HOUSE OF COMMONS

Health and Social Care Committee

Oral evidence: Cancer services, HC 551

Tuesday 14 September 2021

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Watch the meeting

Members present: Jeremy Hunt (Chair); Paul Bristow; Dr James Davies; Taiwo Owatemi; Anum Qaisar-Javed.

Questions 68 - 137

Witnesses

I: Andrea Brady, bereaved mother and campaigner; and Simon Brady, bereaved father and campaigner.

II: Dr Jeanette Dickson, President, Royal College of Radiologists; Dr Richard Roope, Clinical Adviser for Cancer, Royal College of General Practitioners; and Dr Andrew Millar, Clinical Lead, North Central London Cancer Alliance Rapid Diagnostic Centre.

III: Michelle Mitchell, Chief Executive, Cancer Research UK; Sir Harpal Kumar, President, GRAIL Europe; and Professor Peter Sasieni, Academic Director, King's College Clinical Trials Unit.

Examination of witnesses

Witnesses: Andrea Brady and Simon Brady.

Chair: Good morning. Welcome to the second evidence session of the Health and Social Care Committee inquiry into cancer services. In our first session, we looked at why our cancer survival rates lag behind those of countries such as Australia and Denmark. One of the main reasons was our failure to diagnose cancer early. In this session, we are focusing on that issue—how we improve the speed of diagnosis. We will also look at the role of research and scientific discovery and how that could help.

Shortly, we will be joined by Dr Andrew Millar, the rapid diagnostic centre lead at the North Central London Cancer Alliance; Dr Jeanette Dickson, the president of the Royal College of Radiologists; and Dr Richard Roope, the clinical adviser for cancer at the Royal College of GPs. In our last panel, we will hear from Michelle Mitchell, chief executive officer of Cancer Research UK; Sir Harpal Kumar, the president of GRAIL Europe; and Professor Peter Sasieni, the academic director of King's College London's clinical trials unit.

First, we will hear from Andrea, whose daughter Jess tragically died from cancer last year after receiving a late diagnosis. Andrea is with her husband, Simon. We appreciate how difficult it is for you to tell the story of what happened to your family and we are incredibly grateful to you for joining us. My colleague Anum will ask Andrea a few questions.

Q68 **Anum Qaisar-Javed:** Thank you, Andrea and Simon, for coming in to tell us about Jess and the experiences that you had. I understand that this may be quite difficult for you, so please take your time in answering. Could you start by briefly telling us what happened to Jess and giving us the timeline please?

Andrea Brady: Yes, of course. Jess was 27. I should put it into context by saying that she was new to her GP surgery. Eighteen months beforehand, she had left the family home and had moved surgeries, so she was not well known by the surgery and she did not know the doctors there. In the middle of the spring and summer lockdown of 2020—in about the middle of June—she had some abdominal and back discomfort and made an e-consult referral. As a result, she was diagnosed with a kidney infection and prescribed antibiotics. That was in the absence of any diagnostic testing or physical examination.

In the next few weeks, she became much more fatigued. That developed into a hoarse voice and a tickly cough. Obviously, in the time of Covid, with no face-to-face appointments with GPs, nobody wanted to see Jessica because of the risk of Covid, but she had a PCR test, which was negative. Over the next two months, more antibiotics, inhalers and steroids were prescribed. Progressively, her condition was deteriorating, and she developed an acute post-nasal drip.

At one point, she was advised to go to A&E for a chest X-ray. While she was at A&E, her bloods were taken and she was found to have a raised D-dimer, which is indicative, apparently, of a blood clot. They scanned Jess, but nothing was found from that scan, apart from an enlarged heart. We now know that that was a vital clue that was lost, because we have discovered that there can be a raised D-dimer in the plasma of certain cancer patients with solid cancers, but nothing was followed up. In fact, it often happens with patients with cancer of the oesophagus, which, we later discovered, was probably Jessica's primary cancer.

Time went on. During the next five months, Jess contacted her GP practice on nearly 20 occasions. At her lowest ebb, it was really difficult for her to navigate the receptionists and to receive any contact from a doctor. At one point, Jessica's back spasmed, rendering her immobile, and she had to call an ambulance. No ambulance came. A St John's volunteer came, and she was told that she had pulled a muscle. Two and a half months later—we were now in November—we discovered that she had tumours on her spine. In contact with her doctor at that point, the doctor phoned Jessica back and said to her, "What can we do for you this time?"

Jess was a very gentle, intelligent, articulate young lady, but it took an enormous toll. Towards the end, Jess said, "What's the point? Nobody will do anything." In early November, I went with Jessica for a permitted face-to-face appointment. During that appointment, we asked if Jess could be referred to an ENT consultant. The doctor laughed and said, "There's no way that we would know when you would receive an appointment like that," so we decided to pay privately. From that private referral, a biopsy was taken of some very large glands that had come up in her neck and been described as reactionary. She was diagnosed on 26 November—five months later—with secondary cancers in her lymph nodes. A day later, after a scan, she was found to have stage 4 cancer—adenocarcinoma of the lungs, bones, spine and liver.

At one of her later doctor appointments, when she had had a full blood count done, it was found that her liver function was a bit dubious, which would make sense, as she had liver cancer. Even at that stage, it was decided that they would wait six weeks to see what would happen.

Jess went into hospital on the day of her diagnosis. She went straight to in-patients, through casualty. She didn't leave hospital, because she was dependent on oxygen. She died on 20 December, three and a half weeks later.

Q69 **Anum Qaisar-Javed:** I am so sorry for your loss. It is obviously very difficult for you to speak about, so take your time. There is no need for you to answer this, but you said that Jess had to contact her GP about 20 times to get a face-to-face appointment. How challenging was that for her, and for you, as her parents?

Andrea Brady: It was incredibly challenging for Jess just to navigate the whole system of e-consult procedures. I am really sad to say that, unfortunately, receptionists were sometimes very dismissive, quite rude and a bit patronising. That was deeply upsetting for Jess because, as I said, she was really poorly. The most important thing is that we feel, and Jess felt, that nobody listened. Nobody took it seriously. More than anything, she needed a permitted face-to-face appointment really early on, with people making notes.

During all of that time, she was not seen by one designated doctor. Four different doctors spoke to Jess and prescribed medication. We think that was key. No one person was looking at the whole picture and putting the pieces of the jigsaw together. In fact, that did not happen until about two days before Jess received her diagnosis, when I think there was an element of panic, because she was receiving quite a lot of phone calls at that stage, saying, "You probably need a gastroscopy." In fairness, if that had happened three months earlier, we think that her cancer would not have spread so aggressively by then. Jessie was a very gentle, sweet person, but she definitely attributed her late diagnosis to the slow reactions of her GP surgery.

Q70 **Anum Qaisar-Javed:** Jess was 27 when she passed away. Do you feel that her age may have been a factor in that?

Andrea Brady: Absolutely. We feel very strongly that age should not be a discriminating factor. Without question, we now know that Jess's symptoms were indicative of either the stomach cancer that they think she may have had, or cancer of the oesophagus. We believe quite strongly that, had it been Simon or me, or somebody older, reactions might have been quicker. It is not common in Jessica's age group, but statistical likelihood should not be a determining factor in deciding whether diagnostic testing should be done.

From the campaign that we have started to raise awareness about cancer in young people and early diagnosis, we have been contacted by many people. This is something that has been happening for years. It is not just a Covid issue. It has been happening for 25 or 30 years-plus. The people who come forward to say, "I was one of the lucky ones," invariably praise their GP. They say, "My GP was really quick to react and to send me for testing."

We believe that, if somebody approaches their GP practice on more than three occasions, it is important that the case should be elevated for review. If it happens on five occasions, perhaps there ought to be a cancer checklist. In GP surgeries, there should be a specialist cancer person, perhaps a highly specialist nurse. We also think that frequent refresher courses and training for GPs are essential. I am a teacher. It could be along the lines of the KCS that we do for child protection in schools, which is carried out yearly, just to refresh completely.

Q71 **Anum Qaisar-Javed:** Thank you so much for telling us about the

campaign that you are doing. You have this opportunity now and are sitting with us. Is there a message that you would like to give the Government and the NHS?

Andrea Brady: Because Jessica's story is incredibly tragic and went over a period of more than five months, there are quite a lot of messages. Could there be a "Never too young" campaign? We think that campaigns like "Could it be?" should not be addressed just to the general public. They should be part of a GP's training. As I mentioned, there should be designated cancer specialists in GP surgeries.

