# Fokal Atriyal Taşikardi Ablasyonu (Olgu ile tartışma)

10. Atriyal Fibrilasyon Zirvesi 2021

Serkan SAYGI

KAROLINSKA
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# OLGU 1

19 yaşında kadın hasta

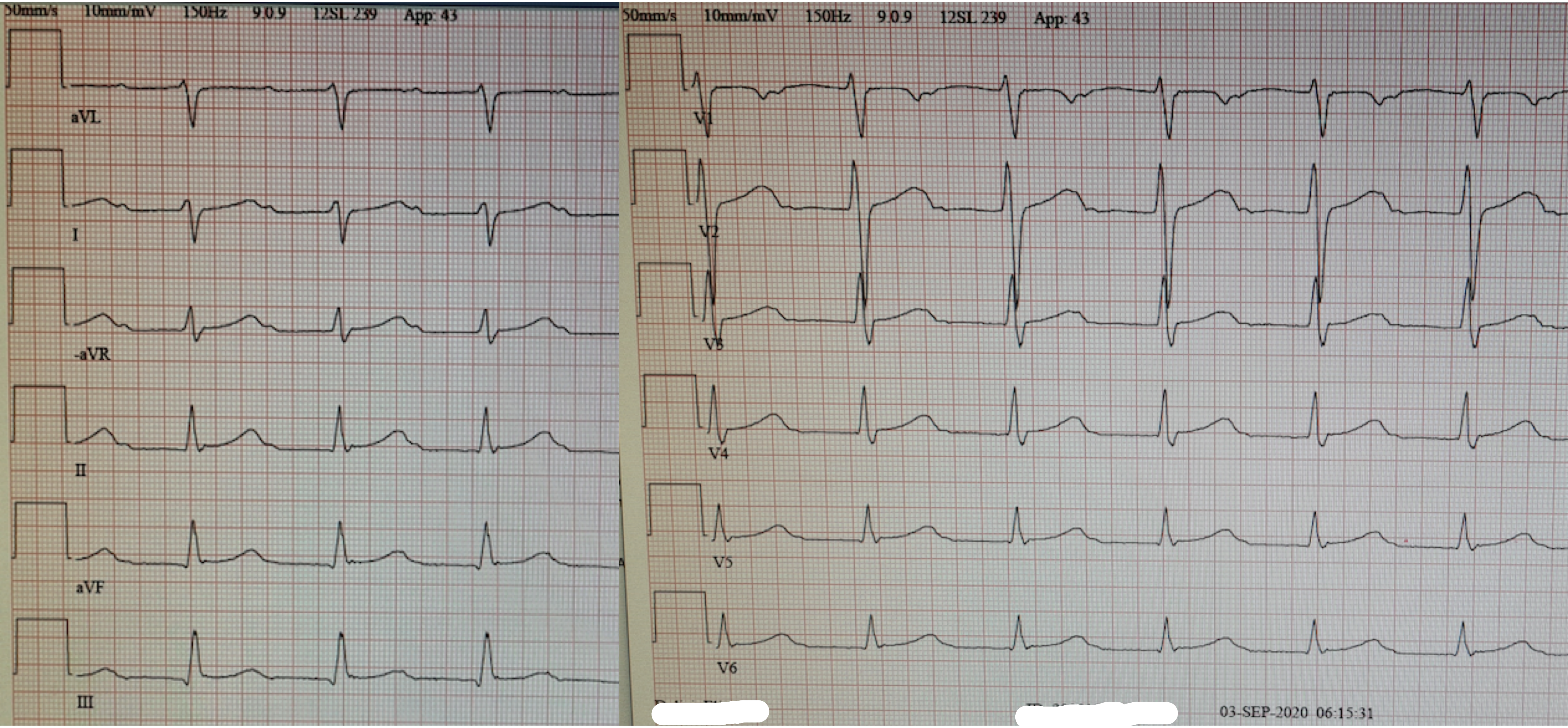
2 haftalık (süreksiz)  çarpıntı öyküsü

Normal TTE

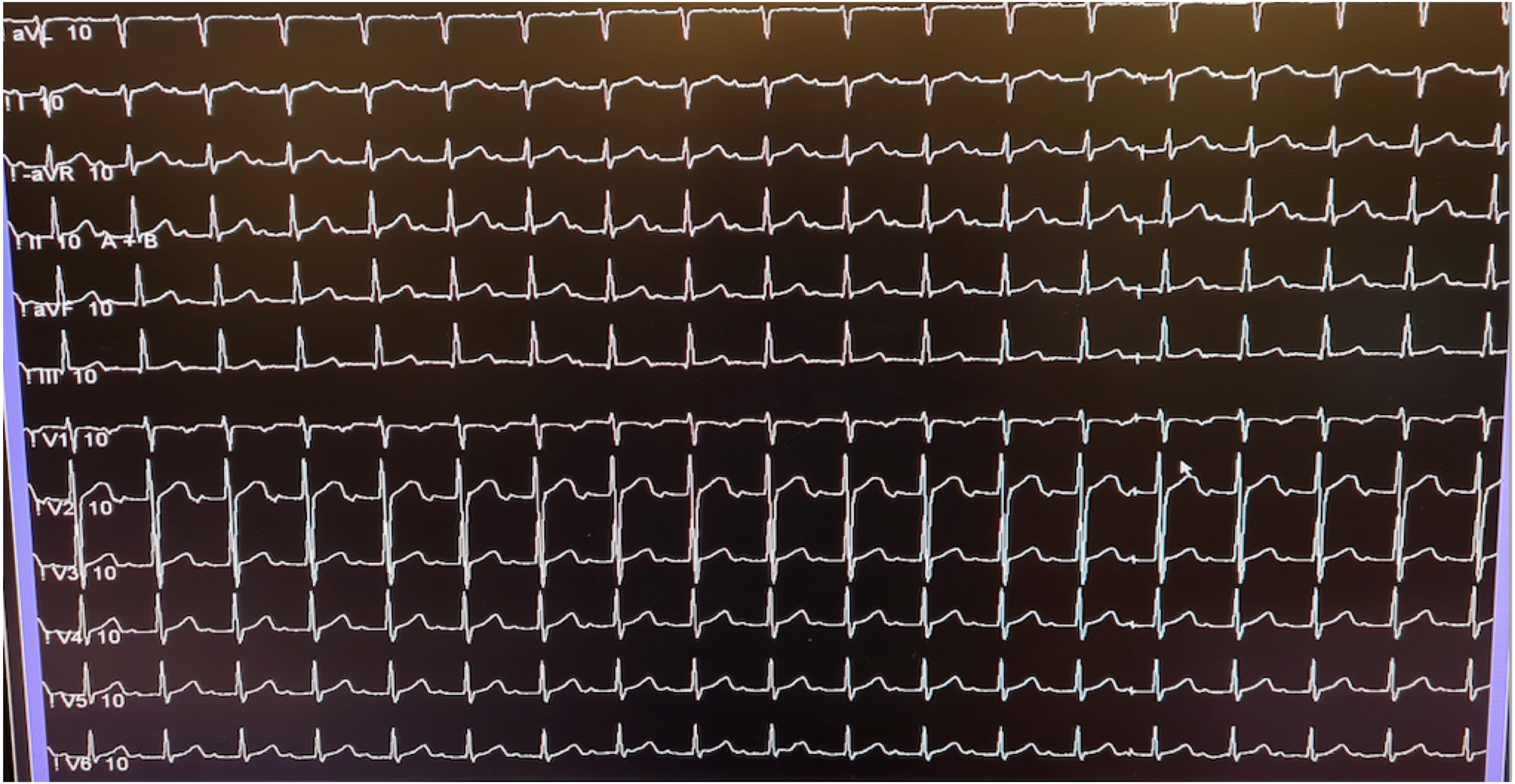
Ek hastalık yok

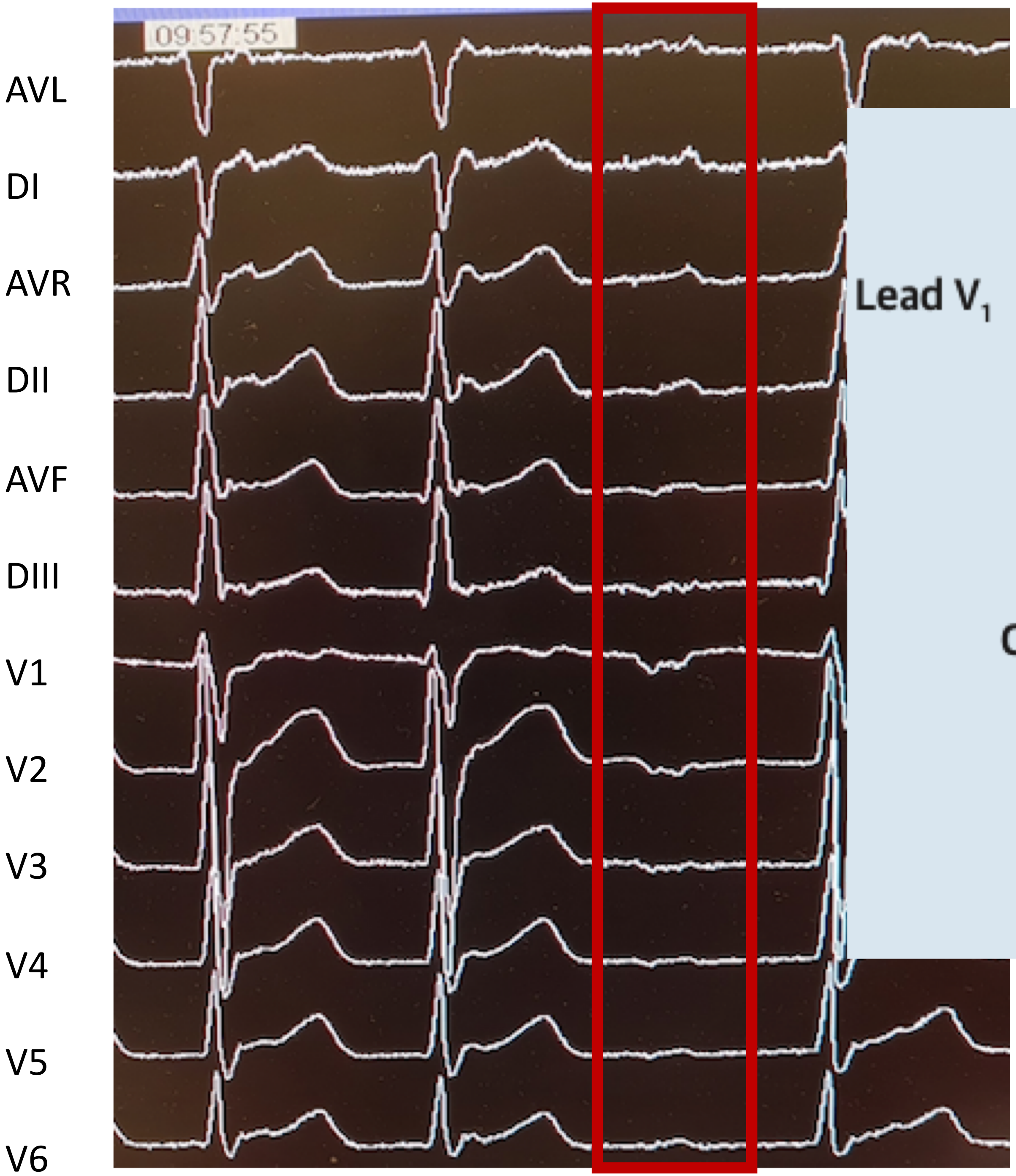
Ca kanal blokeri ve B bloker  etkisiz

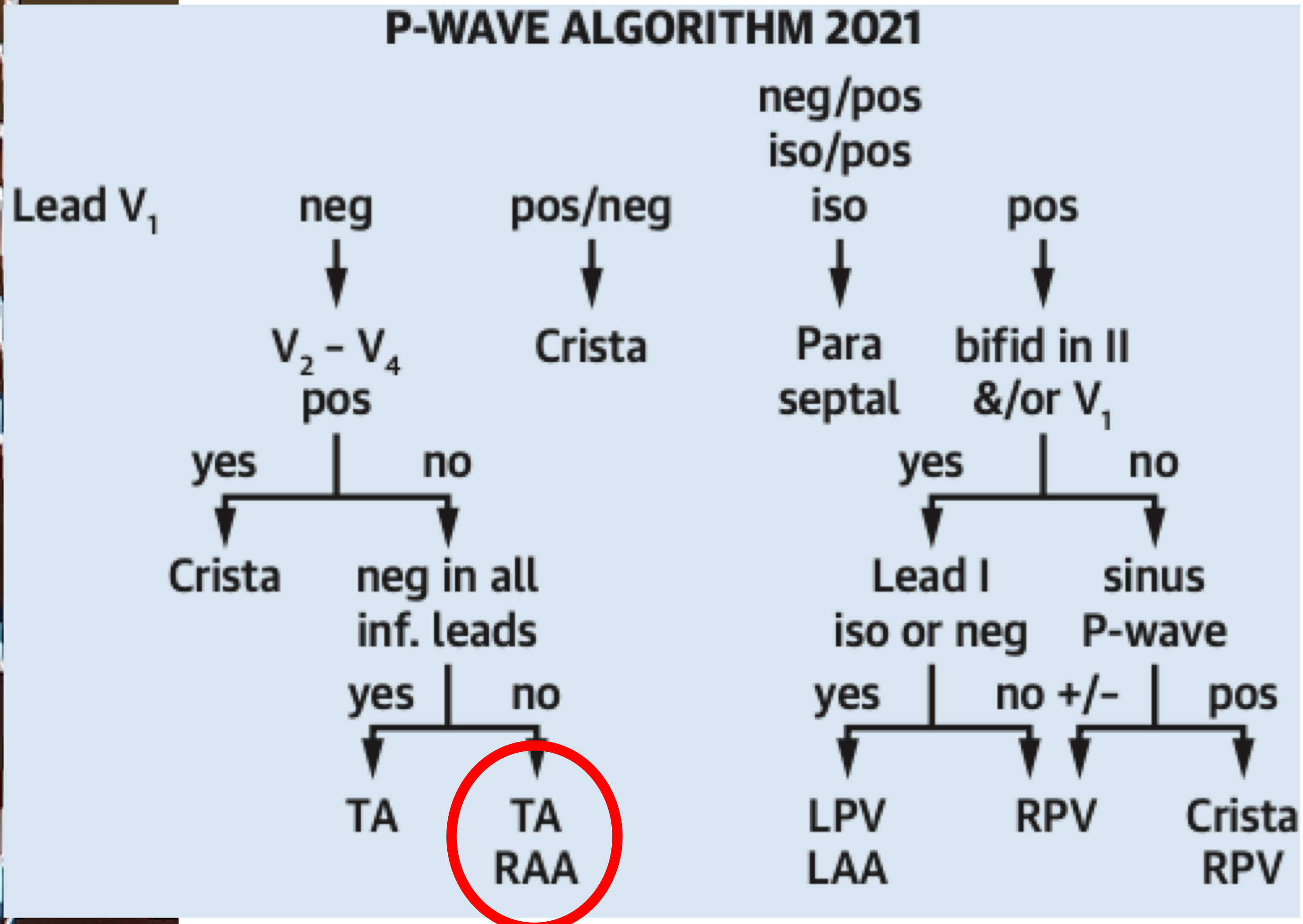
# Taşikardi-EKG (50mm/s)



