

Written evidence submitted by Advanced Accelerator Applications (AAA) (CSV0047)

About AAA, a Novartis Company

We are pioneers of an exciting pillar of oncology with an innovative form of precision medicine. Our mission is to transform the lives of people with cancer using expertise in oncology to develop targeted radioligand therapies for the benefit of patients in the UK and beyond. Radioligand therapy (RLT) is a promising type of cancer therapy that can offer life-enhancing treatment by delivering precision therapeutic radiation to cancer cells, administered via the bloodstream. The NHS has already taken positive steps to ensure that patients can benefit from this treatment approach in a rare form of neuroendocrine cancer.

One form of RLT is recommended for use amongst patients with a rare form of neuroendocrine tumours.¹ AAA will soon file for marketing authorisation for RLT in advanced prostate cancer. However, over the medium to long-term, radioligand therapies have the potential to be used in a number of oncology indications and Novartis regards RLT as the fourth pillar of oncology.

However, if radioligand therapy is to be integrated into cancer care more widely in a way that will benefit current and future patient populations, there are a number of factors that must be addressed, including:

- Greater NHS readiness for radioligand therapy, in terms of physical infrastructure and capacity, workforce training and recruitment
- The Environment Agency, private contractors and NHS trusts to have a framework for minimising the environmental impact of managing and disposing of nuclear medicine across each radioisotope
- Enhanced collaboration to deliver radioligand therapy through multi-disciplinary teams (MDTs) and clear treatment pathways for equitable access for patients
- Improved understanding and inclusion of radioligand therapy in Government and NHS policy frameworks
- More consistent data collection to improve the health system's understanding and application of radioligand therapy

We believe that the Government and health system should target areas such as RLT to drive improvements in cancer outcomes. We believe that this will help to ensure cancer outcomes are equal to comparable countries, so that people living with cancer get the care that they deserve.

Executive Summary

- Studies from before the COVID-19 pandemic show that five-year survival rates across a number of cancer sites lag behind those of comparable, high-income countries.²
- In prostate cancer, which causes around 50,000 deaths annually in the UK,³ the UK's five-year survival rate between 1995 and 2014 was lower than comparable European countries⁴, with the UK's prevalence of the top five cancers higher than the European average.⁵
- England has fewer MRI and CT scanners per capita than most OECD countries.⁶ Vacancy rates for radiologists and radiographers are also high, whilst the number of patients being referred for diagnostic tests has risen.⁷ The NHS should not allow delays to diagnosis due to staffing shortages, which could cause significant amounts of stress for patients.
- Over 30% of approved oncology medicines for use were restricted in England between 2016-2019, more than any European country, other than Greece.⁸

¹ PharmaField. 2018. Lutathera® receives NICE approval for GEP-NETs. Available at: https://pharmafield.co.uk/pharma_news/lutathera-receives-nice-approval-for-gep-nets/. [Last accessed: August 2021].

² Arnold et al (2019) Progress in cancer survival, mortality, and incidence in seven high-income countries 1995-2014 (ICB SURVMARK-2): a population-based study. *Lancet* Volume 20, Issue 11 P1493-1505

³ Cancer Research UK (2021) Prostate Cancer Statistics. Available at: <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/prostate-cancer#heading-Zero>. [Last Accessed: August 2021]

⁴ EFPIA (2021) Cancer Care in 2020 – An overview of cancer outcomes across Europe – Survival. Available at: <https://www.efpia.eu/publications/cancer-comparator-report/survival/>. [Last accessed: August 2021]

⁵ ABPI (2020) Cancer in 2020 and Beyond

⁶ Organisation for Economic Cooperation and Development (2017) Health at a Glance 2017: OECD indicators. Available from: www.oecd.org/health/health-systems/health-at-a-glance-19991312.htm. [Last accessed: August 2021]

⁷ NHS Long Term Plan

⁸ EFPIA (2021) EFPIA Patients W.A.I.T. Indicator 2020 Survey. Available at: <https://www.efpia.eu/media/602652/efpia-patient-wait-indicator-final-250521.pdf>. [Last accessed: August 2021]

