



UNITED ARAB EMIRATES

Realising the potential of radioligand therapy: a national call to action

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An introduction to radioligand therapy

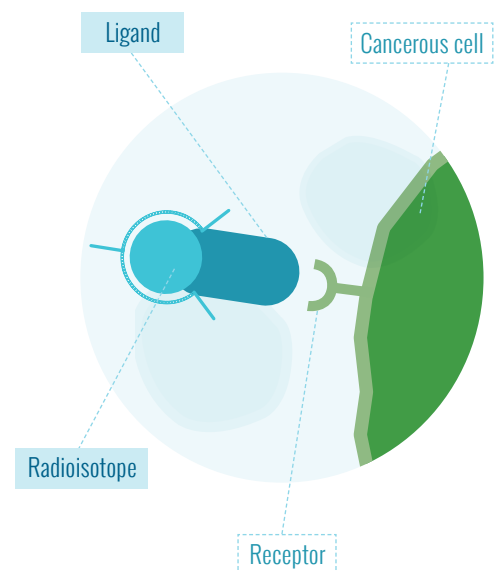
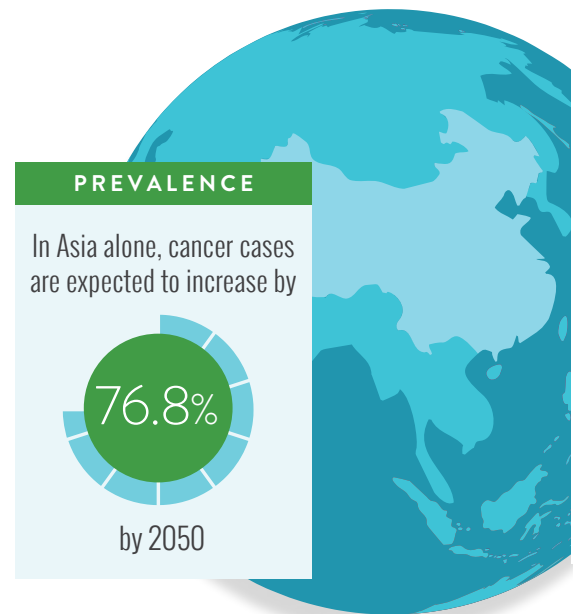
The global prevalence and cost of cancer is immense, and continues to grow, but our ability to tackle it is improving.

Cancer was the third leading cause of death in 2021, when it led to almost 10 million deaths globally.¹ In Asia alone – the continent with the highest prevalence of cancer – it is estimated that there will be 7.5 million additional new cases of cancer by 2050, an increase of 76.8% from 2022.⁹ However, while the incidence of cancer continues to grow, so does the number of available treatments and innovations.

Radioligand therapy is a targeted treatment with huge potential to improve cancer care. The therapy is made up of two parts: a ligand that identifies cancer cells, and a radioisotope that delivers radiation.¹⁰ The process allows radiation to target cells anywhere in the body.^{2,3} Because the radiation works over short distances and can be directed specifically to cancer cells, the treatment is generally well tolerated and has less impact on healthy cells than other treatments, such as chemotherapy.³ Additionally, radioligand therapy has been proven to improve survival rates and quality of life, as well as slow disease progression, meaning that the treatment can have a significant positive impact on people's lives.¹¹⁻¹³ Radioligand therapy is currently licensed in several countries for use in certain types of neuroendocrine neoplasms (NENs) and prostate cancer.¹⁴⁻¹⁸

However, the mechanism by which the therapy works is not specific to any particular tumour type, meaning it could be applied to many other cancers.

Investment and research are paving the way for a large increase in demand for radioligand therapy in the next 20 years. Recognition of its potential has led to significant investment; there are more than 320 ongoing clinical trials around the world exploring the therapeutic application of radiopharmaceuticals in a range of cancers.⁴ Given the potential of this research to identify new applications for radioligand therapy, demand is expected to surge.





As demand increases, so too will the need to build readiness for the implementation of radioligand therapy to ensure equitable access.

Readiness is the ability of a health system to rapidly and sustainably adapt policies, processes and infrastructure to support the integration of new therapies, as outlined in the Radioligand Therapy Readiness Assessment Framework (see *Appendix*).¹⁹ Identifying the policy and health system barriers to the implementation of radioligand therapy allows for more effective long-term planning and resource allocation to build readiness and provide equitable access to radioligand therapy services.

BOX 1. Defining radioligand therapy

This document uses the term radioligand therapy, but there are various terms used for the approach, including molecular radiotherapy, peptide-receptor radionuclide therapy (PRRT), systemic radiation therapy, targeted radionuclide therapy and targeted radiotherapy. If the ligand used is an antibody, the approach is known as radioimmunotherapy.



The potential of radioligand therapy in the UAE

Cancer is the fifth leading cause of death

in the UAE. In 2021, 8.2% of all deaths in the country were caused by cancer.⁶ Colorectal and prostate cancer were the most common among men, and breast and thyroid cancer were the most common among women.⁶

In 2021

8.2% of all deaths in the country were caused by cancer

The successful implementation of radioligand therapy is an opportunity for the UAE to continue on its path towards being a world-class healthcare and innovation hub.

