


10. Atrial Fibrilasyon Zirvesi 2021
11-13 Kasım 2021 • Calista Kongre Merkezi Antalya

Parahisian Taşikardiler

DR. MUSTAFA YILMAZ

BAŞKENT ÜNİVERSİTESİ, TIP FAKÜLTESİ

KARDİYOLOJİ AD, ADANA UYG. ARAŞT. MERKEZİ



*I have tremor cordis on me: my heart dances;
But not for joy; not joy.*

William Shakespeare

The Winter's Tale, Act I, Scene II


Parahisian ventriküler aritmiler

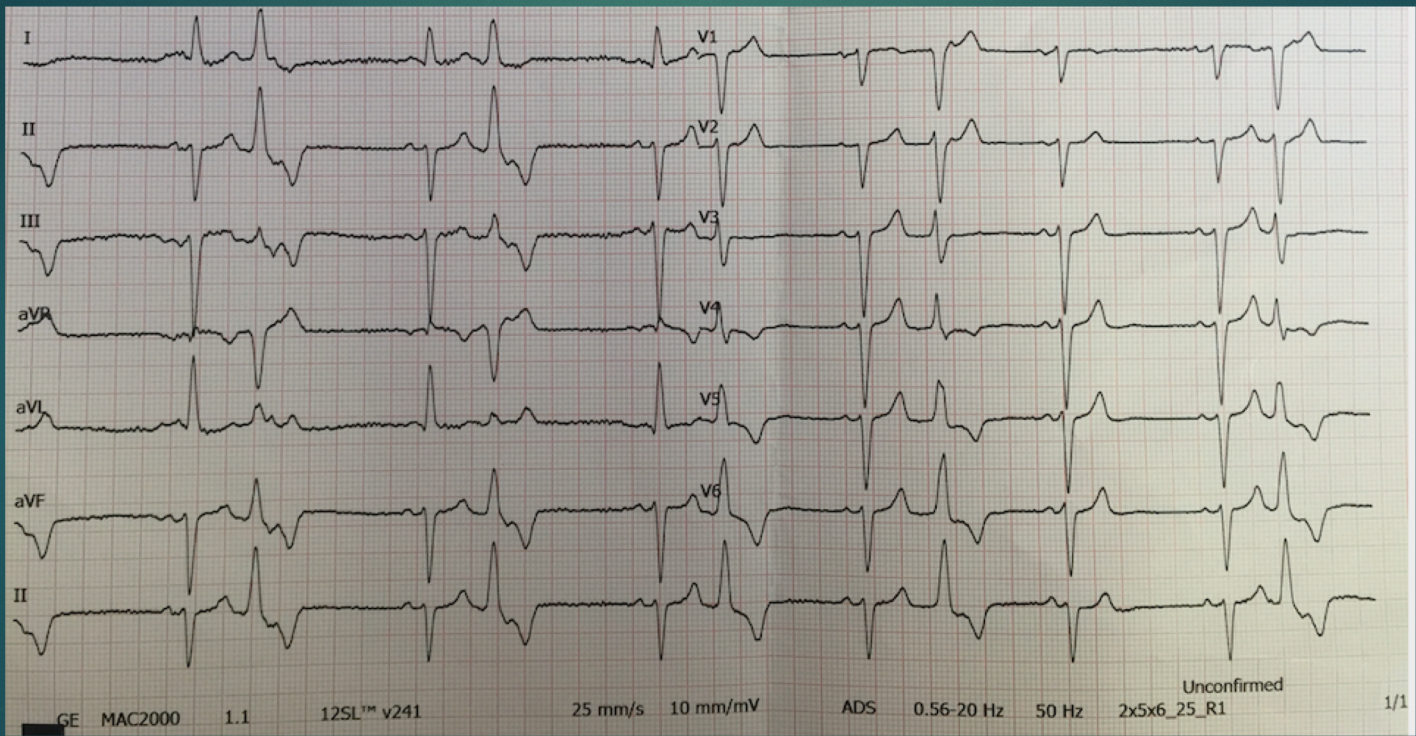
- ▶ Parahisian bölge; tanım olarak HIS kaydı alınan bölgenin 10 mm'ye kadar olan çevresidir.
- ▶ Çıkım yolu ventriküler taşikardilerin %3 - 9'unu oluşturur
- ▶ Ablasyonun başarısı ve komplikasyon riski diğer bölgelere göre daha fazladır.

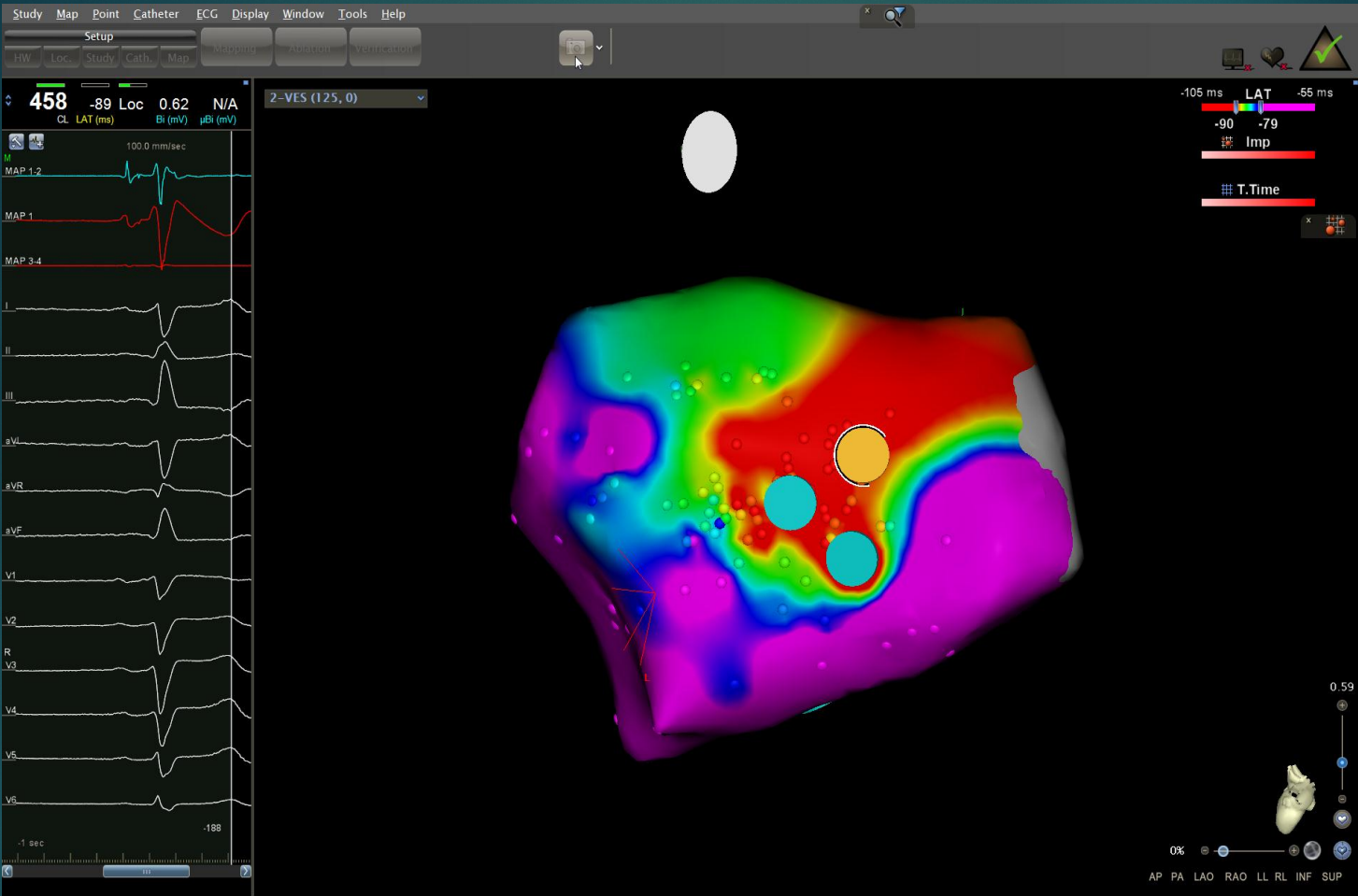
J.-E. Ban et al. Journal of Arrhythmia 30 (2014) 48–54
Enriquez et al. Heart Rhythm. 2018;15(8):1268- 1274
Yamada T et al. Heart Rhythm. 2008;5(1):37-42.

