

Extrassistolia Supraventricular e Ventricular

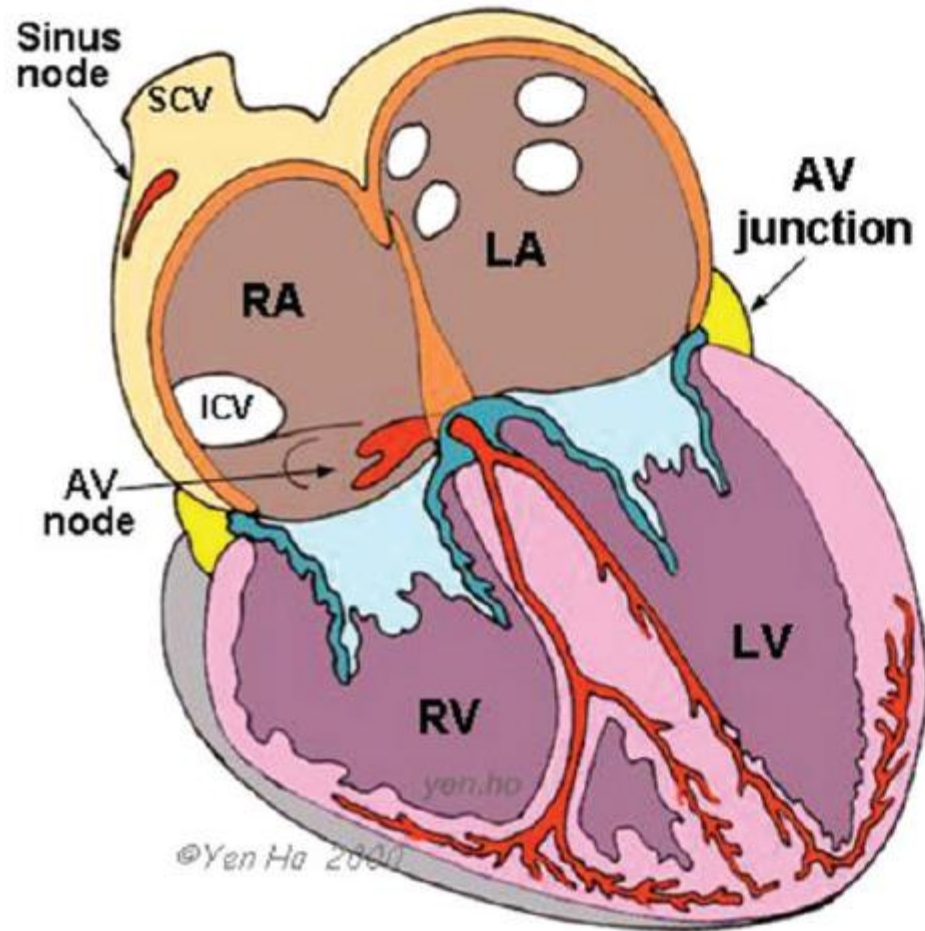
Ignorar, vigiar, tratar e/ou referenciar?

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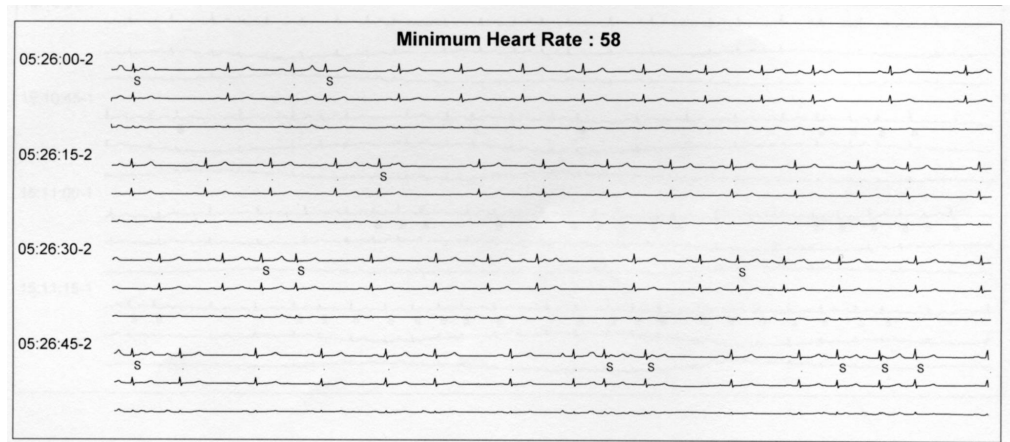
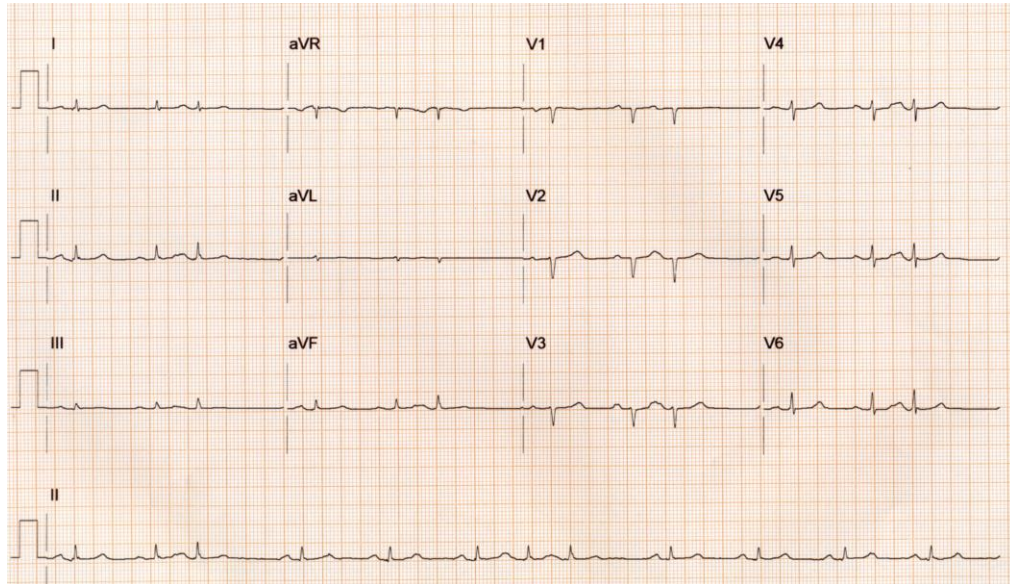
Ignorar, vigiar, tratar e/ou referenciar?



1- Extrassístolia supraventricular

2- Extrassístolia Ventricular

1- Extrassistolia supraventricular



- Uma das arritmias mais frequentes na prática clínica
- Prevalência maior com a idade
- Apresentação clínica variável (assintomáticos, palpitações, cansaço...)

Twenty-Four Hour Continuous ECG Recordings in Long-Distance Runners*

David A. Talan, B.S.; Robert A. Bauernfeind, M.D.;
William W. Ashley, M.D.; Charles Kanakis, Jr., M.D.; and
Kenneth M. Rosen, M.D., F.C.C.P.†

Table 2—Arrhythmias Observed in 20 Long-Distance Runners vs 50 Untrained Subjects

	Long-Distance Runners		Untrained Subjects		P Value
	No.	% of Total	No.	% of Total	
Sinus nodal function					
Sinus tachycardia	17	85	50	100	<.05
Sinus bradycardia	20	100	50	100	NS
Marked sinus bradycardia	17	85	12	24	<.01
Moderate sinus arrhythmia	20	100	43	86	NS
Marked sinus arrhythmia	7	35	25	50	NS
Atrial arrhythmias					
APBs	20	100	28	56	<.01
>100 APBs in 24 hours	1	5	1	2	NS
Blocked APBs	2	10	2	4	NS
Atrial couplets	5	25	0	0	<.01
Ectopic atrial tachycardia	2	10	1	2	NS
Ventricular arrhythmias					
VPBs	14	70	25	50	NS
>50 VPBs in 24 hours	2	10	1	2	NS
Multifocal VPBs	4	20	6	12	NS
R on T phenomenon (VPBs)	0	0	3	6	NS
Ventricular couplets	0	0	1	2	NS
Ventricular tachycardia	0	0	1	2	NS
Atrioventricular block					
First-degree	9	45	4	8	<.01
Second-degree, type 1	8	40	3	6	<.01

Bethesda Conference #36 and the European Society of Cardiology Consensus Recommendations Revisited

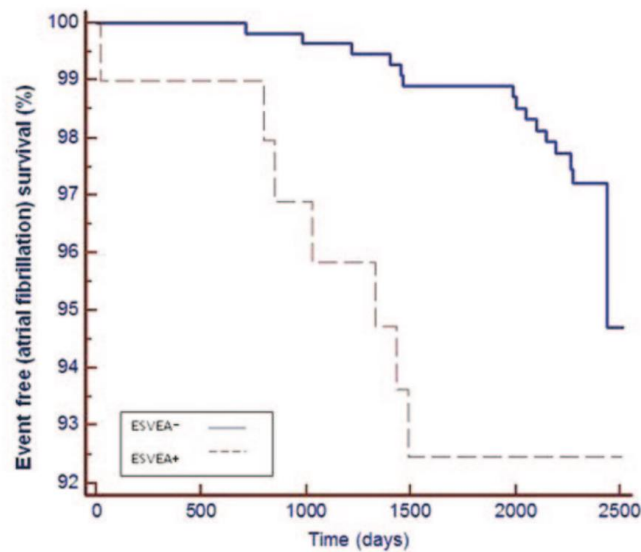
Recomendações para atletas

- **“Premature atrial complexes- In the absence of evidence of structural heart disease and in the absence of symptoms other than occasional palpitation, no evaluation other than a 12 lead ECG is necessary”**

Atrial Ectopic Beats and Risk of Death or Stroke

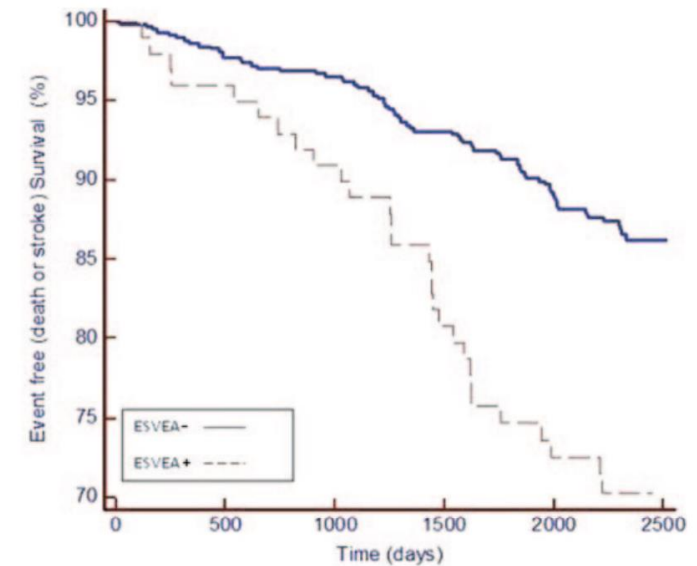
Copenhagen Holter Study - 678 healthy men between 55 and 75 years
 <30 Vs > 30 supraventricular ectopic complexes per hour

Risk of AF



Number at risk: ESVEA-	579	568	560	538	500	4
ESVEA+	99	96	92	79	70	0

Risk of Stroke + Death



Number at risk: ESVEA-	579	566	559	539	500	3
ESVEA+	99	95	90	80	66	0

- 15% of pts without heart disease had >30PAC /h
- 6, 5 Years fup – increased incidence of AF (HR2,78), stroke/death (HR 1,65).

