



DEBATE PACK

Number CDP2018/0090, 5 April 2018

Cancer treatment

This pack has been prepared ahead of the debate to be held in the Commons Chamber on Thursday 19 April 2018 on cancer treatment. The subject for the debate has been selected by the Backbench Business Committee and the debate will be opened by Sarah Jones MP.

The motion to be debated is:

That this House pays tribute to the work of Baroness Tessa Jowell in her campaign to help people with brain tumours to live better lives for longer; recognises the Government's increased funding for research and calls on the Government to increase the sharing of health data and promote greater use of adaptive clinical trials.

The House of Commons Library prepares a briefing in hard copy and/or online for most non-legislative debates in the Chamber and Westminster Hall other than half-hour debates. Debate Packs are produced quickly after the announcement of parliamentary business. They are intended to provide a summary or overview of the issue being debated and identify relevant briefings and useful documents, including press and parliamentary material. More detailed briefing can be prepared for Members on request to the Library.

By Dr Sarah Barber
Nikki Sutherland

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1. Background

A Backbench Business Committee debate on cancer treatment will be led by Sarah Jones MP. The motion of the debate is:

That this House pays tribute to the work of Baroness Tessa Jowell in her campaign to help people with brain tumours to live better lives for longer; recognises the Government's increased funding for research and calls on the Government to increase the sharing of health data and promote greater use of adaptive clinical trials.

In the application to the Backbench Business Committee, Sarah Jones highlighted the debate led by Baroness Tessa Jowell in the House of Lords in January 2018 on cancer treatment, and activity since that time in this area. She said that the proposed debate would mirror the one in the House of Lords and provide an opportunity for the Government to provide further information on this subject following a roundtable event in February 2018.

1.1 House of Lords debate January 2018

In January 2018, Baroness Tessa Jowell led a debate in the House of Lords on innovative cancer treatments.¹ She spoke about her own experience of diagnosis and treatment of a brain tumour and called for international collaboration on research into brain cancer, and other cancers:

For what would every cancer patient want? First, to know that the best, the latest science was being used and available for them, wherever in the world it was developed, whoever began it. What else would they want? They need to know that they have a community around them, supporting and caring, being practical and kind. While doctors look at the big picture, we can all be a part of the human-sized picture.

Seamus Heaney's last words were, "noli timere"—do not be afraid. I am not afraid. I am fearful that this new and important approach may be put into the "too difficult" box, but I also have such great hope. So many cancer patients collaborate and support each other every day. They create that community of love and determination wherever they find each other, every day. All we now ask is that doctors and health systems learn to do the same, and for us to work together, to learn from each other.²

Baroness Jowell highlighted the Eliminate Cancer Initiative, a programme which works to link clinicians and patients through a clinical trial network, and to develop a global database of clinical trials information. Its work is focused on glioblastoma multiforme (the most common high grade primary brain tumour in adults). The initiative is currently based in Australia, but it is planned that it will be rolled out in the UK, China and the USA.³

¹ [HL Deb 25 January 2018, c1168](#)

² [HL Deb 25 January 2018, c1169](#)

³ [HL Deb 25 January 2018, c1169](#)

The Parliamentary Under-Secretary of State for Health, Lord O'Shaughnessy responded to the debate, which had been supported by peers across the House. He accepted that the UK has "*lagged behind the best performing countries in Europe, and catching up with those standards has been a focus for successive Governments, including this one.*" He said that whilst things were getting better, there were some cancers, such as brain and pancreatic cancers where survival rates are still low and there was more still to do. The minister went on to highlight the [cancer strategy](#) and ongoing Government work on prevention, such as through the childhood obesity strategy and the tobacco control plan.

He also accepted the need for increased funding for research for brain cancer, and discussed the role of adaptive trials (clinical trials where treatments may be modified in response to changes in the patient's condition):

I absolutely agree with her that more investment is needed in cancer research for brain cancer. Making that happen is a specific objective of the departmental working group that has been operating under our Chief Scientific Adviser, Professor Chris Whitty. I can confirm that this group will deliver its final report to me next Wednesday, and I can also say today that one action stemming from that will be a highlight notice from the National Institute for Health Research to encourage researchers to submit applications for funding in the specific area of brain cancer research. I hope that some of the interesting ideas and research projects going on today will look at that opportunity so that we get more funding into this important area.

The noble Baroness also talked about the importance of adaptive trials. I am again pleased to report that they form a growing proportion of the clinical research network's portfolio and are mainly in cancer trials. We undoubtedly need to be more radical in this, and the noble Baroness has provided a specific suggestion. I would be delighted to meet the director of the ECI, and I am thrilled that he is here today to hear the debate.⁴

1.2 The brain tumour task and finish working group report

The Department of Health and Social Care (DHSC) brain tumour research task and finish group was chaired the DHSC Chief Scientific Adviser, Professor Chris Whitty. It was established following an e-petition on brain tumour research⁵ funding, and a subsequent Petitions Committee Inquiry in 2016.⁶

The working group included clinicians, charities, patient representatives and officials. It looked at how brain tumour research and its impact could be increased.

⁴ [HL Deb 25 January 2018, c1189](#)

⁵ [E-petition 105660](#)

⁶ Petitions Committee, [Funding for research into brain tumours](#)

The task and finish working group report was published in February 2018.⁷ The working group concluded that a lack of funding had been a major barrier to brain tumour research in the past but now the main concern was a lack of fundable research applications:

The Working Group agreed that, although the availability of funding for brain tumour research may not be the principal problem today, in the past it has been a major barrier. All are now agreed that additional research is needed and funders stand ready to invest more in brain tumour research.

Following such a prolonged period of under-funding, the principal issue is the relative lack of fundable research applications currently being received, compared to the clear need, which occurs for many reasons and needs to be tackled systematically. Therefore, the Working Group focused on identifying opportunities for removing barriers and generating additional high quality research applications.⁸

The report makes a number of conclusions and recommendations, including that:

- The establishment of brain tumour research centres is an effective way to grow research capacity. The group noted that Brain Tumour Research and the Brain Tumour Charity already funded centres, and added that Cancer Research UK were funding two further centres;
- Research funders can encourage research on brain tumours by making it clear that they particularly welcome applications on this issue. The reports states that "*the Department of Health's National Institute for Health Research (NIHR) will announce a highlight notice to encourage research into brain tumours across its programmes in summer 2018;*"
- Current collections of brain tumour tissue and blood samples could be improved. The report notes that brain tumour charities, and the Medical Research Council will work with stakeholders to build further capacity;
- There may be opportunities for medicines licenced for other indications to be used to treat brain tumours. The Association of Medical Research Charities and DHSC have arranged meetings with stakeholders to look at this issue and make recommendations on the repurposing of medicines;
- Research priorities for brain tumours have been set out by the James Lind Alliance (JLA) Priority Setting Partnerships (PSP) and Cancer Research UK. The group states that these should be embraced by researchers; and
- Brain tumour patients would like their health data to be used for research to assist in the development of new treatments. Regulators should respect these wishes, collaborate with NHS

⁷ Department of Health and Social Care, [Brain tumour research: task and finish working group report](#), 22 February 2018

⁸ Department of Health and Social Care, [Brain tumour research: task and finish working group report](#), 22 February 2018

bodies and medical research charities to ensure these wishes can be met and this data can be used.

The report was welcomed by stakeholders. UK brain tumour charities said that it highlighted current barriers and hoped it would lead to more effective action in this area:

Sue Farrington Smith MBE, Chief Executive of Brain Tumour Research, said:

“No one doubts that there is much more that needs to be done; brain tumours kill more children and adults under the age of 40 than any other cancer. This report recognises the serious barriers we face, yet it also notes that progress is being made, particularly through charities supporting dedicated research centres.

“Like patients and their families across the UK, I am impatient for change and will continue to work to improve outcomes for brain tumour patients.”

Dr David Jenkinson, Chief Scientific Officer for The Brain Tumour Charity, said:

“This report provides an overview of the problems that are hindering progress towards a cure for brain tumours.

“For the sake of each and every family affected by the disease, it must be a springboard for more effective action – including greater collaboration to boost global research.”⁹

Following the publication of the brain tumour task and finish working group report, the Government announced £20 million funding for brain tumour research, alongside investment from Cancer Research UK:

Health and Social Care Secretary Jeremy Hunt has announced that an estimated £20 million in funding will be invested through the National Institute for Health Research (NIHR) over the next 5 years.

The funding will start with a formal call to research teams to put forward new proposals, to access NIHR funding in April.

In addition, Cancer Research UK will invest £25 million in research into brain tumours over the next 5 years. This is on top of £13 million each year on the research and development of cancer treatments.

