



# 2026 Cardiology for Primary Care

**Atrial Fibrillation: Rate vs Rhythm control and OAC**

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# Financial Disclosure:

**Speaker/Educator for BioSense Webster**

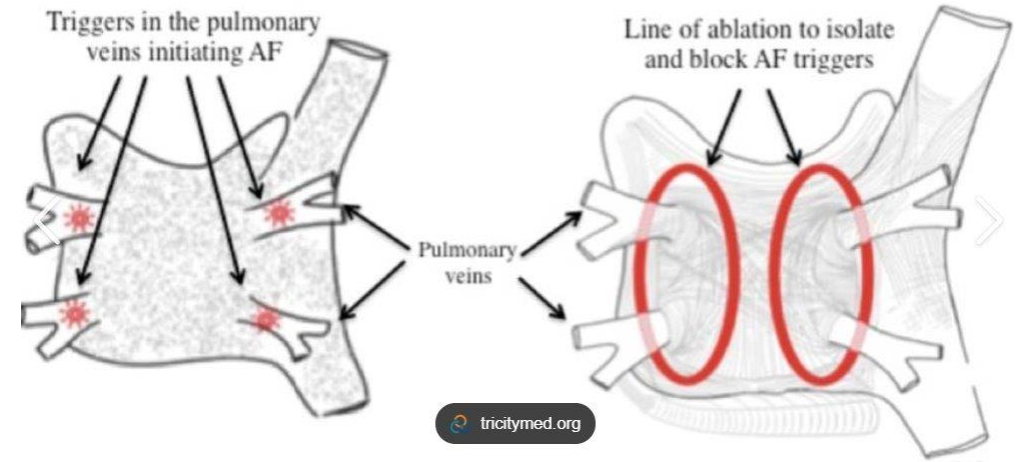
# Atrial Fibrillation – Brief Overview



An irregularly, irregular atrial arrhythmia originating from the left atrium, primarily from the pulmonary veins



There is no cure for AF – it is a chronic condition!



## Epidemiology and Prevalence

AF affects over 30 million people globally, increasing significantly with age, especially in those over 80 years.

# Atrial Fibrillation – Key Points

- Need to be aggressive in screening & treatment of OSA
- Aggressive BP control
- WEIGHT LOSS!

## Symptoms:

Vary from asymptomatic to extremely symptomatic

## MOST COMMON:

- DOE
- Fatigue
- Palpitations
- chest pain
- dizziness

# Atrial Fibrillation – Key Points

Sustained atrial fibrillation causes rapid electrical remodeling, making normal rhythm restoration challenging over time

*\*\*prompt treatment is key to success\*\**

If left uncontrolled, leads to significant decrease in quality of life and heart failure



Decreased quality of life



Acute heart failure – volume overload



Systolic heart failure



Increased stroke risk

# Atrial Fibrillation: Management – Rate control

Two options for treatment: Rate control vs Rhythm control

## Rate Control

Only time to rate control is if patient is asymptomatic, EF normal, and can be anticoagulated appropriately.

**\*\*This is a rare patient\*\***

Can use beta blockers, calcium channel blockers, rare - digoxin and amiodarone

If unable to rate control with medications, may need AV node ablation + pacemaker

# Atrial Fibrillation: Management – Medications

## Medications:

4 classes of drugs : Vaughan Williams class

- Class I – flecainide, propafenone (rhythm control)
- Class II – beta blockers
- Class III – dronedarone (rhythm control)
- Class IV – calcium channel blockers

\*\*Note – amlodipine, nifedipine are not a rate control agents.