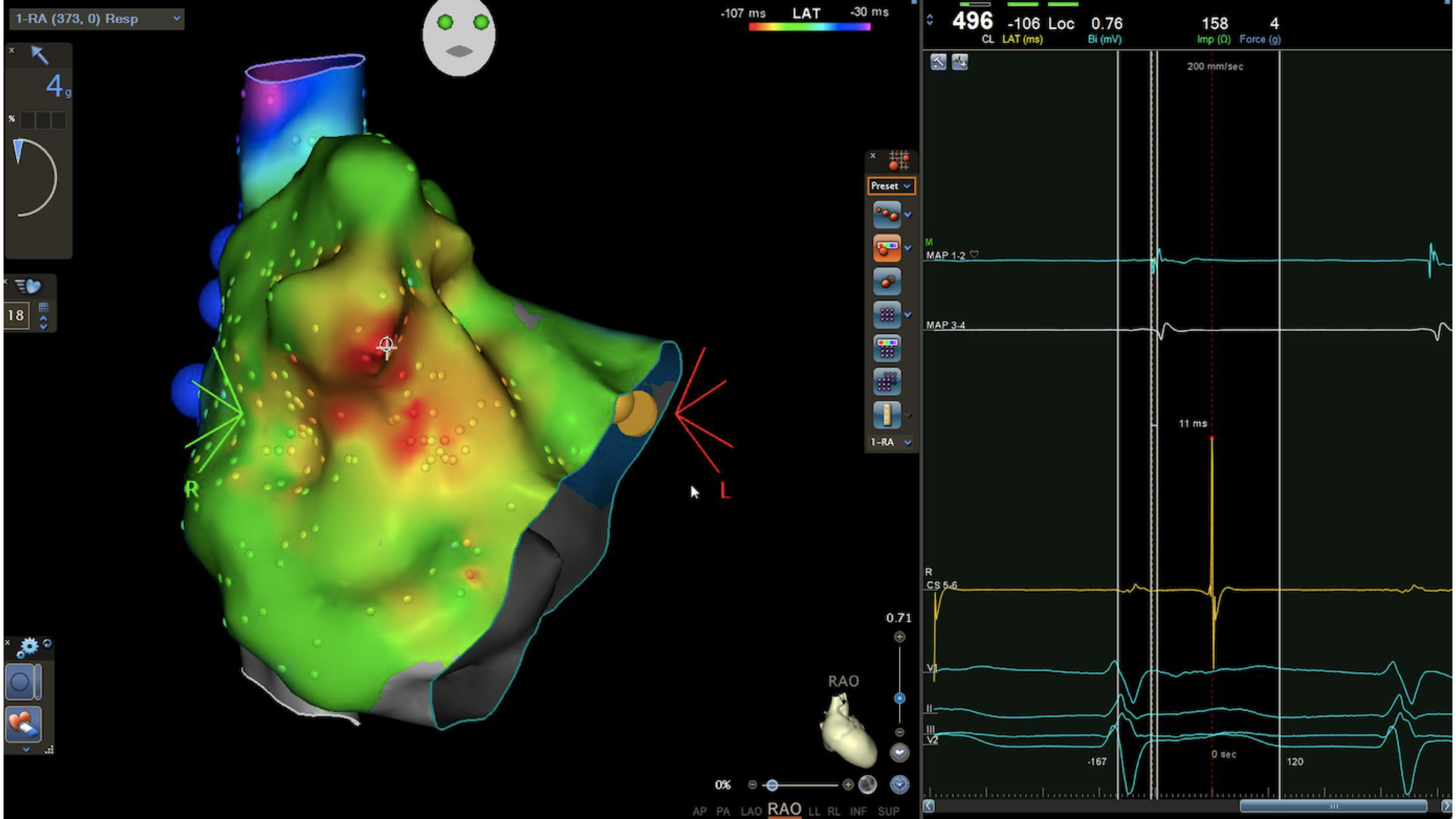
# Taşikardi EKG (25mm/s)



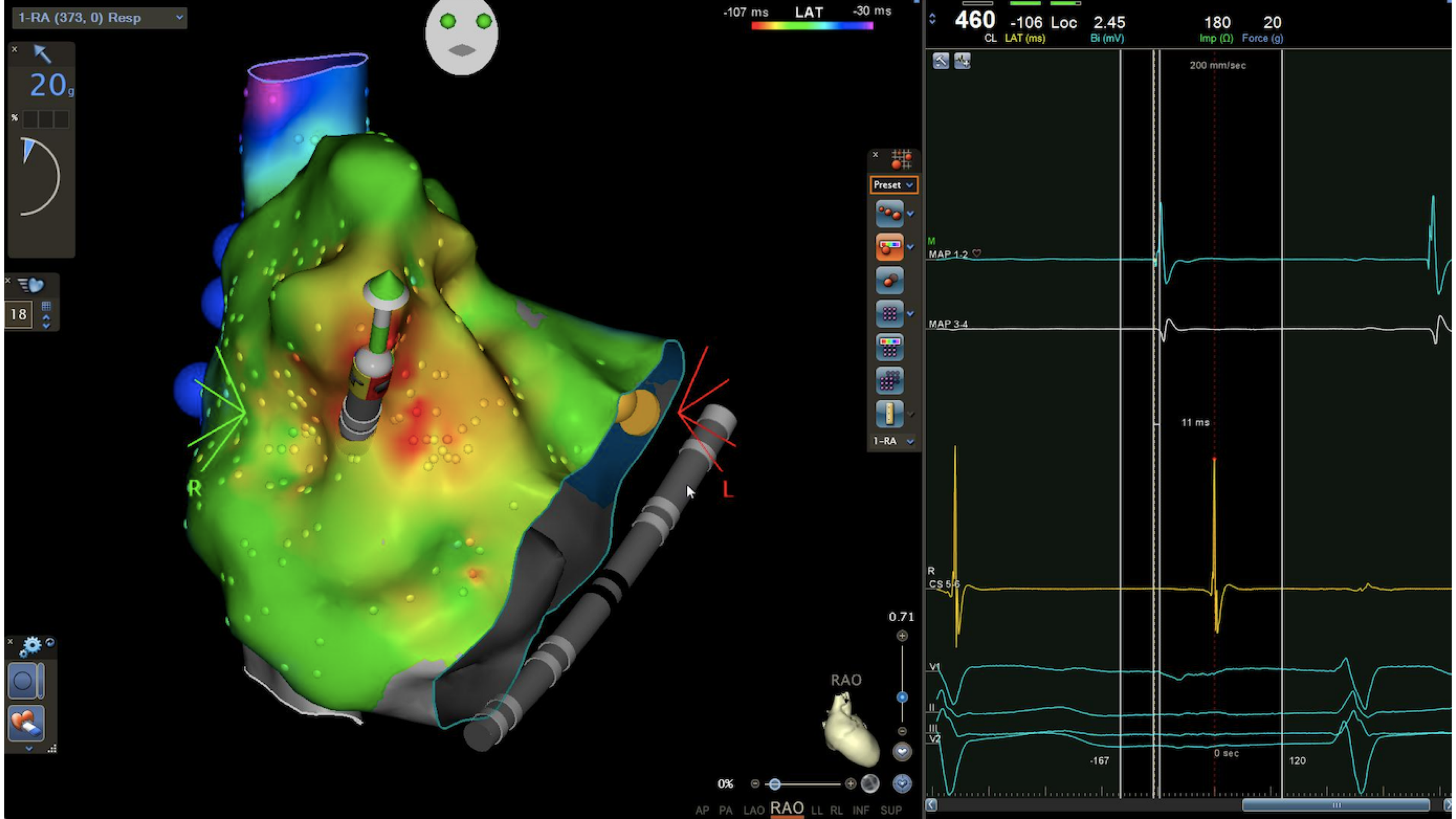



J Am Coll Cardiol EP. Jun 30, 2021. Epublished DOI: 10.1016/j.jacep.2021.05.005

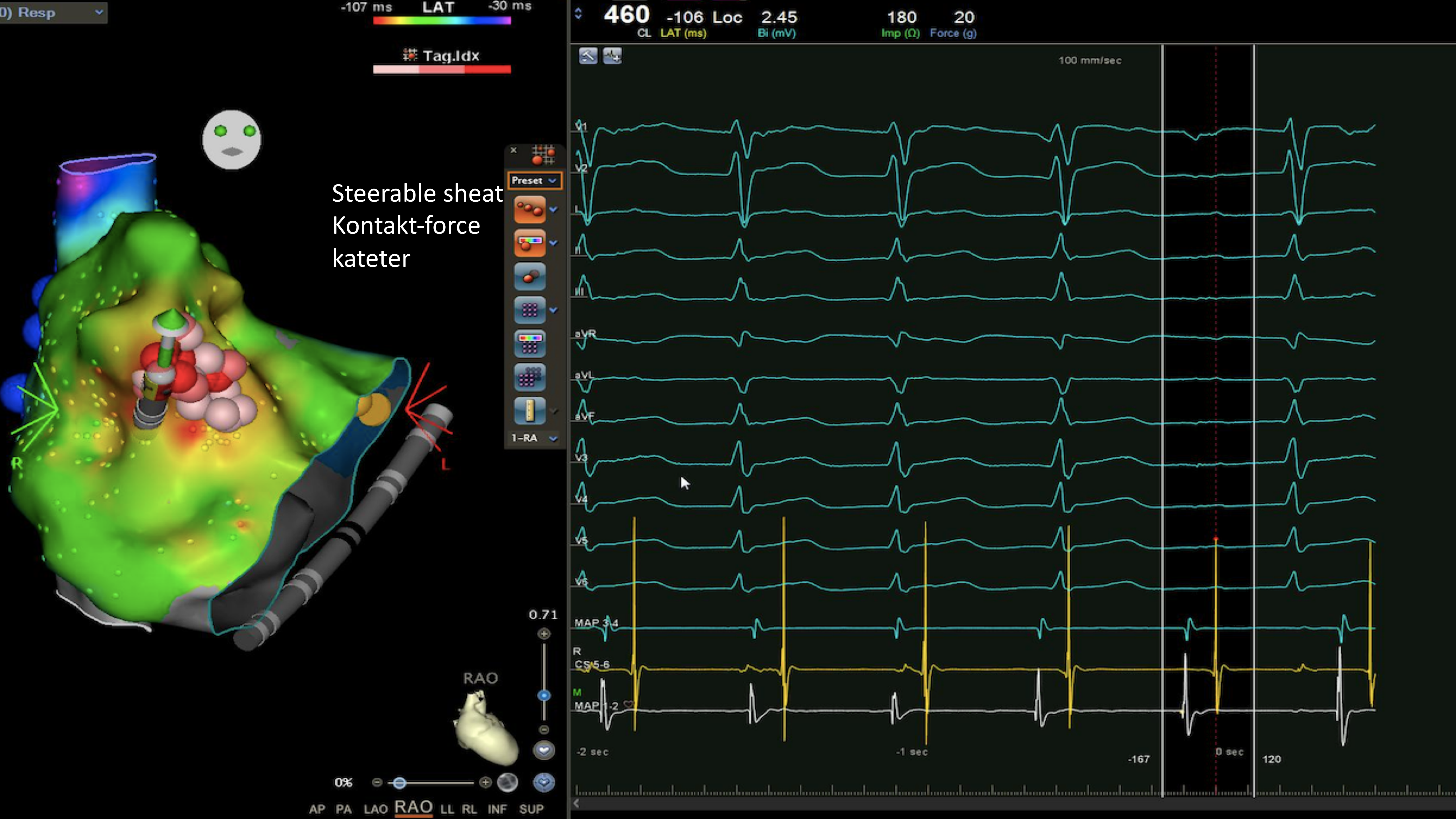


1-RA (373, 0) Resp
4 g
18
-107 ms
LAT
-30 ms
Preset
1-RA
R
L
RAO
0.71
0%
AP PA LAO RAO LL RL INF SUP
496
CL
-106
LAT (ms)
Loc
0.76
Bi (mV)
158
Imp (Ω)
4
Force (g)
200 mm/sec
M
MAP 1-2
MAP 3-4
11 ms
R
CS 5-6
V1
II
III
V2
-167
0 sec
120

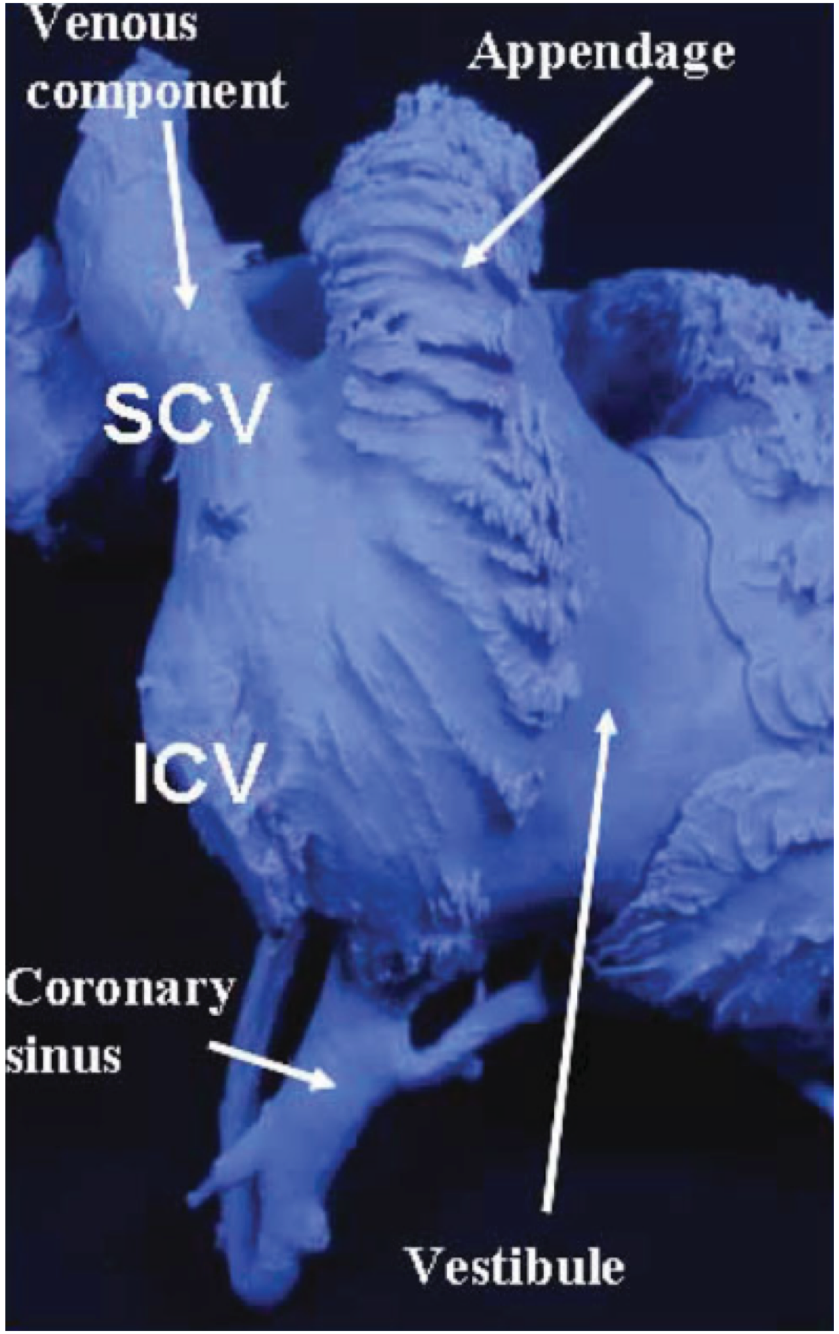


1-RA (373, 0) Resp
20g
18
-107 ms
LAT
-30 ms
R
L
Preset
1-RA
0.71
RAO
0%
AP PA LAO RAO LL RL INF SUP
460
CL
-106
LAT (ms)
Loc
2.45
Bi (mV)
180
Imp (Ω)
20
Force (g)
200 mm/sec
M
MAP 1-2
MAP 3-4
11 ms
R
CS 5-6
V1
II
III
V2
-167
0 sec
120

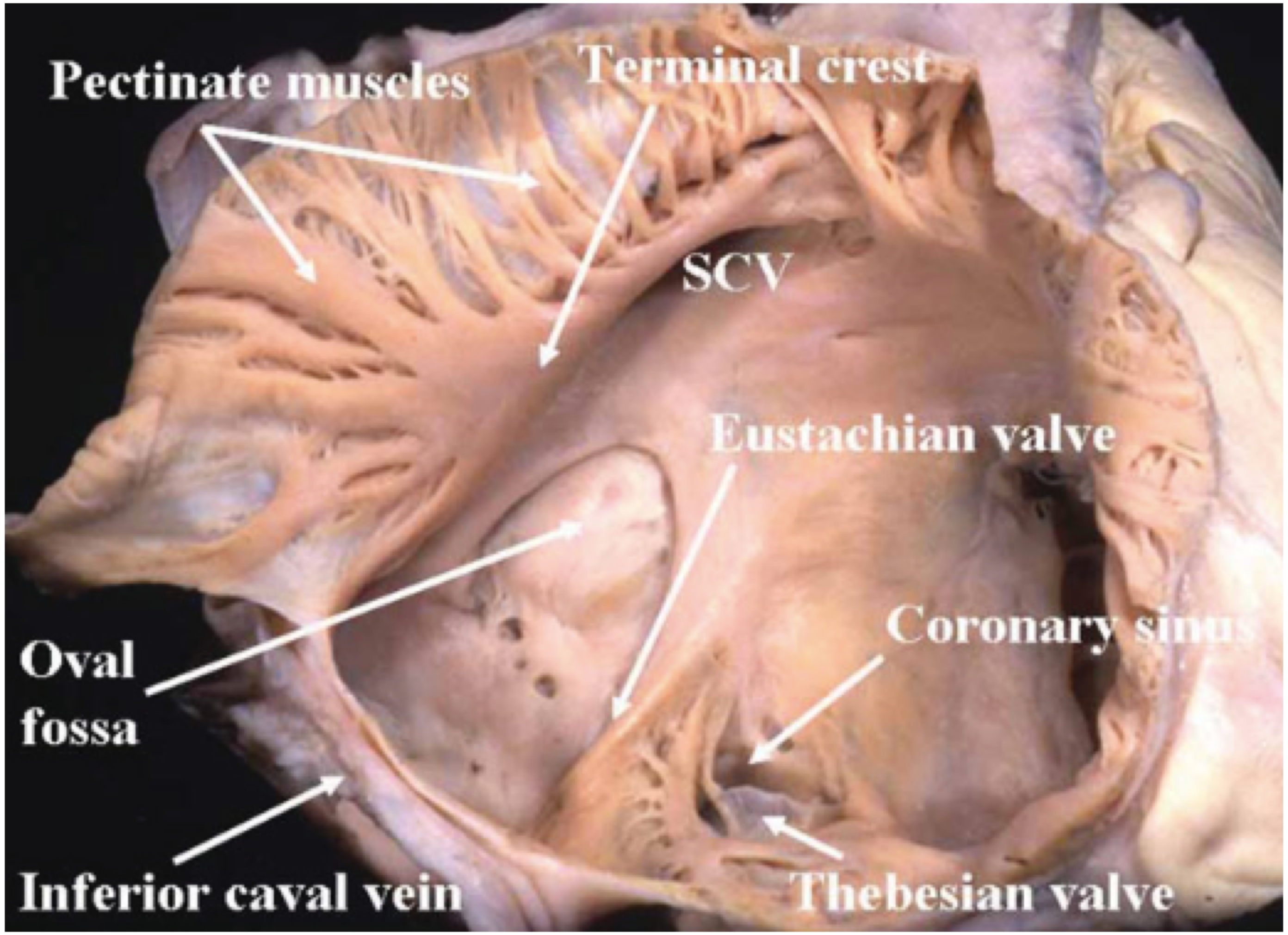
! II A + B
! V1 10
! ABL 1-2 20
! ABL 3-4 20
! RF uni 5
! CS 9-10 10
! CS 7-8 10
! CS 5-6 10
! CS 3-4 10
! CS 1-2 10



