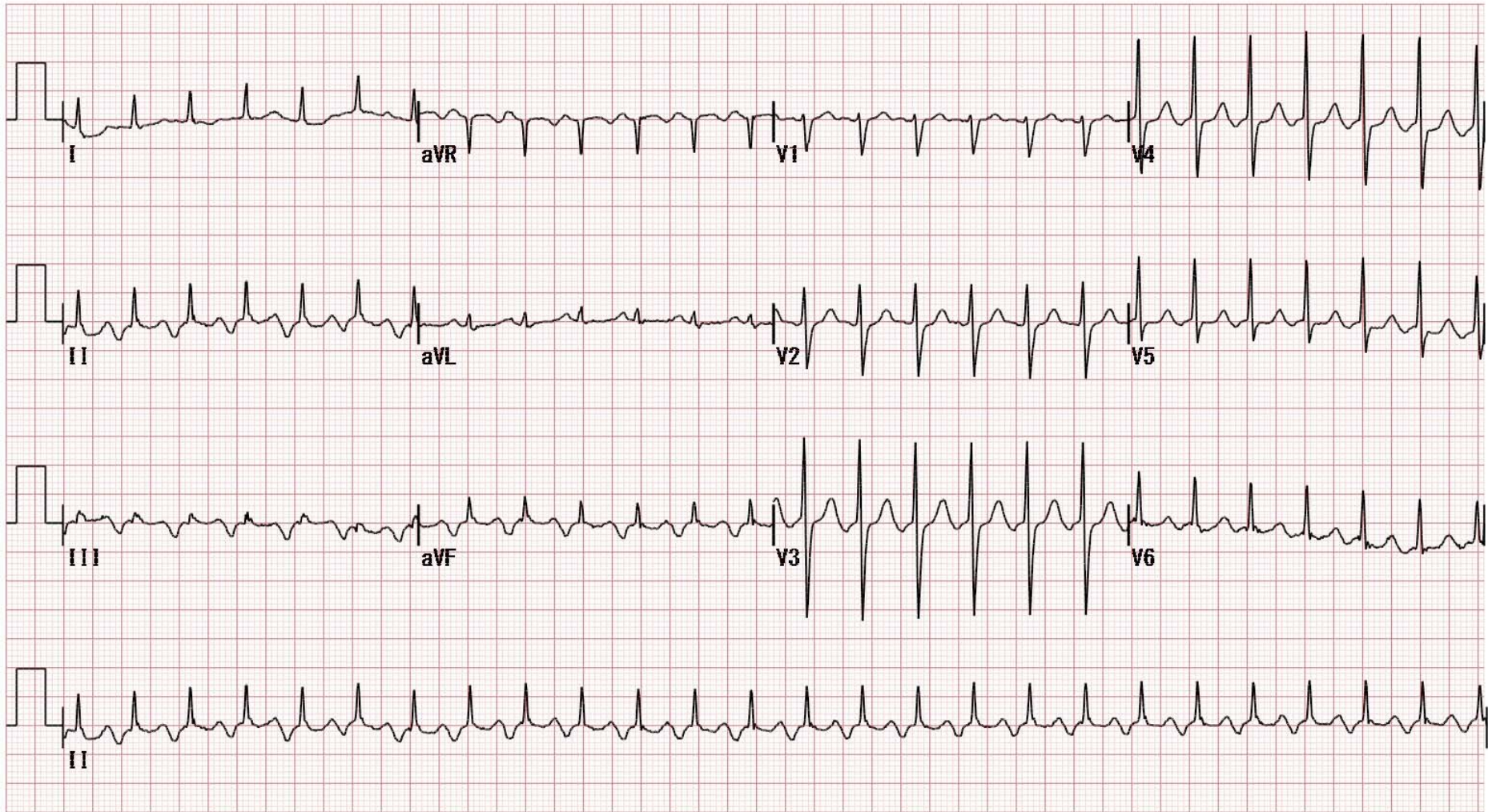


DEVICE(Ver): MAC55 (010Bsp1) 16-150Hz 60Hz

REST ECG : 4 X 2.5s + 1 Rhythm

25mm/s, 10mm/mV

SVT ECG



DEVICE(Ver): MAC55 (010Bsp1) 16-150Hz 60Hz

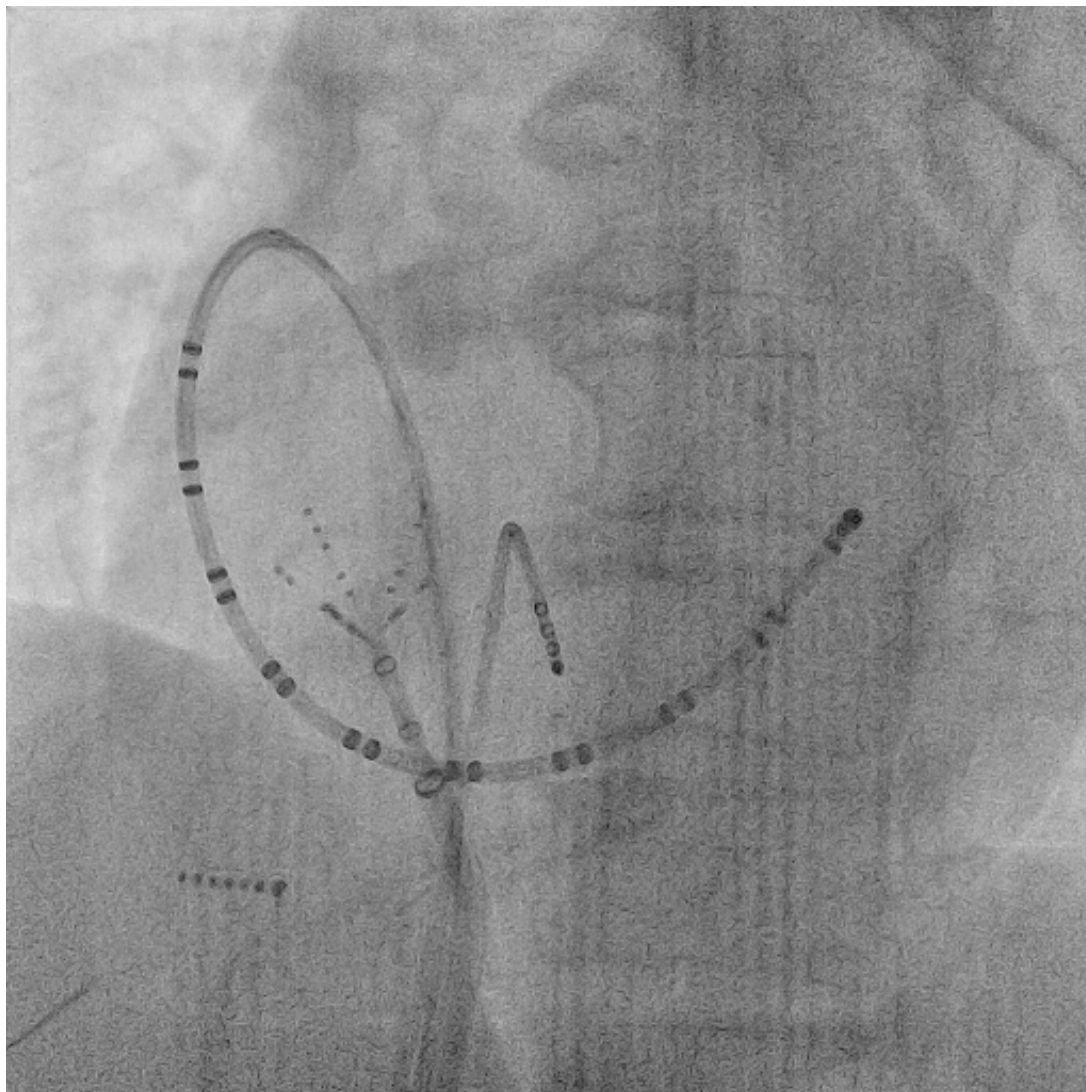
REST ECG : 4 X 2.5s + 1 Rhythm

25mm/s, 10mm/mV

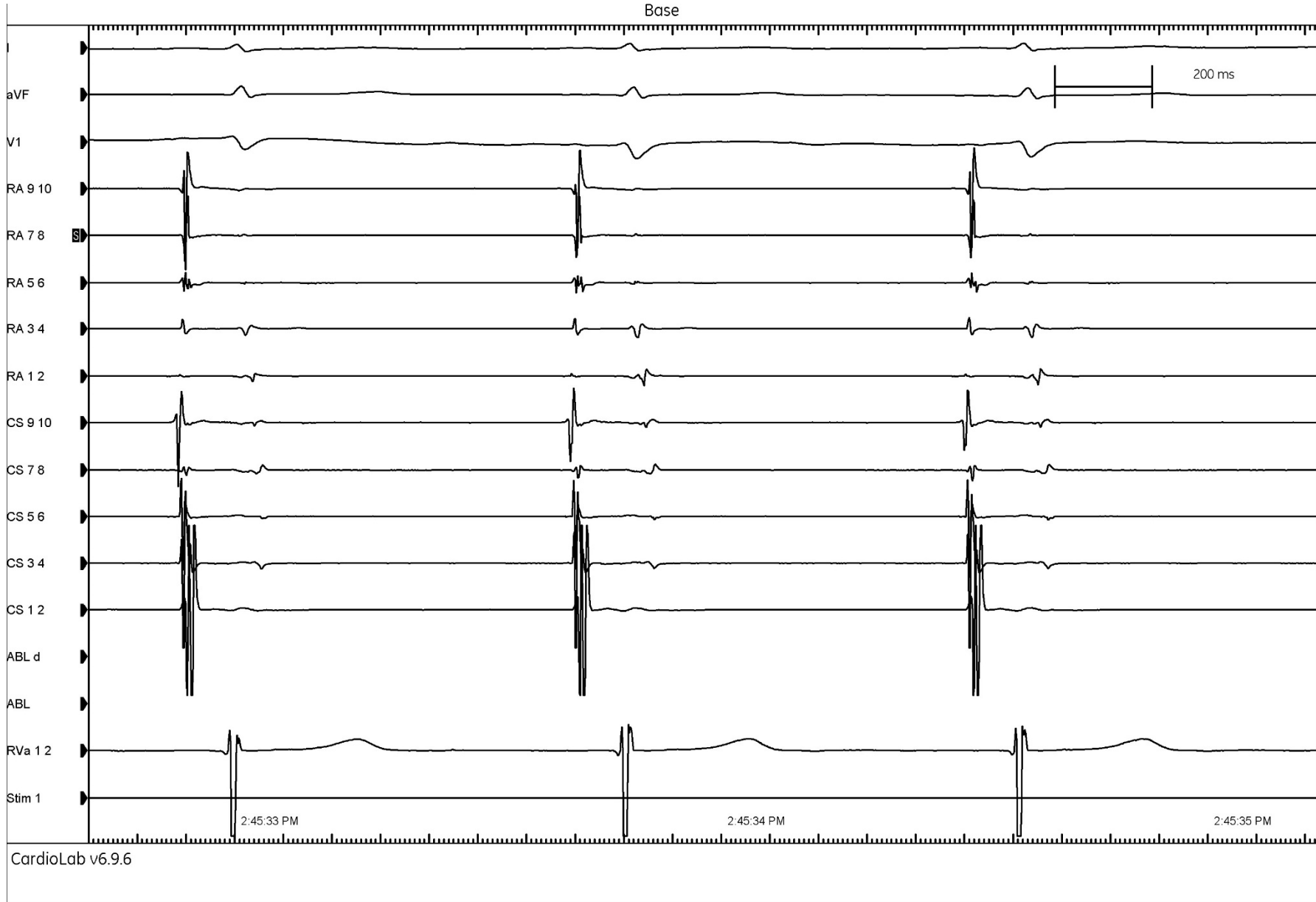
Echo

- 1. normal LV cavity size and normal systolic function (EF=69%)
- 2. no regional wall motion abnormality
- 3. normal LV wall thickness
- 4. valvular morphology and function: trivial TR
- 5. transmitral flow: normal pattern
- 6. no evidence of pericardial effusion or shunt
- 7. no IVC dilation or plethora

