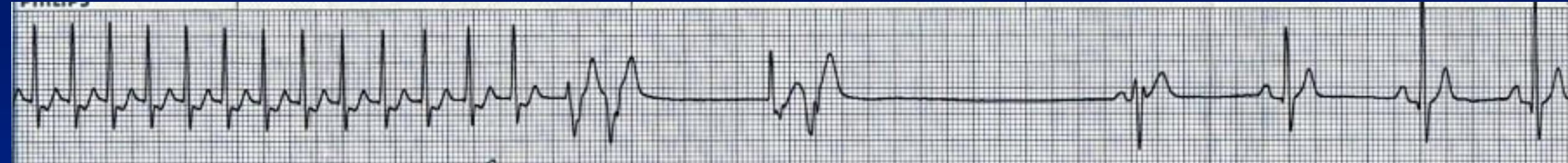
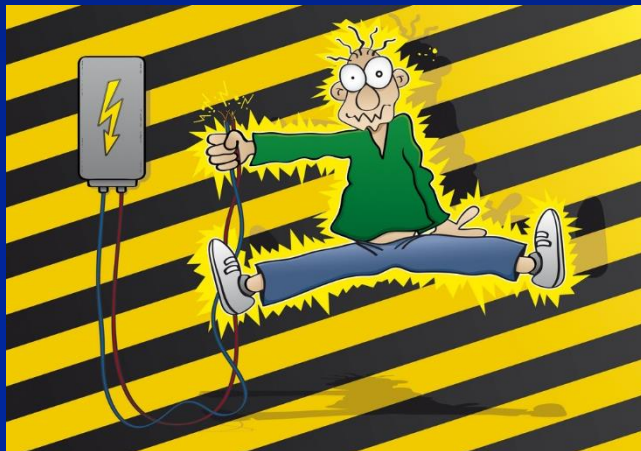


Mastering Pacing, Cardioversion and Defibrillation



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Albany Medical Center



NTI class code:
EXED223



Pacing, Cardioversion, Defib Indications

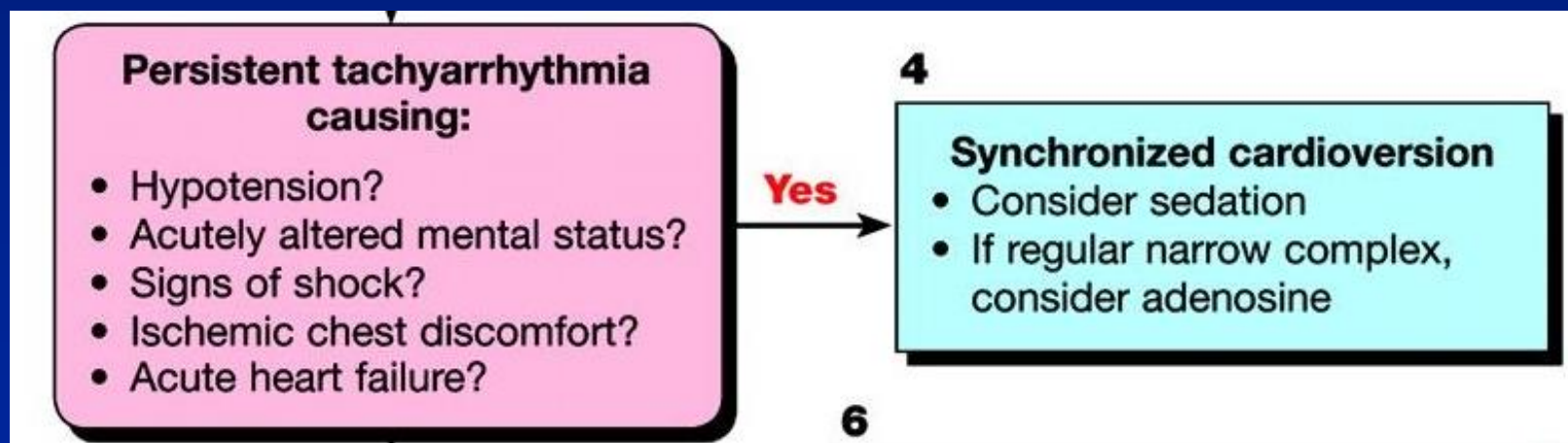
Too many to list...