Steerable sheat
Kontakt-force
kateter
-107 ms LAT -30 ms
Tag.Idx
Resp
Preset
1-RA
460 CL
-106 LAT (ms)
Loc
2.45 Bi (mV)
180 Imp (Ω)
20 Force (g)
100 mm/sec
V1
V2
I
II
III
aVR
aVL
aVF
V3
V4
V5
V6
MAP 3-4
CS 5-6
MAP 1-2
-2 sec
-1 sec
0 sec
-167
120
R
L
RAO
0.71
0%
AP PA LAO RAO LL RL INF SUP




Kontakt problemi➔ Haritalama+ablasyon




Europace (2007) 9, vi3–vi9 doi:10.1093/europace/eum200

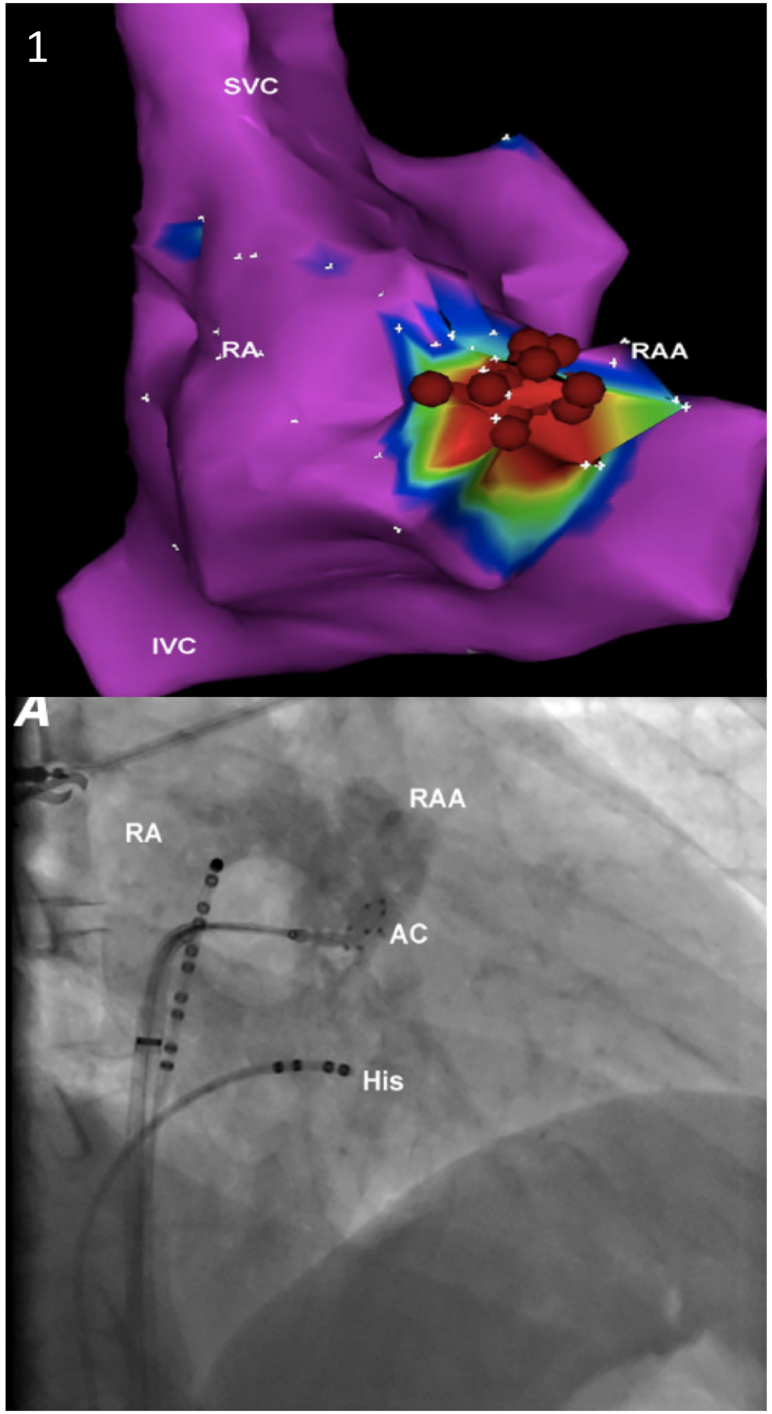
# Alternatif yöntem

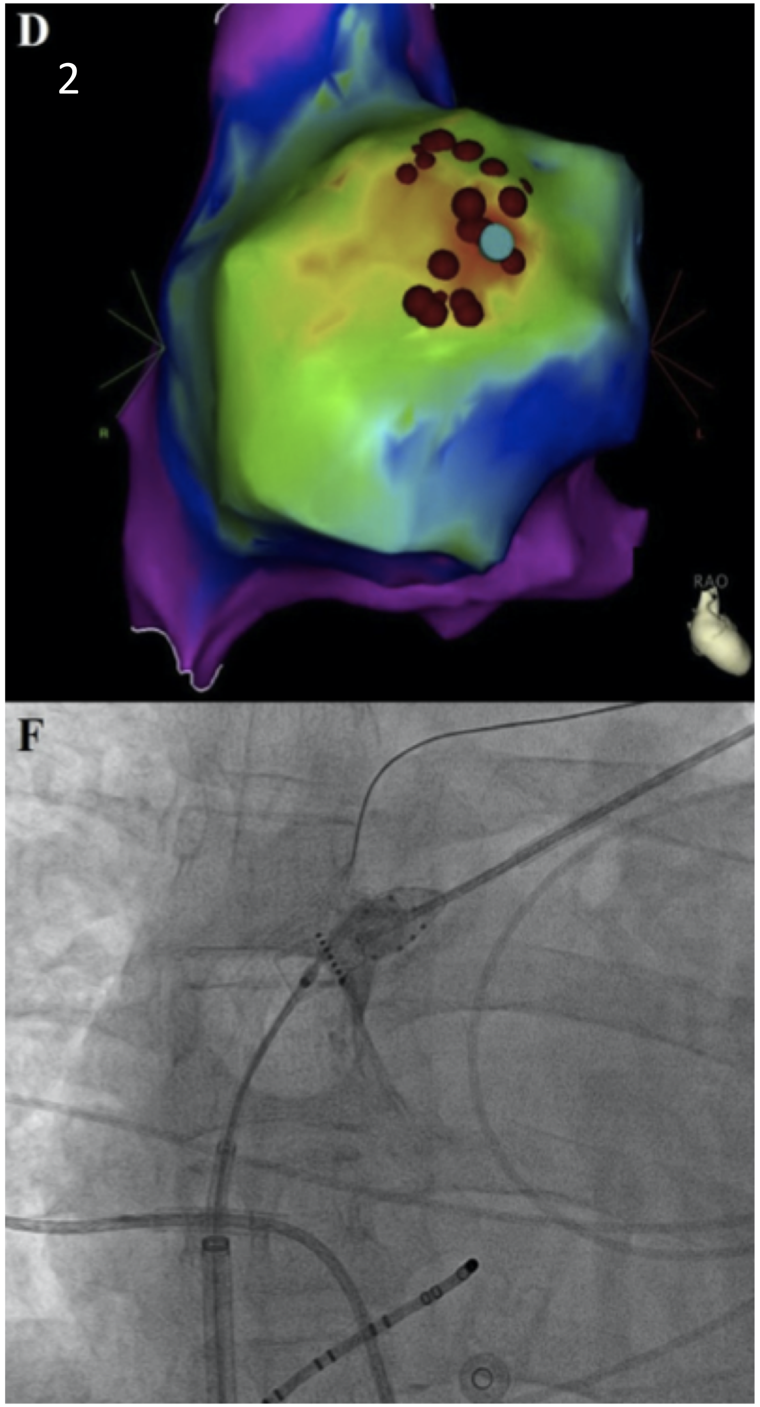
Cryo-balon

Genel anestezi

Ek görüntüleme yöntemi

Farklı kateter

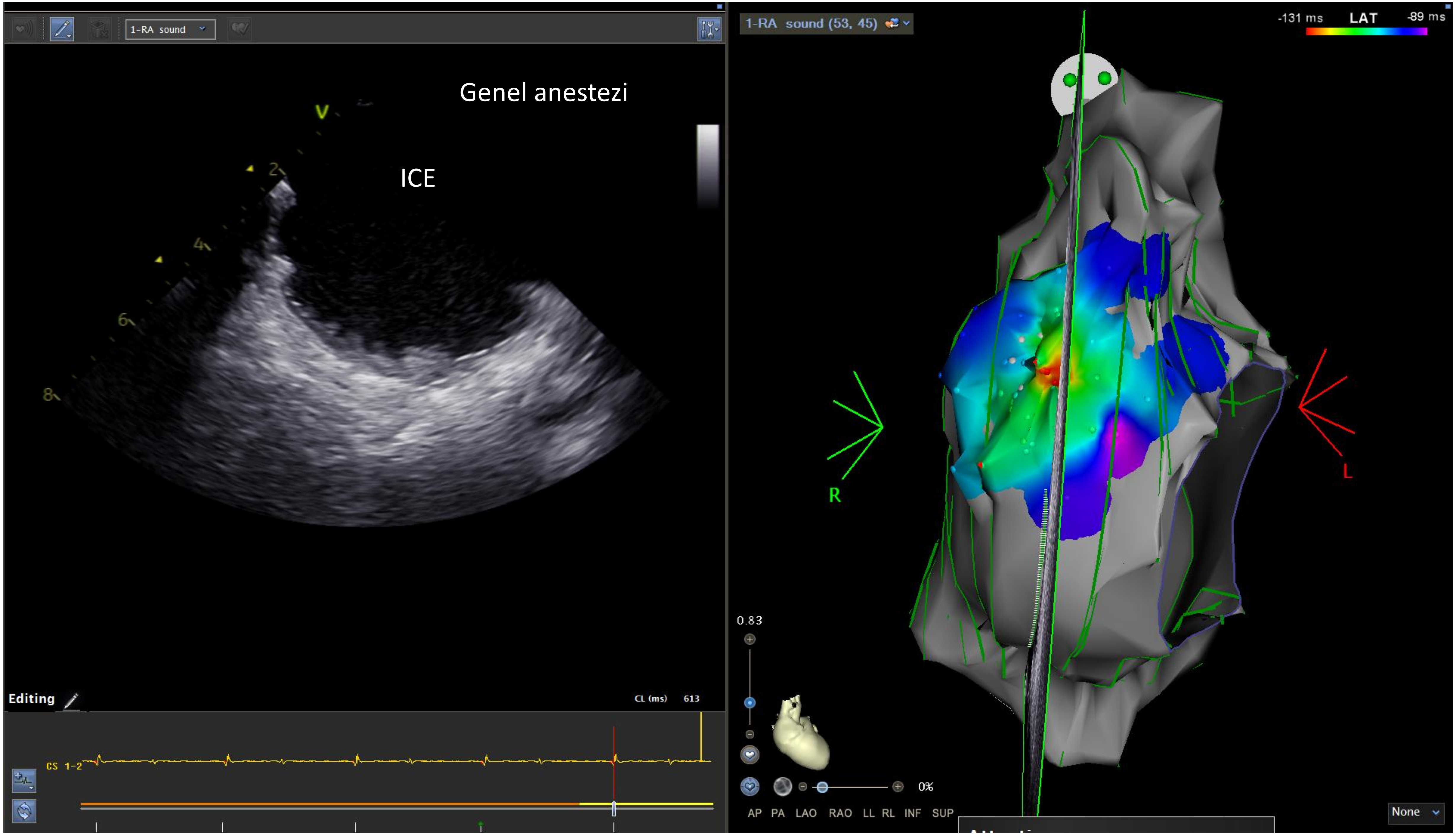


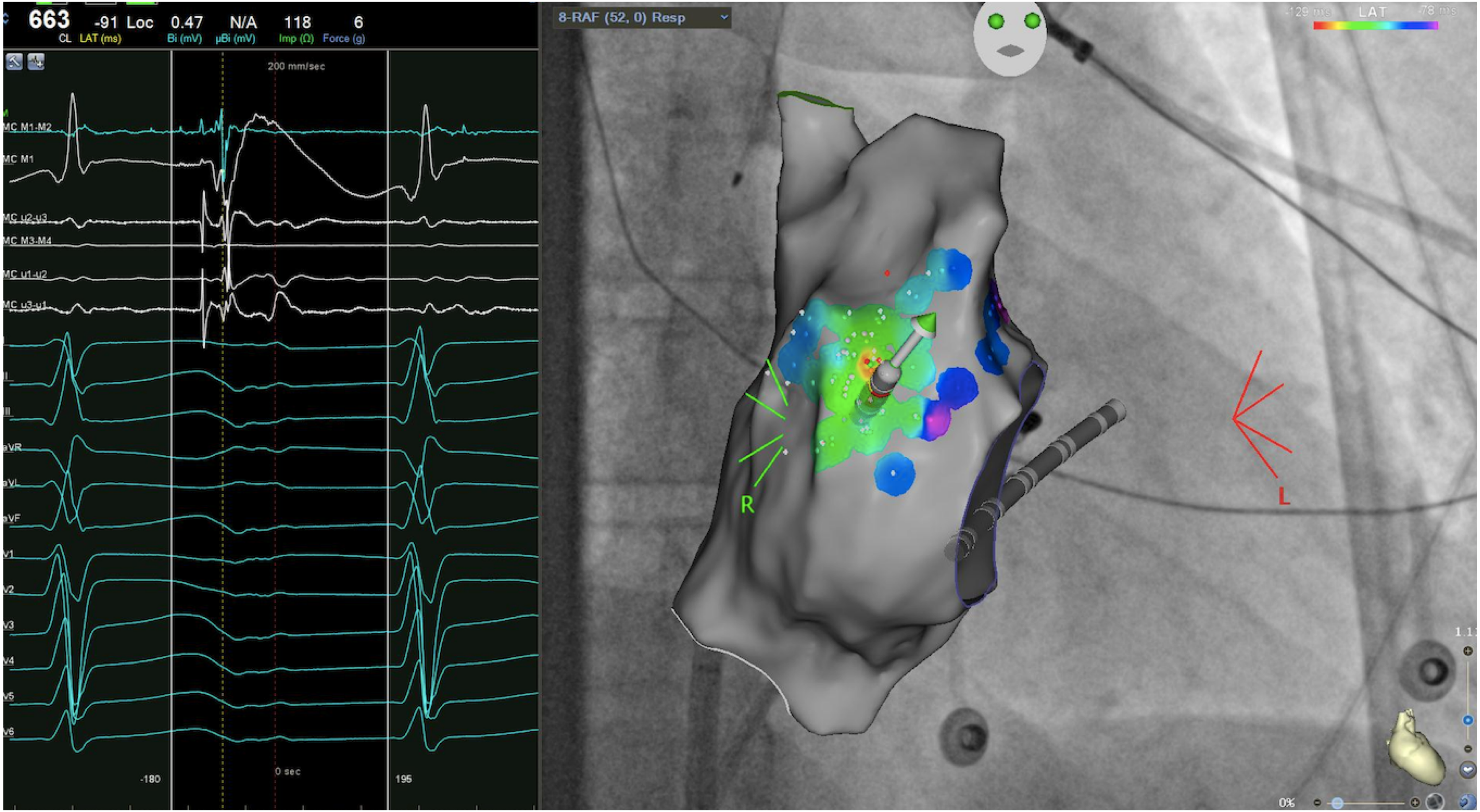


1.Basri Amasyali, Ayhan Kiliç. Tex Heart Inst J 2015;42(3):289-92)

