



ACC Latin America
Conference 2017



MEXICO CITY
JUNE 22 – 24, 2017

GLOBAL EXPERTS, LOCAL LEARNING



ACC Latin America
Conference 2017

Solutions for Every Day Problems
Ask the Experts Roundtable:
Common Dilemmas in AF

Moderator: Hector Michelena, MD

Presenters: Drs. Samuel Asirvatham & Manlio F. Marquez

Saturday, June 24, 2017

3:30 to 4:15 p.m.





Challenges in Atrial Fibrillation

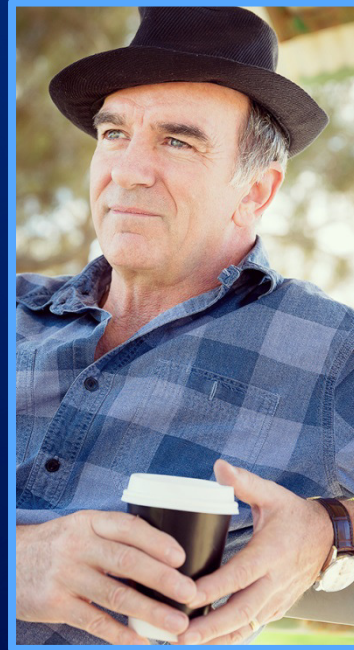


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Heart Rhythm Services
Mayo Clinic Arizona

Learning Objectives

- **Recognize** reversible causes of AF
- **Identify** upstream therapies for AF management
- **Explore** various treatment strategies for AF
- **Formulate** a plan for patients with high bleeding risk

Atrial Fibrillation Cases



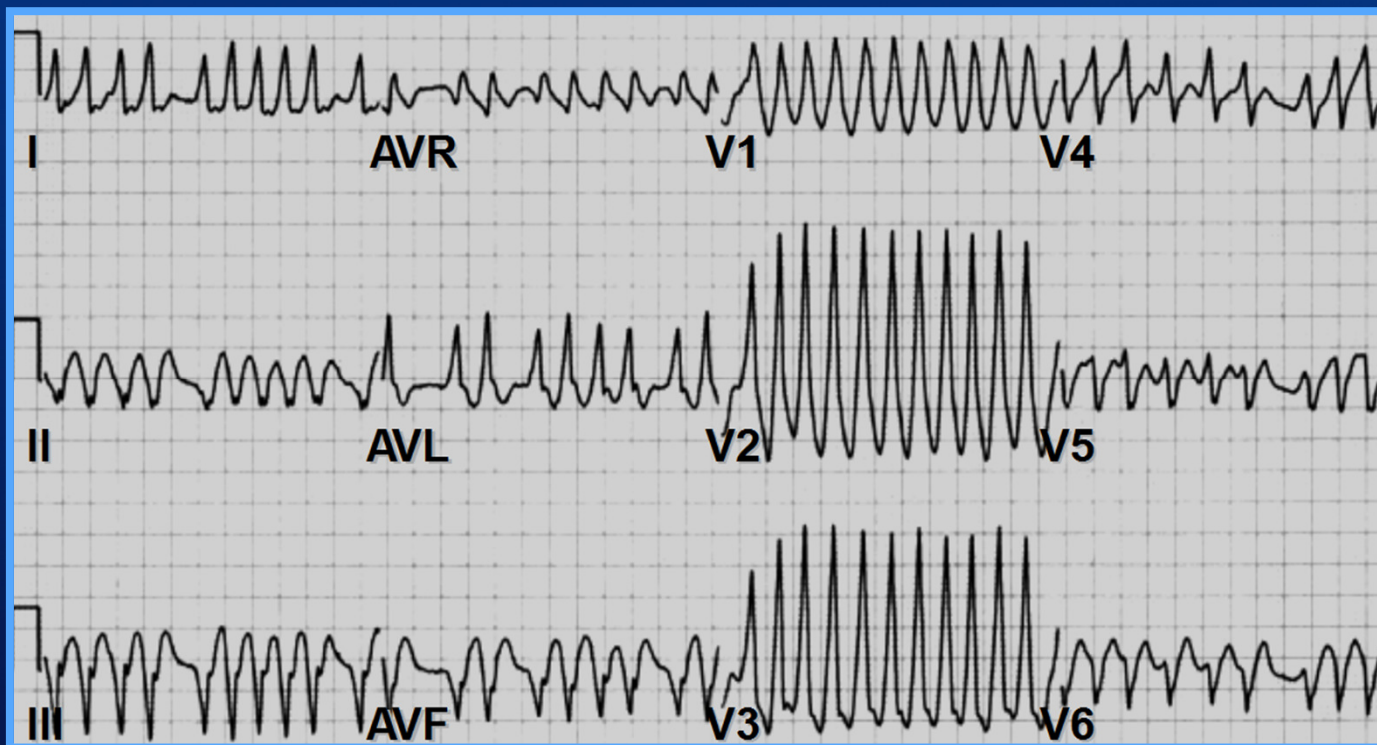
Atrial Fibrillation: Case 1



Case 1: Young Male With Syncope

- 35 year old male passed out while playing basket ball
- Palpitations before onset of dizziness
- No significant past medical history
- Not on any medications

Case 1



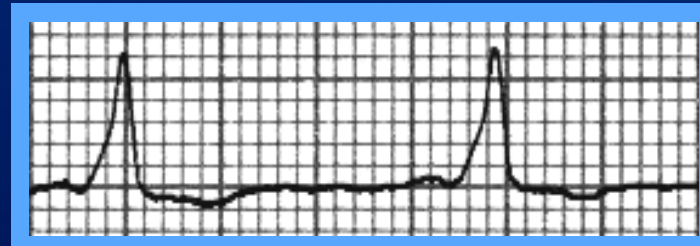
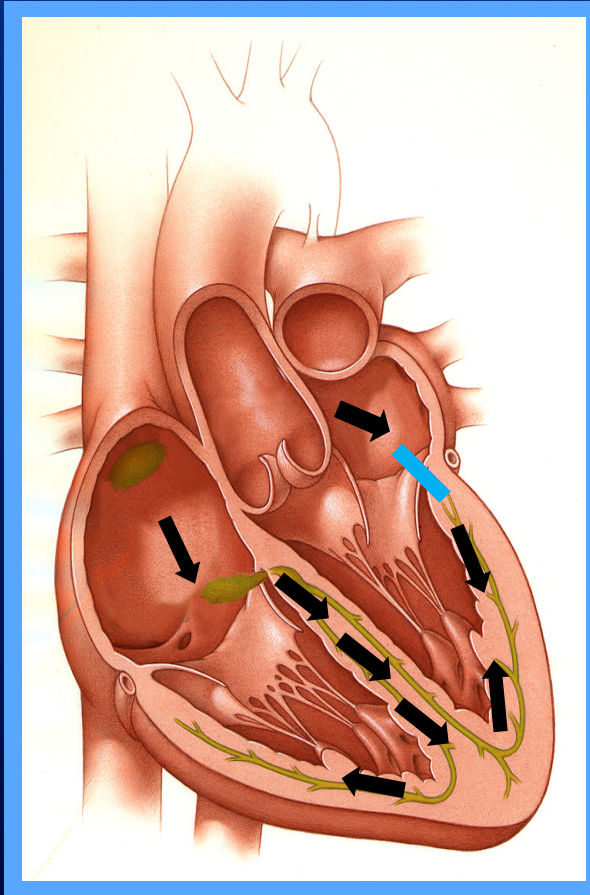
Most appropriate next step in management?

1. Adenosine
2. IV Metoprolol or Diltiazem
3. IV antiarrhythmic medications
4. Cardioversion

Case 1

Most appropriate next step in management?

1. Adenosine
2. IV Metoprolol or Diltiazem
3. IV antiarrhythmic medications
4. Cardioversion



Reversible Causes of AF

- Wolff-Parkinson-White (WPW) syndrome
- Thyroid disorders
- Holiday heart syndrome
 - Alcohol withdrawal
- Recreational drug use
- Fever (pneumonia)

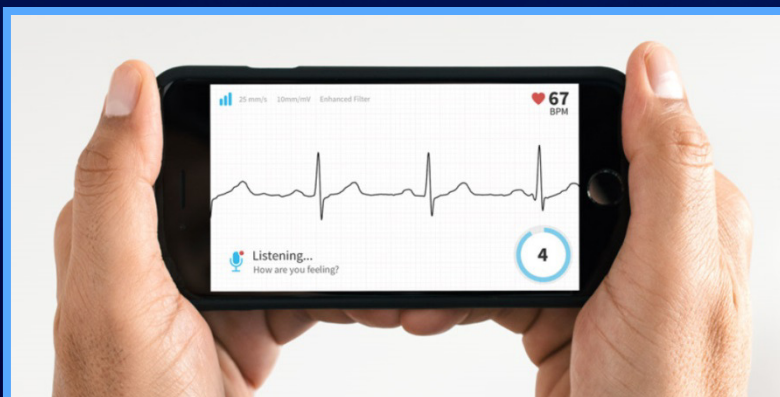
Atrial Fibrillation: Case 2



Case 2

- 30 year old male college student
 - Palpitations
- BMI 44 kg/m²
 - 50 pound gain over the last 6 months
- He wears a shirt with color size 18”
- Snores at bedtime – per his girl friend
- Clinic exam: Normal sinus rhythm

Patient:
Recorded: Monday, September 19, 2016 at 10:10:44 PM
Heart Rate: 120 bpm
Duration: 30s
Finding by Kardia: Possible atrial fibrillation

