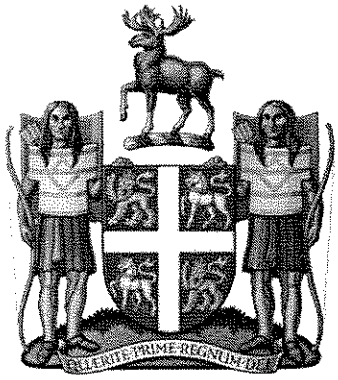

COMMISSION OF INQUIRY ON HORMONE RECEPTOR TESTING

The Honourable Madam Justice Margaret A. Cameron, Commissioner

Submissions to the Commission of Inquiry on Hormone Receptor Testing by Dr. Kara Laing, et al.

December 1, 2008

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PART I - OVERVIEW

(A) Application of Part II Analysis to Part I Evidence

"It is a defining feature of every investigation into a public crisis that the public interest is best served by a full account of what happened together with an account of the lessons to be drawn from the crisis and the events that led up to it. This necessarily involves the application of hindsight. Hindsight becomes suspect only when inferences are drawn that systems or people "should have" acted differently even though they lacked vital knowledge that became available only later."[1]

"The hindsight bias is one of the most reproduced research findings relevant to accident analysis and reactions to failure. Knowledge of outcome biases our judgment about the process that led up to that outcome."[2]

"Human error in medicine, and the adverse events which may follow, are problems of psychology and engineering not of medicine."[3]

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[1] The Sars Commission Interim Report Sars and Public Health in Ontario, The Honourable Mr. Justice Archie Campbell, Commissioner, April 15, 2004, p. 28.
[2] David Woods, Ph.D., Richard I. Cook, M.D., The New Look at Error, Safety, and Failure: A primer
[3] Senders, J.W. (1993, September), On patient injury and death stemming from the design of medical devices. Report, Columbia Falls, ME.

1. This Commission of Inquiry has been charged with the responsibility of answering a number of specific questions, as well as making any "necessary and advisable" recommendations arising from a review of estrogen and progesterone (ER/PR) results conducted between 1997 and 2005. This review and the subsequent events that led to the creation of the Commission of Inquiry have acted as a lightning rod for public attention on issues surrounding breast cancer testing and breast cancer care for patients in Newfoundland and Labrador, Canada, and perhaps globally.

2. In Part I, the Commission heard expert evidence from medical leaders in Canada, the United States and Europe on the subject of immunohistochemistry (IHC) and its relationship to cancer care. Even in 2008, the expert evidence has shown there is still a need for clarity and standardization. In fact, the Commission has seen that there are currently efforts underway in Canada, the United States and Europe to standardize aspects of the preanalytical, analytical and post analytical phases of IHC. It was acknowledged by several witnesses that the medical literature from the past decade has demonstrated that there are many troublesome aspects associated with this testing, especially in the area of ER/PR assays.

3. While a majority of the Commission's focus was in relation to Part I, it nevertheless provided a general and much broader focus on policy issues during

the Part II symposium held on April 22-23, 2008. This symposium, entitled "Looking Forward", devoted one of its major themes to the area of patient safety.

4. A lot of ink has been expended on this subject worldwide.[4] Perhaps some of the most prolific writers, however, are David Woods, PhD and Richard Cook, M.D., of the United States and Dr. James T. Reason of the United Kingdom. These authors have spent more than a decade examining the subject of systems errors and their effect on the delivery of medical care and patient safety.

5. Some of the presenters at the Part II symposium spoke to the limitations of the accident analysis model to the medical system insofar as it focuses on the sharp end, (i.e. the person's approach). Authors such as Woods, Cook and Reason in their research have shown that the real analysis should be towards the blunt end, (i.e. the systems approach), when looking at a complex organization's successes or failures.

6. The medical system, in particular hospitals, are complex organizations. When one carefully examines any failures which occur in these complex work settings, then "the more they realize that the real story is how resources and constraints provided by the blunt end shape and influence the people at the sharp end."[5]

---

[4] For a good synopsis and reference guide on the worldwide literature, see Patient Safety and Health Care Error in the Canadian Health Care System: A Systematic Review and Analysis of Leading Practices in Canada with reference to Key Initiatives Elsewhere: A Report to Health Canada, online: { http://www.hc-sc.gc.ca/hcs-sss/pubs/qual/2001-patient-securit-rev-exam/index-eng.php}

[5] *See Footnote #2*

(B) James T. Reason's "Swiss Cheese Model" of Systems Failure Applied to ER/PR

7. In his book *Human Error*, Dr. James T. Reason makes the following observation:

> "Rather than being the main instigators of an accident, operators tend to be the inheritors of system defects... Their part is that of adding the final garnish to a lethal brew whose ingredients have already been long in the cooking."[6]

8. Dr. Reason's work employs the "Swiss cheese model" of system accidents. It operates on the analogy that accidents occur in highly complex organizations, such as hospitals, when the defensive layers designed to protect potential patients from hazards do not work. These defensive layers, in reality, are more like slices of Swiss cheese which have many holes. However, unlike Swiss cheese, these holes are continually opening and shutting and shifting location. The presence of holes in any one slice does not normally cause a bad outcome. Instead, what happens is when the holes from the many layers momentarily line up to permit a trajectory of action and opportunity, it brings hazards into contact with potential victims and leads to potential adverse events.

9. When the Swiss cheese model is applied to the evidence obtained during Part 1 of this Inquiry, we see that there are a number of potential issues which may have aligned to create the outcome for the patients affected by these very unfortunate series of events.

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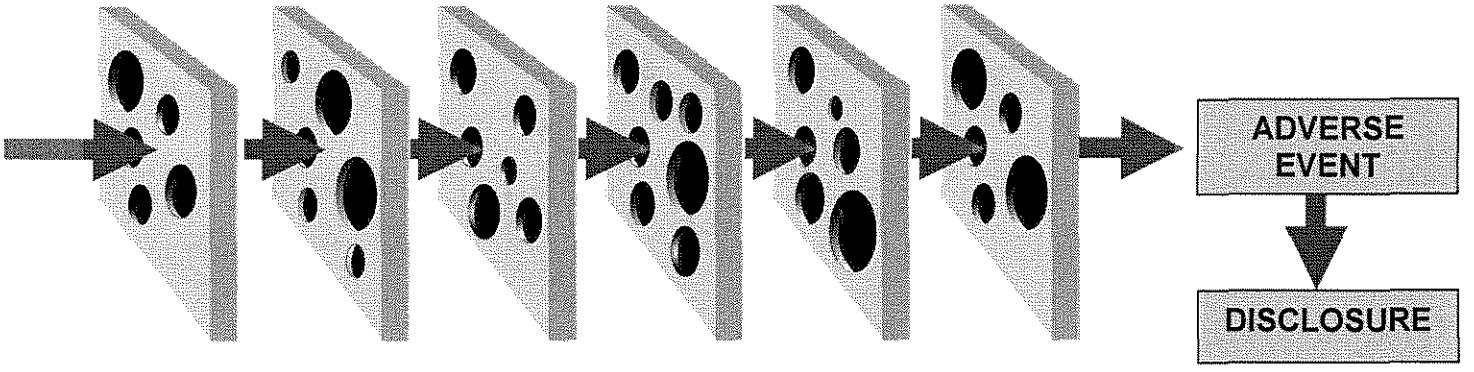
[6] Reason, J.T., *Human Error* (Cambridge University Press 1990) at 173.

"Swiss Cheese Model" of Systems Failure



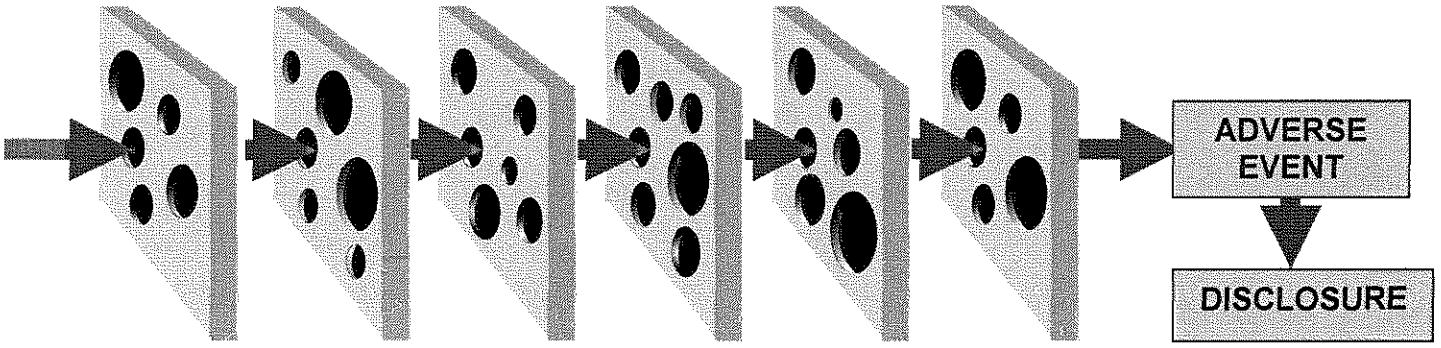
FUNDING & RESOURCES	ORGANIZATION	TEAM	TECHNICAL PROVIDER	MEDICAL PROVIDER	ADVERSE EVENT / DISCLOSURE
Federal/ Provincial Funding for Health Care: - Restrictions on federal/provincial funding of health care during the 1990s and early 2000[7] [8] [9] - Emphasis within the provincial health care system to reduce program/ departmental spending[10] - Hay Report (2002) - Emphasis on efficiency and turnaround times	Hospital Restructuring: - Creation of the Health Care Corporation of St. John's - Hospital closures - Hay Report (2002) - Emphasis on efficiency and turnaround times - Departmental structure and communication - Quality Assurance structures and communication	Communication Issues Between: - Technologists v. Pathologists - Pathologists v. Oncologists - Program Director v. Technologists - Program Director v. Clinical Chief - Programs and Quality Initiatives Department	- DAKO v. Ventana machine (semi-automated v. automated) - Lack of dedicated IHC technologists - Training and knowledge of technologists in matters pertaining to fixation and tissue processing: - Quality Assurance - Lack of Standard Operating Procedures - Antibody Concentration	Pathologists Fiscal Restraints and Effects On: - Recruitment, retention and remuneration - Continuing Medical Education High Turnover Rates and Effects On: - Ability to subspecialize - Ability to see trends due to infrequent interpretation of ER/PR slides	Adverse Event - Clinical v. Technical Conversion of Test Results - Cut-offs - DCIS -False Positives (Retroconverters) Disclosure - Method of Patient Communication -Timing of Communication to the Patient v. Public

[7] Evidence of Dr. Donald Cook on CAP submission (Exhibit #P-0135, p. 5) and see generally evidence of Dr. Diponkar Banerjee

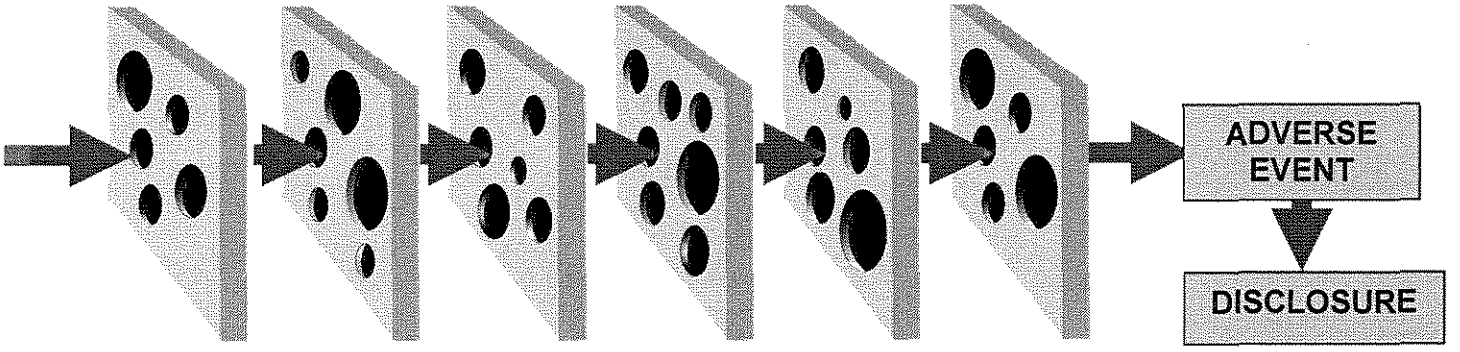
[8] See Generally: Romanow Commission Report: Commission on the Future of Health Care in Canada.

[9] See Generally: The Kirby Report Reforming Health Care Protection and Promotion in Canada: A Time To Act

[10] Requirements Placed on Health Care Organizations to Restrict Budgetary Expenditures (See generally evidence of Mr. George Tilley, Dr. Robert Williams, Ms. Louise Jones, Dr. David Haegert, Dr. Donald Cook and Mr. Terry Gulliver)



FUNDING & RESOURCES	ORGANIZATION	TEAM	TECHNICAL PROVIDER	MEDICAL PROVIDER	ADVERSE EVENT / DISCLOSURE
	- Creation of Eastern Health in 2005 - Addition of more hospitals and bigger departments		- Antigen Retrieval - Maintenance of Equipment such as pipettes, thermometers, tissue processors, dispensing arm of DAKO machine, fluid pump, etc.	Residency/Training Programs and Effects on Knowledge: - Internal Controls - Fixation/ Tissue Processing - Cut-offs Lack of National / International Standards on IHC and Effects on: - Preanalytical - Analytical - Post Analytical Oncologists Fiscal Restraints and Effects on: - Recruitment, retention and remuneration - Continuing Medical Education High Turnover Rates and Effects on: - Ability to subspecialize - Ability see trends due to infrequent ER/PR interpretation	- Verbal Communication v. Written Communication to Patients - Tumor Panel v. Quality Initiatives Communication - Missing Patients - Self-identifiers



FUNDING & RESOURCES	ORGANIZATION	TEAM	TECHNICAL PROVIDER	MEDICAL PROVIDER	ADVERSE EVENT / DISCLOSURE
				Residency/Training Programs and Effects on Knowledge: - Changing cut-offs - Exposure to the basics of IHC testing	

10. Based on the above stated analysis, legal counsel for Dr. Kara Laing, et al. wish to provide the following submissions on behalf of those individual physicians who sought standing before the Commission and the evidence they provided to the Commissioner in respect of their individual and professional roles.

