

## **Response from the Royal College of Pathologists to the House of Commons Science and Technology Committee inquiry on Brexit, Science and Innovation: Preparations for 'No-Deal'**

- What a No Deal Brexit would mean for the science and innovation community

The scope of our work is in the healthcare use and novel development of in vitro diagnostic tests, including testing blood and tissue for disease and development of novel diagnostic technologies including "digital pathology" - the diagnosis of cancer using digital images.

A no deal Brexit would have the following effects:

### 1. Access to European research funding and collaborations

A no-deal Brexit would prevent UK medical researchers from accessing European funding for research. This is a very large amount of research funding (EUR 30 billion from 2018-2020), and currently the UK is one of the greatest beneficiaries of this funding. The government has committed to replacing horizon 2020 funding, but this does not account for all the EU funding available to UK scientists.

Modern research is inherently collaborative and requires significant transfer of knowledge, skills and information between researchers. Exclusion from these research networks would leave UK researchers isolated from significant international collaborations.

### 2. People

A no-deal Brexit will have a very serious impact on the people involved in tissue research and diagnosis. Our Fellows are pathologists (doctors) and scientists - 14% of pathologists are EU graduates. There is currently a severe shortage of pathologists in the UK, likely to get worse over the coming years, and only 3% of pathology departments have enough staff. European pathologists and scientists are trained to high standards and we need to encourage these highly trained individuals to join the NHS to meet this need, as the NHS is currently unable to meet this demand.

Innovations in digital pathology require highly trained computer scientists with skills in software development and artificial intelligence. These skills are in high demand, and these people are already in short supply in the UK - many positions are filled by non-UK staff. A no deal Brexit will affect the existing population of computer scientists and make it significantly harder to recruit computer scientists to work in UK universities and businesses. This will limit our ability to lead in the development of AI in healthcare just as this tech.

### 3. Attractiveness to industry as a partner for development and innovation

Industry sees healthcare as a good environment for the development of new technologies and a key market for the introduction of new medical technology. Adoption of a new drug or device in healthcare is highly prized as it tends to lead to adoption in other countries. A no deal Brexit will isolate the UK, removing its favourable status as an attractive partner for industry and reducing the incentive for industry to make UK-specific solutions. For example, software manufacturers will see little incentive in making customisations for UK-specific settings given the relatively small size of the market (66 million) compared to EU (300 million) or US (280 million) markets. The British in vitro Diagnostics Association has also provided commentary at <https://protect-eu.mimecast.com/s/zonsC5QpmIWBqjsQXW5r?domain=bivda.org.uk>

#### 4. Regulation

Currently the UK benefits from being part of an EU-wide regulatory framework. This allows the UK to influence and deliver the regulation of devices and drugs across the entire EU. It increases the impact of UK regulators and UK scientists developing drugs and devices, as industry has an incentive to comply with regulatory standards in such a large market. In a no-deal Brexit the ability of the UK to influence global regulatory standards, and persuade industry to comply with UK specific regulations, would be reduced.

We believe that a no-deal Brexit would have a serious and long-standing impact on diagnostics and future ability for research and innovation in this area.

- The adequacy of what the Government and its non-departmental public bodies are doing to prepare for such an outcome.

Other than the promise regarding Horizon 2020 funding above, we are not aware of any specific preparations or mitigating actions the government has undertaken.

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