CANADA

PROVINCE OF NOVA SCOTIA

IN THE MATTER OF THE

FATALITY INVESTIGATIONS ACT

S.N.S. 2001, c. 31

THE DESMOND FATALITY INQUIRY

TRANSCRIPT

HEARD BEFORE: The Honourable Judge Warren K. Zimmer

PLACE HEARD: Guysborough, Nova Scotia

DATE HEARD: January 30, 2020

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COURT OPENED **(10:07 HRS.)**

THE COURT: Good morning.

COUNSEL: Good morning, Your Honour.

THE COURT: Mr. Murray?

MR. MURRAY: Yes, Your Honour. Mr. Russell will be conducting the examination.

THE COURT: Mr. Russell?

MR. RUSSELL: Yes, Your Honour. Counsel will be calling Dr. Erik Mont this morning.

THE COURT: Thank you. Good morning, Dr. Mont.

DR. ERIK MONT, affirmed, testified:

DIRECT EXAMINATION

MR. RUSSELL: Good morning, Dr. Mont.

A. Good morning.

Q. Could you state your full name for the court record, please?

A. My name is Erik Mont. That's M-O-N-T.

Q. And, Doctor, what is your occupation and official title?

A. I am a Forensic Pathologist. My title is Deputy-Chief Medical Examiner for the Nova Scotia Medical Examiner Service.

Q. And where is the Nova Scotia Medical Examiner's Office located in Nova Scotia?

A. It's in Dartmouth, Nova Scotia.

Q. And how many medical examiners are there in Nova Scotia?

A. Right now there are four.

EXHIBIT P-000044 - *CURRICULUM VITAE* - DR. ERIK K. MONT, M.D.

Q. And, Doctor, I'm wondering if we could take a look at exhibit number 44. This will come up to you in front of you on

the screen, and is in the binder as well if you prefer to look at a paper copy.

Q. So Doctor, I'm just wondering if you could tell us a little bit about your education.

A. I have an undergraduate degree from Johns Hopkins University, where I graduated in 1991. I have a medical degree from the Robert Wood Johnson Medical School, where I graduated in 1997. I went on to do a residency in anatomic pathology at the National Institutes of Health. Completed that in 2000. I did a fellowship in forensic pathology with Miami Dade County Medical Examiner Department from 2000 to 2001 and then I did some additional sub-specialty training of fellowship in cardiovascular pathology at the Armed Forces Institute of Pathology.

Q. And, Doctor, I'm wondering if you could briefly describe your professional experience and, in particular, I guess starting in 2003.

A. So after my fellowship in Cardiovascular Pathology I returned as a staff member to the Miami Dade County Medical Examiner Department, where I was an associate medical examiner and worked there as a forensic pathologist and medical examiner until 2009, when I moved here and took on my current position.

Q. And you've been in that current position steady since 2009 in Nova Scotia?

A. That's correct.

Q. Doctor, I just want to ask briefly - more curiosity, I guess than anything - your experience for those years in Miami Dade County, I'm assuming that was a fairly busy place to work?

A. Yes, as far as case numbers, the overall case numbers of the office are significantly higher than Nova Scotia. The office serves a larger population. In that office there were a larger number of medical examiners. So each pathologist didn't carry a significantly higher caseload. The mix of cases was somewhat different there, as you might imagine, for a different population in a large urban centre.

Q. So it's a pretty, I guess, vast experience of a variety of cases?

A. Yes. I did encounter a fairly wide variety of cases, I would say.

Q. And I'm just going to ask you a few questions in terms of the role of a medical examiner. So how would you sort of generally describe your role and sort of your responsibilities as a medical examiner in Nova Scotia?

A. The responsibilities of our office are outlined in our

Act, the **Fatality Investigations Act**. In general, though, we are responsible for determining and certifying the cause and manner of death in a certain subset of deaths that occur in Nova Scotia. Those particular types of deaths are outlined in that **Act**. In very general terms, though, they encompass all deaths that are not natural deaths, and many deaths that can't be certified as natural deaths at the time the person dies.

An example would be a person who dies unexpectedly without a history that would suggest the cause of death, and so the cause could be a number of things, including either natural or external causes. So we do investigate a number of deaths that, after our investigations, do turn out to be natural deaths as well.

Q. And I'm wondering if you could explain. You are now in the role of Deputy-Chief Medical Examiner, and I'm assuming with that it carries further responsibilities above and beyond your previous role as a medical examiner. What are some of the other obligations you have as Deputy-Chief Medical Examiner for Nova Scotia?

A. My general duties day to day are typical of one of the medical examiners in our office. The additional duties encompass, really, covering for Dr. Bowes, the Chief Medical

Examiner when he is unavailable. So occasionally, if he's traveling for meetings or things like that I will undertake his responsibilities.

Q. Okay. How would a particular case get assigned in general terms? If there are four medical examiners in the office how does one go about sort of assigning a particular medical examiner maybe to a particular case?

A. In our office that is strictly based on our schedule. We have a rotating call schedule and when a case occurs when we are on call that will become our case. Dr. Bowes obviously has the authority to assign cases outside of that but he has not done that, to my knowledge, ever. When the case comes in on our call we have handle of the case.

Q. Okay, and I understand that as a medical examiner on a particular case you don't work alone and that there's a support team that's in place that work with the medical examiner, and these are pretty qualified individuals. I wonder if you could tell the Court a little bit about what comprises that team or what sort of backgrounds these people might have.

A. Our team is comprised of a number of different professionals that fulfill different roles, though. Some of them fulfill investigative roles. That might include liaising

with police, liaising with other medical professionals, speaking with families, a number of other avenues of investigation. Often scene attendants as well.

We have full-time staff in our office. Those people hold the title of coordinators of investigation, and we have another group that covers nights and weekends. Those are our medical/legal death investigators. And depending on what time a death occurs, either might field that initial call. The actual responsibility for the file will ultimately be taken on by one of full-time people.

(10:18:08)

Q. Okay.

A. These people have, as you said, a high degree of education and experience. They're all nurses or paramedics with critical care experience.

Q. And I'm going to move into a series of questions and the category is probably wrong. And obviously correct me. But in terms of the science or the test and the ultimate sort of goal of the medical examiner, I understand that one of the primary responsibilities is for a medical examiner to determine a cause and manner of death. Is that the case?

A. That's correct.

Q. I'm wondering if you could define for the Court what "cause" is and what "manner of death" is.

A. The cause of death is defined as the disease or injury that, in an unbroken chain of events, ultimately leads to a person's death. There may be a number of mechanisms in that chain that follow from that underlying cause, but the cause is that basic injury or disease that initiates that chain.

The manner of death is a classification that is a statistical classification, really, in which cases are classified into one of five categories, and those are homicide, suicide, accident, natural, undetermined.

Q. And, Doctor, in sort of working towards a conclusion in terms of cause and manner of death, obviously you take sort of a scientific approach to it and a detailed analysis. What are the sort of categories of evidence, I guess, does a medical examiner consider when trying to determine cause and manner of death?

A. Can I clarify the question? Are you asking categories with regard to what types of information or our degree of certainty in the ...

Q. What types of information or categories of evidence would you consider?

A. I mean the short answer is we consider all information that is available to us. In a particular case, it may be one source or a number of sources. That can be scene information. That can be witness accounts. That can be medical records. That can be accounts of associates of the person. Police investigative information is included in that. We often review medical records.

So at the outset and throughout the case we obtain as much information as we can from that. We also, in cases in which we have done an autopsy, have the benefit of that information as well. And that includes both the gross autopsy findings that we see at the time an autopsy is conducted and a number of tests that may be done afterwards, which might include microscopic examination of tissues and organs. In a particular case, it might include toxicology testing. Sometimes microbiology testing. Sometimes genetic testing.

There are a number of other categories that, in some cases, become pertinent, and oftentimes we rely on other professionals. Forensic entomologists sometimes. Forensic anthropologists sometimes.

Q. So entering into sort of an investigation, is it fair to say one category of evidence is not deemed more essential

than others?

A. I think that it's very case dependent. There are cases in which the cause and manner of death are clearly evident from the autopsy findings and the autopsy findings alone. More often, the autopsy findings are interpreted in the context of everything else we know about the case, about the history and the individual and the scene and any other information that we can have.

Q. Okay. And moving, I guess, to questions sort of about scene evidence. Is there a particular reason why it may be important for a medical examiner to attend the scene?

A. There are a number of reasons why attendance at a scene may be beneficial. It's not necessarily beneficial in every case but we don't know which cases that may be affected by our attendance. We see things looking from a different perspective than police investigators sometimes and so we may pick up different things at the scene. Again, it's very case dependent on which things that might be.

Q. Would you say it's unusual or would you say it's common for a medical examiner to attend a scene in Nova Scotia?

A. It's common for one of our personnel to attend a scene. Usually that would be one of our investigators, either

the coordinators or the medical/legal investigators that cover nights and weekends. As medical examiners, we try to attend all scenes that are clearly homicide scenes where a body is still at the scene, hasn't been transported to the hospital. Or where there is a legitimate suspicion that it might represent a homicide.

And we attend any scenes in which the police are uncomfortable, and our investigators if they're there already, that there are questions at the scene that might need to be addressed.

Q. And I'll move back to this particular case. But in general terms, is it sometimes important ... time, I guess, is of the essence, that the sooner a medical examiner gets to the scene, the more beneficial it is in coming to a conclusion of cause and manner of death?

A. Typically the earliest information that we are able to obtain at a scene from the scene is the best. For instance, the means by which we can estimate the time of death are related to postmortem changes of the body. That's cooling of the body. That's something called livor mortis, where the blood settles to the dependent portions of the body and is visible as pink discolouration called livor mortis, or lividity, and rigor

mortis, the stiffening of muscles after death.

These things occur with relatively predictable time ranges. So the earlier we're able to establish those things, the better the information we can provide is. Still, those allow us only to determine the time of death in relatively broad ranges but, again, the earlier, the better. The longer the range, the longer the time since death, the larger that range is.

Q. Okay.

A. So that's one factor. The processes of decomposition of a body essentially begin the moment a person dies. So from our perspective, from our examination, the earlier we're able to do an example, the better.

Q. Okay. Moving, I guess, to this particular case or matter before the Court. You're obviously familiar with the tragic deaths of members of the Desmond/Borden families, leading to this inquiry. I'm just wondering when you first might have became alerted or involved, I guess, in your office.

(10:27:54)

A. I believe the initial call came on ... I believe it was January 3rd, 2017. Time was around 8:20 or 8:30 p.m. That information is captured in our database. So the call would have initially gone to one of our investigators, one of our nighttime

investigators, who obtained some initial information and then called me to notify me that this had happened.