A number of government strategies outline its commitment to enhancing innovative healthcare. The Dubai Industrial Strategy 2030 aims to make it ‘an international hub for knowledge-based innovation and sustainable industrial activities’, with pharmaceuticals and medical equipment highlighted as one of six sectors of focus.⁷ Similarly, the Abu Dhabi Economic Vision 2030 commits to the provision of a world-class health system, with pharmaceuticals seen as a way of reinforcing this.⁸ Reducing the impact of cancer has also historically been a key aspirational pillar of national policy in the UAE.⁵ All of this indicates that innovative pharmaceuticals, such as radioligand therapy, can make a significant contribution to the country’s long-term political and health ambitions.

Centres of Excellence (CoEs) established for other diseases demonstrate the UAE’s commitment to high-quality healthcare and present a possible avenue to deliver radioligand therapy. CoEs – specialist healthcare facilities that provide expert, multidisciplinary services for complex care – have already been established in Abu Dhabi for a number of diseases.²⁰ To achieve CoE accreditation, a healthcare facility must demonstrate its ability to deliver the best possible health outcomes when undertaking complex clinical procedures.²⁰ These centres are not exclusively applicable to oncology but encompass various healthcare facilities.²¹ Expanding the existing CoE model may act as an important strategy for the future delivery of radioligand therapy across the UAE.

Radioligand therapy in the UAE is currently delivered in line with international best practice by a small number of centres whose concentrated distribution may contribute to inequitable access to treatment. Radioligand therapy is administered by nuclear medicine physicians as an outpatient day-care procedure, allowing people to return home 4–6 hours after treatment. This



approach supports greater patient throughput.^{22 23} All people receiving radioligand therapy in these centres are managed by a multidisciplinary team including medical oncologists, nuclear medicine specialists, medical physicists/radiation safety officers and technologists;²⁴ this approach is aligned with generally accepted best practice.²³ However, the six centres capable of delivering the therapy are located in Abu Dhabi and Dubai,²⁵ so people in rural areas may need to travel significant distances to access treatment.

Radioligand therapy is currently used to treat two types of cancer in the UAE, but this is expected to expand. Prostate cancer and neuroendocrine tumours are treated with radioligand therapy in the UAE;²² however, the Ministry of Health and Prevention (MOHP) has currently only registered the therapy for use in advanced prostate cancer.²⁶ Radioligand therapy is delivered through a combination of licensed and unlicensed therapies, each subject to differing regulatory approval processes; this may result in inconsistent quality and safety standards. Given the significant number of ongoing clinical trials exploring the applications of radioligand therapy,⁴ the approach is expected to treat many other cancers in the future.

The lack of UAE-specific clinical guidelines and the limited consideration of radioligand therapy in national cancer policy may be hindering its wider implementation. While there are no national guidelines for delivering radioligand therapy in the UAE, healthcare professionals follow clinical guidelines published by the National Cancer Comprehensive Network (NCCN) in the US.^{22 24 27} The UAE has developed a comprehensive and up-to-date national cancer control plan, but it has yet to be officially adopted and does not make reference to radioligand therapy.²⁸



Opportunities to advance the implementation of radioligand therapy in the UAE



Establishing a clear policy framework for radioligand therapy would contribute to greater clarity in standards and requirements



Specialist training programmes can support workforce expansion and the consistent delivery of best-practice care



Educating physicians and providing clear guidance can optimise referral pathways



Centralised radioligand therapy services and financial support for rural patients can enhance equitable access to high-quality, specialist care



Increased awareness among government-led access programmes, insurance and reimbursement decision-makers could reduce inequalities in access



Consolidating the regulation of radioligand therapy can support more consistent quality and safety standards



Establishing a clear policy framework for radioligand therapy would contribute to greater clarity in standards and requirements



WHAT IS THE CURRENT CONTEXT?

Radioligand therapy implementation is unlikely to be optimal in the UAE without a dedicated policy framework or standard guiding delivery. Without clear policies or standards, existing or prospective radioligand therapy centres lack well-defined guidance on key requirements such as the qualifications and roles of healthcare professionals, referral pathways and treatment guidelines.^{29,30} The lack of a UAE-specific policy framework or standard covering radioligand therapy may be contributing to uncertainty regarding the workforce, infrastructure and regulatory requirements needed to deliver it.²⁹ This in turn may hamper long-term planning efforts to meet future demand.

WHAT CAN BE DONE?

Establishing evidence-based policy recommendations for radioligand therapy is essential and requires collaboration between healthcare professionals and policymakers. Developing a dedicated policy and standard for delivering radioligand therapy would support more effective implementation, ensure evidence-based decision-making and help prepare for future capacity needs.²⁹ To fully understand the complexities of delivering radioligand therapy equitably in the UAE, policymakers would benefit from engaging with regulators, healthcare professionals involved in its delivery, insurance companies and other relevant stakeholders (*Case study 1*).²⁹

CASE STUDY 1.

