

Martini Ziekenhuis Groningen

Tachycardiomyopathie en atriumfibrilleren

T. Koldenhof

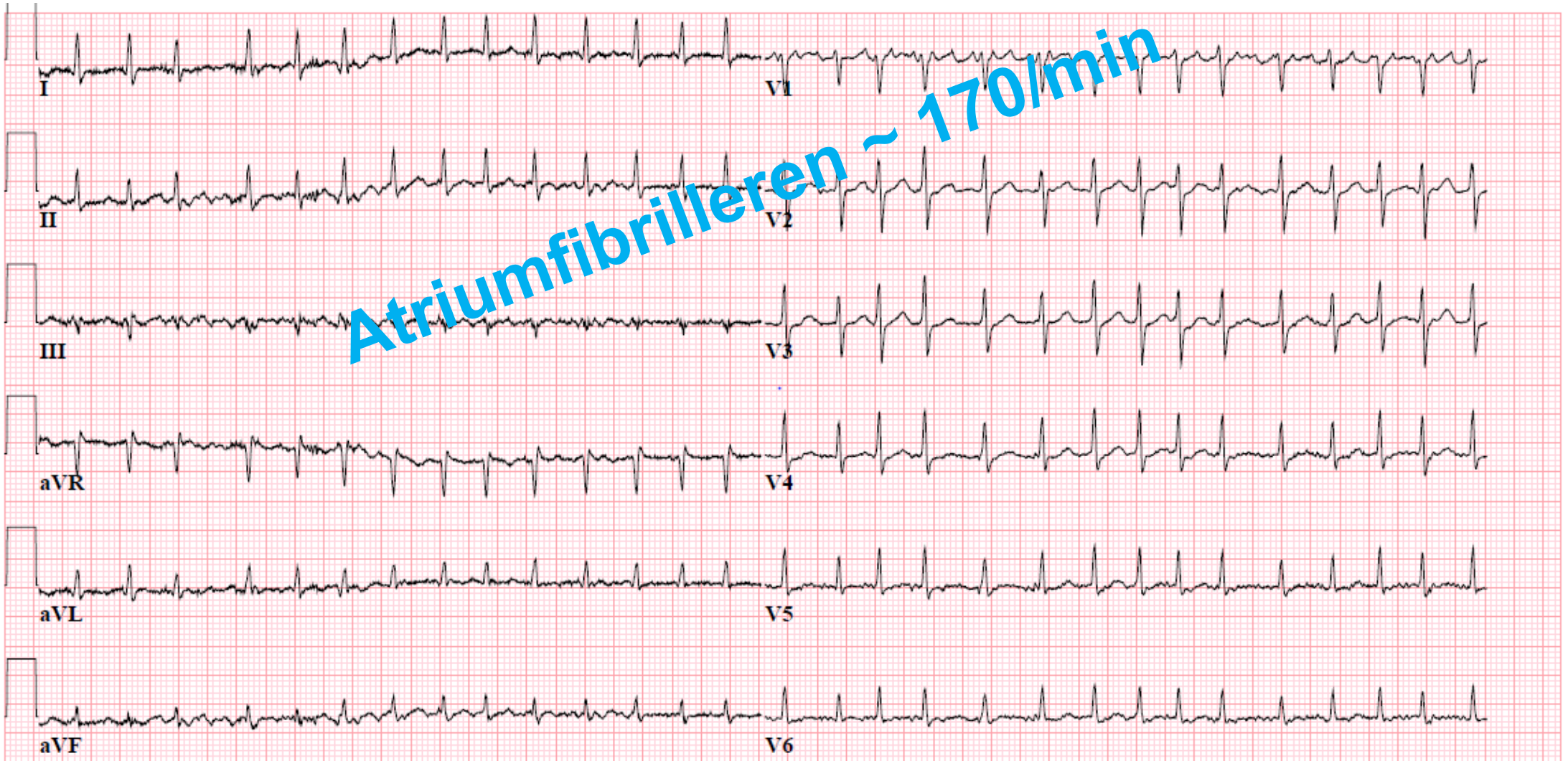


Casus

- 67 jarige man op de spoedeisende hulp met dyspneu
 - Blanco cardiopulmonale voorgeschiedenis
- Anamnese
 - Dyspneu sinds 2-3 maanden, komt de trap niet meer op
 - Sinds 2 weken orthopneu en nycturie
- Lichamelijk onderzoek
 - Algemeen: zichtbaar dyspnoïsch
 - Cor: normale harttonen, irregulair en tachycard, geen souffles
 - Pulm: normaal ademgeruis bdz, bibasaal crepiteren
 - Extremiteiten: pitting oedeem tot halverwege de onderbenen



Casus

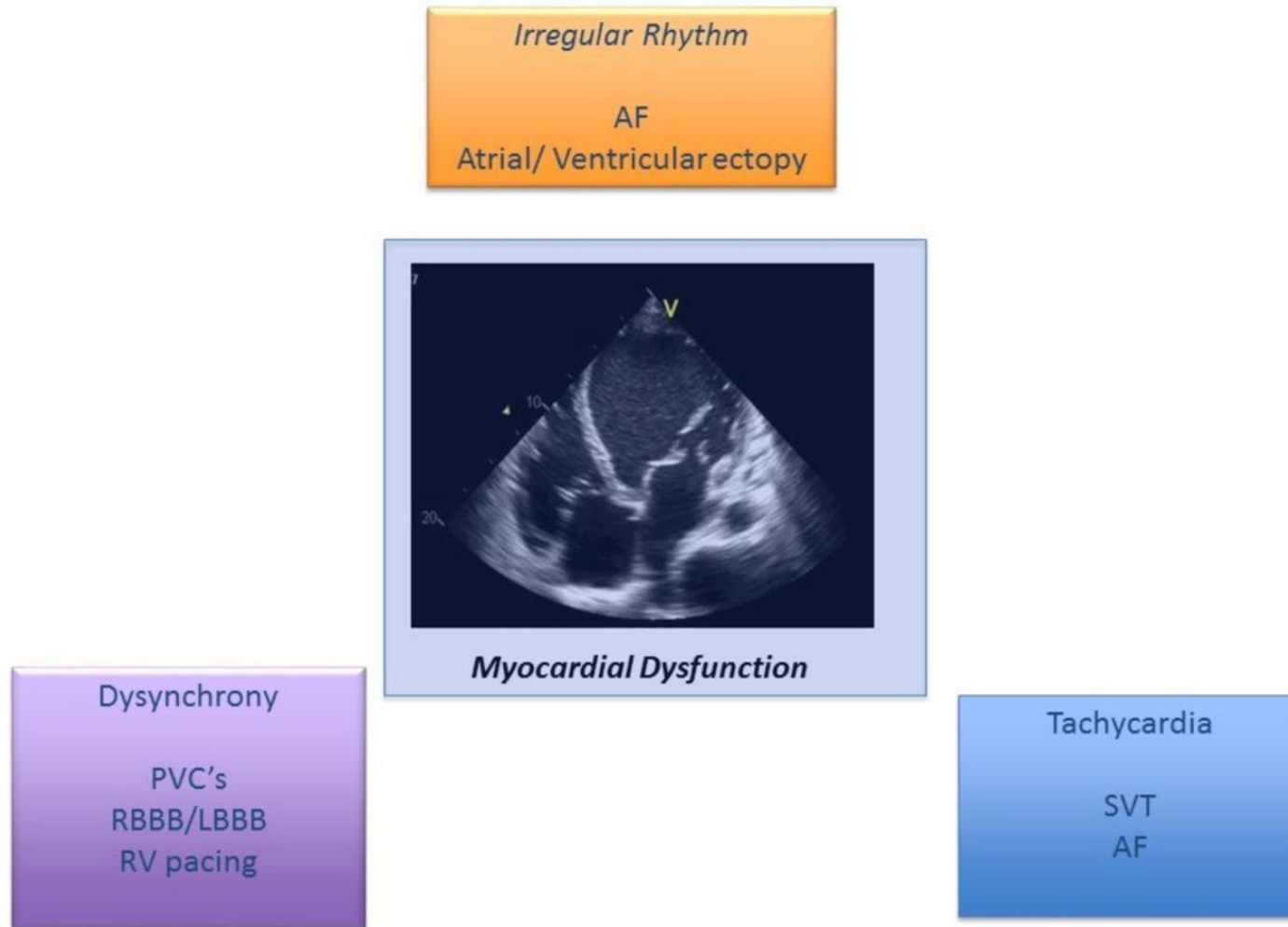


Casus

- Echo cor:
 - Slechte systolische linker ventrikelfunctie (<30%)
 - Dilatatie van de linker ventrikel
 - Bi-atriale dilatatie
 - Vena cava inferieur is wijd en collabeert slecht
- Differentiaal diagnose:
 - Ischemische cardiomyopathie
 - Tachycardiomyopathie
 - Dilaterende cardiomyopathie
- Diagnostiek? Behandeling?