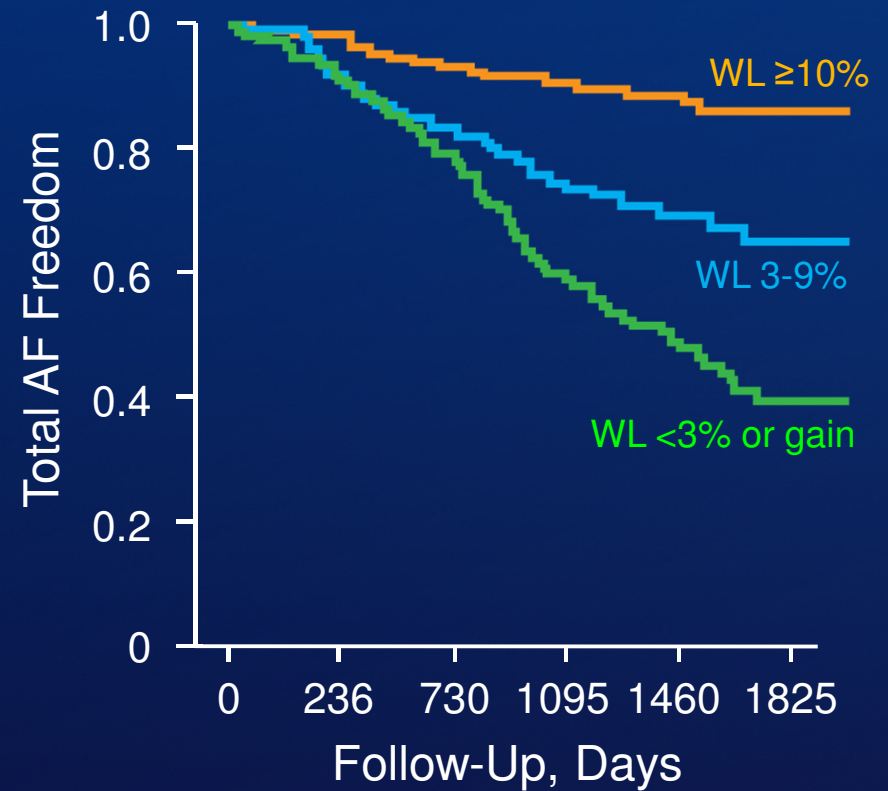
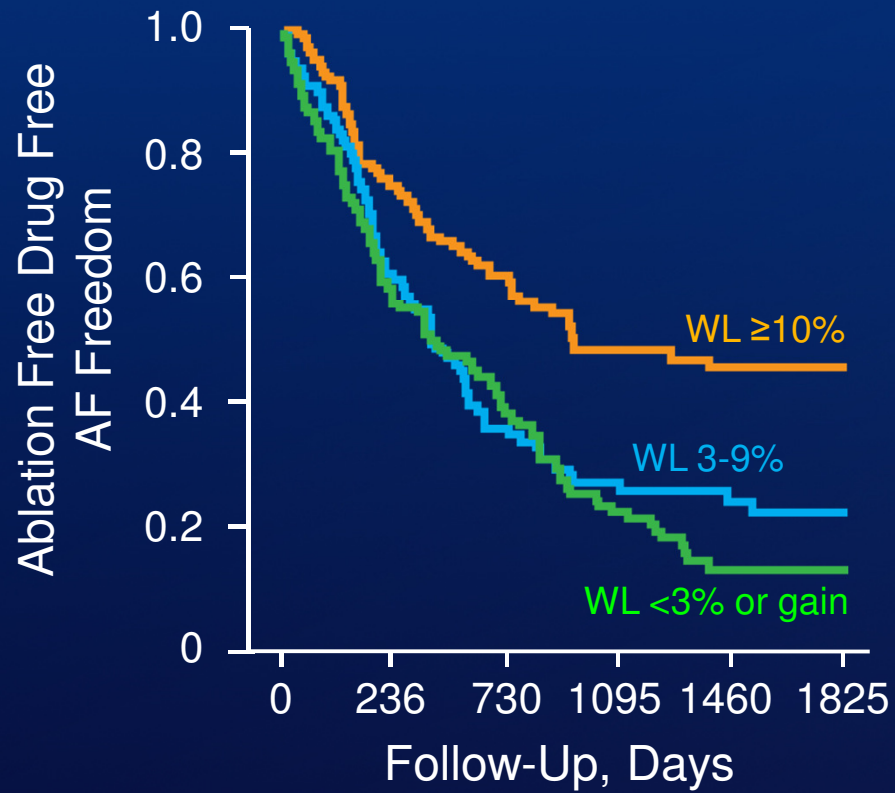


Case 2

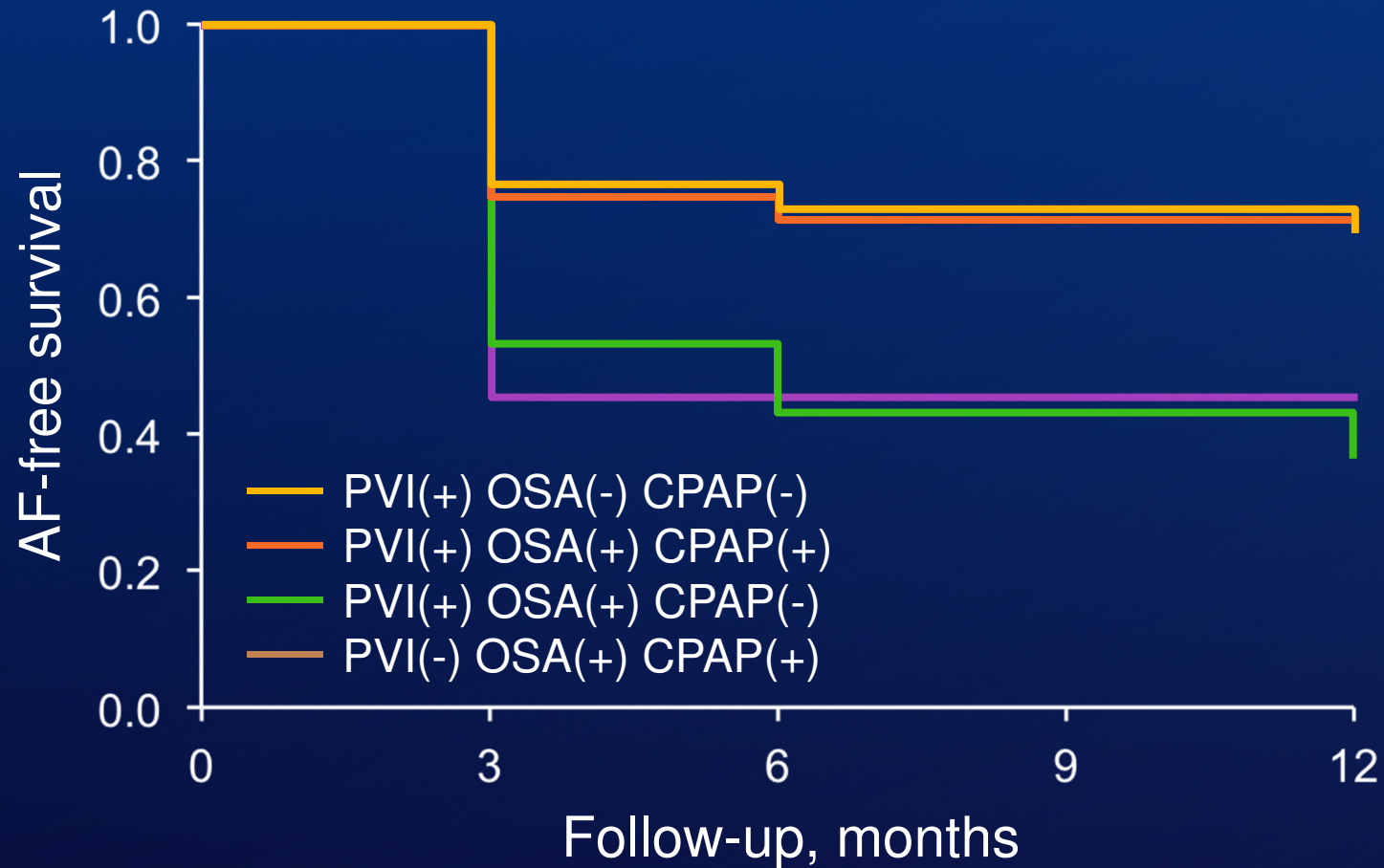
Most likely diagnosis?

1. Sinus arrhythmia
2. Sinus rhythm with PACs
3. Junctional rhythm, underlying artifact
4. Atrial fibrillation

LEGACY Study



OSA and AF



Atrial Fibrillation: Case 3



Case 3

- 66 year old male with HTN and highly symptomatic AF
- He has preserved EF and no other risk factors
- BMI 22 kg/m²

Most appropriate next step in management?

