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# LAA Closure with the Watchman versus Amplatzer Cardiac Plug

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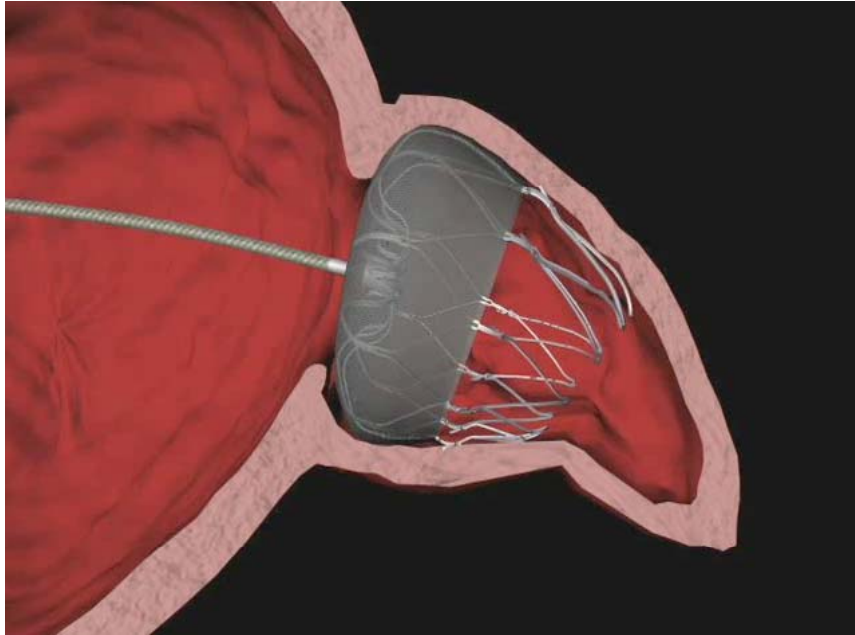
# Watchman Device



Gen 2

- Nitinol frame with PET membrane and fixation bars
- CE mark
- Proven to be non-inferior to anticoagulation
  - Randomized PROTECT AF trial and large registries

# Watchman Device



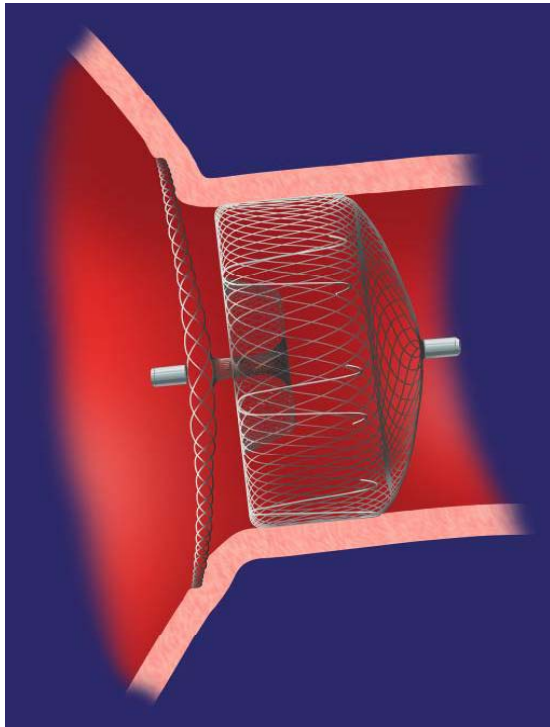
- Frame sits in the LAA
- Fixation barbs prevent dislodgement
- PET membrane gets covered by endothelium

# Amplatzer Cardiac Plug ACP



- Nitinol wire mesh with distal plug and proximal disk connected by a central waist
- Polyester patch inside
- CE mark
- So far only retrospective registries
  - Results of prospective EU registry are pending
  - Randomized trial just started

# Amplatzer Cardiac Plug ACP



- Plug sits in the LAA
- Hooks prevent dislodgement
- Umbrella closes the orrifice

# Is one better than the other?

- It is rare that a LAA can not be closed
  - less than 5% with all devices
- There are no data comparing the different devices head to head
- You can almost use what you are used to use
- However, the devices have
  - some specific exclusion-inclusion criteria
  - some advantages and disadvantages in specific anatomical subsets

# Size of the LAA

- Watchman:
  - LAA ostium has to be 17- 29 (-31) mm
- ACP
  - LAA ostium has to be 10-28mm

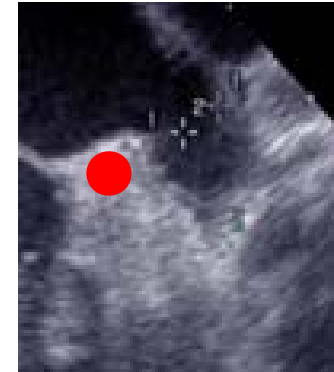
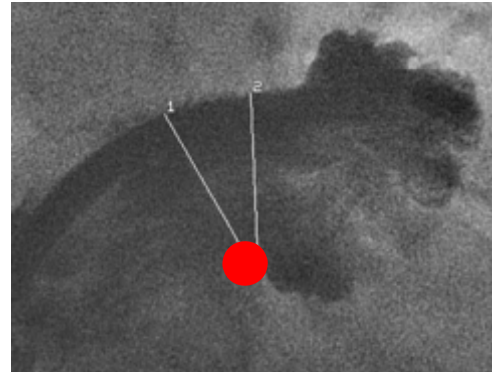
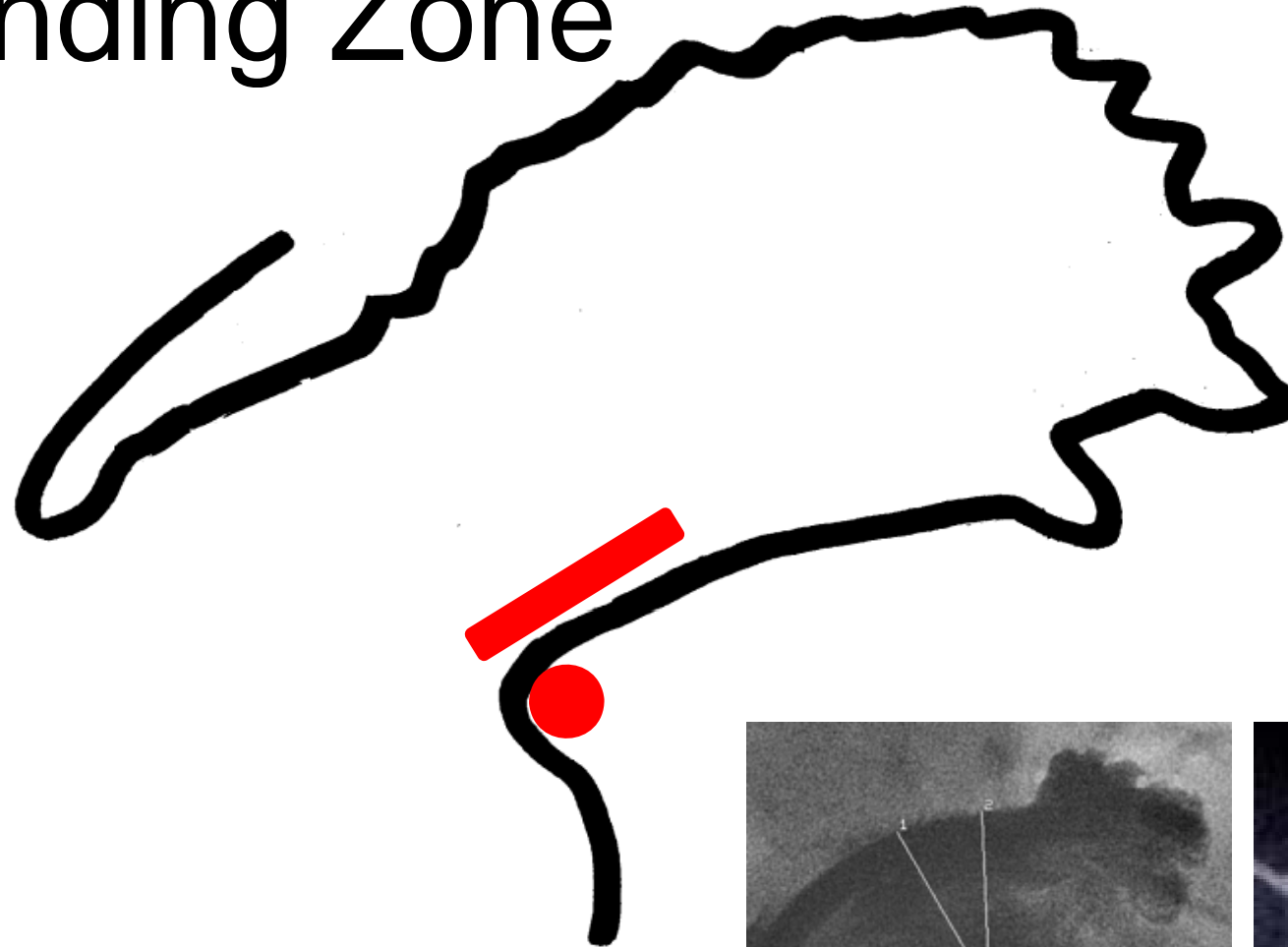
# Morphology of the LAA

- Watchman:
  - Minimum "functional" LAA length should be at least equal to device diameter
- ACP
  - Minimum "functional" LAA length 10mm



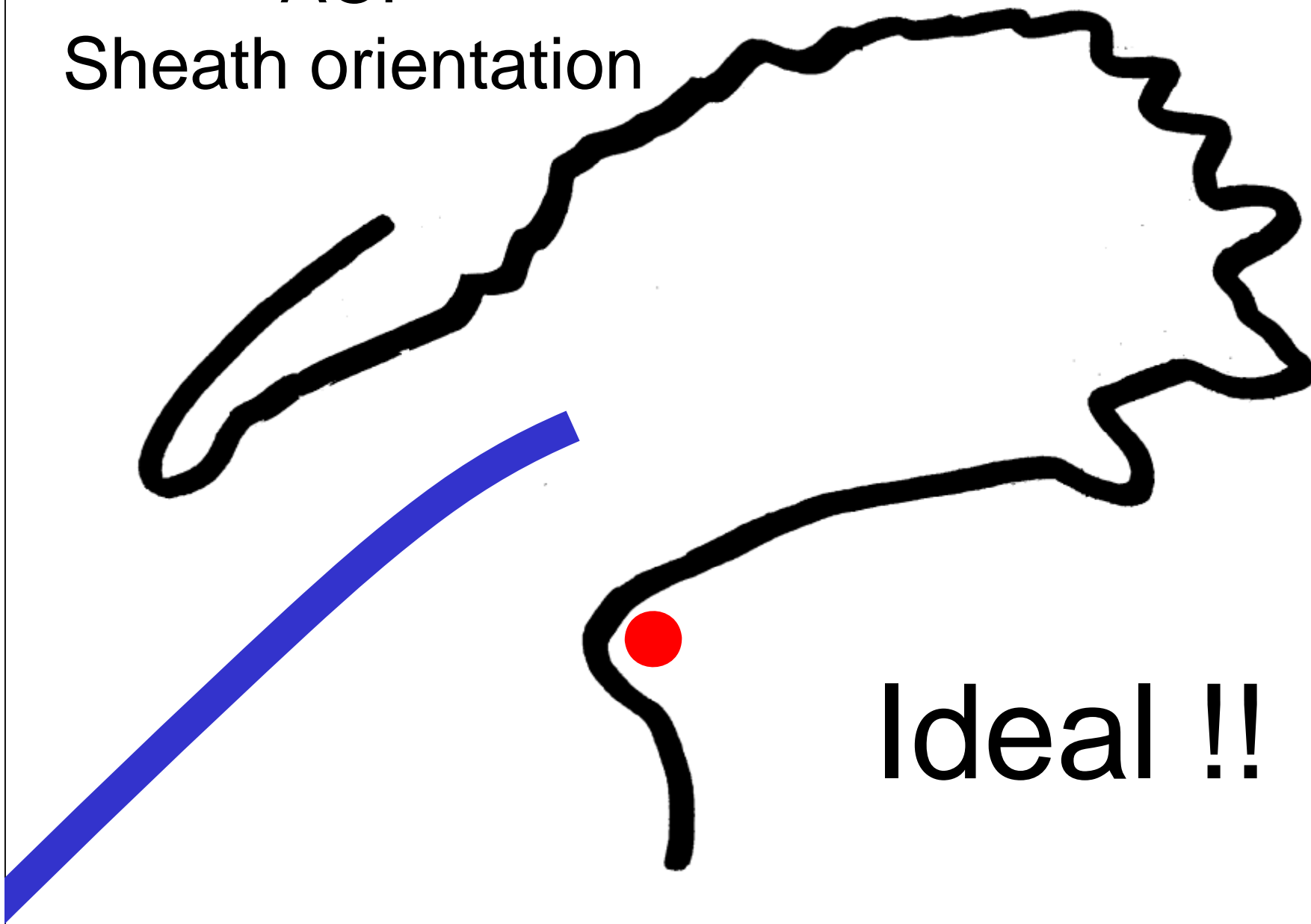
Watchman is more  
forgiving regarding  
sheath position