Supporting the development of a radioligand policy framework in Europe³¹

The Stakeholder Political Alliance for Radioligand Cancer Therapies (SPARC-Europe), which launched in 2020, is an initiative that aims to create a suitable policy environment for radioligand therapies by facilitating collaboration between healthcare professionals and European policymakers.

The initiative shares the expertise of healthcare professionals and patients with policymakers to support evidence-based decision-making, with the ultimate objective of overcoming barriers that contribute to inequitable access.

The establishment of similar initiatives in the UAE could support the development of radioligand therapy policies that are guided by expert knowledge and accurately reflect the unique requirements of this therapy.



Specialist training programmes can support workforce expansion and the consistent delivery of best-practice care



WHAT IS THE CURRENT CONTEXT?

The lack of local training programmes for nuclear medicine physicians in the UAE may lead to variable treatment standards and constrain future capacity. Radioligand therapy delivery carries radiation risks; to ensure patient and healthcare professional safety, adequate training is required.³² One expert has suggested that, without formal training, inconsistencies in care may arise, such as with patient counselling and management of adverse events.²² Efforts to expand workforce capacity may also be limited by the lack of a training programme.

Additional specialist staff will be needed to meet future demand for radioligand therapy. The current workforce capacity for delivering radioligand therapy appears to be sufficient in the large centres,²⁷ despite the UAE having comparatively low numbers of nuclear medicine physicians (0.02 per 10,000 population in the UAE³² versus 0.20 in Germany and 0.19 in Australia).^{33 34} However, increasing the number of nuclear medicine physicians, as well as radiopharmacists and technologists within these centres, and at other centres seeking to deliver radioligand therapy, is expected to be necessary to support growing demand for the approach.²⁴

WHAT CAN BE DONE?

The introduction of formal nuclear medicine training would support standardised radioligand therapy in the UAE. The proposal for a Cancer Control Plan recognises the need to invest in developing workforce capacity by establishing training programmes in specialised areas of cancer care.³⁵ International organisations, including the International Atomic Energy Agency, the European Association of Nuclear Medicine, and the Society for Nuclear Medicine and Molecular Imaging have published guidance on the training of nuclear medicine physicians in the field of theranostics, including radioligand therapy.²³ In 2024, several nuclear medicine specialists from the Arab world published insights on theranostics training in the region and made a number of recommendations that are relevant for the UAE.³² These state that nuclear medicine training should include the practical application of radioligand therapy and the management of adverse events, as well as education on patient management and relevant disciplines such as oncology and/or urology.^{23 32}



Capacity expansion and long-term planning could be supported by regulatory guidance outlining the roles and responsibilities of healthcare professionals involved in radioligand therapy. Such guidance would enable hospitals in the UAE to plan effectively and protect against capacity shortages while maintaining high standards of care.²⁹ A well-defined regulatory framework underpinned by comprehensive data on current capacity would support evidence-based decision-making on workforce requirements and ensure radioligand therapy is implemented safely and efficiently.

Efforts to expand workforce capacity can also be supported by patient and professional organisations. Initiatives to recruit people to work in relevant healthcare disciplines have been established by international professional organisations and alliances to support the expansion of the nuclear medicine and cancer workforce (*Case study 2* and *Case study 3*).^{36,37} Implementing similar programmes at a local level in the UAE could increase the number of nuclear medicine physicians, radiopharmacists and technologists.



CASE STUDY 2. European Association of Nuclear Medicine INSPIRE programme: tackling workforce challenges³⁶

The European Association of Nuclear Medicine has developed the Initiatives in Nuclear Medicine to Support Professional Interest and Recruitment in Europe (INSPIRE) programme to address shortages in the workforce.

The objective of the programme is to attract nuclear medicine workers by approaching students, schools, universities and other stakeholders. INSPIRE engages younger generations through social media, offers in-person experience in nuclear medicine, and promotes the appeal of working in the field.

Similar projects could be replicated in other countries, including the UAE, to boost the nuclear medicine workforce and support the long-term implementation of radioligand therapy.



CASE STUDY 3. Supporting a cancer workforce in crisis: European Cancer Organisation³⁷

In 2023, the European Cancer Organisation launched a cross-stakeholder campaign to address shortages in the cancer workforce. The campaign aims to change cancer policies in national governments and health institutions by:

→ improving data on working conditions and workforce shortages through a survey

→ highlighting the human impact of the workforce crisis by collecting first-person accounts from cancer staff

→ providing policy recommendations and best-practice examples to support national and European decision-makers in addressing the crisis.



Educating physicians and providing clear guidance can optimise referral pathways



WHAT IS THE CURRENT CONTEXT?

