

## Patient information

# Scanning for Pulmonary Embolism in Pregnancy

Haematology Liverpool

### What is Pulmonary Embolism (PE)?

Pulmonary Embolism (PE) is a blockage of one or more arteries in the lung usually caused by clot/clots that travelled in the circulation (embolus). This usually starts from a blood clot (thrombus) that is formed in the deep vein of your leg or pelvis, known as Deep Vein Thrombosis (DVT). The fragment of blood clot travels through the circulation and eventually gets stuck in the blood vessels of the lung.

### What are the symptoms of PE?

The symptoms of PE vary, depending on the size of the clot. A small clot often causes a feeling of breathlessness with chest pain, racing heart rate and in some extreme cases coughing up blood. Large clots usually cause severe shortness of breath, feeling unwell or faint and may lead to collapse. There may be pain and swelling in your leg (DVT) but it is not always present. Chest pains or breathlessness are common in normal pregnancy and do not necessarily mean you have had a PE or other illness.

### Why might I have a PE?

Being pregnant increases your risk of having a PE, as your blood thickens more than usual and is more prone to clot formation. You are less active towards the end of your pregnancy and blood flow in the legs may slow down, which adds to the risks. This means that you are more at risk of a PE than non-pregnant women at your age.

### Why do I need a scan?

First of all a chest X-ray will be arranged for you. To confirm whether you have a PE we have to carry out a special scan to have a look at the circulation of blood in your lungs. The main types of scan that can be used are ventilation/perfusion (V/Q) scan and computed tomographic pulmonary angiography (CTPA) scan. Occasionally more than one type of scan is needed.

### What do these scans involve?

#### Ventilation/Perfusion scan (V/Q) scan

In perfusion scan (Q), a small amount of radioisotopes will be injected in your blood. A scan is then performed to create an image of blood flow in your lung. Sometimes, the ventilation scan (V) may also be needed.

For this, you will be asked to breathe in a small amount of radioisotope gas (a low-risk radioactive substance) to measure the air in your lung. These two scans will then be compared for any areas of mismatching between the blood flow and air in your lung.

### **Are there any risks associated with V/Q scan?**

During a V/Q scan both you and your baby will be exposed to a very low level of radiation. For your baby, it is three times lower than the natural background radiation from the environment. However, there is a very small increased risk of childhood cancer to 1 in 280,000.

### **CTPA (CT Pulmonary Angiogram)**

CTPA is a scan looking at the blood flow of the arteries in your lung. You will be asked to lie flat on a table and a dye is injected into your blood. This dye allows clear pictures of your circulation to be taken. The scan will then be performed with the table moving into a donut-shaped scanner and several images are taken. You will be asked to breathe in, out or hold your breath during the process. It is essential for you to lie down very still to help us get good pictures of the blood flow in your lungs.

### **Are there any risks associated with CTPA scan?**

During a CTPA scan, both you and your baby will be exposed to a very low level of radiation. For your baby, it is seven times lower than the natural background radiation from the environment. So far, no significant risk from CTPA has been shown to the baby. However, there is a slight increased risk of maternal breast cancer compared to the natural baseline risk; this increased risk is estimated to be less than 1%.

### **Can I wait until I deliver my baby?**

**No.** PE can have serious consequences in pregnancy hence it is vital that we make the diagnosis as soon as possible.

### **What will happen if I don't have the scan?**

It is important to confirm where or not you have a PE so that you can be treated immediately. Also, it may have implications for your family members or situations in the future.

### **Which scan will I have?**

The decision will be made by your doctor depending on the availability of the scan, and your past medical history. Generally, other factors such as your recent chest X-ray, allergies towards the dye, previous history of PE or DVT, your renal function and existing cardio-respiratory disease would play a role in this decision.

### **Is there any alternative way to diagnose PE?**

**Unfortunately no** Scanning is the best available method to make a firm diagnosis that you have PE.

**What would happen if the scan is positive?**

This will confirm that you have a PE. Your doctor will commence appropriate treatment. This is likely to be injections of Heparin. Your doctor will talk to you regarding this.

**What should I do if the scan is negative?**

This will be reviewed by your doctor and you would be advised appropriately.

**Important:**

**If you have had your baby and are breastfeeding please discard your breast milk for 24 hours after the scan.**

**Feedback**

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

**Further Information**

**For further information please contact below**

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