Pancreatic Cancer APPG Inquiry

Pancreatic cancer charities and researchers – 12th May 2014

Eric Ollerenshaw: My name is Eric Ollerenshaw; I'm chairman of the All Party Group on pancreatic cancer, of which this is a meeting. I've got Mark Durkan MP on my left here, Lord Aberdare from the Upper House, and there may be one or two others attending later in the meeting. The nature of these things is that members will be involved in other things, then come in for things and go out for things. .

Can I just thank the witnesses, who I'll give chance to introduce themselves in a minute, but just to say what we're trying to do as an all-party group is to have a few sessions to actually have a look at where the research is in terms of pancreatic cancer. That's both in terms, obviously, of finance, in terms of results and cross-sharing of information, just where the whole field is in terms of research regarding this particular form of cancer.

We aim then to produce a report. For the benefit of witnesses, everything is being recorded. When we produce the report, you will get in advance a draft of everything, so if there's anything you want to alter, you're free to alter it. If there's something when you walk out this room you think, "I should have said…" then don't worry about it; send it in, because we're also taking in lots of written submissions as well. Just to reassure you that whatever you want to see in print will be in print, whatever you don't want to see in print will not be in print, and you will be in control of that.

I understand Dr Pereira and Mr Kocher have got to go at a certain point. We have the room booked until 3:30 and, being Parliamentary rooms, these are heavily booked; at 3:30 we will be inundated or not by another lot of people, so I aim to finish at 3:25. What I aim to do is if I can start with Dr Pereira and Mr Kocher, and then, following your introduction, questions come from members.

What I try and do, because we are an all-party group is if there are any other points from other people in the room who want to speak after the members have finished, I'll give time for other people to make any particular comment and then we'll proceed like that.

I hope that's understandable; I can just about understand it. If we start, I think, because you're the first name I've got, if we can start with Dr Pereira. If you want to just briefly say who you are, what you do and then a few

comments, other than the written submission, and then I'll move on to Mr Kocher, the surgeon, same thing, and then we'll move on to some questions if that's okay. Dr Pereira, please, thank you.

Dr Steve Pereira: Thanks very much. My name is Dr Steve Pereira. I'm a consultant gastroenterologist at the Royal Free Hospital and University College Hospital. I have a particular interest in the care of patients with pancreatic cancer and also lead a research team, particularly focusing on early diagnosis and novel therapies in pancreatic cancer. I'm also Chairman of the Pancreatic Section of the British Society of Gastroenterology and previous President of the Pancreatic Society of Great Britain and Ireland.

In terms of remit for pancreatic cancer research, my main comment I think is that, given that most patients we see with pancreatic cancer have advanced disease at diagnosis, a key role for future research is in identifying patients at an earlier stage. One of the ways of doing that is to provide further research funding into identifying bloods and other biological fluid biomarkers for diagnosis and also for stratifying treatment for patients.

The second area is in symptom identification. We've really had an assumption that patients with pancreatic cancer have vague symptoms, which are difficult to identify. I think the evidence coming out of some of the large general practice studies is that that's not true, and that patients with pancreatic cancer can have symptoms for up to a year before diagnosis, and with modern symptom awareness tools that are starting to be trialled, we can have a way of identifying patients with particular risk factors – for example, family history, cigarette smoking, being overweight, etc. – and combining that with certain suggestive symptoms. That will increase the possibility of that person having pancreatic cancer and the need for investigations.

The third area that I would like to see research into is in health services research. There is a large body of evidence now that there's a great deal of variation around the country in the management of people with pancreatic cancer, and that leads to big variations in outcomes, particularly access to surgery, access to nurses and overall survival. I think research aimed at identifying why some people in different parts of the country have better or worse outcomes would be important.

Finally, we've seen a lot of the data coming out about how little research funding is available in pancreatic cancer research. It's lagged behind many of the other cancers, which have had great successes in terms of improving

quality of life and survival; we haven't seen that in pancreatic cancer, of course. I think improvements in availability of research funding, in terms of funding schemes ranging from junior scientists and clinicians up to senior cancer research leaders, would be important.

Eric Ollerenshaw: Thanks for that introduction. Mr Kocher?

Mr Hemant Kocher: My name is Hemant Kocher. I am a pancreatic surgeon; I work at Royal London Hospital. My other, I would say equally, if not more, important job is to do pancreatic cancer research in the laboratory, where I lead a team of clinicians and scientists, looking at how we can perhaps get a new biomarker to diagnose pancreas cancer early and develop new treatments for pancreas cancer, where we target not only the cancer but the surrounding cells.

I also lead the pancreatic subgroup of the National Cancer Intelligence Network, which is a part of Public Health England, and we see some shocking statistics coming out for pancreatic cancer through that subgroup. I can elaborate a little bit more on that.

Over the last 10 years, I've been a consultant surgeon. I've been treating many pancreatic cancer patients; I have done complex operations, as you would expect. Sadly, it is very uncommon for me to see those patients beyond two years; therefore, there's a pressing need for us to do more research.

What I find frustrating is applying for grant after grant, to be refused because there's not enough money for pancreas cancer. Things are changing; a lot of pancreatic cancer charities are working very hard, and we are getting a national consortium of clinicians and researchers to work together to create a tissue bank. I can elaborate a little bit more on that during the question-and-answer.

Eric Ollerenshaw: Thank you. Anything from the members before I dive in? Lord Aberdare?

Lord Aberdare: I think perhaps just one question: Dr Pereira mentioned the regional differences, and of course one of the things that struck me most about the situation is it's worse in the UK, seemingly, than in a number of other countries around the world. Is there a good system for making sure we share the learning from other countries, as well as from other regions and within the UK itself?

Dr Steve Pereira: We do have benchmarks of overall mortality and access to chemotherapy around Europe, and we know that the UK doesn't perform as well as many other countries in Europe, the United States and, Australia.

I don't think that the information is available to know why that is. Historically, pancreatic cancer statistics have been incorporated with other upper_GI cancers and it's been difficult to tease those things out. The recent information is that there is quite a lot of variation and we don't know why that is.

Mr Hermant Kocher: One of the things, if I may add to it, is in the NCIN, or National Cancer Intelligence Network, we see there's a lot of association of poor performance long term with socio-economic deprivation. That is a recurring thing across various cancers, but it is particularly true for pancreatic cancer.

There are also a lot of regional variations of how patients are referred for their treatment, so some regions are very good and referring their patients to a central unit, which will perform very good surgery and very good diagnostic tests and thereby very good chemotherapy regimens for those patients, while other regions are not so good. If we can come to a national standard, where all the regions perform as well, we will improve survival for pancreatic cancer patients in the country as a whole.

Eric Ollerenshaw: Mark, do you want to…?