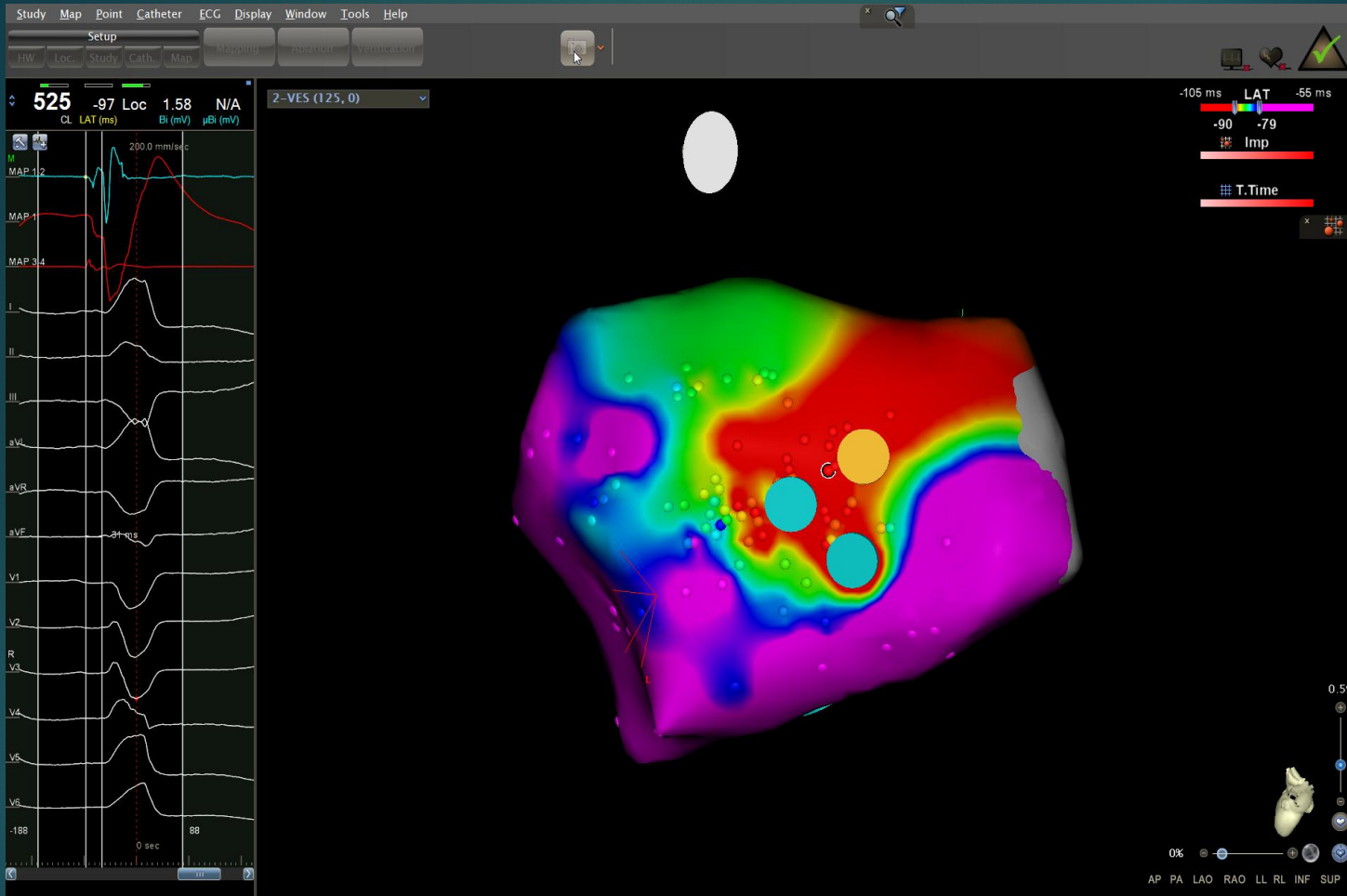
► AV blok riskinden kaçınmak için yöntemler

1. Düşük enerji ile başlayıp güç miktarını kademeli olarak arttırmak (düşük ve yavaş yaklaşım).
2. Normal enerji ile başlayıp, PR mesafesi, junctional ritm ve VA ileti takibi ile ablasyon (ani sonlandırma yaklaşımı).
3. Rölatif olarak daha güvenli bir bölgeden ablasyon (aortik kusp, distal HIS bölgesi).
4. Alternatif yaklaşım teknikleri (ters C eğimi veya cryoablasyon).

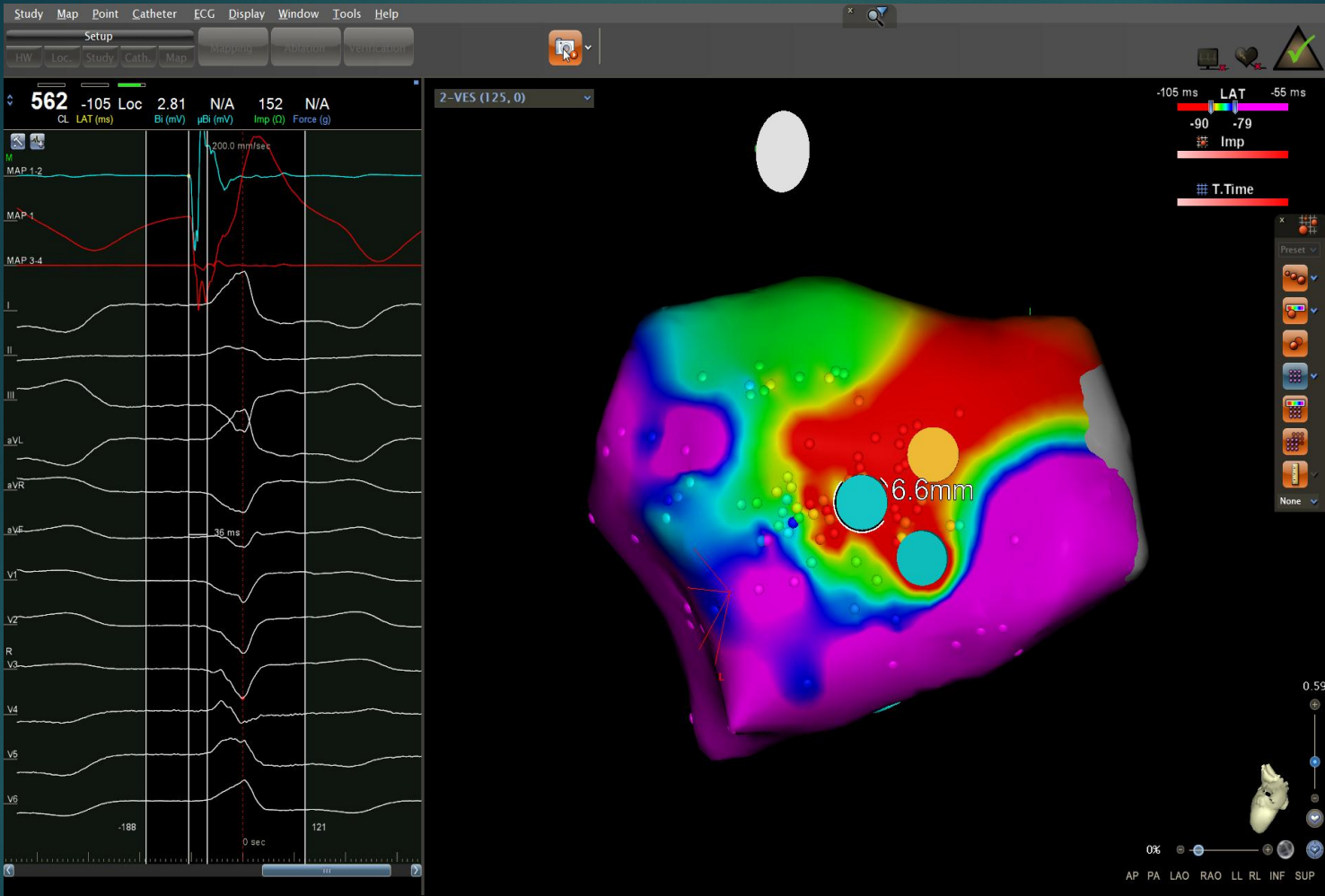
- 
- ▶ 69 yaş kadın hasta
 - ▶ Çarpıntı, erken yorulma
 - ▶ Holterde 31737 (%34,2) erken vuru
 - ▶ Eko: EF %45







