Thursday, 17 November 2011

(9.30 am)

DR RUTHVEN MITCHELL (continued)

Questions by MR MACKENZIE

THE CHAIRMAN: Good morning, Mr Mackenzie.

MR MACKENZIE: Thank you, sir. Sir, today our first witness is Dr Mitchell.

A. Good morning.

THE CHAIRMAN: Dr Mitchell it has been some time.

A. Not too long.

MR MACKENZIE: Good morning, Dr Mitchell.

A. Good morning.

Q. We are dealing today with the topic C2, the question of surrogate testing for non-A non-B Hepatitis during the 1980s and, doctor, you have helpfully provided two statements for us. Before I go to them, I would like to take you through one of two documents from the time, if I may, and ask you some questions. I would like, doctor, firstly, if I may, to take you back to 1983 and the UK Working Party on Transfusion-Associated Hepatitis, of which I think you were a member.

Could we, please, go to the minutes of a meeting dated 18 January 1983. It's our reference page 4 of [PEN0171507]. We can see from the top of the minutes, doctor, that you were present at this meeting. Do you

have any recollections as to --

A. Yes.

Q. Yes? We can see this particular meeting is the second meeting of the working party.

If we can go to page 2, please, of the minutes, under item 6 we can see the subheading "Transfusion-associated hepatitis studies". There is then a listing of various different types of studies, including prospective study, like the USA TTV study.

At the very bottom of the page we can see somebody has put two lines beside the passage:

"It was agreed that some form of study was needed so that the UK is equipped to answer queries about any specific or non-specific tests for non-A non-B Hepatitis offered from abroad."

Under paragraph 6.4 there is a discussion of the fate of the 1974 MRC study.

Do you remember that study, doctor? That was the study that was carried out, I think, earlier, that was reported in 1974 by Professor Zuckerman and others?

A. I have seen the results of it. I wasn't party to it. I wasn't director then.

Q. Yes. Under item 6.5 we see:

"Dr McClelland circulated a draft proposal for a prospective study of non-A non-B Hepatitis. Members

of the working party were asked to provide him with any comments on this."

The final passage I would like to take you to, please, in two paragraphs down:

"If MRC samples are not available, the working party will put forward proposals for some form of study to the MRC and DHSS."

The question I would like to ask you, doctor, is this: we have heard from Dr McClelland that he was of the view that there should be a study in the UK along the lines of the American studies, namely a prospective study of blood donors and recipients to investigate the incidence of post-transfusion hepatitis and the effectiveness of surrogate tests in reducing the incidence of post-transfusion hepatitis. Can you remember, doctor, what were your views at the time on the need for such a study in the UK?

A. Yes, I think everyone was concerned that we had seen this information from America, a different donor population and so on, but we had seen it, and there was a lot of discussion about problems that might arise in the future if we hadn't looked at this particular set of tests.

No one was convinced that they were absolutely specific but, nevertheless, it was something that just

couldn't be ignored. And you have got to remember that -- and it's difficult to say this but early on clearly Dr McClelland and Professor Cash both very tragically had had experience of staff and colleagues being affected by a disease which was -- we now know to be transmissible and they obviously were quite sensitive to the question of: is there any way we could diagnose non-A non-B or some other virus which we don't know about? And that was really the reason that people were interested. But the idea of going into a big prospective study was very difficult because of the enormity of it.

I don't want to go into too much detail but clearly it would require an enormous follow-up of patients through a series of hospitals, through various operation schedules and so on, which we know is notoriously difficult to get information from case sheets, from clinicians, who after all -- you know, way back in 1964 there was a Scottish Office memorandum to medical officers asking them to report any defect associated with blood or blood transfusion. So clearly, everybody knew that it was important to report these things. But whether they were reporting them or not is really not for me to say. All I can say is that the number of reports that we were receiving were pretty small,

I think as we know from other evidence.

So the first part of the study, I think, was doable. That was within blood transfusion confines it would be relatively straightforward to do a study of our donors because we knew who they were, we knew where they were, we knew all their history, where they had been and so on and so on. So we were able to without much difficulty -- I know the technical difficulties were there -- to do -- on the materials available we were able to certainly do that.

But the follow-up of patients was an entirely much more difficult multi-centre thing. And you must remember that I was handling 30 hospitals and to ask individual hospitals to trace information where samples -- and information was not kept, where records were badly kept, where often blood transfusion numbers were changed to other numbers, which bore no relationship to our numbers, and to try and trace all that through the system, it's mind boggling to think about it.

So the Americans were -- I don't know whether they were fortunate or not but clearly they had a much bigger problem than the UK and, therefore, they had people breathing down their necks about doing something about this. So they were able to do a kind of multi-centre

study involving a number of fairly major hospitals. But, again, people in the hospitals, supplying blood to that hospital, therefore follow-up was prospective -- perhaps not so difficult, but I think in our context and even perhaps in the UK very, very difficult test to do --

Q. Yes.

A. -- to do the prospective test.

Q. I can quite understand what you say, doctor. So at the time, did you support Dr McClelland's proposal for a prospective study, including the follow-up of recipients or was that something you were neutral on or were against or what?

A. I would be concerned about the follow-up. As I say, the first part was doable, given the resources and the staff and the techniques and so on, which were not well-known. I mean, we all know that ALT testing is fraught with difficulties, fraught with technical difficulties, different manufacturers, different kits, different cut-off values. We know all about that.

So it's the old story of saying: well, does A equal B? And the problem really is that when I was taught in science, as I did my science degree, it was important to set up what was called a "null hypothesis", not a fallacious argument but an argument which said: is A

equal to B? And your experiments are set up in such a way to try and show that A does not equal B. If, by all means that you have available, you cannot demonstrate that A does not equal B, then there is an assumption that A equals B. But it's not necessarily other than a fallacious argument.

Q. Thank you.

A. I think that comes out in some of the American studies later.

Q. Yes.

THE CHAIRMAN: Dr Mitchell, can I ask you this? I think I can see the difficulties for someone like yourself with 30 hospitals. Do you think the same difficulties would have afflicted Dr McClelland, who was working in a single unit more or less at that stage or would it have been feasible here in the east?

A. I think that part might have been feasible to Dr McClelland. I think he would have difficulty getting sufficient numbers to make it statistically valid. I think you are not talking in terms of two or three weeks or three or four months; you are talking in terms of a number of years.

And we know from other studies that tragically many people who get transfused don't survive. So how do you follow up someone for ten years who is dead? This is

a dilemma that people have.

So inevitably the look-back -- that kind of study -- what I call looking forward, that kind of study can be very, very difficult because you have got a selected group of people who were the survivors. You don't know why the other ones didn't.

So, I'm sorry, that maybe doesn't answer your question but it does demonstrate a difficulty in a place where there are many hospitals being supplied. In a hospital the size of the Royal Infirmary in Edinburgh, okay, but it would have taken a long, long time with these caveats that I have explained.

THE CHAIRMAN: I have an impression the answer you have just given, the extended answer, perhaps attacks more fundamentally the whole notion of a study of this kind than the initial suggestion that, because of the multiplicity of hospitals, it would become difficult. Perhaps we should just leave that for the time being and see what comes up.

A. I think, sir, that there was a difficulty even in Europe of people being desperate to try and find an answer to this problem. And I think if you know from the literature that you have read, Germany introduced it because they'd had catastrophic problem with gamma globulin. Ireland introduced it because they'd had

a catastrophic problem with anti-D immunoglobulin. Germany had a problem with manufacturers who were making blood products and so on, and so on, and other places were the same.

There is Italy, had a enormous problem. Because we know that Italy and the south part of Europe was quite different from the north part of Europe in terms of prevalence of even the ALT testing. And we knew that they were using different methods. We knew if you even go further afield into the Far East or the Middle East, you find even worse problems. As you probable know, I worked in Africa for two years. So I'm pretty well aware of the problems running a blood bank under these kind of conditions.

THE CHAIRMAN: I think we also know that chronology is quite important here. The Germans were doing ALT testing from the 1960s because of their background. It wasn't related to developing knowledge of NANBH.

A. No, they had a problem too with the question of the requirement because the Americans were doing products which had been tested. And I think Europe was saying: well, we have to do the same.

And Paris did the same because they had a catastrophic problem with the Jean-Pierre Allain case, where there was a massive problem with haemophiliacs in

Paris. I'm sorry, it doesn't answer your question.

THE CHAIRMAN: I'm just wondering whether it's worth, you know, pursuing aspects of this.

I think much more of this will come out, I'm sure, Dr Mitchell, but I think we should just proceed.

MR MACKENZIE: Thank you. Dr Mitchell, I would like now to look at another meeting of the working party in 1983, please. I think this was a last meeting of the working party before it fell into abeyance for a couple of years.

I would like, firstly, to look at the agenda, please, to see if this can jog your memory. It's [SNB01430029].

We can see from the top, doctor, this is the agenda of the fourth meeting of the working party on 27 September 1983, and it's items 4 and 5 on the agenda that I think are of interest. We can see item 4 is AIDS, which has now become a priority item, even though this is a working party on hepatitis.

We see AIDS as item 4 on the agenda. Can you see that?

A. Yes.

Q. Underneath that, item 5 "Transfusion-associated hepatitis", including at 5.3 "Prospective TAH studies (Dr McClelland and Dr Barbara)."

Then if we go to the minutes, please, of the meeting, [SNB0143030], what I think is of interest to us, doctor, is that if one reads through the minutes, there is much discussion on AIDS, some discussion on immunoglobulins but no reference at all in the minutes to hepatitis, transfusion-associated hepatitis.

Do you have any recollection of that meeting, doctor?

A. Yes.

Q. Are you able to tell us why hepatitis doesn't appear from the face of the minutes to have been discussed?

A. Well, I think minutes quite clearly were very much preoccupied with the AIDS problem, and I think if you went back to the previous agenda, it says, I think, that Dr McClelland was to prepare a document. I'm not sure if that document was ever proposed or ever seen.

Q. We have seen it, doctor --

A. Later it was seen, yes.

Q. I think it's dated January 1983. I think it might even have been available for the meeting we have looked at previously on 18 January 1983. So I think it had been prepared and was distributed, and in fact Dr --

A. That was the one that was jointly, I think, with North London, Edgware, with John Barbara, was it?

Q. The initial proposal may have been Edinburgh and

Manchester.

A. Manchester.

Q. And then I think at one meeting, possibly a later meeting, in 1986, it was suggested that Edinburgh would have too low a prevalence, therefore Edgware should be included as well.

A. I don't remember the document that anyone agreed to actually let the study go ahead.

Q. No.

A. I think it was a preoccupation with another, much more lethal problem that we had.

Q. Yes. So that perhaps is the explanation why hepatitis doesn't appear in these minutes?

A. It was not pursued in these minutes, yes.

Q. Thank you. Again, sticking at 1983, doctor, the next publication, I'm sure you remember, is the publication on Vox Sanguinis, if we can go to that, please. It's [LIT0011837]. I take you remember this, doctor?

A. Yes.

Q. Can we go, please, to page 57, which is 1846? We can see in the right-hand column your views on the question of:

"Should surrogate testing be introduced at that time."

In the first paragraph you explain the work that was

undertaken in Glasgow by Drs Dow and Follett searching for a serological marker for non-A non-B Hepatitis.

The next paragraph you refer to the USA studies, and then I'll pick up the last paragraph on the right-hand column, you say:

"As SGPT-ALT testing has obviously high false positive and also high false negative rates, we have no intention of suspending 3 per cent of our volunteer blood donors on the basis of an SGPT-ALT test when they may have only transient elevations. Furthermore, such a policy would discourage donor recruitment among the few willing to donate for the good of the community and would cause some anxiety in donors and their families, when we cannot offer anything more than the argument that non-A non-B Hepatitis may exist. We have been most disturbed by the treatment or lack of treatment for unrelated diseases ... and fear that donors with elevated SGPT/ALT levels may suffer the same problems.

"We await the development of a specific serological test for non-A non-B Hepatitis. The use of non-specific tests such as SGPT-ALT can have deep sociological and psychological effects on established blood donors and would necessitate the recruitment of voluntary non-remunerated replacements."

Would it be fair, doctor, to say that the main

concerns expressed there relate to the lack of specificity of surrogate testing and concerns about the effect on donors and the blood supply?

A. Yes.

Q. Just out of interest, doctor, if we can go to the previous page again, please, page 57.

If we could have a look at Dr McClelland's response in the left-hand column, please, you will see that Dr McClelland stated:

"The only action I would recommend at that time was a thorough prospective study to determine the frequency with which post-transfusion hepatitis occurs ..."

The next paragraph and then possibly recommending a further study into the effectivenesses of surrogate markers in reducing PTH.

Then he says:

"I consider that without undertaking thorough studies along these lines, the potential and actual scale of the 'benefit' side of the cost benefit calculation is unknown and therefore no rational decisions can be taken."

Now, doctor, there is no reference in your response to the need to carry out prospective studies. Can you remember why that was?

A. I think I have explained in the response that I gave to

that particular question exactly what my problem was or what other people's problem was. I have already said to you that I think doing prospective would be very difficult.

The first part, we had done something about it. As I said to you, the first part is doable. We did the first part, not all of it, but we did some of it. Having done that, we were obviously faced with the problem of we knew that the level was transient. We knew it varies from day to day. We knew we could have a donor today who was okay and in a week's time his ALT was abnormal.

We knew that some parts of Glasgow on a Monday morning, the ALT levels are much higher than they would be on a Sunday afternoon, and so we knew there was this huge variation within populations, which had nothing whatever to do with hepatitis. It was to do with transaminitis, which is a different condition altogether, of which there are many, many causes.

At the same time, you know, one is reminded of, you would say to a donor. We don't know what this is but we know you have got it. That doesn't ring very true, does it, to any specific donor, who then goes out to tell his friends? And you can see the effect that has on donor recruitment, the poor chap is wandering about wondering,

"Have I got something lethal? Can I talk to my children? Can I talk to my wife? Can I do all the other things that normal people can do? And all I get from that was because I volunteered."

Q. Doctor, I can quite understand your focus on the donor and on the lack of specificity of the test. I simply wonder whether at this time your view on prospective studies was that, perhaps a nice idea in theory but perhaps too many practical problems in following up recipients to really be a runner? Is that a reasonable way to put your views --

A. Yes, I think that's fair.

Q. Yes, thank you.

Now, the next document, please, doctor. Moving on in time, we know that in 1986 blood banks in the US introduced surrogate testing and there was discussion in the UK of that.

I would like then, please, to go to a meeting of SNBTS directors on 3 March 1987, and it's [SGH0016653]. The reason I have gone to this minute, doctor, is that if we can, please, go to page 5, which is 6657, under item (f), at the bottom of the page, we see "Surrogate testing for NANB", and we see:

"The UK Working Party on Transfusion-Associated Hepatitis had been reconvened to pursue the issue of

implementing surrogate testing for NANB."

And a proposed multi-centre study restricted to following up donors, not recipients. You'll remember that, doctor, no doubt.

Over the page in the minutes, please, at the top of the page we see:

"It was noted that some commercial plasma collectors and non-profit blood collectors in the US had begun surrogate testing in 1987 and that in Britain the Haemophilia Society may adopt a position which put pressure on BPL to ensure surrogate testing was introduced.

"The directors discussed the options open to Scotland and agreed the following:

"To recommend to the SHHD that surrogate testing for NANB should be implemented with effect from 1 April 1988 as a national development requiring strictly new funding."

To pause there, doctor, do you remember this meeting?

A. Yes.

Q. What was the nature of the discussion? Were there different views or what?

A. I think the real difficulty was two things. The American was -- recommended for blood banks to do it.

It was not mandatory. The FDA had not said, "You will do this". Nevertheless, commercial people in America were doing it.

That may have been done as what I would call gesture, to show that something was being done. It didn't actually add anything particularly to the value of the product.

At the same time, Dr Lane in the Blood Products Laboratory in London and, of course, Dr Perry and John Watt in Edinburgh, were of a similar view. Well, if we are going to come to self-sufficiency, if we are going to have a product which is equal, if not better than commercial products, then it would be wrong if suddenly your package insert said "Our material has not been tested for ALT". I think that's really the gist of it.

So one would say, well, if the UK were to follow the line of the commercial people and follow the line of the American blood banks, for whatever reason they were doing it, then Scotland and England and -- might well be forced to do the same thing. So it was a question of: let's get geared up, let's get geared up. If this is going to be mandatory, if we are required to do it, then fine, it has got to be done. But we weren't saying to people, "Well, you know, we can do it at no cost".

Clearly there is a big decision to be made somewhere.

Q. What was your personal view, doctor, at the meeting? Were you in favour of the introduction of surrogate testing?

A. Of surrogate testing for donors?

Q. Yes.

A. I think any test in a donor which would be valuable would be okay, provided it met the purpose for which it was intended. So this is a question: could we do any test? Was any test better than none? That's really what you are asking me. And if you want to put that another way: would you say that cancer of the lung was due to the purchase of washing machines? Because the two events run parallel.

Q. We are not going to go into that?

A. No, I know you probably don't want to go into that but that's a bit of a dilemma. Again, if other people are doing it, there is a reason to think: well, maybe they know something that we don't know. Maybe we had better look at this as a problem.

Q. Put it this way, doctor, in 1983 we saw your view was that you were not in favour of introducing surrogate testing. I simply wonder whether, come this meeting in March 1987, your view had changed so that you were now in favour of introducing surrogate testing?

A. I was in favour of doing donor testing, donor testing, looking at donors for a marker for something which might be useful in producing a good result. I was in favour of thinking about: if the commercial people are doing this and our fractionators are telling us that this is important to them, then it's something we should be thinking about. We must accede to their problem.

At the same time, we knew perfectly well that there might not be any particular advantage in doing it, in screening donors out of the system because again -- no doubt it will come out later -- if you take a pool of 20,000 donors and one of them is positive for any marker, it is diluted 1 in 20,000. So the chances of detecting it are pretty slim. As I say, if you are looking for a needle in the haystack, you do not burn the haystack down.

Q. I'm going to break this down a little perhaps, doctor. If in 1987 the SHHD had said to the SNBTS, "You are the experts, if you think surrogate screening of donors, using ALT and anti-HBc tests, should be introduced with a view to trying the reduce the incidence of post-transfusion hepatitis, we will supply the money," if that had been said, would you have supported the introduction of such surrogate screening testing?

A. Yes, I would have supported it, yes.

Q. Why?
A. Well, in order to try and answer the question, was it relevant or not, was it going to show that A equals B.
Q. Yes, and when I say introducing surrogate testing, doctor, I don't mean as a study, a research study, I mean introducing screening of donors using surrogate testing and not using blood with elevated ALT levels or positive for anti-HBc. That's what I mean by surrogate screening of donors.
A. I would have been in favour of doing it on the basis of big competition from the commercial companies. That's what I'm in favour of.
Q. I understand. So you would have been in favour of such screening because of -- the commercial competitors were doing it, rather than perhaps because you thought it offered -- well, let me ask you: did you think surrogate testing at that time offered benefits in increased patient safety?
A. No, not very much. No.
Q. I can certainly understand that for the pooled plasma products but how about for the blood components? Even for the components, were you of the view that surrogate testing wouldn't materially increase patient safety?
A. I'm very doubtful about its ability to do that.
Q. Why?

A. I think because I know that there are many, many other causes. I know that many people die of a whole variety of things. There is a thing called multiple pathology problem. There are multiple difficulties and I don't think that taking one particular one would have made much difference, especially since we knew from the studies that the ALT levels are much, much higher in other groups of the population which don't give blood, seldom give blood.

So we already had a idea of the likely numbers that might be involved in our donors' population. But screening them all to find one or two extra ones, fine, but I don't know what we would do with the results. We would have said: okay, those that are above 150 IU we will haul those out, we will not take these. Fine.

I think looking back now, that's probably true but we weren't looking at that, we were looking at figures of, you know, 2.5 times the norm. And it has been said, if you went to any ALT level, any ALT level at all, any elevation, you would probably take out a third of the donors.

Q. Yes. Am I right in thinking, doctor, from your answer that, in answer to my question why were you of the view that surrogate testing would not materially increase patient safety, one aspect was your view as to a low

prevalence of post-transfusion hepatitis, at least in the West of Scotland -- that's one aspect -- but mainly perhaps, secondly, simply the non-specificity, in particular of ALT testing -- both tests?

A. Yes, I think that's important. We also had some evidence from -- I think you probably know that the West of Scotland made all the dried plasma for Scotland, and every dried plasma bottle had an enormous label on the outside.

I'm sorry I haven't got one but I have got one of the last examples, stuck on the front "Hepatitis", it said, and a great cautionary label, "If you have any information about this, please let us know". The simple answer is no, there were no reports.

Okay, it might well have been that physicians and surgeons and so on would say, "Och, it's okay, don't worry, everybody gets a bit jaundiced". That's fine, but they weren't telling us. So I had no handle on the number of patients that were likely to get better or get worse. No idea. All I knew from my own studies that there were very few.

Q. I think it was known against that, doctor, in the 1980s, that, as regards non-A non-B Hepatitis, the majority of patients were not jaundiced, would therefore be -- one would have to be cautious with relying on the number of

reported cases as giving a true incidence of the problem. Is that correct?

A. Yes, that's right.

Q. Yes. Thank you, doctor.

Moving on a little but sticking in 1987, could I then, please, take you to a letter to The Lancet of 13 June 1987. It's [LIT0010346].

It's a letter in the left-hand column headed "Non-A non-B Hepatitis surrogate testing of blood donations". We see the authors are Drs Dow, yourself and Dr Follett.