Excessive Atrial Ectopy and Short Atrial Runs Increase the Risk of Stroke Beyond Incident Atrial Fibrillation

15-year follow-up of the Copenhagen Holter Study

678 healthy men between 55 and 75 years | <30 Vs > 30 supraventricular ectopic complexes per hour

FIGURE 1 Incidence of Stroke per 1,000 Patient-Years According to ESVEA and CHA₂DS₂-VASc score

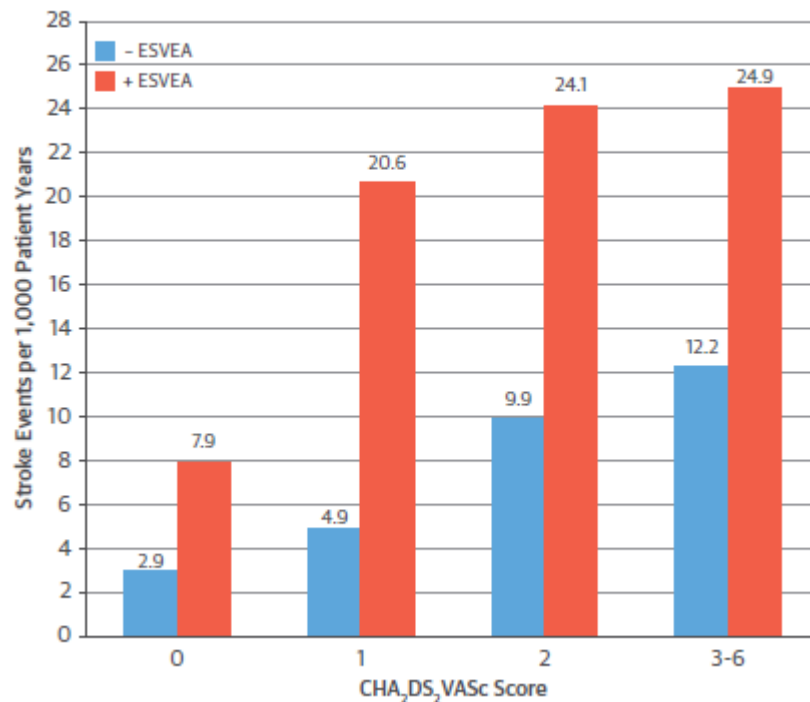
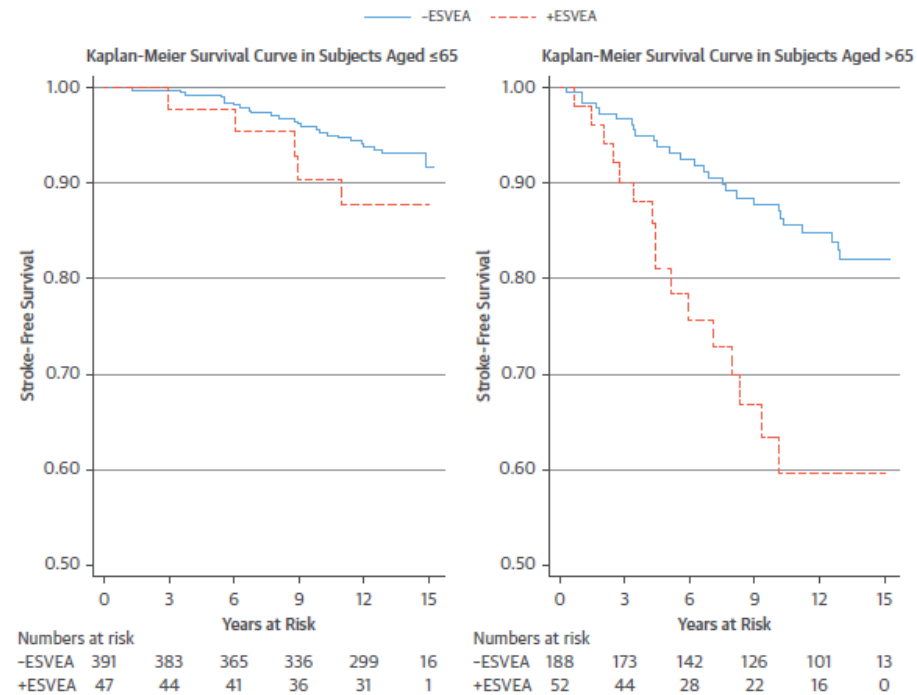


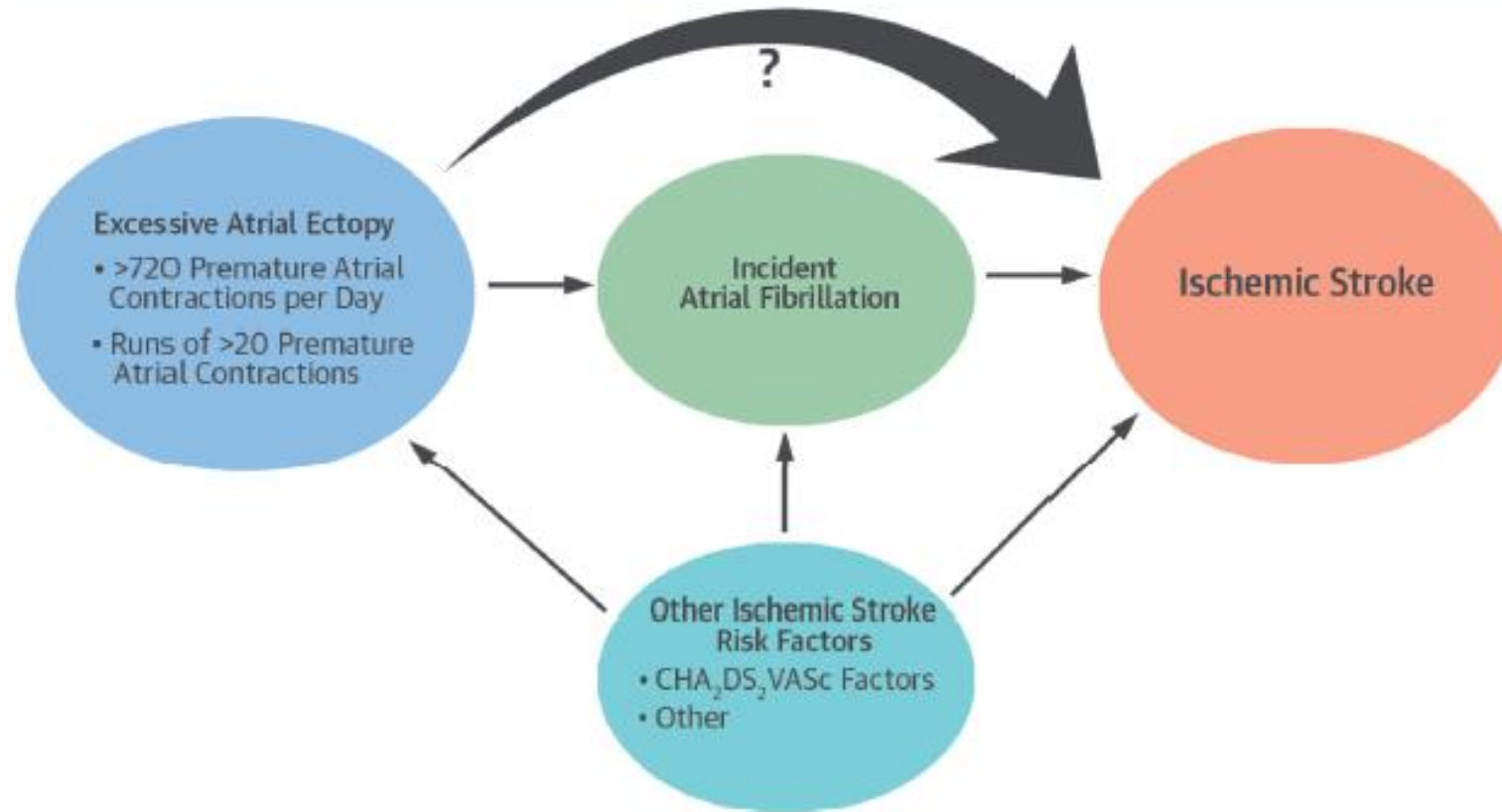
FIGURE 2 Kaplan-Meier Survival Estimate of Stroke-Free Survival Stratified on Age-Groups and ESVEA



(15%) demonstrated ESVEA - associated with an increased risk of ischemic stroke beyond manifest AF

Excessive Atrial Ectopy and Short Atrial Runs Increase the Risk of Stroke Beyond Incident Atrial Fibrillation

CENTRAL ILLUSTRATION Excessive Atrial Ectopy and Other Risk Factors in Relation to Ischemic Stroke



Larsen, B.S. et al. J Am Coll Cardiol. 2015; 66(3):232-41.