HIS kaydı alınan noktada = -31 msn
Unipolar kayıt QS paterni

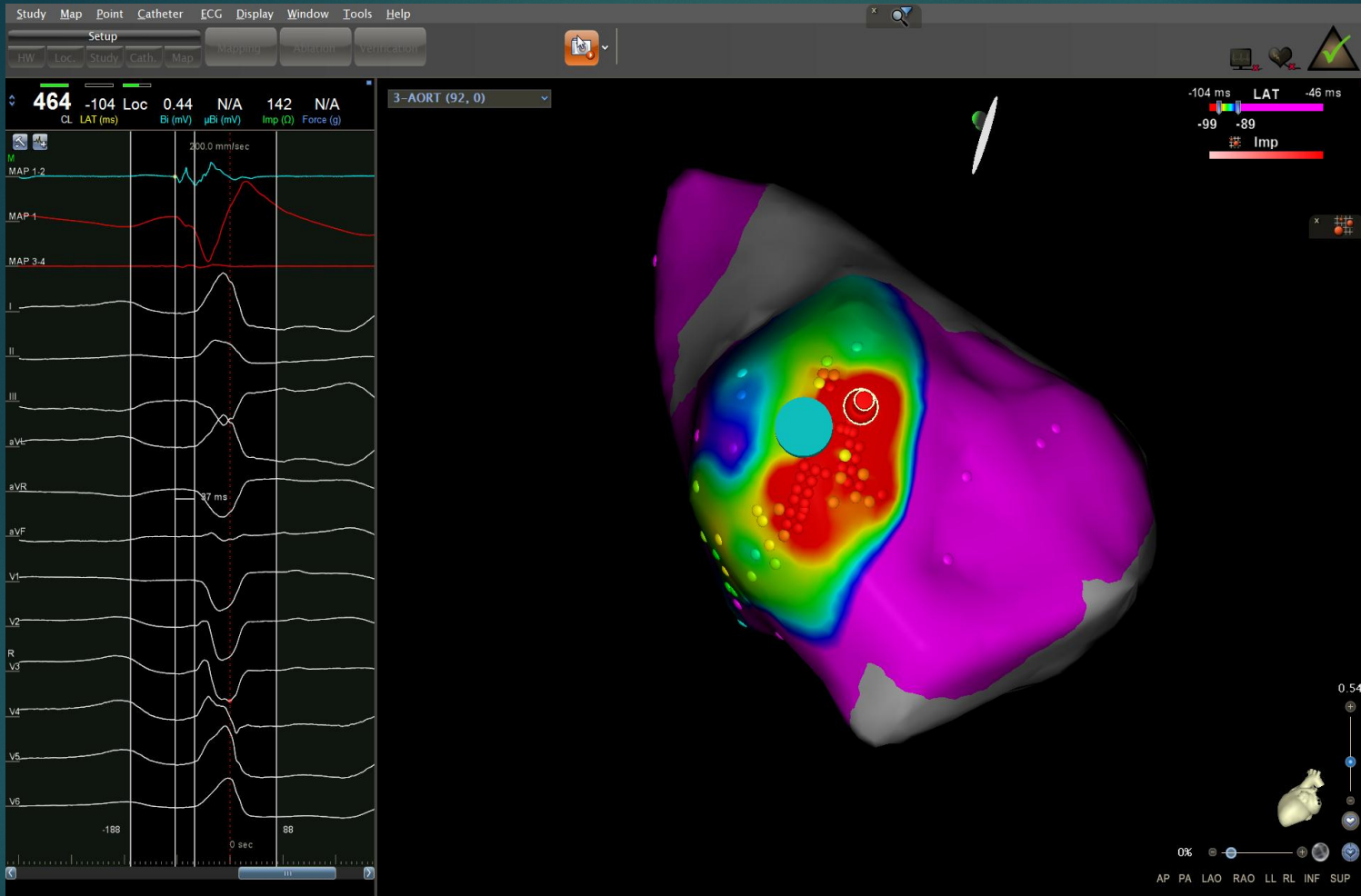


Bu bölgedeki en erken EGM = -35 msn

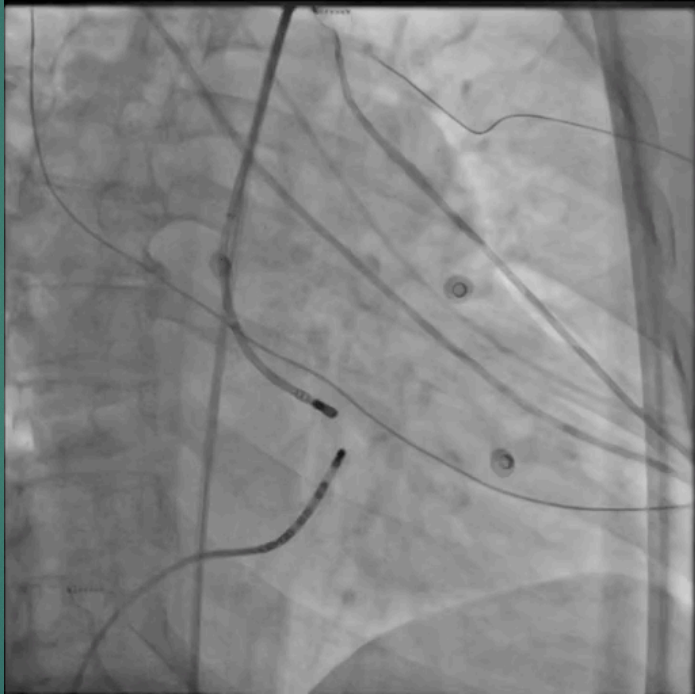
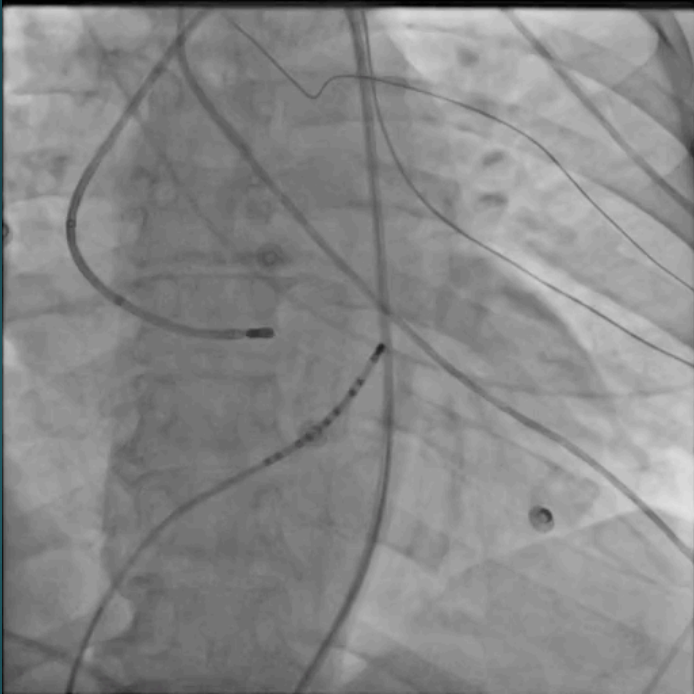
Unipolar kayıt QS paterni

En erken kayıt alınan nokta ile HIS arası mesafe 6,6 mm





Aort kökü haritasında, en erken kayıt sağ koroner kuspta
 EGM to QRS = -27 msn
 Unipolar kayıt QS paterni