Cancer Research UK’s funding will support 2 new specialised centres:

1. The Children’s Brain Tumour Centre of Excellence, based at the University of Cambridge
2. The Institute of Cancer Research, London

These centres bring together world-leading experts to discover and develop new treatments to tackle brain tumours in children. A centre focusing on adult brain tumours will open later this year.¹⁰

A roundtable event, held on the same day as the publication of the report brought together representatives of cancer research, charities and pharmaceutical industry with Baroness Jowell and the Secretary of

⁹ Brain Tumour Research, [Experts call for innovation in brain tumour research](#), 22 February 2018

¹⁰ DHSC, [Brain cancer research to receive £45 million funding](#), 22 February 2018

State for Health to discuss improving brain cancer treatment and diagnosis.¹¹

¹¹ The Brain Tumour Charity, [Today's UK Brain Cancer summit at the Cabinet Office](#), 22 February 2018

2. News items

Independent

Theresa May announces £75m funding boost for prostate cancer

9 April 2018

<https://www.independent.co.uk/news/health/theresa-may-prostate-cancer-awareness-week-funding-nhs-uk-budget-cuts-a8296731.html>

Independent

Major breakthrough in cancer care as gene map paves way for new treatments

5 April 2018

<https://www.independent.co.uk/news/health/cancer-gene-tumour-treatment-immunotherapy-cure-breakthrough-map-a8290881.html>

Guardian

Tessa Jowell calls for global cooperation to help cancer patients

25 January 2018

<https://www.theguardian.com/politics/2018/jan/25/tessa-jowell-calls-for-global-cooperation-to-help-cancer-patients>

BBC News Online

Common virus used to help fight incurable brain cancer

4 January 2018

<http://www.bbc.co.uk/news/health-42544267>

BBC News Online

Ovarian cancer drug 'could treat brain tumours'

6 November 2017

<http://www.bbc.co.uk/news/uk-scotland-41885927>

New Scientist

We may be able to use Zika virus to attack brain cancer cells

5 September 2017

<https://www.newscientist.com/article/2146356-we-may-be-able-to-use-zika-virus-to-attack-brain-cancer-cells/>

3. Press releases

Cancer Research UK

Aggressive brain tumours carry potential target for engineered immune cells

1 March 2018

A molecule on glioblastoma cells that could be used as a target for genetically engineered immune cells has been identified.

Researchers at the [University of North Carolina\(link is external\)](#) found a molecule called CSPG4 in two thirds of tumour samples from 46 patients with glioblastoma.

Dr Martin Pule, a Cancer Research UK-funded immunotherapy expert, said finding CSPG4 on the majority of glioblastoma cells suggests it could be tested as a possible treatment target for a broad range of patients.

This study confirms that a molecule found on glioblastoma cells could be used as a target for engineered immune cells called CAR T cells.

- Dr Martin Pule, Cancer Research UK

Immune cells genetically engineered to seek out CSPG4 controlled the growth of glioblastoma cells grown in the lab and in mice. The findings are published in [Science Translational Medicine\(link is external\)](#).

This study confirms that a molecule found on glioblastoma cells could be used as a target for engineered immune cells called CAR T cells,

said Pule.

It adds to a growing list of possible targets for this type of treatment.

What are CAR T cells?

CAR T cell therapy is when scientists engineer a patient's own immune cells to fight cancer.

Specialised immune cells called T cells are good at fighting infection, but sometimes find it hard to know if a cell is a cancer cell.

That's why scientists need to find molecules on cancer cells that can flag to the immune system that they need to be destroyed. CAR T cells can be genetically engineered to hunt out these molecules.

Other CAR T cell targets: Scientists around the world are looking for possible targets on solid tumours that could help engineered immune cells identify them as cancer. For example, Cancer Research UK scientists are investigating a molecule called [EGFRvIII\(link is external\)](#), found on glioblastoma cells, and others are studying [IL13-Ralpha2\(link is external\)](#) also known to be on aggressive brain tumours.

Read more: [Engineering a cancer-fighting immune super soldier](#)

What is glioblastoma?

There are over 130 different types of tumour that [can grow in the brain](#) and other parts of the central nervous system. Glioblastoma is the most common type of brain tumour in the UK. It's also one of the hardest to treat.

Dr Gianpietro Dotti, who led the latest study, said glioblastoma has a very low chance of being cured with current available therapies.

This is a potential new way to treat these tumours using the immune system.

Importantly, the CSPG4 molecule was also be found on specialised tumour stem cells, which experts think are responsible for these aggressive tumours coming back after treatment.

Dotti said:

We know it's very important to target these cells as well because they are probably the cause of tumour recurrence. If you don't target them, they will come back.

Pule added that more work is needed to know for certain that CSPG4 is not found on normal brain cells as well. If the engineered immune cells also attacked healthy cells, this could cause side effects.

Before the team can test this new target out in a clinical trial, they need to do further work on the safety of the approach and make sure the molecule isn't also present on healthy cells, he said.

References

Pellegatta, S. et al (2018) Constitutive and TNFa-inducible expression of chondroitin sulfate proteoglycan 4 in glioblastoma and neurospheres: Implications for CAR-T cell therapy. *Science Translational Medicine*. DOI: [10.1126/scitranslmed.aao2731](https://doi.org/10.1126/scitranslmed.aao2731)(link is external)

Queen Mary University of London**Health ministers and politicians visit brain tumour research labs****23 February 2018**

UK health ministers shared the news of an upcoming funding boost to brain tumour research, during a visit to laboratories at Queen Mary University of London this week.

Health Minister Lord O'Shaughnessy, George Freeman MP and Derek Thomas MP, took part in a tour of the state-of-the-art laboratories in East London, organised by the charity Brain Tumour Research.

Professor Silvia Marino, Director of the [Brain Tumour Research Centre of Excellence](#) at Queen Mary, presented an overview of her group's research and their focus on glioblastoma multiforme (GBM), the most common and most aggressive adult malignant brain tumour.

The politicians and Professor Marino discussed the challenges and opportunities facing the UK and global research community, which was

followed by a tour of the laboratory, where Dr Gabriel Rosser and James Boot from Professor Marino's team gave an overview of their individual research projects.

£45m of brain tumour research funding

Yesterday, the [Department of Health and Social Care](#) announced that £45 million in funding would be made available for brain tumour researchers by the National Institute for Health Research and Cancer Research UK.

[Professor Silvia Marino](#) from Queen Mary's [Blizard Institute](#) said: "This funding will play a key role in accelerating the translation of basic discoveries in brain tumour biology for patient benefit, particularly as it emphasises the global and collaborative approach the research community must take to succeed.

Glioblastoma is a relatively rare form of cancer, meaning that global collaboration is essential. Of course, there will be challenges, but the announcement is a step in the right direction and we now need policymakers and health care professionals, the world over, to work together to accelerate the discovery of powerful new treatments

Brain Cancer Initiative Roundtable

The Secretary of State for Health and Social Care Jeremy Hunt and Baroness Tessa Jowell also chaired a roundtable with cancer charities, leading academics, including Professor Marino, and pharmaceutical companies, to discuss how to improve brain cancer diagnosis and treatment.

The Roundtable was convened following Baroness Tessa Jowell's speech to the House of Lords last month, when she shared how she had been diagnosed with a highly aggressive form of GBM – which typically has a prognosis of just 9-18 months.

Health and Social Care Secretary Jeremy Hunt said:

While survival rates for most cancers are at record levels, the prognosis for people with brain tumours has scarcely improved in over a generation. I am grateful to Baroness Jowell and other MPs who have campaigned with great dignity and courage to raise awareness of this issue.

Our ambition is to deliver a big uplift in the funding of brain cancer research, while galvanising the clinical and scientific communities to explore new avenues for diagnosis and treatment in the future – it is a chance to create a genuine, step change in survival rates for one of the deadliest forms of cancer.

More information

- ['Brain cancer research to receive £45 million funding'](#) - Department of Health and Social Care
- ['Brain tumour research: task and finish working group report'](#) - Department of Health and Social Care

- Find out about studying [Medicine MBBS](#) at Barts and The London School of Medicine and Dentistry, Queen Mary University of London.

Minderoo Foundation

Minderoo Foundation's Eliminate Cancer Initiative helps to convene a UK brain cancer summit, £46 million in funding already pledged

February 23, 2018

The Eliminate Cancer Initiative has taken Australia's landmark Brain Cancer Mission global, helping to convene an unprecedented roundtable with some of the UK's top brain tumour experts, researchers and policymakers.

The February 22 roundtable, held at The Cabinet Office Briefing Rooms in London, explored new and innovative approaches to tackling brain cancer and follows ECI's contribution to the launch of the Australian Government's Brain Cancer Mission in October 2017 - a \$100 million roadmap to double brain cancer survival in ten years.

Minderoo Foundation chairman and ECI founder Andrew Forrest AO pledged £1 million from ECI to kick-start a £100 million fundraising mission in the UK.

Research and collaboration are the keys to a cure,

Mr Forrest said.

For brain tumours and other intractable diseases such as this, the world must collaborate to make progress.