(Patient Must Be Symptomatic and **Documented** with ECG)



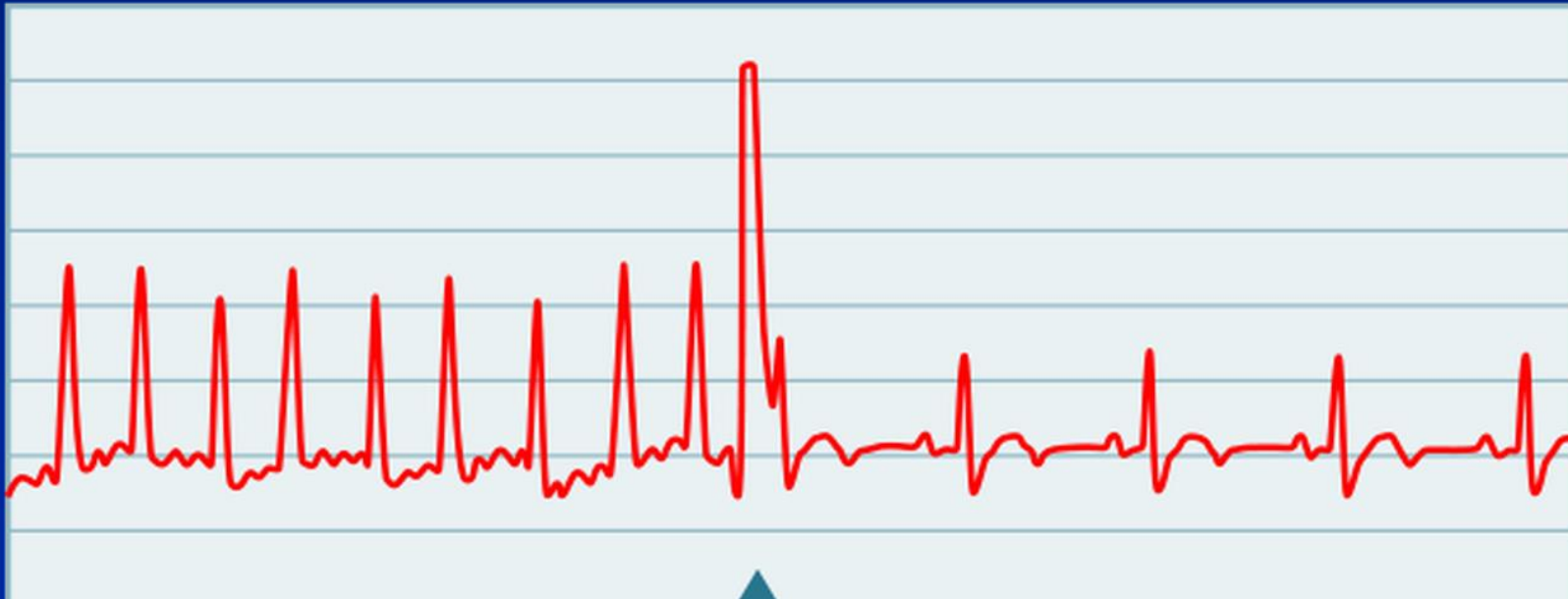
- ◆ Too slow
- ◆ Too fast
- ◆ Too irregular

Unstable VT

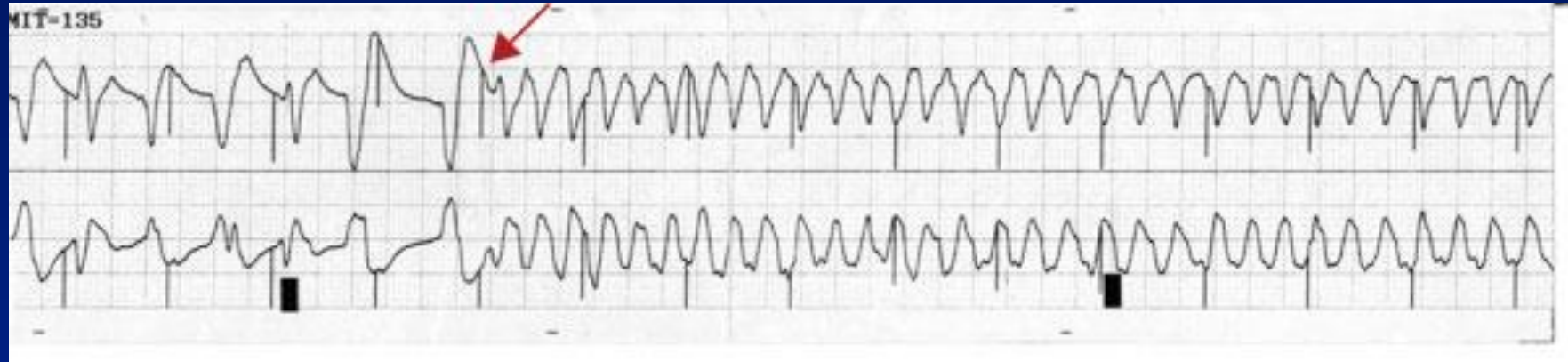


Cardiovert or Defibrillate?