Mark Durkan MP: Yes, Mr Kocher, you expressed some frustration in relation to funding applications or pursuit of grants being refused; can you tell us more about that and do you think that the problem is just lack of prioritisation for pancreatic cancer? Is it due to pressures in other areas, or is it just the absence of a committed research funding framework?

Mr Hemant Kocher: About 10 years ago when I started, I got a big grant from the National Institute of Health Research to start my team of researchers working on pancreatic cancer, so that was a big sum of money. Subsequently, we have found that when you apply for big sums of money, they are pooled together with various other diseases. It may not be just cancers, but it could be other diseases – mental health, diabetes. Of course, those diseases may be more common and they are given more funding, if you like.

Therefore, even if you might meet the scientific credentials to get the funding, the public health impact for diabetes, for example, would be much more than for pancreatic cancer, so the funding is diverted in that direction. You're given feedback at the end of every grant that you took part in to say, "Your proposal was well received, your group is well respected in the field;

however, we didn't have enough money to give to you." That is a recurring theme when you go for big sums of money.

The presence of pancreatic cancer charities has changed that in a big way, so we can get small sums of money to do project work. However, to do a programme of work, which requires multiple projects working together to make a leap in pancreatic cancer diagnosis or therapy, we find it very difficult to fund that.

Eric Ollerenshaw: Dr Pereira, you spoke right at the beginning about early diagnosis and symptoms: that the symptoms are there for a year; is it that you haven't got your biomarker – and I'd like to know a little bit more about that – or is it the ability of GPs to recognise what those symptoms are, or is it a mixture of both?

Dr Steve Pereira: We don't have a reliable biomarker for almost any cancer to use in the general population, but we are looking at the possibility of developing biomarkers in people with an increased risk of pancreatic cancer. For example, if we could define a population where 5% of the group might develop pancreatic cancer with time, then biomarkers in that situation might be useful. Those people might include those individuals who've got a family history pancreatic cancer or who've got suggestive symptoms.

Suggestive symptoms like abdominal pain, or back pain, or weight loss are common symptoms throughout general practice, and so we need to combine those kinds of symptoms in such a way with diagnostic support tools, so that they're helpful for GPs to be able to identify those few patients with pancreatic cancer against all those other people they see with dyspepsia or musculoskeletal back pain, for example.

There are tools coming out which look like they are able to do that, and they've been piloted and we need to validate those. One of the key areas of future research will be to combine those symptom support tools with biomarkers in the populations.

Eric Ollerenshaw: Where is the whole biomarker issue then in terms of where the research is? Are those things something that will be around in five years, ten? What's your prognosis, Doctor, I think is the phrase I'm looking for?

Dr Steve Pereira: Many of us around the UK and internationally are working on biomarkers individually, and I think the very positive things in pancreatic cancer research in recent years have been the growth and support of the charities, with an increasing focus on early diagnosis.

The other area which is certainly improving is the ability of research groups to liaise and coordinate their research efforts with others, both within the country and internationally. Those kinds of things have been very important.

When are we going to have a biomarker that's useful for early diagnosis? That's a difficult question. I think that we will have biomarker panels available to trial in people with an increased risk of pancreatic cancer within 24 months.

Eric Ollerenshaw: Really?

Dr Steve Pereira: I think we need to develop those trials to test those. Whether such biomarkers will be useful in identifying people with pancreatic cancer, or whether they just pull out so many people who don't have pancreatic cancer but who have a positive biomarker and then go through a lot of tests unnecessarily, and therefore is not cost-effective, remains to be seen. But we need to initiate such studies, and we can do that quite quickly.

Eric Ollerenshaw: Who's the 'we', who's going to be doing all this?

Dr Steve Pereira: There are a lot of different centres involved in biomarker development. in blood urine for example. All of those areas are of interest and we need to encourage a research environment to support these.

Eric Ollerenshaw: Please, yes.

Mr Hermant Kocher: If I can add to that, I think Steve has outlined this very well. If you look into biomarkers, there are different types of biomarkers, one which can tell you whether you have got cancer or not, but ones which can tell you whether you will respond to treatment or not, or ones which will tell you whether you'll live long or not.

In order to do this, there are a lot of structural barriers which we are trying to overcome. For example, you need a large pool of samples, pancreas cancer being a relatively uncommon disease, short survival; we need serial samples. That has been lacking in a coordinated attempt so far.

Now, with the help of Pancreatic Cancer Research Fund, we're setting up a national pancreas tissue bank, which will allow various researchers to pool their resources together, which will help researchers such as Steve to test a biomarker very quickly, validate it in a large pool of samples, with the serial samples taken before and after treatment, for example, to be able to validate this and go into large-scale clinical trials very early.

Eric Ollerenshaw: Is that national, is that England and Wales, or is that United Kingdom national? Not that I'm making a statement about Scottish independence at this point; I'm just…

Mr Hermant Kocher: The national pancreas tissue bank includes Scotland; Glasgow is the main contributing centre and they have a number of researchers over there who are interested in pancreas cancer.

Eric Ollerenshaw: So it's United Kingdom-wide?

Mr Hermant Kocher: That's right.

Eric Ollerenshaw: Is anybody else going to…? Can I ask – this is slightly off-line, but this follows a meeting the previous week; in terms of research and the Cancer Drugs Fund. What would your professional view be? Has that been of help or is that…? Because it only applies to England, doesn't it? Because there's a lot of argument at the moment about the usefulness or not of the Cancer Drugs Fund, do you see in research terms it's been of some use, or do you just see it in terms of the practical?

Dr Steve Pereira: I concentrate on patients at the diagnostic level, so when we've made a diagnosis for patients with pancreatic cancer, we then consult with their surgical and oncology colleagues, so I don't have much information on that and will defer to Hemant.

Mr Hermant Kocher: From the surgical point of view, I think with the centralisation of services that you can get very good-quality surgical service in most of the key centres. Now we have defined that there are 24 key centres throughout England; we want to rationalise that further to perhaps 18 or 20, which we think would be reasonable to sustain a good quality of care, without patients having to travel very far for their treatment.

For chemotherapy, having the Cancer Drugs Fund has allowed us, for example, to get a new chemotherapy, which has just been trialled and the results were published in November, to be given to patients now. However, that's for a limited number of patients; you have to apply for funding.

In our centre since the CDF, or Cancer Drugs Fund, approval for Abraxane came true about six weeks ago, we have applied for four patients and we got funding for one. It is challenging, but at least one patient got that, where none would have got it before.

Eric Ollerenshaw: Yes. If you take that to a stage further, there are a number of criticisms about the whole way the NICE formula operates. Obviously there's consultation going on at the moment in terms of NICE; how do you see that

in relation to the development of research in terms of pancreatic funding? Are there ways in which NICE has operated you would want changing?