Q. So obviously this call, was it in the evening?

A. Yes, it was.

Q. So it's sort of after sort of what we'd call standard banking or business hours. So were you on call?

A. Yes.

Q. Okay. Do you recall sort of generally what sort of information is conveyed to you about this at the time?

A. The initial call typically could include fairly general information. The number of victims, perhaps the type of injuries, where the scene is, what time it was called in, and who was reporting it. The level of detail and accuracy of that information evolves over time. So that initial call is typically somewhat more general.

Q. And I understand that you ultimately made a determination that you would, in fact, attend the scene in Guysborough?

A. Yes.

Q. And, Doctor, do you recall when you might have actually arrived, I guess, on scene, or when that was?

A. During the initial few telephone calls on the 3rd and

the early morning of the 4th we made a plan with the police investigators that we would try to arrive sometime after noon to give them some time to process the scene before we are able to do anything at the scene.

Q. So do you recall approximately when on the 4th of January 2017 you might have arrived?

A. It was around 1:15 p.m.

Q. And I understand that you didn't enter the residence right away.

A. The Ident officers who had been processing the scene asked us if it was okay to take a break at that point as we had a preliminary discussion of the case. So we entered the scene at around 2:30, I believe.

Q. Okay, and when you say "we entered the scene", do you recall if you were traveling with a team, a support team as well?

A. There were two investigators from our office ...

Q. Okay.

A. ... that were with me that day.

Q. Do you recall who they were or what their positions were?

A. They were both medical/legal investigators. They're

not coordinators of investigation. And one was coming from Cape Breton and one was coming from our office, which is why we met at the scene.

Q. Okay. And they entered the scene with you.

A. With me, along with the police Ident officers.

Q. I understand there's a certain sort of dynamic between the RCMP or a police detachment and the Medical Examiner's Office. I'm wondering if you could just, in general terms, explain the sort of ... I don't know if it's jurisdictional authorities.

A. With reference specifically to a scene?

Q. Yes, yeah.

A. Well, as I mentioned, they had processed the scene overnight before we got there. The police are responsible for the scene and for the processing of the scene. They have jurisdiction over all that. We have jurisdiction over the bodies themselves. So we work with the police on this. We're partners on this. We certainly try not to go through or into a scene that hasn't been properly processed yet to get to a body to move a body. As I said, we'd like to begin our examination as early as possible but it's a partnership.

So the police oftentimes need to do a great deal of

processing before we can get to a body without contaminating evidence that's at the scene.

Q. Okay, and do you recall meeting with a Sergeant Jen Olfert?

A. Yes.

Q. And my understanding is she had been one of the forensic officers with the RCMP that you were referring to?

A. Yes.

Q. And do you recall when you might have entered? So if you said you arrived at around 1:15, around when is the time you entered?

A. It was around 2:30 p.m.

Q. And are you with her when you enter the scene?

A. Yes.

Q. And I guess I'll get to this point. So there was a slight, I guess ... I don't even want to call it a delay. But there was a time period between events occurring and you ultimately entering the scene at 2:30, and ultimately you reached conclusions about cause and manner of death, which we'll get into.

Did time cause any problem or impact in you reaching your final conclusions as it relates to the deaths of the four

individuals?

A. No.

Q. Okay. And so you enter the scene. I'm wondering if there were any sort of particular observations that you made while in the scene that were of importance to you in your ultimate considerations.

I appreciate that's a broad question and we could narrow it.

A. Yeah. I mean general things in this case were that there were four individuals, each of whom appeared to have sustained gunshot wounds. At this point I had received some information from the police regarding the events leading to this. So the elements that I talked about with regard to the time of death were consistent with that timeframe. So that's the temperature of the body, the rigor mortis, the livor mortis.

I observed the bodies as they were. They did not appear to have been moved yet. So that included the bodies as well as some of the blood around the bodies and beneath the bodies. There was a firearm that had been moved. I saw that. But not where it had been found. And I saw where some of the casings had been found as well.

Q. And so to your knowledge, outside of the firearm that

had been moved, to your knowledge, had the scene been disturbed in any manner when you were eventually given the initial walk-through and evaluation?

A. Not with respect to the bodies or the immediate areas of the bodies.

Q. Okay. And in this arrival on scene and assessment of the scene, did your office take photos or was that the RCMP?

A. That was the RCMP.

Q. And is that typical?

A. At the scene, yes.

Q. And at the scene did you examine ... or at any point did you examine the firearm?

(10:36:47)

A. I saw the firearm. I didn't examine the firearm. In the course of my training and experience, I have some knowledge of firearms and their injuries, but I am not a firearms examiner. I'm not an expert in firearms *per se*.

Q. So do you recall how long you might have been present and examined the scene? You entered at, say, approximately 2:30 in the afternoon.

A. Having reviewed the notes, I believe I left, along with our investigators, a little over two hours later.

Q. And I understand that the bodies of the four deceased were eventually removed from the residence and taken to your office for a postmortem exam?

A. That's correct.

Q. And I wonder if you could just, in general terms, describe what's a postmortem exam?

A. A postmortem examination is an examination of a deceased person that includes an external examination and an internal examination. In the course of our examination we have a number of objectives. One is to establish the identity of the person. One is to document and collect any evidence that may be pertinent in that case and then, of course, determination of the cause and manner of death.

So in these type of cases, typically many photographs are taken at different stages of this process. Photographs are taken. Well, bodies are transported in a body bag that is sealed with a specific security tag with a specific number to ensure that chain of custody and that nothing has been altered.

So upon breaking that security tag, photographs are taken as-is. Occasionally things may change from the scene to the examination at our office. The appearance of wounds sometimes changes just over time and with refrigeration. The bodies are

stored in refrigeration. And these postmortem changes that we use for determining the cause and manner of death obviously have progressed for however many hours have elapsed in the interim.

Q. And so just a general question. It's obviously leading. So there were no issues, in your opinion, surrounding any sort of continuity and that the postmortems were of Lionel Desmond, Shanna Desmond, Aaliyah Desmond, and Brenda Desmond?

A. That's correct, yeah. So in this case, the hands had been covered with bags at the scenes. There was trace evidence that was collected there that included some swabs, different types of swabs. Some for DNA, some for gunshot residue. And the clothing was collected. And the external examination includes an examination of the body from head to toe.

And that includes a visual examination, oftentimes an examination by feel. Sometimes things are palpable that are not visible. So we examine with those same objectives in mind determining who this person is, how they died, when they died, and collecting any evidence.

That's followed by an internal examination in which incisions are made in the body and the organs of the body are examined as they are in the body, noting injuries, natural disease processes, any abnormalities that might be there.

Collecting evidence sometimes. The organs are then removed from the body, weighed and examined in greater detail and then in the course of this a number of specimens are obtained.

In addition to the trace evidence specimens, there are toxicology specimens, specimens for pieces of tissue for microscopy, and as I mentioned before, specimens that in a particular case might be collected for a specific test later on.

Q. And before we get into the particular details of the postmortem exams of the four deceased are you able to say whether or not you were, at the end of the day, able to confidently determine the cause and manner of death of Lionel Desmond, Shanna Desmond, Aaliyah Desmond, and Brenda Desmond?

A. Yes.

Q. So, Doctor, I guess we'll logically ... I think it flows maybe a little easier. If we could start with the conclusions and maybe work our way back through the details. And I guess if we could look at Exhibit 62.

EXHIBIT P-000062 - MEDICAL CERTIFICATE OF DEATH - SHANNA DESMOND

Q. So, Doctor, you recognize this document?

A. Yes.

Q. And it's titled Medical Certificate of Death?

A. Yes.

Q. What is a Medical Certificate of Death, I guess?

A. It's a document that is filed with Vital Statistics that contains a number of pieces of demographic information and also the cause and manner of death.

Q. And in particular with this document, Exhibit 62, at the top it appears as though it has a series of information, Shanna Desmond, date of birth, occupation. Place of birth is checked off as "home" and there's an address listed?

A. Yes.

Q. So that is sort of standard information, I take it, that you fill out with each ... at the conclusion of each investigation?

A. Yes.

Q. And this is the document as it relates to Shanna Desmond.

A. That's correct.

Q. So, Doctor, I'm wondering if you look down at the page, it says sort of ... you know, there's a signature there. Is that your signature?

A. Yes, it is.

Q. And it's dated January 6th, 2017?

A. That's correct.

Q. And, Doctor, throughout the Certificate of Death there's a number of things and, in particular, I guess a quarter-way down of the page, number 12, it says, "Date of death"?

A. Yes.

Q. And when was that?

A. That was January 3rd, 2017.

Q. And that's a conclusion that you ultimately reached?

A. Yes.

Q. And number 13 it says, "Immediate cause of death" and what was the immediate cause of death for Shanna Desmond?

A. She had gunshot wounds of the neck, chest, and abdomen.

Q. And next to that, over to the right, it says, "Approximate interval between onset and death" and what does it say?

A. "Seconds".

Q. So I'm wondering if you could explain what the approximate interval between onset and death is.

A. This is something that we try to estimate, again, based on a number of factors. Sometimes that can be history. In other words, if a person has died of a natural disease that

they were known to have for years that would be years. So it's not necessarily based on the anatomic findings at the time of autopsy.

However, in a case such as this, the interval is approximated really, based, essentially, on the autopsy findings. We don't try to narrow that down typically in terms other than seconds, minutes, hours, days. It's very difficult to pinpoint the amount of time it takes for someone to die of an acute injury.

Q. And so in this case you were able to say seconds, you believe?

A. Yes.

Q. And it was due to the nature of the wounds that were inflicted?

A. That's correct.

Q. And we'll get into the details. It says, "State of death was". Number 16. And what did you note as the state of death?

(10:47:04)

A. Number 16. You mean does it take into account the autopsy finding?

Q. Yes. Or below that. It says, "State of death was",

and it has natural, accident, homicide, suicide ...

A. Oh, that refers to the manner of death.

Q. Yeah, the manner.

A. So in this case, based on the findings and the investigative information that I had received, I classified this as a homicide.