Because of where we live in the country, we feel that there is a bit of a postcode lottery. Jessica was treated in a fairly small hospital. Her last three and a half weeks were spent on a Covid ward. All the other patients had coronavirus. She did not have access to specialist scans or treatment at the time, because Jessie died on 20 December. We were told that it was very busy, that it was too late for Jess and that it was too near Christmas.

It is also important to mention the end-of-life care. Jess died on a Covid ward. She was too ill, ironically, to be moved to a hospice because of her oxygen requirement. On the night Jess died, we were left alone pretty much all night with her. She was inadequately medicated. She was acutely aware of what was happening. The last words she said to us were, "I think I'm dying."

We think that a message to Government should be about overlapping care for people who need to be treated in hospitals. Perhaps somebody could be linked to a hospice, so that we had the support and Jess had the support that she needed. It was utterly tragic and traumatising. Jessica's young partner was there on that day. Her younger brother was there. We think that is really important. Palliative care is key. It is important to ring-fence funding and to have specialist diagnostic units in cancer hospitals. Jess felt that really strongly. That is why we are here today.

Anum Qaisar-Javed: Is there anything else that you would like to tell us while you have this opportunity today?

Chair: I have a final question, if I may, while you are thinking about that.

Andrea Brady: Yes, of course.

Q72 **Chair:** Correct me if I am wrong, but I think it is clear that this is not just about the pandemic.

Andrea Brady: No.

Q73 **Chair:** Initially, as I listened to the story, you talked about not being able to get a face-to-face appointment. I want to draw on one thing you talked about, which is the fact that Jess was seen by four different doctors, and no one person looked at the whole picture. How do you think we need to reorganise general practice to avoid that happening to someone else?

Andrea Brady: Patients need a named doctor, not just in principle but in practice—somebody who will follow through their care. When I went with Jessica to the doctor for the permitted face-to-face appointment at the beginning of November, somebody who knew Jess would have realised the toll that her illness had taken on her. By that stage, she had lost 2 stone in weight. Nobody had taken any notice of her vomiting and weight loss. She was not a large girl even before that, so she was tiny. If they had known Jess, they would have known just from her pallor and by gauging her exhaustion, but it was another new doctor who saw her on that occasion, so they would not have known. That is key. When I was a child, you always had a family doctor who knew you and your family. I think it is really important that one person takes ownership. Even now, the GP practice has not really acknowledged any responsibility.

Simon Brady: They did not seem to compare notes or read up previous notes.

Andrea Brady: For us, that fragmented care was key.

The only other thing that I would say, and thank you for giving me the opportunity, is that we trusted the healthcare professionals. We feel enormous guilt, in a way, that we did. Jess knew that there was something wrong, but she was a fairly compliant person. Nadine Dorries said recently that we need to stand up, to fight and to demand treatment. But it goes back to the point that when people are truly very poorly, they should not have to fight two battles—one to keep themselves going and the other to try to convince somebody that they are, in fact, very unwell

I am sure that there are hundreds of thousands of GPs who are incredibly conscientious, and they will do their job, but everybody needs to be aware. We should not have to fight for ourselves and our loved ones, and then feel guilt afterwards that we did not do enough.

Q74 **Chair:** Thank you for that very powerful testimony. Clearly, you want Jess's legacy to be that other families do not have to go through what you have been through, but in order to do that you have to relive the sadness of what happened with Jess over and over again. That is incredibly difficult, so we are very grateful to you for joining us this morning. Is there anything else that you would like to add before we conclude? We are about to hear from a whole bunch of experts and will be asking them for their views on your story, but if there is anything that you want to add finally, please feel free.

Andrea Brady: We had a Zoom meeting with Matt Hancock in early July, while he was still Health Secretary. We produced some notes for that meeting. We would very much like to share those notes after the meeting so that you can look through them, in case there is anything that I have forgotten to mention. That would be much appreciated.

Q75 **Chair:** Please send them to us. If you want to sit at the back to listen to

the rest of the session, you are more than welcome to do so. If you want to escape, you are also welcome to leave whenever you want. Thank you very much for joining us this morning. It is enormously appreciated.

Andrea Brady: Thank you. We will sit in.

Examination of witnesses

Witnesses: Dr Dickson, Dr Roope and Dr Millar.

Q76 **Chair:** We now move to our second panel. I ask Dr Millar, Dr Dickson and Dr Roope to take their seats. Good morning. Thank you very much for joining us this morning. Dr Roope, what is your reaction to the story that we have just heard? What do you take away from that?

Dr Roope: It is an incredibly tragic story. It took huge bravery for Jess's parents to come here today. It is those personal stories, I think, that have the potential to really change how we do things. In general practice, we talk about learning events. This is the mother of all learning events. There is so much that we can learn from it.

To state the obvious, no GP gets up in the morning to miss a diagnosis. We are there to help our patients and to enable access to the best diagnostics and treatments in a timely fashion, but we can do things better than has happened. In a way, the narrative that we have heard is essentially a manifestation of demand outstripping supply. All GPs could do more if we had more time. If there were more GPs, we could give more time to each patient.

Q77 **Chair:** We will talk about the workforce issues shortly, but perhaps I could put those to one side for a moment. Let's suppose that we had all the GPs that we needed, which we don't at the moment. Andrea talked about some changes to the structure of general practice—in particular, moving back to a named GP for every patient in reality, not just as part of a box that has to be ticked. What lessons do you draw about the structure of general practice when it comes to cancer diagnosis?

Dr Roope: Continuity is really important. That is a challenge in the current model of general practice because, increasingly, more GPs are working what we call portfolio careers. They may be doing three days in the practice and a day of leadership, training or education, which brings that experience into general practice, but means that they are not necessarily there every day of the week.

Q78 **Chair:** Dr Dickson, obviously, radiologists have a crucial role in the diagnosis of cancer. We have this big ambition in the NHS to increase the number of people we diagnose at stages 1 and 2 from around 55% to 75% by 2028. We have had the big interruption of the pandemic. How well do you think that we are doing in making progress towards that ambition?

Dr Dickson: If we are being frank, we are doing very badly. While we lag behind European countries, over many years we have seen an increase in

cancer survival, but the pandemic has shone a light on the lack of capacity, as Richard said, for the demand that we have. If we want to diagnose cancer earlier, we have to do more imaging investigations and diagnostic tests. We do not have the capacity for that. We do not have the workforce to support it; we also do not have the kit to do it or the other enablers of efficiency, such as IT connectivity.

Q79 **Chair:** There has been a lot of talk about extra money going to the NHS to deal with the backlog caused by the pandemic, but these things take time, don't they? It takes time to get in more kit and to train up more radiologists and radiographers. In your view, what is the realistic timescale to get to the capacity that we need?

Dr Dickson: That is a very difficult one, because it is very multifactorial. Part of it is kit. You can buy and deploy machines very quickly, which we have seen. During Covid, we have had an expansion of the kit base, but it takes longer to get the people to run those machines. We are actively looking at different ways to train radiographers, who are the people who acquire the images. It is a very complex thing to acquire images, to make sure that they have the quality and clarity to deliver what they need to deliver to the reporter.

There is a mixed economy of reporters. There are radiologists, who take five years to train from entry to the speciality, but we can train diagnostic radiographers to do simpler, more protocolised tasks, which would allow the radiologists to work at the top of their licence. There is a shortfall of at least 10% to 20% in diagnostic radiographers. You could train more of them more quickly if you had more capacity and more excess workforce. AI has not shown the benefit that we hoped it would to help us to expand that capacity massively.

Q80 **Chair:** Dr Millar, you are at the cutting edge, in a way, because you run one of the new diagnostic centres that is designed to speed up diagnosis by getting all the tests done in one place, getting them done quickly and making GP referral much easier. How is that going? If we did more of the kind of thing you are doing, do you think that we could still meet the ambition to diagnose three quarters of cancers at the early stages?

Dr Millar: The RDC programme is well under way. It has a long way to go, and there is a lot of learning to be had in that process. The RDC naturally fits a need. That need is driven by the data, which is clear that approximately 50% of patients do not present with an alarm symptom. We therefore need a route for patients with non-alarm, non-specific symptoms.