# ACP Landing Zone



ACP

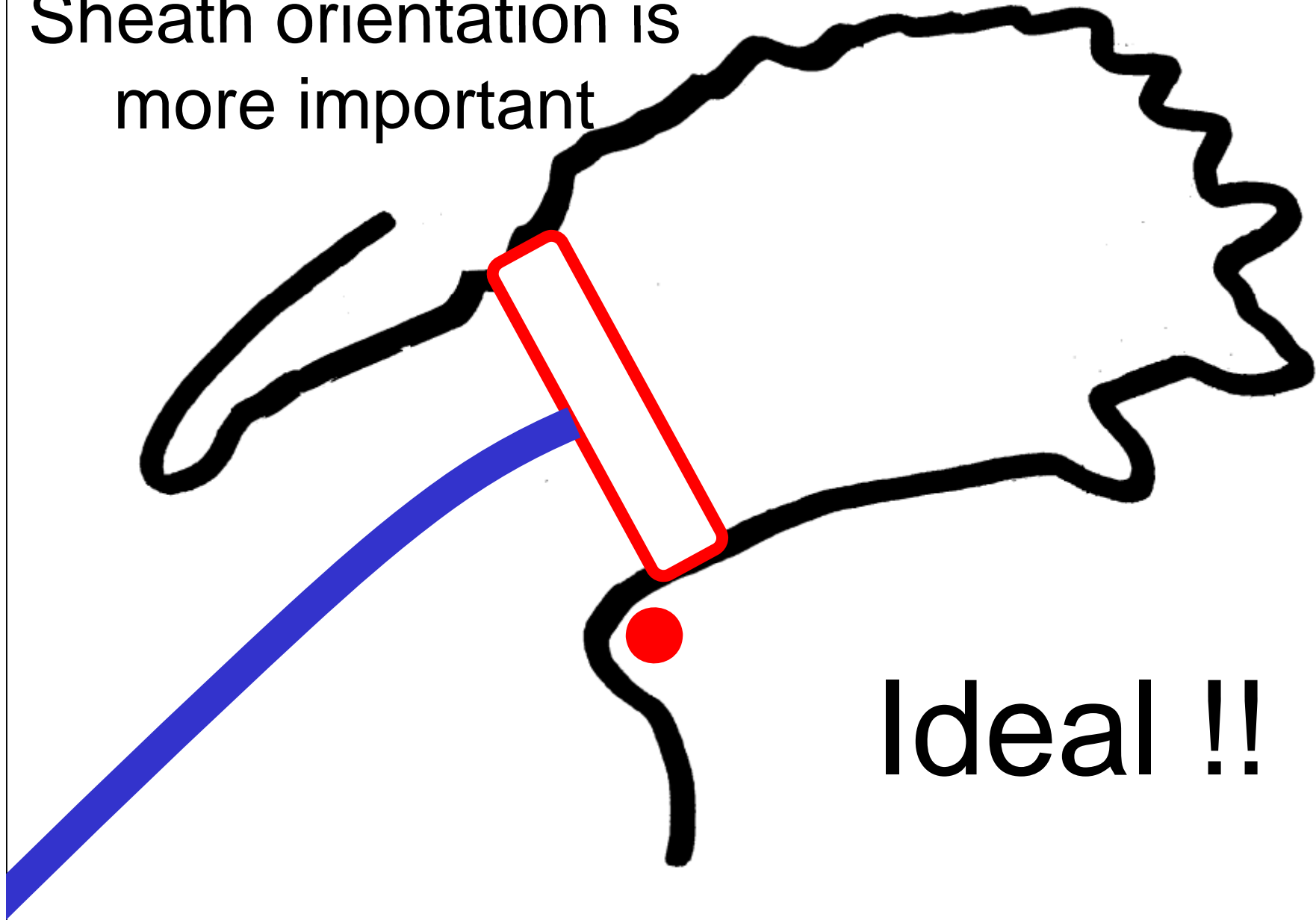
Sheath orientation



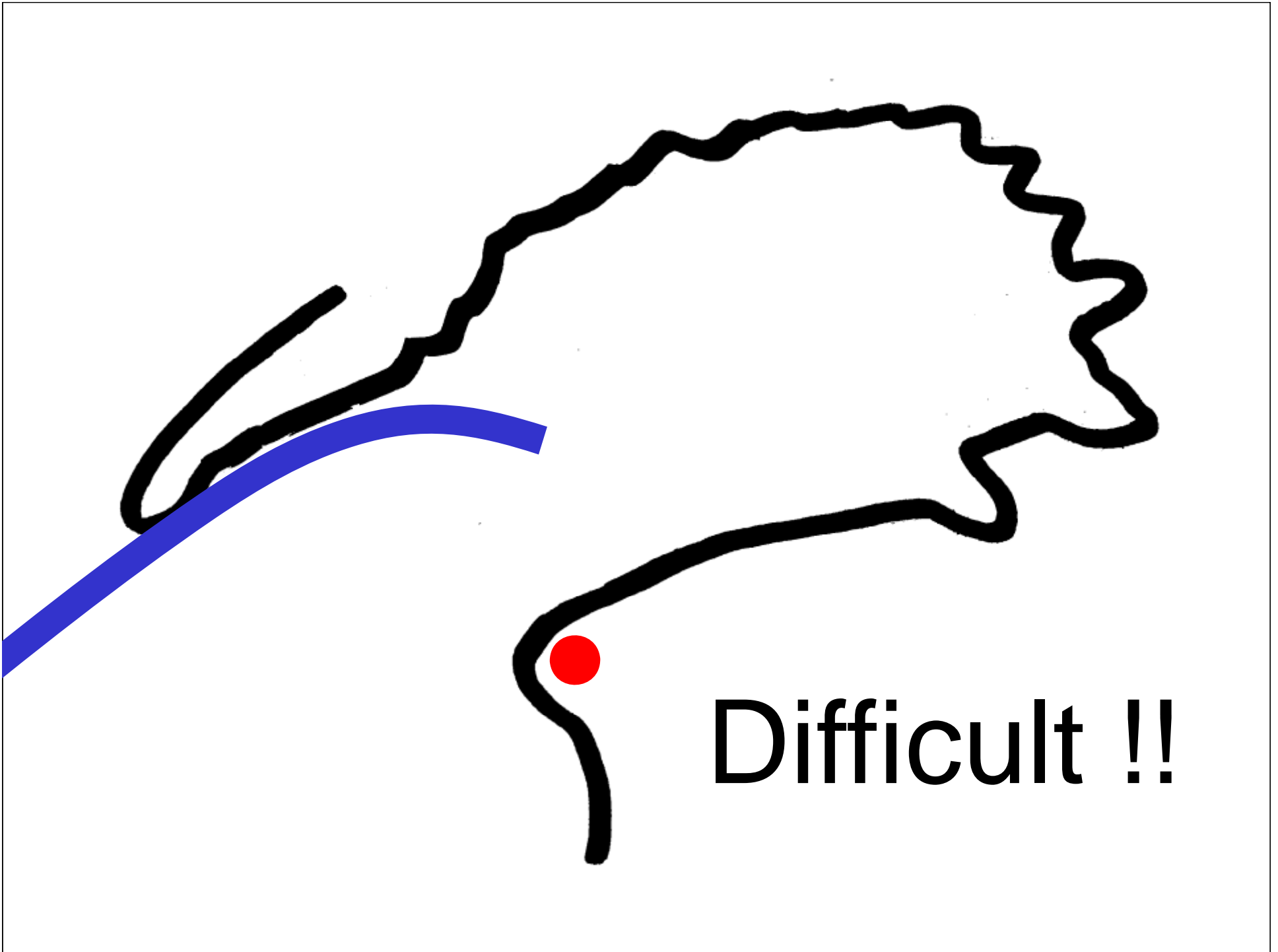
Ideal !!

ACP

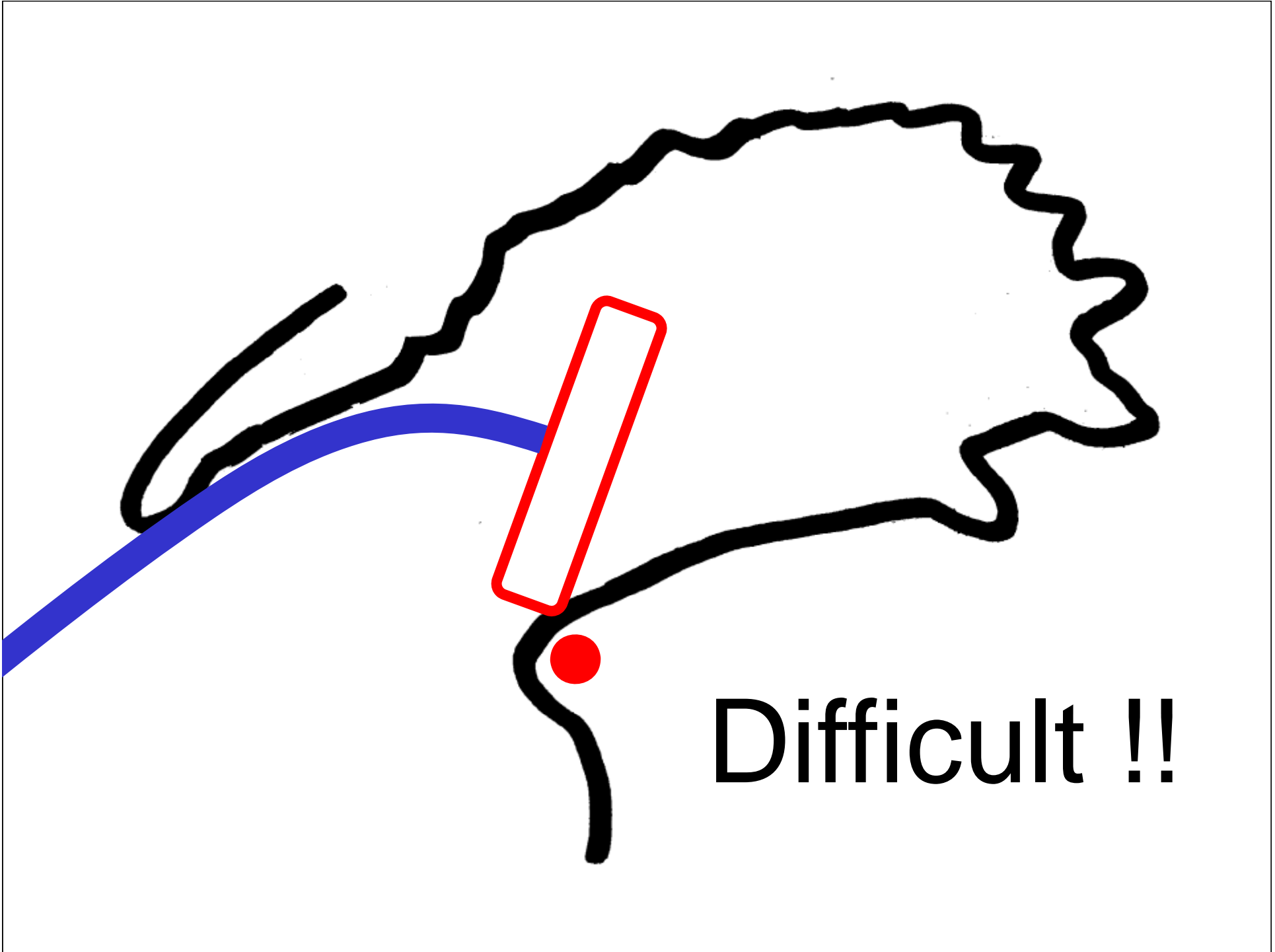
Sheath orientation is  
more important



Ideal !!



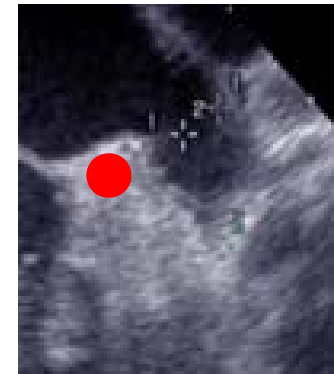
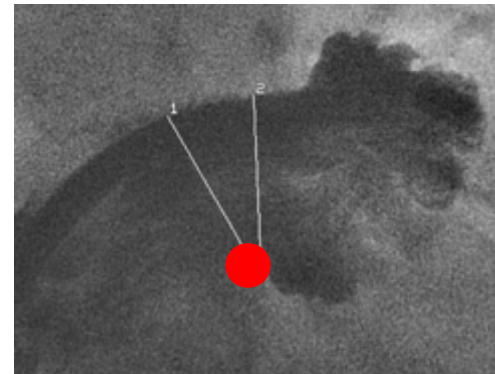
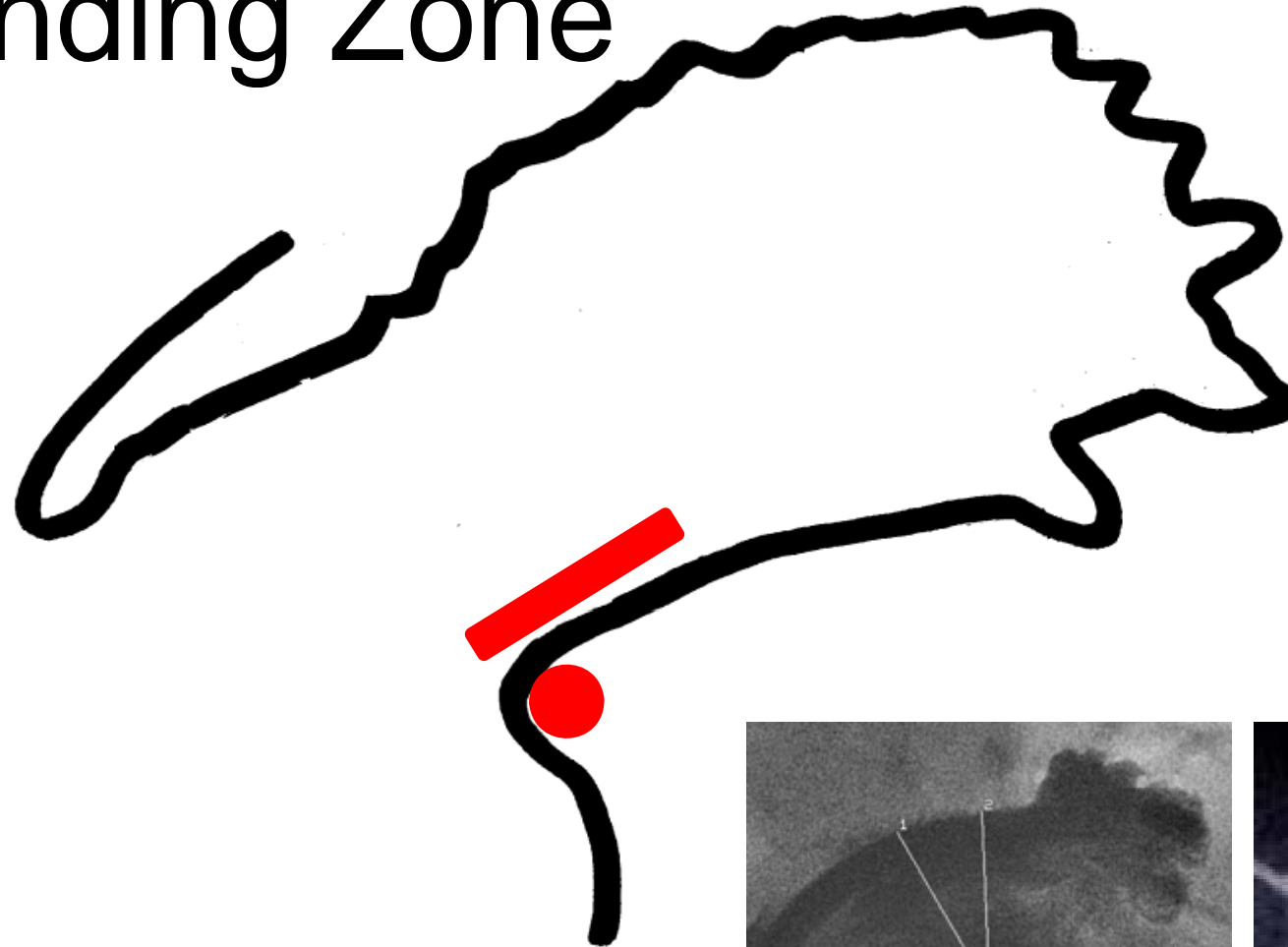
Difficult !!