- In relation to comparable countries, the UK often performs worse when it comes to the number of late phase clinical trials.⁹ Access to late phase clinical trials is beneficial as they offer patients hope by giving access to innovative medicines that they might not otherwise have had access to. There is also a possibility that standard of care can improve during clinical trials, particularly in areas which may be relatively poorly resourced.
- The COVID-19 pandemic has had a demonstrable negative impact on cancer services in the UK, inhibiting access to non-COVID clinical trials and delaying diagnosis and early treatment.
- Whilst AAA notes these challenges are likely to have hindered the UK's progress in catching up with international cancer outcomes, AAA has identified opportunities and innovations during the pandemic which, if sufficiently built upon, could help to improve the UK's international standing.
- AAA believes new methods of cancer treatment delivery developed during the pandemic should be continued and built upon and, where possible, expanded to incorporate emerging treatments like RLT.
- AAA believes the focus seen in the development of COVID-19 vaccines should be expanded to incorporate new and emerging cancer treatments, especially those that are effective against late-stage cancer indications such as RLT.
- We must implement the commitments laid out in the NHS Long Term Plan, but we ought to do more if we are truly to improve outcomes for those diagnosed with life-changing cancers and their carers.
- AAA is encouraged by the announcement made from Professor Peter Johnson in the oral evidence session to this inquiry, in which he stated his optimism in reaching the Long Term Plan's commitment to have three quarters of cancers diagnosed at stage 1 or 2 by 2028. This would be a huge step towards improving survival chances for those diagnosed with cancer.
- AAA welcomed NHS's commitment to invest in new equipment including CT scanners. Progress on this commitment needs to be communicated externally so that patients who are desperate for a speedier diagnosis can get one.
- If the NHS is keen to speed up the path from innovation to business as usual, it must be more ambitious in its ability to get innovative medicines to all patients who stand to benefit from them.
- The Long Term Plan could do more to strengthen the NHS's commitment towards those living with severe, debilitating advanced cancers. This is pertinent as COVID-19 has led to an increase in emergency presentations and likely more cancers diagnosed at the later stage.⁴⁰
- Existing and new commitments to improve cancer outcomes should be considered in light of the Health and Social Care Bill. ICSs have an essential role to play in terms of population health, particularly with cancer. Individual ICSs will need to display ambition to act as testbeds for innovation and best practice.

Why do cancer outcomes in England – in particular survival – still lag behind comparable countries internationally?

Whilst cancer outcomes in the UK have improved in recent decades, studies from before the COVID-19 pandemic have shown that five-year survival rates across a number of cancer sites lag behind those of other comparable, high-income countries such as Australia, Canada, Ireland and Denmark.¹⁰ Furthermore, data from the OECD on age-adjusted cancer survival rates in developed nations consistently position the UK among the lower half of nations for which comparable data is available.¹¹ The Government has previously expressed determination to improve cancer survival in the UK, pointing to the NHS Long Term Plan as a key means of delivering earlier diagnosis and better treatment.¹² This is a determination AAA shares.

AAA acknowledges that multiple factors determine cancer outcomes. For example, lifestyle factors such as diet and smoking, can increase ones chances of developing cancer. However, there are many systemic issues, explored below, that Government should focus on. Many of these factors are not fixed eventualities, yet cancer survival rates in England still lag behind other comparable countries.

For example, in prostate cancer, the UK's five-year survival rate between 1995 and 2014 was lower than other comparable European countries including France, Italy, Germany and Spain.¹³ The UK's poor

⁹ ABPI (2019) Clinical Trials – How the UK is researching medicines of the future.

¹⁰ Arnold et al (2019) Progress in cancer survival, mortality, and incidence in seven high-income countries 1995-2014 (ICB SURVMARK-2): a population-based study. *Lancet* Volume 20, Issue 11 P1493-1505

¹¹ OECD (2021) Health Care Quality Indicators – Cancer Care. Available at: <https://stats.oecd.org/>. [Last accessed: August 2021]

¹² BBC (2019) Cancer survival in the UK improving, but lagging behind' Available at: <https://www.bbc.co.uk/news/health-49661516> [Last accessed: August 2021]

¹³ EFPIA (2021) Cancer Care in 2020 – An overview of cancer outcomes across Europe – Survival. Available at: <https://www.efpia.eu/publications/cancer-comparator-report/survival/>. [Last accessed: August 2021]

performance in prostate cancer outcomes compared to the rest of Europe is more concerning given the UK's prevalence of prostate cancer is higher than the European average.⁴

In this response, AAA will detail the factors that could have the biggest impact on cancer outcomes.

