Proposals for the reshaping of cancer services in England: funding for innovative cancer treatments

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The Royal College of Radiologists

SoR THE SOCIETY OF RADIOGRAPHERS

This short document expands on our **proposals for improving funding arrangement to enable equitable access** to innovative cancer treatments. We are **concerned that current commissioning and funding structures are inhibiting innovation and leading to unequal access to novel treatments** – including Stereotactic Ablative Body Radiotherapy (SABR), molecular radiotherapy (MRT) and new drugs.

Improving commissioning arrangements for these treatments will provide direct patient benefits, including faster and more equitable access, improved health outcomes, and care closer to home. The National Cancer Plan should include clear actions to reconsider the funding for innovative cancer treatments.

Funding arrangements–what needs to change?

Treatments should be funded by a tariff that includes not just the costs of the new drug or new equipment but **also workforce, capital and a flexible innovation incentive payment**.

- Reimbursement **should include the whole episode of care**. This should include not only the delivery of treatment but the **workforce and equipment** for the quality assurance processes and patient support necessary to ensure treatment is given safely.
- The capital component should factor in **new resources required if current capacity is outstripped**, such as new chemotherapy facilities or radiotherapy machines. **NHSE could adopt creative approaches** where appropriate to maximise cost efficiencies or provide economies of scale, such as **leasing radiotherapy machines or using mobile chemotherapy units**, where appropriate.
- An **innovation incentive payment** will facilitate appropriate adoption of new treatments that require **new expertise or training until the treatment is established as routine**.
- **National professional consensus** based on sound evidence is required to inform which new treatments and indications should be commissioned and what resources are needed to deliver them safely and effectively. The framework for this should be designed to enable rapid adoption of new treatment.
- **Adoption of certain treatments may need to be in specialist centres**, rather than every hospital. Services should be designed to enable equitable access wherever someone lives. A planned review should consider wider rollout later if appropriate.
- Trusts should be strongly **encouraged to take part in clinical trials for innovative treatments**, as they provide a reliable way to safely implement new techniques under controlled circumstances.
- **Medical Royal Colleges and other professional bodies** have the expertise to work with NICE and other regulators to produce the necessary consensus and provide the required guidance.

All new anti-cancer treatments or techniques should be funded in this way and should be subject to the same clinical scrutiny. Broader actions to expand radiotherapy capacity would complement and enable these actions to foster a creative environment for innovation.[1]

Current funding models for three types of innovative therapies **illustrate how the current reimbursement system is not fit for purpose** and **exemplify the case for making the changes outlined above**.

There remains further detail to be worked through to successfully reshape funding for innovative cancer treatments. This would need to include factors such as out of area referrals, capacity for clinical trials, funding delegation, workforce development, the use of skill mix and more.

Stereotactic Ablative Body Radiotherapy (SABR)

SABR provides higher biological radiation doses than conventional radiotherapy by employing sophisticated planning and on-treatment strategies. This maximises the dose to the tumour, while minimising exposure of healthy tissues. This means **therapy can be given with fewer doses, compared to conventional techniques**. Each radiation dose needs very precise quality assurance to make sure it is accurate. It is now an effective ablative treatment, akin to surgery and interventional radiology-based ablation methods.

When SABR was first introduced, there were rigorous controls on how it was implemented and which patients should have SABR. These were necessary to ensure departments had the technical and human expertise to implement it effectively. The **underlying techniques are now well-established, but the commissioning framework has not evolved in parallel** and is now hindering the adoption of SABR for two reasons:

1. Currently, the framework requires an individual commissioning application be made, and Level 1 evidence provided, for every new indication for SABR. A new application is also needed to modify the inclusion criteria for current indications when trying to reflect the changing evidence base. This can lead to long delays in implementation; the same is not the case for other cancer treatments. It means that trusts do not receive tariff for treating patients with SABR for cancers outside of those indications. The cumbersome nature of this process and burden of evidence required **delays adoption of effective new therapies**. Where Level 1 evidence is not available, value frameworks (presently in development by the European Society of Radiation Oncology) can be used to appraise promising innovations within the context of reimbursement.
2. In contrast to most radiotherapy, SABR is funded via its own unit price tariff.[2] Though an improvement in many ways on the block contract model, there can be challenges with this approach. It does not account for the cost of upfront investment in equipment, training and planning. Moreover, the unit price may **underestimate the true cost of SABR delivery**, such as in cases of complex treatment, meaning that trusts would be providing it 'at cost'. By giving the false impression that SABR does not 'generate an income' for the hospital, the current funding model is **creating a perverse incentive for financial directors to not approve the adoption of SABR.**

It should also be noted that, for all types of radiotherapy, the current funding model does not adequately account for fixed costs, such as those of equipment, buildings and facilities, which are estimated to comprise 62% of the costs of radiotherapy delivery.[3]

Molecular Radiotherapy (MRT)

MRT uses radioactive drugs to selectively target cancer cells (rather than healthy tissue) and shows increasing promise for a range of cancer types. As cancer incidence rises, and as more people live for longer with cancer, there will be increasing numbers of patients who could benefit from this approach.