Difficult !!

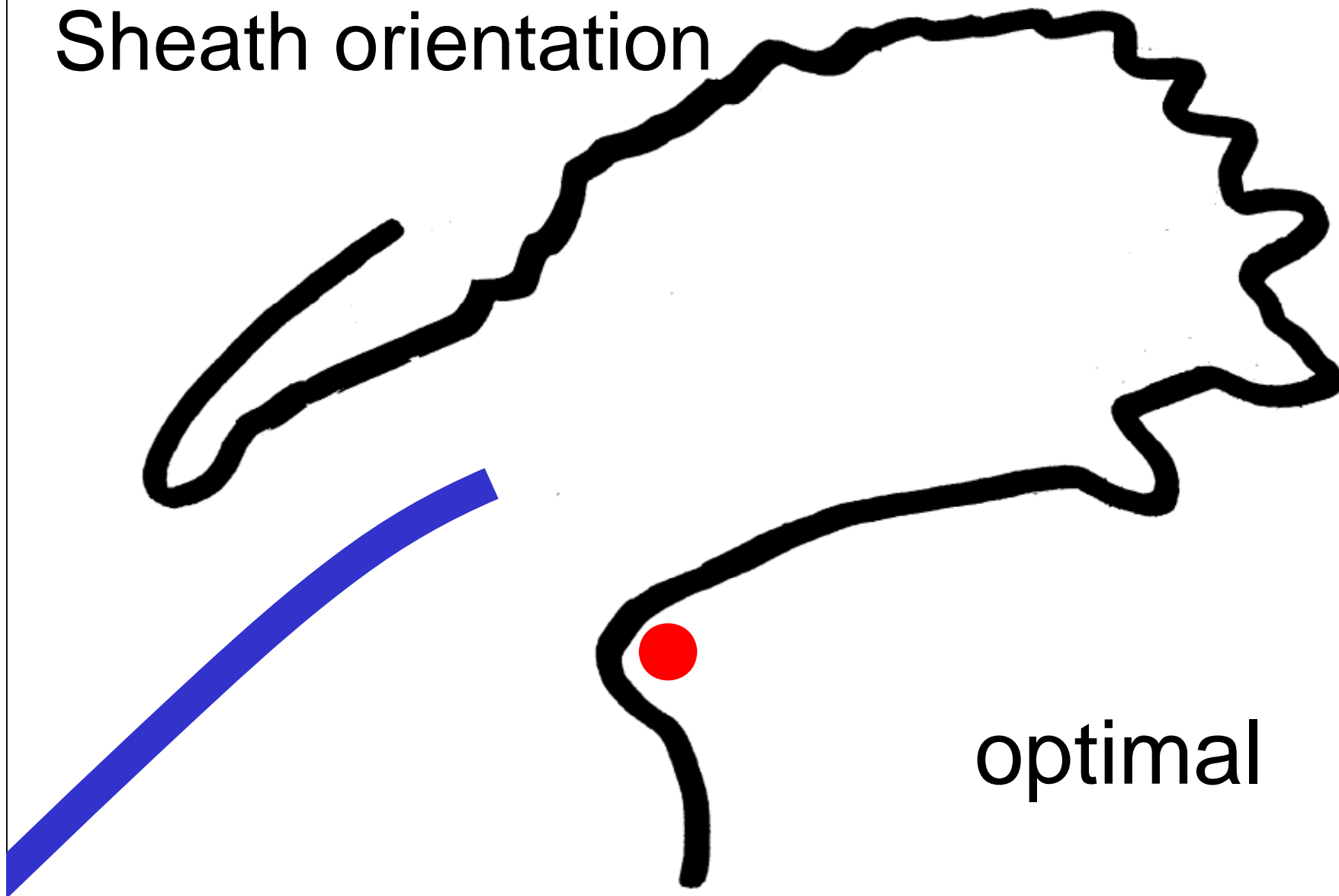
Sheath orientation not  
so important with the  
Watchman

