HOUSE OF COMMONS

Health and Social Care Committee

Oral evidence: Future Cancer, HC 1250

Thursday 14 September 2023

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Watch the meeting

Members present: Steve Brine (Chair); Paul Blomfield; Mrs Paulette Hamilton; Rachael Maskell; James Morris.

Questions 91 - 121

Witnesses

I: Professor Sir John Bell, Regius Professor of Medicine, Oxford University; Dr Robin Buckle, Chief Science Officer, Medical Research Council; Dr Susan Galbraith, Executive Vice President of Oncology Research and Development, AstraZeneca; and Professor Kevin Harrington, Head of the Division of Radiotherapy and Imaging, Institute of Cancer Research.

Examination of witnesses

Witnesses: Professor Sir John Bell, Dr Robin Buckle, Dr Susan Galbraith and Professor Kevin Harrington.

Q91 **Chair:** Good morning. It is Thursday morning, 14 September. Welcome to the Palace of Westminster and the House of Commons. This is the Health and Social Care Select Committee, a cross-party Committee of MPs. We are looking today at our big inquiry that we call "Future Cancer". This is the third oral evidence session that we have taken into this inquiry, which follows a huge volume of written evidence that we have taken. The purpose of this inquiry is to look beyond the month-to-month cancer services figures. There has been lots of debate recently around the 28-day faster diagnosis standard, or the 62-day treatment target. That is important to this Committee, and we have given and will continue to give great scrutiny to it.

The purpose of this inquiry is to lift our gaze above those day-to-day figures and to look at what the future of upstream, pre-symptomatic cancer diagnosis looks like, and at the future of cancer treatment in the next 10, 20 or 30 years, long after we have all gone. That is why we decided to do this inquiry.

I will introduce our guests in just a moment. This session will explore the landscape of cancer research in the context of the wider life sciences agenda in the UK. It will look at our status as a genuine world leader—question mark, close brackets—in cancer research. Some of my colleagues will touch on Horizon Europe, which I am pretty sure will come up. If it does not from us, I am sure that it will from you.

Let us introduce our guests. We have Professor Kevin Harrington, head of the division of radiotherapy and imaging at the Institute of Cancer Research. We have Professor John Bell, regius professor of medicine at Oxford University, and a well-known voice to many of our viewers from the pandemic. Dr Robin Buckle is chief scientific officer at the Medical Research Council. Joining us online is Dr Susan Galbraith, who is executive vice-president of oncology research and development at AstraZeneca.

Thank you all very much for joining us. We really appreciate you giving up your time on a Thursday morning for what we hope is an important inquiry, and I know that the subject is one that you, as guests, will all be interested in.

Looking back to where we started this inquiry, we talked to the big cancer charities. Michelle Mitchell, the CEO of Cancer Research UK, told us that we want, as a country, to be "world-leading and not world-lagging" in cancer survival. She was very clear that we have to retain our position as a global leader in science and cancer research. Just to give you all an early touch of the ball, starting with you, Professor Bell, is the UK a genuine world leader in cancer research as things stand today?

Professor Sir John Bell: We are a world leader. We are not the world leader, but we are in the pack of people who make substantial contributions to cancer research. That is largely due to the fact that we have a very strong commercial sector in cancer research. AstraZeneca, of course, is one of the real leaders in oncology products, and that has happened over the past 10 years. They have done a terrific job.

We have a wide biotech sector and also a very strong academic sector, which really helps keep us afloat, but we do not have a perfect environment for undertaking cancer research yet, and we do need to think about how we make that work better.

Q92 **Chair:** Professor Harrington, from the point of view of the institute, we are a genuine world leader. I am sure that you would concur. What are the conditions that we need in order to go to the next division?

Professor Harrington: I would agree we are world-leading in cancer research. I would make the point, however, that, although we are in the pack, to extend Professor Bell's analogy, we are in danger of our position dropping down in that pack and are being outpaced by others.

In order to try to address why we are doing that and how we can perhaps prevent that from happening, we need to be far more effective in the way in which we attract research leaders into this country. We have had some issues around recruitment and retention of the brightest and the best. There are issues relating to when we interact with pharma colleagues and ask for opportunities to work, for instance, in clinical trial activity.

Unfortunately, the UK is being seen increasingly as a less favourable environment in which to conduct translational clinical research or, indeed, clinical trials. In many respects, that is due to the fact that we are not as nimble or as quick as we could be in setting up and delivering on research.

When we deliver on that research, we are, regrettably, seen as a country where the products and outputs of that research are not always put into place. We do not always approve the novel therapies that we are part of establishing as being the new standards of care that may apply around the world but do not necessarily apply here in this country. Those are some of the things that we need to address.

Q93 **Chair:** Can I just explore that further with you? I will then bring in AZ. When you say "not as nimble", you are talking about barriers to research and particularly the transition of that to frontside use in the NHS. Therefore, is there a frustration from those researchers, in that they think, "It is not going to translate anything like quickly enough, if at all, and, therefore, there are other environments where it is a better place for me to be"?

Professor Harrington: There is a little bit of that, but that is not what my comment was really addressed at. I am a practising clinician as well as running a research laboratory at the Institute of Cancer Research.

Within the last two years, for the first time in the last 20 years of leading clinical trials, I am hearing, in discussion with pharmaceutical companies, "We are not going to bring this study to the UK". I have not heard that before, and we are beginning to hear that as one of the risks that we face. One of the reasons for that is that it takes such a long time to set up a clinical trial. The delivery of the clinical trial is seen as potentially clunky, although, when we get the thing going, we are seen as delivering extraordinarily good-quality data.

It is expensive to deliver trials here in the UK; Dr Galbraith may have comments on this. Then there is the frustration that naturally comes with the fact that you may be involved in developing things that are seen as practice-changing, but not here. That can be a frustration.

I do not think that scientists are saying, "I am not going to be appreciated in this country. I will go somewhere else". I do not think that that is the motivator, but some of the other aspects that I have just outlined would be considered.

Q94 **Chair:** That is fascinating, and we are going to explore it more as we go on, because you have literally, very early on, got to the nub of it. Let me bring in Dr Galbraith from AZ. Do you recognise what Professor Harrington is saying? How are we in this position so quickly, off the back of—let us face it—what looked like an absolutely golden period, when this country delivered the vaccine that people all around the world benefited from, and showed ourselves to be the opposite of what Professor Harrington was talking about? We showed ourselves to be nimble and quick-footed, and produced results. Do you recognise everything that you have heard so far?

Dr Galbraith: I do recognise it, and I would acknowledge that, in the context of the pandemic, in what was then a crisis, people absolutely came together and enabled the speed of clinical trials, but that is not the normal reality.