PART II – THE PATHOLOGY PERSPECTIVE

(A) What factors may have caused or contributed to the problem?

(1) Inadequate Fixation/Tissue Processing

Dr. Brendan Mullen

11. Over the course of these events, two slide reviews were conducted by outside pathologists. One of these reviews was conducted by Dr. Brendan Mullen of Mount Sinai at the request of Commission counsel. In addition, Dr. Mullen conducted the retrospective review of the retest results.

12. He identified fixation/ tissue processing as a factor in the problems related to ER/PR testing from 1997-2005. During his retrospective review of the ER/PR negative tissue blocks from that period, he noted certain fixation/tissue processing issues which he felt ought to have been evident to pathologists.[11]

13. In addition to interpreting all the retest results, Dr. Mullen reviewed a number of the original slides. In so doing, he identified a number of frequent issues including:

    (i) poor adherence;
    (ii) "exploding" sections;
    (iii) poor fixation and/or processing;
    (iv) "hollow" sections or loss of internal structure;
    (v) staining only at the periphery. [12]

14. He observed that the "hollow" section problem was due to fixation aggravated by poor processing. It was his opinion that a majority of the slides he reviewed had such problems.[13]

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[11] Evidence of Brendan Mullen, 27/06/2008, p. 20, lines 7-13.
[12] Exhibit P-1840, p.1

15. Finally, in addition to the fixation and tissue processing issues, Dr. Mullen also opined that the stains had not been properly optimized or validated. As a result, this contributed to the problems associated with fixation and tissue processing.

Dr. Diponkar Banerjee

16. Dr. Diponkar Banerjee was the first outside pathologist to review any of the original slides. In an external review report dated October 17, 2005, he recorded his observations from an on-site visit of Eastern Health's Laboratory Medicine Program in September 2005.[14] One of the similar problems he observed was improperly fixed tissue. In evidence before the Commission, Dr. Banerjee testified that it is critical to ensure breast tissue is properly fixed and that under-fixation has the potential to alter the amount of antigen that can be retrieved during ER/PR testing.[15]

17. Also, similar to Dr. Mullen's observations, Dr. Banerjee identified the lack of testing optimization, specifically problems with antigen retrieval method, antibody concentrations and/or antibody detection system titration, as a possible reason for test failure. Thus, the problem, from his perspective, was a combination of both fixation/tissue processing and testing protocols.[16]

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[13] Evidence of Brendan Mullen, 27/06/08, p.61, lines 7-19.
[14] Exhibit P-0046
[15] Evidence of Diponkar Banerjee, 30/07/2008, p.27, lines 5-19.
[16] Evidence of Diponkar Banerjee, 30/07/2008, p.77, lines 1-17.

18. Dr. Banerjee did qualify his observations by stating that not every pathologist would recognize problems with fixation and tissue processing as it was conceivable that they became used to the presence of artifacts on slides and simply read through them, accepting it as part of the normal quality. Thus, it was entirely possible that pathologists did not recognize any problems with fixation/tissue processing.[17]

19. After his initial on-site visit, Dr. Banerjee returned in April 2006 for a second review. During this occasion, he re-emphasized the need for standardization of fixation and tissue processing protocols. In his testimony he was also candid in stating that fixation and tissue processing can and does vary from lab to lab. Moreover, the literature, particularly from the United Kingdom, suggests that antigen retrieval also varies from lab to lab, and is the biggest reason for inter-lab variability of test results.[18]

Dr. David Dabbs

20. Dr. David Dabbs is a recognized world authority in IHC. He has studied and published extensively in the area for decades and in 2002 published a textbook on the subject because of a perceived need to have a comprehensive reference source.

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[17] Evidence of Diponkar Banerjee, 30/07/2008, pp.97-98, lines 13-3.
[18] Evidence of Diponkar Banerjee, 30/07/2008, p.28, lines 5-14.

21. Dr. Dabbs acknowledged to the Commission that problems with poor fixation and tissue processing can be considered major red flags. His overall impression after reviewing the comments of Dr. Mullen's original slide review was that the process was "uneven and erratic and fraught with technical difficulties".[19]

22. Like Drs. Mullen and Banerjee, he also emphasized the importance of fixation and tissue processing, noting that there was no way to repair under-fixed tissue, whereas over-fixed tissue could be compensated by adjustment of antigen retrieval times.[20] Consequently, he explained that most institutions in the United States have now moved towards the primary use of core biopsies for performance of ER/PR.

Dr. Gershon Ejeckam

23. Dr. Ejeckam is a Canadian qualified pathologist who practiced briefly at the Grace General Hospital in the 1980s. He returned to Newfoundland in 2002 after spending a number of years overseas, including a period of time running an IHC lab in Doha, Qatar. When he joined the staff of the Health Sciences Centre in 2002, it was immediately recognized by the Clinical Chief, Dr. Donald Cook, that he had an interest in this area and was asked by Dr. Cook to act as a resource person.

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[19] Evidence of David Dabbs, 16/09/2008, p.17, lines 18-22
[20] Evidence of David Dabbs, 16/09/2008, pp.31-32, lines 19-2

24. In his testimony to the Commission, Dr. Ejeckam agreed that pathologists should be able to determine most fixation problems by examination of the H&E slide. However, he did go on to state that fixation/tissue processing problems are less obvious, if at all, when examining an IHC slide.[21]

25. In his experience, most fixation problems can be overcome by proper antigen retrieval if the tissue is properly processed.[22] Dr. Ejeckam felt the most important step of the analytical process for IHC was antigen retrieval and that it was critical for every lab to validate its own antigen retrieval times in order to ensure optimal results and to avoid creating false negatives.[23]

Dr. Donald Cook

26. Dr. Cook has been a Staff Pathologist at St. Clare's Mercy Hospital since 1986. He held positions as both Site Chief (1996-2007) and Clinical Chief (2002-2006). Dr. Cook did not observe any trend of fixation/tissue processing problems over the years, nor did he receive complaints as the Site Chief or Clinical Chief surrounding fixation/tissue processing for the slide quality. Rather, most complaints he received centered around turnaround times in the lab.[24]

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[21] Evidence of Gershon Ejeckam, 04/06/2008, pp.64-66, lines 13-1.
[22] Evidence of Gershon Ejeckam, 03/06/2008, p.243, lines 5-24.
[23] Evidence of Gershon Ejeckam, 04/06/2008, pp.291-292, lines 5-9.
[24] Evidence of Donald Cook, 02/07/2008, p.61, lines 2-14.

27. During the course of his testimony, Dr. Cook agreed with Commission counsel's suggestion that there is an obligation on an individual pathologist to go back and determine the cause of a fixation/tissue processing problem when he/she recognizes a problem and has a concern. However, he did not recognize any significant problem with fixation/tissue processing until he began the ER/PR review in the summer of 2005. Likewise, other pathologists who testified before the Commission stated that they did not recognize any trends which may have suggested there were any major problems with fixation/tissue processing that would require investigation. That is not to say, however, that some pathologists did not, on occasion, have problems with a particular case which they brought to the attention of a technologist.

28. In terms of the grossing aspect of fixation/tissue processing, Dr. Cook testified that in his experience most of the pathologists whom he worked with followed standard grossing protocols which were described in recognized Pathology textbooks, such as Ackerman's. This remained the practice until the creation of the 2007 protocols.[25]

Dr. Beverley Carter

29. Dr. Carter is a Pathologist with sub-speciality training in the area of breast. She became a permanent member of the Laboratory Medicine Program of Eastern Health in 2004. In July 2005, at the request of her Clinical Chief, Dr. Carter

[25] Evidence of Donald Cook, 02/07/2008, p.201, lines 4-18.

began an internal review into the possible causes of the changed ER/PR test results. As part of this review, she examined approximately 97 original ER/PR negative slides and identified problems with fixation/tissue processing, internal controls and technical issues.

30. As for the technical issues, Dr. Carter testified that the DAKO machine was not the cause of the problem, but rather her concern focused on the performance of the test itself. Like Dr. Banerjee she agreed that it was likely antibody concentration and antigen retrieval that was the main cause for the changes in results.[26]

31. Furthermore, Dr. Carter believed that these factors were likely more significant than fixation/tissue processing since Mount Sinai Hospital and Dr. Mullen were able to successfully recreate reliable and reportable test results.[27]

Mr. Bryan Hewlett / Mr. William Parks

32. Mr. Hewlett and Mr. Parks are seasoned IHC technologists with distinguished careers in teaching, performance and management on the technical side of IHC. Mr. Hewlett testified that poor fixation could not be remedied at a later stage such as antigen retrieval.[28] Whereas, his colleague, Mr. Parks, suggested that the main reason for changes in ER results (such as from 0% to 80-90%) could be

[26] Evidence of Beverley Carter, 28/07/2008, pp.319-320, lines 17-12.
[27] Evidence of Beverley Carter, 29/07/2008, pp.182-183, lines 6-8.
[28] Evidence of Bryan Hewlett, 10/10/2008, pp.257-258, lines 19-13.

due to either inadequate fixation and/or changes in antibody for the same block. Mr. Parks later testified that he would expect ER results to be within the standard deviation, even using different antibodies, if the sample was properly fixed.[29]

33. Mr. Hewlett also challenged the suggestion from the U.K. literature, specifically from the work of Dr. Rhodes, that identified antigen retrieval as the most important factor in IHC. Instead, he asserted that this was only the case because the specimens in question were probably fixed and processed to an appropriate standard.[30]

Dr. Clive Wells

34. Dr. Wells is a distinguished breast pathologist from the United Kingdom. He is a recognized leader, both in the United Kingdom and Europe, in the area of breast pathology and IHC. Dr. Wells holds a number of positions, including membership on the United Kingdom's Working Group of the National Coordinating Committee for Breast Screening Pathology, membership on the National Health Services Breast Screening Program and Chairmanship of the European Working Group for Breast Cancer Pathology.

35. In direct contrast to the testimony of Mr. Hewlett on the main reason for a change in ER result, Dr. Wells stated that a negative ER obtained on a poorly fixed block

[29] Evidence of William Parks, 10/10/2008, pp.305-308, lines 16-14.
[30] Evidence of Bryan Hewlett, 10/10/2008, p.313, lines 7-15.

would not normally produce a positive result upon retesting. Instead, he indicated it would be possible to obtain a positive result if the retesting technique was more sensitive.[31] Therefore, inadequate antigen retrieval could explain false negative results as demonstrated by Dr. Rhodes and his colleagues in the U.K. literature.

Dr. David Dabbs

36. In a similar vein to Dr. Wells' testimony, Dr. Dabbs testified that fixation would not account for a dramatic change in an ER result from 0% to 90%. Rather, the explanations would be technical in nature such as titre of antibody; improper dehydration; antigen retrieval; initial antibody dilution or improper buffer solution. Furthermore, it would not be related to the antibody clone, as those in use at the time were all fairly robust and comparable.[32]

(2) Antibody Concentration/Antigen Retrieval

Dr. Diponkar Banerjee

37. As stated previously, Drs. Banerjee, Mullen, Dabbs and Carter identified issues associated with the technical process as potential causes of conversions.

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[31] Evidence of Clive Wells, 27/10/2008, pp.85-86, lines 6-18.
[32] Evidence of David Dabbs, 15/09/2008, pp.210-211, lines 11-7.

38. In his review of the original slides selected by Dr. Cook, Dr. Banerjee noted that slides run on the DAKO machine had decreased staining intensity, whereas those run on the Ventana machine had increased staining intensity with background staining. Based on these observations, it was his impression that the Ventana was over-staining and providing increased background staining, likely associated with improper optimization[33] and that the DAKO system was not likely faulty. Instead the reason for the test failure was most likely "lack of test optimization, including antigen retrieval method and antibody/detection system titration...".[34]

39. Dr. Banerjee went on to explain that the optimization process is a procedure carried out in each lab to ensure that what is produced is a crisp and intensely stained slide.

