

## Pulmonary Perfusion Study

**\*\*\* Chest X-ray is used for correlation. It should be obtained within an hour or so but no more than 24 hours.**

<b>Indications</b>	<ul style="list-style-type: none"><li>• Diagnosis of PE</li><li>• Evaluation of regional pulmonary perfusion</li></ul>
<b>Exam Time</b>	Procedure Imaging Time 30 minutes
<b>Patient Preparation</b>	None
<b>Patient Positioning</b>	Sitting preferably, supine is also acceptable. Or supine for injection and 1 min after injection, pt may be supine or sitting upright.
<b>Radiopharmaceutical and Dose</b>	<sup>99m</sup> Tc-macroaggregated albumin (MAA), about 300,000 particle; however, this can be reduced to 100,000 to 200,000 in persons with known right to left shunts, infants and children.
<b>Method of Administration:</b>	Before injection the pt should, if possible, cough and take several deep breaths. Invert syringe immediately before injection to resuspend particles. With the patient supine, or as close to supine as possible, begin slow IV injections in antecubital vein during three to five respiratory cycles.
<b>Conflicting exams and medications:</b>	None
<b>Imaging Device</b>	Large FOV camera, if available
<b>Acquisition Protocol</b>	500k counts Routine View: <ol style="list-style-type: none"><li>1- Posterior</li><li>2- Left Posterior Oblique</li><li>3- Left Lateral</li><li>4- Left anterior oblique</li><li>5- Anterior</li><li>6- Right anterior oblique</li><li>7- Right lateral</li><li>8- Right posterior oblique</li></ol>

**Comments** If Blood is introduced into the syringe containing the radiopharmaceutical, the injection must be completed immediately or small blood clots entrapping the radiopharmaceutical may cause hot spots in the lung. If the injected particles are too

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small, they will accumulate in the liver and spleen.

# NUCLEAR MEDICINE PROTOCOLS



**Comments Cont'd** Inpatients with tight to left shunts, young children, and patients with pulmonary hypertension, reduce the number of particles to about 60,000 to 100, 000.

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A well flushed indwelling line can be used. Do not administer in the distal port of a Swan-Ganz catheter or any indwelling line or port that contains a filter. (e.g. chemotherapy line)