

Invited Speakers Session 2

World Practices 2: Parenchyma Section

Parenchymal dissection with CUSA

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How do you divide the liver?

The concept of liver dissection

The concept of liver dissection

The concept of liver dissection

Slash! (一刀両断)



The concept of liver dissection



Carving...?



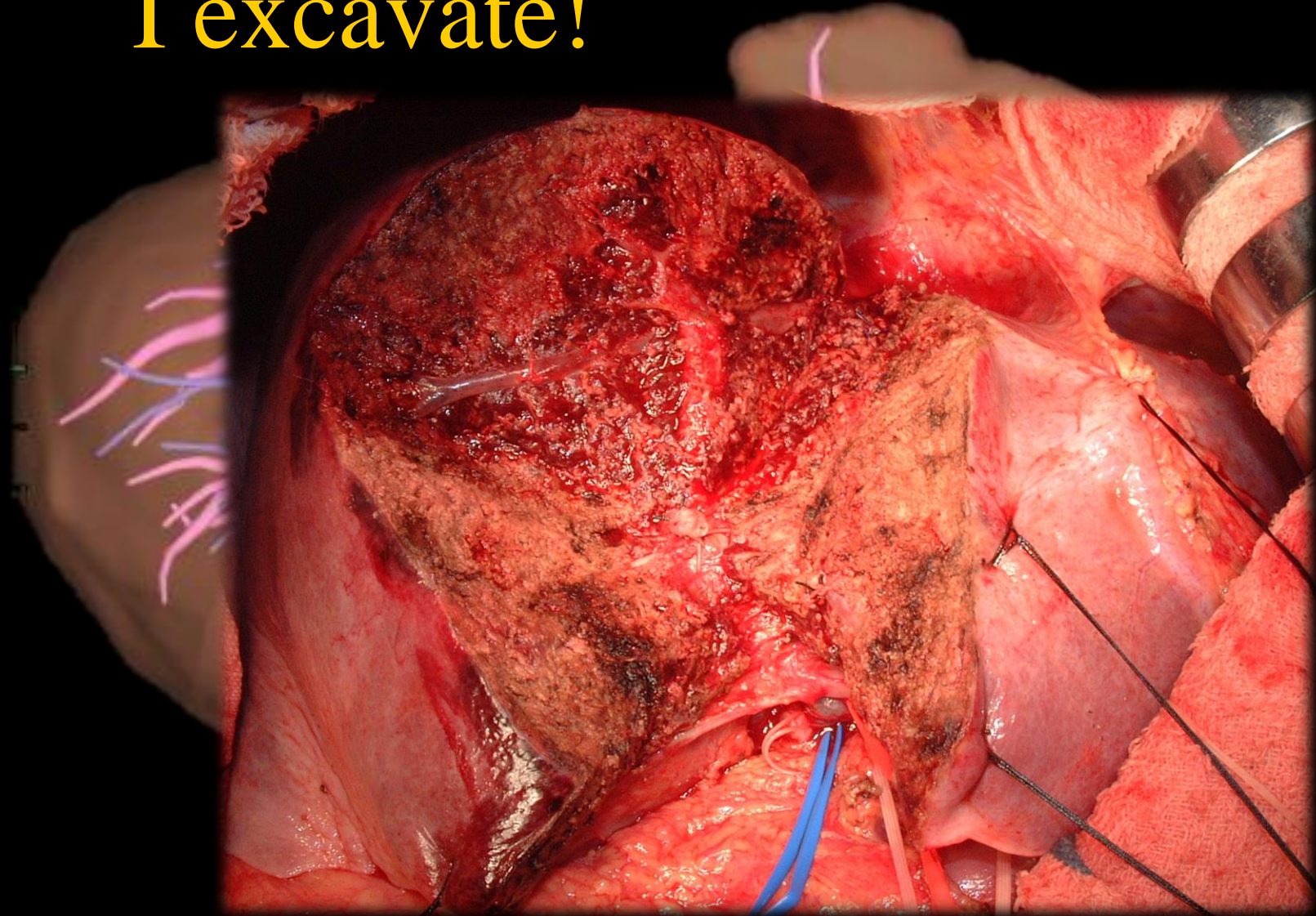
The concept of liver dissection

I excavate!



The concept of liver dissection

I excavate!



The concept of liver dissection

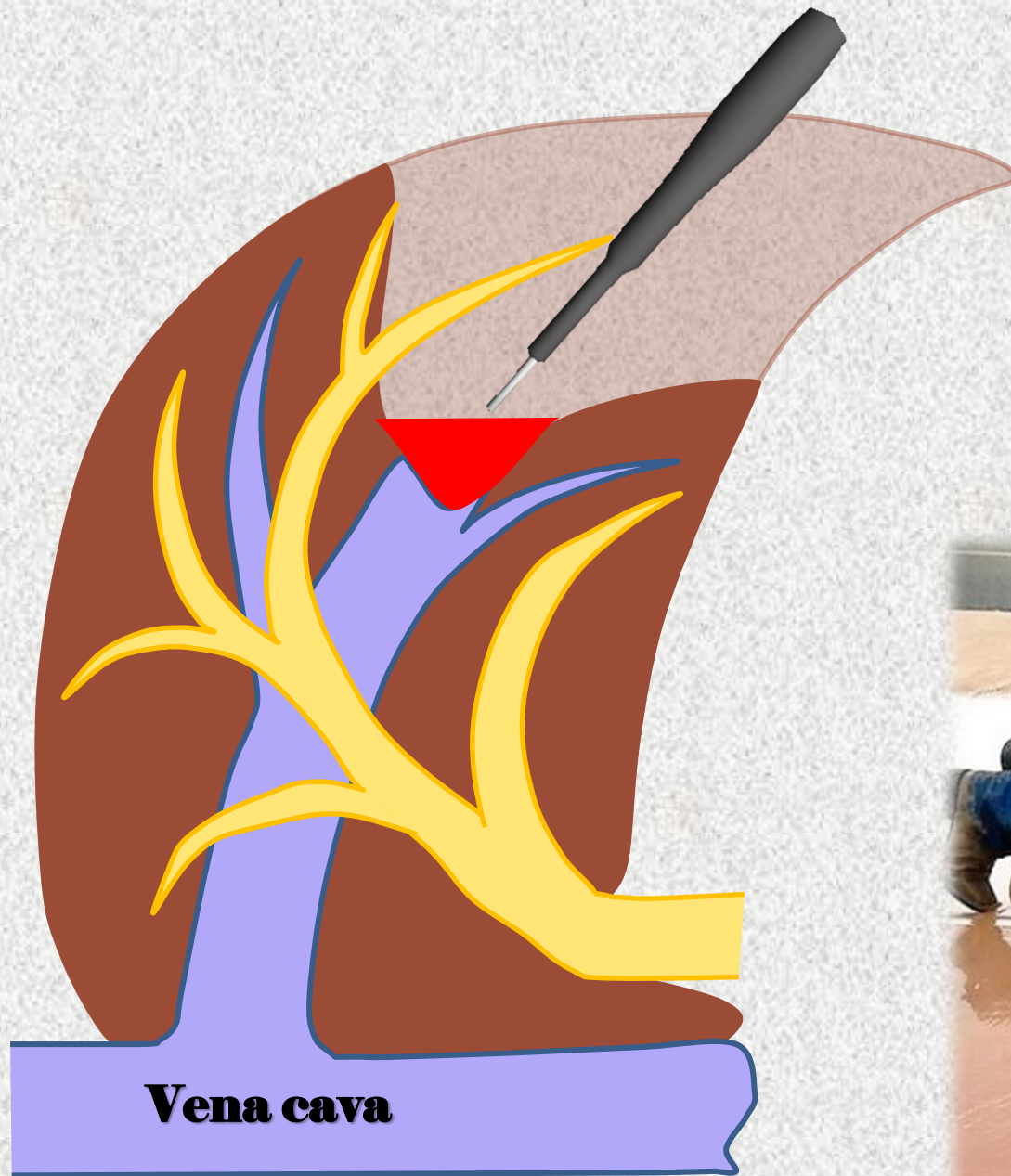
to excavate successfully

to excavate successfully

to excavate successfully



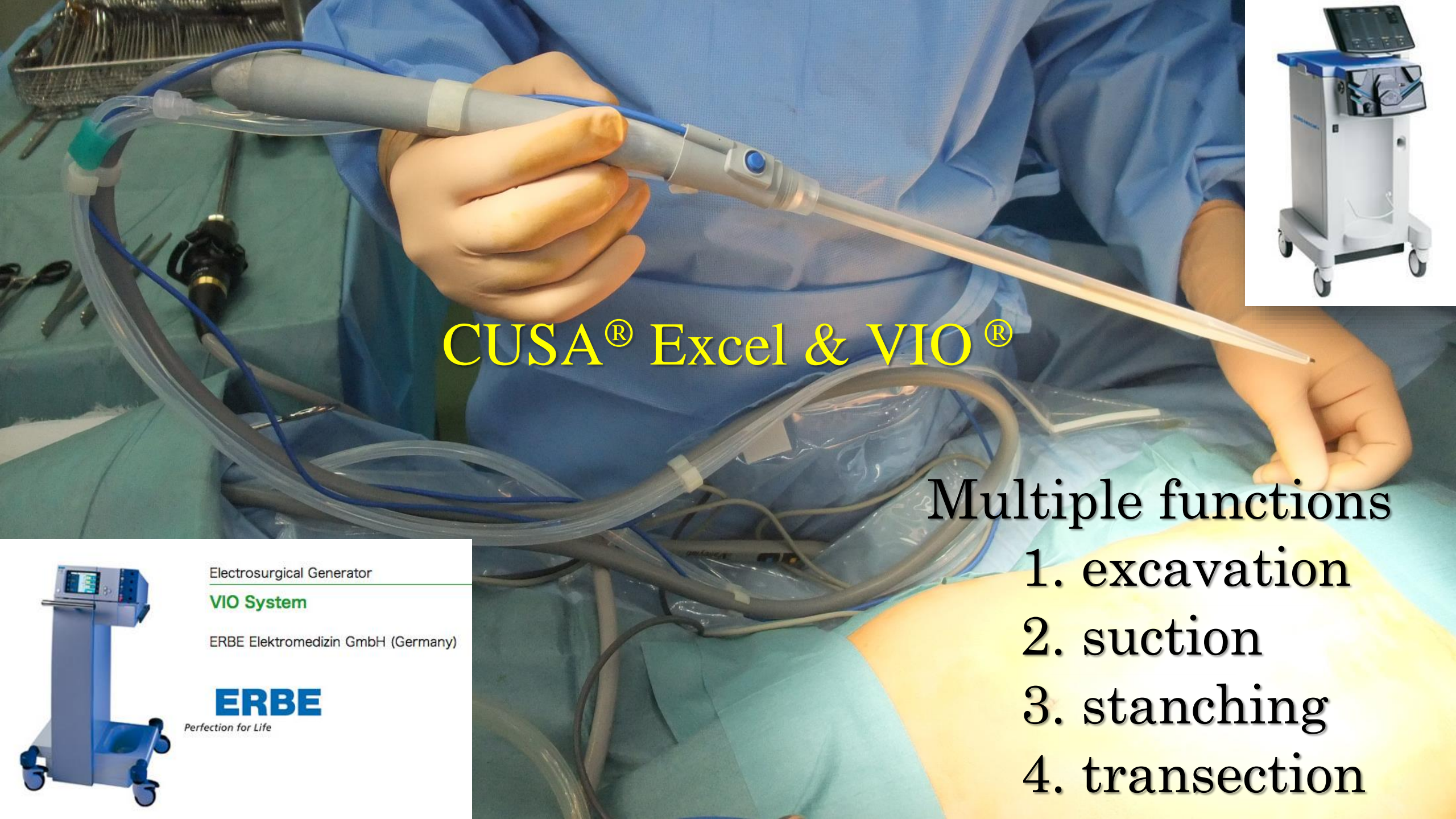
Dry operative field



Liver dissection procedure by excavating

Dry operative field

- Inflow control → Pringle maneuver
- Outflow control → reducing CVP
- Useful devices
- Appropriate technique



CUSA[®] Excel & VIO[®]

Multiple functions

1. excavation
2. suction
3. stanching
4. transection



Electrosurgical Generator

VIO System

ERBE Elektromedizin GmbH (Germany)

ERBE

Perfection for Life

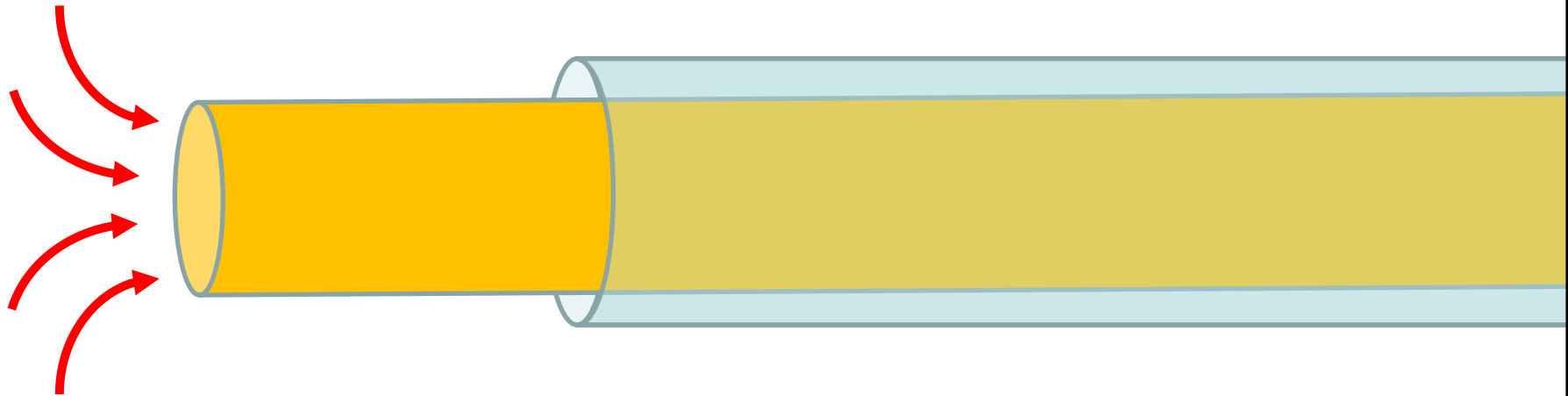
Lap-hepatectomy with CUSA[®] Excel

How to utilize CUSA[®]



CUSA vibrates longitudinally.

CUSA sucks fluid at the tip.



When using it as a CUSA, the tip edge should be used.