This summit has provided a unique opportunity for some of the brightest minds to come together with the ambitious focus of eliminating brain cancer. Survival rates haven't shifted in decades – we can and should do better.

The roundtable was inspired by Baroness Tessa Jowell who was the honorary chair and was diagnosed with the aggressive brain cancer glioblastoma multiforme (GBM) last year.

The Department of Health and Social Care and Cancer Research UK also committed £45 million to towards finding new research and treatment pathways for patients, noting its desire to accelerate these efforts.

ECI plans to convene similar roundtables in other countries, including the US and China, to continue to drive brain cancer research, collaboration and data sharing.

Rare cancers like brain cancer are difficult to defeat because they require collaboration across industry.

Of those diagnosed with GBM, only around 5 per cent live longer than 5 years, and most die within 18 months. There has been no significant increase in survival rates for the cancer in over 30 years.

Following the roundtable, a blueprint will be developed to enhance research and patient support, strengthen collaboration and improve the quality of diagnosis and care for those suffering from this disease worldwide.

Department of Health and Social Care

Brain cancer research to receive £45 million funding

Brain tumour research in the UK to receive £45 million in funding from the Department of Health and Social Care and Cancer Research UK.

22 February 2018

Health and Social Care Secretary Jeremy Hunt has announced that an estimated £20 million in funding will be invested through the National Institute for Health Research (NIHR) over the next 5 years.

The funding will start with a formal call to research teams to put forward new proposals, to access NIHR funding in April.

In addition, Cancer Research UK will invest £25 million in research into brain tumours over the next 5 years. This is on top of £13 million each year on the research and development of cancer treatments.

Cancer Research UK's funding will support 2 new specialised centres:

- The Children's Brain Tumour Centre of Excellence, based at the University of Cambridge
- The Institute of Cancer Research, London

These centres bring together world-leading experts to discover and develop new treatments to tackle brain tumours in children. A centre focusing on adult brain tumours will open later this year.

The funding announcement follows the publication of the [report of the task and finish working group on brain tumour research](#), led by the government Chief Scientific Adviser Professor Chris Whitty.

Health and Social Care Secretary Jeremy Hunt said:

While survival rates for most cancers are at record levels, the prognosis for people with brain tumours has scarcely improved in over a generation. I am grateful to Baroness Jowell and other MPs who have campaigned with great dignity and courage to raise awareness of this issue.

Our ambition is to deliver a big uplift in the funding of brain cancer research, while galvanising the clinical and scientific communities to explore new avenues for diagnosis and treatment in the future. It is a chance to create a genuine step change in survival rates for one of the deadliest forms of cancer.

Sir Harpal Kumar, Cancer Research UK Chief Executive, said:

Brain tumours remain a huge challenge, with survival barely improving over the last 30 years. Since we laid out our plans to tackle this challenge in 2014, Cancer Research UK has already

substantially increased its funding into brain tumours and attracted some of the world's leading experts to the UK.

This new funding will mean that we can accelerate these efforts further, by developing a critical mass of expertise in key areas and supporting work along the entire research pipeline to improve survival for children and adults with brain tumours.

Each year around 11,400 people in the UK are diagnosed with a brain tumour and just 14% of people survive their disease for 10 or more years.

Institute of Cancer Research

ICR childhood brain cancer research to benefit from funding boost announced by the Department of Health and Social Care and Cancer Research UK

22 February 2018

Brain tumour research in the UK is set to be revolutionised with £45 million in funding by the [Department of Health and Social Care](#) and [Cancer Research UK](#). The Institute of Cancer Research, London, will benefit from some of this new funding.

In a bid to deliver a “step change” in survival rates, the Health and Social Care Secretary Jeremy Hunt has announced that an estimated £20 million in funding will be invested through the [National Institute for Health Research](#) (NIHR) over the next five years – with the aim of doubling this once new high-quality research proposals become available.

The funding boost will be kick-started by a formal call to the research community known as a highlight notice, which will encourage teams to put forward new research proposals to access NIHR funding in April.

Boosting research into brain tumours

Today also marks a significant moment in Cancer Research UK's ongoing commitment to boosting research into brain tumours – with an investment of an extra £25 million over the next five years. This is in addition to the £13 million spent each year on research and development of new treatments for the disease.

Cancer Research UK's funding will support two new specialised centres. The Children's Brain Tumour Centre of Excellence, based at the [University of Cambridge](#) and The Institute of Cancer Research, London, opening today – that brings together world-leading experts to discover and develop new treatments to tackle brain tumours in children. A second centre focusing on adult brain tumours will open later in the year.

Professor Richard Gilbertson, director of the Cancer Research UK Children's Brain Tumour Centre of Excellence at Cambridge University and the ICR, said:

By creating a hub of expertise for childhood brain tumour research in the UK, we aim to make real inroads to tackling these

diseases. Gathering this expertise together means we can shine a light on the numerous challenges and difficulties that brain tumours pose and discover new treatments to ensure that more children survive their disease.

Supporting our Childhood Cancer appeal will help us develop new treatments for children with aggressive and hard to treat cancers.

[Read more](#)

Collaboration vital in childhood brain cancer research

[Professor Chris Jones](#), Professor of Childhood Brain Tumour Biology at the ICR, said:

Collaboration is vital in childhood brain cancer research and we're excited to be able to work in close partnership with our colleagues at Cambridge.

At the ICR, we've made great strides in our understanding of the biology of the different types of childhood brain tumour and, working together, we hope to translate those discoveries into the new treatments that children so urgently need as quickly as possible.

Cancer Research UK will also be launching a number of new initiatives over the coming months to build new international collaborations. These will support research to transform the understanding of how and why brain tumours develop, to develop new ways diagnose the disease and trials to test new personalised treatments.

Today's Government funding announcement follows the publication of the report of the Task and Finish Working Group, led by the Government's Chief Scientific Adviser Professor Chris Witty. Other actions include:

- A plan to improve the approach to trialling new treatments, including making better use of adaptive trials that enable patients to receive different treatments concurrently.
- The development of a new cadre of clinical-oncologists to ensure the NHS can draw on world class expertise in treating brain cancer.
- A commitment to treble the number of cancer patients whose whole genome is sequenced as part of their diagnosis over the next four years through the 100,000 Genomes Project.
- Improvements in how brain tumour tissue is collected and shared across the research community.
- A commitment from NHS England to work with Cancer Alliances and brain cancer surgery centres to understand the barriers to using 5 ALA – a special fluorescent dye that helps surgeons identify and remove more malignant brain tissue during operations.

Health and Social Care Secretary [Jeremy Hunt](#) said:

While survival rates for most cancers are at record levels, the prognosis for people with brain tumours has scarcely improved in over a generation. I am grateful to Baroness Jowell and other MPs

who have campaigned with great dignity and courage to raise awareness of this issue.

Our ambition is to deliver a big uplift in the funding of brain cancer research, while galvanising the clinical and scientific communities to explore new avenues for diagnosis and treatment in the future – it is a chance to create a genuine, step change in survival rates for one of the deadliest forms of cancer.

Accelerating efforts further

[Sir Harpal Kumar](#), Cancer Research UK's chief executive, said:

Brain tumours remain a huge challenge, with survival barely improving over the last 30 years. Since we laid out our plans to tackle this challenge in 2014, Cancer Research UK has already substantially increased its funding into brain tumours and attracted some of the world's leading experts to the UK.

This new funding will mean that we can accelerate these efforts further, by developing a critical mass of expertise in key areas and supporting work along the entire research pipeline to improve survival for children and adults with brain tumours.

Each year around 11,400 people in the UK are diagnosed with a brain tumour and just 14% of people survive their disease for 10 or more years.

Later today the Secretary of State for Health and Social Care Jeremy Hunt and Baroness Tessa Jowell will chair a roundtable with key brain cancer charities, leading academics and pharmaceutical companies to discuss how to improve brain cancer diagnosis and treatment.

Brain Tumour Research

Experts call for innovation in brain tumour research

Feb 22, 2018

The Government has today called for greater innovation in brain tumour research, as it publishes a landmark review into brain cancer research in the UK.

The new report by the Department of Health and Social Care (DHSC) Task and Finish Working Group found that one of the barriers to finding breakthrough treatments for the disease is the lack of high quality research applications for specialist funding.

Drawing on the expertise of clinicians, charities, patients and government advisers, the Working Group explored how to increase the level and impact of research in brain tumours.

The Task and Finish Working Group came to a series of conclusions:

- Dedicated brain tumour research centres are an effective way of expanding and developing research capacity and capability.
- The current processes for collection, storage and sharing of brain tumour tissue, blood samples and clinical data are not optimal for the latest research requirements.