\*\*THINK - diltiazem or verapamil = AV nodal agents

\*\*Note – clonidine also can cause bradycardia

# Management – Rhythm control; Medications

## Rhythm Control

Mild Agents

### **Class IC agents - flecainide, propafenone**

- Blocks Na channels in the heart
- Doesn't have the high toxicity risk like others
- Monitor renal function
- Can't use with CAD patients (can actually be proarrhythmic)

### **Class III- dronedarone**

- Blocks ion channels (K, Na, Ca) and beta-adrenergic receptors that slows electrical signals in heart to regulate rhythm
- Has GI side effects
- Not overly effective
- Monitor LFTs – has some toxicities similar to Amiodarone
- \$\$\$



# Management – Rhythm control; Medications

## Strong Agents

### **dofetilide**

Class III - mainly K channel blocker

**\*\*Must be admitted to hospital for initiation\*\***

Can cause potentially life threatening Qtc prolongation

Monitored 5 doses in hospital on high risk tele and with EKGs post dosing

### PRO:

- very well tolerated
- As strong as Amiodarone without long term toxicity
- Can be used with CMO, bradycardia

### CON:

- Drug interactions - common abx (Zpack), anti-nausea meds, psych drugs most common
- Now generic but can be expensive
- Hospital stay
- Can't be used in severe renal dysfunction

# Management – Rhythm control; Medications

**amiodarone** (has characteristics of all 4 classes)

PRO:

- Strongest drug we have
- Can be used in heart & kidney failure
- Reasonably priced
- Treats atrial & ventricular arrhythmias

CON:

- Long term toxicity: lungs, thyroid, liver, eye - Sometimes irreversible
- A lot of side effects: GI, overall poor tolerability, gait instability

**sotalol**

Class II and III - natural beta blocker but also has some K channel blocker properties

PRO:

- stronger than normal beta blocker
- Cost
- Can also treat ventricular arrhythmias

CON:

- hospital stay - similar to Tikosyn
- It's a beta blocker (increased SE profile & not ideal in patients with SND or AVB)
- Can't be used in HF patients
- Monitor renal function during use - can't be used with severe renal dysfunction

# Management – Rhythm control; Cardioversion

Short term solution – gets them back to SR (hopefully) but does nothing to prevent the rhythm from recurring!

Needs AAD therapy vs ablation most of the time!

Preferably elective unless hemodynamically unstable

Prefer use of Anesthesia (can be done without but typically painful)

Risks:

- Sinus arrest – heart is "stunned" - rarely requires PPM
- Burn or irritation of skin
- Anesthesia concerns
- Needs to be able to lay flat – concern in acute heart failure

# Management – Rhythm control; Ablation

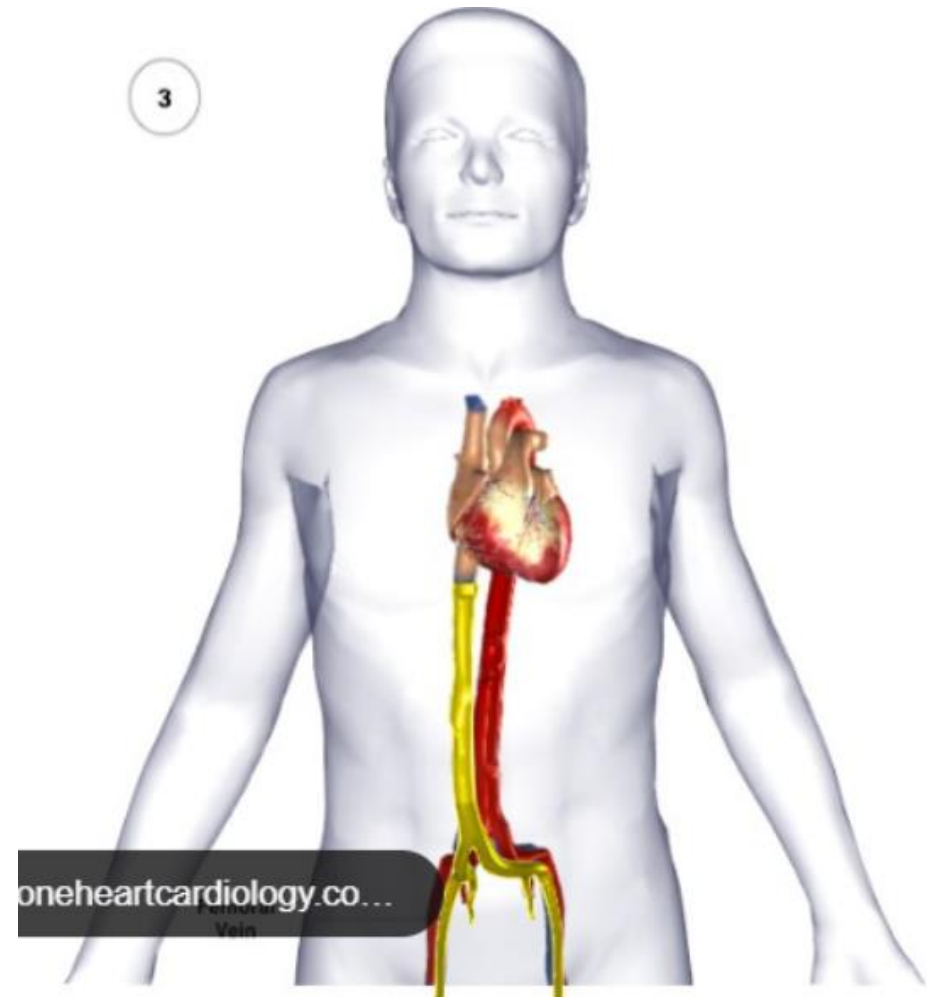
Invasive procedure done to isolate pulmonary veins and other areas where AFib originates