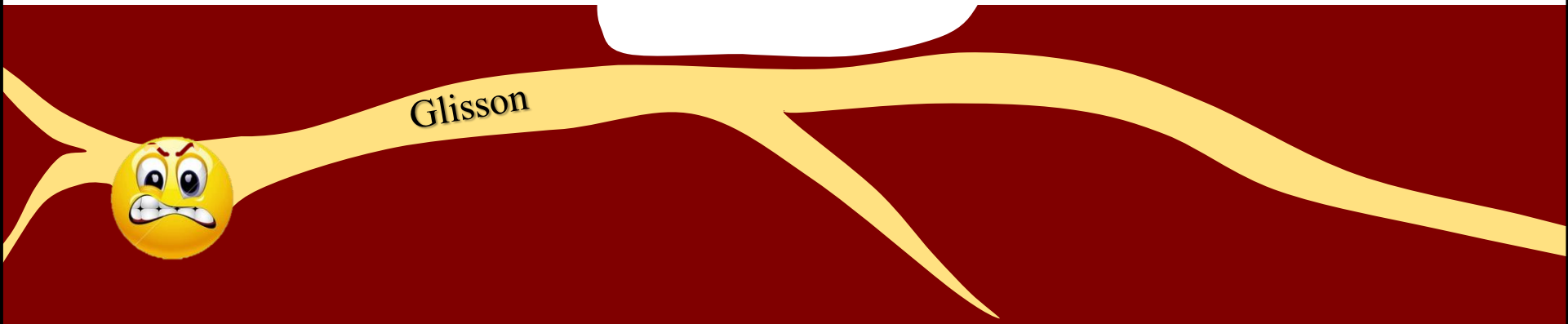
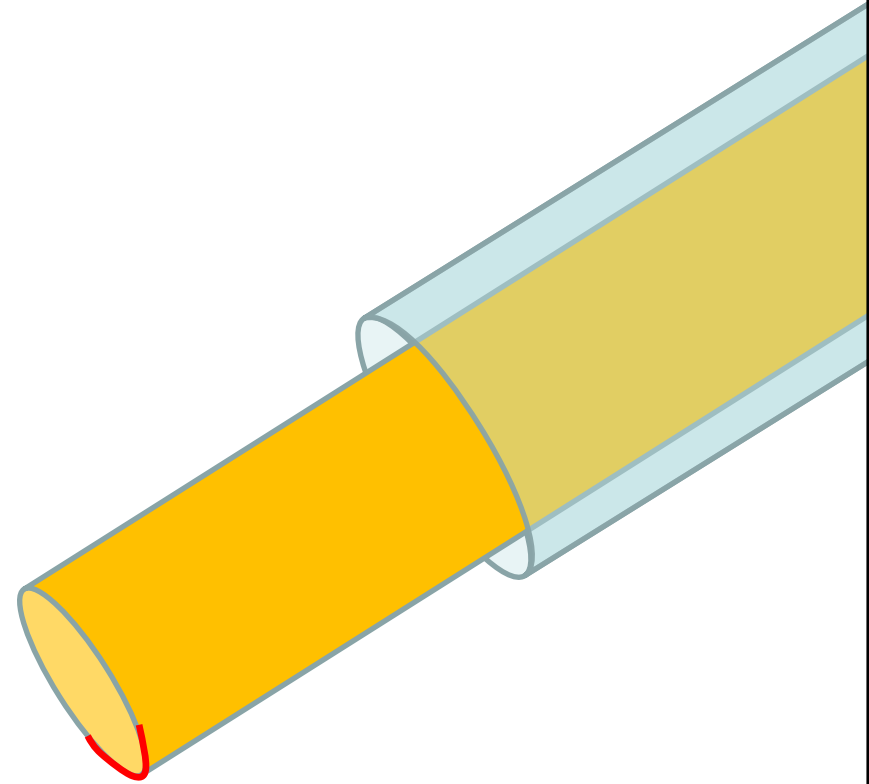


Multiple manners to move **the tip edge** of CUSA

Shoveling



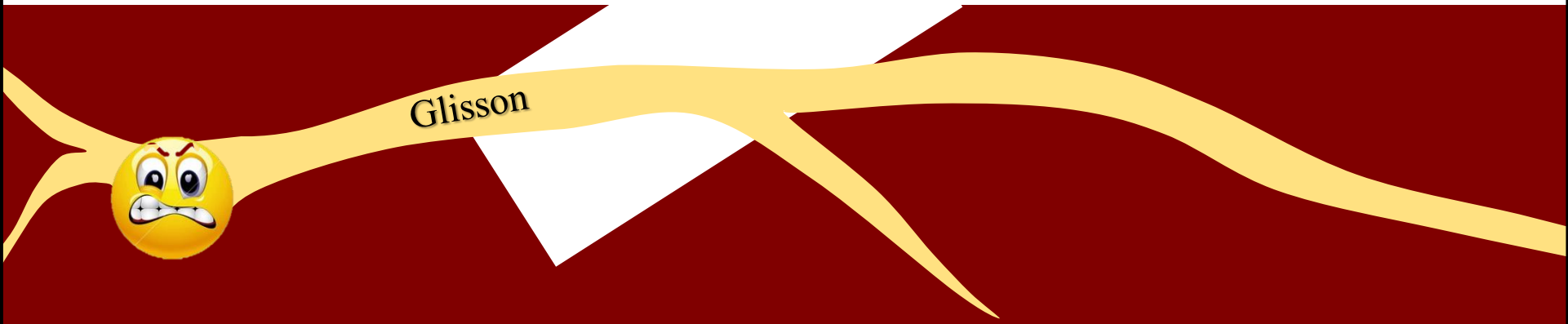
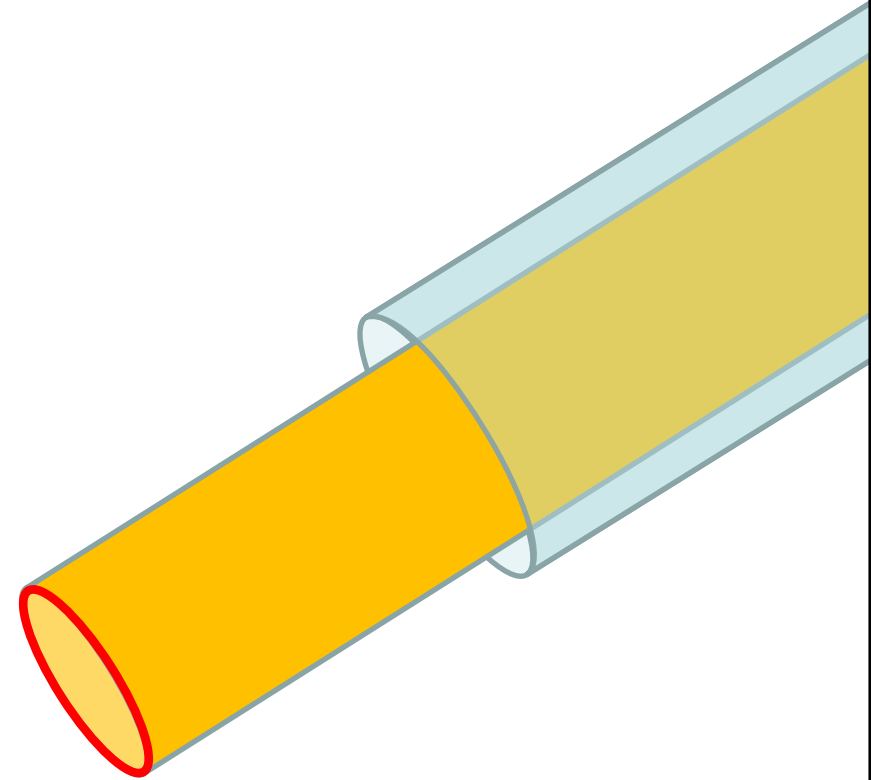
By inserting obliquely,
CUSA becomes a scoop.



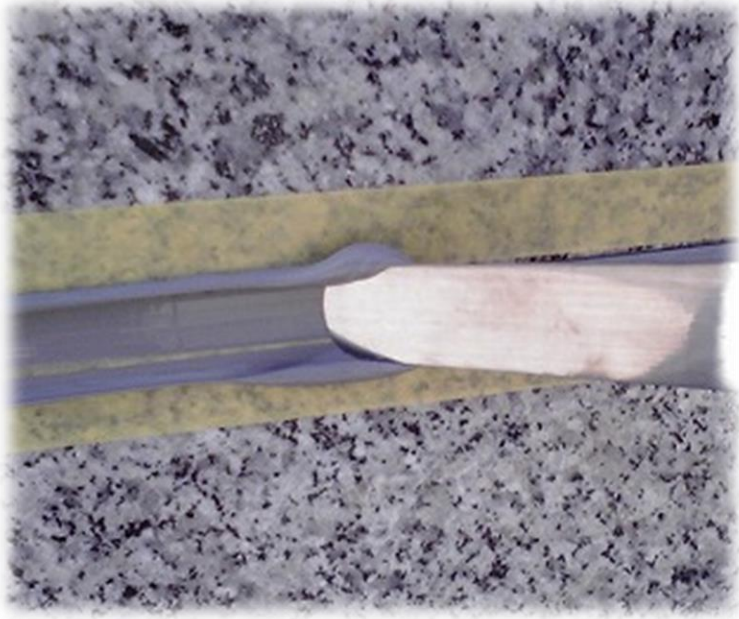
Boring



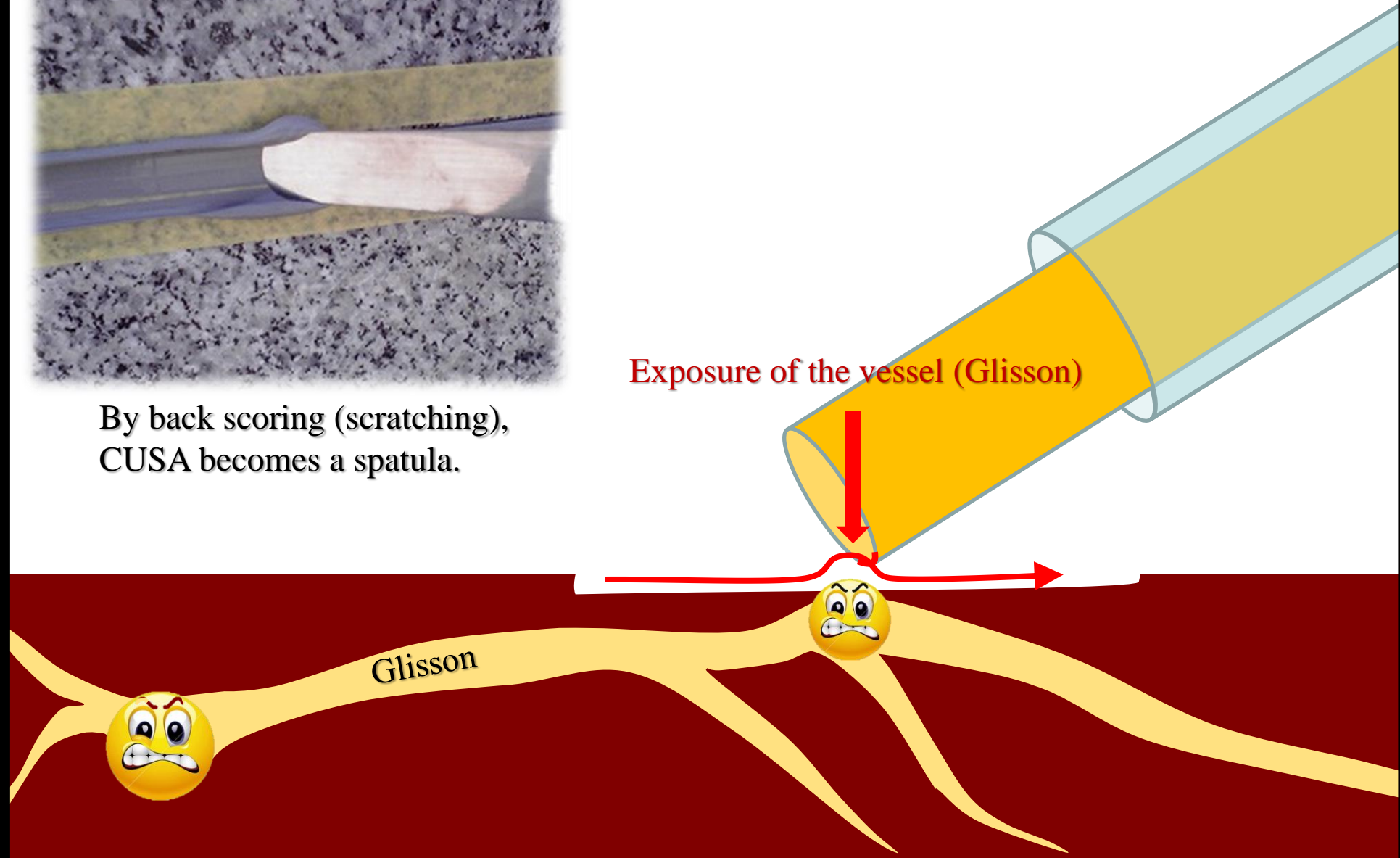
By inserting longitudinally,
CUSA becomes a boring machine.



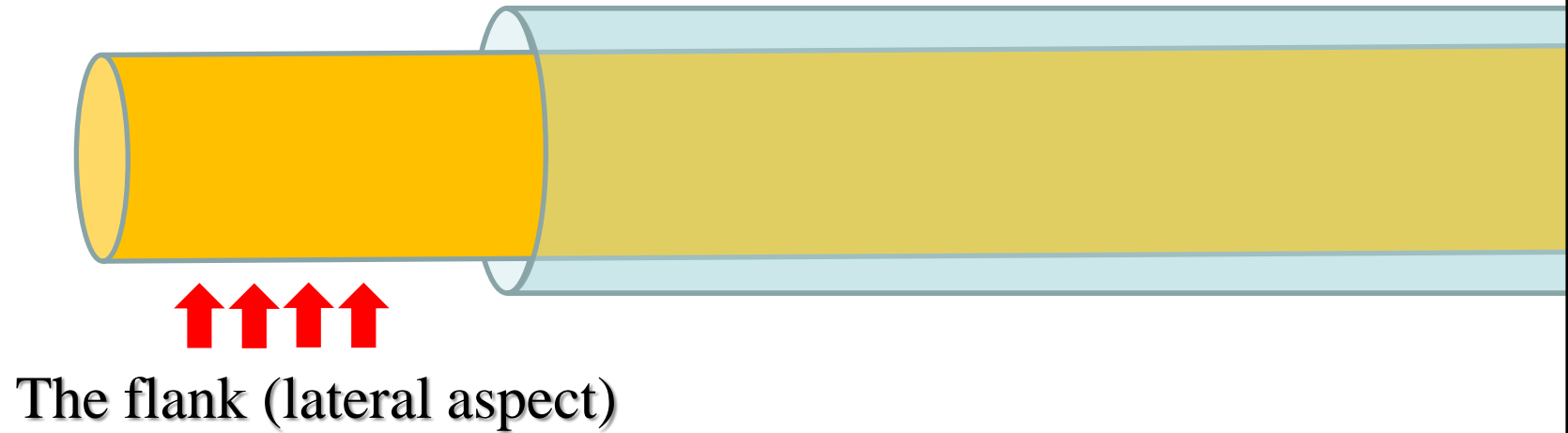
Back scoring



By back scoring (scratching),
CUSA becomes a spatula.



CUSA vibrates longitudinally.