As noted in the O'Shaughnessy review, the UK is falling behind in commercial clinical trials activity. It has dropped from 50,000 patients per year in commercially led studies supported by the NIHR, to 28,000. It is also falling behind in the number of clinical trials initiated, and the time to get those up and going, so that is absolutely true.

On a broader point that Professor Harrington made, the UK is still a good place to do research and development. Indeed, AstraZeneca contributes £2.5 billion to the research that we do in this country on an annual basis. Access to the medicines that we research and develop in the UK is not good enough, and it makes it harder to justify investing in R&D in the UK, particularly as other nations become more competitive.

One example that I can give of where technology is accelerating rapidly is the area of cell therapy, which is an innovative technique that is making a difference in haematologic malignancies, but it has the potential to affect

solid tumour trials. The UK has a number of biotech companies that have been developed in this area.

If you look at what China is doing, for example, the Chinese regulatory authority in that space allows investigator-initiated trials to start more rapidly. China used to have a longer timeframe to get clinical trials up and going than many western countries. It has changed. It has rapidly accelerated and is enabling research in this space. It is exploding in China, and they are technologically ahead, from an innovation perspective, of any other country, in my view, having visited them a couple of times. I am just on my way to visit them.

That is just one example of the way in which that nimbleness that Professor Harrington referred to is being adopted in some regions. If we want to keep our research edge, that is something that the UK needs to continue to foster. This general environment of then rewarding the innovation that is done is important if you want large pharmaceutical companies to continue to invest on the scale that they have in previous decades.

In particular, we are also falling behind European countries in terms of that reward of innovation. For example, I can tell you that one of our breast cancer medicines, which addresses a high unmet-need population, has been available in France since November 2022 and in Germany since January 2023. This medicine has been extremely well received by clinicians. In fact, it got a standing ovation at the American Society of Clinical Oncology when the data were revealed. It is already used routinely in other clinical settings, but we are uncertain that this medicine is ever going to reach UK patients, despite this strong clinical demand, even though we have a willingness to offer the same commercial terms offered by France and Germany. Even in the best case, we are going to be a year behind Germany and France in approving this medicine, and that is just one example.

The issue is the general environment, not just in clinical trials but also in reward and innovation for what we are hoping to be, which is a leading life sciences industry. It is critically important that we do not fall further behind in this regard.

Q95 **Chair:** Dr Buckle, Dr Galbraith talked at the very start of her answer about Covid. That was not the normal reality. Are we saying that we can only be nimble and do that when our backs are against the wall in a crisis? That is a pretty damning position, if so.

Dr Buckle: The Covid example catalysed everyone working in the same direction with a focus, and there are elements to that response that we need to capture and bring into routine delivery. The build of that vaccine, and the clinical trial structure that supported the assessment of many interventions, was built on a long-term science base that was there and ready to use. You cannot magic these things out of nothing.

The pipeline that we are responsible for establishing through UKRI and Medical Research Council funding is really dedicated to the discovery, to the translatable and to the handover point into clinical studies. As has been said, the research base is strong and competitive. The issue really is about effective join-up and synergy.

Post Covid, we have seen a relaxation, to some extent, into business as usual, which is about different parts of the system being a little bit too self-interested. Barriers to data access and to recruitment and so on, which we saw solved during Covid, have regressed to a situation that is not great and causes some of the issues that we are discussing today.

In terms of our assessment of the science base—and we use international peer review and have standards that are checked by international comparators—we have a very strong basis. You visited, for example, the Crick Institute, I believe, and that would be one example. There are many that we could point to.

Some of the infrastructures that we built are attracting international attention in this space. UK Biobank is a fantastic example of an infrastructure that is open science, where researchers around the world are looking to the UK to develop, but it is the translation into commercial take-up and inward investment from companies that is the concern. At the research base level, we are doing what we can to promote inward investment, and we are fairly successful at that.

Chair: I am going to bring in Paulette Hamilton, but we will come back to this issue around translating that work into the treatment space, because that seems to me, from all four of you, to be at the heart of some of the challenge about future cancer. We can do the best lab work in the world, but if we are not getting it to patients, problemo. What we just heard is slightly depressing, but I am an optimist. Someone who is never depressing is Paulette Hamilton.

Mrs Hamilton: I always look on the bright side of life.

Chair: She does.

Q96 **Mrs Hamilton:** Good morning. I have two questions that follow on from each other. I will be asking Professor Harrington and Dr Robin Buckle, if you do not mind. If anybody else wants to pop in, I do not mind, but the questions are quite simple.

First, there was a piece of research from Nurse about funding in this area. It said that the UK invests a total of 2.6% to 2.7% of its GDP in research and development, when countries such as the USA, South Korea and Germany invest 3.2% to 4.6% of their GDP in research and development. Do you feel that the Government are doing enough in terms of leadership and investment when it comes to funding research in the long term?

Dr Buckle: The discussion of investment and the percentage of GDP is a live debate that has been around for quite a while. The description that

you have laid out of Paul Nurse's report alludes to the fact that we are low down the league table. We should aspire to being near the top of that table. That is undoubtedly the case.

The ambition of the current Government—I have heard it from opposition parties as well—to increase the R&D spend and commitment is moving in the right direction. We really need a long-term view, because this is not just about delivering increased funding; with that will be a necessity to build research capacity and capability.

We can honestly say that the UK punches above its weight, given the investment that we have in R&D. There is a lot of evidence that we have an effective R&D system. Can we effectively super-boost that with increased investment? I am sure that we can, but we need to recognise that there are structural and capacity-building issues that need to go alongside that.

Professor Harrington: As somebody who has devoted his career to research, you are not going to expect me to say, "No, you should not put more money into research". To amplify Dr Buckle's answer, I would agree with that, but, of course, it has to be spent in a way that delivers benefit.

One of the things that really needs to be looked at is the opportunity for sustainable investment, so that we build research structures and mechanisms whereby, rather than going through five-year, quinquennial cycles, which is the sort of thing that, as a practising scientist, I am used to, where you live and die by the sword of every grant review, there is sustainable investment in research.

We have to recognise that even when we go out and win a research grant for our organisation and for our own research laboratory, you may get only 80% of that money FEC with that grant, which leaves a funding gap. That funding gap is a perennial problem that organisations have to face. Again, I would ask that there is attention paid to that, looking at grant funding that allows for more of the direct costs of the research to be provided.

Then there is the long-term sustainability issue around the infrastructure and equipment that is needed to deliver research. One of the reasons why we may be lagging or falling back in the pack, to use the analogy that I used earlier, is that, in order to deliver some of the really high-tech genomic research and some of the more translational biomarker-led clinical work, we need to be up to date in terms of the equipment and infrastructure that we have available, as well as renewal programmes for infrastructure for delivery of research, and that can be for biological research in the laboratory or, as a practising radiation oncologist, the delivery of radiation therapy through the latest state-of-the-art machinery. We need to make sure that there is a structure that allows us to fund that effectively.

