

# Radiofrequency ablation

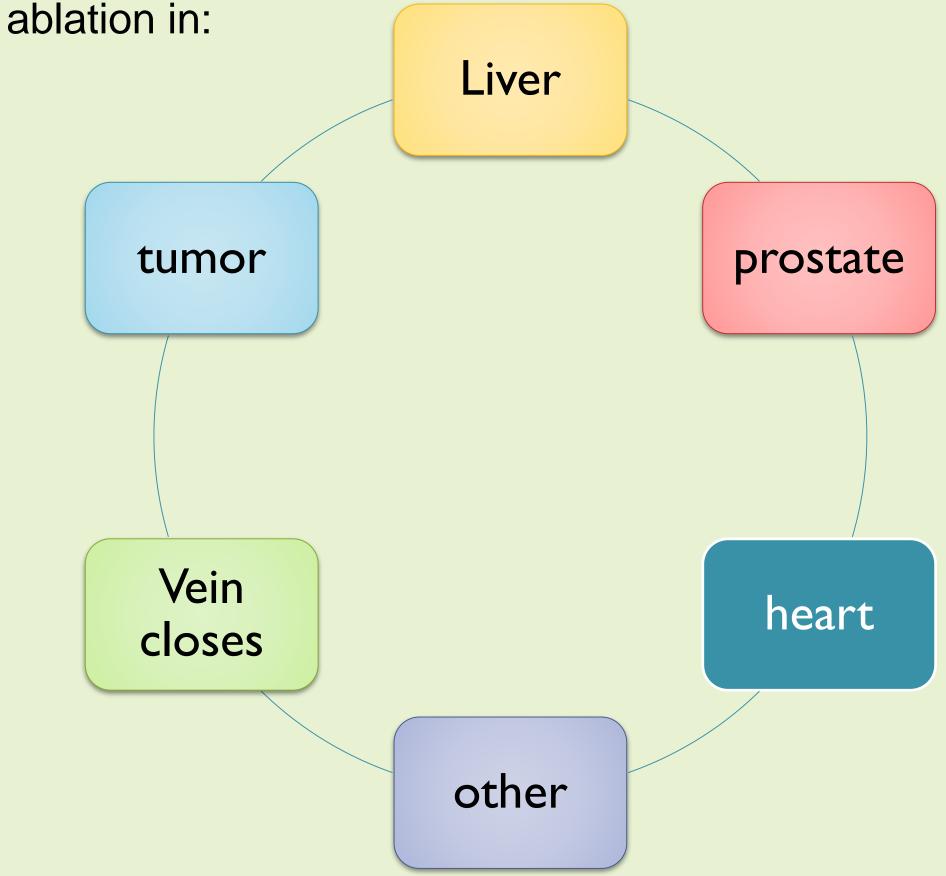
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#### Introduction

Radiofrequency ablation: The use of electrodes to generate heat and destroy abnormal tissue. In radiofrequency ablation(RFA), heat is generated locally by a high frequency, alternating current that flows from the electrodes. A probe is inserted into the center of the tumors and the non-insulated electrodes, which are shaped like prongs, are projected into the tumor. The local heat that is generated melts the tissue (coagulative necrosis) that is adjacent to the probe. This results in a 3 cm to 5.5 cm sphere of dead tissue per treatment session. The probe is left in place for about 10 to 15 minutes (1)

Radiofrequency ablation has been used for thermal



The cells killed by radiofrequency ablation are not removed, but are gradually replaced by fibrosis and scar tissue. Over the coming months, the treated tissue shrinks. If there is local recurrence, it occurs at the edge, and in some cases may be retreated.

## Case # 1

The case of a 72-year-old male patient with HCC is presented in whom percutaneous RFA was used as the sole first-line anticancer treatment, since he denied having partial hepatectomy. The patient underwent RFA two more times, at 1.5 years for treating a local tumor progression at the initial ablation site and at 11 years after the first session for treating a new remote intrahepatic recurrence. He revealed a long-term survival of more than 12 years so far and still remains in excellent clinical status.(2)

# Case #2

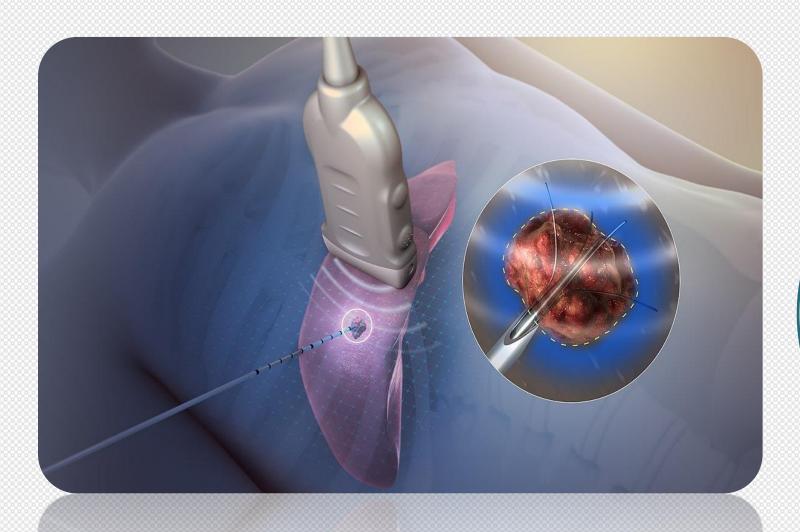
study was conducted on 26 patients (31 limbs) with primary VV; all patients were treated with RFA using VNUS closure under tumescent anesthesia.