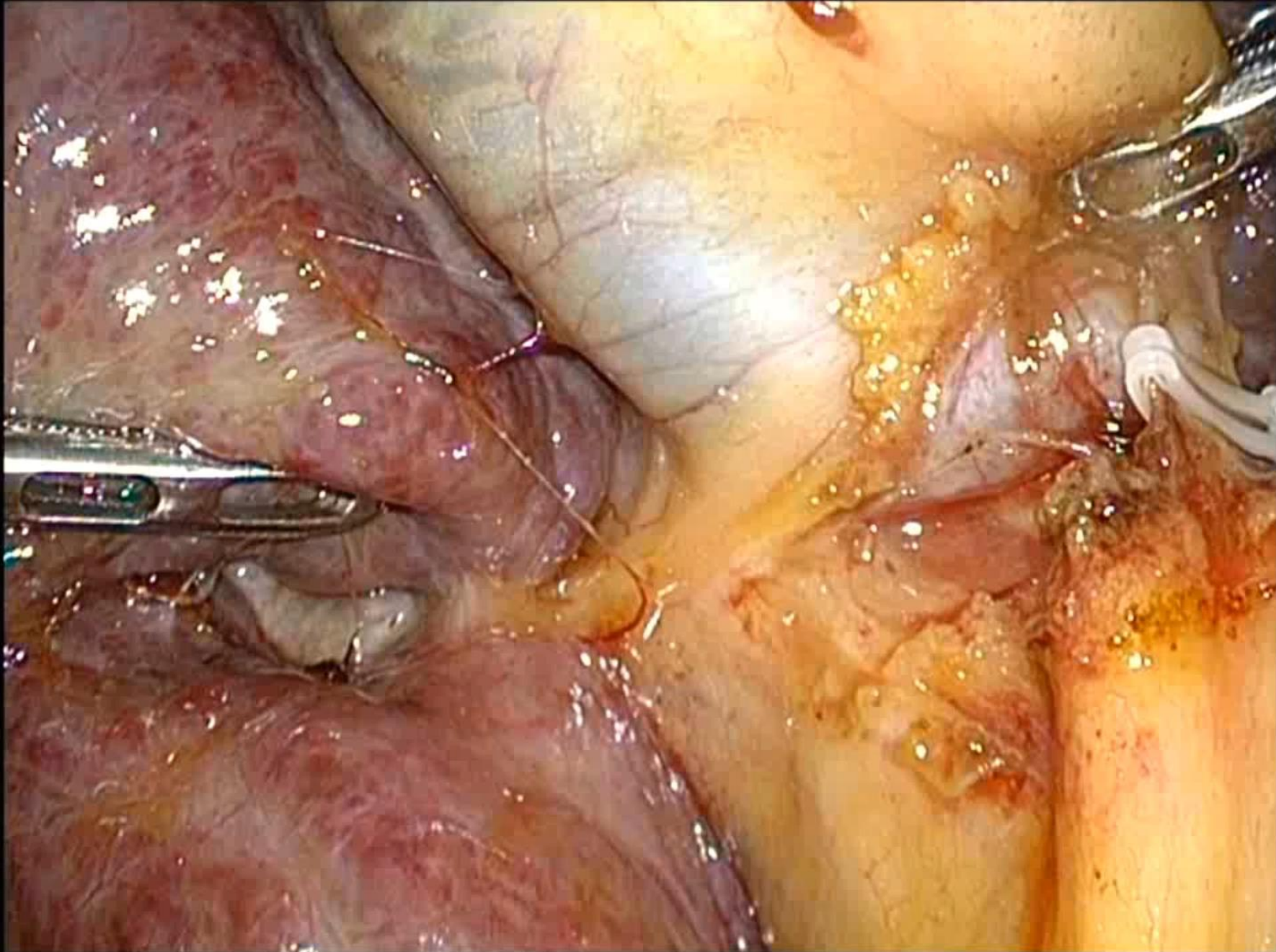
The flank (lateral aspect) of the metal tip is atraumatic!!



Techniques utilizing **the flank (lateral aspect)**

1. pushing off the vessel with the flank,
ablate the parenchyma behind the vessel with the tip

push off the vessel with flank and ablate parenchyma behind the vessel with tip edge



The flank (lateral aspect) of the metal tip is atraumatic!!



Techniques utilizing **the flank (lateral aspect)**

1. pushing off the vessel with the flank,
ablate the parenchyma behind the vessel with the tip
2. To apply the VIO, compressing the bleeding point (vessel) with the flank
to stop the bleeding or oozing

The flank (lateral aspect) of the metal tip is atraumatic!!



The metal tip is vibrating and is covered by mist.

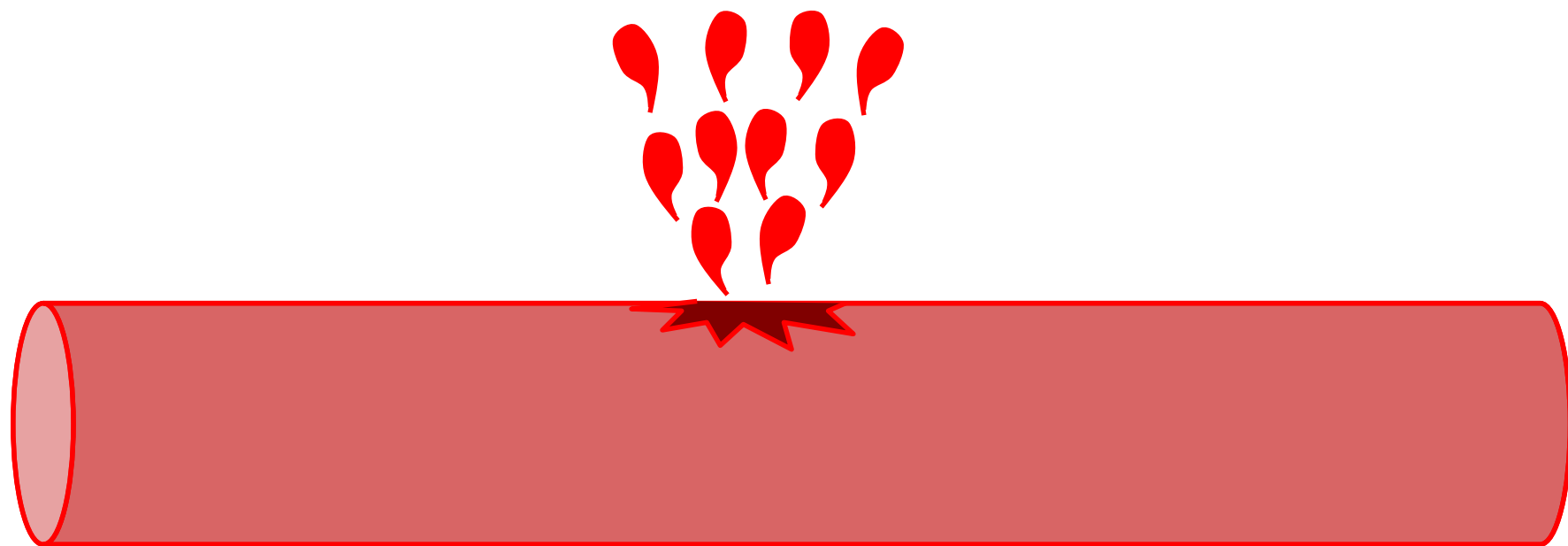
- ☞ Surrounding burned tissue does not stick on it.
..... Soft-coagulation benefit is enhanced.

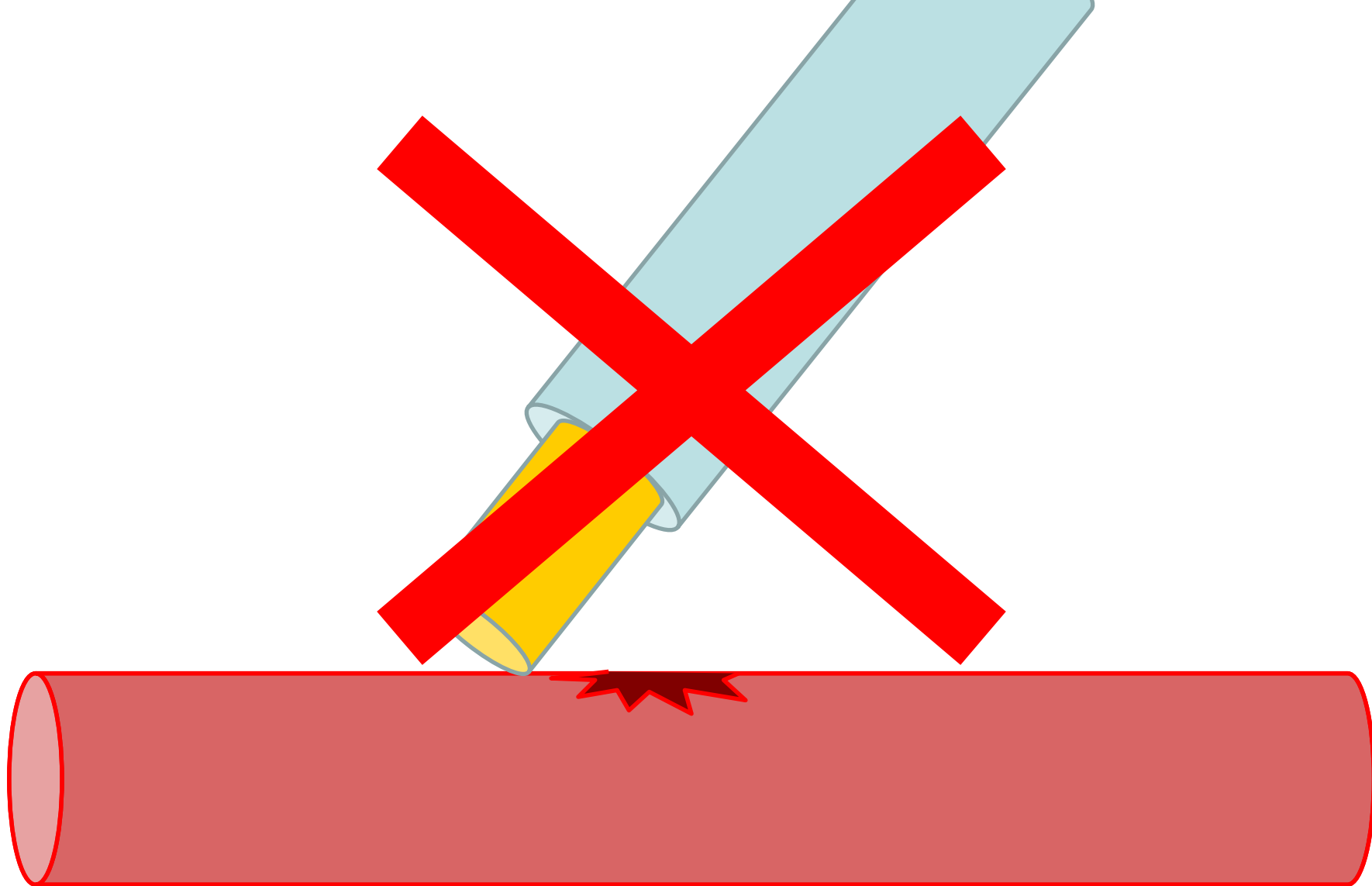
The flank (lateral aspect) of the metal tip is atraumatic!!



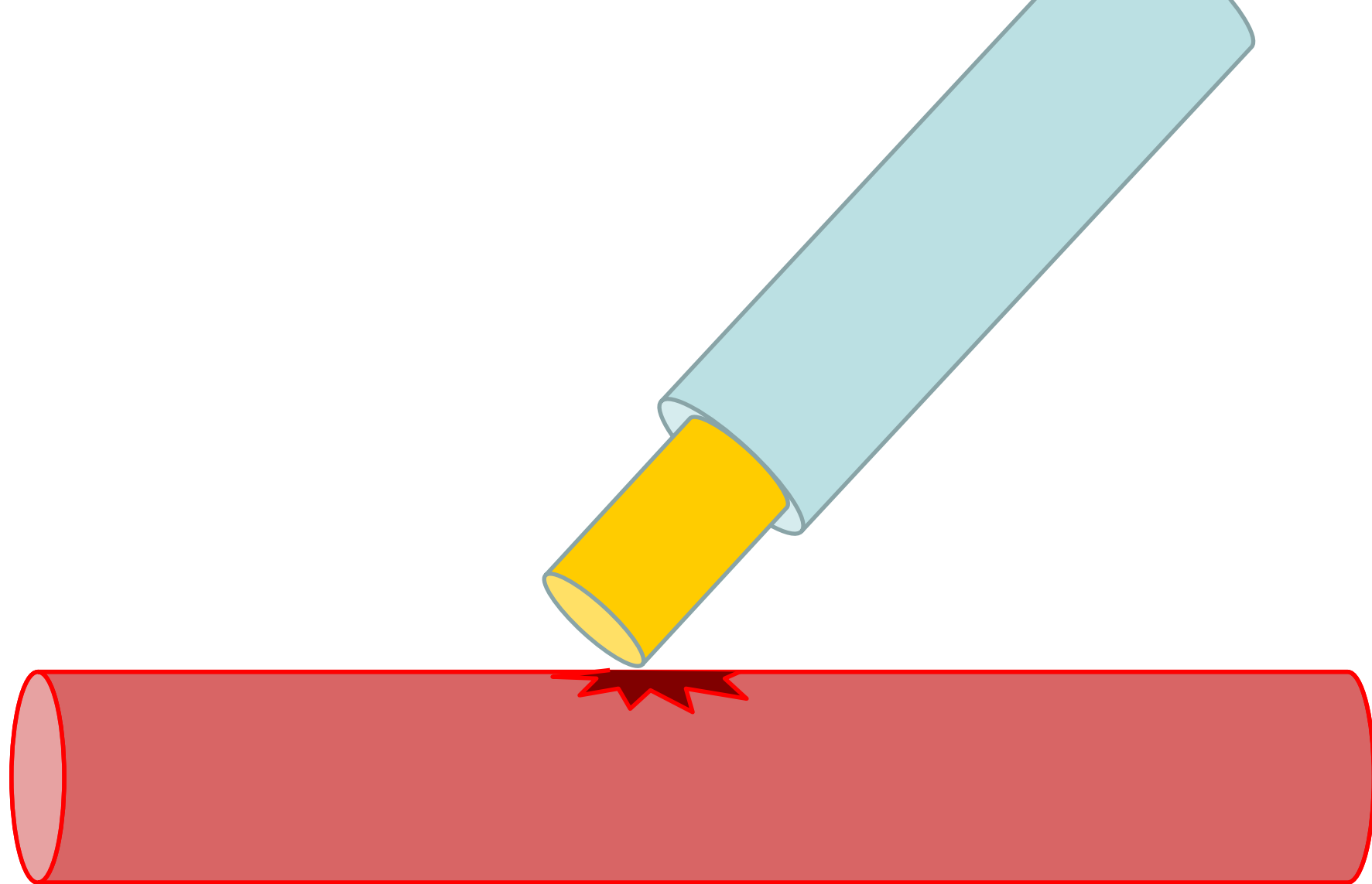
The flank (lateral aspect)

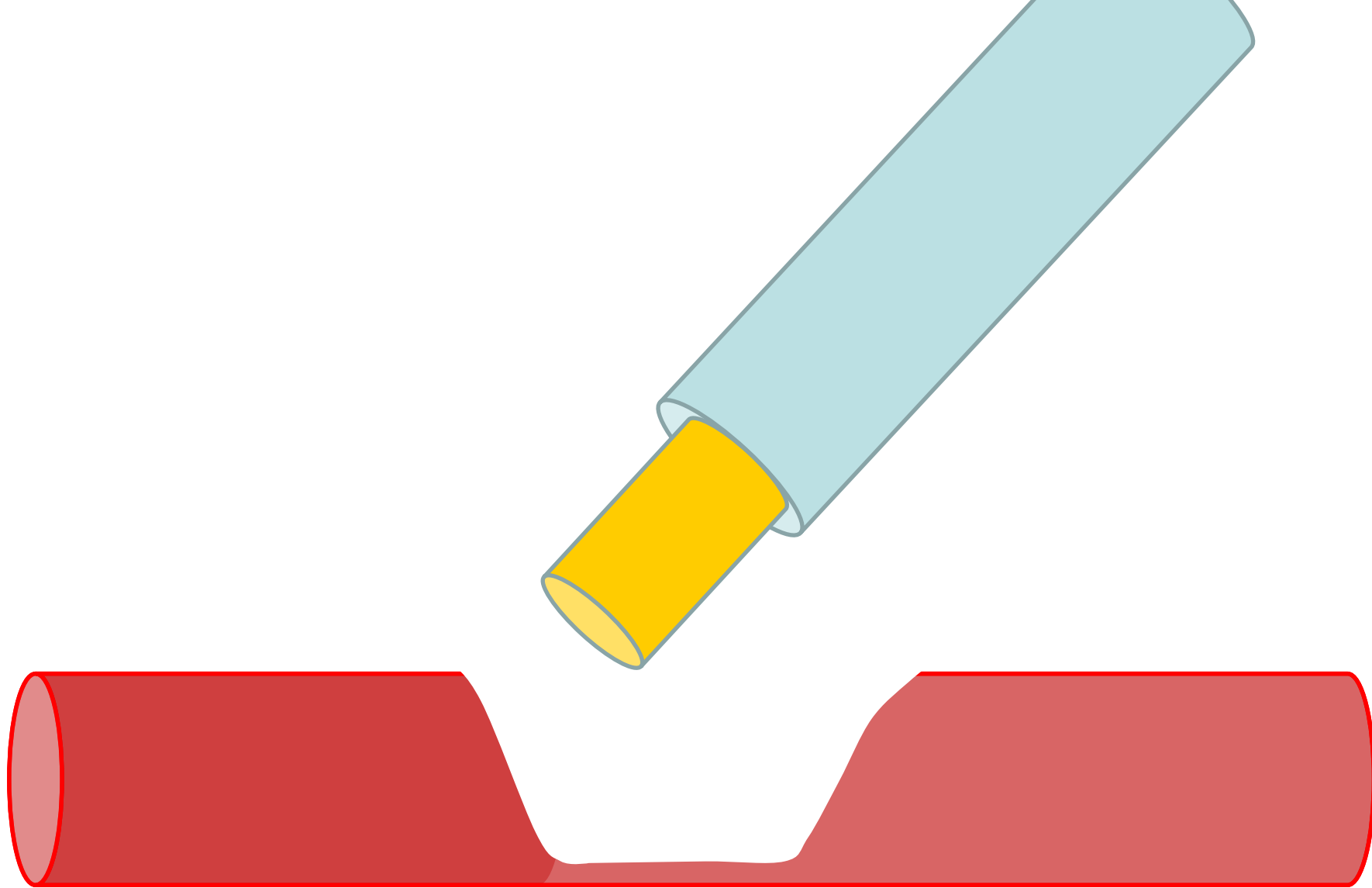
Compress in flank, applying CUSA function!





