How Do I "Balance" Bradycardia with Rate Control in Atrial Fibrillation?

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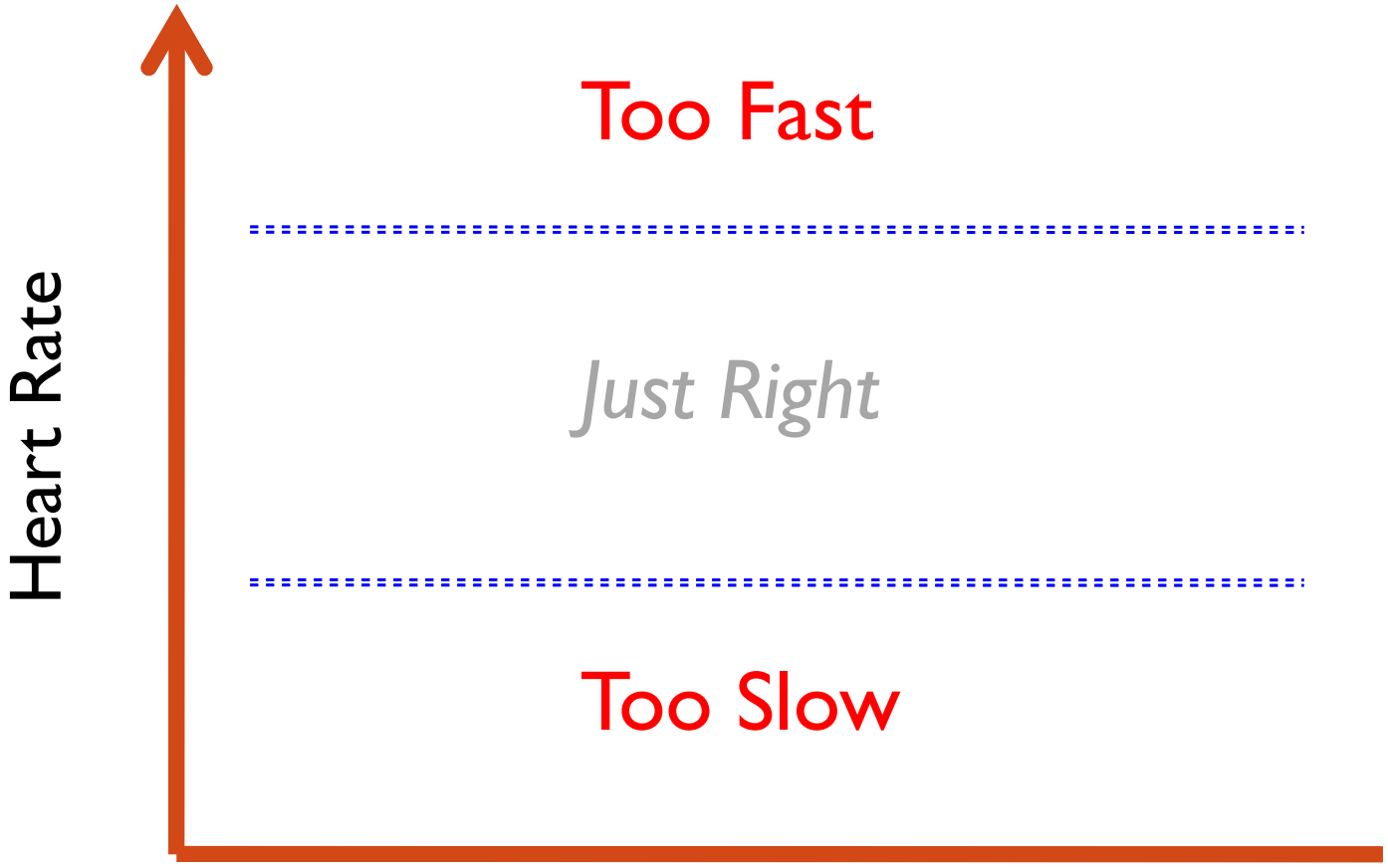
Objectives