# Watchman Landing Zone

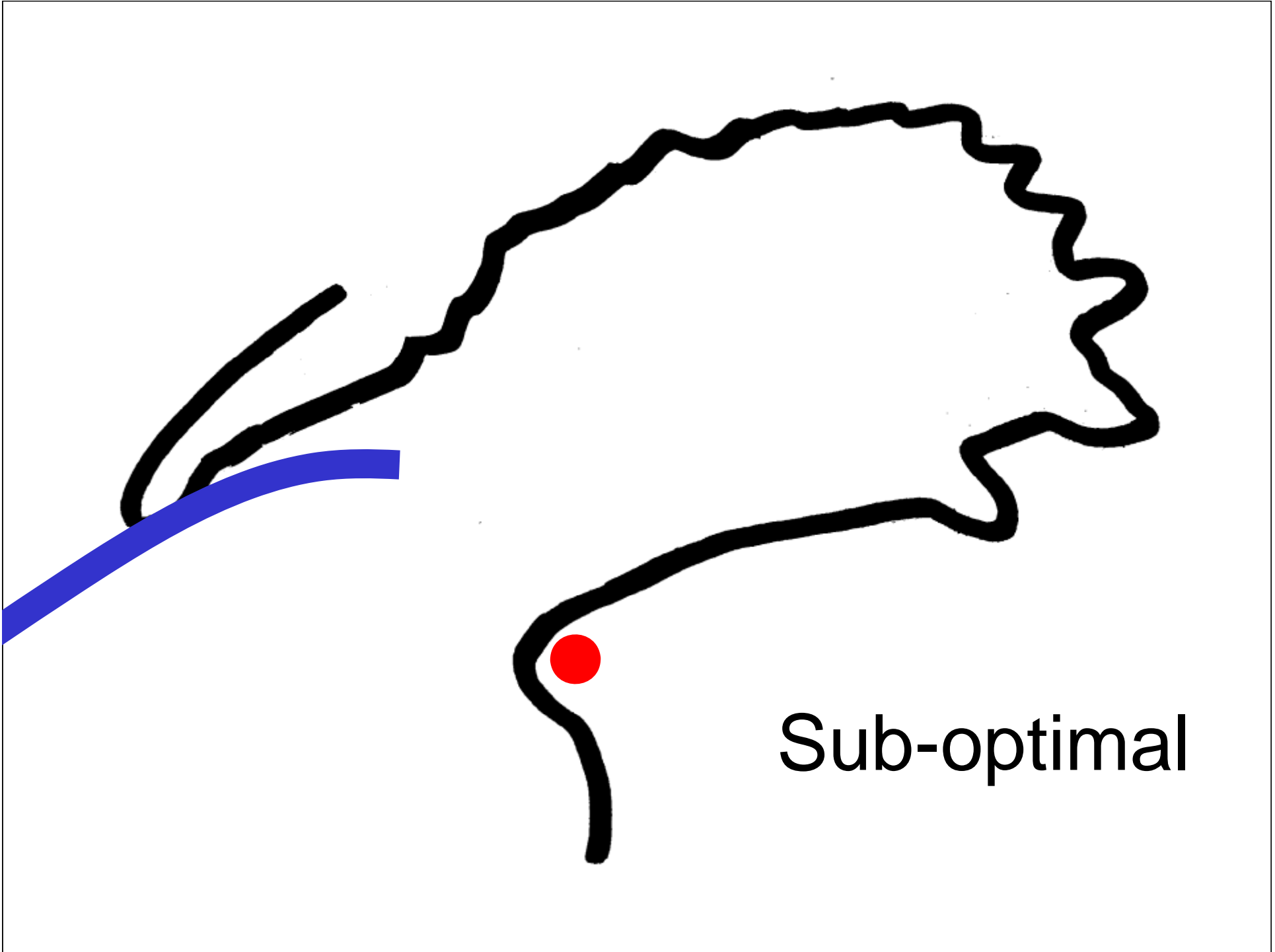


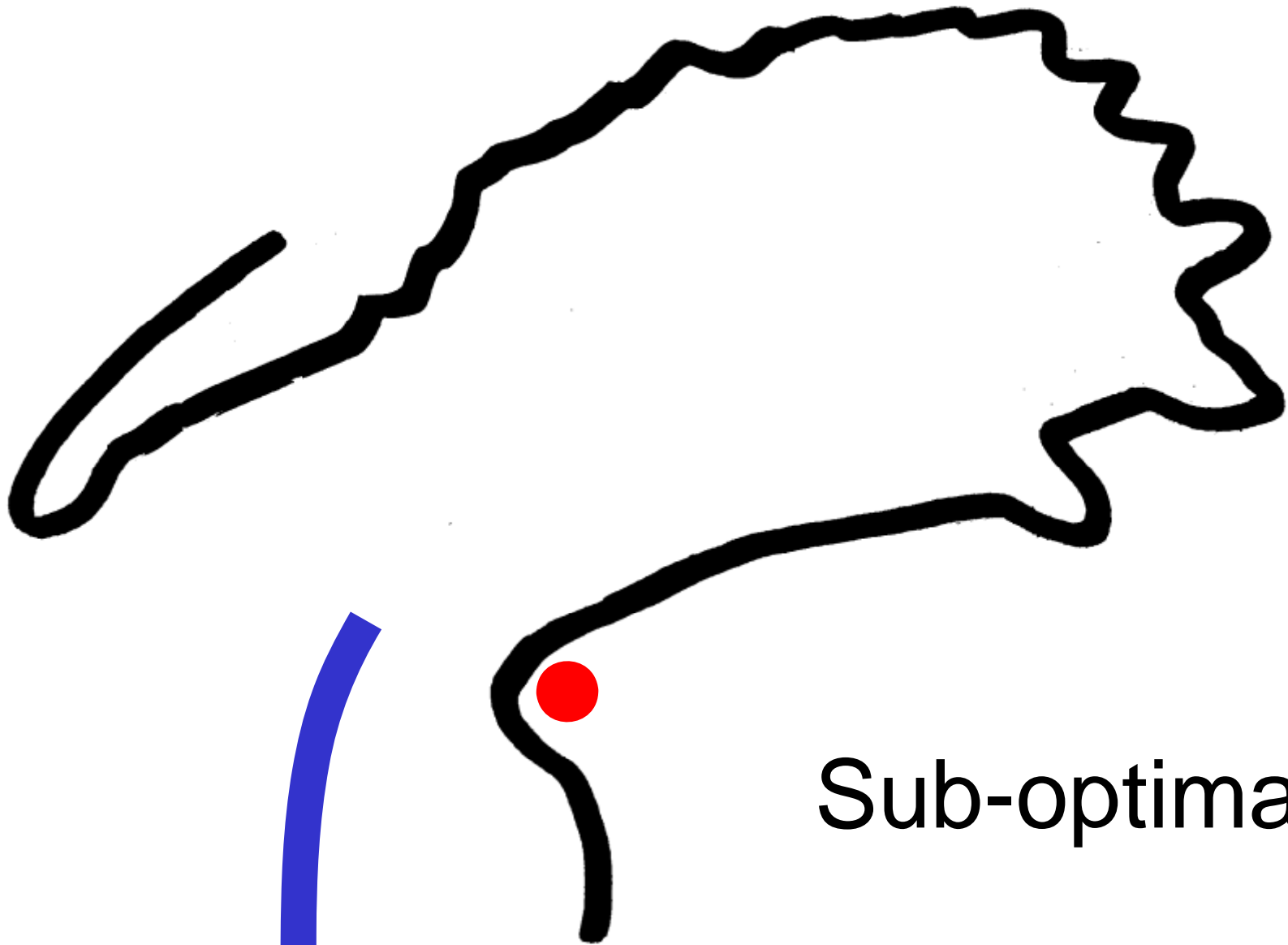


Watchman  
Sheath orientation

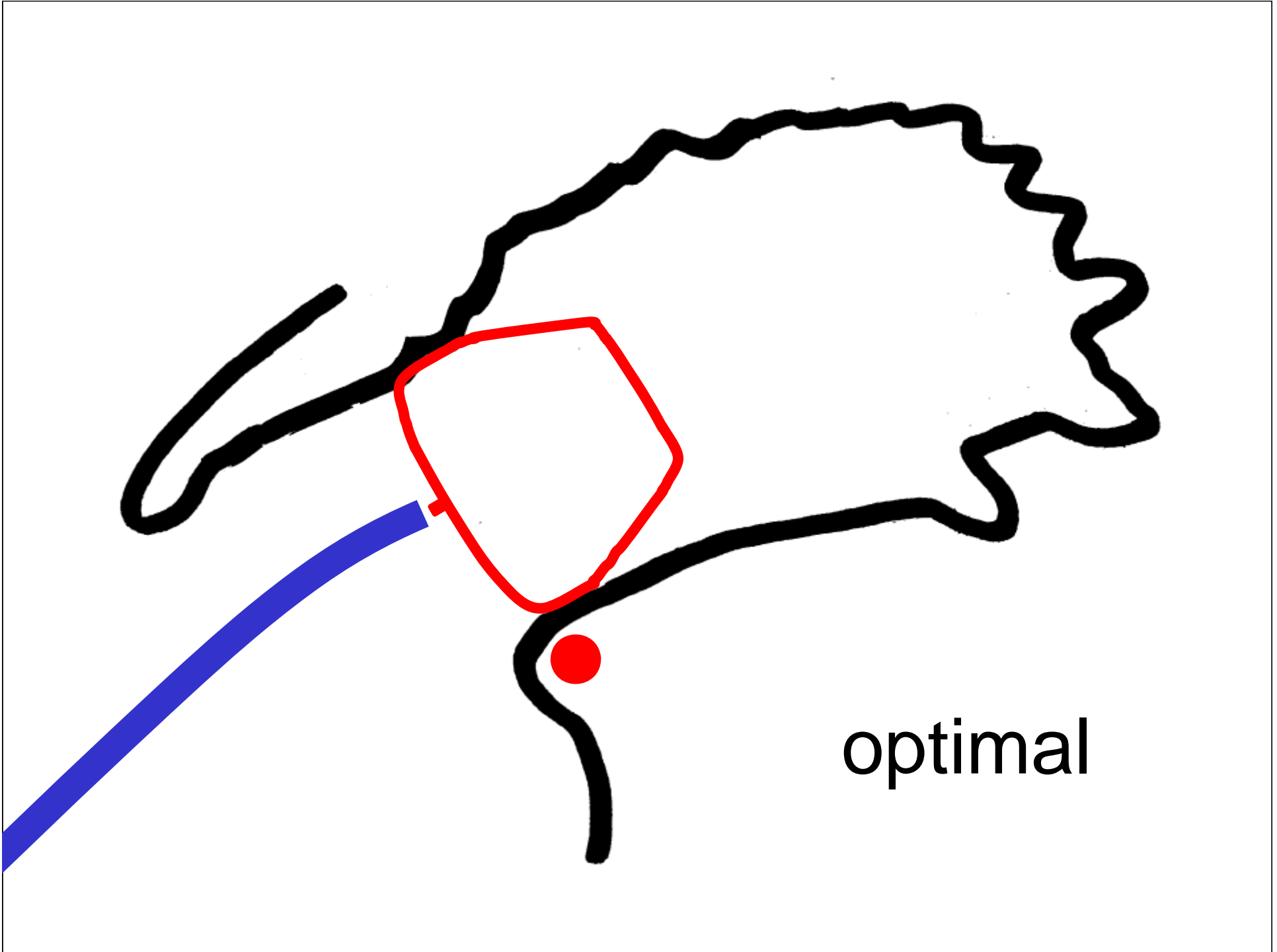


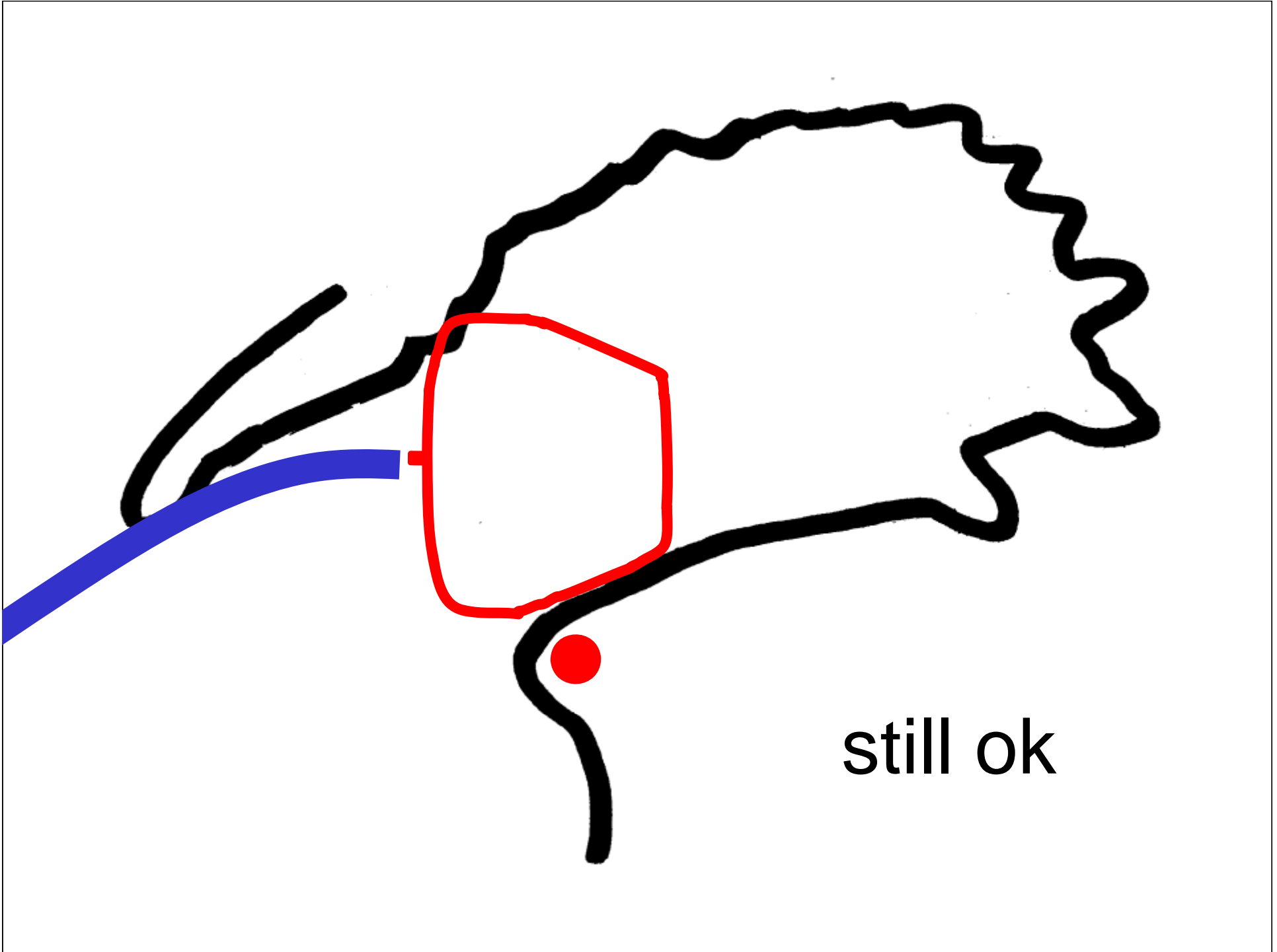
optimal



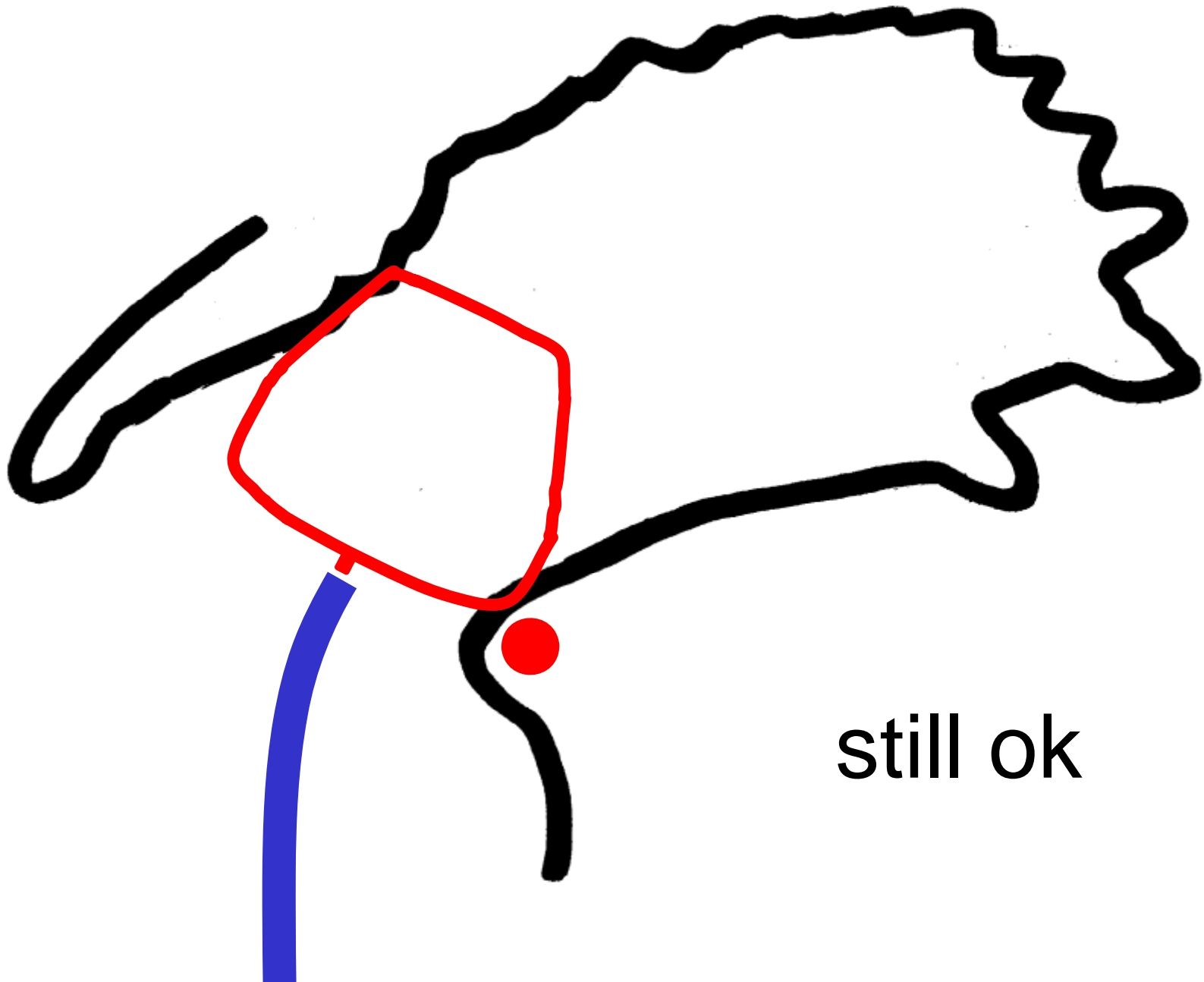


Sub-optimal





still ok

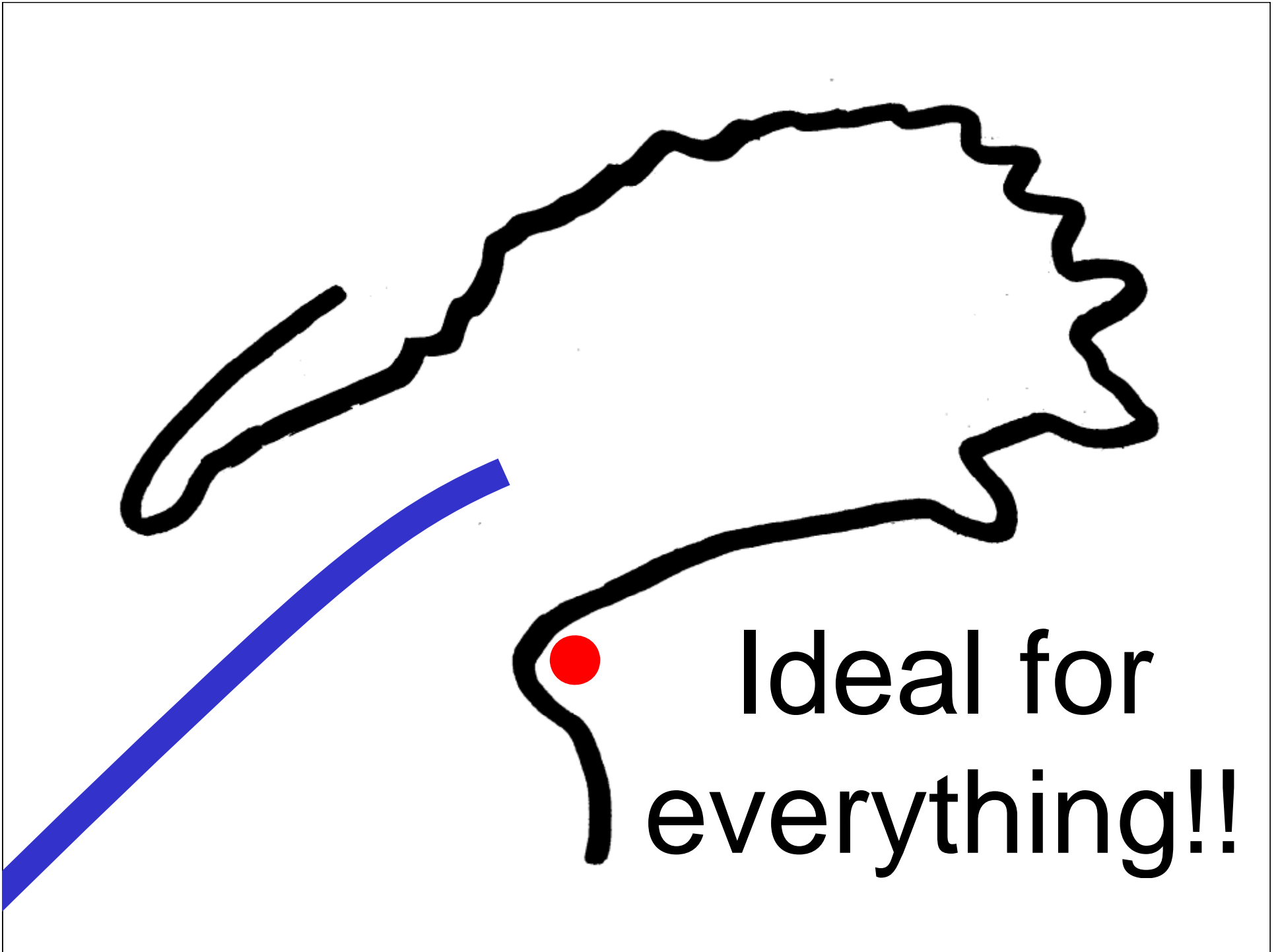


still ok

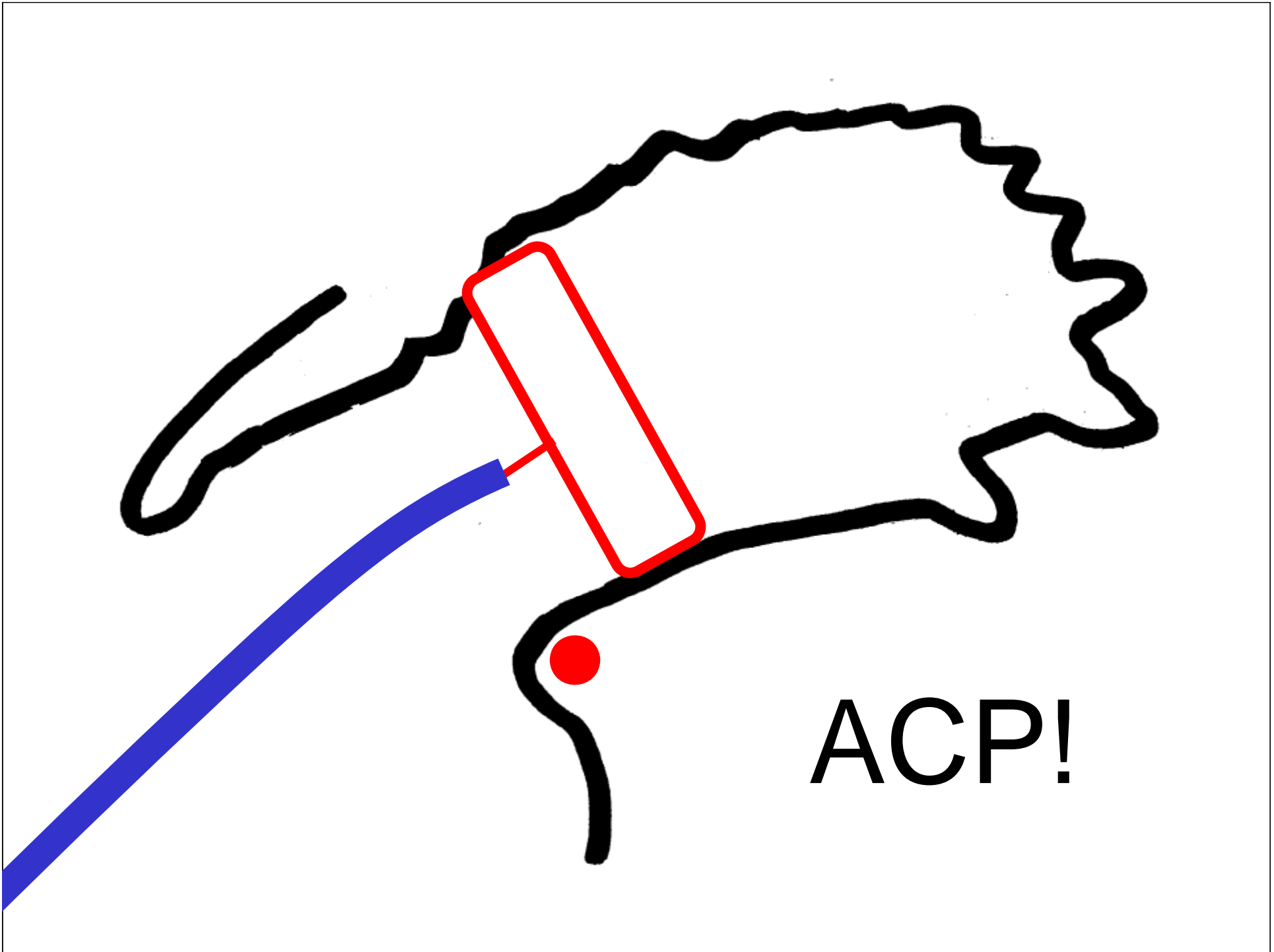
ACP requires more than the  