Mr Hermant Kocher: Sure, I think NICE is useful at the service level, while the research I think would run in parallel. Having NICE approval for a new drug would help build clinical trials which use that drug as a baseline. If the NICE, for example, does not approve this new drug which has come out for pancreatic cancer, we, as clinicians, can't use that drug to trial other drugs on top of it.

That remains a challenge to develop research on a platform which the service is running on, so NICE has a crucial role in developing that robust platform. There's always the cost-effectiveness which comes in, and I think it's a play between the pharmaceutical company and the pricing. I think we have to engage with the pharmaceutical company to make sure that our patients get the best deal.

Eric Ollerenshaw: Yes. A comment was made earlier about international benchmarks and so on. Presumably, there are people right across the world in different countries doing stuff on pancreatic cancer, and would you have any angle on where that is or are certain places? Would the USA be more advanced in terms of that research, simply because of the bigger population? The international scene, if you've got any comments..

Mr Hermant Kocher: Internationally, for treatment of pancreas cancer, if we wind the clock back about 20 years ago, the surgery was – and I would say still is – the mainstay for treatment.

Eric: Yes.

Mr Hermant Kocher: Patients would fly from all over the world to England to have their surgical dissection, because it was complex surgery; it was done only in very few centres. Now surgeons have trained, have gone back to their home countries, that's being done over there.

The key thing is the adjuvant treatment; that means chemotherapy after surgery or chemotherapy on its own without surgery. We are – how will I say? Put it this way, we are constrained by NICE to be able to give a range of chemotherapy which other countries – for example, Germany and USA – can give.

Most patients would go there and I know, for example, centres in Heidelberg and Munich, whom I interact with regularly, get a lot of international patients. Based on those international patients, they can do

much more research, because those patients are recruited into clinical trials.

Eric Ollerenshaw: Because they're allowed a wider…

Mr Hermant Kocher: Wider catchment area, if you like. The presence of NICE, as you mentioned earlier on, creates a nice benchmark but also creates a ceiling beyond which we cannot grow.

Eric Ollerenshaw: A constraint.

Mr Hermant Kocher: There has to be an agreement with the pharmaceutical companies, to make sure that the pricing is right for our patients.

Eric Ollerenshaw: Do you think that that NICE thing is holding back research here? Is that what you're saying, compared to other countries?

Mr Hermant Kocher: It's not just NICE; it's a combination of what NICE does and how the pricing is done by the pharmaceutical company, because this pricing is an arbitrary figure, as anybody would answer.

Eric Ollerenshaw: Surely pharmaceutical companies are international, as we understand at the moment, I think.

Mr Hermant Kocher: Yes, they are.

Eric Ollerenshaw: Therefore, that pricing would be the same across different countries, but then you're saying in Germany…

Mr Hermant Kocher: The price of the same drug varies across countries.

Eric Ollerenshaw: NICE's job is to sort that out, but in sorting it out you're saying it's cutting down the options for research?

Mr Hermant Kocher: Correct; you need to engage with the pharmaceutical companies, so that our patients can benefit from this.

Eric Ollerenshaw: I think there's a committee down the corridor engaging very close to a certain pharmaceutical this afternoon. I'm not sure what will come of that. Dr Pereira, on the early diagnosis in terms of international, is there anything you've seen or come across that says some people are moving quicker than we are?

Dr Steve Pereira: There's work on using endoscopic approaches to screen people who are at increased risk of pancreatic cancer, and there's quite a number of papers out there showing the usefulness endoscopic ultrasound in particular high risk groups. There's an ongoing study in the UK, which has extended to

Europe, which is also studying that, so I think we are doing the same as most of the international groups.

Internationally in terms of biomarker work, I think that some of the recent innovations have been in developing Europe-wide collaborations. Those are developing and will become more and more important in the coming years.

Eric Ollerenshaw: You don't think anybody is more or less in front of us?

Dr Steve Pereira: I don't know that there's a group with a particular set of biomarkers which is ready for prime time, ready for going out into clinical practice, but certainly there are biomarker panels available which are ready for trialling, ready for use in well-designed, prospective clinical studies.

Eric Ollerenshaw: Yes. Would all countries be comparable in terms of pancreatic cancer, or is it the Americas, Britain, and Germany where you…? I don't know.

Dr Steve Pereira: I think we have some advantages in the UK with, as Hemant talked about, the structure of the national cancer networks across the UK so that we're very well set up for clinical trials nationally. That's one of the great advantages we have over some other countries.

If we could have a comprehensive research portfolio in place, with appropriate funding and specific research questions to answer, then we can do that quite quickly on a national basis. Then in turn, NICE can then come in and then use that to recommend appropriate treatments.

Eric Ollerenshaw: Sorry, Lord Aberdare.

Lord Aberdare: I just wanted to comment that it seems to me this is an area that this inquiry could usefully look into, because I remain slightly puzzled by… I think it's encouraging that clearly there is quite a lot of interchange between what's going on in different countries. I have a friend who is, touch wood, a survivor and he had a treatment that came from France, I think, so it's good to see that that's happening.

Then I remain puzzled; if that's the case, why do we still not seem to have as good results as some of these other countries? Is it to do with the NICE situation, or is it to do with…? What is it to do with? I think that would be a… It's a very good area for this inquiry to try and unravel a bit, so it's a comment rather than a question.

Eric Ollerenshaw: I think you're going to get a comment back, hopefully.

Mr Hermant Kocher: Comparisons, when you make on population-wide, that is very much true; UK or England does not fare as well as, for example, Germany or Canada. When you look at patients who have had treatment – surgery, chemotherapy, or a combination of those – we compare as well as any other country. It's getting the patients through having those treatments is the key thing and that's where our diagnostic colleagues, working in conjunction with the GPs – what you've heard from Steve earlier on – is the key to get more patients to come to these centres of excellence, where they can get treated.

When you look at the structure, another structural barrier is in the research funding. I organise my annual workshop, called the London Pancreas Workshop, where many of our colleagues over here were present, and some of my European and American counterparts were surprised by the activity generated by the pancreatic cancer charities in the UK.

They don't have similar organisations, but they have large governmental money; for example, in the US NIH and NCI put in a lot of money to get centres of excellence which do pancreatic cancer research, what they call 'SPORE', Specialised Programme of Research Excellence.

Similarly, in Germany I alluded to earlier on Munich, Heidelberg and Hamburg are very good centres of pancreatic cancer research excellence, where the Deutsch Cancer Federation puts in a lot of money to those centres to do a lot of research. We don't have a similar mechanism in England.

Eric Ollerenshaw: Clearly, the US and the German national institutions, whether they be governmental or whatever, consider this a higher priority?

Mr Hermant Kocher: They seem to.

Eric Ollerenshaw: They seem to?