I'm not going to go through the detail of the letter, other than the final paragraph, if I may, which states:

"It would be prudent to do a UK study to assess the real incidence of acute post-transfusion NANB hepatitis and to assess the proportion of those chronically affected, before considering following the American surrogate testing policy."

There you seem to be suggesting some form of prospective study of recipients of transfusion?

A. Hm-mm. That's right, yes. I don't demur from that, yes. If it could be organised.

Q. Yes. So again a nice idea in theory --

A. A very good idea in theory but not practical -- very difficult to do practically.

Q. Although it does seem a little odd, I suppose, doctor, in that if your position in the 80s was that it's a nice idea in theory but not really practical, it seems a little odd that in this letter you are suggesting it would be prudent to do such a study?

A. I'm sorry, what did you say?

Q. Yes.

A. It would be ...?

Q. The final paragraph of this letter you say:

"It would be prudent to do a UK study to assess the real incidence of acute post-transfusion hepatitis and to assess the proportion of those chronically affected."

If by that you mean a study such as the American multi-centre study, it does perhaps seem a little odd that you would be suggesting such a study in 1987 if your view was that it was a nice idea in theory but not really practical.

A. I think what we are saying there is, if you look at the earlier part of that letter, there is a -- the problem is not as big as you think but if you want to do it, fine, it might well silence the people who were saying, "Oh, yes, yes, this is an extremely prevalent condition".

Q. Yes.

A. Because clearly, if you look at the information before,

it doesn't show that, that it's prevalent. It shows that in actual fact there are not very much cases in the United Kingdom compared to America.

Q. Based on reported cases?

A. Based on reported cases and based on information that was being examined by the people who were actually doing some testing at that time.

Q. Yes.

A. I mean, Follett and Dow are doing some of these tests. So, I mean, they are being done.

Q. Is perhaps, doctor, another way to look at the final paragraph of this letter -- I think Dr McClelland's position when he gave evidence was that, I think, with the benefit of hindsight, he started to see some of the practical problems, which there would have been, in seeking to undertake a large multi-centre study involving follow-up of recipients. But I think his ultimate position was it probably could have been done if there was sufficient will at the very highest level, ie government, and money to do it -- I suppose it may be, is it possible there is an element of that in your final paragraph, that it would be prudent to do a UK study if somebody has sufficient will and money to do it?

A. I think that's right. I think that the more you look at

this, the more you see that it didn't have an awful lot of support throughout the transfusion departments, both in the UK and in -- perhaps in Scotland, Ireland and in England.

I think often, when you look at blood transfusion, you have got to understand that there are doers and there are followers in terms of their ability within the regional blood transfusion centre. There would always be some transfusion directors who really didn't feel able or willing to organise such an event for the reasons that I have already said. Yet there were others, very academic people, who were saying, "Oh, yes, this would be worth doing".

Equally, there are other eminent people of an academic nature who were saying, "No, this isn't worth doing". And you have got this dilemma. You say, "Well, it might be prudent to do it, but I couldn't really say what the result might be".

Q. When you say -- or said in the letter it might be prudent to do it, you don't say anything in the letter about whether that would be an easy task or a hard task; you simply say it might be prudent to do it or would be prudent to do it. You are not giving any views in the letter about how easy such a study would be.

A. No, I couldn't say that. All I knew, from my

experience, was that blood transfusion is run by doers and followers.

Why Glasgow was chosen to do these kind of things? We could have sat back and done nothing but we didn't. We said, "No, we have got a group of people who are interested in all of these problems and it makes life interesting for them to be contributing". There are other people who are content to follow.

Q. Yes.

PROFESSOR JAMES: Could I ask you, Dr Mitchell, there seems to be a certain difficulty in your letter because in the first two paragraphs you and your colleagues report the results of essentially Brian Dow's survey over many years of the raised transaminases.

A. Yes.

PROFESSOR JAMES: And you came to the conclusion really that post-transfusion hepatitis was extremely rare in the West of Scotland on the basis of the number of individuals with really significantly raised transaminases. However, in this letter you state in the middle of the penultimate paragraph:

"Thus, when ALT follow-up studies are not done in transfusion recipients, only 1 per cent of hepatitis cases are reported. Conversely, 99 per cent of hepatitis cases are never brought to the attention of

transfusion centres ..."

So as a matter of fact, what was and is your view? Do you actually think that in retrospect very easy to be wise that your view, led by your colleagues' excellent research, that post-transfusion hepatitis was extremely rare in the West of Scotland was actually incorrect because the kind of studies that you referred to there, the careful follow-up studies, where 99 per cent of cases might then be turned up, had not been done?

A. I think that's one way of interpreting it. It's not one that I agree with particularly but I can see where you are coming from.

I think if you look -- I think around that time, if you remember, Alter in Holland and people like that in the States actually went to the trouble of saying that in retrospect, comparing three years of testing against two years of not testing, made no difference whatsoever. In a place where there was a high prevalence, very high prevalence, they were talking 10 per cent, was it, something of that order, maybe even higher in other places.

So I mean, when you were saying, well, maybe Scotland had a figure like that, we had nothing like that. We could only go on what was being told to us by clinicians. And we presumed that they were wise.

PROFESSOR JAMES: What I'm suggesting, though, is that we now know and actually you say in this letter that what you are told by clinicians is a gross underestimate, and I should say that I did a study myself in 1983 among cardiac surgery patients in whom I made the same -- in retrospect, what I now consider to be mistake in discarding a number of people with a very low elevation of transaminase but we now know that the natural history of Hepatitis C, non-A non-B Hepatitis, actually is that these elevations of transaminase are not necessarily very high and they are intermittent.

A. That's right.

PROFESSOR JAMES: So I'm just putting to you that actually Brian Dow's study, which was a very estimable study in the early 1980s, for reasons that we all subscribed to at the time, nonetheless produced an answer which turned out to be wrong, precisely for the reasons that you and he then enunciated in this letter. Do you think that's fair or not?

A. I think that's fair, based on the information that we had, yes. Based on what information we had.

PROFESSOR JAMES: Thank you.

MR MACKENZIE: Thank you. Doctor, the next document I would like to look at, please in this chain, moving on to 16 June 1987, is [SNB0040672].

You will see, doctor, that is an extra meeting of the coordinating group of the SNBTS. If we can go, please, to page 3, under item 5 "Testing blood donors for non-A non-B Hepatitis", do you see reference to Dr McClelland:

"... tabled a draft letter to The Lancet in expansion of the SNBTS view of the need to commence surrogate marker screening ... in the context of product liability and of competition from commercial producers who would be introducing it. Certain SNBTS staff had already written to The Lancet that surrogate testing was not justified on scientific grounds and the directors acknowledged this."

So is that essentially consistent with what you have told us, doctor, that you weren't perhaps convinced on the need for surrogate testing on scientific grounds but you could certainly see the issue of competition from commercial producers? How about product liability? Was that an issue which featured in your consideration?

A. Yes. I think just looking back a bit on the criticisms from other places, one centre that also did a good study, I think, was Dr Contreras in the south, with John Barbara. They were actually sitting on the doorstep of a major hospital, so they were able to do the kind of prospective follow-up thing that perhaps we

couldn't do in our centre at Law Hospital. So having said that, they clearly were again of the view, well, this is something which is scientifically desirable but is not providing very much in the way of information.

On the question of product liability, product liability was something which clearly the Americans were particularly concerned about. That's one of the reasons they introduced ALT testing, as a gesture, "Let's do something".

At the same time, Britain, as I understand it, had a thing called Crown immunity at that time. And, therefore, what we knew as directors was that European legislation was coming along on product liability for all kind of medicines, including blood. People tried to arrange [sic] that blood wasn't really a drug, you know, it wasn't a proper drug, so it wouldn't come under the legislation. However, those that were wiser than us said, "No, sorry, you can't do that, it will be considered". So therefore, we were saying, well, product liability may force us into this situation of doing something in order to be just similar to the FDA, which was -- it would carry a bit of weight in this country.

At the same time the English -- when that letter was published, there was an immediate outcry from the

English directors. They were deeply disappointed that Scotland should attempt to go it alone or even suggest that such a thing should be done.

Q. Yes.

A. So they were perhaps less favourable than we were on the question of product liability.

Q. Yes. And we see that --

A. We could see it coming.

Q. We can see the final entry in the minute is that:

"After a few editing points were made, each director signed an amended copy of the letter which Professor Cash would submit for publication."

I take it, doctor, you were quite happy to sign the letter at that stage?

A. Yes.

Q. Could we then, please, go to the letter for completeness? It's [LIT0010328].

We can see, sir, a letter published in The Lancet on 4 July 1987 under the heading "Testing of blood donors for non-A non-B Hepatitis: irrational, perhaps, but inescapable."

Could you just read, please, doctor, the first paragraph to yourself? (Pause).

Do you see the part:

"No large study to answer this critical question has

yet been presented and we agree that the size of the benefit to be gained from surrogate testing cannot be accurately established without such a study. However, the time for this study has already passed. Starting now will give us an answer in 3-4 years -- and that is probably 3 to 4 years too late. The introduction of surrogate marker testing for NANB is now virtually inescapable ..."

So is your position in this letter, doctor, you agree with the proposition that it's too late to seek to undertake a large multi-centre prospective study, instead surrogate testing should simply be introduced?

A. Yes, I think that's right. I think we were forced into that decision on the basis of -- on scientific information, but this question of: is it better to do something than nothing?

And, of course, we also knew at that time -- I think that's about -- what is it? -- 1987 or 1988 -- I think it was quite clear -- I think in my first statement about non-A non-B you will see that I say despite all this controversy that was going on about levels of ALT, did they have it or did they not, all that stuff, eventually what I said in my witness statement was, I think it was something like -- the word I wanted to use was "ultimately it was decided that something would

come along". In actual fact when I first wrote it, what I said was:

"Mercifully something had come along."

We knew that something was coming along nicely. Chiron were introducing a test based on a virus that nobody had ever seen --

Q. Yes.

A. -- which nobody had ever shown to obey the normal postulates of Koch and other people, who knew about transmission of infection.

So I think again you are right, there was an inevitability of doing something.

Q. Thank you. The last document I would like to take you to, please, doctor, before coming to your statements, [SNB0113846].

If we go over the page, please, we will see it's a letter from Professor Cash. If we go back to the first page, please, it's a letter to Dr Fraser, the director in Bristol, 8 July 1987.

It perhaps provides some further context for the letter we have just looked at in The Lancet:

"1. The SNBTS directors do not wish and currently have no intention, of introducing NANB surrogate testing unilaterally."

Would that have been your position at the time as

well?

A. Yes, I think that's obviously a winner, yes.

Q. Why was that?

A. Well, we were quite well respected among our English colleagues, and they were among us. There was no reason to think that the population of Scotland and England were anything different and, therefore, there was a feeling that if we don't hang together, we will surely hang separately.

I think Professor Cash makes it clear there that this -- again this idea of introducing, "Let's clear the decks, let's get started in case there is an argument somewhere upstairs that says, 'Yes, you have got to do it because product liability we can't assume that we will be excused. We are committed to using, wherever possible, British products, we are not prepared to continue buying products from abroad, which we know carry a tremendous risk. Therefore, please carry on, get something up and running.'".

And, therefore, the public expenditure survey, as he rightly said, was over a period of years, not months. So that's right, we were in that position.

And as I said, the English directors were very, very worried about that because they had no central funding. Remember, they actually were funded from regional health

authorities, and they had to persuade their local treasurer that it was worthwhile doing or not. So there you had 15 individual directors going round 15 individual finance directors asking for something to be done, the money.

At least in Scotland we had one place that we went to for money. Some people took the view, rightly, I think, and quite true, that a service like the Blood Transfusion Service had no right to be doing research of any kind. If you want to do research, go and get a research grant. Don't ask the health service to support you.

Now, some of us didn't agree with that but there was an element of a feeling among some people that blood transfusion was a service and just you deliver a service, don't get involved in the politics and the science of the subject. I am afraid if that did happen, we would be nowhere today.

Q. Let me ask you this, doctor, what would have had to have been in place for surrogate testing to have been introduced in Scotland at this time. I assume funding would obviously have had to have been in place. Is that right? Secondly, the agreement of the English transfusion directors. Was that correct?

A. Hm-mm.

Q. How about the approval of the SHHD and perhaps DHSS? Were they elements as well?
A. Oh, yes, they were the money lenders. Clearly you don't go ahead with these things without finance, regardless. I mean, there were all sorts of problem with that. Not just doing the test but all the things that follow on from the test. What are you going to do with all these donors that have nothing wrong with them?
Q. What I wonder, doctor, looking at Professor Cash's letter, on the face of the letter, when one looks at paragraphs 2, 3 and 4, just to take a second to read them. (Pause).

Reading those paragraphs 1, 2, 3 and 4 by themselves, it may give an inference -- well, they may beg the question: how serious were the Scottish directors in seeking to introduce surrogate testing? I wonder whether the answer is -- and tell me if I'm wrong -- is that if these other elements were in place, funding, agreement of English directors, approval of SHHD and perhaps DHSS, then the Scottish directors were serious about recommending introduction of surrogate screening for the reasons you have discussed? Is that fair?
A. Yes, I think that's fair. If there had been nothing else on the horizon. I think they would have been

forced into doing this, much against their better judgment, much against my better judgment.

Again, I just keep coming back to the idea that, you know, it's reckoned there are 50,000 people in Britain -- in Scotland who carry Hepatitis C, 50,000. There is 179,000 in the world who are carrying Hepatitis C. Now, you are not going to tell me they are all blood donors.

Q. I'm not sure the figures are right, doctor.

A. That's the figures, they have been published.

Q. 50,000 Hepatitis C --

A. 50,000 in Scotland.

Q. And how many in the world?

A. 179,000 I think it is.

Q. That would suggest --

A. This was published by David Goldberg, and it was also published in the Viral Hepatitis Journal from one of the speakers in a symposium in Edinburgh, one of the Professors of Medicine in Edinburgh.

Q. We may have to check --

A. When the -- it's not at that time but subsequently that's the kind of figures that are being bandied about.

Q. We may have to check them but you suggested --

A. I have got the paper with me, if you want to see it.

Q. Is it perhaps 180 million in the world?

A. I beg your pardon, yes.
Q. That would make more sense.
A. Sorry, that's right. Yes, I beg your pardon, I'm forgetting the world is a big place. I'm talking really about the Scottish figures. I have got the paper with me, if you would like to have a look at it.
Q. Scotland can claim many things but I don't think we can claim to have about a third of the world's population of Hep C carriers.
A. In some parts of Africa, you would be surprised.
Q. I have no more documents to take you to but you have provided two statements I would like to take you to for completeness, please. The first one is [WIT0030116].

By way of explanation, we asked a number of standard questions to all of our witnesses, and you have provided the following responses. We don't have the questions in your statement but I will give an indication of the questions.

Questions 1 and 2 related to the consideration given by the SNBTS in the 1980s to surrogate testing and also the research into surrogate testing undertaken by SNBTS. I think what we might simply do is take all of your answers as read, but I will ask you some questions about them.

So the answer to paragraphs 1 and 2, you explain

that:

"Consideration was given by the SNBTS to introduce surrogate tests ..."

You refer to the work being undertaken by Dr Follett and Dr Dow to identify a serological marker for the disease, and the problems with specificity and the disease remaining a diagnosis of exclusion. We can read the rest of that answer for ourselves.

Then at paragraph 3 we asked why the multi-centre study into surrogate testing for NANBH did not include a Scottish transfusion centre, and you say you have no knowledge of that.

We can see what else you say there.

In paragraph 4 --

A. I'm not sure just what is the purpose of the question. I don't know whether they were doing ALT as the basis of that study that you describe or whether it was the introduction of Chiron test. It's certainly true that England did some studies of Chiron in the early 1989s and Glasgow did them as well --

Q. Yes --

A. -- but with different kits from the same manufacturer.

Q. Yes, I appreciate the question of surrogate testing and the Chiron testing. They do merge at one point. There is clearly an overlap, but I will seek to keep the

overlap to a minimum because obviously you are coming back next week to tell us about Chiron and Hepatitis C screening.

A. It's just that when I saw the test kits from manufacturers were obtained, that's because we were obtaining sample test kits from Organon and Abbott and Ortho.

Q. We should understand the reference to test kits from manufacturers --

A. I think that's --

Q. -- as relating to the anti-Hepatitis C test kits.

A. We certainly don't know of any test in England which was doing ALT testing as, you know, introducing surrogate testing. I don't know of anyone who was doing that.

Q. No, the question was:

"Why the multi-centre study into surrogate testing for NANBH conducted at Edgware, Manchester and Bristol did not include a Scottish blood transfusion centre."

And I think you will remember at the transfusion services Working Party on Transfusion-Associated Hepatitis, it was agreed that a multi-centre study into surrogate testing of donors would be undertaken, not recipients, but donors, and I think that study duly took place and Dr Gunson produced a paper.

So that's the reference to the multi-centre study.

It wasn't, at least at that stage, to do with the Chiron Hepatitis C test. But it may be that in your answer -- it may be the reference to "test kits from manufacturers", you perhaps are referring to the Hepatitis C test.

A. Hm-mm.

Q. I understand, thank you. Paragraph 4 we asked:

"Why it took until October 1988 before the multi-centre study into surrogate testing commenced."

It was just a puzzle on our part. I think we have since -- there is further documentation which perhaps will help us solve that puzzle.

But in terms of your answer, I think certainly the second part of the answer on that page, the second half of it, I think, again deals with Hepatitis C Chiron-type testing. So I won't go into that today.

Over the page, please, I think again the paragraph at the top of the page, again I think --

A. I think I can say that the reason there was a delay was because there is a delay in manufacturers supplying the material.

Q. Hang on, doctor, you mean there you are talking about the Chiron Hepatitis C test?

A. Yes.

Q. Put that to one side today, please.

A. Okay.
Q. We are trying to stick to the surrogate testing, the ALT and anti-HBc. I appreciate there is an overlap and I can appreciate why the Hepatitis C tests are included in your statement.

Then paragraph 45, the question was:

"When the SNBTS sought funding from SHHD to introduce surrogate testing, including when it was proposed to introduce such testing ..."

Your answer in paragraph 5, I think, again relates to Hepatitis C testing. So, again, I'm not going to take you to that.

In paragraph 6 we asked:

"Why the SNBTS first sought funding from the SHHD in 1986, the introduction of surrogate testing in 1987."

Your answer 6, doctor, is that again to do with the Hepatitis C Chiron test, rather than the ALT and anti-HBc tests?

A. I think it's a bit of both actually. Because clearly there was a succession of requests to the SHHD, as you probably know, over a number of years of the PES document. But I think sort of in the middle of that, in came Chiron. So it knocked the whole idea of rapid, massive introduction of ALT to one side.
Q. Yes. Thank you.

A. Although ALT was still done on HCV-positive individuals, quite clearly. In a way you were looking back at the -- getting an answer to the first question by doing the second.

Q. Yes, thank you. And then question 7, I think we have covered, in that we asked the question why the directors agreed at their meeting on 3 March 1987 that surrogate testing should be introduced. So I won't go back over your answer, other than to say I think in the second last line you refer to your "retrial".

A. That's --

Q. I think that's your retiral, I think?

A. Yes, I did say to Susan Murray that statements like that had a propensity to become realistic. I did seek to have it changed but unfortunately it hasn't come.

Q. We will change it now. We take out "retrial" an we'll insert "retiral" --

A. I did notice it when I -- write about it actually.

PROFESSOR JAMES: Were you convicted, Dr Mitchell?

A. I stood on the shoulders of giants.

MR MACKENZIE: The next two questions, 8 and 9, asked about the steps taken by the SNBTS and when to prepare for the introduction of surrogate testing. And 9 was estimates at the time of the likely costs of introducing surrogate testing. Again, I think we can explore these matters,

certainly the question of funding and costing, with Professor Cash in more detail when he comes.

Paragraph 10, we asked:

"Why surrogate testing was not introduced in Scotland."

You say it was not:

"... introduced in Scotland and elsewhere but was never abandoned as a desirable procedure. It was necessary to proceed with caution and accuracy for the benefit of patients and donors."

Reference to Chiron, we can see. Paragraph 11 over the page, please.

A. If can I just say about paragraph 10, I think it's important to say that if there was a good test, we would all have been doing it. I think that's important to realise that. It's not a question of hanging back.

We were cautious; that's right. I mean, when I left the transfusion centre, they used to say that Mitchell was the negative control in much of the discussion because I was always cautious about things and realised that, well, there is money at stake. And I just want to make that point, that if there was a good test, we would all have been doing it.

Q. And that's perhaps illustrated by the Chiron Hepatitis C test?

A. That's where the change came.
Q. There came a point when everybody was doing that test?
A. That was it. That was the Holy Grail. That was what we were looking for.
Q. Thank you.

Then question 11 we asked:

"If surrogate testing had been introduced in Scotland, the extent to which the incidence of post-transfusion NANBH or Hepatitis C is likely to have been reduced."

And you replied:

"Introduction of suitable surrogate tests ... would in my view reduce the possibility of non-A non-B Hepatitis but by how much I cannot calculate because the early tests were unreliable ..."

Then a reference to a Journal of Hepatitis article I won't go to, but the reference is [PEN0171891].

Question 12 we asked:

"If surrogate testing had been introduced, the percentage of donations that are likely to have been rejected and whether that may have caused a problem in maintaining a sufficient blood supply."

And we can see your answer in paragraph 12.