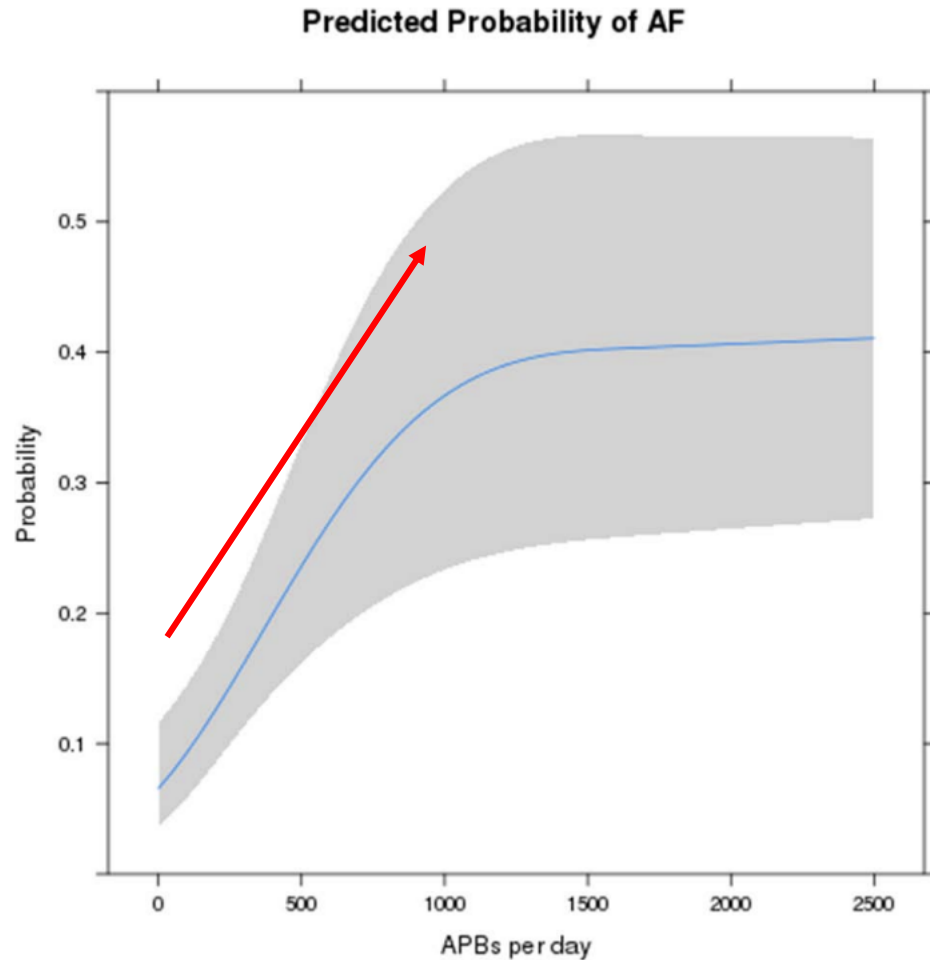
Prognostic Significance of Premature Atrial Complexes Burden in Prediction of Long-Term Outcome

Table 1. Baseline Characteristics of All Patients

	All n=5371	PAC \leq 76/day n=3299	PAC >76/day n=2072	P Value
Baseline characteristics				
Age, mean \pm SD	61.76 \pm 18.57	56.55 \pm 18.29	70.06 \pm 15.79	<0.001
Men	3222 (60.0)	1765 (53.5)	1457 (70.3)	<0.001
Cirrhosis	28 (0.5)	18 (0.5)	10 (0.5)	0.755
Prior MI	31 (0.6)	13 (0.4)	18 (0.9)	0.025
Valvular heart disease	103 (1.9)	68 (2.1)	35 (1.7)	0.359
Cardiovascular risk factor				
Diabetes mellitus	530 (20.2)	299 (9.1)	231 (11.1)	0.013
Hypertension	1911 (35.6)	989 (30.0)	922 (44.5)	<0.001
Hypercholesterolemia	687 (12.8)	467 (9.4)	220 (10.5)	0.298
Heart failure	253 (4.7)	127 (3.8)	126 (6.1)	<0.001
LVEF	44.59 \pm 13.06	43.71 \pm 13.40	45.49 \pm 12.70	0.118
NYHA I	135 (53.4)	67 (52.8)	68 (54.0)	0.847
NYHA II	59 (23.3)	28 (22.0)	31 (24.6)	0.631
NYHA III	57 (22.5)	30 (23.6)	27 (21.4)	0.676
NYHA IV	2 (0.8)	2 (1.6)	0 (0.0)	0.157
Coronary artery disease	1580 (29.4)	875 (26.5)	705 (34.0)	<0.001
CKD	57 (1.1)	30 (0.9)	27 (1.3)	0.174
Congenital heart disease	6 (1.1)	5 (0.2)	1 (0.0)	0.270
Medication	621 (11.6)	348 (10.5)	273 (13.2)	0.003
Anti-arrhythmia*	28 (0.5)	13 (0.4)	15 (0.7)	0.102
Anti-hypertension†	1050 (19.5)	526 (16.0)	524 (25.2)	<0.001
PAC, mean \pm SD	252 \pm 565	19 \pm 20	643 \pm 780	<0.001
Follow-up, days	3334 \pm 221	3332 \pm 221	3338 \pm 221	0.377

Conclusions—The burden of PACs is independently associated with mortality, cardiovascular hospitalization, new-onset AF, and PPM implantation in the long term. (*J Am Heart Assoc.* 2015;4:e002192 doi: 10.1161/JAHA.115.002192)

Atrial Premature Beats Predict Atrial Fibrillation in Cryptogenic Stroke Results From the EMBRACE Trial



The probability of AF during follow up:

- less than 9% among patients with PACs burden <100/24 h
- over 40% in those with a PAC burden of >1500/24 h).

EHRA POSITION PAPER

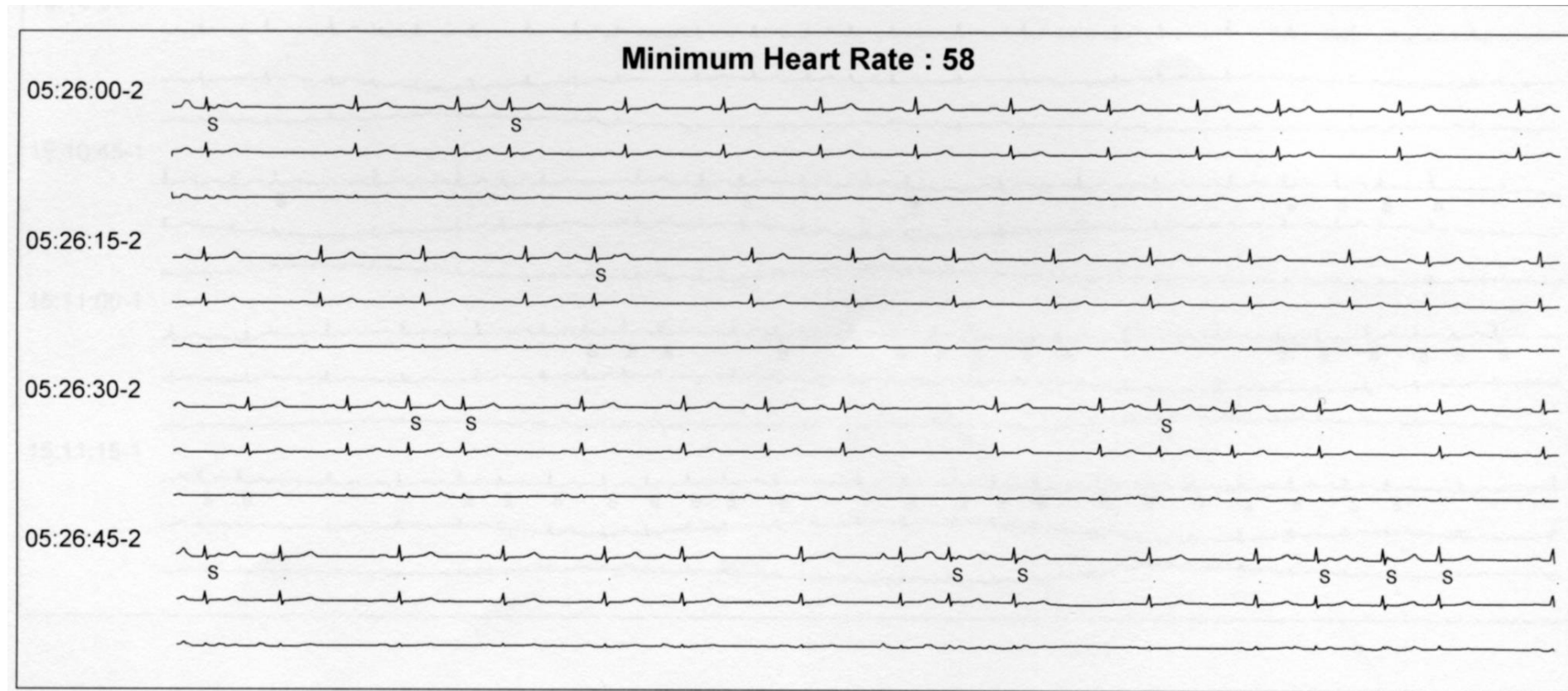
Management of asymptomatic arrhythmias

- *Patients with a high PAC burden (>500/24h) on Holter monitor should be considered at increased risk for developing of AF and be educated on the symptoms of AF. They should undergo further evaluation for possible AF including more detailed or prolonged rhythm monitoring*
- *Comprehensive cardiovascular risk factor modification is recommended for patients with a high PAC burden including careful control of hypertension, weight loss, and screening for sleep apnoea. In addition, evaluation for structural heart disease should be considered in selected cases.*
- *Low to moderate PAC burden without documented AF is not an indication for oral anticoagulation*



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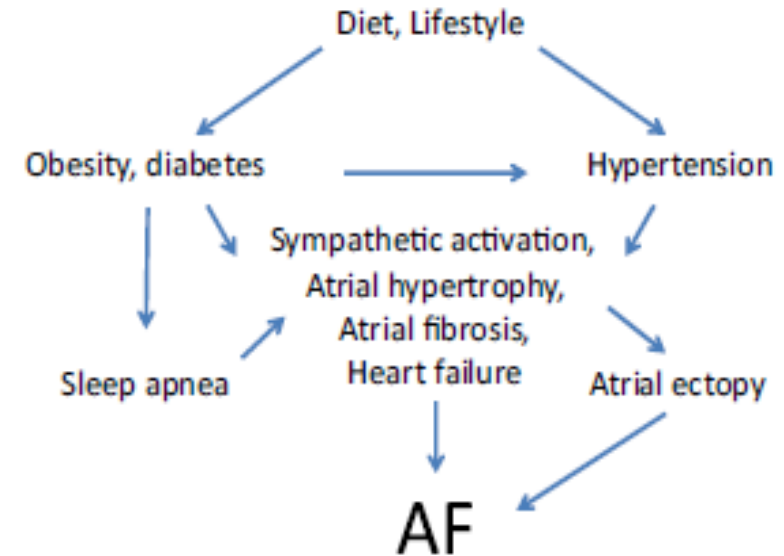
1- Extrassistolia supraventricular



Ignorar? Não...