The message that I would take from Jess's very sad story is that it is not just about thinking about cancer; it is about explaining the symptoms. If a patient does not have a clear explanation for symptoms, it is important that we as doctors change the way we work from thinking, "I'll try a treatment," to, "Am I clear about what is causing the problem in this patient?" It is a big challenge. It is very important to point out the

challenge of patients who have non-specific symptoms, because there is a huge number of patients who have non-specific symptoms and do not have a pathological cause for those symptoms. A big question is how you work out which are those patients and which are the patients with non-specific symptoms that have a pathological cause.

RDCs will play a key role in that, but changes in the way primary care works will play a key role, too. Professor Roope's point is very clear. We need to look at personalising care all the way through, from the point of GP up to referral to the rapid diagnostic centre.

Q81 **Chair:** I want to ask you and Professor Roope the question I asked Dr Dickson. We have this ambition to diagnose three quarters of cancers by 2028. I am personally quite attached to it because I was part of the process of conceiving it. In the first session that we had on cancer, there was agreement from the experts on the panel that, if we actually hit that target, we would bring our cancer survival rates up to some of the best in the world. There is not much disagreement with the principle behind the ambition, but I would like a sense of whether we can actually achieve it. Dr Millar, you are doing some of the most exciting stuff, with the RDCs. Professor Roope, perhaps I will come to you first.

Dr Roope: Dr Roope; I have not made professor yet.

Q82 **Chair:** Maybe after this session your evidence will cause that thing to happen.

It takes time to build up the capacity of general practice. That is the principal problem, but there are also structural changes. Is it an ambition that we could realistically meet? Do we currently have the urgency in the system necessary to try to get there?

Dr Roope: I think we can. We have a number of untapped resources. For instance, community pharmacists have a huge role to play. If we can upskill our pharmacists on the high street, and those working in general practice, they are often the first medical professional that a patient will see. If they are able to ask the pertinent questions, find a red-flag symptom and then have the ability to get them into the cancer diagnostic pathway, it has the potential to save huge amounts of time. The resource is there, ready to roll.

Q83 **Chair:** That would be music to the ears of one of my colleagues, who is, herself, a pharmacist. Let me ask the question of Dr Millar.

Dr Millar: I think we need a whole range of different interventions in order to achieve the target. Another issue highlighted by Jess's story is that we need to be able to break the barrier of why people cannot, or feel that they cannot, go to the GP or will not go to the GP. We need more recognition of non-specific symptoms. The alarm symptoms are also an issue. In other words, we have patients who have alarm symptoms who still do not go to their general practitioner and, therefore, receive a late

diagnosis. We have poor methods of identifying patients who have non-specific symptoms and ensuring that they are referred appropriately.

At the moment, we do not have good ways of analysing those alarm symptoms and non-specific symptoms. A huge research effort is required to look at how we record patient symptoms, and use artificial intelligence and other methods to derive clinical decision tools that will help us to decide which patients need diagnoses or not.

I will take the example of weight loss. Weight loss is a huge reason for referral for cancer diagnostics, but by itself it is a poor signal for cancer. With other symptoms, it has a much higher risk of cancer. How can we identify patients with weight loss who do not need investigation, to save money, and how can we identify patients with weight loss like Jess, who clearly have lost a significant amount of weight? That weight loss must be explained and they must be referred. If those systems are built into our integrated digital systems so that patients are not left in the system without a diagnosis, because the digital system will pick it up and alert, that will be a key factor.

We need ways of diagnosing patients using biomarkers. Biomarkers like the GRAIL—we are going to hear from Professor Harpal later—are a key innovation to the NHS. The FIT test, for example, in colorectal cancer is a game changer in our ability to diagnose colorectal cancer more quickly. It should also be a game changer and help us to exclude patients who do not need investigations. We need biomarkers in a much wider range of cancers that perform the same role as the FIT test does in colorectal cancer.

The next thing we need is to ensure when we refer a patient for diagnostics that we have two pathways. We need to ensure that the site-specific pathways, which are well set up, run on a timed basis, or should, so that you have a very clear pathway from day nought to day 28, where 95% of your patients will have a diagnosis in 28 days or sooner. The patients who easily fit that pathway should have a smooth and slick pathway; for instance, breast cancer is probably the best example where that works really well, as does prostate. We need to ensure that all the pathways where that works for a site-specific pathway are well set up. All the rest of the patients, where it is not clear, should go to the rapid diagnostic centre.

The rapid diagnostic centre should perform two main tasks. The first is triage. Not every patient referred to an RDC should be seen in the RDC. The RDC expertise should, and does, include the ability to say, "Thank you for referring this patient. You, the general practitioner, were clearly not sure what was going on." That is absolutely fine. We all have patients where we go, "I don't know what is happening. I don't know what this patient has got wrong with them." The RDC should be the target for those patients.

Chair: I am sure we are going to have more questions on that. Let me

bring in Dr Luke Evans.

Q84 **Dr Evans:** Thank you, Chair. I am going to work my way down the panel because it is almost set up in the referral pathway that I can see. Dr Roope, we heard provisionally in the evidence about Jessica. Something that struck a chord with me was seeing someone for the third time and making a decision there. Do you think GPs are alert enough to seeing repeat symptoms and making a different decision?

Dr Roope: I think we all need to revisit what we learnt at medical school—the old mantra, "Three strikes and you're in." If a patient presents for the third time with the same symptoms and you are no further forward in the diagnosis, you need to call in the cavalry and send them to your secondary care colleagues for diagnostics. I think that may have been lost. There is certainly a perception that there is pressure not to refer.

Q85 **Dr Evans:** You have hit the nail on the head. How much of a reality do you think that is? There are scarce resources and time. You are absolutely right. Often, when secondary colleagues used to say to me, "Why are GPs always referring patients in?", we say, "Actually, it's much harder. You spend 45 minutes on the phone trying to get someone in." You feel the pressure not to do so. How do you think that balance has changed over the last five years?

Dr Roope: One of the perhaps silver linings of Covid is that it has become essential to work collaboratively with our secondary care colleagues. In our patch down in south Hampshire, we have a very robust advice and guidance service. Certainly, if you look at one of the reasons why perhaps we are slower in diagnosing, it is that we have lost the ability for GPs to pick up a phone and speak to a secondary care colleague.

In Sweden, where they get much better outcomes, they still have an open phone line. I think we need to restore that as best we can so that we GPs, when we have uncertainty and we are looking for a steer, can talk to an expert in the area that we are concerned about. When there are non-site-specific symptoms, the rapid investigation services and the rapid diagnostic centres are just one area where we could get that advice.

Q86 **Dr Evans:** Do you think that the UK has the model wrong in this sense? GPs do a great job as gatekeepers. However, we heard that in Jessica's case they ended up going privately to an ENT specialist for a problem.

Where I worked, we had Polish patients, and they are often very keen to come in and immediately say, "Why can't I see an endocrinologist or an obs & gynae person because I just self-refer to them?" Is there something in that that we should be looking at? You hinted at the rapid diagnosis, but I assume that would still be a referral by GPs. Is there something where a patient could go, "I have a red-flag symptom. Should I self-refer directly to a unit?"

Dr Roope: Interestingly, in Wessex we are exploring a model, a pilot, of having breast symptom direct patient referrals so that they can make their own referrals to the service. We are doing a pilot on that.

The gatekeeper role has its strengths and its weaknesses. We heard earlier about continuity of care. If you did not have the gatekeeper role, there would be no continuity of care. Certainly, our French colleagues—we have friends who live in France—can go from one specialist to another. Of course, that requires the patient to know which specialist to go to. That in itself can be a challenge for us GPs because the whole system is set up such that we need to know who to refer to before we have reached the diagnosis. The development of the rapid investigation service and the rapid diagnostic centres for once is actually looking through the telescope from the primary care end, in that we need symptomologists, rather than the urologist or the gynaecologist, because we may not know who to refer to because we do not yet have a diagnosis.

Q87 **Dr Evans:** Flipping it on its head, many doctors practising tell me they are worried about being sued and about missing a diagnosis. How much do you think that contributes to people referring on for a 55-year-old with two weeks of not being able to swallow properly, or a little bit of tummy upset and acid reflux? It could be cancer in the worst case, so they are referring as a protective mechanism, to make sure that they do not miss the cancer case. How much do you think that plays a part in our system?

Dr Roope: I think there is always an element. The data suggests that each GP will exercise their indemnity policy once every 10 years. The defensive medicine aspect is always there, but GPs are trained professionals; we pick up on signs and we do the best we can.