Delays to Diagnosis

For cancers across the board, late-stage diagnosis is a major factor determining survival outcomes. Diagnostic capabilities are hampered by patient and clinician awareness of symptoms: the longer it takes for someone to spot the symptoms of cancer, the later the stage of cancer a person will be diagnosed at, meaning their cancer may have progressed to a less treatable state. Access to general practitioners has been reduced during the pandemic, resulting in a reduction of early cancer diagnoses.¹⁴

Availability of diagnostic tools is also associated with improving cancer outcomes. The NHS Long Term Plan raised the issue of diagnostic imaging capacity across the NHS, with England having fewer MRI and CT scanners per capita than most OECD countries.¹⁵ Vacancy rates for radiologists and radiographers are high, whilst the number of patients being referred for diagnostic tests has also risen.¹⁶ As with many areas of the health system in England, demand has outpaced capacity. The Government needs to invest in innovative, cost-effective diagnostic technologies that can improve cancer outcomes.

The use of PET/CT or MRI scanners to conduct high resolution scans can enable clinicians to make appropriate treatment decisions and stage cancer. Whilst PET or MRI is an established diagnostic approach, it requires thoughtful, long-term planning. In the UK, enhancements to existing NHS infrastructure and working practices are required to ensure that PET scans can be provided to all patients who might benefit from it. Although the NHS and Government is working extremely hard to return to pre-pandemic business as usual, the opportunity to expand PET services must be seized. This could help to reduce the backlog and improve outcomes going forward. In the oral evidence session to this inquiry, Dame Cally Palmer outlined that NHS England has been investing in additional CT scanning capacity, for example through mobile CT units. This is an area that AAA is keen to partner with the NHS on.

Medicines Access and Uptake

At first glance, access to oncology medicines in the UK is good, and higher than many other European counterparts. For instance, from 2016-2019, England ranked fourth out of all European countries for the total number of medicines available to patients, with 36 out of 41 EMA approved medicines being made available in England.¹³ However, upon closer inspection, many of these medicines in reality, have limited availability. These medicines received 'optimised recommendations' by NICE, meaning the products were only available for a smaller patient population than the indicated population at market authorisation. Just under half of approved oncology medicines for use were optimised in England between 2016-2019, more than any European country, other than Greece.¹⁷

AAA is very appreciative for the great work that NICE does, and acknowledges that it represents the gold standard in health technology evaluation when it comes to reviewing the cost and clinical effectiveness of drugs. However, the high occurrence of restricted access recommendations in England has obvious implications for cancer patients who could stand to benefit from those products. This is particularly true for innovative medicines which are indicated for late-stage cancers. These are often indicated for later stage cancers where patients have fewer non-palliative treatment options and prognosis is poor.⁸ As the ABPI recommends, NICE should adopt changes that support faster and wider access to treatment innovations in cancer.⁴

An associated issue is medicines uptake. Uptake data is difficult to access as it varies across health systems. However, in 2017 an ABPI report asserted that the UK is generally slower than other G5 countries when it comes to uptake of oncology medicines. Of the eight drugs covered in the report, the UK has the lowest or 2nd lowest use for six of them (these medicines correspond to the most widely used new medicines in six different forms of cancer).¹⁸

¹⁴ Macmillan (2020) The Forgotten 'C': The impact of Covid-19 on cancer care.

¹⁵ Organisation for Economic Cooperation and Development (2017) Health at a Glance 2017: OECD indicators. Available from: www.oecd.org/health/health-systems/health-at-a-glance-19991312.htm. [Last accessed: August 2021]

¹⁶ NHS Long Term Plan

¹⁷ EFPIA (2021) EFPIA Patients W.A.I.T. Indicator 2020 Survey. Available at: <https://www.efpia.eu/media/602652/efpia-patient-wait-indicator-final-250521.pdf>. [Last accessed: August 2021]

¹⁸ IHE Report (2017) Comparator report on patient access to cancer medicines in Europe revisited – a UK perspective. Available at: <https://www.abpi.org.uk/media/3459/report-access-cancer-medicines-in-europe-revisited-uk-perspective.pdf>. [Last accessed: August 2021]

Historically in the UK, the newest cancer medicines (launched within the last three years) make up only 5% of total oncology medicine prescriptions. This is compared to 8% of the total average sales across Europe. Although this figure has improved over recent years, wide fluctuations between 4 and 15% still occur.¹³ This suggests that clinicians have, historically, and may still in some instances, be reluctant to prescribe the latest innovative drugs. NHS should make a concerted effort to track oncology medicines uptake post reimbursement, to ensure patients benefit from the latest advances in oncology medicine.