Dr. David Dabbs

40. Based on his extensive training and knowledge in the area of IHC, Dr. Dabbs testified that as a starting principle, IHC, if performed accurately, should provide reproducible and reliable results. While he acknowledged that there can be variability, it was his expectation that it should be small and somewhere in the range of 1%-5%. He went on to add that the literature suggests that there is a

[33] Evidence of Diponkar Banerjee, 30/07/2008, p.77, lines 3-17.
[34] Exhibit P-0046, p.4.

fairly consistent correlation amongst the widely used antibodies such as 6F11, 1D5 and SP1.[35]

41. In his PowerPoint presentation to the Commission, Dr. Dabbs made it clear that an important step in the technical process is to ensure that antibody dilutions used during the process are measured absolutely correctly. If not, this can produce false negative results. Similarly, the duration and intensity of antigen retrieval is equally important in avoiding false negative results. Equally important is the monitoring of the calibration of the equipment used during the analytical phase, as this also has bearing on the outcome of test results.[36]

42. Finally, Dr. Dabbs did note that the "red flags" of poor processing, identified by Dr. Mullen, indicated evidence of improper technique and possibly poor antigen retrieval or improper antibody dilution. On cross-examination by legal counsel for the Class Action, Mr. Crosbie, Q.C., Dr. Dabbs characterized the main reason for the test failures as largely "technique failures".[37]

Dr. Clive Wells

43. When Dr. Wells was asked his opinion about what can cause false negative ER results, he stated that it was usually not a pathologist's reporting but the technical aspects of the IHC process such as the problems associated with antibody

[35] Evidence of David Dabbs, 15/09/2008, pp.202-203, lines 25-13.
[36] Evidence of David Dabbs, 15/09/2008, pp.153-155, lines 19-15.
[37] Evidence of David Dabbs, 16/09/2008, p.249, lines 11-15.

dilutions and antigen retrieval as well as fixation. He did acknowledge that false negatives can be caused by a multitude of factors.[38]

Ms. Trish Wegrynowski

44. Ms. Wegrynowski is a lead technologist at Mount Sinai Hospital who was retained by Eastern Health to perform a quality review of the technical side of Eastern Health's Laboratory Medicine Program. Following her initial review in September 2005, Ms. Wegrynowski identified a number of problems which could have resulted in false negatives.[39]

45. First and foremost, she did not find any policies or standard operating procedures in place for the IHC lab. She was also concerned with the rotating nature of the technical staff, but did not look into the issue of the alleged "sensitivity" of the Ventana system as she felt the machine itself should provide reproducible results if optimized correctly.[40]

46. In a follow up visit in March 2006, Ms. Wegrynowski still found that the lab was a "long, long way" from completing her previous recommendations in the fall of 2005.[41]

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[38] Evidence of Clive Wells, 27/10/2008, p.54, lines 9-23.
[39] Exhibit P-0047
[40] Evidence of Trish Wegrynowski, 24/06/2008, pp.52-53, lines 10-23.
[41] Evidence of Trish Wegrynowski, 25/06/2008, p.27, lines 9-23.

47. During cross-examination by counsel for Eastern Health, Mr. Simmons, Ms. Wegrynowski agreed that there is a dearth of specialized training at an academic level nationally in IHC, despite the growing need and demand. Ideally, with a sufficient knowledge base, both technologists and pathologists can have a role with respect to troubleshooting issues surrounding IHC and that in order to do so it would be important to maintain dialogue between both sides.[42]

48. Having said this, Ms. Wegrynowski also firmly suggested that technologists should have sufficient knowledge so as to be able to recognize problems and to facilitate this team approach.[43] This, however, was in direct contrast to the subsequent evidence of the Lab Manager, Mr. Barry Dyer, who testified that technologists felt they could simply rely on pathologists to be their main source of quality assurance and troubleshooting.[44]

49. On cross-examination by legal counsel for Dr. Kara Laing, et al., Ms. Wegrynowski confirmed that technologists need to be attuned to ensuring that control tissue is handled in the same manner as specimen tissue during the technical production of slides. Additionally, monitoring the preparation of in-house formalin and proper calibration of pipettes would have an effect on the amount of signal or positivity produced from an individual specimen slide.[45]

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[42] Evidence of Trish Wegrynowski, 26/06/2008, pp.66-68, lines 12-5.
[43] Evidence of Trish Wegrynowski, 25/06/2008, p.103, lines 14-18.
[44] Evidence of Barry Dyer, 23/07/2008, pp.92-93, lines 19-17.
[45] Evidence of Trish Wegrynowski, 25/06/2008, p.103, lines 14-18; pp.114-115, lines 16-13.

50. Finally, Ms. Wegrynowski confirmed on cross-examination by legal counsel for the Canadian Cancer Society, Ms. Newbury, that a lab performing IHC must adhere to stringent protocols for the analytical stage. Further, that technologists performing the procedure need to be current in their knowledge and attentive to completion of the appropriate documentation for the various technical steps.[46]

(3) Tissue Reprocessing

Mr. Barry Dyer

51. Mr. Barry Dyer is the current Lab Manager for Eastern Health. He assumed this position in 2002 after his predecessor, Mr. Terry Gulliver, became Program Director. Mr. Dyer testified that from his perspective the biggest technical difference he saw between the St. Clare's site and the Health Sciences Centre site was that St. Clare's engaged in re-processing of breast tissue on a regular basis. Mr. Dyer raised this point with Ms. Wegrynowski during her external review and in fact suggested that as much as 50% of the breast tissue samples produced at St. Clare's were reprocessed due to poor fixation.[47] Conversely, Mr. Dyer testified that re-processing was never performed at the Health Sciences.

52. Once he became aware of the situation, Mr. Dyer stated that he instructed the technologists at St. Clare's not to re-process breast tissue, however, they

[46] Evidence of Trish Wegrynowski, 25/06/2008, pp.117-118, lines 18-15.
[47] Evidence of Trish Wegrynowski, 24/06/2008, p.62, lines 14-20.

informed him the practice continued because pathologists requested it.[48] However, following the consolidation of the technical portion of the lab at the Health Sciences Centre in 2005, Mr. Dyer indicated he refused to allow it to continue.

53. When Ms. Wegrynowski and Dr. Banerjee were asked about their views on re-processing they indicated that in theory it could potentially affect the antigen retrieval process, but they were uncertain as to what extent.

Dr. Donald Cook

54. When asked about the extent of reprocessing which occurred at St. Clare's, Dr. Cook confirmed that he was aware of occasions when pathologists would ask a technologist to reprocess the block if they were not happy with the quality of the slide produced. Upon questioning by Commission counsel, he acknowledged that it was possible that this may interfere with the number of antigen sites that could be unmasked during the retrieval process. However, that on certain occasions, re-processing was both inevitable and necessary if there was insufficient dehydration of the tissue or incorrect grading of alcohol. When asked to respond to the suggestion that there was a high degree of re-processing of breast tissue at St. Clare's, Dr. Cook testified that not only was he not aware of this, he felt that in fact it was fairly uncommon.[49]

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[48] Evidence of Barry Dyer, 21/07/2008, pp.85-86, lines 23-13.
[49] Evidence of Donald Cook, 02/07/2008, pp.55-58, lines 15-22; p.63, lines 1-12.

Dr. Gershon Ejeckam

55. Dr. Ejeckam was also questioned about his knowledge surrounding reprocessing of breast tissue. Firstly, he was unaware of re-processing occurring to any large extent at St. Clare's or the Health Sciences Centre and secondly did not feel that reprocessing itself would affect antigen retrieval in a major way.[50]

Dr. David Dabbs

56. Dr. Dabbs was also asked his opinion on the issue of tissue reprocessing. He indicated that re-processing is used in circumstances where it is not possible to get a good cut from a block because the tissue is not properly fixed, not dehydrated well or cut too thickly.

57. As for his opinion on its effects on IHC results, Dr. Dabbs advised the Commission that to his knowledge no studies have been conducted into whether or not it has any deleterious effects.[51]

(4) Internal Controls

58. One of the findings arising from the two external reviews of original slides that has direct bearing on pathologists were the reviewers' observations in respect of

[50] Evidence of Gershon Ejeckam, 03/06/2008, pp.251-252, lines 21-7.
[51] Evidence of David Dabbs, 16/09/2008, p.40, lines 1-5.

internal controls. All the pathologists who testified before the Commission explained their training and knowledge on this subject. An interesting observation from their collective evidence is that, depending on where and when they did their residency, their knowledge base on the subject varied. For example, pathologists who did their residency in the United Kingdom and United States had far more exposure to IHC than those pathologists who were Canadian trained. However, this difference became even more stark when comparing the evidence of Drs. Dalton and Fontaine concerning their residency experience at Dalhousie University in Halifax, Nova Scotia, which is detailed below.

Dr. Maurice Dalton

59. Dr. Dalton is currently the Lab Director for the Laboratory Medicine Program at the Central Regional Health Authority, Grand Falls-Windsor site. He completed a general pathology residency at Dalhousie University from 1992-1996. During that time, there was very little IHC testing available and the experience he received was limited to reading IHC slides, together with a supervising pathologist.

60. Dr. Dalton admitted that he was not taught about the importance of internal controls.[52] Instead, he was taught to look for nuclear staining and to report the result as either "positive" or "negative" using a 30% cut-off. He did notice that

[52] Evidence of Maurice Dalton, 18/07/2008, p.167, lines 7-11.

this practice was not entirely uniform as some pathologists did include percentages.[53]

61. During cross-examination by counsel for Eastern Health, Dr. Dalton admitted that he had not necessarily been looking for internal controls up until he started forwarding blocks to Mount Sinai for retesting in 2005. However, it is worth pointing out that Dr. Dalton did not receive Dr. Ejeckam's memo of May, 2003, nor did his colleague, Dr. Barry Gallagher, who was practicing at the Gander site. Both admitted during their testimony, had they received this memo, it would have been very useful information that they could have applied to their respective practices. Instead, both pathologists selected blocks for ER/PR testing on the basis of having a prominent amount of representative tumor.[54]

62. Anecdotally, Dr. Dalton informed the Commission that from his review of the retesting results, he felt that internal controls did not emerge as a major factor from Dr. Mullen's review of the blocks from Grand Falls-Windsor, nor was he aware of any concerns raised by Dr. Mullen or his colleagues at Mount Sinai with respect to internal controls.[55]

63. Finally, Dr. Dalton did agree that in theory pathologists have a professional obligation to stay current on all subject matters relevant to their practice. In so doing, at his institution, he, as well as his colleagues, (when all staff pathologist

[53] Evidence of Maurice Dalton, 18/07/2008, p.165-166, lines 9-9.
[54] Evidence of Maurice Dalton, 18/07/2008, p.325-326, lines 18-8.
[55] Evidence of Maurice Dalton, 18/07/2008, p.332-333, lines 7-14.

positions were filled) review journals, perform CAP surveys, fill out Oakstone quizzes, attend professional meetings, have discussions with colleagues and finally attempt to develop policy and procedure manuals when the time allows.[56]

Dr. Daniel Fontaine

64. Dr. Fontaine is a Canadian qualified pathologist who is currently the Director of the Cytopathology Program for the Province of NL and previously held the position of Site Chief at Eastern Health for a brief period of time in 2005-06.

65. As previously stated, when one juxtaposes Dr. Dalton's experience at Dalhousie University with Dr. Fontaine's, it illustrates the evolution of the residency training program's approach to IHC. Unlike Dr. Dalton who completed a residency in general pathology, Dr. Fontaine completed a residency in anatomic pathology between 1998 and 2003. While he received no formal training in IHC, he nevertheless was exposed to several lectures on the basics as part of academic half-day presentations.[57] During Dr. Fontaine's residency, he noticed variation in practices among pathologists, however, what distinguished his experience from Dr. Dalton's was the fortuitous opportunity to train with a breast pathologist. Coming out of his residency, Dr. Fontaine learned to select a tissue block with internal control and to report percentages. Moreover, he also learned that if the

[56] Evidence of Maurice Dalton, 18/07/2008, p.327-328, lines 22-7.
[57] Evidence of Daniel Fontaine, 17/07/2008, p.126, lines 2-18.

internal control did not stain, the run of that particular test would be considered invalid and would need to be repeated.[58]

66. Dr. Fontaine proffered to the Commission that his residency experience demonstrated to him that ER/PR was "fraught with difficulties"[59] and that when he did a six-month rotation in St. John's from June to December 2002, the IHC practices in place at the time were no different than those in place in Halifax.[60]

Dr. Brendan Mullen

67. In his review, Dr. Mullen identified that beyond issues surrounding fixation and tissue processing, there were examples of slides which did not contain internal controls or that contained internal controls which did not stain.

Dr. Diponkar Banerjee

68. Like Dr Mullen, Dr. Banerjee noted in his review of the 20-30 original slides that there were problems with internal controls, namely slides which either had no staining or slides where the internal control was absent.

69. In response to questioning from Commission counsel, Dr. Banerjee acknowledged that some pathologists may not be aware of the importance of

[58] Evidence of Daniel Fontaine, 17/07/2008, pp.138-140, lines 1-11; pp.146-147, lines 8-2.
[59] Evidence of Daniel Fontaine, 17/07/2008, p.199, lines 10-18.
[60] Evidence of Daniel Fontaine, 17/07/2008, p.196, lines 4-13.

internal controls as a quality assurance measure due to their training and experience or through the set-up of the lab structure.[61] However, in his return visit in April 2006, he did note significant improvement in the quality of slides and more importantly, from the slides he reviewed, the internal controls were working well.[62]

Dr. David Dabbs

70. Dr. Dabbs also spoke to the issue of internal controls. On cross-examination by counsel for Laing, et al. he acknowledged that his training was somewhat unique from most pathologists in that during medical school he took a one year leave of absence to gain exposure to pathology. On top of this, during his residency during the mid-1980's he gravitated towards a centre of excellence in IHC training. It was there where he was first exposed to the concept of internal controls.

71. Currently, at his institution, most ER/PR testing is performed on core biopsies. In such instances, it is not always possible to obtain an internal control, given the size of the specimen obtained. Thus, in these circumstances the pathologist must rely on an external control for quality assurance.[63] This approach was reconfirmed on cross-examination by counsel for Eastern Health when Dr. Dabbs acknowledged that it is possible to report a test result without an internal control

[61] Evidence of Diponkar Banerjee, 30/07/2008, pp.51-52, lines 6-11.
[62] Evidence of Diponkar Banerjee, 30/07/2008, p.199, lines 12-22.
[63] Evidence of David Dabbs, 15/09/2008, p.200, lines 11-24.

in circumstances where you have a positive external control and tumor present on the slide.[64]

Dr. Beverley Carter

72. Like Drs. Mullen and Banerjee, Dr. Carter, in conducting her initial internal review, noticed problems with the lack of internal controls and internal controls which were present but not staining. In addition to issues surrounding fixation and tissue processing, Dr. Carter also shared these findings with Dr. Cook.