- Review importance of ventricular rate control in atrial fibrillation
- Review what is considered adequate rate control
- Review indications for a permanent pacemaker in the setting of atrial fibrillation

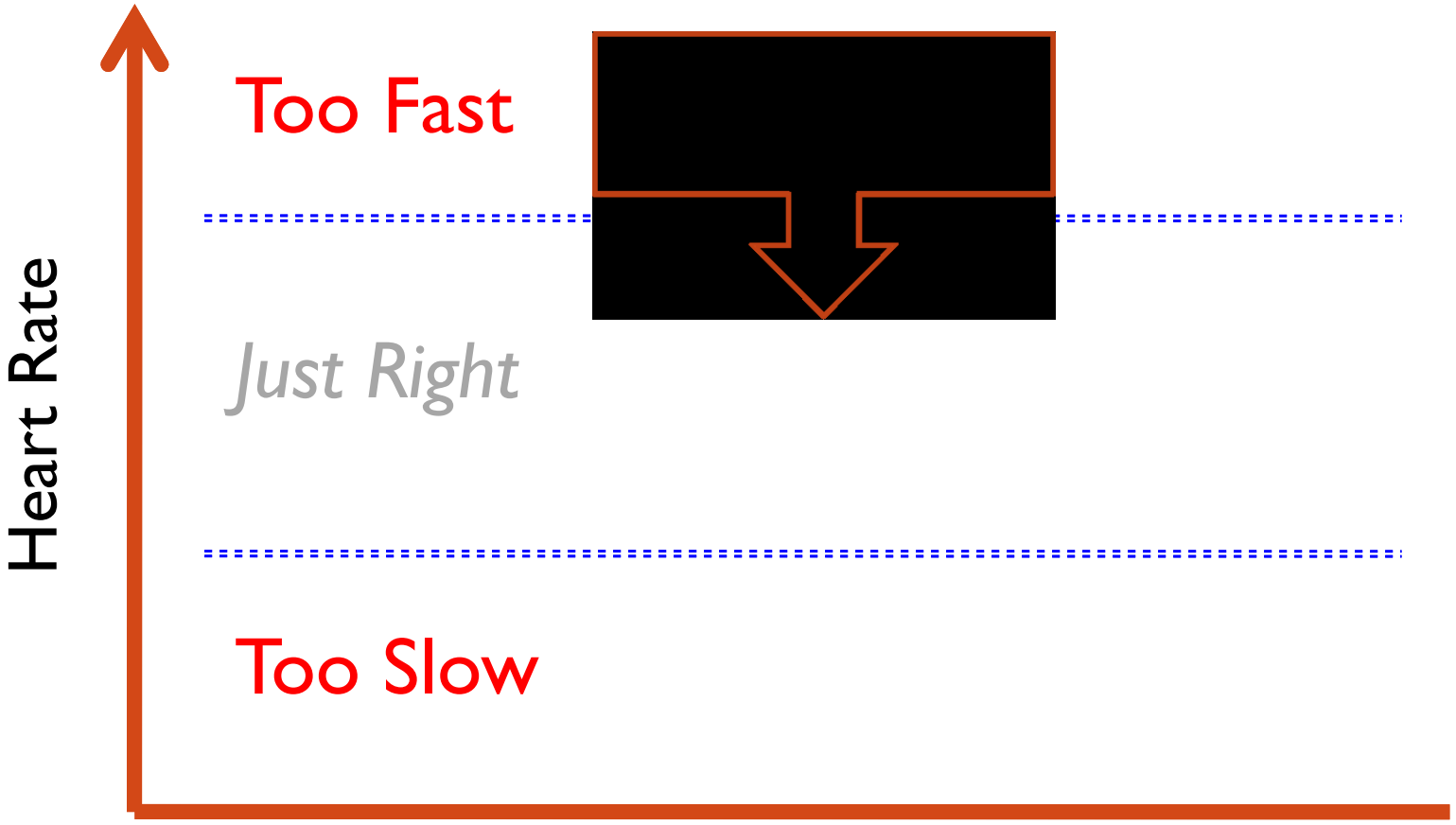
Disclosures

- Research support:
  - Bayer
  - Boehringer Ingelheim
  - Medicines Company
- This program has not received any financial, education or in-kind support
- Investigational products will not be discussed in this presentation