- Appropriate drugs, originally developed for other conditions but with potential for the effective treatment of brain tumours, should be 'repurposed' where the evidence supports it.
- Sub-speciality training for neuro-oncology should be included in the curriculum and appropriate time should be ring-fenced to allow consultants to carry out research.
- Funders should highlight that applications focused on brain tumour research are particularly welcome. These include studies on the development of pre-clinical models, tumour detection, radiotherapy, surgery, drug development, and clinical trials.
- The UK brain tumour and neurosciences research communities should work together to explore opportunities for research collaborations.
- Patient health data, with the appropriate permission, should be available for use in research to accelerate the development of new treatments.
- More coordination and cooperation within the brain tumour research community is essential to accelerate progress in the field.

Chair of Task and Finish Working Group and DHSC Chief Scientific Adviser, Professor Chris Whitty said:

This is a hugely complex and challenging issue, but one that everyone around the table is dedicated to seeing progress on. This report is an important staging post on a considerable journey which we all agree needs to be made. It is heartening to realise this opportunity to catalyse change.

Since we formed the Working Group, we have already seen the launch of exciting initiatives in brain tumour research, including Cancer Research UK's new £25 million investment, with many more in development.

Sue Farrington Smith MBE, Chief Executive of Brain Tumour Research, said:

No one doubts that there is much more that needs to be done; brain tumours kill more children and adults under the age of 40 than any other cancer. This report recognises the serious barriers we face, yet it also notes that progress is being made, particularly through charities supporting dedicated research centres.

Like patients and their families across the UK, I am impatient for change and will continue to work to improve outcomes for brain tumour patients.

Dr David Jenkinson, Chief Scientific Officer for The Brain Tumour Charity, said:

This report provides an overview of the problems that are hindering progress towards a cure for brain tumours.

For the sake of each and every family affected by the disease, it must be a springboard for more effective action – including greater collaboration to boost global research.

The Task and Finish report comes ahead of today's Brain Cancer Initiative Roundtable which was convened following a speech by Baroness Tessa Jowell, who shared how she had been diagnosed with a highly aggressive form of brain tumour – high-grade glioblastoma multiforme – which typically has a prognosis of just 9-18 months.

The roundtable, to be chaired by the Health and Social Care Secretary Jeremy Hunt and Baroness Tessa Jowell, will involve representatives from leading cancer, academic and pharmaceutical organisations.

Speaking ahead of the Brain Cancer Initiative Roundtable, Health Minister Lord O'Shaughnessy said:

This is an opportunity to harness the expertise of leading figures in brain tumour research, development and treatment so we can formulate a blueprint for the future that has the ability to transform lives.

We must all work closely together in the coming months and years to build on the issues surrounding this devastating illness, so we can see improved survival rates and a greater quality of life for those living with brain cancer.

The Task and Finish Working Group consisted of representatives from:

Department of Health

Association of the British Pharmaceutical Industry

Department for Business, Energy and Industrial Strategy

Institute of Cancer Sciences & Beatson West of Scotland Cancer Centre

Brain Tumour Research

Children with Cancer UK

Cancer Research UK

National Cancer Research Institute

Sheffield Teaching Hospitals NHS Foundation Trust

University College London Hospitals NHS Foundation Trust

Imperial College Healthcare NHS Trust

NHS England

Medical Research Council

The Brain Tumour Charity

University of Nottingham

NIHR Evaluation Trials and Studies

University of Wolverhampton

Notes to Editors

Brain Tumour Research is the only national charity in the UK focused on funding sustainable research to find a cure for brain tumours. We have established a game-changing network of world-class Research Centres of Excellence in the UK. Embracing passionate member charities

nationwide, over £6 million was raised towards research and support during 2017.

We are campaigning to see the national spend on research into brain tumours increased to £30 - £35 million a year, in line with breast cancer and leukaemia. The unprecedented success of our 2015 petition led to the 2016 Westminster Hall debate and Brain Tumour Research taking a leading role in the Government's Task and Finish Working Group convened to tackle the historic underfunding for research with the report being published in 2018.

Key statistics on brain tumours:

- Brain tumours kill more children and adults under the age of 40 than any other cancer
- They kill more children than leukaemia
- They kill more men under 45 than prostate cancer
- They kill more women under 35 than breast cancer
- Just 1% of the national spend on cancer research has been allocated to this devastating disease
- In the UK 16,000 people each year are diagnosed with a brain tumour
- Less than 20% of those diagnosed with a brain tumour survive beyond five years compared with an average of 50% across all cancers
- Brain tumours are indiscriminate; they can affect anyone at any age
- Incidences of, and deaths from, brain tumours are increasing

Please quote Brain Tumour Research as the source when using this information. Additional facts and statistics are available from [our website](#) including our latest [Report on National Research Funding](#). We can also provide case-studies and research expertise for media.

Brain Tumour Research

Brain Tumour Research welcomes commitment to the funding of clinical trials for cancer treatment

15 February 2018

Cancer Research UK has announced that £45 million will be invested into its network of clinical trials units across the UK, one of the charity's largest investments in clinical research to date.

Clinical trials are the only way to find out if a new treatment is safe to use, and if it's better than existing treatments. Hence, this investment is essential for better future options for patients.

Professor Charles Swanton, Cancer Research UK's chief clinician, said:

Our clinical research enables us to translate discoveries from the lab in order to improve cancer diagnostics and treatments, giving more patients the best chance of beating their disease.

This is particularly important for patients with hard to treat cancers, including pancreatic, oesophageal, lung and brain tumours, where options for treatment are limited and survival rates remain poor.

Brain Tumour Research welcomes this announcement and hopes that some of the clinical trials will be focused on brain tumours as this is clearly a priority area of research development.

The Brain Tumour Charity

Our research update into glioblastoma, adaptive trials, and the 'pink drink'

26 January 2018

Our Research Engagement Manager, Becky Birch, outlines developments highlighted by Tessa Jowell's debate

Last year, former cabinet Minister Tessa Jowell was diagnosed with a glioblastoma, an aggressive, high-grade brain tumour. This week she has spoken out about her diagnosis, the urgent need for increasing patient involvement in clinical trials and the importance of flexible trial design.

Glioblastomas are the most common primary brain tumour in adults. They are also the most aggressive form of adult brain tumour, meaning they are fast growing and likely to spread. The exact cause of this type of brain tumour is still unknown and treatment options are limited, therefore prognosis and quality of life for these patients is poor.

The current standard of care for patients diagnosed with glioblastoma is surgery to remove as much of the tumour as possible, followed by chemotherapy and radiation.

One of the few ways doctors can influence the rate at which this disease progresses is by removing as much of the tumour during surgery as possible.

The Pink Drink

One of the most significant developments in this field in recent years has been the introduction of fluorescence-guided surgery. This involves giving patients a drug before surgery called 5-Aminolevulinic Acid (5-ALA), which makes brain tumour cells illuminate under fluorescent light.

This allows surgeons to see the tumour tissue more clearly so they can remove more of it. However, 5-ALA is currently only available in around half of neurosurgery units in the UK, and in her speech on Thursday at the House of Lords, Baroness Jowell called for access to this drug to be extended to all.

This is something we have been campaigning for, and in our research strategy, [A Cure Can't Wait](#), we outline how we will work to ensure every patient with a brain tumour has access to the best treatments and care available.

Adaptive Trials

Baroness Jowell also spoke about the need to speed up the use of adaptive clinical trials and to give more patients the option to contribute to research and clinical trials.

While traditional clinical trials have contributed immensely to advances in patient care, there are several shortcomings in their design – they only test one drug or treatment strategy at a time, they are expensive and very time consuming. Time is not a luxury patients with a brain tumour have.

In an adaptive clinical trial, researchers can make changes to improve the existing trial, if early results suggest what is being tested isn't working or that something else might work better.

These changes are planned and made in such a way that the trial, and the evidence it provides, remain reliable.

The flexibility of an adaptive clinical trial means that the process of developing new treatments, which are so desperately needed to defeat this devastating disease, is sped up.

Adaptive trials are not easy to design, plan or execute. Baroness Jowell said she was fearful that this important approach will be put in the 'too difficult' box - we are working to make sure that doesn't happen.

From late February to May this year, we will be accepting applications for our [Glioma Clinical Trial](#) funding - a funding opportunity created to establish an adaptive clinical trial for glioma patients in the UK.

Through this we hope to facilitate an increase in the number of brain tumour clinical trials and permit more newly diagnosed people to enter trials.

The Brain Tumour Charity

What is an adaptive clinical trial?

24 January 2018

In her interview on the Today programme, Tessa Jowell talked about adaptive clinical trials. Find out more

Traditional clinical trials test only one drug or different aspect of treatment at a time and take several years to produce results - positive or negative.

In an adaptive clinical trial, researchers can add in new drugs or combinations of therapies in response to a patient's improved or deteriorating condition.

We are determined to see more people affected with brain tumours have access to and take part in clinical trials.

To accomplish this aim, we have created this [funding opportunity](#) to promote the establishment of brain tumour trial infrastructure.