In the system we have at the moment, there is NICE guidance called NG12. It is a very numbers-based thing. It sets a 3% threshold. Where the risk of cancer is 3%, you make a referral. Of course, that means that, if the risk for that patient having cancer is less than 3%, there really is no pathway for that person. When you change it into a fraction, it means basically that we are not making a referral on one in 30 patients in the first instance.

Q88 **Dr Evans:** We are expecting more advanced cancers to be presented due to the pandemic. In my practice, once every two months, you would get a person where you would go, "This is a barn-door cancer," yet they still go in the two-week wait. Someone else might come in and you say, "Well, I'm not sure," but they go on the two-week wait. For those where it is a definite, nailed-on cancer such that the person needs picking up yesterday, is there an argument for having a system within the system to pick up those definite cancers?

Dr Roope: Yes, and very often you can exercise that by calling a colleague. I had a patient a few years ago I was really worried about. I spoke to the consultant, and they said, "They can't wait two weeks. Send

them straight in." Again, if you have straightforward lines of communication, and you are not hanging on the line for 45 minutes at the hospital switchboard, they would lend themselves to that.

Dr Evans: Should the NHS be looking at formalising—

Chair: Could I encourage you to go down the diagnostic pathway as there are other colleagues who want to come in? Doctor, might the college write to us, if you have not already, with any changes you think we need to the cancer referral pathway with respect to general practice? I think this is at the heart of the discussion that you are having with Dr Evans.

Q89 **Dr Evans:** That leads me on very quickly to the next one. You mentioned the use of AI in identifying. How does AI help when you are reading the scans, Dr Dickson? Is there a pick-up that we could be using to make sure that you are not missing anything, within the internal side of radiology itself? It is almost an aid to make sure: "This area looks a bit shadowy. I'm not sure about this part on the CT or MRI scan."

Dr Dickson: That is where AI is being placed at the moment. Unfortunately, as yet there is no good evidence that that works in real time. The most recent article in the *BMJ* last week said that with breast cancer, rather than going through two doctors reading mammograms, it could go to one doctor and one computer. In trials it looks really good, but in real life it is not as good as two doctors. You are missing things.

There are some nodule follow-ups, so you pick up nodules in lungs. That is very good for helping to see if there is a nodule, but using AI as a triage tool is not yet there.

Q90 **Dr Evans:** It is not there yet?

Dr Dickson: No, it is not there yet.

Q91 **Dr Evans:** In a practical, day-to-day sense how would you assess NHS IT ability for you to get your scan to the GP and vice versa?

Dr Dickson: Generally, very poor. I work in one centre and deal with patients in another centre. I am an oncologist by trade. I go out to local hospitals. Jess was in a local hospital. You go out and meet your patient there. You see the scans there. They are not visible when you come back to your base hospital. You have to actively push and pull them there. You cannot visualise them.

Scotland has a whole networked pack system within the country, so you can look at the scans wherever you are in Scotland. It is easy to do. It just requires the will to do it.

Q92 **Dr Evans:** Can you give me a figure? Is 10% of your workload or 5% of your workload chasing IT admin?

Dr Dickson: At least 10%, and on a bad day 20%.

Dr Evans: Dr Roope, as a percentage of your work?

Chair: Luke, I am going to have to move on to other colleagues. I am sorry.

Q93 **Dr Evans:** I would like to have an answer to that question, and also from Dr Millar with a one-word answer on the percentage.

Dr Roope: About 10%

Dr Millar: About 10% or 20%.

Dr Evans: That is the point I wanted to get across.

Chair: A very important one.

Q94 **Paul Bristow:** Dr Dickson, I was very taken with what you said about how you are beginning to let more colleagues in radiology do tasks that traditionally would have been done by radiologists. Do you want to elaborate on why that is, perhaps why that has happened and why it has not happened in the past?

Dr Dickson: I think it has happened because there is a deficit in the workforce to manage the demand that is there. We acknowledge that. We also acknowledge that our colleagues in the team have skillsets and abilities that are valuable to the team. There is talk about working at the top of your licence. We are all trained clinicians. You pay us quite a lot of money to do very important and very complex stuff, but there is a lot of stuff that is quite routine and can be easily managed by other well-trained professionals, be they nurses, pharmacists or radiographers.

Q95 **Paul Bristow:** I could not agree with you more. In my experience, I have seen that with nurse-led endoscopy. Nurse-led prescribing has been going on for a number of years, but it is nowhere near the percentage that it should be, in my opinion. Why do you feel that is?

Dr Dickson: Partly because there is a dearth in the radiographer workforce as well. Where you have demand outstripping capacity, your ability to train and to mentor people in that group is limited. You tend to spend time as a doctor training doctors rather than training the wider team, because you know what you are going to get. I am not saying that is correct. Certain places—90% of places—now have radiographer reporting. Some places have a significant percentage of plain films being reported by radiographers. It is not as far behind as you might think.

Q96 **Paul Bristow:** Do you think there is an element of professional protectionism in that area, and perhaps other areas, that you have experienced?

Dr Dickson: All doctors are trained to do things to the perfect standard. As you go through your career, you become much more oriented to the team and what the team skills are. Certainly, the new generation coming through are very much in that mould. Do I think it is protectionism? I think it is care for patient safety and the need to see the evidence that

things are as safe with other reporters. I think that evidence is there, and that is why it is moving.

Q97 **Paul Bristow:** How do you think we can spread that across the NHS? I know you can only comment on your profession, and you say that you are beginning to see that with 90%, but if you had to talk about spreading this at pace and scale within other areas of the NHS, how would you suggest it might be done?

Dr Dickson: It is partly about shared experiences, case histories and showing how it works. It is partly getting together within networks and seeing what is happening in the network, and sharing that information and sharing accurate data. Getting data out of the NHS to share is a real challenge for everyone.

Q98 **Paul Bristow:** Do you think professional bodies have a role in that?

Dr Dickson: Yes.

Q99 **Paul Bristow:** On another topic, the cancer drugs fund was a big deal a few years ago. I was taken by what you said about lack of capacity, kit and diagnostic kit. That may have improved recently with Covid. Do you think there is a case for a cancer technology fund based on the same premise as the cancer drugs fund?

Dr Dickson: I always did think that. As I say, I am a clinical oncologist. I treat cancer with drugs and radiotherapy. It has always been a loss, I feel, that we have invested heavily in the cancer drugs fund and not so much in radiation technologies. Radiotherapy cures more patients than chemotherapy. That has always been one of my things.

Paul Bristow: I agree. Thank you.

Q100 **Taiwo Owatemi:** Dr Roope, earlier you spoke about how Sweden has a better outcome than us. One of the key differences between Sweden and the UK has to do with the confidence that patients have in being able to go to their doctor to express their concerns about whether or not they have symptoms of cancer. What do you think we can do to tackle the fear of patients wanting to go to their GP and not feeling that they are wasting their GP's time?

Dr Roope: I think it is a cultural issue. You may have come across the International Cancer Benchmarking Partnership, which does research into different health jurisdictions and tries to explain the differences between them. One of the features that that has demonstrated is the stoicism of the British public and the stiff upper lip, "I am going to put up with my symptoms." We probably also have an element of fatalism: "If I've got cancer, I don't want to know about it because if I've got cancer I'm dead." Of course, that has completely changed, in that more than 50% of those diagnosed with cancer will still be with us 10 years later.

If there can be a public-facing information programme that says, "If you catch cancer early, you really improve your chances of cure and survival,"

that could be very helpful. The Be Clear on Cancer campaign has proven very effective in years past. The Help us, Help you campaign, which is under way, has the potential to reach out to people and get them to present that little bit earlier, and perhaps drop the stoicism and become more Swedish.

Q101 **Taiwo Owatemi:** During the pandemic there was a change to digital consultation, just due to the nature of the pandemic. A lot of people's attitude towards wanting to go to their GP has changed because of that. How do you think we can get the right balance between face to face and digital consultation?

Dr Roope: It is a challenge. There have been huge benefits with the e-consult system. One of the things that can be incorporated into that is developing the AI, so that if you put into the e-consult that you have abdominal pain, it automatically asks you the questions that will allow you to develop a risk score. That has huge potential if it can be achieved in the computer systems and the software.