Q. So when we referred earlier as manner of death, on this form it's worded as "state of death".

A. Yes.

Q. Homicide. And then finally, how the injury did occur. It's noted as ...

A. Decedent was shot by other person.

Q. I wonder if we could turn to Exhibit 46.

EXHIBIT P-000046 - MEDICAL CERTIFICATE OF DEATH - AALIYAH DESMOND

Q. And, Doctor, you recognize that document?

A. Yes.

Q. And what is it?

A. That is a Medical Certificate of Death for Aaliyah Desmond.

Q. And that was also, I guess, signed by you and dated?

A. Yes.

Q. And when was it dated?

A. It was dated January 6th, 2017.

Q. And again, number 12, I guess, the date of death was determined to be when?

A. January 3rd, 2017.

Q. And immediate cause of death was listed as what?

A. "Gunshot wound of face, neck, and chest."

Q. And it says, "Approximate interval between onset and death".

A. Yes.

Q. And what does it say?

A. "Minutes".

Q. And so that is slightly different than what was listed for Shanna Desmond?

A. Yeah.

Q. And was it due to the nature of the injuries that were discovered through your postmortem exam?

A. Yes. Just as a note of clarification.

Q. Yes.

A. The terminology I use, gunshot wound of face, this refers to a single gunshot wound that injures those areas of the body. This is not three separate gunshot wounds.

Q. And I would clarify that once we get into the postmortem but since we're on that topic or area. If we could turn back to Exhibit 62. This is the Medical Certificate of Death as it relates to Shanna Desmond and it says, "Gunshot wounds", plural, and it lists, "Neck, chest, and abdomen"?

A. Yes. This refers to multiple gunshot wounds, more than one.

Q. And in particular, three?

A. Yes.

Q. If we could turn back to Exhibit 46 and I guess, as well, on Aaliyah Desmond's certificate of death, you've noted state of death which you referred to as cause, you indicated what?

A. Manner of death.

Q. Manner, sorry.

A. Yes. Homicide as well.

Q. And how did the injury occur and you noted?

A. The decedent was shot by other person.

Q. Moving to Exhibit 51.

EXHIBIT P-000051 - MEDICAL CERTIFICATE OF DEATH - BRENDA DESMOND

Q. And, Doctor, do you recognize this document?

A. Yes, I do.

Q. What is it?

A. This is the medical certificate of death for Brenda Desmond.

Q. And I see a signature on this page, as well, dated January 6th, is that your signature?

A. Yes, it is.

Q. That's 2017?

A. Yes.

Q. And, Doctor, I guess you noted that the date of death was when?

A. January 3rd, 2017.

Q. And you listed immediate cause of death as what?

A. Gunshot wound to the chest.

Q. And is that a single gunshot wound?

A. Yes, it is.

Q. And you said approximate interval between onset and death was?

A. Minutes.

Q. And, again, that's as a result of the analysis after your postmortem examination?

A. Yes.

Q. And the state of death was listed as what?

A. Homicide.

Q. And how did the injury occur, you noted?

A. Decedent was shot by another person.

Q. Moving to Exhibit 56.

EXHIBIT P-000056 - MEDICAL CERTIFICATE OF DEATH - LIONEL DESMOND

Q. Do you recognize that document?

A. I do.

Q. What is it?

A. That is the medical certificate of death for Lionel Desmond.

Q. And, Doctor, again I see a signature, is that your signature?

A. Yes, it is.

Q. And it's dated January 6th, 2017?

A. Yes.

Q. And, Doctor, I noted that date of death was noted or determined to you to be when?

A. January 3rd, 2017.

Q. And it states immediate cause of death and you found it was?

A. Gunshot wound to the head.

Q. And a single?

A. Yes.

Q. And you said approximate interval was when?

A. Seconds.

Q. And, as well, you indicated state of death was and in this case you indicated what?

A. Suicide.

Q. And that was after a conclusion of all the evidence you collected and examined?

A. Yes.

Q. And how did the injury occur, you determined?

A. Decedent shot himself.

Q. So, Doctor, so to just clarify, you indicated that three of the four parties, Shanna, Aaliyah, and Brenda Desmond, you ultimately ruled that their deaths were a homicide, is that correct?

A. That's correct.

Q. And Lionel Desmond's death you ruled as a suicide?

A. That's correct.

Q. And that was after considering all of the evidence, scene, RCMP investigation, postmortem exam, toxicology, et cetera?

A. That was before the toxicology results were available.

So the postmortem examination as well as information from the scene and information from the police up to that point.

Q. And did the toxicology sway your opinion at all or change your ...

A. It did not.

Q. I'm wondering, Doctor, we'll have to turn to the details of your postmortem examinations. If we could look at Exhibit 61.

EXHIBIT P-000061 - REPORT OF POSTMORTEM EXAMINATION - SHANNA DESMOND

Q. What is this report, Doctor?

A. This is the report of the postmortem examination of Shanna Desmond.

Q. And who prepared this report?

A. I did.

Q. And is this something that's standard after you do a postmortem examination?

A. Yes, it is.

Q. And, Doctor, there's a few things I would like to sort of draw your attention to. In the report, so this report would document all of your evidentiary findings as a result of the postmortem exam?

A. Yes, this encompasses the findings of the postmortem examination done on the day of the autopsy. This also includes the toxicology results and the results of microscopic examination.

Q. Okay. And it also reports, I believe, a summary and an opinion as well?

A. Yes.

Q. So, Doctor, I'm wondering if we could go one-by-one and in this particular case, Shanna Desmond. You have noted as the cause of death on this report as what?

A. Gunshot wounds of neck, chest and abdomen.

Q. And that's consistent with ultimately your conclusions on the certificate of death?

A. Yes.

Q. And so, Doctor, you made a number of autopsy findings that, one through four, that you made note of. What were those and in what way were they significant, I guess?

A. Well, in this case with regard to the cause and manner of death, only the number one is pertinent. The injuries in this case are responsible for causing the death and relate to the manner of death.

Q. Okay.

A. The other are observations but they did not play a role in the death.

Q. And in terms of number one, what did you note?

A. I noted a perforating gunshot wound of the neck and penetrating gunshot wounds of the chest and abdomen. So just to clarify, in the terminology that we typically use, perforating means a through-and-through wound, a wound in which a projectile enters the body and exits the body. A penetrating wound is one in which the projectile does not exit the body. So in this case there was on perforating wound, or one through-and-through wound, two gunshot wounds that penetrated the body and did not exit.

(10:57:04)

Q. And the perforating wound was to the neck and the penetrating to the chest and abdomen?

A. That's correct.

Q. So, Doctor, on page three of the report, I'm going to go through each sort of evidence of injury. So, in particular, you indicated earlier that there were three, you were able to determine there were three separate gunshots wounds to Shanna Desmond, is that correct?

A. That's correct.

Q. And I guess the, I'll call it the first, is there any way you could determine which of those gunshot wounds occurred before the other or in what order?

A. Not in this case, no.

Q. And so what I'll call, say, the first and I know it's not a set order as you concluded, but the gunshot wound to the neck, I'm wondering if you could describe sort of its point of entry and exit and what sort of impact that may have had?

A. This wound was associated with an entrance in the right side of the neck. We look for a number of characteristics with regard to gunshot wounds that assist us in determining, in some cases, the range of fire. We look for a number of factors that are mentioned here as negative findings - stippling, soot, muzzle imprint. So in a contact range gunshot wound in which the muzzle of a firearm is in contact with the skin, sometimes there's an imprint from that on the skin itself. When a projectile exits the muzzle of the gun, it is accompanied by a number of other things including burning and unburnt fragments of gunpowder, smoke, and these things, at different ranges, may either hit the skin and cause injuries or deposit on the skin as soot and that gives us an idea, in some cases, of a range of fire. If these things are not found on the skin it means that

the muzzle of the gun was either far enough away from the entrance point so that none of those things either hit or deposited on the skin, or there was an intermediary object that blocked those things and we can't always tell. So in cases in which there are none of these things, we refer to those as indeterminate range. In this case, it's likely that this was not a contact or close range wound but it would be referred to as indeterminate range.

Q. So you're able to, I guess, confidently offer the opinion that this particular gunshot wound wasn't of close range but can you say an approximate distance away that the shooter might have been from Shanna Desmond?

A. Different firearms with different ammunitions may cause different patterns of that deposition so in order to have a specific number, that weapon would need to be test fired with that specific ammunition from a number of different distances. In general terms, we can say that this is probably over three feet or so away from the victim ...

Q. Okay.

A. ... but I can't be more specific than that in a case like this.

Q. And this particular trajectory, if you could describe

what sort of internal arteries or things it might have intersected and how that impacted death?

A. So the path of the gunshot wound was from right to left, slightly downward and slightly back to front. So in the course of that track, a number of internal structures were injured, probably most importantly the cervical spine and the spinal cord were transected in this case. There were a number of other injuries as well but that is pertinent because that would sever any connection between the brain and the body, both motor and sensory.

Q. And that would factor into your determination in terms of the time between impact and death, you indicated minutes, I believe?

A. In this case I think I said seconds.

Q. Oh, I apologize.

A. Again, these are estimates and they're ranges. So that was the main basis for that estimation though, yes.

Q. And I'm going to sort of circle back to you described sort of an overall path of the gunshot wound. You described it as right to left, slightly downward, and slightly back to front?

A. Yes.

Q. Now, I understand that there are any sort of number of

variables in terms of the shooter and the victim could be in motion?

A. Yes.

Q. Are you able to, in this particular wound when you say back to front, are you able to say whether or not, is it suggestive of, I guess, the shooter being behind the victim or the victim with the back turned or either/or rather than face-to-face I guess?

A. A couple of points of clarification on that.

Q. Yes.

A. When we refer to the directionality in the body, we refer to it with the body in what's called the standard anatomical position.

Q. Okay.

A. And if I may stand up just to demonstrate?

Q. Absolutely, absolutely.

A. So that is with an individual facing forward, arms down like this, so this is all relative to the body in this position. It doesn't necessarily mean that the body was in this position when that wound was sustained.

Q. Yes.

A. That being said, another point of clarification. This

was slightly back to front and the main direction was from right to left in this case. I can't say what position the head or neck was in at the time that happened so that could affect that front- to-back trajectory as well. What we can tell from the direction of the wound in the body is the relative position of the muzzle of the firearm to the body at the time it was discharged. So the position of the body can alter that quite a bit and what I mean by that is is a wound in the body in the anatomic position is essentially horizontal, might not actually have been sustained from a bullet that was traveling in a horizontal direction. You can imagine someone who is leaned over almost 90 degrees, a horizontal wound in the body would be almost vertical.

Q. So in this particular case, could that particular wound, even though it says slightly back to front, could it be consistent with Lionel Desmond firing a shot facing the direction of Shanna Desmond with her head turned or is that ...

A. Given the rest of the wound I would say no.

Q. Okay.

A. This is essentially from right to left given the direction through the spine. The other consideration in this case is that there was an associated wound on the left shoulder

with the exit wound so it appears that the projectile exited the left side of the neck and grazed the top of the left shoulder. So that suggests to me that this more or less was a right to left gunshot wound.