This will facilitate an increase in the number of [brain tumour clinical trials](#), permit more newly diagnosed people to enter trials, make the United Kingdom a more attractive place to open trials, and increase availability of [banked brain tumour tissue for research](#).

If you have been diagnosed with an aggressive [brain tumour](#) and given no hope of a cure, it is very difficult to understand why you shouldn't be allowed to try new treatments or combinations of treatments that might extend your life.

This lack of flexibility in clinical trials has been one factor in historically slow progress towards more effective treatments for [high-grade brain tumours](#).

These tumours progress very quickly – there is simply not enough time for a patient to take part in different trials, each of which tests a single potential treatment.

We support the development and funding of more adaptive clinical trials for patients with high-grade brain tumours.

The Brain Tumour Charity

Launching our data-sharing project in quest for brain tumour cure

11 January 2018

Pioneering web-app will help patients and researchers

We are proud to announce the launch a unique global data-sharing project to boost progress towards more effective [brain tumour treatments](#).

The Charity's new data bank, known as [BRIAN](#), will allow those affected by a [brain tumour](#) to upload real-time information about their diagnosis, the treatment they receive and the impact it has on both their tumour and quality of life.

It will also collect clinical and medical data from patients' NHS trusts, with the appropriate consent.

The data will be made freely available in a managed way to clinicians and scientists around the world in order to drive forward global [research into brain tumours](#).

Patients will be able to access the data bank so they can benefit from others' knowledge and experience and make better-informed decisions about their treatment and care.

Uniting our community

We are now inviting patients to [register their interest in BRIAN](#) at the website and give the charity consent to access their medical records, with a view to launching the web-app itself later this year.

Dr David Jenkinson, chief scientific officer for The Brain Tumour Charity, said:

Progress towards more effective brain tumour treatments has been too slow for too long.

There is not enough information available to researchers and accessing what little there is can take years.

We know that the vast majority of those affected by a brain tumour will do whatever they can to change that.

BRIAN will radically change the landscape of research into brain tumours, allowing patients to make better-informed decisions on their treatment and care and accelerating the development of potential new treatments and diagnostic techniques.

Backed by experts

Professor Keyoumars Ashkan, professor of neurosurgery at King's College Hospital in London, said:

The global data bank initiative by The Brain Tumour Charity will provide an invaluable resource for shared information and knowledge amongst clinicians and patients across the world, to accelerate research and progress, to meet the needs of our patients and ultimately defeat this most difficult of diseases.

Dr Paul Brennan, senior clinical lecturer in neurosurgery at the University of Edinburgh, described the data bank as 'game-changing. "

He said:

With this project, researchers will for the first time have access to large amounts of data from lots of patients.

This is game-changing for research into brain tumours, permitting researchers to ask questions and test hypotheses on a database that is more representative of the 'real-world' than ever before.

The answers and insights generated will hopefully propel forward our search for new and effective treatments.

Willingness to share

Louise Edwards, a project manager who was [diagnosed with a brain tumour](#) in 2011, welcomed the move to establish a patient data bank.

Ms Edwards, who was among the patient representatives advising The Brain Tumour Charity as it developed BRIAN, said:

The Brain Tumour Charity's data bank will help give patients access to the right information at the right time.

In my case, I struggled to find out about the after-effects of [brain tumour surgery](#).

I had been warned I would be at risk of infection but when it actually happened, I found it very difficult to deal with - I had no practical advice on coping with it.

If I had been able to use the data bank to find out how other patients were managing, I would have felt less alone.

Our survey, conducted last year, found that almost all of those diagnosed with a brain tumour would be willing to share information about their diagnosis and subsequent treatment in order to help develop better treatments.

Of 270 respondents to the survey, 97% (262 respondents) agreed with the statement:

I would be willing to give my medical and health data to the data bank to help improve brain tumour treatment and care.

Asked to explain their motivation, almost 88% (230 people) said they would do it

to improve outcomes and help others with the disease now and in the future, even if I get no benefit

while 8% (21 people) said they would do it for the improvements it could bring to their own care, treatment and quality of life.

United, we will make a difference.

Cancer Research UK

Scientists are combining drugs and radiotherapy, hunting for better results

Michael Walsh January 8, 2018

Radiotherapy has been around for decades, and is often extremely effective. But researchers are still discovering new ways to use it.

This includes [testing new drugs alongside radiotherapy](#).

The aim is to increase the chance of a cure by making the radiotherapy more effective at killing cancer cells,

says Professor Anthony Chalmers, a Cancer Research UK-funded radiotherapy expert at the University of Glasgow.

But avoiding making side effects worse is a challenge. So research is focused on finding drugs that enhance the effects of radiotherapy on cancer cells, while leaving normal cells unaffected.

Professor Kevin Harrington, joint head of the Division of Radiotherapy and Imaging at The Institute of Cancer Research (ICR), London, says the precision of radiotherapy will have a big part to play in this.

The more precise we get in radiation delivery the better the opportunities we have to combine some of the new smart drugs with radiation, he says.

[High-tech radiotherapy methods](#) that [deliver as little radiation to normal tissues](#) as possible, while maintaining or [escalating the dose to the tumour](#), are ideally suited for these combinations.

And studies are underway to test if certain drugs can make radiotherapy more effective, or if radiotherapy can make other drugs yield better results.

'Doping' radiotherapy

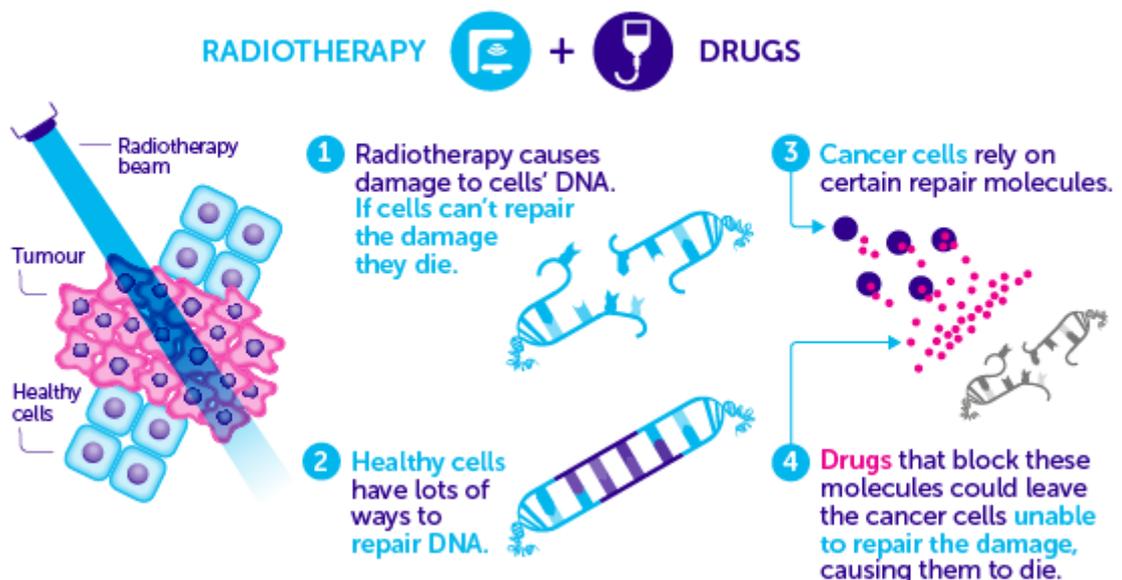
Radiotherapy causes damage to DNA inside both cancerous and healthy cells. If cells can't repair this damage, they die. This is good news if cancer cells are dying, but not if it's healthy cells that are affected.

Crucially, some cancer cells are [reliant on certain processes](#) to repair the damage caused by radiotherapy. And it's this knowledge of how cancer cells respond to radiotherapy that researchers are exploiting in combination studies with targeted drugs.

The idea is that the radiation triggers DNA damage, the tumour relies on a specific pathway to fix that DNA damage and you come in with a drug that blocks that pathway," says Harrington. "Normal cells have other backup pathways they can use to get around the drug whereas the tumour is absolutely addicted to this pathway, and you've blocked it with a drug.

COMBINING RADIOTHERAPY WITH DRUGS

Drugs that stop cancer cells repairing their DNA could help make radiotherapy more effective.



LET'S BEAT CANCER SOONER
cruk.org



Different drugs that target key DNA damage response (DDR) molecules are already [being tested](#) with radiotherapy in clinical trials covering a broad range of tumour types.

One molecule involved in repairing DNA damage is [PARP](#), and Chalmers is studying how blocking it might make radiotherapy more effective.

[We've shown](#) that PARP inhibitors increase the effect of radiotherapy on rapidly multiplying tumour cells, but have no impact on non-proliferating cells, he says.

This is the case in a type of brain tumour called glioblastoma. "It's made up of rapidly proliferating tumour cells, but the cells of the surrounding normal brain are essentially non-proliferating," Chalmers adds.