Mr Hemant Kocher: Yes.

Eric Ollerenshaw: I wonder if anybody has seemed to know what argument convinces the powers that be.

Mr Hemant Kocher: I wouldn't have a like-for-like comparison of numbers for you to be able to say. Just talking to the researchers, it seems that they can build big conglomerates of researchers working together in one institute and pump prime that, give that infrastructure for these researchers to work with relative freedom.

Eric Ollerenshaw: Interesting, interesting. Sorry, Mark, did you want to…?

Mark Dukan: Yes. Are we losing research capacity? If the activity appears to be stronger in other places and if the follow-through in terms of earlier use of new chemotherapy is going through, are we seeing any of our potential research capacity here being attracted elsewhere?

Dr Steve Pereira: I think we're losing an opportunity in directing young researchers into the field of pancreatic cancer with current funding levels. I've had experiences, as Hemant has, of having young researchers who have a project which is not funded because it's not a good project, but it doesn't have the background of a large body of research, as one might have in breast cancer or bowel cancer research, etc., with a series of successes in terms of outcome and research output if we don't encourage young researchers going into the field of pancreatic cancer going into other areas, then we won't develop pancreatic cancer research group..

There are positive signs; you'll hear later that Cancer Research UK have just come out with a document last week about developing that particular area in pancreatic cancer. We look forward to that.

Eric Ollerenshaw: Is there any solid evidence on that that we could utilise? The one use we could be as an all-party group is to get the Minister to look at what we're saying, and obviously they will be asking for evidence on that. Can you think about having a look at where there would be evidence that we're losing certain people?

You don't have to think immediately now; we're going to take a few months to produce this, but if you can think of anything more to add to that, it would be quite useful for us to be able to say that. They'd want clear evidence.

Mr Hemant Kocher: I think the like-for-like comparison of funding has been done by Ali Stunt for Pancreatic Cancer Action, and I'm sure you'll be able to hear more about that later on.

Eric Ollerenshaw: Yes. It's the losing of research that is the worry, in that sense that Mark raised, I think.

Mark Durkan: Mention was made earlier of the Cancer Drugs Fund. I represent a constituency in Northern Ireland; we don't have Cancer Drugs Fund, although I'd say there's a major campaign with the devolved executive at the minute.

One of the frustrations that has been expressed by some of the clinicians and researchers at the Cancer Centre in Belfast has been that they have

been part of trials that have helped to develop drugs, that they then see being used elsewhere, that aren't then being supported by them because of the absence of a Cancer Drugs Fund in Northern Ireland.

Is there any similar experience at a UK level? Have you seen any of the research and the trialling that you have been involved in applied elsewhere, while you're still waiting to see it get full traction here?

Mr Hemant Kocher: From the surgical perspective, the UK has been at the forefront, as I mentioned, 20 years ago developing new surgical techniques, streamlining the procedures so that patients have very good outcomes. That has been applied worldwide and definitely is there UK-wide; that's why we have these good results from centres of excellence.

I think that, if I get the question right, for chemotherapy the number of options for pancreas cancer is limited and only in the last two years have we got to new chemotherapy regimens which have come through, only one of which is applicable under Cancer Drugs Fund. I think drawing parallels with other cancers will be difficult in pancreas cancer, if I get your question right.

We haven't done anything here which we cannot practice because of the limitations of Cancer Drug Fund, but going forward I think that will be applicable, because now the newer treatments and the newer clinical trials which are coming up would mean that we should have that platform, and we don't have that platform at the moment.

Eric Ollerenshaw: Can I thank you, gentlemen? As I said, if there's something else we want to pick up on, we may get back to you; if you think there's something else you think of, please get back to us. As I said, whatever we produce at the end, you'll have time to have a look at that and make your comments in terms of that, but if you want to go now, thank you very much indeed – really grateful, very grateful indeed.

Dr Steve Pereira: Thanks very much.

Mr Hemant Kocher: Thank you for your time.

Part 2

Eric Ollerenshaw: Thank you. Can I move on then? We've got Maggie, Ali and Stephen – Peter, sorry, not Stephen; where have I got Stephen from? Can I go in that order then? Maggie, just a few minutes, who you are, what you're up to, Ali the same, then Peter. Then we'll go to some questions.

Maggie Blanks: Just a brief introduction and then you'll come back to questions after?

Eric Ollerenshaw: Yes, please. Yes, we know who you are; a lot of this is for the record as well so we get everything right.

Maggie Blanks: Yes. I'm Maggie Blanks, Founder and CEO of the charity Pancreatic Cancer Research Fund. Perhaps as the name conveys, research is our thing; that's all we do. The aim in setting up PCRF about 10 years ago was to add to the level of research going on for pancreatic cancer.

We are the only national charity that exclusively funds research into pancreatic cancer across the UK. Our structure is that the money we raise is to be provided in research grants that institutions around the UK are invited to apply for. The funding decisions are made as a result of peer review process, which is the gold standard for medical research charities to allocate their research funding.

Since we've been going, therefore, we have funded a total of 27 research projects so far, with a value of just over £4 million. Of that 4 million, 1 million was allocated in one go in our last award round; that was the 2012 award round.

Just to pick up perhaps Hemant's point about the nature of funding, Hemant talked about programme grants, which he was able to get from NIHR. Those could be several million pounds; it is quite big stuff. We're not in that league yet; if I win the lottery we may be, but at the moment our model is to have offered what's called 'project grants', which are the smaller amounts. They generally cover a project, which can be up to three years, and currently our award funding for a project is up to £180,000; hence, the last award round I had about six projects funded, most of which wanted somewhere between £150,000 and £180,000, so that was a million in total.

I'm not going to say a lot about comparison statistics and so on, because I know Ali will have all that at her fingertips. I suppose I just want to say, other than to say, "We can do a lot better in the UK," the importance of funding has always been there, but the need for more funding is growing.

In the early years, I would hear Cancer Research UK and others, MRC and so on, say, "There just isn't the demand for research funding." When I was asking them, "Why aren't you funding more research into pancreatic cancer?" "We're not getting the applications."

That may or may not have been the case, but it's no longer the case now. We can see from the growth of applications to PCRF that there are more and more researchers and research teams doing pancreatic cancer and who want to do pancreatic cancer. If we take as a good sign, if a somewhat frustrating one, the fact that the research community that is concerned and interested in pancreatic cancer, it is growing; it has grown. I can see that in the 10 years that I've been involved in PCRF. In our early years, we maybe had two or three applications; with this year's award round that we're just dealing with the applications for, it's 30, and I know that there is growing enthusiasm amongst the research community to do this.