Q. A shooter from the right side to the victim?

A. Yes.

Q. Next in terms of evidence of injury, the gunshot wound to chest. I'm wondering, Doctor, if you could, it's again page three, I wonder if you could take us through that a little bit about your findings, one of I believe you said that this penetrated?

A. Yes.

Q. And if you could explain where it penetrated and what sort of internal organs it might have impacted.

(11:07:03)

A. So the general summary is that this entered the right side of the chest and the bullet lodged in the left side of the chest. It hit a number of structures in between there including ribs and lung. It went through the heart and the diaphragm and the liver and caused damage to all of those organs and structures.

Q. And you noted in this one at page four, this

particular injury, you also noticed, if I can have one moment. Sorry, back at page three, you said the entrance has no associated stippling, soot or muzzle imprint?

A. Yes.

Q. And again are you able to sort of ... you explained that that's suggestive of it's not immediate close range. Again, are you able to sort of estimate how far away this shot would have been fired from?

A. The estimate is about the same with the caveat in this case that there was a shirt in between, there was some fabric ...

Q. Okay.

A. ... between the entrance and the muzzle of the gun.

Q. And what was the distance you gave earlier?

A. In the range of three feet or so.

Q. And you described the overall path on page four. The overall path of the gunshot wound is right to left, slightly back to front, and that is consistent language with the injury you described to the neck?

A. Yes.

Q. And so from that can we sort of see a similar conclusion in that the shooter might have been to the right side

of the victim?

A. Yes, at the least the muzzle of the gun was, yeah.

Q. Yeah, the muzzle of the gun was aimed to the right of the victim?

A. From the right side to the left.

Q. To the left. And you indicate here that the overall path of the gunshot wound is front to back and downward so what do you mean perhaps by downward and path?

A. That's the next one.

Q. Oh sorry, I apologize.

A. So for the wound in the chest, it was right to left and slightly back to front.

Q. Okay, sorry, I apologize. So if we could go to the third distinct gunshot wound which was a gunshot wound to the abdomen, I'm wondering if you could take us through your observations and conclusions there.

A. Yes. The entrance wound was in the left side of the abdomen. Anatomically we usually break up the abdomen into quadrants: upper, lower, right and left, so this was left lower quadrant meaning it was on the left side, inferior to the level of the umbilicus or the belly button. The entrance had similar characteristics to the other two, in other words there was no

evidence that this was contact or close range wound. This wound was angled downward and from front to back. So the wound track went through the abdominal wall into the pelvis and then through the pelvis. The projectile actually lodged in the left buttock.

Q. So when we have this wound described as front to back, which differs from the previous two that said back or slightly back to front, could this be suggestive of movement of either party, movement of maybe Lionel Desmond facing more directly towards Shanna Desmond or Shanna Desmond moving and facing more directly towards Lionel Desmond?

A. That's possible. As you mentioned earlier, we don't know the order in which these wounds were sustained and other than they were all sustained in relatively close proximity, we don't know that they were sustained within a few seconds or it's possible it could even be a few minutes in between. So the change in position could be related to rapid movement as someone falls or twists as they fall or alternatively, it could be a shot fired earlier or later in the course of this event.

Q. So I guess clearly compared to, and I realize you can't put the sequence of the three separate distinct shots in order of which happened first, but given that we have two that are slightly back to front and one that is front to back, is

that suggestive of one of the two parties or both, at some point, moved during one of the three shots?

A. It would necessitate that, yes.

Q. And at some point during this third injury, and I understand you can't put them in order, would have had the victim facing towards the firearm?

A. Yes.

Q. And, Doctor, I won't get you to elaborate on the details but you did a separate sort of internal and external examination and you describe in your report that that was sort of an assessment of the heart, liver, lungs, those internal organs. Is that something that is sort of standard in a postmortem examination?

A. Yes.

Q. And in this particular case, sparing the details if you can, in terms of the conclusions reached with Shanna Desmond and the cause and manner of death, did those examinations have anything of any ... were they remarkable in any way?

A. There were no findings that were contributory to the cause of death.

Q. If we could move to Exhibit 65.

EXHIBIT P-000065 - TOXICOLOGY REPORT - SHANNA DESMOND

Q. And, Doctor, this particular document, what is it?

A. This is a toxicology report.

Q. And it doesn't specify a name, however, it has a date of birth of July 2nd of 1985 and age 31 and there's a patient I.D. number. Can we conclude, I guess, and this is obviously leading but I'll bend the rules in the circumstances, that that is the toxicology report of Shanna Desmond?

A. It is.

Q. And you had, I believe, requested perhaps this toxicology report be completed?

A. Yes.

Q. And this report is three pages and what sort of things are being tested for in a toxicology report such as this and why?

A. We have a contract with NMS Labs who does a lot of forensic work, a lot of postmortem toxicology work, who conducts our toxicology and through them we are able to order a number of different tests. In most cases we order panels of tests. We have, in most cases, that encompasses either a basic panel or an expanded panel. A basic panel captures a wide array of drugs, captures most common drugs of abuse as well as alcohol as well as some therapeutic drugs including opiates, it doesn't

encompass or capture every drug. The expanded panel captures more drugs, it captures all of those drugs that the basic panel captures. In addition, it captures a number of therapeutic drugs. There is no panel that can possibly capture everything possible. We can sometimes order specific tests if that's warranted in a case but these panels are quite comprehensive. So in this case, the blood that was sent there underwent testing for that basic panel.

(11:17:27)

Q. And on the report, the report back to you, it says on the first page Causative Findings?

A. Yes.

Q. And it sort of lists two things, I guess, I'm not sure if they're the same one. I wonder if you could explain what the positive findings were. So a result did come back and what was it?

A. Ethanol was found in the blood. Ethanol is alcohol typically that people drink. This is a relatively low concentration so as a point of reference, the blood alcohol concentration in this case was .02 grams per 100 milliliters. The legal limit for driving in this province is .08 so well below that.

Q. Okay. And just another question about the particular toxicology screens that are requested. If we look to the third page of that Exhibit 65 and I guess we'll look at the third page first. It says amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, fentanyl, methadone, it lists a fairly comprehensive number of drugs and if we look at page two, it lists a number of things as well, a number of compounds?

A. Yes.

Q. MDA? MDMA?

A. Mm-hmm.

Q. What is the purpose of these being listed on this report?

A. This indicates the threshold level for detection and reporting for this particular test. So just as an example, the threshold level for amphetamine is five nanograms per milliliter. If there were four nanograms per milliliter in the sample, it would not be detected and reported.

Q. Okay.

A. These are very low concentrations, though, so a negative results means that nothing was found above these levels of detection.

Q. Okay. And the list of all of these different drugs,

is that a comprehensive list of the drugs that were tested for during the basic toxicology request?

A. Yes. This is the drugs that are tested and reported under that basic test. Occasionally, in the course of that test, the results will be such that the toxicologist will be able to see an unidentified peak or an unidentified abnormality and they may, if they do see that, they'll typically call us and say, Do you want to pursue this? This looks like it might be ... based on the characteristics of that, they may have an idea of what it is and then specific testing can be done for that.

Q. And when you say these sort of thresholds, I guess, are low, is it fair to say that they're deliberately low because you want to be as comprehensive as you can to see if they're actually detected?

A. That's right.

Q. And, I guess, scientifically, they are extremely low?

A. That's right.

Q. And is there a basis for the cutoff? Is it sort of questionable whether you can even detect it any level below that?

A. Based on their methods of detection, that is the lowest level that they can reliably detect.

Q. Okay, thank you.

EXHIBIT P-000045 - REPORT OF POSTMORTEM EXAMINATION - AALIYAH DESMOND

If we move to Exhibit 45. Doctor, you recognize this document.

A. Yes, I do.

Q. And this is the postmortem exam of Aaliyah Desmond?

A. Yes, it is.

Q. And in terms of cause of death, you noted it as what?

A. Gunshot wound of face, neck and chest.

Q. And, earlier, you clarified that this was a single gunshot wound?

A. That's correct.

Q. And, Doctor, if you could describe, you have on the first page "Autopsy Findings".

A. Yes.

Q. What were there?

A. The findings were all related to that single gunshot wound. So there was a single entrance wound and injuries within the pathway of that wound. So injuries of the face including fractures of the mandible and teeth, soft tissue injuries as well. Injuries in the neck, including the bony and

cartilaginous structures in the neck were fractured. The wound track continued into the chest where the right lung was injured and there was hemorrhage in the right thoracic cavity associated with those injuries.

The projectile and this is, again, a penetrating injury, it has no exit wound, so the projectile was recovered in this case from the right side of the chest.

Q. So would it be fair to say that this single gunshot wound was such that it penetrated a number of sort of internal structures that would've certainly been fatal?

A. Injured a number of structures that certainly were fatal in this case.

Q. And in Aaliyah's case you, I believe, indicated death would've been seconds or ...

A. I think minutes in this case.

Q. Minutes? And you indicated that the, again, entrance had no associated stippling or discernable soot.

A. That's right.

Q. And, again, that suggested to you of not very close range?

A. Correct.

Q. Based on your observations of the wound, again, are

you able to sort of, as best you can, put an estimate on range of a distance between the gun and the ultimate injuries sustained to Aaliyah Desmond?

A. Again, very generally, somewhere on the order of three feet or so.

Q. And you described, on page three of the report, the overall path of the gunshot wound is what?

A. Front to back, downward, and left to right.

Q. So I wonder if you could describe that for the Court a little bit?

A. Yes. The entrance wound was in the lower lip, slightly left of the midline, and the projectile was recovered in the right side of the chest.

So that pathway was ... entered from the front side of the body and travelled downward and left to right within the body and somewhat front to back, going through the structures of the face, the neck, and the right side of the chest.

THE COURT: I was going to ask you, Dr. Mont, when you have an injury like that, you know, when it enters the lip, it's going to hit bone, and then the path of the projectile can change. It's no longer being driven by the force that delivered it, but it changes at that point in time so it then depends on

what ...

A. It's possible.

THE COURT: ... it encounters ... changes the path?

A. It's possible. So, yes, that's possible. A couple of things can happen there. The projectile can change path or ricochet or slightly alter its angle. These type of projectiles often also break up, so different fragments of that can travel off at slightly different angles.

So when I'm referring to that overall path of the wound, essentially what I'm talking about is from the entrance to the location in which the projectile was recovered. That general direction is front to back, downward, and right to left.