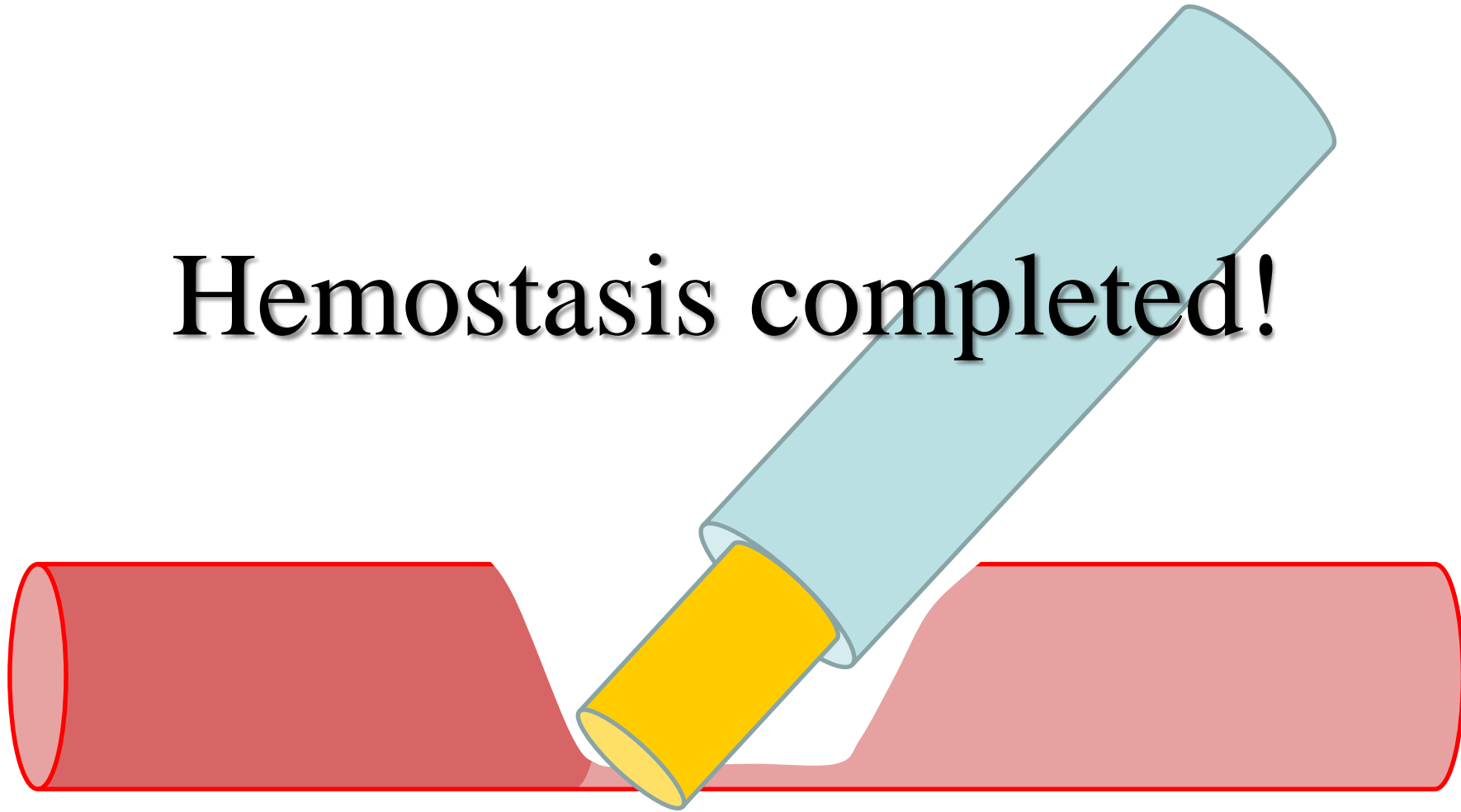
Gentle compression does not work.





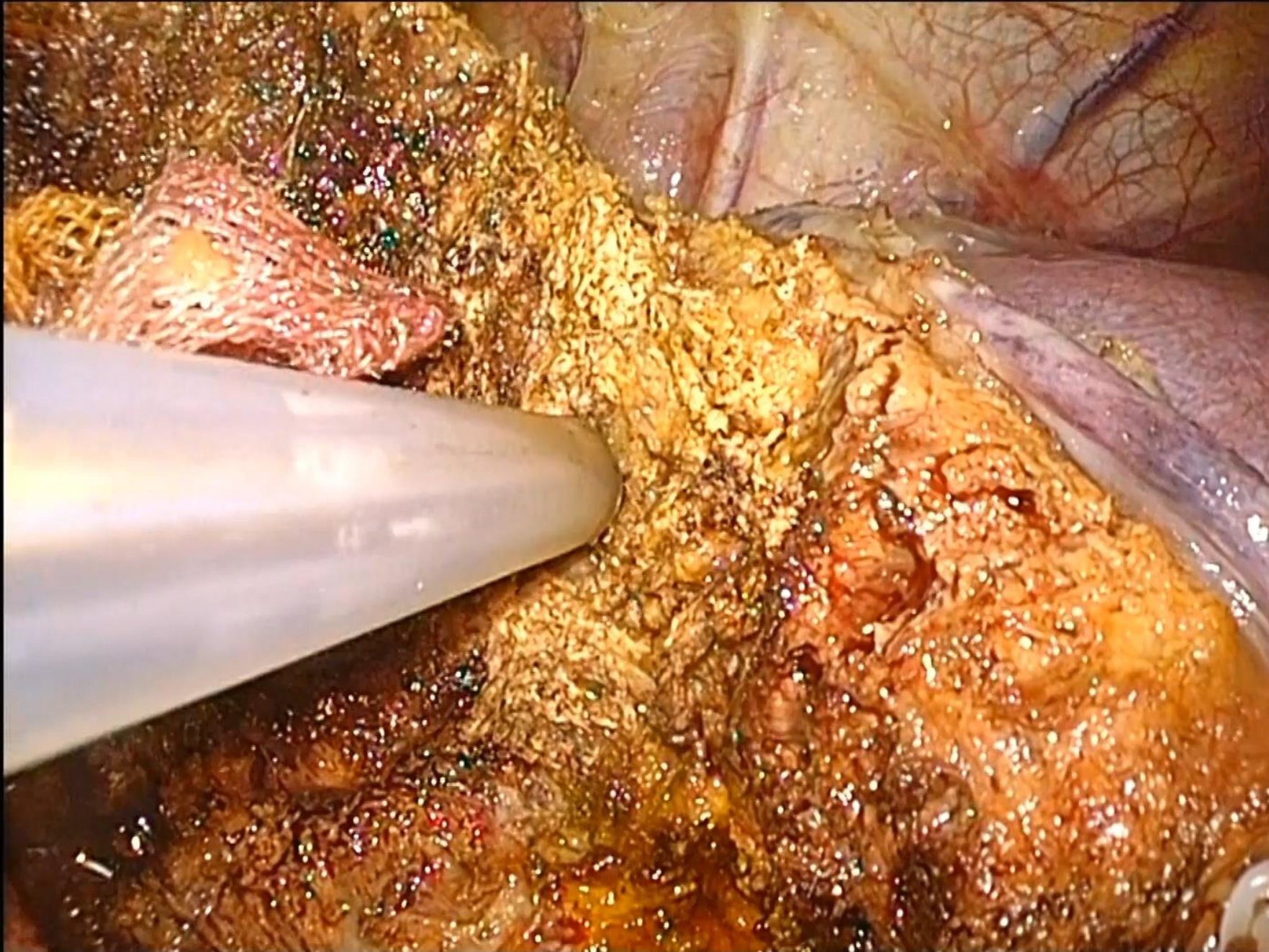
Obstruct blood flow, and seal the vessel.

Hemostasis completed!



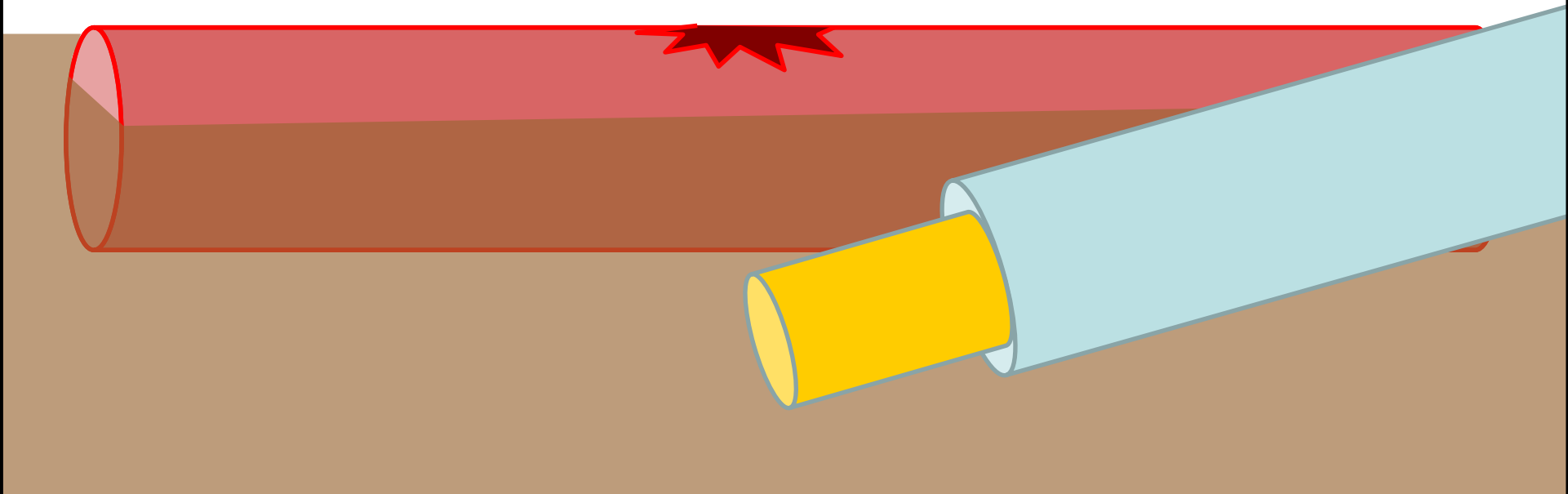
Obstruct blood flow, and seal the vessel.

compress the bleeding point (vessel) in flank, applying VIO



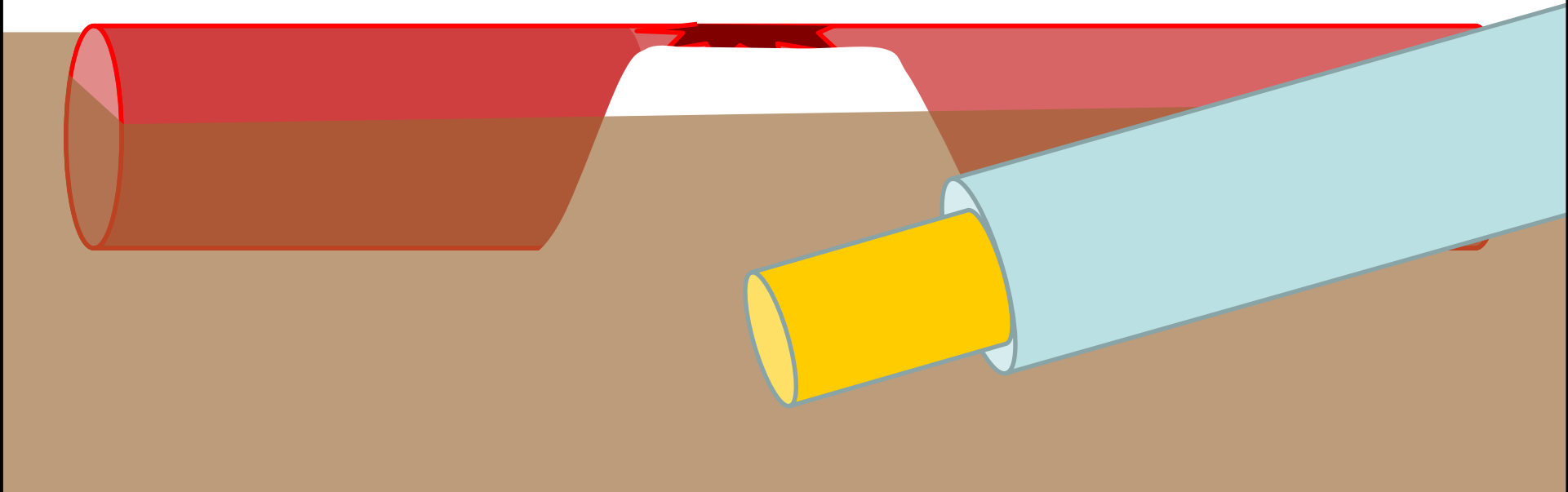
Another way to flat the vessel

The bleeding from the vessel buried in parenchyma



Another way to flat the vessel

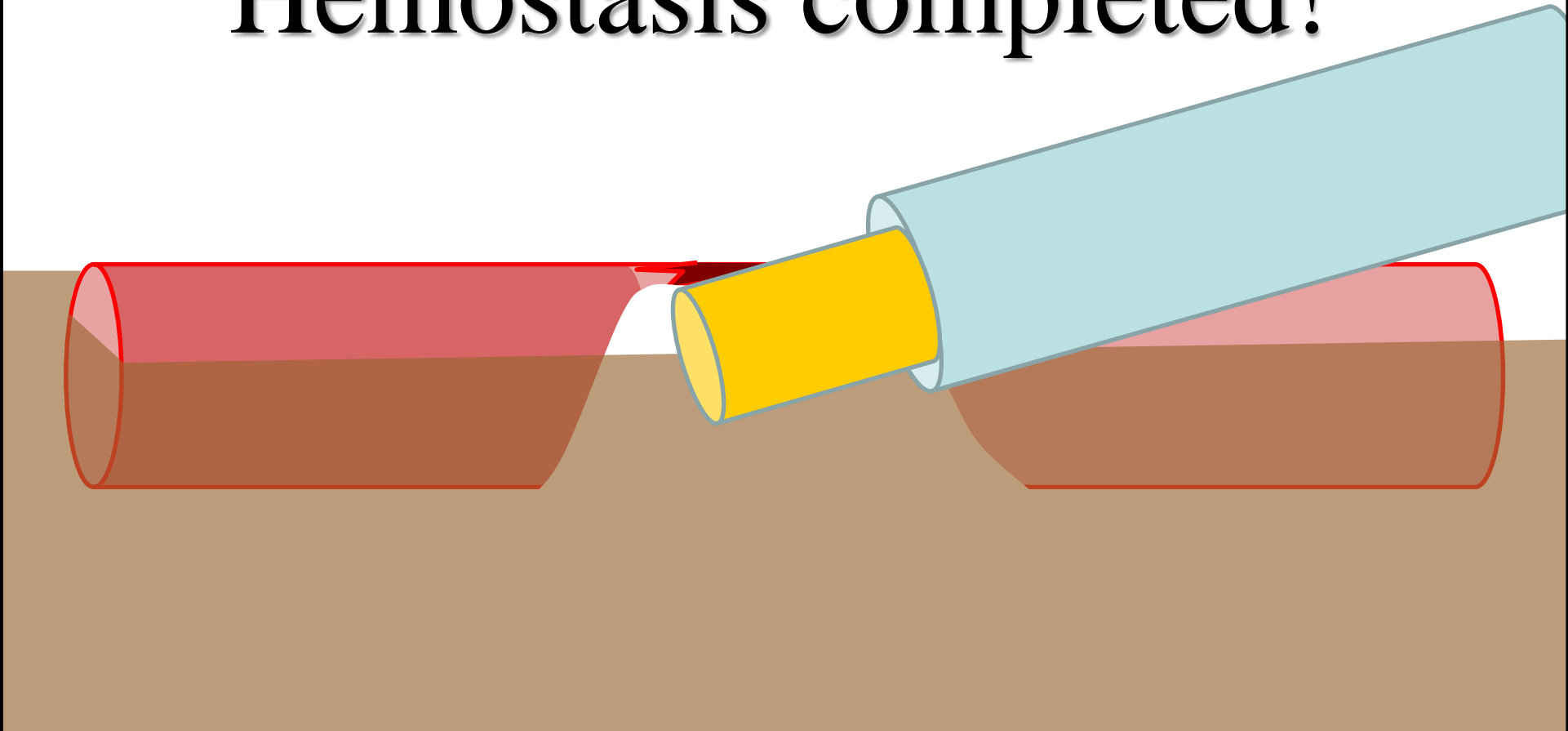
The bleeding from the vessel buried in parenchyma