**\*\*This is now the gold standard of treatment\*\***

Previously, ablation was only recommended with failure of medications, however given increased safety with newer technology, it is now 1st line

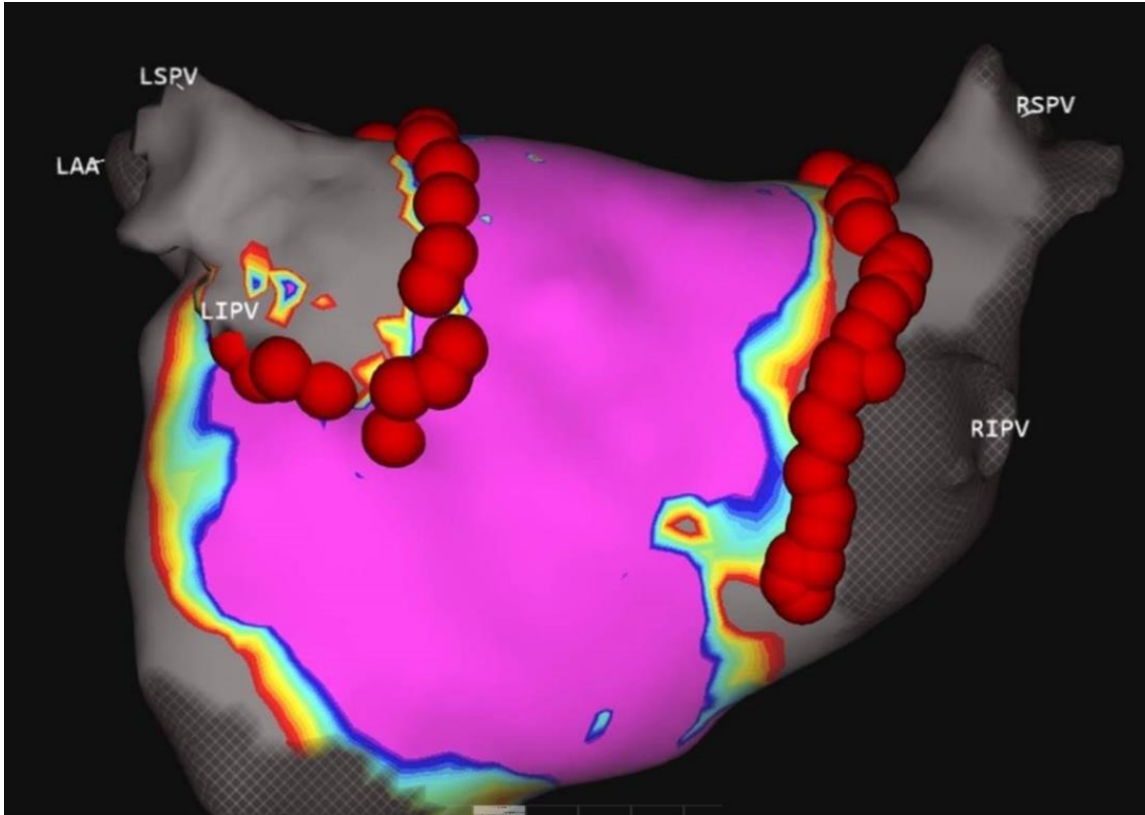
## ***What is involved with an ablation?***