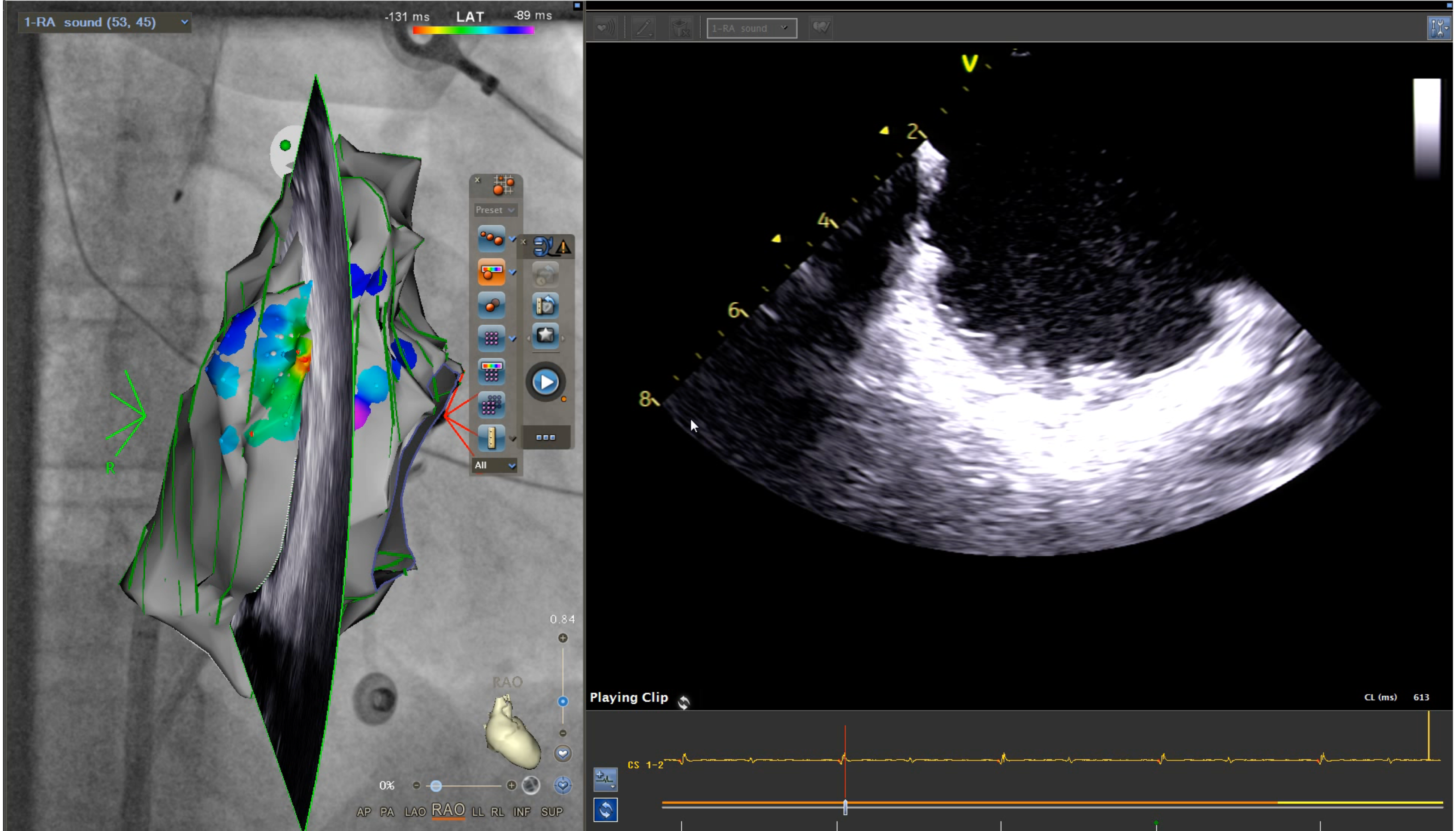
2. Hikmet Yorgun, Hamza Sunman, Ugur Canpolat, Kudret Aytemir. Indian Pacing and Electrophysiology Journal 19 (2019) 164e166



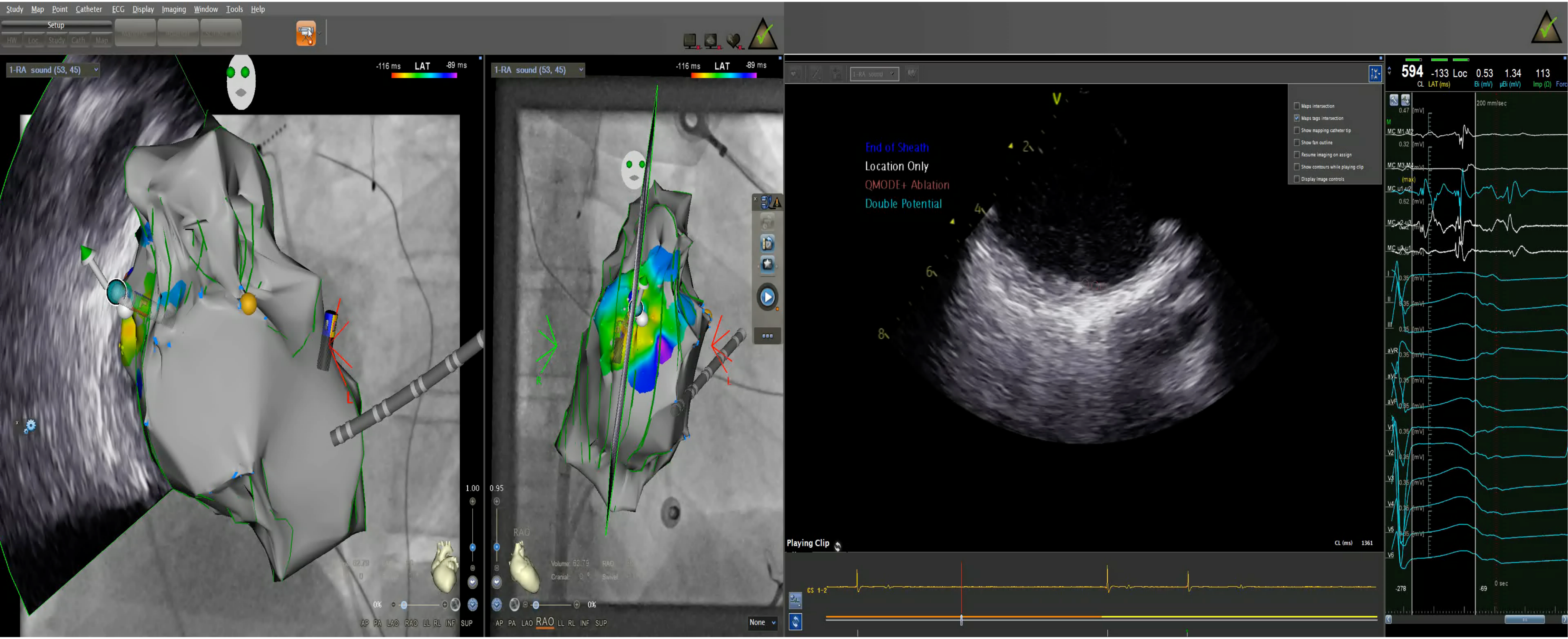
Genel anestezi
ICE
1-RA sound
Editing
CL (ms) 613
CS 1-2
1-RA sound (53, 45)
-131 ms
LAT
-89 ms
R
L
0.83
0%
AP PA LAO RAO LL RL INF SUP
None

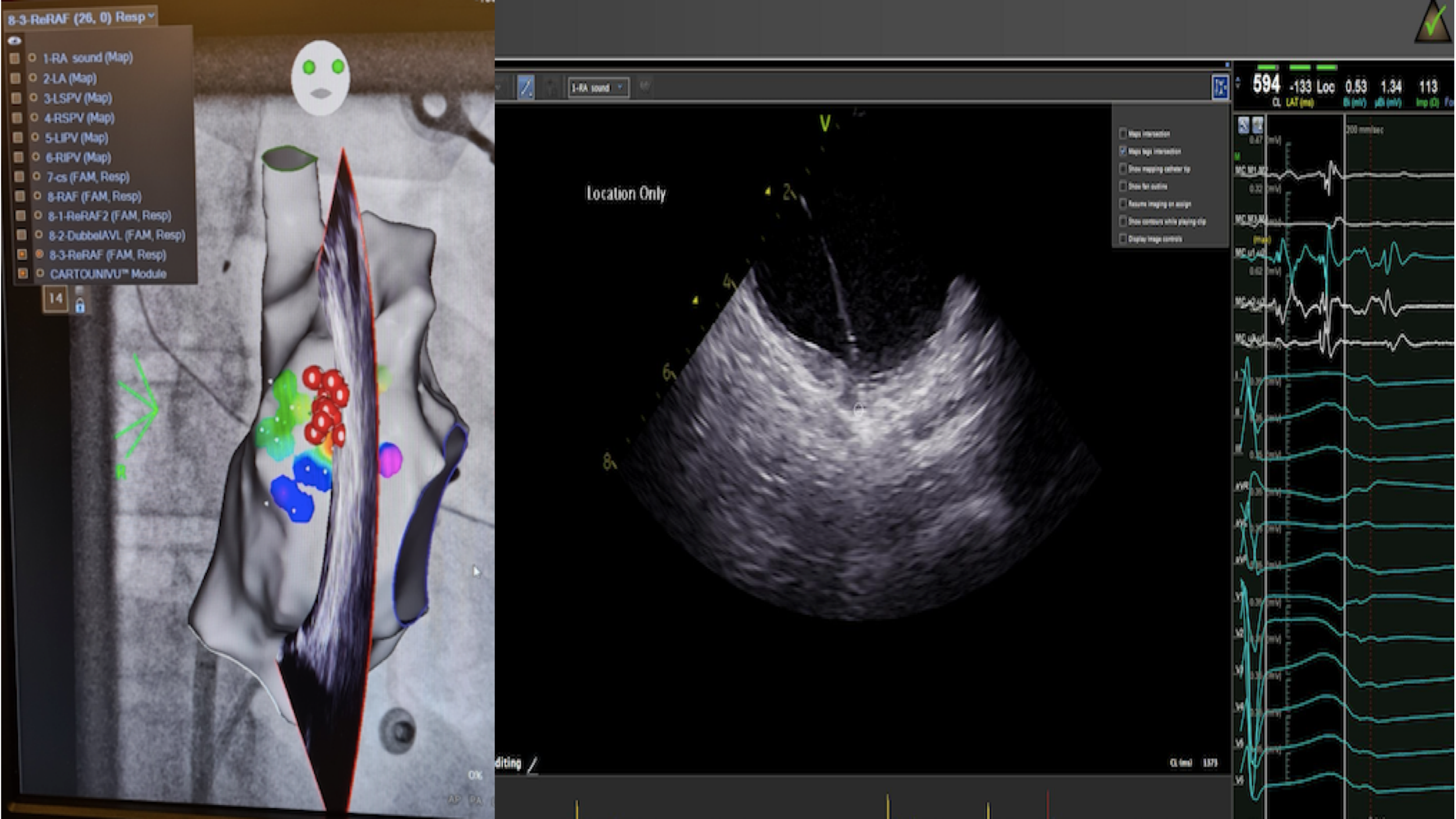


663
CL
-91
LAT (ms)
Loc
0.47
Bi (mV)
N/A
µBi (mV)
118
Imp (Ω)
6
Force (g)
200 mm/sec
MC M1-M2
MC M1
MC u2-u3
MC M3-M4
MC u1-u2
MC u3-u1
I
II
III
aVR
aVL
aVF
V1
V2
V3
V4
V5
V6
-180
0 sec
195
8-RAF (52, 0) Resp
LAT
R
L
0%



1-RA sound (53, 45)
-131 ms
LAT
-89 ms
Preset
All
R
0.84
RAO
0%
AP
PA
LAO
RAO
LL
RL
INF
SUP
1-RA sound
V
2
4
6
8
Playing Clip
CL (ms)
613
CS 1-2


Study Map Point Catheter ECG Display Imaging Window Tools Help
Setup
1-RA sound (53, 45)
-116 ms LAT -89 ms
1-RA sound (53, 45)
-116 ms LAT -89 ms
AP PA LAO RAO LL RL INF SUP
AP PA LAO RAO LL RL INF SUP
None
End of Sheath
Location Only
QMODE+ Ablation
Double Potential
Playing Clip
CS 1-2
594 -133 Loc 0.53 1.34 113
200 mm/sec


8-3-ReRAF (26, 0) Resp
1-RA sound (Map)
2-LA (Map)
3-LSPV (Map)
4-RSPV (Map)
5-LIPV (Map)
6-RIPV (Map)
7-cs (FAM, Resp)
8-RAF (FAM, Resp)
8-1-ReRAF2 (FAM, Resp)
8-2-DubbelAVL (FAM, Resp)
8-3-ReRAF (FAM, Resp)
CARTOUNIVU™ Module
14
R
1-RA sound
Location Only
V
594
-133
Loc
0.53
1.34
113
CL
LAT (ms)
Maps intersection
Maps tags intersection
Show mapping catheter tip
Show fan outline
Resume imaging on assign
Show contours while playing clip
Display image controls
200 mm/sec
diting