Watchman a well defined landing  
zone and a perpendicular  
orientation of the sheath in  
relation to the LAA ostium

What's about different  
LAA shapes?

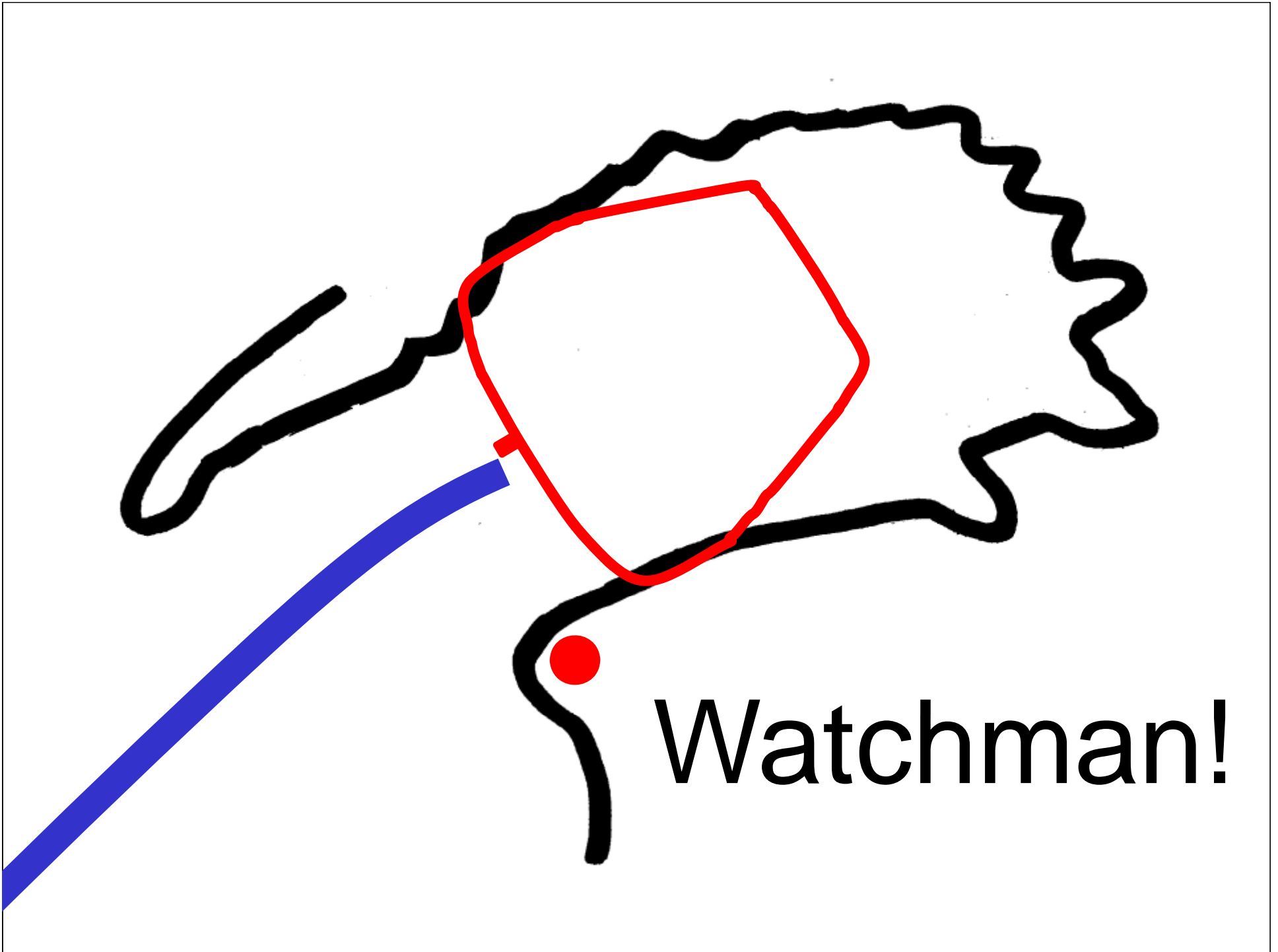




Ideal for  
everything!!



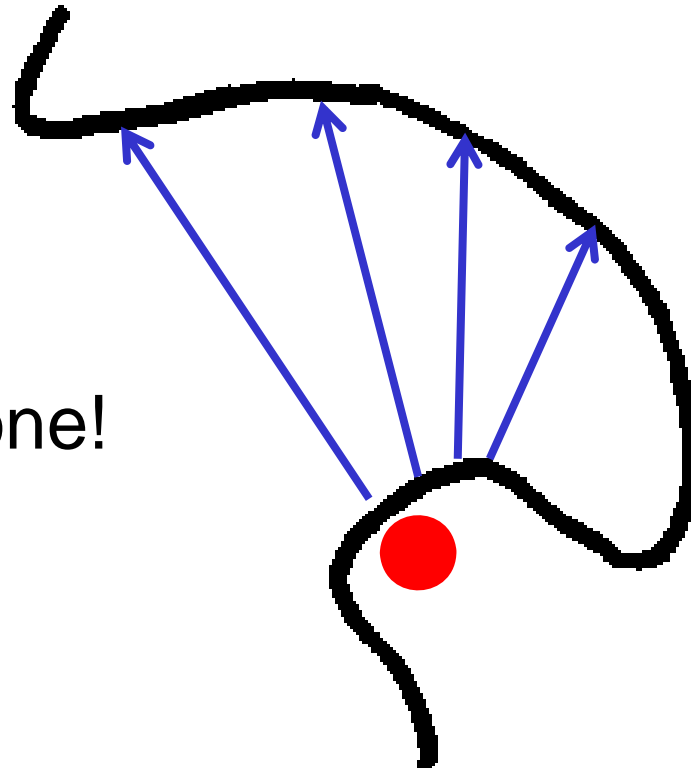
ACP!



Watchman!

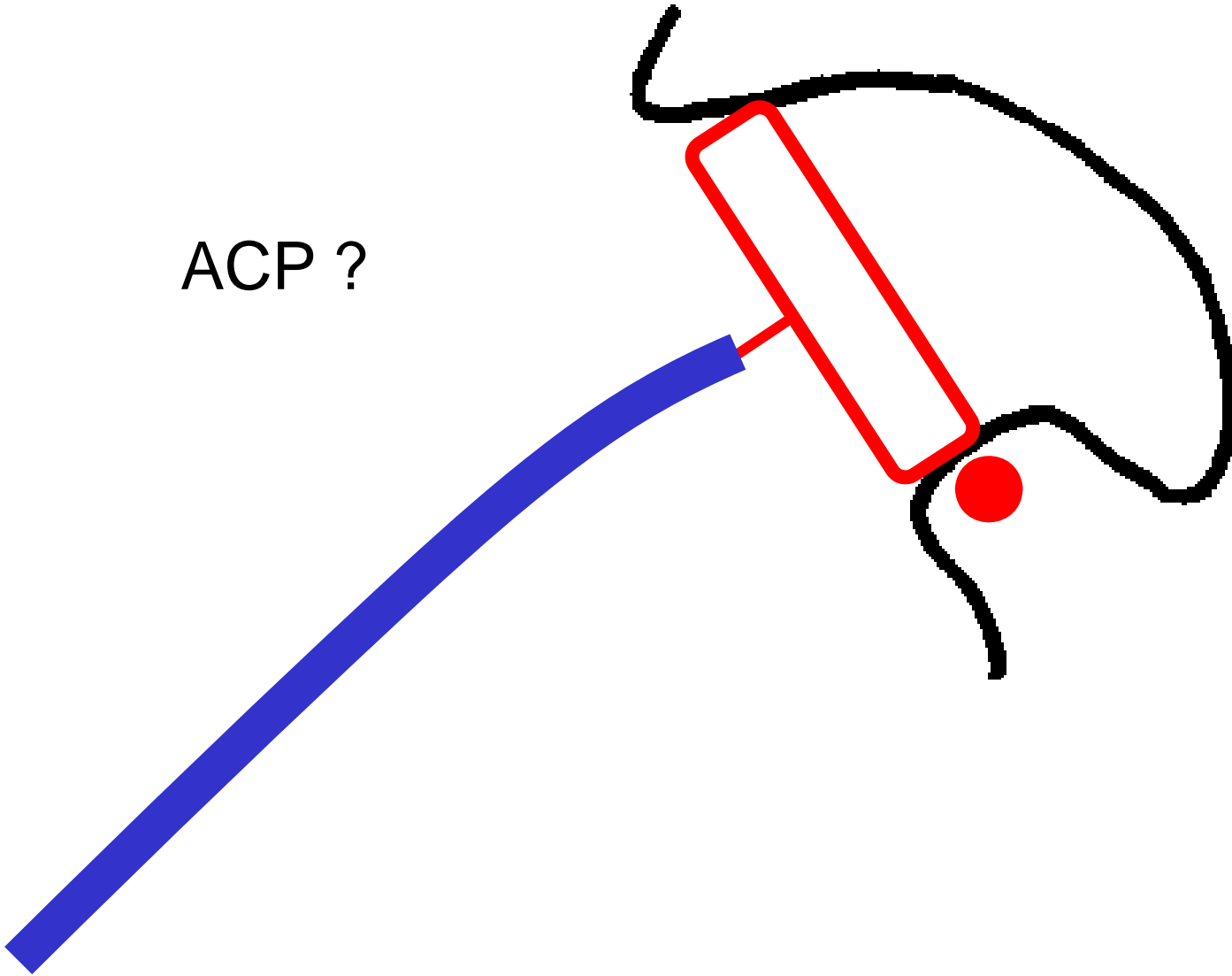
# Not as easy as it looks!

No good landing zone!



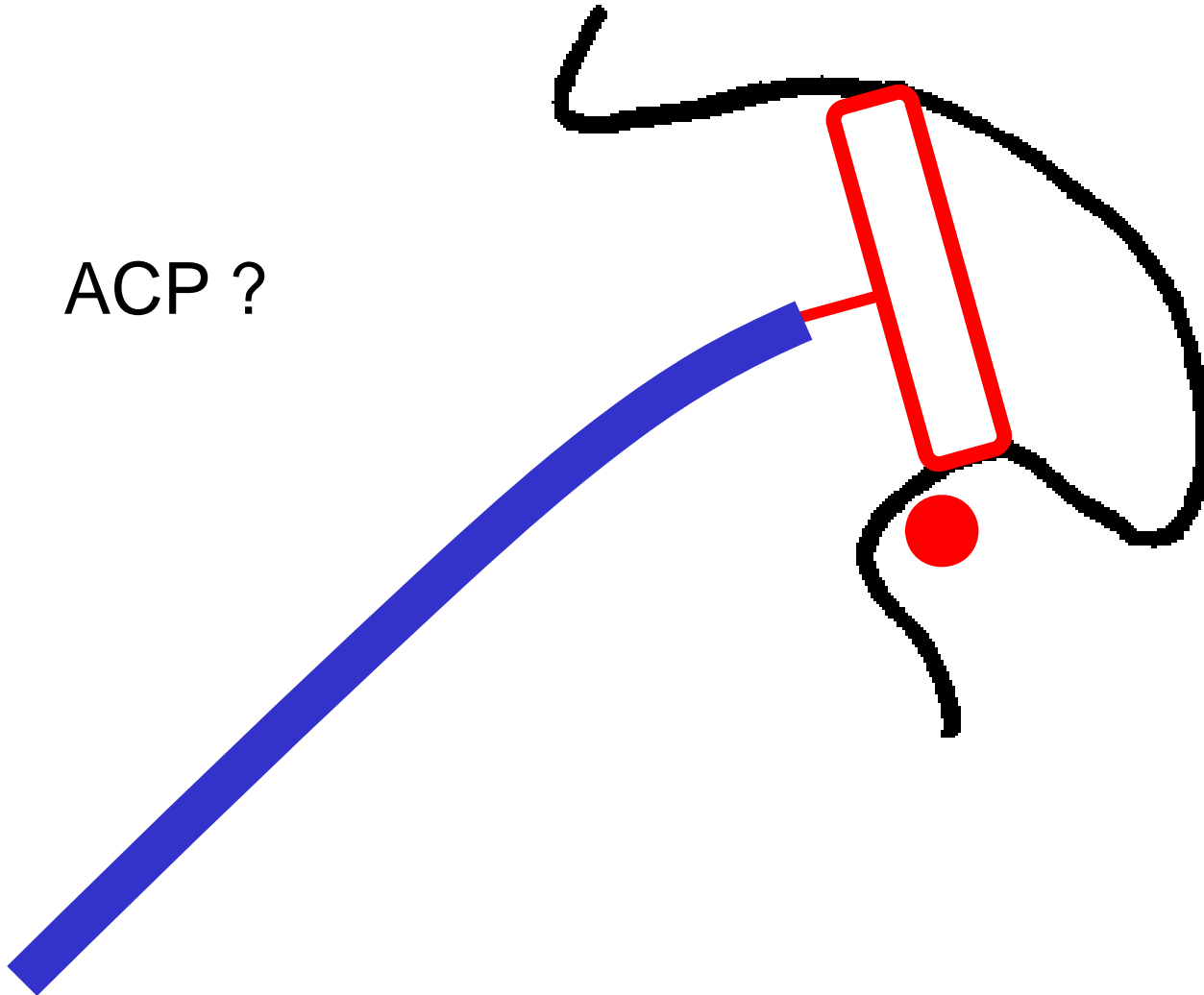
# Not as easy as it looks!