Low awareness of radioligand therapy among relevant physicians may be limiting referrals. The provision of radioligand therapy relies heavily on referrals from medical oncologists and urologists, and thus on these referring physicians having an awareness of the approach. While there is generally good awareness among these physicians in centres that provide radioligand therapy, awareness outside of these centres is limited.³⁸ A lack of understanding about the benefits and risks of the therapy may be contributing to referral hesitancy.²⁷ This hesitancy may be exacerbated by concerns that referring a patient could result in their management being transferred to a different hospital, leading to a financial loss for the referring hospital.^{29 38 39}

The lack of representation of nuclear medicine in multidisciplinary teams in some centres impacts referrals for and equitable access to radioligand therapy. Patients receiving care at centres without radioligand therapy services rely on referrals to larger centres for access to the treatment. Smaller centres, however, often do not have a nuclear medicine physician in the multidisciplinary team.^{29 39} And without input from a nuclear medicine physician, a multidisciplinary team may be less likely to recommend radioligand therapy and refer patients to centres capable of providing it.³⁹

WHAT CAN BE DONE?

Educating relevant physicians about radioligand therapy would support effective referrals and expand access to the treatment. Some centres that deliver radioligand therapy in the UAE host meetings with smaller centres to inform them about the benefits and practical applications of the therapy, and to encourage appropriate referrals.³⁸ Educational initiatives – such as conferences, lectures, online courses (*Case study 4*) and workshops – are already available to referring physicians who have an interest in learning more about radioligand therapy.^{22 24} Creating opportunities for medical oncologists, urologists and nuclear medicine physicians to share experiences and insights can further enhance awareness of new therapies and support more effective referral pathways.



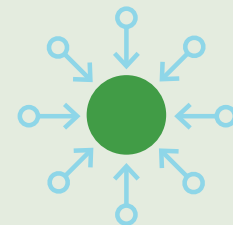
Establishing clear referral pathways that are supported by guidance could enhance coordination between nuclear medicine and referring physicians. In the UAE, any patient referred for radioligand therapy is subsequently returned to the referring physician, who continues the management of their care.^{22 29} Despite this, some referring physicians are concerned about losing control of the management of patients they refer for radioligand therapy.³⁹ These fears could be mitigated by incorporating a clear referral pathway into a clinical guideline that defines the roles and responsibilities of each discipline involved. Such guidance would also promote coordination among nuclear medicine, medical oncology and urology.²⁹

CASE STUDY 4. The Radioligand Therapy Academy: increasing awareness among healthcare professionals⁴⁰



The Radioligand Therapy Academy aims to increase knowledge of the therapy around the world, and advance its integration into cancer care. The academy offers virtual and in-person courses, providing healthcare professionals the opportunity to upskill in the field of radioligand therapy. This can in turn help improve referrals. Without formal training on radioligand therapy in the UAE, healthcare professionals may benefit from participating in such courses to gain expertise and address knowledge gaps.

Centralised radioligand therapy services and financial support for rural patients can enhance equitable access to high-quality, specialist care



WHAT IS THE CURRENT CONTEXT?

Variations in hospital infrastructure across the UAE may be contributing to disparities in access to radioligand therapy. Radioligand therapy delivery requires specialist treatment rooms that are equipped with appropriate shielding to protect patients, healthcare professionals and the general public against the radioactivity emitted after its administration.²³ While some centres providing the therapy have experienced challenges around ensuring there are sufficient specialist treatment rooms to meet demand,²⁹ other centres report no such limitations.³⁸

Some people have to travel long distances to access radioligand therapy, creating further obstacles to receiving the treatment. Radioligand therapy is only available in a limited number of centres in the UAE, meaning that some people have to travel significant distances to receive care.^{24 29} This indicates people living in some regions of the UAE face additional barriers to receiving radioligand therapy compared with people living in other areas, for example additional time spent travelling, and cost of travelling.²⁴



WHAT CAN BE DONE?

Adopting a more centralised approach to delivering radioligand therapy could enhance accessibility and quality of care while reducing costs for the health system. Delivering radioligand therapy through formally recognised CoEs is considered an effective approach for ensuring high-quality care.²⁷⁻²⁹ It enables the concentration of multidisciplinary expertise, providing patients with access to the full spectrum of healthcare professionals.²⁹ Additionally, building capacity in CoEs could prove cost-effective for the UAE health system, as establishing new services can be challenging.³⁹ However, a centralised model may not adequately address access challenges for people in rural areas; to mitigate this issue and boost health equity, CoEs could provide financial support to people for whom travel costs pose a barrier (*Case study 5*).²⁹

A centralised system would require clear referral pathways and a reimbursement structure designed to foster collaboration between referring centres and CoEs. The success of a centralised delivery system for radioligand therapy relies on an effective referral network and awareness of this therapeutic approach among medical oncologists and urologists.²⁹ Experts consulted for this project have suggested an innovative reimbursement model is needed to mitigate concerns from referring physicians about patient management and financial loss; in turn, this will help ensure that enough patients are referred to CoEs in the future.²⁹ Such a model would focus on reimbursing the overall management of a health condition (such as prostate cancer), rather than specific services (such as radioligand therapy). An example of this is bundled payments, where a single payment covers a package of care and services.⁴¹ These types of payments support greater accountability for providing care to patients along the entire pathway.⁴¹ By incentivising collaboration, this model could facilitate referring centres or hospitals working together with centres delivering radioligand therapy to provide comprehensive, integrated care for patients, ultimately leading to improved health outcomes and a more sustainable healthcare system.