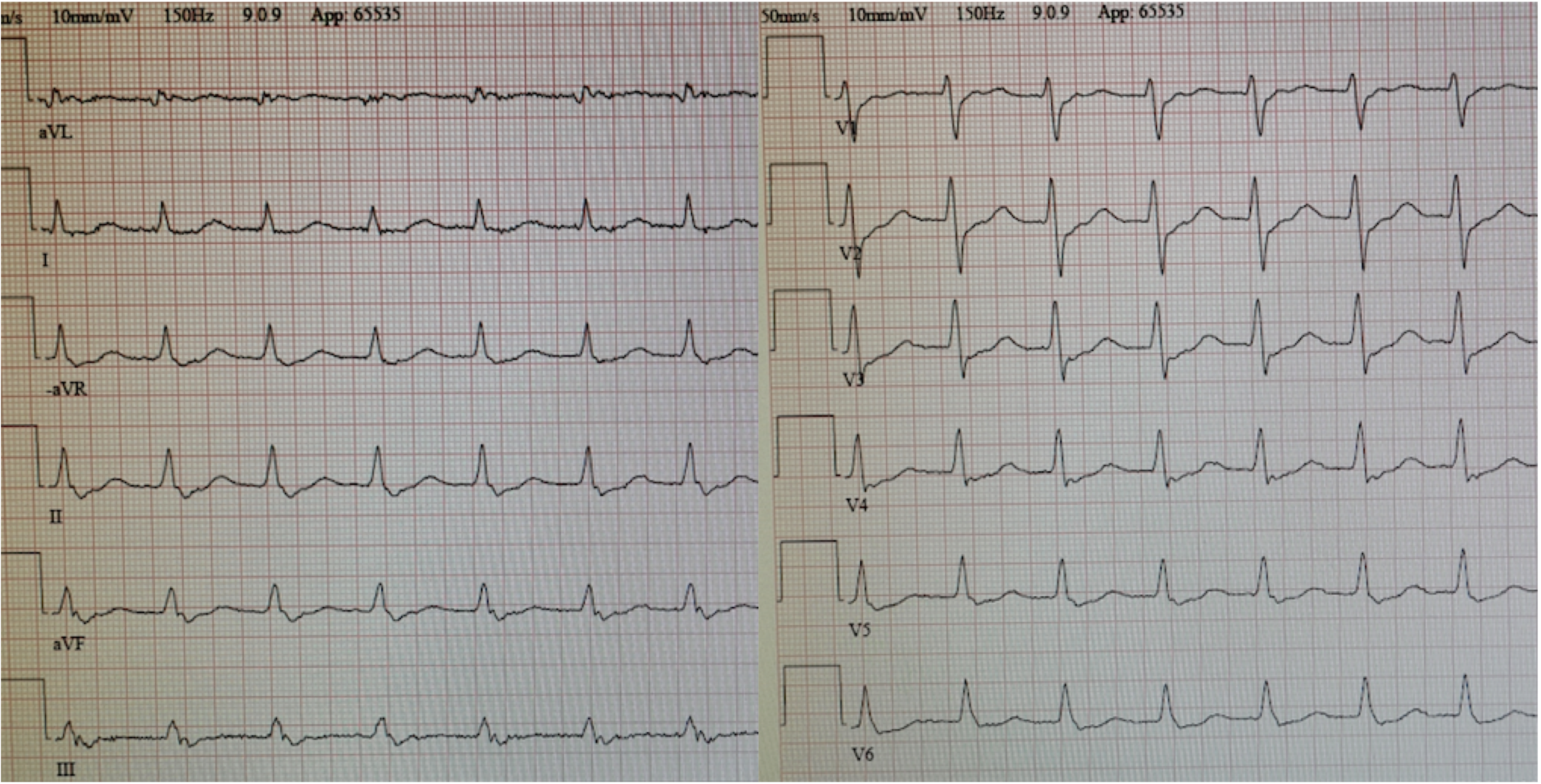
# Olgu 2

62 yaşında kadın

5 yıldır paroksismal SVT atakları

Normal EKO

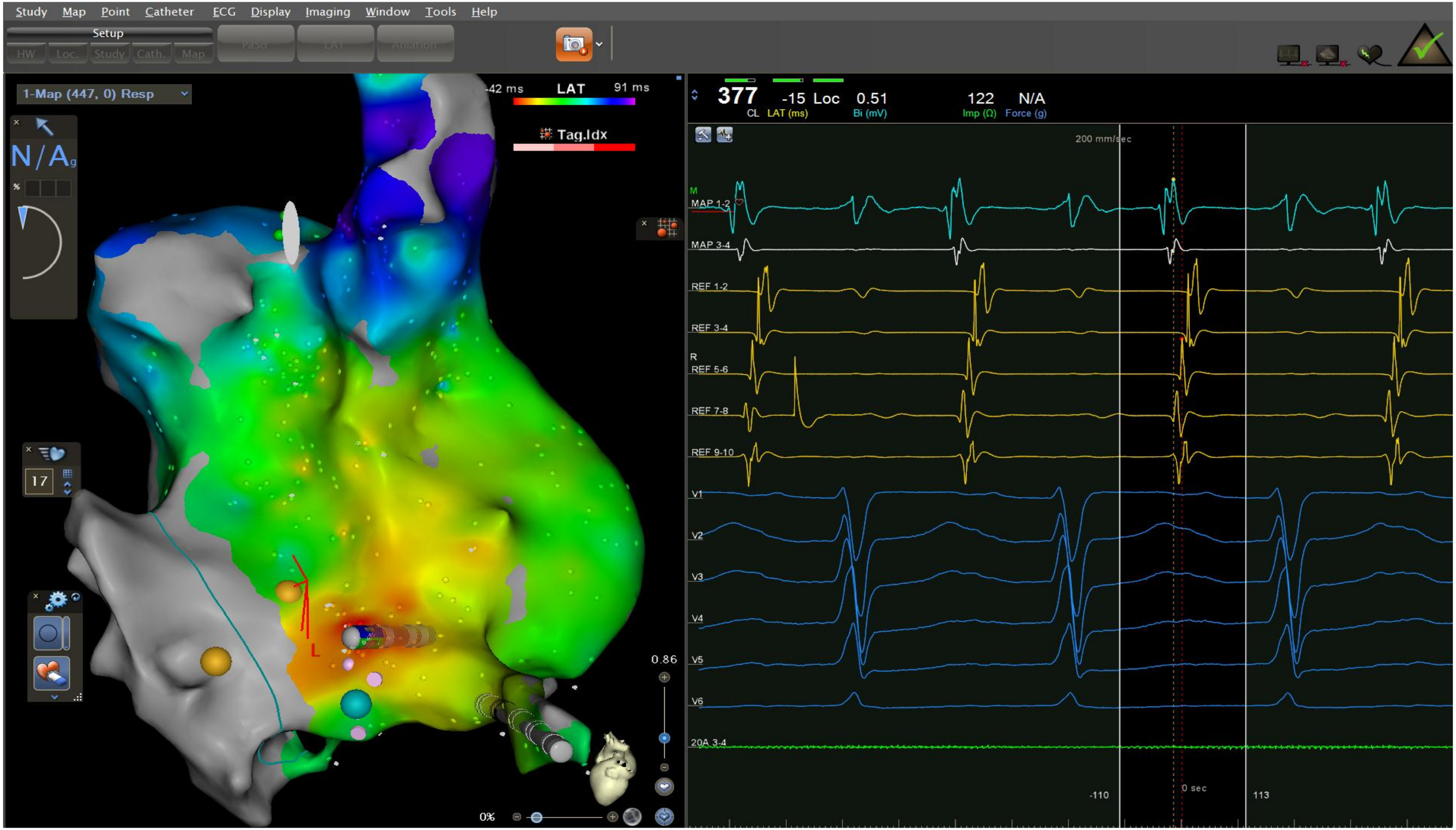
Taşikardi EKG (50mm/s)



# AT

! aVL 10
! I 10
! -aVR 10
! II 10 A + B
! aVF 10
64
! III 10
! V1 10
! V2 10
! V3 10
! V4 10
! V5 10
! V6 10

Study Map Point Catheter ECG Display Imaging Window Tools Help
Setup
HW Loc. Study Cath. Map
1-Map (447, 0) Resp
-38 ms LAT 91 ms
Tag.Idx
N/A
17
L
LAO
1.00
0%
377 CL
-15 LAT (ms)
Loc
0.51 Bi (mV)
122 Imp (Ω)
N/A Force (g)
200 mm/sec
REF 5-6
MAP 1-2
I
II
III
aVR
aVL
aVF
V1
V2
V3
V4
V5
V6
20A 13-14
20A 17-18
-110
0 sec
113



Study Map Point Catheter ECG Display Imaging Window Tools Help
Setup
HW Loc. Study Cath. Map
1-Map (447, 0) Resp
-42 ms LAT 91 ms
Tag.Idx
N/A
17
0.86
0%
377
CL
-15
LAT (ms)
Loc
0.51
Bi (mV)
122
Imp (Ω)
N/A
Force (g)
200 mm/sec
MAP 1-2
MAP 3-4
REF 1-2
REF 3-4
REF 5-6
REF 7-8
REF 9-10
V1
V2
V3
V4
V5
V6
20A 3-4
-110
0 sec
113