I would certainly endorse the idea that we could increase the percentage of GDP, and I leave it to the politicians to define how they are going to find that money, but we need to be really smart about the way we use that money.

Professor Sir John Bell: This is a really important point. I do not want to be an apologist for the Government, but I have to say that what we have seen over the past five years has been extraordinary in terms of the increase in Government funding for biomedical research and for research generally. It has risen to £20 billion a year, which is extraordinary. When I first started to make these arguments, we were at about 1.6% of GDP. There is only a limited amount that the taxpayer can do to push the numbers up.

Do not forget that the other key bit to this is our friends in industry, because they also go to that number. If we want to be at 3%, it is crucial that we make this an attractive place for the industry to invest and do R&D. That has turned out to be, as Susan has already alluded to, pretty challenging now. We have made the environment for doing clinical trials almost impossible. We also have this problem of uptake of the products that come through, so you can see why industry is starting to say, "I am not so sure about the UK. I am going to go somewhere else".

If you really want that number to grow, you have to focus on what you are doing to make this a really good place for industry. In fact, you cannot rely on Government to do that whole pitch. It is just unreasonable. It is really important to remember that we need to be good at working with industry in making this a great place for them to do their research and their development programmes.

Q97 **Mrs Hamilton:** Following on from that, I am passionate about pancreatic cancer. It is a specific interest of mine, the reason being that my best friend died of it. She was in her late 40s and suddenly realised she had cancer. Within three months, she was dead. What I am trying to ask you is around diagnosis. With the research and development that is going on, what would you like to see happen in areas around pancreatic cancer to increase Britain's relevance around earlier diagnosis in this area? I am saying pancreatic cancer, but it could be some difficult brain cancers and other conditions. It is just that pancreatic cancer is something that I am absolutely passionate about, and that is why I have highlighted it.

Dr Buckle: You are absolutely right. Efforts to improve early diagnosis and interception of cancer at the earliest stages are something that everybody is doing. I would say that we see the real challenges there about promoting interdisciplinary science at the outset, because a lot of this is around getting readouts from tissue samples. You need engineers, chemists, physicists and biologists, as well as clinicians. It is about building team science and promoting and incentivising interdisciplinary science.

There was an announcement yesterday, for example, in this space around doing exactly this, funded through UKRI and through a cancer sandpit type of approach. That is a small-scale example of what is needed.

Then, of course, we have to make sure, as John was alluding to, that industry is able to pick up and license the IP. There are investible propositions, so there needs to be proof of concept funding around this. Again, we have schemes that are dedicated to that, which I would say are successful with the amount of money that we can put in, but we will make progress only if we join up the fundamental science with the clinical pull and the need to deliver conceptual advances, which can then be picked up by industry.

Professor Harrington: You mentioned one of the cancers par excellence—and indeed brain cancer—where it is likely that early diagnosis could change the landscape, because most pancreatic cancer is diagnosed when it is already incurable by any of the existing treatments, and possibly by future developments for the next decade or two.

We need to look at ways of making diagnoses more quickly. That will include things that can be done, for instance, on blood tests, and there are huge developments around things like circulating tumour cells and circulating tumour DNA. There are big areas of opportunity there to make the diagnosis so that the treatment could be delivered when the disease is stage 1, rather than stage 4. It is the same in things like brain tumours and other difficult-to-treat cancers.

It is really important that we throw efforts into that, but we should also recognise the fact that, even in the space of pancreas cancer, which is quite often driven by a specific genetic alteration or mutation in a protein that is called RAS, within the last decade we have seen unprecedented developments in novel therapies built around a deep understanding of the biology of the cancer and how potentially to target really difficult-to-drug protein targets. That comes out of really revolutionary developmental science led in this country and elsewhere in the world.

That is a very fine example, not just of something we want to diagnose earlier, but because when you do, unfortunately, diagnose it at a later stage, some of our technological, medical and biological developments can lead to new therapies that can really change the way we go about this. It is across the whole piece—not just early diagnosis, but also treating patients at a later stage.

Dr Galbraith: I would like to re-emphasise what Professor Harrington said about early diagnosis. For some cancers, we have screening programmes. For others, like pancreatic cancer, we do not. There is a hope that we can introduce multi-cancer early detection tests, as they are called, through this technology of identifying circulating tumour DNA—bits of DNA that come off the tumour and get released into the bloodstream, which you can detect with the latest very sensitive tests.

I am excited that the UK is participating in an early trial of these multi-cancer early detection tests. That is very exciting and helpful, but it then needs to be followed by probably multimodal therapy, which is the future of cancer treatment. We already have surgery, radiation and chemotherapy as standard elements of cancer treatment. We need to put those together in the right sequence, together with some new therapies that can come in, better than current chemotherapy, perhaps with technologies like antibody drug conjugates or radioimmunoconjugates. We need to introduce immunotherapies into diseases like pancreatic cancer. There are new technologies like T cell engagers that pull the immune system into the cancer and give it a better chance to respond. There is then the cell therapy that I talked about earlier.

All of these can be done, and there is work ongoing right now on the research and development of multiple biotechs in industry, as well as academic labs around the world to help do that, but we need the environment to help bring these together quickly into novel regimens. This requires a partnership between industry, academia and the clinical trial environment to enable the UK to be at the forefront of that kind of development.

Q98 **Chair:** Professor Bell, can I just touch on the life sciences vision, which you were at the heart of? You said that the UK needs to be relentless in focusing energy and attention in the areas where it can gain competitive advantage. You talked about GRAIL, for instance, as a key example of that innovative commercial partnership. PinPoint is another example of that.

We have not talked about what the Galleri trial, GRAIL or PinPoint are doing, but, in some of the answers that you have given so far, you seem to be alluding to that as some of the upstream detection and prevention that we are talking about in future cancer. When the GRAIL and PinPoint pieces of work are done and have proved their concept, in terms of translating the work into practical examples, will we be in a place in this country where we can take advantage of that? What worries me is that we are going to prove it, and then other parts of the world will run with it.

Professor Sir John Bell: You are bang on with the question, because it is the thing that worries me most. There are many examples where we have led the world in discovery technology, both in the commercial world and in the stuff that academia has been doing, but because of the slow, incredibly pedestrian approach that we take to adopting these therapies, we are often the last to use them.

The GRAIL trial of circulating tumour DNA is great one. They recruited fantastically well around the country. It was a really good exemplar of what you could do. They will be expecting data about a year from now, which will give us a view on whether it works. What worries me about this is that the NHS is not really ready to take it up, so who is going to do it and what are we going to do with the results?