Clinical Trials

The UK is one of the top destinations for the delivery of early phase clinical trials, delivering 12% of all global trials for innovative cell and gene therapies in 2019.¹⁹ However, in relation to comparable countries, the UK often performs worse when it comes to late phase clinical trials.²⁰ Access to these late phase clinical trials is beneficial as they allow patients to access medicines that they might not otherwise have been able to. This is particularly true for innovative products that are likely to receive restricted recommendations from NICE. Further, these trials represent a point where the science is closer to finding new medicines for NHS patients.⁸ . Not only will this enable the UK to retain its attractive life sciences offer globally, but may also help to improve cancer outcomes.

The Government should earmark funding for clinical research that goes specifically towards later phase trials. Clinicians should also be regularly updated on the latest clinical trials, and ensure patients are aware of their ability to take part in research.

Having the capacity and the infrastructure to conduct clinical trials is also essential. AAA is currently conducting trials for its RLT in the UK. However, it is limited in its ability to run trials across the country given limited access to ⁶⁸Ga PET services. Currently, ⁶⁸Ga is only available in five cities in England: London, Cambridge, Birmingham, Manchester, and Coventry. As a comparator, ⁶⁸Ga is widely available across Europe. For example, France has 31 cities that can offer ⁶⁸Ga diagnostics. Additionally, Italy and Germany have 30 cities and 50 cities respectively, that can offer the service. Nordic countries have 19 cities where patients can obtain this kind of scan.²¹

Workforce

Adequate staffing across the health service is also needed to improve cancer outcomes, particularly following the pandemic as the cancer backlog builds. In 2020, the Royal College of Radiologists reported a 19% shortfall in consultant clinical oncologists, forecast to rise to 26% by 2024.²² The NHS must invest in recruitment and training staff as well as retaining existing staff. This response will explore in greater detail some of the workforce issues around delivering RLT, and why ensuring workforce readiness is key to unlocking the potential of this new pillar of cancer treatment.

Health Inequalities

Cancer Research UK reported that there are around 20,000 extra cancer cases each year in more deprived areas of the UK.²³ With the example of late-stage diagnosis, people in poorer areas are more likely to be diagnosed at a late-stage for certain cancer types. This highlights the importance of equitable access to cancer services and innovation across the UK.

With the example of prostate cancer, 1 in 4 black men will get prostate cancer in their lifetime. Black men are also more likely to get prostate cancer than other men, who have a 1 in 8 chance of being diagnosed with the disease.²⁴ Men living in more deprived areas of the country are unfortunately less likely to recognise symptoms of cancer.¹⁴ NHS and Government should therefore ensure that more deprived areas of the country are targeted with effective public health messaging to raise awareness on possible cancer symptoms, as well as accessing cancer services.

How will COVID-19 affect efforts to catch up to the best cancer outcomes internationally?

¹⁹ Cell and Gene Therapy Catapult Clinical Trials Data Base. Available at:

<https://ct.catapult.org.uk/sites/default/files/publication/Clinical%20Trials%20Database%20Commentary%202020.pdf>. [Last accessed: August 2021]

²⁰ ABPI (2019) Clinical Trials – How the UK is researching medicines of the future. Available at: <https://www.abpi.org.uk/publications/clinical-trials-how-the-uk-is-researching-medicines-of-the-future/>. [Last accessed: August 2021]

²¹ AAA Data on File

²² Royal College of Radiologists (2020) Clinical Oncology Workforce Census 2019 Key Findings. Available at:

https://www.rcr.ac.uk/system/files/publication/field_publication_files/clinical-oncology-uk-workforce-census-2019-key-findings.pdf. [Last accessed: August 2021]