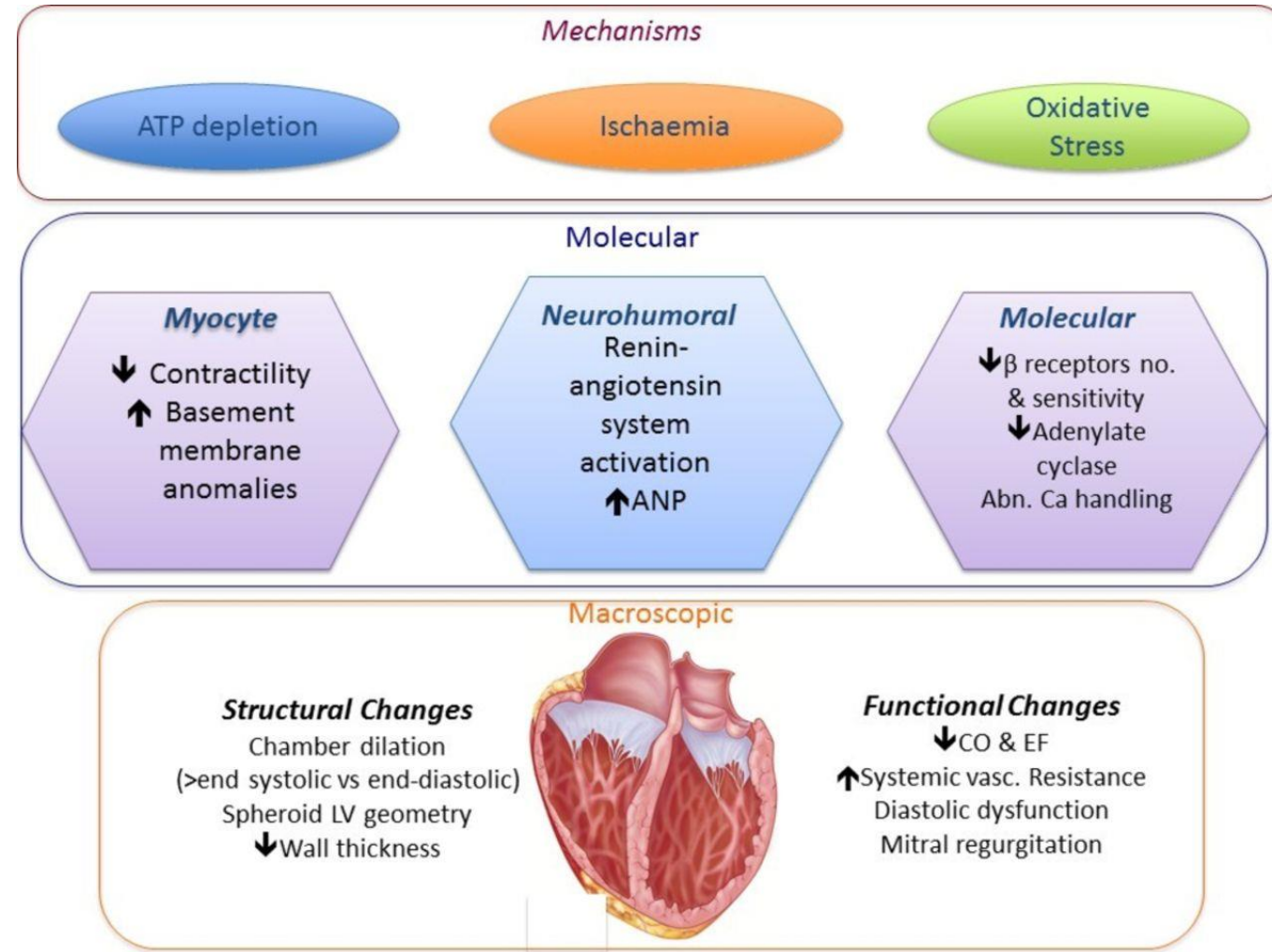
Wat is een tachycardiomyopathie?



Martin, Claire A, and Pier D Lambiase. "Pathophysiology, diagnosis and treatment of tachycardiomyopathy." *Heart (British Cardiac Society)* vol. 103,19 (2017): 1543-1552. doi:10.1136/heartjnl-2016-310391



Pathofysiologie












Martin, Claire A, and Pier D Lambiase. "Pathophysiology, diagnosis and treatment of tachycardiomyopathy." Heart (British Cardiac Society) vol. 103,19 (2017): 1543-1552. doi:10.1136/heartjnl-2016-310391




Typische presentatie


Heart Failure Signs and Symptoms








- Short of breath 
- Tired 
- Swollen ankles 
- Loss of appetite 
- Coughing 
- Dizziness 
- Abdominal bloating 
- Sleep disturbance 

 ST VINCENT'S HOSPITAL
HEART HEALTH

Atrial Fibrillation Symptoms



- lightheadedness 
- fatigue 
- shortness of breath 
- palpitations 
- chest discomfort 

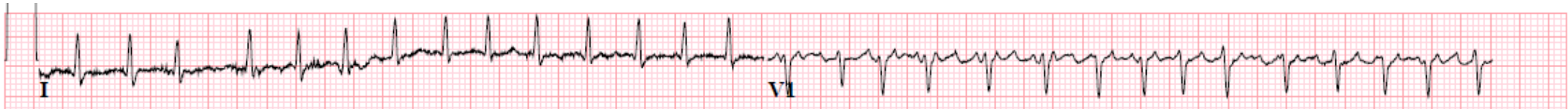
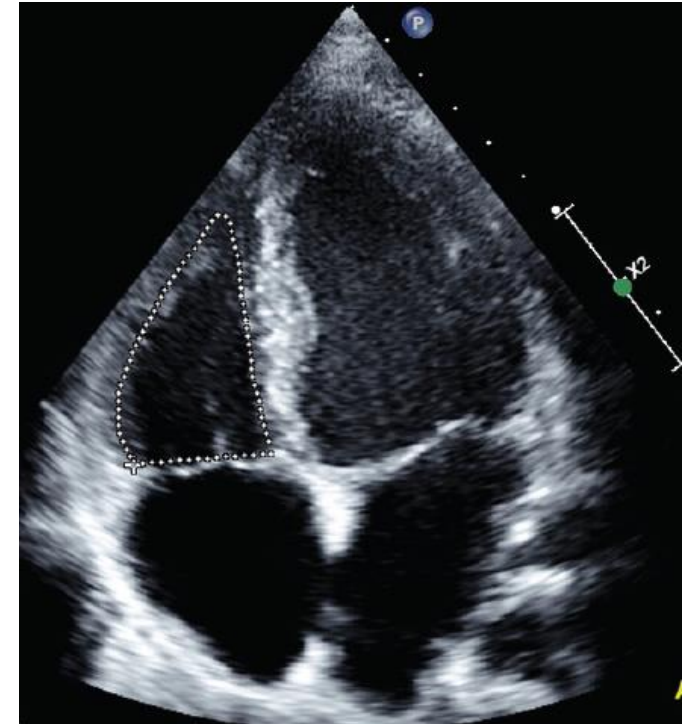
verywell

Casus: deel 2

- 67 jarige man
 - Hartfalen met een verminderde LVEF
 - Atriumfibrilleren van onbekende duur met snel volgen
 - Klinisch gedecompenseerd

Hartfalen → Atriumfibrilleren ??

Atriumfibrilleren → Hartfalen ??



Diagnose tachycardiomyopathie

- Lastige diagnose



Diagnose tachycardiomyopathie

- Geen goed gedefinieerde diagnostische criteria van tachycardiomyopathie
- Bij een nieuwe patiënt met hartfalen EN tachyritmie lastige diagnose
 - Waarschijnlijk niet direct te onderscheiden van andere oorzaken van hartfalen
- Soms pas te diagnostiseren na herstel van sinusritme of adequate rate controle
- Herstel LVEF in sinusritme → Tachycardiomyopathie
- Eerst normale LVEF en verslechtering in AF → Tachycardiomyopathie
- Bestaand hartfalen met toename klachten in AF → Tachycardiomyopathie

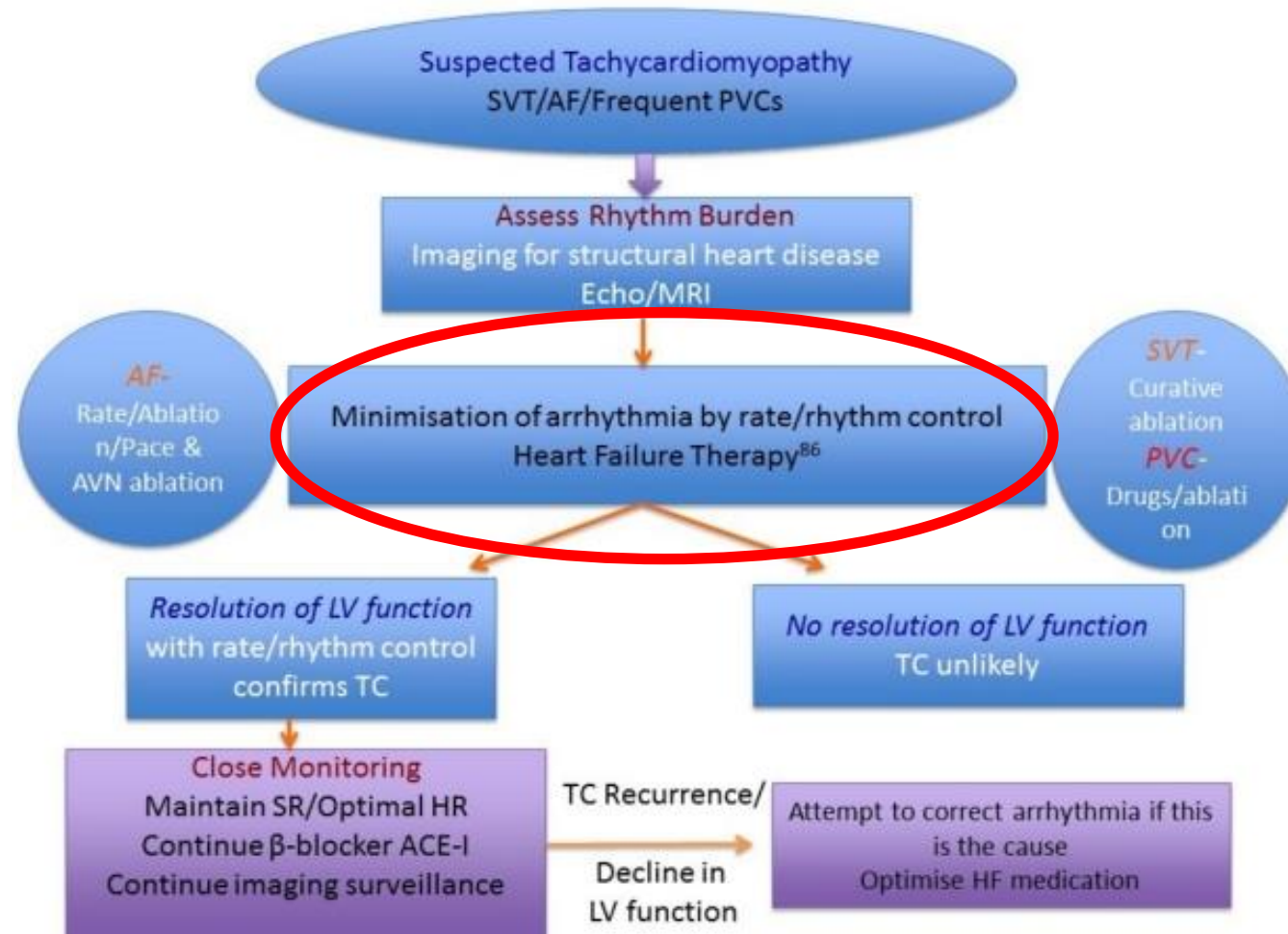


Diagnose tachycardiomyopathie

- Hartfalen met een verminderde systolische linker ventriekelfunctie
 - Gedilateerde linker kamer
 - Tachycardie/ aritmie (hoge burden)
 - Herstel LV functie in sinusritme
- Voorgeschiedenis en klinische gegevens gebruiken
 - Aanwijzingen alternatieve diagnose hartfalen
- Uitsluiten andere onderliggende pathologie