Let us pretend that we can diagnose half the pancreatic cancers early. That is pretty interesting, but then that puts a burden on other bits of the NHS. Who is going to operate on them? How does the system deal with a lot of these early diagnostic opportunities? They will dramatically change our outcomes, but you have to have a whole system to work. I worry about this a lot.

In the same way, NICE is not interested in T cell engagers. There are problems with armed antibodies and it is really challenging to get them in use. This is the cutting edge of cancer. If we want to be at the front edge of cancer survival and outcomes, we have to do all these things, and do them at pace, a bit like we did stuff in the pandemic, but let me tell you that this looks completely different from what we were doing there.

Q99 **Chair:** My limited clinical knowledge of surgery relating to pancreatic cancer, sticking with that example, is that, with an early stage 1 or pre-stage 1 detection, a Whipple surgery could remove the tumour and you could get a survivable outcome. Did you see anything in the NHS workforce plan that convinced you that we would be in a position, for instance, in that example, to take advantage of very early detection of pancreatic tumours?

Professor Sir John Bell: Unfortunately, the NHS workforce plan was at such a high level that it was very difficult to know what you were going to do, but I can say a couple of things. One is thatsz every time you train a ton of new doctors, productivity goes down, not up, so just be a bit careful about that model. The current environment in the NHS is not great for the medical profession. The analogy that I have been quoted on, which is probably fair, is that it is like training more people to go into battle in the Somme. You send them across and things do not go so well. There are some really fundamental issues about the environment in which we work.

Q100 **Chair:** Why do you say that when you train a bunch of new doctors, productivity goes down?

Professor Sir John Bell: We introduced about 2,000 new medical school spaces in the early 2000s, and yet productivity in the health service has fallen steadily. In fact, it is miles out of line with productivity in any other sector in the UK.

Q101 **Chair:** Were there other reasons for that?

Professor Sir John Bell: There are lots of other reasons for that.

Q102 **Chair:** I know that we are digressing a bit, but I say that because one of the working assumptions at the heart of the workforce plan is a productivity assumption. If that is not met, it worries me that the sums start to digress.

Professor Sir John Bell: I would challenge that assumption, because I am not entirely sure that that is where you are going to end up. I do not

want to get into this discussion at length, but we have always said, "It is a cheap and cheerful healthcare system. What do you expect? We are not going to get great outcomes". The truth is that this is a very expensive healthcare system now. We are one of the most expensive healthcare systems on the planet, although not as expensive as America, and our outcomes are the second-worst in the OECD. Fortunately, America is there and they always take the bottom slot on outcomes, but we are right next to them.

There are some fundamental issues that do not really have to do with the amount of money that we are putting into it. It is the way in which the system is organised. The example of clinical trials, which we talked about earlier, is a good one. We really do unnecessarily make it very difficult to start a trial, to initiate first patients in and get the things to run properly. We have a million people who are trying to regulate something that probably needs light-touch regulation rather than heavy-duty regulation, and those regulators are slow. There are lots of process things that do not involve having more doctors, which could make the whole thing work a great deal more smoothly.

Q103 **Chair:** With regards to the life sciences strategy, one of the visions talks about a UK-US bilateral cancer summit—the first ever such summit—to share ideas and identify opportunities for collaboration to accelerate advances in lifesaving approaches to cancer. Has that summit happened yet? I do not believe that it has.

Professor Sir John Bell: There was a Prime Ministerial-Presidential ya-ya or whatever it was, and they agreed things. We have been flipping through Prime Ministers pretty quickly, so these things get lost quite quickly.

Q104 **Chair:** Dr Buckle, it has not happened, has it?

Dr Buckle: It has happened in terms of 60 or 70 top scientists getting together bilaterally and having a discussion. A report is going to be published later this month on that summit.

Q105 **Chair:** Is there more to do on that relationship?

Dr Buckle: It has identified where the opportunities are. Many of those are structural, rather than on fundamental research—for example, data sharing or understanding regulatory pathways and synergies, much of which would address what we have. There are some actions being enabled as a consequence of that, but it is true to say that the momentum that went into that, as John has said, has dissipated because of the political landscape.

Professor Sir John Bell: I might just mention one thing about the life sciences vision, which is very relevant to the cancer space, and that is that we gathered a group of industry and scientific experts when we were building the vision and a strategy for life sciences in the UK. We said to them, "Tell us where medicine is going to be 20 years from now". That is

where we should paddle to, so that we get to where we need to be. They identified a number of areas that they thought were going to be really powerful, and where the UK could really contribute exceptionally well. One was genomics, and we are seeing that evolution happen now and are in a very strong position in that space.

The second one is data, and you saw how impressive the data assets were that this country had in Covid. For data, we were the best country in the world, without a shadow of doubt. The elastic band has twanged back now, so you cannot get access to any of the data, but that is a space that we could make a very significant difference to.

The third came largely from industry. Industry said to us, "In the future, for all the big, chronic diseases, including cancer, the main focus should be on prevention, early detection and early treatment, because that is what is going to get you the biggest uplift". We have tried to create some programmes that will allow us to evaluate that. The UK has a single-payer healthcare system, with 55 million people in England. It is a perfect place to evaluate those early intervention and prevention-type strategies. We need to push that agenda, because it is also one way to decompress the NHS. That is much more important and, to be clear, it does not need doctors; it needs other types of people. That is a side issue but a really important one.

Chair: It is very interesting, and "Prime Ministerial-Presidential ya-ya" is a new one on me, but I like it a lot. There is a lot of ya-ya in here—not on that subject, but on the subject of genomics, which you touched on, and which is one of the things that James Morris is interested in.

Q106 **James Morris:** Professor Bell, we have received quite a lot of evidence in this inquiry about the point that you were making on data access and the lack thereof. One of the commitments that the Government made as part of their digital strategy for the NHS was to "transform access to and linkage of NHS health and genomic data for data-driven innovation and inclusive clinical trials, whose results will be critical to ensuring public confidence in data access for research and innovation purposes".

Our expert panel, as part of this Committee, concluded that "Government's ambition in that area requires improvement in terms of implementation". We have received other evidence about this being a significant barrier. Why do you think it is a significant barrier and what do you think we can do to overcome it?

Professor Sir John Bell: You have come to the right conclusion. It needs more work. We have demonstrated how powerful our data assets are in Covid, as I said earlier, so there is no question that they are there and available, but the data world is confused by data ownership. There are lots of bits of the healthcare system that think that they own their bits of patient data, and they do not want to play with the wider set of healthcare providers. That has multiple disadvantages. It is massively disadvantageous to patients, because it is helpful that your hospital

knows what is in the GP record, and vice versa. In many cases, that does not happen at all, so that is not helpful.

It is also not helpful in terms of running a healthcare system, because, like any big organisation, you really want to have access to all the data—who is being seen where, what is an efficient way to manage these pathways and how you make that work. Cancer is a really important example of this, I have to say, because getting that right does require data flows.