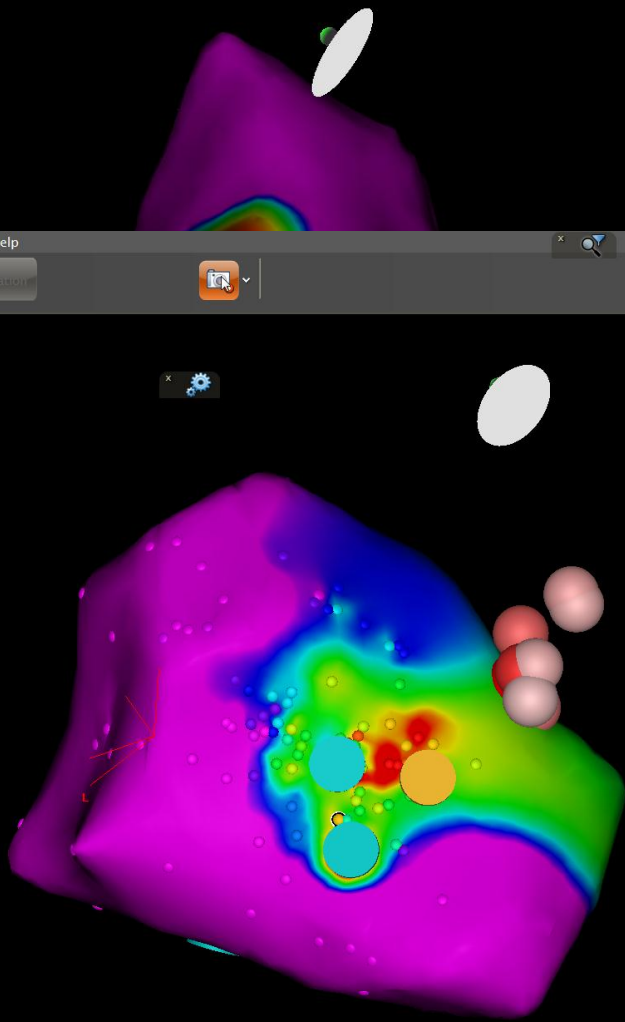
3-AORT (92, 0)



2-VES (125, 0)



13



0.65

0%

AP PA LAO RAO LL RL INF SUP

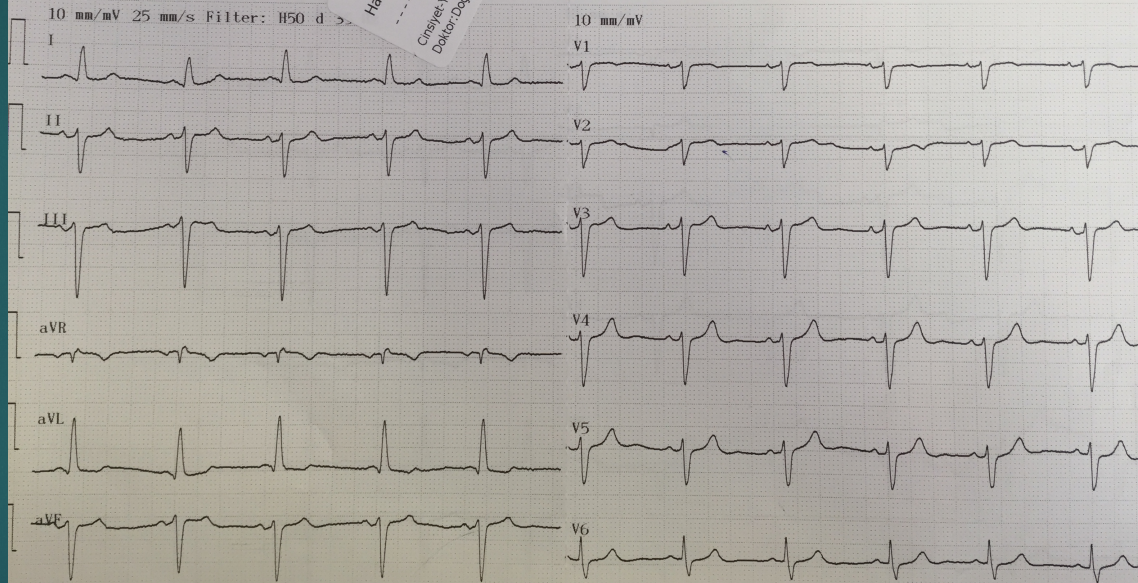
Sex: Male Birth Date: Years
cm kg mmHg
Medication:
Symptoms:
History:

Vent rate 65 bpm
PR int 136 ms
QRS dur 112 ms
QT/QTc int 404/ 416 ms
P/QRS/T axis 43/ -61/ 57 °
RV5/SV1 amp 0.285/ 0.580 mV
RV5+SV1 amp 0.865 mV

Hasta
Cinsiyet: Yast/Kadin -10/09/1982
Doktor: Dog. Dr. Mustafa YILMAZ

1100 Sinus rhythm
2630 Left anterior fascicular block (QR in I, RS in II, -90 deg. < QRS axis < -45 deg.)
5211 Minimal voltage criteria for LVH, may be normal variant (R amp. (aVL) > 1.1 mV)
9150 ** abnormal ECG **

Unconfirmed Report
Reviewed by:



Safety and efficacy of catheter ablation of ventricular arrhythmias with para-Hisian origin via a systematic direct approach from the aortic sinus cusp

- Parahisian VEV olan toplam 21 hasta
- Direkt olarak aortik yaklaşım ile ablasyonun başarısı %81
- Başarılı olan 17 hastanın 13'ü sağ koroner kusptan, 4'ü ise non-koroner kusptan

