

## **RADIOIMMUNOTHERAPY - QUO VADIS**

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This review will outline the advances made with radioimmunotherapy in solid and hematologic neoplasms. In particular, under-utilization of this molecular radiotherapy will be examined. In order for radioimmunotherapy to be utilized optimally, several issues need to be addressed. These include suitable education of public and professionals about the relative safety of systemic radiotherapy; greater interaction between treating physicians and referring hemato-oncologists; harmonization of economic imperatives, and an appropriate understanding of both immunologic and radiobiologic effects of therapy. Success of lymphoma radioimmunotherapy will provide incentive for the continuing study of antigen-binding proteins to which tailored radioactivity – alpha particle-based therapy for hematologic or minimal residual disease, beta particle-based therapy for bulkier disease – can be administered. Attempts to increase relative absorbed dose to tumor by adoption of multi-step targeting methods have proved promising, as has therapy based on radiation absorbed dose (to normal organs and, increasingly, to tumor). Molecular radiotherapy has considerable potential not only for thyroid cancer but for a variety of neoplasms, and efforts to promote the scientific and health care impact of radioimmunotherapy will result in improved cancer management.