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| ***التصوير الطبي***  ***Medical Imaging***  ***LECTURE EIGHT***  **Nuclear imaging**  ***Dr. Forat Hamzah*** |

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| ***AL-Mustaqbal University College***  ***Department of Medical Physics***  ***The Second Stage***  ***Medical Imaging*** | **شعار المستقبل جديد فقط.jpg** | ***كلية المستقبل الجامعة***  ***قسم الفيزياء الطبية***  ***المرحلة الثانية***  ***التصوير الطبي***  ***Dr. Forat Hamzah*** |

***LECTURE EIGHT***

**Nuclear imaging**

**Introduction**

Nuclear medicine imaging is a method of producing images by detecting radiation from different parts of the body after a radioactive tracer is given to the patient. The images are digitally generated on a computer and transferred to a nuclear medicine physician, who interprets the images to make a diagnosis. Radioactive tracers used in nuclear medicine are, in most cases, injected into a vein. For some studies, they may be given by mouth. These tracers aren’t dyes or medicines, and they have no side effects. The amount of radiation a patient receives in a typical nuclear medicine scan tends to be very low.Nuclear imaging is used primarily to diagnose or treat illnesses. Conditions diagnosed by nuclear medicine imaging include:

Blood disorders.

Thyroid disease, including hypothyroidism.

Heart disease.

Gallbladder disease.

Lung problems.

Bone problems, including infections or breaks.

Kidney disease, including infections, scars or blockages.

Cancer.

Nuclear medicine imaging can also be used to treat conditions or to evaluate how treatment is working. One example of this is radioimmunotherapy, which combines radiation and immunotherapy to deliver radiation precisely to a targeted area.