ACP ?



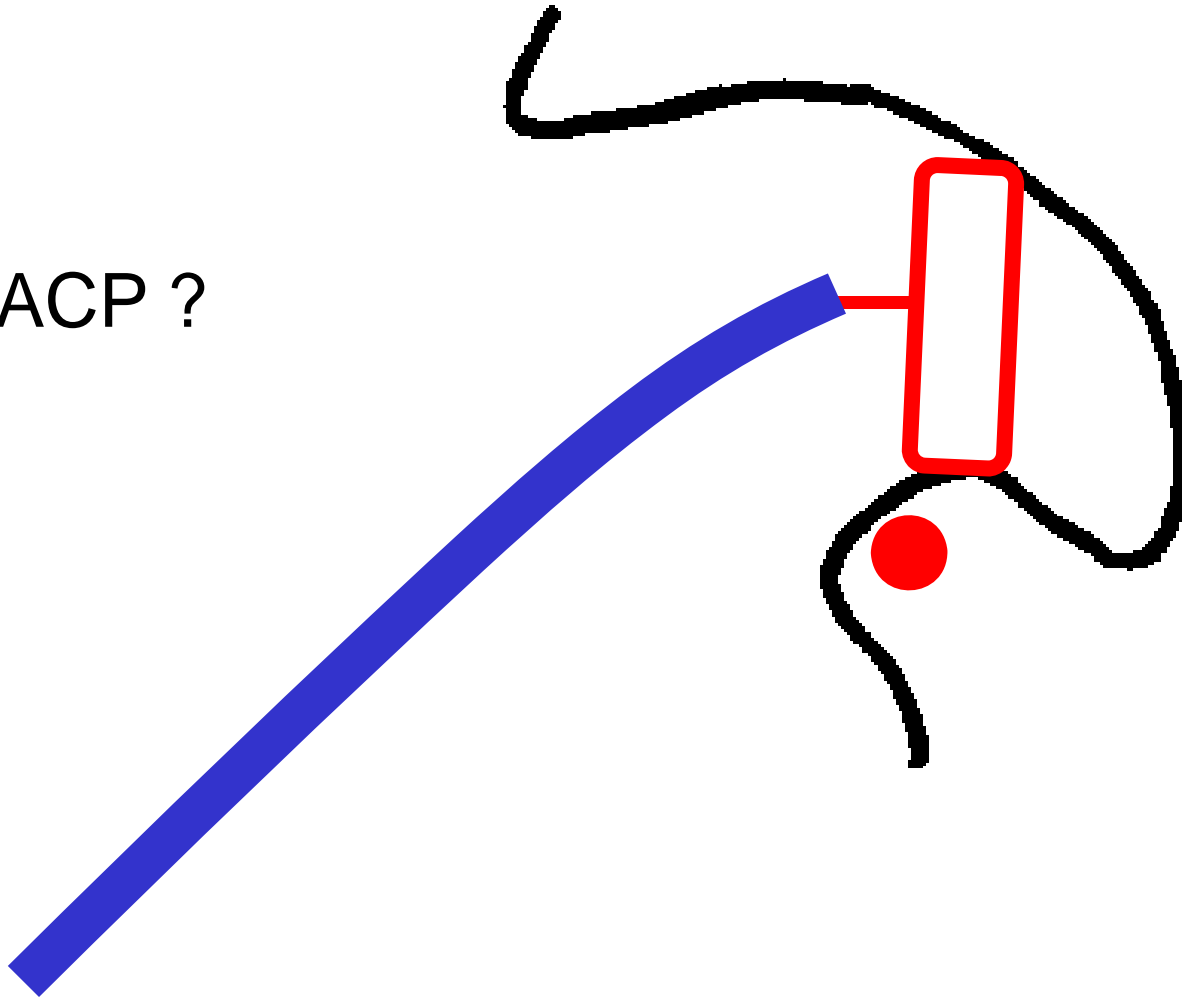
# Not as easy as it looks!

ACP ?



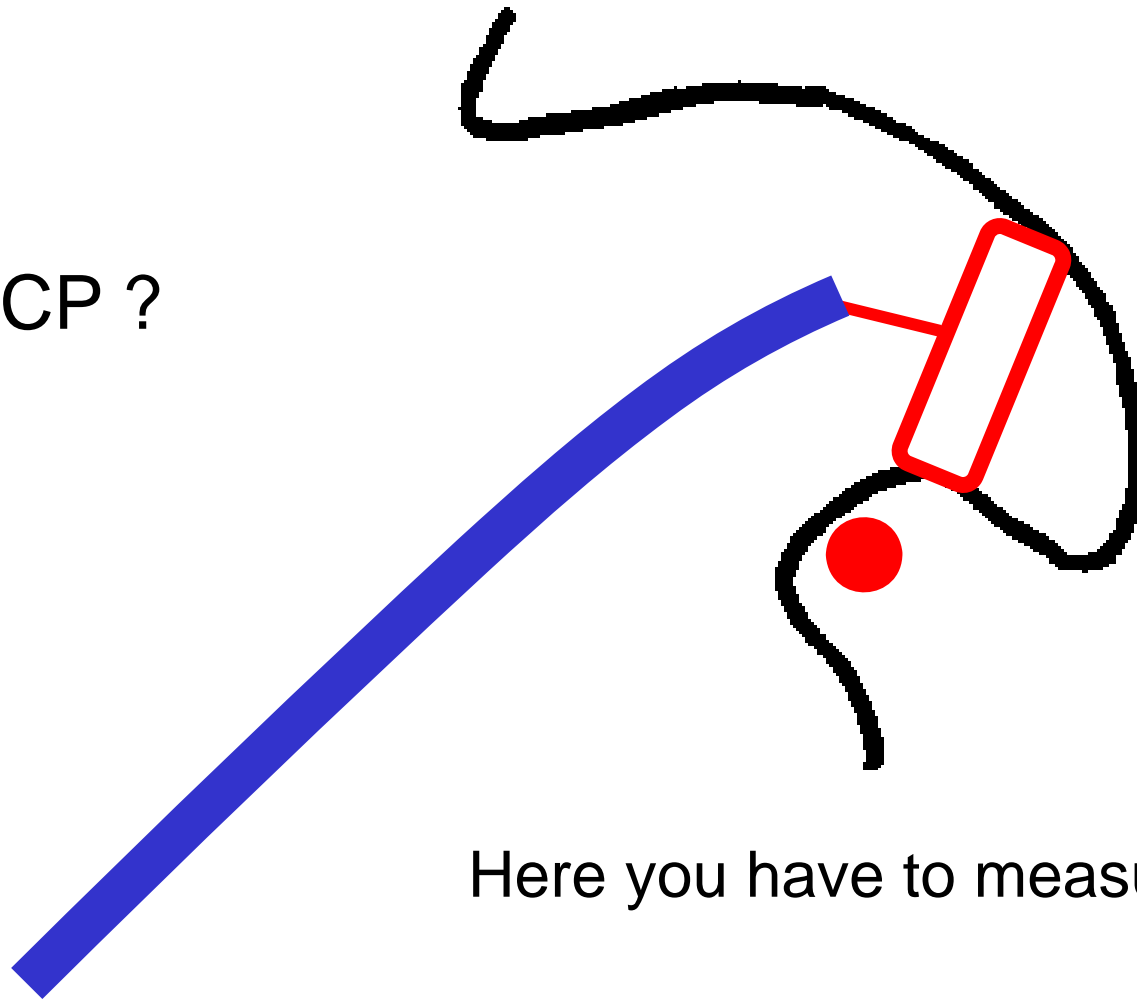
# Not as easy as it looks!

ACP ?



# Not as easy as it looks!

ACP ?



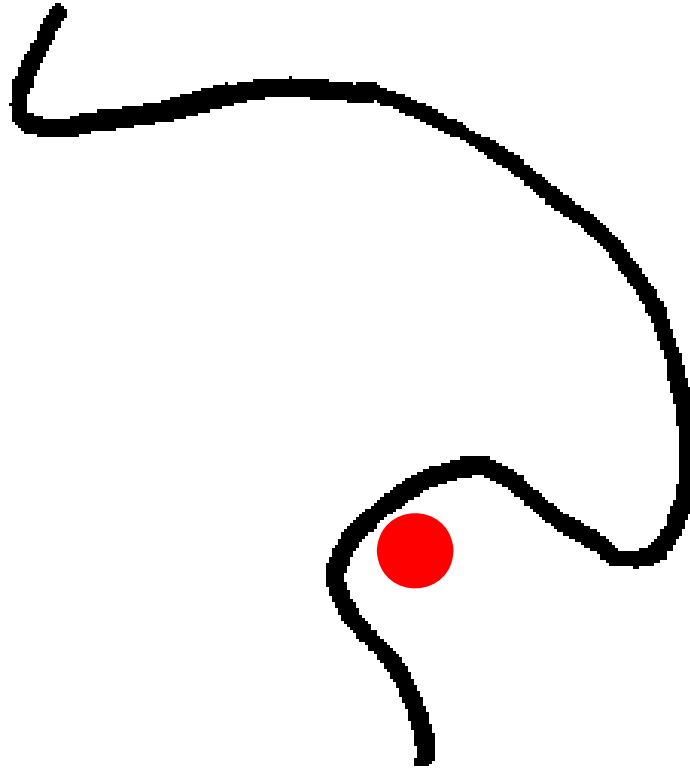
Here you have to measure precisely!