Dr. Gershon Ejeckam

73. Dr. Ejeckam testified that his knowledge concerning the importance of having normal breast tissue as an internal control tissue on an IHC slide came about as a result of his experience in Doha. From his understanding, the internal control was considered to be a second level control to the external control. On questioning from Commission counsel, he agreed that pathologists should know about internal controls as part of their general knowledge and experience, but did qualify this answer by stating that if a pathologist was not performing a lot of ER/PR testing, it was possible not to appreciate its importance as a quality assurance measure.[65]

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[64] Evidence of David Dabbs, 16/09/2008, p.142, lines 6-24.
[65] Evidence of Gershon Ejeckam, 03/06/2008, p.272, lines 1-22.

74. Furthermore, he did acknowledge that prior to his 2003 intervention, he did have occasion to receive a slide with a negative internal control but this test was repeated successfully. He was not aware of any instance where a test result was reported where the internal control failed.[66]

Dr. Donald Cook

75. Dr. Cook testified to the Commission that when he started reporting ER/PR in 1998 he did not appreciate the significance of having or looking for internal controls. Instead, he relied on the information set out in Dr. Khalifa's Memo dated February 16, 1998. He did not become aware of the importance of internal controls until sometime around 2000-2001 when reading an article on IHC. Prior to this, he did not recall the subject being mentioned in the literature he reviewed.[67] By 2000-2001 it was his understanding that internal controls were another component, in conjunction with the external control, used to evaluate the slide. Both provided some reassurance that the test worked properly.

76. Other pathologists who testified before the Commission also admitted that they were unaware of the importance of internal controls until Dr. Ejeckam's memo of May 2003. From Dr. Cook's perspective, he was not aware of any issues of concern with internal controls until the slide review of 2005. Moreover, prior to this time, Dr. Cook stated that he did not receive any complaints about slide

[66] Evidence of Gershon Ejeckam, 04/06/2008, pp.52-53, lines 8-10.
[67] Evidence of Donald Cook, 02/07/2008, p.163-166, lines 11-16.

quality, nor did he recall reordering any ER/PR tests because of concerns over either the external or internal controls.[68]

(5) Inconsistent Reporting (Cut-Offs)

77. The Commission has heard extensive evidence concerning how ER/PR results may be reported. In fact, even today there is great debate surrounding this subject. The literature is replete on whether a quantitative or semi-quantitative approach is more clinically reliable. However, more recent initiatives, such as the Ad Hoc Committee on IHC Standards in the United States, have urged a move towards a single universal standardized scoring system using a quantitative approach, i.e. percentages plus staining intensity.

Dr. Donald Cook

78. In the 1997-98 transition period between biochemical assay to IHC assay for ER/PR, a great deal of discussion occurred amongst pathologists at the Health Sciences and St. Clare's sites as to how results should be reported.

79. At St. Clare's, pathologists felt they should not become involved in establishing cut-offs for positivity, but rather should simply report percentages of positivity and allow the oncologists to decide treatment options. Dr. Cook recalled that as part of the transition phase, St. Clare's forwarded at least 10 cases to the Mayo Clinic

[68] Evidence of Donald Cook, 02/07/2008, p.347-348, lines 24-4.

for performance of IHC in comparison with the biochemical assay. This was in conjunction with the parallel testing being conducted by Dr. Khalifa. Dr. Cook recalled that the Mayo clinic did not use a standard cut-off, but simply reported percentages.[69]

80. Moreover, pathologists at St. Clare's wished to report their own cases and this was discussed in a meeting in December 1997 with Dr. Khalifa who agreed with this approach. The issue of cut-offs was also addressed by Dr. Khalifa later on in his February 1998 memo to all pathologists in Newfoundland wherein he stated that the use of the 30% cut-off was optional - not obligatory.[70]

81. Dr. Cook was questioned by Commission counsel as to whether arrangements were made for any in-service or continuing medical education around reporting of ER/PR. According to Dr. Cook, it was his recollection that the general expectation was that each pathologist would review the existing literature to address any questions they may have surrounding the process.[71]

82. Overall, it was Dr. Cook's impression that by 1997-98, the situation involving reporting cut-offs was dynamic and changes were occurring across North America with no clear consensus. His interpretation of Dr. Khalifa's memo was that the format he used suggested an approach whereby any degree of positivity

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[69] Evidence of Donald Cook, 02/07/2008, p.96-98, lines 17-6.
[70] Evidence of Donald Cook, 02/07/2008, p.141, lines 1-9.
[71] Evidence of Donald Cook, 02/07/2008, pp.104-106, lines 22-11.

would be reported. Whereas, the rider portion of the memo referencing 30% was optional and could be included or disregarded by the reporting pathologist.[72]

Dr. Mahmoud Khalifa

83. Dr. Khalifa confirmed Dr. Cook's evidence surrounding the discussions over the approach to reporting ER/PR. From his perspective, Dr. Khalifa wanted to maintain consistency. At the time, it was his understanding from reviewing the literature that a result greater than 30% using a monoclonal IHC assay correlated with a positive result using a biochemical assay.[73]

84. In his memo of February 1998, Dr. Khalifa made it very clear to all pathologists that he was not making a policy for reporting as he did not have any authority to do so.[74] Rather, he simply had some knowledge and interest in the area of IHC and was providing information to his colleagues. His purpose in adding the 30% rider was to illuminate the end user (i.e. the oncologist) as to how the IHC result could be correlated with a biochemical result. Following his memo, Dr. Khalifa never received any questions from the oncologists about this portion of the reporting format.[75]

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[72] Exhibit P-0594, pp.3-4
[73] Evidence of Mahmoud Khalifa, 24/07/2008, pp.118-119, lines 10-1.
[74] Exhibit P-0594, p.3
[75] Evidence of Mahmoud Khalifa, 24/07/2008, pp.196-197, lines 14-3.

85. As well, Dr. Khalifa did not recall receiving any feedback from any pathologists expressing anxiety or disagreement about the responsibility for reporting ER/PR IHC assay. He did testify that on a number of subsequent occasions he spoke with his out-of-town colleagues by telephone and regularly visited their labs and discussed issues of common interest.[76]

(6) Interpretive Errors

Dr. Brendan Mullen

86. Following his review of the original slides from Newfoundland and Labrador, Dr. Mullen stated:

> "There were very few cases in which there was a significant difference in my observation compared to that recorded on the original report. Some of my observations were higher than those recorded and some lower."[77]

As a result, interpretive errors do not appear to be a factor in the rate of conversions.

87. With respect to the current cases, Dr. Mullen discussed the issue of what constitutes a "positive" result with Dr. Cook. Dr. Mullen stated to the Commissioner that pathology is not a black and white science and there are legitimate disagreements in interpretation. As well, although Mt. Sinai uses a 1%

[76] Evidence of Mahmoud Khalifa, 24/07/2008, pp.173-174, lines 16-21
[77] Exhibit P-1840, p.2

cut-off positivity rate, Dr. Mullen acknowledged that some institutions use 10% and he does not regard that figure as unacceptable.[78]

(7) False Positives (Retro-Converters)

Dr. Nebojsa (Nash) Denic

88. Following the completion of the retesting of the original tissue blocks by Mount Sinai a number of additional issues arose besides test result changes from negative to positive. These included a small number of results which converted from positive to negative. This was addressed by a number of witnesses who testified before the Commission, including the current Clinical Chief of Eastern Health, Dr. Nash Denic.

89. Dr. Denic, during cross-examination by counsel for the Canadian Cancer Society, explained that from his perspective, there were 4 false positives (retro-converters). These were cases which had been reported as 30% or less (before 2000) and the treating physicians had considered them ER positive. Dr. Denic personally examined these 4 cases and determined that they were over-called due to background staining. Furthermore, from a literature review he determined false positives are not a very common problem associated with IHC staining.

[78] Evidence of Brendan Mullen, 27/06/2008, pp.168-171, lines 15-20.

This observation was mirrored in the evidence of other experts, including Dr. Dabbs and Dr. Wells.[79]

Dr. Donald MacDonald / Dr. Reza

90. Dr. MacDonald and Dr. Reza are a PhD/MD team on staff with the Newfoundland and Labrador Center for Health Information (NLCHI). They were retained by Mr. Robert Thompson on behalf of the Government of Newfoundland and Labrador to assist with creating a database of all ER/PR patients tested between 1997 and 2005. The primary purpose of this database was to ensure completeness of patient identification and communication. As part of their work, Drs. MacDonald and Reza included comparison of the original results and the Mount Sinai retest results.

91. The issue of false positives was raised with Drs. MacDonald and Reza on cross-examination by counsel for the Canadian Cancer Society. In response, Dr. MacDonald indicated that it could be "misleading" to do an analysis of false positives because of the "biased sample" cohort (only ER/PR negatives).[80] He explained that any analysis would be very limited due to the small number of positives that were retested combined with the additional problem that the sample cohort was not randomly selected. Thus, Dr. MacDonald recommended against any analysis based on these numbers as it would not be statistically

[79] Evidence of Nebojsa (Nash) Denic, 15/09/2008, p.13, lines 1-24.
[80] Evidence of Don MacDonald, 24/10/2008, pp.62-63, lines 13-1.

significant. From his perspective, the testing cohort had to be a random sample of at least 300-400.[81]

(8) Structural Organization / Clinical and Technical Interaction

Dr. Gershon Ejeckam

92. When he arrived at the Health Sciences in 2002, Dr. Ejeckam noticed that all technologists reported to the Lab Manager, Mr. Barry Dyer, and that Mr. Dyer reported to the Program Director, Mr. Terry Gulliver. Unlike his experience in Doha, Dr. Ejeckam observed the laboratory did not have a Medical Head overseeing the IHC service. Instead, pathologists would report to the Site Chief who then reported to the Clinical Chief. Dr. Ejeckam found this structure very frustrating and felt there should be a Medical Head of the IHC program.

93. This was evident by the fact that Dr. Ejeckam, despite the concerns he expressed in his June 2003 memo, had no control over budgetary expenditures. By way of example, he testified that the Ventana machine was purchased without any input or knowledge on his part.[82]

94. Shortly after his arrival, Dr. Ejeckam was informally designated by the Clinical Chief as the point person for overseeing IHC. This was because it was evident

[81] Evidence of Don MacDonald, 24/10/2008, pp.69-75, lines 15-6.
[82] Evidence of Gershon Ejeckam, 05/06/2008, pp.51-52, lines 15-12.

he had some knowledge, interest and experience in the area. However, he stressed quite emphatically that there was no formal structure giving him any real authority or responsibility over the technologists. Despite this, Dr. Ejeckam did his best and acted as a resource person for technologists who were quite receptive to his guidance. [83]

95. During Dr. Banerjee's external review, he spoke with Dr. Ejeckam who raised his concerns regarding the division between the clinical and technical sides of the lab and the parallel responsibilities which existed within the program. Subsequently, Dr. Ejeckam was pleased to learn that Dr. Banerjee made a recommendation which favored the creation of a section head for the IHC lab.[84]

96. In October 2005, the Clinical Chief, Dr. Cook, wrote all pathologists and technical staff confirming Dr. Ejeckam's role as the resource person for IHC and specifically providing him with supervision over the technologists.[85]

Dr. Mahmoud Khalifa

97. Previous to Dr. Ejeckam's ad hoc designation as the resource person for IHC, Dr. Khalifa began initiatives in this area following his arrival and subsequent appointment as Site Chief in 1996. By 1997, he continued with these initiatives including the move towards a transition of ER/PR testing and biochemical assay

[83] Evidence of Gershon Ejeckam, 04/06/2008, pp.179-180, lines 6-5.
[84] Evidence of Gershon Ejeckam, 05/06/2008, pp.56-57, lines 6-19.
[85] Exhibit P-0637

to IHC assay. These initiatives were undertaken as a result of Dr. Khalifa's knowledge, interest and experience in the area. Like Dr. Ejeckam, he did not have a formal appointment as a Medical Head of IHC and did not have any authority over the laboratory medicine program.

98. Dr. Khalifa's understanding of his role was similar to Dr. Ejeckam's, in that he had an informal "supervisory role" with respect to the technologists[86]and would assist them with occasional troubleshooting. However, he did not consider he had a role or obligation to provide them with formal training.

Dr. Donald Cook

99. Dr. Cook described to the Commission the evolution of the Clinical Chief's position during his tenure as a pathologist. Prior to the creation of the Health Care Corporation in 1995, the medical and technical arms reported to a Medical Director located at each hospital site who oversaw the entire program. This structure changed with the creation of the Health Care Corporation which introduced the concept of program management. At the same time, a number of critical management positions were eliminated and lab accreditation (which had been part of the overall hospital accreditation program) seemed to be "set adrift" leaving very little structured review of the lab medicine program as part of overall hospital accreditation.[87]

[86] Evidence of Mahmoud Khalifa, 24/07/2008, pp.45-47, lines 12-5.
[87] Evidence of Donald Cook, 08/07/2008, pp.33-38, lines 1-2.

100. As time passed, the program management structure seemed to create a divide between the medical and technical branches of the laboratory, with a large degree of control being concentrated on the technical side and correspondingly very little on the medical side. From Dr. Cook's perspective as both Site Chief and Clinical Chief, this led to frustration and departmental conflict.

Dr. Diponkar Banerjee

101. In his first external review report Dr. Banerjee referenced a lack of a team approach to the laboratory medicine program.[88] In making this observation, he had spoken with Drs. Cook and Ejeckam about their concerns and frustrations in overseeing the program without any actual authority. This included Dr. Ejeckam's explanation about how he encountered difficulty in implementing the changes he felt were necessary, such as having dedicated technologists (versus rotating).