(11:27:00)

THE COURT: That's the way it travelled, whether it travelled as a result of ricochet or deflection.

A. Whether that was a perfectly straight line or not is not clear.

THE COURT: That's the path. Thank you.

MR. RUSSELL: So, Doctor, are you able to sort of comment on, I guess, is it safe to say we know that Aaliyah Desmond was shot in the face? Are you able to comment on where the firearm would've been in proximity to her? Would it be facing her? Or

sort of in a frontward direction, a shooter were perhaps looking at her?

A. Again, relative position of the firearm to her would have been in front of her, above her and slightly to the left of her, and that is with the body in the anatomic position.

So if I may stand up.

Q. Yes, yes.

A. What we're talking about, directionality, is from here to here. So the firearm would be angled this way relative to her.

Now, again, the position of her body may alter that. If she were bent forward, that may not be truly as much of a downward angle as it appears with the body in the anatomic position.

Same may be true of her twisting. I mean there are a lot of variables that just can't account for in looking just at the injuries.

Q. In this report on page three, you also noted a heading "Additional Injuries". What was the additional injury you noted?

A. She had two additional injuries that were abrasions on the face. Abrasions are scrapes. Relatively superficial wounds

of the skin on the face. One was on the bridge of the nose and that was quite superficial and the other one was just outside of the orbit, or just below and outside the eye, and that was on the left side.

Q. Could you tell if these abrasions were sort of an extension of the gunshot wound or are you able to say that perhaps they were separate and distinct?

A. They appeared to be separate and distinct. It should be noted that they looked fresh. They didn't appear to be healing wounds, but that doesn't necessarily mean that they occurred at precisely the same time the gunshot wound injuries occurred.

So, theoretically, it's possible she had these already when the gunshot wounds occurred. Alternatively, it's possible that she sustained them when she fell from the gunshot wound, if she fell from the gunshot wound.

Q. And there's no way you could tell?

A. Not with any degree of certainty. Had they been healing, microscopic examinations sometimes can be helpful.

In the course of an autopsy, we try very hard not to disfigure bodies more than necessary, so we very rarely take microscopic sections from the face.

Q. But you could say that they were fresh or recent.

A. Yes.

Q. I apologize for jumping around, but I'd like to go back to Exhibit 61 which was the postmortem exam of Shanna Desmond that we had reviewed earlier and, in particular, page four.

There, as well, you noted an additional injury as it related to Shanna Desmond. I'm wondering if you could say what that was?

A. That was also an abrasion or a scrape on the side of the back, the left side of the back. It did not appear to be directly associated with any of the gunshot wounds.

Q. Okay. And you described Aaliyah Desmond's facial injury, the additional injuries, as fresh or more recent. Would the same have appeared in terms of this injury?

A. Yes.

Q. Yes?

A. Yes.

Q. And not associated to a gunshot wound.

A. Not directly associated. So, for instance, these could've occurred when one of them collapsed after being shot, but not directly attributable to the gunshot wound itself.

Q. Okay. Is there any way for you to determine, and I know this a very sort of broad question and maybe it's too far extending. The additional injury to Aaliyah Desmond and the additional injury to Shanna Desmond, could it have been consistent in any way with a struggle between two parties?

A. It's possible. That is certainly a possibility. I'll say that neither of these had any pattern that was recognizable to me. In other words, they didn't ... there are occasions in which injuries like this have a pattern that suggests, or can be matched with, the object that caused them. Neither of these cases had any specific pattern that I could see that suggested what caused them or exactly how they were caused.

Q. Okay. And, finally, with Aaliyah Desmond's postmortem exam, similarly, the question to the postmortem exam of Shanna Desmond, you did an external examination and an external (sic) examination and, in particular, again, you went through various organs. Was there anything of any real relevance to the cause and manner of death in those areas of your report?

A. No. Other than the injuries, she appeared to be anatomically normal.

Q. If we could move to Exhibit P-000019 and, Doctor, this ...

THE CLERK: I'm sorry, did you mean 000049?

EXHIBIT P-000049 - TOXICOLOGY REPORT - AALIYAH DESMOND

MR. RUSSELL: P-000049. I apologize. And, Doctor, this appears again with the toxicology report?

A. Yes.

Q. And is this toxicology report in relation to Aaliyah Desmond?

A. Yes, it is.

Q. It indicates a patient ID number and age ten years?

A. Yes.

Q. And, Doctor, had there been anything that came back after the toxicology was conducted?

A. They didn't detect any substances.

EXHIBIT P-00050 - AMENDED REPORT OF POSTMORTEM EXAMINATION - BRENDA DESMOND

Q. Okay. If we could look at Exhibit 000050.

Doctor, I should ask before we're moving on to our next postmortem report, just if you needed a drink of water or any sort of break?

THE COURT: I was going to ask the same question. I note that we started at 10. It's 11:30 so this may be a good opportunity to take a short break All right?

Thank you, Doctor.

COURT RECESSED (11:36 HRS.)

COURT RESUMED (11:52 HRS.)

THE COURT: Mr. Russell, I think you were just turning to Exhibit 50.

MR. RUSSELL: Yes, Your Honour.

So, Doctor, Exhibit 50, which is in front of you, where we left off, this Amended Report of Postmortem Examination, Brenda Desmond ...

A. Yes.

Q. It's the first, I guess, and only report or first report we see that says amended. What's behind that? Why does it say amended?

A. In the initial report that I had issued I made some typographical errors, some copy and paste errors with regard to, in the Summary and Opinion section with regard to family relations, so this was issued to correct that.

Q. So there was nothing of significance in terms of ultimately determining cause and manner of death?

A. Nothing of significance with regard to the cause and manner of death, no.

Q. Okay. And as it relates to Brenda Desmond, you

indicated that the cause of death on the first page was what?

A. Gunshot wound to the chest.

Q. And you made a number of autopsy findings but, in particular, I guess, if we could start with Evidence of Injury, page 2.

A. Yes.

Q. And I'm wondering if you could describe that particular wound.

A. This is, again, a single gunshot wound. The entrance wound had similar characteristics to the other wounds we've discussed, specifically, no evidence of contact or close range gunfire. The entrance wound was in the posterior or back of the right shoulder and the wound tracked across the body to the left side of the chest, where the projectile was recovered. This again was a penetrating injury that was not associated with an exit wound, so the projectile was recovered in the body.

Q. And are there any particular sort of arteries or organs that might have been penetrated as a result of this wound? I might have missed that in your description but ...

A. Yes. So this, this wound went through a number of structures in the neck before it went into the left side of the chest, as well as the right side of the chest but, in

particular, some of the very large arteries that branch off the aorta that supply blood to the head and neck were injured, as well as injury to the lungs and some other structures.

Q. Earlier you mentioned, you just mentioned neck ...

A. Yes.

Q. And in the report it says right upper back.

A. Yes.

Q. I just want to reconcile the two, I guess.

A. So this has an interesting pathway and, as we discussed earlier, the path sometimes between the entrance wound and the recovery site or the exit wound is not a perfectly straight line, either because the pathway is deviated by hitting a solid structure or because of the position of the body at the time the wound was sustained. So just as an example, this is a hypothetical example that does not apply in this case, but you might imagine a scenario in which somebody's shoulders are pushed together in the front, where you might have an entrance wound here and an exit wound here, so both in the back. It's hard to make that a straight line with the body in the anatomic position. The same is true of this particular wound. So the entrance wound was in the upper back or in the back of the right shoulder. Some of the structures in the neck were injured, the

lower part of the neck, and the projectile was recovered in the left side of the chest.

Q. And you describe the gunshot wound path as ... I wonder if you could indicate again what that was.

A. Back to front, right to left, and upward.

Q. So I guess I'm just trying to, as much as possible, sort of orient where the gun that fires the shot ultimately comes from, the bullet. Would that have been facing in front of Brenda Desmond, directed towards her, or behind her?

A. Somewhat behind her and to the right side would be where the gun was situated and aimed from her right to her left side.

Q. So am I able to say that if the shooter is stationary and holding the gun stationary, given this particular path, I guess, could you suggest perhaps that Brenda Desmond had been turned?

A. Yes.

Q. And with her back facing towards the gun and shooter?

A. Yes, not directly back-facing but somewhat turned to the side, but the entrance wound is, in fact, in the back of her shoulder.

Q. Into the back. And are you able to sort of estimate,

again, I know, as much as possible, because this didn't have any sort of evidence of stippling, muzzle imprint, et cetera, the distance between firearm and wound entry?

A. Yes. Again with the caveat that this is what we would refer to as an indeterminate range, because she did have clothing on, as well, this did go through clothing, but there was no evidence to suggest that this was within, on the order of three feet or so.

Q. I note in this report at page 3 it has a title that says Evidence, right at the very bottom of the screen there, Evidence of Medical Intervention.

A. Yes.

Q. What was that?

A. These were adhesive electrocardiogram pads. Responding medical personnel, EHS personnel, often come, when they're called to a scene will put EKG pads on and establish that there is no cardiac activity, there is cardiac electrical activity or that there is. But oftentimes there are these adhesive pads that remain on the body after they leave.

Q. And, Doctor, I guess, in comparison to your findings as it relates to Shanna Desmond and Aaliyah Desmond, is the nature of the injury to Brenda Desmond that was ultimately fatal

such that had there been early intervention, sort of medical intervention, that there was a possibility that she might have survived? Is that a fair question or ...

A. It's a difficult question to answer. You know, these ... it's somewhat speculative. In a hypothetical scenario where someone sustains these kind of injuries just outside an operating room, with a trauma surgeon poised to intervene, some things might be possible. This kind of ties in with the time listed on the medical certificate of death from the onset of injury.

In this case, there were some significant injuries that may not have been survivable even under the best scenario. I can't say that with a hundred percent certainty though. That had this happened and had there been intervention immediately, it's possible. That is a distinction from a case like Shanna Desmond where the spinal cord in the neck is transected or, in Lionel's case, where the wound itself is just not a survivable injury.

(12:02:22)

Q. Okay. So would it be fair to say it was ... the type of injury was less immediately fatal, would that be a fair comment?

A. Yes.

Q. And, again, you conducted an internal and external examination of various sorts of organs, heart, kidneys, et cetera. Was there anything remarkable that impacted your finding on the cause or manner death for Brenda Desmond?

A. Nothing that played a role in the cause or manner of death.

Q. If we could turn to Exhibit 54.

EXHIBIT P-000054 - TOXICOLOGY REPORT - BRENDA DESMOND

So, Doctor, this appears to be a toxicology report as it relates to, again, a patient ID, age 52. Is this the toxicology report of Brenda Desmond?

