



# Radioisotopes in diagnosis and therapy

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# Radioisotopes in physics

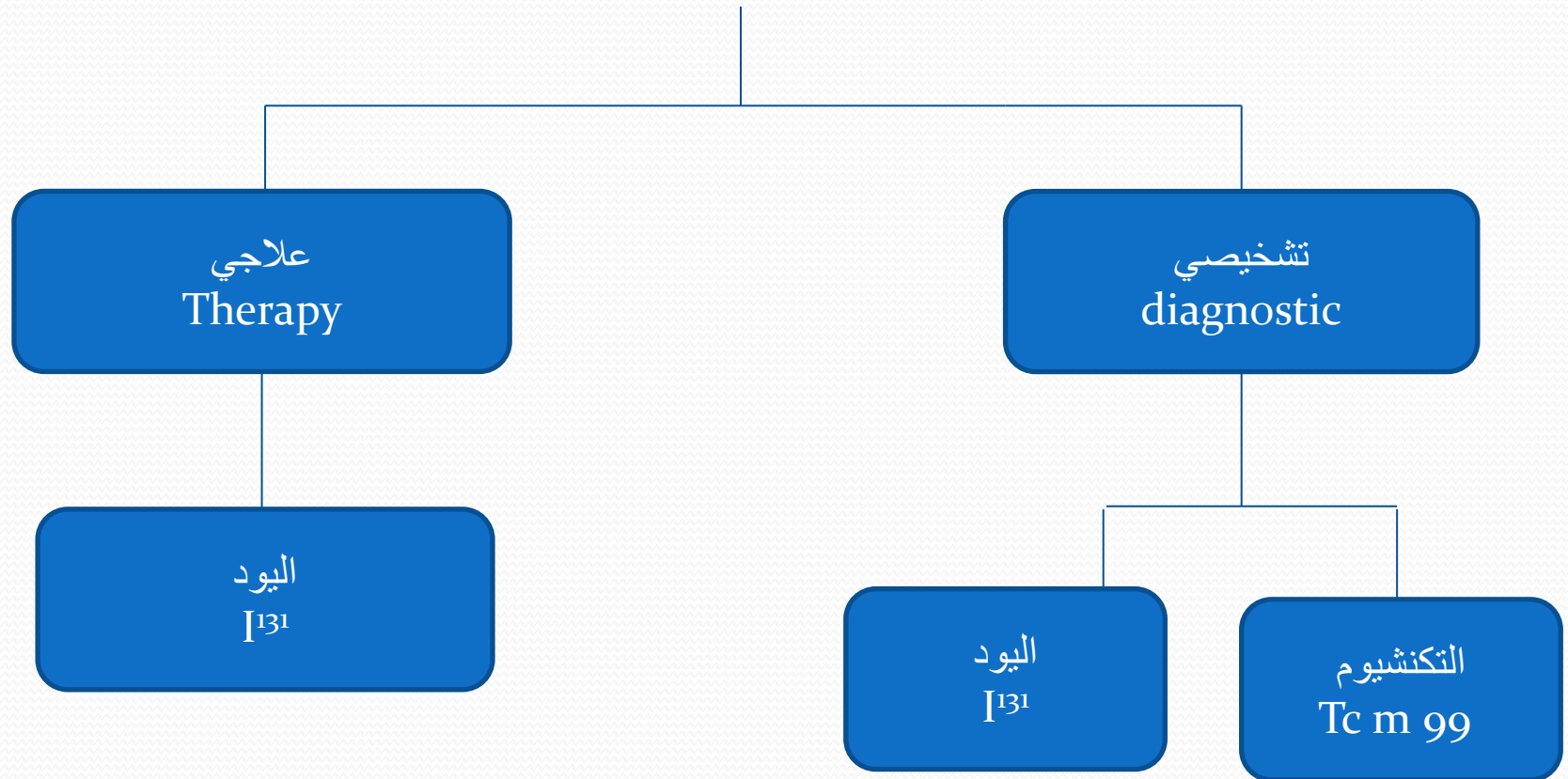
**Radioisotopes are radioactive isotopes of an element. They can also be defined as atoms that contain an unstable combination of neutrons and protons, or excess energy in their nucleus.**

# Radioisotopes in Medicine

**radioisotopes in medicine. Nuclear medicine uses small amounts of radiation to provide information about a person's body and the functioning of specific organs, ongoing biological processes, or the disease state of a specific illness. In most cases the information is used by physicians to make an accurate diagnosis physicians to make an accurate diagnosis**

***Radiotherapy can be used to treat some medical conditions, especially cancer, using radiation to weaken or destroy particular targeted cells.***

# (isotope)



# 1. Radioactive Iodine

Radioactive iodine is considered to be a radioactive iodine isotope

## Types of Iodine

-I<sup>123</sup>

-I<sup>127</sup>

-I<sup>131</sup>

# Uses of radioactive iodine

- **Used as a treatment in case of failure of thyroid drugs.**
- **Cases of parathyroid hypertrophy to reduce its size.**
- **One option for treating thyroid cancer.**
- **Treatment of hyperthyroidism.**
- **Graves'disease.**

# Advantages of radioactive iodine therapy

**Radio iodine therapy is characterized by the fact that it is not stored in other organs of the human body other than the thyroid gland, so iodine that is not stored in the thyroid gland will be removed with urine through the kidneys, and part of it may come out through sweat or through the intestines. Because of these properties of the iodine cycle in the human body, it can be given in large doses for treatment**

## How to treat with radioactive iodine

- **Radioactive iodine is given to the patient in the hospital in the form of capsules or liquid and is prevented from eating iodine-containing foods for two weeks after treatment.**
- **You may experience flu-like symptoms or throat congestion after treatment.**
- **Treatment may be accompanied by an enlarged thyroid gland and an increase in size, but it disappears and is not dangerous..**