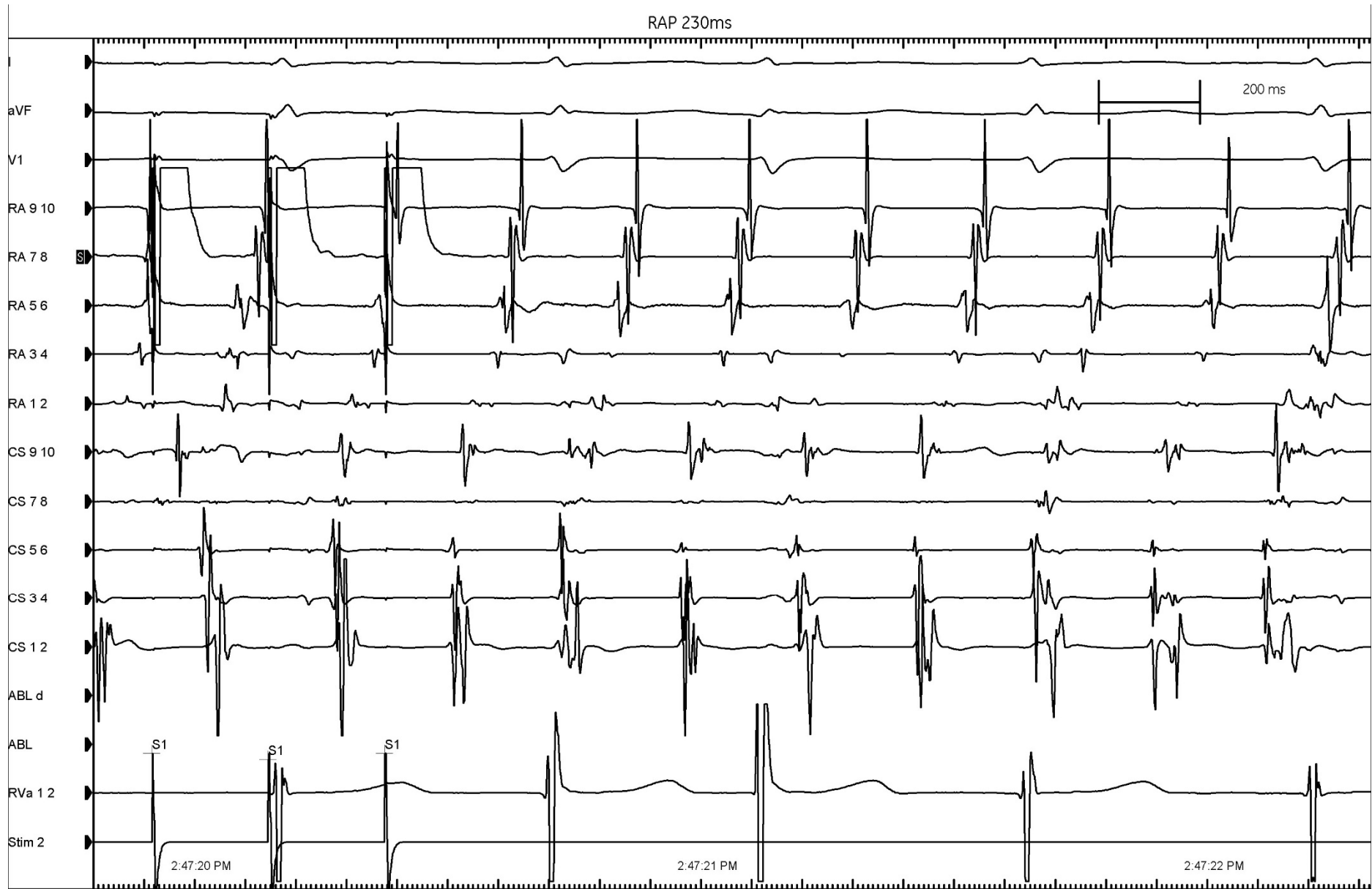
EP catheters



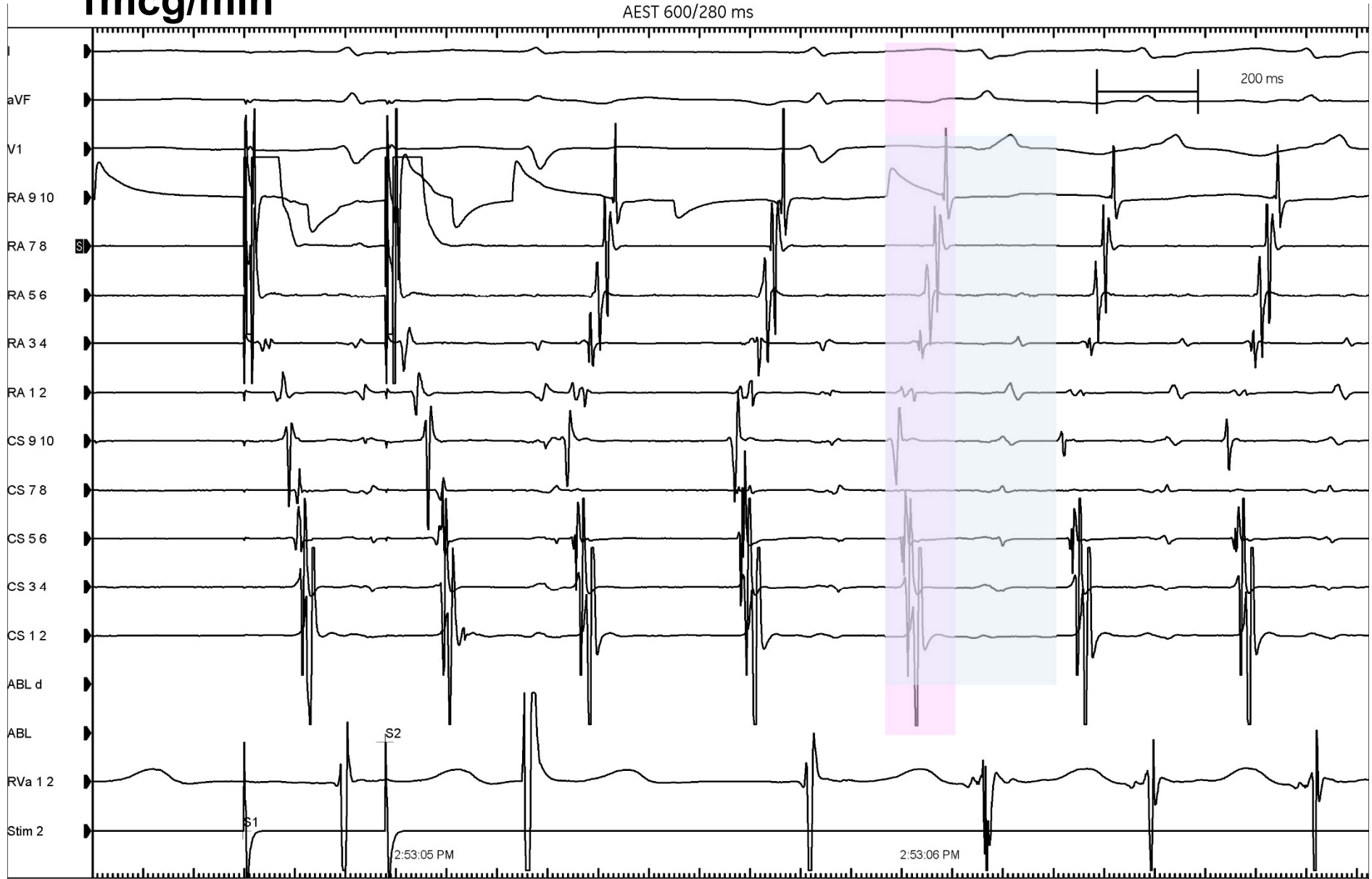
Sinus rhythm



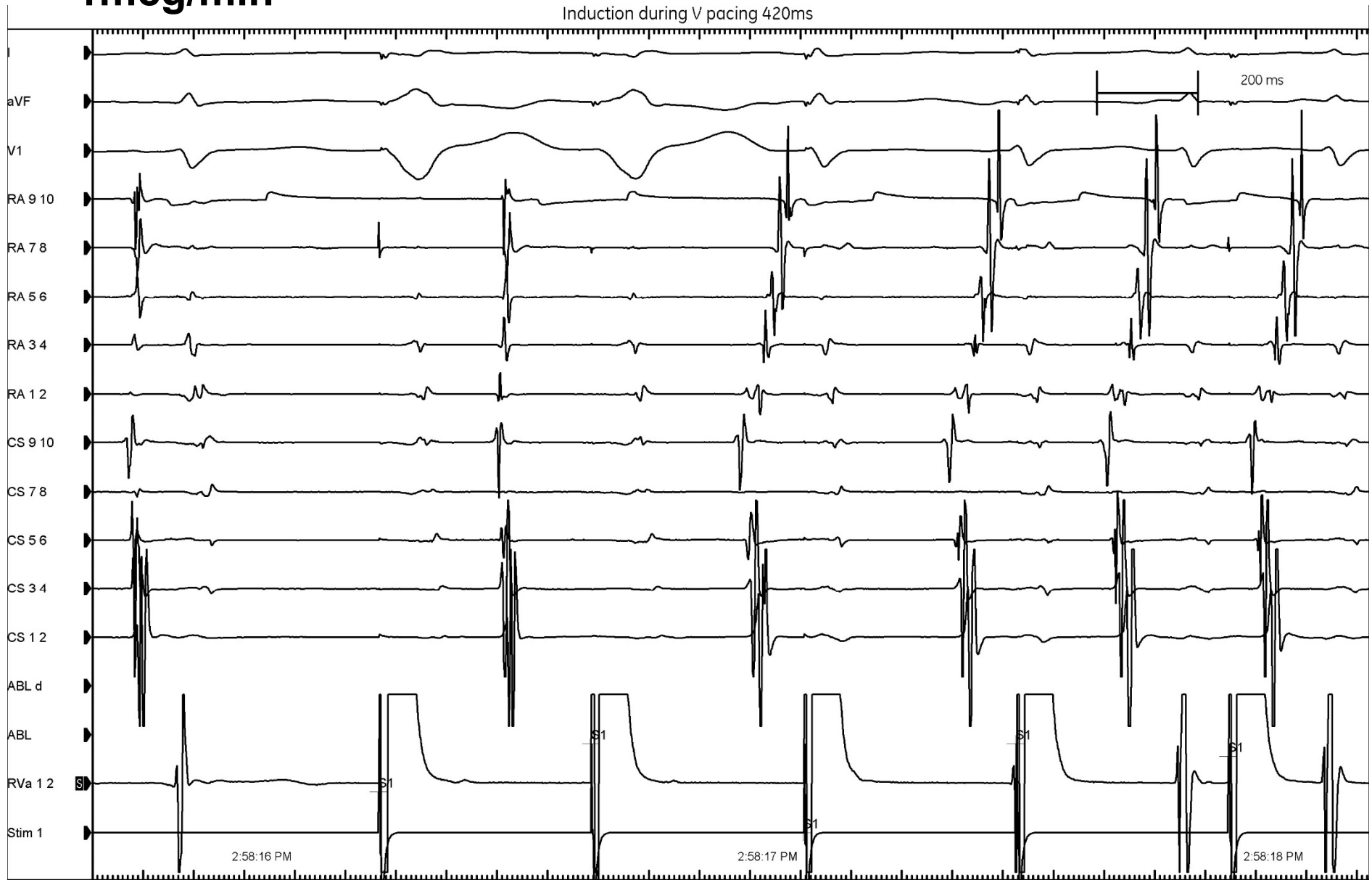
SVT induction by RAP 230ms – nonspecific