A. Yes.

Q. And was this panel, you described a number of possibilities of requests, the basic, the extended, I believe, it was or ...

A. This was a, this was a basic panel.

Q. And did anything come back as detected?

A. No.

EXHIBIT P-000055 - AMENDED REPORT OF POSTMORTEM EXAMINATION - LIONEL DESMOND

Q. I wonder if we could turn to Exhibit 55. You recognize this report?

A. I do.

Q. And again, Doctor, it's Amended Postmortem Examination and it appears to be of Lionel Desmond, is that correct?

A. Yes.

Q. And again it says "amended", just like Brenda Desmond's said "amended". I wonder if there was any particular reasoning for that?

A. It was the same reasons as the other report.

Q. And the amendments, were they substantial to an extent that they impacted your final conclusions?

A. Not that they impacted the final conclusions.

Q. So, Doctor, here you indicate cause of death to Lionel Desmond as what?

A. Gunshot wound to the head.

Q. And you indicated in Summary and Opinion ... three lines down under Summary and Opinion, you say: "The history, scene findings, and autopsy findings were consistent with a self-inflicted wound."

A. Yes.

Q. And what led you to that conclusion?

A. A number of factors related to the history as it was

known to me at the time, the course of events. And the scene supported that, as well, where the bodies were found, where this decedent was found, where the firearm was found initially, and the nature of the wound are all consistent with a self-inflicted wound.

Q. And if we could turn to page 2, you have Evidence of Injury, and I believe it was one single gunshot wound in this case, and I wonder if you could describe that single wound.

A. This appeared to be a contact range gunshot, in which the muzzle was applied directly to the skin, essentially, between the eyebrows in the, in the front of the face, slightly left of the midline but close to the midline. There was a discrete exit wound in the back or posterior aspect of the left side of the head, and the wound itself was associated with devastating injuries.

As I had talked about briefly earlier, when a firearm is discharged not only is the projectile expelled from the muzzle of the gun but burning and unburnt powder, smoke, and a lot of expanding gas is expelled. And that in a contact range gunshot wound is expelled into the wound itself, so that causes a great deal of devastation to the tissue, which was the case here, extensive disruption of the scalp and the brain.

Q. And, Doctor, you indicated, I believe it was stippling in this particular case ...

A. There was no ...

Q. There was no stippling.

A. Stippling would suggest that the muzzle of the weapon was at a distance sufficient to allow the spread of those particles to hit the skin outside of the entrance wound. So outside of that circular entrance wound we would see a pattern of abrasions that's known as stippling. In this case there was soot around the wound, suggesting that the smoke, which does not travel as far as those solid particles, was deposited on and in the wound suggesting a contact wound rather than a close-range wound.

Q. So when you say suggestive of a contact wound is that a contact between, I guess, the muzzle of the gun and Lionel Desmond's skin?

A. Skin. Yes.

Q. So is it fair to say it was your opinion that Lionel Desmond had turned the gun on himself, made contact with his skin and face and fired the shot?

A. Yes.

Q. And what part of his head was the point of contact?

Are you able to ...

A. The entrance was in the front of his face, the lower forehead, between his eyebrows.

Q. And, Doctor, you described a very - I don't want to get into too many details but it was a very sort of lethal shot.

A. Yes. So going back to the estimates of time from onset to death this was, essentially, instantaneous. I think on the medical certificate of death I may have said seconds but that really referred to probably seconds before all physiologic activity ceased. As far as any cognition or voluntary movements, this was, essentially, instantaneous.

Q. And, Doctor, a sort of side question. Are you familiar with something referred to as post-concussion syndrome, or I believe it may have another name, where injuries to the brain are sort of suggestive of causing or impacting certain psychological disorders or mood changes?

A. Yeah, you're referring to CT or chronic traumatic encephalopathy.

Q. Yes.

A. Yes.

Q. And I just wanted to cover off, without getting into the details, obviously, but in this particular case would a

postmortem examination of that have been possible due to the nature of the injury Lionel Desmond had inflicted upon himself?

A. Unfortunately, no.

Q. And, Doctor, you conducted, again, sort of an internal examination and an external examination which involved various organs, such as the heart, liver, lungs. Again, was there anything remarkable that would have impacted your conclusions on the cause and manner of death of Lionel Desmond?

A. No.

EXHIBIT 000059 - POSTMORTEM TOXICOLOGY REQUISITION - LIONEL DESMOND

Q. If we could turn to Exhibit 60, or, I guess, 59, if I might. Doctor, what is this particular Exhibit 59?

A. This is the requisition that is completed in order to submit toxicology specimens to NMS Lab.

Q. And I notice sort of midway through the page, and this is as it relates to Lionel Desmond ...

(12:12:02)

A. Yes.

Q. A Postmortem Toxicology of Lionel Desmond. So here there's, again you referred to this earlier, there's basic, expanded, and expert?

A. Yes.

Q. And in this case you requested that the postmortem toxicology of Lionel Desmond, I guess, be different than Shanna, Aaliyah, and Brenda, and you selected which option?

A. The expanded panel.

Q. And what was your reasoning behind requesting the expanded panel?

A. At the time it appeared that the decedent had committed the homicides of the other three victims and taken his own life, so his state of mind and state of intoxication, as well as his therapeutic drug intake, appeared to be pertinent. So I thought it was prudent to order the expanded panel to capture some of those therapeutic drugs. Some of the drugs included in the expanded panel do include antidepressant medications, anxiolytic medications, as well as a number of other therapeutic drugs.

Q. So it's more comprehensive?

A. Yes.

EXHIBIT P000060 - TOXICOLOGY REPORT - LIONEL DESMOND

Q. Doctor, if you could look at Exhibit 60.

I'm again mindful that I'm leading a little bit, but this appears to be the toxicology exam results of that expanded panel

as it related to Lionel Desmond?

A. Yes.

Q. And, Doctor, were there any positive findings found in that toxicology examination?

A. Yes.

Q. And what were they?

A. Caffeine was detected and mCPP was detected.

Q. I guess if we could just scroll the screen down a little bit. And I think we all sort of understand what caffeine is but there's a description as to, on page 2, what caffeine is. I wonder, I guess, the scientific physiological. I wonder if you could explain that.

A. Caffeine?

Q. Yes, and the effects on someone.

A. It's a central nervous system stimulant. You know, as it probably says here, it can change or it can alter people's level of alertness, as well as some of their physiologic characteristics. So it can increase heart rate, blood pressure, things like that.

Q. What's more interesting is the mCPP.

A. Yes.

Q. And what is mCPP?

A. Meta-chlorophenylpiperazine.

Q. Okay.

A. It is, in the context of this case, I think it's a metabolite of an antidepressant drug. Piperazines are a class of drugs that are sometimes used as antidepressants. In other contexts, sometimes this substance is detected in illicit preparations of Ecstasy. There's nothing to suggest that that's the case here.

Q. Okay. And in terms of it's a metabolite of those antidepressants, and then there's a description about those antidepressants, about sort of adverse effects of that medication. What can be those adverse effects?

A. Well, adverse effects are when a drug is tested, every adverse effect that a person experiences is recorded. And in this case those have included nausea, vomiting, dizziness, sweating, induction of migraine-like headache, anxiety, depressive symptoms and paranoia. This is a list of all of those and it doesn't capture whether this is dose-related or duration-related or any of those factors.

Q. And just for the sake of clarification, could you detect sort of a level of dosage of a particular drug, and in this case you know that there's a metabolite there, and I guess

metabolite is very different than saying a particular dosage of a drug is in his system at the time something is happening. I just wonder if you could explain that a little bit.

A. Well, in general or with specific reference?

Q. With specific reference to this case.

A. In this case, this is probably a metabolite of trazodone. The concentration is ... in postmortem specimens is not well-established. Typically, when drugs are consumed they are metabolized in any one of several different ways, either in the liver or excreted in the kidneys through the urine. They're broken down in different ways. And this is the substance that we can detect with people who have consumed Trazodone as an antidepressant. Postmortem concentrations of drugs are subject to some alteration based on postmortem changes in the body. So they can't be interpreted in, in the same range as therapeutic concentrations are published in living people. So this level doesn't appear to be particularly high. It's somewhat speculative exactly how to interpret that though.

Q. Okay. And so, Doctor, you had testified that you had requested and got the results back of the expanded panel.

A. Yes.

Q. Which were tested for a very comprehensive number of

drugs in Mr. Desmond's system at the time of his death. Was there any suggestion to you that there were any other drugs in his system other than caffeine and the metabolite mCPP, which you believe was linked to the antidepressant trazodone?

A. Those were the only substances that were detected in this panel.

Q. And, Doctor, when you reached your conclusion in terms of cause and manner of death, had there been evidence or indications that a particular drug, whether it was caffeine, which we'll admit is fairly doubtful, or trazodone playing an integral role into what occurred and why this occurred, would you have noted that? I know that was a bit of a long question.

A. I think I understand the question though. When we certify the cause and manner of death we consider usually the physiologic disease or injury that leads to someone's death and, as far as the manner goes, whether it was an intentional and volitional act of the individual either to cause harm to someone else or cause harm to themselves. Beyond that, the reasons don't play into our certification. People may be suicidal or homicidal for any number of reasons, whether that's drug induced, whether that's related to some other trauma. There are any number of reasons. Doesn't change the fact that this is the

cause and the manner of death.

Q. Okay.

A. So I did order the expanded panel to have that additional bit of information anticipating that that would be important in the course of this investigation but not in the context of changing the cause and manner of death, more in the context that we're in right now.

(12:22:06)

Q. If I might have just one moment, Your Honour.

So, Doctor, I just want to sort of conclude with a question. I mean I anticipate the answer; however, I certainly should ask it: You did the postmortem examinations and cause and manner of death for Lionel Desmond, Shanna Desmond, Aaliyah Desmond, Brenda Desmond. Based on the totality of the evidence, including postmortem examinations, medical evidence, scene evidence, toxicology evidence, all the factors that you considered, are you able to put sort of an order or sequence in terms of who might have been shot first and who was shot last?

A. Well, yes, who was shot last. As I mentioned, there would have been no volitional acts performed by Lionel Desmond after he sustained his injury. With regard to the order of the other three, I can't tell which was first, second, or third.

MR. RUSSELL: No further questions for the Deputy Medical Examiner, Your Honour.

THE COURT: Thank you. Ms. Ward?

CROSS-EXAMINATION BY MS. WARD

(12:24:01)

MS. WARD: Just one question, Dr. Mont. Are you able to say, and this calls for speculation and opinion, but would the injuries that Brenda Desmond sustained, would she have been able to make a phone call after she sustained the injuries or would that have been impossible?