How about the question, doctor, if 4 or 5 per cent of blood donors had been lost in the West of Scotland,

would that have created a problem for the blood supply?
A. Yes.
Q. Would that be an insurmountable problem?
A. With sufficient drive perhaps it could have been overcome, and I think there was a change of policy, remember, in -- well, statements about stop doing single pint transfusions, single unit transfusions. Take those out of the equation. So most people getting blood after that were multiple transfusions, they were being given more than one unit at a time, perhaps many units.

And so the answer to that is, yes, we could probably have overcome the problem. It would have taken a lot of additional advertising, and it's difficult to see how you would recruit donors faced with the knowledge that you were imparting through their colleagues at the workplace, who were not infected, but had a marker which was putting them off-service. They would be saying to themselves "Well, I'm not going. If you are not going to go, I'm not going because I might be turned down the same as you". And once you are turned down, then you have a problem. I have said to you many, many times, a donor becomes a patient for whatever reason.

Q. And we should perhaps be cautious in thinking the figure may just have been 4 or 5 per cent. If one donor says to another "I had a bad experience, and they said this

to me", and it put off others too?

A. I think you are reading some of the literature that I read recently on this particular inquiry. I think many donors are now turned down for a variety of reasons, and I just do not know how they can manage with some of the questions which are asked -- are quite difficult for donors to answer.

We tried, remember, to do a bit of advertising with massive television coverage. What happens with that is it goes up for a week or two and then falls back again. The natural donor volunteer rate is around 5 per cent of the population. It goes up and down a little bit. If you get the Gulf War coming along, everything goes, no problem, let's give -- big, big problem there. But at the same time if you don't keep up the pressure on the donor population, they don't come. Many of them don't come back a second time.

Q. Yes.

A. For various reasons.

Q. There is then a continuing effect, if one donor would otherwise have come back again and again and again and again, that donor doesn't come back ever again --

A. That's right.

Q. -- then perhaps some sort of accumulating effect, a sort of an ongoing effect certainly.

A. Yes, it's cumulative.
Q. Yes, thank you. Then question 13 we asked about the two letters in The Lancet of June and July 1987, but I have asked you about that in your oral evidence. So we can move over to question 14.

This was a quite a narrow question that:

"The minutes of the first meeting of the UK Blood Transfusion Services Advisory Committee on Transfusion-Transmitted Diseases on 24 February 1989."

It's mentioned in the preliminary report in paragraph 9.109, you refer to:

"A Glasgow study of 5,000 donations on which ALT was tested and a separate study of 2,000 donations in which anti-HBc was tested."

I don't think we have to go into the details of that.

A. No, just the statement co-infection can occur --
Q. I see.
A. -- and that's quite obvious with virus diseases. It's often -- you know, the type of person who gets Hepatitis B or HAV or other viruses, these are often what people would call a culture plate waiting to be colonised. So there is a lot of cross-fertility in that particular regard. Co-infection is quite important.

Q. Thank you. Doctor, I think we have covered really, all of the main matters I wish to put to you, but again simply for completeness, we did ask some supplementary questions and you kindly provided a statement. It's [PEN0171897].

Can I just ask, doctor: how was this statement produced? Did you type up the answers or what?

A. No, that would be done in Susan's office. Susan Murray's office --

Q. So did you dictate them or write them down?

A. She would have one of the typists type it for me. Jennifer would type that for me.

Q. From your handwritten notes?

A. Often by my dictated note. But sometimes I would send a handwritten one with it, if there was a difficulty about understanding a word or whatever.

Q. Okay.

A. But it worked quite well.

Q. The first question we asked was:

"Should a large-scale prospective study have been carried out in the UK in the early 80s".

I think we have gone over that today, this morning, doctor, so I think we will just take your written answer as read, please.

Then in question 2 we asked:

"If such a study had been carried out, to what extent it's likely to have met its objectives."

You say:

"Such a study would not have provided useful pointers to the cause or causes of non-A non-B Hepatitis."

We can quite understand that.

Paragraph 3 we asked about the work of Drs Dow and Follett. In your response, doctor, you say:

"The findings of Dow and Follett were carried out using a wide range of serum samples from a variety of individuals and their findings could not have detected subclinical infection, since there were many possible causes. The SHHD figures were partly based on observation in a low level of clinical notification."

SHHD figures? What's that a reference to, do you remember?

A. I'm not sure which figures you're referring -- did the question not ask what the figures were? I'm sorry, I don't have the question 3 that you asked. What did you ask?

Q. It's on the previous page. I'm sorry, no, it's on that page. It's question 3.

A. "Did the inclusions ..."

Yes.

Q. It may be that there has been some sort of typographical error, I don't know.

A. I'm sorry, it's the question of SHHD figures. That's Scottish figures. That's the figures which we had obtained, which were the only figures available at that time.

There were some other samples -- you see, that was done on the basis of Dr Cash asked the West to do a study taking account of samples from Aberdeen, Edinburgh, Dundee, and so on, and they all piled in with whatever they could supply. Some of them put in haemophiliacs, some put in chronic dialysis patients, some put in people who had immuno-suppression for other reasons, and so on. So there was a variety of patients put in and donors.

Q. Are we talking now about the Chiron hepatitis?

A. No, we are talking about this particular group of tests, this particular group. Now that was -- yes, it was Chiron, yes. It was Chiron. But as I said to you, a lot of Chiron was also done with ALT testing.

Some of the ALT tests were already known from the person who gave us the sample. It would be known whether they were positive or not from Aberdeen or wherever.

Q. I don't want to go into Chiron today. We will come back

to that next week.

A. I'm saying the figures were probably based on that low level of notification that we had. But the study was done on samples provided by the other Scottish centres.

Q. Thank you.

A. As well as our own.

Q. Question 4 we won't go into, that's the question of SHHD medical officers, and you haven't provided a written answer. We can explore that with the officers themselves.

Question 5, going over the page, I'm sorry -- question (a) we can see what that says.

Question (b), the blood supply, we have looked at already.

Question 5(c), we asked:

"To what extent ... if surrogate testing had been introduced, cases of post-transfusion Hepatitis C are likely to have been prevented."

And you said, doctor:

"The 0.088 per cent HCV positives confirmed by specific and sensitive second generation tests and beyond, is low."

Do you mean by that there was a low prevalence of Hepatitis C in Scottish blood donors?

A. Yes.

Q. You then go on to say:

"5 per cent of these HCV-positive samples showing --

A. I'm sorry, that's 59.

Q. I'm sorry, I understand:

"... 59 per cent of these HCV-positive samples showing elevation of ALT above three times normal would mean that 50 per cent of 0.088 per cent, which is arithmetically very low, compared with ALT elevations reported for other reasons."

I see.

A. That's right.

MR MACKENZIE: Thank you, doctor.

Sir, I have no further questions for Dr Mitchell.

A. I think the important thing is we had come from 3 per cent hit rate down to 0.6 per cent hit rate, down to 0.63 per cent hit rate, down to 0.088 hit rate, over the period of time that the studies were done. So that was a sort of benefit by doing the second and even third generation tests. It had put the marker on -- a real marker on Hepatitis C virus. We could confidently say to someone at that time, "You have got it. We know you have got it. We have the evidence you have got it". We couldn't say that to the chap who was tested three years previously. Sorry.

THE CHAIRMAN: We will have a break at that stage, I think.

(11.00 am)

(Short break)

(11.18 am)

THE CHAIRMAN: Mr Di Rollo?

MR DI ROLLO: Sir, Mr Dawson is going to question the witness.

THE CHAIRMAN: Mr Dawson?

Questions by MR DAWSON

MR DAWSON: Thank you, sir.

Good morning, Dr Mitchell. I just have a few questions for you.

Could I have up to the screen, please, document [SGH0016653] and in particular page 6?

Dr Mitchell, you will remember this document to which you referred earlier. It's the minutes of the SNBTS directors meeting from 3 March 1987, and in particular here we have the passage relating to the directors having discussed the options relating to surrogate testing and the recommendation that was made.

Do you remember that passage?

A. Yes.

Q. In your earlier evidence, would I be correct in saying that the reason why you voted for this recommendation at that time was as a gesture to appease the fractionators?

A. Yes, that was one of the reasons, yes.

Q. Was that one of the reasons or was that the reason?
A. I think that was the main reason.
Q. The main reason, as far as you were concerned?
A. Yes.
Q. Could I just ask you, at this stage -- this is March 1987 -- the background, as far as fractionation processes are concerned, is that we are on the verge of having a heat-treated concentrate --
A. Yes.
Q. -- which I think came in in the next month. Is that right?
A. That's right.
Q. And obviously one is dealing with a product which is made from very large pools. That's correct, as well, isn't it?
A. Yes.
Q. What safety value did you think surrogate testing would have, as far as the fractionated products were concerned?
A. Not a lot. For the reasons I have already said about the question of dilution. So when some people said, "Oh, you must test the serum, not the plasma going in", fine.

But, again, in the background of that, when they were making that sort of request from the fractionators,

Bob Perry was sitting on -- I think the figure he has given in one of the papers, 50 tonnes of what you would call untested plasma.

Dr Richard Lane was sitting on a very large amount of material, which was either in process or had been processed, and was not up to that standard being required by the commercial people.

So at the advisory committee meeting, of which I was a member, with the methods(?) committee, at that time there was discussion, "What are we going to do with this plasma, all these materials?" It was led that if the test -- if no test was available and they were happy about the heat treatment, there was an option of: would we destroy the plasma or would we dispose of it?

And the question was: well, perhaps we could get -- dispose of it. One of the options. I said, "No". I think you will see in the minute, Dr Mitchell said it was an option, there were other options available. One was obviously we could -- there was a question of whether we should export it. We could have exported it and who would have benefited from that product which had not been tested.

The Third World is desperate for that kind of material. As I say, where I have worked in the past, to be seen by the doctor is a privilege, to be given

a blood transfusion or to be offered something like that is something really quite spectacular. You must have seen in recent conflict, not wishing to go into it too much, but in recent conflict the problems that they have of resuscitation of patients is unbelievable because they don't have access to this kind of material.

So there was a lot of forces in the background suggesting that, "Listen, we need to get this done, if we are to salvage and save the fractionators and what they have available".

Q. But as far as the actual safety value of surrogate testing for the fractionator product --

A. I doubt very much if it would have made any difference.

Q. If could we focus -- I think you have already covered this area as well, but I just want to be clear as to your position. As far as the blood that was being taken and was destined for patients for transfusion was concerned, I think your position in your earlier evidence was that it was doubtful as to whether there would be any safety value associated with surrogate testing for those patients as well. Is that right?

A. I think that's right. Again, I'm only basing that on Dr Dow's work.

Q. Yes but, that was --

A. That was my opinion --

Q. -- position at the time.
A. -- based on what other centres had sent to us and what we had discovered in our own archives within the regional centre in Glasgow with patients that were referred to as allegedly post-transfusion hepatitis. Looking at them, we thought: well, it's pretty low level problem. You know, when I last -- when I finished the evidence, just before tea, you were asking me what did it mean by 0.088. Well, Professor Goldberg has written that the chances of getting a blood transfusion causing PTH today is one in 2 million.
Q. Just to look at the minute, which we have up on the screen there, after the recommendation that's set out in the first sentence -- this is the bold passage -- we see there where it says:

"Each director should let Dr Cash know what funds would be required."

So obviously the idea was that the recommendation had been made and you would be committed to spending a certain amount of money, I think as you have said, and you would be sent away to work out precisely what that amount would be. Is that right?
A. That was right. That was done I think basically by John Francis the finance chap in the headquarters.

I think they all were pretty well aware of how much

the tests cost, how many people you needed to do it, that kind of thing, how long did a test take. That was already known.

Q. Okay.

A. So it wouldn't be too difficult to work out the actual cost.

Q. I just want to get your reaction to this proposition, Dr Mitchell, that as someone responsible for the safety of blood in Scotland, as you were at that time, your position was that you at this meeting voted for a recommendation to introduce a safety measure which you thought would have little or no value, as far as safety was concerned?

A. So far as patients were concerned, I don't think it would have made an awful lot of difference.

Q. Despite that you voted for it?

A. I voted for it on the reasons I have just been saying that you have a problem with the fractionators and the presence of -- it's okay saying, yes, they were about to introduce heat treatment, but we don't know. I mean, PFC, Edinburgh, were still doing evaluations of the heat treatment systems. I can't speak for them but I don't know when they would be able to say hand on heart, "Yes, it's okay, we have managed to salvage all this material".

Q. Would it be correct to say that at about this time within the SNBTS directors group it was Dr Brian McClelland that was taking the lead on this issue?
A. Yes.
Q. Yes. I think yesterday Professor Cash referred to the leadership of Brian McClelland in connection with this issue, but that was your recollection as well?
A. Yes.
Q. Did you discuss with Brian McClelland what his reasoning was for voting for the recommendation at this stage?
A. Brian had put up his reasoning on at least three occasions. The protocol of his work and so on had been well discussed in very many places. So he was well aware of his reasoning, yes.
Q. To be fair, Dr Mitchell, I may have not asked that quite clearly enough because the protocol you are talking about, this is the protocol that he had put up on a number of occasions looking to institute a large-scale study, but by this stage it appears that the recommendation is not to have a study but instead to go straight to testing. So his position appears to have evolved, if not changed.

So what I'm asking you is whether you had discussed at this point in time, that's March 1987, with

Dr McClelland, what his reasoning was for voting for this recommendation?

A. I think his reasoning would be the same as mine, which we were, as I said, faced with the problems of the fractionators and product liability.

Q. In his evidence Dr McClelland was asked what part patient safety played in this decision being taken at this time. And he said:

"It was the factor ..."

In his consideration as to whether this recommendation should be made. That doesn't seem to accord with your evidence as to what your reasoning was. Is that correct?

A. Yes, I can only go on what we knew.

Q. Yes.

A. But the only people that had actually done a study in Scotland at that time of that amount of depth -- we could only go by what we knew, and what we knew, and as Brian Dow I think said in his thesis, it was a small problem, it was a low problem, low priority, nothing like AIDS or any of the other things. And you asked earlier about was that the basis of the SHHD figures. The answer is yes. I think the SHHD had a copy of Brian's thesis, from which the figures were quoted, I think. Having seen that from Dr Forrester.

Q. There is just one other area I wanted to explore with you, because I think it's something that you have mentioned in your evidence before and I think you recognise that. It's the concept of a donor becoming a patient as a concept. I think a phrase that you have used a couple of times.

I just want to explore with you the fact that surely in some cases it's a good thing that donor becomes a patient because in testing that donor, you found out that the donor has some medical problem and that donor can thereby receive medical assistance. Is that right?

A. Yes, absolutely.

Q. So the idea of a donor becoming a patient isn't per se a reason not to do testing?

A. No, provided the basis on which you make him a patient is justifiable. The fact that he has got, you know, a marker, doesn't mean to say he is going to die tomorrow. It doesn't mean to say he is going to die in 20 years' time. As we now know that people who have received various products and so on have had the fortune of living a much longer time than they would have done.

And it was a question really of saying to yourself, isn't it fortunate that heat treatment and so on came along, that people who previously had a very low expectation, had a very considerable increased lifespan

with all that goes with it, whereas a donor who was found positive for whatever reason was turned down? What do you say, "Go and see your GP"? The GP immediately phones us and says, "What does this mean?" "I don't know what it means, but I know what you are getting at". But he says to me, "But this chap is sitting in front of me and he is dead scared, he's worried, 'What's going on happen to me?' I can't tell him anything". I say, "Neither can I".

MR DAWSON: Thank you very much, Dr Mitchell. Thank you, sir.

MR ANDERSON: I have no questions. Thank you, sir.

THE CHAIRMAN: Mr Johnston?

MR JOHNSTON: I have no questions either, sir.

THE CHAIRMAN: Thank you, Dr Mitchell. Thank you very much.

A. Thank you.

MR MACKENZIE: Sir, the next witness is Dr Gillon.

DR JACK GILLON (continued)

Questions by MR MACKENZIE

MR MACKENZIE: Good morning, Dr Gillon.

A. Good morning.

Q. We are looking today at C2, the question of surrogate testing for non-A non-B Hepatitis in the 1980s. And we have looked at your CV before, doctor, so we won't go back to that.

But in short, I think, you joined the SNBTS at the end of 1984. I think from April 1985 to date you are a Consultant Physician with the Edinburgh and Southeast Scotland Blood Transfusion Service and a Consultant at the Department of Transfusion Medicine at the ERI.

A. That's correct, yes.

Q. Before I take you to your statement, doctor, I would like to take you to one or two documents first and ask you some questions. The first one very briefly is [SGH0016653].

We will see this is the minute of a meeting of the SNBTS directors on 3 March 1987, and if we go, please, to page 6, we can see in bold text a paragraph:

"To recommend to the SHHD that surrogate testing for NANB should be implemented with effect from 1 April 1988..."

Et cetera.

Now, we know, doctor, that you had been working on the question of surrogate markers for non-A non-B, I think towards the end of 1986. Is that correct -- 1987, was it?

A. Yes, yes, 1986 and 1987 was when we were looking at donors, yes.

Q. Were you told of this recommendation by the directors about this time or ...?

A. I became aware of it at some time during that period. I can't remember if it was immediately after this meeting or when but, yes, it became known that that was the recommendation.

Q. We will come back to look at what happened after that, but I think it might be helpful just to look at the work you were doing in relation to surrogate markers and probably the best account, I think, is perhaps the 1988 Vox Sanguinis report. Could we have that up, please 1234, it's [SNB00083536].

We can see from the abstract, it starts with a reference to events in America, and it picks up:

"As part of an assessment of the medical and economic implications of such a screening programme, we have screened 1,742 regular blood donors for ALT and 2,086 (including the same 1,742) for anti-HBc. 42 (2.4 per cent) of the 1,742 donors had ALT levels above 45 units. Clinical assessment of 33 of these revealed that 26 exceeded their ideal body weight for more than 10 per cent and 15 by more than 20 per cent. 11 admitted to an alcohol intake of over 40g daily. In all 82 per cent of donors with raised ALT had a non-viral clinical explanation for this abnormality. Anti-HBc was detected in 42 (2.0 per cent) of the 2,086 donors screened. 27 (64 per cent) also had anti-HBs and 11

(26 per cent) had anti-HBc. There was no overlap between donors with raised ALT and those with anti-HBc. Combined screening would lead to a loss of at least 4.4 per cent of donations in the population studied. In view of the medical and economic implications of the introduction of these screening tests and the poverty of data on the clinical significance of post-transfusion non-A non-B Hepatitis, we conclude that such a screening programme cannot be justified at present. Further studies are required, including a prospective controlled trial of the effects of screening."

We can see some further discussion.

I think if we go over the page, please, to page 149 under "Methods" we can see:

"Between April and November 1986 ALT levels were measured ..."

That's when the study is being carried out.

If we go over the page again, please, page 150, under "Discussion" we see:

"In our regular donors a raised ALT as defined by the American studies occurs in 2.4 per cent. The chosen cut-off value of 45 units corresponds closely to two standard deviations above the mean, the usual laboratory definition for the upper limit of normal. The number of donors identified by this cut-off level as having

a raised ALT would therefore be similar in Edinburgh to that in the American studies."

Then:

"We have found a strong association between a raised ALT and both obesity and alcohol ingestion. This confirms the findings of Alter's study of American donors."

A few lines down:

"In the present series using a definition of obesity of 10 per cent above ideal weight for height and of alcohol excess as the ingestion of more than 40g daily a simple explanation for a raised ALT was found in 82 per cent of donors, though in the absence of a control group, it is impossible to be certain about the relationship between weight and the frequency of raised ALT."

I think another interesting observation over the page, please, at page 151, in the top of the left-hand column, about six lines down we see the sentence:

"It is important for those who advocate ALT testing to recognise that this tendency to fluctuation in ALT levels would produce a cumulative loss of donors far in excess of that suggested by studies already published and that most of these donors would not be NANB hepatitis carriers."

Again the right-hand column, please, the paragraph comments:

"In addition to this raw cost of screening all donations, account must be taken of the clinical consequences of identifying up to 5 per cent of the donor population as being potential carriers. The assessment of each of these donors, with further laboratory testing will generate substantial costs. If the BTS were to take the same responsible attitude to the medical assessment and counselling of these donors, as it has to HIV antibody-positive donors, staff and resources would be required to deal with 4-6 donors daily in a medium-sized centre."

What's the reference to a "medium-sized centre" there? Can you give us an example?

A. I guess that what I would have had in mind was Edinburgh, because Glasgow and the West of Scotland had roughly twice the size of donor potential as we did. Whereas Dundee and Aberdeen had approximately half. So for approximately 100,000 attendances a year, that would be what you would expect to see.

Q. Then:

"At least as important as the financial consequences of combined testing is the potential morbidity generated in these donors as a result of informing them of these

abnormalities. Our experience in this study has convinced us that such donors suffer significant anxiety, though it could be argued that the identification of obesity, alcohol abuse and perhaps significant liver disease could be of potential benefit."

I think again an interesting observation over the page, please, at page 152, in the left-hand column, please, towards the bottom, the sentence commencing:

"Four small prospective studies have been carried out, two using ALT screening and two using anti-HBc. Three of these studies, including Alter's study of ALT testing at NIH, failed to demonstrate any reduction in post-transfusion NANB hepatitis as a result of donor screening. In the most recently reported study, using methods similar to the TTV and NIH studies, an apparent association between anti-HBc in donor units and recipient hepatitis is reported."

Then, finally, the right-hand column, the final paragraph:

"We conclude that the introduction of these screening tests cannot at present be justified. Further studies of recipient NANB hepatitis and the natural history of the disease are necessary, and a properly conducted prospective trial of screening for surrogate

markers is essential. More extensive studies of the donor population would be valuable, with a particular need for elucidation of the apparent relationship between body weight and ALT level. Such studies would prove useful in the management of donors, should the case for screening ever be well-enough established for the introduction to be considered necessary."