Behandeling



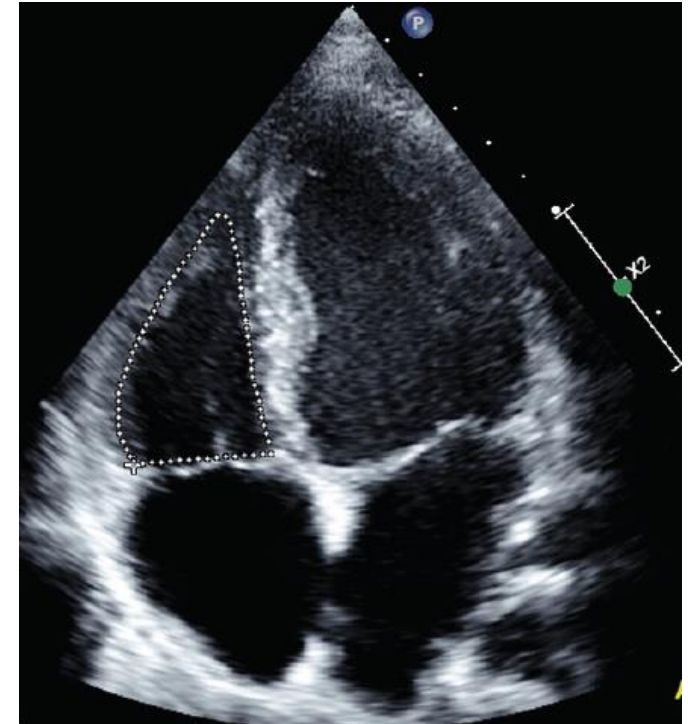
Martin, Claire A, and Pier D Lambiase. "Pathophysiology, diagnosis and treatment of tachycardiomyopathy." *Heart (British Cardiac Society)* vol. 103,19 (2017): 1543-1552. doi:10.1136/heartjnl-2016-310391



Casus: deel 3

Minimisation of arrhythmia by rate/rhythm control
Heart Failure Therapy⁸⁶

- 67 jarige man
 - Hartfalen met een verminderde LVEF
 - Atriumfibrilleren 170/min
 - Klinisch gedecompenseerd

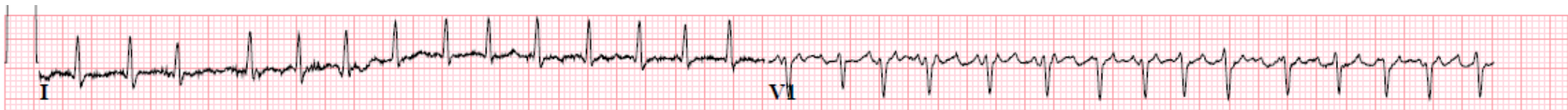
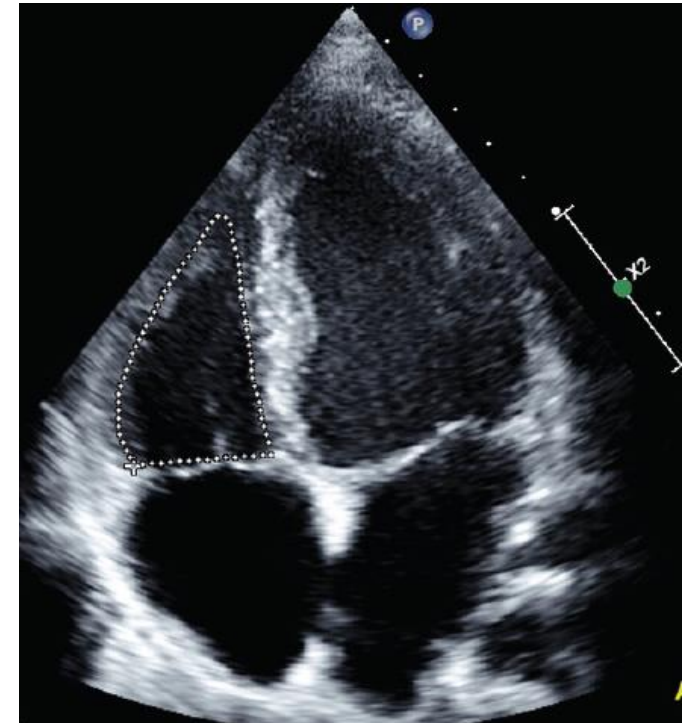


Casus: deel 3

Minimisation of arrhythmia by rate/rhythm control
Heart Failure Therapy⁸⁶

- 67 jarige man
 - Hartfalen met een verminderde LVEF
 - Atriumfibrilleren 170/min
 - Klinisch gedecompenseerd

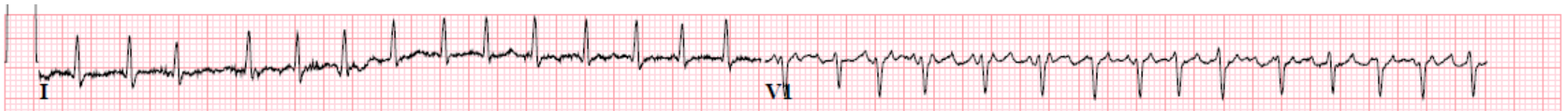
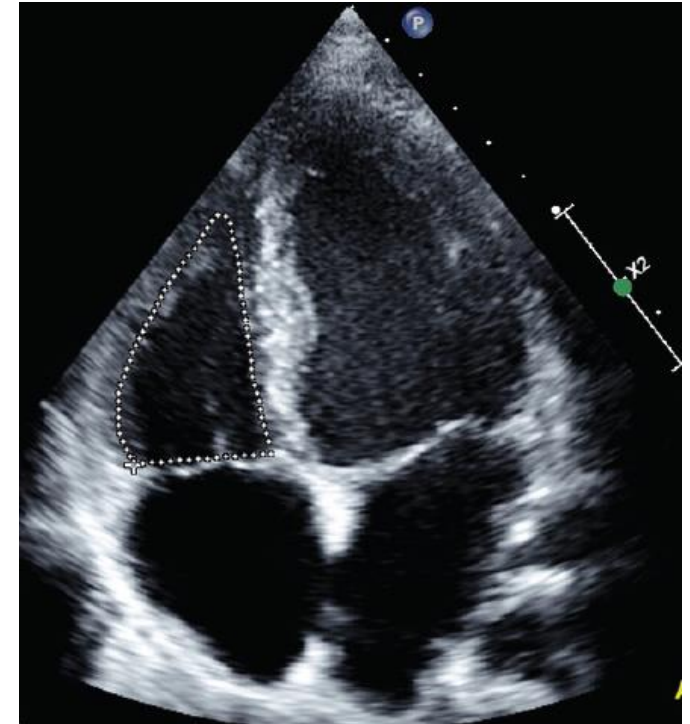
1. **Behandeling hartfalen** → Ontwateren/diuretica
2. **Adequate rate controle**
3. Rhythm controle



Casus: deel 3

Minimisation of arrhythmia by rate/rhythm control
Heart Failure Therapy⁸⁶

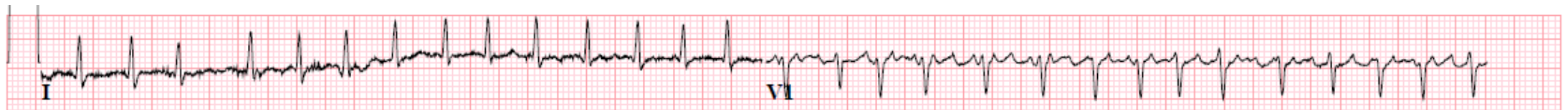
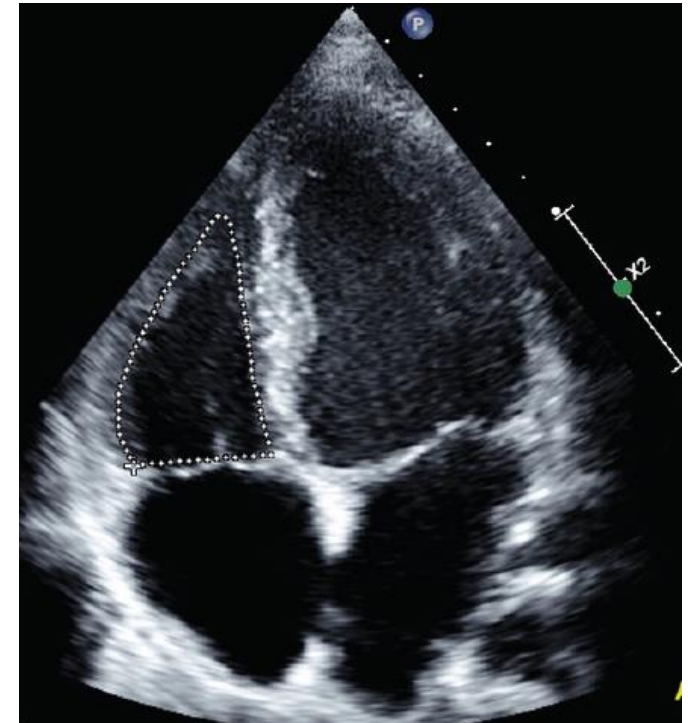
- Beste keuze rate controle?
 - A. Bisoprolol
 - B. Amiodaron
 - C. Verapamil
 - D. Digoxine



