

## Diagnostic Studies

### Online Content (1H)

#### Unit Objectives:

- **Interpret results of diagnostic tests in relation to patient symptoms and assessment findings. (1,2)\***  
**(\*Course Objectives)**

In order to receive full credit (1H class time) for this assignment, it must be completed in its entirety and submitted to the Unit 4- Diagnostic Studies Dropbox by 2/9/2026 at 0800. Any assignment not completed in its entirety will result in missed class time, and must be made up before the end of the semester.

What blood laboratory studies might be altered in an individual with a venous thromboembolism (VTE)?

- D-dimer elevated, coagulation studies (aPTT, PT/INR), CBC (mild leukocytosis), ABGs (PE, resp. alkalosis, hypoxemia), and a troponin/ BNP (severe pulmonary embolism).

What does an elevated D-dimer suggest?

- Indicates an active clot formation and breakdown is occurring in the body. Suggesting a DVT, PE, recent surgery, trauma, pregnancy, infection, cancers, or a disseminated intravascular coagulation.

A peripheral arteriography and/or venography can be used to detect and visualize what?

- Arteriography: shows arterial blood flow, occlusions, stenosis, and aneurysms.
- Venography: shows a venous systems patency, presence, and location of a DVT. Thrombi.

What problems can a transesophageal echocardiogram (TEE) detect?

- Endocarditis, source of emboli, intracardiac thrombi, cardiac tumors, aortic dissection, valvular disease/stenosis/regurgitation, and left atrial size/ function.

If you are the nurse assisting with a TEE, what are your responsibilities?

- Before: NPO status 6-8hrs, informed consent, baseline vitals, start IV, assess gag reflex, administer sedation and topical anesthetics.
- During: Continuous ECG, BP, O2, HR, airway, hypoxia, dysrhythmias, and assist the provider.
- After: Monitor gag reflex to return, maintain NPO status until it does, vitals, respiratory status, sore throat, bleeding, and aspiration.

What is a Lexiscan stress test and why is it performed? What must you, as the nurse, ask the patient prior to performing the test?

- A pharmacologic cardiac stress test that is done in place of the typical exercise stress test. Pt. cannot ambulate. Lexiscan (regadenoson) dilates the coronary arteries to help identify myocardial ischemia during nuclear imaging.

If you are conducting a stress test on a patient, what are some reasons to conclude or terminate the test?

1. \_\_Recent caffeine intake \_\_\_\_\_
2. \_\_Use of theophylline or aminophylline \_\_\_\_\_
3. \_\_Hx of chest pain\_\_\_\_\_
4. \_\_Hx of asthma/COPD\_\_\_\_\_
5. \_\_Pregnancy status\_\_\_\_\_

What are some things we can identify from a 12-lead ECG?

1. \_\_\_\_HR and rhythm \_\_\_\_\_
2. \_\_\_\_MI/ infarction\_\_\_\_\_
3. \_\_\_\_Electrolyte imbalances\_\_\_\_\_
4. \_\_\_\_Pacemaker function/ ectopic beats \_\_\_\_\_
5. \_\_\_\_Conduction abnormalities\_\_\_\_\_
6. \_\_\_\_Chamber enlargements \_\_\_\_\_

A BNP of 775 would be diagnostic for what? \_\_\_\_\_Heart failure\_\_\_\_\_

There are two substances released in the blood when cardiac tissue damage occurs. Name them:

1. \_\_\_\_\_Troponin\_\_\_\_\_
2. \_\_\_\_\_Creatine kinase- MB \_\_\_\_\_

View the following 3-minute TEE video:

<https://www.youtube.com/watch?v=9Us9mXXILSk>

In this particular case they are looking for the presence of what inside the heart?

- A thrombus in the left atria. Thrombus, abnormalities, congenital abnormalities, and other factors that could impair the next process of a cardioversion.

Optional question: When the cardiac rhythms shows on the bottom of the TEE screen, what tells you the patient is in A-fib (atrial fibrillation)?

- Inconsistent R-R, no p waves