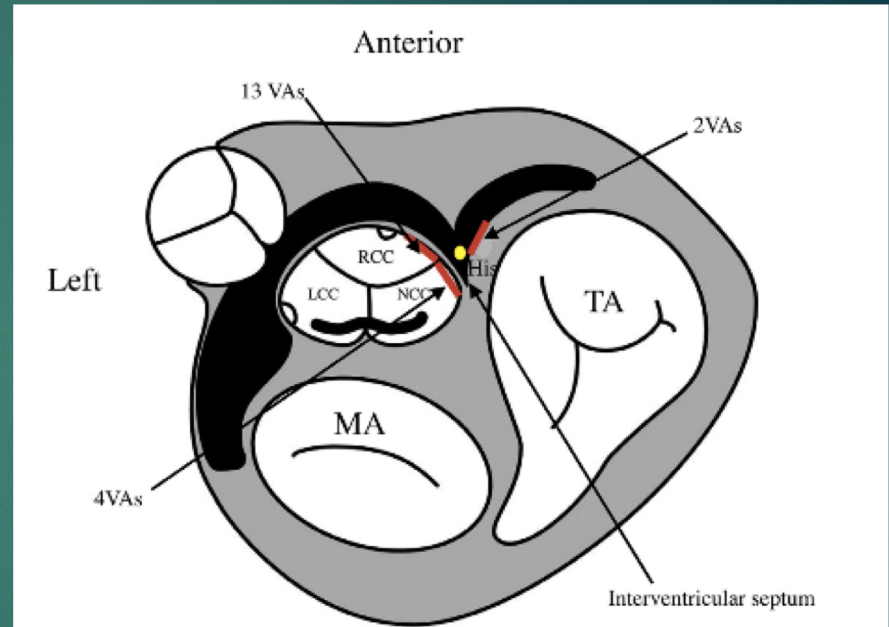
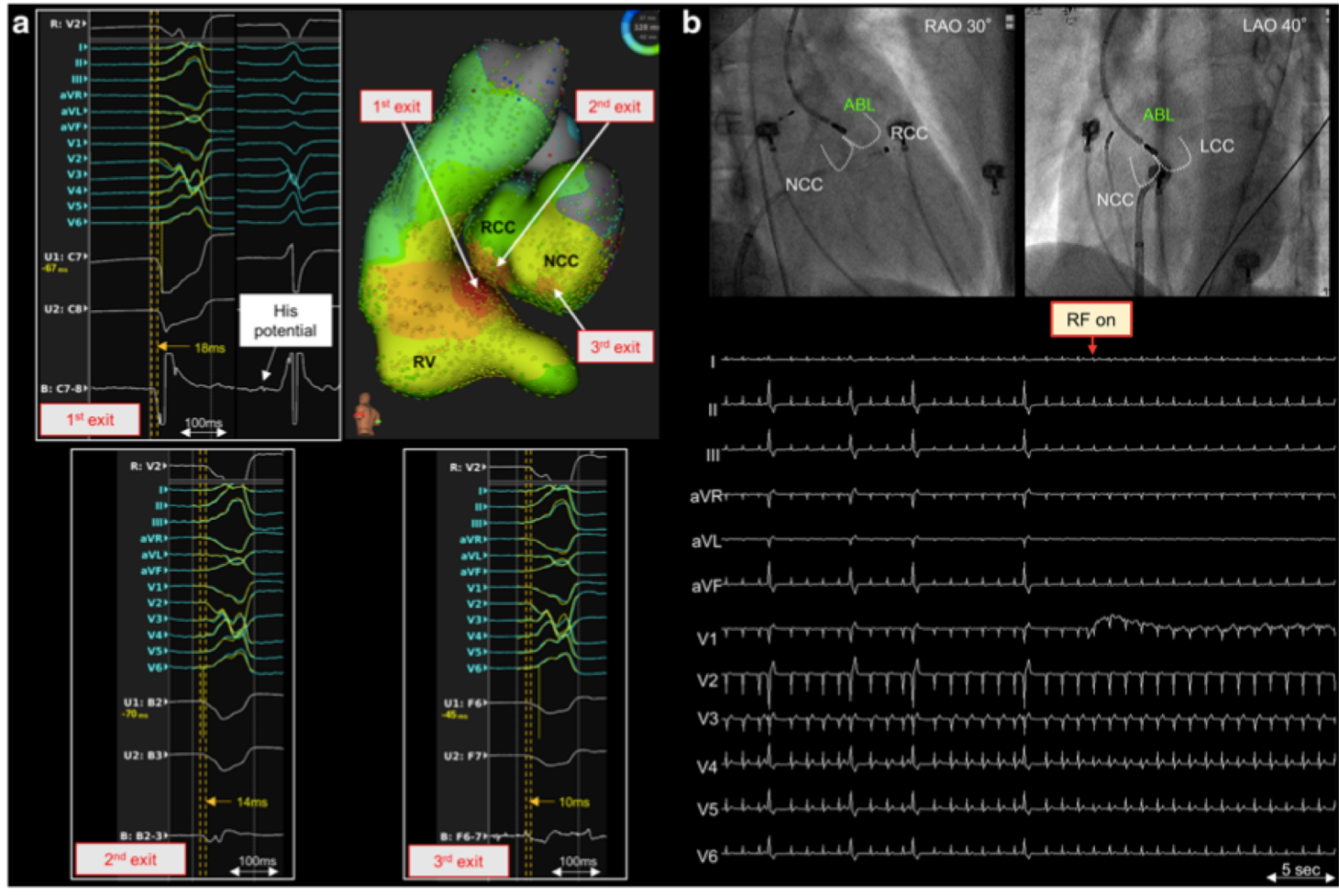


Figure 3 Schematic diagram of the location of successful ablation sites surrounding the His bundle cloud (yellow circle) through either the RCC (n = 13), the NCC (n = 4), or the RV septum (n = 2) in 19 patients. LCC = left coronary cusp; MA = mitral annulus; NCC = noncoronary cusp; RCC = right coronary cusp; RV = right ventricle; TA = tricuspid annulus; VA = ventricular arrhythmia.



J Interv Card Electrophysiol. 2020;57(1):161-162.

Cryoablasyon bizi komplikasyonlardan korur mu?

Safety and Efficacy of Cryoablation in Patients With Ventricular Arrhythmias Originating From the Para-Hisian Region

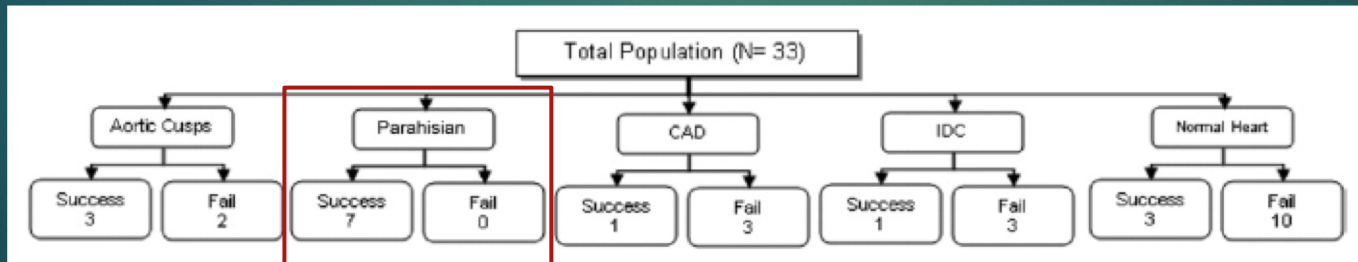
- Parahisian VEV/VT ablasyonu yapılan 10 hasta
- 8 hastada daha önce RF ile başarısız ablasyon öyküsü
- Akut başarı %70
- 1 hastada cryoablasyon ile AV blok (%10)
- Uzun dönem takipte rekürrens %50


JACC Clin Electrophysiol. 2018;4(3):366-373.

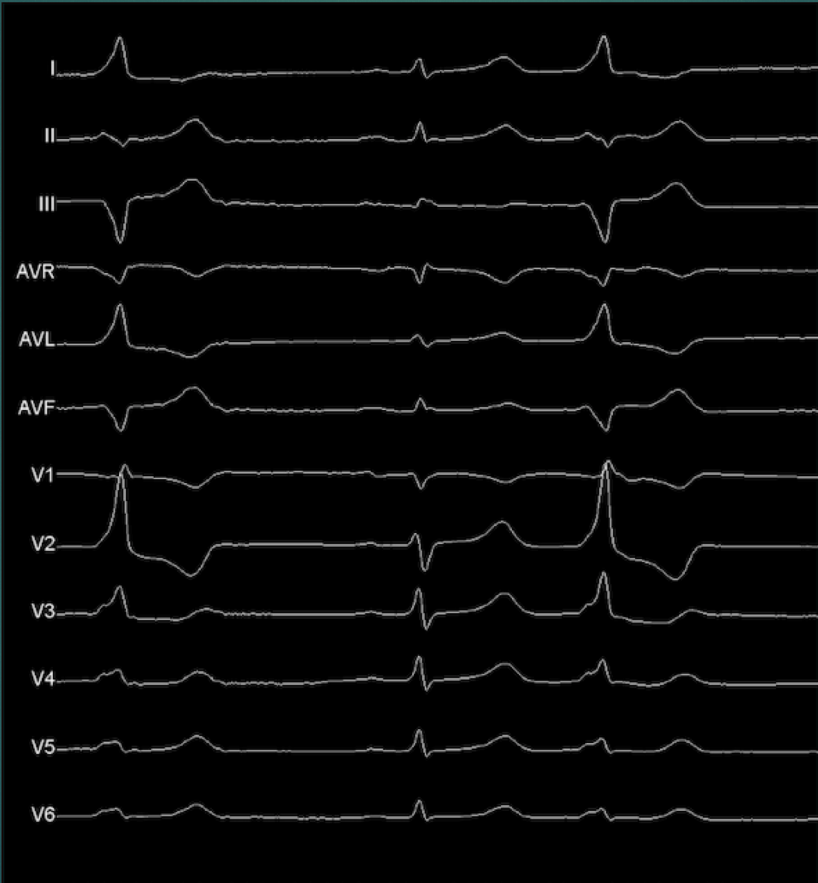
Safety and outcomes of cryoablation for ventricular tachyarrhythmias: Results from a multicenter experience