Now, doctor, these are your views, obviously, as set out perhaps towards the end of 1987, when the paper was drafted, or at some point in 1988, I'm not sure. Can you remember approximately when the paper was drafted?

A. No, but it would have been during 1987, yes.

Q. I think, as we will come to see, the essential view set out in this report on the question of surrogate testing presumably you had formed these views some time after the end of your study?

A. Yes. I mean, I think in common with most people at the time, my views were in evolution and probably swung backwards and forwards because it was a very difficult issue.

Q. Yes. Could I then, please, look at one or two documents from the time. The first one is [SNB0113548].

This, doctor, is a letter from Professor Cash to yourself of 30 March 1987. He writes:

"Many thanks for letting me have a look at your

manuscript on ALT/anti-HBc testing of donations."

I'm not sure, doctor, is that a reference to the draft paper we have just looked at? Because we also know that you wrote a letter to The Lancet in June 1987. But given the number of pages, 11, 13 and 15, I wonder if perhaps it is the lengthier paper we have just looked at, rather than the one page, if that, letter to The Lancet in June 1987?

A. I think it's almost certainly the paper we have just seen, yes.

Q. Thank you. Paragraph 4, Professor Cash says:

"I have one major worry -- the final conclusion. My problem is that it runs quite contrary to the decision made by the SNBTS directors (to seek funds to establish routine testing in mid 1988). The proposal, to which the directors agreed, was made by one of the co-authors of your paper, Dr McClelland."

Do you remember there being any discussion between perhaps yourself, Professor Cash and Dr McClelland about your paper and the question of surrogate testing?

A. I don't remember the three of us sitting down to discuss this at the time. I know that there were reverberations obviously and, as I recall, Dr McClelland's name wasn't on the final paper.

Q. Indeed. Perhaps the next item to look at, please, is

the letter to The Lancet from yourself and your fellow authors, and that is [LIT0010346].

We can see the date is 13 June 1986. We can see the subject matter. It also appears alongside a letter from Drs Dow, Mitchell and Follett, who essentially agree with yourself and your fellow authors that surrogate testing should not be introduced without further study.

I won't go through the details of your letter. I think that would simply be to repeat the paper but could we, please, go over the page and simply for completeness we will see the conclusion. It's the same as the paper, the top left-hand corner:

"We conclude that the introduction of ALT/anti-HBc screening tests as an indicator of NANB hepatitis carrier status in blood donors cannot at present be justified."

Then I think the next matter which happened, if we can look, please, at [SNB0040672]. These are the minutes of an extra meeting of the coordinating group of the directors of 16 June 1987.

If we can go to page 3, please, under item 5, "Testing blood donors for non-A non-B Hepatitis", we can see this is the genesis of the letter which will later appear in the Lancet, by the directors, surrogate testing, irrational perhaps but inescapable.

We can see the views, as noted, of the directors that:

"The need to commence surrogate marker screening of blood donations for NANB in the context of product liability and of competition from commercial producers who would be introducing it. Certain SNBTS staff had already written to The Lancet that surrogate testing was not justified on scientific grounds and the directors acknowledged this."

So it may be, doctor, that the differences between yourself and your Edinburgh colleagues and perhaps Dr Dow and Dr Follett from Glasgow and the SNBTS directors may not actually have been as great as they may on face value appear, in that it seems to be here that, if the minute is correct, the directors are acknowledging that surrogate testing was not justified on scientific grounds but there were other reasons, we have product liability, competition from commercial producers, which did justify such testing.

Do you have any comment on that suggestion?

A. I think that's exactly right, and my take on this was that what had been decided was essentially a political decision, and I was at pains to point out the impact of this on the donor population because, I suppose, to a large extent I saw myself as an advocate for the

donors, and not only that but just looking at the whole implication in terms of resources, as well as the medical implications for the donors was very important to get that into the frame.

Q. So if one were to ask the question at that time, should surrogate testing be introduced, it may depend who you asked as to the answer you received?

A. I'm sure it would, yes, certainly. I mean, I think nobody would have denied that introducing surrogate testing would have identified some donors who were carriers of non-A non-B Hepatitis. We knew that. We just didn't know how many. We didn't know enough about whether this test would perform as it was being predicted in the American literature.

Q. We know, doctor, that your view at the time was that surrogate testing should not be introduced. Sitting today, knowing all we now know about Hepatitis C and the prevalence, as found with the introduction of Hepatitis C screening, do you still think that it was correct not to introduce surrogate testing in 1987?

A. I have asked myself that question a lot, not just since this Inquiry but since that time, and I don't know the answer to that. All of the things that were in the equation then are still in the equation now. How would we have managed that? How would it have performed in

practice?

I certainly take the view that the predictions of efficacy, of 30 per cent/40 per cent ALT, would almost certainly have been too high, and there are various reasons for that. It was a predictive efficacy, for instance and didn't -- just to throw one thing into the mix, didn't take into account the fact that if you reject 5 per cent of blood donors, you have to recruit a similar number of new blood donors to take their place.

If you look at the prevalence we found in new donors in 1991 when we started screening, compared to regular donors, I think it's something like five times as high in the new donors. So if you then recruit, whatever it would be, 4,000 or 5,000 new donors a year in Scotland, to make up the shortfall, and most of them -- the ones who had Hepatitis C would not be identifiable by ALT screening, you could conceivably have increased the risk, and this is something that wasn't discussed adequately at the time. I know Harvey Alter talked about a corrected efficacy to try to accommodate that, and that dropped his predicted efficacy from 40 per cent to 20 per cent by trying to make a calculated correction, but it was totally speculative.

Q. Just sticking with the question of efficacy --

I apologise for jumping back in time. Going back to 1987, what was your view at that time as to whether surrogate testing was likely to result in any benefit to patient safety?

A. Yes, I think I would have accepted that it would have undoubtedly have prevented the transfusion of some infectious units. We had no idea how many infectious units, because we didn't know what the prevalence was in the donor population and, as I have said, we would have had to recruit new donors to fill the gap. But you would have prevented the transfusion of some units that were infectious. But you could have done that by rejecting any cohort of donors you chose to reject.

Q. So would it be fair to say your view was that at that time surrogate testing was likely to have some benefit to patient safety but the benefit was unquantifiable?

A. Yes.

Q. I would like now to turn, before I go to your statement, to one final document we haven't looked at yet, please. It's [PEN0170302].

This is the judgment of Mr Justice Burton produced on 26 March 2001 following the Hepatitis C litigation in England. I'm not going on take you to any of the details, doctor, apart from there is a helpful table at page 0369, which sets out the countries which did

introduce surrogate testing.

I don't think we have looked at that yet on this topic. At page 0369, please. It's paragraph 108(v), I think, of the judgment. Yes. We can see it's headed:

"Not many countries apart from the United States (both tests) and Germany (ALT only) introduced surrogate tests. The full picture is as follows."

I think we can see Germany, 1965 (ALT); Italy, 1970 (ALT); USA, September 1986 onwards (both); Luxembourg, 1 October 1986, (ALT), mid 87 (for new donors) (anti-HBc); France 15 April 1988 (for ALT), 3 October 1988 (for anti-HBc); Switzerland, 1 June 1988 (ALT); and Malta, early 1989 (ALT).

And the judge then went on to say:

"There was some partial routine ALT testing in certain centres in Austria, Belgium and Spain from about 1987 and Queensland (alone of the Australian states) introduced compulsory ALT testing in about April 1989."

Also a reference to Sweden:

"No other country, so far as is known, ever introduced either test."

It is perhaps a bit unfair to put this to you, doctor, have you ever done any work on which other countries introduced surrogate testing or do we simply have to take that table really for what it says?

A. I think we probably have to take that at face vale. The only comments I would make were that I know that the transfusion systems in Germany and Italy were very diverse and remained so for a long time thereafter.

And in the USA, in fact they didn't introduce anti-core testing in 1986 as planned because core testing was technically difficult and they were having problems with reproducibility. I'm not sure it was ever universally introduced but if it was, it was certainly not before the middle of 1987. But that's kind of neither here nor there.

Q. So for Germany and Italy, it's perhaps an oversimplification to assume that ALT testing was used throughout each country. You have stated one may in fact have to look at regional differences.

A. Yes, and different systems within the country. It was very diverse, as it was in the United States.

Q. And also this table tells us nothing about the ALT level used as a cut-off for rejecting a donor.

A. Yes.

Q. Thank you. With all of that preamble, doctor, I would like now, please, to look at your statement. It is [PEN0171931].

We asked you two preliminary questions before coming to our standard supplementary questions. Could we

firstly, please, go to the Crawford paper from 1994. It's [PEN0020582].

We have looked at this many times. I would like to go straight over the page, please, page 122 of the article -- well, page 2 of the article, page 122 of the journal, to be precise.

On the right-hand column, about half way down, we see -- I should perhaps start in the left-hand column, I'm sorry, under "Results", second paragraph:

"159 donors were found to be infected with HCV. 151 (95 per cent) of these donors responded to the invitation to attend for further counselling and follow-up."

In the right-hand column about half way down:

"Of the 151 donors, 89 (59 per cent) had ALT levels above the upper limit of normal."

We simply wondered what this meant "above the upper limit of normal".

Could we then put that paper to one side, please, and go back to your statement? I'm not going to read out verbatim your answer, doctor, but in short you explain that ALT testing of the Hepatitis C-positive donors was carried out by the respective Departments of Clinical Chemistry in five SNBTS regions.

And then in the second paragraph, half way down, we

see:

"Different laboratories used different test methods, and had different upper limits of normal. The standard method for determining normal levels is to test a sufficiently large population of 'normal subjects' to allow valid statistical calculations to be made. The upper limit of normal is then taken as two standard deviations above the logarithmic mean of all results. This then defines the upper 2.5 per cent of that population. Individual laboratories define their own levels of normality using a local population sample, for ALT as for other tests."

Et cetera.

You say you have no record of the levels that were used in the regional laboratories at that time:

"But because of the variations in test methodology and local demographics, they are likely to have been different from one another but not markedly so."

I can quite understand all of that, doctor, but is it likely that the upper limit of normal was about 45 international units per millilitre?

A. Probably less, in fact. In Edinburgh it was 40 units per litre at the time, and I would guess the others were of that sort of order.

Q. Thank you. It's just to give us some feel for the

figure. Thank you.

The second preliminary question was again to do with the '94 paper and, this was really more in hope than expectation, we wondered whether there was any information available as to how many anti-HCV negative blood donors had ALT levels above the upper limit of normal, really just to try and let us -- a control group or a comparator group to let us try and compare that group with the positive donors.

You say:

"To the best of my knowledge, no representative sample of known HCV negative Scottish blood donors has ever been screened for ALT levels."

One can understand why that would be the case:

"However, two cohorts of Edinburgh donors were screened in the period prior to screening tests for HCV becoming available, with the aim of ascertaining the potential impact of ALT testing, should it be introduced in Scotland."

We have looked already at your 1988 Vox Sanguinis paper. The result of this was that 2.4 per cent of donors were found to have raised ALT using that definition.

You also reported in the same paper:

"A survey of the records of 708 plasmapheresis

donors ... and 3.7 per cent of these highly selected 'pedigree" donors had raised ALT in the first sample, and 6 per cent of those with initially normal levels had an elevated level at some point thereafter."

You then say that:

"... led us to study plasma donors in more detail, as reported in the Prowse and others paper in 1993."

The reference is [PEN0172043]. I'm not going to go to it because at the next page in your statement I think you set out the main findings.

If we can go on to page 3 in your statement, you say:

"We showed that by measuring ALT levels at every attendance of 431 donors (plasma donors typically donate monthly) over a period of 18 months, 23 per cent had a elevated ALT at some point and 11.1 per cent of donations exhibited ALT level greater than 40 IU, the upper limit of normal for the laboratory at that time. Analysing the data by sex showed that 14.8 per cent of donations by men and 3.6 per cent of donations by women had levels greater than 40 IU. 58 per cent of men had at least one ALT over 40 IU at some time, compared with 22 per cent of women. This confirmed previous reports of a difference in ALT level in men and women."

This is a completely to one side question, doctor,

but very generally, of the total donor population in Scotland, what percentage are men, what percentage are women, very generally?

A. It's roughly 50/50 with a slight preponderance of men.

Q. Thank you. That was really the two preliminary questions we asked you about the 1994 paper.

We then went on to ask you the same questions we have asked other witnesses. We asked, firstly, whether:

"Should a large-scale prospective study ... along the lines of the US ... studies ... have been carried out in the UK ..."

With various aims.

You say you:

"... make a few general comments in respect of this query and will give a more detailed response to the question of the effectiveness and potential outcomes of surrogate testing ..."

And your response to query 5 below.

The top of page 4 of your statement, please you say:

"With hindsight, it is easy to say that such a study would have been desirable, though it would have been incredibly prescient in 1981 ..."

To pause there, do you know now that Dr McClelland was proposing such studies in the early 1980s, in fact 1980, 81, 83?

A. Yes, I think he was being very prescient actually.
Q. You go on to say:
"The significance of NANBH was only then becoming apparent and indeed there was at the time and for many years thereafter a body of opinion which disputed the seriousness of chronic NANBH. A programme of research into transfusion-transmitted hepatitis had been established in the West for many years ..."
Is that the Dow/Follett work?
A. Yes.
Q. "... and in SEBTS basic research to try to detect markers of putative infectious agents ..."
Et cetera.
Is that the Hopkins fieldwork?
A. Yes.
Q. Thank you. You go on to say:
"Information on the prevalence of the disease and outcome for patients would have been highly desirable ... but also the difficulties involved in carrying out a prospective study should not ... be underestimated."
Doctor, when you in 1987/1988 were recommending that surrogate testing shouldn't be introduced without prospective studies having been carried out, did you apply your mind at that time to how realistic a proposition it was to carry out a prospective study

with extensive follow-up of recipients?

A. I think it was constantly in our minds at that time. Although we did know that it was a massive undertaking to do that, and particularly difficult in the presumed low prevalence area that we thought Britain was. That wasn't based on very much, as I'm sure you have heard from others, but turned out to be correct in fact. It would have been a huge study. It would have had to have been a multi-centre study with very substantial funding and resource implications and impact on other departments, such as, not least, the hepatology departments.

So I don't know that we ever lost sight of that but by -- the other thing that was becoming -- well, it wasn't becoming evident but the other thing I had in my mind was that there was the likelihood that there would be a scientific resolution to this problem, we would hope within a very short time. I remember when, before I was appointed, I was sent off to America to learn about blood transfusion because I came from a gastroenterology background, and one of the things I did was a grand tour, which took in a visit to Harvey Alter in NIH, where obviously what we talked about was NANBH and Hepatitis B, and also to the CDC in Atlanta where I met Dan Bradley, and that was very

interesting indeed because he described what turned out to be the basic research underlying the eventual discovery of HCV. Now, that was in April 1985, I guess, March 1985, and I was in correspondence with Dr Bradley in the year or so following that about potential lines of research where we might collaborate. And he was also receiving interesting work from Japan that was published about the same time using monoclonal antibodies. There were serious developments going on and, of course, about that time it was when he started to collaborate with Chiron and communication went dead from my end because, of course, he got involved with the commercial exploitation of that.

But to say that ALT was the only show in town was perhaps true, but it's not that we didn't have other avenues that were opening up in a much more rigorously scientific way of dealing with this problem. So, yes, by all means, if there was a way of doing a multi-centre double -- well, it couldn't be double-blind but a controlled trial, which was randomised and properly carried out with big enough numbers, we would have been all for it, but nobody was driving that at the time.

Q. Yes, thank you. To pick up your statement you say further down:

"In the context of a disease about which very little

was known and for which no specific diagnostic test was available, I think it is unsurprising that such a study was not pursued in 1981 or shortly thereafter, particularly once it was acknowledged that a definitive answer to the question of the efficacy of surrogate testing could not be obtained by such studies, but only by a prospective randomised trial in which sufficient numbers of patients were randomised to receive either ALT screened or unscreened blood. No such trial was ever carried out on a scale big enough to provide definitive answers."

The second question we asked was:

"If such a study had been carried out, to what extent is it likely to have met the objectives we set out in ..."

Our preceding question.

Over the page, please, at page 5 of your statement, you explain:

"The success of such a study would have depended critically on a variety of factors but it is likely that an evaluation of the prevalence of PTNANBH in the UK could have been obtained (with the important caveat that diagnosis in the absence of a specific test would be likely to be very imprecise), and would have been useful in deciding whether or not to introduce surrogate

testing.

"Investigating the natural history of the disease, however, would not have been within the remit or capabilities of the transfusion services."

Can you explain just briefly why?

A. That would have required extended follow-up of patients, which would naturally have been the remit of the aforementioned hepatologists, who had no inkling of this, I'm sure, at the time. Perhaps Professor James could confirm that. It would have been a massive undertaking.

Q. How long would such a study have had to have gone on for to provide meaningful results?

A. Well, the first seriously meaningful results -- I can't remember exactly when it was published, it was the follow-up of the patients originally identified in the TTV study, which was published in the late 1980s, I think. I think Aach was the main author. That provided nearly 20 years' worth of follow-up. And that was the first time that we had seen big numbers indicating that, yes, there was a significant risk, something like, you know, up to 50 per cent of patients would have evidence of chronic persistent hepatitis and maybe up to -- I think in that initial paper it was something like 15 to 20 per cent would have evidence of

cirrhosis after 20 years. So by then, with that extended follow-up of a big number, there was hard evidence of significant chronic liver disease in that group of patients.

It did not translate into an increased mortality at 20 years and that is something that has been found in subsequent studies, including our own in the UK of patients identified through the look-back process. But there is no doubt about the significance of the liver disease in a subset of those patients.

Q. Returning to your statement you say:

"In order to be of value, a bank of sera for future use would need to have been substantial in the numbers of affected patients, controls, and the respective donors, as would have been necessary to establish an accurate estimate of prevalence. In a putatively low prevalence population such as was thought to be the case in the UK, an enormous number of patients would have had to be followed up."

We saw looking at one of the earlier TTVS papers that the creation of a library or bank of sera of "known" infected patients was one of the purposes of the study, partly to be there to evaluate putative specific tests for NANBH, were it to come along. It also occurs to me, as I understand it, at least in the West, when

post-transfusion hepatitis cases were reported, I think samples may have been kept from these reported cases, which presumably could have been and perhaps were used to then test, for example, the Chiron test when that came along. Was that a standard practice, for example, in Edinburgh and the east as well, of keeping samples from reported cases of post-transfusion hepatitis?

A. Not that I can recall. I don't remember any systematic attempt to do that. But reported cases of hepatitis were few and far between.

Q. I see. Thank you.

Then returning to your statement, you have no comment to make on the conclusions drawn by Drs Dow and Follett.

Question 4 was a reference to the views of SHHD medical officers and, again, you have no comment to make on that issue.

In 5 we asked:

"If surrogate testing of blood donors, (ie testing for elevated ALT and/or anti-HBc) had been introduced in Scotland (a) what percentage of donors are likely to have been deferred."

Then I think again you refer to your study we have looked at, the 1988 Vox Sanguinis study, the results of which were:

"2.4 per cent of donors had ALT greater than 45 units and 2.0 per cent were positive or anti-HBc, with no overlap between the two groups. This suggests a minimum donor loss of 4.4 per cent if both tests were implemented."

We can see what else you say there:

"But the question of the finding of an association between anti-HBc in donors and recipient NANBH was a surprise outcome of the TTV study and the more surprising aspect was a lack of overlap between donors with raised ALT and those with anti-HBc. This led the authors of the NIH study to speculate as follows ..."

On to page 6, this is Alter and Holland in 1984 saying:

"This dichotomy is disturbing suggesting either that the tests are not really detecting carriers of non-A non-B Hepatitis and that their apparent association with non-A non-B Hepatitis is a statistical artefact, or that they are detecting two different carrier populations, perhaps harbouring different agents for non-A non-B Hepatitis."

Can you tell us a little then in the next paragraph about the difficulty with the surrogate screening test, the technical limitation of the tests then available? Can you tell us a little bit about that? I don't think

we have heard much about that.

A. I'm not sure I'm the right person to ask, but it was well-known, as I have alluded to already, the Americans had trouble when they tried to introduce anti-core testing with inconsistencies within laboratories and I think comparing laboratories. The tests did give a lot of false positive reactions and it was difficult to tell -- the way the test was configured -- what would be a correct cut-off level for positivity. I think probably Brian Dow could give you better chapter and verse on that than I could, but it was not a straightforward test to use.

Q. You then say --

THE CHAIRMAN: Before you leave it, Dr Gillon, I find this dichotomy, the lack of overlap really quite perplexing, but I can't see why a positive test for ALT should exclude a positive test for Hep B. Is there some explanation?

A. I share your perplexity, sir, because this has always been a huge puzzle to me and it's one of the things that instinctively did not make sense about this whole business. There should be a very considerable overlap, and there just isn't. And I think reading from Harvey Alter said then is what I felt. And I do remember at the time sitting down -- and I have actually

still got a bit of paper that I was working on when I was writing the paper that we have looked at today, where I tried to stratify theoretical hundreds of donors into categories who got 1 unit of blood, 2 units, 10 units, 20 units and worked on different prevalences of the putative infection, the ALT, the anti-core and stratified them. And I became convinced that a lot of the association was coincidental, that it was entirely -- well, not entirely but at least substantially a function of having a large volume of transfusion, so that where you had patients who got, say, 15/20 units of blood at given prevalences were much more likely to get one thing and the other thing, more or less by coincidence, compared with people who only got one unit of blood, when it was much more unlikely that there would be a coincidence.