102. Dr. Banerjee, like Dr. Ejeckam, felt the dual management structure was problematic to the operation of the IHC lab and necessitated the creation of a permanent position of Director for IHC. Such a position would allow for increased communication between pathologists, technologists and oncologists and increased troubleshooting.[89]

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[88] Exhibit P-0046, p.5
[89] Exhibit P-0046, p.5

(9) Lack of Human/Financial Resources

Dr. Diponkar Banerjee

103. In his October 17, 2005 cover letter to his Report, Dr. Banerjee highlighted two key recommendations:

i) "Pathologists' compensation should be competitive with those of other provinces"... and

ii) "For a high quality cancer program in the province, your department must invest in sub-specialization, continuing education, and central pathology review for the entire province...".[90]

104. In his evidence to the Commission, Dr. Banerjee spoke of the challenges facing labs across Canada in light of how health care should be provided and funded. Specifically, he spoke to the fact that in both the Romanow and Kirby Reports, the only reference in either to pathology was in relation to speech pathology. In so doing, he made the following poignant observation:

> Not a single word about labs in either document. So we are invisible to politicians, we are invisible to hospital administrators and we are invisible to the public until there is a scandal.[91]

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[90] Exhibit P-0046, p.1
[91] Evidence of Dr. Diponkar Banerjee, 30/07/2008, p. 305, lines 18-23

Dr. Donald Cook

105. Dr. Cook informed the Commission that pathologists in Newfoundland and Labrador always had the lowest salaries in the country (until recently). This obviously led to manpower shortages. As Clinical Chief, Dr. Cook initially resolved these shortages through the use of J1 Visa pathologists, however, this solution became problematic by 2002 when other provinces began relaxing their requirements thereby eliminating this source of potential manpower.

106. Dr. Cook tried other initiatives, including approaching the Program Manager and the V.P. of Medical Affairs to see whether money generated by the Program for providing outside consultations, including ER/PR testing, could be put back into the lab program budget. His suggestion was brought forward by the V.P. of Medical Affairs to the hospital executive, but was unfortunately turned down.[92]

107. Finally Dr. Cook provided objective evidence of the national initiatives brought forward by organizations such as the Canadian Association of Pathologists (CAP). In 2003 the CAP wrote the Romanow Commission and expressed concerns over the negative impact that cost containment measures would have on quality assurance for labs across the country.[93] As previously noted above, the response was silence.

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[92] Evidence of Donald Cook, 08/07/2008, pp.50-51, lines 4-12.
[93] Exhibit P-0135, p.5

Dr. David Haegert

108. Dr. Haegert was the first Clinical Chief under the new program management structure. He spoke to difficulties he experienced as Clinical Chief in the mid to late 1990s and the pressure placed upon him to save significant amounts of money. He described one particular instance where he and the Program Director, Mr. Vern Whelan, met with Mr. George Tilley, the Director of Finance at the time, who asked them to find $1 million in savings from the laboratory medicine program budget for that year (1997). Given that most of the lab's budget was for personnel, Dr. Haegert and Mr. Whelan felt the only option to save money was to cut positions.

109. Dr. Haegert informed the Commission that the lab management team tried their best to save money while doing the least harm. One example was that if a senior manager was close to retirement it was decided not to replace him/her. Another way which was identified to save money was to have one manager in pathology for two sites, Mr. Murphy for St. Clare's and the Grace and Mr. Gulliver for the Janeway and General Hospitals. Later, this changed to having a single pathology manager overseeing both the General site and the St. Clare's site. In hindsight, he acknowledged that general supervision becomes much more difficult if there is a need to manage multiple sites.

110. As part of this cost containment approach, the program was able to come up with $700,000 in savings.[94] Dr. Haegert also felt it was reasonably likely he would have advised Mr. Tilley at the time that the savings the Corporation was seeking would come with a cost to the program. In the end, Mr. Tilley accepted the $700,000 proposal and it was removed from the budget. Subsequently, Dr. Haegert was also asked to save money around the closure of the Grace Hospital.

111. Looking back on this experience, Dr. Haegert told the Commission that the thinking within the hospital system at the time was that pathology was a "cost center" – i.e. a program where costs could be reduced.[95]

Dr. David Dabbs

112. On cross-examination by counsel for Laing, et al. Dr. Dabbs agreed with the suggestion that education in IHC is an important aspect of pathology. Moreover, every program should have the necessary financial resources to train pathologists in IHC, including the importance of the technical aspects and interpretation pitfalls. However, in order for this to occur, pathologists need to attend national and international meetings on the subject of IHC. Dr Dabbs acknowledged that without proper funding pathologists would not be able to attend such conferences to gain important knowledge.[96] He also agreed that an

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[94] Evidence of David Haegert, 04/09/2008, pp.45-50, lines 4-13.
[95] Evidence of David Haegert, 04/09/2008, pp.50-51, lines 14-3.
[96] Evidence of David Dabbs, 16/09/2008, pp.195-198, lines 4-19.

institution which had a high turnover of staff could have problems noticing any possible trends occurring within the department.[97]

(10) Lack of Pathology Assistants

113. The pathology experts who spoke to the Commission, including Dr. Banerjee and Dr. Dabbs, spoke of the important role played by pathology assistants at their respective institutions. Pathology assistants perform an important but tedious function of specimen grossing. But more importantly, they help provide standardization and corresponding reductions with fixation problems.

Dr. Donald Cook

114. In 2002, the Government of Newfoundland and Labrador commissioned the Hay Group to prepare a report on the efficiency of the Health Care Corporation. Included among its many recommendations was the creation of pathology assistants. This had been an agenda item for Dr. Cook and his colleagues for quite some time. In fact, prior to this, they had promoted the notion within the hospital administration because they viewed the creation of these positions as important steps towards the grossing function of specimens.

115. Dr. Cook explained to the Commission that the grossing function is a tedious and time-consuming task for pathologists. It takes away from meaningful time they

[97] Evidence of David Dabbs, 16/09/2008, pp.198-199, lines 20-12.

need to devote to both diagnosis and interpretation. In 2002 most centres in Canada had already established pathology assistant positions to address this problem. Both Dr. Cook and his colleague, Dr. Desmond Robb, Discipline Chair for Pathology, made efforts within the Health Care Corporation and directly to Government (through the NLMA) to raise the issue, but were unsuccessful.[98]

116. By September 2005 the issue of pathology assistants was again raised, this time by the Site Chief, Dr. Daniel Fontaine, in correspondence to the Program Director, Mr. Terry Gulliver. Dr. Fontaine re-emphasized the need for pathology assistants, as well as the importance of having dedicated technologists for the performance of IHC.[99] Unfortunately, it was not until around 2006 that funding was eventually provided to Eastern Health to hire four pathology assistants. A budget outline for the creation of these positions was jointly proposed by Dr. Cook and Mr. Gulliver in a report to the V.P. of Medical Affairs, Dr. Bob Williams, in October of 2005.[100]

Dr. Diponkar Banerjee

117. Like Dr. Cook, Dr. Banerjee agreed that the introduction of pathology assistants would help address the issue of fixation since these individuals would be

[98] Evidence of Donald Cook, 08/07/2008, pp.47-48, lines 19-18.
[99] Exhibit P-0595, pp.1-2.
[100] Exhibit P-0351 pp. 2-3.

exclusively devoted to grossing thus providing more time for pathologists to offer diagnosis and interpretation.[101]

Dr. David Dabbs

118. Dr. Dabbs testified that pathology assistants have been in use at his institution for a number of years and are an invaluable part of the IHC process. They provide good consistency in grossing and accessioning of specimens.[102]

(11) Lack of National Standards

119. Since 2005, there has been an obvious movement within pathology circles throughout North America to create national standards. The United Kingdom is somewhat ahead with such initiatives as the Pathology Reporting of Breast Disease (created January 2005). This is an extensive document incorporating the third edition of the National Health Systems Breast Screening Programs Guidelines for Pathology Reporting and Breast Cancer Screening and the second edition of the Royal College of Pathologists Minimum Data Set for Breast Cancer Histopathology. Despite its existence, the Commission heard from Dr. Clive Wells that in 2008 there is still a recognition throughout pathology circles in Europe of a need to come together for a common set of standards in IHC.

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[101] Exhibit P-0046, p.5.
[102] Evidence of David Dabbs, 16/09/2008, pp.9-10, lines 14-8.

Dr. Donald Cook

120. Dr. Cook was questioned briefly on the topic of national standards for ER/PR testing in view of his previous position as past president of the Canadian Association of Pathologists (CAP). He explained that in the fall of 2005 he undertook to place this topic on the agenda of the CAP executive. He did so because he felt it was an important issue and he recognized that no national standards existed. This meeting occurred in November 2005, just shortly following Dr. Banerjee's external review.[103]

Dr. Diponkar Banerjee

121. Dr. Banerjee was also asked about his role as past president of CAP. Dr. Banerjee was on the executive in the fall of 2005 when the issue of developing national standards for IHC was brought forward by Dr. Cook. Based on his own knowledge of the issue, Dr. Cook's proposal was added to the CAP agenda.[104]

122. Subsequently, a draft proposal was prepared by several members from Saskatchewan and British Columbia, however, the CAP could not advance the project without both political and financial support from the provincial and federal levels of governments.[105] Despite this, a working group was created. Dr. Banerjee acknowledged there was a lot of "inertia" because of questions around

[103] Evidence of Donald Cook, 03/07/2008, pp.229-231, lines 17-21.
[104] Exhibit P-2095
[105] Evidence of Diponkar Banerjee, 30/07/2008, p.178, lines 4-24.

who should be driving the process and the obvious necessity to involve other organizations such as the Royal College of Physicians. Despite this, he felt there was no interest in moving forward with the project.[106]

123. In view of these comments, Commission counsel asked Dr. Banerjee how IHC could have been introduced to the health care system without proper standards and quality assurance. His response was simply that nobody took responsibility for it when it was first introduced.[107]

124. Over time, Dr. Banerjee wrote various stakeholders across the country but received very few responses. It is only recently that there seems to be a willingness to address the issue of national IHC standards.

Dr. David Dabbs

125. On cross-examination by legal counsel for Eastern Health, Dr. Dabbs elaborated on the role of the IHC Ad Hoc Working Group in the United States. This group first met in California in 2006 and in Florida in 2007. The purpose of these meetings was to bring together various recognized leaders in pathology throughout the United States due to a general consensus that standards were lacking.

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[106] Evidence of Diponkar Banerjee, 30/07/2008, p.233, lines 2-22.
[107] Evidence of Diponkar Banerjee, 30/07/2008, p.253-257, lines 9-13.

126. Dr. Dabbs acknowledged that there was an "unevenness" which existed throughout pathology, especially in the areas of reporting schemes and methodologies. From these meetings, there was strong recognition that an initiative should be undertaken to develop consensus statements and recommendations. In his view, the publications that have come about as a result of these meetings will have a positive impact on the profession generally.[108]

127. Finally, according to Dr. Dabbs, in the United States, unlike Canada, accreditation has been required by law for at least a decade. Its importance could not be overemphasized as a quality assurance measure. He also acknowledged that unlike the United Kingdom, he was unaware of any large-scale study as to whether there was widespread variation in testing results among U.S. labs. Most importantly, Dr. Dabbs was not aware of any large scale retesting equivalent to the process undertaken by Eastern Health in 2005.[109]

(B) <u>What factors may have led to the problem not being detected until 2005?</u>

(1) <u>Lack of an External Quality Assurance Program (EQAP)</u>

128. The Commission has heard evidence from a number of witnesses concerning the importance of EQAPs and their relevance to labs performing IHC. One of the most recognized programs worldwide is the United Kingdom's National External Quality Assurance System (UKNEQAS). This program has been active in

[108] Evidence of David Dabbs, 16/09/2008, pp.82-86, lines 3-14.
[109] Evidence of David Dabbs, 16/09/2008, pp.96-97, lines 7-12.

assessing the quality of hormone receptors performed on formalin fixed paraffin embedded tissue for over a decade and more importantly has published extensively on issues surrounding quality. Included among its publications is the recognition of the poor performance levels by a number of laboratories in the United Kingdom in the early part of this century. UKNEQAS and its Canadian equivalent in Ontario, Quality Management Program – Laboratory Service (QMP-LS) offer labs the opportunity of having their IHC slides reviewed by quality assessors for the purpose of identifying technical problems such as antigen retrieval and antibody concentration. Afterward, they also offer assistance to remedy any problems which were identified.

Dr. Diponkar Banerjee

129. When questioned by Commission counsel, Dr. Banerjee opined that the technical problems identified by him in 2005 could perhaps have been detected earlier had the IHC lab been enrolled in external proficiency testing.

Mr. Terry Gulliver

130. Mr. Gulliver was the Lab Manager within the Health Care Corporation of St. John's until 2002 when he assumed the position of Program Director. He testified that as both Lab Manager and Program Director he was aware that there was no external proficiency testing for the IHC portion of the lab prior to 2005, but

believed this was not part of his responsibility as Program Director.[110] At the same time, Mr. Gulliver also recognized that the National Accreditation Scheme performed by the Canadian Council on Health Services Accreditation (CCHSA) was only superficial in terms of lab accreditation. He attributed this to the nature of the review process itself which only involved speaking to key individuals and getting their feedback as opposed to a detailed examination of the lab including its functions and processes. Mr. Gulliver testified that he communicated these concerns to the V.P. of Medical Affairs, Dr. Williams, and that accreditation by organizations such as QMPLS was not explored until 2005 or later.[111]

Dr. Emina Torlakovic

131. Dr. Torlakovic is a European-trained pathologist who had extensive experience in IHC and quality assurance measures. In fact, she was an active participant in the Nordic Immunohistochemical Quality Control Program (NordiQC).