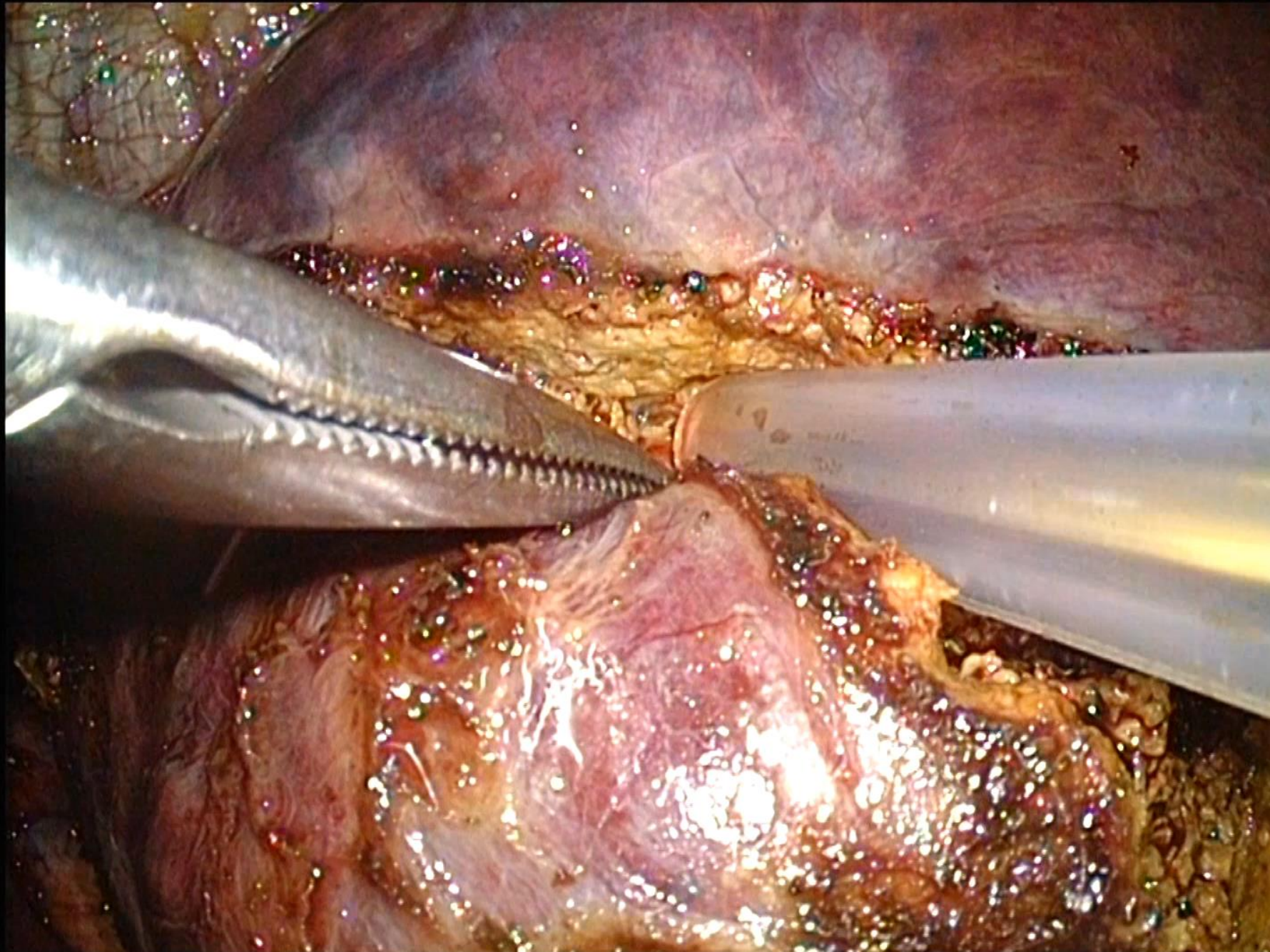
Another way to flat the vessel

The bleeding from the vessel buried in parenchyma

Hemostasis completed!



compress the bleeding point (vessel) in flank, applying VIO

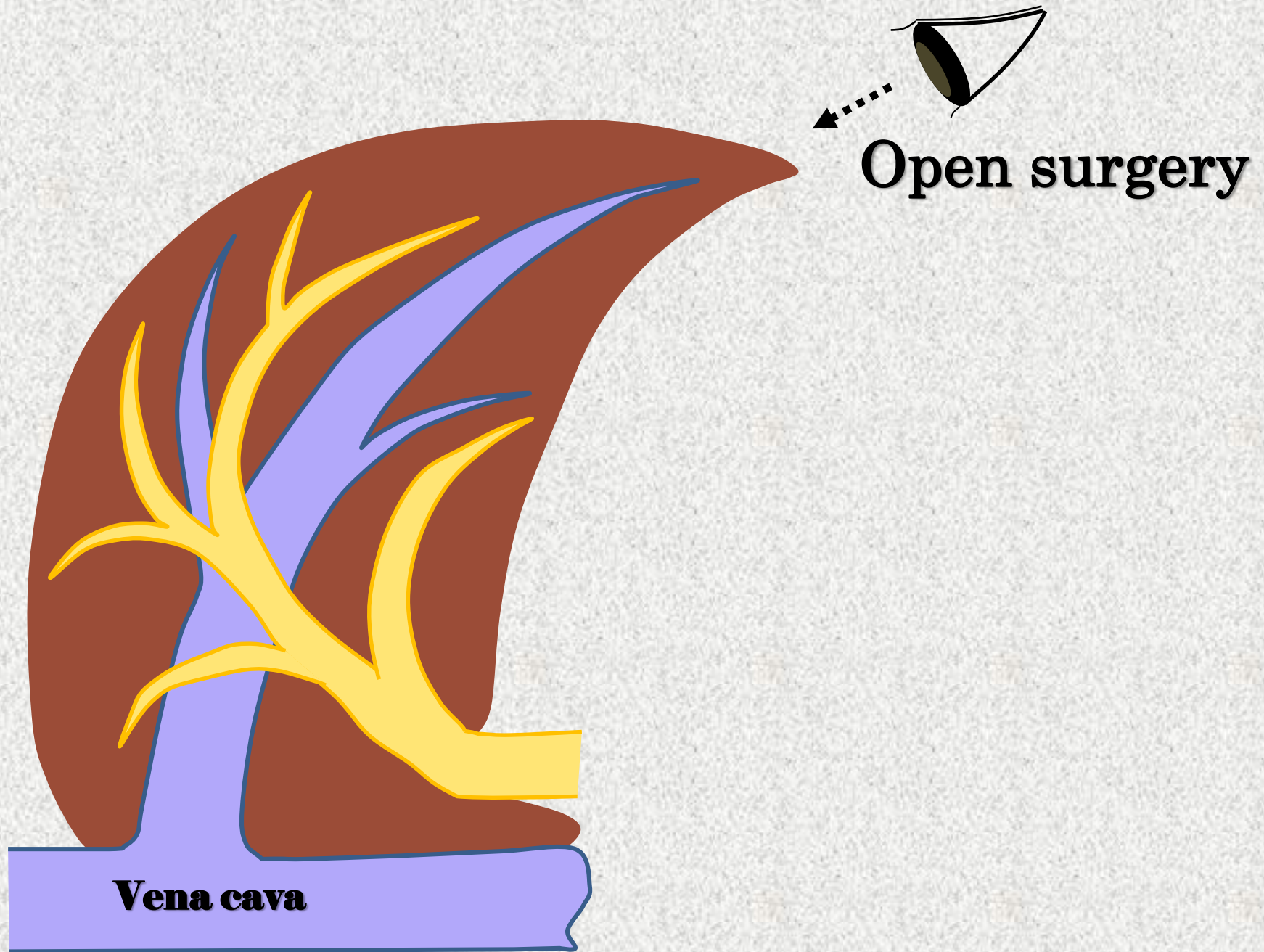


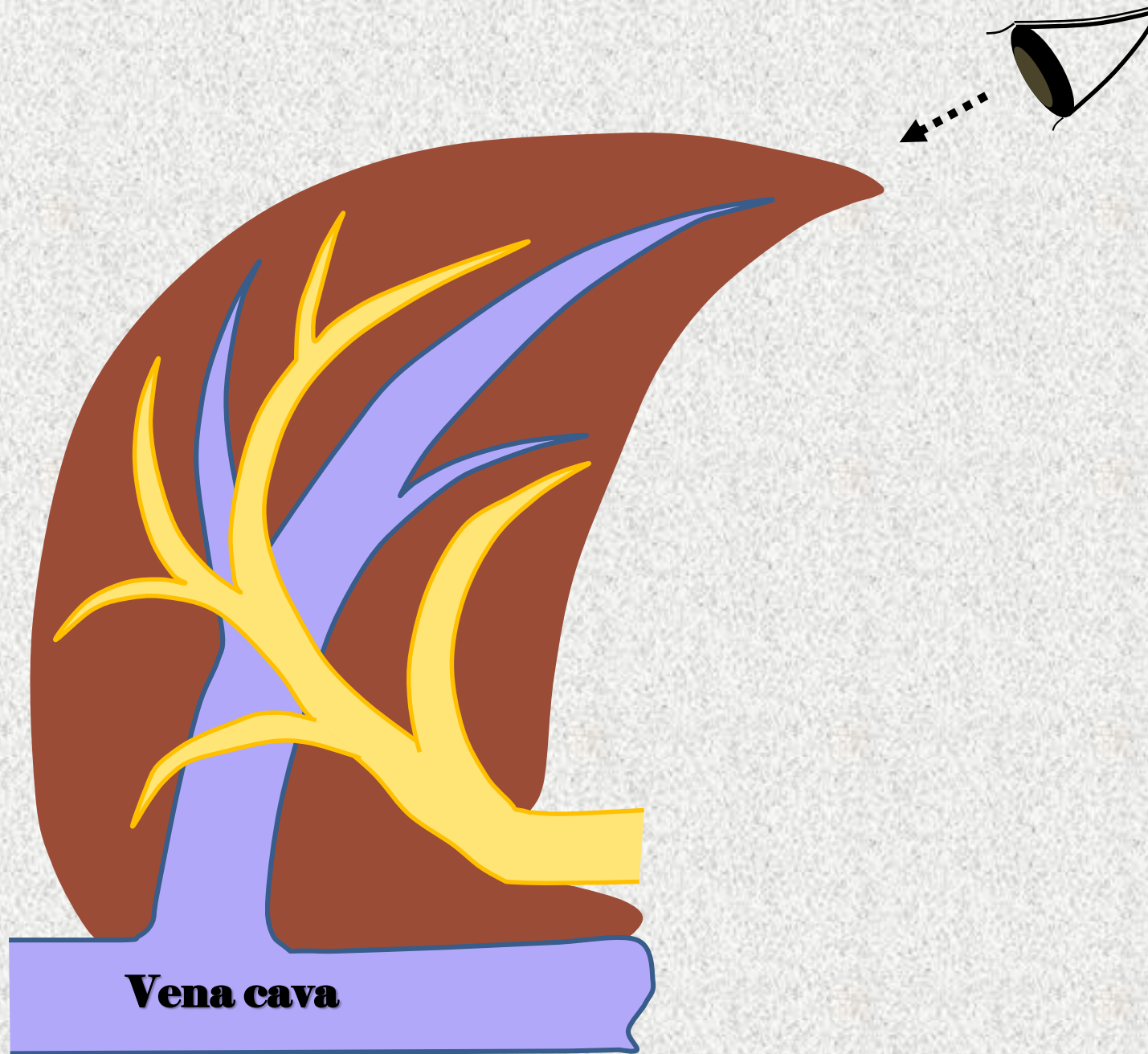
Lap-hepatectomy with CUSA[®] Excel

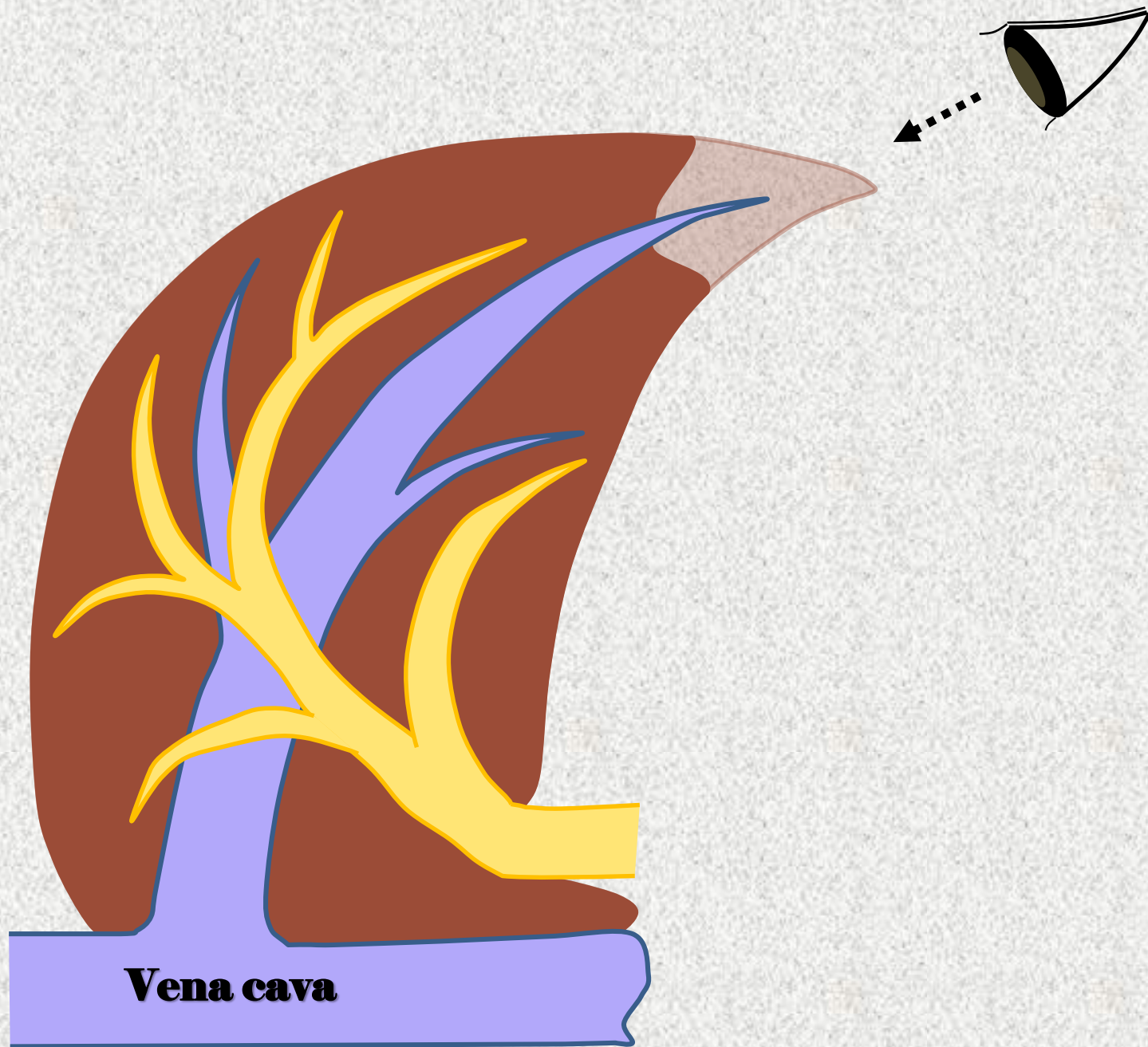
How to move CUSA[®]