And they're testing this out in [two early glioblastoma trials](#).

It's important to work out which patients will benefit from using these drugs alongside radiotherapy. Identifying and measuring molecules that distinguish between normal and cancer cells – called biomarkers – is one way of doing this.

As part of these trials, the team will collect tumour and blood samples from patients, with the aim of identifying biomarkers to predict who might benefit in the future.

PARP inhibitors are clinically furthest along this journey, but [others are being developed](#) that could be more effective in sensitising tumours to radiotherapy. The early work around all of these treatments will make sure they don't increase side effects.

And it's not just how cancer cells repair their DNA that scientists are targeting. The way tumours produce energy, respond to their harsh environment, and spread around the body are all different to normal cells, and so have the potential to be exploited with drugs and radiotherapy combined.

But there's also another side to the combination coin.

Vaccinating the patient

There's growing interest in a completely different approach, which is to use radiotherapy to boost the effects of drug treatment,

says Chalmers.

Perhaps the best example of this is using radiotherapy in combination with immunotherapy.

A radiation hit to a cancer can sometimes shrink not only the tumour itself, but also affect distant sites of the disease (metastases) that haven't been irradiated. This is known as the [abscopal effect](#).

When radiotherapy kills tumour cells, they release molecules that alert the immune system. Immune cells can then potentially target the original tumour, as well as other cancer cells that have spread around the body.

Harrington describes this as using radiotherapy to 'vaccinate' the patient against their own disease.

But the abscopal effect is [rare](#).

So researchers are looking at how immunotherapies such as [checkpoint inhibitors](#) can provide a boost. [These drugs](#) release the brakes on the immune system so that it can better fight the tumour.

Not surprisingly there's huge [interest](#) in this abscopal effect of [radiotherapy](#),

says Chalmers.

Researchers are working to identify the best dose and timing of radiotherapy to use, and the best drugs to combine it with.

The early data is tantalising but it's mainly single reports or case studies,

says Professor Tim Illidge, a Cancer Research UK-funded radiotherapy expert at the University of Manchester.

What we don't know is whether we can increase the proportion of patients who benefit and how best to do that.

Plenty of questions need to be answered: which immunotherapies and doses should be used? Will this be different for different tumours? Is it better to give a patient one big dose of radiotherapy or lots of smaller 'fractions'?

Better together

This kind of work illustrates the potential of using cutting-edge treatments alongside older tried and tested techniques.

And it's an example of how researchers are trying to be smarter about the tools they have to hand, combining treatments to improve effectiveness and reduce side effects.

But some of the usual questions remain: which treatments will best suit which patients? And will any positive effects be long lasting?

The journey to find the best way to combine drugs and radiotherapy has [only just begun](#).

Cancer Research UK

Electronic cap treatment improves brain tumour survival

19 December 2017

Applying low frequency electric fields to the scalp of people with an aggressive type of brain tumour improves survival, according to a clinical trial.

Researchers from the [Northwestern University Feinberg School of Medicine\(link is external\)](#) in the say their device offers "promising results" in [the trial\(link is external\)](#).

The device delivers low-intensity electricity to the brain through 9 insulated electrodes, placed on the patient's shaved scalp using a cap. These doses of electricity, called Tumour Treating Fields (TTFields), interfere with the molecular machinery inside cancer cells that helps them divide.

Published in the [J\(link is external\)ournal of the American Medical Association\(link is external\)](#), the study included 695 patients with glioblastoma who had surgery to remove their tumour and radiotherapy. Two thirds of patients received the electric cap treatment plus the chemotherapy drug [temozolomide \(Temodal\)](#). The remaining third just had the drug.

Overall survival in patients who had the drug with the electric therapy was 20.9 months on average, compared to 16 months on average with chemotherapy alone.

The average amount of time where the cancer didn't get worse was 6.7 months for patients who had the drug with the electronic cap treatment. This was 4 months for patients who just took the drug.

Cancer Research UK-funded glioblastoma expert, Dr Colin Watts, said:

These results are promising because glioblastoma is so hard to treat and overall survival is stubbornly low.

Patients who received the electrical treatment wore the device on their head for around 18 hours a day for 5 days over a 28-day period. This was repeated between 6 and 12 times.

Patients were trained to operate and maintain the portable device themselves at home.

Dr Watts added that the side effects of this new treatment were also relatively minor compared to chemotherapy drugs and patients who respond less well to chemotherapy also seemed to benefit.

The next step will be to work out which patients would benefit most from this new technique, he added.

But the potential price of the treatment has been raised as possible issue.

Experts in the field are discussing [whether this device is a cost-effective\(link is external\)](#) option for healthcare systems and patients.

References

Stupp, R. et al. (2017) Effect of Tumor-Treating Fields Plus Maintenance Temozolomide vs Maintenance Temozolomide Alone on Survival in Patients With Glioblastoma A Randomized Clinical Trial. *JAMA* [doi:10.1001/jama.2017.18718](https://doi.org/10.1001/jama.2017.18718)(link is external)

Cancer Research UK

Scientists exploit leaks in blood brain barrier to treat glioblastoma

6 November 2017

An ovarian cancer drug can leak through the blood brain barrier to reach brain tumours and could be an effective treatment for glioblastoma, suggest [results\(link is external\)](#) presented at the [National Cancer Research Institute's\(link is external\)](#) (NCRI) Cancer Conference in Liverpool, today (Monday).

By showing that this drug reaches brain tumours, we are in a much stronger position to use it to make current treatments more effective

Professor Anthony Chalmers

The Cancer Research UK-funded OPARATIC trial, which was managed by the charity's [Centre for Drug Development](#), tested whether the ovarian cancer drug olaparib could reach glioblastoma, a type of brain tumour which is very difficult to treat. And early results show it successfully reaches brain tumours at high enough levels for treatment.

The successful delivery of this drug is an important step as many others have failed to reach the tumour.

The study recruited 48 patients with glioblastoma which had returned after initial treatment.* The majority of patients were then given olaparib in combination with the chemotherapy drug temozolomide.

Scientists looked at tumour samples and found that the drug penetrates the core of the tumour as well as the surrounding areas which contain smaller numbers of cancerous cells.** Cancer cells in these regions cannot be removed by surgery so reaching them with drugs is crucial.

The researchers also identified a way to safely combine both drugs by giving olaparib intermittently, minimising dangerous side effects.***

[Olaparib](#) is a PARP inhibitor, which is already used to treat certain ovarian cancer patients and prevents damaged cancer cells from repairing themselves after chemotherapy or radiotherapy.

The OPARATIC trial has paved the way for two additional clinical trials – [PARADIGM](#) and [PARADIGM-2](#) – testing olaparib in combination with radiotherapy and temozolomide in patients with newly diagnosed glioblastoma.

Professor Anthony Chalmers, lead researcher and Chair of Clinical Oncology at the University of Glasgow, said:

Brain tumours are stubbornly difficult to treat and one of the main reasons for this is the blood brain barrier, a natural filter that blocks the passage of drugs.

But these results suggest that olaparib is able to leak through because this barrier is disrupted in glioblastoma. By showing that this drug reaches brain tumours, we are in a much stronger position to use it to make current treatments more effective.

Dr Nigel Blackburn, Cancer Research UK's director of drug development, said:

While overall survival for cancer is improving, survival for brain tumours is still very low and the blood brain barrier is a significant pharmacological obstacle.

Experimental trials like this, which test new ways to reach these hard to treat tumours, are crucially important if we are to see more patients survive their cancer.

Professor Susan Short, member of NCRI's Radiotherapy Research Working Group, said:

We're just beginning to realise the full potential of PARP inhibitors to tackle many different types of cancer, so it's exciting to see that olaparib could potentially be used to treat glioblastoma in combination with chemotherapy and radiotherapy.

These results are a huge step forwards in developing better treatments for patients with brain tumours, which claim too many lives every year.

Notes to Editor

*48 patients were recruited (median age 51 (18-68); 29 male, 19 female). 27 patients underwent surgery and 35 received olaparib/TMZ. Researchers evaluated the maximum tolerated schedule and also measured olaparib exposure in tumour core, tumour margin and plasma following four doses.

**Olaparib was detected in 73 of 74 tumour core specimens from 27 patients (mean concentration: 588nM). Olaparib was also detected in 27 of 28 tumour margin specimens from 10 patients (mean concentration 500nM).

***a common side effect researchers worked to reduce was myelosuppression - decreased bone marrow activity which can lead to immunosuppression, infection and bleeding.

4. Parliamentary material

PQs

[Cancer: Nurses](#)

Asked by: Ashworth, Jonathan

To ask the Secretary of State for Health and Social Care, how many cancer clinical nurse specialists were working in the NHS in the last period for which figures are available.

Answering member: Steve Brine | Department: Department of Health and Social Care

The number of cancer clinical nurse specialists (CNSs) is not routinely collected. Macmillan Cancer Support is due publish to the latest CNS census in spring 2018.