The third thing is that, if you are going to enable the innovation agenda, having access to that data is going to be hugely powerful. The new developments in AI that we have seen in the last year are going to make it not just important but essential that we get access to that data, otherwise we will not be able to use that for the discovery stuff.

Those are the arguments in favour. One of the reasons that this does not happen is that there has not been a consistent view across the health system about who owns the data. In my view, the data is owned by two people. It is owned by the patients, first and foremost. That is my data that is sitting in the GP records. It is nobody else's data. I have some ownership of that. The second person who owns it is the NHS, not the hospital over here or the GP practice there. It is owned by the NHS. Until we get a real vision of that, it is going to be very hard to get it consolidated in one place.

Q107 **James Morris:** In terms of, say, genomic innovation, is it preventing us from doing exactly what we have been discussing, which is translating good-quality, leading-edge research? When they are talking in this statement about inclusive clinical trials, is it a major obstacle that is going to mean that we lose our competitive advantage? If we do not sort it out, are we going to be really behind the curve?

Professor Sir John Bell: When you talk to industry, what they would really like is rapid access to large, well-characterised populations, ideally with genomic and other types of data that would allow them to select particular subpopulations where they think that they are going to have the biggest impact. We do not offer that at the moment, and that is a major limitation. What is problematic about that is that we could offer that if we wanted to. We just need to get the will together to get it right.

Dr Buckle: A pivot point in terms of where research and implementation go is access to big data to have interoperable systems. There is a genetic basis for cancer, for sure, but there is also an environmental basis. There is a lot of data in terms of patient lifestyle and health inequity, which I am sure we will get to. Data is a solution to that. Again, going back to the Covid example, people dissolved some of the barriers and things worked very well, so we have a model that we know can work.

We also need to respect the analytical confidentiality piece and the respect of data donors. A lot of work is going in at this point in time

through UKRI around setting up infrastructures for secure data, the ethics and so on. We are at the leading edge of that, but what is holding us back are these policy barriers to how data is recognised and made discoverable. The confidence of the public is brought with us, because we have had false starts in this area before.

If AI is to be fully involved in this area, we need to make sure that the data going into the algorithms on which that is built is of the best quality. In the UK, again, we are well positioned to be able to do that, if we get this right.

Dr Galbraith: What Professor Sir John Bell said is absolutely right. What industry wants is well-annotated clinical data linked to the genomic data and, preferably, the pathology data as well. We have access to that in part. We have collaborations, for example, with companies such as Tempus, which provide that kind of annotated data at scale. It is available in the United States. It is not currently available routinely in many other places outside of that, and it is hugely valuable. We use it routinely in the design of all of our phase III trials. We have been doing that for a year to 18 months.

It is critical to get that design right, particularly in cancer, where you are often doing it in selective patient populations and you may not know how the standard of care in the control arm of your clinical trial is going to perform in that subset. It is hugely valuable.

I would also like to echo Sir John's comment that the patient owns these data. Navigating through the system for patients to get access to their data, so that they can get to the right people and the right decisions, is also very difficult. We need to make sure that we also think about how the patient is enabled in terms of owning their journey through their cancer treatment. The patient is often not allowed to get access to the data about their own cancer, and it can be extraordinarily frustrating to go through that system, so that needs to be sorted from a patient perspective as well as from a clinical trial access perspective.

Professor Harrington: Maybe I could just make one additional point and give a tangible example. I would agree with everything that the other witnesses have said. The UK is in an unprecedented position of potentially being able to provide these exquisitely annotated, very well-curated but ultimately held in secrecy data sets that are never joined up in the right way. We can correct that problem, I hope, and it would give us an enormous resource.

I want to give you an example of a process that I was involved in. As part of a CRUK award across the five major radiation research centres across the United Kingdom, we won a grant for a networked activity, at the heart of which was a data sharing platform. The award was for five years. It took us four and a half years to do the data sharing agreement. Unfortunately, that is symptomatic of some of the problems that we face. We need to correct that, because it is a huge missed opportunity.

The final point that I would make is that I can picture the look of bewilderment on the patient's face when you tell them, "I cannot share your data with Manchester, because we do not have an agreement". The patient is absolutely perplexed that we would not be able to do that as a routine. It is really a fundamental missed opportunity that we have. Fingers crossed that we are going to correct that, and I am encouraged to hear comments from Professor Bell in regard to that.

Q108 **James Morris:** That is a very interesting point. Dr Buckle, you talked about policy decisions in this area that would flip the debate about data, but what did you mean by that? What can we do to overcome this four-and-a-half-year issue? What is that barrier? Why can we not just get on with it?

Dr Buckle: There is policy with a small P and policy with a big P here. Data linkage to GP data sets, pharmacy records and so on is within the gift of the Department of Health and Social Care and associated bodies. From our side, there is also a policy issue with a small P in relation to how the university system operates, where there is, to some extent, some reluctance or risk aversion. As a funder, we are always trying to find initiatives to incentivise those barriers to come down.

As I said, during Covid, everyone was prepared to see the bigger picture and move in that direction, and we collectively need to check what the key components of that were, what we know can work and how we reinforce that in the long term.

Q109 **Rachael Maskell:** It is a genuine privilege having you here today. I want to take a slightly different tack with the first question to Dr Buckle. We know that around 40% of cancers can be avoided if proper prevention is in place. The whole area that is blowing our minds—the technologies and therapies that are being developed—is of real interest. If we are going to really drill into prevention, data is really important, as is having the knowhow and research to ensure that groups that are more exposed to cancers are targeted and supported.

In light of the data, how much resource is going into prevention? How is that being seen as a priority in the research field, to ensure significant change, particularly targeted at minoritised groups or those with socioeconomic disadvantage?

Dr Buckle: It is an excellent question. Increasingly, the sector sees prevention as a really hot area to move into. It probably has been underplayed. Smoking policy and the impact on lung cancer is one of the main examples of preventable cancer. That was generated through large-scale epidemiological evidence, and then translated into policy changes. To some extent, the molecular architecture of lung cancer was irrelevant to that action. There are other lifestyle choices that we need to influence.

I have mentioned UK Biobank. That is the sort of research that is providing increasing evidence about the interplay of modifiable lifestyle factors and particular preventable scenarios. The problem with something

like UK Biobank, which is not a criticism of it, is that it was not set up to be representative of the UK population. A lot of our evidence base, whether genetic, epidemiological or other forms, is based on a Caucasian, quite often middle-class society, and tracking their routes into illness.

We all increasingly recognise the need to diversify the information that is available to researchers in terms of population diversity at the molecular and biological level, as well as at the social level. That can impact recruitment and also groups coming forward for treatment. We have now understood, for example, in prostate cancer, through some recent evidence, how black men are more at risk in those areas. As a funder, we have gone big on making sure that policy around diversity in research is addressed. We are targeting that.