- General Anesthesia
- Takes 2-3 hours
- Femoral vein with bilateral groin access --> goes through the IVC --> into the RA (right atrium). Crosses over septum into left atrium. Catheters are placed at the entrance of pulmonary veins to create isolation

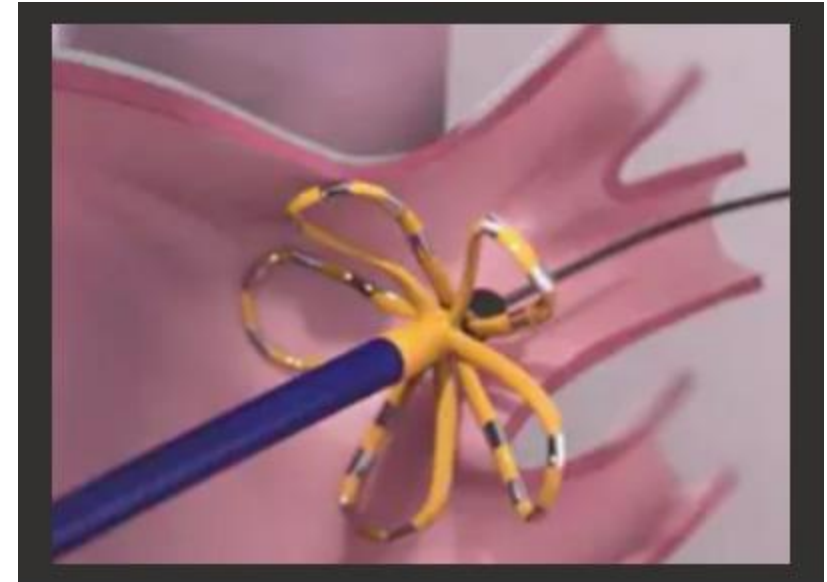


# Management – Rhythm control; Ablation

Image of a map - RF



PFA



# Management – Rhythm control; Ablation

## Post op care

- Must lay flat 2-3 hours post operative
- 90-95% patients go home same day
- No heavy lifting x 1 week
- Post op anesthesia routine care

# Management – Rhythm control; Ablation

## RISKS

- Anesthesia risks
- Previously concerned with atria-esophageal fistula – typically fatal
  - Less common with new technology – risk isn't eliminated, but minimal!
- Groin complications to include bleeding, infection, injury to femoral vein or IVC
- Pericardial effusion – not common. Sometimes managed easily but other times a pericardial window is needed with CTS
- Transseptal puncture creates a PFO – typically resolves on it's own but not always
- Cryoballoon – uses dye
- Radiation exposure – minimal but is used
- Pulmonary vein stenosis – not as common
- Elevated hemidiaphragm - typically slow to resolve but self limiting

# Management – Rhythm control; Ablation

## Notes on ablation

This is not a cure for AF - some patients require several ablations

Patient does NOT need to be in AFib for procedure (in fact, we prefer them being in SR as long as possible)