²³ Cancer Research UK (2020) UK Health Inequalities. Available at: <https://news.cancerresearchuk.org/2020/09/30/uk-health-inequalities-20000-more-cancer-cases-a-year-in-the-most-deprived-areas/>. [Last accessed: August 2021]

²⁴ Prostate Cancer UK (2020) Black men and prostate cancer. Available at: <https://prostatecanceruk.org/prostate-information/are-you-at-risk/black-men-and-prostate-cancer>. [Last accessed: August 2021]

The COVID-19 pandemic has had a demonstrable impact on cancer services in the UK. A key area where challenges have been acute is clinical trials; the National Institute for Health Research (NIHR) paused the site set up of any new or ongoing non-COVID studies in March 2020,²⁵ causing the number of new patients recruited onto UK-based trials to fall by 95% in April 2020 compared with April 2019.²⁶ As a result, fewer cancer patients participated in new trials, inhibiting access to emerging treatments with the potential to improve outcomes, and stalling UK-based research into innovative cancer treatments overall. AAA agrees with the Association of the British Pharmaceutical Industry (ABPI) that, without continued action to mitigate pandemic-induced disruption, the UK's strong international position in early-stage cancer clinical trials could be jeopardised, and that patients will ultimately bear the cost of this.²⁷

There have been significant falls in new cancer diagnoses during the pandemic. Analysis of data from NHS England shows a 16% drop in urgent cancer referrals between March 2020 and January 2021 compared to the same period in the previous year.²⁸ These 'missed' cancer patients are therefore likely to be diagnosed at a later stage when outcomes are known to be poorer, which is something that NHS England's National Cancer Director, Dame Cally Palmer, acknowledged when giving evidence to this inquiry on 13th July 2021.²⁹ According to a study published in *Lancet Oncology*, these delays in cancer diagnosis could contribute to an increase of between 5 and 17% in the number of cancer deaths within 5 years in England, depending on the cancer type.³⁰

As cancer outcomes in the UK were generally worse than those of comparable nations before the pandemic,¹⁰ the recent challenges observed across clinical trials, early diagnosis and intervention, and treatment schedules are very likely to have hindered efforts to catch up with international outcomes. Nevertheless, AAA believes there are innovations and opportunities identified during the pandemic which, if sufficiently built upon in the aftermath of the pandemic, could support improved cancer outcomes in the UK.

One example is the innovative methods of cancer treatment delivery developed during the pandemic, to expand capacity, to alleviate pressure on existing resources, and to protect vulnerable cancer patients from COVID-19 infection. These innovations have included networks of satellite hubs for cancer services drawn from existing NHS resources and the private sector,³¹ and services enabling patients to receive treatment like chemotherapy at home or in mobile units.³² AAA believes these new methods of cancer service delivery should be continued and built upon. Where possible, the NHS should also look to expand these new services to incorporate emerging treatment areas such as RLT.

A second example is the way approvals for COVID-19 vaccine clinical trials were expedited by the Medicines and Healthcare products Regulatory Agency (MHRA).³³ When grouped internationally, the expedition of clinical trials processes has delivered significant results, with several vaccine candidates having rapidly progressed to the point where they have now been fully or conditionally approved for use in countries around the world, demonstrably suppressing morbidity and mortality from COVID-19 in jurisdictions where vaccine deployment has been high.³⁴

Given the expected size of the backlog in cancer diagnosis and care in the UK following the pandemic, AAA believes there is an urgent need to expand the focus seen in the development and trialling of COVID-19 vaccines to incorporate new and emerging cancer treatments. The likely increase in incidences of advanced disease also means this need is greater in treatments that are effective against late-stage cancer indications. These include radioligand therapies that are or are likely to be indicated for a range of cancer sites including neuroendocrine, lymphoma and prostate.³⁵ AAA therefore sees an opportunity for the NHS, the NIHR and the MHRA to collaborate effectively to ensure clinical trials are approved and progressed without delay to

²⁵ NIHR (2020) Statement from Dr Louise Wood CBE, Co-lead for NIHR. Available at: <https://www.nihr.ac.uk/news/dhsc-issues-guidance-on-the-impact-on-covid-19-on-research-funded-or-supported-by-nihr/24469>. [Last accessed: August 2021]