Fokal Cryo kateter ile ablasyon

Etkisiz

Mapping (-30℃)➔ Geçici AV-blok +

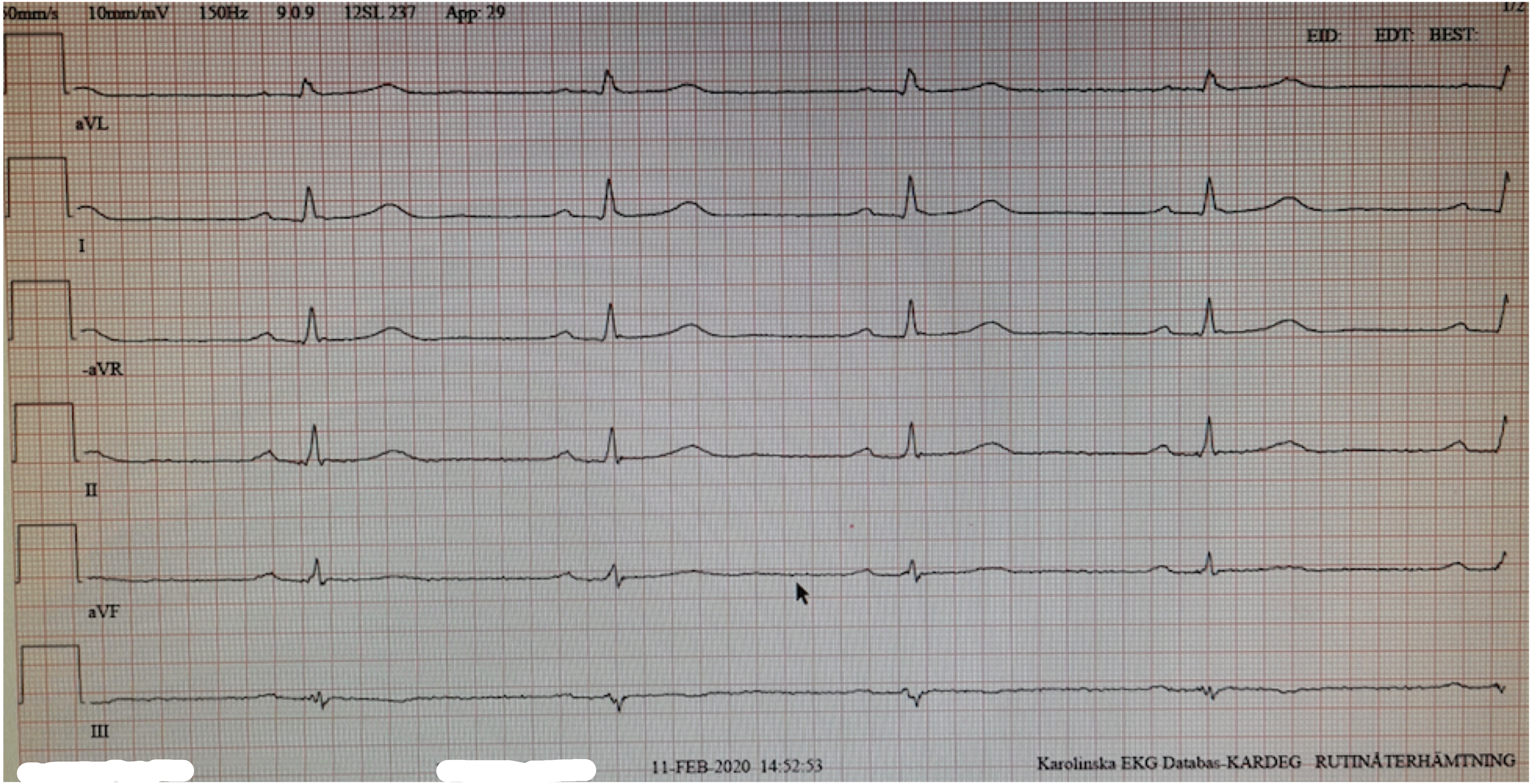
İşlem sonlandırılıyor

Flekainid/Ca kanal blokerleri etkisiz

2. Işlem planlandı

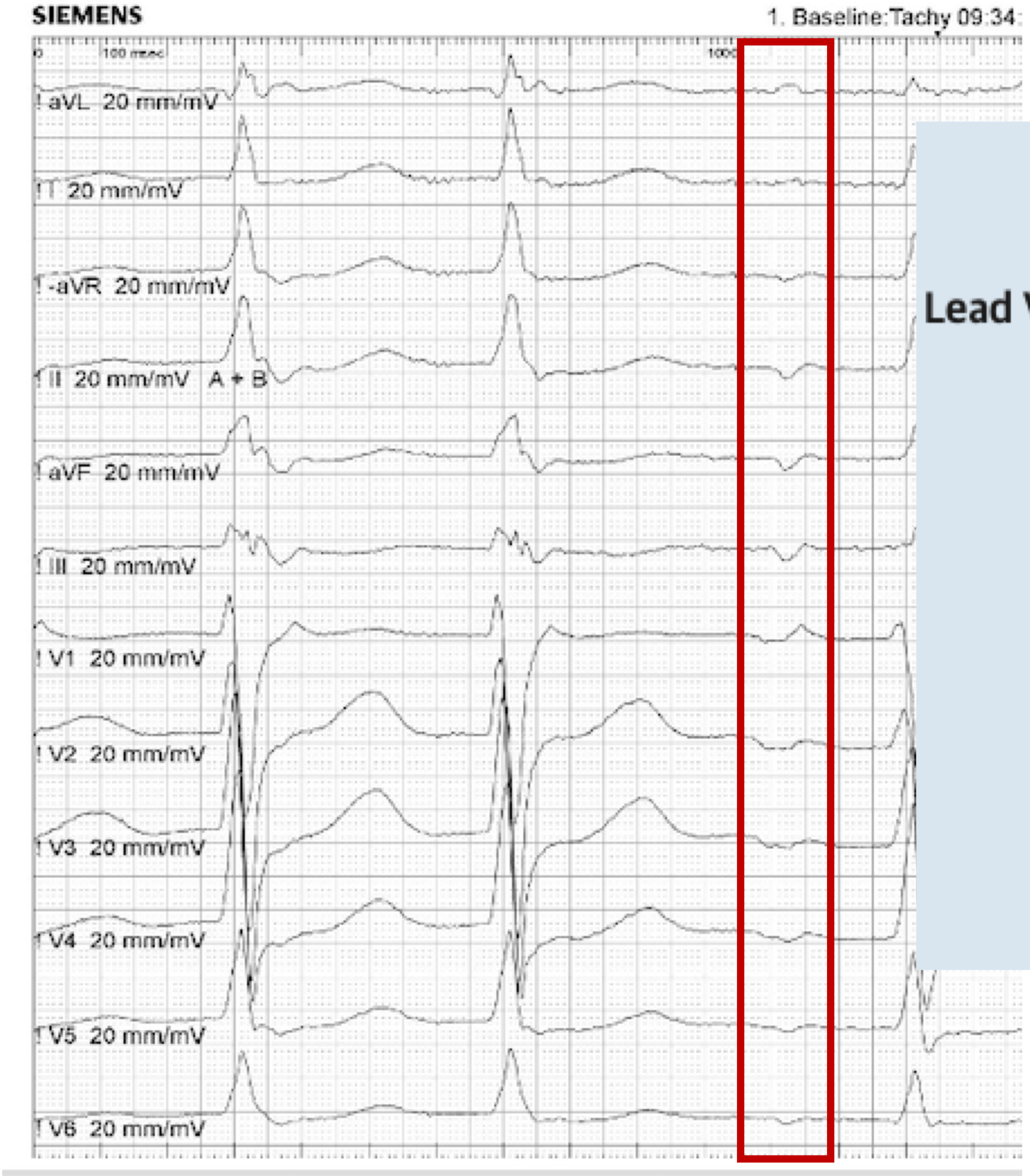
# SR EKG, PQ uzama 2. işlem öncesi

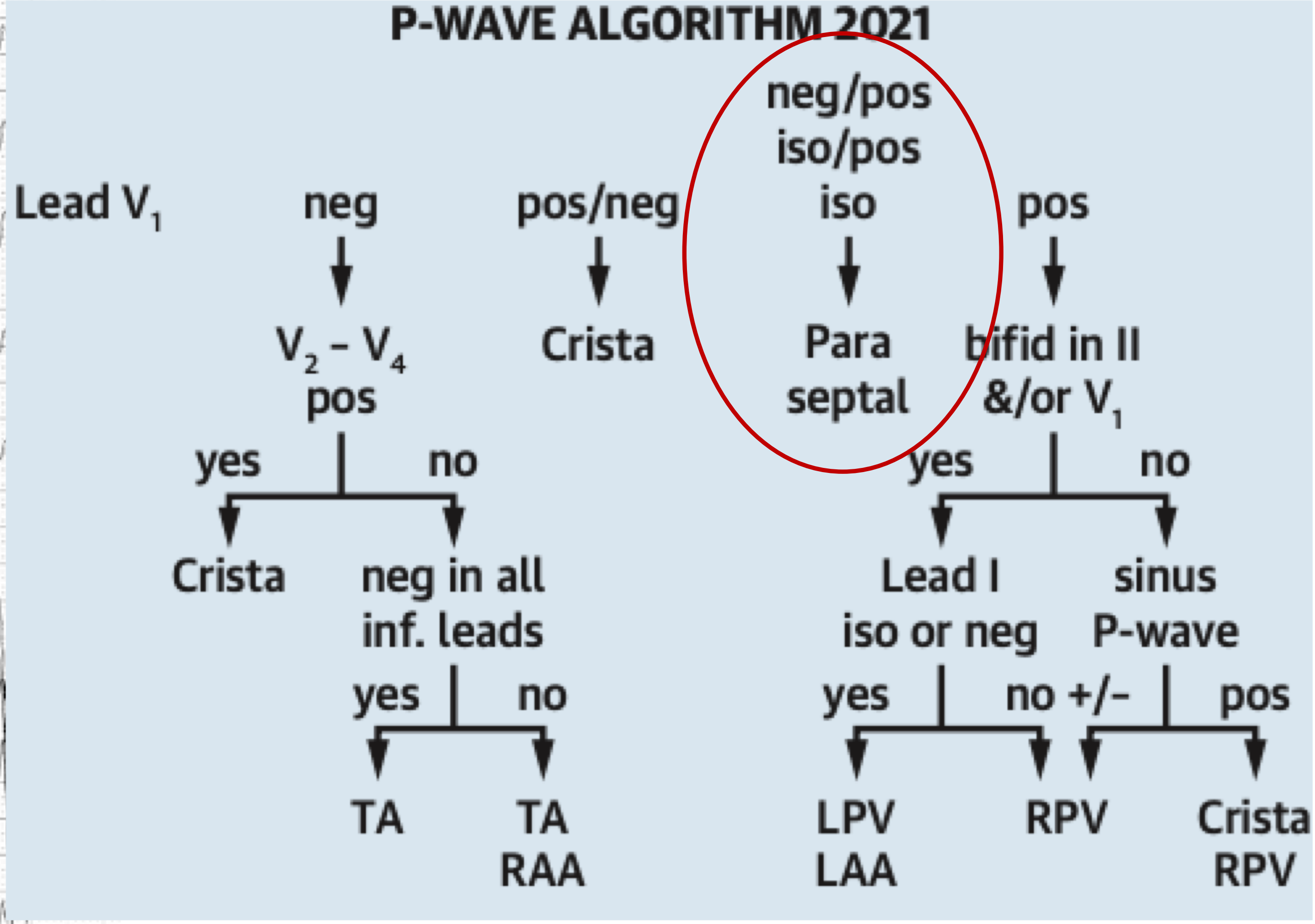
# 1. İşlem öncesi: PR 174ms



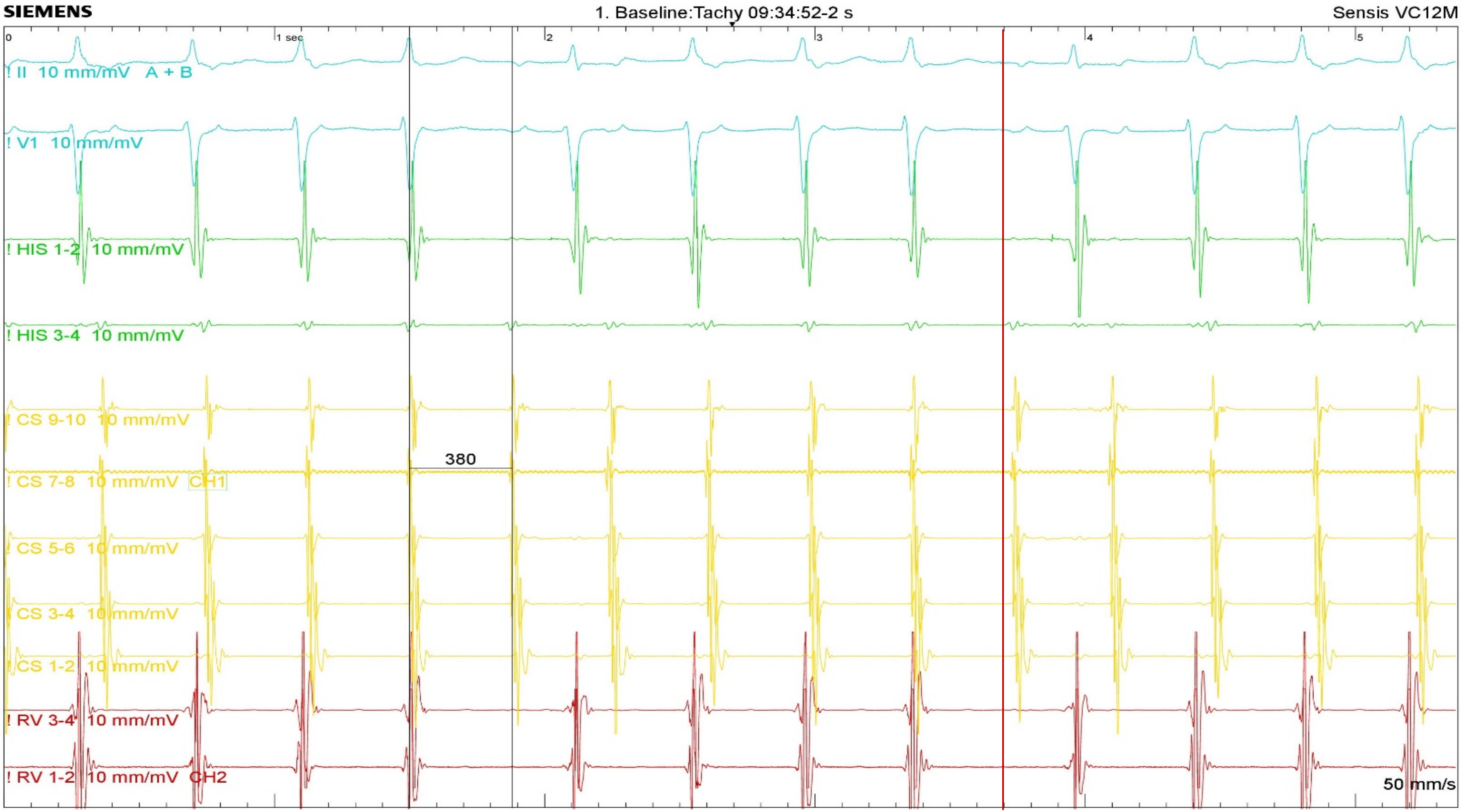
# SR EKG, PQ uzama 2. işlem öncesi

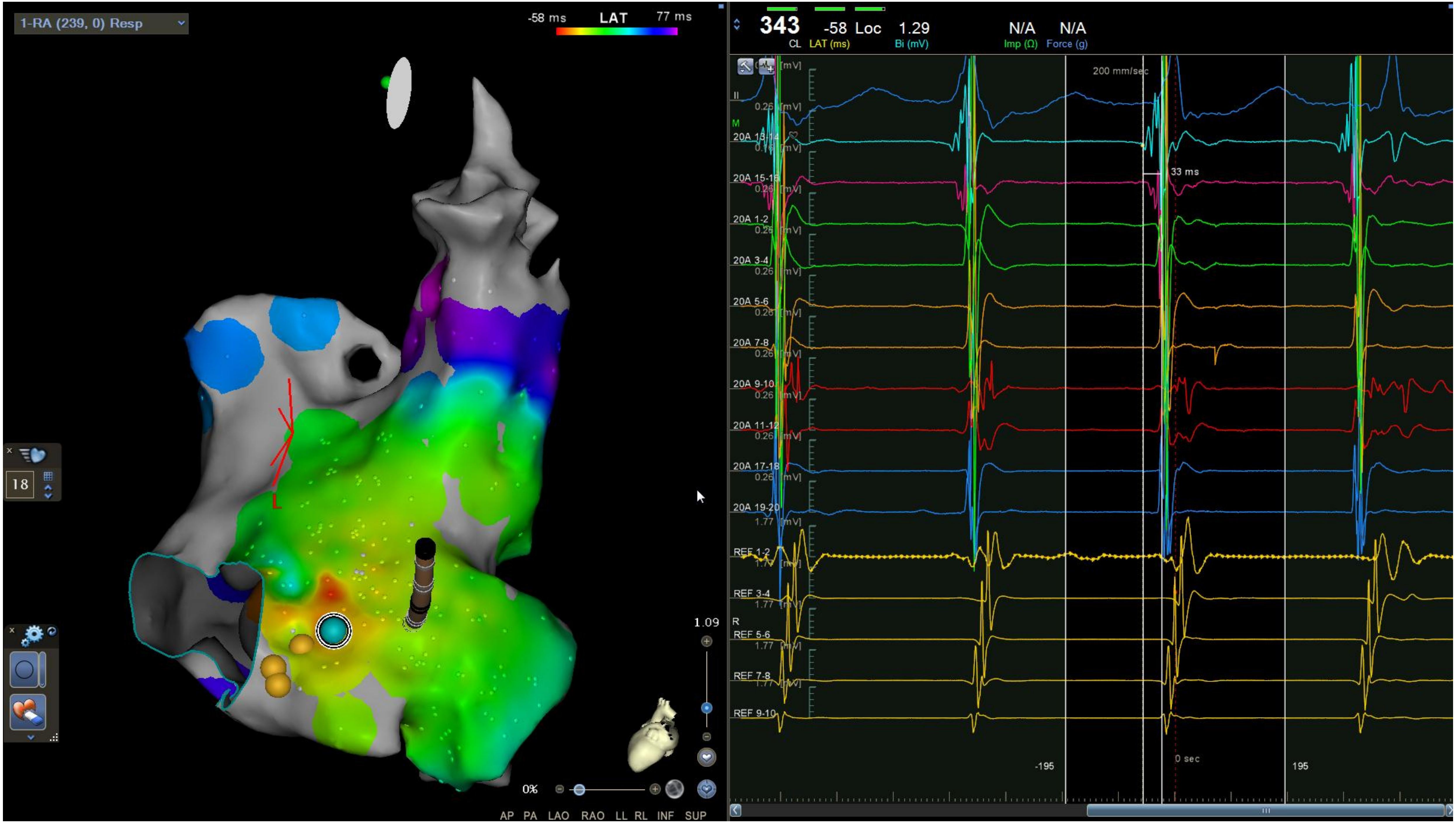
SIEMENS 1. Baseline:Tachy 09:34:52-1 s Sensis VC12M