It is important that general practice is seen to be open. There were certainly a lot of media reports through the earlier months of the pandemic that we were all on leave and were not there. The fact that we have empty waiting rooms does not mean that we are not working. I think there probably is a balance, and we will achieve that in the months ahead, where we still have the e-consult system, which some people find incredibly helpful. Certainly, in my practice, I would say probably 80% have found it better than what we had before, but 20% have found it a real challenge. To support those who may have less IT literacy and access, it is really important to have an alternative route into general practice so that you can have timely first assessment.

Q102 **Taiwo Owatemi:** How do you think we can provide that alternative route? In my constituency, many patients, particularly the elderly, express their concerns about being able to access it. Older people have a higher chance of getting cancer. What can we do to ensure that they feel confident enough to see their GP?

Dr Roope: We heard the tragic story that Jess's parents were so eloquent about. We need to train our receptionists so that they are alert to worrying symptoms. We need to have a culture where patients are happy to discuss their symptoms with the receptionist. In a way, the receptionist is doing a very elementary triage role.

One of the benefits of the e-consult system is that we have got away from the "Is it urgent for today?" Of course, patients may not know if it is urgent for today because they do not necessarily know the severity of their symptoms. The e-consult system has enabled very early clinical triage and is probably better than receptionist triage, but if you do not have the IT, you still need receptionists trained so that they can pick up on the key symptoms and then route them appropriately.

Q103 **Taiwo Owatemi:** Absolutely. It is always helpful to have a receptionist who knows exactly how to do the triage system. If I have time, I am going to move on to Dr Dickson and Dr Millar.

Dr Dickson, you spoke about the deficit in the workforce and how that deficit prevents you from being able to train other healthcare professionals because, obviously, you have to prioritise training junior doctors. What level of investment do you think is required for you to meet that level of workforce growth?

Dr Dickson: Current demand says that we are about 1,989 whole-time equivalent clinical radiologists short at the present time. That is to meet the demand that we have now and not the demand that would take us to the European average. The money is in the system to do it because we spend that on outsourcing, which is a way of radiologists not within the department reporting a scan. It is there but we are 33% short.

Q104 **Taiwo Owatemi:** How do you think we can meet that target?

Dr Dickson: As I say—

Q105 **Chair:** Thirty-three per cent. short?

Dr Dickson: Yes, 33% short.

Q106 **Chair:** When we did our maternity safety report, NHS Providers helped us to quantify the number of midwives and the number of obstetricians, and how much the annual additional cost would be to the NHS of doing it.

Dr Dickson: We have that data.

Q107 **Chair:** I wonder if you could help us on the GP front as well for that, Dr Roope. It would be very helpful in our report, if we could be concrete about the investment needed.

Dr Dickson: We are more than happy to do that.

Q108 **Taiwo Owatemi:** Thank you. Dr Millar, again on investment, what workforce and capital challenges have you faced in establishing a rapid diagnostic centre?

Dr Millar: There are many in all aspects, equipment, staff and technology. In terms of the equipment, we need more scanners, as has been pointed out. We have only about nine per million in the United Kingdom, which is probably one of the lowest in any of the developed parts of the world. Increasing the number of scanners is inevitably required, but obviously we need the workforce to manage the scanners and where they are going to come from is not clear, because it takes time and we do not have the time. It is not a political statement; it is a pragmatic statement to say that I think we need to ensure that we can recruit from abroad, and bring in trained people from abroad, so long as they are not influencing perversely other people's healthcare systems.

On the other aspects, a really key aspect is where we spend the technology fund that we have heard about. At the moment, when I receive a referral in secondary care, whether it be in the rapid diagnostic centre or in my routine pathway, I receive between a six to 20-page pdf from my general practitioner colleague. It takes me about five to 10 minutes just to read through that, to make notes and to gather all the information. When I then see the patient and make an assessment, all that information is on the pdf. I have to reproduce it all when I make my assessment of the patient. When I then see the patient through my diagnostic process, the GP gets none of that digitally. I send a letter back in a pdf, which is installed in the GP's system.

I am afraid this is craziness. We now have the technology to support a system that would provide a national care record for patients with cancer. We urgently need to invest in that, so that when a patient is referred, either for symptoms or for surveillance of a known cancer problem, they should be referred on an electronic system that automatically delivers data to a national care record. When I work in my practice, I might be working on my own local EPR system, but those data fields should migrate to the national data care system.

We have a pro forma for that in the endoscopy world. When I do an endoscopy, which I do regularly, all that data will now be migrated to the national endoscopy database, and the national team will be able to identify who is doing what well and who is doing things badly. It will also be able to drive trends and perform research—

Chair: Sorry. We have to move on soon to the next panel, but I wholeheartedly agree with your comments.

Dr Millar: Perhaps I could point out one more thing about workforce, and that is navigators and the importance of the crucial staff who perform the navigating role in cancer care.

Q109 **Chair:** Before we move on to our final panel, I have one final question and I would like a brief answer, if I may, from all three of you. Anita Charlesworth of the Health Foundation says that we need to completely overhaul our workforce planning. Her proposal is to turn Health Education England into a version of what the Office for Budget Responsibility does for the Chancellor at Budget time. It would be an organisation that independently forecasts every year exactly the number of doctors, nurses and AHPs in every specialty that we are going to need in the next five, 10, 15 or 20 years, so that we can make sure we are training enough.

Do you think we need a radical overhaul of the way we plan for workforce, now that, at this point, we have shortages in nearly every specialty across the NHS? If so, briefly what change would you propose?

Dr Roope: Absolutely. The system has been caught napping, in that we have failed to observe people's dates of birth and when they are likely to be retiring. For instance, a large cohort of 55 to 60-year-old GPs are coming up for retirement. I do not think that has been taken into

account. If we had a unified system that was outside the five-year political cycle, so that there were no political points to be gained, we would have an independent body that oversees what would be a 10 to 15-year strategy and was a rolling strategy.

Dr Dickson: Unfortunately, I do not think I can really add anything to what Dr Roope said. Absolutely, yes, we need to look across all the specialties and to look at future likely healthcare trends, and we need it soon.

Dr Millar: I agree. I think we need to expand the workforce. Paul Bristow's point about how we use additional extra staff in the system, working in collaboration with the team, is the key for how you make it safe. If you train a nurse endoscopist, they have to work closely with a medical endoscopist—a physician or surgical endoscopist—so that when they find something odd, they can talk to that person. In America, people with biology degrees routinely become technologists in healthcare systems. That is a private, litigious system, and we need to reflect on that and work to the same goal.

Chair: Thank you. We could talk about this at great length. It has been a very useful discussion, and we are very grateful for your time. Thank you for joining us and for your excellent evidence. I am now going to move on to our final panel. Dr Millar, Dr Dickson and Dr Roope, thank you for joining us.

Examination of witnesses

Witnesses: Michelle Mitchell, Sir Harpal Kumar and Professor Peter Sasieni.

Q110 **Chair:** Thank you very much for joining us. I welcome Michelle Mitchell, chief executive officer of Cancer Research UK; Sir Harpal Kumar, her predecessor at Cancer Research UK and now president of GRAIL Europe, which we have been hearing about in the news this week; and Professor Peter Sasieni, academic director at King's College London's clinical trials unit. You are most welcome. I think you heard the evidence that we have been hearing to date.

We would love your views on the issue of early diagnosis, but in this panel we particularly want to focus on the opportunities of technology. If we are trying to match the best cancer survival rates in the world, and we accept the premise that early diagnosis is important, what is the role of new technology, new medicine and new techniques in helping us to leapfrog, if you like, other countries? I think that is particularly on everyone's mind, given the role of science in the pandemic. Many people have begun to understand the exciting potential of science to be transformative in a way that has not happened before.

Michelle, perhaps I could start with you, please. Your evidence suggests that a lot of the improvement that we all want to see will rely on research and innovation. Tell us what you think the potential is and how you think

we should get the balance right between copying tried and tested techniques in other countries and trying to tear up the rulebook.

Michelle Mitchell: It is a great question to start with. The first thing I would say, which unites us all—Andrea and her family, viewers and parliamentarians in each constituency—is that we should aim as a country for world-class cancer outcomes. That is such an important part to start with. Breakthroughs in cancer research, as well as improvements in the health system, have seen survival double in the last 40 years, but we sit here today with the impact of the pandemic being very sorely felt in the health system, not least for cancer patients, at the moment.