Statistically that was very difficult to tease out and the statistician in the paper we looked at, which was published in Vox Sanguinis, was puzzled by this too. I sat him down and said, "Look at this bit of paper. Can you see what's wrong with this? Where -- am I barking up the wrong tree?" And he looked at it and said, "It looks right, but I've never seen anything written about that in statistical publications". And I can't give a name to it, but he was happy to put his

name on the paper, with me making reference to that.

So I still don't have a satisfactory explanation for that, but it was part of the instinctive feeling that there was something going on here which was not just about you use a test and you identify somebody who might transmit non-A non-B Hepatitis. So it was not as simple as that. And I remain convinced there was a statistical artefact. That doesn't mean that identifying people with high ALT wouldn't have prevented Hepatitis C but it does call into question the exact relationship between the two and the exact outcome if you did it prospectively.

THE CHAIRMAN: It makes it quite difficult to take the two different tests and apply them additively to find a value.

A. Yes. And that's why I thought the only way to do this was a prospective trial. There was no other way of getting the information that I could see.

THE CHAIRMAN: Thank you.

MR MACKENZIE: Thank you.

Could I pick up one point in your statement, please, doctor. You say:

"The American experience when surrogate testing was implemented in 1987 was that anti-HBc was indeed problematic and for these reasons it has never been

implemented in the UK in spite of the apparent logic behind it."

What do you mean by the apparent logic behind anti-HBc testing?

A. Well, you can see on first principles, if you identify people who have what looks to be a marker for previous exposure to Hepatitis B, it might also be a marker for potential exposure to whatever the agent of non-A non-B Hepatitis was. Assuming that it was a parenterally transmitted virus, as we thought we knew.

Q. I see. You go on to say:

"The case of ALT is entirely different in that this enzyme is a normal constituent of blood and is therefore present universally. The blood level varies with body weight, increasing with increasing weight, and levels above the standard upper limit of normal of 2SD above the log mean are associated with obesity. Though this association was recognised in the 1980s, it was poorly understood and hepatologists were at that time puzzled by the increasing numbers of patients they were seeing with abnormal liver function tests discovered coincidentally. Later research revealed that the abnormalities of liver function were due to fatty infiltration of the liver. Association was not only with obesity but also with insulin resistance and type 2

diabetes and this constellation was named 'the metabolic syndrome' with the liver component designated non-alcoholic/steatohepatitis (NASH)'."

We have looked already at the differences of ALT levels in men and women, "it is thought that is largely due to differences in body weight." Higher levels -- sorry, "The segment of the population with the highest mean levels is in males aged 30 to 40. Higher levels are also found in association with excessive alcohol consumption, and are associated with muscle damage, eg myocardial infarction but more commonly after hard exercise.

"In most studies of HCV-positive blood donors, there is found to be a preponderance of males, typically in the age range 30-40. There is therefore a coincidental association between higher ALT levels and the donors most likely to have been exposed to HCV. It is therefore likely that ALT is to some extent an epiphenomenon in statistical or epidemiological terms as Alter and Holland suggested. This may well have been an example of the 'fallacy of the transposed conditional', first proposed by Falk in 1986."

I don't think we need a detailed explanation of that, doctor.

THE CHAIRMAN: I don't know.

PROFESSOR JAMES: Is might turn into Koch's postulates all over again.

MR MACKENZIE: I think you go on to summarise it, is that correct, at the end of this paragraph?

You say:

"In essence this can be rendered as follows. If a patient develops PTNANBH there is a strong possibility of having received blood with a high ALT because of the coincidental segregation of the carriage of NANBH and raised ALT, whereas a raised ALT in a donor says little about the risk of NANBH in the recipient."

Sir, I was going to leave the fallacy of the transposed conditional there, but I'm not sure if it's a matter you wish to explore further.

THE CHAIRMAN: It's just a bit of terminology that seems to be saying very much the same as the fallacy of the undistributed middle that I knew in my youth but clearly has become rather more sophisticated by 1986, which is well after my youth.

A. I think it's very interesting because I had no idea it had a name. As I've suggested, Robin Prescott, the statistician, had no name for it at the time. And I think actually probably it was described before Falk. I have been trying to find out the history of this, but certainly it only became recognised about that time.

And I discovered the name, the fallacy, in a letter to The Times in 2009, which Professor James will know the background to this, which was that the then chief -- no, it wasn't, it was the president of the Royal College of Physicians in England, instructed middle England to stop having a couple of glasses a wine at night because everybody was ending up in the liver wards. And the president of the Royal Society of Statisticians wrote to The Times saying this was an example of the fallacy of the transposed conditional, which is the first time I had heard the name.

I thought this applies to what we are looking at here.

THE CHAIRMAN: I'll try and remember to look it up tonight in a couple of books on elementary statistics and see if I can -- but I suspect they may be too far back as well.

A. I found it on Google.

MR MACKENZIE: Thank you. Returning to your statement, doctor:

"There is also, of course, a more specific sense in which ALT can be regarded as a surrogate for HCV, as opposed to being a merely statistical artefact, in as much as it is often raised in the presence of liver damage, though again this is not specific to any particular cause of liver damage. There is therefore

a prima facie reason to think that ALT testing might prevent some PTNANBH."

You go on to say that:

"Even when a raised ALT is found in the presence of HCV ... the levels are known to fluctuate ... the same is true of 'normal' donors ... thus repeated testing of the same population of donors would give a much higher 'hit rate' for raised levels than a one-off snapshot with obvious implications for the potential impact on the blood supply.

"The crucial issue here is the choice of cut-off level and this is indeed the crux of the problem posed by ALT testing. There is in fact no true upper limit of normal that accurately differentiates between those with disease and those without ..."

You go on:

"The higher the cut-off, the fewer true positives will be detected resulting from a loss of sensitivity ... but a smaller proportion of those identified by the test will be false positives, indicating greater specificity."

Is it the case, doctor, that a donor with HCV -- let me put it this way: is there a correlation between the level of ALT in a donor and the likelihood of Hep C infection?

A. I don't know that it has been studied rigorously enough to put a figure on it, but, yes, I think the impression is that the higher the ALT the more likely it is that that will be a true positive.

Q. I see. You go on to say --

THE CHAIRMAN: Why? Is it just because Hep C, where it exists, generate relatively high levels of ALT or what?

A. I think it's because by the time you have had Hepatitis C for a time or indeed any chronic liver disease, you are likely to have quite a substantially raised ALT. Whereas if you've, say, got a raised ALT just because of obesity or metabolic syndrome, it is not likely to go that high. So there is a middle ground where it is difficult to sort out, but the higher you go, the more likely it is you are going to find very significant liver disease.

THE CHAIRMAN: But we are back to the same problem that unless one can say that a given level is specific to Hepatitis C, the other causes of elevation can't be excluded.

A. It can never be specific to Hepatitis C and indeed the highest level we found in our study was a young woman who turned out to have very significant chronic active hepatitis of the autoimmune type.

MR MACKENZIE: Thank you.

You go on, doctor, saying:

"The choice of cut-off level is thus entirely arbitrary and in the present context boils down to striking a balance between the need to identify as many of the HCV infected donors as possible and the desire to minimise the impact on non-infected donors and on the blood supply.

"It is thus impossible to state what percentage of donors would have been deferred."

We can see:

"A compromise position was adopted ..."

In the UK:

"... whereby donors with modestly elevated levels were not informed but the donation discarded while those with higher levels and those with repeated modest elevations were informed and deferred."

A. I think you said in the UK, it was in the USA.

Q. I'm sorry, thank you for that. Then the next question we asked:

"Could a sufficient blood supply have been maintained if surrogate testing had been introduced?"

Again you explain:

"That is hypothetical and impossible to answer with any degree of certainty."

You say:

"There was difficulty in maintaining donor attendances in the second half of the 1980s for reasons that were not fully understood."

I will come back to look at that with Professor Cash when he comes back:

"The situation became serious to the extent that a substantial injection of resources was necessary around 1990, with most of the money and effort going into a television advertising campaign which reversed the decline in donor numbers. Whether it would have been possible to weather a loss of donations of the order of at least 4-5 per cent and so maintain self-sufficiency with or without such funding is doubtful but this is speculative in the extreme."

Now, I think we are particularly interested, doctor, in the next question, (c):

"To what extent are cases of post-transfusion Hepatitis C likely to have been prevented if surrogate testing had been introduced?"

On page 9 you give your answer. This is the last page of your statement. You say:

"Estimates of the number of cases of PTHCV occurring annually in Scotland during the period prior to the introduction of a test for anti-HCV will be presented to the Inquiry by Professor David Goldberg. The starting

point for these estimates was the prevalence found ... between 1 September and 31 December 1991, ie 0.09 per cent in donors... the assumption being that very few donors would have been able to donate more than once during that period ... backwards chronological extrapolation incorporating a number of assumptions including the change in prevalence in the population with time will permit the most accurate estimates to date of the number of patients exposed to potentially infectious donations."

I think that may be a work in progress just now.

But:

"It is impossible to state with certainty what proportion of these potential (and actual) transmissions might have been prevented by ALT testing. Though the percentage of donors in the HCV-positive cohort with raised ALT is impressive (59 per cent), it cannot be assumed that a similar proportion of PTHCV would have been prevented by ALT screening. Much would have depended on the choice of cut-off, but it should be borne in mind that in a low prevalence population like that in Scottish blood donors, the ratio of false to true positives would be very high, at all but a very high cut-off value."

Just to pause there, doctor, the question of the

59 per cent figure at first blush a face value seeming impressive. On a balance of probabilities and without being particularly scientific about it, can you give us any indication at all, at least based on that figure, what would have been the likely percentage of positive donors who would have been screened out by surrogate testing?

A. I take that absolutely at face value. It looks like 60 per cent. Whether that would have translated into reality, I have no way of knowing. And, of course, we have this issue of having to replace them with a new cohort of previously untested donors.

Q. Yes. Does that 59 per cent figure at least suggest that it is likely that there would have been a material screening out of HCV-positive donors, using surrogate tests, and by material I really just mean something more than de minimis, something more than 1 per cent, something more than that at least?

A. Yes, but you can set the cut-off level anywhere you like. And the only way to make sure there is no Hepatitis C in your recipient population is to have no blood donors.

You can set your level at any point above that, and the higher you go, the more likely it is that you will be excluding donors with Hepatitis C. But the vast

majority of the carriers of Hepatitis C were at levels below the cut-offs that were proposed. And looking at this 59 per cent figure, that was based on a relatively low cut-off of -- well, in Edinburgh it was 40 units per litre. It was probably the same elsewhere, which is not what we would have used in practice.

It's a matter of regret that I don't have the original data that went into this paper, because it would be very interesting to see how those ALT levels stratified, and I can't remember why we didn't do that at the time. The preparation of the paper was, of course, complicated by the sudden death of Dr Crawford, and I simply don't know whether I had the original data or it went back to Glasgow or whatever, but it's a shame we don't have that.

Q. In the final paragraph of your statement you say:

"In concluding, I would wish to emphasise that neither ALT nor anti-HBc testing has ever been shown, in a randomised trial of sufficient power, to prevent PTHCV. Alter and colleagues, based on their experience in an environment where PTNANBH rates were around 10 per cent, estimated that ALT testing might prevent around 30 per cent of transmissions, yet in their prospective study after initiating routine ALT testing in 1981 (without a control group; that not being

a controlled trial) found no reduction in NANBH incidence in transfused patients."

The reference there is [LIT0012221]. We don't have to go to it:

"In a low prevalence population such as Scottish blood donors, ALT testing would be unlikely to exceed the efficacy found in the USA, and so to suggest that a more advantageous outcome might have been obtained on this side of the Atlantic would be pure speculation."

Now, doctor, we can put your statement to one side, please, there are two final papers I would like to take you to before finishing with one final question.

The two final papers. Firstly, [LIT0010851]. We can see this is a 1991 publication by Aach and others, I think those involved with the TTVS study, but I think using the samples from the TTVS study to test the ortho HCV test then available.

If we look at the abstract under "Methods" we see:

"We used two first generation enzyme linked immuno-assays and one second generation immuno-assay to test for anti-HCV antibodies in serum samples collected between 1976 and 1979 in the transfusion-transmitted viruses study (from 1,247 patients who underwent transfusion and 1,235 matched control subjects who did not receive transfusions)."

Under results we see:

"Of the 115 patients in whom post-transfusion non-A non-B Hepatitis developed, the initial serum samples of 111 were anti-HCV negative, but after hepatitis developed in these 111 patients, the first generation EIAs detected anti-HCV in 51 (46 per cent) and the second generation assay detected anti-HCV in an additional 16 (14 per cent), for a total of 60 per cent. Of 40 controls, 37 were anti-HCV negative initially, and none zero converted after hepatitis developed."

Then this is the main conclusion from this study, the main point of this study:

"Nearly all cases of non-A non-B post-transfusion hepatitis are caused by HCV."

The authors do go on to look at the question of surrogate testing as well.

Could we go over the page, please? Page 1326 of the original journal. In the right-hand column, please, towards the top, about six lines down, we see:

"The present study is thus based on the 111 patients with non-A non-B Hepatitis among 1,232 recipients of blood transfusions and 37 persons with non-A non-B Hepatitis among 1,230 controls. Specimens from every donor were available for 99 of the 111 transfusion recipients with non-A non-B Hepatitis."

So that's where the 99 figure comes from.

If we go on to the next page, please, page 1327, in the right-hand column at the top, please, the authors state:

"Table 4 analyses the relation between anti-HCV seroconversion in the 199 transfusion recipients with non-A non-B Hepatitis and the presence of anti-HCV or surrogate markers in the blood they were given. A total of 55 patients received one or more units of blood that was positive for surrogate markers. Of these, 45 (82 per cent) received blood that was also anti-HCV-positive in the same unit. Among those who received units that contained anti-HCV, the seroconversion rate was not influenced by the presence (91 per cent) or absence (93 per cent) of surrogate markers in the same unit. None of the eight patients who had post-transfusion hepatitis after receiving blood positive only for surrogate markers had seroconversion to able to HCV. Surrogate markers were absent from the units given to the four patients who seroconverted after the transfusion of anti-HCV negative blood."

I should say, doctor, I don't find all of this easy to follow but we shall then go over the page and look at table 4, which was referred to at page 1328.

We can see at the bottom, table 4. Again, I'm sure

the ignorance is all mine but I don't find again this table entirely easy to follow.

I'm not going to ask you about the detailed results -- to look at those detailed results, it's really the foundation for the authors' conclusion, and in the right-hand column, opposite table 4, we see:

"Testing the donors of the blood received by those with post-transfusion hepatitis allowed us to assess the effectiveness of surrogate markers and first generation anti-HCV assays in donor screening. Among the cases of HCV identified in this study, 73 per cent (43 of 59) were associated with the presence of surrogate markers in the donors, a rate similar to that predicted before HCV was identified. The use of surrogate markers in the United States since 1986 therefore appears to be well justified."

That's the last item from the paper I wish to go to.

Does this paper, looking at things broadly, provide in retrospect support for the use of surrogate testing?

A. Up to a point, yes, but I don't know up to which point, for the same reasons we have been through earlier. What it shows -- and there were other similar papers, Harvey Alter, obviously, a paper along similar lines, which showed that when they looked retrospectively at cohorts they had identified in these studies that they

had been following up, that, yes, most of the significant non-A non-B Hepatitis was Hepatitis C, almost all of it, and that became evident from many studies and not least by the introduction of testing for anti-HCV, which meant that the problem disappeared. So there was adequate proof that what we had been looking at all along was Hepatitis C. That's beyond dispute.

The -- there are one or two other interesting aspects of this. First of all, out of their -- the cohort of patients with what they called non-A non-B Hepatitis, based on the criteria they applied, this 111 were those -- I can't remember exactly where you will find this, but there was a cohort of people that had apparent non-A non-B Hepatitis, which turned out to be something entirely different and they found even in the autologous blood recipients, something like 6 per cent or so got something that could be defined as non-A non-B Hepatitis. That's people who only got their own blood back. So there were other things happening. Quite what they meant I don't know.

If you look at all of these studies from that time, the criteria for defining non-A non-B Hepatitis, based on sequential ALT levels was never the same from one group to the other. They used very different criteria. But that's not to deny that the real problem, the

central problem, was Hepatitis C.

As far as the relationship to ALT retrospectively is concerned -- this goes back to the TTV study -- I remain convinced that a substantial amount of this is due to an association between ALT and Hepatitis C, which is not necessarily causative. Some of it certainly is causative; in other words, there were people with Hepatitis C who therefore had a high ALT, but not all of it probably.

Q. Thank you. And the final paper I wish to put to you, doctor, is one Dr McClelland drew our attention to. It's the Canadian paper, [LIT0013223], the 1995 publication by Blajchman and others.

If we look at the summary, in the left-hand, about half way down we see:

"Withholding of blood containing NANB surrogate positive units reduced the overall post-transfusion hepatitis rate by 40 per cent and the Hepatitis C rate by 70 per cent. Most of the benefit of NANB surrogate testing was due to reduced frequency of Hepatitis C virus after transfusion before all donor blood was screened for anti-HCV."

The bottom of the column the authors state:

"Our study indicates that screening of blood donors with the NANB surrogate markers was of value in reducing

HCV infection before HCV screening began."

It is not an entirely easy paper, I think, to follow but a helpful starting point maybe to then go, please, to the next page, 3224, using our reference.

The right-hand column underneath the various table of figures we see the subheading "Classification of post-transfusion hepatitis events."

We can see how a post-transfusion hepatitis event was classified, and the final post-transfusion hepatitis diagnosis to be made by an events committee.

Over the page, please. Over the page again, please. At page 3226, if we look at the subheading "Impact of anti-HCV screening on the benefit of NANB surrogate markers":

"We also analysed our data according to whether HCV screening was in place (table 3). Before HCV screening, the overall post-transfusion hepatitis rate per 1000 subjects was 20.2 in the no withhold group compared with 5.0 in the withhold group ..."

I think that's a reference to whether recipients were given blood which had been screened for surrogate markers or not, and they say:

"Estimated benefit of NANB surrogate testing was 75 per cent before HCV testing ..."

I think these figures -- if one goes back a page,

please, to table 3, 3225, and if one looks at table 3 at the top of the page, looking firstly at the different headings, "Number of recipients" I think is clear enough.

"Number of events", I think that's a reference to number of post-transfusion hepatitis events. We saw how these were diagnosed.

The next heading "Overall post-transfusion hepatitis", I think that means overall post-transfusion hepatitis rate per 1,000 subjects.

And we can see the other headings for ourselves. And then looking one down, left-hand column, "Pre-HCV screening" no withhold 397 recipients. Number of PTH events, 8. Overall post-transfusion hepatitis rate per 1,000 subjects, 20.2. And hepatitis HCVPTH, 12.6. So I think these are the recipients who received blood which had not been surrogate tested.

And then the next line down, I think "withhold" means those recipients who were given blood which was negative for surrogate testing. Number of recipients, 402. Number of post-transfusion events 2. Overall post-transfusion hepatitis rate per 1,000 subjects, 5. Then HCVPTH, 0. I think these are the results, I think, which lead the authors to conclude that surrogate testing was of benefit, at least some benefit -- do you

have any comments on this paper, doctor?

A. Like you, I find this very difficult to interpret. I think the face value figure of a reduction by withholding those that were found to have a surrogate marker from essentially 2 per cent, 0.5 per cent, which they say is statistically significant, that looks fine, it looks good, but it looks as if they then went on to continue doing surrogate testing after they introduced HCV screening, which I think was the first generation test.

And they seem to have puzzlingly high rates of hepatitis, post-transfusion hepatitis of something like 0.8 per cent. I just don't understand that. Which is higher than the -- even in the withheld group, it's higher than it was before the introduction of HCV screening. I don't know what that means.

Q. I should perhaps for completeness continue the discussion part of the paper to see what is said there. 3226, please.

Under "Discussion" the second paragraph, the authors state:

"During our study, withholding of NANB surrogate marker positive units reduced the overall post-transfusion hepatitis rate by 40 per cent."

The second line from the bottom:

"Nonetheless our data suggests that NANB surrogate testing in Canada before May 1990 would have reduced the frequency of NANB hepatitis, especially that caused by HCV."

I think the important following paragraph:

"The drop in the HCV hepatitis rate from 31.3 per 1,000 to 12.6 per 1,000 between 1984-85 ..."

That was the first study carried out in Canada:

"... and 1988-90 ..."

That being the present study reported on:

"... appears to have been associated with improved methods for the screening of blood donors, since the drop occurred without NANB surrogate markers. In the USA a similar reduction in HCV hepatitis was reported over the same period in association with the introduction of NANB surrogate marker testing."

Do you have any comments, doctor, on that final paragraph I read out?

A. I think it's very interesting that -- and it's well established that in the period prior to the introduction of HCV testing, the overall post-transfusion hepatitis rate had been coming down, initially in leaps and bounds during the 1970s, and Harvey Alter, in many papers, has produced a graph, which he shows in all his lectures, which shows that round about the late 1960s, there was

a prevalence of post-transfusion hepatitis in the States of about 30 per cent, and they were using a lot of paid donors. And then he shows that when you eliminated almost all of the paid donor, it comes down to about 10 per cent, and you then introduce Hepatitis B testing and it comes down to -- by the early 80s I think at NIH it was down to something like 2 or 3 per cent. And then following the introduction of the donor selection methods that were stimulated by awareness of HIV, it comes down again.

One of the interesting things in this graph is that around, I think it is 1981, there is an arrow showing the introduction of ALT testing, and the graph goes along for two or three years after that before -- with increased donor selection in 1985-1985, and so on, dropping off again a little bit.