Atrial Fibrillation Rate Control



Atrial Fibrillation Rate Control



Adequate Rate Control

- Permanent atrial fibrillation
- Resting HR targets

- Symptom control
- Prevent cardiomyopathy / heart failure

Question is what is adequate?

Lenient versus Strict Rate Control in Patients with Atrial Fibrillation

Isabelle C. Van Gelder, M.D., Hessel F. Groenveld, M.D., Harry J.G.M. Crijns, M.D., Ype S. Tuininga, M.D.,

ABSTRACT

Strict Control	Lenient Control
Resting HR < 80 bpm • Mean HR 76 ±12 bpm	Resting HR < 110 bpm • Mean HR 93 ±9 bpm
CV death, CVA, CHF, etc • 14.9% at 3 yrs	CV death, CVA, CHF, etc • 12.9% at 3 yrs

-2.0% (90% CI -7.6 to 3.5) p<0.001
HR 0.84 (90% CI 0.58 to 1.21) p=0.001

Van Gelder et al. NEJM 2010;362:1363

Atrial Fibrillation Guidelines

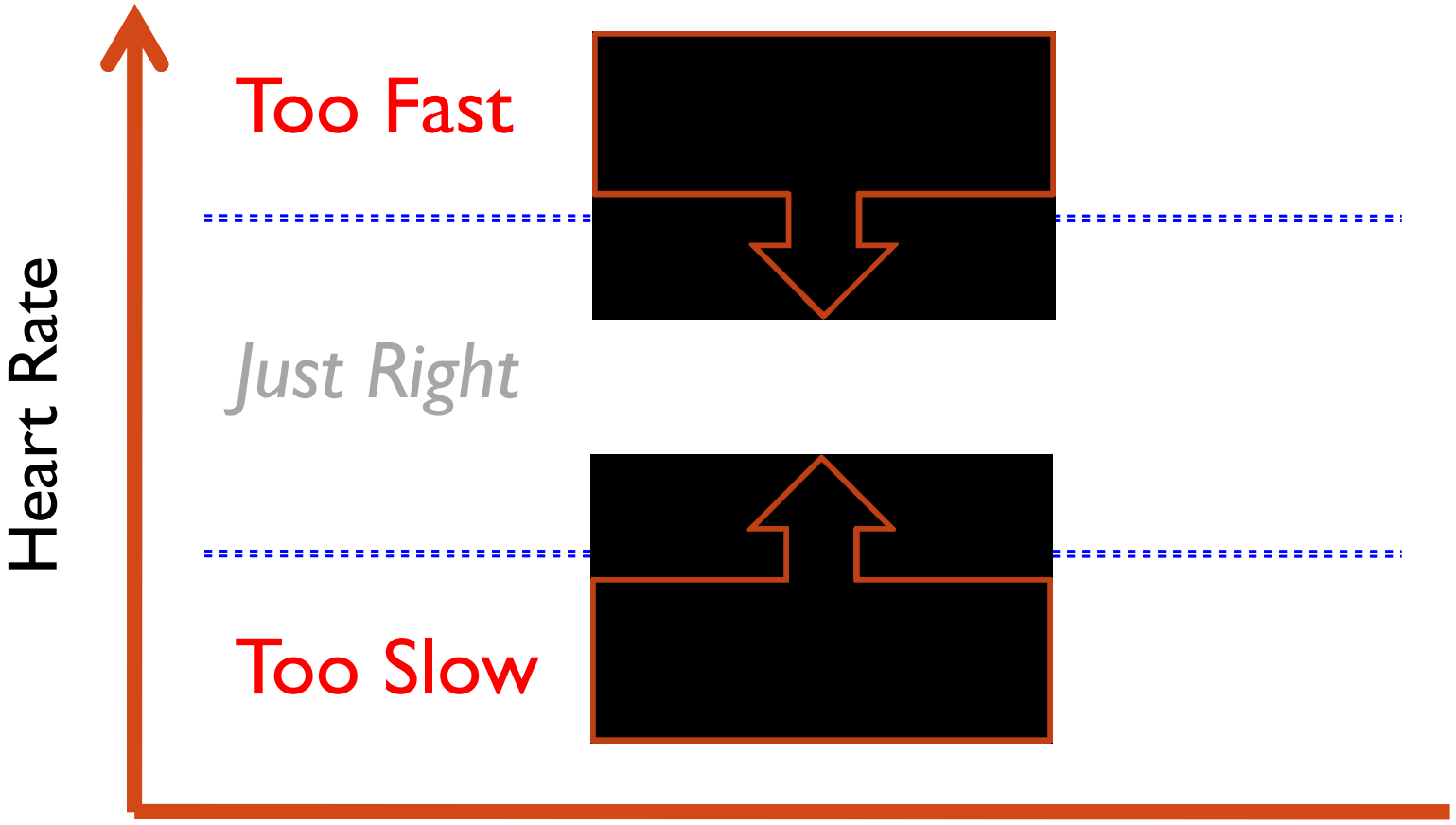
ACC/AHA

- < 110 bpm
- HR with improved symptoms