Casus: deel 3

Minimisation of arrhythmia by rate/rhythm control
Heart Failure Therapy⁸⁶

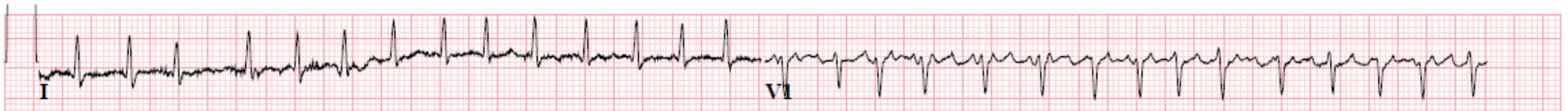
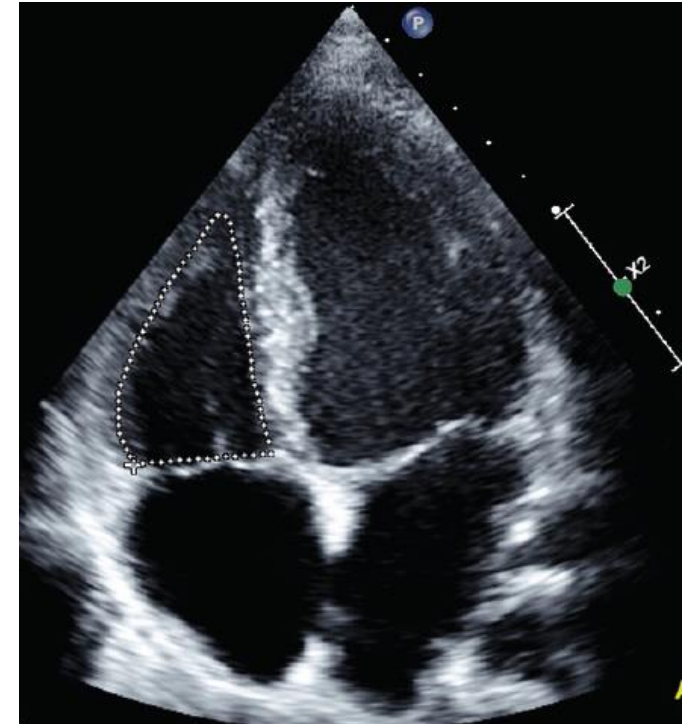
- Beste keuze rate controle?
 - A. Bisoprolol
 - B. Amiodaron
 - C. Verapamil
 - D. Digoxine



Casus: deel 3

Minimisation of arrhythmia by rate/rhythm control
Heart Failure Therapy⁸⁶

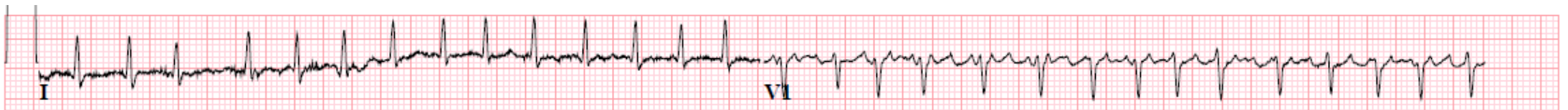
- 67 jarige man
 - Hartfalen met een verminderde LVEF
 - Atriumfibrilleren 170/min
 - Klinisch gedecompenseerd
1. Behandeling hartfalen
 2. Adequate rate controle
 3. Rhythm controle



Casus: deel 3, Rhythm Controle

Minimisation of arrhythmia by rate/rhythm control
Heart Failure Therapy⁸⁶

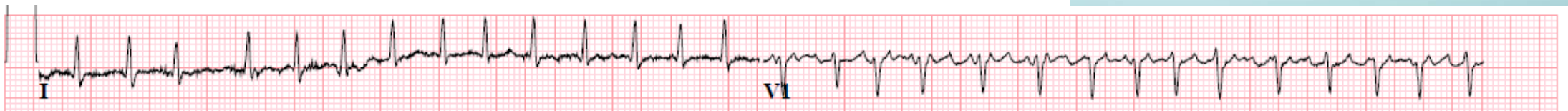
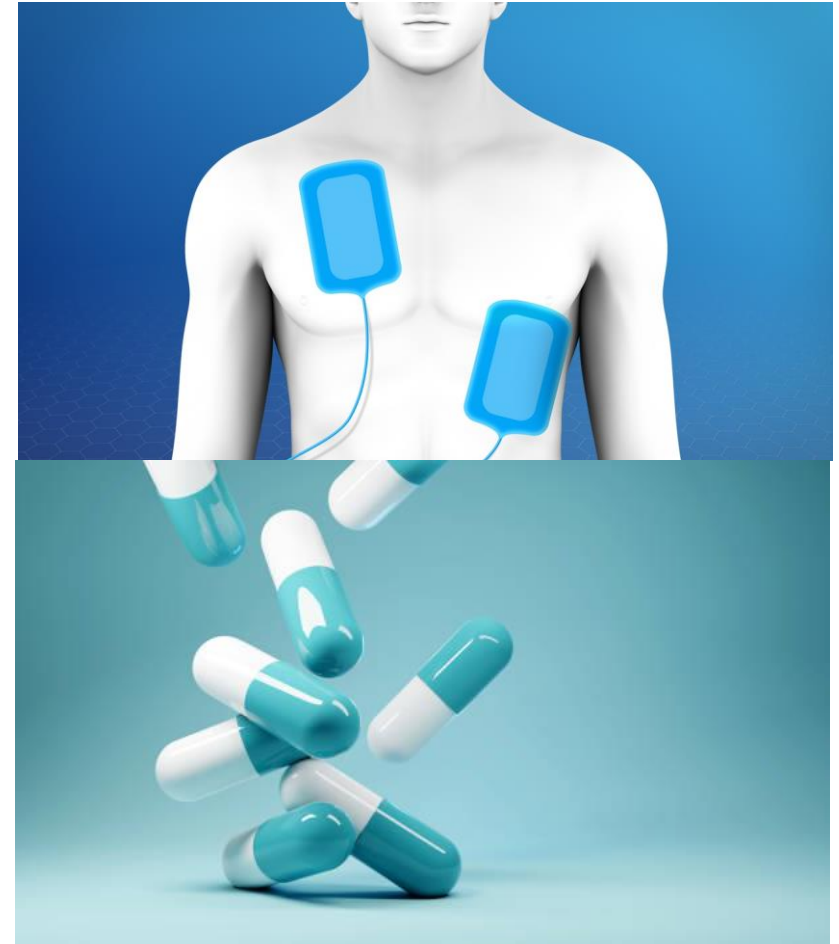
- Korte termijn (acute cardioversie)
 - elektrocardioversie
 - Chemische cardioversie
 - Flecainide
 - Amiodaron
 - Ibutilide
- Lange termijn (behoud sinusritme)
 - Ablatie
 - Medicamenteus
 - Flecainide
 - Amiodaron
 - Sotalol?



Casus: deel 3

Minimisation of arrhythmia by rate/rhythm control
Heart Failure Therapy⁸⁶

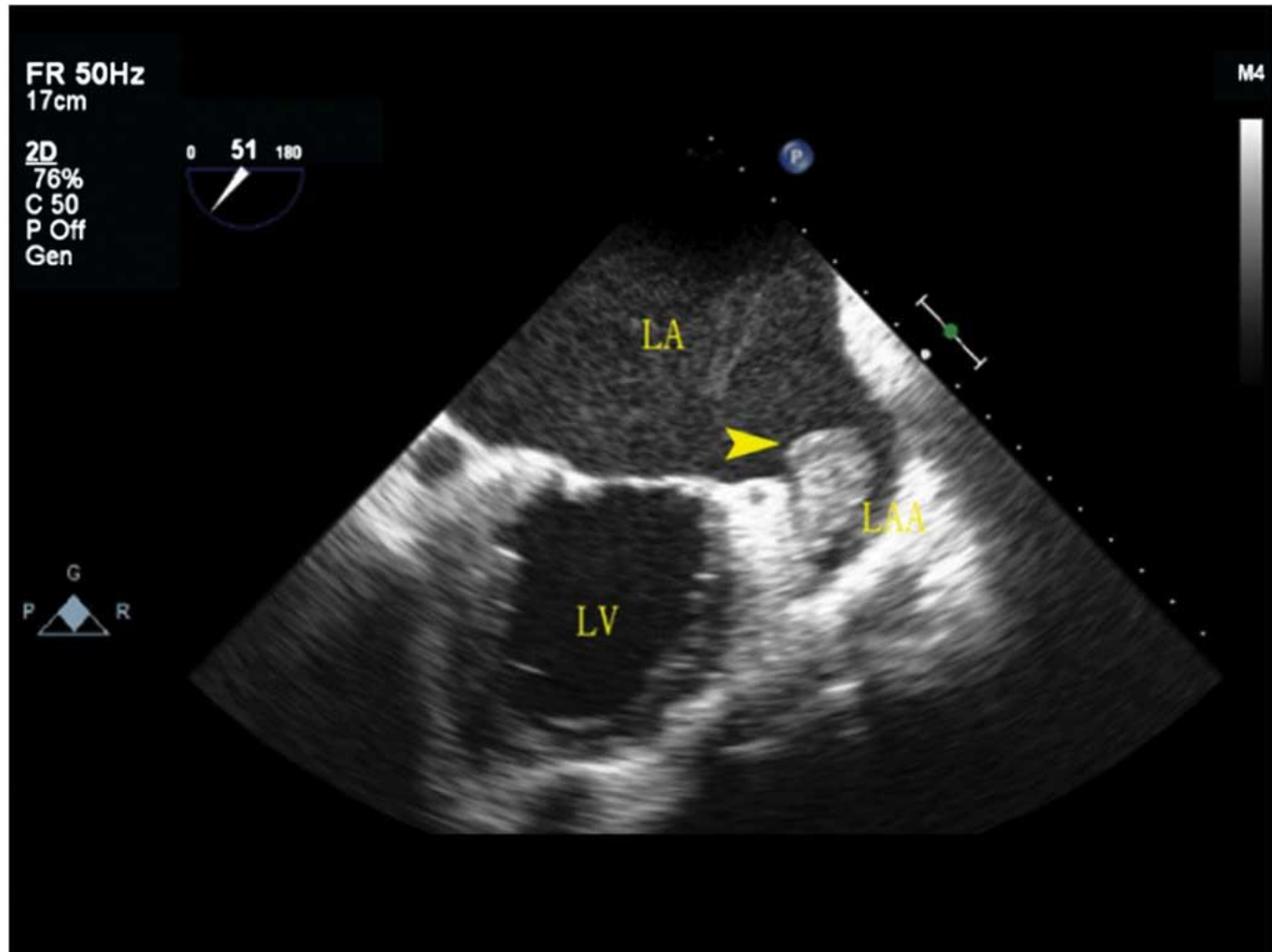
- Korte termijn rhythm controle strategie
 - A. Direct elektrocardioversie
 - B. Geen cardioversie
 - C. Chemische cardioversie
 - D. Eerst frequentie controle en later elektrocardioversie