Precisely where you want to place the device

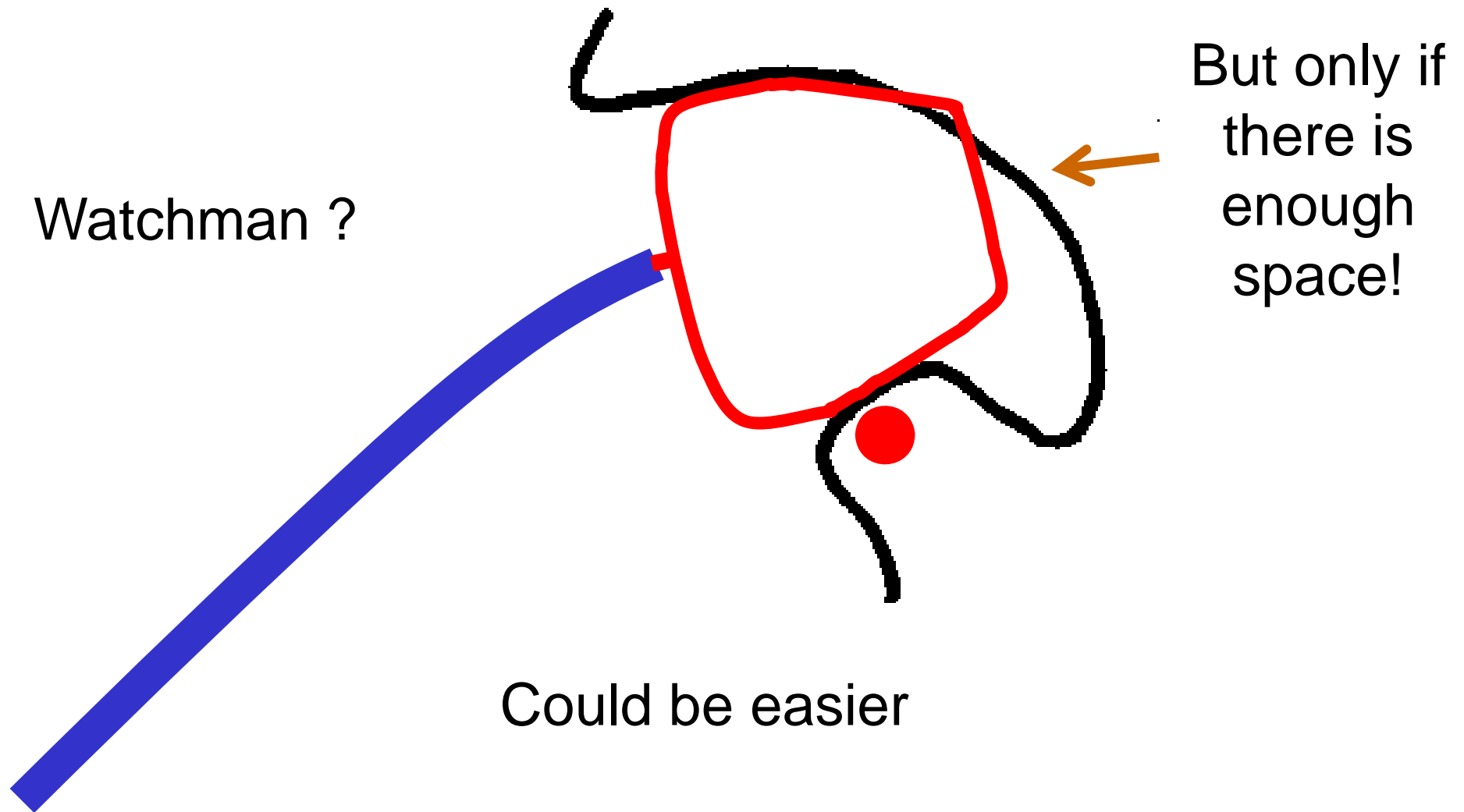


# Not as easy as it looks!

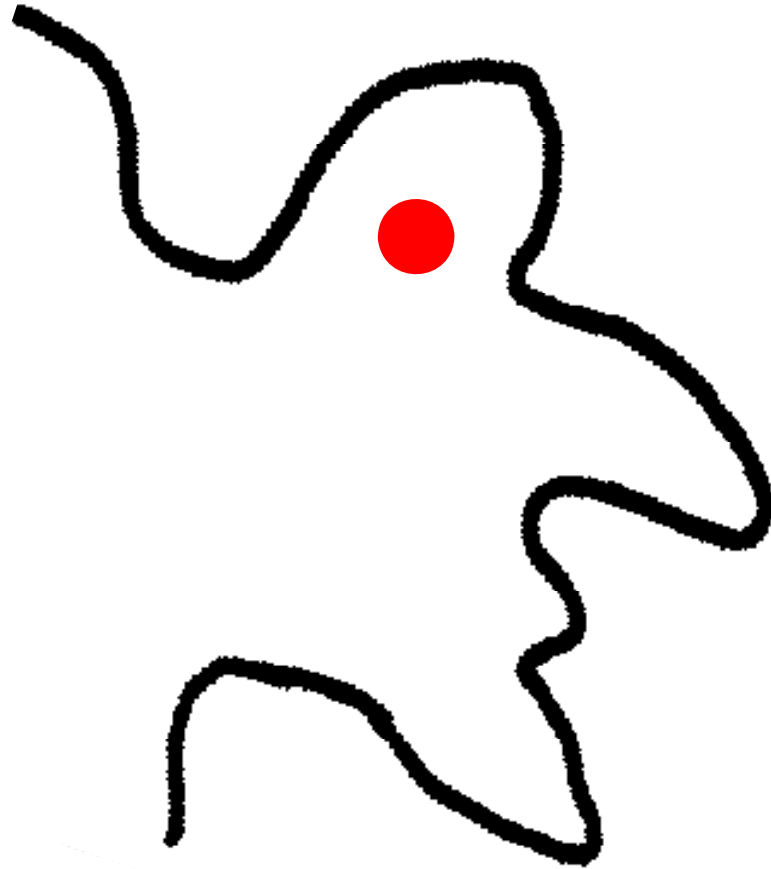
And Watchman ?



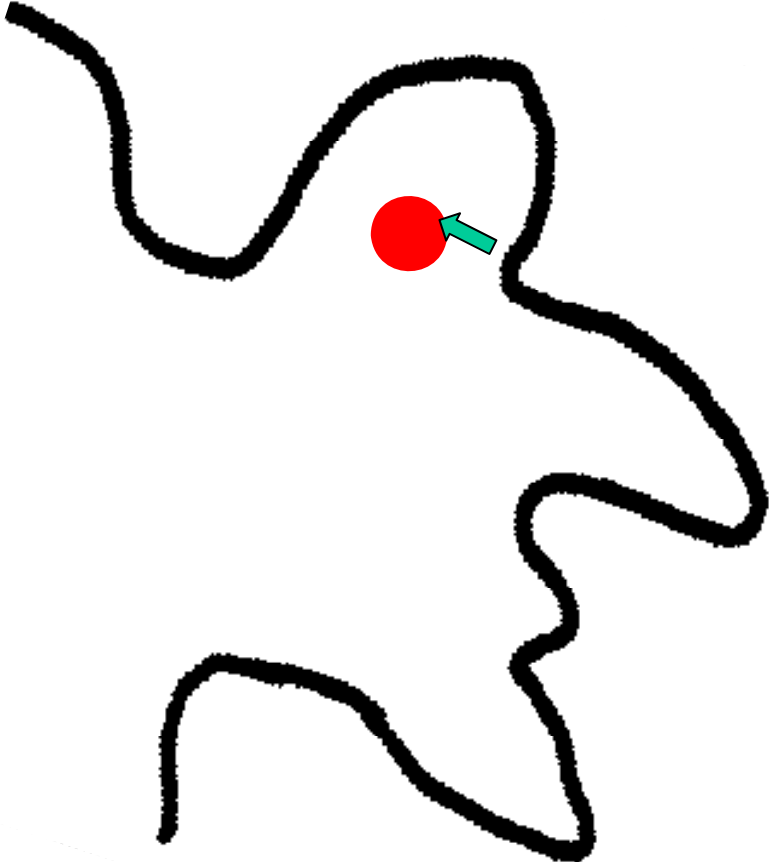
# Not as easy as it looks!



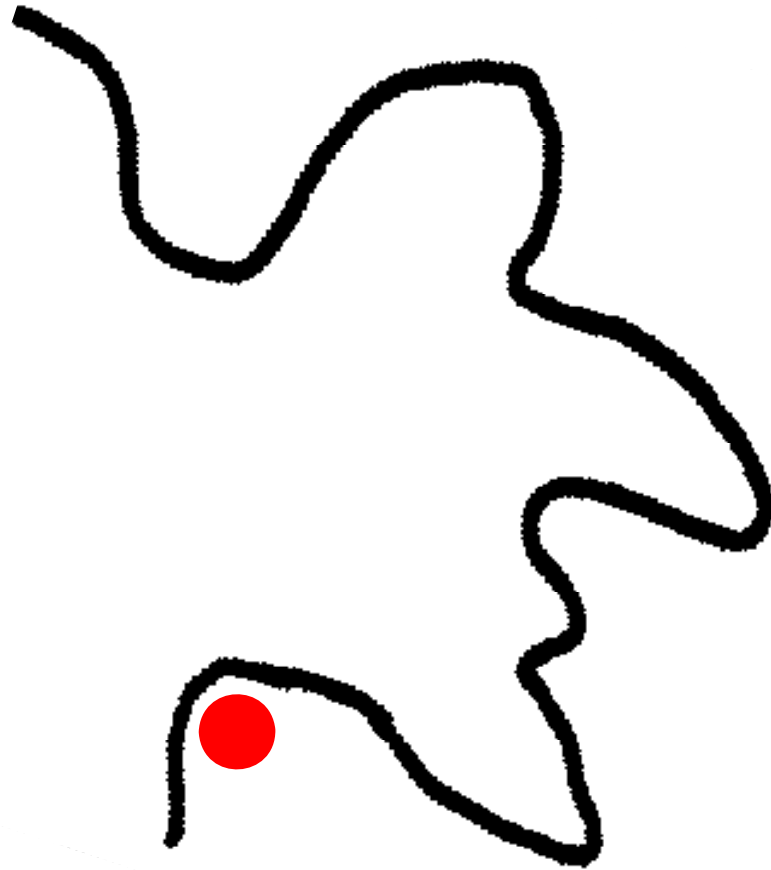
What's that?



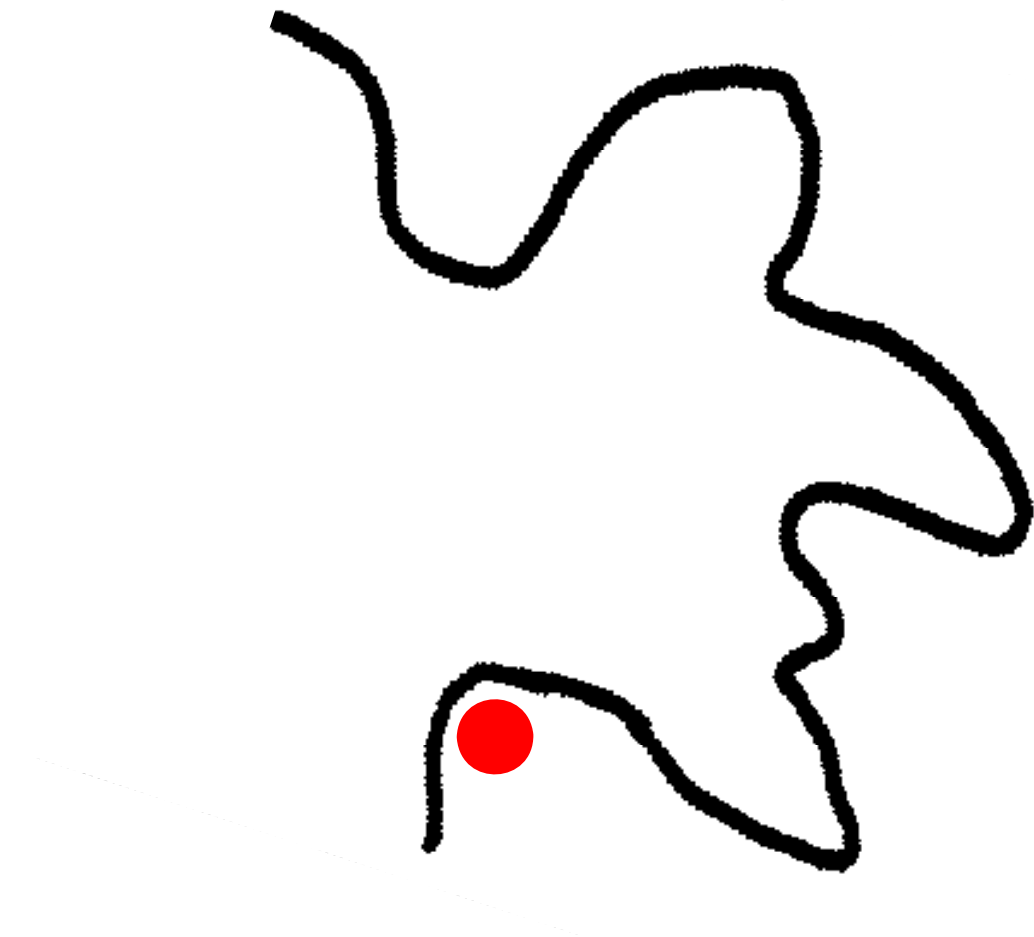
What's that?



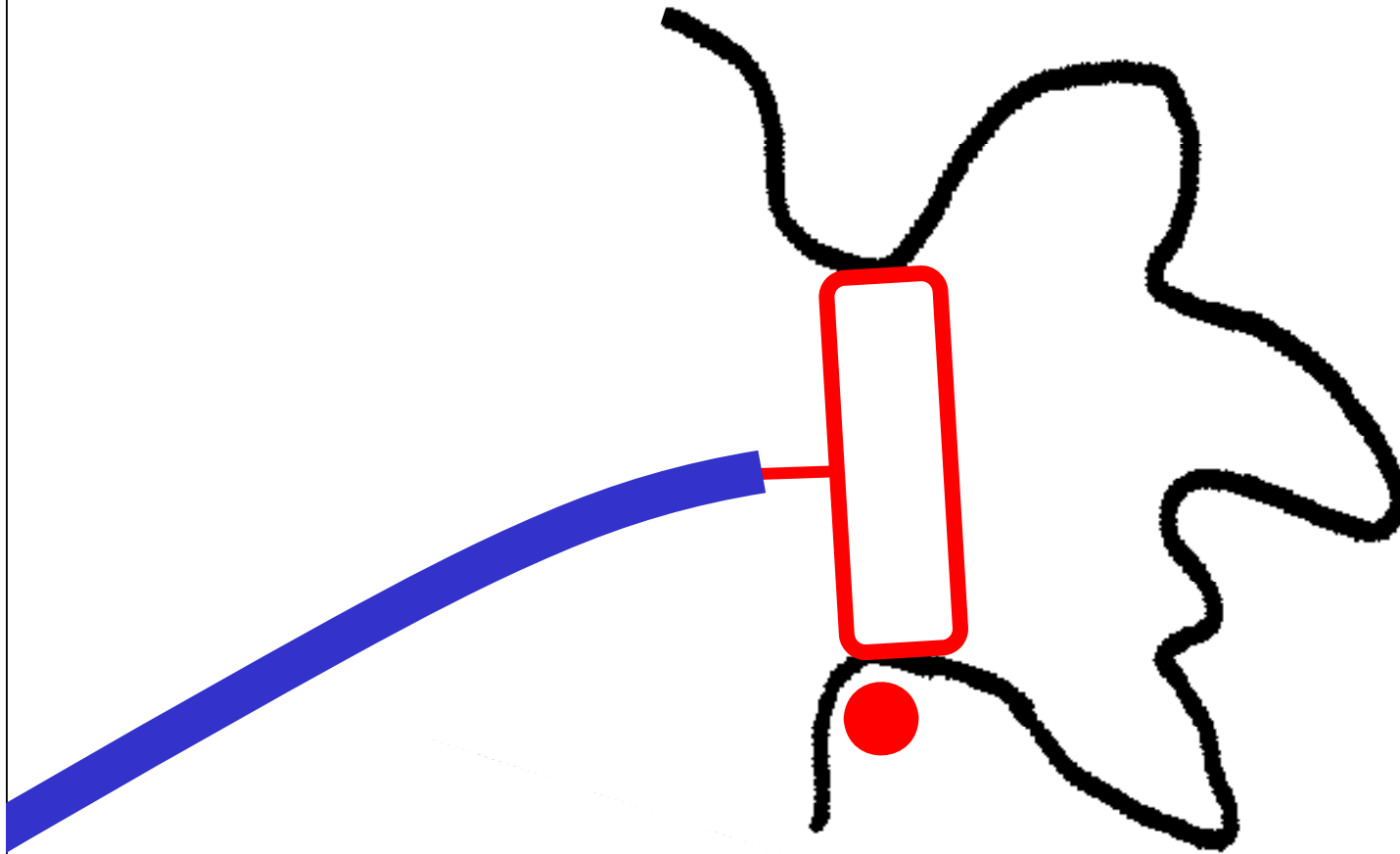
What's that?