Canadian Cardiovascular Society

- < 100 bpm

Atrial Fibrillation Rate Control

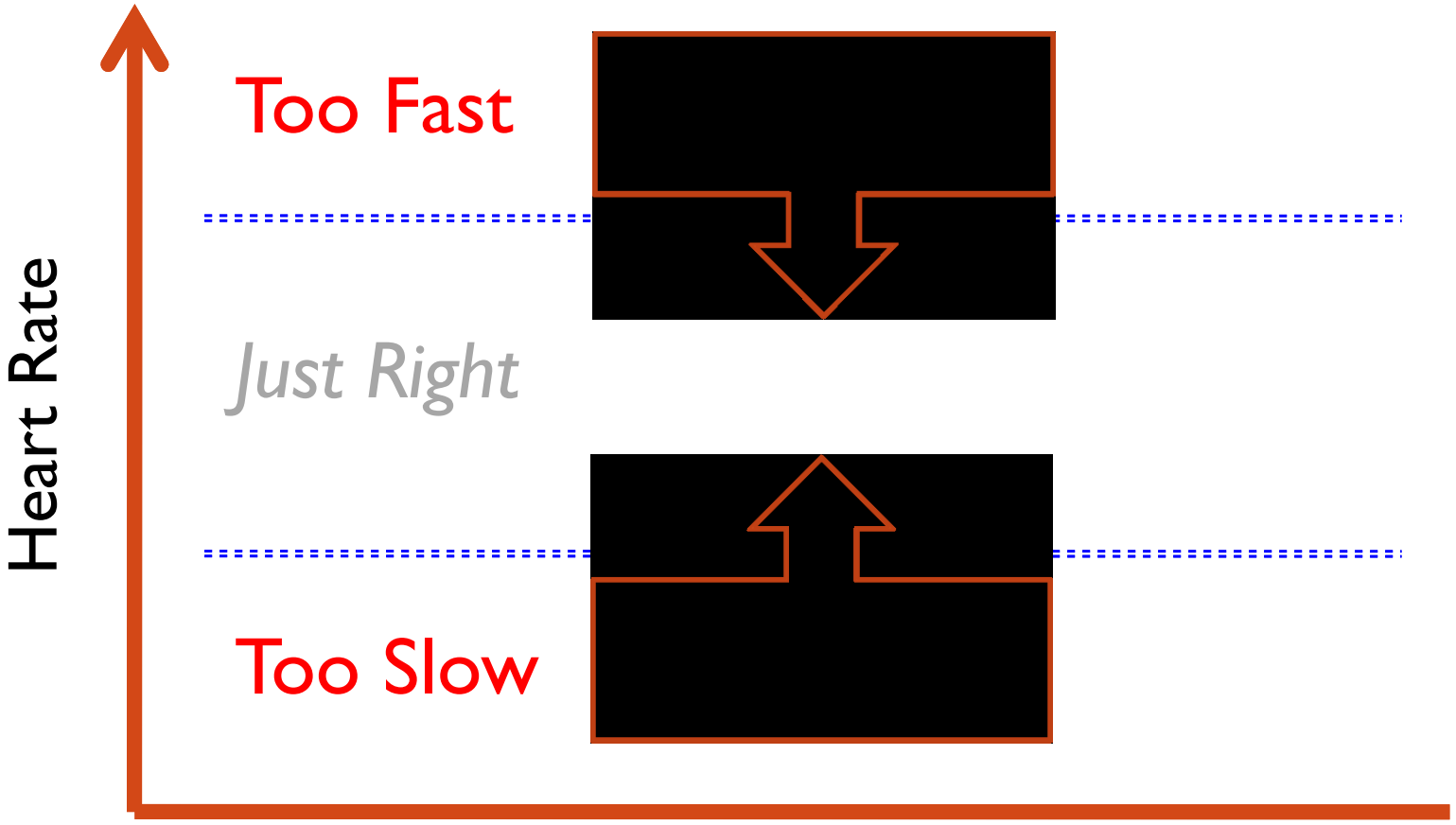


Too Slow – Indications for PPM

In setting of permanent atrial fibrillation:

- 3rd degree AV block
  - regular wide QRS suggesting ventricular escape
- Advanced 2nd degree AV block
  - >5 sec ventricular pause while awake
- Symptomatic bradycardia
  - exertion symptoms
  - presyncope/syncope