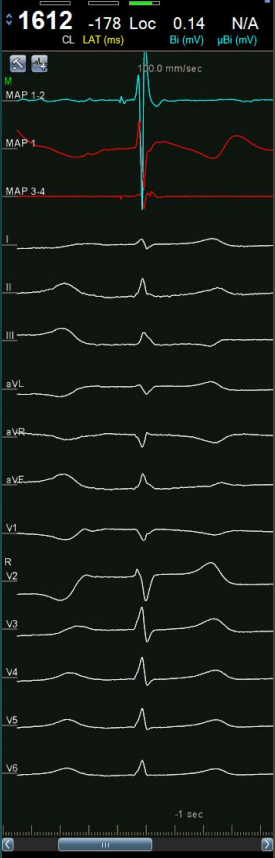
Ventriküler aritmiler için ablasyon yapılan 33 hasta (15 endokardiyal, 13 epikardiyal ve 5 aortik kusp)

Ablasyon başarısı %45,

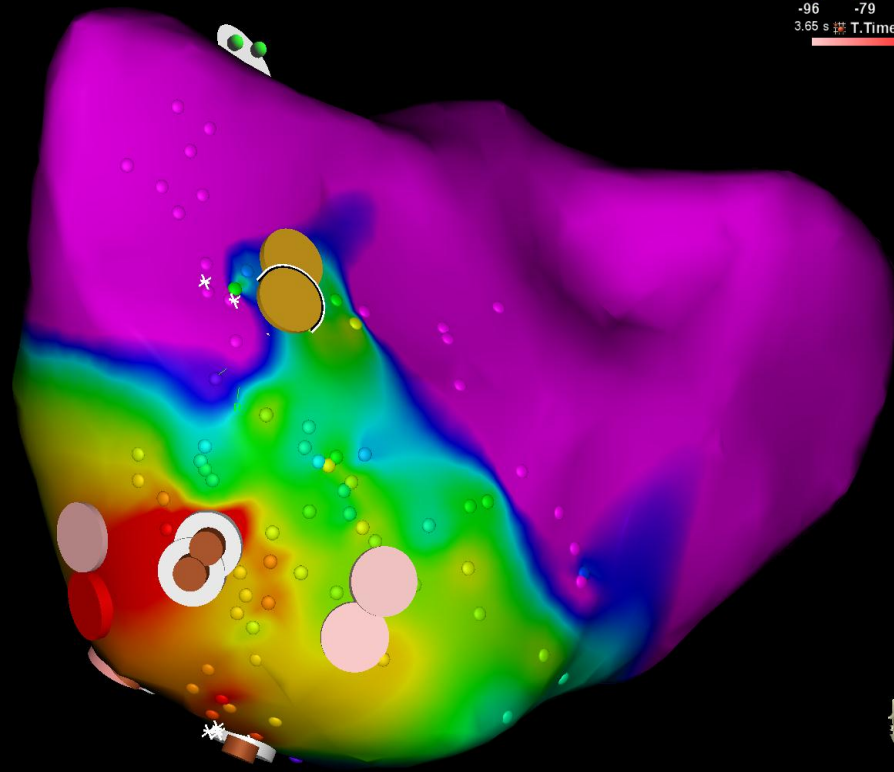


- 
- ▶ 69 yaş kadın hasta
 - ▶ Asemptomatik, kontrol sırasında kalp aritmik saptanmış
 - ▶ Holterde 47530 ventriküler erken vuru (%50)
 - ▶ EKO'da EF %42, sol kalp hafif dilate