CASE STUDY 5. **Hub-and-spoke by the British Nuclear Medicine Society**

As proposed by the British Nuclear Medicine Society, a hub-and-spoke model of service provision is one way to ensure equitable access to radioligand therapy.⁴² This involves a central 'hub' – equipped to deliver radioligand therapy – working in conjunction with 'spoke' centres, which have fewer specialist staff but can rely on capacity and expertise from the central hub to deliver high-quality services.⁴³ People on low incomes may be eligible for financial help for travel costs to access specialist services.⁴⁴ This model could be replicated in the UAE to provide equitable access and meet future demand for radioligand therapy.



Increased awareness among government-led access programmes, insurance and reimbursement decision-makers could reduce inequalities in access



WHAT IS THE CURRENT CONTEXT?

Differences in insurance policies result in variable coverage of radioligand therapy and limited access for some people in the UAE. Most insurance policies impose annual caps on treatment costs, with the amount covered varying between policies.^{24 27 38} Radioligand therapy is typically offered as a later line of treatment in the UAE; at this stage, many people have exhausted their annual insurance limits on prior treatments.²⁴ This creates significant barriers for individuals, particularly among traditionally underserved populations who are more likely to have low incomes⁴⁵ or those with lower annual caps, making access to radioligand therapy particularly difficult for these groups.²⁹

Current policies often fail to account for the time-sensitive nature of radioligand therapy and may contribute to an inconsistent approach to reimbursement. The reimbursement of high-cost treatments typically requires extensive documentation, which can delay reimbursement decisions.^{27 29} These delays can be critical, as radioligand therapy needs to be administered within the standard treatment intervals stipulated in clinical guidelines to maximise effectiveness.^{27 29} Failure to adhere to these timelines may result in disease progression and diminished treatment outcomes, underscoring the need for more streamlined and responsive reimbursement processes.

BOX 2 Radioligand therapy delivery requires efficient logistics

Radioligand therapy has a short shelf-life owing to its radioactive nature, meaning that it loses strength over time. Administration of the approach should take place within 3–5 days of production, depending on the therapy.^{15 17} This highlights the vital need for streamlined transportation, regulation and supply chains.

WHAT CAN BE DONE?

Programmes for traditionally under-represented people could improve equitable access to radioligand therapy. While some charities provide financial support to people whose insurance policies do not fully cover the cost of radioligand therapy,^{24 29 39} there is uncertainty regarding the extent of the coverage.²⁹ Establishing structured, government-led initiatives to assist people with limited insurance policies would help reduce disparities in access to this therapy.²⁹ For example, the Abu Dhabi government currently provides funding



for medical expenses for some patients without insurance coverage under the ‘Activity Based Mandate’ programme.⁴⁶ Expanding similar programmes could support broader access to treatment for a greater number of patients.

A more consistent approach to insurance and reimbursement could be guided by a clear protocol on therapy eligibility and increased awareness among relevant stakeholders and decision-makers. Educating decision-makers on the importance of the timely delivery of radioligand therapy is crucial to developing streamlined processes that facilitate more timely treatment and thus improved patient outcomes.²⁹ This could be achieved through a collaborative approach involving experts in radioligand therapy and insurance decision-makers, whereby experts share insights and highlight areas for improvement. A protocol that clearly defines radioligand therapy eligibility could help standardise reimbursement and insurance decisions, ensuring a smoother and more predictable process for people seeking radioligand therapy in the UAE, as well as supporting the effective logistical delivery of radioligand therapy.²⁹

Consolidating the regulation of radioligand therapy can support more consistent quality and safety standards



WHAT IS THE CURRENT CONTEXT?

Regulation is not standardised for licensed and unlicensed radioligand therapy, potentially leading to variation in quality and safety assessments.

Currently, licensed and unlicensed radioligand therapies undergo different evaluation processes,²⁹ potentially reflecting the need for enhanced awareness of the variable applications of radioligand therapy among decision-makers. This inconsistency may contribute to disparities in implementation and care standards of radioligand therapy. Some experts in the UAE have highlighted the need for clear guidance on the appropriate use of licensed and unlicensed radioligand therapy, particularly where both options are available.²⁹

WHAT CAN BE DONE?

