

Course Description**SON1115L | Duplex Abdominal Sonography | 1.00 credit**

This course is designed to cover aspects of duplex abdominal sonography applications. Topics include: the aorta and its branches, the IVC and its tributaries, and the portal system. Subject matter includes: etiology, pathophysiology, clinical presentations, sonographic appearance and differential diagnosis of diseases. Prerequisite: SON1112C.

Course Competencies:

Competency 1: The student will coverage comprehensive of duplex abdominal sonography applications, focusing on the aorta and its branches, the IVC and its tributaries, and the portal system by:

1. Exploring the etiology and pathophysiology of diseases affecting the aorta and its branches, the IVC and its tributaries, and the portal system, gaining a deep understanding of the underlying mechanisms and factors contributing to these conditions
2. Identifying the clinical presentations and symptoms associated with diseases affecting the abdominal vessels and the portal system, recognizing the signs that warrant further investigation through duplex sonography
3. Analyzing the sonographic appearance of various diseases, such as aneurysms, stenosis, thrombosis, and tumors, in the aorta and its branches, the IVC and its tributaries, and the portal system, and differentiating them from other conditions through differential diagnosis

Competency 2: The student will actively engage in applying duplex sonography techniques to assess and diagnose diseases related to the aorta and its branches, the IVC and its tributaries, and the portal system by:

1. Practicing duplex sonography techniques, including Doppler imaging and color flow mapping, to evaluate blood flow patterns and detect abnormalities or obstructions in the aorta and its branches, the IVC and its tributaries, and the portal system
2. Performing duplex sonography examinations to visualize and assess the structural integrity and patency of the abdominal vessels and the portal system, utilizing appropriate scanning protocols and optimizing image quality
3. Interpreting sonographic findings, integrating knowledge of etiology, pathophysiology, and clinical presentations of diseases, to formulate accurate diagnoses and provide relevant information for patient management and treatment decisions

Competency 3: The student will have developed proficiency in conducting duplex sonography examinations and interpreting sonographic findings related to the aorta and its branches, the IVC and its tributaries, and the portal system by:

1. Refining scanning techniques and optimizing image acquisition to enhance the clarity and diagnostic value of duplex sonographic images of the abdominal vessels and the portal system
2. Collaborating with healthcare professionals, such as radiologists and physicians, to discuss and analyze sonographic findings, contributing to multidisciplinary approaches in patient care and treatment planning
3. Demonstrating competence in reporting and documenting sonographic findings accurately and comprehensively, adhering to professional standards and guidelines, and effectively communicating results to healthcare teams to aid in patient management and decision-making

Learning Outcomes:

- Communicate effectively using listening, speaking, reading, and writing skills
- Solve problems using critical and creative thinking and scientific reasoning
- Demonstrate knowledge of ethical thinking and its application to issues in society
- Use computer and emerging technologies effectively