We have to acknowledge and recognise that there is no silver bullet that will get us today and in the future to improved cancer survival of 75% of people being diagnosed at stage one and two. There is no silver bullet. Research and early detection play a critical role, but, as we have heard from evidence given previously, we also have to encourage people to come forward with signs and symptoms. We have to optimise screening. We have to have better pathways and referrals. We have to shorten the time for tests and diagnosis. Of course, innovation is an opportunity for us to leapfrog where we are today, but at the moment I would say we are not confident that we will meet the survival ambitions that have been set out by the Government.

Q111 **Chair:** You are not confident that we will get to the 2028 target?

Michelle Mitchell: Not with the current plan and not with the current investment.

Q112 **Chair:** We might come back to that. Let me bring in Sir Harpal. First of all, Sir Harpal, I should say that I thoroughly enjoyed working with you when I was Health Secretary. You helped educate me on a whole new area extremely helpfully. Do you share Michelle's assessment that at the moment we are not on track to get to the 75% target, which I think you came up with? How could science and technology help us, particularly the GRAIL project?

Sir Harpal Kumar: It is nice to see you again, Chair. I share the assessment that we are not currently on the trajectory. I am not quite as pessimistic as Michelle in saying that there is no hope of us getting there. I think there is a hope, but it is important to recognise where we are, which is that we have been at about 54% or 55% early stage diagnosis for the best part of the last 10 years. We really have not moved at all, so there is no trajectory other than a flat line right now. We have to recognise that and say, "Okay, what would it take to shift this?"

It will require a combination of improvements to existing pathways, as Michelle said, but also investment in new technology. I think that new technology can play a pivotal role. You would expect me to say that, of course. There are multiple different areas. You ask the question about technology. As we have just been hearing from the last panel, one of the first things we can do is invest in current technology. We could have a

level of scanning capacity that would not even come close to many other countries that we compare ourselves with. That would be a start.

New technology will play a critical role. I would draw out three things. Without any question in my mind, the biggest opportunity is earlier detection. Of course, I am going to say that, but GRAIL is not the only new technology out there. There are others, and if we can find technologies that enable us to detect far more people pre-symptomatically—certainly for many types of cancer, we only detect them when they are very advanced, using symptoms—that is a big opportunity. I will say just one thing about GRAIL. Our modelling suggests that with our current performance we could get there. There are other tests; this is not the only one. That is the first opportunity.

The second opportunity is data. We talk about technology, but data is pivotal. We are still not very good at recognising the opportunities in data and how we can use data to optimise everything we are doing. The third thing is that, if we are successful at being able to detect patients earlier, it will lead to a whole raft of new treatments for those earlier cancers which, in and of themselves, will also help to improve survival. I think there are multiple opportunities.

Q113 **Chair:** Let me ask about the GRAIL project. This time last year, there was widespread doubt that it would be possible to get a vaccine up and running and distributed for Covid within a year, but the scientific, medical and pharmaceutical establishment moved heaven and earth, and they did it. A year from now, are we going to have biomarker tests that we can send out to members of the public and start getting those early detections?

Sir Harpal Kumar: I am sure many of you will have seen the media reports yesterday that we have just launched a very large trial in partnership with NHS England. The test is available now. It is being used in the US. What we want to do in this big trial with NHS England is show that at population level we can reduce the number of late-stage cancers. We need to do that work. We know about the performance of the test. We now need to see how, implemented in an NHS context, it can bring down late-stage diagnosis.

The answer to your question is that we will have some of that information in a couple of years. Not one year from now, but perhaps two years from now, we will have interim results from that study.

Q114 **Chair:** Potentially, two years from now, we could make a decision to roll out that test to everyone in the NHS in England?

Sir Harpal Kumar: Again, as you have seen, our arrangement with the NHS is that, if we achieve the results we expect to achieve in two years' time, it will then be rolled out to a million people. A further two years after that, hopefully, when we get final results, it could be applied at a population scale.

Could that be accelerated? Yes, it could. The bigger issue, if you look at the history of implementing new tests, whether we are talking about bowel screening or HPV testing, and so on, is that the time from when the evidence is generated to when we implement is typically years. That is something we really have to be watchful for. I am sure this Committee can play a really helpful role in making sure that we are ready.

Q115 **Chair:** Thank you. Professor Sasieni, thank you for joining us. Why do you think early diagnosis has traditionally attracted less investment than pharmaceutical research into cures?

Professor Sasieni: A couple of reasons. One is the natural thing for everyone that, if you have a patient who is really sick, that is where all the priorities should go. You talked about the cancer drug fund, but it is much harder to do something that is more preventive.

There are whole issues with data access and careers. The attractive things for molecular biologists have always been in terms of how to fight a cancer. Things are being exchanged. We are bringing more disciplines into cancer research using physicists and engineers in different ways for diagnosis and early detection, and there is the fact that companies like GRAIL are attracting investment.

It is much harder. One of the reasons why research happened so fast with Covid-19 was that people who got it were dying within 28 days. You could see very quickly whether your treatments were working or not. This takes a long time, because the NHS-Galleri trial is taking people who do not have symptoms of cancer. Very few of them will develop cancer over the next three years, and we are trying to prevent it. The trial has to be very large, and you have to wait long enough to see what happens to the people you do not screen.

There are barriers. We could do a lot with making data more easily available. The technology is there such that data should be much more easily available, but because of trust issues it is incredibly difficult to get hold of the data. We are doing one trial that will get the data we need for the main results, but if we want to look at what happens to the people who do not take part in the study, which will be very important for looking at inequalities in society and who will not be screened if we have a new screening test and what their risk of cancer is, we probably will not be able to get that data because they have not consented to be in the trial. It is trivial to get it; it is just getting the permissions, and researchers are thinking, "I can't spend one year of a junior researcher's time just trying to apply for that data." That is what it would take in practice.

Q116 **Dr Evans:** Professor, my first question might be a slightly unfair one, on the basis that we have talked about prevention and about dealing with cancers. Where do you sit on the future of genetic testing fitting in with this?

Professor Sasieni: It is very important. There are two sides. One is the genetic testing of cancers, which is beginning to happen, and is definitely going to happen as we have the more targeted treatments that we need to split the cancer. Rather than just thinking that the cancer is in this organ, what is the genetic make-up of the cancer?

I think you are probably talking about genetic risk profiling, to say what the long-term risk of cancer is in the person. Before the multi-cancer screening tests, I would have said it was extremely important. To some extent, if the Galleri test works, it may not be that important. We are not very good at saying who is at risk of any cancer—very high risk or very low risk. There are very few exceptions to that. We can do it quite well for certain cancers—for breast cancer, prostate cancer and colorectal cancer.

However, in the next 10 to 20 years, I hope there will be a combination of using some of the existing screening technologies and some sort of liquid biopsy new test. Then it may well be that we want to risk-stratify and say, "You are at a very high underlying risk of getting cancer over the next 10 years. Therefore, we need to screen you more intensively, or we need to use a lower threshold to refer you on a screening test than somebody else." I think there is definitely a role.

I am not as positive as some of my colleagues who think that that is the be-all and end-all. Mostly, the information in a screening test is much greater than the information in the genetic test for that individual's risk of having cancer now. Basically, no matter how high your underlying risk, if you had a positive screen and if you saw something on a lung CT, I would not ignore it; you still need to get that referred. If you haven't and you have just had a negative CT scan, and you were at extremely high risk, well, you have just had a negative scan, so you are fine for a little while. It will mostly be to do with how long until your next screen and what should be the age at the first screening.

Q117 **Dr Evans:** That is really helpful. I am going to use that information with you, Michelle. It sounds to me as if we are talking about risk stratification at various different levels. It is going to become ever more tailored for the individual person. We are talking about genetic therapies in cancers and in other conditions as well.

Do you think the professions are in a position to be able to understand and deal with that—and the patients? When I worked in Oxford, we had several people who had their genomes sequenced. They would come in saying, "I've been told I've got an 80% chance of getting Parkinson's disease and a 50% chance of having a heart attack." I can do something about the heart attack, but it is very hard to do something about an 80% chance of Parkinson's for a 55-year-old woman. How do you think we can teach the public, and indeed the profession, to deal with this ever more stratified and more personalised care when it comes to cancer?

Michelle Mitchell: There are two points. Referring back to the Chair, who talked about workforce, I think long-term planning with a whole new set of skills coming through the cancer workforce is absolutely critical as science, research and technology develop.