1-Map (144, 0)
Correlations: Unmatched Matched



-101 ms LAT -41 ms
-96 -79
3.65 s T.Time 48.85 s

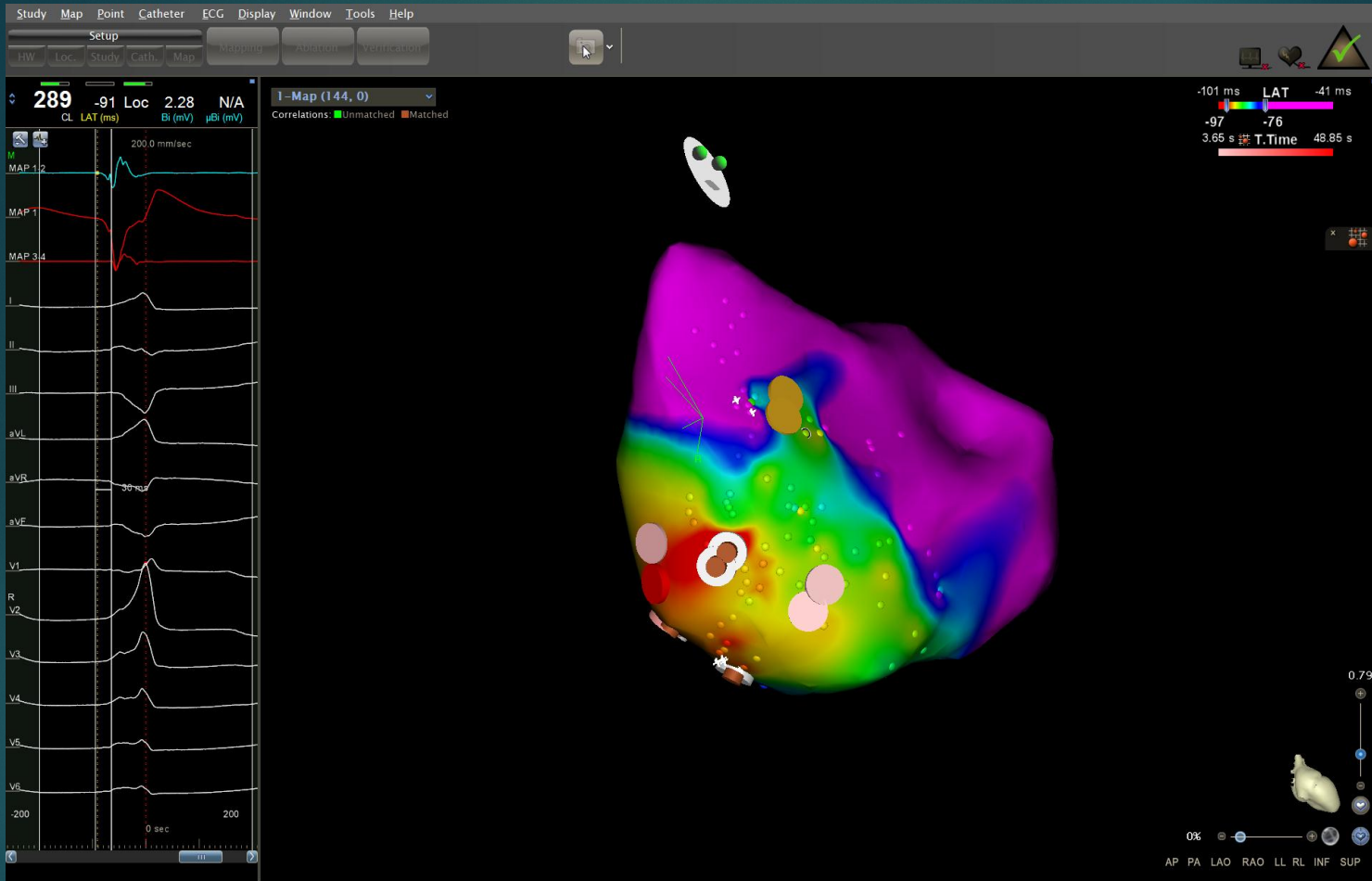
Preset

- 1-Map
- 2-Map
- 3-Map
- 4-Map
- 5-Map
- 6-Map
- 7-Map
- 8-Map
- 9-Map
- 10-Map

1-Map

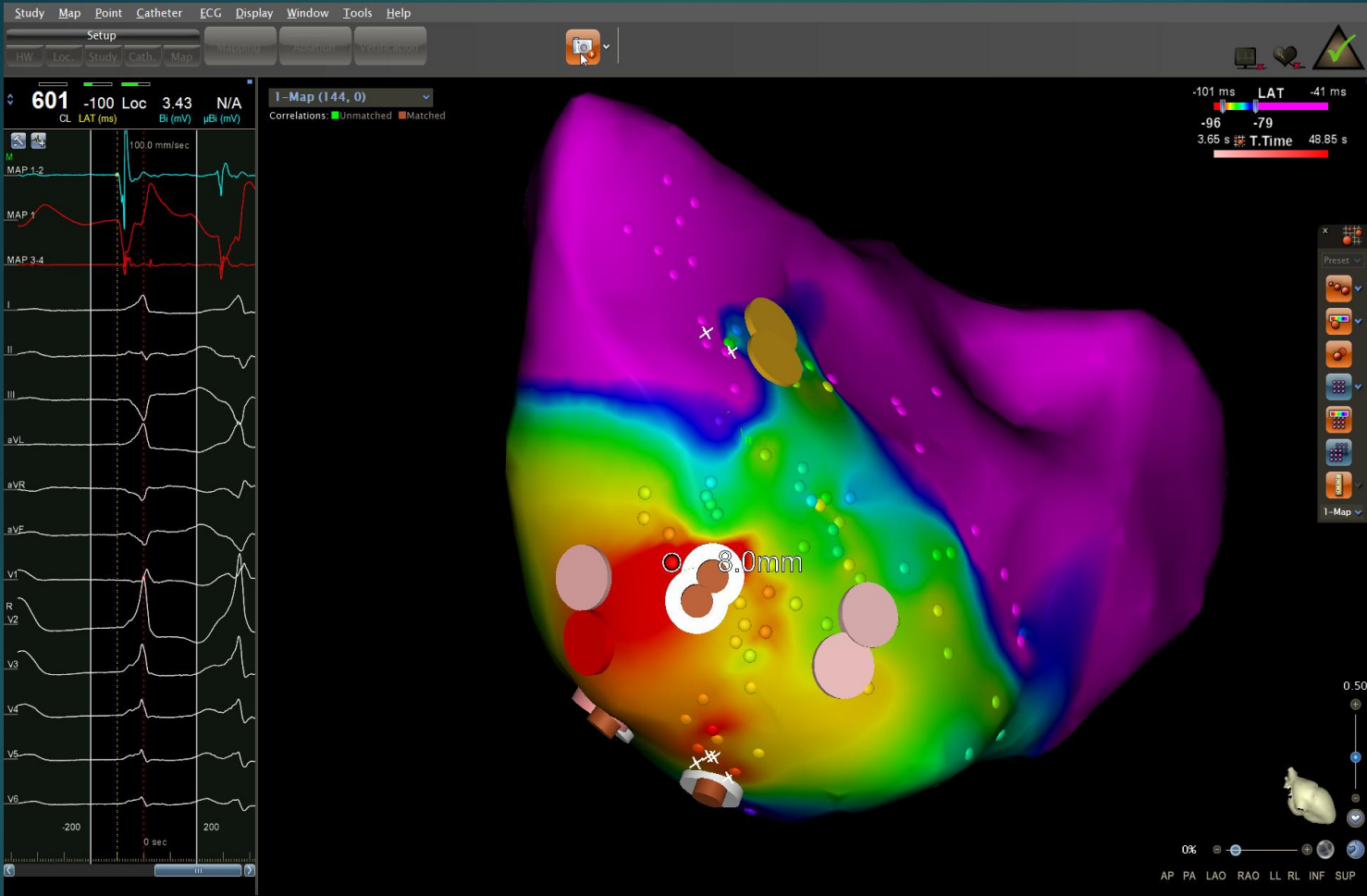
0% 0.50

AP PA LAO RAO LL RL INF SUP



En erken noktada EGM = -36 msn

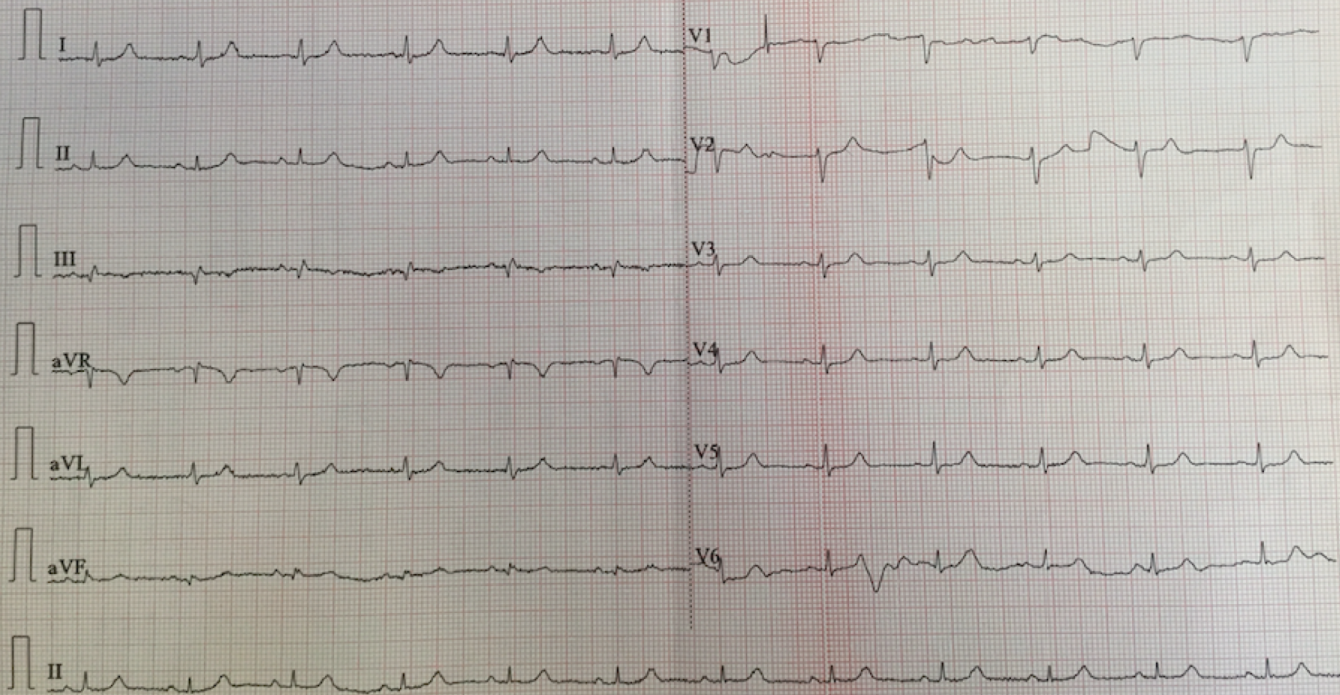
Unipolar kayıt QS paterni



Başarılı ablasyon noktası ile HIS kaydı arası mesafe 8 mm

95

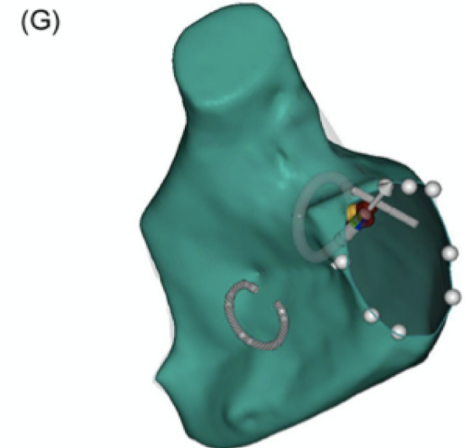
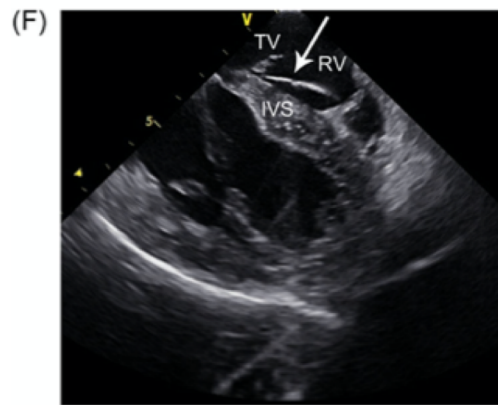
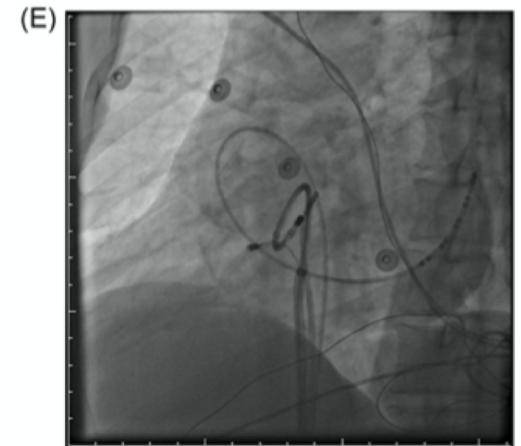
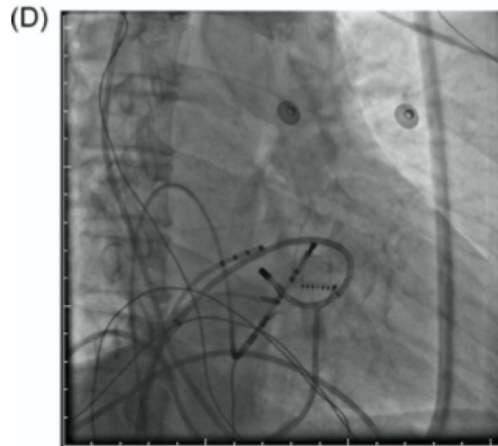
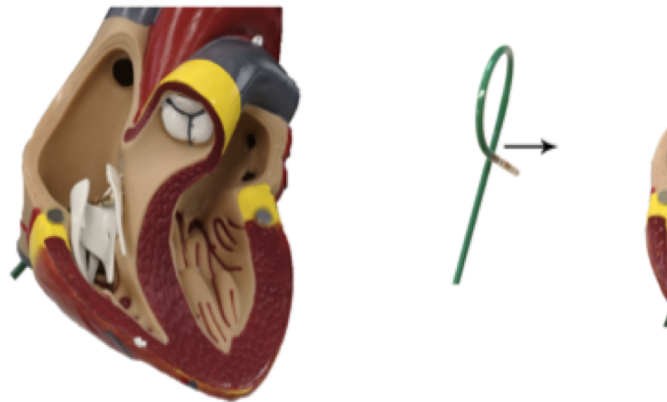
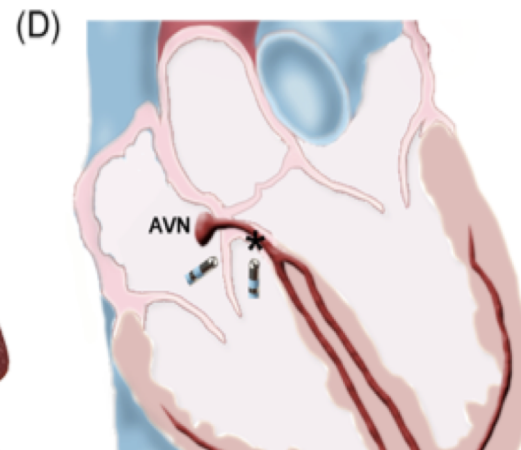
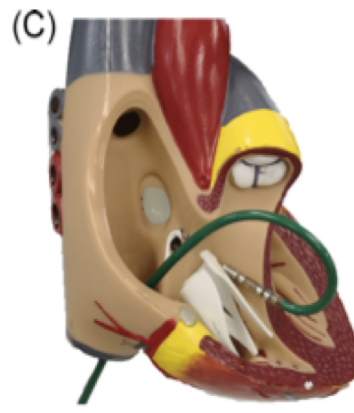
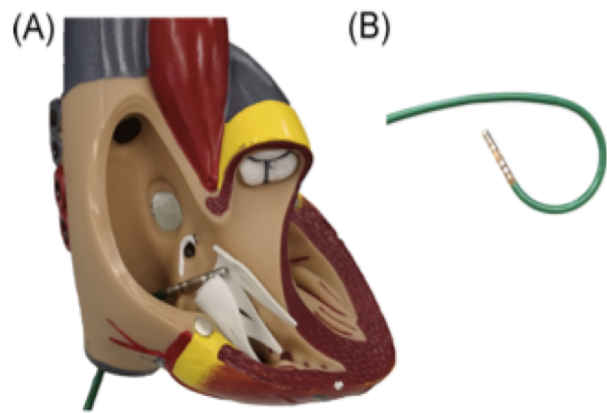
Doğrulanmamış Rapor



Alternatif yaklaşım teknikleri

Catheter ablation of ventricular arrhythmias originating from the para-Hisian region with reversed C-curve technique

- Parahisian VEV olan 25 hasta
- Triküspit kapak altında ters C curve tekniği ile RF ablasyon
- 22 hastada (%88) başarı sağlanmış
- AV blok gelişen hasta yok



J Cardiovasc Electrophysiol
. 2019;30(11):2377-2386.

Parahisian atriyal taşikardiler

- ▶ Tanım olarak HIS kaydı alınan bölgenin 10 mm çevresini kapsar