1. Rhythm control strategy
2. Rate control strategy
3. AV node ablation/PPM implant
4. Surgical MAZE procedure

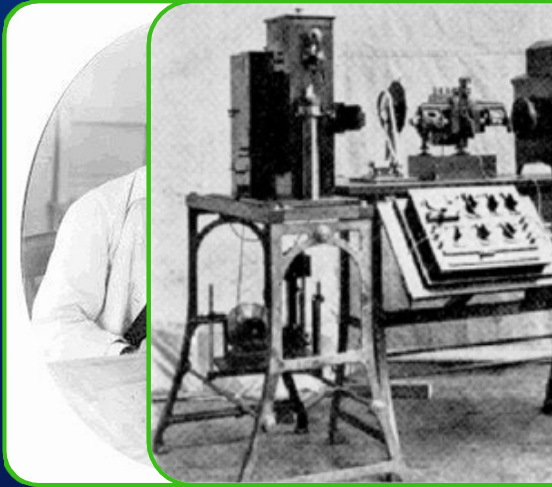
Brief History: Discovery



William Stokes

1854

Irregular Pulse and ECG waveforms

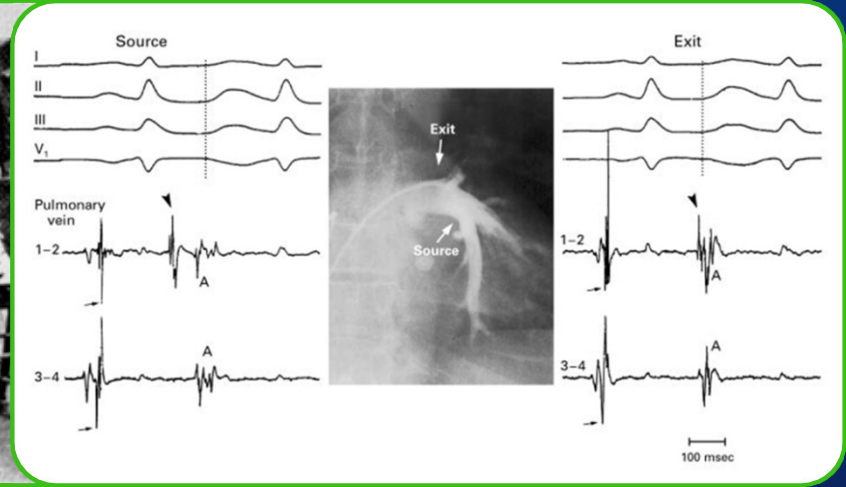


Karel Wenckebach and Max Einthoven

1904

1907

1908



Moe

1964

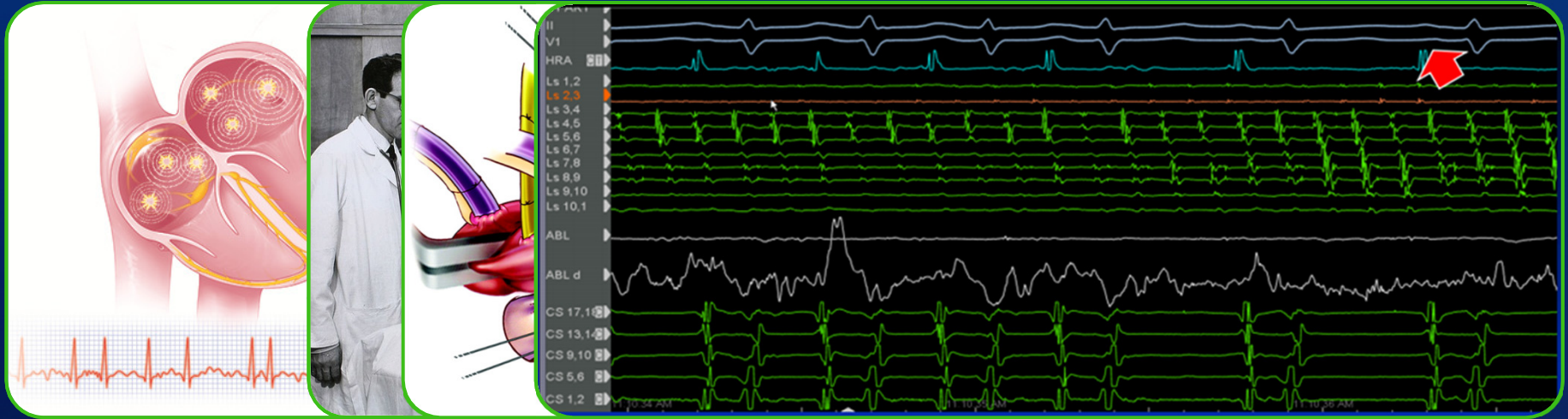
Multiple wavelet theory

Haissaguerre

1998

PV are the triggers

Brief History: Therapy