In relation to the public, of course there are ethical issues about whether, when diagnosed, there are treatments available. What we are seeing in the cancer field are huge leaps in the number of treatments available. There are ever more precise and personalised medicines. It is important that we have a broader debate with the public about the role of data and how personal data is used, in this instance to really improve early diagnosis and ultimately survival. We know through more recent debates about data, particularly data held at GP and primary care level, that the public have some way to go. Charities have a role in brokering and supporting a debate about the benefits, and about some of the conditions that need to be in place to give the public confidence about how their personal data will be used.

Q118 **Dr Evans:** Have the Government engaged with you? I was not going to go down this line, but I will pick it up. It is my final question, Chair. The GP data is quite topical. It has been very important to get that out. Have the Government approached the likes of Cancer Research UK to explain to the public what is going on and why it is so important to be able to share and use this data? The hardest thing is that people do not understand even what is being shared. I am breaking no confidentiality when I say that David Davis has spoken out about being worried that he will be identified because of his previous injuries. That is what he is worried about. Have you been approached about how you can deal with this?

Michelle Mitchell: We have been approached about what the policy framework should be. We think it is probably right that we pause at the moment. There are a number of stipulations that need to go into the future policy. We are really happy to engage with Government about the pros, cons, risks and how that policy needs to change to get better public support for it.

Chair: Thank you.

Q119 **Paul Bristow:** Sir Harpal Kumar, I was taken by what you said about the time between study and trial, and then implementation in the UK. Do you mind explaining why you feel that is, and what we might need to do to speed up the process?

Sir Harpal Kumar: As with everything in health, there is a multiplicity of factors, but one or two things tend to stand out. Peter is probably in a better position than I am to talk about HPV testing because he has spent his career working in that area, so I will leave HPV.

If we think about FIT, for example, which is the test we use for bowel screening, there was a period of years. I will talk about two obstacles. The first was that there was real concern that it was going to flood

endoscopy services: "Endoscopy services are already under strain. The last thing we want to do is put more pressure on endoscopy services." That conversation bounced around for quite a long time. Now it comes back to the workforce discussion that we have just been having: "The system wouldn't be able to cope, so don't do this yet. Set a very high threshold so very few people come through." That was one issue.

The other issue that bedevils the screening programmes is how long it takes to sort out IT. These things are typically not planned in advance. You typically wait, and then it takes whatever it takes, three or four years, to get the right IT system in place to be able to do it. Actually, once established, our screening programmes are reasonably effective. It just takes a long time to get them going. Those are all things we can plan for in advance. We just don't do it.

Q120 **Paul Bristow:** That is really interesting, especially the first point and the feeling that they may flood endoscopy. I remember a while ago we talked about cytosponge as another technology. That took some time to come through. Do you think there is a cultural aversion to innovation in the NHS sometimes?

Sir Harpal Kumar: I think historically there has been. It is less the case now than it was. Particularly in cancer, people recognise how critical new technology is. I am not just talking about screening tests. I am talking about the entire panoply of technologies, treatments, tests and so on. I think it is shifting. We are still slightly more—I was going to say innovation averse, but I don't think it is that—innovation cautious than other countries would be. We tend to invest slower. I think it is a factor.

Q121 **Paul Bristow:** That is quite interesting. Often, we are one of the first countries to trial something, but when it is implemented at pace and scale we lag behind. Professor, perhaps you would like to comment on this as well.

Professor Sasieni: I agree that it is a major issue. It was a good 10 years from the randomised control trials with bowel screening before the bowel screening programme was introduced. HPV took even longer. The IT is definitely an issue. The cervical screening programme is still using an IT system that was written in the 1980s and brought in in 1988. They have just delayed the new system again. I remember being at a meeting in the Department of Health in 2004 when I said, "We need a new system." I was told that NPfIT would be going to deal with it all. Remember that?

There is an issue of its being an orphan area. Very often with screening we are not talking about a new, fancy screening test with a major pharmaceutical company behind it. Academics do the first piece of research, but there is no one then to drive the thing. If you are going to introduce a new screening programme, there will potentially be the need for £100 million investment.

Nobody is discussing it, when the Treasury is meeting, and saying, "We are going to need that extra money for the budget." One academic does the first clinical trial. Then people think, "Oh, we need someone who knows about implementation science. We need a health economist." They may not all be joined together. I think you need a project manager, provided either by the Department of Health or by the NHS, to say, "We have just seen these great results from a clinical trial. What do we need to do to get from 'This can work in ideal situations' to 'How will this work within the NHS?'" We need to make sure that we collect those bits of evidence and put a timescale on it. It would be a disaster if we publish something in four years' time, saying, "The NHS-Galleri test shows that you can prevent advanced cancers with this thing," and they say, "Okay, we are doing a million tests a year." We need to be doing 20 million tests a year.

Are we already thinking about, "If the trial goes well, how quickly will we be doing 20 million tests a year?" Maybe GRAIL and NHS England have had those discussions. With anything else, that would not have happened. No one makes much money on FIT tests. The HPV test was developed by a very small company. It was only when Roche became involved in HPV testing that it started to get traction.

Q122 **Paul Bristow:** The NHS can do that. In another area, when it required significant reconfiguration, look at primary PCI. That was a huge thing. That was—

Professor Sasieni: The HPV vaccine was introduced within months. It was tremendous. We have one of the best HPV immunisation programmes in the world. Within a year of the trial showing that it worked, we had vaccinated millions of young women.

Q123 **Paul Bristow:** This is my last question. Could Michelle respond to the earlier question? If anyone wants to comment on what I said about a cancer technology fund, if you think that would help, I would be very grateful.

Michelle Mitchell: I will add a few positives to the discussion. The cancer drug fund, of course, was a major innovation. We are getting access to innovative therapies quickly in a number of areas.

We have heard a lot about the impact of Covid on the NHS. The number of people starting new treatments is down by 37 million. We have not heard so much about the innovations that have happened; there have been several actually that, as a result of the conditions created by Covid, have got through the system a little bit quicker. You mentioned cytosponge. We have also seen some good innovation around the colon capsule and looking at AI mammography.

There is always hope. What I would say, stepping back from that, is that we have to close the adaptation, adoption and implementation gap. When we have proven research evidence and interventions, we have to apply

that to the NHS and very quickly make treatments and services available. Harpal talked about the potential of the GRAIL trial. Peter mentioned that we have to get the system ready if we think it is going to be positive, and look closely at those results.

In relation to a technology fund, I would put it this way. I would not run my organisation without a workforce plan and a technology plan. Integrating that with the main outcomes we want to achieve through the long-term plan, with long-term planning around the workforce and technology, is absolutely critical to driving improved patient outcomes, which we all expect, not least in cancer.

Q124 **Paul Bristow:** Do you want to say anything about the idea of a cancer technology fund?

Chair: Briefly, if we may.

Professor Sasieni: What we need is a way of ensuring that, if we want to do research on a technology on a very large scale, we can do it. It is the cytosponge, self-sampling for stuff, screening and referring more people for endoscopy with a lower FIT threshold. It is incredibly difficult. There is no join-up. I get a grant from Cancer Research UK, but who is going to pay for that extra work?

Q125 **Chair:** Harpal, on that point?

Sir Harpal Kumar: Briefly, yes, I think a broader technology fund would be helpful, but it needs to be right-sized, and the size may be bigger than we might imagine. It is one thing to say, "Okay, we have a fund that enables us to roll out a new CAR-T therapy that may only be applicable for 300 people a year to something that might apply to 20 million people a year." Thinking about how we are flexible enough in setting that up would be one of the challenges. It is definitely an opportunity. We heard about LINACS earlier. We do not have enough LINACS in this country. LINACS is very old technology.

Q126 **Taiwo Owatemi:** The Government's new clinical research strategy spoke about the need for addressing regional inequality, particularly to do with research. Starting with Sir Harpal, are you able to explain ways in which we can address regional inequalities with regard to research?

Sir Harpal Kumar: I think we have to be really proactive about it. We have to reach out. We have to make sure that it is a priority in everything we do. I do not think that has always been historically easy to do. I think we are now better able than we have been before.

Why did we choose the eight regions of the country that we have chosen for our trial? Precisely because those are areas that also have areas of very high deprivation and a broad ethnic mix. We are proactively making sure that we reach out to people across those various groups.