Condições clínicas importantes na avaliação de um doente com extrassistolia supraventricular

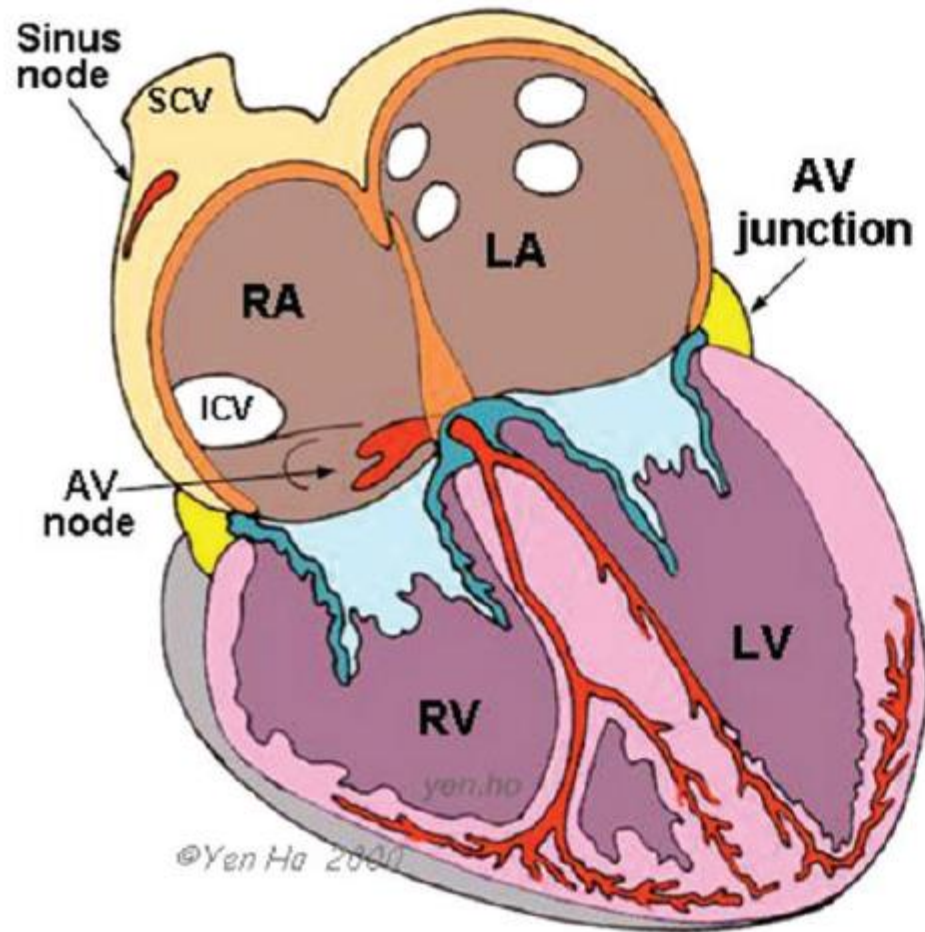
- Cardiopatia estrutural
- Doença Coronária
- HTA / Diabetes
- Obesidade
- Apneia de Sono
- Disfunção tiroideia
- Alcoolismo / drogas
- Desporto excessivo



Vigiar, tratar e referenciar?

- **Tratar comorbilidades / Doença subjacente**
- **Tratamento maioritariamente sintomático:**
 - **Fármacos - Efeitos secundários/adversos – risco/benefício**
 - **Pouca evidência para o benefício clínico de tratamento antiarrítmico em doentes assintomáticos**
- **Maior risco de fibrilhação auricular se carga arrítmica elevada**
 - **Vigilância apertada em doentes com antecedentes de AVC ou CHADSVASC elevado (especialmente >65 anos)**
 - **Se Fibrilhação auricular documentada – tratar!**
 - ACO se CHADSVASC >0
 - Considerar controlo de ritmo – fármacos vs ablação
- **Referenciar – sempre que necessário na partilha de decisão, manejo de terapêuticas específicas ou doenças associadas**

Ignorar, vigiar, tratar e/ou referenciar?



1- Extrassístolia supraventricular

2- Extrassístolia Ventricular



LONG-TERM FOLLOW-UP OF ASYMPTOMATIC HEALTHY SUBJECTS WITH FREQUENT AND COMPLEX VENTRICULAR ECTOPY

HAROLD L. KENNEDY, M.D., M.P.H., JAMES A. WHITLOCK, B.S., MICHAEL K. SPRAGUE, LISA J. KENNEDY, THOMAS A. BUCKINGHAM, M.D., AND ROBERT J. GOLDBERG, PH.D.

EV em 1 a 4% dos indivíduos saudáveis ; Bom Prognóstico

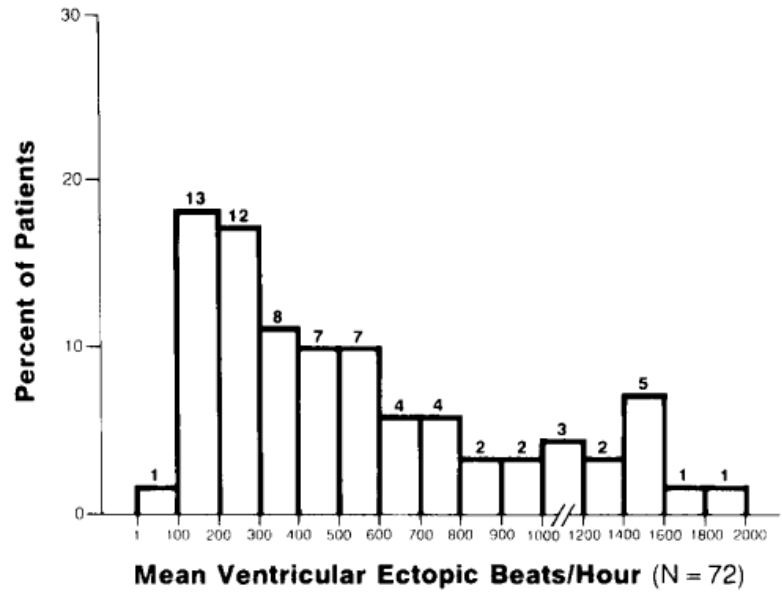
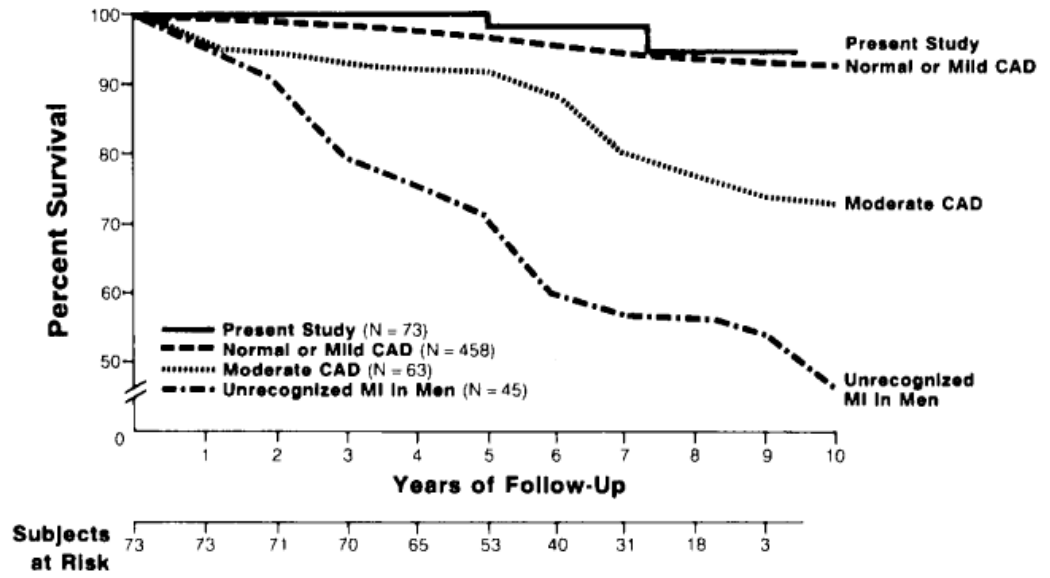


Figure 1. Distribution of Frequencies of Mean Ventricular Ectopic Beats in 72 Subjects.



Long-Term Clinical Significance of Frequent and Complex Ventricular Tachyarrhythmias in Trained Athletes

Alessandro Biffi, MD,* Antonio Pelliccia, MD,* Luisa Verdile, MD,* Fredrick Fernando, MD,* Antonio Spataro, MD,* Stefano Caselli, MD,* Massimo Santini, MD,† Barry J. Maron, MD, FACC‡

355 atletas profissionais ; Fup com HOLTER ; 1 morte em dte com DAVD (grupo A)

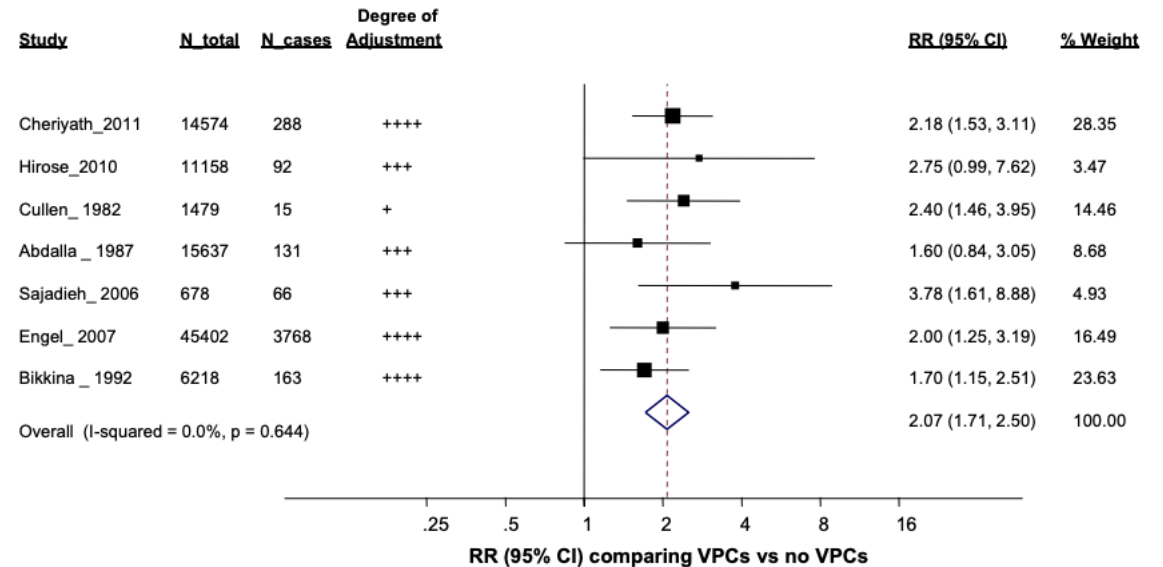
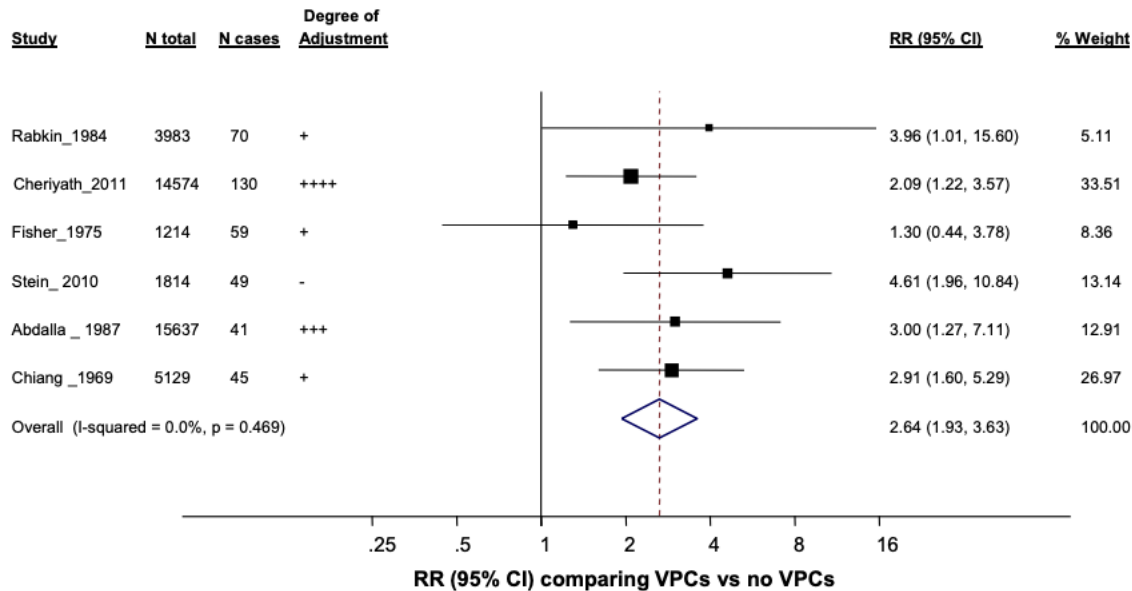
Table 1. Demographic and Clinical Data in 355 Competitive Athletes With Ventricular Tachyarrhythmias