Not everyone is an ablation candidate

- prior structural heart abnormalities or prior procedures
- not anesthesia candidate
- LA thrombus
- Severe heart failure
- Ongoing infection
- Controversial - enlarged LA size. "it's too late"



# Anticoagulation

## Risk assessment

| CHADS2 – VASc Score |                                          |   | CHADS2-VASc Score | Stroke rate (%) |
|---------------------|------------------------------------------|---|-------------------|-----------------|
| C                   | Congestive Heart Failure                 | 1 | 0                 | 0               |
| H                   | Hypertension (>140/90 mmHg)              | 1 | 1                 | 1.3             |
| A                   | Age > 75                                 | 2 | 2                 | 2.2             |
| D                   | Diabetes Mellitus                        | 1 | 3                 | 3.2             |
| S <sub>2</sub>      | Prior TIA or stroke                      | 2 | 4                 | 4.0             |
| V                   | Vascular disease (MI, aortic plaque etc) | 1 | 5                 | 6.7             |
| A                   | Age 65-74                                | 1 | 6                 | 9.8             |
| Sc                  | Sex category (Female = 1 pt)             | 1 | 7                 | 9.6             |
|                     |                                          |   | 8                 | 6.7             |
|                     |                                          |   | 9                 | 15.2            |

quizlet.com

## CHADS VASC score

C(CHF), H(HTN), A(age), D(DM), S(stroke - CVA/TIA), V(Vascular disease), A(age), Sc(sex)

### Men

<2 - low risk. Nothing

>2 = DOAC

### Women

<3 - low risk. Nothing

>3 = DOAC

# Anticoagulation

## Medication options

### DOAC – BEST

\*apixaban 5mg BID (twice day, best bleeding profile)

*Must meet 2/3 criteria for reduced dose– THIS IS A MUST*

- *Cr >1.5*
- *Age >80*
- *Weight < 60kg*

\*rivaroxaban

- *take with food!*
- *once daily*
- *renally dosed – CrCl < 51 = 15mg daily*

### DOAC

Less common: dabigatran, edoxaban

PROS: steady state, not affected by diet, better efficacy, low bleeding risk

CONS: cost

*Consider alternative pharmacies!*

### WARFARIN

Valvular AF

Labile INR

Very diet sensitive

# Anticoagulation

## Changes to management of OAC post ablation:

### **ALONE AF TRIAL** (JAMA 8/25)

Patients at least 1 year without AF post ablation can safely d/c OAC with low to intermediate risk

\*\*Still need to have discussion with high risk

### **OCEAN AF TRIAL** (NEJM 11/25)

In patients with CHADS VASC 1-3 with successful (1 year no AF) post AF ablation → ASA = Xarelto for prevention of CVA

\*\*Both of these trials have changed how we manage OAC post ablation and have led to an increase in recommendation for ablation.\*\*

## Notes:

### **How much Afib do you need for anticoagulation?**

Studies vary - -> 6 minutes - 6 hours

### Risk vs benefit

- Advanced age, fall risk, renal dysfunction, bleed risk, anemia/thrombocytopenia
- Need for medications that interact
- Need for NSAIDS – common!

# Anticoagulation – Pre Op Considerations

Rare that we bridge in EP for procedures

- Still consider bridging if valvular disease

DOAC safe to d/c 48 hours prior to procedure – this is our standard line

- Any further holding is up to provider performing procedure

Ask that patient resumes as soon as felt safe post procedure

Highest stroke risk is going in & out of AF

- Think cardioversion, PAF
- post ablation

Will not clear patients post CVN for at least 30 days and 90 days post ablation unless urgent/emergent

# Management – Anticoagulation

## WATCHMAN

Parachute shaped device implanted at the base of the LA appendage – keeps clots enclosed so they can't enter bloodstream

Must meet indications:

- CHADS VASC 3 or higher
- Suitable candidate
- Very similar procedure to AF ablation
- Can be done with AF ablation
- **CLOSURE trial** (non industry based) = failed to prove that LAAL device was as effective as DOAC