It is not easy to do. It costs more money. It takes more data and it takes longer. Particularly for academics, it is really hard to do for those three

reasons, but for any organisation it is difficult to do. The only way of addressing it is by being really positive and proactive about it, and making it a priority.

Q127 **Taiwo Owatemi:** Thank you. Professor?

Professor Sasieni: It is particularly difficult in early detection and early diagnosis because the people we want to involve in the research are the people who do not come forward. If someone has cancer, you can probably recruit them to a trial, no matter what their background. We have talked about trying to do studies in homeless people. The hurdles to doing that are enormous.

We are doing a trial on prostate cancer, which is virtually all in Yorkshire, but because prostate cancer is a particular issue for black men we wanted to have a good cohort of black men, so we are trying to get something in London as well, but that needs more funding. It will require an extra employee. These are difficult things. It should always be thought about, and we must make sure that we do not just do tokenism instead, finding some tiny minority group and saying, "Oh, we're going to do a big study," and not thinking about the major inequalities in society and how to tackle them.

Q128 **Taiwo Owatemi:** Thank you. Michelle?

Michelle Mitchell: Having been involved in the development of the new clinical strategy, what I have seen is the NHS really taking attention and focus to clinical research and beginning to commit resource to that. More recently, during Covid we have seen a significant impact on clinical research, not least clinical trials. It has had a big impact on access to trials, the continuation of trials and on the future funding of trials. Cancer Research UK funds 50% of publicly funded cancer research in the country. Unfortunately, we have seen our income very hard hit. We are anticipating a £250 million drop in three years, which has meant that we are not able to support the number and level of clinical trials that we have done historically. We have seen, across the country, clinical trials coming back more slowly than in a number of European countries.

Q129 **Taiwo Owatemi:** What is the reason for that?

Michelle Mitchell: A variety of reasons. The impact of Covid has been very tough here in the UK. I think people have been pulled away from clinical trials. It was not always a safe environment early on. We want to do an assessment of the trials that should continue, because we think they will not work in the future context. Of course, for future clinical trials we are not able to fund at the same level as we have.

Q130 **Taiwo Owatemi:** Coming back to the GRAIL technology, there is a lot of potential in that. It sounds like it is going to be a groundbreaking technology. When you look at some of the reports from Cancer Research UK, which express concerns about the ability of technology to pick up the diagnosis for stage one cancer, how can we ensure that public trust is not

affected by reports like that, given the fact that in America they had the whole Theranos scandal?

Sir Harpal Kumar: I will make two or three points, if I may. First of all, you have to do really rigorous and proper clinical trials. Theranos never did those. As a company, we have. I was 16 years at Cancer Research UK. I know about the value of good quality clinical trials. I have spent my life in that. You have to do properly designed, well set-up clinical trials to generate reliable evidence. That is the first thing.

The second thing is that, as you have seen, we are very deliberately doing this in partnership with NHS England. GRAIL is funding it, but it is very much in partnership with NHS England. At the end of the day, NHS England will make the decisions as to whether this is rolled out, not GRAIL. That is exactly how it should be.

There is something very important to understand about where you started your question. I am sorry to spend time on GRAIL, but you asked the question. An early-stage cancer can be stage one or stage two. One of the things that we did was to pre-specify a group of 12 types of cancer, which, in the UK, are responsible for just under two thirds of all cancer deaths. The data from our studies so far suggest that in that group of 12 cancers, which include pancreas, liver, lung, and ovary, we have 70% sensitivity at stage two, which is an early-stage cancer.

We want to see that at population level. If that is the case, bear in mind that almost all of those have no screening tests available today and therefore it is 70% compared with nothing. Is it 100%? No, it is not, but it is 70% compared with nothing. That would be a massive step forward if it plays out at population level.

Taiwo Owatemi: Thank you for your hard work.

Q131 **Anum Qaisar-Javed:** Michelle, would it be a fair assessment to say that in terms of research and innovation there are certain under-represented groups when it comes to cancer? I am thinking about young people and children.

We heard the tragic story of Jess, who went to her GP. Behind that, there is the research and innovation. I have a constituent who lost a four-year-old boy to childhood cancer. In terms of research and innovation, is it a fair assessment to say that funding is an issue as well?

Michelle Mitchell: It has been an area of focus for us at Cancer Research UK for many, many years. Only a couple of months ago, we launched a whole new research programme and a funding round for children with cancer and an important funding body to continue to ensure that we have comprehensive research and funding going into this area.

Critically, as you know from one of your constituents, it is so important to work with the families of children who have cancer and those who have died with cancer. Many are, and remain, angry that there are not always

cures and new treatments available. Progress has been slow in a number of areas. Yes, it is an important issue, and one where we must work together to make better progress.

Q132 **Anum Qaisar-Javed:** Jess was from England, and my constituent is from Scotland where there is a devolved health service. What message would you give to both the Scottish Government and the UK Government about funding, research and innovation when it comes to young people and children?

Michelle Mitchell: I think the message is the same for all people who have cancer. It is about today's generation and future generations. We must aspire to world-class cancer outcomes in this country. If we do not change our plan and investment, and reap the benefits of decades' worth of research and innovation, we are still going to lag behind comparable countries around the world. There is no silver bullet, but what we need as well as continued investment in research is money for infrastructure and for diagnostics, and a long-term plan for the workforce. If we combine those three things, we have a good chance of making the shifts that we need to make in this country, all four countries of the United Kingdom, to improve cancer survival. That would be the message I want to give.

Q133 **Chair:** That brings us to the end of our session, but just before we go, I want to ask a final question. Imagine that you are sitting around a table with the Secretary of State and he says to you, "I really want to hit this 2028 target of diagnosing three quarters of cancers at stage one or two. What are the top three things I need to do?" I think we have heard your top three, Michelle, so let me ask Peter and Harpal, if I may. What would be the top three things you would tell him?

Professor Sasieni: Continue doing the things that Cancer Research UK has said need to be done.

Q134 **Chair:** Those were workforce, diagnostics and investment.

Professor Sasieni: There are two things. We want to make sure that the budget is there, so that if the NHS-Galleri trial is successful, it will be rolled out with 20 million tests a year in 2026.

The other potential for progress now is in elderly people—probably octogenarians—where there is the biggest problem with late-stage diagnosis. Potentially, there are opportunities for healthcare workers and social care workers to be the eyes and ears for those patients. They are not good at communicating. They may never say anything to their GP. Can we train those people to do what a spouse would do, and say, "Actually, this patient needs to see a GP. I am a bit concerned"? Then the GP would have to manage them. I do not know if that would work. We need to do a bit of research, but there is big potential. Our biggest gap in survival compared to other countries is in the elderly.

Q135 **Chair:** Harpal, you have sat at the Secretary of State's table many times. What are your top three if we are to hit that three-quarters ambition?

Sir Harpal Kumar: I do not think there is going to be any surprise in what I say: definitely diagnostic capacity. I would say definitely investment in workforce, which partly overlaps with diagnostic capacity, and being ready to invest in the technology if it comes along.

I do not see any technology that is going to enable us to get to the three quarters, other than the GRAIL technology. It does not mean that there will not be, but I look at the world pretty closely, as you know, and I do not see anything else.

We still only have 60% uptake of bowel screening. We could make a lot of progress just by getting bowel screening uptake much higher. There are things we can do with current screening technologies and faster diagnosis, but ultimately we are not going to get to 75% without new technology.

Q136 **Chair:** Thank you. Before I conclude, perhaps I could give Michelle some homework. Could you at CRUK quantify those three areas in terms of cost, on top of what we are currently spending in diagnostics, workforce and new technology? I think it would be helpful for our report.

Michelle Mitchell: You have seen our modelling and analysis—

Q137 **Chair:** Yes, but if we are to hit the 2028 target, this is the additional resourcing we would need in those three areas.

Michelle Mitchell: It is particularly important with the comprehensive spending review coming up. I ask you to consider this. One of the things that would be helpful is for NHS England to publish its model about how it believes it will achieve the 75% target—not the policies and plans, but the model. That is an important area where we can begin to share understanding of what is needed to achieve those really important targets.

Chair: Thank you. Thank you for joining us this morning. Thank you, Andrea and Simon, for coming and telling us the story of Jess. We have heard some very sad things this morning, but also an element of hope as to what is possible going forward. Thank you all very much for your time.