	Group A (≥2,000 PVDs and ≥1 NSVT)	Group B* (≥100 to <2,000 PVDs)	Group C* (<100 PVDs)	p Value
No. athletes	71	153	131	
Age	24 ± 10	24 ± 10	25 ± 11	NS
Male:Female	51:20	120:33	102:29	NS
Palpitations†	8 (11%)	10 (6%)	0	0.0013
12-lead ECG abnormalities‡	15 (21%)	5 (3%)	2 (1.5%)	< 0.001¶
Echo abnormalities§	21 (30%)	8 (5%)	0	< 0.001¶

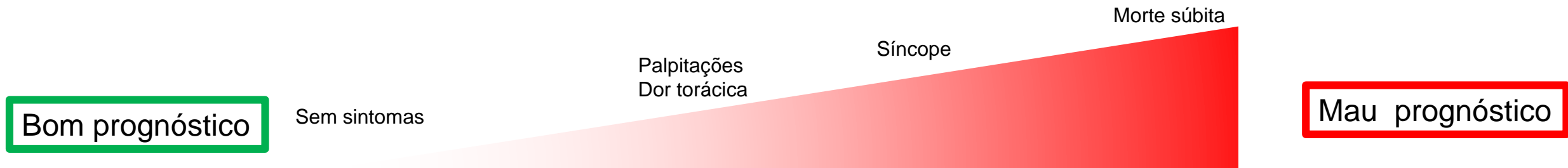
CONCLUSIONS Frequent and complex ventricular tachyarrhythmias are common in trained athletes and are usually unassociated with underlying cardiovascular abnormalities. Such VAs (when unassociated with cardiovascular abnormalities) do not convey adverse clinical significance, appear to be an expression of “athlete’s heart syndrome,” and probably do not per se justify a disqualification from competitive sports. (J Am Coll Cardiol 2002;40:446–52) © 2002 by the American College of Cardiology Foundation

Meta-Analysis of Ventricular Premature Complexes and Their Relation to Cardiac Mortality in General Populations

frequent PVCs are associated with a substantial increase in the risk for sudden cardiac death and total cardiac death



Como estratificar o risco ?

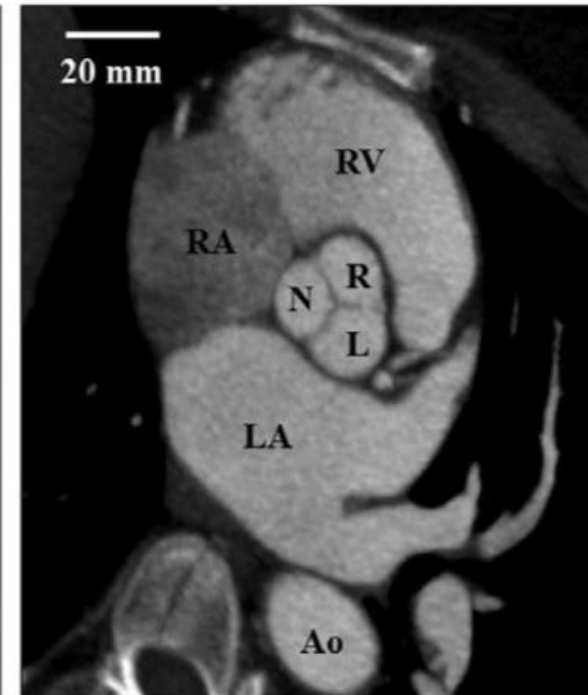
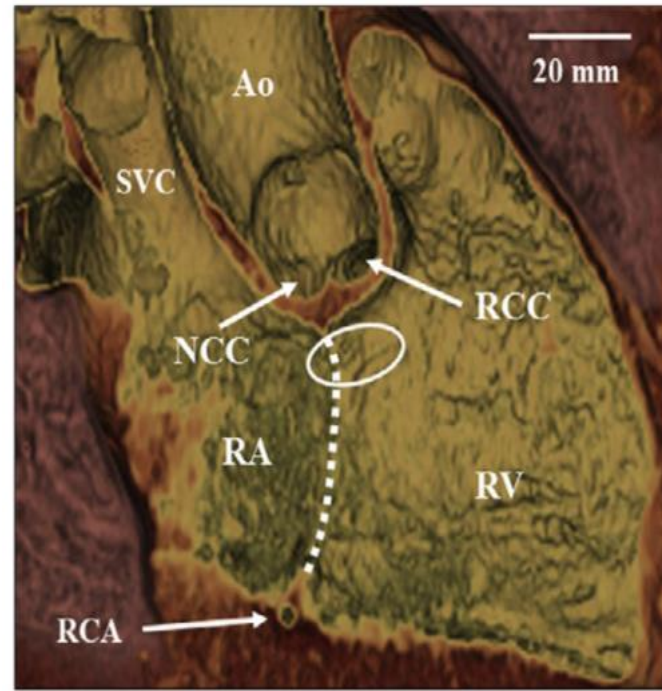
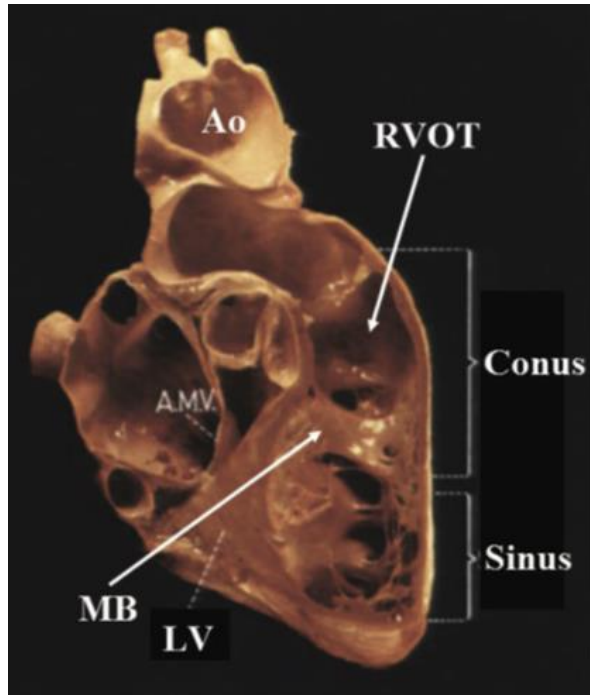


Factores de pior prognóstico em doentes com extrassistolia ventricular

- **Número:** Mais de 2000 EV/24h (risco de taquimiopatia se carga >15% de EV?)
- **Morfologia:**
 - EV complexa (couplets, triplets, TVNM)
 - **Morfologia "não idiopática" (camara de saída) ou mais do que uma morfologia**
- **Incremento de Extrassistolia com o exercício**
- *Intervalo de acoplamento curto ('R-on-T')*
- *EV com QRS muito alargado (mais frequentemente relacionadas com cardiopatia)*
- **Presença de cardiopatia isquémica, estrutural ou elétrica**