Consolidating regulation could help ensure that applications are consistently safe and effective. Standardised regulation is essential to ensuring that all radioligand therapy, whether licensed or unlicensed, undergoes the same rigorous quality and assurance assessments.²⁹

Increased data collection on the use of radioligand therapies can support greater awareness and evidence-based decision-making. By gathering more data on current use of radioligand therapy in the UAE, decision-makers can better understand the treatment landscape. This will in turn enable them to develop evidence-based regulations that enhance the effective use of the therapy and, ultimately, patient outcomes.²⁹



Recommendations for action

The effective implementation of radioligand therapy represents a significant opportunity for the UAE to establish itself as a world-leading health system that provides the best possible care to its population. Although progress towards the adoption of radioligand therapy has been positive so far, a number of challenges must be addressed to ensure equitable access to this innovative treatment.

The authors of this report, guided by a multidisciplinary advisory group, have developed a series of recommendations to support the UAE in its efforts to establish itself as an innovation hub through the successful implementation of radioligand therapy.

WE CALL FOR POLICYMAKERS IN THE UAE TO:

- 1 **initiate a formal consultation with relevant experts on current radioligand therapy practices and challenges** to kick-start the process of developing a policy framework to support the optimal implementation of radioligand therapy. This framework should include details of the workforce requirements for a hospital to deliver radioligand therapy, and clear guidance on referral pathways.
- 2 **engage with nuclear medicine institutions to establish a mandatory training programme on nuclear medicine for those delivering radioligand therapy.** This should include guidance on the practical delivery of radioligand therapy and the management of adverse events, as well as education on patient management and the role of other disciplines, such as oncology and urology.
- 3 **work with relevant stakeholders, such as nuclear medicine leaders and industry partners, to establish and roll out accredited Centres of Excellence (CoEs) for nuclear medicine** that are capable of delivering radioligand therapy while also facilitating access for people in rural areas.
- 4 **implement government-led access programmes to support people with limited insurance policies,** to help ensure equitable access to innovative treatments such as radioligand therapy.
- 5 **engage with insurance and reimbursement decision-makers in developing an innovative model of reimbursement between referring centres and radioligand therapy centres** to mitigate concerns about patient management and financial loss, and ensure that enough patients are referred to radioligand therapy centres in future.
- 6 **collaborate with nuclear medicine specialists delivering radioligand therapy to collect data on the current provision of licensed and unlicensed radioligand therapy** to support evidence-based regulation.



