

Radiologic Management of Venous Thromboembolism

Deep vein thrombosis is caused by blood clots in the veins in the legs. These can travel to the lungs, causing pulmonary embolism (PE) (<https://www.radiologyinfo.org/en/info/pulmonary-embolism>) . These conditions are referred to as venous thromboembolism (VTE).

VTE is usually treated with anticoagulants (medicines that decrease blood clotting). It may also be appropriate to put a permanent or retrievable device within the inferior vena cava (IVC) to stop the clot from going into the lungs. A retrievable IVC is usually appropriate when the use of anticoagulants may cause too high a risk of bleeding.

A permanent IVC may be appropriate. In cases of acute VTE with a clot in calf veins below the knee (which has a lower risk for PE), observation with serial imaging tests is usually appropriate. Anticoagulation may also be appropriate if there is severe pain with the calf vein clot or if the patient is bedridden or has an underlying malignancy.

In individuals who have chronic VTE, anticoagulation is usually appropriate. In select patients who develop high pressures within the lung arteries due to chronic VTE and PE, an operation to remove the clots from the lungs or a procedure to open the artery in the lungs by inflating a balloon may be appropriate. A permanent or retrievable IVC may also be appropriate. *For more information, see the IVC Filters page* (<https://www.radiologyinfo.org/en/info/venacavafilter>) .

In people at high risk for VTE (for example, those with major trauma), anticoagulation and using a device that automatically compresses the legs to keep blood flow moving is usually appropriate. Retrievable IVC or surveillance may also be appropriate.

— By Susan Anemone and Tasneem K. Lalani, MD. This information originally appeared in the *Journal of the American College of Radiology*.

Disclaimer

This information is copied from the RadiologyInfo Web site (<http://www.radiologyinfo.org>) which is dedicated to providing the highest quality information. To ensure that, each section is reviewed by a physician with expertise in the area presented. All information contained in the Web site is further reviewed by an ACR (American College of Radiology) - RSNA (Radiological Society of North America) committee, comprising physicians with expertise in several radiologic areas.

However, it is not possible to assure that this Web site contains complete, up-to-date information on any particular subject. Therefore, ACR and RSNA make no representations or warranties about the suitability of this information for use for any particular purpose. All information is provided "as is" without express or implied warranty.

Please visit the RadiologyInfo Web site at <http://www.radiologyinfo.org> to view or download the latest information.

Note: Images may be shown for illustrative purposes. Do not attempt to draw conclusions or make diagnoses by comparing these images to other medical images, particularly your own. Only qualified physicians should interpret images; the radiologist is the physician expert trained in medical imaging.

Copyright

This material is copyrighted by either the Radiological Society of North America (RSNA), 820 Jorie Boulevard, Oak Brook, IL 60523-2251 or the American College of Radiology (ACR), 1891 Preston White Drive, Reston, VA 20191-4397. Commercial reproduction or multiple distribution by any traditional or electronically based reproduction/publication method is prohibited.

Copyright © 2025 Radiological Society of North America, Inc.