²⁶ Cancer Research UK (2020) Getting cancer services back on track during the coronavirus pandemic. Available at: <https://scienceblog.cancerresearchuk.org/2020/06/22/getting-cancer-services-back-on-track-during-the-covid-19-pandemic/>. [Last Accessed: August 2021]

²⁷ ABPI (2020) UK leading Europe in clinical trials, but strategy needed to restart non-COVID research. Available at: <https://www.abpi.org.uk/media-centre/news/2020/october/uk-leading-europe-in-clinical-trials-but-strategy-needed-to-restart-non-covid-research/> [Last accessed: August 2021]

²⁸ The Times (2021) 'Shocking' rise in cancer patients not being treated due to Covid-19 concerns, NHS England data shows. Available at: <https://www.thetimes.co.uk/article/shocking-rise-in-cancer-patients-not-being-treated-due-to-covid-19-concerns-nhs-england-data-shows-bj50db80d>. [Last accessed: August 2021].

²⁹ Oral evidence from Dame Cally Palmer to the Health and Social Care Committee. Available at: <https://committees.parliament.uk/oralevidence/2570/pdf/>. [Last accessed: August 2021]

³⁰ Maringe C., Spicer J., *et al.* The impact of the COVID-19 pandemic on cancer deaths due to delays in diagnosis in England, UK: a national, population-based, modelling study. *Lancet Oncol* 2020;21:1023–34. <https://doi.org/10.1016/>

³¹ NHS England (2020) Letter from Sir Simon Stevens and Amanda Pritchard to the Chief Executives of all NHS trusts and foundations trusts, *et al.* Available at:

<https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/second-phase-of-nhs-response-to-covid-19-letter-to-chief-execs-29-april-2020.pdf> [Last accessed: August 2021].

³² NHS England (2020) Convenient modern cancer treatment for patients during COVID-19 pandemic. Available at: <https://www.england.nhs.uk/2020/06/convenient-modern-cancer-treatment-for-patients-during-covid-19-pandemic/>. [Last accessed: August 2021]

³³ HM Government (2020) MHRA approves COVID-19 vaccine trial in 7 working days. Available at: <https://www.gov.uk/government/news/mhra-approves-covid-19-vaccine-trial-in-7-working-days>. [Last accessed: August 2021]

³⁴ Hungerford D., Cunliffe N. A. (2021) Real world effectiveness of covid-19 vaccines. *BMJ* 2021;374:n2034. doi: <https://doi.org/10.1136/bmj.n2034>

³⁵ What is radioligand therapy? Available at: <https://www.radioligandtherapy.com/> [Last accessed: August 2021].

ensure UK patients can access the most innovative emerging medicines and treatments for cancer. AAA believes this improved collaboration could play a role in helping to build and preserve the UK's strong international reputation in cancer clinical trials.

Will implementing the Long Term Plan for cancer improve cancer outcomes to the level of the best countries internationally?

AAA believes that we must implement the commitments laid out in the NHS Long Term Plan, and we ought to do more.

AAA welcomed the NHS Long Term Plan and the commitments around cancer. AAA is encouraged by the announcement made by Professor Peter Johnson in the oral evidence session to this inquiry, in which he stated his optimism in reaching the Long Term Plan's commitment to have three quarters of cancers diagnosed at stage 1 or 2 by 2028. AAA looks forward to this target being reached and would like to see regular data published on the target to track progress.

AAA also welcomed the NHS's commitment to invest in new equipment including CT and MRI scanners. However, progress on this commitment needs to be communicated externally. In 2020, NHS England published a report outlining the number of PET-CT scanners needed for the next five years, stating that an extra 45 would be required by 2024.³⁶ AAA believes that an update to this report would be beneficial before the end of that five year target to track progress on this front.

Despite these positive commitments, there are areas of the NHS Long Term plan that appear promising towards improving cancer outcomes, but lack detail to explain exactly how these interventions would be carried out.

