**BSI Response to the HSCC Expert Panel's evaluation of the Government's commitments in the area of cancer services in England**

British Society for Immunology

The British Society for Immunology is the leading UK charity organisation representing scientists and clinicians who study the immune system in humans and animals. As a membership organisation, we act as a focal hub for the immunology community, supporting and empowering immunologists working in academic, industry and clinical settings to drive forward scientific discovery and application together.

Section 3:

Column 1:

1. *Does the commitment have a clear and fixed deadline for implementation?*

Yes, the commitment has a clear deadline of 2021 as part of a set of defined milestones.

2. *Are there any mitigating factors or conflicting policy decisions that may have led to the commitment not being met or not being on track to be met? How significant are these? Was appropriate action taken to account for any mitigating factors?*

Around 80% of cancer multidisciplinary teams are currently offering patients 'Personalised Care and Support Planning'[i]. COVID-19 has severely hampered the ability of the NHS to remain active in the delivery of day to day care reforms.

3. *To what extent has the NHS's Covid-19 response affected progress on targets?*

Please see the answer to Q2.

5. *Does data show achievement against the target (if applicable)?*

Please see the answer to Q2.

Column 2:

1. *Were specific funding arrangements made to support the implementation of the commitment? If not, why? If so, what were these, when and where were they made?*

   Personalised care will be funded by personal health budgets. These are "not new money, but a different way of spending health funding to meet the needs of an individual".[ii]

2. *Which relevant organisation(s) responsible for the patients' care was involved in determining the funding arrangements? Who was ultimately responsible for this decision?*

   NHS England and NHS Improvement are currently working with CCGs, commissioners, and Regional Finance Directors to ensure that necessary contracting and commissioning change can occur[iii].

4. *Was any financial commitment a 'new' resource stream? If not, did reallocation of funds result in any unforeseen consequences/ undesirable 'work arounds' at local level?*

   Please see the answer to Q1. We are not aware of any unforeseen circumstances surrounding reallocation of funds at a local level.

5. *What factors were considered when funding arrangements were being determined?*

   Many factors were considered in the creation of these funding arrangements: from the widening discernment between the medical model of health and health's wider determinants, to the changing in relationship between citizens and public services such as higher expectations and more diverse demands on a background of radical changes in technology and innovation[iv]. With a more complex health and social care system not necessarily dealing with a more complex set of demands any better, focus should be shifted to the individual to have a greater role in managing their own care.

<u>Column 3:</u>

1. *What was the impact on equity of outcome for different groups?*

   Personalised care also has a positive impact on health inequalities, taking account of people's different backgrounds and preferences, with people from lower socioeconomic groups able to benefit the most from personalised care. The social prescribing aspect of personalised care can reduce health inequalities by aiding in the involvement of patients with their communities, whilst the individualised control enables the health system to respond more effectively to people's backgrounds, whilst acting to increase health literacy at the same time. A personalised care plan with appropriate immunotherapies would allow a more targeted approached to individual cancers; the primary obstacle is the dearth of knowledge at present surrounding the predictive biomarkers which would allow clinicians to be able to identify patients that would most benefit from such interventions.

2. *Has this commitment led to improvements in the quality of life for service users/cancer patients? And in respect of commitments which have yet to be completed, is there evidence that the quality of life of service users will improve as a result?*

   Personalised care has been shown by studies to benefit those with long term and chronic health conditions, both psychologically and physically[v]. It is the case however, that more research is needed to investigate which parts of personalised care planning is most effective at providing benefit for specific patient groups, including cancer patients. The inclusion of immunotherapies as part of personalised care has the potential to offer effective treatment with fewer side effects and longer remission periods.

3. *Was (or is) the commitment likely to achieve meaningful improvement for service users, healthcare staff and/or the healthcare system as a whole?*

   The evidence certainly suggests so. By increasing people's engagement with the health system and improving people's experience with interacting with it, it may reverse recent trends that saw growing dissatisfaction with the NHS[vi], prior to the announcement of a record real terms funding announced and reiterated by successive Prime Ministers. The reaction to COVID-19 and the response by the NHS and society at large and the alteration in attitudes along with that will potentially prove an insurmountable confounding variable. Additionally, beyond the benefits of immunotherapies as part of personalised treatment mentioned previously for patients, effective targeting and personalisation of its use would save the health system unnecessary expense.