- ◆ Cardioversion is synchronized with...

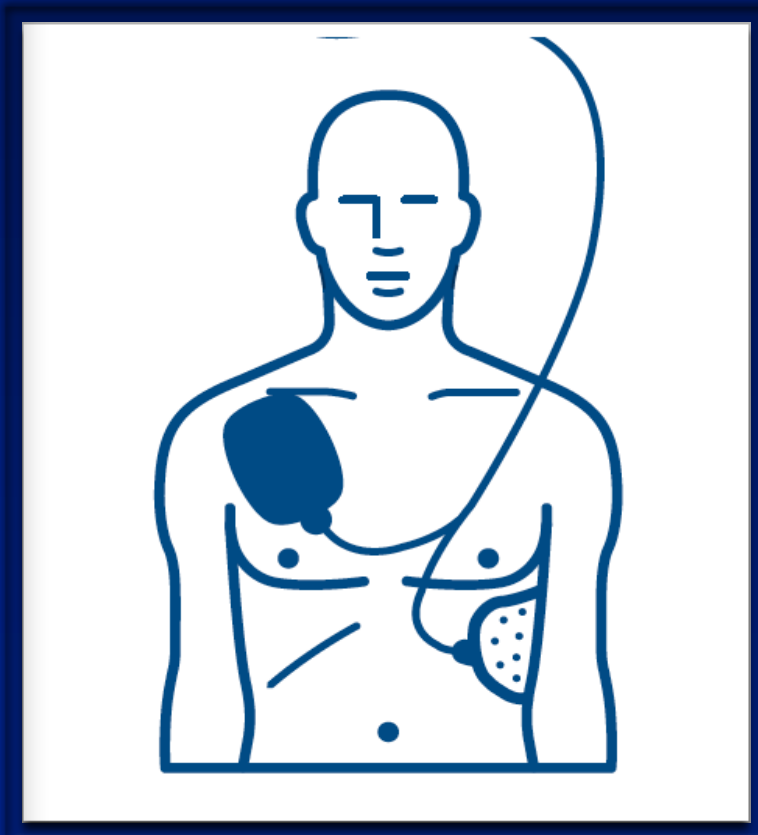


R on T

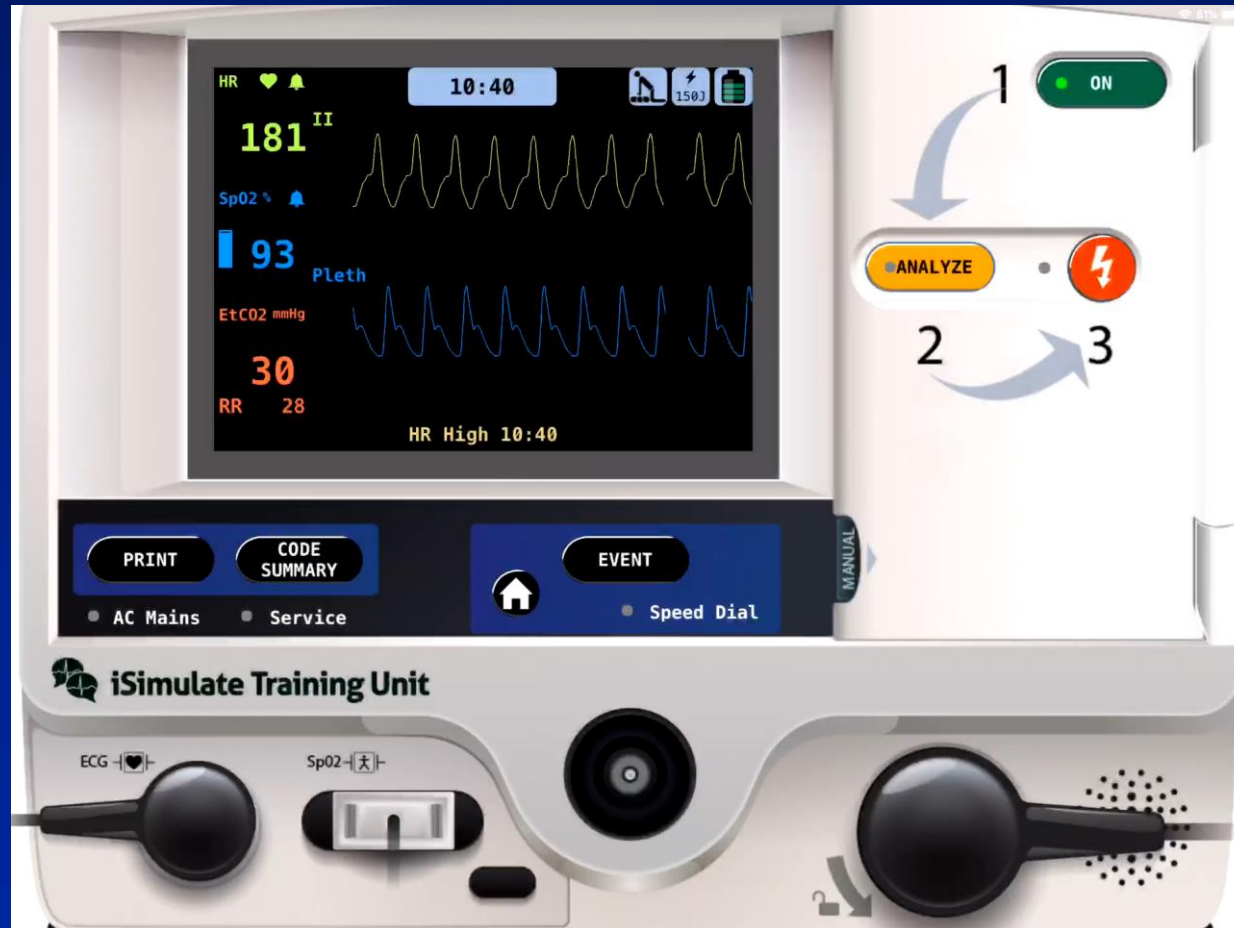


Leads? Pads?