Casus: deel 3

Minimisation of arrhythmia by rate/rhythm control

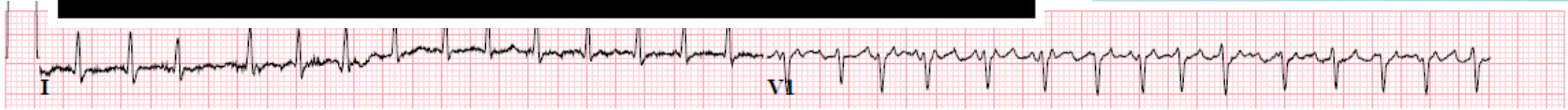
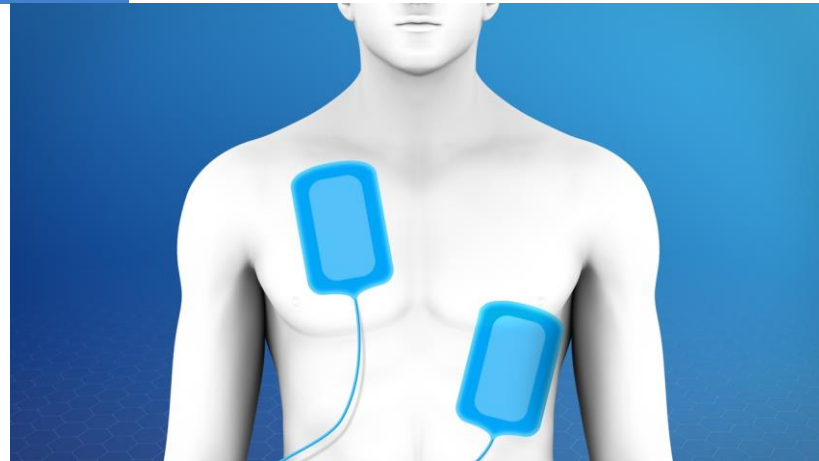
- Kc



- W

- W

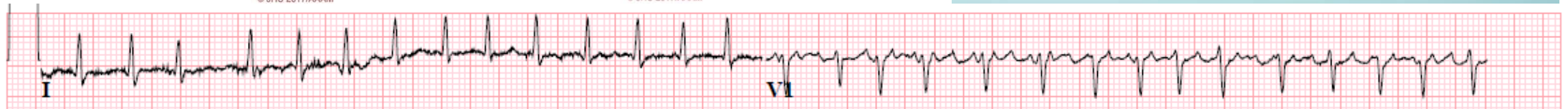
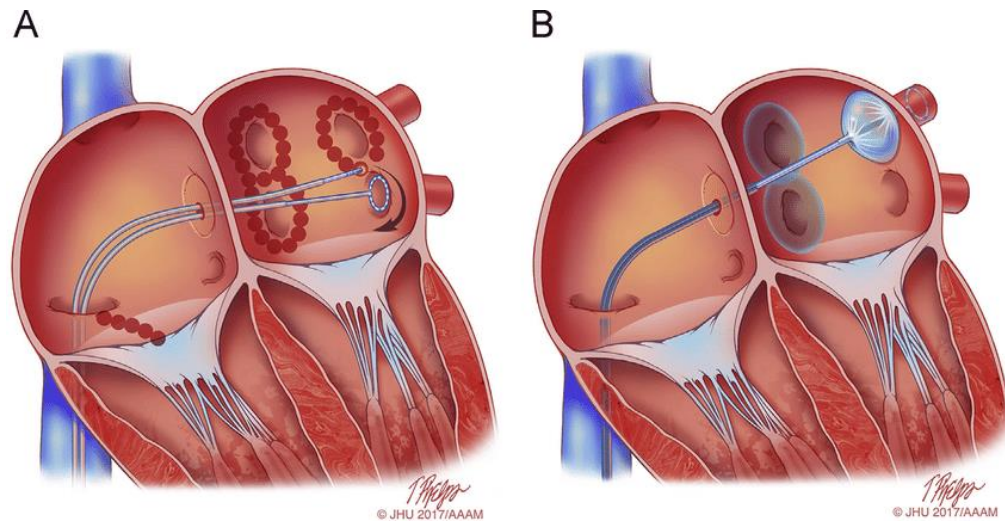
ie



Casus: deel 3

Minimisation of arrhythmia by rate/rhythm control
Heart Failure Therapy⁸⁶

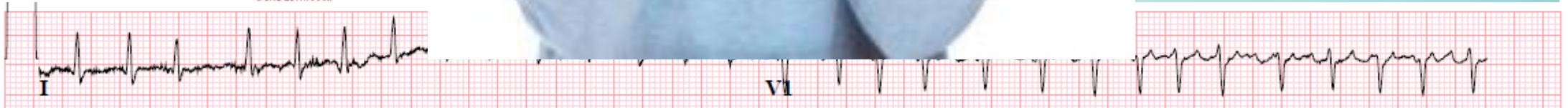
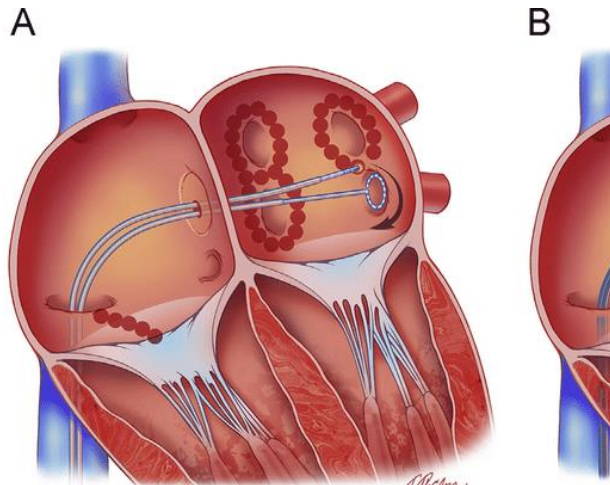
- Lange termijn rhythm controle strategie
 - A. Ablatie
 - B. Flecainide in onderhoud
 - C. Amiodaron in onderhoud



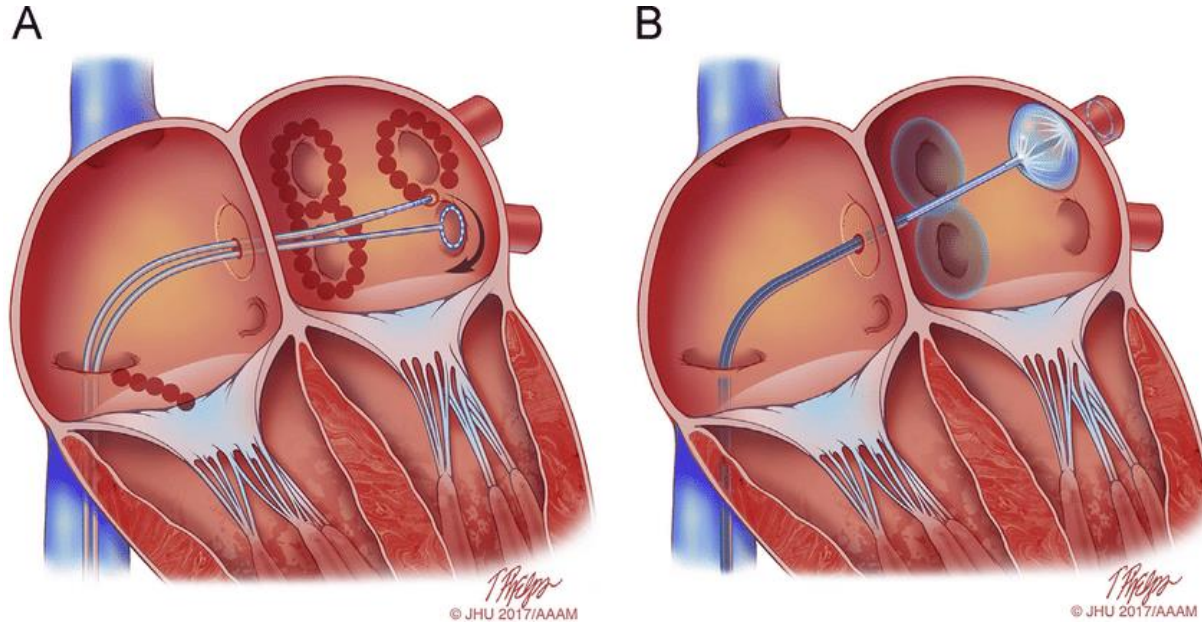
Casus: deel 3

Minimisation of arrhythmia by rate/rhythm control
Heart Failure Therapy⁸⁶

- Lange termijn rhythm control
 - A. Ablatie
 - B. Flecainide in onc
 - C. Amiodaron in onc



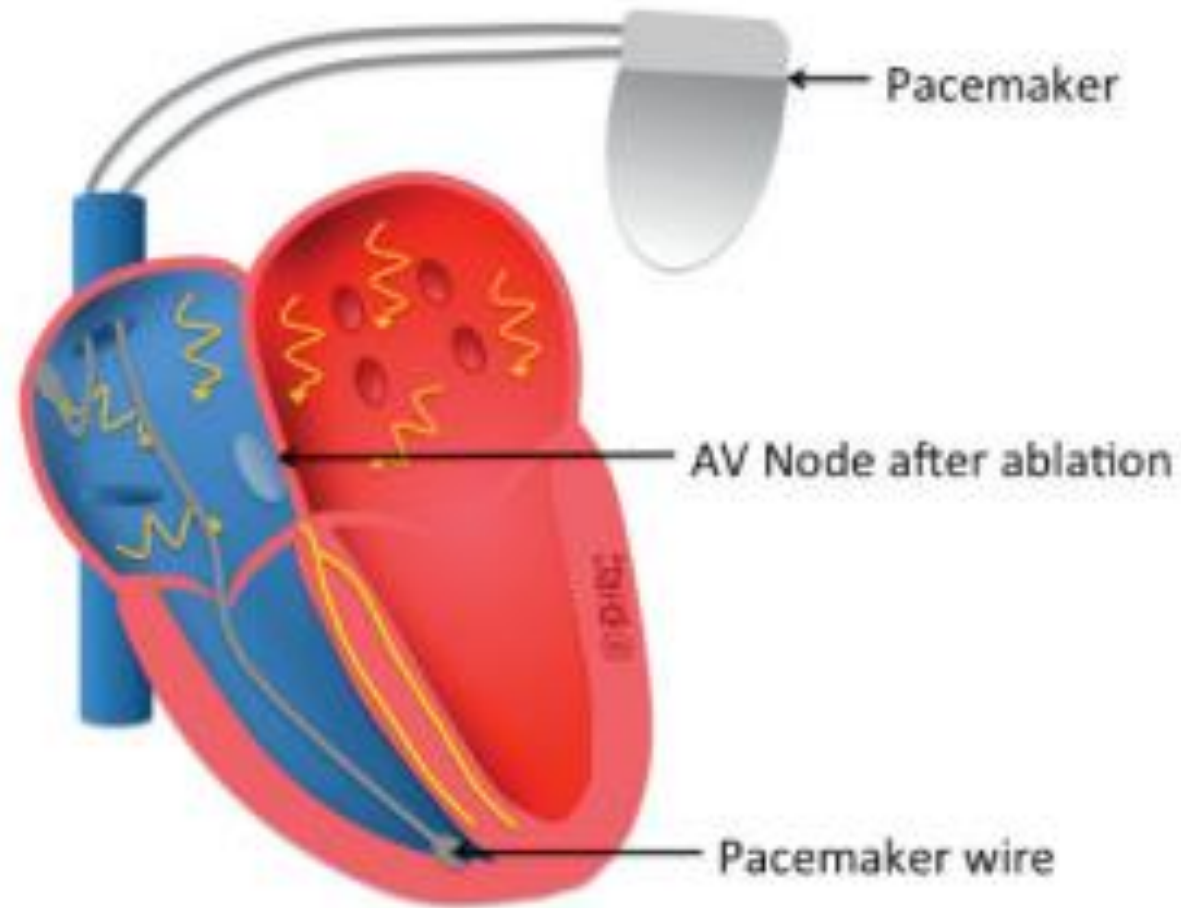
Beste manier van ritme controle?