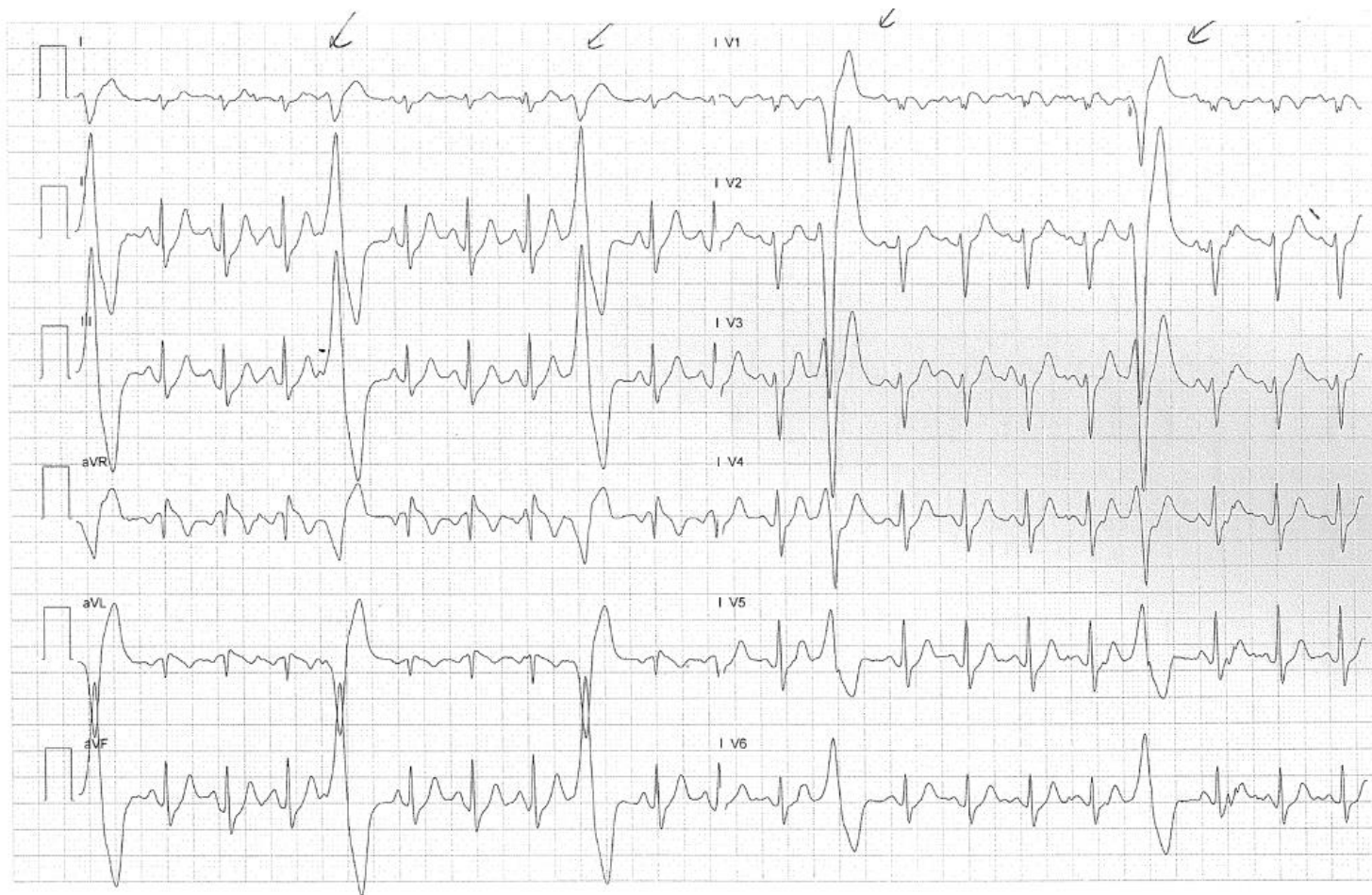
Disritmia Ventricular Idiopática

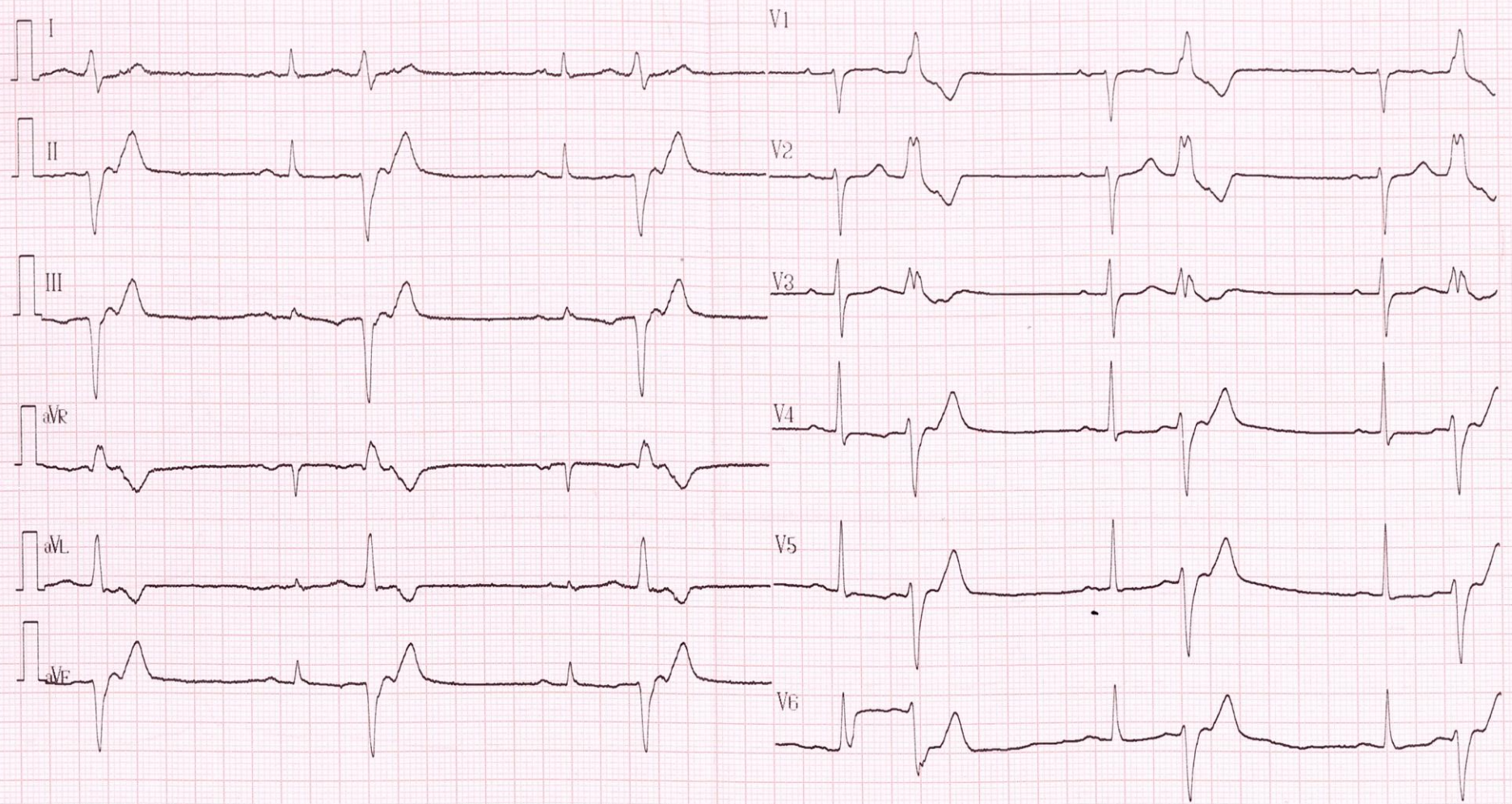
Origem mais frequente



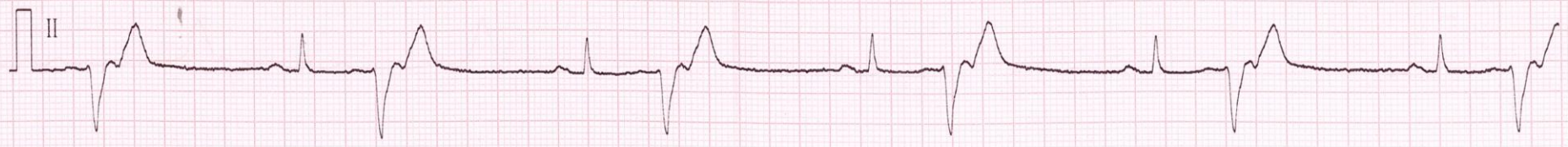
Morfologia das EV's e etiologia

- **Idiopáticas- Sem Doença estrutural:**
 - **CSVD – padrão BRESq + eixo inferior**
 - Fasciculares (VE)- padrão BRESq + eixo superior
- **Cardiopatia estrutural:**
 - MCD ; Doença coronária (padrão BRDto + eixo variável)
 - DAVD – padrão BRESq + Inversão onda t