# Complex morphology

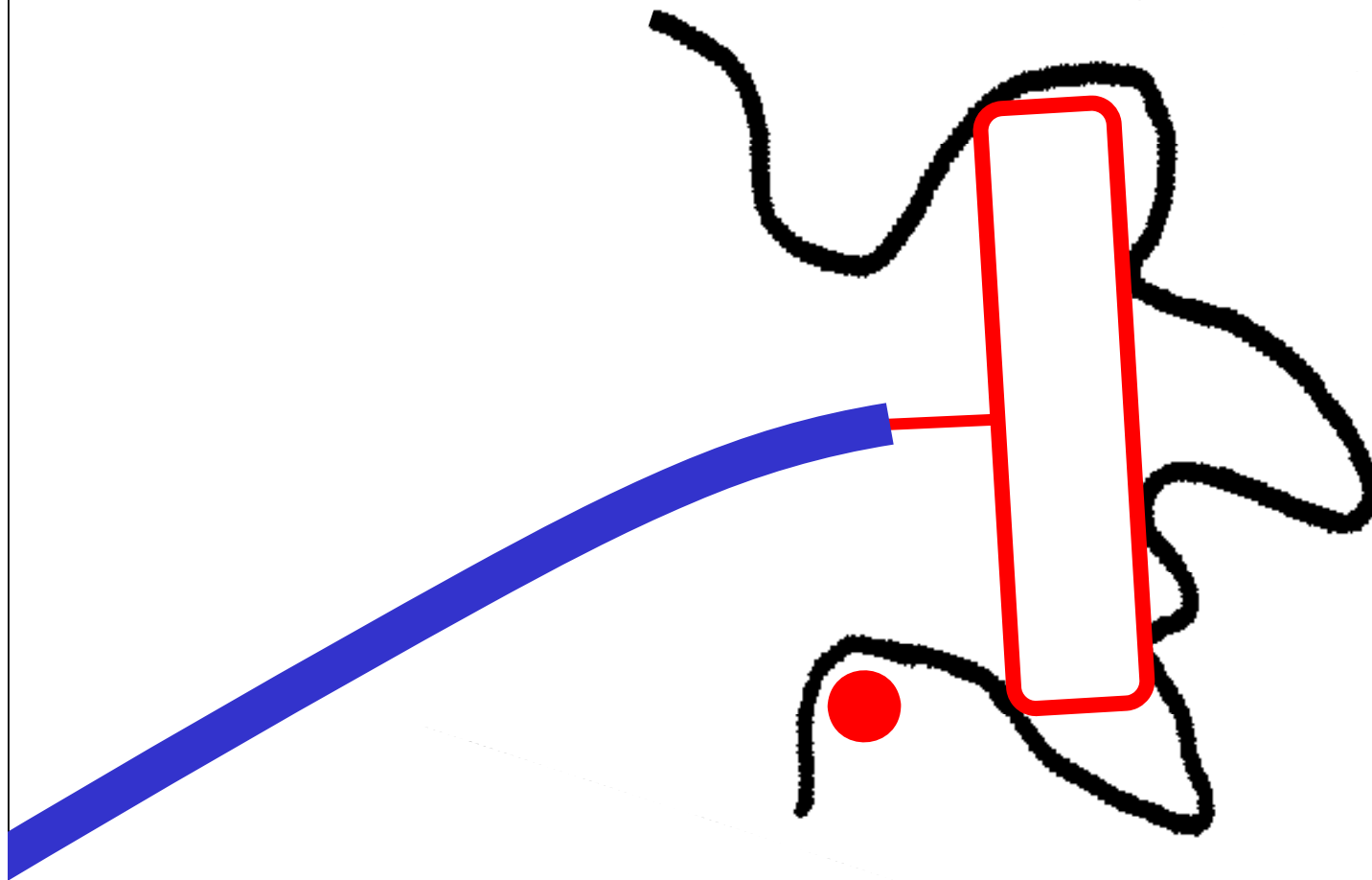


# Complex morphology



Difficult to place  
an ACP right here!

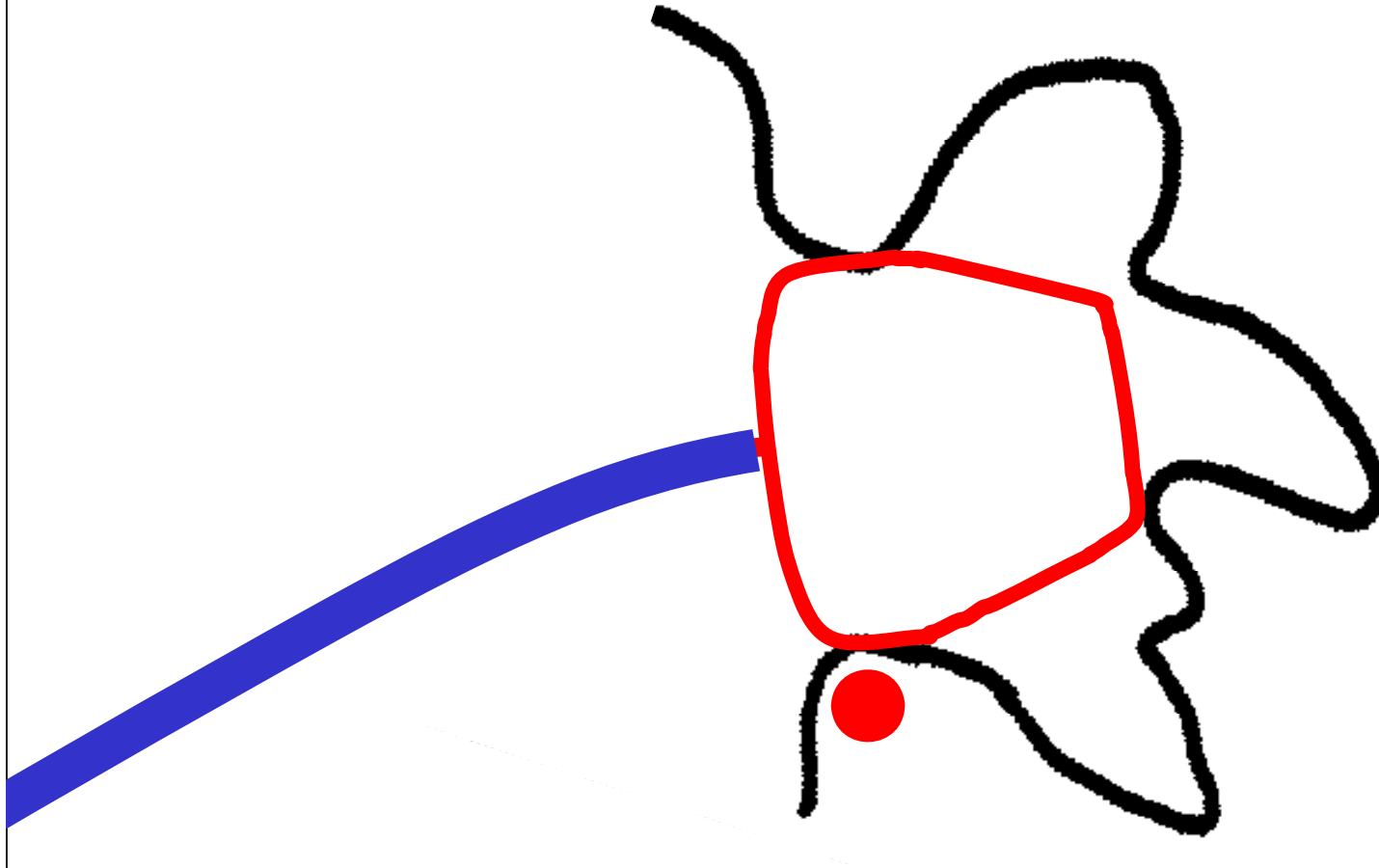
# Complex morphology



But rather easy here!



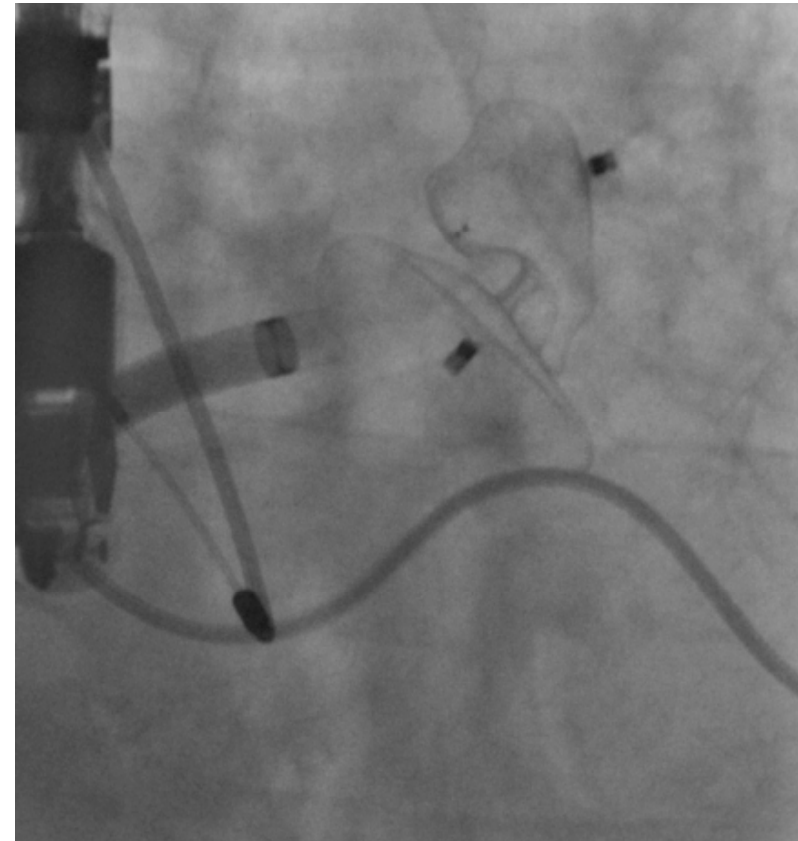
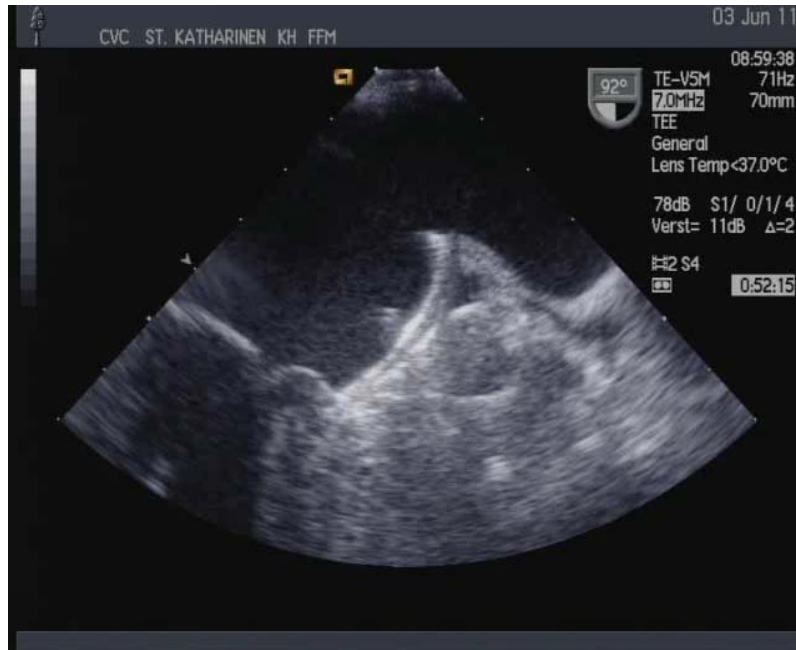
# Complex morphology



And Watchman also easy  
– if the functional landing zone is long enough

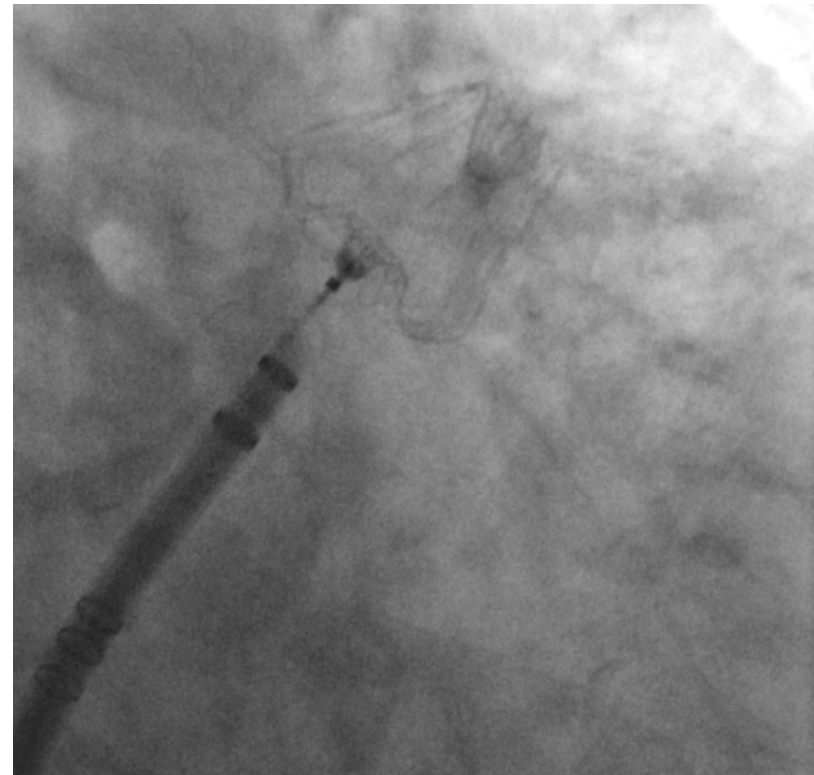
Does one "look nicer"  
than the other?

# ACP: Looks "nice"



Final position: TEE and Angiogramm

# Watchman: Looks "nice"



Final position: TEE and Angiogramm

All LAAs look nice ...

... as soon as they are  
closed

# Other considerations

- In case of device embolisation it is easier to snare and extract the Watchman than the ACP
- With Watchman one sheath size fits for all device sizes
  - The sheath can be used for calibration
  - Decision about device size can be made after sheath insertion
- With ACP no quantitative measurements are needed after device implantation
- That one LAA closure device is effective in stroke prevention does not mean necessarily that all other devices are effective as well
  - Data are still much more solid for Watchman
- To compare the safety profile of different devices a randomized study is needed

# When to use which device?

- Very short LAA
  - ACP may be better than Watchman
- Very large LAA (>28mm)
  - Watchman may be better (up to 31mm)
- Multiple proximal lobes
  - ACP may be better (short landing zone, umbrella may cover all lobes)
- But if there is a bad angle between delivery system and LAA
  - Watchman may be better
- In 95% of all patients you can use ever one



LAA ASIA-PACIFIC  
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MAY 5, 2012 | SINGAPORE



How to Close the Left Atrial Appendage

[www.csi-laa.org](http://www.csi-laa.org)