Miami Dade College

Course Description

NMT2723C | Nuclear Medicine Procedures 2 | 2.00 credits

A continuation of Nuclear Medicine Procedures 1, students will learn the imaging parameters necessary to obtain images as well as the use of instrumentation necessary to produce the required images performed in a nuclear medicine department. Exposure to patient management during the procedures will also be addressed. Prerequisites: NMT1713C, NMT2102, NMT2534C, NMT2804C; Corequisites: NMT2130C, NMT2814C

Course Competencies:

Competency 1: The student will be able to accurately describe all aspects of cardiac procedures performed in nuclear medicine by:

1. Utilizing gated blood pool imaging, myocardial perfusion imaging, PET or PET/CT imaging:
    a. Instrumentation - detector system, data acquisition, data analysis, ancillary equipment, and computer processing
    b. Radiopharmaceuticals - type, dosage, administration, biodistribution, dosimetry, and if applicable, pharmaceutical intervention
    c. Patient Preparation, Monitoring, and Education - indications and contraindications, pregnancy, nursing, dietary restrictions, adverse reactions, medications, age-specific considerations
    d. Imaging Techniques - views performed and patient-detector orientation
    e. Interpretation of images - normal and abnormal variants, artifacts, and correlative tests
    f. Anatomy and Pathophysiology

Competency 2: The student will accurately describe all aspects of endocrine procedures performed in nuclear medicine by:

1. Utilizing parathyroid imaging, neuroendocrine imaging, and adrenal imaging:
    a. Instrumentation - detector system, data acquisition, data analysis, ancillary equipment, and computer processing
    b. Radiopharmaceuticals - type, dosage, administration, biodistribution, dosimetry and if applicable, pharmaceutical intervention
    c. Patient Preparation, Monitoring, and Education - indications and contraindications, pregnancy, nursing, dietary restrictions, adverse reactions, medications, age-specific considerations
    d. Imaging Techniques - views performed and patient-detector orientation
    e. Interpretation of images - normal and abnormal variants, artifacts, and correlative tests
    f. Anatomy and Pathophysiology

Competency 3: The student will be able to demonstrate an understanding of all aspects of central nervous system procedures performed in nuclear medicine by:

1. Utilizing Brain death, Brain SPECT, Brain PET or PET/CT, and Cisternography/CSF leak:
    a. Instrumentation - detector system, data acquisition, data analysis, ancillary equipment, and computer processing
    b. Radiopharmaceuticals - type, dosage, administration, biodistribution, dosimetry, and, if applicable, pharmaceutical intervention
    c. Patient Preparation, Monitoring, and Education - indications and contraindications, pregnancy, nursing, dietary restrictions, adverse reactions, medications, and age-specific considerations
    d. Imaging Techniques - views performed and patient-detector orientation
    e. Interpretation of images - normal and abnormal variants, artifacts, and correlative tests
    f. Anatomy and Pathophysiology

Learning Outcomes:

- Communicate effectively using listening, speaking, reading, and writing skills
- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information
- Use computer and emerging technologies effectively