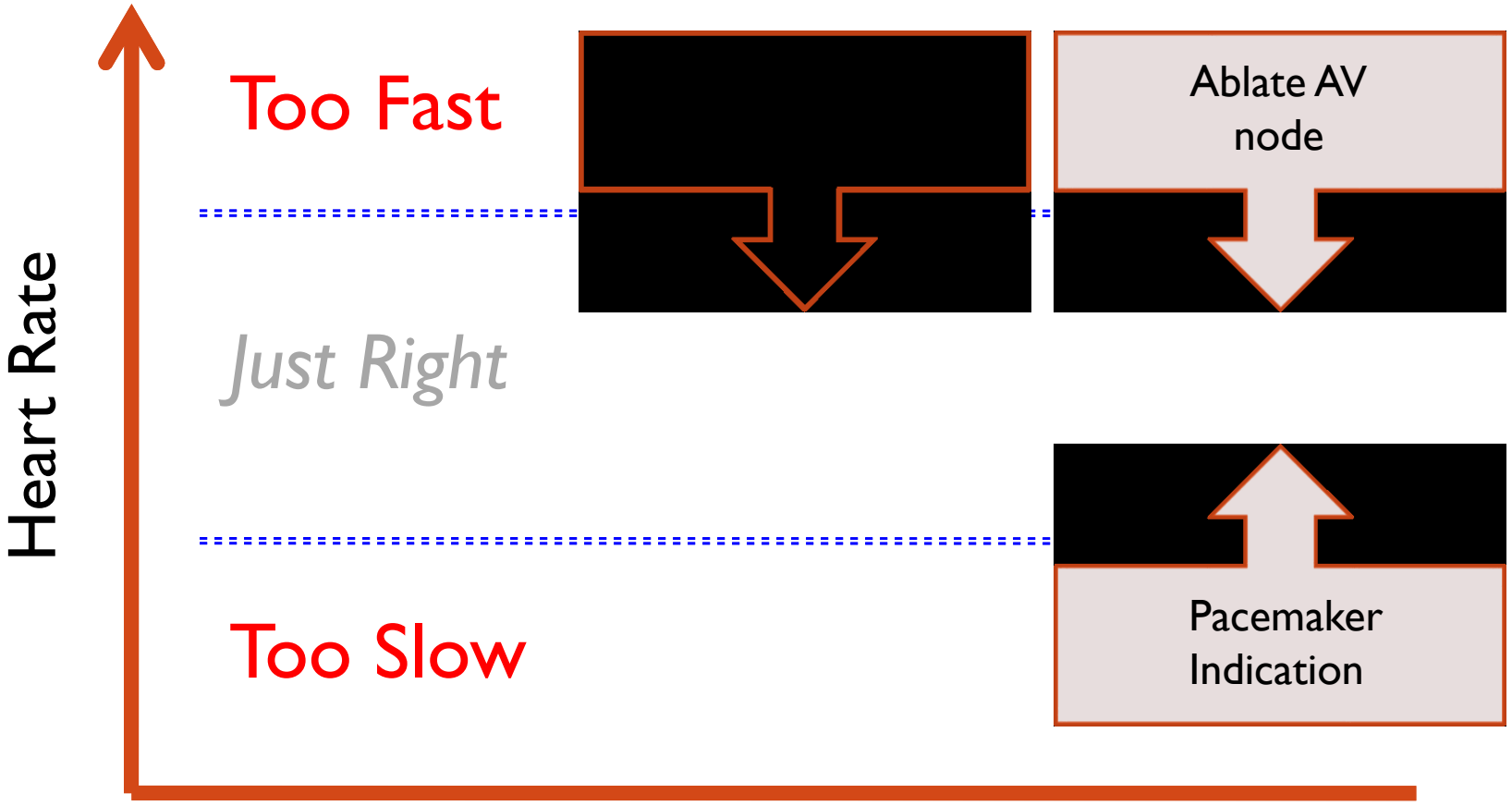
Atrial Fibrillation Rate Control



“Balancing” Brady and Rate Control

- No “balancing” needed
- Don’t need to compromise ability to achieve adequate rate control
- Titrate meds as needed
- If concerning bradycardias problematic, likely has an indication for permanent pacemaker for backup

Atrial Fibrillation Rate Control



"Pace and Ablate"

- Inadequate rate control despite 2-3 meds
- Adequate rate control, but patient intolerant or highly likely to be intolerant of rate control meds
  - Elderly
  - Frequent postural hypotension
- Certain HF patients with low EF
  - Need lower HR for symptoms
  - Some meds contraindicated in low EF
  - CRT or ICD indication

Paroxysmal Atrial Fibrillation

- Due to high variance of paroxysms, no "target HR"
- Medication indication dependent on:
  - Frequency of paroxysms
  - Ventricular rate of paroxysms
  - Duration of paroxysms
  - Symptoms during paroxysms
  - Tolerance of rate control agents when in sinus rhythm
- If symptomatic paroxysms, consideration for rhythm control strategy