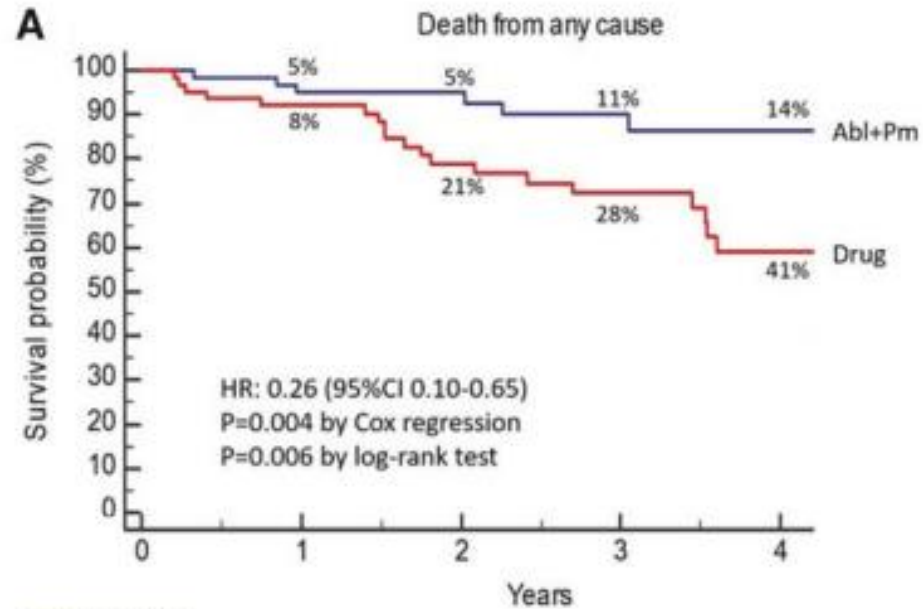
CRYoballoon Ablation versus medical therapy in patients with Heart Failure and atrial fibrillation: a multicenter randomized clinical trial, the RACE-8-HF trial

Pace and ablate

Insertion of a permanent pacemaker

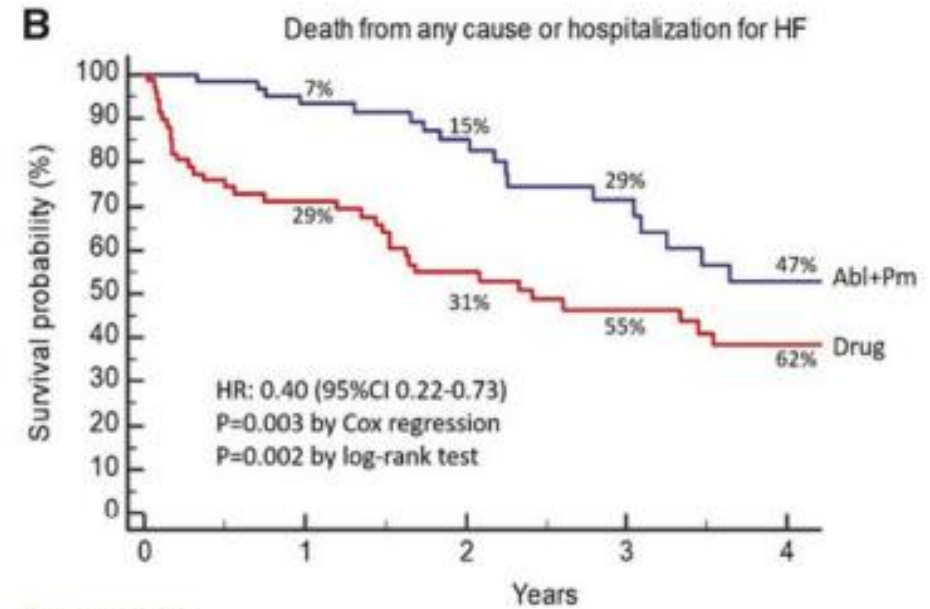


APAF-CRT mortality trial



Number at risk

Abl+Pm	63	52	41	27	12
Drug	70	56	38	29	9



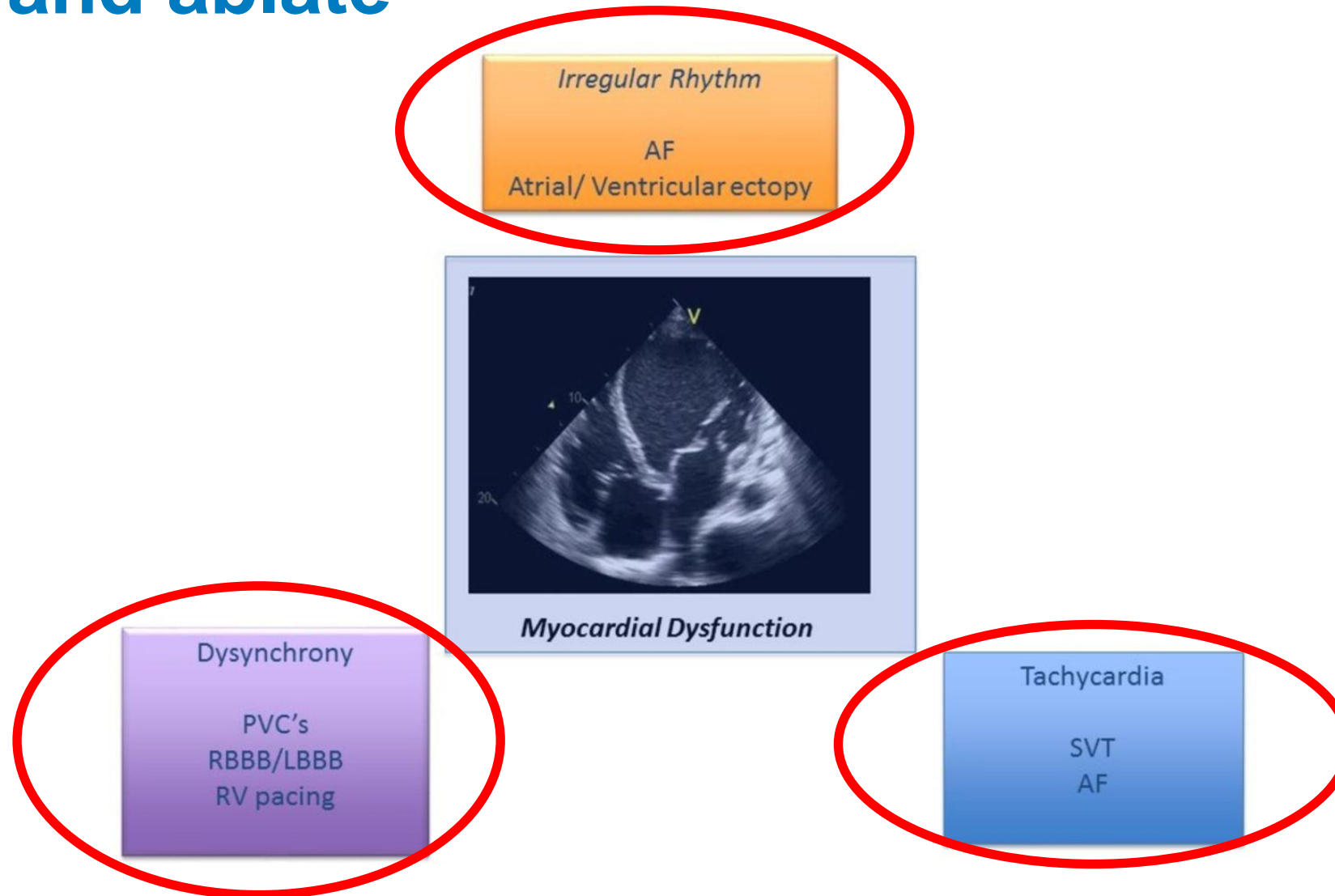
Number at risk

Abl+Pm	63	51	36	21	9
Drug	70	44	27	21	7

Brignole, Michele et al. "AV junction ablation and cardiac resynchronization for patients with permanent atrial fibrillation and narrow QRS: the APAF-CRT mortality trial." European heart journal vol. 42,46 (2021): 4731-4739. doi:10.1093/eurheartj/ehab569