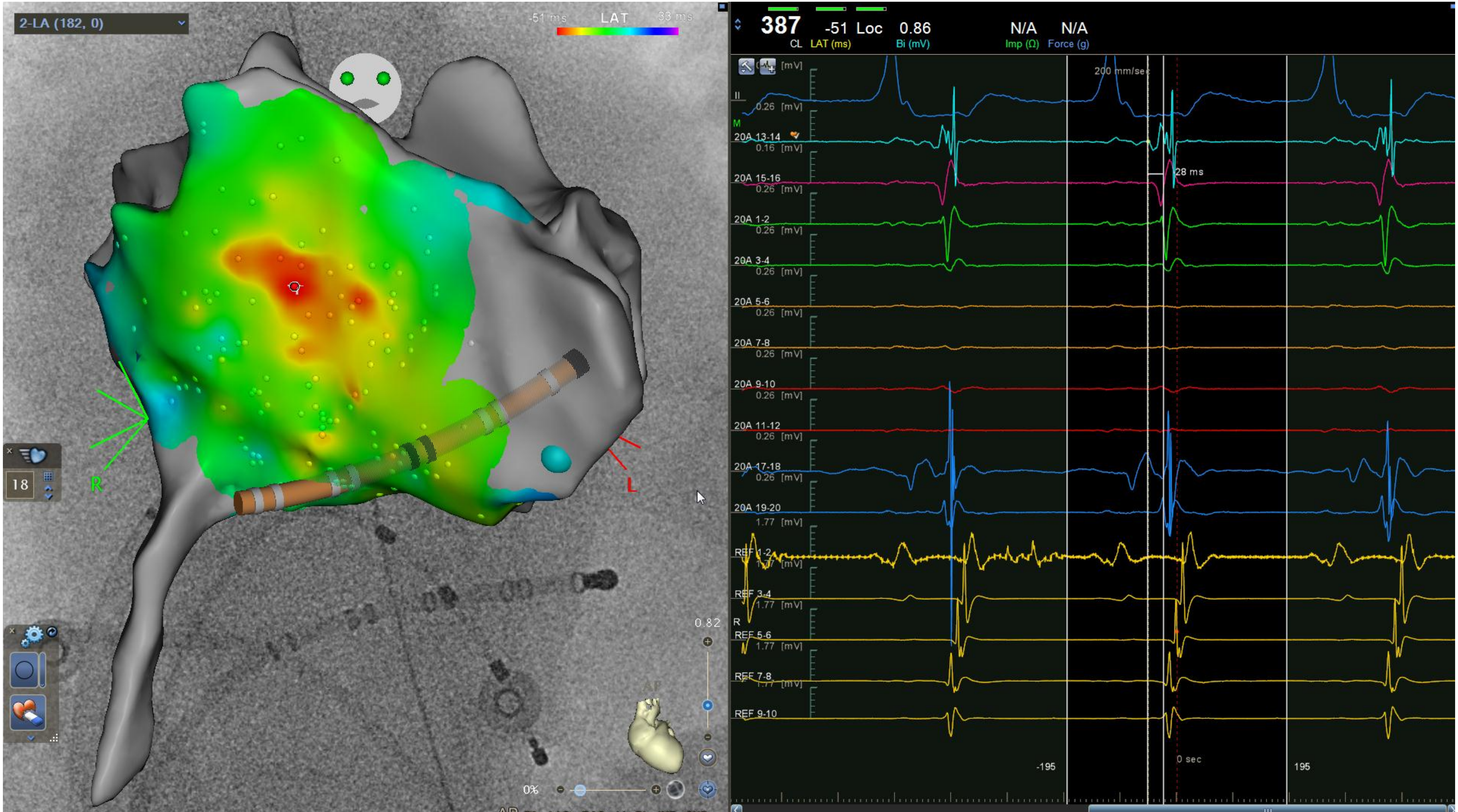


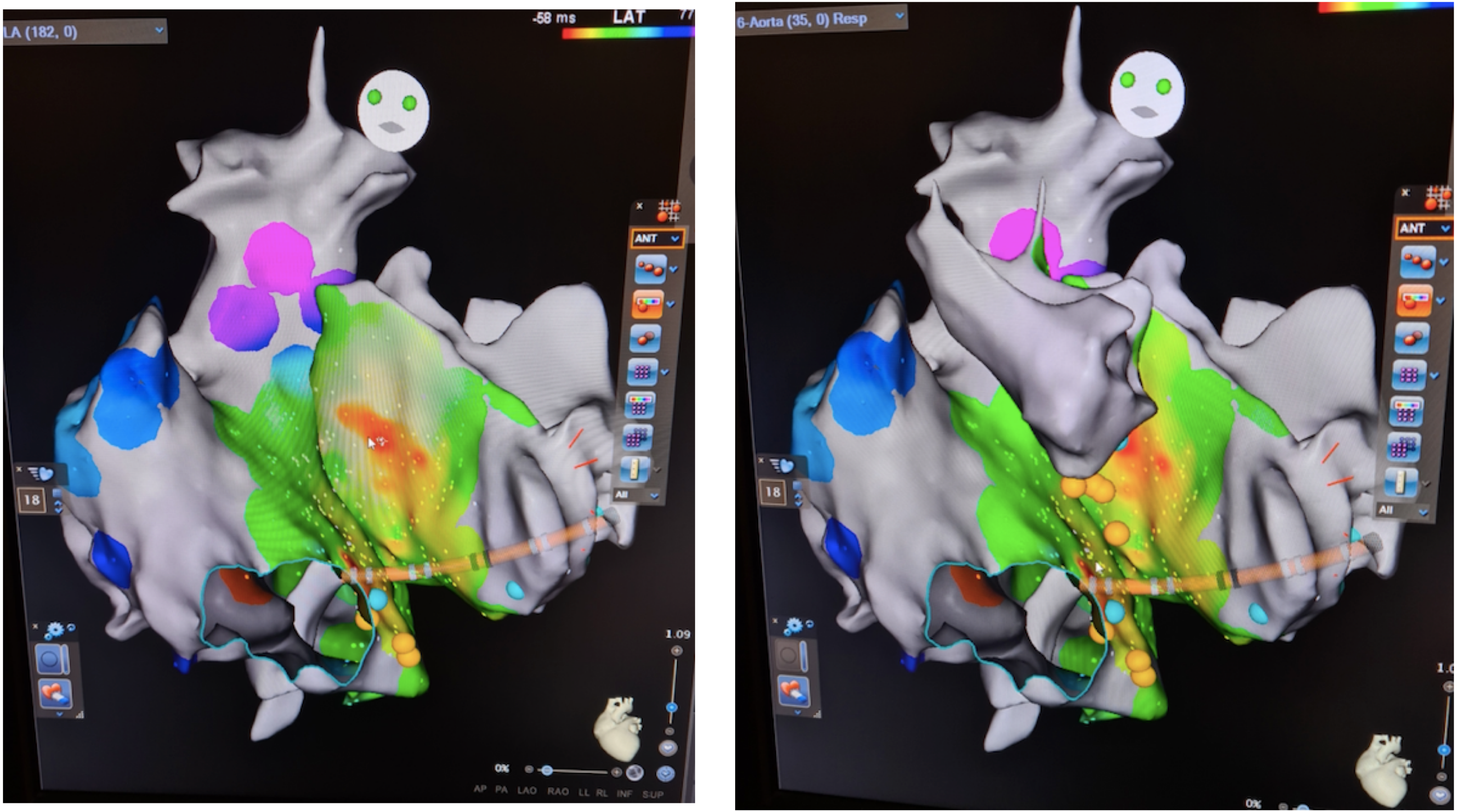



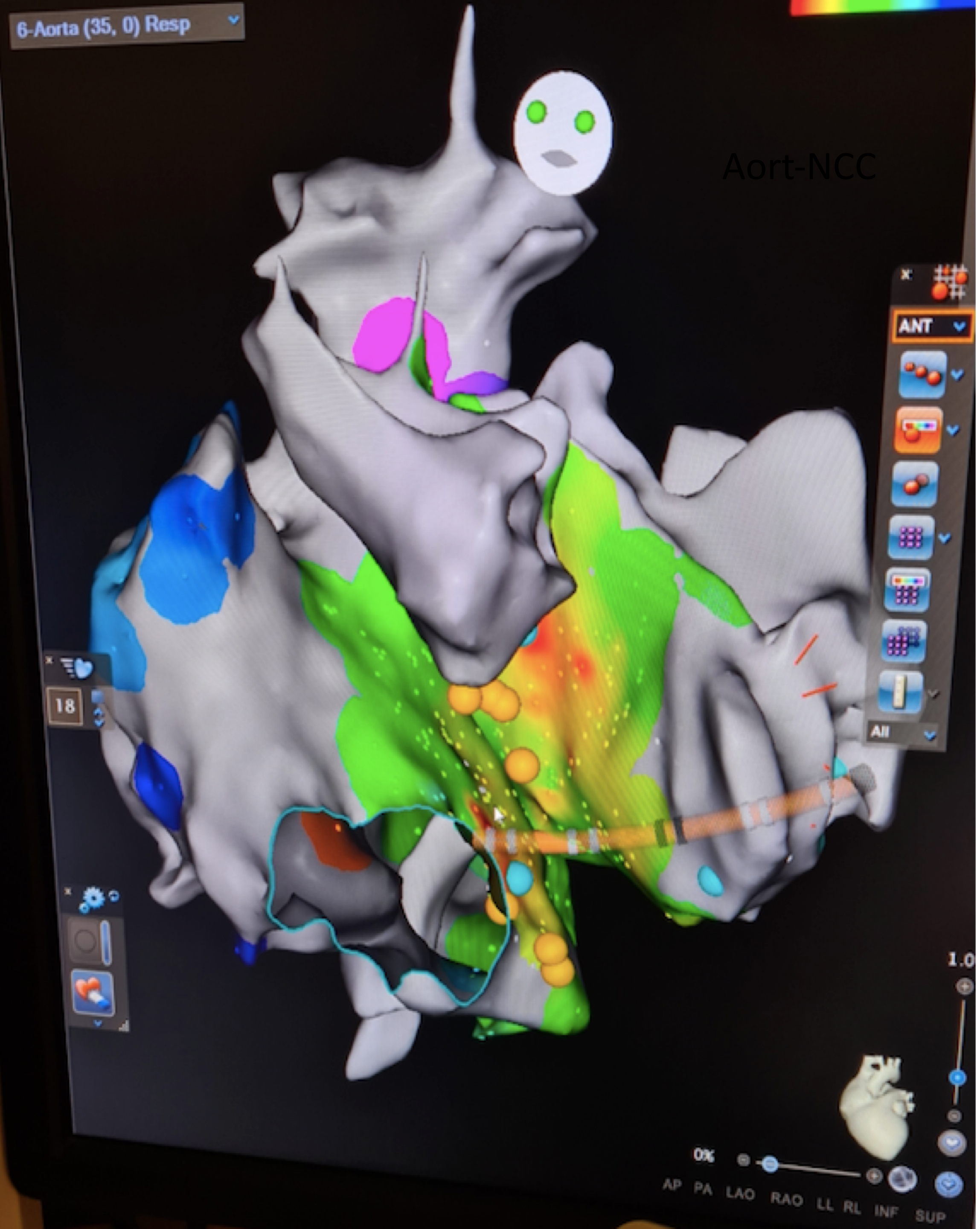

J Am Coll Cardiol EP. Jun 30, 2021. Epublished DOI: 10.1016/j.jacep.2021.05.005

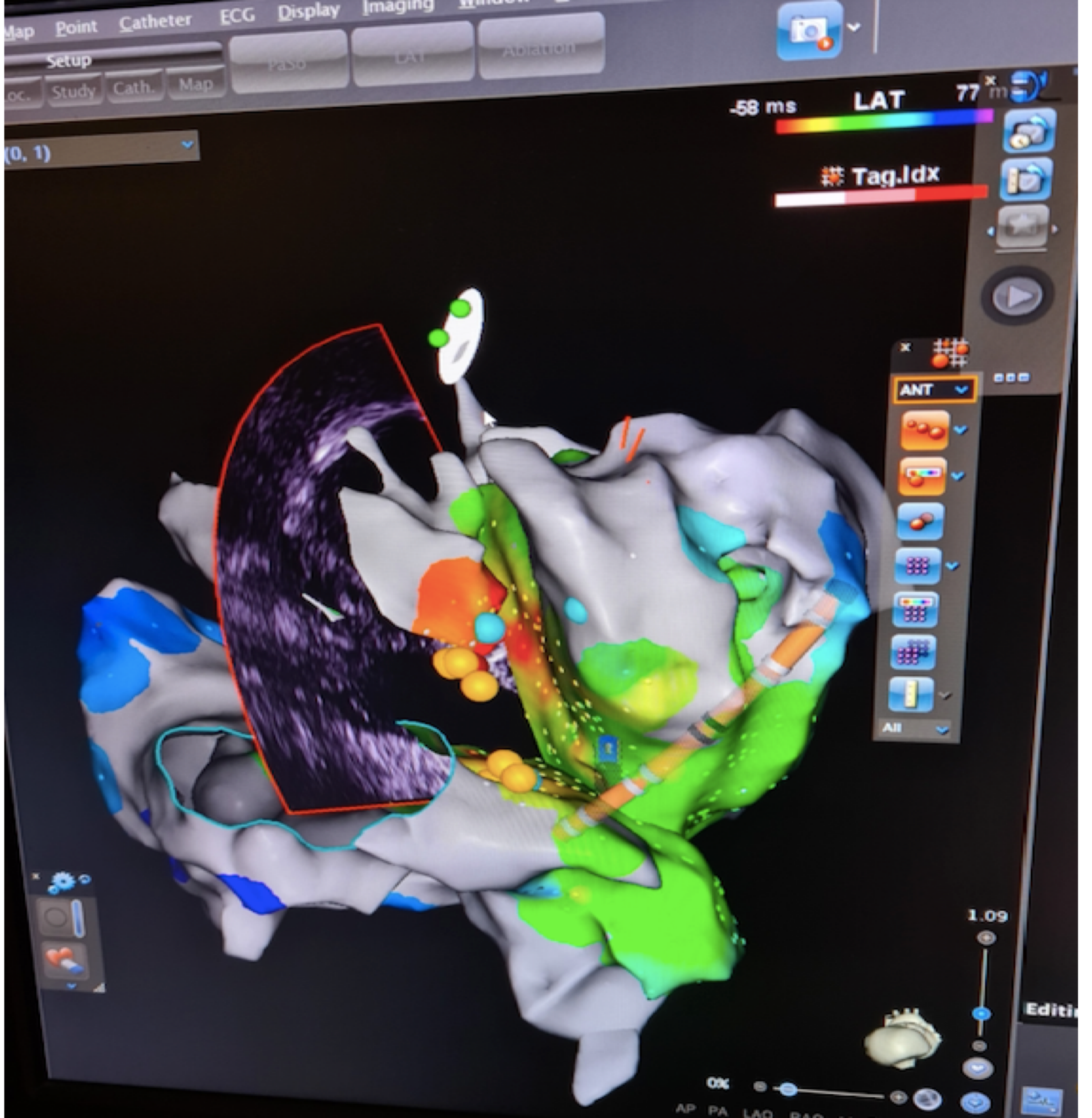

SIEMENS
1. Baseline:Tachy 09:34:52-2 s
Sensis VC12M
0
1 sec
2
3
4
5
! II 10 mm/mV A + B
! V1 10 mm/mV
! HIS 1-2 10 mm/mV
! HIS 3-4 10 mm/mV
! CS 9-10 10 mm/mV
380
! CS 7-8 10 mm/mV CH1
! CS 5-6 10 mm/mV
! CS 3-4 10 mm/mV
! CS 1-2 10 mm/mV
! RV 3-4 10 mm/mV
! RV 1-2 10 mm/mV CH2
50 mm/s

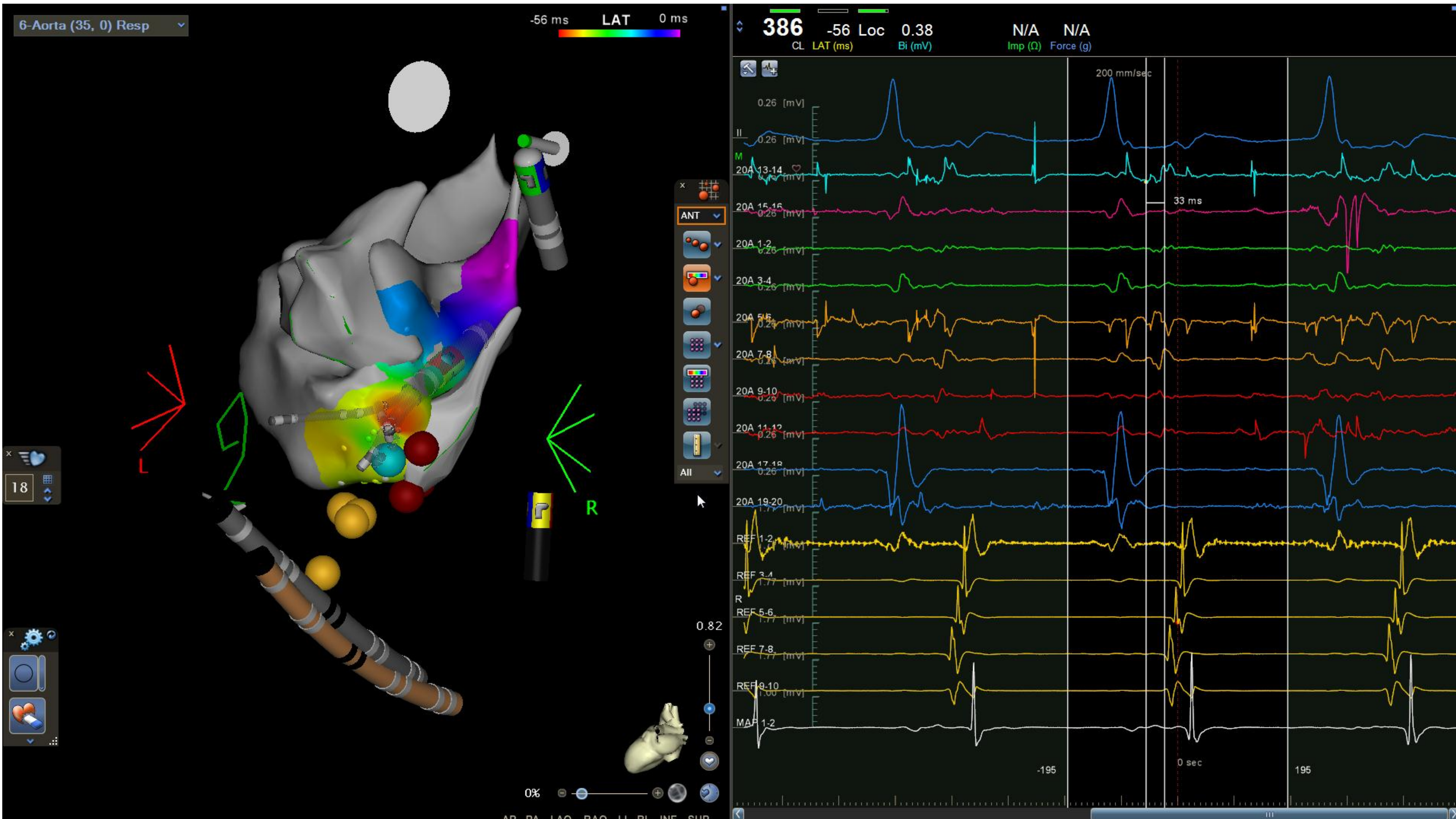

1-RA (239, 0) Resp
-58 ms
LAT
77 ms
18
1.09
0%
AP PA LAO RAO LL RL INF SUP
343
CL
-58 Loc
LAT (ms)
1.29
Bi (mV)
N/A
Imp (Ω)
N/A
Force (g)
200 mm/sec
II
20A 13-14
20A 15-16
33 ms
20A 1-2
20A 3-4
20A 5-6
20A 7-8
20A 9-10
20A 11-12
20A 17-18
20A 19-20
REF 1-2
REF 3-4
REF 5-6
REF 7-8
REF 9-10
-195
0 sec
195

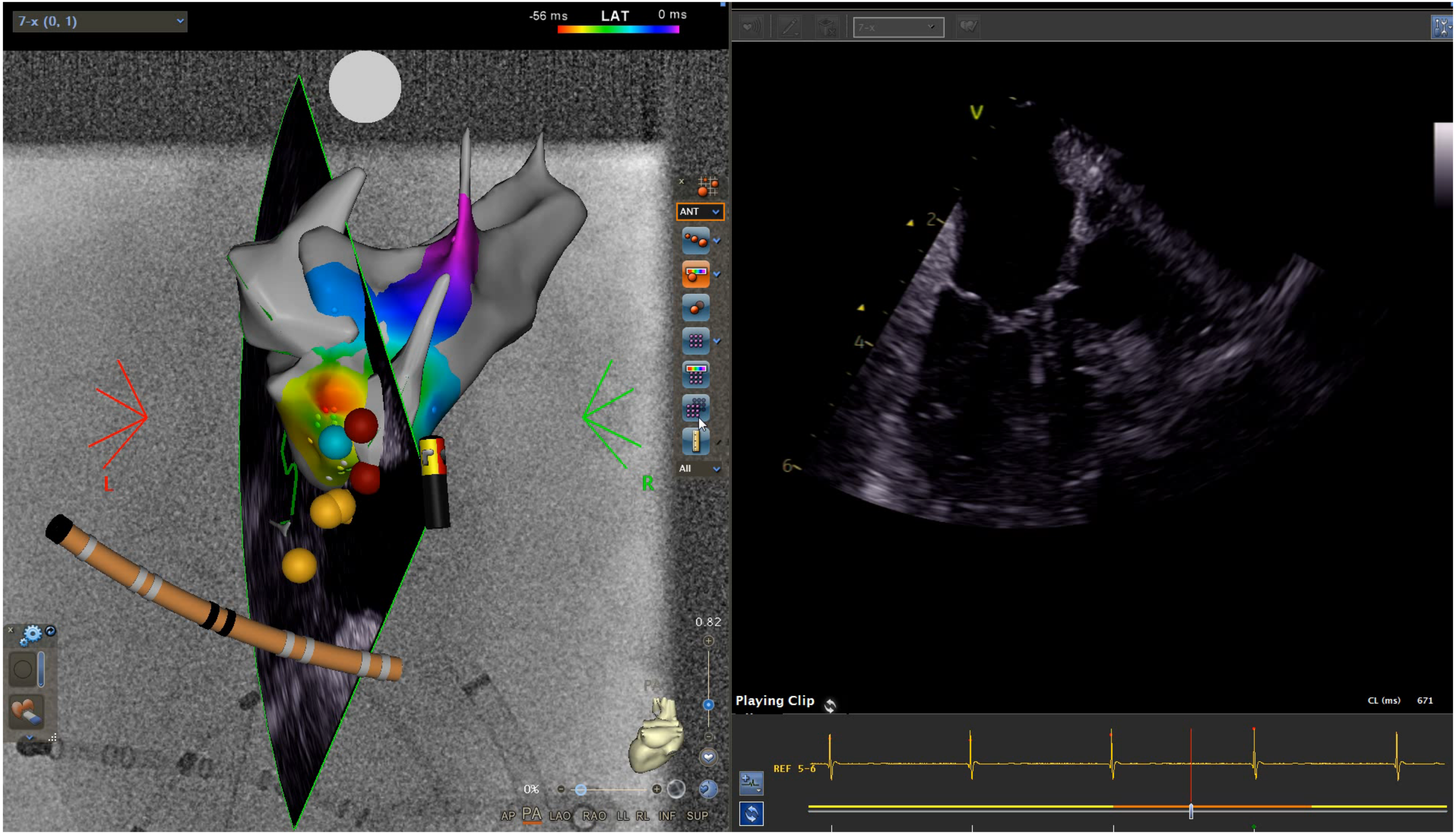

2-LA (182, 0)
-51 ms
LAT
33 ms
R
L
18
0.82
0%
387
CL
-51
LAT (ms)
Loc
0.86
Bi (mV)
N/A
Imp (Ω)
N/A
Force (g)
200 mm/sec
28 ms
20A 13-14
20A 15-16
20A 1-2
20A 3-4
20A 5-6
20A 7-8
20A 9-10
20A 11-12
20A 17-18
20A 19-20
REF 1-2
REF 3-4
REF 5-6
REF 7-8
REF 9-10
-195
0 sec
195


LA (182, 0)
-58 ms
LAT
ANT
All
18
1.09
0%
AP PA LAO RAO LL RL INF SUP
6-Aorta (35, 0) Resp
ANT
All
18