Phillips & Levine

Lown

Cox Haissaguerre

1949

1962

1980

1991

1998

Rate control for
tachycardia
cardiomyopathy

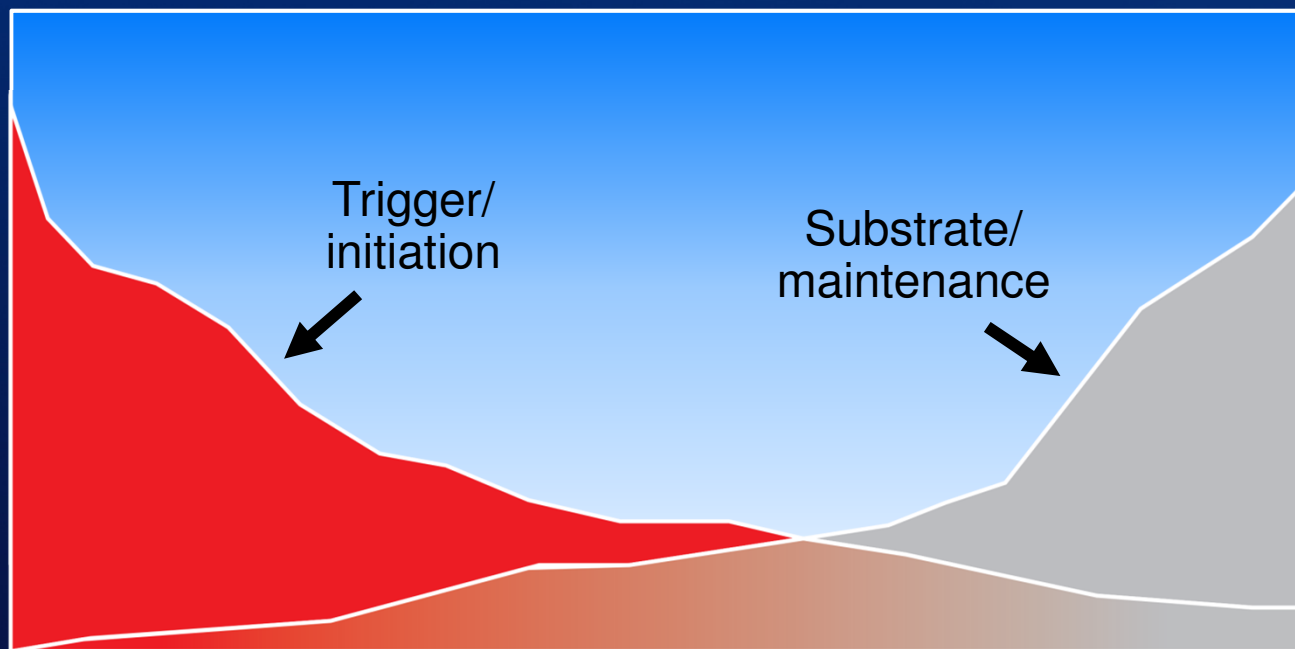
Cardioversion

Anticoagulation
Maze Procedure
Pulmonary vein
isolation

Paroxysmal

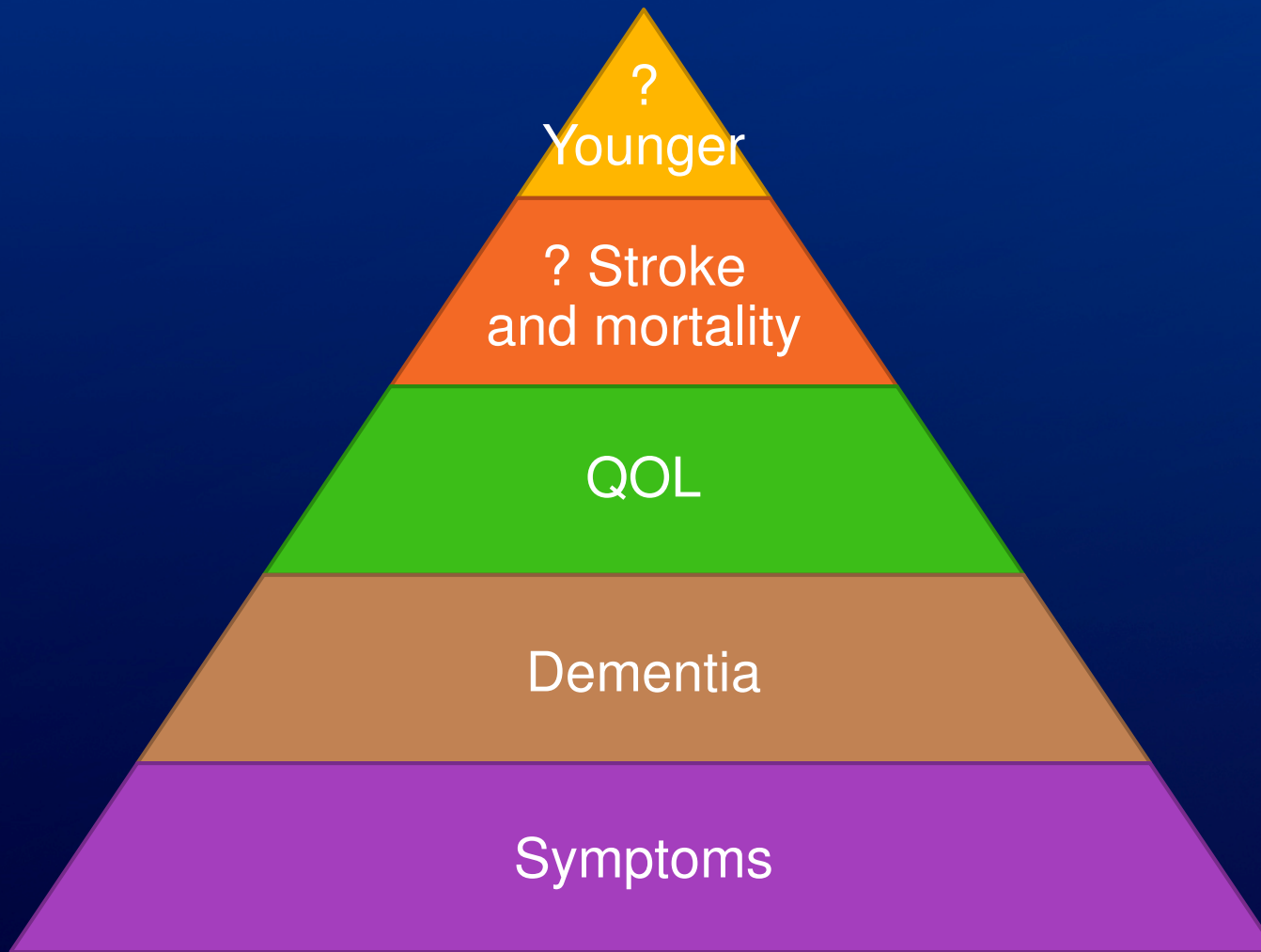
Persistent

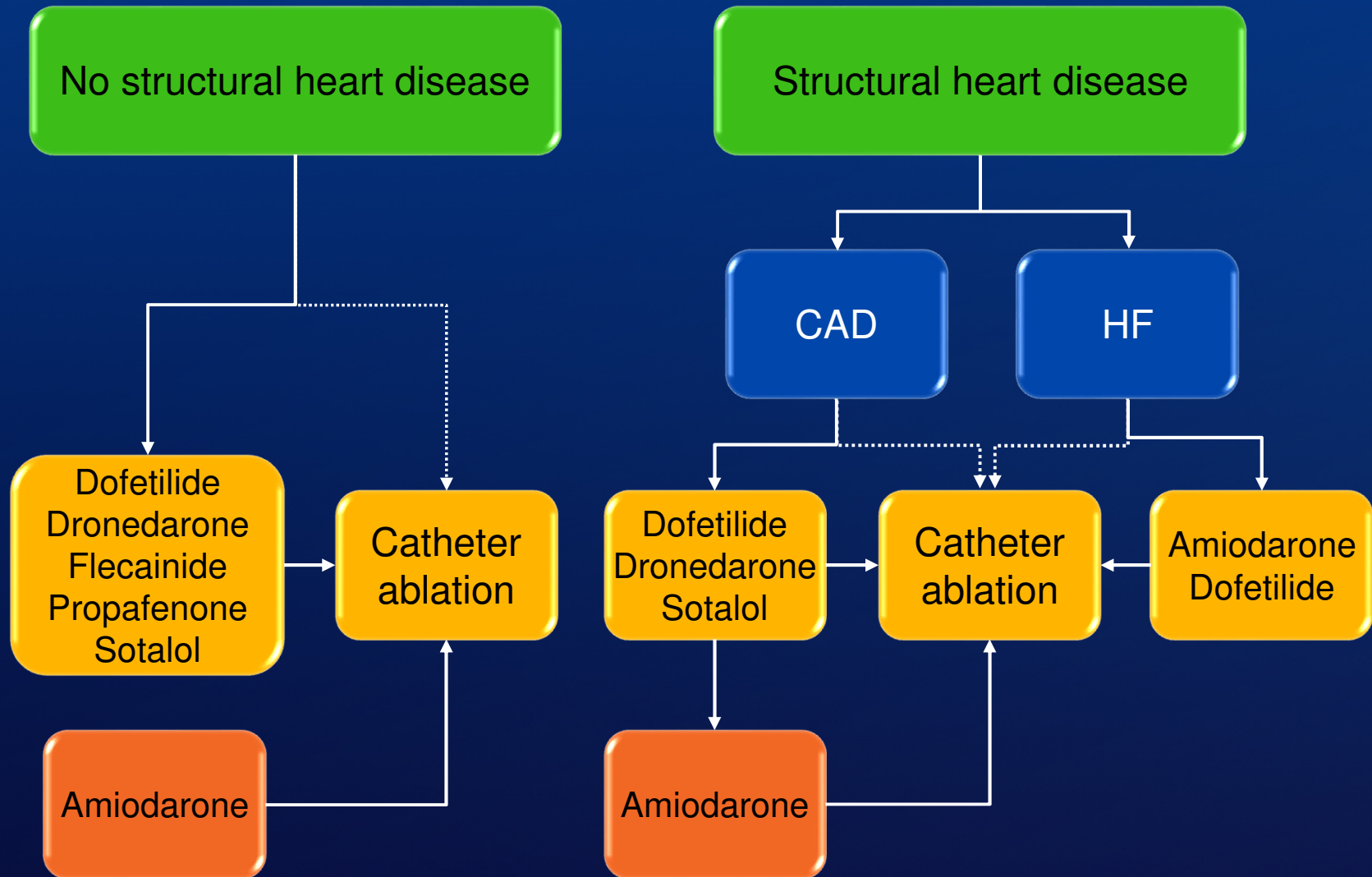
Permanent

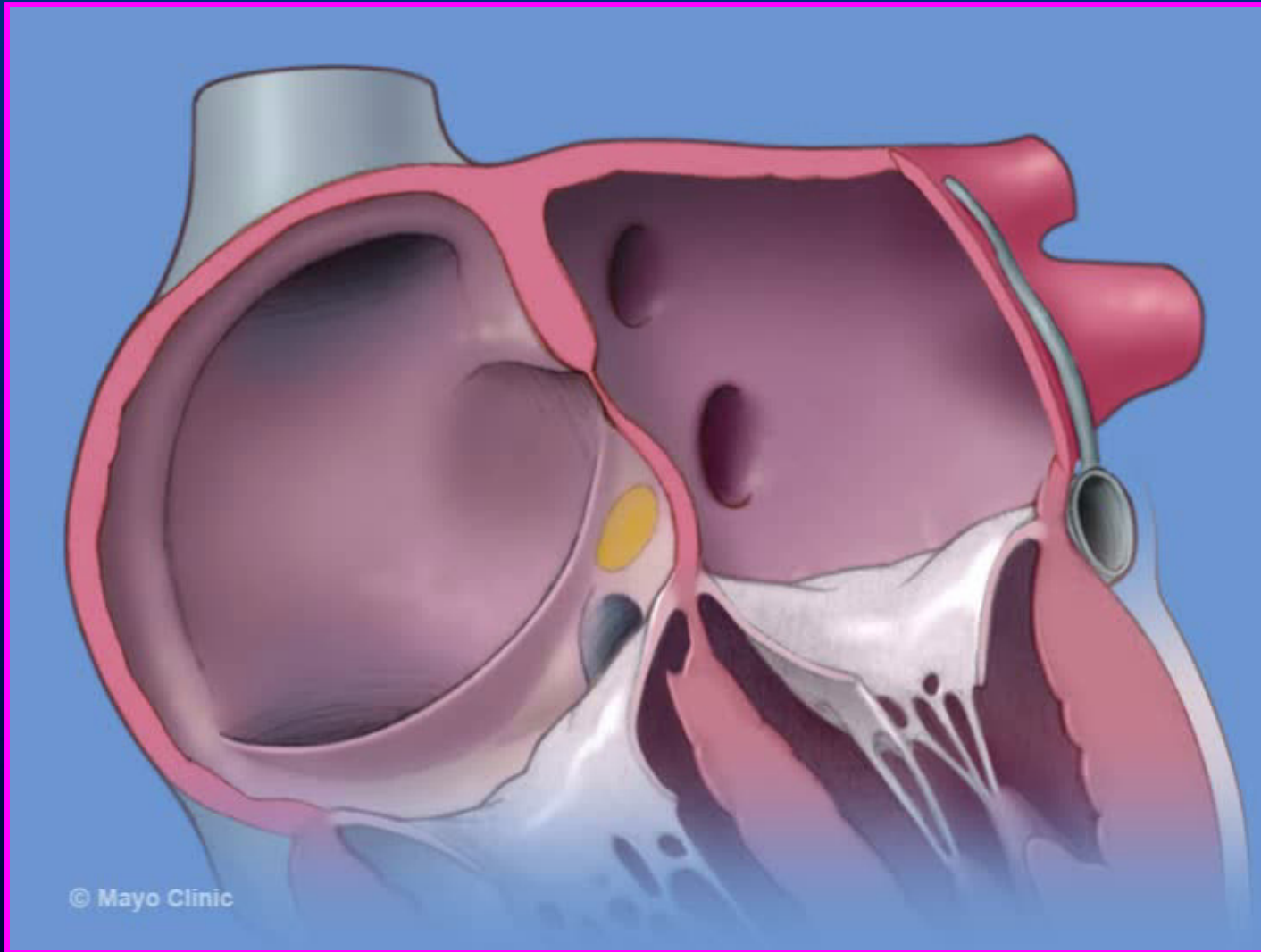


AF duration

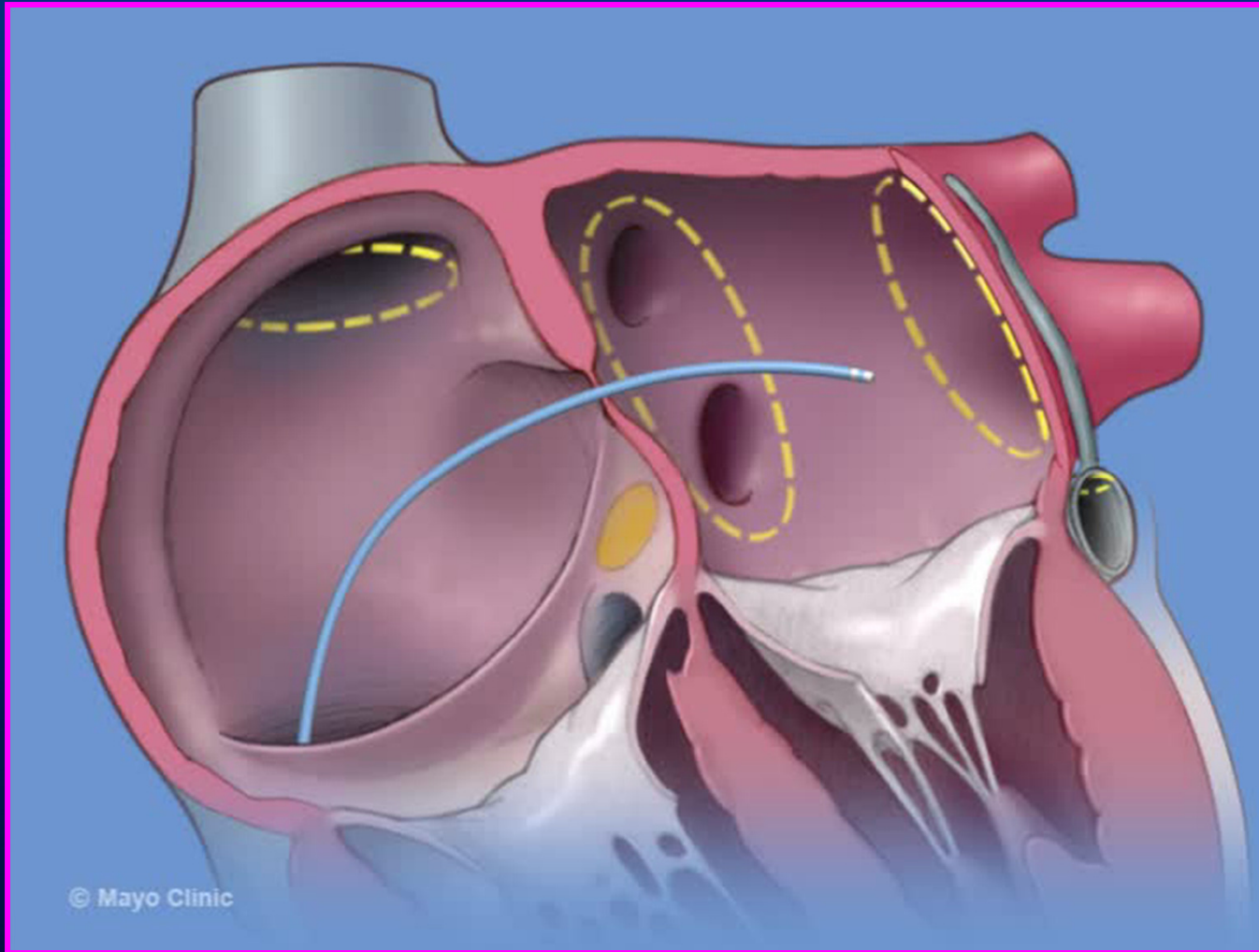
Why Rhythm Control?

