



Nuclear Medicine Methods

Lecturer By
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Types of Nuclear Medicine

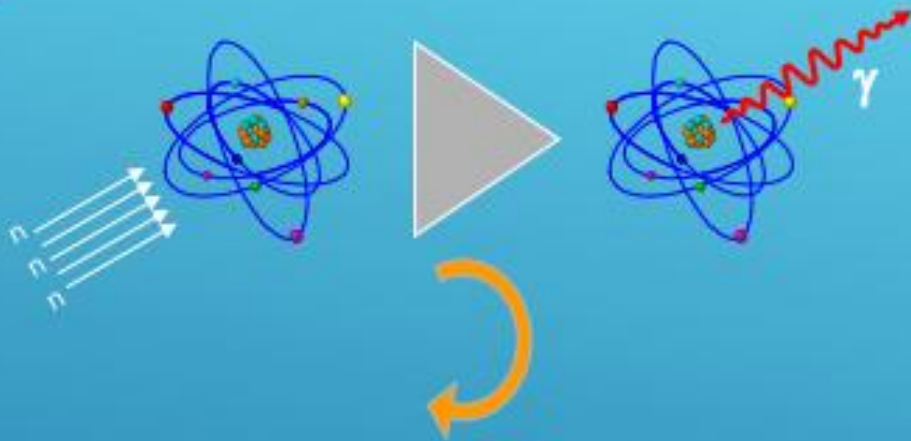
- In vivo
- In vitro
- Treatment with radiopharmaceuticals

Treatment with radiopharmaceuticals

- Therapeutic applications of radioactive materials in nuclear medicine are far less than their diagnostic applications.
- The main application is the use of iodine 131 to treat hyperthyroidism and thyroid cancer.
- In nuclear medicine, radioisotopes that emit gamma photons are used to image and scan organs, and radioisotopes that emit beta rays are used for treatment