Column 4:

1. *Is the commitment wide enough in scope?*

   Yes, the commitment spans the care pathway from diagnosis to end of life care, if needed, and is being rolled out across the country.

2. *Is the commitment specific enough?*

   Yes. The delivery documents provided by the Government are both wide ranging and in depth enough.

3. *Was the level of ambition as expressed by the commitment reasonable?*

   The commitment is ambitious without being undeliverable. The milestones for cancer in the NHS Long Term Plan present a realistic timetable that, coupled with a plan for delivery, may be followed and culminate in the diagnosis of 75% of cancers at stage 1 or 2 by 2028.

5. *Was the commitment addressing an identified need and relevant to the problem?*

   As discussed previously, there must be a shift towards personalised care in order to meet the increasingly diverse demands of individuals in a population that is growing older and has more complex health needs than ever before. The benefits of this are enjoyed by both the patient and the health system as a whole.

Section 4:

Column 1:

1. *Does the commitment have a clear and fixed deadline for implementation?*

   There are no specific deadlines for implementing the use of 'advanced radiotherapy techniques and immunotherapies'. This could be related to the need for NICE to approve treatments for clinical use, so the timetable being out of the Government's control. In July 2019, the Government affirmed its commitment in Parliament to ensuring that providers roll out the latest treatments according to NICE guidelines.

2. *Are there any mitigating factors or conflicting policy decisions that may have led to the commitment not being met or not being on track to be met? How significant are these? Was appropriate action taken to account for any mitigating factors?*

   In order to realise the Government's commitment, there be more investment in immunotherapy research, especially in cross-working between cancer researchers and immunologists. Much of the underlying biology behind the mechanisms through which immunotherapy works is not understood yet and this is vital to making advances in treatment; partnerships between immunologists and cancer scientists will be critical in clearing this knowledge block. There should be (1) the creation of accessible research-ready datasets that enable the long-term follow-up of patients on immunotherapies and meaningful research into mechanisms of action, immune-related adverse events (IrAEs) and co-morbidities; (2) improved access to clinical samples for robust pre-clinical models of human cancer immunity; (3) research into biomarkers for response prediction and patient stratification; and (4) support of prospective cohort studies and linking them in with the wider research community.

Additionally, more focus should be given to upskilling the clinical workforce through education in immunology, as well as targeting oncologists through education about the early detection and management of IrAEs (including in the long term); these steps would make immunotherapy more practicable in a clinical environment. Only through taking steps both at the research level and in the NHS can the burgeoning benefits of immunotherapies be delivered to patients successfully.

3. *To what extent has the NHS's Covid-19 response affected progress on targets?*

   From a research perspective, many immunology labs switched their focus to COVID-19 early on during the pandemic. This coupled with lockdown working restrictions has impeded the ability of scientists to access their labs and carry on the research that they were doing, e.g., in immunotherapy pre-pandemic. This impact was also felt by clinical trials, the progress of many of which was halted for considerable time. As well as the effects of lockdown restrictions, research which involved patients, or visiting patients in a clinical setting, was particularly affected, not least because cancer patients are often immunocompromised and so would be classified as 'vulnerable' by the Government during the pandemic. On the clinical side, the backlog of cases, including in cancer that has arisen because of the changes in care and the care being delivered because of the pandemic, has been well documented.

<u>Column 2:</u>

1. *Was any financial commitment a 'new' resource stream? If not, did reallocation of funds result in any unforeseen consequences/ undesirable 'work arounds' at local level?*

   There are no financial commitments to the advancement of immunotherapies, whilst existing funds will be used for the '£130 million upgrade of radiotherapy machines across England and commissioning of the NHS new state-of-the-art Proton Beam facilities in London and Reforms to the specialised commissioning payments for radiotherapy hypofractionation will be introduced to support further equipment upgrades.'.

2. *Were specific funding arrangements made to support the implementation of the commitment? If not, why? If so, what were these, when and where were they made?*

   No. Achieving this commitment will only be possible, should investment be made in the right areas, and this means ensuring that the Government's missions in its Life Sciences Vision be joined up to the appropriate areas in the NHS Long Term. With the right infrastructure and investment, we can bring this research excellence to bear on the development of new cancer immunotherapies, facilitating the smooth progress of these potentially life-saving treatments from bench to bedside to significantly improve patient care and ultimately patient survival. But this will rely heavily on joined up government directing the right funding to the right places to allow a collaborative science approach.