In terms of the prevention question, at the UKRI level, we, as the Medical Research Council, have to work with groups such as the Economic and Social Research Council, which has the expertise in behavioural change in the community. Implementation of prevention is as much about communicating and influencing behaviour change in lifestyle. Unfortunately, that has, again, been overly targeted at easy-to-reach communities in recent times.

I would conclude by just saying that, if you look at our delivery plan that was published last year, prevention is a major pillar. There are new initiatives within UKRI. Health and wellbeing is a major strategic activity, to which prevention is central, and public health initiatives are being built. The pendulum is very much swinging in that direction.

Q110 **Rachael Maskell:** It does seem that there is an inherent unconscious bias within the system that does still need addressing.

Professor Harrington: I just wanted to add to that, because Dr Buckle raises the question of prostate cancer. We have a test that performs extremely badly in terms of trying to diagnose early prostate cancer so that it can be treated at a stage where it is not going to threaten the patient's health. That is the PSA test. The reality is that that screening test is applied almost exclusively to a white, middle-aged and middle and upper-class population. It is exactly not the group of patients where the adverse outcomes occur, which is in those lower socioeconomic groups, with a disproportionately bad outcome in black patients. We need to be able to initiate screening processes and get the prevention message into communities and populations where it is going to really make a difference.

A colleague of mine, Professor Nick James, appeared before a committee such as this relatively recently, talking about an initiative that is being run through the Institute of Cancer Research. It is taking a van into the community and offering screening to individuals, not in a hospital setting but in the workplace, and using that opportunity not just to screen for such things as prostate cancer, but also to check for diabetes and hypertension risk, and to have a real opportunity to intervene with

members of the community and of society who are probably less well served by the health service. We need to address opportunities in that way as well, because those are relatively low-cost but potentially high-impact solutions.

Chair: To be fair, there is the yellow van initiative in Greater Manchester, where exactly that is happening. I met that team at Confed in Manchester this year, and they would be pleased to hear that put on the record.

Professor Sir John Bell: As the other witnesses have spoken about, this is a key issue. You may or may not be aware of the new initiative to try to make a larger cohort of adult people, starting at a much younger age than UK Biobank, at 18, and going all the way up to 110. The intention from the beginning is, first of all, to scale the cohort. This is our future health. Interestingly, it came out of the life sciences strategy, supported very strongly by industry but also by Innovate UK and a number of charities.

The idea of that is to collect a large cohort—5 million people, or 10% of the UK population, the same size as Denmark—and scrutinise them for their risk factors, find out who is at risk of this and that, evaluate early diagnostic tools in that setting, and help with the prevention agenda. It is bang on this.

Crucially, we set out to try to recruit large numbers of people from diverse ethnic populations, but also from diverse socioeconomic populations. In less than a year, we recruited about 850,000 people, so this is going to be a really big success story for the UK. We will recruit probably a million a year and get to our 5 million. We have already collected more people from hard-to-reach groups than all the other cohorts have ever done in the UK, so we are pushing very hard on that door to make sure that it is a properly representative population. There are some assets in place that will help us to address that, focused on prevention and early detection, so there we are.

Q111 **Rachael Maskell:** That is very encouraging for me. If I may turn to a second topic and a question to Professor Harrington regarding radiotherapy, while you are before the Committee, we would love to hear about your priorities for research in radiotherapy. We know that there are lots of challenges with the supply of labour and treatment, which is holding back opportunity. To hear about your priorities in that field today would be really helpful.

Professor Harrington: Thank you for that question and for the opportunity to highlight a treatment that often is not necessarily recognised as being as important as it is. As you may well know, radiotherapy is a component of treatment of at least 50% of people who are cured of cancer. In its own right, radiotherapy can be curative as a definitive treatment or can be an adjunct to surgery and/or chemotherapy to cure patients.

The UK has a very proud record in the development of radiation research. In fact, to recognise the strengths of our National Health Service, working within a system where you have to prove the benefit of a treatment before it is widely adopted has, in some respects, been a major plus for the radiotherapy research community. I would highlight initially things such as intensity modulated radiotherapy as being a treatment that was, essentially, taken up elsewhere in the world as being self-evidently better than the standard of care radio therapy given with 3D conformal or conventional radiation. We had to demonstrate that there were clearly tangible benefits. We did that and, of course, it has been supported and is now the gold standard across the country.

What is the next thing? It is really around novel technologies such as image-guided radiotherapy. Again, we are working very hard to demonstrate benefits for using, rather than simple CT-guided simulation, things like MR-guided radiotherapy delivery, be that with an MR Linac, which is a new type of radiation machine, or a scanning modality with an MR scan and then treatment on a standard C-arm linear accelerator. Again, the UK is at the very vanguard of the MR-Linac Consortium, for instance, leading that research globally, and we lead on a number of the themes in that area.

The adoption of proton radiation therapy here in this country, with centres at UCL in London and in Manchester, means that, in order to evaluate that technology, we have had to conduct clinical trials. It is the data that comes from those clinical trials that will allow us to make correct judgments as to who should and should not receive proton beam radiotherapy. An area that is going to be of major research is going to be in terms of the use of those treatments.

We have also led the drive to altered fractionation regimens and will continue to do so, and I would highlight the work of colleagues at the Institute of Cancer Research and the Royal Marsden Hospital. 20 years ago, patients with prostate cancer would receive 37 fractions of radiotherapy. Colleagues conducted research and demonstrated that you could do the same job with less toxicity in 20 fractions. We have now shown that you can do the same with five fractions, and a trial is ongoing to deliver treatment with curative intent in two fractions of radiotherapy.

This is revolutionary work that has been adopted globally, but I would highlight the fact that there is a massive disincentive to do that work, unfortunately. When you work in a system where the payment for radiotherapy delivery is based on a tariff system, and you get paid per fraction of radiation, there is a danger that, if you show that fewer fractions work, you get less money into your organisation. There has been a disincentive to take part in those studies, and I would ask that that be thought about and addressed. We have led the world in that regard.

Another area where we have a huge opportunity—and again, Susan Galbraith has been hugely supportive of this as a potential initiative—is the combination of radiation and drug treatment, both in terms of drugs that make the radiation kill cancer cells better, but also the way in which radiation can interact with the immune system and, essentially, act as an in situ vaccination against cancer recurrence. This is a huge area of research that the UK is going to continue to lead on, and an area where we have a big opportunity. For me, it is about technological developments, smarter and kinder treatments, more cures and fewer side-effects. We have done that for the last three or four decades and will continue to lead on that.

There are huge activities around novel biology and how we can modulate radiation responses, with massive opportunities for our patients. It is an area that we should be justifiably proud of, and with which we should continue to push forward.