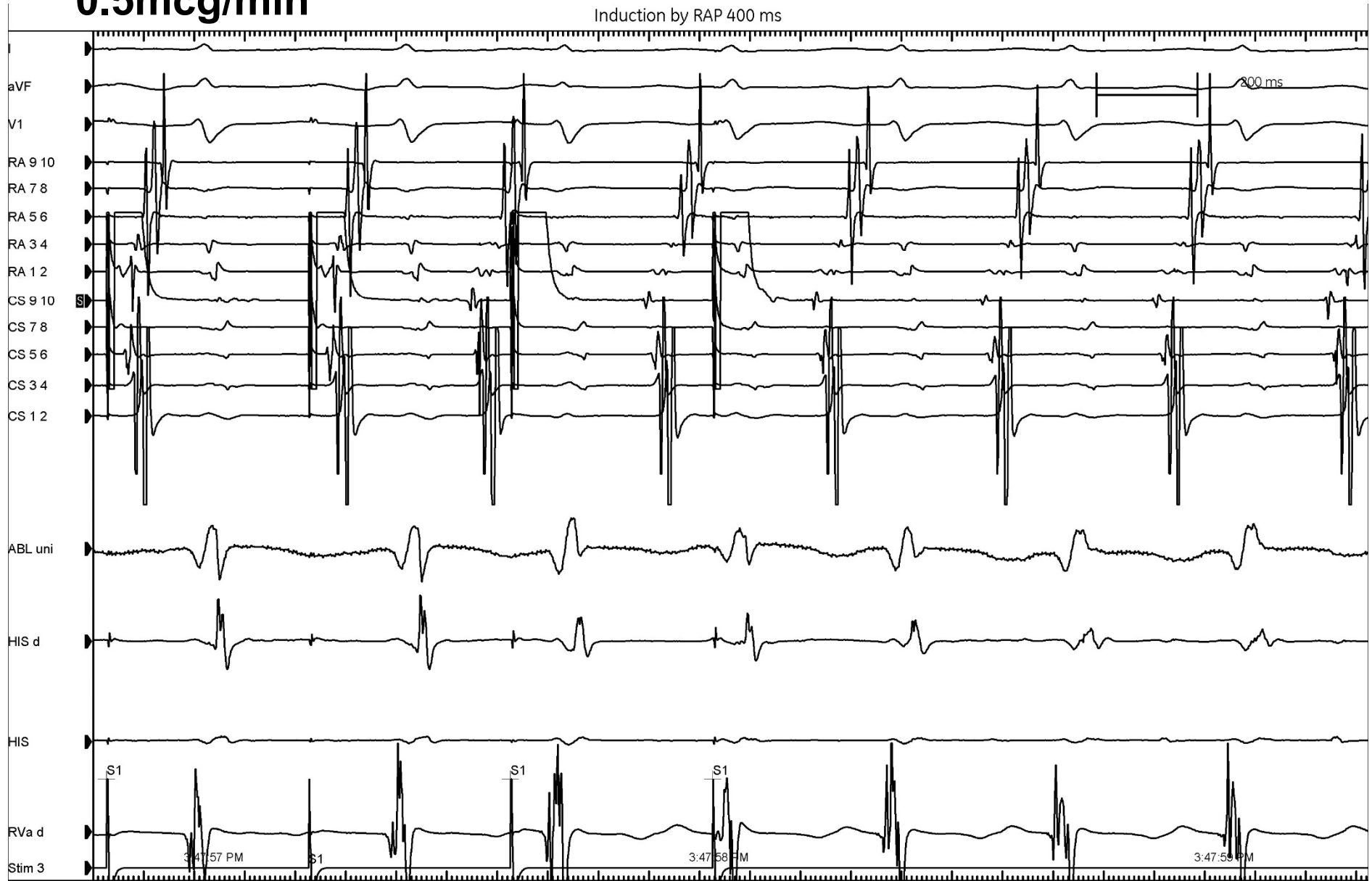
SVT induction by AEST 600/280ms during isoproterenol 1mcg/min