Column 3:

1. *What was the impact on equity of outcome for different groups?*

   Patient outcomes have varied considerably in response to treatment with immunotherapy, with some responding very well but others displaying no response at all. For example, monoclonal antibodies designed to reactivate the killer function of T cells, known as immune checkpoint inhibitors, include one targeting the interaction between the programmed cell death (PD-1) receptor and its ligand (PD-L1). In theory, this should be universally effective no matter the cell type, but in practice melanomas respond well, but prostate cancers do so seldomly. A move to precision treatments is therefore needed and much more research needs to be done into the predictive biomarkers that can help to indicate whether or not a treatment will or will not be successful, which will include genes involved in mutation repair which may differ from group to group[vii]. There is further evidence that a one size fits all will not work with immunotherapy, for example that there may be inherent differences in treatment responses between males and females[viii].

2. *Has (or will) there been (or be) a meaningful improvement in measurable outcomes, reasonably attributable to the commitment?*
   At the moment, there is thought to be a success rate of 15-20% in cancer patients treated with immunotherapy[ix]. This is not a failure in the efficacy of the treatment, but that, as well as different cancers responding differently to the treatments, at the moment we do not know who will or won't respond best to the treatment, so a 'scattergun' approach is effectively in operation. As mentioned previously, a major point of research will be finding the determinants for who will and will not respond.

3. *Will (or have) service users benefit(ted) directly, indirectly or both?*

   Patients will benefit directly from advances in immunotherapy.

4. *What category of service users have benefitted? And why?*

   Cancer patients. Immunotherapy treatments represent a shift change in how we treat cancer and if nurtured effectively could join surgery, chemotherapy, and radiation in one of the main modes of treatments. Everybody has an immune system so it has a universality, side effects could be less than other forms of treatment, and because of immune memory there is the prospect of longer lasting remissions.

5. *Have (some) service users been hindered by the commitment and its implementation?*

   It is possible that patients have been hindered by the lack of advancement in immunotherapy, but hypothetical and so impossible to quantify.

Column 4:

1. *Was (or is) the commitment likely to achieve meaningful improvement for service users, healthcare staff and/or the healthcare system as a whole?*

If advances are made in cancer immunotherapy, then there will be a certain and meaningful improvement to service users. By determining the predictive biomarkers which will allow clinicians to identify patients who are likely to respond well and those who aren't, the health system will be able to save money by not offering treatment when it will be ineffective or otherwise unnecessary.

2. *Is the commitment wide enough in scope? Is it specific enough?*

   The use of immunotherapy to continue to support improvements in survival rates is a broad and ambitious target that should allow the UK to graduate to the next generation of cancer care. There do not appear to be specific details however about how this should be achieved, as with other aspects of the NHS Long Term Plan. Without taking steps, such as those enumerated in this consultation response, then we will fail to take advantage of both our world leading R&D base and health system.

4. *Is the target contained in the commitment an effective measure of policy success (if applicable)?*

   There are no targets included in the NHS Long Term Plan, but without specific targets and measures of success, there will be no movement towards being able to utilise immunotherapy advances fully.

---

[i] Personalising care and improving quality life outcomes, NHS England and NHS Improvement
[ii] NHS Personalised Care, Personal health budgets, NHS England and NHS Improvement
[iii] Finance, contract and commissioning support for personalised care, NHS England and NHS Improvement
[iv] Universal Personalised Care, NHS England and NHS Improvement
[v] Personalised care planning for adults with chronic or long-term health conditions, Coulter A et al., Cochrane Database Syst Rev. 2015 Mar; 2015(3): CD010523
[vi] Public Satisfaction with the NHS, The King's Fund
[vii] Cancer immunotherapy: predicting outcomes, Genomics Education Programme, Health Education England
[viii] The impact of sex and gender on immunotherapy outcomes, Klein S and Morgan R, Biol Sex Differ. 2020; 11: 24.
[ix] Immunotherapy: Precision Medicine in Action; Johns Hopkins inHealth