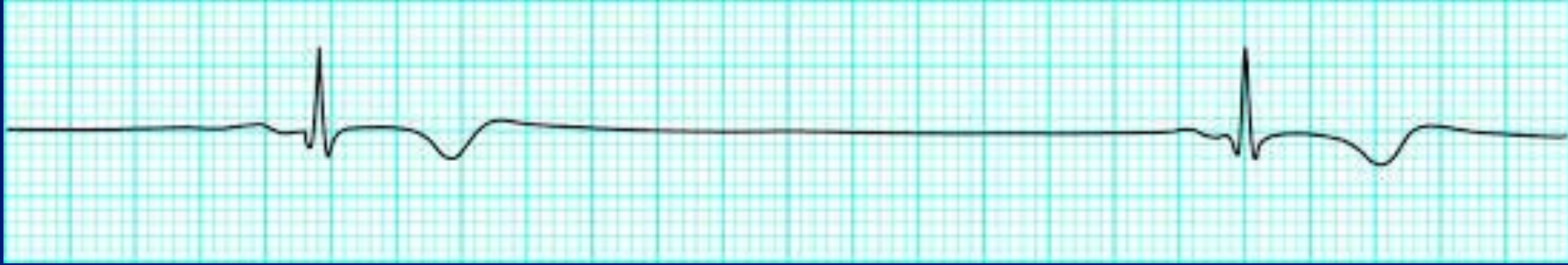
- ◆ Do you need to place the leads?
- ◆ Where's the best place for the pads?



Synchronized Cardioversion



Now, too slow...



