System-Level Barriers to Uptake of Existing and Novel Radioimmunotherapy for People with Lymphoma

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AIM

To better understand the policy and system barriers to appropriate integration of existing and novel radioimmunotherapy into lymphoma care in the US and the UK, in order to improve future integration into relevant clinical guidelines and care pathways.

BACKGROUND

- Radioimmunotherapy, a type of radioligand therapy, is a targeted approach to cancer care shown to improve progression-free survival, chances of complete remission, and quality of life in people with CD20-positive B-cell non-Hodgkin's lymphoma.[1-3]
  - CD20-targeted therapy has been approved in the US and Europe for nearly two decades.[4]
- Currently approved therapies are considered by some to be underused relative to their potential benefit.[3 5]
  - For example, between 2007 and 2017, the most people with lymphoma treated in a single year in the UK was 57.[6] Data on the number of eligible patients in the UK are not available. There are no equivalent data in the US.
- Despite low utilization, research in this area is ongoing. A PubMed search for "radioimmunotherapy" and "lymphoma" produces more than 1,000 articles from the past 20 years, including more than 300 articles from the past 10 years.
- With novel applications (e.g. CD37 or CD22 targeted) currently under investigation,[7-9] it is increasingly important to understand potential system and policy barriers to uptake, to learn from and overcome such roadblocks.

METHODOLOGY

Structured literature review and semi-structured interviews with lymphoma experts in the US and the UK, including eight clinicians and nurses ("clinical experts") and three patient advocates ("advocates").

Research was conducted as part of a wider assessment of readiness for radioligand therapy and radioimmunotherapy in a variety of cancers, and was guided by expert advisory groups in the US and the UK.

Questions explored integration and readiness for radioimmunotherapy across five domains of the health system, which were built into the Radioligand Therapy Readiness Assessment Framework (*Figure 1*).[10]

The systems approach allowed us to gain a holistic understanding of what policies and health system components are needed to ensure proper integration of radioimmunotherapy into patient care.

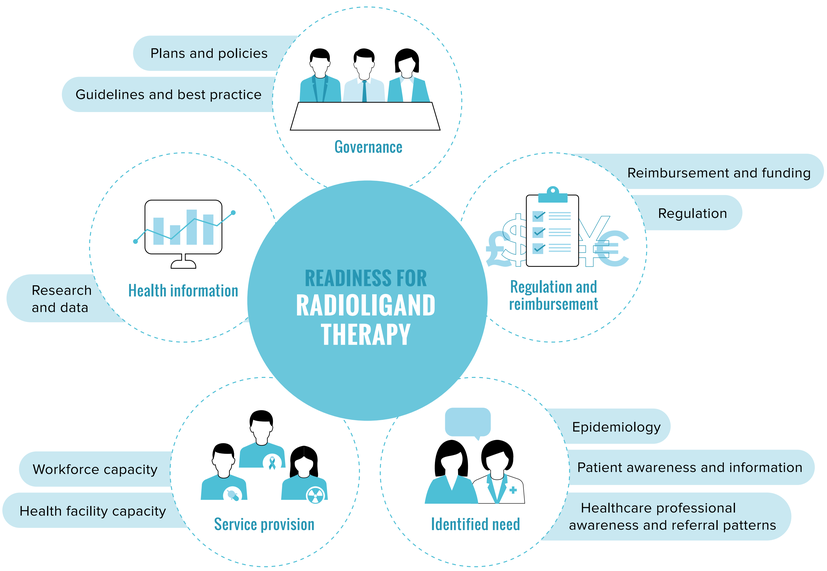

FIGURE 1. Domains and subdomains of the health system as analyzed in the Radioligand Therapy Readiness Assessment Framework

RESULTS

While the US and the UK health systems differ in terms of organization and funding, the structured literature review and expert interviews revealed many common strategic challenges to integration of radioimmunotherapy.

Barriers to system readiness

Lack of recent clinical data and research (reported by *n*=5 clinical experts): such data, which are growing, are essential to support evidence-based planning for cancer care, as well as appropriate use of the therapy.

Low awareness and understanding of radioimmunotherapy among newly licensed healthcare professionals (*n*=8 clinical experts): as radioimmunotherapy is not included in relevant training curricula and board certification requirements in the UK or the US, awareness of the therapy among newly licensed healthcare professionals may be inconsistent. This may impede referrals, resulting in inequitable availability of the therapy.

Limited awareness by patient advocates, patients, and policymakers (*n*=3 advocates): without up-to-date information patients may not be able to take part in treatment decision-making. Policymakers and regulators must also be aware of radioimmunotherapy to ensure that regulatory and training requirements are appropriate, and that the therapy is added to national and regional cancer plans where relevant.

Challenges for future integration

Caution around uptake of new radioimmunotherapy agents (*n*=7 clinical experts): because of limited access to older treatments and their minimal use, healthcare professionals may not be sure where novel radioimmunotherapy agents will fit into treatment plans.

Nonexistent referral pathways and unclear models of working (*n*=4 clinical experts): this discourages shared care and multidisciplinary coordination, making it difficult for hematologists and clinical oncologists to refer patients to appropriate specialists. In the US, this barrier is particularly prominent as lymphoma is often treated in a community setting, whereas radioimmunotherapy is typically provided in larger centers.

Reimbursement concerns (*n*=5 clinical experts): insufficient funding and complex reimbursement processes limit the extent to which healthcare institutions can feasibly offer radioimmunotherapy in the US. In the UK, limited economic data mean that approved radioimmunotherapy is not reimbursed by the National Health Service.

POLICY IMPLICATIONS

Our findings reveal that professional societies, policymakers and patient advocacy groups in the US and the UK will need to work together to overcome barriers to system readiness by:

- **reaching** consensus on timing and eligibility criteria for use of radioimmunotherapy
- **creating** accurate and consistent patient-friendly information on the therapy
- **efficiently updating** clinical training and treatment guidelines to include approved radioimmunotherapy
- **ensuring** that training requirements for the delivery of radioimmunotherapy are proportional to the risks
- **developing** evidence-based referral and treatment pathways which ensure consistency of care
- **investing** in data collection and analysis to continually refine practice.

Ultimately, this will help to ensure that people who would benefit from radioimmunotherapy are able to get the treatment they need.

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