SVT induction by RVP 420ms during isoproterenol 1mcg/min



SVT induction by RAP 400ms during isoproterenol 0.5mcg/min



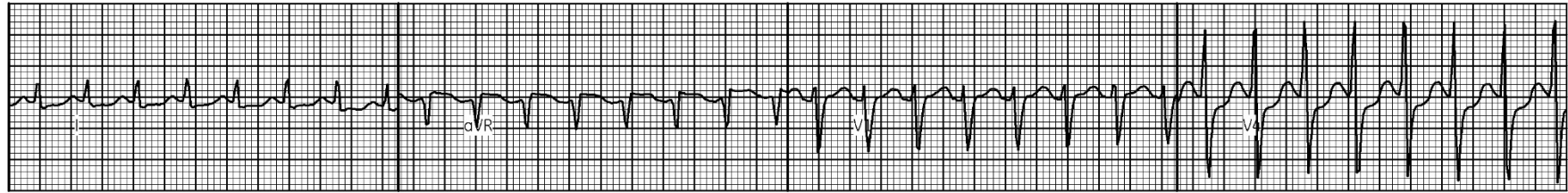
SVT ECG

Age: 52 Years
Gender: Female
Height: 154 Cm

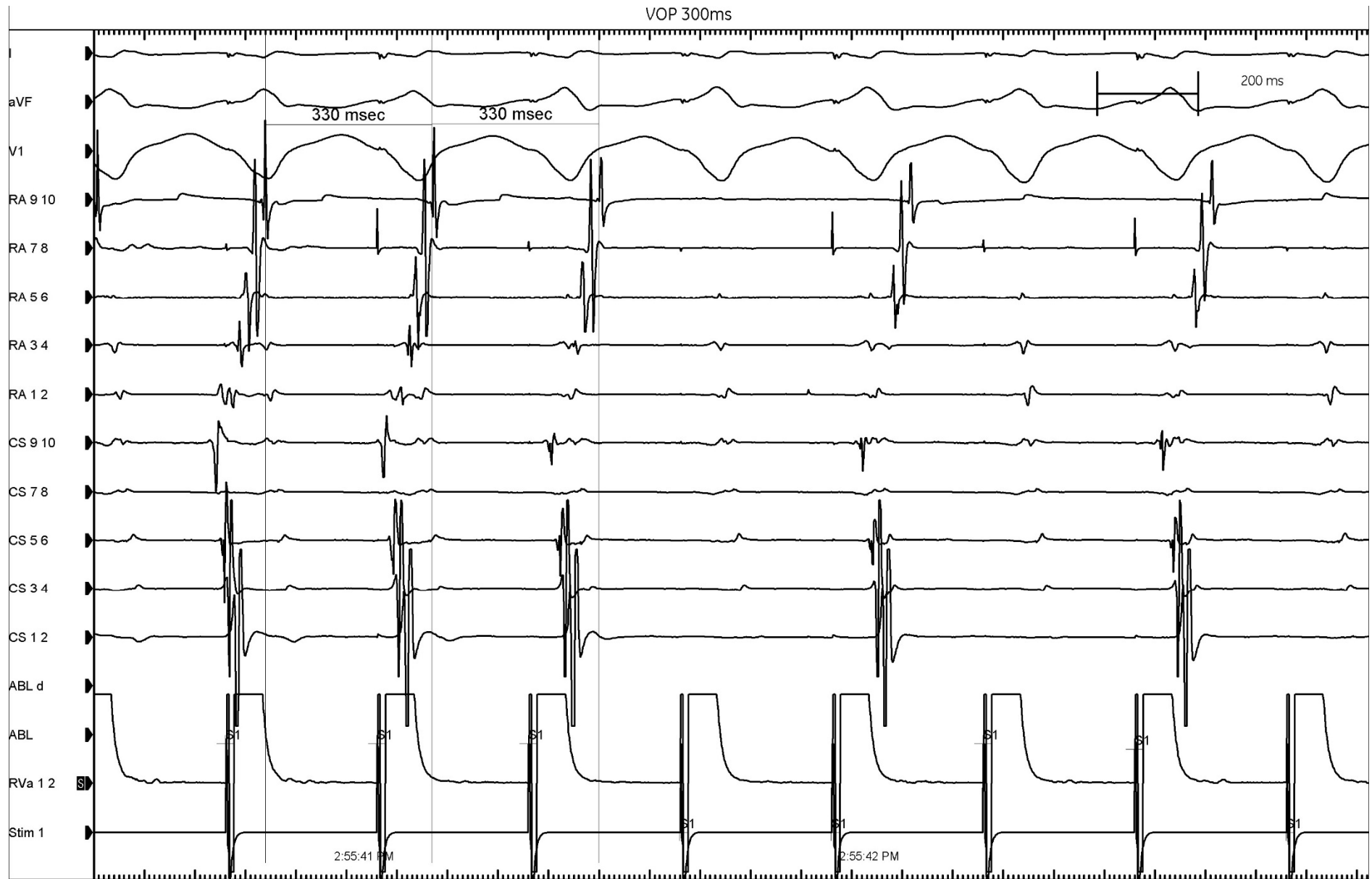
Weight: 57.0 Kg
Vent Rate (BPM): 187
RR (msec): 320

PR (msec): ***
QRS dur (msec): 57
QT / QTC (msec): 266 / 471

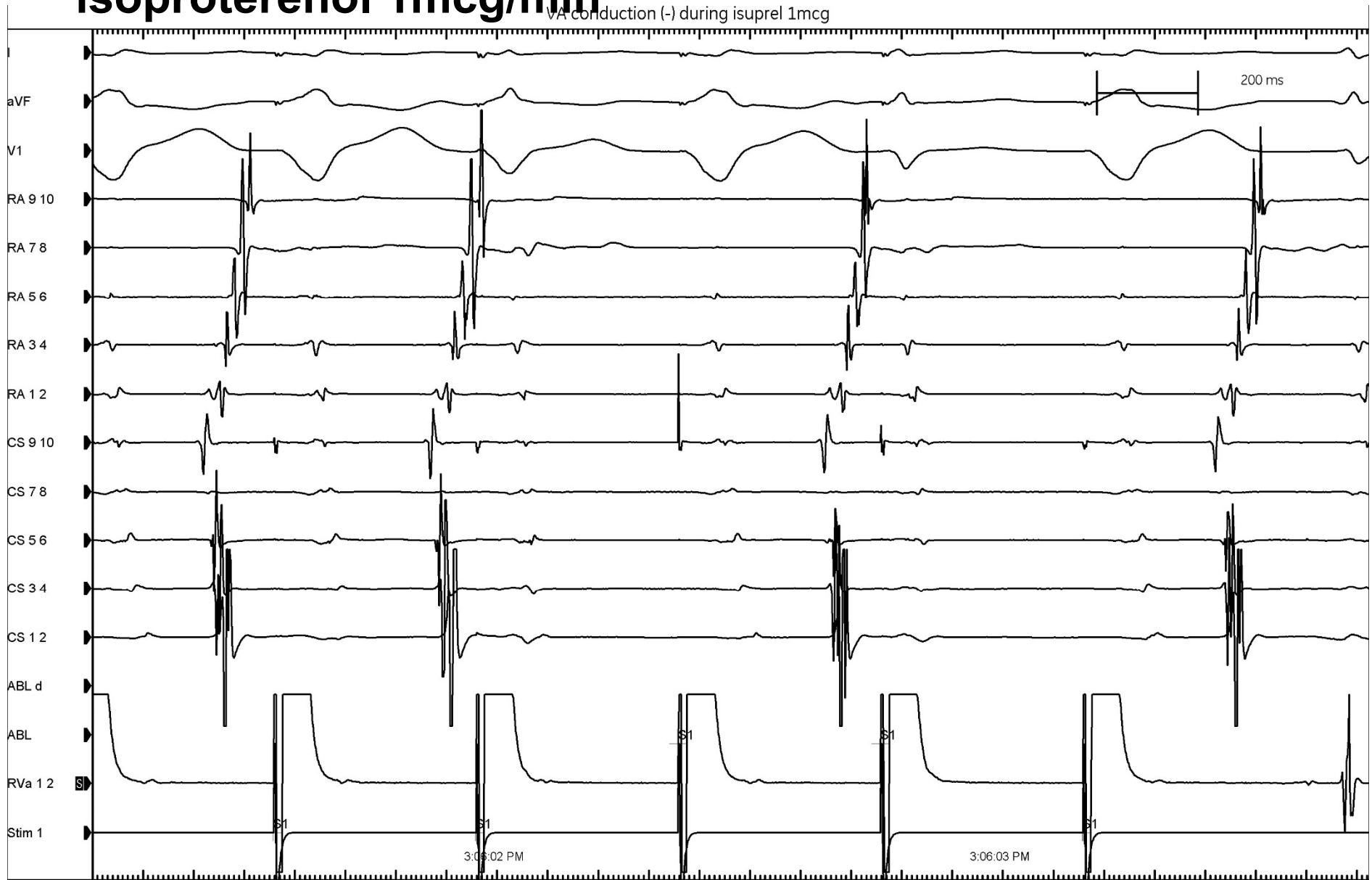
Display speed: 25 mm/sec
Display Scale: 10 mm/mV