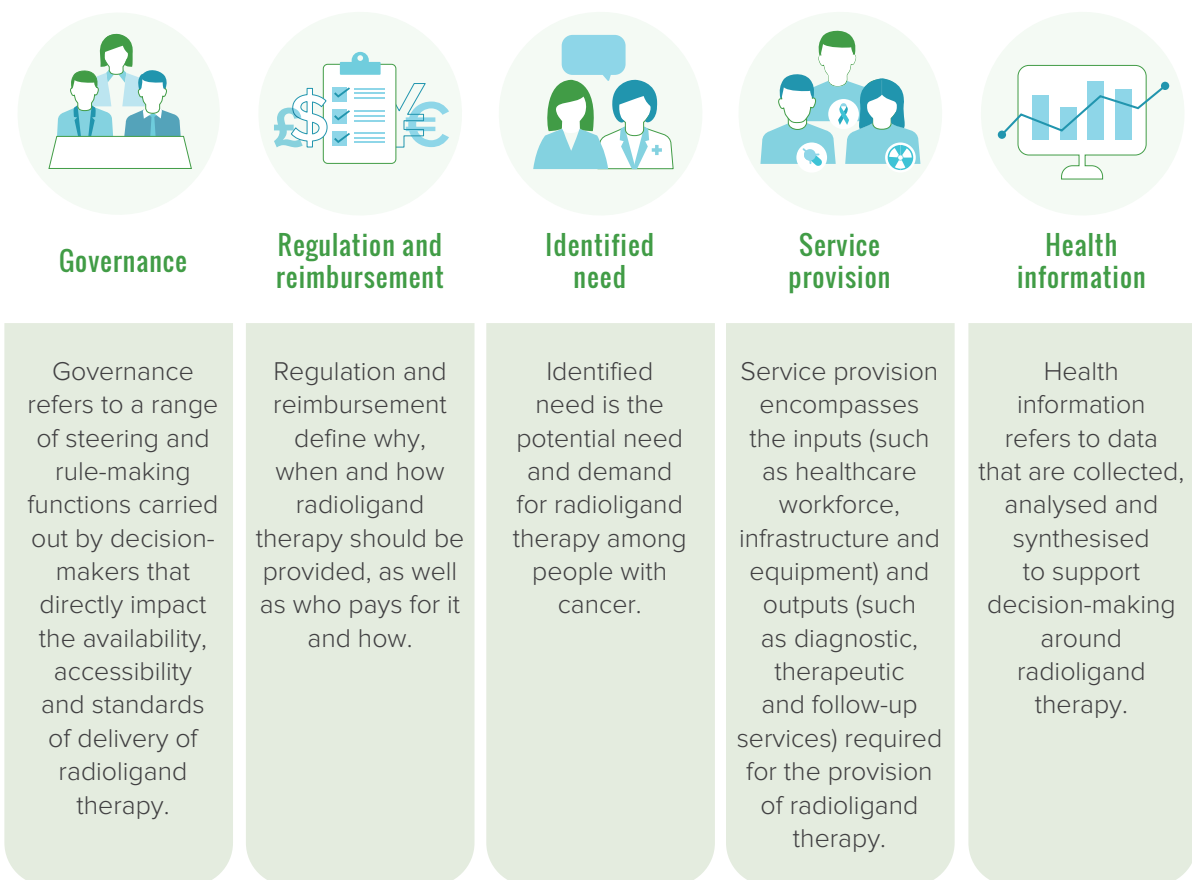
Appendix

The Radioligand Therapy Readiness Assessment Framework used to guide the research for this policy narrative was developed by HPP to evaluate national health systems' progress in integrating radioligand therapy.¹⁹ The framework allows those using it to take a systems-based approach to assessing the level of readiness in their country across five key domains (*Figure 1*), with the aim of identifying gaps in capacity and supporting more effective long-term planning and resource allocation.

The framework's development was guided by a multi-stakeholder international advisory group made up of nuclear medicine specialists, oncologists, urologists and patient representatives, and has been endorsed by the European Association of Urology, the European Neuroendocrine Tumor Society and the Oncidium Foundation.

Previous applications of the framework have been carried out in the US, the UK and South Korea.

Figure 1. The five domains of the Radioligand Therapy Readiness Assessment Framework





References

1. Global Burden of Disease Collaborative Network. 2024. *Global Burden of Disease Study 2021 (GBD 2021)*. Seattle: Institute for Health Metrics and Evaluation (IHME)
2. Jadvar H. 2017. Targeted Radionuclide Therapy: An Evolution Toward Precision Cancer Treatment. *AJR Am J Roentgenol* 209(2): 277-88
3. Sgouros G, Bodei L, McDevitt MR, et al. 2020. Radiopharmaceutical therapy in cancer: clinical advances and challenges. *Nat Rev Drug Discov* 19(9): 589-608
4. ancora.ai. 2024. Explore. Available from: https://www.ancora.ai/resultsradiopharm?partner=ancora_ai [Accessed 19/11/24]
5. United Arab Emirates Cabinet. 2014. National Agenda. Available from: <https://uaecabinet.ae/en/national-agenda#:~:text=The%20UAE%20Vision%202021%20National%20Agenda%20aims%20to%20make%20the%20police%20services%20and%20road%20safety> [Accessed 09/10/24]
6. Harbi AZ, Belaila BAB, Shelpai W, et al. 2024. UAE National Cancer Registry. In: Al-Shamsi HO, ed. *Cancer Care in the United Arab Emirates*. Singapore: Springer Nature Singapore: 57-77
7. Government of Dubai. 2021. *Dubai Industrial Strategy 2030*. Dubai: Government of Dubai
8. The Government of Abu Dhabi. 2007. *Abu Dhabi Economic Vision 2030*. Abu Dhabi: The Government of Abu Dhabi
9. International agency for Research on Cancer. 2024. Estimated number of new cases from 2022 to 2050, Both sexes, age [0-85+]: All cancers. Available from: <https://gco.iarc.fr/tomorrow/en/dataviz/bars?years=2050> [Accessed 04/07/24]
10. Bugani V, Battistelli L, Sansovini M, et al. 2023. Radioligand therapies in cancer: mapping the educational landscape in Europe. *EJNMMI*: 50(9): 2692-98
11. Sartor O, de Bono J, Chi KN, et al. 2021. Lutetium-177–PSMA-617 for Metastatic Castration-Resistant Prostate Cancer. *N Engl J Med*: 10.1056/NEJMoa2107322:
12. Strosberg J, El-Haddad G, Wolin E, et al. 2017. Phase 3 Trial of (177)Lu-Dotatate for Midgut Neuroendocrine Tumors. *N Engl J Med* 376(2): 125-35
13. UChicagoMedicine Comprehensive Cancer Center. Lutetium-177 PSMA Therapy for Prostate Cancer (Pluvicto). Available from: <https://www.uchicagomedicine.org/cancer/types-treatments/prostate-cancer/treatment/lutetium-177-psma-therapy-for-prostate-cancer> [Accessed 12/11/24]
14. National Cancer Institute. FDA Approves New Treatment for Certain Neuroendocrine Tumors. Available from: <https://www.cancer.gov/news-events/cancer-currents-blog/2018/lutathera-fda-gastrointestinal-nets> [Accessed 04/10/24]
15. European Medicines Agency. 2017. Lutathera EPAR Product Information. Available from: https://www.ema.europa.eu/en/documents/product-information/lutathera-epar-product-information_en.pdf [Accessed 04/10/24]
16. U. S. Food and Drug Administration. 2022. FDA approves Pluvicto for metastatic castration-resistant prostate cancer. Available from: <https://www.fda.gov/drugs/resources-information-approved-drugs/fda-approves-pluvicto-metastatic-castration-resistant-prostate-cancer> [Accessed 04/10/24]
17. European Medicines Agency. 2022. Pluvicto. Available from: <https://www.ema.europa.eu/en/medicines/human/EPAR/pluvicto> [Accessed 10/10/24]
18. Electronic Medicines Compendium. 2023. Lutathera® 370 MBq/mL solution for infusion. Available from: <https://www.medicines.org.uk/emc/files/pil.12723.pdf> [Accessed 11/10/24]
19. The Health Policy Partnership. 2021. *Radioligand therapy readiness assessment framework*. London: The Health Policy Partnership
20. Abu Dhabi Department of Health. Centre of Excellence - CoE. Available from: <https://www.doh.gov.ae/en/programs-initiatives/centre-of-excellence> [Accessed 16/10/24]
21. Abu Dhabi Department of Health. 2019. *DOH STANDARD FOR CENTERS OF EXCELLENCE IN THE EMIRATE OF ABU DHABI*. Abu Dhabi: Abu Dhabi Department of Health
22. Syed R. 2024. Interview with Chris Melson at The Health Policy Partnership [Teleconference]. 12/08/24
23. Herrmann K, Giovannella L, Santos A, et al. 2022. Joint EANM, SNMMI and IAEA enabling guide: how to set up a theranostics centre. *EJNMMI* 49(7): 2300-09
24. Ibrahim S. 2024. Interview with Chris Melson at The Health Policy Partnership [Teleconference]. 06/08/24
25. Novartis. 2024. *Novartis (data on file)*.
26. Department of Health Abu Dhabi. 2024. Drugs Search Engine. Available from: <https://www.doh.gov.ae/en/resources/drug-search-page> [Accessed 26/09/24]
27. Ansari J. 2024. Interview with Chris Melson at The Health Policy Partnership [Teleconference]. 30/08/24
28. The Economist. 2022. The future of cancer care: health system sustainability in The Middle East and North Africa (MENA) - United Arab Emirates. Available from: https://impact.economist.com/perspectives/sites/default/files/download/ei248_uae_country_profile.pdf [Accessed 26/09/24]
29. UAE RLT Advisory Group. 2024. Workshop; 11/09/24; Virtual