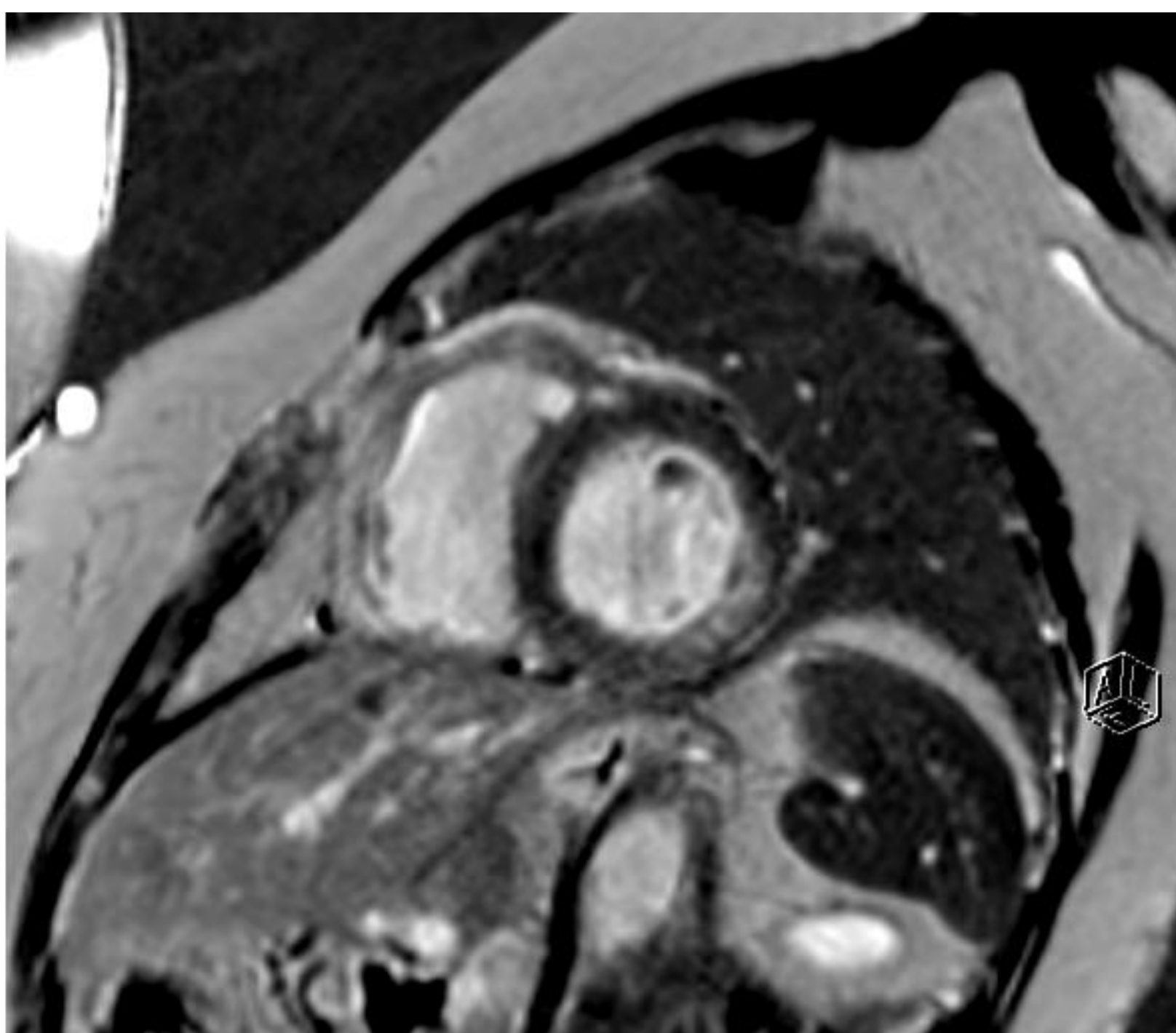




0s 5s 10s
10mm/mV 25mm/s 10mm/mV

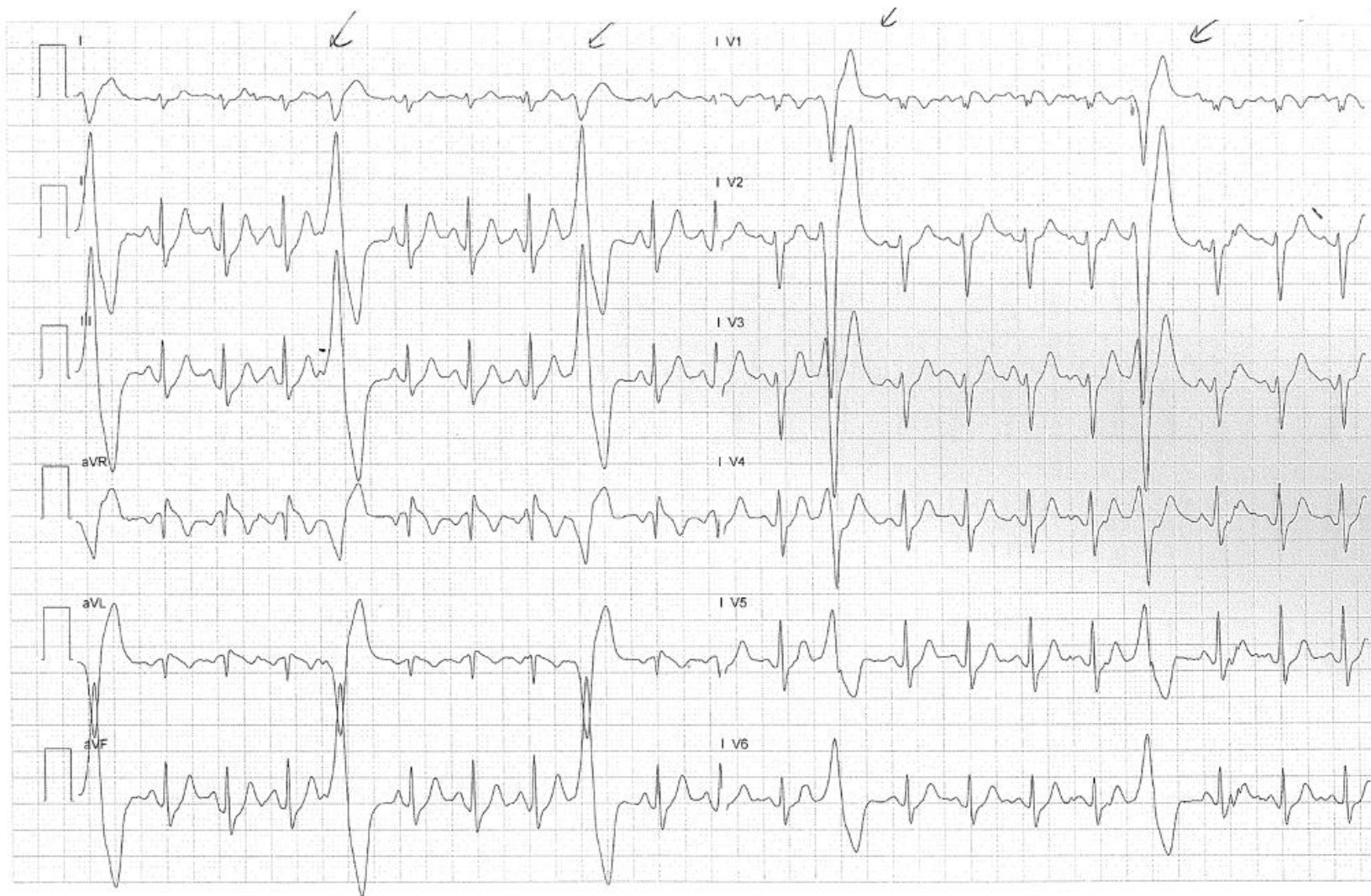


0s 5s 10s
10mm/mV 25mm/s Filter: AC MF DF



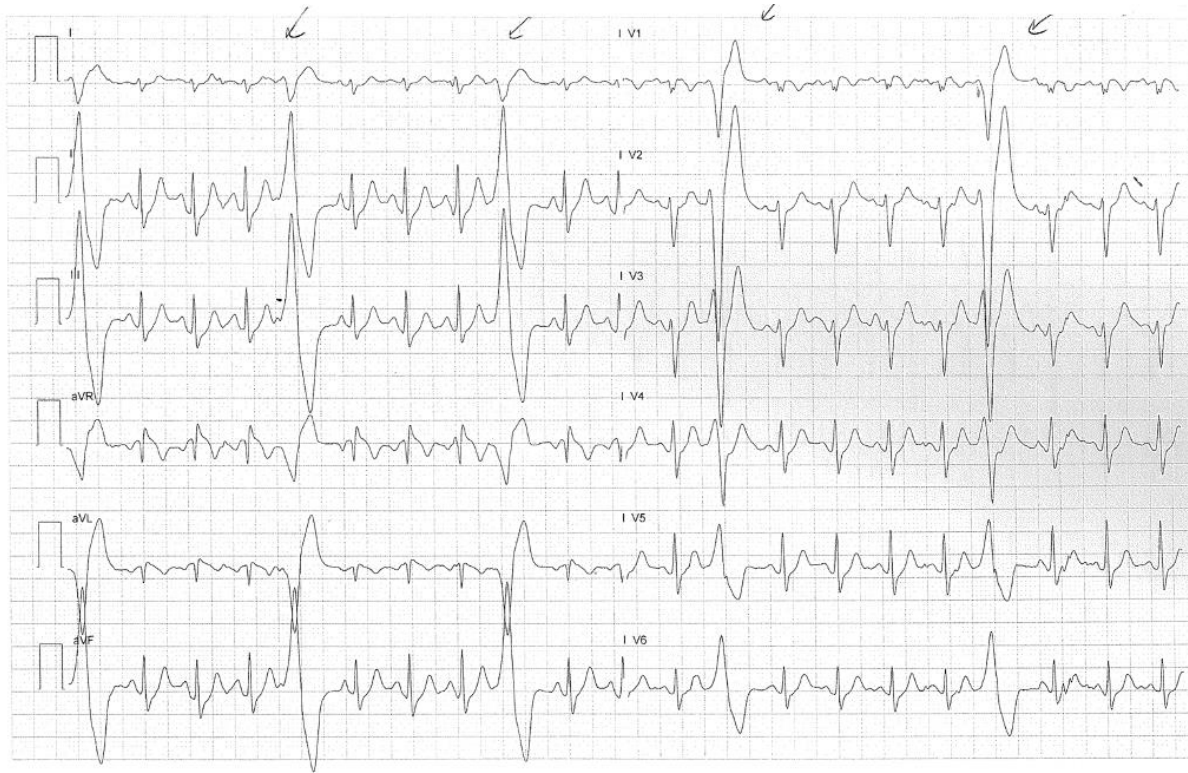
EV e TVNM induzida pelo exercício

Homem, 41 anos, sem cardiopatia estrutural EV induzida pelo exercício



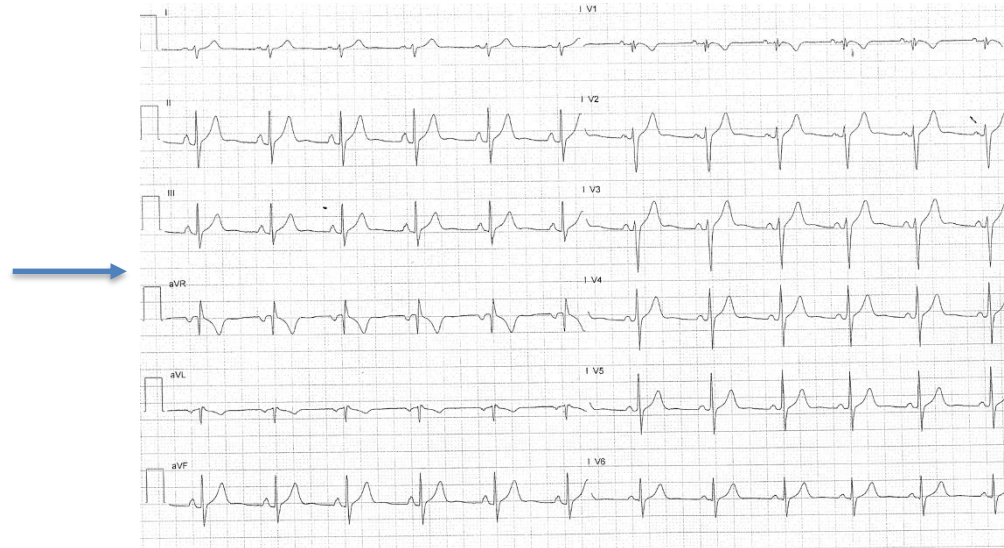
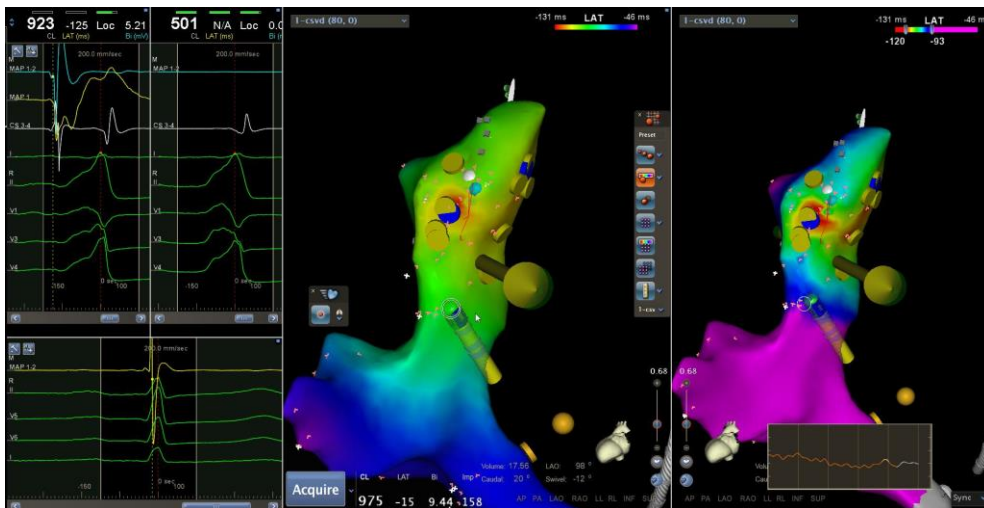
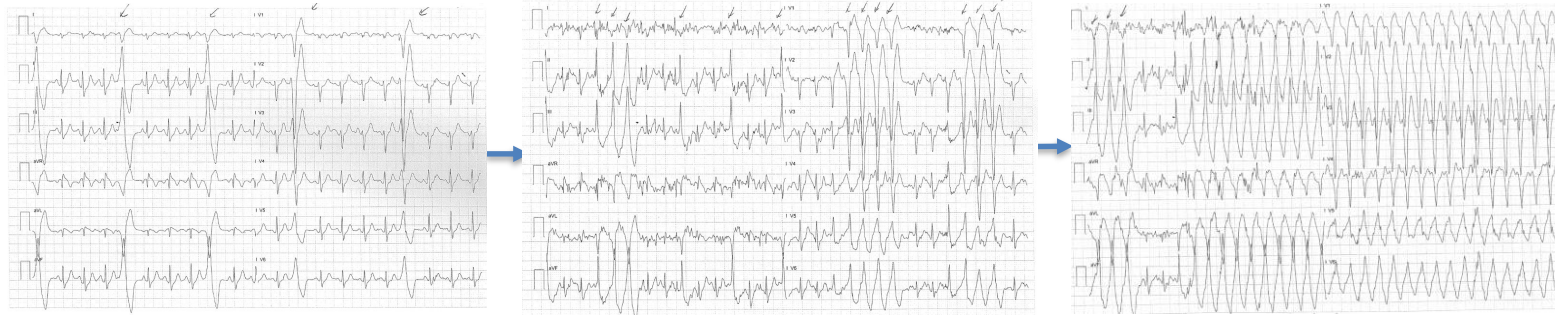
TVNM no exercício

Sempre que aumento de intensidade ou complexidade no exercício – referenciar!