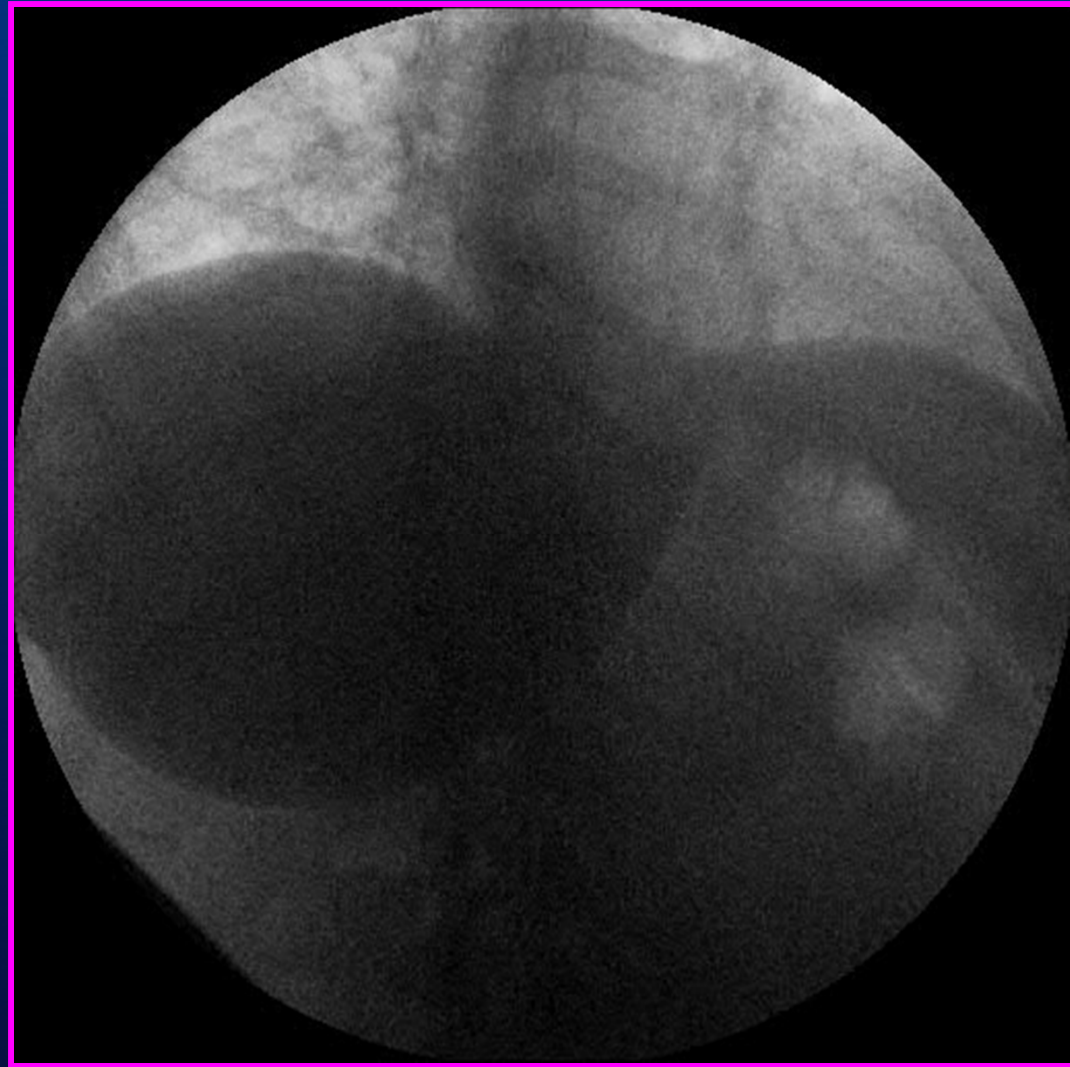


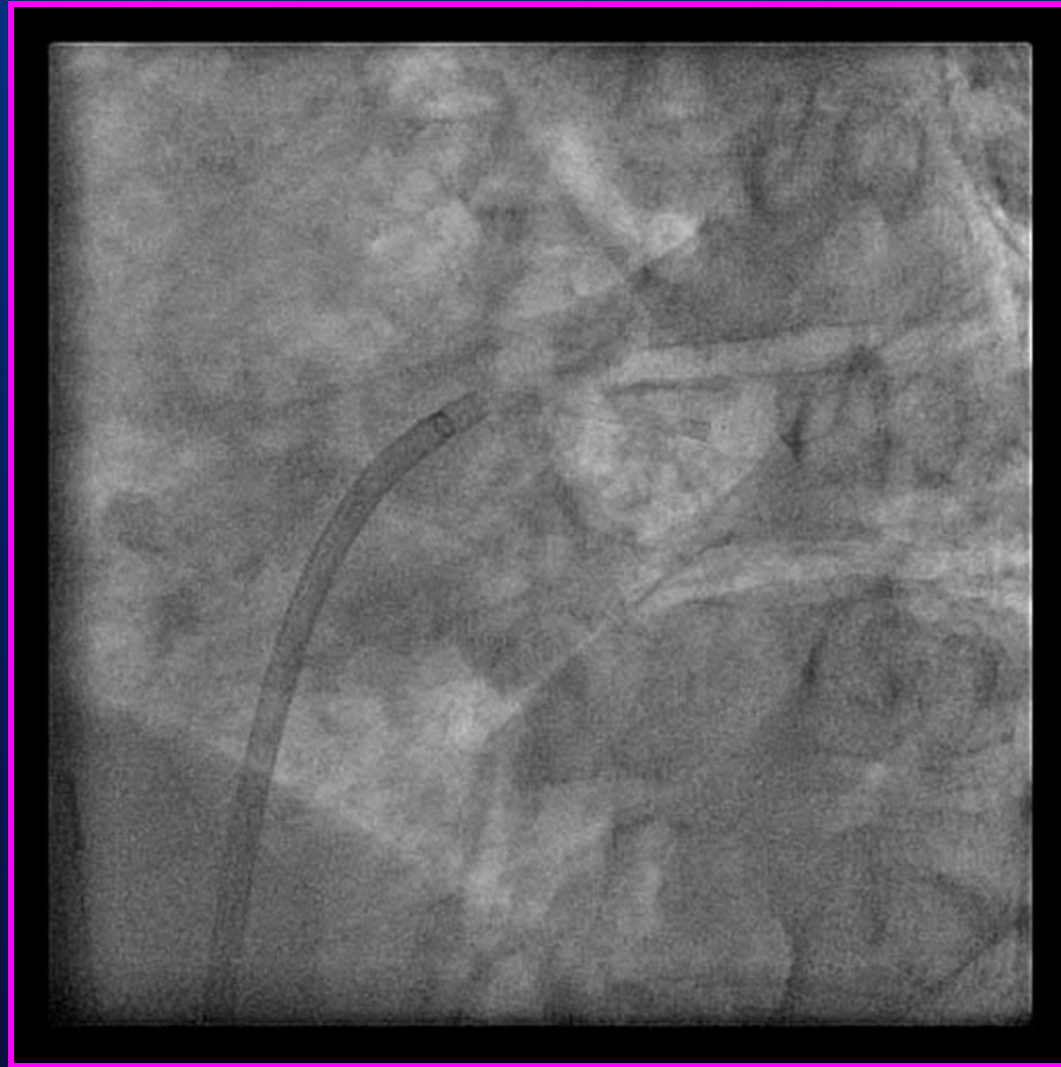




© Mayo Clinic

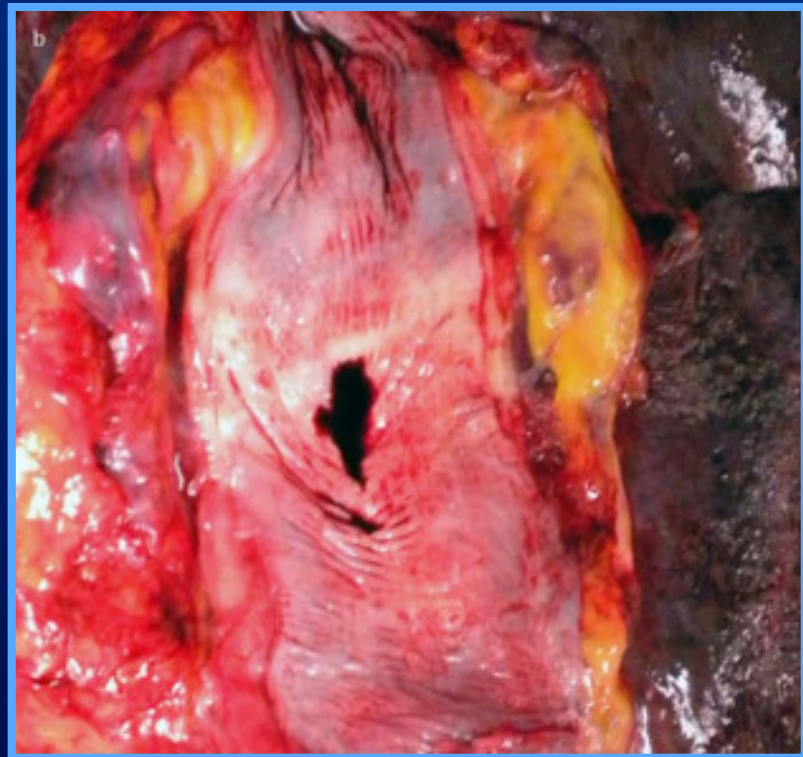
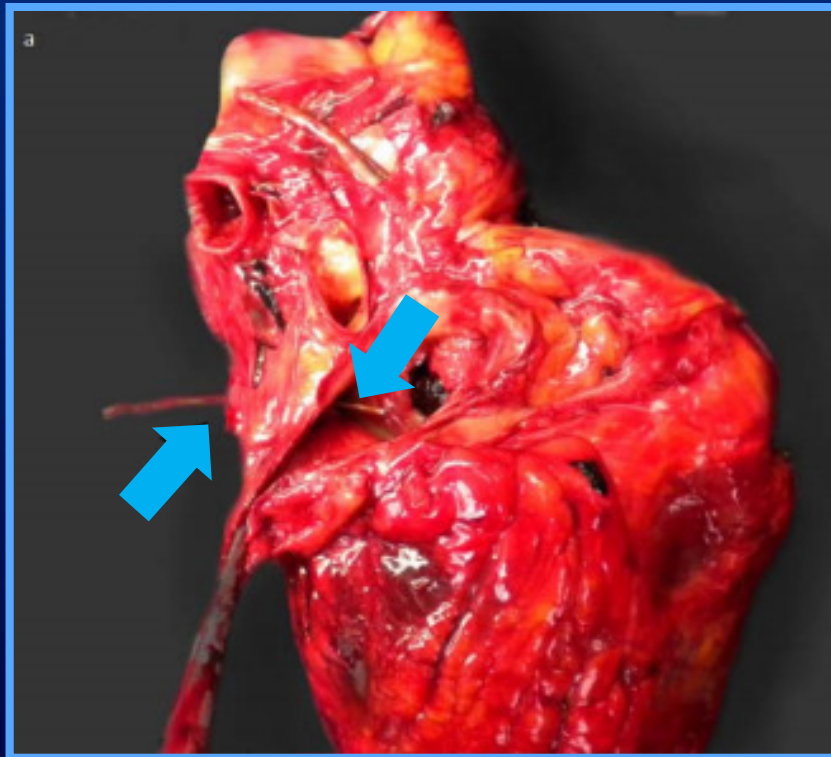


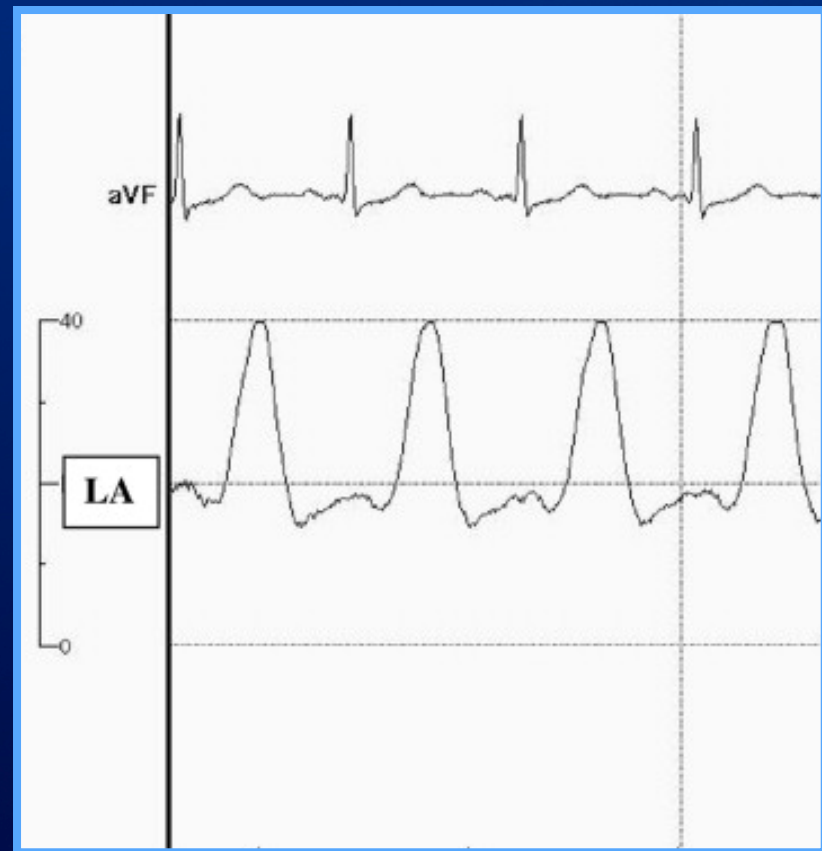
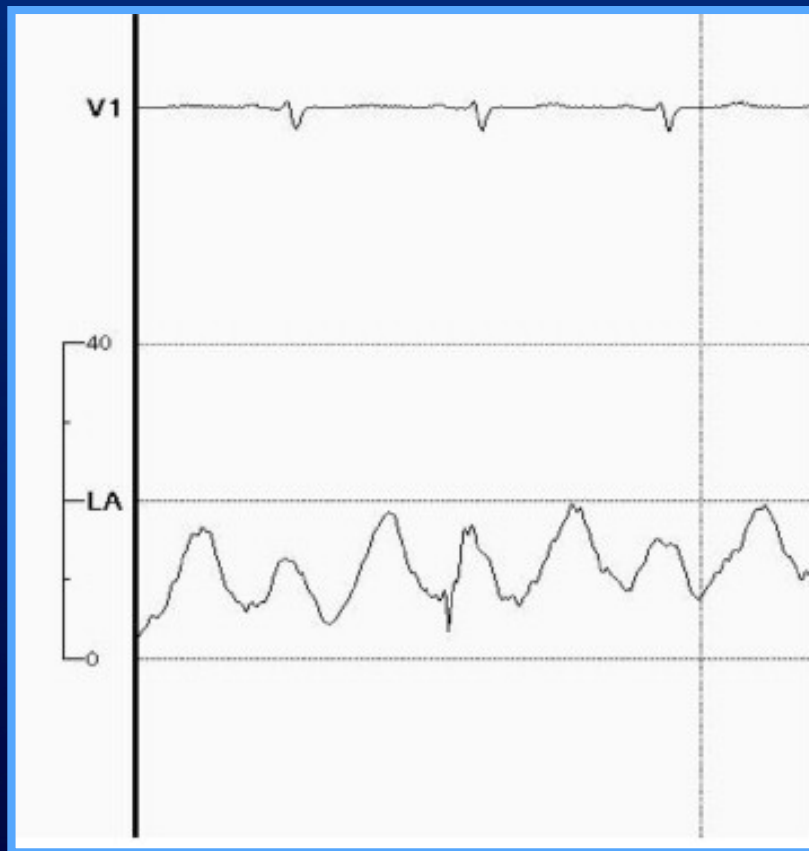




Success Rates

Paroxysmal AF	80%
Persistent AF	60%
Blanking period	Normal to have AF
Periprocedural complications	2-5%
Stroke/TIA	1%