NM Process

1



2



3



4



5



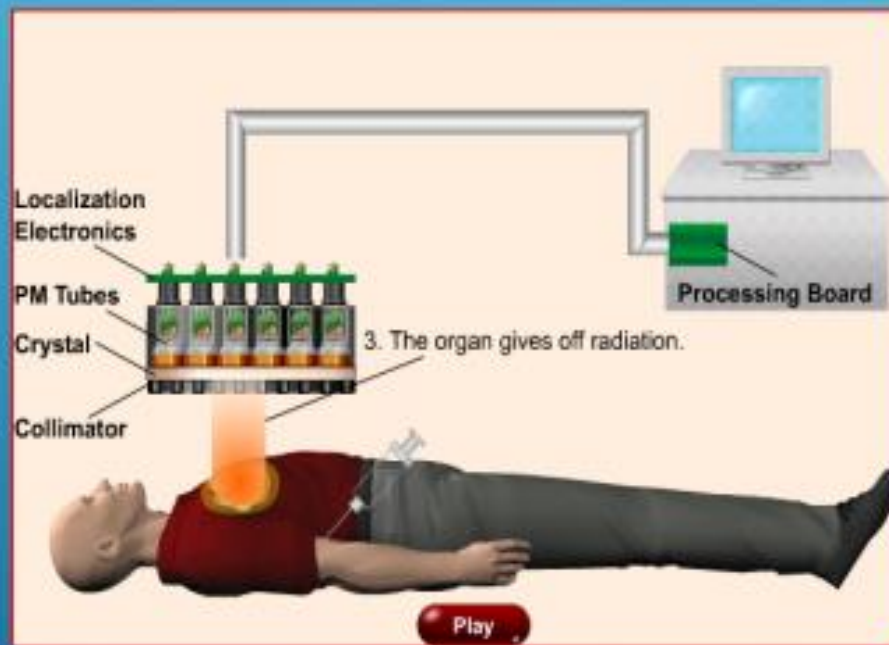
Step 1

RADIOPHARMACUTICAL IS ABSORBED BY ORGAN



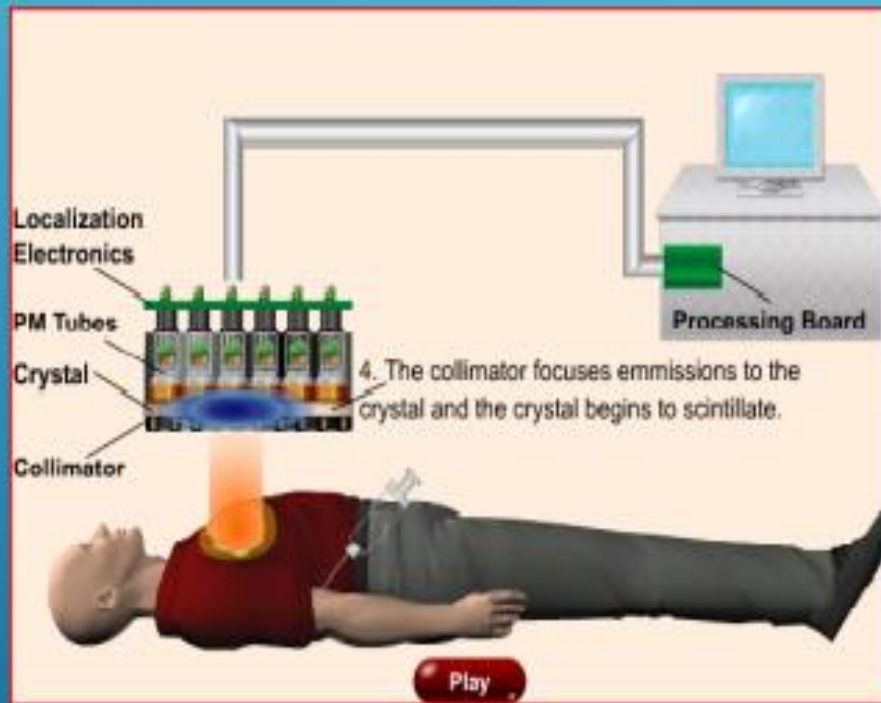
Step 2

THE ORGAN GIVES OFF RADIATION



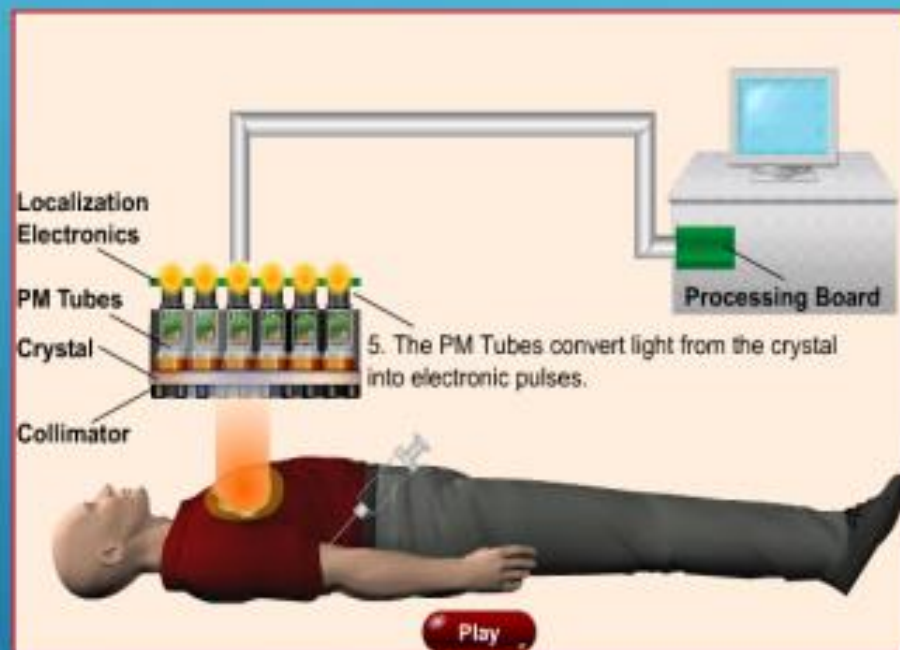
Step 3

THE COLLIMATOR FOCUSES EMISSIONS



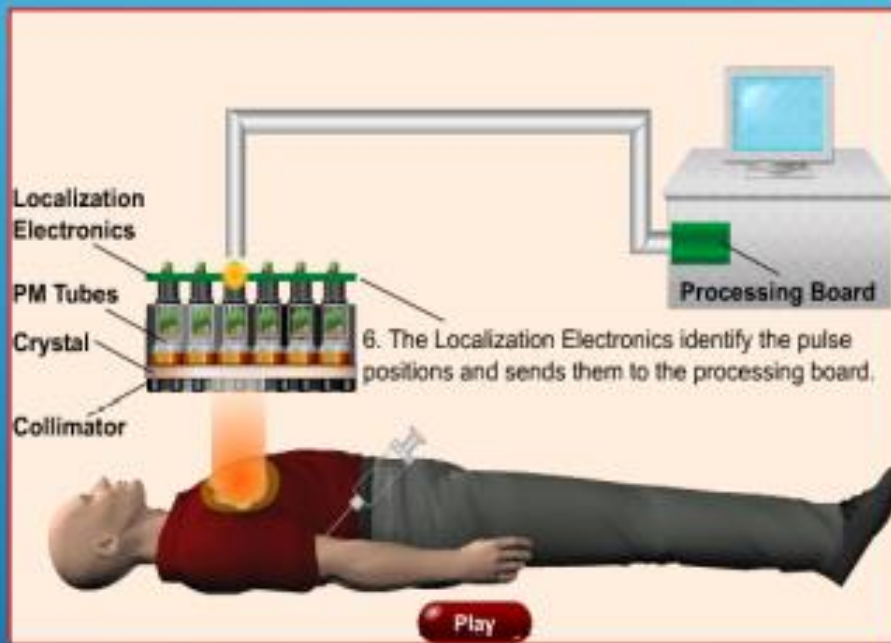
Step 4

THE PMTS CONVERT LIGHTS TO ELECTRONIC SIGNAL



Step 5

THE LOCALIZATION ELECTRONIC IDENTIFY POSITION



RAW DATA PROCESSING AND IMAGE RECONSTRUCTION