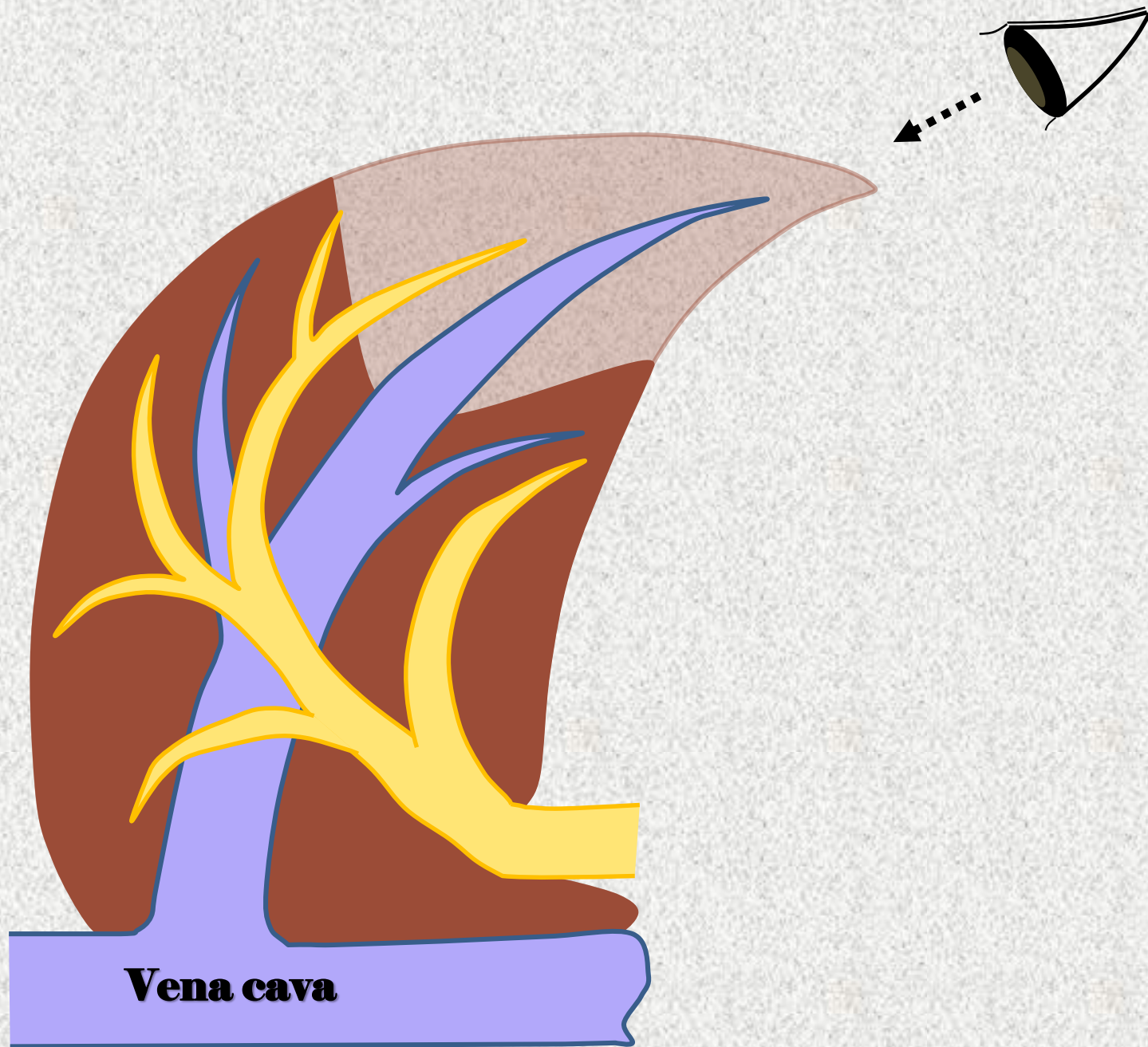


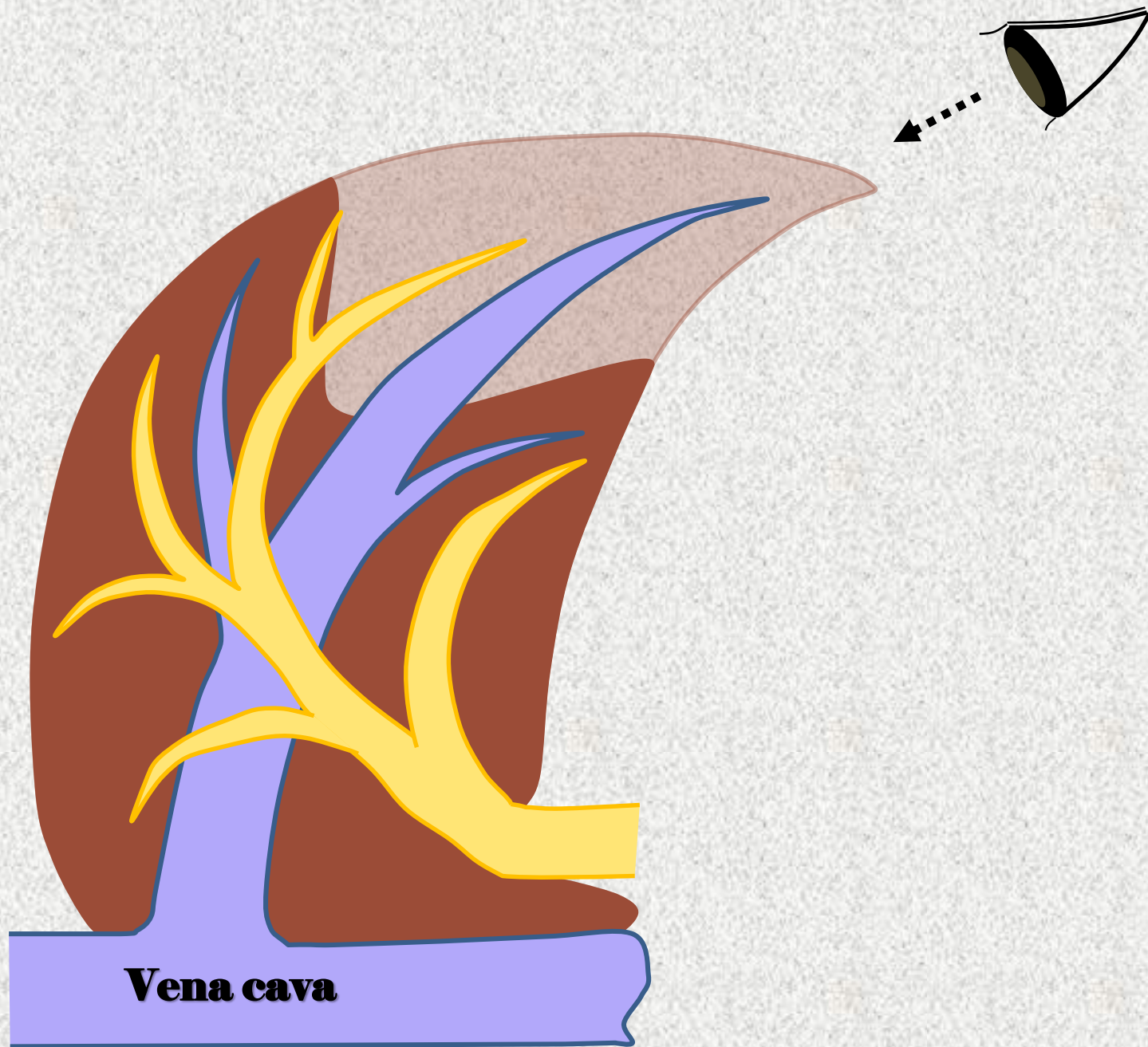


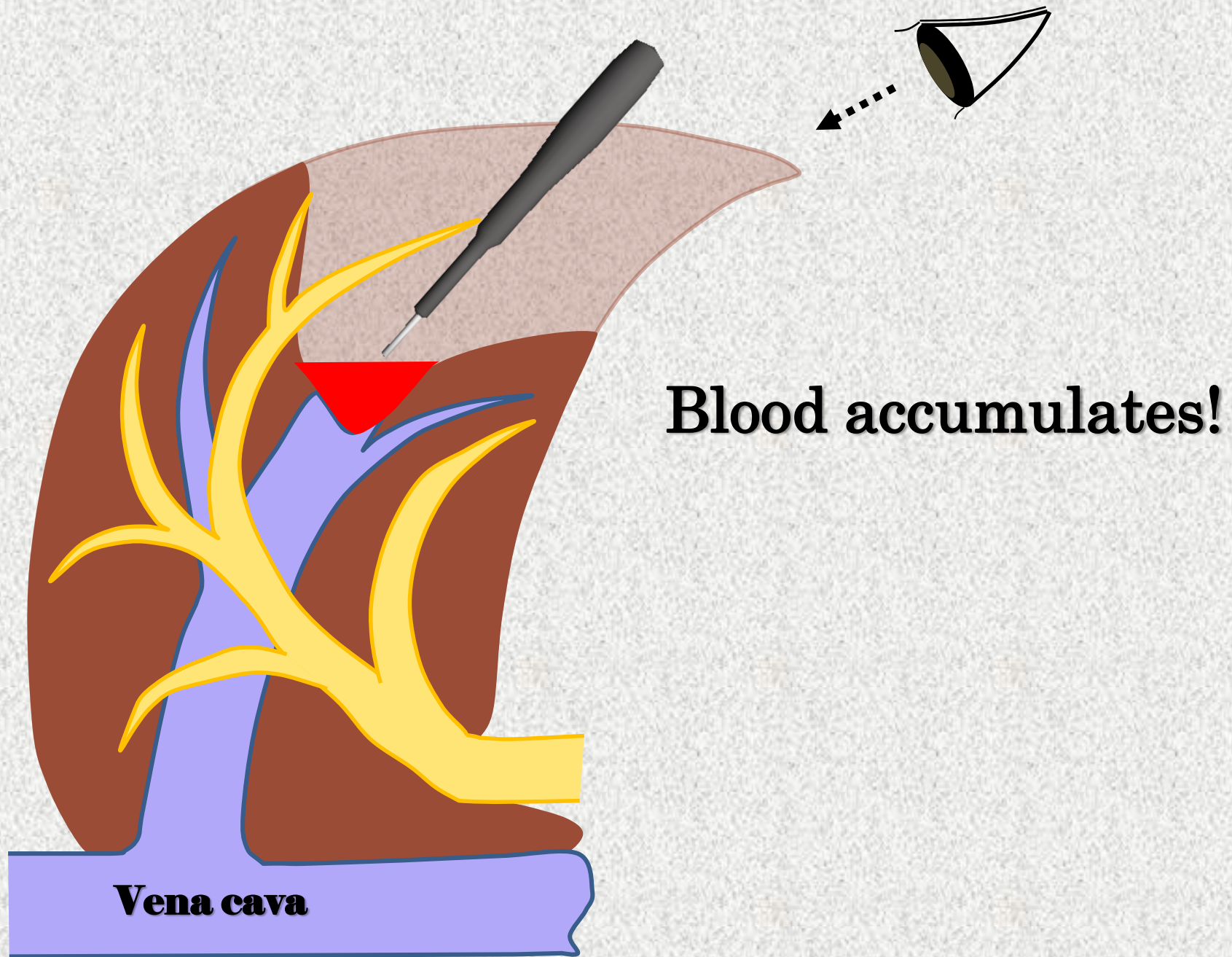






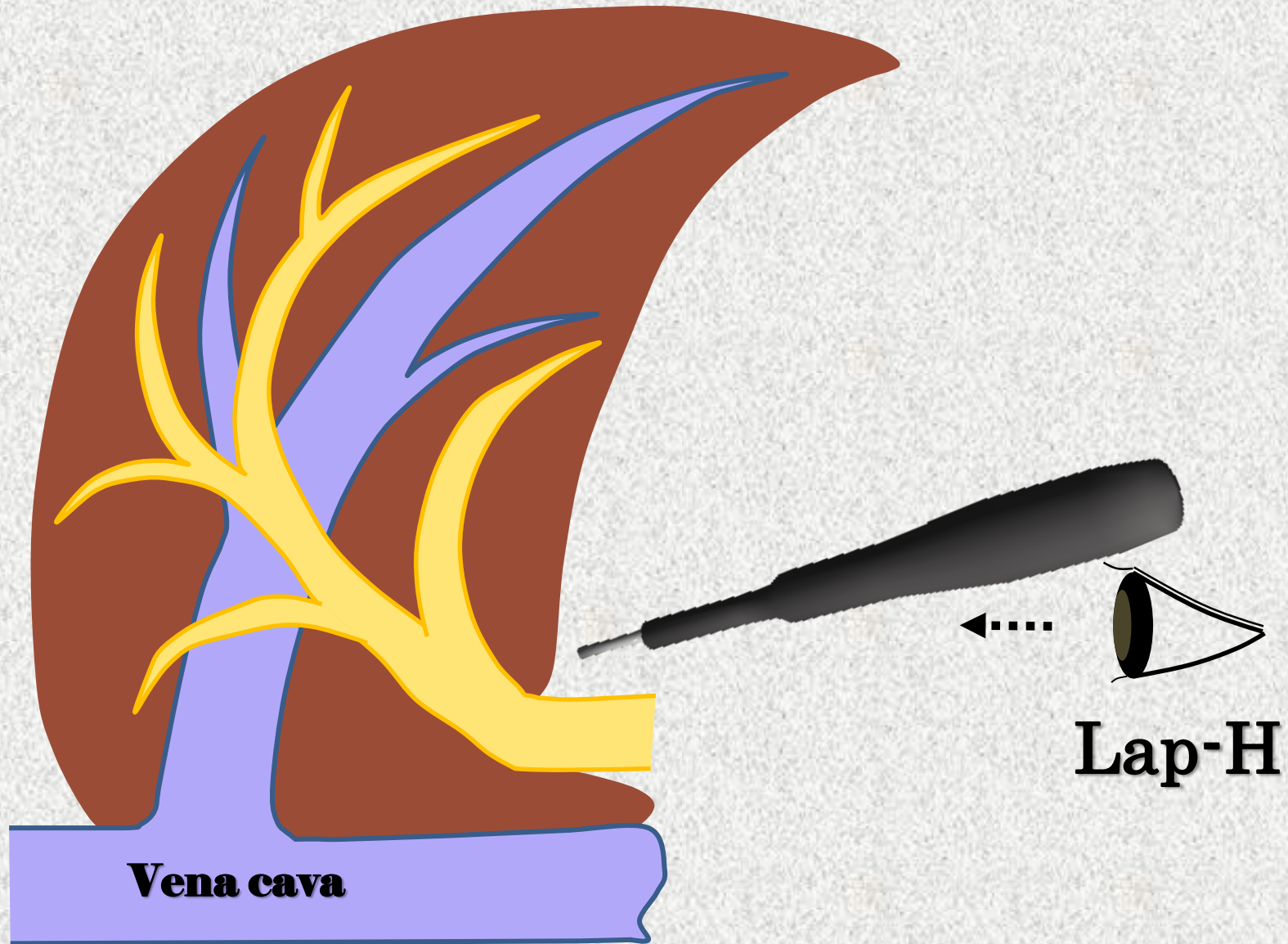




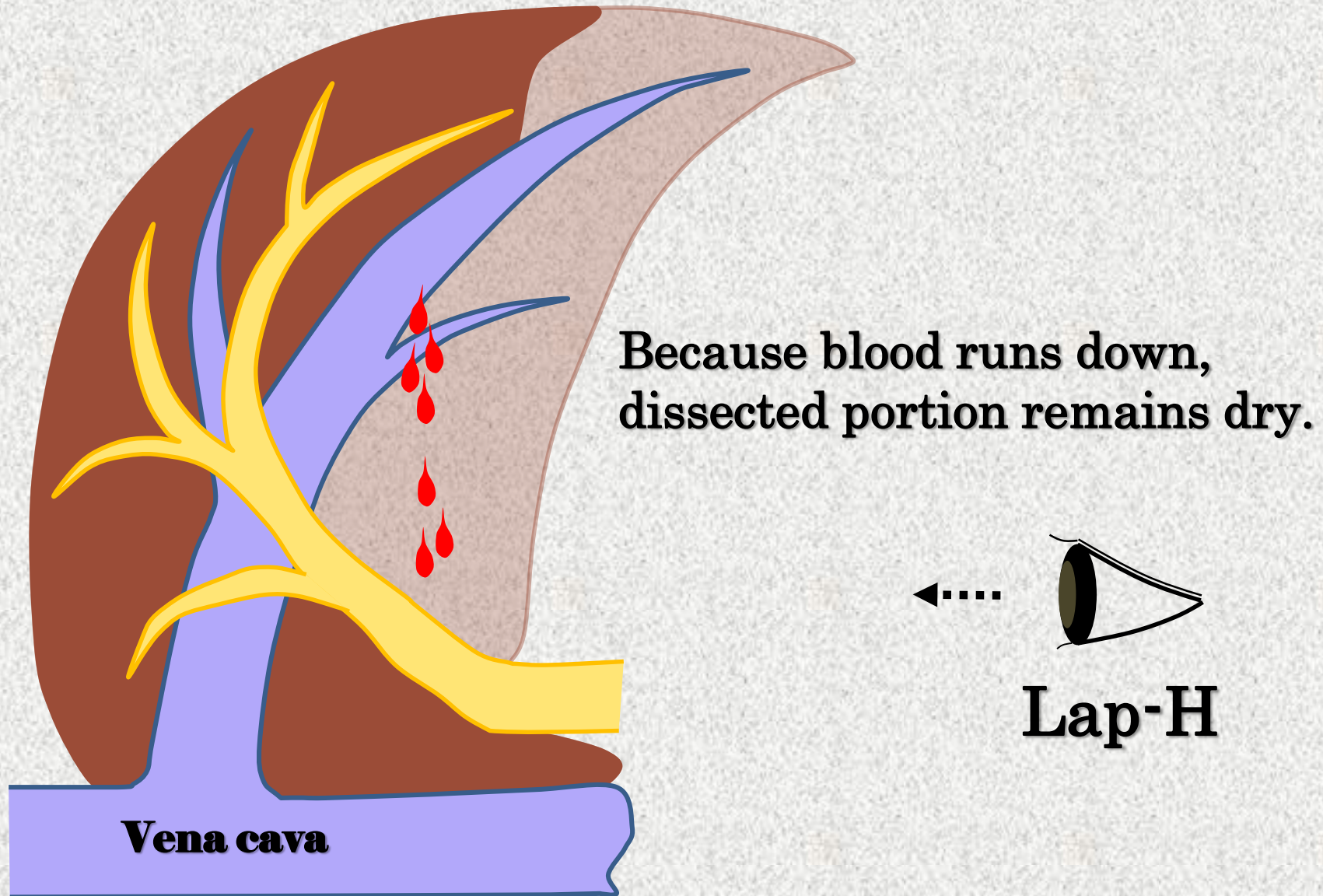




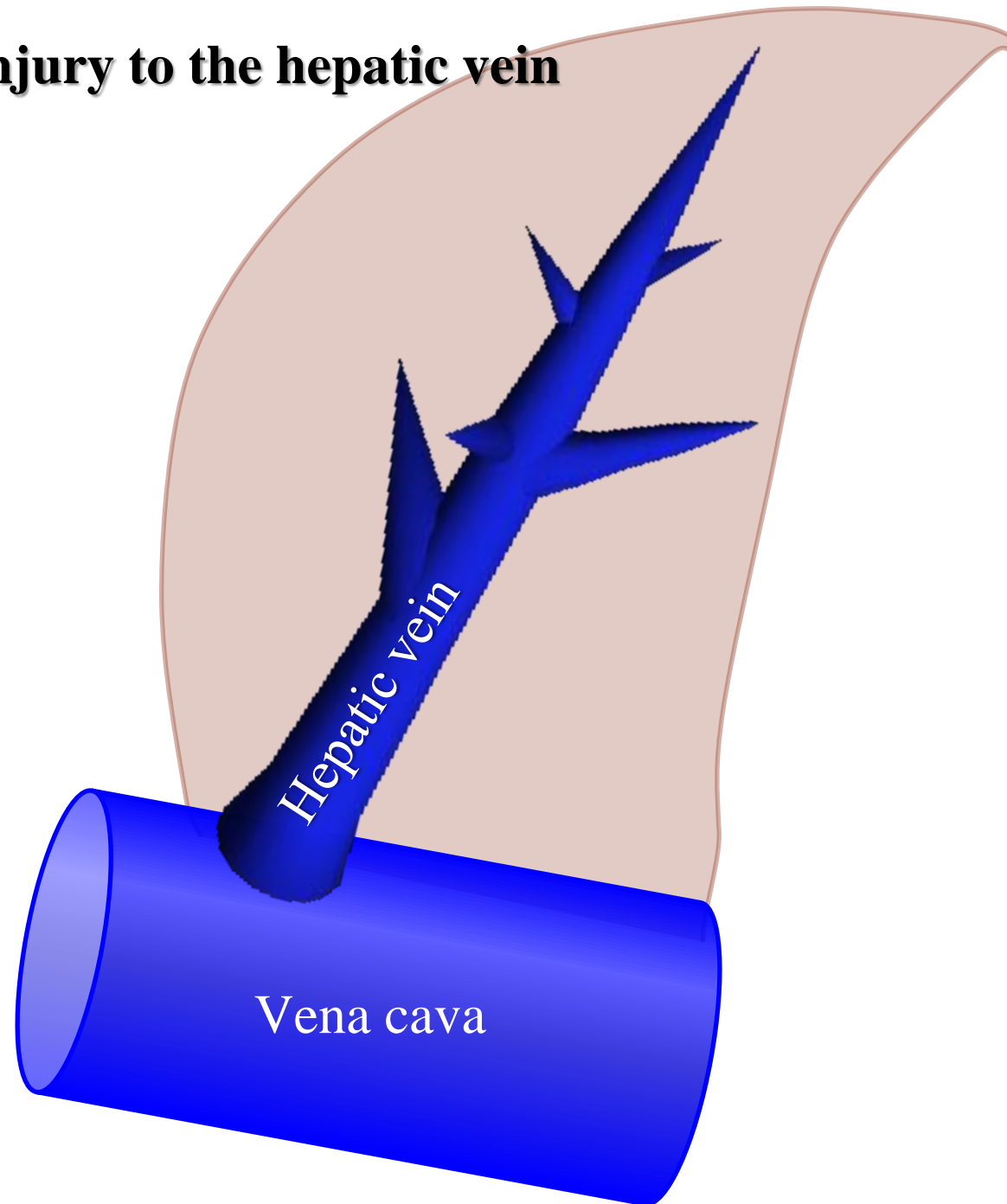
The caudodorsal approach in Lap-H



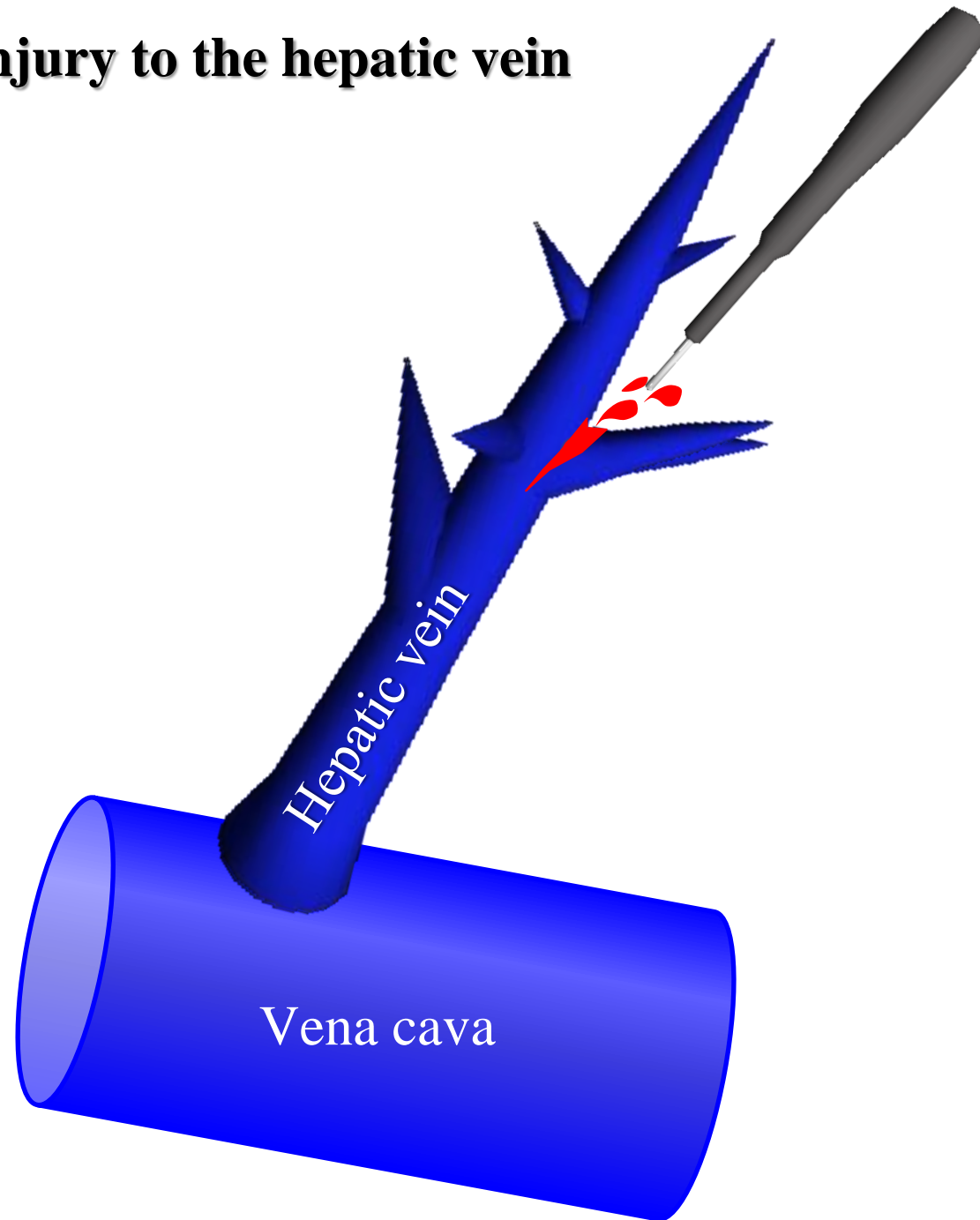
The caudodorsal approach in Lap-H



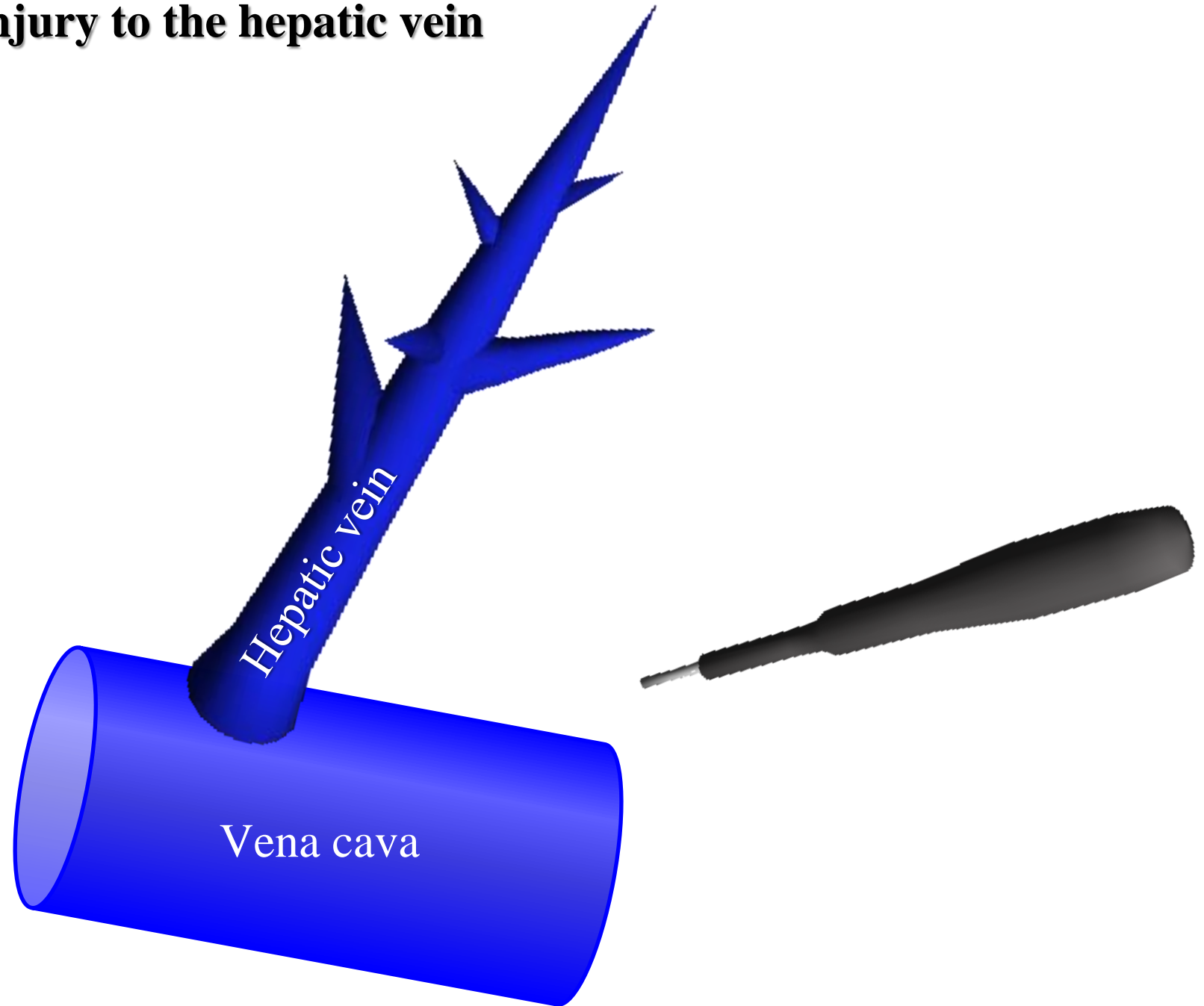
Split injury to the hepatic vein



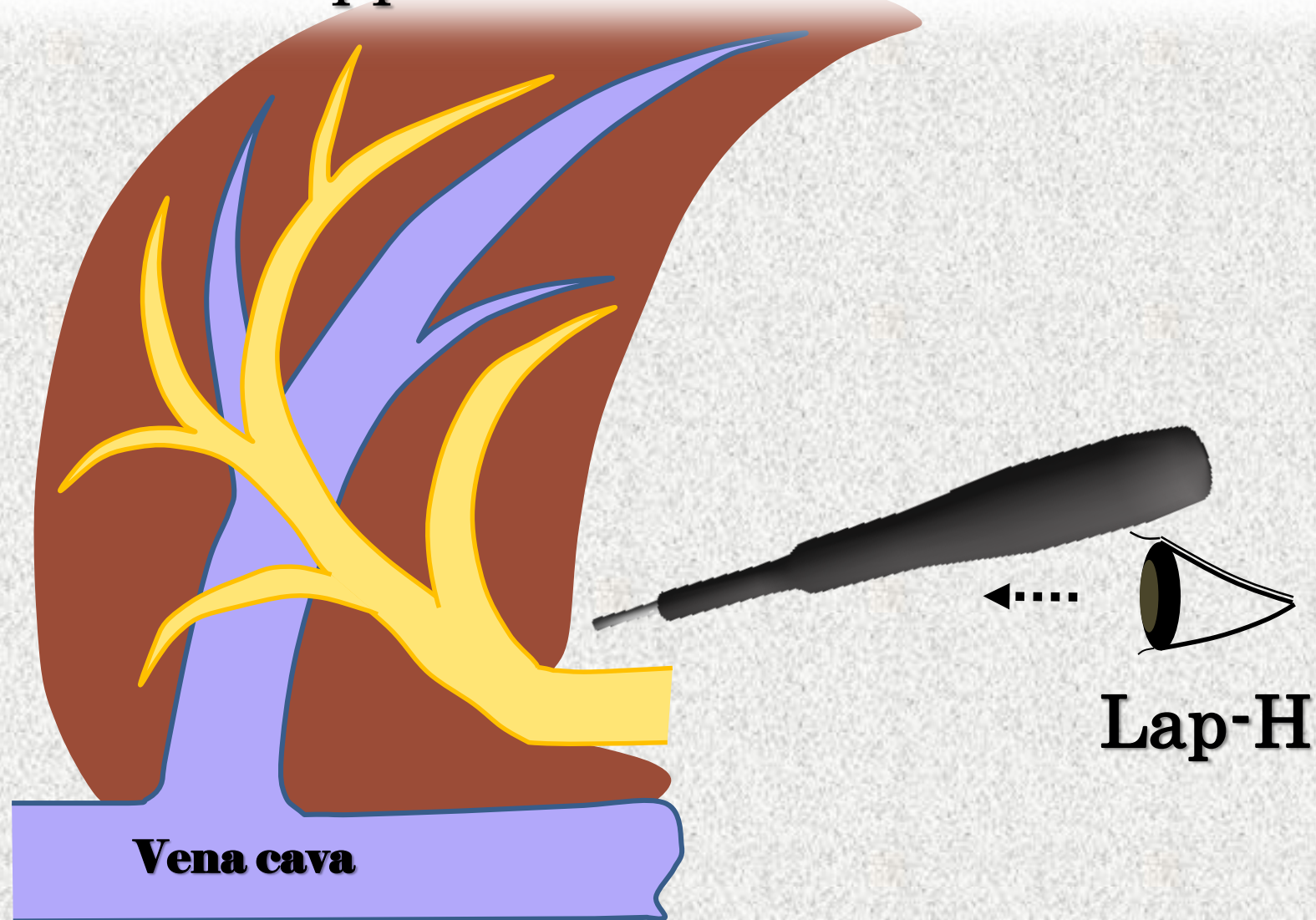