So what they are describing here was, I think, quite well established and has been retrospectively that the increased donor selection methods were hugely important, not only in keeping the numbers of post-transfusion HIV down but also as a nice by-product, if you like, in reducing the amount of Hepatitis C in the recipient population as well.

Q. Thank you. Doctor, one final question. I'm going to call it the McClelland question, because it is

Dr McClelland who thought of it, and it's this: in 1987, if you or a family member required a blood transfusion and you had the choice between blood which was screened for these surrogate markers and was negative and blood which was either unscreened or had screened positive, which blood would you have chosen?

A. It's a no brainer, you'd have chosen the screened blood. You wouldn't have known how much benefit you were getting but you would have chosen the screened blood. But if you had the ultimate choice, you would have chosen autologous blood, which is why Brian McClelland I introduced the first autologous transfusion service in the UK in 1987.

Q. I see. Doctor, it's a follow-up question. We know you were a consultant physician at the ERI and you mentioned back then being responsible for donors. Did you also advise patients as well at that time?

A. Yes, indeed.

Q. Yes.

A. And those were both patients who were being treated by us in specialised ways by therapeutic plasmapheresis, for instance, but I also still had a clinical commitment in the gastroenterology service.

Q. So presumably, again hypothetically speaking, if a patient at that time in 1987 had the choice between

screened negative blood or unscreened or screened positive blood, presumably again your advice to the patient would have been to choose, if they had the choice, the screened negative blood?

A. Or indeed autologous blood, if that was an option, yes. But I would have been very aware of what that cost the service, the donors, the country, to provide that. And I think that is the important other side of the equation that we mustn't lose sight of. And given that we couldn't measure the potential benefit of all these interventions, we couldn't make a proper cost effectiveness analysis. And like it or not, you have to do that in healthcare.

MR MACKENZIE: Thank you, doctor. I have no further questions, sir.

PROFESSOR JAMES: Could I just ask, have you any idea if screening for ALT had been introduced in Scotland, what the level might have been because obviously, the level, as you very well said, would alter the productivity, if you like, of the result?

A. We never discussed that, to my knowledge. I was certainly never asked to give any advice on that topic, nor indeed on how we might manage the donors and so on. We simply never reached that point.

PROFESSOR JAMES: Thank you.

THE CHAIRMAN: Mr Dawson?

MR DAWSON: Sir, I do have couple of hopefully quite quick questions for Dr Gillon.

Questions by MR DAWSON

MR DAWSON: There are really two areas I want to explore with you, Dr Gillon. In his evidence yesterday, Professor Cash gave the image of yourself arriving at a donor's door to inform him of the fact that he had had a positive test. Do I assume correctly from that that you would have had some involvement or responsibility for donor counselling, had surrogate testing come in?

A. I would have done all of it. Well, I did all of it that was to be done for HIV, Hepatitis B and so on.
I couldn't have done all of it for Hepatitis C, because we had been talking about having a clinic for a half day every day of the week to see all of these donors. But, yes, we took responsibility for giving that information in person.

Q. Why would it be necessary to offer counselling to a donor who had tested positive for one of the two surrogate tests that we have been talking about?

A. To answer that, probably it would be best to backtrack a little. Much of my experience was formed by dealing with the plasmapheresis donors. This was a new area for me, coming into plasmapheresis, and what I inherited was

the system where all plasmapheresis donors, to be accepted from the general donor panel, had a full medical examination, all sorts of blood tests, including liver blood -- liver function tests, and then these tests were repeated at six-monthly intervals. And that's the basis for the information of our first paper. It was retrospective, looking at what was in the donor's records.

And the reason for that is that plasmapheresis grew out of -- I think the main driver was the need to provide rhesus D immunoglobulin, and for that to be produced, you either had to find a woman who had natural anti-D as a result of having a pregnancy, and there were some of them, but that couldn't meet the whole demand, so you had to immunise rhesus negative male donors with rhesus positive blood from other blood donors, obviously. And we were well aware of the possibility of transmitting hepatitis viruses from one set of donors to the other. So you had to have a system of pedigreeing the donors of the rhesus positive blood and then following up the recipients who were then immunised and producing anti-D, which we would then harvest and make sure they didn't get hepatitis.

So we had a lot of experience of examining these blood donors, talking to them, making absolutely sure

they had no risk factors and then following them up thereafter.

That became extended to all of the plasma donors. So when I took over, we were doing a full medical when we took on a plasma donor. We were doing a medical every year. We were doing all of these blood samples every six months. And as you've seen from these papers, we were throwing up all these ALT levels, which were unexpectedly high and fluctuating all over the place. And whenever there was a donor who was showing two or three raised ALTs in succession, the junior doctors looking after the department would come to me and say, "What will we do about this?" And what I would do is get them in and do a full medical history, and then refer them to Dr Neil Finlayson, who was one of the hepatologists in the Royal Infirmary, later the president of the Royal College of Physicians, a very distinguished hepatologist. He would see them and do the same again.

I remember bumping into him once in the big corridor at the Royal Infirmary, and he said, "Jack, what are we going to do with all these people? I don't know what to do with them. I don't know whether to biopsy them or not". A liver biopsy had a finite mortality rate of one in a 1,000, a very painful, potentially dangerous

procedure.

So that is the question that arises. As soon as you see somebody, sit them down and say, "There may be something wrong with your liver, you may be carrying some nasty virus that may or may not cause chronic liver disease. We may have to send you to a specialist. They may stick a needle in your liver". It was not trivial. It is absolutely not trivial.

Q. There are references in a number of places to the fact that one of the reasons why one might not have been keen on surrogate testing was the possibility that anxiety would be caused if you were to tell a patient, for example, as you say, that they had a raised ALT level. What I'm interested in exploring is the extent to which, if you were to tell someone they had a raised ALT level because of the fact that that's a non-specific marker for non-A non-B Hepatitis, the extent to which that news would really cause them anxiety?

A. It would depend what you told them. If you told them, "Go away and don't worry about it", then it probably wouldn't. But in all conscience you couldn't do that.

And in the big part of our study, where we screened the 1,742, I think it was, regular blood donors, when we recalled all of those donors with high ALTs, I saw them personally, and as well as grilling them about potential

exposure to Hepatitis C, "Are you sure you never used drugs at any time, even once?" and so on, I was able to do a full medical examination, I was able to establish whether or not I thought there was significant evidence of disease but also to assess the impact of that whole process on them. And they were quite anxious, they were very keen to know the next set of results, and they were really quite concerned about this.

Q. As far as the other test is concerned, the anti-HBc test, am I right in thinking that patients who had tested positive for that would also have been tested for Hepatitis B surface antigen?

A. Yes.

Q. So in effect would I be right in saying that you would be telling those patients, "You don't have Hepatitis B but you've probably been exposed to it in the past"?

A. That's correct. But in fact in that study we did not feedback that information to those donors.

Q. Okay. There is just one other area I wanted to explore with you very briefly. You have given some evidence in your statement in some detail into the fact that one of the other reasons why someone might not be keen on surrogate testing is the fact that it's a non-specific test, meaning that if, for example, one has a raised ALT level that would be caused by something else other than

non-A non-B Hepatitis, and you give a list there of the kinds of factors that could cause a raised ALT level.

One of the arguments that we have seen is that that may result in there being a loss to the system of what one might call good blood, otherwise good blood. But would I be right in saying it is not quite as simple as saying that blood is either good or bad but it's a sort of spectrum between the obviously very bad and the obviously very good, based on a risk assessment of the donor?

A. Yes, that's correct. And the risk assessment takes into account all sorts of factors, behavioural factors, for instance, travel, that might take into account malaria and so on.

Q. What I'm interested specifically in exploring is the extent to which the things that might cause a raised ALT level other than non-A non-B Hepatitis would in themselves be contraindicators to that donor being a good donor?

A. We would certainly not accept anyone as a donor who had significant liver disease, which would be the obvious conclusion of an ALT that was sustained at a high level. We do not accept people who show evidence of inebriation or give a history of alcoholism, for instance, simply because we would regard that as an unreliable donor.

And one of the mainstays of donor safety, and we see this from the last paragraph of that paper, where the incidence of post-transfusion hepatitis has fallen with increasingly rigorous donor selection is just that, is donor selection.

THE CHAIRMAN: Mr Dawson.

MR DAWSON: That was my last question. Thank you very much.

THE CHAIRMAN: Mr Anderson?

MR ANDERSON: I have only one question I wanted to ask and that concerned the autologous transfusion.

THE CHAIRMAN: Is that going to get us into some time?

MR ANDERSON: The question won't, but the answer might.

THE CHAIRMAN: I think we better rise at that and start at quarter to.

(1.07 pm)

(The short adjournment)

(2.00 pm)

THE CHAIRMAN: Yes, Mr Anderson?

Questions by MR ANDERSON

MR ANDERSON: Dr Gillon, good afternoon. You remember towards the end of his questioning, Mr Mackenzie put to you what he termed the McClelland question?

A. Yes.

Q. You said that if it were possible, the best option would be to opt for an autologous transfusion. Do you

remember that?

A. Yes.

Q. I don't think the transcript quite shows this, but I had thought that I heard you say in answer to that that you and Dr McClelland had instigated such a service in 1987. Is that correct?

A. We did, yes.

Q. I don't think we have heard about this previously. Could you perhaps tell us about that? That is to say, its genesis, the reasons for it, how it came about and the results.

A. The genesis really, as in so much of what the Inquiry has heard, came from the United States, and really was part of the response in the States to HIV in transfusion. And very rapidly what was known as pre-deposit autologous transfusion became very popular, which is the process of a patient scheduled for an elective operation donating blood, which was then stored and given to them, if they needed it, post operatively.

By the late 80s, that was accounting for something like 5 to 10 per cent of the blood supply in the United States. So it had a very considerable impact. But it was restricted to that situation of elective surgery really.

It is very hard to remember exactly how it came

about, but I think we were having some questions from patients about the possibility of doing this. It had obviously appeared in the press, and most of them had tended to come through the gynaecologists. So it was young women who were alarmed at this prospect really of potentially having a blood transfusion after surgery.

So we discussed it with one of the gynaecologists, who was sympathetic to his patients asking about this, and set up a service. I think it was May 1987 we started with the gynaecology patients. And once we had the systems we thought refined as safely and as well as possible, we looked at what was potentially the most interesting group, which was orthopaedic operations, where you could fairly certainly predict the amount of blood use, and that would be something like hip replacements or spinal surgery, and took it to the orthopaedic surgeons. We got a mixed response from them, I must say, but a couple of the surgeons and their anaesthetists were quite enthusiastic. And we then opened it up as a service to any of the surgical departments that thought it might be appropriate, and circulated them with what was required.

So by 1988, I would say, we had a fairly full service available to the surgical departments in Edinburgh, but the take-up from the various specialities

was very low, apart from these one or two enthusiastic orthopaedic surgeons.

Q. Again, it doesn't seem to be quite clear from the transcript, but I think you said you started in May 1987 and by 1988 you had a fairly full service available. Was this commonplace in Great Britain?

A. Not at all. There was a service set up in Sunderland late in 1987 by Dr Lesley Kay, and we and she started presenting our data to the British Blood Transfusion Society annual meetings and so on, and set up a special interest group. And one or two others came on board, but really there wasn't much enthusiasm for it elsewhere, apart from these two centres, and uptake was very slow in Britain.

It's perhaps also worth saying that we went on to establish something that we called intraoperative blood salvage, using the kind of equipment -- a bit like the equipment we used for plasmapheresis, where we were retrieving the bloods spilt in the operative field, and you wash it in a centrifuge, resuspend the cells and then give it back to the patient, rather than give donor blood. And, again, we were one of the first to do this in this country.

That procedure goes to this day and is very valuable in certain situations with heavy blood loss. Whereas

the pre-deposit autologous transfusion fairly rapidly became obsolete for the simple reason that what became obvious was that the main benefit of the pre-deposit schemes was to illustrate that blood wasn't always necessary in some of these operations and that it was being used in a slightly, shall we say, cavalier fashion. So it put some rigour into the people prescribing the transfusions to look at whether the patients really needed all the blood that they were giving them. And that came out of the fact that about 50 per cent of the autologous blood remained untransfused. It came out of the American studies actually.

So it was very valuable, in the sense that it helped to transform transfusion practice and make people much more critical about the need for blood. For instance, the initial cohort of gynaecology patients we started with were being routinely cross-matched for two units of blood for an elective hysterectomy, and in fact none of them got blood, and this was a huge waste of time and resource in the blood bank and tied up a lot of blood that was never going to be used. So we were able to demonstrate that, and the gynaecologists said, "Well, that's fine, we won't use autologous transfusion and we won't crossmatch those patients, as long as you promise

that you will get blood to us quickly if we need it", which we did. So it was very beneficial but it was a low volume operation in this country.

Q. I suppose the original reason for autologous transfusion largely flew off once effective testing had come in in relation to hepatitis?

A. Well, no, because you can never say that there isn't something else lurking in the wings and, for instance, new variant CJD was round the corner, and we knew about that in the late 1980s.

MR ANDERSON: Thank you very much.

THE CHAIRMAN: Mr Johnston?

MR JOHNSTON: I have no questions, thank you, sir.

THE CHAIRMAN: Are you tempted by autologous transfusion?

MR MACKENZIE: Sorry, sir.

THE CHAIRMAN: You are not tempted by autologous transfusion?

MR MACKENZIE: No, sir.

THE CHAIRMAN: Thank you very much.

MR MACKENZIE: The next witness, sir, is Mr Duncan Macniven.

MR DUNCAN MACNIVEN (continued)

Questions by MR MACKENZIE

MR MACKENZIE: Good appear, Mr Macniven.

A. Good afternoon.

Q. Welcome back, I think it was perhaps two weeks ago

roughly you were here last?

A. That's right.

Q. Today we have moved on to a different topic, our topic C2, the question of surrogate testing for non-A non-B Hepatitis. We've looked at your biographical details before. I think in short, between May 1986 and July 1989 you were an Assistant Secretary in SHHD with responsibility for blood matters.

A. Among other things, that's correct, yes.

Q. I would like to start by looking at a document we now have, setting out the SHHD structure in the 80s. It's [PEN0172506].

I won't go over this document in detail but just so we have an idea of the hierarchy, perhaps. We can see at the top, the Secretary of State for Scotland. I think there would also have been a Minister in the Lords responsible for Scottish health matters. They would then have the junior Scottish minister with responsibilities for health, and then the Permanent Secretary of the Scottish Office, and then one down, the Secretary of the SHHD, also known as a Deputy Secretary?

A. Correct.

Q. And one down, various Undersecretaries. We can see that:

"The SHHD like other Scottish Office departments was

subdivided into a number of groups, each headed by an Under Secretary (or group head). Health was the responsibility of two groups of which the relevant one was group 4 ..."

We can see that while you were there, Mr Macniven, Mr Hugh Morison would have been the Under Secretary while you were there.

A. He was succeeded while I was still there by Hamish Hamill.

Q. I see. Yes, that would be correct.

Over the page, please, the next level on the hierarchy we see Assistant Secretary or Senior Principal and we can see:

"Each group was divided into a number of divisions ... each division was headed by an Assistant Secretary or, in some cases a Senior Principal. The relevant division was IVD ..."

That's signifying group 4, division D, presumably?

A. Correct.

Q. We can see that you were the Assistant Secretary between May 1986 and July 1989.

Then beneath you in the hierarchy, you would have a principal, a senior executive officer. We can see that each division was subdivided into branches, and the branch with responsibility for SNBTS-related matters was

headed by -- I think there were three individuals during your tenure, Mr Sandy Murray between 83 and 87, Mr Tom MacDonald, 87 to 88, and Mr Rab Panton between 1988 onwards.

A. That's correct.

Q. Over the page in the document -- I won't take you through this, Mr Macniven, but we can see there is a hierarchy set out for medical officers in the SHHD. I might perhaps take one of the medical officer witnesses next week through that. Thank you. We can put that to one side, please.

I would like, please, to go to your statement you provided for us. It's [PEN0172053]. Paragraph 1 we know.

Question 1, we asked four questions. The first one was this:

"What generally were the respective roles and views of the SHHD medical and administrative officials in respect of surrogate testing for NANBH ... during your tenure?"

And you answer:

"Medical and administrative officials worked together extremely closely. The respective roles were not so far as I can recall codified in writing but there was a clear mutual understanding of what they were.

Administrative officials like myself were responsible for advising ministers on the policy in Scotland regarding blood transfusion and allied matters, and for implementing that policy including ensuring that finance was in place. Medical officials provided us, and through us ministers, with advice on medical, scientific and technical matters. There was no difference of views between us so far as I can recall, and none is evident from the papers."

When you say "there was no difference of views between us," is that in respect of the question of surrogate testing?

A. Yes, it was also generally true, but I was answering the -- this is a paper specifically about surrogate testing.

Q. Thank you. The second question we asked. What were:

"Mr Macniven's personal involvement with and views on the issue of surrogate testing, including funding requests for such testing ..."

During your tenure.

You explain:

"I only dimly recall such involvement 25 years ago."

I understand you have been given access to certain papers in preparing your statement. Yes.

The paper suggests that:

"... Sandy Murray and Tom MacDonald spearheaded SHHD's work but the papers also show that I was involved in the appraisal of the merits of introducing testing."

You refer to certain minutes.

What I propose doing, Mr Macniven, is completing your statement and then later on going to certain individual documents one after the other.

Over the page, please, you say:

"I would certainly have been involved also in considering the financial aspect of the proposal to introduce testing because of its magnitude. I have no doubt that I agreed with the advice of my medical colleagues; that there were powerful reasons, largely non-financial, against introducing surrogate testing during the period of my involvement with the subject ... these are summarised ..."

In certain notes and minutes:

"My minute of 2 October 1987 shows that I was aware of the great importance of finding the money to allow surrogate testing to start quickly, had evidence showed that it was desirable."

To what extent, Mr Macniven, did you defer to the views of your medical colleagues on the pros and cons of surrogate testing?

A. I don't think it was quite -- I don't think "defer" is

quite the right term. I heard, considered and agreed with their views.

Q. Speaking more generally, on medical and scientific matters, did you have any qualifications in those areas?

A. No, I don't. I was in much the same position as you would have been when you started the Inquiry, as having a general knowledge of the subject of blood transfusion, in my case as a donor, but no expert scientific or medical knowledge.

Q. So again, speaking as a generality, during your tenure, when medical officers gave you medical or scientific advice, were you really in any position to refute that advice?

A. Not refute but challenge, question, ask for explanation. My role was to appraise that advice critically, really in the interest of ministers.

Q. But if medical officers said that as a matter of medicine or science the position is X, were you really in a position to disagree?

A. Only if, for example, I felt that they had addressed the wrong question, but essentially I agree with what you are saying, that if somebody like John Forrester or Archie McIntyre had addressed the right question and provided a logical and supported piece of advice, then, yes, it would have been almost impertinent of me to have

overturned it. There was no way that I could overturn it.

Q. Thank you. Then the third question we asked was what were:

"... the views and involvement, if any, of any Scottish minister with responsibility for health ... The ... secretary of the SHHD and the undersecretary of the SHHD, on the question of surrogate testing ..."

During your tenure.

You replied:

"I do not recall ministers being involved and none of the papers to which I have been given access suggests that they were. It is however clear from the papers that the matter was considered by senior officials. For example, on 6 April 1987 Dr Archibald McIntyre, the relevant principal medical officer, wrote a detailed minute to Hugh Morison, the relevant undersecretary, and others -- to which Dr Graham Scott, the deputy chief medical officer, and I replied on 7 and 9 April respectively, in my case responding on Mr Morison's behalf as well as my own."

We will come to some of these documents in due course, Mr Macniven.

Let me ask you this, though: is it correct that the introduction of a new screening test such as surrogate

testing would have been considered a matter of such importance at the time that it would require ministerial approval?

A. The introduction would certainly have done so.

Q. Is the converse also true that a decision not to introduce a new screening test, in particular one that was recommended by the SNBTS directors, ought equally to have been a matter of such importance that ministerial approval ought to have been sought?

A. Not necessarily. Obviously, although the Secretary of State has statutory responsibility or had at that time statutory responsibility for the health service in Scotland, and a great many other things beside, it would have been impracticable for the Secretary of State personally or indeed a junior minister personally to take a decision on every question that the Scottish Office, as it was then called, was considering. It's a matter of judgment when a topic should be put to ministers, and it looks as if our judgment at the time, certainly the documentary evidence suggests that our judgment at the time was that that did not need to be put to ministers.

Q. We know that in, I think, March 1987 the SNBTS directors agreed to recommend that surrogate testing should be introduced. Do you not think the minister would have

been interested in that recommendation coming as it did from the whole collective body of SNBTS directors?

A. I cannot have done so at the time, and I deduce that that's because there were a great many finger posts pointing in a different direction, including people within the SNBTS.

Q. So would it be right to put matters this way, that I don't think a decision was taken by anybody, whether in the SHHD or a minister, not to introduce surrogate testing; rather, SHHD officials took the view that there wasn't sufficient evidence to recommend to ministers that such testing be introduced?

A. That is correct, or at least that's my understanding from the papers.

Q. Yes. So the recommendation from SNBTS directors that surrogate testing should be introduced really went as far as the SHHD officials but no further?

A. That's what the papers demonstrate.

Q. And you have no recollection differently?

A. I have no recollection otherwise, no.

THE CHAIRMAN: I wonder if I could tease it out just a little. Mr Mackenzie has, for obvious reasons, focused on the advice of the transfusion directors --

A. Yes.

THE CHAIRMAN: -- within the SNBTS network. By what

mechanism would the views of a body like that reach you? What would be the intermediate stages?