- ◆ Pacing pads can be applied any time!
- ◆ Better to have them in place before you need them
 - easier to move the patient

Transcutaneous

- ◆ Pacing Pads
- ◆ Conduct through skin



Transcutaneous

- ◆ Set Rate
- ◆ Set Output



TCP – Transcutaneous Pacing

- ◆ Pads on patient
 - Leads usually needed
- ◆ Turn on Pacing
 - Starts @ 0 mA, 80/min
- ◆ Increase mA until capture observed
- ◆ Confirm mechanical capture (pulse, SpO₂)

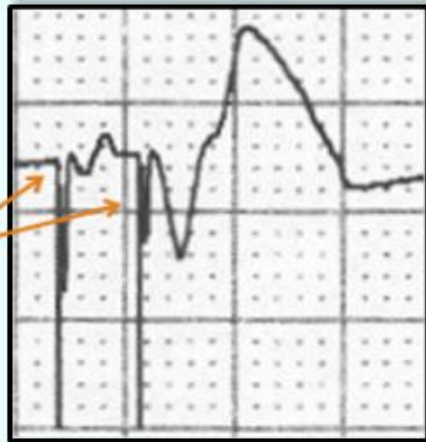


Capture

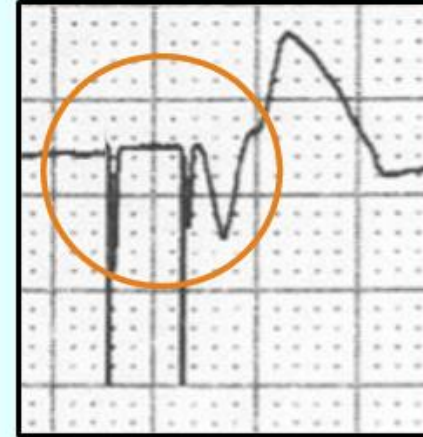
Myocardial Stimulation (Capture)

Atrial and Ventricular Capture

Pacing Pulses
(Spike)



Atrial Loss of Capture



Ventricular Loss of Capture



TCP: What Mode?

VOO

VVI

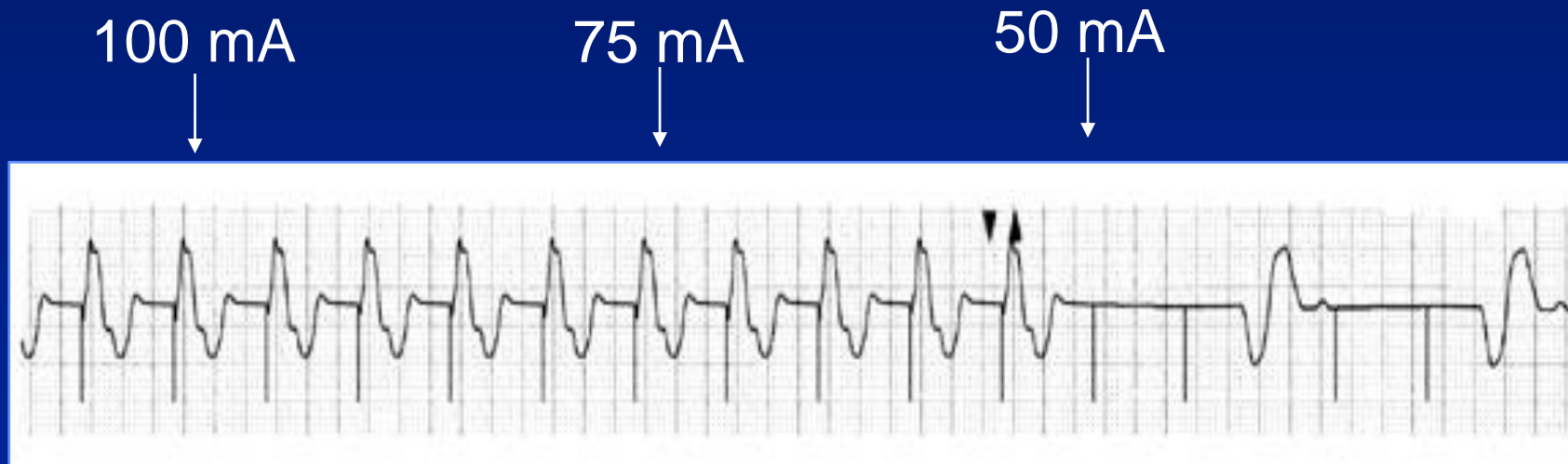
What's the problem/solution?



Loss of capture – increase mA

Stimulation Threshold

The minimum output needed to consistently capture the heart



Something's not right here...