When you get to this level of interest and potential interest, then you get to what CRUK love to call 'the critical mass'. If you get enough researchers who have experience and motivation for pancreatic cancer research, then you get this sort of snowballing effect. We really are, from my perception, getting to that stage now, where the potential for progress is there, very much so, which wasn't necessarily the case in the past. It's the potential for progress that attracts funding and so on.

Yes, we want increased governmental funding into this area. It is only one of the strands of funding; you will hear, or you know already, there are a number of strands: charitable, governmental, pharmaceutical. The governmental aspect, as Hemant touched on, can be vital as a driver. His example was seeing what's going on in the States, for example; there's a big governmental input of funding into pancreatic cancer there.

Very recently, I was interested to see that there has been set up in the States what's called a 'dream team', a dream team for pancreatic cancer, where a big injection of governmental money, along with some charitable, it has to be said, but there was a big injection of money that was offered to a dream team that could be put together from some of the leading research institutions in the US, with a number of priority areas that they had to focus

on. Maybe we can see something like that in the UK, certainly the need for more funding, aside from the researchers who want to do the projects.

What are helping the development of pancreatic cancer research now are the technological developments that have come along in the last few years. One of our projects, a world-leading project at Manchester University for pancreatic cancer, they're using a piece of machinery that didn't even exist two years ago, and it's fantastic in what it can help them do in terms of developing a liquid biopsy for pancreatic cancer.

This piece of equipment cost a quarter of a million pounds and the maintenance of that piece of equipment is certainly not chicken feed either, so having some kind of recognition of the need for funding for the equipment alone, never mind the research projects, that's another area of greater need and will continue to be a growing need as well. Just the very fact of being able to provide fancy equipment that can speed up research is important.

Finally, Hemant mentioned the National Pancreas Tissue Bank that we got into conversation with him in the past about. One of the problems that slows down research or inhibits research is the lack of access to tissue for researchers. We've worked with Hemant to agree the funding for this resource and it is, we have to say, a major contribution to the infrastructure of pancreatic cancer research in the UK. That's going to be getting underway later this year.

That's a contribution that we can make to powering more research, enabling more research to be done, enabling research to be done more quickly, but that will take us away from some of the project grants that we've been able to fund.

Eric Ollerenshaw: Research, yes.

Maggie Blanks: Who's going to fill that gap?

Eric Ollerenshaw: Thank you on that note. Ali?

Ali Stunt: Which leads quite nicely into the structures of funding in the UK for pancreatic cancer research and cancer research in general, because we're talking about a huge input from the charitable sector, and we're having to use money that's been donated by the generosity of the general public in order to fund a lot of our cancer research in the UK.

To re-quote some of the stats that we all should know about from the previous inquiry, we're still receiving only 1% of overall cancer research

funding from the NCRI partners. The way the NCRI works is that it's made up of 22 organisations currently, which includes the Department of Health and the MRC. The majority are extremely large breast cancer charities, the two breast cancer charities; there's a large prostate cancer charity, Children with Cancer, Roy Castle Lung Cancer Foundation, etc.

Last year, 2013, of the 503 million that was spent by NCRI partners on site-specific cancer research, only 5 million was spent on pancreatic cancer; it was 5.2, to be precise. In contrast, breast cancer received 40 million, bowel cancer 25 million, leukaemia 34 million, and prostate 22 million, so that's where the big money is being spent.

The criteria to become a member of the NCRI actually includes an annual research spend of over a million per annum, so Maggie has to replicate what she's done this year every single year in order to become a member, if she so wanted to be one as part of PCRF. Obviously, as Maggie is already doing, the research funds need to be allocated by independent competitive peer review process.

The opposite seems to be true in the United States, because the majority of funding seems to come from government. While we still have the issues surrounding the lack of pancreatic cancer research globally, it's very similar in terms of the proportion of funds of their total cancer research budgets being spent on pancreatic cancer, very similar to here in the UK.

You've got France, Institut National Du Cancer – excuse my accent, it's not very good – they didn't contribute anything to pancreatic cancer; Canada, Canadian Cancer Alliance, 0.5% of their funding. The NCRI, as we've just heard, is just under 1%; the National Institute for Health in the USA, which is one of the big funders, that's actually 2.9%, so that's significantly bigger than the proportion that we have in the UK.

While the proportions are similar, the budgets are bigger, so we're talking… Maggie was alluding to the strategy and there's now a strategic framework for pancreatic cancer research done by the NCI in the States. That's injecting $105 million last year in 2012 – sorry, the year before last, in 2012 – specifically for pancreatic cancer research, whereas in 2000 that was only $20,000, so they've made a big, big investment over the last few years. The Recalcitrant Cancers Act has also looked at that.

Coming back to the UK, one of the things that is quite apparent is the direct correlation between the lack of improvement in survival for pancreatic cancer and the lack of research funding over decades. There's a graph in my written submission that actually shows this quite nicely, where you can

see that breast cancer you start off here, and the injection of funding is going like this and the survival rates are doing exactly the same; they're mirroring the funding graph. There is a direct correlation, which is why we've seen tremendous successes in those cancers versus that for pancreatic cancer.

To put things in context, we were talking about clinical trials earlier; in the UK now, as of last night, there are only nine clinical trials currently recruiting patients in the UK for pancreatic cancer. For breast cancer we have 76 trials, for lung 62, bowel 47, leukaemia 40, prostate 38, ovarian 34, oesophageal 26, melanoma 21, brain 20, blah, blah, blah. We can see we're one of the lowest cancers in terms of the numbers of clinical trials we've got, and that is a direct reflection of the lack of funding we've got into the disease.

One of the things I'd like to find out through this committee is how is the decision with NCRI partners and other people, in terms of where the funds are allocated for cancer research spend on the site-specific things, because we've got some anomalies here when we look at some of the NCRI data and we look at the amount of spend per patient, so per head, so taking it at incidence?

Pancreatic cancer, the spend per patient is £512; for ovarian cancer, which has got an incidence rate that is about 1,600-1,700 people lower than pancreatic cancer, receives £1,727 per head. That's three times as much funding for ovarian, yet there's no direct representation of ovarian cancer charities on the NCRI partners, but there seems to be a disproportionately large amount of funding. I don't want to take it away from them, but I'm just trying to say, "Where are the decisions being made?"

Another issue that we have in the UK – and I think anywhere else, to be perfectly honest – is this problem about nihilism. I was having a private conversation with Lord Saatchi about various things and one of the things he was saying, he said, "Look, Ali, you're going to have a real problem persuading people to fund pancreatic cancer, because a lot of people think it's not worth it. Why bother? Nobody is surviving; you're going to throw good money after bad." Somehow, we've got to convince people that it's worth spending the money, to get more people, to get more funds into research.

One of the things I think is that the early diagnosis area, I think personally, is where we should be spending a lot of… Putting a lot of attention. Currently, when you're looking at the International Cancer Research

Partners' funding – and that includes NCRI, includes the American institutions I was talking about, and France, and Canada – at the moment the majority of funding is going into treatment for research. I would say less than 50% is going into early diagnosis, and this is across the world.