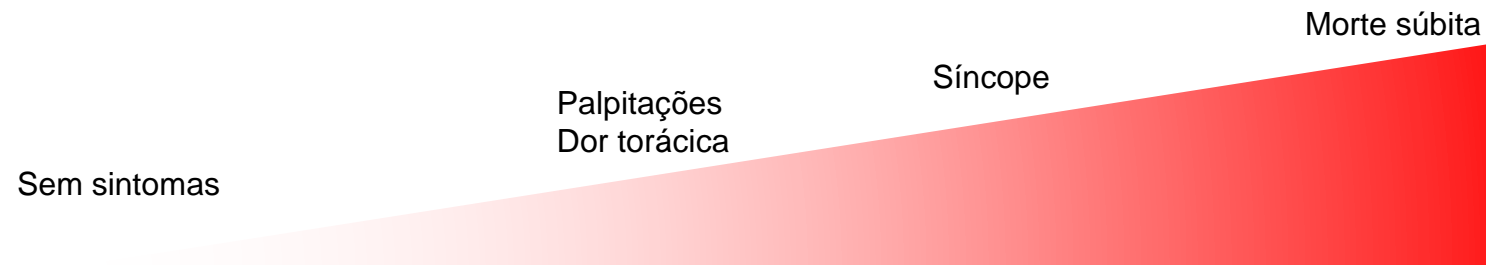


Ablação de EV da Câmara de saída

Homem, 41 anos, sem cardiopatia estrutural EV induzida pelo exercício – EEF e ablação



EV Ignorar? Não... estratificar e referenciar!



Estratificação de risco:

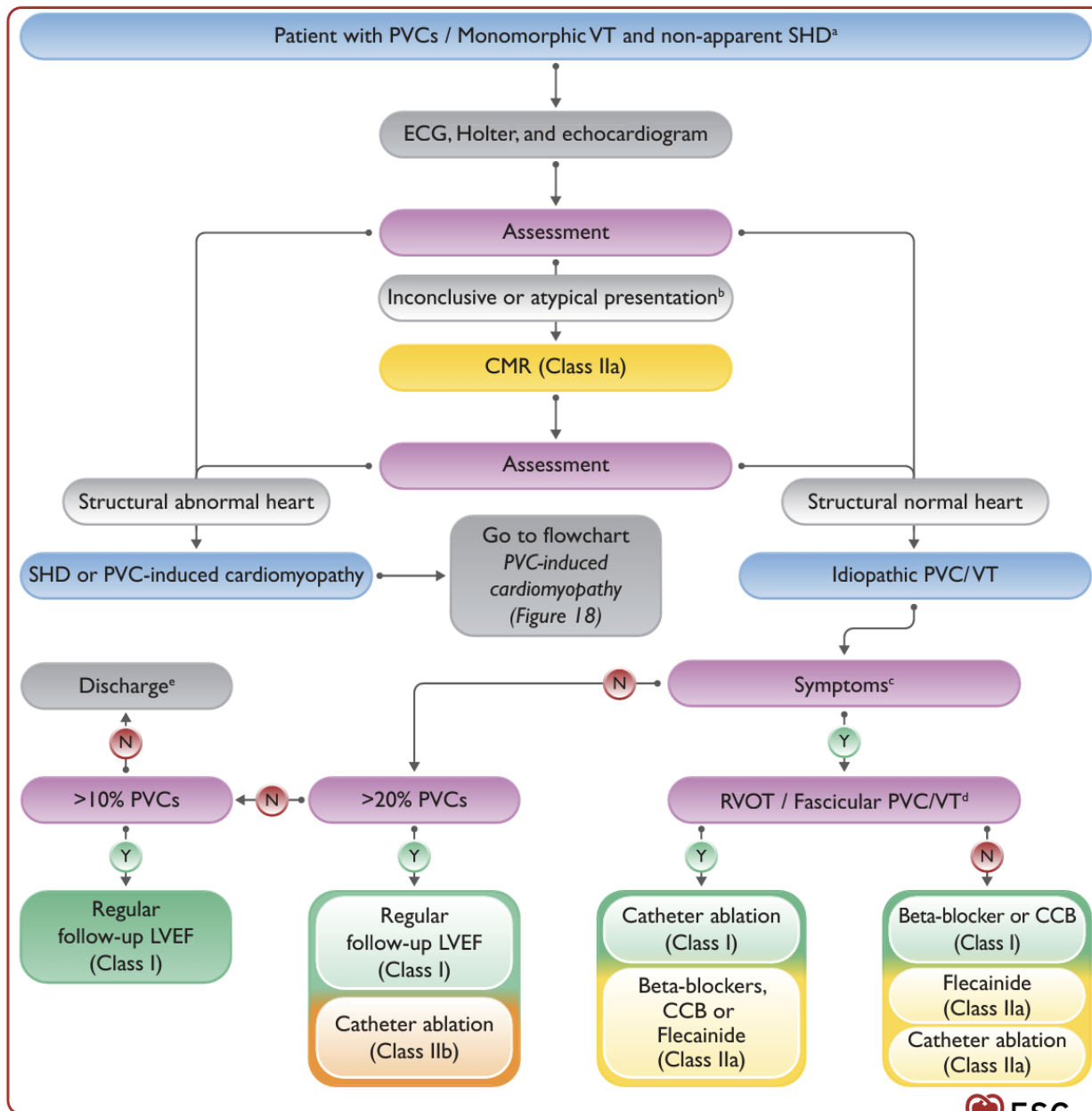
- ECG 12 derivações
- Ecocardiograma
- Holter 24h
- Prova de esforço
- RMN cardíaca

Se:

- ECG normal + EV idiopática
- Ecocardiograma normal
- Holter 24h sem formas complexas
- Prova de esforço com supressão EVs

Bom prognóstico

EV - Tratar?

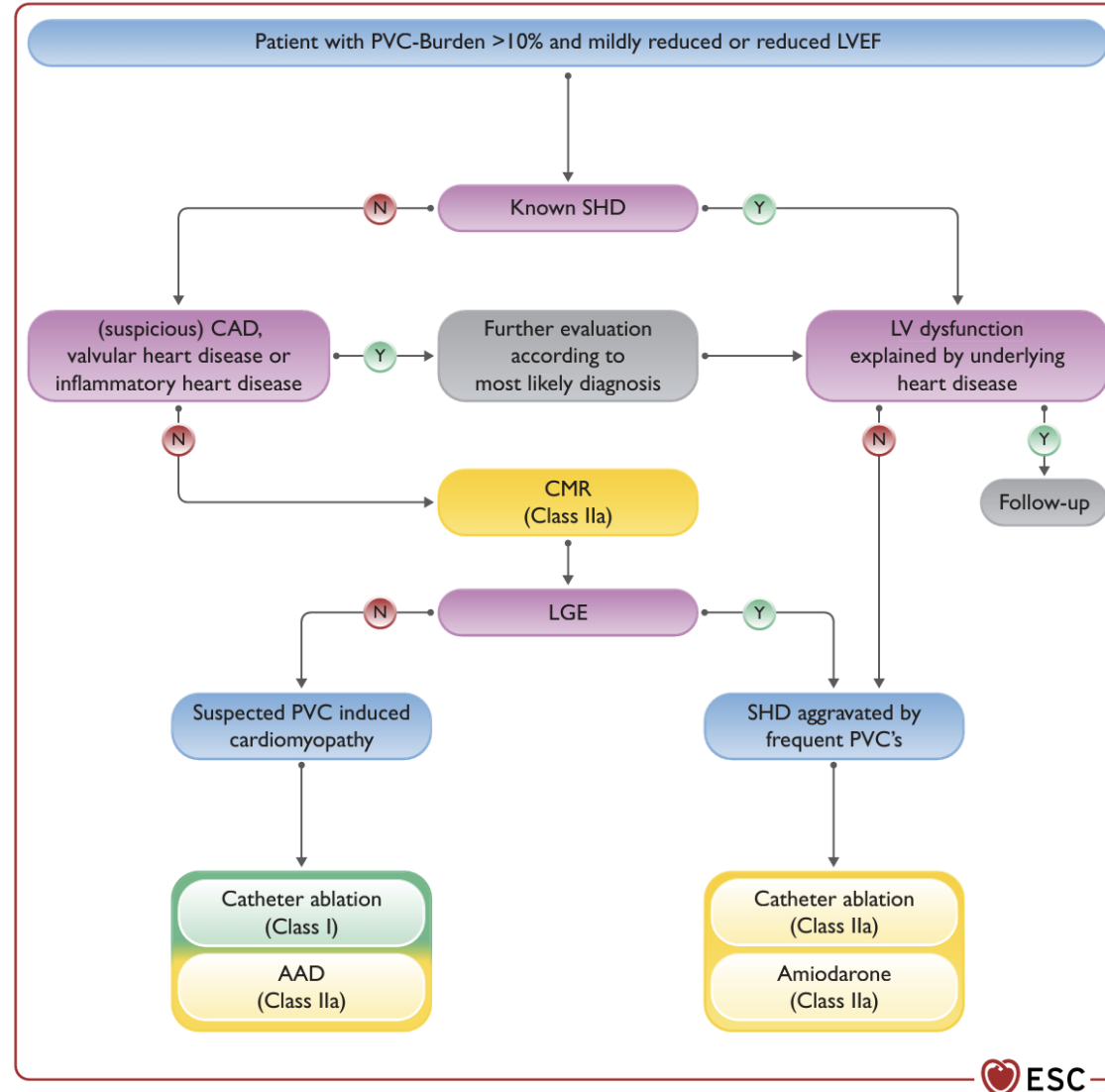


Terapêutica da EV idiopática?

	Ablation	Beta-blocker	CCB	Flecainide	Amiodarone
RVOT/fascicular PVC/VT: Symptomatic, normal LV function	Class I	Class IIa	Class IIa	Class IIa	Class III
PVC/VT other than RVOT/fascicular: Symptomatic, normal LV function	Class IIa	Class I	Class I	Class IIa	Class III
RVOT/fascicular PVC/VT: LV dysfunction	Class I	Class IIa	Class III ^a	Class IIa ^b	Class IIa
PVC/VT other than RVOT/fascicular: LV dysfunction	Class I	Class IIa	Class III ^a	Class IIa ^b	Class IIa
PVC: Burden >20%, asymptomatic, normal LV function	Class IIb				Class III

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Taquimiopatia por EV ?



Extrassístolia Ventricular

- Relativamente frequente na prática clínica
- Obrigatório avaliar e estratificar o risco!
- Prognóstico e tratamento associado à doença subjacente
- Quando perfil benigno o tratamento maioritariamente sintomático
- Vigilância da função ventricular se carga > 10%
- **Considerar Referênciação** para estratificar risco e tratamento

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