132. Dr. Torlakovic's evidence helped emphasize the important point that external quality assurance for ER/PR testing has only been appreciated widely in recent years. Upon her arrival in Canada in 2004, Dr. Torlakovic became aware that Canada had no national program for external quality assurance.[112] Given her interest in this area, she decided to embark upon establishing such a program in conjunction with her colleague, Dr. Blake Gilks, of the University of British

[110] Evidence of Terry Gulliver, 03/10/2008, pp.234-237, lines 18-18.
[111] Evidence of Terry Gulliver, 07/10/2008, pp.368-370, lines 2-19.
[112] Evidence of Emina Torlakovic, 09/10/2008, p.93, lines 5-13.

Columbia. Their program, Canadian Immunohistochemistry Quality Control (cIQc), focuses on providing IHC quality control as well as education, much like the approach employed by organizations such as UKNEQAS. However, so far, cIQc has not received any extensive funding, leaving the various members to donate their time and work toward this laudable cause. It is Dr. Torlakovic's belief that such an organization should be government funded since it would be too onerous for each lab to fund such a program and there is value in having a national exposure to external quality assurance, expertise and education.[113]

133. A formal proposal for the cIQc structure was forwarded to CAP on July 11, 2006.[114] At first, nothing happened but by 2007 a National Standards Committee for IHC was created with the goal of improving the quality of IHC throughout the country.

134. To date, the cIQc runs for its participants have shown good results for ER/PR. This was a surprising finding for Dr. Torlakovic because of the known variability which exists globally. Her explanation for this finding was that everyone in Canada is now paying much closer attention to ER/PR because of what occurred here in Newfoundland and Labrador since 2005.[115]

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[113] Evidence of Emina Torlakovic, 09/10/2008, pp.161-162, lines 2-18.
[114] Exhibit P-0412
[115] Evidence of Emina Torlakovic, 09/10/2008, pp.148-150, lines 20-4.

135. Dr. Torlakovic informed the Commission that it is her long term goal is to see all labs participating in their external quality assurance program at least three times a year and receiving good results in order to "certify" their ER/PR testing.[116]

(2) Lack of Resources – The Revolving Door Syndrome

136. The issue of manpower shortages and turnovers within the pathology profession in Newfoundland and Labrador was a common theme addressed by many of the pathologists who testified before the Commission. These issues and the pressures they brought to bear on those who practiced between 1997 and 2005 may have contributed to the problem not being recognized earlier.

Dr. Donald Cook

137. Dr. Cook emphasized that during his tenure as Clinical Chief the primary challenge confronting him was ensuring that there were adequate numbers of pathologists at both hospital sites. Recruitment and retention became a significant problem due to a number of factors such as lack of available funding for the program, inadequately low compensation packages for pathologists and inadequate funding for continuing medical education and research.

138. In his first year as Clinical Chief, Dr. Cook was faced with a 25% reduction in manpower. He therefore felt it necessary to recruit J-1 visa pathologists who had

[116] Evidence of Emina Torlakovic, 09/10/2008, pp.166-167, lines 18-3.

historically seen Newfoundland and Labrador as a stepping stone to practicing on the mainland. Service requirements were so large that Dr. Cook still carried a 100% service load as Clinical Chief, even though in theory he was permitted anywhere between 30-50% protected time to perform his administrative duties.[117]

139. The problems with poor remuneration and lack of funding remained a significant barrier to a stable complement of pathologists until 2007 when Government agreed to pay pathologists a cancer bonus which it previously awarded only to oncologists. Subsequent to this in 2008, Government agreed to increase their overall remuneration package. Meanwhile in 2006, funding was obtained to create pathology assistant positions, as well as increased funding for continuing medical education.

Dr. Diponkar Banerjee

140. During his testimony to the Commission, Dr. Banerjee was asked why he sent correspondence in February 2006 to the then Minister of Health, Mr. John Ottenheimer, asking him to address the issues of turnover and retention of pathologists through better compensation.

[117] Evidence of Donald Cook, 02/07/2008, pp.23-25, lines 11-9.

141. In answering this question, Dr. Banerjee testified that the purpose of his correspondence was to highlight the need to have comparable compensation to ensure consistent retention of pathologists within the Province.[118]

Dr. Nebojsa (Nash) Denic

142. Dr. Denic is the current Clinical Chief of the Laboratory Medicine Program for Eastern Health. He assumed this position in March of 2006. Previous to this, Dr. Denic was the President of the Newfoundland Association of Pathologists (NAP) from November 2004 until November 2007. In this role he advocated on behalf of pathologists on matters such as remuneration, staffing levels, recruitment and retention. During his tenure, Dr. Denic made several presentations to Government officials, including various Ministers of Health.

143. Specifically, Dr. Denic spoke to the external consultant report concerning pathology workloads that came about as a result of a series of meetings with the then Minister of Health, Mr. Tom Osborne, in October 2006. Government advised the NLMA and the NAP that it would not examine the issue of compensation until an external work load review was completed. In view of this position, Dr. Raymond Maung, a pathologist practicing in British Columbia, was tasked to perform such a review because of his experience with similar reviews in the past. His final report was presented to Government in January 2007,

[118] Evidence of Diponkar Banerjee, 30/07/2008, p.187-188, lines 17-7.

following which the Minister of Health met with Treasury Board and the pathologists received the oncology bonus in May 2007.[119]

144. It is noteworthy that many of the issues that Dr. Maung dealt with in his report still have not been addressed in 2008, such as workload and increasing the number of pathology positions, particularly at tertiary care centres. However, the matter of improved compensation was resolved in May 2008, as was additional time and funding for CME activities.[120]

Dr. Mahmoud Khalifa

145. The current situation as evidenced by Dr. Denic's testimony was in stark contrast to the evidence provided by Dr. Khalifa. When he arrived to begin practicing in Newfoundland in 1995, he testified that he was "shocked" by the salary and that remuneration was a major concern among his pathology colleagues.[121]

146. Dr. Khalifa gave two examples surrounding the lack of recognition and remuneration afforded to pathologists at the time. First, a promotion to Professor status did not trigger a corresponding increase in his salary and second, extra work undertaken by him in providing second opinions to colleagues in out-of-

[119] Evidence of Nebojsa (Nash) Denic, 11/09/2008, p.165, lines 6-18.
[120] Evidence of Nebojsa (Nash) Denic, 11/092008, p.165-173, lines 19-15.
[121] Evidence of Mahmoud Khalifa, 24/07/2008, pp.38-39, lines 18-17.

town hospitals and to the Newfoundland Cancer Treatment Research Foundation would not be compensated.[122]

147. While remuneration was important, the lack of respect and recognition for his work contributed to Dr. Khalifa's decision to leave the province and practice in Ontario.

(3) No Formal IHC Director's Position

148. As previously noted, this was an important issue observed by Dr. Banerjee in his initial external review report.

Dr. Donald Cook

149. With respect to Dr Banerjee's recommendation to have an officially designated pathologist as Director of IHC, Dr. Cook testified that, following Dr. Khalifa's departure in 1999, there was a period of time when there was no one pathologist in charge of overseeing IHC. Dr. Cook recognized this problem and actively sought out individuals to assume the role. He eventually was successful when he recruited Dr. Ejeckam in 2002 to act as a point person. In the interim, the responsibility for overseeing any difficulties with IHC fell to the Site Chief or the pathologist on call at the Health Sciences Centre.[123]

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[122] Evidence of Mahmoud Khalifa, 24/07/2008, pp.39-41, lines 17-5; pp.77-78, lines 5-20.
[123] Evidence of Donald Cook, 02/07/2008, pp.64-66, lines 14-5.

(4) Lack of Ability to Sub-specialize

Dr. Brendan Mullen

150. Dr. Mullen was asked by Commission counsel if he could offer any explanation as to why the problems with ER/PR testing had gone on for so long. In response, he opined that the problems may not have been obvious to pathologists if they were only looking at a couple of cases per month. Rather, pathologists would be much more attuned to technical issues if exposed to cumulative problems across multiple cases.[124] This observation was supported by all pathologists who testified that on average they would have seen 1-2 ER/PR cases per month.

Dr. Donald Cook

151. As noted previously, the critical manpower shortages throughout Dr. Cook's tenure obviously impacted on his department's ability to sub-specialize. A stable manpower situation is a sine qua non for this to occur. If sub-specialization had been achievable, this would have allowed for the development of a small group of pathologists to interpret ER/PR. Such a group would then be able to recognize issues associated with fixation/tissue processing, internal controls, slide quality and possible trends. In hindsight, Dr. Cook felt had they been able

[124] Evidence of Brendan Mullen, 26/06/2008, pp.268-269, lines 24-20

to sub-specialize sooner, the problem with ER/PR testing could have been identified earlier.[125]

Dr. Beverley Carter

152. Dr. Carter was questioned by Commission counsel on her efforts, shortly following her arrival in 2003-04, to have the opportunity to review all ER/PR slides as a way to keep up her skill set in breast pathology interpretation. She recalled that some of her colleagues were supportive of her suggestion, but others saw it as a potential problem should she take over all breast pathology interpretation and then leave somewhere down the road. From their perspective such an approach could create a situation whereby pathologists would lose their skill set in an area, only to be forced to resume it after a hiatus.[126]

Dr. Carolyn Morris-Larkin

153. Dr. Morris-Larkin's testimony added another perspective to the complexity and the concerns surrounding the notion of sub-specialization. In her view, due to the size of the province and the number of available pathologists, some members felt they had to be able to maintain a broad skill set and general experience in order to practice effectively.[127]

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[125] Evidence of Donald Cook, 03/07/2008, pp.250-252, lines 24-1.
[126] Evidence of Beverley Carter, 28/07/2008, pp.209-210, lines 20-7.
[127] Evidence of Carolyn Morris-Larkin, 07/10/2008, pp.107-109, lines 22-9.

(5) No Tracking of Positivity Rates

Dr. David Dabbs

154. Dr. Dabbs informed the Commission that currently in his department someone from quality assurance keeps track of all pathology reports and generates quarterly analysis of positivity and negativity percentages. He called this information "metrics" which he as Department Chief reviews with other team members. The statistical results generated from this data should be fairly constant with no wild fluctuations.[128]

155. The importance of this information is that it gives the department the ability to compare the results with the literature and presumably identify a problem if it occurs. By way of example, Dr. Dabbs testified that he would be concerned if more than 2% repeats were being conducted of IHC tests because this can indicate issues surrounding tissue processing.[129]

156. As part of a sound foundation for quality assurance, Dr. Dabbs felt that metrics have to be in place to statistically demonstrate that there is proper grossing of specimens, creation of controls, etc.[130]

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[128] Evidence of David Dabbs, 16/09/2008, pp.45-47, lines 24-22.
[129] Evidence of David Dabbs, 15/09/2008, pp.206-209, lines 13-8.
[130] Evidence of David Dabbs, 16/09/2008, pp.63-64, lines 7-7.

(6) Lack of Ability to Detect Trends

157. As previously referenced, Dr. Cook testified that a large part of the inability to detect trends was directly linked to two main issues: 1) high turnover of pathologists; and 2) lack of ability to sub-specialize. Despite this, the Commission did hear evidence from some pathologists as to occasional problems which were detected.

Dr. Ford Elms

158. Dr. Elms testified that sometime during 2000-2001, he noticed some technical difficulties with slides "on occasion" such as tissue boiling off or "knife chatter". He saw these problems as sporadic in nature and something that would not necessarily compromise his interpretation. However, if they did, Dr. Elms would ask for a repeat and would discuss the issue with the lead technologist – likely Ms. Mary Butler. He recalled an occasion when he was informed by Ms. Butler that they were working on a problem that he had drawn to her attention.[131]

159. Dr. Elms estimated that he would report approximately 50 ER/PR tests annually. He did recall occasions when he received requests for repeats by oncologists, but this may have been once or twice in a year and he could not recall the

[131] Evidence of Ford Elms, 02/09/2008, pp.47-51, lines 11-20.

specific reasons surrounding the repeat requests. More importantly, Dr. Elms did not recall any complaints by oncologists about IHC results generally.[132]

160. Dr. Elms was asked about three specific occasions in the summer of 2002 where he had requested repeats of ER/PR. In answering Commission counsel's question, Dr. Elms said he did not detect any particular problems or trends at the time.[133]

161. With respect to a repeat request by Dr. Zaidi[134], Dr. Elms agreed that in hindsight the change would technically be considered a conversion. However, he was unsure as to whether he reported the change to anyone other than Dr. Zaidi. More importantly, Dr. Elms admitted that his knowledge at the time did not allow him to appreciate the question as to whether the change should trigger a look-back at other cases. During cross-examination by counsel for the Class Action, Dr. Elms stated as well that his knowledge at the time did not trigger an appreciation as to whether he had an obligation to report the change in result.[135] Moreover, he was unaware of any patterns of changes that may have been occurring as there was no database kept to track issues such as this.[136] Finally, in cross-examination by counsel for the Canadian Cancer Society, Dr. Elms

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[132] Evidence of Ford Elms, 02/09/2008, pp.54-60, lines 7-2.
[133] Evidence of Ford Elms, 02/09/2008, pp.65-66, lines 20-13.
[134] Exhibit C-0174
[135] Evidence of Ford Elms, 02/09/2008, pp.392-393, lines 21-8.
[136] Evidence of Ford Elms, 02/09/2008, pp.393-395, lines 9-21.

acknowledged that his appreciation today has changed as should a similar result occur now, he would document and report it.[137]

Dr. Donald Cook

162. Dr. Cook was asked by Class Action counsel as to whether the case of Ms. Christine Purcell could have led to an investigation as to the reasons for her test result change. In hindsight, Dr. Cook agreed that had such a finding been brought to his attention as Clinical Chief by the original pathologist, it may have triggered consideration of a possible look-back.[138]