Intrinsic Beat



Paced Beat



Fusion Beat



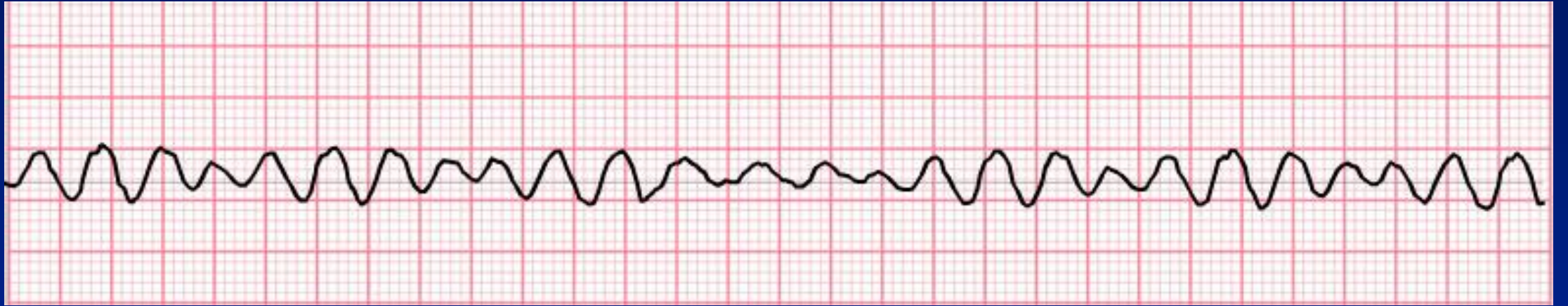
Pseudofusion Beat

Pause Button

- ◆ Drops rate to 25% programmed value
- ◆ Won't STOP pacing (10 ppm minimum)



Really bad - vfib



Rule # 1: Show Up & Shock

Goal for defibrillation:

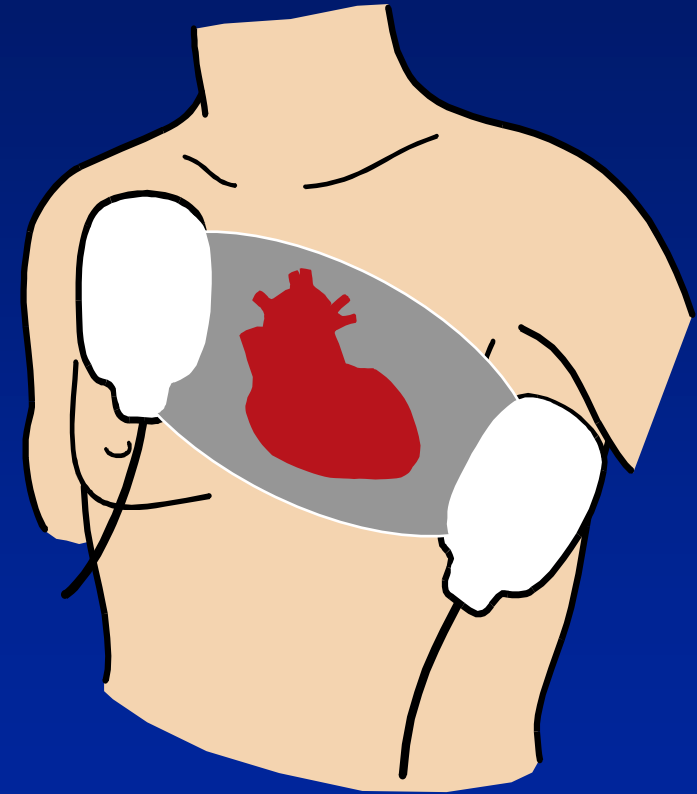
- ◆ Hospital: 3 minutes
- ◆ Community: 5 minutes