Split injury to the hepatic vein

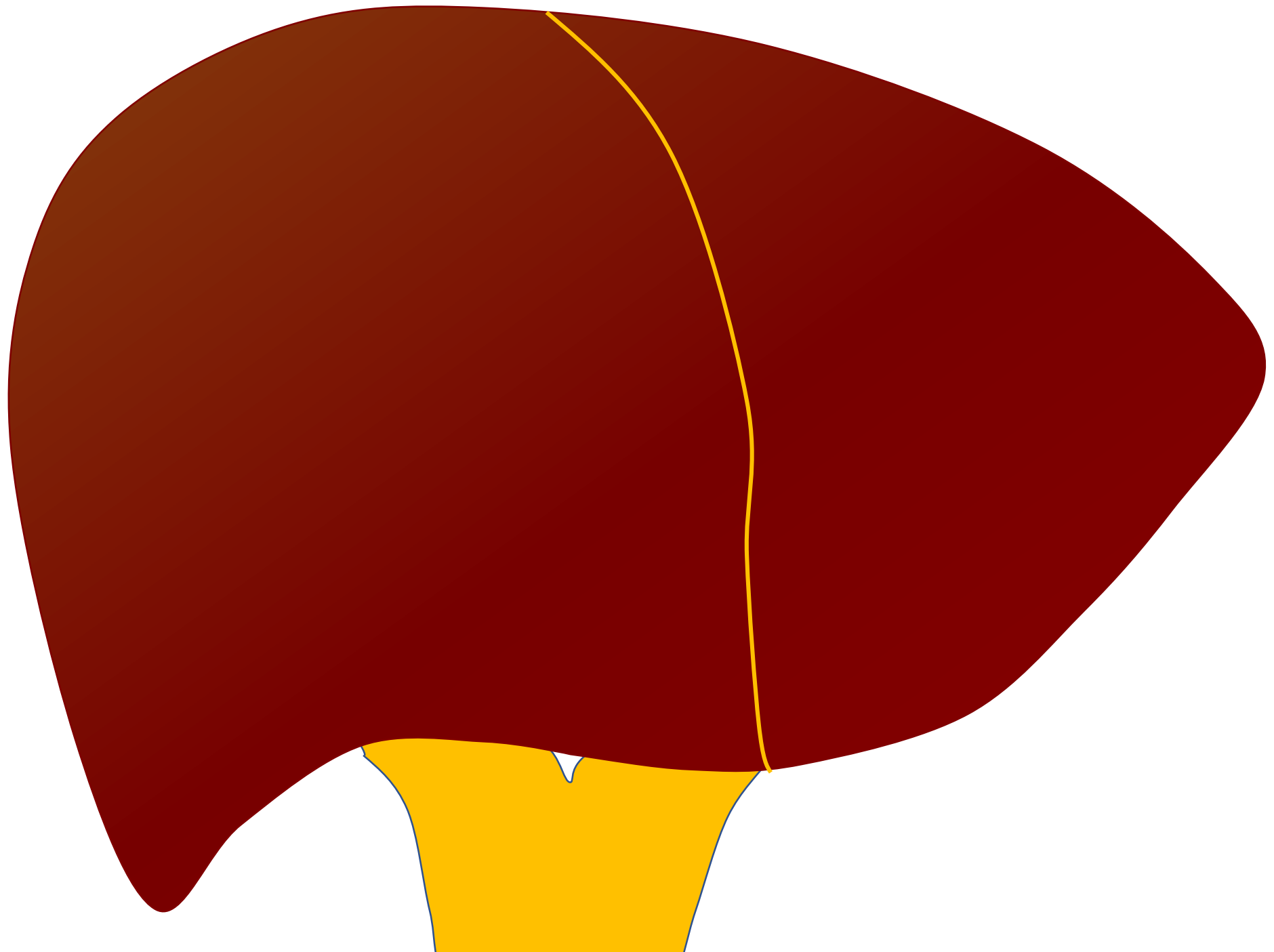


Split injury to the hepatic vein



The caudodorsal approach in Lap-H
is useful for the approach to the **Glissonean tree** as well.





From the periphery, we cannot identify the border of these trees.











We **can** identify the border of these trees by advancing from the roots side.



We **can** identify the border of these trees by advancing from the roots side.