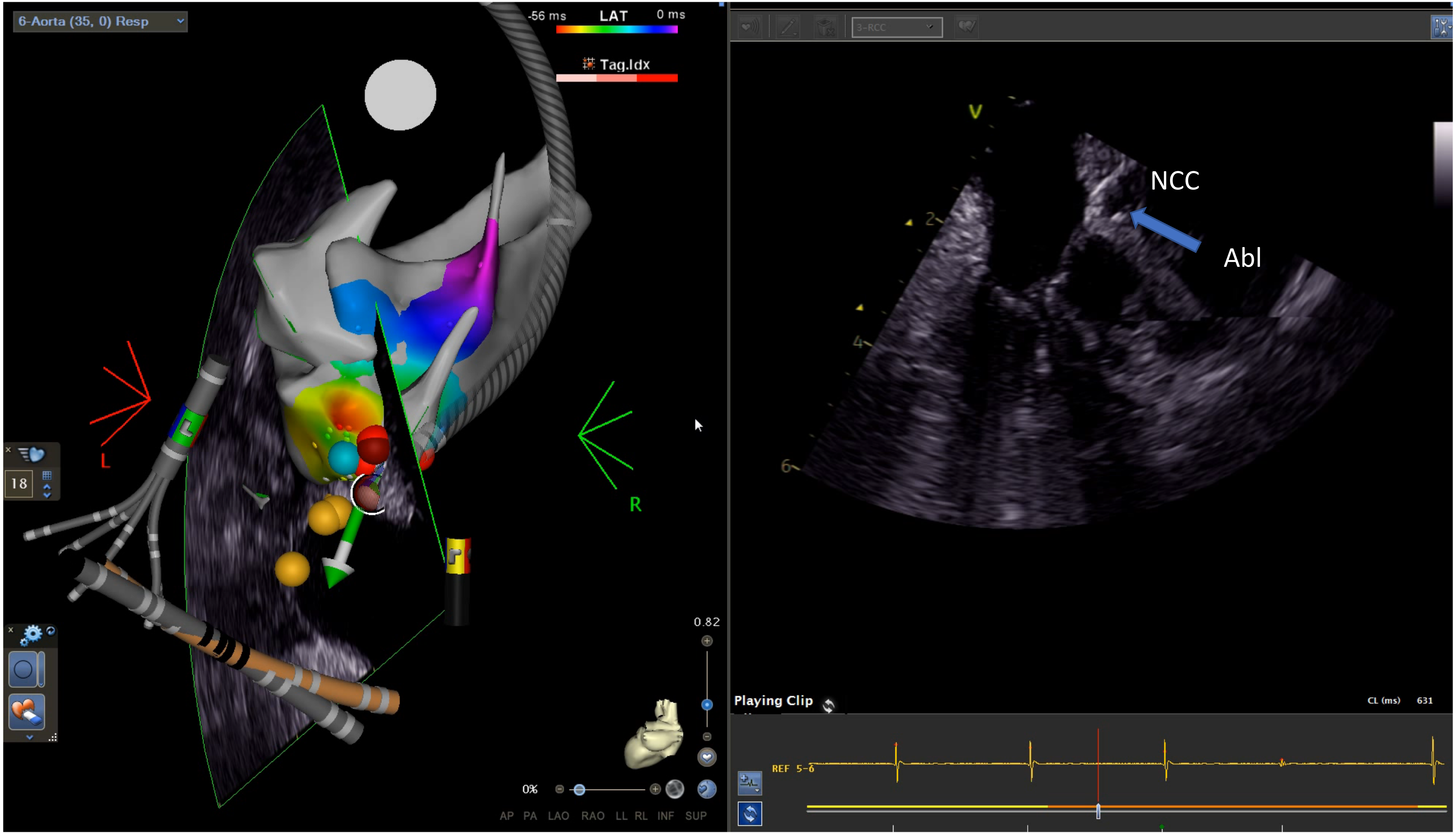

6-Aorta (35, 0) Resp
Aort-NCC
ANT
18
All
1.0
0%
AP PA LAO RAO LL RL INF SUP

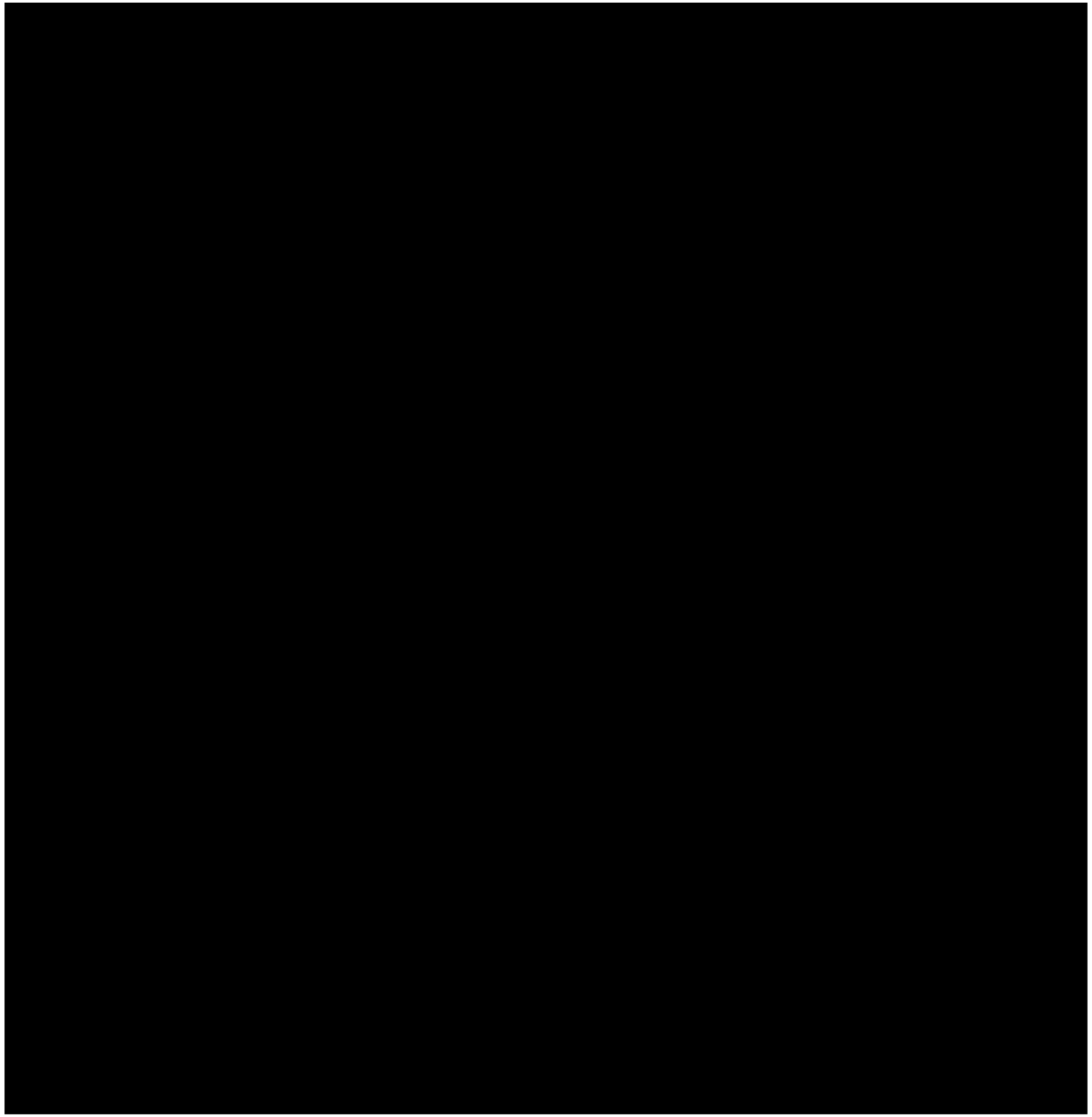

Point Catheter ECG Display
Setup
Study Cath. Map
-58 ms
LAT
77
(0, 1)
Tag.Idx
ANT
All
1.09
0%

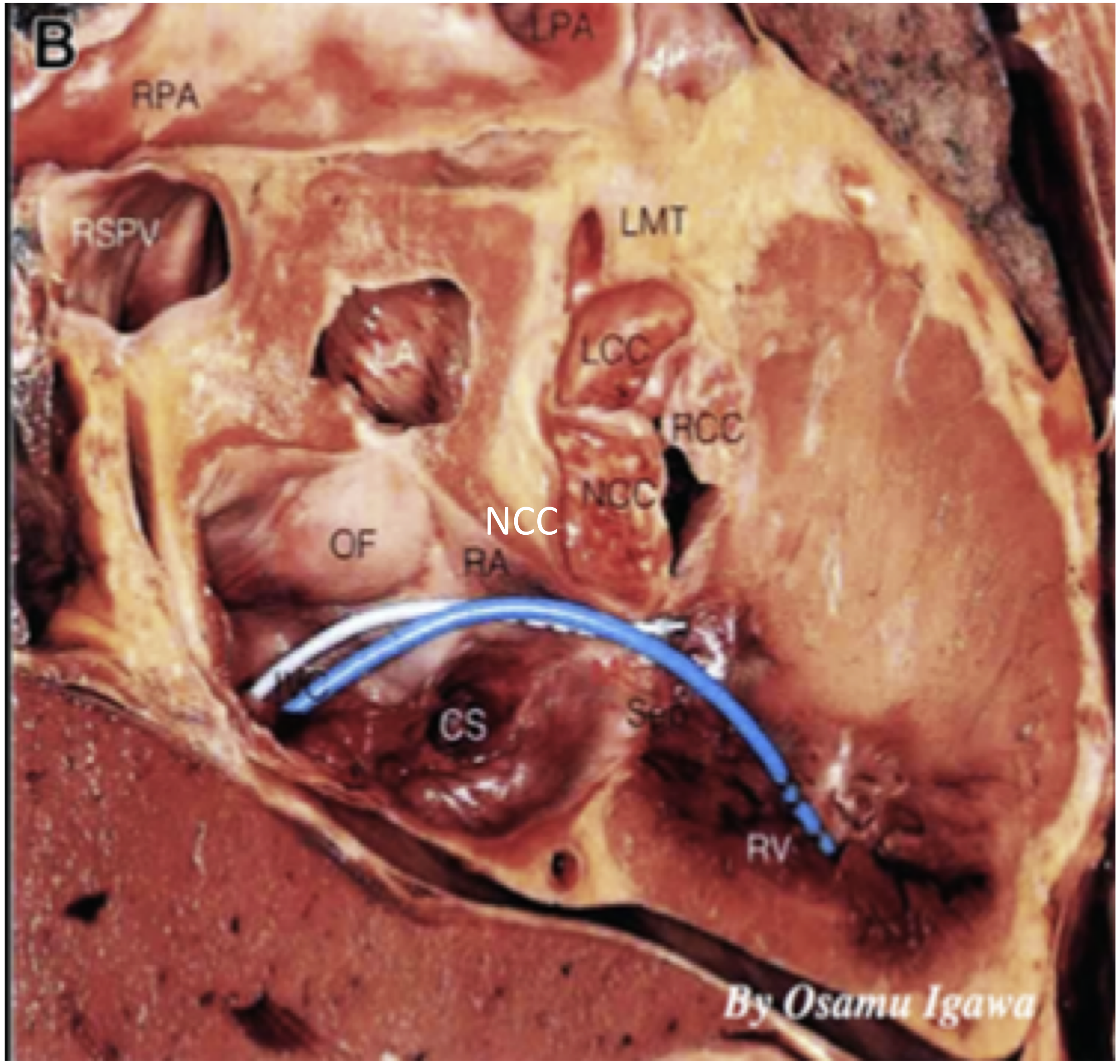

6-Aorta (35, 0) Resp
-56 ms
LAT
0 ms
L
R
ANT
All
18
0.82
0%
386
CL
-56
LAT (ms)
Loc
0.38
Bi (mV)
N/A
Imp (Ω)
N/A
Force (g)
200 mm/sec
33 ms
II
M
20A 13-14
20A 15-16
20A 1-2
20A 3-4
20A 5-6
20A 7-8
20A 9-10
20A 11-12
20A 17-18
20A 19-20
REF 1-2
REF 3-4
R
REF 5-6
REF 7-8
REF 9-10
MAP 1-2
-195
0 sec
195



7-x (0, 1)
-56 ms
LAT
0 ms
ANT
All
L
R
0.82
0%
AP
PA
LAO
RAO
LL
RL
INF
SUP
V
2
4
6
Playing Clip
CL (ms)
671
REF 5-6


6-Aorta (35, 0) Resp
-56 ms
LAT
0 ms
Tag.Idx
L
R
18
0.82
0%
AP PA LAO RAO LL RL INF SUP
V
NCC
Abl
Playing Clip
CL (ms) 631
REF 5-6







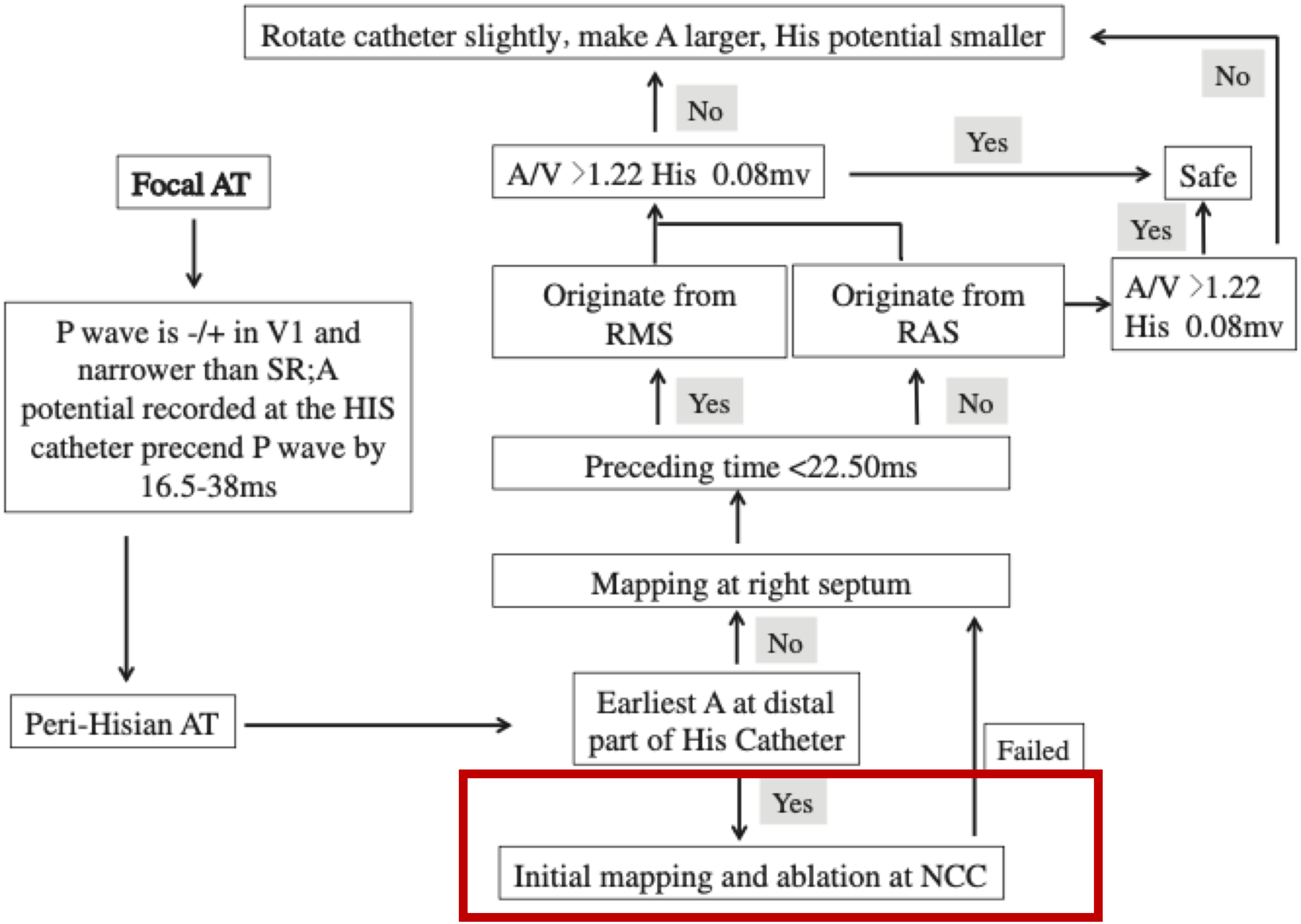
Heart Rhythm 2017;14:1344–1350

# Focal atrial tachycardias from the parahisian region: Strategies for mapping and catheter ablation

Heart Rhythm 2017;14:1344–1350

91 para Hisian AT olgu

| | RAS | RMS | NCC |
|---|---|---|---|
| Ablation sites-P-value | 30.99 ± 8.54 | 28.33 ± 8.35 | 33.27 ± 5.81 |
| $HIS_A$-P (ms) | 24.59 ± 8.73 (17–38) | 18.25 ± 7.20 (10–29) | 27.08 ± 5.63 (16.5–36) |
| Only HISd early | 2/18 | 1/15 | 25/36 |
| $HIS_d$, $HIS_p$ both early | 1/18 | 1/15 | 8/36 |
| Only $HIS_p$ early | 15/18 | 13/15 | 3/36 |
| JNE/AH prolongation during ablation | 13/57 | 11/35 | 2/44 |




Heart Rhythm 2017;14:1344–1350

Teşekkürler