Q112 **Rachael Maskell:** Thank you so much. I have a final question for Dr Galbraith, although others may want to come in. It is about the infrastructure and how we target for the infrastructure, because it seems that we are very good at talking about inputs, but looking at outcomes is particularly important, as well as ensuring that they are properly framed into the long term. Do we need a Kate Bingham for driving forward a cancer strategy, so as to really join all these pieces together and ensure that we see the outcomes that we want?

Dr Galbraith: There are many recommendations that are already in cancer strategies that have been written before and require adoption. You have heard already much that is relevant to incentivising the continued influx of innovation into the UK. That is a key part of what needs to happen. That can be addressed in a few relatively straightforward ways. It is not possible to wave a magic wand and do everything that everybody wants instantaneously, but there are a few things that need to and can be addressed and are within our scope to do.

A focus on early diagnosis and on collecting the data that is already in the NHS and making it available more readily will be key. There are some workforce pieces that are needed. For example, we have a shortage of pathologists and radiologists, and there is a technology opportunity to help deal with some of that, in that, if we move more rapidly to digital pathology and radiology, it can help relieve some of that backlog. There are aspects of where the technology can help us address some of the infrastructure gaps, if adopted more rapidly.

The pieces of what is needed that would make a difference are already well articulated. What we need is a co-ordinated execution of those top recommendations in a timeframe that is more similar to what we were able to do in the Covid pandemic. The urgency should be the same, because, if you look at the number of people who are unnecessarily dying and could be saved, it starts to come onto the same scale as what we addressed in the Covid pandemic. The sense of urgency should be there

to make the difference to one of the biggest killers that we have within the UK, which is cancer. We could do that and we have the attributes to do that.

There are a few key recommendations. We welcome the lung screening commitment, which can also help with the health inequities that we talked about, but please let us think about how we get over the barriers that we have unnecessarily created for clinical trial adoption and the sharing of data, and fix some of the core pieces that are not right at the moment in terms of rewarding innovation and creating an infrastructure where research and innovation, from end to end, are encouraged and welcomed in this country. It would make a huge difference if we could do those few things.

Q113 **Paul Blomfield:** I wanted to try to probe a little further on where we are in relation to comparable countries, and on what we can learn. Paulette spoke about where we stood on R&D funding, and you are right, Professor Bell, that we have come a long way from 1.6% over the last five years, but we are still behind where we were 15 years ago. That is in general terms, but I wonder where we are specifically in relation to cancer funding.

I take your point about the relationship between public funding and investment from the private sector, but there is a relationship between those two. Where are we in relation to comparable countries, in terms of the sorts of policies that could take us forward, collaboration—we are in a better place than we were, and are finally back in and associated with the Horizon programme—and recruitment and retention of talent, which you mentioned, as did Professor Harrington? Across the field, where are we? What can we learn in all of those areas?

Professor Sir John Bell: We are not in a terrible place, but there are a lot of things that we could do to improve where we are. One of the issues about having so much money swimming around in public sector-funded research is that you have to be a bit more industrial-like in terms of strategic allocation of your money, and to be crystal clear about what you are trying to get out of your funding envelope that you are trying to use. It is all fine to have £20 billion in the public sector research pot, but what is not clear to me is whether we have set out clear, strategic objectives to use that funding and what you would use it on. Not only that, but who is accountable for getting that money out of the door and how do you measure the outcomes? There is a lot of measurement of activity, but you have to try to see if you can measure outcomes in some significant way.

That is always hard in science, because some things work and some do not work, but you should see a trend of success in domains where you put particular effort in. I would argue that cancer should be one of the domains that we identify for strategic prioritisation in the health spend, simply because it is a major cause of death as well as a major cause of concern for most taxpayers. When you hit the age of 55, you start

worrying about cancer. It and vascular disease are the two things that will likely see you off, so there is a real need to do that.

Collaboratively, the UK works pretty well. We are very much part of a global network of centres that interact positively in a whole variety of domains. Horizon will probably help that, but, again, Horizon is not so great at strategic prioritisation, so you would have to be careful to make sure that you understood what Horizon was going to do to bring the cancer community together in particular projects. They will do some things, but I am not sure whether that is enough. Those are the things that we need to keep an eye on, if we are going to make best use of taxpayers' money and make progress in this domain.

Q114 **Paul Blomfield:** That probably leads to Dr Buckle, for comment on how we allocate funding for research. Where are we specifically on the money that we spend on cancer research? Drill down from the general "R&D as a percentage of GDP" debate.

Dr Buckle: I am sure that spend figures have been presented to you already, although I noted some of the evidence given had misquoted us. Just for clarity, MRC spends about £125 million per annum on cancer research. Funding from UKRI, because of the other partners—Innovate UK, EPSRC and BBSRC, which we have already heard about—is collectively around £200 million per annum. The CRUK budget is in the order of £430 million.

Q115 **Paul Blomfield:** How does it compare with comparable countries? We are always comparing a big R&D figure.

Dr Buckle: As with everything in R&D, the US dwarfs the UK. We were talking about the emergence of China.

Q116 **Paul Blomfield:** What about per capita?

Dr Buckle: It still does. We can provide you with better figures, if that is helpful. I do not have them to hand. In the rest of mainland Europe, we have comparable investments to the big players, but I would not be able to tell you immediately how we compare to Germany, France and so on.

I would also echo the point on collaborative activity. The UK should be proud of its collaborative ethos. Many of the international partnerships and advisers that we have in will say that the one thing that shines out is the ability of the UK to collaborate and to work in that style, so we have some credit in the bank on that one, and mechanisms such as Horizon Europe and other things that have previously been set up internationally put us in good stock there.

I fully accept what John said about strategic overlay on what we do. On what we fund, we have to be careful that we do not overly pitch into application areas. To give you an example, monoclonal antibodies were discovered and developed at LMB in the '70s, '80s and '90s. That provides the technology for nearly all of the major drugs in this space.

That was not built through looking for cancer therapeutics. It was discovery research that was exploited. We can say the same about genomics and probably about some of the advanced therapeutics areas as well.

When we give you the figures for cancer spend, that is what we can directly attribute to cancer, but I would say that the infrastructures that we built, such as UK Biobank and the Francis Crick Institute, are incredibly supportive of cancer research as well as of other areas. We just have to make sure that we maintain that foundation of everything that we do with the appropriate strategic overlay and pull in terms of end users and industry.

Q117 **Paul Blomfield:** Dr Harrington, we as a Committee are looking for things that we should be recommending to Government—public policy interventions that can remove barriers, put us in a better position through learning from comparable countries, and tackle some of the issues that you have been raising with us. Do you have any thoughts on what we should be saying?

