Cancer is an accelerating global crisis in need of international solutions. With more than 3.7 million new cases and 1.9 million deaths each year, cancer is the second most common cause of morbidity and death in Europe. In the UK, one in two people will develop cancer at some point, and as more people benefit from longer life expectancy, the number of cancer cases is expected to rise.

Our ambition is to see 3 in 4 people with cancer surviving the disease by 2034. International research is at the heart of our plan to reach this target. **CRUK is the largest independent funder of cancer research in the world**, spending £423m (€490m) on research in 2017/18 alone.

But our progress relies on close cooperation with international partners. At latest estimate, CRUK researchers were partnering with more than 400 different organisations in the EU27. This briefing, for prospective UK MEPs, details urgent action that needs to be taken to protect this vital UK-EU collaboration – to benefit patients in the UK, Europe and around the world.

Clinical trials are the gold standard in testing whether new medical interventions are safe and effective, and provide patients with opportunities to access potentially lifesaving innovations at an early stage in their development. Clinical research is a vital strand of CRUK’s work and we fund nearly 200 clinical trials and recruit around 25,000 patients each year to all trials we support.

UK-EU trials are an essential feature of our clinical research - particularly vital for rare and childhood diseases, where single countries may not have large enough patient populations to run trials alone. 28% of the trial CRUK supports take place with at least one other EU Member State, and overall **4,800 UK-EU clinical trials took place between 2004 and 2016**. The UK participates in the highest number of pan-EU trials for rare diseases and childhood diseases of any Member State.

Pan-EU trials currently operate under the Clinical Trials Directive (2001/20/EC) (CTD). The CTD will be replaced by the forthcoming EU Clinical Trial Regulation (536/2014) (CTR) – regarded by the research community as a significant improvement, and which the UK was central is devising. While UK

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Government has committed to aligning as closely as possible with this regulation, there is more work to do. **There is currently no provision for third country access to the underpinning digital infrastructure, which speeds up trial-set-up and improves safety reporting.**

If the UK is excluded from this infrastructure, it will significantly hamper the set-up of the UK-EU trials which benefit patients across Europe.

**Action:** Make the case for continued UK-EU cooperation on clinical research, and UK access to the digital infrastructure associated with the Clinical Trial Regulation.

### 2. Securing patient access to medicines

The European Medicines Agency (EMA) has a key role in making new medicines available for use in Europe, by evaluating applications for marketing authorisation (allowing a medicine to be sold in the EU). This certifies a medicine’s safety, efficacy, and manufacturing quality, before its cost-effectiveness is then evaluated at a UK level.

The UK’s Medicines and Healthcare products Regulatory Agency (MHRA) has worked productively with the EMA to promote patient access to new treatment options. Between 2008 and 2016 the MHRA acted as the lead assessor in around 20% of centralised EMA marketing authorisations.

Divergence from the EMA’s marketing authorisation arrangements could make the UK a lower-priority market for the launch of new medicines and ultimately delay patient access. The EMA covers an area responsible for 25% of global pharmaceutical sales; the UK makes up only 3%. **For comparison, Switzerland’s independent medicines regulator has been found to approve medicines around 5 months later than the EMA.**

A reduced role for the MHRA in the EMA’s procedures could also affect patient access to new medicines in the EU. **Uncertainty is already affecting the MHRA/EMA relationship.** In particular there is concern that after Brexit the MHRA will not be able to work on EMA medicines assessments. This risks undermining the leading status of UK science and leaving a sizable gap in EMA capabilities. Indeed, the EMA has already scaled back its operations in anticipation of losing MHRA capacity and expertise.

**Action:** The UK must continue its close working relationship with the EMA on the licensing of medicines, with an active role for the MHRA, to the benefit of patients across Europe.

### 3. Shaping EU collaborative research programmes

Funding from EU sources helps support the UK’s thriving research environment, and provides a framework under which vital cross-national collaboration can take place.

**Horizon Europe, the forthcoming Research Framework Programme, is due to come into effect in 2021. It will include, for the first time, a ‘mission’ focus on cancer** – coordinating continental action to drive improvements in outcomes. The mission structure has been confirmed, but rules on third country association and budgets will be examined by the European Parliament this Autumn.

The UK must retain access to this programme at this crucial moment. Our world-leading cancer research environment will provide benefit to, and derive benefit from, Horizon Europe association.

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The UK has been a significant beneficiary of the EU’s Research Framework Programmes. In the last two such programmes, Framework Programme 7 (FP7) and Horizon 2020, the UK has had over 2,300 researchers in more than 1,000 health related projects, valued at €1.2 billion. The European Commission reports that for every €1 from FP7 the direct and indirect economic effects produce €11.

**Action:** When MEPs confirm the rules of Horizon Europe this Autumn, the UK’s ability to associate and contribute to the programme must be paramount.

### 4. Protecting the mobility of researchers

Medical research is inherently international, and a mix of domestic and international scientific talent underpins the UK’s world-leading position in the life sciences. At CRUK, 76% of post-Doctoral researchers at our institutes are not originally from the UK. This is also true of half of our PhD researchers - more than a third (35%) from the EEA.

Freedom of Movement has been a powerful driver of scientific collaboration. Many British researchers live and work in the EU27 - indeed, 72% of UK-based researchers spent time at non-UK institutions between 1996 and 2015. If Freedom of Movement is to end, it is essential that scientific mobility – both for short term collaborations and longer term placements – is protected.

In the UK, CRUK is working to ensure the Government’s new immigration system works as well as it can for science and research flows from around the world, including opposing detrimental visa costs and salary caps. **But it is essential that the UK and EU reach agreement to protect the unique links between research communities in the continent.** The Political Declaration makes reference to protecting the mobility of researchers, and the previous European Parliament noted the need for a very close ongoing relationship on science. It is crucial this is built on – to protect our research environment, and provide certainty to the researchers who make it world-leading.

**Action:** MEPs must build on the work of the last Parliament and ensure UK-EU researcher mobility is protected.

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**The BEACON clinical trial – Case Study**

Overleaf, you can see a visualisation of the BEACON clinical trial – supported by CRUK. **Trials like this, which rely on international cooperation, must be protected.**

Neuroblastoma is a rare form of cancer that mostly affects children under the age of five. Improvements in treatment owing to scientific research mean that global survival rates are higher than ever before. Yet more than half the children with aggressive forms of the cancer will see it return, called recurrent neuroblastoma. And for these children, there are few treatment options left.

This is the first ever randomised clinical trial to treat children with first relapsed neuroblastoma conducted across Europe. The trial itself was designed in the UK, with the Chief Investigator, Dr Moreno, based in Spain.

Dr Moreno says **“The BEACON-Neuroblastoma trial is a fantastic example of successful European collaboration. Such small patient populations make research into rarer cancers difficult, but all ten countries involved have joined forces to improve things for children with poor prognosis cancers.”**

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European collaboration on clinical trials

BEACON Neuroblastoma trial

UK
• Designed and sponsors the trial
• Funding from Cancer Research UK
• Recruited the most patients

Ireland
• Trial sites open and recruiting patients

Netherlands
• Trial sites open and recruiting patients

Denmark
• Trial sites open and recruiting patients

Germany
• Trial sites open and recruiting patients

Austria
• Trial sites open and recruiting patients

Switzerland
• Trial sites open and recruiting patients
• Drug provided by Roche Pharma AG

Spain
• Chief Investigator is based here
• Trial sites open and recruiting patients

Italy
• Trial sites open and recruiting patients

Together we will beat cancer

1 Imagine for Margo is a French charity dedicated to tackling children’s cancer
2 Roche AG is a Swiss pharmaceutical company