A. It is a difficult question. I can say that she didn't sustain injuries that would have prevented her from any volitional act either through cognition or through ... She didn't sustain injuries to the central nervous system, she didn't sustain injuries to the extremities that would prevent her from that. Whether she would be able to and what the duration of her consciousness was after the injury I can't say with a great deal of certainty. There are a number of reports in the literature that address post-injury survival and activity and they vary widely. There are well-documented reports of people who have injuries similar to this who are immediately

incapacitated and, on the other hand, there are well-documented cases of people who have sustained quite a bit of activity, quite a bit of physical and mental activity afterwards, so I wouldn't say it's impossible. It would be speculative.

Q. Thank you, Doctor.

THE COURT: Mr. Anderson?

MR. ANDERSON: No questions, Your Honour.

MR. MACDONALD: No questions, Your Honour.

THE COURT: Mr. Macdonald. Ms. Whitehead?

MS. WHITEHEAD: No questions, Your Honour.

MS. MILLER: I have no questions, Your Honour.

THE COURT: Ms. Whitehead, no questions. Mr. Rodgers?

MR. RODGERS: Thank you, Your Honour.

CROSS-EXAMINATION BY MR. RODGERS

(12:26:34)

MR. RODGERS: Dr. Mont, I'm Adam Rodgers and I'm representing the personal representative of Corporal Desmond, so I do have a few questions for you. In reviewing your, I guess, Amended Report of Postmortem Examination, and forgive me, I can't remember the exhibit number ...

THE COURT: Which Amended Report?

A. 55, I believe.

MR. RODGERS: 55, yes, thank you. In there, Doctor, on the third page of that report, you indicate you made some measurements of Corporal Desmond's internal organs, his liver, heart, spleen, and kidneys.

A. Yes.

Q. Now the little bit of research that I was able to do to try to figure out what might be a normal or expected size of those might not be correct, so I want to ask you a few questions just to see if there's any relevance to those weights that might apply here. So the size of his liver, I think, you have at 1110 grams. Is that roughly normal? I saw some reports that said a normal liver might be a little larger than that.

A. Well, as in most things related to the human body, there's a spectrum of what is normal. This would be smaller than the median weight for someone his size and gender and age but, beyond that, I don't think this was ... would fall outside of what is considered a range of normal.

Q. Okay. So ...

A. So I would say smaller than average but not abnormally small.

Q. Okay. So it didn't raise any issues with you that there might be some condition that caused that?

A. No.

Q. Okay.

A. Nor did I see anything microscopically that suggested significant pathology.

Q. Okay. And I saw you have his spleen at 120 grams. I see some reports that that might be at the lower end of a range and that if you have, at the lower end of a range that might be indicative of a sickle cell disease. Is there any ... was that something that you considered or is that accurate in any way?

A. Sickle cell disease and sickle cell trait are slightly different in their degree of severity. So in somebody with sickle cell anemia or sickle cell disease usually by this age their spleen would be much, much smaller, almost unidentifiable. In someone with sickle cell trait, they might have a smaller spleen. There was nothing else in his history or in his autopsy findings to suggest, though, that he had sickle cell.

Q. And there was nothing ... And I'll tell you, from my review, there was nothing in his other medical records that suggested that, either, but would there be any other ... There

was nothing else relevant about that measurement that raised any issues with you, was there?

A. I didn't attribute any significance to it, no.

Q. Okay. In your notes ... Now where did you ... I'm not sure where you said this in your report, but I think in your lung you noted that there autolysis, not sure I'm pronouncing that correctly.

A. Autolysis, yeah.

Q. Thank you. And edema and congestion. Is that ... are those things that might have been caused by his death?

A. Yes, yeah.

Q. Okay.

A. Autolysis is a postmortem change. As I said, essentially the moment someone dies those processes of decomposition begin, and that's an early part of the process of what goes on after death. The congestion and edema are very non-specific findings that occur with a number of types of death. The sudden neurological collapse in this case is what I would attribute that to.

Q. And in your report you noted with his liver that there was focal minimal steatosis.

A. Steatosis.

Q. Steatosis.

A. So that there were some very small and minor areas of fat accumulation in the cells of the liver. That is a non-specific finding that can be associated with a number of things. Some of them are disease-related and some of those are related to exposures, including even relatively low concentrations of alcohol.

(12:32:12)

Q. Okay. I want to move to the toxicology report, Dr. Mont, and this is Exhibit 60, and you've answered much of this already in your responses to my friend, Mr. Russell, but I want to ask a little bit more about this mCPP. And in the report it's noted that there's 20 milligrams, is that, am I reading that correctly?

A. That was detected or ... In his blood ...

Q. Yes.

A. 34 nanograms per milliliter was the concentration.

Q. Of the mCPP?

A. Yes.

Q. Okay. And that'd be considered a fairly low dose. I guess ... I want to get your thoughts, and you started to talk about how it's difficult to compare a dose or a finding from a

deceased individual to somebody that's alive and whether ... I guess, can you dig a little deeper into that in this case? Is the amount of mCPP you discovered, would you consider that a low or mid or high dose or is that something you can conclude?

A. I would conclude that this is not a concentration that would be associated with significant acute toxicity. Beyond that, I wouldn't opine. You know, some of these other chronic findings or adverse events that have been associated with it, I'm not sure what dose dependency that is.

Q. Yeah.

A. So things that might be pertinent in this case, I really wouldn't ... you know, things that they list, like migraine-like headaches, anxiety, depressive symptoms, and paranoia, it's kind of outside of the scope of what I can comment on based on my experience and training.

Q. Okay, that's fine. I see some of the effects you noted. Some of the other research that I did, and I'll ... if you can comment on this, whether ... It suggested that it would induce anxiety, as you mentioned, severe headaches, potentially cognitive effects, depression and feelings of, you know, severe depression or impending doom, those kinds of effects, and even could worsen obsessive-compulsive disorder symptoms. Is that

something that you had an opportunity to review in the course of preparing this report?

A. Preparing ...

Q. Or reviewing in the course of preparing this report or if it's something that you're just familiar with in the course of your work?

A. I'm familiar with those potential side effects but, again, whether or not those played a role in his experience and behaviour, it would be completely speculative and, you know, furthermore, I don't know what his particular history was with regard to the duration he was on this and his compliance, whether he was taking it all the time or at episodically. I just don't know.

Q. Sure. And I think we'll find and there'll be evidence presented about prescription of trazodone that he was in receipt of. Whether he was taking that or overdosing on it or anything else would be ... you wouldn't be able to comment on that, based on the toxicology report?

A. Well, I wouldn't consider this an acute overdose, an acute toxicity related to that, and by toxicity I mean a physiologic toxicity that would be significant in independently causing complications leading to death. Whether it affected his

mental state or not, you have better experts coming on that can answer that.

Q. Sure. No, I just wanted to ask you and see where, if that was something that was in your realm.

Okay, Doctor, I want to move to a different topic, which - and you've already touched on this, as well, and that is the issue of a CTE, and I'm not going to try to pronounce that again, but you discussed with my friend how it would not be possible with Corporal Desmond, due to the nature of his injuries, to test for that in his case or not possible, not possible at all or not easily done?

A. Without getting too graphic, it may have been possible to look at some parts of this but not to do a good and comprehensive analysis.

Q. I guess while we have you here, Dr. Mont, and part of what we're ... I think our goal here is to think of recommendations and ideas for how other treatments might take place. In your role in the Medical Examiner's Office, you must see every homicide or suicide of, particularly, young men, I'm thinking of and, you know, we see reports from the United States, from football and other sports leagues, and how head injuries are becoming a much bigger issue that people are

confronting. And I guess I just want to ask you about that and what is ... what can you tell us about the level of analysis that's possible or that is done, either here in Nova Scotia or, if you want to expand, within Canada, what is being done?

A. What is being done with regard to pursuing CTE and the diagnosis in Nova Scotia is very little, for a number of reasons, and there are a number of factors that play into that, you know, starting with the basic premise that that would not play directly into our determination and opinions regarding cause and manner of death. So, in other words, if someone were to have taken their life, again the reasons that may have led to that don't play into the cause and manner of death certification.

Now we don't consider that our only mandate though. We do try to make a contribution where we can. The examination for CTE is time-consuming and difficult and somewhat expensive and it's not something that I personally would undertake. I would refer that to a neuropathologist.

Q. Okay.

A. And there's a cost associated with that as well. At this point we don't have an institute in Nova Scotia that has that research interest and we don't have funding for that. It

certainly would be feasible, I think, for us to direct some cases towards that. It's not something ... That would need to be undertaken with the consent of the individual's families though.

Q. Sure, yeah.

A. So I know that doesn't directly answer your question. The answer is that right now I have not had a case that has been worked up for CTE in my career.

Q. Yes.

A. It could be done.

Q. And the things you hear out of the United States and it's, you know, the NFL and other sports leagues are looking at these and, you know, people retire and then a few years later, you know, they kill themselves, and they complain about headaches and the concussions that they've suffered and it seems to be something that's being studied more and more. Do you see any trend along those lines in Canada at all, you know, in sports or, you know, in the military context we're thinking here?

A. I see the discussions.

Q. Yeah.

A. And certainly we've had the discussions among

ourselves within our office about how to address this, how to explore this, in our cases, what is the most effective way to systematically ask these questions in these cases so that we can get at real answers.

(12:42:01)

Q. I mean perhaps, particularly in suicides, if we're looking at trying to prevent suicides, knowing whether 90 percent or 50 percent or 10 percent of those who've committed suicide also had CTE would seem like something worth studying at least. What do you think of that?

A. I agree. It's not something that we have adopted, at least yet, but it's certainly something that we have discussed and have not yet come to a conclusion and changed our protocols yet.

Q. Yeah. Do you have occasions to connect formally or informally with other medical examiner offices throughout the country?

A. Yes.

Q. Conferences or other means?

A. Yeah.

Q. Do you know whether this is something others are looking at doing?

A. I don't think anyone in Canada, to my knowledge, is doing it systematically. They may have had a case here or there that they have investigated but I don't know of anyone in the country who is doing it systematically, nor ... Much of my experience and my colleagues' are in the U.S., as well, and I don't know of any jurisdictions that are doing this systematically. The centers of research have referrals from many different places. I don't know of any one particular place that is, for instance, looking at all suicides systematically and either has a specific protocol for questioning or investigating these cases or for doing neuropathology on these cases.