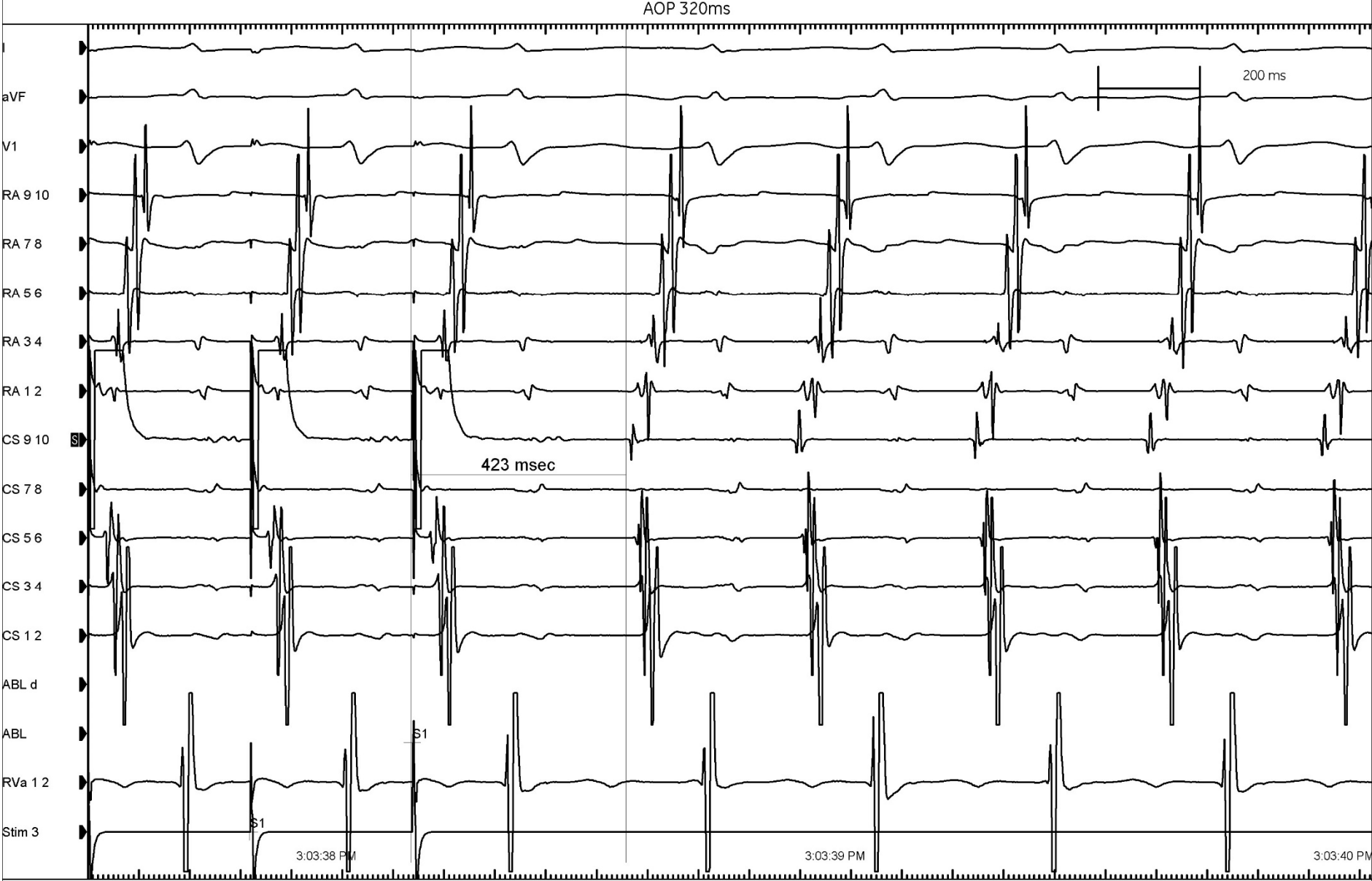
SVT termination during V overdrive pacing 300ms



No 1:1 VA conduction by RVP 400ms during isoproterenol 1mcg/min



PPI = 423ms after A overdrive pacing 320ms



PPI = 433ms after A overdrive pacing 310ms



SVT termination after A overdrive pacing 300ms



Focal AT >>

- Induction by AEST: A(P)-V-A-A-V
- Small fraction of atrial activation compared to TCL
- Failure of V entrainment
- No 1:1 VA conduction during V overdrive pacing at tachycardia cycle length even during isoproterenol infusion
- Overdrive pacing suppression: increasing PPI with shortened A pacing cycle length

- His catheter...

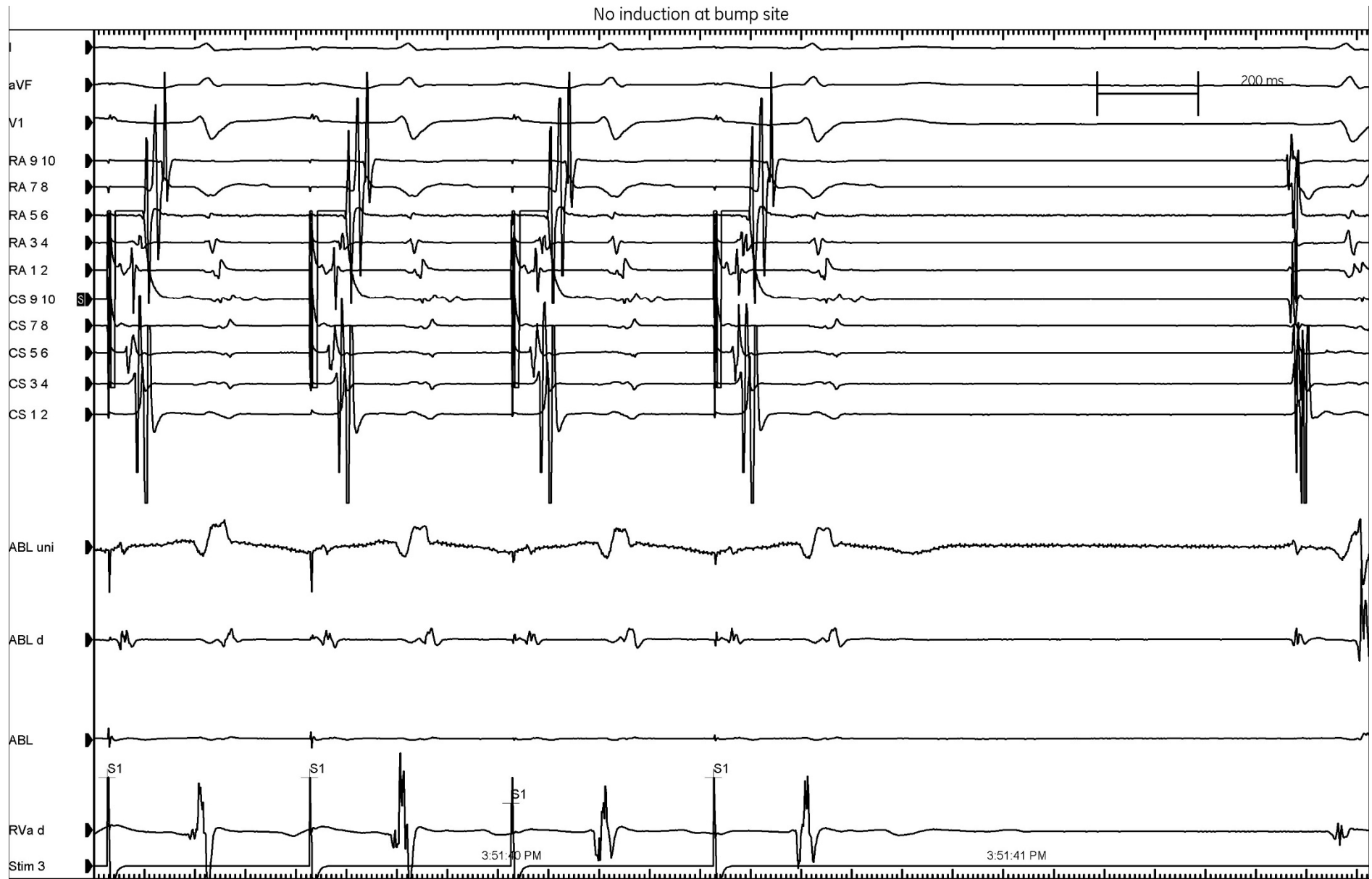
Cycle length variation (330~350ms)