Dr. Carolyn Morris-Larkin

163. Like Dr. Elms, Dr. Morris-Larkin was questioned on one of her pathology reports from 2003. This report had 2 Addendums three days apart in which the ER/PR was repeated.[139] The ER upon repeat went from 0% to 80% which was acknowledged by Dr. Morris-Larkin as a significant change. However, Dr. Morris-Larkin did telephone the Cancer Clinic to advise them of the change but was uncertain as to whether she received any feedback. She admitted she did not inform the Clinical Chief but may have informed Dr. Ejeckam. She likely would

[137] Evidence of Ford Elms, 02/09/2008, pp.384-385, lines 18-19.
[138] Evidence of Donald Cook, 07/07/2008, pp.211-214, lines 13-11.
[139] Exhibit C-0175

not have completed an occurrence report, explaining that she would have considered this to be an issue that arose within the expected realm of practice.[140]

164. With hindsight today, Dr. Morris-Larkin testified she would likely consider it an internal lab occurrence, report the change within the lab and investigate it. She would not think the situation was such that it would require an occurrence report. However, if there were months in between the two test results (versus three days) then an occurrence report would likely be required.[141]

165. Anecdotally, Dr. Adam Burfsky provided the Commission with a similar perspective from the oncology point of view.[142]

Dr. David Dabbs

166. Dr. Dabbs spoke to the ability of pathologists to detect trends based on their knowledge level. By way of example, he referenced the incidents of typically high expressor tumors. Dr. Dabbs testified that tubular, classical papillary, lobular and invasive lobular are considered high expressors. Thus, if he were to receive an ER/PR test which was negative for these tumors, he would consider it a "red alert" that required corrective action such as a repeat of the test.[143]

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[140] Evidence of Carolyn Morris-Larkin, 07/10/2008, pp.93-95, lines 4-8.
[141] Evidence of Carolyn Morris-Larkin, 07/10/2008, pp.95-97, lines 16-17.
[142] Evidence of Adam Brufsky, 01/10/2008, pp. 73-76
[143] Evidence of David Dabbs, 15/09/2008, pp.223-224, lines 20-15.

167. However, as was evident from the overall testimony of other pathologists, knowledge levels vary depending on training and experience. This included knowledge surrounding high expressor tumors. It was not until May 2003 with Dr. Ejeckam's memo that this point was highlighted, as were other issues such as internal controls, reporting methods and the incidence of ER negative/PR positive tumors.

168. By way of example, Dr. Denic introduced exhibits from various recognized textbooks such as Ackerman's which contained references suggesting there was not much correlation between the type of cancer and ER status[144] and that 70-92% of lobular carcinomas were ER positive[145].

(7) The 2003 Stoppage of ER/PR and Other IHC Antibodies

Dr. Gershon Ejeckam

169. Shortly prior to April 2003, Dr. Ejeckam recalled discussions during the weekly conferences with his colleagues about the inconsistency of the quality of certain stains, in particular, the issue of background staining. Given that Dr. Ejeckam held the informal role as point person for IHC, his colleagues asked him to

[144] Exhibit P-2623, p.3
[145] Exhibit P-2625, p.3

address the issue. He agreed and stopped the eight antibodies, including ER and PR, as outlined in his April 4, 2003 memo.[146]

170. This memo was copied to the lab manager, Mr. Barry Dyer, and all technical staff, as well as pathologists throughout the province. Dr. Ejeckam's purpose in taking this measure was to concentrate on achieving a crisp nuclear stain that would be easy to interpret by pathologists. He confirmed that he did not consult with his Clinical Chief, Dr. Cook, nor the V.P. of Medical Affairs, Dr. Williams, because he considered this intervention to be strictly a lab issue for which he was responsible and had the support of his colleagues.

171. Dr. Ejeckam felt that at no time was there a danger to patients. Furthermore, it was his understanding that during the entire stoppage all tests that needed to be performed were either held or, if urgent, sent outside St. John's for testing.[147]

172. Because of Dr. Ejeckam's background in quality assurance, Dr. Cook also asked him to oversee the Surgical Pathology Review Committee (SPRC). This Committee held its first meeting on April 1, 2003.[148] After the decision to stop some of the IHC stains, Dr. Ejeckam notified the committee members. Later, at the September 2003 meeting, he informed the Committee that the problems had been resolved.

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[146] Exhibit P-0113, p.1
[147] Evidence of Gershon Ejeckam, 03/06/2008, pp.220-224, lines 4-3.
[148] Exhibit P-0904, p.1

173. During the period of the stoppage, Dr. Ejeckam worked with the technologists, in particular, Ms. Mary Butler. He helped look for good control tissues and assisted Ms. Butler in altering titration times and antigen retrieval times. The purpose of the exercise was to see which times would give better reactions and crisper slides.[149]

174. Dr. Ejeckam confirmed to Commission counsel that he did not directly seek any input from DAKO and was uncertain as to whether the lab manager, Mr. Barry Dyer, had contacted them for any assistance as he was not informed.[150]

175. In terms of the remaining six antibodies, Dr. Ejeckam stated that he worked on these subsequent to ER/PR and again the main focus was antigen retrieval. Following his work with the technologists, Dr. Ejeckam recalled that he was satisfied with the changes that occurred and noticed a positive difference in the staining quality.[151]

May 2, 2003 Memo

176. As with his previous memo of April 2003, Dr. Ejeckam copied the May memo to the site chiefs, the clinical chief and all pathologists, as well as the lab manager and technologists.[152] His purpose in issuing this memo was to provide

[149] Evidence of Gershon Ejeckam, 03/06/2008, pp.224-226, lines 13-16.
[150] Evidence of Gershon Ejeckam, 03/06/2008, pp.227, lines 3-17.
[151] Evidence of Gershon Ejeckam, 03/06/2008, pp.232-235, lines 22-1.
[152] Exhibit P-0113, p.2

information to his colleagues concerning important interpretative indicia for ER/PR. He confirmed he did not expect to receive any written feedback, but did have discussions subsequently with some pathologists who felt that the quality of the slides had improved.[153]

177. Dr. Ejeckam informed the Commission that the information contained in this memo was not based on any particular findings from his work with troubleshooting the slides over the previous 4-5 weeks, but rather information he had obtained from journals and textbooks on IHC, including a 2002 textbook by Dr. David Dabbs.[154]

June 19, 2003 Memo

178. This was the third and final memo issued by Dr. Ejeckam in 2003.[155] Its purpose was to bring forward his concerns to the Program Director, Mr. Terry Gulliver, of potential future risks. Dr. Ejeckam testified that following the issuance of this memo, he had discussions with Dr. Cook about its contents. Mr. Gulliver did not provide a written reply or arrange a meeting.[156]

179. When asked by Commission counsel whether he spoke with the V.P. of Medical Affairs about his concerns, Dr. Ejeckam again stated that it was an internal lab

[153] Evidence of Gershon Ejeckam, 03/06/2008, pp.241-242, lines 4-22.
[154] Evidence of Gershon Ejeckam, 03/06/2008, pp.274-275, lines 21-9.
[155] Exhibit P-0113, p.5
[156] Evidence of Gershon Ejeckam, 04/06/2008, pp.28-29, lines 8-11.

issue which he did not consider to be of sufficient critical importance to raise directly with Dr. Williams. Dr. Ejeckam felt that the appropriate person to bring these concerns forward to the attention of the V.P. Medical was the Program Director, who controlled the budget and had the influence to bring about necessary change.[157] While the conditions were improved enough to continue on with IHC in May 2003, the deficiencies he highlighted in his last memo still needed to be addressed.

180. Dr. Ejeckam pointed out in his evidence that his emphasis was on the future and the problems that may occur if these matters were not corrected. Specifically, if the status quo remained without the changes he recommended involving staff and resources, he would not be able to provide any further reassurances concerning the quality of the slides.

181. When asked his opinion as to whether he believed the lab was providing an "unreliable and erratic" IHC service in June 2003, Dr. Ejeckam replied that he did not.[158] He was then asked why he did not raise the issue again later after he did not see any immediate changes. Dr. Ejeckam replied by stating that he had already provided the memo to all the appropriate people who could invoke change. More importantly, he did note that later on the IHC portion of the lab was moved to a separate section, thereby eliminating his concerns over humidity

[157] Evidence of Gershon Ejeckam, 04/06/2008, p.4, lines 13-25.
[158] Evidence of Gershon Ejeckam, 04/06/2008, p.26, lines 4-14.

levels. As well, certain staff were eventually dedicated to performing the IHC procedure.

182. Dr. Ejeckam was asked about his use of language in all three memos. He replied that, despite the tone, he did not feel there was any danger to patients through the work carried out by the technologists.[159]

183. At the time of this memo, Dr. Ejeckam was also aware that the knowledge level of the technologists working the lab needed to be improved and that they did not receive any continuing education. As such, he offered them the opportunity to meet on a regular basis to assist in understanding the basic concepts of IHC.[160]

184. As for any concerns over the DAKO system in use at the time, Dr. Ejeckam understood that the whole system was semi-automated but it was a system he had been familiar with from his work in Doha and therefore he had no specific concerns with the technology per se.[161] Instead, his focus was on the practical side in making sure technologists would produce a good quality product that could be interpreted by pathologists.

185. When asked on cross-examination by Class Action counsel whether he saw any evidence for consideration of a retest based on his 2003 findings, Dr. Ejeckam was firm in stating that he saw his role as troubleshooting problems arising from

[159] Evidence of Gershon Ejeckam, 04/06/2008 pp.16-17, lines 21-15.
[160] Evidence of Gershon Ejeckam, 04/06/2008, pp.99-100, lines 17-3
[161] Evidence of Gershon Ejeckam, 04/06/2008, pp.211-212, lines 24-14

his observations and those of his colleagues around that time. More importantly, his efforts were directed at improving the technical quality of the stains to allow for better interpretation. He did not see any objective basis for recommending a look-back at that time.[162]

Dr. Donald Cook

186. Dr. Cook testified that he did not recall receiving any complaints prior to Dr. Ejeckam's April 2003 memo. He viewed the memo as reassurance that the selection of Dr. Ejeckam as the point person for overseeing IHC was appropriate and did not pursue it with him further. This view was reinforced when he received the information contained in Dr Ejeckam's second memo of May 2003.

187. However, Dr. Cook did speak with Dr. Ejeckam following receipt of his June 2003 memo. This discussion centered on Dr. Ejeckam's concern surrounding the lack of resources and his frustration with the management structure.[163] Afterward, Dr. Cook approached Mr. Gulliver who gave him the impression he would follow up with Dr. Ejeckam and ensure his concerns were addressed. Like Dr. Ejeckam, Dr. Cook viewed the April 2003 stoppage as an internal lab issue and did not pursue it with the V.P. of Medical Affairs.[164]

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[162] Evidence of Gershon Ejeckam, 05/06/2008, pp.25-26, lines 1-16
[163] Evidence of Donald Cook, 07/02/2008, pp.260-262, lines 5-2
[164] Evidence of Donald Cook, 07/02/2008, pp.262-263, lines 3-2

188. When asked about consideration of a review of previous test results in 2003, Dr. Cook stated that he did not see any objective evidence that there had been impact on patient care and recalled that in 2000-01 a number of cases had been sent to Cleveland for testing and no concerns were expressed at that time.[165]

Mr. Terry Gulliver

189. Mr. Gulliver testified that around the time of Dr. Ejeckam's April and May 2003 memos, he asked Dr. Ejeckam to put his requests and opinions in writing and this resulted in the June 19, 2003 memo. This was in direct contrast to Dr. Ejeckam's testimony. According to Mr. Gulliver, he was looking for documentation to take to his superiors when requesting additional lab funding. However, he also admitted that despite this intention, he never brought forward the memo to the attention of his superior, Dr. Williams. Instead, Mr. Gulliver felt that this was Dr. Cook's responsibility even though the memo was addressed to him personally.[166] Also in direct contrast to Dr. Ejeckam's testimony, Mr. Gulliver testified that he met with Dr. Ejeckam and Mr. Dyer to discuss its contents.[167]

190. Commission counsel asked Mr. Gulliver why from 2003 onward his program goals and objectives did not reference the need for increasing resources for the IHC program and employing a quality manager. In response, Mr. Gulliver stated that he felt the issues raised by Dr. Ejeckam had been dealt with and that he did

[165] Evidence of Donald Cook, 02/07/2008, pp.266-269, lines 5-5
[166] Evidence of Terry Gulliver, 08/10/2008, pp.52-54, lines 17-17
[167] Evidence of Terry Gulliver, 08/10/2008, pp.32-33, lines 18-4

not hear further from him about the IHC program following his June memo and therefore he assumed that Dr. Ejeckam was pleased with the changes that had been implemented.[168]

191. Finally, Mr. Gulliver stated that he did not receive a copy of the correspondence from DAKO to Mr. Barry Dyer and Ms. Butler, dated April 22, 2003, which stated that "variability in patient slides might be due to variability in tissue preparation" and that it might be a good idea to set some guidelines for all of the regional hospitals on this topic.[169] This issue was not brought to his attention until sometime around 2005-2007.[170]

Dr. David Dabbs / Dr. Diponkar Banerjee

192. Dr. Dabbs and Dr. Banerjee felt that the problems detected in 2005 could have been detected in 2003 following the concerns raised by Dr. Ejeckam, as these could have triggered consideration about a possible external review.

(C) Were the testing protocols in place between 1997 and 2005 reasonable and appropriate?