30. Younis N. 2024. Interview with Chris Melson at The Health Policy Partnership [Teleconference]. 22/08/24
31. SPARC-Europe. 2024. Stakeholder Political Alliance for Radioligand Cancer Therapies. Available from: <https://sparc-europe.com/> [Accessed 02/10/24]
32. Juweid ME, Al-Qasem S, Haidar M, et al. 2024. Theranostics and molecular imaging training in the arab world: present and prospects. *EJNMMI*: 10.1007/s00259-024-06845-0
33. Arztestellen. 2023. Facharzt-Weiterbildung Nuklearmedizin: Dauer, Inhalte, Perspektiven. Available from: <https://arztestellen.aerzteblatt.de/de/redaktion/facharzt-weiterbildung-nuklearmedizin> [Accessed 24/10/24]
34. Australasian Association of Nuclear Medicine Specialists. 2022. *Re-indexation of nuclear medicine-related items on the Medicare Benefits Schedule (MBS)*. Balmain: AANMS
35. Al-Shamsi HO, Abyad AM. 2024. A Proposal for Cancer Control Plan in the UAE. In: Al-Shamsi HO, ed. *Cancer Care in the United Arab Emirates*. Singapore: Springer Nature Singapore: 91-126
36. European Association of Nuclear Medicine. 2024. Discover INSPIRE by EANM. Available from: <https://eanm.org/the-eanm-community/initiatives/inspire-by-eanm/> [Accessed 02/10/24]
37. European Cancer Organisation. 2. Information. Available from: <https://www.europeancancer.org/content/the-code-information.html> [Accessed 22/10/24]
38. Dawoud E. 2024. Interview with Chris Melson at The Health Policy Partnership [Teleconference]. 26/09/24
39. Jaafar H. 2024. Interview with Chris Melson at The Health Policy Partnership [Teleconference]. 28/08/24
40. RLT Academy. Radioligand Therapy Academy. Available from: <https://rltacademy.eu/> [Accessed 19/11/24]
41. Organisation for Economic Co-operation and Development. 2022. *Value-based providers' payment models: understanding where and under which conditions they work*. Paris: OECD
42. Flux G, Buscombe J. 2021. BNMS position statement on molecular radiotherapy : Nuclear Medicine Communications. *Nucl Med Commun* 42(10): 1061-63
43. Buscombe J. 2020. The future of molecular radiotherapy services in the UK. *Clin Oncol*: 10.1016/j.clon.2020.11.012
44. National Health Service. Healthcare Travel Costs Scheme. Available from: <https://www.nhs.uk/nhs-services/help-with-health-costs/healthcare-travel-costs-scheme-htcs/> [Accessed 09/10/24]
45. European Commission. 2018. *A study of national policies 2018*. Brussels: European Commission
46. PureHealth. 2023. *Prospectus for the Public Offering of Shares in Pure Health Holding PJSC*. Abu Dhabi: PureHealth





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