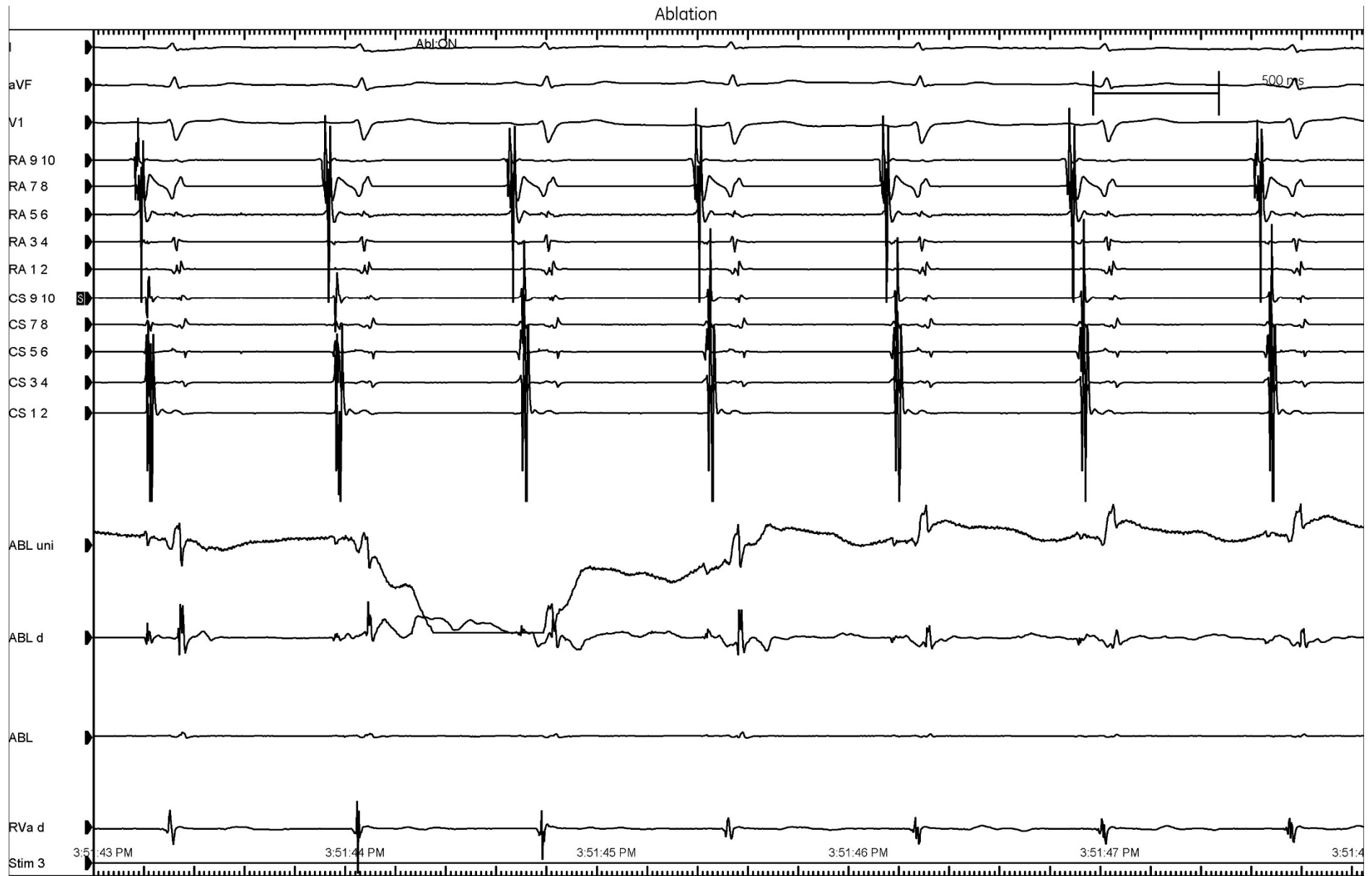
Bump at TA 4'O clock



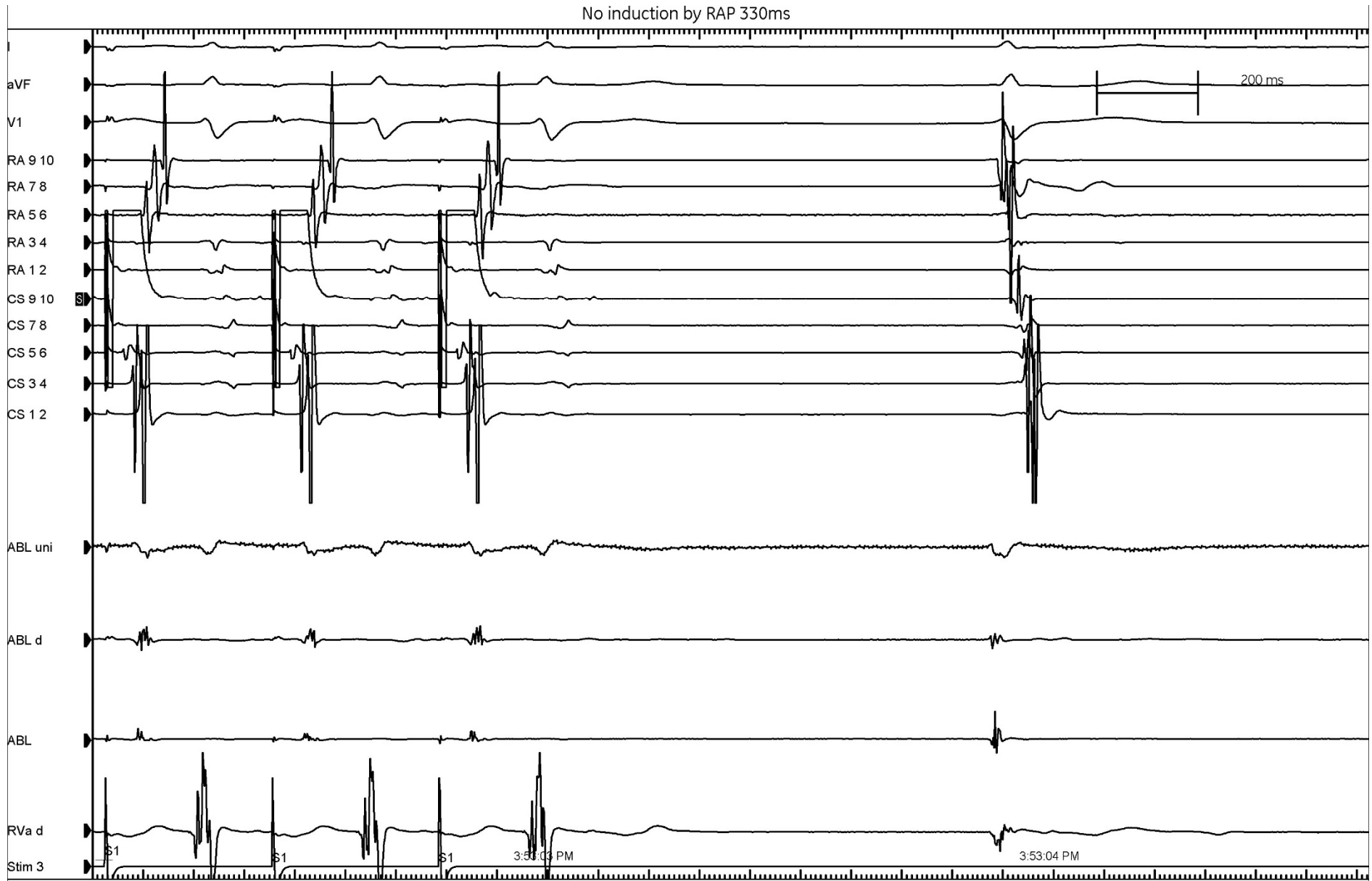
No induction with ablation catheter at bump site