In the 2016 Cancer Patient Experience Survey, 90% of patients reported being given the name of a CNS who would support them through their treatment. Health Education England's first ever Cancer Workforce Plan, published in December 2017, made the commitment to support the expansion of CNSs so that every patient has access to a CNS or other support worker by 2021. This will be achieved by developing national competencies and a clear route into training.

HC Deb 16 April 2018 | PQ 135003

[Cancer: Medical Treatments](#)

Asked by: Shannon, Jim

To ask the Secretary of State for Health and Social Care, what progress has been made on implementing recommendation 32 of the NHS Cancer Strategy on the adaptation of immunotherapy treatments.

To ask the Secretary of State for Health and Social Care, what progress has been made on recommendation 32 of the NHS Cancer Strategy, Achieving World Class Outcomes, on the adoption of immunotherapy treatments.

Answering member: Steve Brine | Department: Department of Health and Social Care

The development of immunotherapies for the treatment of cancer is an emergent area of clinical practice. The National Institute for Health and Care Excellence has recommended a number of immunotherapies for routine use on the National Health Service, and these are commissioned by NHS England.

HC Deb 03 April 2018 | PQ 134411; PQ 134409

[Cancer and Rare Diseases: Medical Treatments](#)

Asked by: Smith, Henry

To ask the Secretary of State for Health and Social Care, what recent assessment he has made of the effectiveness of NICE appraisals for new treatments for rare (a) diseases and (b) cancers.

Answering member: Steve Brine | Department: Department of Health and Social Care

Most new drugs and significant licence indications are assessed by the National Institute for Health and Care Excellence (NICE) through its technology appraisal programme, through which NICE has been able to recommend a significant number of drugs for the treatment of rare cancers and other diseases for routine use on the National Health Service. NICE also operates a separate Highly Specialised Technology evaluation programme for the evaluation of a very small number of treatments for very rare diseases.

The methods and processes NICE uses in the development of its guidance are internationally respected, have been developed through extensive engagement with a full range of stakeholders, including the Department, and are regularly reviewed to ensure that they remain fit for purpose.

HC Deb 03 April 2018 | PQ 134188

[Cancer](#)

Asked by: Dakin, Nic

To ask the Secretary of State for Health and Social Care, pursuant to the Answer of 26 February 2018 to Question 127294, on cancer, and with reference to paragraph 7 of the Next steps on the NHS Five Year Forward View report, published in March 2017 on survival rates, between what years have been compared to reach the estimate of 7,000 more people are surviving cancer after NHS treatment than would have three years before; and what values for survival index and number of cancer patients were used to arrive at this number.

Answering member: Steve Brine | Department: Department of Health and Social Care

The figure for the number of lives saved over three years is the difference between two figures:

- the number of deaths from cancer occurring in one year, taking into account the last published set of survival rates (these were for patients followed up until 2015, at the time of writing of the March 2017 report) and the number of new cancer cases each year (there were approximately 297,000 new cancer cases in 2014); and
- the number of deaths which would have occurred if survival rates were lagging three years behind.

The survival rates used in computing the two figures above (shown in the table below) reveal an increase in all published cancer survival rates in the last three years. Approximately 7,000 more people would have died from cancer in 2015 if survival rates had still been those that applied to patients followed up until 2011.

Survival rates (scale 0 - 100) of patients diagnosed with cancer in England (Office for National Statistics)

Year patients diagnosed	One year since diagnosis	Five years since diagnosis	10 years since diagnosis
1999	60.6	42.5	36.2
2000	61.1	43.1	36.9
2001	61.5	43.7	37.5
2002	62	44.4	38.2
2003	62.6	45	38.9
2004	63.1	45.7	39.6
2005	63.7	46.3	40.3
2006	64.2	47	:
2007	64.9	47.7	:
2008	65.6	48.4	:
2009	66.3	49.2	:
2010	67.1	49.9	:
2011	67.9	:	:
2012	68.8	:	:
2013	69.6	:	:
2014	70.4	:	:

HC Deb 29 March 2018 | PQ 134218

[Brain: Tumours](#)

Asked by: Docherty, Leo

To ask the Secretary of State for Health and Social Care, what steps the Government is taking to (a) increase public awareness of the symptoms of brain tumours and (b) promote early diagnoses of that condition.

To ask the Secretary of State for Health and Social Care, what plans the Government has to increase the level of medical support for people who have brain tumours.

Answering member: Steve Brine | Department: Department of Health and Social Care

There is currently a major £130 million investment in the modernisation of radiotherapy equipment in England. Combined with new approaches to surgery, it is hoped that around 6,000 brain tumour patients a year will benefit from effective but less invasive treatments.

Improving early diagnosis of all cancer is a priority for this Government however we recognise that diagnosis of brain tumours can present certain challenges in general practice. As such, we support the work of HeadSmart in increasing awareness of symptoms that might be brain cancer. As well as making the National Health Service in England aware of the benefits of HeadSmart we have highlighted its benefits with Directors of Public Health, health visitors and school nurses, to encourage their use by professionals in signposting to specialist advice if needed. Further information is available at:

<https://www.headsmart.org.uk/>

NHS England has confirmed £200 million of transformation funding over the next two years, to encourage local areas to find new and innovative ways to diagnose cancer earlier. NHS England's Accelerate, Co-ordinate, Evaluate (ACE) programme is testing innovative ways of diagnosing cancer earlier, with ACE Wave 2 piloting multi-disciplinary diagnostic centres for patients with vague or non-specific symptoms, such as brain cancers.

Finally, the government has committed its support to the newly established Less Survivable Cancers Taskforce. The Taskforce is a radical new taskforce representing cancers with stubbornly poor survival rates, specifically lung, liver, brain, oesophageal, pancreatic and stomach cancers. Although cancer survival rates are at an all-time high, these cancers all have a five-year survival rate of less than 20%. The Taskforce calls for the changes required in research, diagnosis, treatment and care to level up the less survivable cancers with those where great progress has been made.

HC Deb 28 March 2018 | PQ 134302; PQ 134300

[Cancer: Medical Treatments](#)

Asked by: McKinnell, Catherine

To ask the Secretary of State for Health and Social Care, what assessment his Department has made of the effect of the potential de-alignment with the EU's Clinical Trials Regulation (CTR) on access to cancer treatments after the UK leaves the EU.

Answering member: Jackie Doyle-Price | Department: Department of Health and Social Care

The Government values the strong collaborative partnerships that we have across the European Union in the areas of science, research and innovation, and as part of exit negotiations is working to ensure that we

have the best possible environment in which to support the United Kingdom medical research sector and patient access to cross-border clinical trials after we leave the EU.

In the UK, the Medicines and Healthcare products Regulatory Agency, Health Research Authority, ethics services, National Institute for Health Research and the National Health Service have been working towards implementation of the new European Clinical Trials Regulation (CTR) since it was agreed in 2014. The application date of the CTR across the EU is yet to be set by the European Commission, but is expected to be in early 2020.

Whatever the outcome of the UK's EU exit negotiations, the current regulatory approval legislation will stay in place until such time as any changes are needed, so there will be no interruption in UK clinical trials approval. The EU Withdrawal Bill will make the current UK clinical trials regulations (2004 2001/1031) that implement the clinical trials directive (2001/20/EC) operable on exit day and this is not contingent on any decision about whether the CTR will apply in the future.

HC Deb 27 March 2018 | PQ 133956

[Cancer: Drugs](#)

Asked by: Ashworth, Jonathan

To ask the Secretary of State for Health and Social Care, how many patients have received medicine funded by the Cancer Drugs Fund by medicine since 2016.

Answering member: Steve Brine | Department: Department of Health and Social Care

Since the new Cancer Drugs Fund began in July 2016, just over 17,600 patients have been registered to receive treatment for 48 medicines.

Below is a table showing the breakdown by medicine.

Drug	Number
Atezolizumab	34
Bendamustine	2,321
Bevacizumab	1,595
Blinatumomab	29
Bortezomib	105
Bosutinib	39
Brentuximab	346
Cabozantinib	154
Carfilzomib	45

Ceritinib	15
Cetuximab	1,708
Clofarabine	82
Crizotinib	127
Daratumumab	35
Dasatinib	107
Eribulin	347
Everolimus	370
Ibrutinib	1,067
Ipilimumab/Nivolumab	97
Ixazomib	119
Lenvatinib	Fewer than 10
Nab-paclitaxel	134
Nelarabine	45
Nivolumab	541
Obinutuzumab	33
Olaratumumab	199
Osimertinib	255
Palbociclib	413
Panitumumab	392
Pemetrexed	37
Pembrolizumab	1,604
Pertuzumab	1,739
Pegylated liposomal doxorubicin	48
Pomalidomide	380
Ponatinib	88
Radium-223 Dichloride	243
Regorafenib	74
Ribociclib	29
Sorafenib	871
Sunitinib	71

Talimogene laherparepvec	Fewer than 10
Temsirolimus	Fewer than 10
Trastuzumab Emtansine	673
Trametinib/Dabrafenib	172
Trifluridine and tipiracil	444
Vandetanib	40
Venetoclax	118
Vismodegib	217

Source: NHS England. Information provided from 31 July 2016 to end of January 2018 (latest data available).