A. The meetings, the regular meetings of the SNBTS directors were attended by the responsible senior medical officer within the department. In the case of that meeting, John Forrester, who would have reported very quickly indeed on what the meeting had concluded. And I remember from reading the file, his note doing so, for this particular reason, that he was very surprised that they came to that conclusion.

THE CHAIRMAN: I think we have seen that note, but would I understand from what you have just said that that would be a report direct from him to you or to one of your subordinates or what?

A. I can't remember. It would certainly have reached me if there was a matter of any importance in it. Whether it reached me directly because John had written it to me, or copied it to me, or whether the addressees of his note thought it important to involve me.

THE CHAIRMAN: What would be the role of the medical officers in relation to the transmission of information of that kind be, if any?

A. It would be important -- I mean, we worked as a team. It was important that every member of the team shared with the rest of the team relevant information.

THE CHAIRMAN: Does that mean sending memos or actually meeting?

A. It was a mixture of the two. I mean, only the memos survive. I can't remember whether we also met. But meetings were a very frequent occurrence. We were -- we were located very closely together.

THE CHAIRMAN: Now, so far then we have got to the point at which the senior principal medical officer might have been involved, you might have been involved. What would have been the route upwards from either of you or both of you, or however you worked?

A. Almost certainly on a matter of importance -- and this was clearly a matter of importance -- John Forrester's note of the meeting of the SNBTS directors would either have been sent directly to Dr Scott, who was the deputy chief medical officer at the time, or to Hugh Morison, who was my boss at the time, or to both. But that is a matter of fact that can be checked by looking at --

THE CHAIRMAN: I have no doubt we will. I'm just trying to get a feel for the structure. So it's only after one had penetrated this succession of curtain walls that the question would arise whether the issue should be referred upwards to ministers?

A. With respect, sir, I don't think that the impression of curtain walls gave quite the right --

THE CHAIRMAN: Nothing as substantial as that?
A. The most diaphanous of curtains I might agree with. I would prefer no curtains at all, because we worked extremely closely together. I would have seen my boss daily or certainly quite a number of times every week, not as a regular rule but just in the course of business. We worked very closely indeed together as a team.
THE CHAIRMAN: Yes. Thank you, I think that's a sufficient general picture for me.
MR MACKENZIE: Thank you, sir. Yes.

Over the page, please, in your statement, Mr Macniven, the fourth and last question we asked was:

"Whether or not [you] agree was what is set out in Mr Murray's C2 statement."

Which we will come to shortly. You say:

"I agree with it, with trivial exceptions ..."

Which we will see:

"I agree in particular with paragraph 4 of the statement, which well expresses the importance we attached to the safety of Scotland's supply of blood and blood products."

I would like to put your statement to one side, please, and now look at Mr Murray's statement, which I think helps us with some of the procedures and

processes within SHHD, which I think may not otherwise be obvious to us looking in from the outside.

A. Yes.

Q. This is [PEN0171755]. The first two paragraphs are by way of introduction.

We can go to paragraph 3, please. Mr Murray states:

"I was not involved in the formulation of policy in relation to blood and blood products. My task was to administer or execute as appropriate detailed departmental policy."

The question that I think arises from the first sentence, Mr Murray was not involved in the formulation of policy in relation to blood and blood products. Who did formulate such policy?

A. It was the people that we have just referred to. It was the -- it was my boss, me Arch -- Dr Archibald McIntyre and Dr John Forrester, referring to ministers or to more senior officials as necessary. I should add to that list that I have just given, Dr Scott, the deputy chief medical officer, who was closely involved in this kind of matter.

Q. I understand. Picking up Mr Murray's statement. He goes on:

"In relation to medical, scientific and technical matters relating to SNBTS, I would receive information,

guidance and advice from medical colleagues, namely Drs Bell, Forrester and McIntyre. I was not in a line management structure with them but in relation to medical matters officials relied heavily on the expertise of those professional advisers."

Would the same apply to you, Mr Macniven?

A. Yes, essentially Sandy Murray is putting in different words the rather more extended explanation that I gave to you earlier.

Q. I understand. We see Dr Forrester replaced Dr Bell. All three reported to Dr Scott, who was the deputy chief medical officer:

"They would minute me or ask me to discuss matters with them. As I did not have medical qualifications of any kind, I would not question their instructions in relation to medical matters."

To pause there, do I take it, Mr Macniven, that you may have been a little more willing to question their instructions in relation to medical matters, certainly if something seemed inconsistent or illogical, or if you thought they hadn't addressed the right question perhaps?

A. That's correct.

Q. I understand.

In paragraph 4 Mr Murray goes on to say:

"That said, I was left in no doubt during my period in branch 3 that we were dealing with matters of the highest importance to the safety of the blood supply; literally life and death."

We can see what else is set out there.

Over the page, please. Paragraph 5 Mr Murray says:

"I can't remember when I first became aware of the issue of possible introduction of surrogate testing."

Just to pause and ask you, Mr Macniven, do you have any recollection of when you first became aware of the issue?

A. Not specifically. I can only be guided by the papers you have shown me.

Q. Yes, thank you.

Paragraph 6 and 7 we don't have to go to.

Paragraph 8, we get into the question of funding, which may be helpful to look at. Paragraph 8, Mr Murray states:

"Paragraph 9.36 of the interim report refers to a bid for SNBTS funding for 1987/88. One of my responsibilities was to coordinate the SHHD response to the CSA annual bid for funding."

Are you able to explain to us in simple terms and briefly, Mr Macniven, how an organisation such as the SNBTS would seek funding for their operations and

activities?

A. Yes, there was an annual bidding process which covered at least the next year and I think may have covered the two following years as well, and that was submitted to us as part of our Common Services Agency application for funds, which covered other services like the ambulance service. We considered that along with, of course, all the other requests for funding from, particularly, the health boards, and came to a conclusion about how the available resources should be spent.

That was a question which always was put to ministers, a vital question on the disposition of resources, and it's possible, but I have seen no papers on the subject, that we would have mentioned the SNBTS bid for resources for surrogate testing as part of an omnibus note to ministers in the context of the budget for the following year.

Q. We will come on to that question, in particular to whether the SNBTS bid went as far as that, as far as to ministers, but I think that's a helpful overview to start with. Thank you.

Mr Murray, going back to his statement, he says -- yes:

"The CSA would submit annually a global bid for all of their divisions for the coming financial years. This

was referred to as PES -- the public expenditure survey. I was responsible for coordinating the assessment of the PES bid by the SHHD branches responsible for the various divisions of the CSA."

Mr Murray then goes on to talk us through the various steps.

If we can go over the page, please, to paragraph 9, Mr Murray states:

"As I recall, the CSA PES bid was formulated on the basis of bids made by each of the CSA divisional heads to the finance division/Treasurer's department of CSA. The finance division/Treasurer's department then assembled the internal bids and presented them to the CSA management committee to consider or revise as appropriate. The CSA central administration then sent them to SHHD, at which point I would coordinate within the department. I would then farm out sections of the bid to administrative colleagues in the branches dealing with the particular CSA divisions in order to get departmental colleagues' comment. I also assessed the bids for the divisions for which I had responsibility, including SNBTS and the Scottish Ambulance Service. As regards PES, I dealt primarily with CSA officials rather than SNBTS. This reflects the fact that Mr Murray's concerns were essentially administrative/executive."

Paragraph 10. Mr Murray states:

"For the parts of the PES bid for which I was responsible, including SNBTS, I would consider CSA's bid and would assess it. In doing so, I would have had regard to advice from SHHD finance division as to the limitation of what could be bidded for. They may, for example, have put a percentage cap on any increase of funding, based on the rate of inflation. On receipt of the PES bid, I would copy the SNBTS bid to my medical colleagues as on medical matters I was guided by them."

To pause there, Mr Macniven, did you have any role in this process?

A. Not in the process as Sandy Murray has described it thus far, but when the -- when he had accumulated the necessary advice, the results would be put to me and then to my boss in that process of aggregation across the whole health service that I described a moment ago.

Q. I understand.

THE CHAIRMAN: Could I ask one question? When the units were putting together the initial bids to come up, did they have any guidance as to the probable level of percentage uplift or whether there would be additional funds available for specified projects or what?

A. Yes. I can't remember. That's a factual question that admits of a factual answer, but I can't remember what

our practice then was. I don't think, though, that we would have clasped to our bosom information like a percentage uplift that was known to us and might be helpful to them. But nor would they have -- nor would we have wanted to constrain them to that percentage uplift as a limit. Because in certain parts of the health service, and the Blood Transfusion Service is a very good example, the needs of the service were such that it would have received an increasing proportion of the health service's resources because of the sort of question that your Inquiry has been looking into.

THE CHAIRMAN: The interesting question would be whether a selection among possible projects had to be made in making a submission to you, as it were --

A. Yes.

THE CHAIRMAN: -- or whether it would come open with all bids included and then be subjected to analysis and constraints from above?

A. Yes, and my recollection on that is a very clear one. There were parts of the health service which were more self-denying than the SNBTS. The SNBTS's inclination was to display to the department all the pressures that they felt themselves to be subject to, or at least all the significant pressures that they felt themselves to be subject to. And I think that may have reflected the

previous very close involvement that we spoke of a fortnight ago of the department in the affairs of the SNBTS pre-dating the CSA.

PROFESSOR JAMES: Could I ask if the bidding was iterative in any way?

A. Yes -- I'm not certain that I heard the question. If it were --

PROFESSOR JAMES: Was the bidding process iterative in any way?

A. Yes, it was. My memory is that the SNBTS submission was quite brief and was sometimes a little hard to understand. So we would have certainly gone back -- if we had been in any doubt what was underlying it, we would certainly have gone back to the SNBTS and asked questions. My memory, which may be faulty, is that the submission was also discussed at the periodic meetings we had with John Cash.

PROFESSOR JAMES: I see, thank you.

MR MACKENZIE: Thank you. Returning to Mr Murray's statement, please, at paragraph 11, he goes on to say that:

"The bids would generally be based on the previous year's allocation and would request a percentage increase for growth ... they would often ask in addition for new money for entirely new projects, not covered by

the previous year's allocation. That is what happened with the bid referred to in paragraph 9.36 ..."

Of the principal report. That's the bid for funding in 1987/88:

"This would not have been unusual because there are always new threats and new developments and therefore always a need for new money."

In paragraph 12 Mr Murray says:

"I have had made available to me the document [SNB0112637], SNBTS public expenditure survey 1986 programme narrative. In that document, the figure of 810,000 is shown as the bid for 1987/88 for NANBH testing. Paragraph 4(b) of the section entitled 'Future strategies' appears to be the justification for this bid."

We'll come back to this document later:

"I would have copied this documentation and indeed all other documents, to medical colleagues."

Over the page, please.

Paragraph 13, Mr Murray states:

"I always tried to get as much money as possible for SNBTS, as one of the CSA divisions for which I was responsible; colleagues responsible for other CSA divisions did likewise. When I was in receipt of the comments from medical colleagues, I would then reframe

the bid accordingly and submit to SHHD finance division."

Pausing there, Mr Macniven, were you involved at this stage?

A. Yes.

Q. So would Mr Murray put the consolidated and considered bid to you and that would then be passed?

A. I think so. I would certainly have been consulted, even if the mechanism of passage to the finance division was through Sandy Murray.

Q. And so you would have been aware of Mr Murray's work in consolidating and assessing the bid before it went to finance?

A. Absolutely, more than aware of. I would have approved.

Q. Approved. And how about Mr Morison? Would he have approved it before it went to finance?

A. I can't remember whether he did so at that stage or at the subsequent stage, when finance division had aggregated it up to the health service level, as I was describing a moment ago.

Q. Yes. I'm not sure if you can answer this question, Mr Macniven but we see in paragraph 13 in the second sentence, Mr Murray says:

"When I was in receipt of the comments from medical committee, I would then reframe the bid accordingly ..."

Do you know what he meant by "reframe"?

A. Not really. I would have used the word -- the process -- I would have described the process as being more one of critical appraisal.

Q. But would it have been open to Mr Murray and yourself, after consultation with medical and any other colleagues, to drop parts of the bid?

A. Yes. Whether we did so in the case of surrogate testing, I can't remember and the documents that I have seen don't help us.

Q. We may come back to some more shortly in that regard.

Sir, we have got to the point of the bid having been submitted to the SHHD finance division and Mr Murray goes on:

"I am not aware of how they conduct their consideration but I would imagine they had regard to guidance they had received from the Treasury. SHHD finance division made the final decisions on funding."

So by the time the bid goes to the finance division, is the bid essentially for a certain amount of money, together with an explanation or justification for that money?

A. That's correct, yes.

Q. So for those sitting in the finance division, I imagine money sought for existing operations would have been

a fairly straightforward matter in terms of was that something which should be financed or not. Is that correct?

A. Not necessarily, because we were expected in those days, as now, to achieve efficiency savings on existing work. One can always try to get more value out of every public expenditure pound.

So there was a critical appraisal of that kind, but fundamentally what you are saying is correct, that it was more straightforward to say we have got to carry on producing the same amount of blood and range of blood products as before and it's going to cost a little more than it has in the past, for instance because of increases in staff salary. It's easier to do that than it is to say there is this extra task that needs to be taken on.

Our role in relation to finance division on these extra tasks would be to construct as good a case as we possibly could for extra expenditure that we believed to be justified. The key point about surrogate testing is that we did not believe that extra expenditure was justified.

Q. I understand. Paragraph 14. Mr Murray goes on:

"The reasons why the bid for funding NANBH screening was not included by me in the overall bids submitted to

finance division are set out in paragraph 9.49 of the preliminary report."

We will come back to this:

"... I cannot add anything to that list justifications. None of those justifications fell within my administrative executive responsibilities. Medical colleagues would have formed a view and advised me accordingly."

We are told that an unknown author, referred to in the minute, referred to in paragraph 9.49 of the report, is Hugh Morison.

Paragraph 15. Mr Murray states:

"It was technically my call not to include funding for screening in the overall bid as I was the person responsible for drafting and submitting the bid to finance division but I made my call based on advice from medical colleagues."

Is that correct? Was it technically Mr Murray's call not to include funding for screening in the overall bid or was that technically your call?

A. I think it would have been, yes. I can't imagine that Sandy Murray solo, even with the very clear and strong advice from medical colleagues, would have done that without reference to me. I would have -- if -- I would have approved -- even if Sandy Murray transmitted to

finance division, I would have approved the bid that he transmitted.

Q. I understand. Paragraph 16. We can see what that says. Again, Mr Murray couldn't see any reference to that particular proposal ever going to the permanent secretary or the minister.

Paragraph 17:

"I am not aware of there having been any opposing policy views from senior officials."

I think is very consistent with what you said, that the medical and administrative or executive officers were at one on the question of surrogate testing was not justified on the information available to you?

A. That's correct.

Q. We can then I think --

A. I think that that was what Hugh Morison's unknown author note was about --

Q. Yes.

A. -- showing that he too agreed that it was premature to introduce surrogate testing without clearer scientific evidence.

Q. We will come back to these documents very shortly but finally, please, last paragraph, paragraph 19.

Mr Murray states:

"Aside from discussions in relation to funding I had

no substantive involvement in any general discussions as to the desirability of introducing surrogate testing. Had any decisions been reached, I would have been involved in securing funding to allow them to be implemented."

The first sentence, Mr Macniven, did you have any substantive involvement in general discussions about the desirability of introducing surrogate testing?

A. Yes, I can't remember. I was certainly involved -- the file shows that I was involved in to-ing and fro-ing on paper. I would have thought that that would have been parallelled by oral discussion but I have no evidence of it one way or the other.

Q. Would it have been unusual for you at the time to have discussed issues with the medical officers?

A. No, certainly it would not have been unusual for me to discuss them. It would have been very normal. In the way that I have described at the beginning, we operated as a team.

Q. So you would have discussed the merits, the substance, of issues which were arising?

A. I imagine that I would have done. I don't have any evidence one way or the other.

Q. Thank you. I would like now, please, to put that statement to one side and to finally go through a series

of documents with you, please, Mr Macniven, relating to events at the time, 1986 and 1987, and simply to look at things in chronological order, and I think the issues we will see arising under the umbrella of surrogate testing, we will see issues such as product liability, questions of funding and some discussion of the merits of surrogate testing as well.

Now, the first document, please, is [SGH0016295]. If we go over the page, please, to see the author, we will see this is a minute by Dr Forrester of 30 June 1986.

Then back to the first page, please. We can see it's addressed to Dr McIntyre and copied to Dr Scott. So on the face of it a minute primarily for the benefit of Dr Forrester's medical colleagues.

I think we can see in top of the right-hand corner the names Mr Murray, Mr Thomson and file. The name Mr Murray and the tick, does that suggest at least that a copy of the document was sent to Mr Murray who would tick it once he had read it?

A. Exactly so. In the way that I had described earlier about the transmission of information among the team.

Q. I see. And the fact that, Mr Macniven, your name isn't on the document, does that suggest that you didn't see it?

A. I would almost certainly have seen it when the file was subsequently in my hands but I wouldn't have seen it contemporaneously with its issue.
Q. When and why would the file be in your hands?
A. One would need to look at the front cover of the file to show that. That information is recorded on the front cover of the file.
Q. So why would you be looking at a file -- if a minute had come to you asking you a question, then you may go to the relevant file to dig it out, is it that scenario?
A. That sort of thing.
Q. I understand. One matter I wish to take you to is back to page 2. I will have to put these documents to Dr Forrester when he is with us, but it's the issue of product liability under point 6.

I know that you did come to have some involvement in product liability, and Dr Forrester here states:

"Dr Cash continues to express grave anxiety on this score. I protested that his anxiety appears impossible to justify or comprehend."

Et cetera.

I think, Mr Macniven, this is a reference to a Council Directive of 25 July 1985 by which the UK would require to bring in legislation in respect of essentially strict liability for defective products?

A. For products of all sorts, and blood products were only one of our -- a complete cross-section of products used by consumers.

Q. You are absolutely right, it's the question of consumer protection generally and products generally and it's certainly not a question of just blood products. As you say, it's products generally.

A. Absolutely.

Q. We know that the Consumer Protection Act 1987, with strict liability provisions, came into force in March 1988. I wonder, Mr Macniven, you joined the SHHD in May 1986, did there come a time when the issue of product liability, the Consumer Protection Act and the question of blood and blood products came to your attention?

A. Yes. The bill that preceded the Act had a number of implications for the services for which I was responsible within the department, of which the SNBTS was one. So I was involved in the preparation of the legislation, which was being carried out in Whitehall by the Department of Trade and Industry.

We were worried about aspects of the effect on blood and blood products, and these worries were fuelled by John Cash's very substantial worries about them. Now, we didn't entirely share, as John Forrester's note

records, John Cash's fears but there were aspects that we checked up, particularly, I think, to ensure that blood donors were not in any way caught by the legislation that in donating blood, you weren't seen as the producer of the product that the legislation was concerned with.

Q. So you were aware of these issues at the time?

A. Oh, yes, very much so.

Q. Thank you. Then I think the next document, please -- we are back to funding -- it's [SNB0112637]. It's slightly unfortunate, Mr Macniven, I had hoped to take Professor Cash through all of the funding bids before I asked you about them because some of the matters I think aren't entirely clear from the face of the documents, but we haven't had a chance to do that so we will just have to handle this as best we can?

A. That lack of clarity is what I was alluding to earlier, that it was sometimes necessary to go back to the SNBTS and elucidate what was in this programme narrative document.

Q. We might see some examples of that but just to understand what this document is, we can see it's entitled "SNBTS: public expenditure survey (1986)."

I take it this relates to the year 1987/88?

A. It will be clear in a page or two.

Q. "Programme narrative". The bottom right-hand corner we see the letters "JDC". I assume this was drafted by Professor Cash but I will have to put that to him in due course.

Again we see 5/86. It may have been it was drafted in May or submitted in May 1986 but again I can check that with Professor Cash.

A. But I think that's a likely hypothesis.

Q. Thank you. Go on, please, to page 2640. We can see a table 1, which has various columns, "Item", and then the years 1986/87, 87/88, 88/89, 89/90.

Could I ask, Mr Macniven, are the years 87/88, a reference to calendar years or financial years?

A. These would be references to financial years running from 1 April to 31 March, and this is an example of what I was saying earlier, that these bids covered not only the next year, next financial year, but also, although inevitably more speculatively, the following two years. So what you get in that table is four years. The then current financial year, which was the baseline against which one could look at the bids in the following years in the way that you were describing a moment ago, and then the three future years.

Q. Thank you. I think we can see item 5(g) in the left-hand column:

"Non-A non-B Hepatitis testing."

A sum of £810,000 sought for 87/88. Then a sum of 836,000 indicated for 88/89.

If we can then, please, go on to page 264 --

THE CHAIRMAN: Just before you leave, as far as the current year is concerned, is this simply narrating a vote that has already gone through, it's not supplementary?

A. That's my understanding. Obviously things come up in the middle of a financial year and there were mechanisms for dealing with them. I don't think this would have been the mechanism for doing so. So what you describe is the normal practice.

THE CHAIRMAN: Right.

MR MACKENZIE: Thank you. We can see some narrative in relation to that sum at 2649. We can see under 4 -- 4 is "Additional donation microbial screening" under (b) NANB:

"Despite the absence of specific tests to detect donations which transmit non-A non-B Hepatitis, there is increasing evidence that both in Europe and North America formal moves will be made, within the next 12-18 months, to introduce surrogate testing of all donations (liver function and anti (HBsAg) core tests). Current studies in the States have costed this exercise at $7 per donation. For the SNBTS this would be

approximately £1.5 million per annum (using current exchange rates). There would be additional capital monies required and the US costings do not include a significant revenue cost for subsequent counselling of donors. Provision has been made for this development to commence in 1987-88 ..."