We **can** identify the border of these trees by advancing from the roots side.



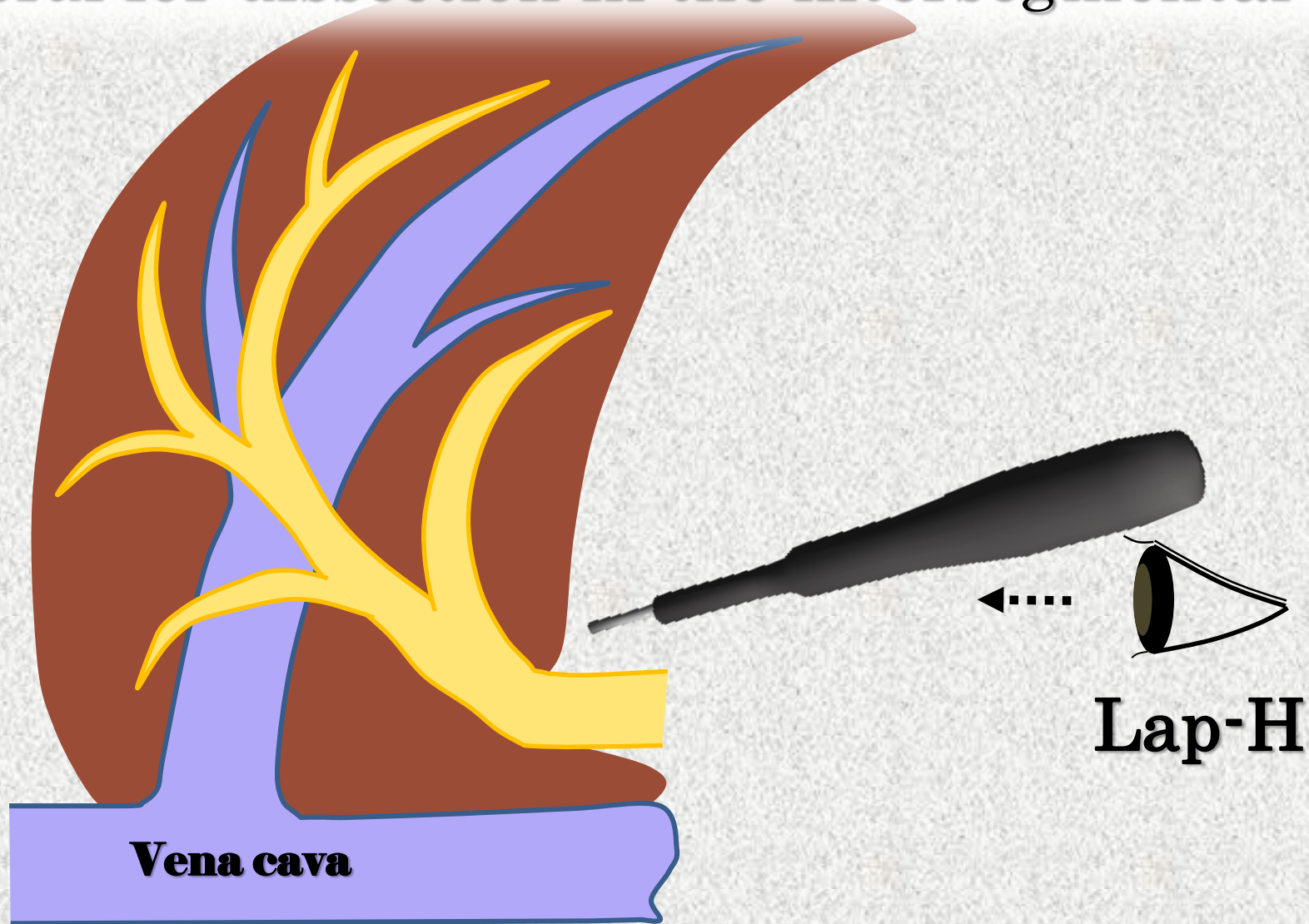
We **can** identify the border of these trees by advancing from the roots side.

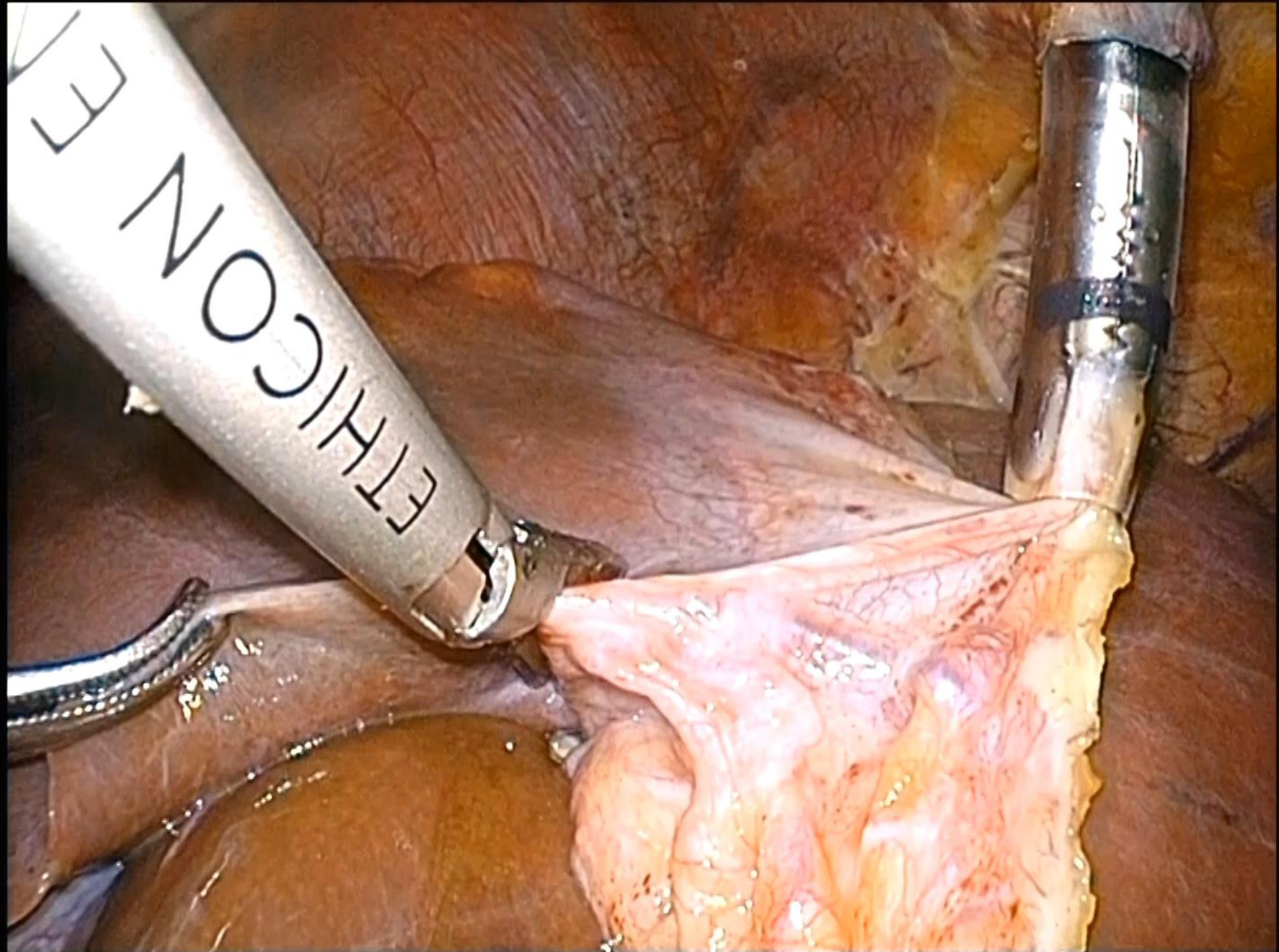


Intersegmental plane

Moses

The caudodorsal approach in Lap-H is useful for dissection in the intersegmental plane.






Conclusion

The concept of liver dissection is excavation in the dry field.





Thank you for your kind attention.

Goro Honda M.D., F.A.C.S.