For example, the Plan commits to 'speed up the path from innovation to business-as-usual'. Yet, the Plan does not go into further detail other than committing 'new investment'. As mentioned above, there is a very tangible issue with the NHS in England whereby innovative products are not reaching the patient populations that they were intended for at marketing authorisation. If the NHS is keen to speed up the path from innovation to business as usual, it must be more ambitious in its ability to get innovative medicines to all patients who stand to benefit from them. Further, improving access to innovative medicines should come at no additional cost to the NHS. This is because the VPAS agreement provides cost security to the NHS in achieving promised access, through a limited budget due to the cap on medicines spend,

There is also a commitment to ensure that advances in radiotherapy techniques will improve survival outcomes. However, this is dependent on increasing the imaging workforce. NHS England has already acknowledged that expansion of the imaging workforce (e.g. radiographers, radiologists and physicists) combined with improvements in productivity, will be vital in meeting the increasing demand, but very challenging.²⁹

In the case of RLT, workforce readiness will be key to unlocking the potential of this new pillar of cancer treatment. It is also imperative that Trusts are aware of the complexities of nuclear medicine and imaging to ensure the necessary levels of quality are maintained in order to deliver accurate diagnostic and therapeutic outcomes.³⁰ However, scientific support in nuclear medicine is an expensive resource and therefore its value will need to be understood by Trust management.³⁷ The training and expertise of clinical scientists in nuclear medicine typically mirrors that of consultant specialists in medicine; it takes approximately 10 years to train a consultant clinical scientist.³⁰

AAA recommends that NHS Improvement, NHS England and Health Education England should engage with Trusts to assess levels of need in relation to recruitment and professional training in order to futureproof the specialist nuclear medicine and oncology workforces. Further, National and local bodies should work closely with specialist organisations, such as the British Nuclear Medicine Society and the Royal College of Radiologists, to understand what investment is needed for workforce training that would benefit the clinical community.

³⁶ NHS England (2020) Diagnostics: Recovery and Renewal.

³⁷ British Nuclear Medicine Society. 2016. Scientific Support for Nuclear Medicine. Available at: https://cdn.ymaws.com/www.bnms.org.uk/resource/resmgr/guidelines/scientific_support_for_nucle.pdf. [Last accessed: August 2021].

AAA believes that COVID-19 and the significant backlog in cancer care, the Long Term Plan, for cancer at least, should be revisited. There is an opportunity for the NHS to be more ambitious with its cancer plans, and an update to these commitments would be welcome; particularly around the issues of medicines access and uptake, late phase clinical trials and workforce, as outlined above.

The cancer backlog has seen an increase in the number of cancer patients presenting in emergency care.³⁸ It is highly likely, therefore, that we will see a higher than expected rate of cancers being diagnosed in later stages. Whilst the NHS Long Term Plan has bold commitments around early stage cancers, it could do more to strengthen the NHS's commitment towards those living with advanced cancers. AAA recommends that, as part of the implementation of the NHS Long Term Plan, NHS England should work with the Cancer Alliances to set out clear commitments for improving cancer care for patients with more advanced cancers.

Any existing and new commitments to improve cancer outcomes should be considered in light of the forthcoming Health and Social Care Bill and the placing of Integrated care System's (ICSs) onto statutory footing. ICSs have an essential role to play in terms of population health, particularly with cancer. Individual ICSs will need to display ambition to act as testbeds for innovation and best practice. That will include ensuring that patients eligible for innovative oncology medicines are able to reach them. ICSs will also need to have consistent diagnostic strategies across its geography, to ensure patients receive equitable care. It will also include the need for ICSs to plan the cancer workforce in accordance with the need of its populations, particularly in those more deprived areas of the UK which may require additional staffing resource to work through the cancer backlog.

When it comes to data, ICSs will need to ensure that digital innovation is realised, and that data interoperability is efficient. Variation in data collection for oncology across the NHS impacts our understanding of different treatment options, as well as the resource levels and patient outcomes. As the use of radioligand therapy in the NHS increases, there will be the opportunity for more real-world data to be collected that will support improved understanding of the long-term patient outcomes, the impact on quality of life and the cost-effectiveness of the treatment.

NHS Digital and NHSX should take responsibility for greater scrutiny of cancer datasets at a national level, to drive forward the development of actions plans for ICSs to overcome regional variation and improve standards of care.

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³⁸ Public Health England (2021) Emergency presentations of cancer: data up to September 2020. Available at: <https://www.gov.uk/government/statistics/emergency-presentations-of-cancer-data-up-to-september-2020>. [Last accessed: August 2021]
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