Pace and ablate

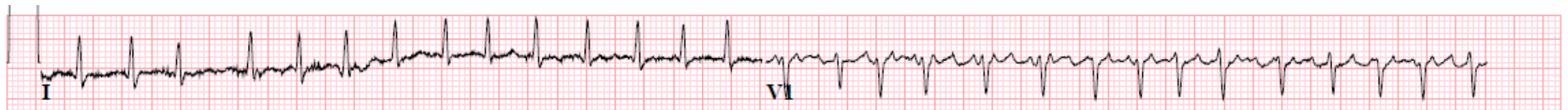
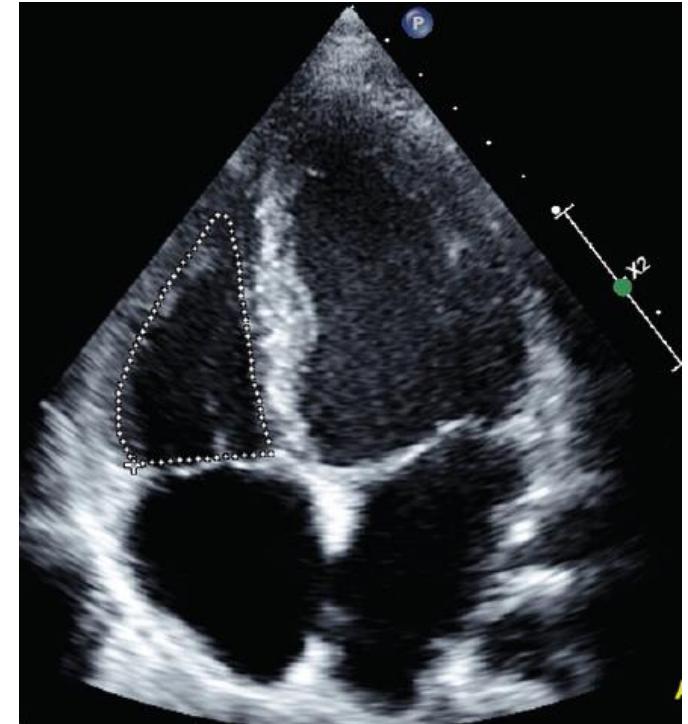


Martin, Claire A, and Pier D Lambiase. "Pathophysiology, diagnosis and treatment of tachycardiomyopathy." *Heart (British Cardiac Society)* vol. 103,19 (2017): 1543-1552. doi:10.1136/heartjnl-2016-310391

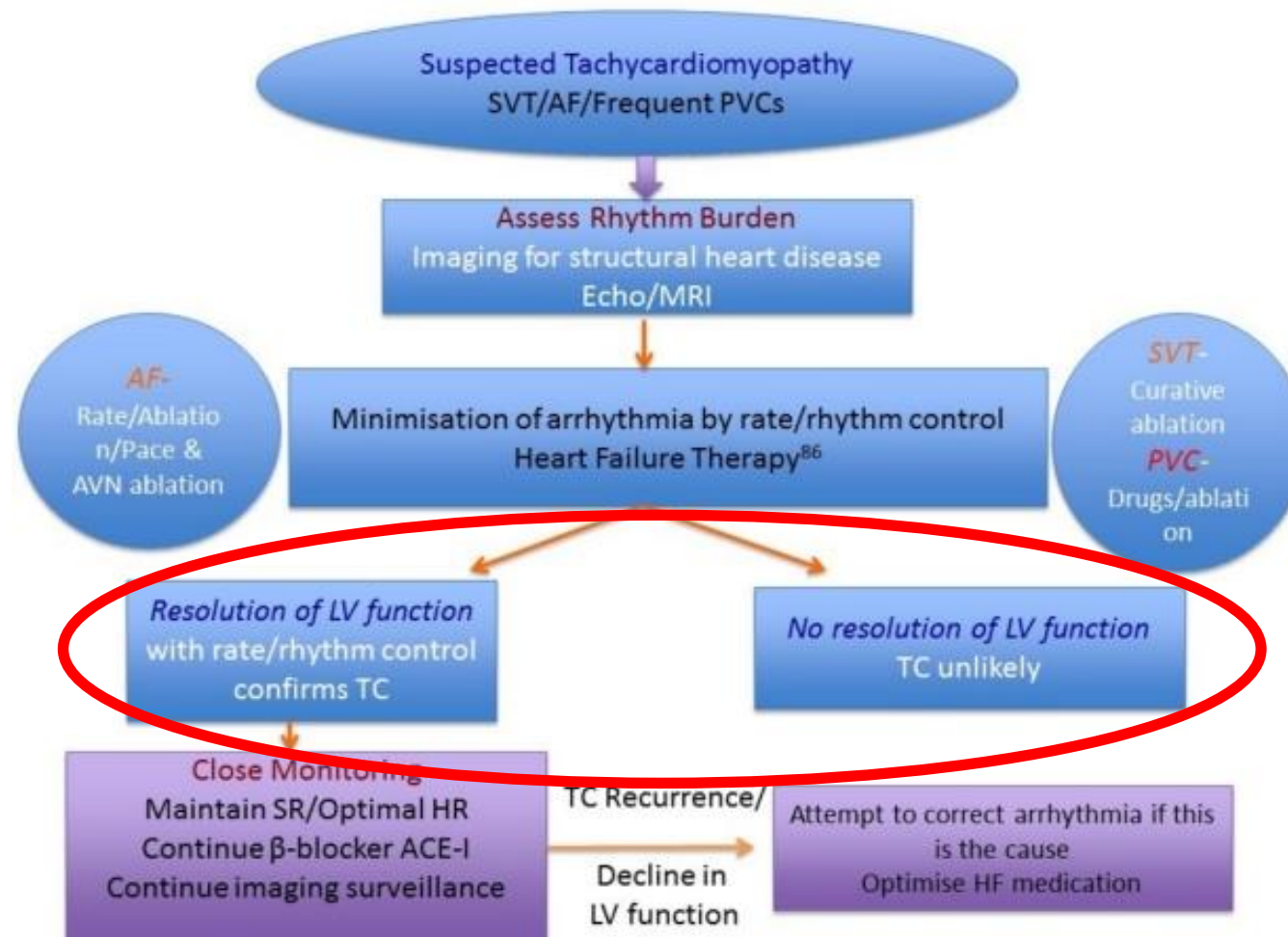


Casus: deel 4

- Ontwaterd ingesteld op hartfalen medicatie
- Rate controle middels digoxine en later beta blocker
 - Start antistolling
- Na 1 maand ECV met behoud van sinusritme nadien



Controleren behandeling

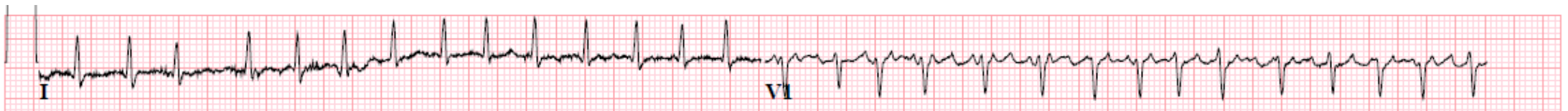
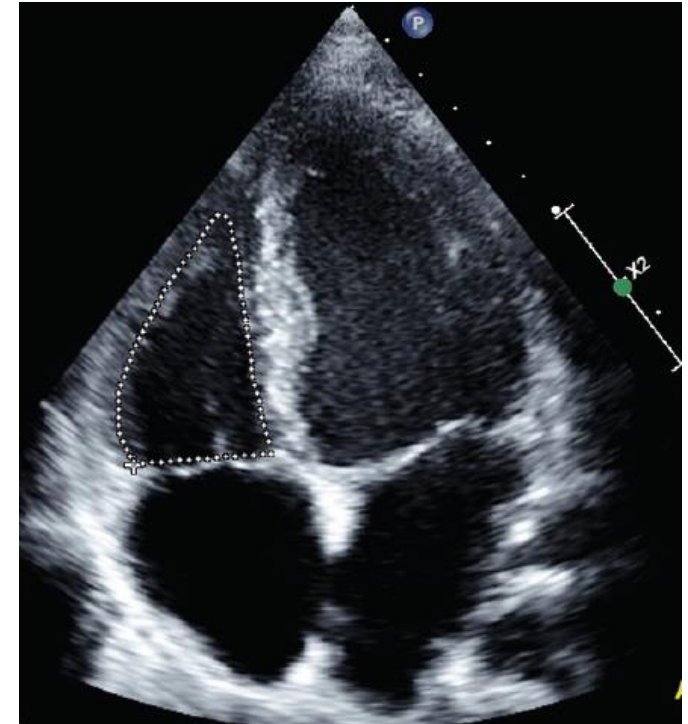


Martin, Claire A, and Pier D Lambiase. "Pathophysiology, diagnosis and treatment of tachycardiomyopathy." Heart (British Cardiac Society) vol. 103,19 (2017): 1543-1552. doi:10.1136/heartjnl-2016-310391

