

## Radionuclide cancer therapy

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Therapeutic nuclear medicine is rapidly developing as an additional treatment modality in oncology. Its unique characteristics are the systemic, yet selective delivery of radiation doses in target tissues, its non-invasiveness, the relative lack of immediate and late side effects, and the advantage that uptake and retention in the tumor can be pre-assessed by tracer studies. Many different tumor seeking radiopharmaceuticals are being used for therapy by different routes and a variety of targeting mechanisms.

The current clinical role of radionuclide therapy is briefly reviewed, as well as more general aspects and considerations, such as mechanisms for tumor targeting, the choice of radionuclide labels, radiopharmacy, drug delivery, radiation protection, dosimetry and toxicity.

**Key words:** radionuclide therapy, tumor targeting, therapeutic nuclear medicine, radiopharmaceuticals for cancer treatment