- ▶ Tüm supraventriküler taşikardilerin %2,3
- ▶ Fokal atriyal taşikardilerin %23-30'unu oluşturur

JACC Clin Electrophysiol. 2016;2(2):193-199.
Am J Cardiol. 2016;118(12):1847-1854.

Comparison of strategies for catheter ablation of focal atrial tachycardia originating near the His bundle region

- RA'dan ablasyon yapılan 28 hastada başarı oranı %46,4 (13 hasta)
- LA'dan ablasyon yapılan 16 hastada başarı oranı %25 (4 hasta)
- NCC'den ablasyon yapılan 52 hastada başarı oranı %88,5 (46 hasta)
- RA'dan ablasyonda AV blok riski %14,3
- Rekürrens RA'da %38,5, LA'da %25, NCC'de %4,4

Efficacy and Safety of Catheter Ablation of Atrial Tachycardia Through a Direct Approach from Noncoronary Sinus of Valsalva

- Parahisian fokal atriyal taşikardi saptanan 23 hasta
- Direkt olarak non-koroner kusptan RF ile ablasyon
- Başarı oranı %95 (23 hasta)
- Komplikasyon görülmemiş

Am J Cardiol. 2016;118(12):1847-1854.

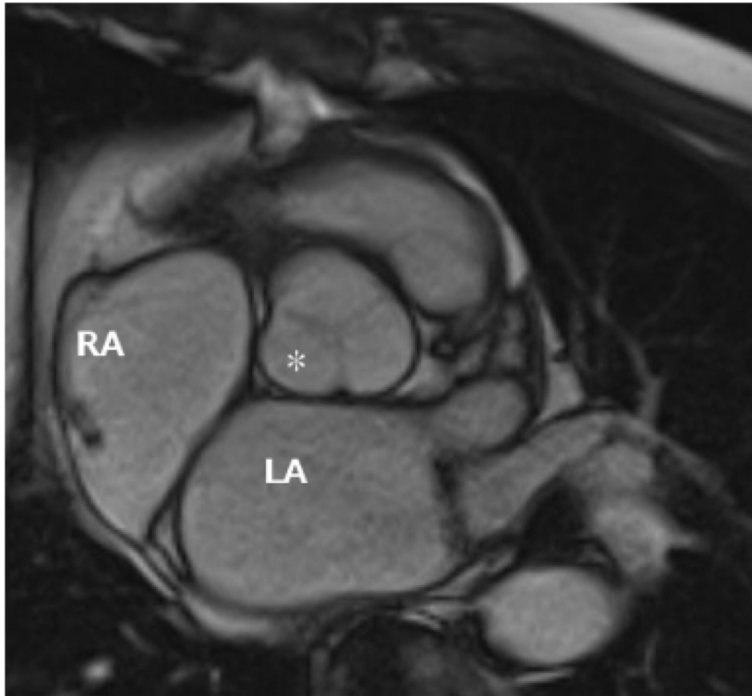


Figure 7. Cross-sectional magnetic resonance image (short-axis view) at the level of the cardiac base showing the topographic relation of the aortic sinuses of Valsalva to the surrounding cardiac structures in a control subject. The *asterisk* denotes the NCAC.

Am J Cardiol. 2016;118(12):1847-1854.