During ablation #1



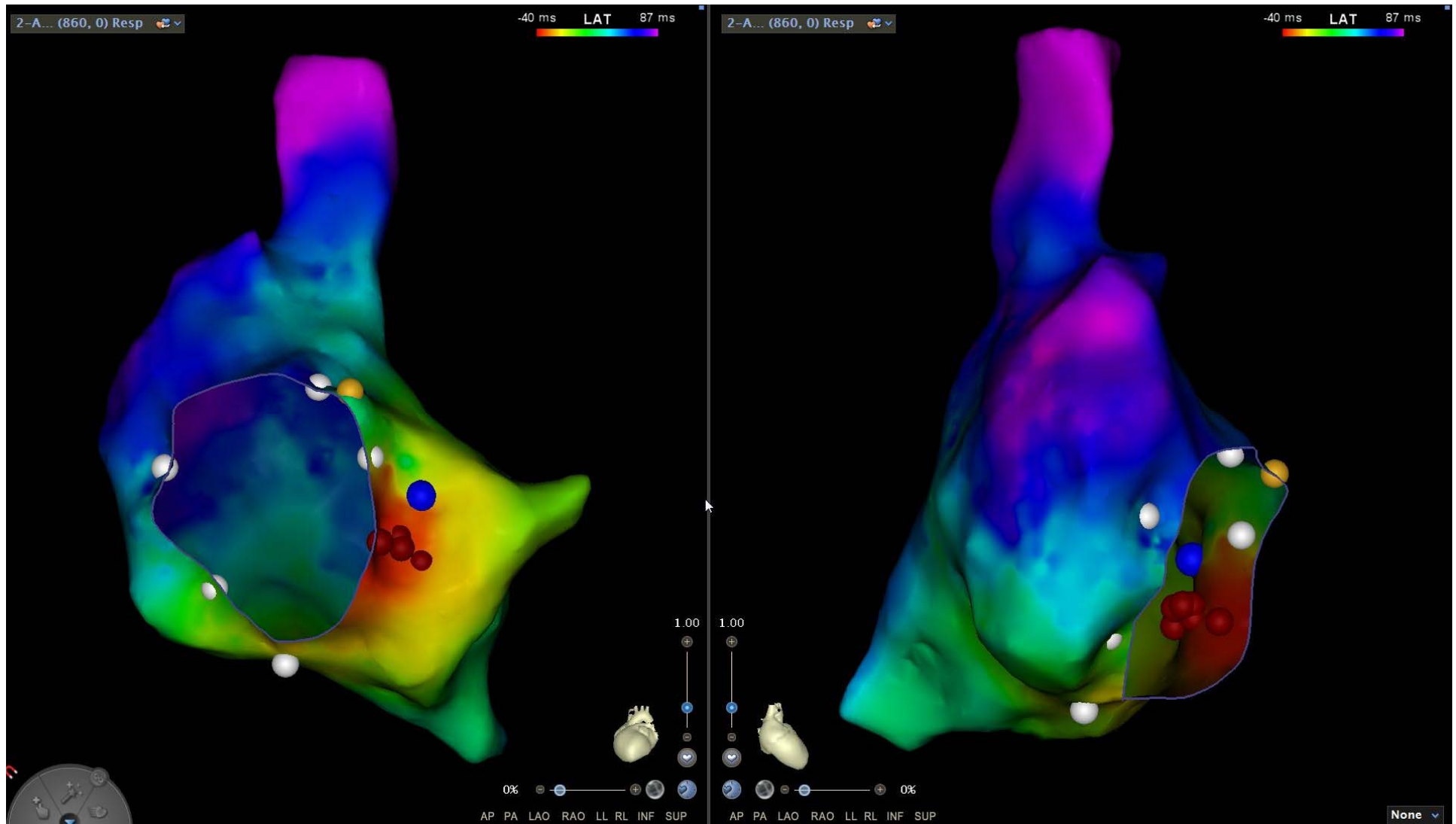
No SVT induction after ablation #1



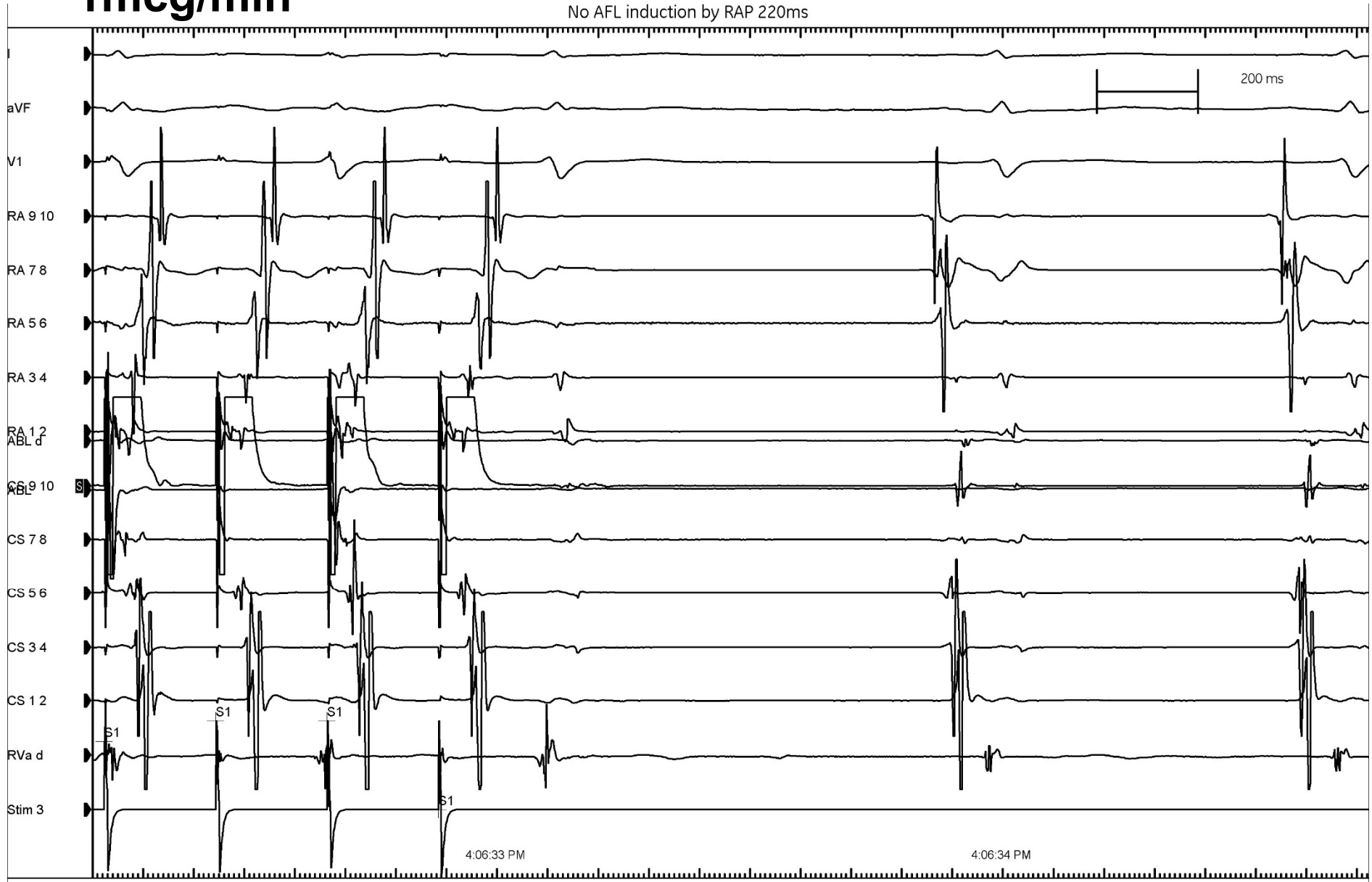
Difficulties in 3D mapping and ablation

- TCL variation
- SVT termination with catheter touch
- No demonstrable QS pattern of A-EGM during SVT
- No response to RF ablation

Ablation at TA 4'O clock



No AFL induction by RAP 220ms during isoproterenol 1mcg/min



Thank You