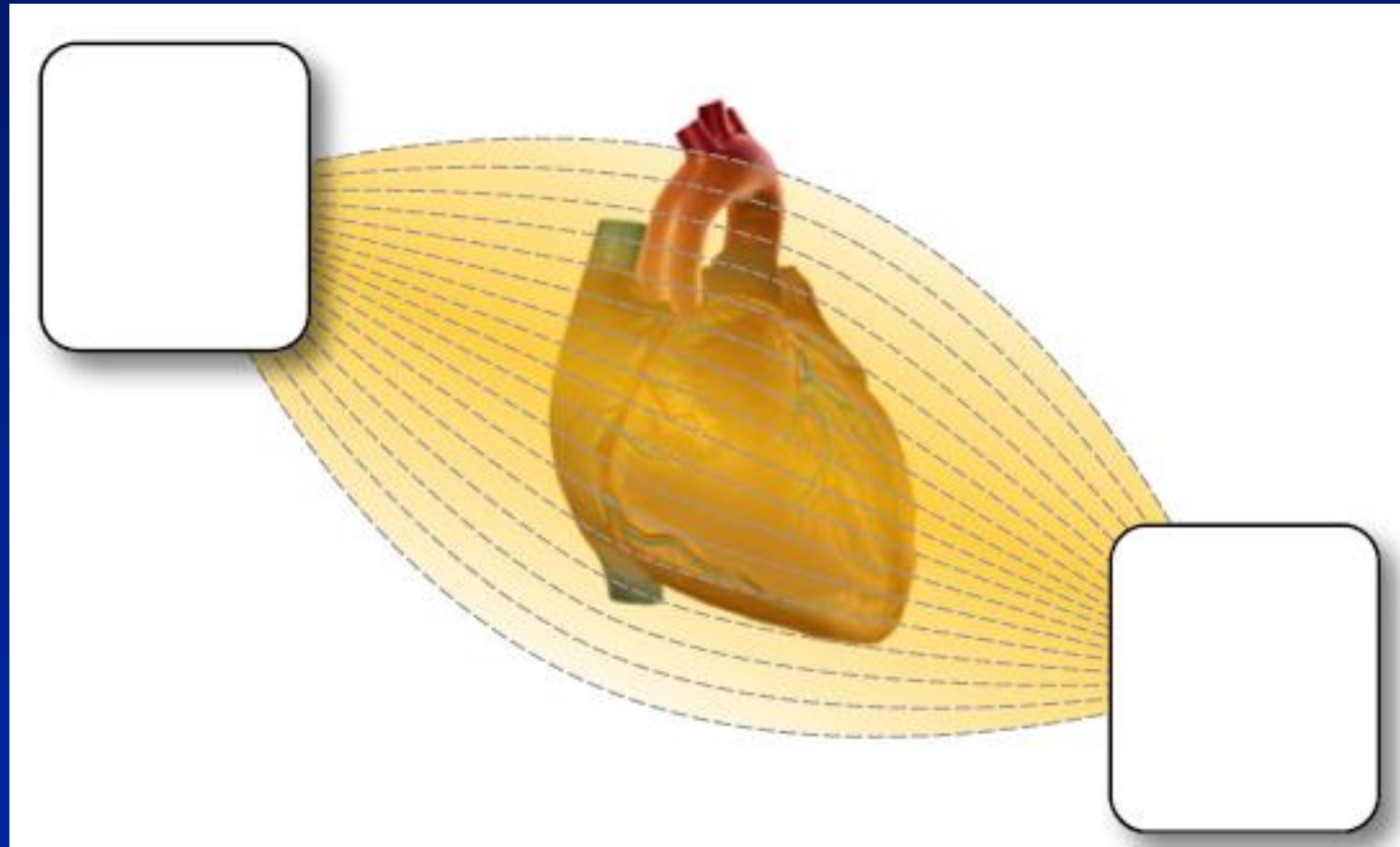
Albert Einstein

“The definition of insanity is doing the same thing over and over again and expecting different results.”