However, provision of MRT services is uneven and lacking in strong central direction.[4] There are several causes of this:

1. MRT is funded via NHS Specialised Commissioning, which has inhibited its rollout, since trusts need to be directly commissioned by NHSE to deliver it. Because it is seldom

commissioned, the ideal funding structure for MRT has not been determined. This uncertainty itself serves to inhibit MRT's commissioning – a negative feedback loop. One reason for this uncertainty is that there is confusion as to whether MRT should be funded like a drug or like other radiation therapies.
Solutions: A tariff for MRT should be developed according to the above model and should include funding for the imaging, staffing and dosimetry necessary to verify safe delivery, alongside an innovation incentive payment. The RCR would strongly advocate that MRT be treated as a radiation therapy (rather than as a drug) so that quality assurance is similar to those of other radiation techniques to keep patients and staff safe. This would help ensure maximum patient benefit is derived from each treatment delivered.

2. Capacity to deliver MRT is dependent on and limited by the provision of specialist equipment, such as PET-CT and SPECT-CT scanners and the cyclotrons required to produce radiotracers. Unlike for drugs, progress on innovation is stalled by centres being only able to participate in studies by purchasing and investing in equipment, which may or may not prove to be beneficial. This sunk cost cannot be recouped and, unlike for drugs, the technology cannot be readily taken off the shelf. Specialist hospital radiopharmacies are also needed to deliver these tracers, with facilities able to store radioactive materials and deliver them safely to patients.
Solutions: NHS capital planning needs to consider the provision of these facilities to enable the wider uptake of MRT. Existing national bulk purchasing options are underutilised; their usage should be stepped up.[5] For novel radiotherapy technologies and techniques, consideration should be given to capital investment in testing sites at selected centres as part of a prospective evaluation of the suitability for wider NHS adoption. A central approach to evidence evaluation for radiation technologies is necessary.

3. Supply chains for medical radioisotopes are complex and fragile, with radioisotopes themselves having half-lives of hours or days. The UK has no domestic production facility, which reinforces the importance of securing stable supply chains. Complex and overlapping regulatory frameworks can complicate the delivery of these materials and the ability of services to expand.[6]
Solutions: Collaboration across government is needed to ensure a stable and increased supply of medical radioisotopes–including a harmonisation and simplification of current regulatory frameworks. A nationally agreed approach to infrastructure and workforce planning must be agreed so MRT provision can be scaled up.

New Systemic Anti-Cancer Therapies (SACT)

SACT refers to drug treatments used to treat cancer. Demand for SACT is increasing by around 6-8% each year, driving up the cost associated with providing this type of treatment.[7] New cancer drugs can be very expensive, but the costs of delivering them are often not reimbursed adequately. Delivery costs include workforce (with increasing SACT demand exceeding the rate of oncology workforce growth), physical capacity (including new spaces to treat patients when current capacity is exceeded), the need for additional diagnostics capacity to monitor treatment response, and acute oncology services to manage toxicities[8] **Reimbursement for new SACT needs to include all these relevant costs**.

Budget impact analyses provided by NICE to support drug approvals are rarely used downstream to expand services to deliver these complex therapeutic agents. Translating

these analyses to practical service change will provide a more sustainable approach to adoption and assessment of affordability.

SACT lends itself well to provision in local communities because it does not necessarily require large, complex equipment. Some SACT could be provided to patients in neighbourhood health centres, community pharmacies, GP surgeries, or even in their homes. Well-designed reimbursement models that cover the relevant workforce and delivery costs will encourage these innovations. Properly reimbursing providers for all the costs associated with SACT will help the NHS to make the **shift from hospitals to communities** as set out in the Ten-Year Health Plan for England.

Protocols for delivery of new SACT therapies, including management of side effects and appropriate monitoring frequencies, should be centrally produced. Moreover these protocols should enable models of delivery in communities and close to patients' homes, in alignment with the Ten-Year Plan. This will reduce unwarranted variation and improve productivity. Royal Colleges, specialist societies and partnership boards have the relevant expertise to lead this work.

Further information

The **Royal College of Radiologists (RCR)** is a charity and leading membership body for clinical radiologists and clinical oncologists across the UK. If you would like any further information, or if you would like to speak to one of our practising clinical oncologists or radiologists in person about the challenges facing our specialties, please get in touch with us at policy@rcr.ac.uk.

The **Society of Radiographers (SoR)** is the trade union and UK professional body for the diagnostic imaging and radiotherapy workforce. With our members, we shape policy and standards, pioneer new ways of working, and ensure safe and fair workplaces. For more information visit www.sor.org.

The **UK Radiotheray Board** provides guidance, oversight and support for the continuing development of high-quality radiotherapy services for cancer patients in the UK. It comprises the RCR, the Society and College of Radiographers (SCoR), and the Institute of Physics and Engineering in Medicine (IPEM).

The **UK SACT Board** provides guidance, oversight and support for the continuing development of SACT services in the UK. It comprises the RCR, the Association of Cancer Physicians (ACP), the British Oncology Pharmacy Association (BOPA), the Royal College of Physicians (RCP), and the UK Oncology Nursing Society (UKONS).

References

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The Royal College of Radiologists
63 Lincoln's Inn Fields
London, WC2A 3JW, UK

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is a Charity registered with the
Charity Commission No 211540.

+44 020 7405 1282
enquiries@rcr.ac.uk
rcr.ac.uk

@RCRadiologists

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