When you look breast cancer, that's very different: two-thirds of the research spend on breast cancer is on early diagnosis. That may well have had an impact on the really good survival rates that we're seeing now. We need also, I believe, a strategy for pancreatic cancer research in the UK, if not globally.

Eric Ollerenshaw: Peter?

Peter O'Hare: Thank you, Chairman. You've had quite a lot of statistics, so I'll be quite brief. I'm Peter O'Hare; I chair the Scientific Advisory Board for Pancreatic Cancer UK. I'm a molecular and cell biologist and a working scientist, and previous to my appointment at Imperial College I was the Director of the Marie Curie Research Institute, and sat on their executive board, and was a member of the National Cancer Research Institute in that capacity.

So I come to Pancreatic Cancer UK not actually as a pancreatic cancer investigator. But I come with a broad knowledge of cancer research, how to fund it, administer it, assess it.

PCUK has three main ambitions focused on pancreatic cancer patients and researchers. First and foremost, we supply support and information to patients and their carers. The main body of our charitable spend goes on funding research. And our third level of activity is in information and in campaigning.

I reiterate and will not repeat many of the things that you have heard about – the failures in pancreatic cancer treatment over the past 40 years and the failure to shift survival rates. There are four main issues with where we are, and if I could separate them out little bit and touch upon some of the points that you both asked and made earlier.

Eric Ollerenshaw: Please.

Peter O'Hare: They are interdigitated, they are linked, but I'm going to try and separate them out. Firstly, there are the scientific challenges; these are distinct from research capacity, research infrastructure, and the funding models. Those are the four things that we would group the issues under, insofar as we can.

Scientific challenges - we've heard about some of those and you've touched on some of them, but if I may, you touched on some of the ones that might be more familiar to you, so for example, NICE and clinical trials. There are huge scientific issues about that, but they are to do with trials that we can have; in other words, we have the agents there to trial, they are there.

Research and the scientific challenges cover all the way from the basic, fundamental biology of pancreatic cancer, why it is different than other cancers, what's happening at the level of the cells, the interactions with tissues, why it's difficult to treat, why it's dense and fibrotic and how that makes drug treatment difficult, through to signalling that goes on in cancer cells, all the way through to animal models, through into translational research, through into research into patients in clinical trials, surgery, and treatment and so on. Scientific challenges come under that very, very broad remit and we have been just touching on a bit of it.

The second then is the research capacity. You again previously alluded to the loss of research capacity and where was it going? I think just linking to some of the things that you've heard earlier, potential new researchers may not be being lost to overseas; they are being potentially, if you like, lost to other cancer disciplines and other field-specific cancer research.

The applications in breast cancer – again going back to both the earlier speakers – there are about seven- or eightfold more applications in breast cancer research than in pancreatic cancer. One might ask questions about why that is. A very simple question for you would be: why do we spend so little money in pancreatic cancer field-specific research? Part of the answer to that – again, Maggie has alluded to this – we'll will be to come back to say, "We don't get the applications, the good-quality applications." It's not that there are lots of good-quality applications coming through that we don't want to fund; they simply aren't coming through.

It's that point that where I think that what we're about is we're trying to facilitate a sea change, in a self-sustaining way, that means those applications will come through, the best quality ones. How we then deal with that in funding terms, whether we are robbing Peter to pay Paul, and paying Peter… taking away money from one cancer to give to another, is an issue that we will have to deal with., But ultimately but all our ambitions are to get the best quality research coming through.

Those applications have not historically been coming through, and that's why the discrepancy in the well of the funding. It, is not, I think, that nobody wants to fund it.

The challenge then is what you do in reaction to that; do you simply wait for those applications to come through, to slowly mobilise and change a field., o Or do you actually, in terms of strategy, catalyse and make that change and put in place a specific strategy to do that? I think that's what we've all been about over the past few years and perhaps what this group can help achieve: what is the strategy to achieve do that change?

By research capacity, I do mean the individuals that are involved; what are we going to do about the future to bring those new people in? I'm not going to, by the way, deal with the scientific challenges, if you'll forgive me. You've heard some of them already; they are perhaps for this meeting too broad, from basic research through to clinical trials, to deal with. Each of them in different disciplines has got different issues; you heard about recruitment and you've talked about it, you've talked about NICE, but all the way through there are different issues that are there for different sorts of overlapping disciplines in the scientific challenges.

Linked to that then is research capacity: why is it that we are getting fewer applications and there are fewer scientists in the field? Again, just to echo two points which you heard earlier, I think that there is a draw from of scientists away from a research area that may not to them be seen to be productive; it may not be seen to enhance their career. It Pancreatic cancer research may be difficult; the challenges are too long. Actually, if you like, we are at the coalface with a very difficult arena to challenge. That is definitely changing, but we must put in place the things that will actually help again catalyse that and bring new scientists, particularly junior scientists, into that the pancreatic cancer field.

PCUK, just as one example and of collaborative working, that is certainly where the majority of our PCUK's funding goes at the minute and will go in the future. That is with innovation and pilot projects at the level that we currently fund, to catalyse new blood into this area and then allow that to accelerate applications from other agencies who can fund at a larger scale than we currently can. , so new blood and making sure that that comes in at many levels, at all levels.

I think there are great opportunities for collaborative working, where those pilot schemes can be supplemented., Either by research council funding, or interactive charity funding, or core infrastructure that would go with it:,

dedicated Ph.D. programmes and so on;, clinical research fellowships, which we also fund. There are things that can be done on research capacity.

Moving onto research infrastructure. B: by that, I mean the collaboration between the research centres. Infrastructure would include one of the laudable things we heard about, about tissue banks. That is a big challenge to do that well, to make sure that there's broad researcher access to it, that tissues are collected in the same way and so on, with standardised procedures and so on. That's what you've heard that our colleagues are now embarking upon.

That will be a wonderful facility, for both basic scientists to access and for clinical trials. N, not just for markers for, "You have cancer," but, "These are likely to be the consequences and prognosis." It's only one example of infrastructure; there are many other things that have to be put in place.

The final thing, if I can tease it out, is then the funding models that then cater to all of those different channels. It's a fourth stream of strategic concern: what are those models? How do we set them up and structure it?, And what sort of collaboration is going there? There are many examples of opportunities there; I think you've talked about international funding or international comparisons.

There are opportunities – and we've worked with Government funding through the research councils – where if we put in a certain amount of money, so does the MRC, to try and supplement clinical research fellows and again augment them that way. There are plenty of opportunities where that can be done, but it needs strategic co-operation between the different organisations, and it can also be done internationally.