Note:

Numbers lower than 10 are rounded-up to avoid releasing potentially patient identifiable data, as per NHS England's data protection commitments.

HC Deb 07 March 2018 | PQ 130200

[Brain: Tumours](#)

Asked by: Amesbury, Mike

To ask the Secretary of State for Health and Social Care, what assessment he has made of the link between early diagnosis of brain tumours following MRI scans and cancer survival rates; and what steps his Department is taking to improve the early detection of such tumours.

Answering member: Steve Brine | Department: Department of Health and Social Care

Cancerous brain tumours are difficult to diagnose and often require immediate treatment. Adults with suspected brain and central nervous system cancers are urgently referred for an MRI scan of the brain for assessment¹. For diagnosed patients, the survival statistics² are:

- 14% of patients survive for ten years or more;
- 19% of patients survive for five years or more; and
- 40% of patients survive for one year or more.

Earlier diagnosis is a key priority for NHS England. We are investing £200 million in transformation funding for earlier diagnosis and better post-treatment care and support for cancer patients.

The National Cancer Programme has established a number of initiatives to support ambitions of improving earlier diagnosis including:

- The Accelerate, Coordinate, Evaluate (ACE) programme tests a new, multi-disciplinary diagnostic centre approach to diagnosing patients. The

model is focussed on patients with vague or unclear but concerning symptoms, to ensure they receive a diagnosis as quickly as possible; and

- The Faster Diagnosis Standard aims to ensure that patients that are referred for an investigation with a suspicion of cancer, including brain tumours, are diagnosed or have cancer ruled out within 28 days, and we are continuing to move towards national implementation, with a new measurement system going live in hospitals from 1 April 2018.

The Government is also supportive of HeadSmart, a United Kingdom-wide campaign to reduce diagnosis times of childhood brain tumours. The campaign aims to raise national awareness of the common signs and symptoms of a brain tumour in children and young people by equipping parents, the public and healthcare professionals with the information they need.

Finally, last week the Government announced a package, alongside Cancer Research UK and Brain Tumour Research, to boost research and investment into brain tumours. We will commit £20 million, through the National Institute for Health Research (NIHR), over the next five years – with the aim of doubling this amount once new high-quality research proposals become available. Cancer Research UK has also confirmed £25 million over five years in major research centres and programmes dedicated to brain tumours. This research will make new discoveries that the NIHR can then translate into treatments for patients.

Notes:

¹National Institute for Health and Care Excellence – <https://www.nice.org.uk/guidance/ng12/chapter/1-recommendations-organised-by-site-of-cancer#brain-and-central-nervous-system-cancers>

²Cancer Research UK - <http://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/brain-other-cns-and-intracranial-tumours#heading-Zero>

HC Deb 26 February 2018 | PQ 128883

Cancer

Asked by: Dakin, Nic

To ask the Secretary of State for Health and Social Care, with reference to page 22 of Next Steps On The NHS Five Year Forward View, published in March 2017, what the evidential basis is for the statements that (a) an estimated 7000+ more people surviving cancer after successful NHS cancer treatment compared to three years prior and (b) within two years, more than 5000 extra people a year will survive cancer as compared to now.

Answering member: Steve Brine | Department: Department of Health and Social Care

The survival projections are based on the one-year survival figures in the Office for National Statistics publication of the Clinical Commissioning Group Cancer Survival Index. One-year survival for all cancers was

measured for patients diagnosed between 2010 and 2014 and followed up to 2015. Further information can be found at the following link:

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/indexofcancersurvivalforclinicalcommissioninggroupsinengland/adultsdiagnosed1999to2014andfollowedupto2015>

HC Deb 26 February 2018 | PQ 127294

[Cancer: Medical Treatments](#)

Asked by: Cameron, Dr Lisa

To ask the Secretary of State for Health and Social Care, what steps his Department is taking to maintain the quality of service of specialist diagnostic workforces in cancer treatment after the UK leaves the EU.

Answering member: Steve Brine | Department: Department of Health and Social Care

We value the enormous contribution of all the staff working in health and social care from across the European Union and the rest of the world. We are committed to ensuring that the National Health Service and social care have the nurses, midwives, doctors, carers and other health professionals that they need to deliver the high quality service on which patients rely following the United Kingdom's exit from the EU.

The Prime Minister has been very clear that EU citizens living lawfully in the UK will be allowed to stay.

The Department has submitted evidence to the Migration Advisory Committee to ensure the position of staff in health and social care is fully understood and taken into account as part of their evidence gathering into the impact of the UK's exit from the EU on the UK labour market.

Health Education England published the cancer workforce plan in December 2017 which sets out actions as recommended in the Cancer Strategy for England, including for the diagnostic workforce up to 2020/21. The plan also considers future challenges beyond 2020/21.

It is the responsibility of the devolved governments in Northern Ireland, Scotland and Wales to ensure they have the specialist workforce to deliver cancer services.

HC Deb 17 January 2018 | PQ 122109

[Cancer: Medical Treatments](#)

Asked by: Berger, Luciana

To ask the Secretary of State for Health and Social Care, how many hospitals have met the national cancer waiting time standard for commencing chemotherapy treatment within 31 days of a clinical

decision having been made in the latest period for which figures are available.

Answering member: Steve Brine | Department: Department of Health and Social Care

132 out of 139 National Health Service trusts reporting activity in November 2017 (latest data available) met the 98% standard of delivering an anti-cancer drug regimen within one month of a decision to treat.

NHS England publishes quarterly performance data on cancer waiting times standards, along with monthly provisional statistics which can be accessed at:

<https://www.england.nhs.uk/statistics/statistical-work-areas/cancer-waiting-times/>

HC Deb 16 January 2018 | PQ 122318

Debates

Commons debate - Cancer Strategy

HC Deb 22 February 2018 | Vol 636 c399-

<https://hansard.parliament.uk/Commons/2018-02-22/debates/3BDD7D0E-1B8E-462A-81FD-A0E53A9C617F/CancerStrategy#contribution-032592D9-6D42-4BD2-82D5-13B27C753730>

Lords debate – NHS: Cancer Treatments

Lords question for short debate on what action they are taking to evaluate innovative cancer treatments and make them available through the National Health Service, and to raise life expectancy for cancer patients.

HL Deb 25 January 2018 | Vol 788 cc1168-1194

<https://hansard.parliament.uk/Lords/2018-01-25/debates/2665383A-7D07-42B2-8DA0-581D43365F2D/NHSCancerTreatments#contribution-25C0DB7D-572A-48EC-9EF8-2A68374E3A1E>

5. Useful links and further reading

NHS England

National Cancer Strategy

<https://cancervanguard.nhs.uk/national-cancer-strategy/>

Cancer Strategy Implementation Plan

<https://www.england.nhs.uk/cancer/strategy/>

The Brain Tumour Charity *What is an adaptive clinical trial?* 24 January 2018

<https://www.thebraintumourcharity.org/media-centre/news/latest-news/what-adaptive-clinical-trial/>

NHS Choices: Malignant Brain Tumour

<https://www.nhs.uk/conditions/malignant-brain-tumour/>

NICE guidance: Brain cancers

<https://www.nice.org.uk/guidance/conditions-and-diseases/cancer/brain-cancers#pathways>

Cancer Research UK *Glioma in Adults*

<http://www.cancerresearchuk.org/about-cancer/brain-tumours/types/glioma-adults>

The Brain Tumour Charity

<https://www.thebraintumourcharity.org/>

Brain Tumour UK information sheet *High-Grade Glioma brain tumours and treatment options*

https://www.nhs.uk/conditions/brain-tumour-malignant/documents/4_high_grade_glioma_brain_tumours%5B1%5D.pdf

Macmillan *Types And Grades Of Primary Brain Tumours*

<https://www.macmillan.org.uk/information-and-support/brain-tumours/understanding-cancer/types-brain-tumour.html>

Headcase Cancer Trust

<http://www.headcase.org.uk/>

Brains Trust Brain Tumour *Hub Brain tumour clinical trials available for:
Glioblastoma*

<http://brainstrust.org.uk/brain-tumour-hub/clinical-trials.php?brain-tumour-type=5>

UCL Glioma Research Group

<https://www.ucl.ac.uk/cancer/research/department-oncology/glioma-research-group>

National Hospital for Neurology and Neurosurgery

<https://www.uclh.nhs.uk/OurServices/OurHospitals/NHNN/Pages/Home.aspx>

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