I think the next document we have -- I should pause and ask, Mr Macniven, do you recall seeing that particular bid at the time?

A. I will have done. I don't recall that bid. I recall a number of years' bids, which I have conflated into one.

Q. I understand. The next, I think, relevant document --

THE CHAIRMAN: We will take a short break at that stage.

MR MACKENZIE: Thank you, sir, yes.

(3.02 pm)

(Short break)

(3.23 pm)

THE CHAIRMAN: Yes.

MR MACKENZIE: Thank you, sir. Mr Macniven, the next document, is [SGH0028140]. We will see shortly, this is a minute from Mr Murray, dated 21 October 1986, sent to Dr Scott and copied to Dr Forrester.

And again, Mr Macniven, can we take it, because your name doesn't appear in this minute, it's unlikely you

would have seen the minute at the time, albeit --

A. Correct.

Q. Correct. It may have been contained in a file you may have looked at later. We see the writing, top right-hand corner, if we scroll down a little, handwriting, 7, 8, 9. Does that mean anything?

A. No, what it is, is the document number on the file, and why it has been changed is because earlier documents must have been found, two earlier documents must have been found, which require the later papers to be renumbered because the file -- document 1 on the file is the oldest document.

Q. Thank you. We can see --

A. In other words, it has very little significance today.

Q. I understand. We can see the content of the minute.

Mr Murray refers to Dr Scott's minute of 16 October and states:

"I ... can confirm that the bid we are making to our finance colleagues for money for the SNBTS in 87/88 makes no provision for NANBH screening."

To pause there, it appears from this memo that, having undertaken an assessment of that particular bid, Mr Murray's view was not to pass it on for submission to finance colleagues. Is that correct?

A. Absolutely.

Q. And then --
A. And the reason for that was because we were not convinced that it was necessary or timely anyway.
Q. Yes. At the bottom of the memo it states:
"We are making no bid for any new money to provide for this hepatitis screening."
Just to follow this forward a little, Mr Macniven, if yourself and Mr Murray and colleagues had decided that such a bid should have been sent on to finance department, and if one assumes finance department had approved the bid, remind me what would have happened next? The finance department would have sent the bid where?
A. It would have put it for ministerial approval and then it would have been enshrined in the vote, which Parliament voted for the money -- the resources which Parliament voted for the subsequent financial year. But you have asked a hypothetical question.
Q. Yes.
A. If I could rephrase that question a little, when the funds were made available for non-A non-B Hepatitis C screening subsequently, some years later, that would have been the process that was followed.
Q. Yes. And just to stick with that, the Hepatitis C process, so once essentially Parliament has voted on the

budget and the bill becomes law, then presumably it is a matter of law. Let's say £100,000 had been bid for and included for Hepatitis C screening and it had been approved by Parliament, then presumably the SNBTS could then only have spent that £100,000 on Hepatitis C screening. They couldn't have chosen to spend the money on new ambulances, for example?

A. They couldn't have spent it on new ambulances because that's nothing to do with the SNBTS, but the SNBTS would have been given a sum of money, which was not hypothecated to particular circumstances. We did sometimes hypothecate, but I don't think we would have done so in this kind of case. It was a very unusual thing to do. So John Cash would have been given a sum of money which he could manage at his discretion, which was very important because, of course, during a financial year things change. The cost of screening might have been lower, which would have allowed him to meet other pressures from the money that would otherwise have been wasted if we had hypothecated it.

Q. So to continue to develop that a little, equally, let's say, if in 1988 the SNBTS had sought funding for surrogate testing, it hadn't been made available, but it would have been open to them, if they could manage it, to take the money from somewhere else in their funding

to introduce such -- to fund at least such screening?
A. Theoretically what you say is right, but the size -- as the table that you had up on the screen a moment ago demonstrates, the size of the expected cost of screening in relation to the total budget of the SNBTS would have made that highly unlikely.
Q. I see.
A. I think that it would have been unreasonable for us to expect John Cash and his colleagues to have introduced it free. That wasn't in our minds at all.
Q. I understand.
THE CHAIRMAN: But the position would be this, that apart from the exceptional case in which sums had been hypothecated at the level of Parliament, in the vote there would be a degree of flexibility in the application of the departmental vote downstream?
A. Hypothecation would not have been done at the level of Parliament. It wouldn't appear in the vote.
THE CHAIRMAN: In any circumstances?
A. I wouldn't like to say in any circumstances.
THE CHAIRMAN: I would have thought, for example, that an aircraft carrier would certainly get its own line.
A. Yes, but in a way the aircraft carrier is the same as the SNBTS, it's a big sum of public expenditure, not as big -- the SNBTS is aircraft carriers these days, but it

wouldn't have been Parliament hypothecating it, it would have been more normal for us to hypothecate it, but still exceptional, and I can see no reason why we would have done so here, where the SNBTS needed no convincing of the merits of introducing the screen.

THE CHAIRMAN: I think that's probably enough. I naturally think of what happens to the poor auditor who comes along and is trying to ensure that it's authorised expenditure, but I think the information you have given is fine --

A. Okay, thank you.

THE CHAIRMAN: -- that there would be a flexibility, subject to a few questions.

A. A lot of flexibility.

PROFESSOR JAMES: Could I just ask: assuming the 100,000, or whatever it was, for the screening was just included in a global number without its hypothecation, nonetheless the quid pro quo of that would have been: but we do expect you to start the screening, I imagine?

A. Oh, yes, yes.

PROFESSOR JAMES: Okay.

A. But I think that the tenor of that question implies a degree of suspicion between us and the SNBTS, which didn't exist in practice.

PROFESSOR JAMES: I'll take your word for it.

THE CHAIRMAN: For the time being.
MR MACKENZIE: Thank you. Mr Macniven, I would like to move on now back to the question of product liability. The next document is [SGH0050155].

This is a letter from a Peter Lambert in the Department of Trade and Industry to Mr Graham Calder. Was he, I think, the chief pharmacist?

A. That's right and Graham was in the lead on product liability matters in the Scottish Health Service because the main products of the Scottish Health Service were pharmaceutical products.

Q. Thank you. This letter is dated 9 February 1987. I think in short this arises from Professor Cash, I think, had asked that blood and blood products be treated as a service rather than a product and, therefore, a specific exemption from the new legislation. And I think in short the answer was no, as we will come to see in this letter headed "Consumer Protection bill".

A. That's my understanding as well.

Q. I'm grateful. I think we won't go into it in detail, other than that when one reads the letter, one can see in the first page that the DTI are unpersuaded that blood and blood products should be removed from the meaning of "goods and products".

Over the page there is mention of a possible defence:

"The case of a product containing a undetectable defect is covered by clause 4(1)(e) of the Bill, which provides that it will be a defence for a person to show that the state of scientific and technical knowledge was not such that a producer of products of the same description as the product in question might be expected to have discovered the defect. The availability of this defence should, I hope, go some way to removing your concern about blood products."

I'm fast forwarding and summarising very much but I think, in short, when the matter came before Mr Justice Burton, I think he took the view that defence was not available because there was a known risk of blood and blood products transmitting hepatitis. It was a known albeit generic risk, it was still a known risk and, therefore, the defence wasn't available, and the producer of a product took the risk of continuing to supply such a product.

We might go into that with Professor Cash a little bit later.

Simply for the record, two further internal documents. We don't have to go to but they continue that story a little.

The first one is [SGH0050149], which is a minute from Mr Calder of 13 February 1987 to Dr Scott and others, really passing on what the DTI have said.

And that is then passed on in a letter from Mr Morison to Mr Donald of the common Services Agency on 13 March 1987, which is [SGH0050140]. I won't go to them in the interests of time, and I don't think they are absolutely necessary to go to.

The next document I think we should go to is [SGH0028127]. If we go to page 2, please, we can see this is a minute from Dr McIntyre of 6 April 1987 and back to the first page, please, we can see it's addressed to Dr Scott and others, including yourself, Mr Macniven, and the heading is "Scottish participation in UK research project on transfusion-associated non-A non-B Hepatitis".

Back to page 2, please. Second paragraph:

"The directors of SNBTS are unanimous and are now pressing fairly strongly that this screening should be instituted; although perfectly aware that it would be costly and could not abolish transmission completely, they could then claim to have taken all steps open to them to reduce transmission. Before embarking on such an expensive programme, it would seem logical to participate in the proposed research and to delay any

further action until the results of this were known.

"If recipients of this minute are agreeable that this is the correct line to adopt, then the Edinburgh SNBTS will be asked to prepare a detailed proposal along similar lines to that of their English counterparts."

If we go back to the first page, please, I think the handwriting is that of Mr Morison. Is that correct?

A. Yes, it is.

Q. And so his handwritten minute or note to you of 6 April saying:

"Mr Macniven, advise, please. My initial reaction is (a) it would not make sense to screen all blood for non-A non-B, the benefits appear out of all proportion to the risks, (b) we should therefore participate in the research, (c) CSO should be encouraged to fund it."

I take it, Mr Macniven, that was also your view and the view of the medical officers too?

A. That's correct, yes.

Q. If we look at the next document in that regard, please, we will see [SGH0028126]. It's a memo from Dr Scott to Dr McIntyre and copies to others, saying:

"I agree in principle with the procedure outlined in your minute of 6 April.

"We must do whatever we can to prevent the BTS going ahead with a full-scale introduction of this testing --

or at least trying to blackmail us into the provision of funds.

"The research proposal from Edinburgh will, of course, have to be subject to the scrutiny of the appropriate CSO group and the availability of finance. I would not like to see it fail on the grounds of finance because the stakes are high."

"Blackmail" is a strong word, what did you understand it to mean in that context?

A. I can't remember what I felt at the time. A possible construction is that Dr Scott was feeling that the SNBTS was threatening us with serious consequences if we didn't provide the funding.

Q. From a product liability point of view, wasn't Professor Cash correct?

A. That's not what we thought at the time, see the previous paper that you put up on the screen from Lambert in the Department of Trade and Industry.

Q. Well, I suppose that the Department of Trade and Industry -- I'm not sure really how much they knew about the supply of blood and surrogate testing. I suppose they are looking at things from a particular angle?

A. Yes, but they knew a lot about what their legislation was intended to achieve. It sounds from the remarks you made when you were showing that document that they were

wrong but that was our understanding at the time.

Q. I think they said a defence may be available. I'm not sure they went much further but maybe I should ask you this, Mr Macniven: do you recall taking advice at the time on the implications of the Consumer Protection Act in relation to the supply of blood generally but in particular the question of surrogate testing?

A. I don't recall. It's too detailed a question. The file will show the answer to that.

Q. Okay. Now, the next document, please --

A. Sorry to interrupt. We certainly sought legal advice on aspects of the consumer protection legislation but whether we sought advice on precisely that angle, I can't remember.

Q. I understand. The next document, please, is [SGH0028125]. This, I think, Mr Macniven, is your response of 9 April 1987 to Dr McIntyre's minute of 6 April, and you say:

"I am replying on my own behalf and that of Mr Morison ... Mr Morison and I entirely agree with Dr Scott's comments in his minute of 7 April to you. It is important that the decision on whether or not to screen all blood for non-A and non-B Hepatitis, which will not be cheap and may not be certain should be taken on the basis of the sort of UK research you suggest."

That was obviously your view at the time, no doubt informed by the views of your medical colleagues?

A. Dr McIntyre in particular, yes.

Q. One difficulty, perhaps, Mr Macniven, is this, that Dr McClelland has explained to us that the type of study proposed was only going to look at donors, and if one really wanted to gain a better understanding of whether surrogate testing may be effective in reducing post-transfusion hepatitis, one would have to study recipients. It seems a fairly obvious and logical position. Was that point ever pointed out to you by your medical colleagues at the time?

A. I don't recall that. I recall that the research proposal was developed in -- by the Blood Transfusion Service south of the border, and I don't know that I would, therefore, have -- you know, the question was did we -- should we participate, rather than is the research the right way to go about it. I would have tended to accept the advice of the experts in the Blood Transfusion Service on that technical question.

Q. Yes. And your position, perhaps, to be fair, may have been that you were unpersuaded on the evidence put to you that surrogate testing should be introduced or funded. So, therefore, some type of further research was required.

Now, it may not have been really a matter for you as to the technical details of exactly what that further research should be?

A. I think that's a fair summary of the position that I adopted at the time, reflected through the papers that I have seen.

Q. Yes.

A. But I don't recall that level of detail.

Q. Yes. If we could then, please, go to [SGF0012085], this is in short, Mr Macniven, a memorandum from Dr McIntyre to yourself and others, dated 21 July 1987. Half way down it refers to a letter in The Lancet of 4 July 1987, where Professor Cash and his SNBTS directors set out a case for starting testing.

Do you recall seeing that letter at the time or about that time?

A. I don't recall it because it's so long ago. I clearly did see it.

Q. Okay. A few paragraphs further down the second paragraph from the bottom:

"DHSS have expressed their concern and dismay at the letter by Professor Cash and colleagues and have interpreted this as being SHHD policy."

I would like to pause, please, and ask you this: to what extent did SHHD liaise with the DHSS in the

question of surrogate testing and, secondly, to what extent did the DHSS influence the views of the SHHD on surrogate testing?

A. We liaised very closely indeed. There was a formal committee, the name of which I can't remember, but it was mentioned in Archie McIntyre's last note that you put up on the screen, on which SHHD was represented to look at this at a GB level and, you know, we were conscious of the fact, as this note brings out, perhaps -- no, but we were conscious of the fact that the view of the BTS directors south of the border was against the introduction of surrogate testing.

Q. Thank you. Thank you, Mr Macniven.

I'm almost finished. There are one or two documents. Next, please, is [SNB0113743]. We are back to the question of funding.

This is the SNBTS PES 87, possibly drafted by Professor Cash in June 1987. Again, I'll check that with him in due course. Can we go, please, to page 3750?

Again, we can see the year 1988 to 1989 under item 5(f):

"Non-A non-B Hepatitis testing £300,000."

It is perhaps not obvious why it should be down to 300, if it was 810 the year before?

A. I think the answer to that is that in the intervening year the SNBTS had got a much better view of what it would cost. I think these are far more accurate figures than the much higher figures that were calculated the year before, I think by extrapolation from American practice. It was slightly tenuous.

Q. If we look at the next column, 89 to 90, £105,000. Again, I will have to ask Professor Cash but I suppose one possible explanation might be higher start-up costs when one first introduces a test and lower costs in subsequent years?

A. That's my deduction as well.

Q. I think it's an important page, 3755 under "NANB surrogate donation testing":

"The SNBTS directors have now decided ..."

I think this must be a reference to the meeting of 3 March 1987, when they made this recommendation:

"... that in the light of the advent of new product liability laws in 1988 and an emerging unchecked private sector blood collection services it would be prudent to plan to commence this programme in the financial year 1988/89. The costing are estimates only and it is proposed that we plan to ensure the financial burden covers two financial years but begin in July 1988 (the date new product liability legislation will be

introduced)."

I think there is then a memo in this connection, Mr Macniven, document [SGH0028077]. This is a minute from -- we don't have to go over the page but it's Dr Forrester of 1 October 1987 to yourself and medical colleagues.

And the starting is:

"As you are aware, the PESC request was lodged for SNBTS some time ago ..."

I think that may be the reference we have just looked at of PES87 but it may not?

A. It could be to the 1986 submission, which was of the same nature.

Q. And the 86 submission, would it still be outstanding as at 1 October 1987?

A. No, but it may be what John has in mind when he says "some time ago".

Q. Okay.

A. You see, he may be looking back three months or four months to the 1987 submission but some time ago creates a slightly longer timescale, in my mind.

Q. Okay. We can see it does say:

"As you are aware, the request was lodged some time ago, seeking funds for this purpose. We DHSS and by and large the English BTS take the view that the case is

inadequate and that instead research is required. SNBTS have published their view in The Lancet for 4 July."

There is then a reference to the Edinburgh application for funds to take part in the UK multi-centre study.

But over the page, page 2, it's stated:

"I would be ready to discuss further, but if there is no hurry to reach a decision on the SNBTS request for the money to screen ..."

There does seem to be some outstanding request for money to screen.

A. Yes.

Q. "... would prefer to do so when the written statement of reasons for rejection has arrived, and when our CSO and DHSS have reached a common stance."

The final passage here is the next document, [SGH0028076]. This is a minute of 2 October 1987, Mr Macniven, from you to Dr Forrester and his medical colleagues.

Paragraph 1. You say:

"The PES timetable really requires us to reach a decision very soon on whether to earmark funds for the SNBTS for this purpose. I have, however, taken steps to get round this problem, by registering with finance division that a need for NANB testing may emerge but

(and this is the key point) it would be premature to allocate money to the SNBTS for the purpose at the moment."

Then we can see what's set out in the second and third paragraphs. You say that you are:

"... anxious for our decision ... to be properly informed by research evidence."

But you don't want money tied up unnecessarily.

In 3 you really say is it possible to expedite the feedback to SNBTS, this is the feedback from the biomedical research committee, and you end by saying:

"Substantial patient safety/expenditure issues ... are at stake."

So really I think a desire on your part -- if research is to be -- a preference for research and really a desire for it to be undertaken sooner rather than later and things not to be held up, and also money not to be set aside unnecessarily for something which may or may not take place?

A. But also the importance of making sure that funding is available if we had been convinced of the merits of the proposal.

Q. Yes. So is this minute really consistent with you keeping an open mind? If you are persuaded on the evidence, then you will seek to ensure funding is

available?

A. Exactly so, that funding should not be the obstacle.

Q. Thank you. Finally, Mr Macniven, the last document I ought to put to you is this: if we can go, please, to document [SNB0132880], you will see this is a letter from Dr MacDonald, the chief medical officer.

If we go to the bottom of the page, please, Dr MacDonald to Dr Cash, dated 8 October 1986. The first part of the letter deals with an issue concerning Dr Forrester, which I'm not going to ask you about. It's rather in the last paragraph of the letter. I should pause and ask, have you seen this letter before?

A. I don't recall seeing it.

Q. Please take a second.

A. The sensitivity of it -- because it talks about the performance of a close colleague, suggests -- Iain Macdonald wouldn't have copied it to me at the time.

Q. Pleases, out of fairness to you, take a second to read it to yourself. (Pause)?

A. Yes, okay.

Q. Thank you. Now, the final paragraph is the part I wanted to ask you about. Dr MacDonald states:

"Unfortunately, because of the highly unfavourable

conditions of service in the medical Civil Service we have lost some very experienced colleagues, including Dr Bell and at present we are operating four senior medical officers under strength."

Really, the two questions I wish to put to you, Mr Macniven, are, firstly, whether you were aware during your tenure of staffing level difficulties among medical officers? That's the first question.

A. I can't remember. Being aware of that. Rather the reverse. I always found it -- I dealt with a number of senior medical officers on the different subjects for which I was responsible and I don't remember any difficulty in getting medical advice when it was required and rapidly.

Q. You certainly have no recollection during your tenure of there being staffing difficulties among the medical officers?

A. No, and as I -- my recollection, although it happened just before I joined, I think, is that Dr Bell was immediately replaced by Dr Forrester, although, as Iain Macdonald recognises in this letter, John Forrester -- we had lost the huge accumulated experience of Dr Bell.

Q. I think he had been there since the 1970s, I think?

A. It was given in the sort of family tree paper that you

put on the screen at the beginning.

MR MACKENZIE: Yes. Thank you. I have no further questions, sir, thank you.

THE CHAIRMAN: Mr Di Rollo?

MR DI ROLLO: Mr Dawson will have some questions.

MR DAWSON: Sir, I do have a number of questions for Mr Macniven. I'm conscious of the time. Obviously this week we have been trying to finish promptly out of concern for the stenographer.

THE CHAIRMAN: How long do you think you need?

MR DAWSON: I would have thought half an hour. What I could say, sir, it might be of assistance, is that it may be -- I know there are another two witnesses coming from SHHD on Monday, and it may be that if I were to put some of the questions which I have for Mr Macniven to them, it may be unnecessary to put them to him at a later stage. So it might significantly reduce that or perhaps completely remove the requirement.

THE CHAIRMAN: I don't know what we can do to reduce or increase anything. I really do want to get away on Monday. I have a commitment in Glasgow. It sounds as if I may have to abandon it.

MR DAWSON: I was contemplating the possibility of Mr Macniven coming back on another day. It might not be necessary after Monday.

MR MACKENZIE: It may be, sir, that if after the two witnesses Dr MacDonald and Forrester have given evidence on Monday, Mr Dawson has any outstanding questions for Mr Macniven, it may be they can be dealt with in writing because I think the timetable is getting a little clogged up.

THE CHAIRMAN: It's getting very clogged up but I don't want to be unfair to Mr Macniven either and having to prepare written answers to questions is a burden that the witnesses shouldn't be subjected to unnecessarily. Anyway, I don't think we can --

A. If I could interject, (a) I go on holiday for a week tomorrow, (b) it is no burden to me or not an unacceptable burden anyway to act as Mr Mackenzie suggests.

THE CHAIRMAN: Right. What are the prospects of staying on a little longer tonight?

A. No problem at all, from my point of view.

THE CHAIRMAN: We have got physical problems with the stenographer in particular that I have got to be very conscious of. Very well, we'll rise now.

(3.58 pm)

(The Inquiry adjourned until 9.30 am on Monday 21 November 2011)

I N D E X