Q. It would seem where the Medical Examiner's Office is notified and needs to be notified of all such deaths that it would be ... perhaps make some sense that you would have some role in this, perhaps, I don't know if gatekeeper is the right way but, you know, you could, the Medical Examiner's Office could perhaps triage those instances that are identified and at least suggest it to somebody for further study.

Would you ... do you see benefits in this and, again, it's just a broad discussion on the topic in a way, but would you see the benefits to being able to study those as maybe not causes

but at least features of individuals in these circumstances?

A. I do think it's something ... it's a contribution that can come out of cases sometimes that might be of some help to the living. There are a lot of aspects of this that are far outside of my area of expertise.

Q. Sure.

A. You know, a lot of these have to do with policy decisions that are, you know, far reaching that I am not involved with. You know, and again within the very narrow mandate of determining manner and cause of death, it's not something that we need to do, but all of us are committed to doing more than just determining the cause and manner of death. So I would welcome us playing a role in that.

Q. Thank you, Dr. Mont. I appreciate your ... I recognize that that's not exactly what you're here to talk about but I appreciate, you know, your views coming from your perspective in your role, so I thank you. Those are the questions I have.

THE COURT: Mr. Russell, anything further?

MR. RUSSELL: Nothing further, Your Honour.

THE COURT: Oh, sorry ...

MR. HAYNE: If I may?

THE COURT: Mr. Hayne, yes, go ahead.

CROSS-EXAMINATION BY MR. HAYNE

(12:47:03)

MR. HAYNE: Good afternoon, Dr. Mont. My name is Stewart Hayne and I am counsel for certain physicians who are participating in the Inquiry.

I just have some questions for you, just a few more questions to help understand the toxicology report at Exhibit P60. And as I understand it, this toxicology report results from a requisition that you made for an expanded panel and you discussed what that meant earlier.

A. Yes.

Q. And this is the report that you received back from that expanded panel requisition. And is it fair to say that, in general, this report shows the substances that were detected, if they could be detected, for example, if they were at detectable levels in either Mr. Desmond's blood or urine that were sent for analysis?

A. Yes, that's fair.

Q. Okay.

A. So it's possible that there are other drugs or toxins

there at a lower concentration than the ability of the instruments to detect or it's possible, as well, that there are other substances that are not encompassed in this panel.

Q. Right. Thank you. But on that, on the first page, sorry, at page 3 of Exhibit 60, at the bottom of the page it does give information as to the ability of this test to detect certain substances.

A. Yes.

Q. And on that page is referenced cannabinoids.

A. Yes.

Q. And is it your understanding that cannabinoids is either synonymous with marijuana or cannabis or are the metabolites of marijuana or cannabis?

A. Yes.

Q. All right. So if someone ... for example, if there was evidence of marijuana or cannabis or cannabinoids in Mr. Desmond's blood or urine at levels exceeding the threshold level, the minimal threshold level, then those would be reported on this test, is that right?

A. That's correct.

Q. Okay. And the same goes for and then continues and doesn't list necessarily specific substances but classes of

substances, for example, it lists antidepressants, antipsychotic agents, and other things.

So do you understand, Doctor, whether, and I'm going to ask you and this, you may not know the answer to this, but do you know whether the, the drug quetiapine is something that would be returned on this report if it were in detectable levels?

A. Yes, it would.

Q. Okay.

A. Yeah, I see that not infrequently in other toxicology reports.

Q. And do you know, same question, whether the drug prazosin would be returned on this report if it was in the system within detectable levels?

A. I don't know offhand.

Q. Okay.

A. Typically, when I'm not sure if a drug is captured in this panel, I will call NMS Labs and they can answer that.

Q. Okay. And the same question, do you know whether, if the drug zolpidem was present at the detectable levels, it would be returned on this report?

A. I don't know that specific drug, whether it would be captured in this panel.

Q. Okay. So just to summarize then, cannabinoids and quetiapine are, at least, are two drug substances that if present in detectable levels in Mr. Desmond's system in, I believe, blood or urine that was sent for analysis, they would have been returned on this report?

A. Yes.

Q. Okay. And the fact that they're not returned on this report, we can conclude that either they weren't present at all or they were present at levels below the threshold for detection?

A. Yes.

Q. Okay. And just in general, in terms of when someone ingests drugs or alcohol, whatever they may be, the body, as I understand it, will metabolize, ingest that substance and will break it down into its metabolites, other substances, as a result of the metabolism process, is that right?

A. Different drugs are broken down or excreted in different ways.

(12:51:57)

Q. Right.

A. So some of it may be excreted whole, some of it may be broken down into metabolic products.

Q. I understand. But, ultimately, the drug is either

ingested and then excreted whole or ingested, metabolized into other substances and those are excreted, as well?

A. Yeah. And when you say ingested, I mean, consumed in one way or the other.

Q. Consumed, yeah. And the rate of that, once a certain drug or substance is consumed, the rate at which it is dissipated from the body may depend on any number of factors, including the nature of that particular drug itself?

A. Yes.

Q. We have discussed earlier how the substance mCPP was detected and that's, and I'm characterizing your evidence, forgive me and correct me if I get it incorrect, but mCPP and, in your view, that was likely the result of metabolized trazodone?

A. I can't say that with any certainty based on empiric evidence, but just based on his history and the fact that he was treated with antidepressants, I think that's probably most likely that ... I don't know of any other source that is more likely or as likely as that.

Q. Thank you. And the quantity of mCPP that was detected could have been there at that time, and I'm asking this in a convoluted way but, essentially, the quantity that's detected is a function of how much was consumed and when it was consumed. Do

you agree with that?

A. In general terms, yes.

Q. Right. So you could have the same quantity detected from a small amount recently consumed or a larger amount consumed earlier in time?

A. In general, with most drugs. I mean, different drugs have different characteristic behaviours, sometimes even in postmortem specimens but, yes, in general, that's true.

Q. Okay. So we're not able to necessarily work backwards from the fact that mCPP was present at the quantity detected as to what amount of trazodone, if it was trazodone, what amount of trazodone was consumed and at what time it was consumed?

A. That's exactly right.

Q. Okay. The lack of detection of cannabinoids, and I understand that maybe cannabis is one that does ... may behave differently but, again, from the research that I've done, cannabinoids may be present in detectable levels is certainly dependent on, again, similar factors, the amount of cannabis consumed and when it was consumed, but also may detectable for, depending on the nature of the consumption, possibly up to 20 or 30 days, is that ... Do you have awareness of that?

A. You're referring to this specific test or possibly

detected?

Q. In general, possible?

A. Well, I mean, it's possible to detect it. Different specimens can be analyzed and there are different compounds that are broken down from cannabis. There are different cannabinoids that we see, and they're ones that we don't typically, that aren't active, as well, and some of those may be detectable later on. It also depends on the method of detection. You know, there are many drugs, many, many drugs, that can be detected long after the fact. If we, for instance, were to test hair ...

Q. Um-hmm.

A. Now that doesn't mean that it played any role in the recent past at all. I mean, it depends on the hair growth and, you know ...

Q. Right.

A. So, in general, yes, it, the cannabinoids have a long half-life, though, and they can be detected longer than many other substances. Does that answer your question?

Q. It does. And I'll just jump to the punchline. From this test is it fair to conclude that Mr. Desmond was not under the influence of cannabis or cannabinoids at the time of his death?

A. Yes.

Q. And from this test, is it fair to conclude that it's more likely than not that he hadn't ingested cannabis in the previous seven days, to pick a number? Or can you conclude that?

A. I'd need to look at these particular substances that they test and the half-lifes of those. I don't know if seven days would be the ... Days, yes; I'm not sure that seven is the number off the top of my head.

Q. Three days?

A. Probably.

Q. And I may have asked this already but it's my last question. With respect to quetiapine, given this test, it's reasonable to conclude that Mr. Desmond was not under the influence of quetiapine at the time of his death, is that a fair conclusion?

A. It's reasonable to conclude that there was no circulating quetiapine, yes. I mean whether any exposure had long-term effects on physiology, that can't be accounted for. This is a snapshot though. So at the time of his death there was no detectable 1uetiapine in his system.

Q. And from that, can we conclude, though, that there was

no, like you say, no, no physiological impact from circulating quetiapine at the time of death?

A. Yes.

Q. Thank you, those are my questions.

THE COURT: Any questions? No?

EXAMINATION BY THE COURT

(12:59:39)

THE COURT: I just want to clarify something, Dr. Mont, if I could.

When Mr. Rodgers was asking about testing for CTE and he had a discussion with you about it and in the particular circumstances of Corporal Desmond and the manner of his death, appreciating that CTE is examined by looking at the structure of the brain. Again, not to be graphic but just to make the point in this particular case there was not sufficient brain matter or in a way that would present itself that would be suitable for that kind of testing, is that correct?

A. That's correct.

Q. Yeah. Okay. I just wanted to be clear that that would be the reason why in this particular set of circumstances.

A question, see if you can help me with this one: There

was talk about trazodone and about the level of the by-product, if you will, the mCPP that was in his system. If you were a doctor and you were prescribing somebody that particular medication for a particular purpose would you, in the normal course of events, get blood tests, for instance, to see whatever, if you had a therapeutic level of that particular substance in a person's system? So this is when you're ...

A. That falls outside of my expertise.

Q. Right.

A. So a prescribing physician would know ...

Q. I'm just curious as to what a therapeutic level of somebody that comes into the doctor's office might be as opposed to what's reflected in a postmortem blood sample.

A. I don't know what the treatment standards are with regard to follow-up and whether ... Some drugs are routinely tested for peak and trough levels and some are not, and I just ... I don't know for trazodone.

Q. All right. We may have somebody else that can help us with that later on.

THE COURT: All right. Thank you, Dr. Mont, appreciate your time. You're free to go.

Counsel, I think Dr. Mont was the last witness that we had

... Thank you, Doctor, you can step out, if you'd like.

WITNESS WITHDREW (13:01 HRS.)

THE COURT: He was the last witness we have for today. So we are going to adjourn for a moment, then we're going to have a discussion but we'll have that as a Chambers discussion, if you will. Thank you.

We'll stand adjourned for a few minutes. Thank you.

COURT RECESSED (13:02 HRS.)

COURT RESUMED (13:19 HRS.)

THE COURT: So we'll just go back on the record, if we can. We'll re-open just for a minute then, thank you.

COURT ADJOURNED (13:19 HRS.)

CERTIFICATE OF COURT TRANSCRIBER

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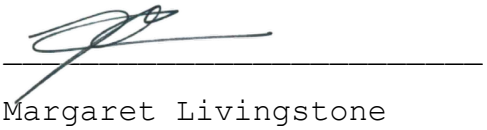

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January 31, 2020