Death	0.25%
Pericardial complications	1-2%





Atrial Fibrillation: Case 3



Case 3

Most appropriate next step in management?

1. Rhythm control strategy
2. Rate control strategy
3. AV node ablation/ PPM implant
4. Surgical MAZE procedure

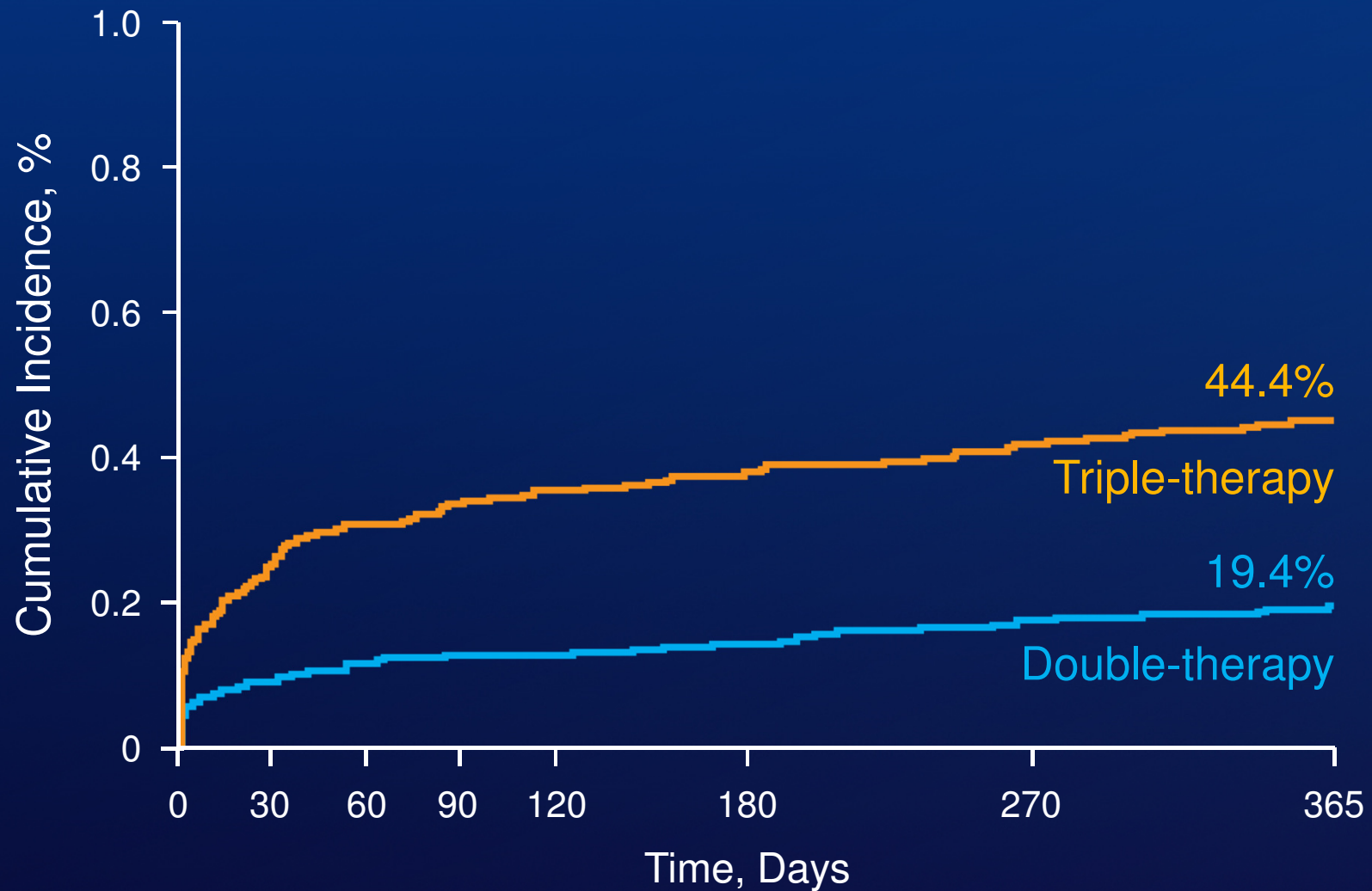
Case 3

- 2 weeks after recent cardioversion
- STEMI and PCI (drug eluting stent) to LAD

Anticoagulation regimen:

