THE ROLE OF RADIOPHARMACEUTICALS IN INDIVIDUALIZED DIAGNOSTIC AND THERAPY

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- Examination techniques employed such as positron emission tomography (PET) or single-photon emission computer tomography (SPECT) are also able to illustrate tumor metabolism.

- The greatest challenge associated with the design of novel radiolabeled compounds is the development of the molecule for selective tissue targeting.

- Using diagnostic radiopharmaceuticals in multi-modality imaging is beginning to gain widespread application.

- It offers not only more accurate diagnosis, but also facilitates personalized therapy and helps a better understanding of the underlying pathological processes.

Ideal therapeutic radiopharmaceuticals:

- Should locate at the tumor site,
- Producing minimal damage to normal surrounding tissues

The design of radiopharmaceuticals requires optimization between *in vivo* targeting of the tumor and the clearance of radioactivity from non-target tissues.