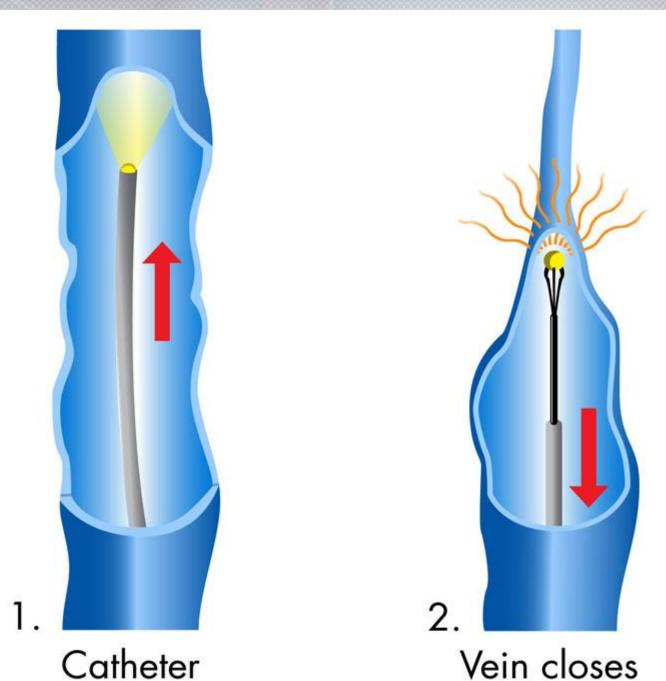
There were satisfactory results with no complications at 3–6 months of follow-up and marked improvement of patients symptoms Endovenous RFA, which is the performed technique, have shown to be very promising techniques as they are minimally invasive and highly effective, with high patient satisfaction (2)

## Case #3

case of a 57 years old male with history of atrial fibrillation treated by radiofrequency ablation because of a two-week history of consistent pleuritic pain in the left hemithorax and low-grade hemoptysis and a lung consolidation treated as a pneumonia with antibiotic but not responding to medical therapy. In view of the poor evolution of the patient, computed tomography angiography was performed with findings of PVT and secondary venous infarction and anticoagulation therapy was optimized. At the end, pulmonary resection was performed due to hemorrhagic recurrence.(3)

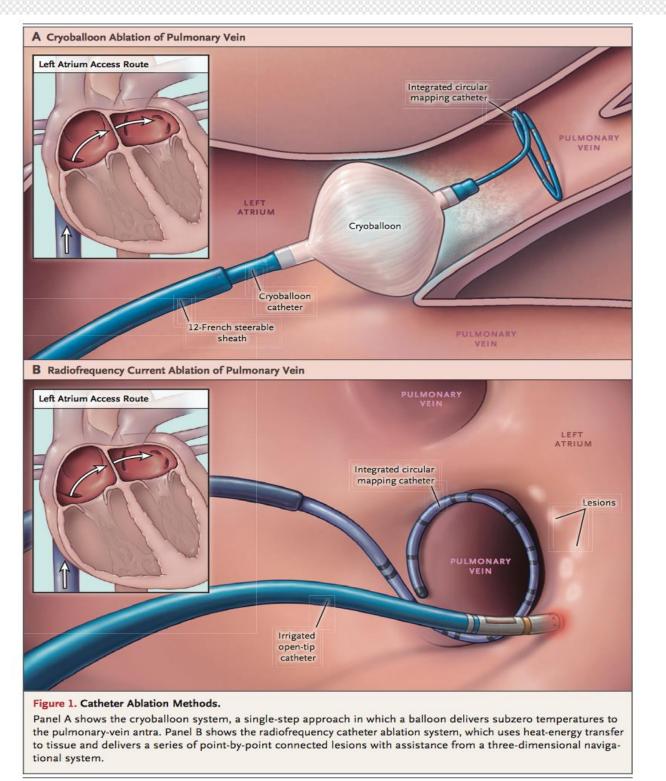
PVT remains a rare complication of radiofrequency ablation and other procedures involving pulmonary veins. Clinical suspicion and early diagnosis is crucial because is a potentially life-threatening entity.





Catheter advanced to treatment area

as catheter is withdrawn



#### Common side effects

- 1. Pain
- 2. Temporary numbness or burning
- 3. Temporary pain at the procedure site
- 4. Infection at the injection site (4)

#### conclusion

using radiofrequency ablation to treats different type of diseases because it is Faster recovery and return to normal and Reduction in fibroid-related symptoms also the Quality-of-life improvement

### references

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