

Table S1 The inclusion criteria and exclusion criteria for this multicenter, randomized controlled trial (20)

Variable	Indicator details
Inclusion criteria	<p>Patients with the following conditions:</p> <p>a. Patients with PE or IVC or iliac, femoral, or popliteal vein thrombosis with one of the following conditions:</p> <ul style="list-style-type: none"> (i) Contraindications of anticoagulation therapy, such as as recent bleeding, bleeding during anticoagulant therapy, or recurrent PE; (ii) PE coupled with LEDVT; (iii) Free-floating thrombi or a large number of thrombi in the iliac and femoral veins or IVC; (iv) Patients diagnosed with thrombophilia and repeated PE occurrence; (v) Patients with acute LEDVT intending to undergo thrombolysis or PMT; <p>b. $15 \text{ mm} \leq \text{IVC diameter} \leq 30 \text{ mm}$;</p> <p>c. Age 18 years or older (no restriction on gender);</p> <p>d. Voluntarily participation, signed informed consent form, and ability cooperate with the entirety of the test process.</p>
Exclusion criteria	<p>Patients with one or more of the following conditions:</p> <p>a. Infection present in the puncture site of filter placement;</p> <p>b. Patients with severe arrhythmia or myocardial infarction within 1 year;</p> <p>c. Chronic IVC thrombosis, severe stenosis, or malformation of the IVC or internal jugular vein;</p> <p>d. Pulmonary fibrosis and PE caused by the loss of embolus from the right heart cavity;</p> <p>e. Patients with massive PE, with life-threatening conditions;</p> <p>f. Patients with bacteremia, toxemia, or purulent embolism;</p> <p>g. Diameter of IVC greater than or equal to the maximum diameter of the backup filters;</p> <p>h. Severe liver and kidney dysfunction (ALT and AST more than 3 times the upper limit of normal value; Cr >225 $\mu\text{mol/L}$);</p> <p>i. Patients with blood pressure higher than 180/110 mmHg that cannot be controlled by medication;</p> <p>j. INR >3.0 and an APTT more than 5 times the upper limit of normal value in patients with severe coagulopathy;</p> <p>k. Patients allergic to the components of the contrast agent or filter system;</p> <p>l. Patients with active cancer or life expectancy <6 months;</p> <p>m. Patients with mental disease, psychological disorders that cannot be properly expressed, or alcoholism and drug dependence (e.g., drug addiction);</p> <p>n. Participants who have participated in clinical trials of other drugs or medical devices within 3 months prior to screening;</p> <p>o. Pregnant or lactating women, recent birth, or inability to take viable contraceptive measures during the trial;</p> <p>p. Other conditions that the investigator deemed inappropriate for participation in the clinical trial</p>

IVC, inferior vena cava; PE, pulmonary embolism; LEDVT, lower extremity deep vein thrombosis; PMT, percutaneous mechanical thrombectomy; ALT, alanine transaminase; AST, amino transferase; Cr, creatinine; INR, international normalized ratio; APTT, activated partial thromboplastin time.