So to summarise, the four categories that we would try and want to highlight, to try and tease out what levers you can then pull, are: scientific challenges all the way through, and all the things that go with that; research capacity – individuals and their recruitment into the pancreatic cancer field, which is certainly now changing, I think; research infrastructure and what you do in the centres, and the capacity within the Department of Health – clinical trials and so on, but also the basic research centres; and funding.

For funding, you've heard from all of us about how now the pancreatic cancer charities are certainly now becoming much bigger players – and of course Cancer Research UK themselves, who are not here – on the field of pancreatic cancer research funding. We – the pancreatic cancer charities - are significant players and we appeal, if you like, to this group to try and

examine what state funding, research council funding, can do to try and augment that in a strategic way.

There are two things I would just highlight in finishing: one has been alluded to, which is the US Recalcitrant Cancer Act of 2012, which requires the director of the NCI, as a Government agency, to put in place a strategy to deal with that those recalcitrant cancers. That's something that we could look to and see if we could examine that model and recapitulate reuse it in some way in the UK. The second – I've forgotten what the second was; there were two things. I don't wish to go through all the statistics; I think I'll simply finish there.

Eric Ollenrenshaw: Okay. Can I just quickly…? NCRI – there's a political stitch up going on, I get the impression.

Ali Stunt: I wouldn't quite put it like that.

Maggie Blanks: Sorry, is a what?

Ali Stunt: You could call it that, but I couldn't possibly comment.

Eric Ollerenshaw: We could ask NCRI or whoever to come here, couldn't we, and ask for a balance?

Ali Stunt: I think that would be extraordinary, yes.

Eric Ollerenshaw: That might open that field up to see what's going on.

Ali Stunt: On the point of Government funding though, your Parliamentary colleague – excuse me if I've got her name wrong – Luciana Berger actually had a question in April, which was asking the Health Secretary what proportion of Government funding goes to cancer research.

One of the things that came out of that – and you can go and look through Hansard – between 2012 and 2013 there was actually a reduction of 20 million in terms of the Government contribution to cancer research. That's gone in the wrong direction, so we need to make sure that that doesn't happen again, in fact more is put into cancer research.

Maggie Blanks: Yes, could I add to that? Are those the figures you're talking about?

Ali Stunt: Yes.

Maggie Blanks: Because NCRI, we have to remember it's an umbrella organisation made up of partner organisations. As Ali commented, a number of those partners won't be funding pancreatic cancer research, because they're breast cancer charities or they're prostate cancer charities. I think of the 22

partner organisations, the ones most likely to be involved in funding pancreatic cancer research that makes up that 5 million, our bit of the total spend, will be Cancer Research UK – and that's probably the lion's share of that 5 million – and then there's the Medical Research Council and the Department of Health, as governmental partners in the NCRI organisation.

I've only just asked recently, I've tried to get the information from NCRI about, of the 5 million, where does it come from? Who are the contributors? They've been very shy about telling me that, but I got some figures through which give me the Department of Health, so that would be DoH and NIHR figures that go into that 5 million which ends up for pancreatic cancer research.

I wasn't that surprised, I guess, but yes, of the 5 million that was spent in 2013 on pancreatic cancer research, the amount coming from Department of Health was just over half a million. That was considerably down on the previous year, where it was 800,000, but even 800,000 is pitiful when we, as a small charity, can put in a million pounds worth of funding in one year and the Department of Health can't manage even that.

Eric Ollerenshaw: It goes back to though, doesn't it, what you've all argued. It's this convincing key funders that any investment is going to have some effect? It's a double thing, isn't it, which we're all involved in? It's, one, raising the awareness of it and the scale of this disease and then convincing that actually one can do something about it. Ali's figures are quite useful in terms of the example of other cancers; if you put money in, you can get results, although I understand the underlying concern about the scientific difficulty. Go on, Peter.

Peter O'Hare: Just to add to that point about doing something about it., A recent genetic analysis about the progression of changes in the cells of pancreatic cancer indicated that it's likely that it initiates somewhere around 10, believe it or not, to 15 years before you would present. It's an accumulation then of errors.

That might be seen as a double-edged sword, but that's actually quite an opportunity. There is then an argument to combat this view that there's nothing we can do about it that says, "Actually…" This comes back, of course, to that we all agree about early biomarkers and early diagnosis, even though there are issues with that…

Eric Ollerenshaw: Early diagnosis?

Peter O'Hare: For example, if you can then take that information and seek out those small changes that then are reflected, whether it's a bloodstream marker or another metabolic marker, a genetic marker, you can then measure those more easily. There's an opportunity in that statistic that there are cell changes 10-15 years before presentation which allow you to then that you can combat that view that we can't do anything about it.

Eric Ollerenshaw: Yes, I see that. That's interesting. Where is that coming from, that research?

Peter O'Hare: That's the peer-reviewed top-notch research from Johns Hopkins that talks about tracing back the likely timeline of mutations in pancreatic cancer.

Ali Stunt: It was published in Nature of 2010.

Eric Ollerenshaw: That's really interesting, isn't it? Actually, that could change your whole view of it, couldn't it?

Peter O'Hare: I think we can understand the view. I think if you simply looked at the history of science, I don't think you can, as a scientist, start to make guarantees about research. It's not like a sausage grinder; you don't put research in and it comes out and you solve the problem. It just doesn't work that way; there are convoluted pathways and you can't make guarantees.

However, I think there is a guarantee you can make : if you ***don't*** carry out research, you are not going to move; nothing is going to happen. That's the guarantee that you could make. If you were looking back at anything – transplant patients 50 years ago, where people were doing ridiculous things and now look where we are – we know that research makes a difference. It's only a correlation, but it's a very good correlation; it's cause and effect really and we're not doing enough of research.

There are plenty of opportunities to counteract that argument about the difficulty, without diminishing it or underestimating it.. There are plenty of opportunities to counteract that with science that's now coming out.

Eric Ollerenshaw: Yes, that's really interesting. Sorry, Mark, did you want…?

Mark Durkan: I was going to ask any of you to tell us, if you were Minister for the day, the week, or the month, what three things would you do that would either make the biggest difference to overcoming some of the inertia, the barriers that are there, or getting in behind some of the more positive prospects that just seem to be bubbling under there?

Ali Stunt: My view is that we need to have a strategic approach with this; I think there needs to be a UK strategy for pancreatic cancer research funding, and it needs to involve all stakeholders. That's Government, it's the charitable sector, it's researchers, it's clinicians, it's members of the public even who have been affected by the disease, because – and potentially the odd parliamentarian, if they're willing to come along – I think at the moment it's quite difficult to actually say who's doing what, when, where and why.