1. ASA + Clopidogrel
2. ASA + NOAC/Coumadin
3. Clopidogrel + NOAC/Coumadin
4. ASA + Clopidogrel + NOAC/Coumadin

Triple- vs Double-Therapy Groups

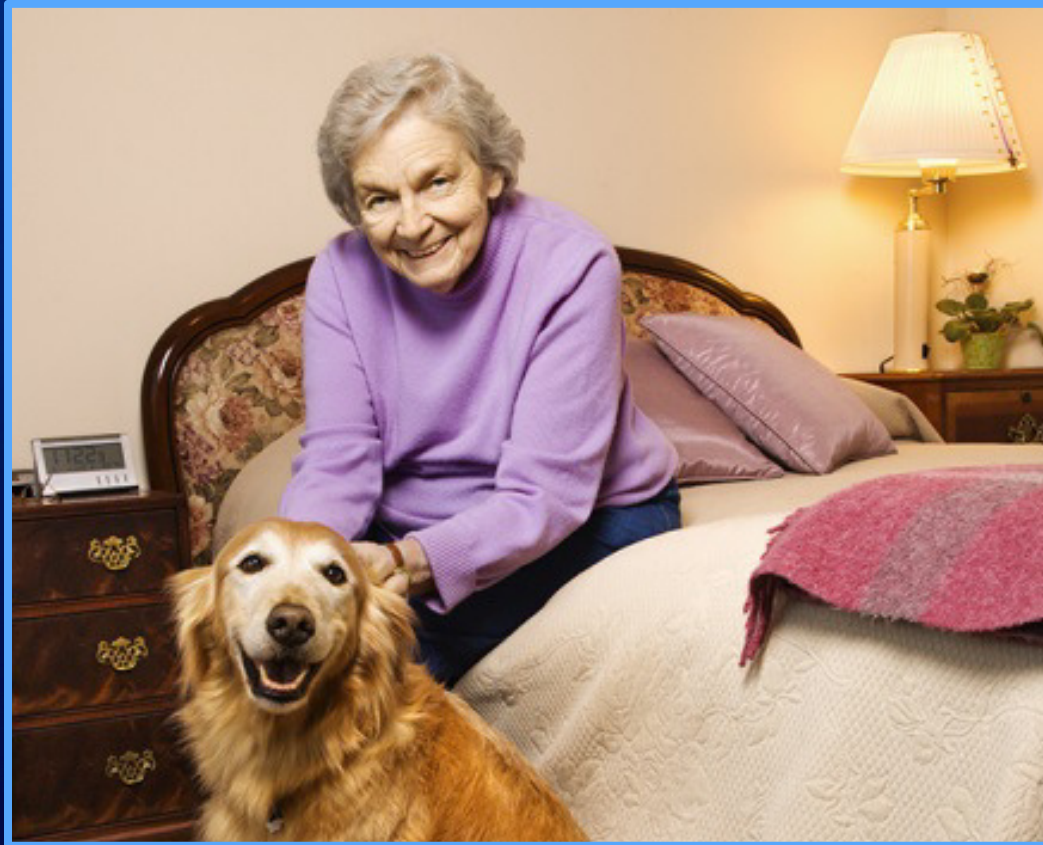


Case 3

Anticoagulation regimen:

1. ASA + Clopidogrel
2. ASA + NOAC/Coumadin
3. Clopidogrel + NOAC/Coumadin
4. ASA + Clopidogrel + NOAC/Coumadin

Atrial Fibrillation: Case 4



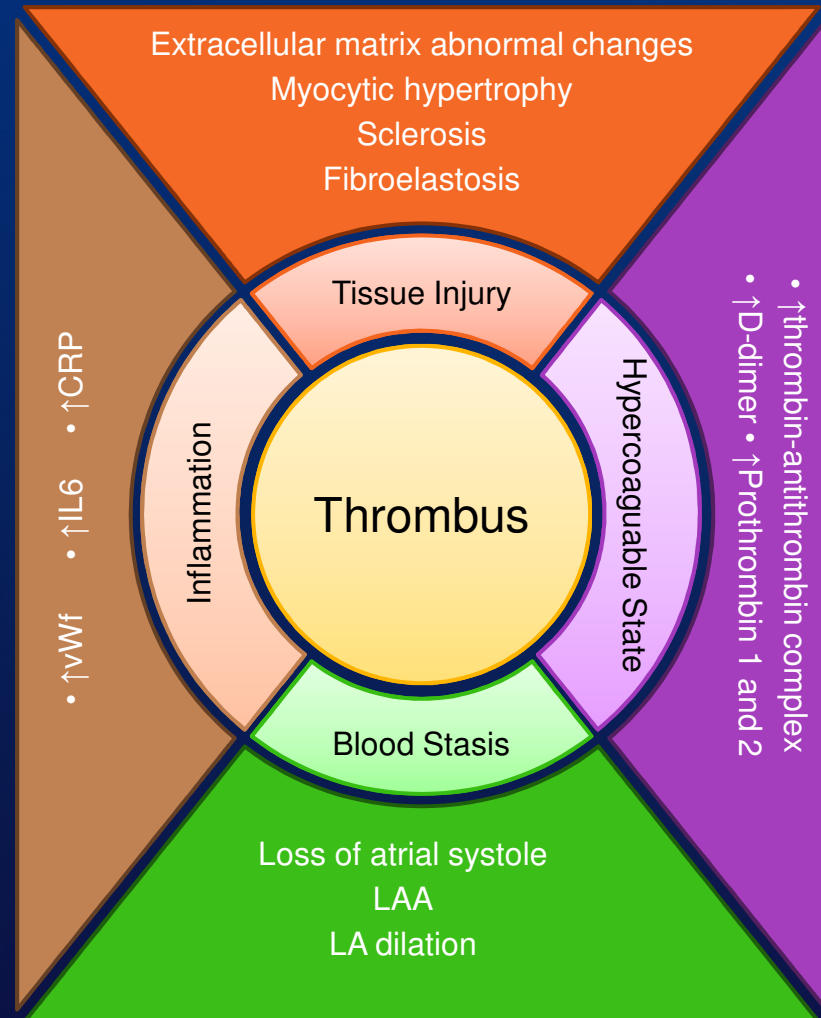
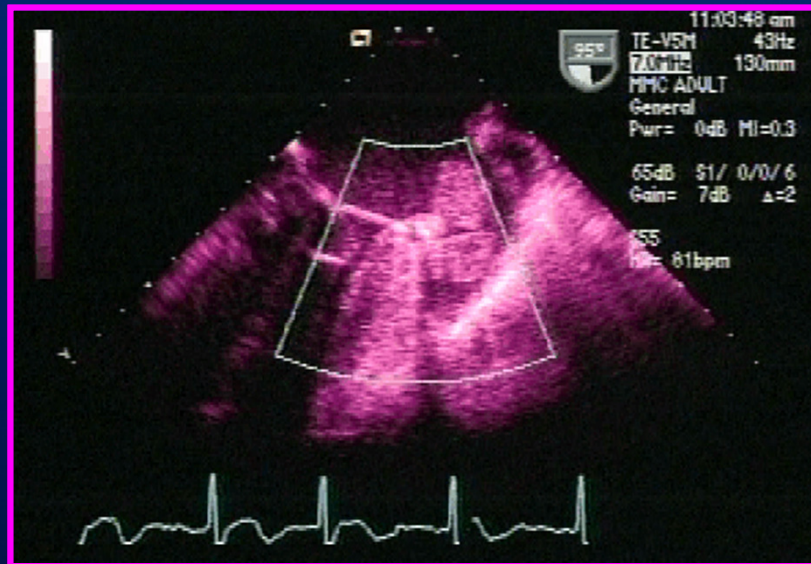
Case 4