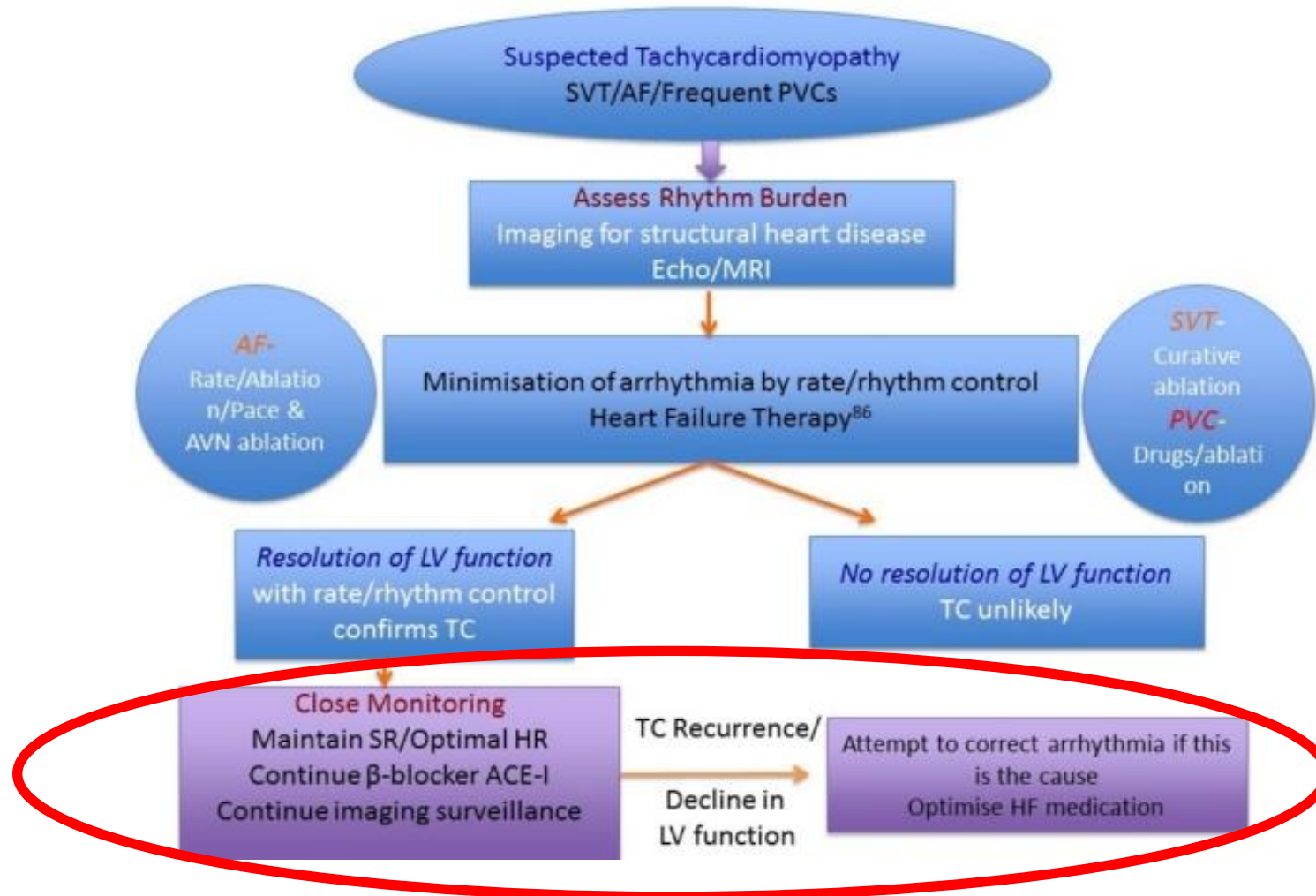


Casus: deel 4

- Ontwaterd ingesteld op hartfalen medicatie
- Rate controle middels digoxine en later beta blocker
 - Start antistolling
- Na 1 maand ECV met behoud van sinusritme nadien
- Na 3 maanden EF 47%
- Na 6 maanden volledig herstel linker ventrikelfunctie
- **Tachycardiomyopathie?**



Follow up



Martin, Claire A, and Pier D Lambiase. "Pathophysiology, diagnosis and treatment of tachycardiomyopathy." *Heart (British Cardiac Society)* vol. 103,19 (2017): 1543-1552. doi:10.1136/heartjnl-2016-310391



Take home messages

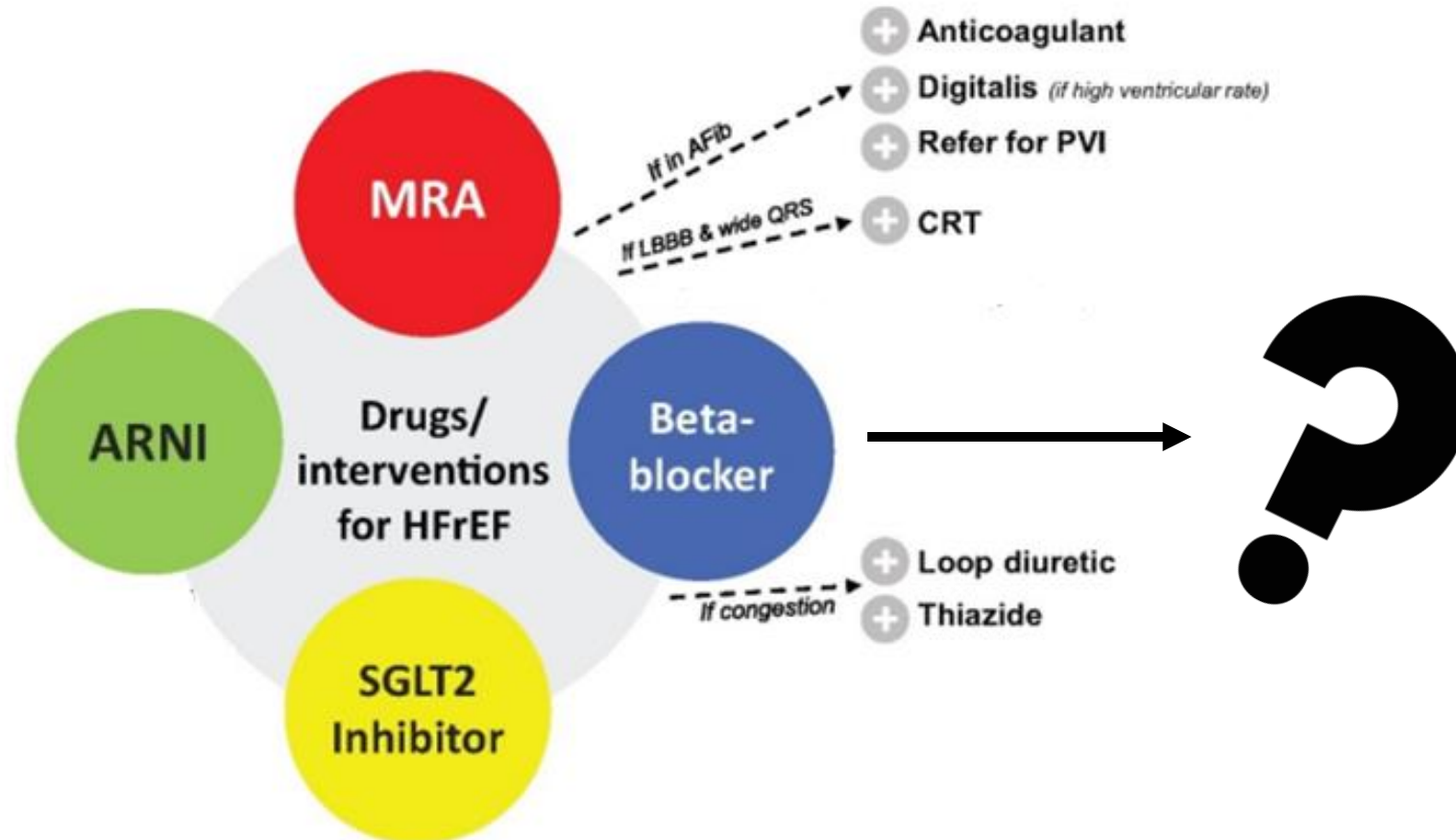
- Hartfalen (of verergering van) door tachycardie, irregulair ritme en asynchroniteit
- Lastige diagnose, maar vaak herstel LVEF bij behandeling aritmie
 - Voorgeschiedenis en klinische gegevens gebruiken
 - Andere diagnoses uitsluiten
- Doel behandeling:
 - Adequate rate controle
 - Streven naar ritme controle
 - Pace and ablate bij persisterend AF en hartfalen
- Controleer effect behandeling
- Active monitoring



Vragen?



Behandeling hartfalen bij atriumfibrilleren

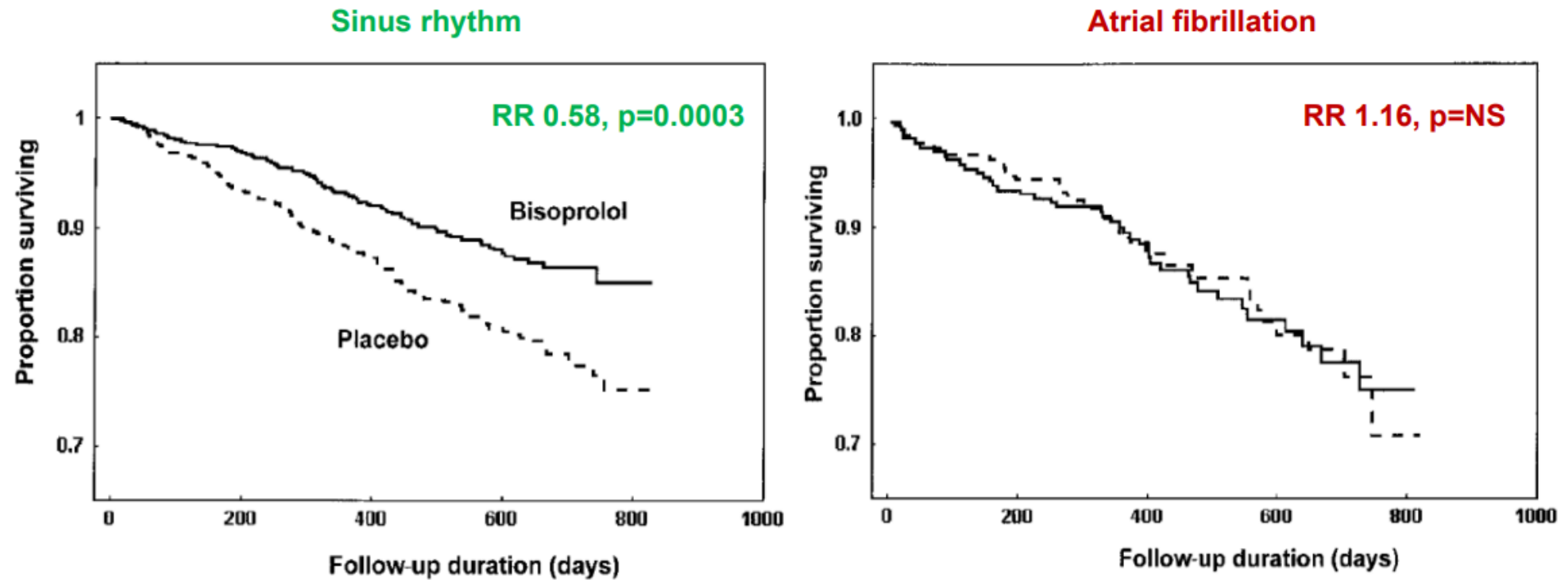


Medicamenteuze behandeling hartfalen

Recommendations	Class	Level
An ACE-I is recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.	I	A
A beta-blocker is recommended for patients with stable HFrEF to reduce the risk of HF hospitalization and death.	I	A
An MRA is recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.	I	A
Dapagliflozin or empagliflozin are recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.	I	A
Sacubitril/valsartan is recommended as a replacement for an ACE-I in patients with HFrEF to reduce the risk of HF hospitalization and death.	I	B



Beta blocker niet effectief bij hartfalen



Lechat, P et al. "Heart rate and cardiac rhythm relationships with bisoprolol benefit in chronic heart failure in CIBIS II Trial." *Circulation* vol. 103,10 (2001): 1428-33. doi:10.1161/01.cir.103.10.1428