Professor Harrington: The first thing that I would wish to highlight in terms of discovery science is investment in sustainable programmes of research that gets away from the short-term—from living hand to mouth, and from grant to grant. There is also the issue of support infrastructure in research organisations, to make sure that we have state-of-the-art facilities and equipment, so that we can exploit the opportunities that we have heard about in terms of both clinical and translational research.

Thinking about the clinical environment, we have an unprecedented track record of having delivered practice-changing research in cancer medicine, as well as in other aspects of medicine. At the very beginning of this meeting, we started talking about the danger of us slipping down the pack on that, and I would really make a point to this Committee to use whatever influence you may have to find a way to turn the tide on that and make it easier for us to deliver on these investigator-initiated studies. These are not industrially funded but, again, are mired in what is often seen as unnecessary and laborious paperwork. Specifically when it comes to increasing the spend into the health service from partnership with pharmaceutical companies, we have to make ourselves an attractive country to which to come and do that research.

Again, I highlight the fact that, for the first time in my research career, I am hearing in the last two years that, although we are regarded as world leaders in what we do, the decision has been taken not to come to the United Kingdom to do the trial, simply because of the organisational barriers. If there is anything that we can do, I would make that plea, not just for the researchers but, most importantly, for the patients who then lose out on those opportunities.

Q118 **Paul Blomfield:** Can I just press a little further on that? You and others have made that point throughout the discussion this morning. You have

talked about over-regulation. What are the critical barriers that we need to change, to improve translational research and to make it attractive to put money here?

Professor Harrington: Maybe I could start by walking you through the process that we have to go through in order to get an approval for a clinical trial. One of the very first steps is that we have to discuss things with the MHRA. I know that the MHRA is under very significant pressure at the moment, for various reasons, but pharma companies ask us, "When can you reasonably expect that you might get a contract in order to do this research?" The time horizons for that now are stretching further and further. We heard recently, for instance, that it might take six months before we got an opinion from the MHRA on one clinical trial. That needs to be much more rapid. We need to be in a position where we can set things up more quickly and get agreements in order to do clinical trials.

Once we get those agreements, we have to have infrastructures within the National Health Service. For instance, if we want to run a multi-centre clinical trial, it has to be approved in every single hospital in which that trial will take place. As the O'Shaughnessy report discussed, we need more central approvals of these things, so that you do not have to reinvent the wheel every time you go to a new hospital in order to get multi-centre activity. These are two very simple things that could be done to accelerate things.

Q119 **Paul Blomfield:** With the MHRA, is the problem resource, the decision-making or the thresholds for approval?

Professor Sir John Bell: I could probably comment on that, because I am helping them out of their hole at the moment. The problem is that, as the MHRA emerged from EMA, they had to be restructured. They went through a transformation process earlier in the year, which turned out to be much more disruptive than it should have been. They lost a lot of their senior people, so they are down in terms of the ability of the organisation to make decisions quickly.

There was a rapid build-up of proposals for clinical trials and, as Professor Harrington said, the delays were up to six, eight and sometimes nine months, which is ridiculous. They spoke about eliminating that lag in the middle of the summer, and by the beginning of October, they should have eliminated the backlog of both amendments and primary proposals.

The real question is then, "What is the sustainable model so that they can keep running at that pace?" and the answer there is pretty simple. There was legislation called the European clinical trial directive, which very dramatically slowed down the approval of trials. Before that, there was something called CTX, which was a clinical trial approval by default—in other words, "Send us your proposal. If you have not heard back from us in a month, you can assume that it has been approved and you can get on and do it".

A lot of this upfront approval is completely unnecessary. For safety, it is crucial. Particularly for new compounds and therapies, you want to spend time making sure that it is safe. You do not need to evaluate these trials for efficacy. That is the company's problem. If they design a trial that is not powered enough to get a result, that is their problem. We have ended up with a system where they are evaluating all kinds of things that they do not need to evaluate.

I have been promoting the use of a CTX again, which would immediately eliminate the backlogs. For those of us who are old enough to remember, it was really efficient, and you could get trials started literally within a month. Off you would go, and it would be done. There are solutions that we should try. If there are benefits of being out of the European Union—and there will be, in the regulatory space—that is one example of things we could grab and just say, "Okay, guys, compete with that if you can", and other countries will have a hard time doing that.

There are lots of opportunities to play in that space. First of all, I should apologise. The MHRA feels really terrible about this, because they did crash the car, frankly. They have now made a real effort to get it back on track. That is happening at pace, and they have done a great job in getting it back in play.

Paul Blomfield: The circumstances behind the MHRA's position were not entirely their fault.

Professor Sir John Bell: That is fair.

Q120 **Paul Blomfield:** The last word goes to Dr Galbraith, not simply on that point, although I am sure that you would echo the comments that Professor Bell is making, but on any of the wider points that I was asking.

Dr Galbraith: I would just like to mention three takeaways. Clinical trial speed is essential and I would support Professor Sir John Bell's suggestion for a CTX. If you want to be leading, that is about leading in the timeframe to get that approved globally, so 30 days is a good benchmark for which to aim for a clinical trial approval.

Widespread adoption of testing and investment in digital tools to enable digital pathology and radiology would really help. An integrated MHRA and NICE review that is resourced would mean that you get the innovation reward decision for reimbursement at the same time. In terms of setting a standard, let us aim for our cancer services to be at the level of Germany and France, and for the reward for innovation to be at about that level. That is affordable, doable and achievable. If we could aim for those things, that would be really helpful.

Q121 **Chair:** Mr Blomfield is excellent at focusing us on policy, because that is what we do. We scrutinise decisions, but we also put suggestions to Ministers. It just so happens that the Secretary of State will be sitting there in a few weeks' time. As a final point from each of you, what would be the one question that you would ask the Secretary of State about this,

if you were sitting here?

Professor Harrington: I would really like to hear his plans for future investment in research infrastructure specifically, and also for research funding, to make sure that, in life sciences research, health research, and especially cancer research, we do not fall behind in the pack, but get up towards the front. There is no reason why we should not aspire to be world-leading, so I would like to hear what his plan is for that.

Dr Galbraith: Do we want to be world leading in the reward for innovation? That is what we need for the life sciences industry to thrive here.

Dr Buckle: I will not repeat what has been said, so I will mention the data question. Removing the points of transaction that currently slow things down would be a priority, to my mind.

Professor Sir John Bell: I would ask him how quickly he is going to implement O'Shaughnessy in its totality. If they do not do that, our clinical trial thing is going down the gurgler.

Chair: Lord O'Shaughnessy was a fellow Minister of mine in the Department at the time, and has produced a very thoughtful and actionable—in the right sense—piece of work, for which we are very grateful.

Thank you very much, Professor Harrington, Professor Sir John Bell, Dr Robin Buckle and Dr Susan Galbraith. We really appreciate your time. If I say so myself, that was a very excellent session. We are grateful for your time.