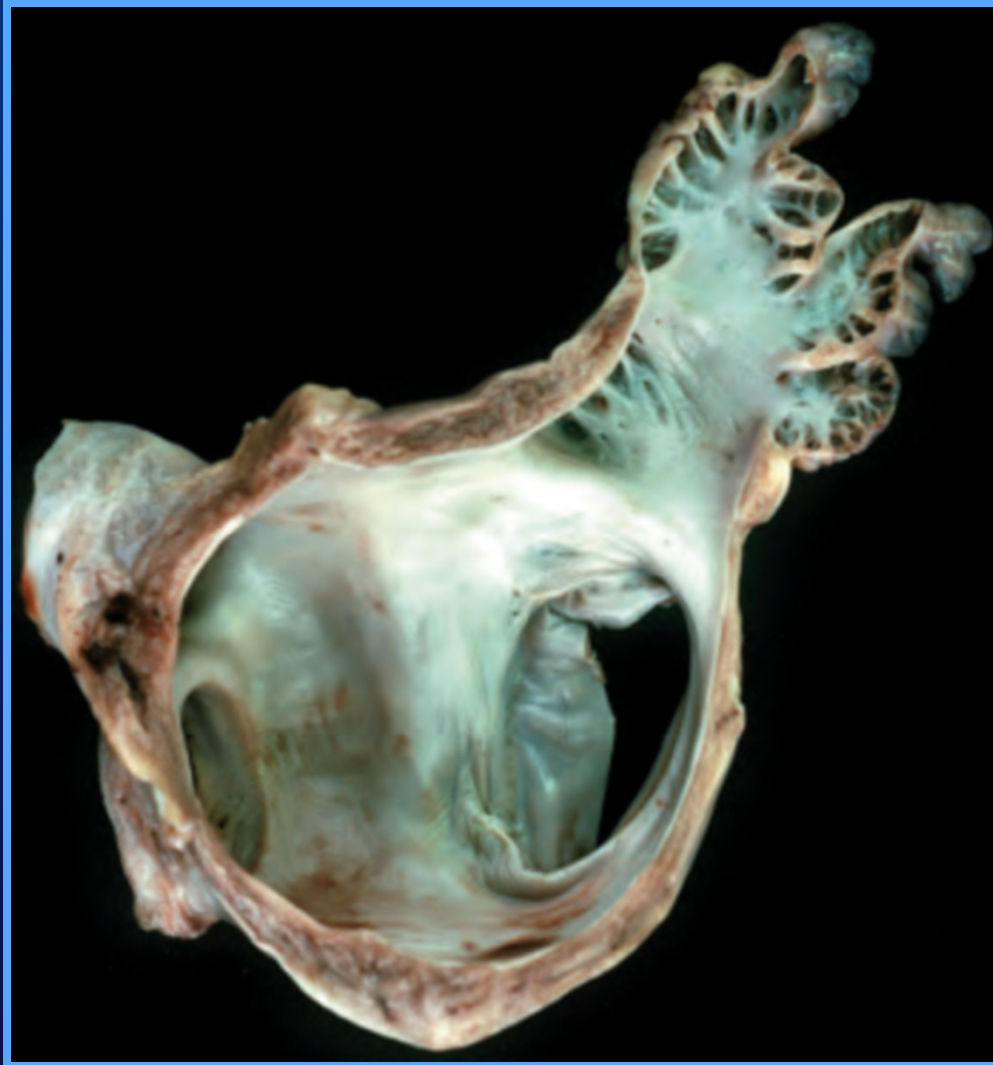
- 80 year old female with frequent falls
- Recent subdural hematoma with associated intra-parenchymal brain bleed

Most appropriate next step in management?

1. Coumadin INR 1.5-2
2. Apixaban
3. Aspirin
4. LAA occlusion

Perfect Storm

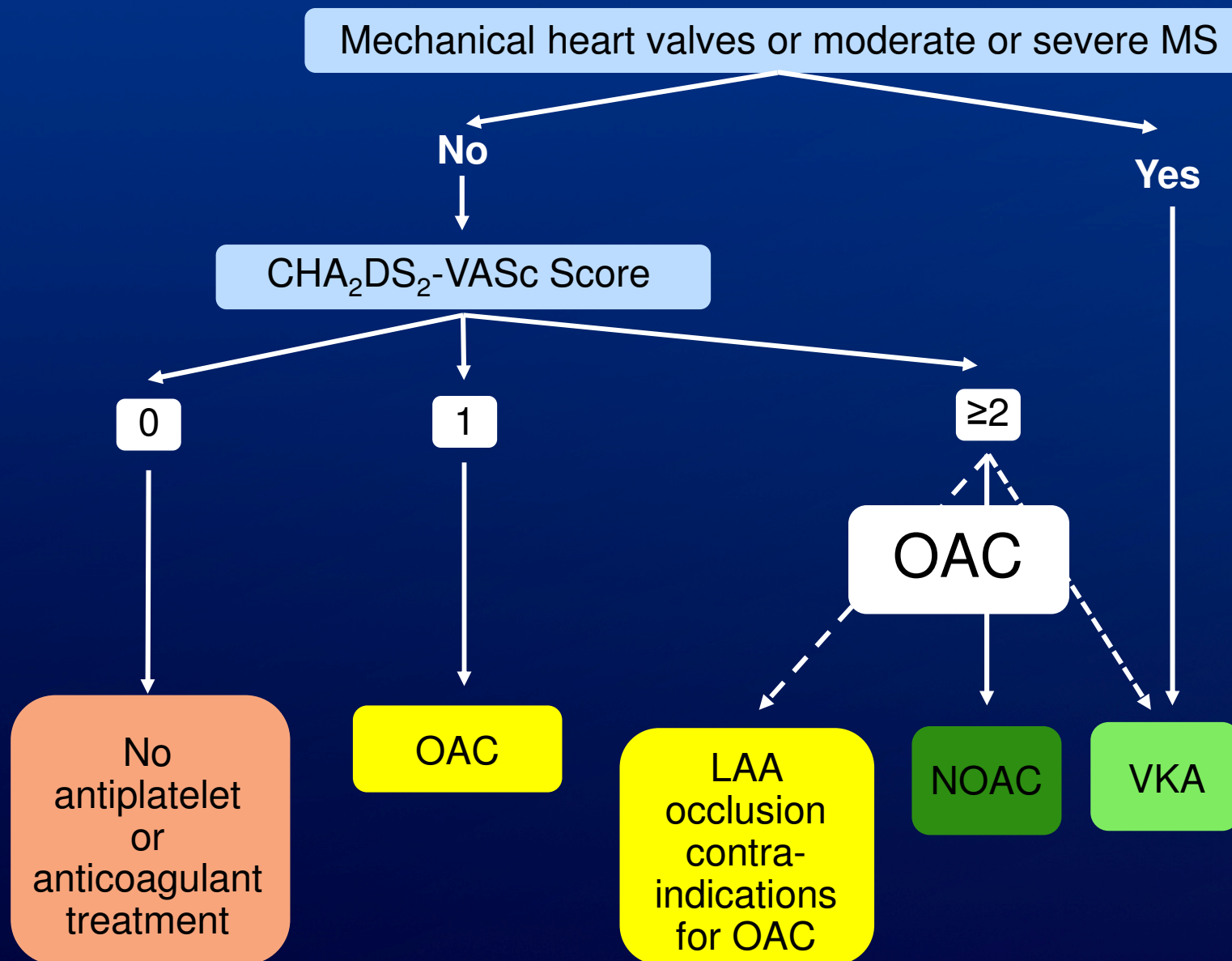




CHADS₂ and CHA₂DS₂VASc

Key differences

- Intermediate risk
- Low risk: no therapy
- Women aged 65 and above



- Coumadin
 - Cheap
 - Adherence
- ASA: Almost never for AF
- Dabigatran: Ischemic stroke reduction
- Apixaban: Low bleeding risk
- Rivaroxaban: Compliance

Watchman



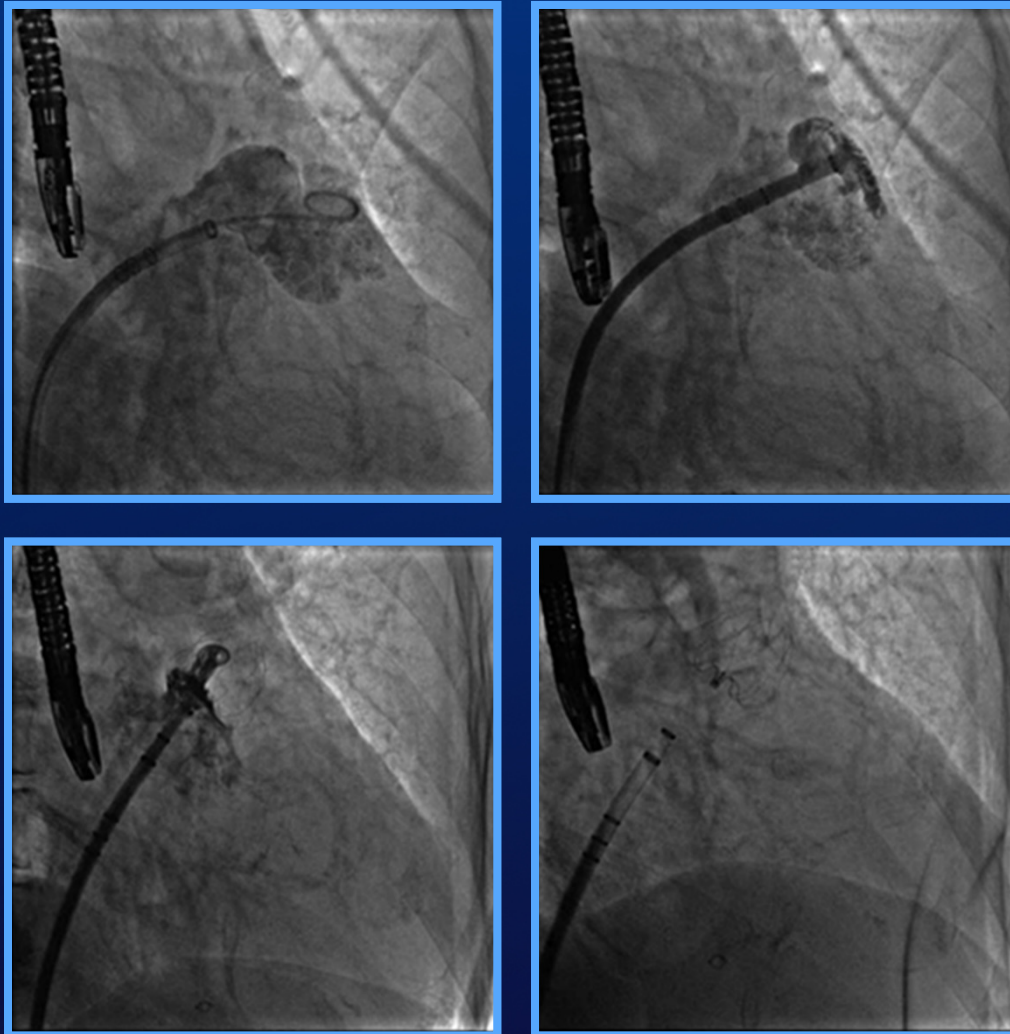
- Advantages

- Expertise readily available

- Disadvantages

- Requires anticoagulation
- Foreign body in circulation
- Erosion
- Embolization

Watchman



Case 4

Most appropriate next step in management?

1. Coumadin INR 1.5-2
2. Apixaban
3. Aspirin
4. LAA occlusion

Summary

- Reversible causes of AF
 - WPW
- Upstream therapy
 - Weight management
- Rhythm control strategy
 - Symptoms
- Stroke prevention
 - NOACs > warfarin
 - LAA occlusion



Questions & Discussion