UNIT 2
Body Structure
Pathological Conditions
ADHESION

- Band of scar tissue binding anatomical surfaces that are normally separate from each other.
  - Adhesions most commonly form in the abdomen after abdominal surgery, inflammation, or injury.
INFLAMMATION

- Protective response of body tissues to irritation, infection, or allergy.
  - Signs of inflammation include redness, swelling, heat, and pain, commonly accompanied by loss of function.
SEPSIS

- Body’s inflammatory response to infection, in which there is fever, elevated heart and respiratory rate, and low blood pressure.
  - *Septicemia is a common type of sepsis.*
Visual examination of the interior of organs and cavities with a specialized lighted instrument called an endoscope.

- Endoscopy can also be used to obtain tissue samples for biopsy, perform surgery, and follow the course of a disease, as in the assessment of the healing of gastric ulcers. The cavity or organ examined dictates the name of the endoscopic procedure. A camera and video recorder are commonly used during this procedure to provide a permanent record.
FLUOROSCOPY

- Radiographic procedure that uses a fluorescent screen instead of a photographic plate to produce a visual image from x-rays that pass through the patient, resulting in continuous imaging of the motion of internal structures and immediate serial images.

  - Fluoroscopy is invaluable in diagnostic and clinical procedures. It permits the radiographer to observe organs, such as the digestive tract and heart, in motion. It is also used during biopsy surgery, nasogastric tube placement, and catheter insertion during angiography.
MAGNETIC RESONANCE IMAGING (MRI)

- Radiographic technique that uses electromagnetic energy to produce multiplanar cross-sectional images of the body.
  - MRI does not require a contrast medium; however, one may be used to enhance visualization of internal structures. MRI is regarded as superior to CT for most central nervous system abnormalities, particularly abnormalities of the brainstem and spinal cord, and musculoskeletal and pelvic area abnormalities.
NUCLEAR SCAN

- Diagnostic technique that produces an image of an organ or area by recording the concentration of a radiopharmaceutical (the combination of a radioactive substance called a radionuclide and another chemical) introduced into the body (ingested, inhaled, or injected).
RADIOGRAPHY

- Production of captured shadow images on photographic film through the action of ionizing radiation passing through the body from an external source.
Drug that contains a radioactive substance which travels to an area or a specific organ that will be scanned.
Technique for carefully studying an area, organ, or system of the body by recording and displaying an image of the area.
TOMOGRAPHY

- Radiographic technique that produces a film representing a detailed cross-section, or slice, of an area, tissue, or organ at a predetermined depth.
COMPUTED TOMOGRAPHY (CT)

- Radiographic technique that uses a narrow beam of x-rays that rotates in a full arc around the patient to acquire multiple views of the body that a computer interprets to produce cross-sectional images of that body part.
Radiographic technique combining computed tomography with radiopharmaceuticals that produces a cross-sectional (transverse) image of the dispersement of radioactivity (through emission of positrons) in a section of the body to reveal the areas where the radiopharmaceutical is being metabolized and where there is a deficiency in metabolism.
SINGLE-PHOTON EMISSION COMPUTED TOMOGRAPHY (SPECT)

- Type of nuclear imaging study that scans organs after injection of a radioactive tracer and employs a specialized gamma camera that detects emitted radiation to produce a three-dimensional image from a composite of numerous views.
ULTRASONOGRAPHY (US)

- Imaging technique that uses high-frequency sound waves (ultrasound) that bounce off body tissues and are recorded to produce an image of an internal organ or tissue.
Ultra high-frequency sound waves and Doppler technology are used to produce audible sound of blood flowing through an artery.
Connection between two vessels; surgical joining of two ducts, blood vessels, or bowel segments to allow flow from one to the other.
CAUTERIZE

- Process of burning abnormal tissue with electricity, freezing, heat, or chemicals (silver nitrate).