



**Essential Imaging**  
BC PATIENT SAFETY & QUALITY COUNCIL

# CT Scans to Find a Blood Clot in The Lungs: A Guide for Essential Imaging

**Recommendation: “Chest CT for suspected pulmonary embolism is not recommended in low-risk patients with a normal D-dimer result.”<sup>1\*</sup>**

The BC Patient Safety & Quality Council has put together these Essential Imaging Conversation Guides for Patients to support and guide conversations with care providers based on the *BC Guidelines for Appropriate Imaging*.<sup>1</sup>

## **What is a Pulmonary Embolism?**

A pulmonary embolism (PE) is a blood clot in the lungs that has traveled from the veins of your leg or pelvis and causes a blockage in the blood flow.<sup>2</sup> It can be life threatening if not diagnosed and treated. Thankfully, your health care providers have many good ways to test for a PE.<sup>1</sup> Pulmonary embolism can be diagnosed through different scanning techniques.<sup>1</sup>

However, sometimes a chest CT scan may not be required, and the test may be harmful.<sup>2</sup>

## Take Action

Here are some ways that you can take an active role in your recovery:<sup>2</sup>

- Continue your usual activities without over-exerting yourself.
- Use medications as instructed by your health care providers.
- Over the next few days, keep an eye on how you are feeling. If your symptoms persist or change then see a health care provider.

## Stay Informed

CT scans come with some risk<sup>2</sup>

- A CT scan is a machine that uses large doses of radiation to take pictures of bone, organs or soft tissues. CT scans looking for a PE also use dye that can cause damage to kidneys or cause an allergic reaction.
- Exposure to large doses of radiation can increase the risk of cancer over your lifetime.
- If your chances of having a PE is low, a CT scan will not help you get better more quickly.

## How Do Health Care Providers Know When a CT Scan is Appropriate?<sup>1,2</sup>

- For very low-risk patients, a list of questions called the Pulmonary Embolism Rule-out Criteria (PERC) can safely rule out a PE without additional testing.
- For low and medium-risk patients, a blood test called the D-dimer in conjunction with clinical decision rules can safely rule out a PE if the test is normal.
- For high-risk patients and/or for those with an abnormal D-dimer blood test, imaging tests such as a CT scan or VQ scan are recommended to rule out a blood clot.

## Seek medical attention if you experience any of the following:<sup>2</sup>

- Your symptoms get worse
- You cough up blood
- You develop more shortness of breath, chest pain or fainting

There may be other tests that can be used to search for a PE—your health care provider will use a CT scan only if appropriate.<sup>1,2</sup>

## Start the Conversation!

Talk with your care provider about appropriate medical imaging.

Learn more and find additional clinical resources at [BCPSQC.ca/imaging](https://bcpsqc.ca/imaging).



<sup>1</sup>BC Guidelines. Appropriate Imaging for Common Situations in Primary and Emergency Care. 2020. Diagnostic Imaging. Available from: <https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/diagnostics-imaging>

<sup>2</sup>A d-dimer test is a blood test that measures a substance that is released into your body when a blood clot breaks up. This test can help check for blood-clotting problems. It can also be used to check how well a treatment is working.

<sup>2</sup>Choosing Wisely Canada. CT scans to find a blood clot in the lungs. When you need one and when you don't. [Internet pamphlet]. Toronto Canada; 2017. [cited 2020 March 10]. Available from: <https://bit.ly/34f12Yy>