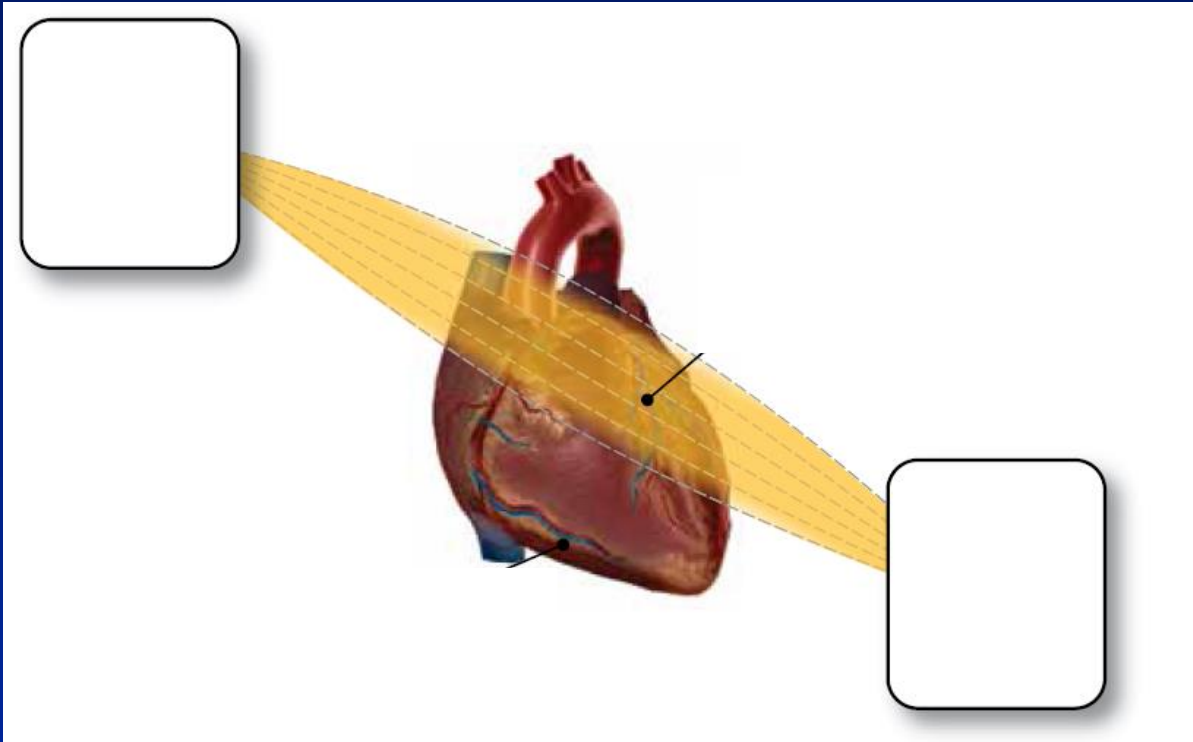
Rule #2: Think Birthday Cake



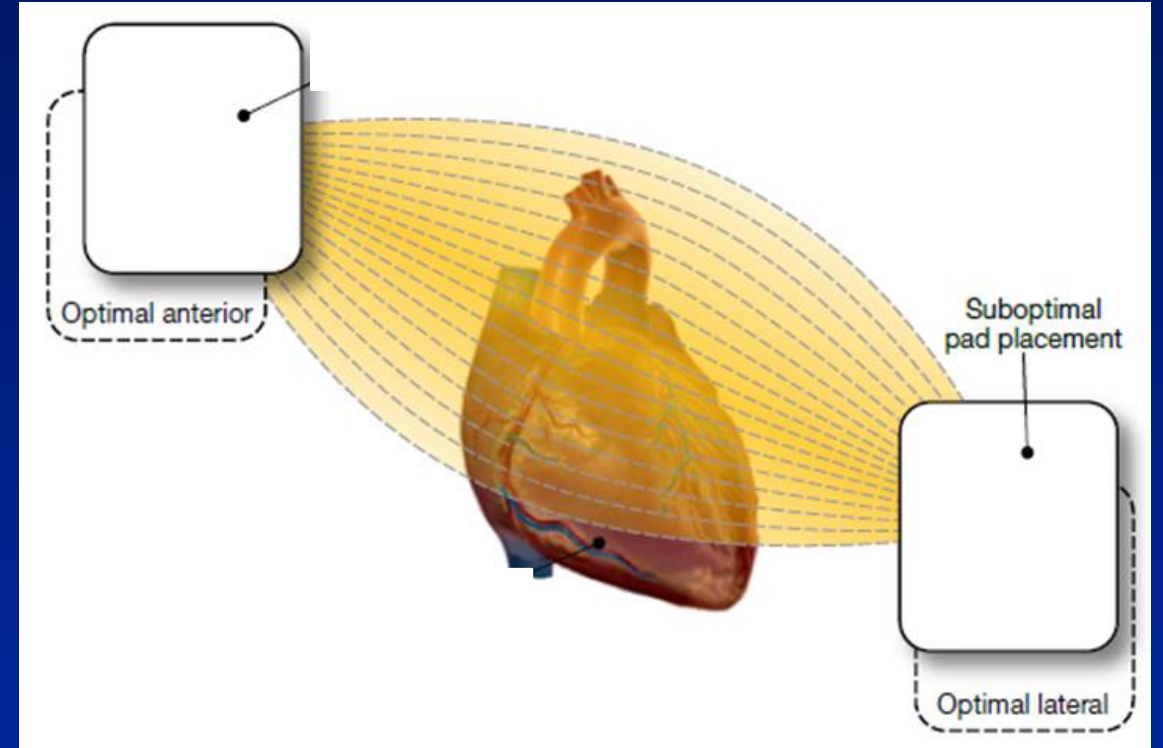
Optimal defib field = 90% myocardium



What would Einstein do?



↑ energy



Change pad location

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