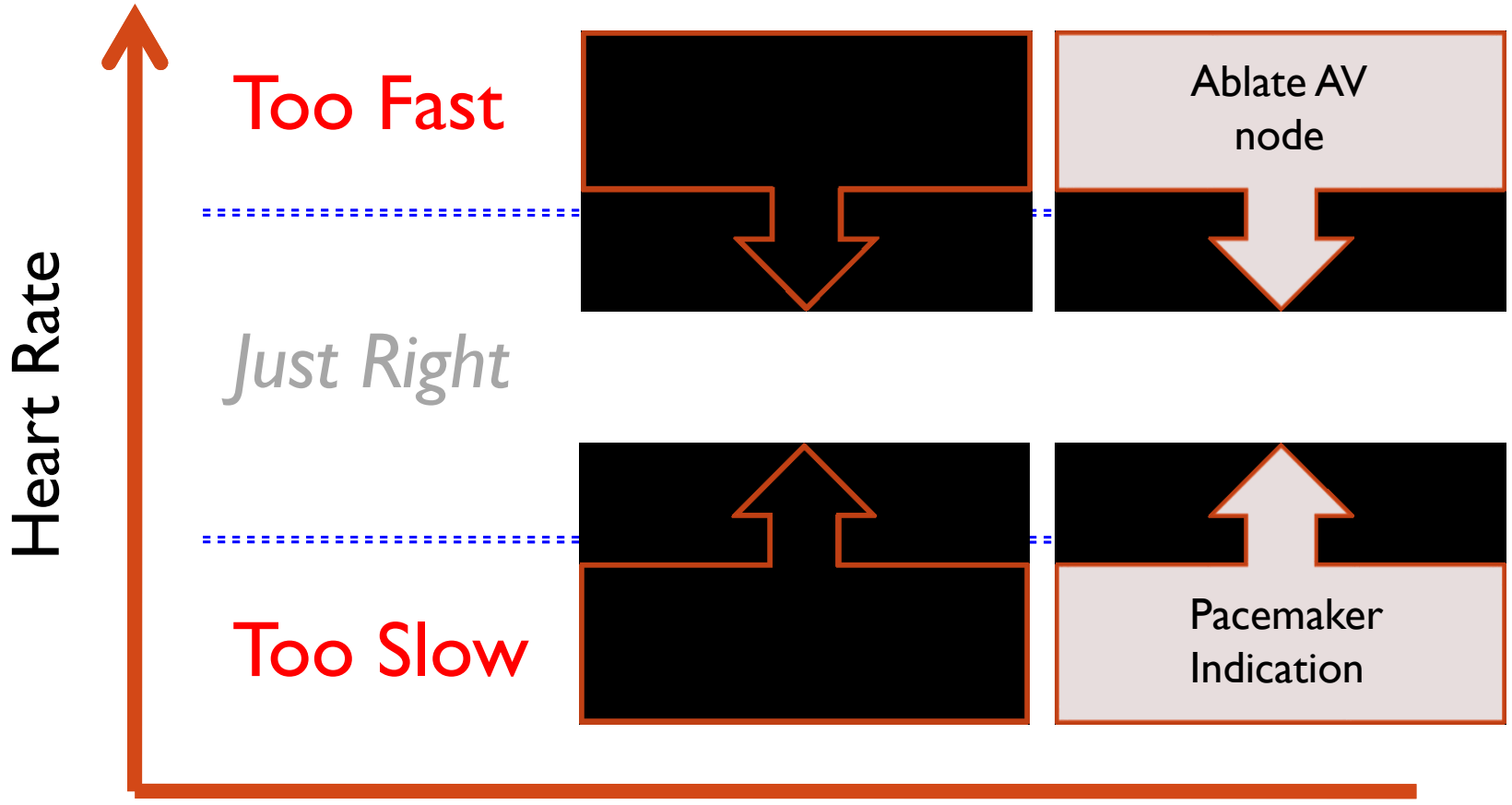
When to Consider Cardiology or EP Cardiology Consultation

- Possible indication for a PPM
- Possible "pace and ablate" strategy
- Difficult to control symptomatic paroxysmal atrial fibrillation (ie possible indication for rhythm control strategy)
  - Anti-arrhythmic meds
  - Pulmonary vein isolation procedure

Summary

- Aggressive rate control not necessary
- No need to compromise or "balance" for permanent atrial fibrillation
- Titrate rate controlling meds as needed
- Refer to (EP) cardiology if:
  - meets pacemaker indication
  - suboptimal rate control despite 2 or 3 meds (ie considering "pace and ablate")
  - considering rhythm control strategy

Questions


Heart Rate
Too Fast
Just Right
Too Slow
Ablate AV node
Pacemaker Indication

FIN