Certainly from where I'm sitting, I think a lot of our clinical colleagues know who's doing what, because they're talking to them at conferences, but there's not laid-down plan to show, "These are the areas that need specific focus," because people are thinking, "I think, yes, we agree, yes, there needs to be focus on this area," whether it's looking for biomarkers to improve early diagnosis or whether it's something, a biomarker, to help identify patients that are likely to respond to a specific treatment. I think there needs to be a strategic approach.

I think we need to try and change the culture of funding and try and find something that Government actually is putting a lot more money in, rather than relying on the charitable sector. This is where pancreatic cancer is at a disadvantage, because while significant strides have been made in many of the organisations in terms of the amount of money that's funded by research in the UK, it's a drop in the ocean in comparison to, say, the breast cancer world, where you've got breast cancer charities who are adding 12 million a pop in some cases. We just haven't got that economy of scale in the pancreatic cancer world.

I think the early diagnosis is key, because I think if you get someone diagnosed in time for surgery, their chance of surviving five years increases tenfold, so you've then got a 30% chance of surviving five years versus three. I think that's where we need to put a lot of our focus currently, because even if we are putting money into research in other areas for novel treatments, etc., it's going to take at least 10-15 years before it reaches the clinical environment, and even longer before patients benefit. I think in the interim I would focus definitely on early diagnosis.

Eric Ollerenshaw: Yes. Maggie, you can be a minister for a day (Laughter).

Maggie Blanks: I'm torn; I think certainly… I talked about this idea of the dream team that was set up in the US; I talked about that with one of the professors, a UK professor in this country, for something to do with early diagnosis. I agree

absolutely with what Ali said, that it's such a crucial part of making an impact on survival statistics.

He actually was not so sure that putting a bunch of clever people together in a room with lots of money would necessarily come up with the answer. He felt that it was the sort of thing that was going to just come from someone one Friday afternoon, when they'd just suddenly been… They get the light bulb moment that you couldn't plan for it in that way.

Maybe the light bulb moment for a scientist on one Friday afternoon may come about as a result of some of the things that we've heard already, that the capacity building is there, the encouragement of collaboration and all the rest of it. I don't know; I don't know about channelling a whole pot of money into that specifically, other than, yes, agreeing that the early diagnosis element is key.

Eric Ollerenshaw: We've got a scientist here; any light bulbs? (Laughter)

Peter O'Hare I think my experience of science is… The history of science is that it is punctuated by those incremental changes. It's absolutely built upon an attritional body of work and I think we've all been talking about that today. However, it does all come to this: how I quite paraphrase it for the Minister I'm not sure, but what I would be saying is, "Sustainable."

Yes, you will turn on a light bulb here and there, but you really must make sure you've got that scientific endeavour going across the board, to give the opportunities for those light bulbs to happen. They aren't going to happen unless this is happening, so the words I'd be using would be, 'sustainable'.

I would ask, I would certainly challenge and say, "Listen, here are the facts on our current incidence and five-year survival rates of different cancers. This is how they have moved and this is the funding that's gone into it, some from state sector, from the charitable sector. Here it is in these recalcitrant cancers and particularly in pancreatic cancer; what are you going to do about it?" I would challenge them for a strategy.

Of course, it is going to be about money and there are nettles to be grasped, in my view, about this when it comes to the funding. To paraphrase it, it might be as simple as this: if you do have targets and you might say, "Here is an ambitious target 15 years ago," for breast cancer, or for leukaemia, or for testicular cancer, or some of our great successes. When we meet them, those ambitious target, do we change our funding streams and structure to those cancer types that have not met those

improvement targets, or not? Do we simply carry on going as we were? Where do we then shine the light and do we grasp a nettle that may be necessary for that?

This is a difficult one. I think we've already talked about not wanting to take money away from other streams; of course we don't, but I think there are issues. It's certainly not just about money and a short-term fillip that will give a small injection and something will happen.

We have to make sure that, for example, if we are going to fund now a first-rate, accessible tissue bank, do we then have the funding for the projects that are going to access that tissue bank? You can't just turn it on and say, "Great" and go away; you really must make sure of that there are then projects utilising that resource. That's just an example. I think the word that I would be trying to say is 'sustainable', with levers on all fronts that will then help those light bulbs to turn on.

Eric Ollerenshaw: Yes, interesting, interesting. I thought we had a National Health Service, but call me naïve. I'm aware of the time and whatever, and I did promise if anybody else had a comment, so I'm now opening up to anybody else who may want to chuck in a comment or a question. No? That's fine then. My view is this – what's it called? – NCRI, for the powers that are taking notes, we try and get them in and clarify how they work.

Yes, I take some of those funding points. We are getting into the detail of it, which was the purpose of this Inquiry, to have some impact obviously on that funding, if we can point some of the things out as politicians

Mark Durkan: It's sort of a catalyst funding mechanism that you're talking about, that that's what's missing at the moment?

Ali Stunt: Absolutely, absolutely, yes. We can spin that to encourage the young researchers and scientists, or even old researchers and scientists, to actually…. I'm not looking at anybody.

Eric Ollerenshaw: There's no ageism here.

Ali Stunt: No.

Peter O'Hare: I'm sorry to interrupt, just a couple of other points. Speaking with a scientific hat on, then there's a different level of tactics that one could utilise. I'm not sure if this is for the Minister, but having a champion of pancreatic cancer research in the UK could be a good thing. Somebody that is a world-leading expert, who can act as a clarion call. Because I think he and a few other, if you like, heavy hitters, if I can use that phrase, that have been

attracted back – there was one recently attracted back from America who's gone back again – a few more heavy hitters like that, where they are, publishing and broadcasting to the scientific committee, particularly as examples to junior people coming into this field. Because I think we are talking about 10 or 15 years. Who's going to solve these problems in 10 or 15 years? People that are currently 20, that are 25, that are now graduating, that are coming through, the junior clinicians, Ph.D. students and postdocs. They must be being brought into the pancreatic cancer research field.

If you have senior people publishing, telling us about the movements that are happening in pancreatic cancer research, advertising and flying that banner, if you like, it will then compete with other disciplines and wash its own face with breast cancer and these other areas. People will come into the pancreatic field and things will get moving. You need to be pushing at that as well, so you need some of those people who have left attracted back, with the structure and infrastructure that the clinical trials issues resolved, if there's a perception that they're different in different countries and more difficult to do. If you can't have that, that's not going to attract people back.

Eric Ollerenshaw: It's kind of an academic push, as well as a political push.

Peter O'Hare: Yes.

Eric Ollerenshaw: Let's think about that one. Let's think about that; it's interesting… Okay, I'm going to leave it there, as I was saying with everybody else, if there's any other things you think as you leave the building, then please feel free to comment. As I said earlier, whatever we put together you can have a copy of and obviously comment on that. We're really grateful…that's the first start on another report. Thank you very much indeed. Thank you.