(1) The Transition from Biochemical Assay to IHC Assay

[168] Evidence of Terry Gulliver, 08/10/2008, pp.72-73, lines 20-13
[169] Exhibit P-2155
[170] Evidence of Terry Gulliver, 08/10/2008, pp.27-28, lines 8-13

Dr. Mahmoud Khalifa

193. When Dr. Khalifa arrived in Newfoundland in 1995, ER/PR testing was performed using the biochemical assay method. However, IHC testing was performed on other tissue specimens. Based on his training and experience, Dr. Khalifa did not believe this was the optimal method for reporting ER/PR and therefore began the process of transforming reporting to IHC assay in 1997-98. As part of this process, he strived to ensure that the IHC lab was producing equally reliable results as those performed under the biochemical assay method. Thus, from January 1997 until September 1997, he performed an internal correlation and optimization exercise in conjunction with a pathology resident. This involved correlation of results of at least 19 cases.[171] Also during this time, and continuing until March 1998, both procedures were being run in parallel with both results provided to oncologists. During this transition, Dr. Khalifa read all slides and consulted with pathologists and oncologists for their feedback.

194. In his testimony, Dr. Khalifa impressed the point that his correlation exercise was not intended as a formal validation of the ER/PR test. Rather, studies had already been conducted and the ER/PR antibody being used had been validated.[172]

195. On March 12, 1997, during the parallel testing phase, Dr. Khalifa wrote Mr. Terry Gulliver, who was then in the position of Lab Manager. The issue concerned the

[171] Evidence of Mahmoud Khalifa, 24/07/2008, pp.149-150, lines 5-10
[172] Evidence of Mahmoud Khalifa, 24/07/2008, pp.156-157, lines 6-24

failure to order a replacement kit for ER/PR on time. In this correspondence, Dr. Khalifa strongly emphasized the importance of not using a new detection system in combination with an old primary antibody.[173] In his testimony, Mr. Gulliver agreed that he did not appreciate the delicacy surrounding the IHC test at this time.[174]

196. Also, during the transition phase, it became clear that all pathologists would be reporting their own cases. As part of this second phase, Dr. Khalifa made available a small collection of cases for review so that individual pathologists could become comfortable in reporting.[175] At no point were any concerns expressed to him about this arrangement. Instead, there was much discussion centered around how to report IHC. As a result, Dr. Khalifa set about to achieve consistency. This culminated in his February 16, 1998 memo.

197. In this memo, which was sent to all Newfoundland pathologists, Dr. Khalifa informed them of the accuracy surrounding the IHC method and explained the final phase of the transition.[176] As pathologists began reporting their own cases, positive external controls would be sent out where possible. However, Dr. Khalifa acknowledged that due to financial constraints, it was not always possible to send out external controls to every site. Therefore, as a compromise he agreed to read the external controls in St. John's and satisfy himself that there

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[173] Exhibit P-1889
[174] Evidence of Terry Gulliver, 03/10/2008, pp.169-170, lines 8-8
[175] Exhibit P-2397
[176] Exhibit P-0594

was adequate staining on the slide. If requested, external controls would be sent out.[177]

198. According to Dr. Khalifa the contexts of his 1998 memo was not meant to be a policy, but rather suggestions towards a standardized approach to reporting since uniformity would be best for interpretation by oncologists. This was evident by the content of the memo itself which suggests that cases with 1-5% positivity should be reported as positive. The comment concerning 30% was added to provide explanation around how to compare an IHC assay with a biochemical assay.[178]

199. Although Dr. Dabbs was critical of Dr. Khalifa's use of a 30% cut-off value, it is worthwhile noting that a 2000 article by Dr. Giuseppe Santeusanio and others stated:

> "At present, there is neither a standard scoring method for evaluating immunostaining results nor a uniformly agreed cut-off value that defines ER positivity and that can be considered as the standard for all histopathology laboratories. In the present study, we observed that a cut-off value of positivity >30% for all MABs [monoclonal antibodies] used best separates patients with tumor stability from those with tumor progression".[179]

[177] Evidence of Mahmoud Khalifa, 24/07/2008, pp.179-182, lines 17-2.
[178] Evidence of Mahmoud Khalifa, 24/07/2008, p.315, lines 1-23
[179] Applied Immunohistochemistry & Molecular Morphology, vol. 8, no. 4, December 2000, 275-284 at 281.

200. Additionally, the 2000 article authored by Dr. Lester J. Layfield, a notable leader in immunohistochemistry, was referenced during cross-examination of Dr. Dabbs by counsel for Dr. Laing, et al. While Dr. Dabbs denied any knowledge of laboratories in the United States using a 30% cut-off, the Layfield article suggests otherwise and in fact confirmed that: "the threshold for calling a result positive varied widely among oncologists. Values associated with a positive result by IHC varied from 1 to 30%." This finding was consistent with the laboratory survey findings which showed that the cut-off points used for the assignment of breast cancer cell populations as positive for ER or PR differed between laboratories. The Layfield article detailed findings from a survey of 300 laboratories within the United States for their current practices regarding the assessment of ER and PR status in breast cancer tissue specimens. Eighty usable responses were received.[180]

Dr. David Haegert

201. Dr. Haegert testified that there was consensus to stop the biochemical assay method for ER/PR and to use IHC as of March 1, 1998. Because the biochemical procedure was the "gold standard" at the time, pathologists were satisfied that the results of Dr. Khalifa's correlation exercise demonstrated concordance between that method and IHC.[181]

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[180] The Breast Journal, vol. 6, no. 3, 2000, 189-196 at 195.
[181] Evidence of David Haegert, 04/09/2008, p.181-183, lines 21-6

202. He understood that many laboratories simply introduced IHC for ER/PR without any correlation and he felt the sample size of 19 cases was large enough because the results were very similar. As well, both methods were run in parallel for a significant period of time.[182]

203. Dr. Haegert stated that the logical person to review the positive external controls was the site chief.[183] Therefore, after Dr. Khalifa's departure in 2001, Dr. Parai was asked to assume that role.

Dr. Carolyn Morris-Larkin

204. In response to a series of questions from Class Action counsel on the issue of Dr. Khalifa's introduction of IHC for ER/PR, Dr. Morris-Larkin explained that the nature of pathology involves learning on the job. As such, she viewed IHC for ER/PR as falling within that context. She also felt that Dr. Khalifa provided some guidance and denied being over-confident in reporting since a learning curve would be expected.[184] However, in hindsight, if IHC were introduced today it is likely that a more formal in-service would now occur, in light of what has happened.[185]

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[182] Evidence of David Haegert, 03/09/2008, p.181-183, lines 21-6
[183] Evidence of David Haegert, 03/09/2008, p.186-187, lines 19-19
[184] Evidence of Carolyn Morris-Larkin, 07/10/2008, pp.261-263, lines 15-6
[185] Evidence of Carolyn Morris-Larkin, 07/10/2008, pp.264-266, lines 23-19

(D) Was there timely and appropriate communication?

(1) The Decision to Consult with Dr. Carter

Dr. Donald Cook

205. When asked by Commission counsel why Dr. Carter was identified to have a significant role in the re-testing as opposed to Dr. Ejeckam, Dr. Cook stated that he had an excellent resource person in Dr. Carter because she was a breast pathologist who had a solid knowledge of IHC and he viewed the ER/PR issue primarily as a breast cancer issue.[186] On top of this, Dr. Ejeckam had been away for a period of time in 2005 but Dr. Cook did speak with him about the events of 2003 following his return in July.[187]

(2) Communication with Pathologists from Other Regional Health Authorities

Dr. Donald Cook

206. In the early days of the investigation, Dr. Cook sent a memorandum to out-of-town pathologists on June 14, 2005 informing them about the ER/PR issue and requesting ER negative cases from 2002 to be sent in to St. John's for retesting.[188] After further investigation in conjunction with Dr. Carter, he sent a

[186] Evidence of Donald Cook, 03/07/2008, pp.47-48, lines 16-5; pp.73-74, lines 16-9
[187] Evidence of Donald Cook, 03/07/2008, pp.143-144, lines 3-18
[188] Exhibit P-0492

second memorandum in September 2005 requesting cases from 1997-2004.[189] Dr. Cook also made telephone calls to each of the out-of-town pathology directors in August 2005 to provide them with an idea about the situation as he knew it at that point.[190].

207. As a result of their joint investigation, Drs. Cook and Carter circulated a memo on July 28, 2005 to all pathologists concerning optimal assessment and reporting of hormone receptor status in infiltrating carcinoma[191]. Additionally, Dr. Cook organized meetings for the St. John's pathologists on August 1st and 5th 2005 following the decision to conduct an extensive review of the ER/PR tests. The purpose of this meeting was to address the concerns of his colleagues surrounding their individual cases being reviewed. At this meeting, Dr. Cook tried to reassure them by stating that the goal of the exercise was not to focus on individuals, but on patient care.

208. With respect to communicating the results of Dr. Banerjee's external review reports, Dr. Cook testified that he was instructed by the V.P. of Medical Affairs not to provide copies to his colleagues as they were protected from disclosure, but he was permitted to read the contents of the first report in a meeting sometime in November 2005.[192]

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[189] Exhibit P-0590
[190] Exhibit P-0581
[191] Exhibit P-0076
[192] Evidence of Donald Cook, 04/07/2008, p.281, lines 3-19

Dr. Nebojsa (Nash) Denic

209. Dr. Denic said that he received a copy of the original external review reports in May 2007 but that he did not distribute any copies to his colleagues since he was advised by Dr. Williams that they were protected under the *Evidence Act*. He did read out a portion of Dr. Banerjee's first report to pathologists in December 2007. Dr. Denic testified that he read out parts of both Dr. Banerjee's and Ms. Wegrynowski's second reports (May 2006) in June 2006 to Drs. Ejeckam, Makarla and Elms after asking Dr. Williams' permission.[193]

PART III – SUMMARY

210. In the Overview section of these submissions, reference is made to the extensive body of literature regarding patient safety. More specifically, the premise expressed by many authors that the "blunt end" i.e. regulators, administrators, economic policy makers and technology suppliers, control the resources and constraints that confront medical practitioners at the "sharp end" by shaping and presenting multiple and conflicting demands on their practice.[194]

211. It is submitted that the overall explanation for the problems surrounding ER/PR testing between 1997 and 2005 can be best described as "a systems failure". Nevertheless, it has been acknowledged by the pathologists who testified before

[193] Evidence of Nebojsa (Nash) Denic, 12/09/2008, pp.67-70, lines 19-21
[194] See Footnote #2

the Commission that their profession did have a role at the "sharp end" which could have possibly led to earlier recognition.

212. As outlined above, there were a number of factors which contributed to this under-appreciation of the problem. However, one thing that was uniform among each of these factors was how the "blunt end" of the health care system affected their performance at the "sharp end".

213. This Commission of Inquiry has been provided the authority to make recommendations that it considers "necessary and advisable" surrounding ER/PR testing procedures. Some of these changes have already been instituted. However, recognition should also be given to the fact that health care, by its very nature, is always subjected to constant changes. These changes include the economic and political changes, organizational and structural changes, knowledge and capability changes and technical and regulatory changes. Ordinarily, these changes have affected various activities within a health care organization by creating more operational complexity for medical practitioners practicing within this system. Unfortunately, for many years, the focus of attention was primarily directed at increased production and efficiency and not toward creating a more "resilient, robust and safer system".[195]

214. In looking forward, it is submitted that any recommendations should place more emphasis toward the "blunt end" of the system with specific direction on problem

[195] See Footnote #2

recognition and solutions. In so doing, this would allow for the creation of a patient safety structure which develops a more diverse and experienced health professional, one who will understand system issues and their potential effect on patient safety. With appropriate structures and knowledge, those at the "sharp end" will be well equipped to make the health care system work better for all patients.

PART IV – THE ONCOLOGY PERSPECTIVE

(A) What factors may have caused or contributed to the problem?

(1) Variation in Cut-Off Points for Positivity

Drs. Kara Laing, Joy McCarthy and Jehan Siddiqui

215. From the oncology perspective, testing by way of immunohistochemistry was relatively new during the mid to late 1990's. There were time periods during which the positivity cut-off for hormonal treatment was not well-defined. In fact, as late as 2000, the variation in cut-off points used by oncologists ranged from 1% to 30%.[196] Thus, depending on the time frame in which individual oncologists trained, their knowledge of the appropriate positivity cut-off was different. By way of example, Drs. Laing and Siddiqui were trained to use a positivity cut-off of 30%, while Dr. McCarthy was trained to use 10%.[197]

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[196] Exhibit P-2617, p. 5

[197] Evidence of Kara Laing, 09/09/2008, p. 131-132; Evidence of Joy McCarthy, 19/09/2008, p. 24-25; Evidence of Jehan Siddiqui, 05/09/2008, p. 352

216. Dr. Laing first became aware of contemplated changes to the cut-off while attending the San Antonio Breast Cancer Conference in 2000.[198] She testified that Cancer Centre oncologists began treating patients on the basis of 10% or greater sometime in 2001/2002, despite the fact that there was no formal direction to do so, either verbal or written, from the Director of the Cancer Clinic. She recalled that new staff members like Dr. McCarthy who joined in 2001, had always used a ten percent cut-off. She did acknowledge however, that it was likely that not all oncologists had adopted the new cutoff as early as January 1, 2001 and it might have been a more staggered change. She herself was on maternity leave until October 2001 and did not make the change until she returned to practice. As such, she could not say with any certainty when others switched.[199] Dr. Siddiqui was also unable to state precisely when the change in treatment cut-offs was fully implemented but did recall informal discussions with his colleagues on the subject in 2001 and 2002.[200]

217. Both Drs. Laing and McCarthy recalled receiving a variety of pathology reports with respect to ER/PR tests. Some gave percentages while others simply stated positive or negative.[201] In those latter instances, Dr. Laing stated that she would have called the pathologist to request a percentage before initiating treatment. Dr. McCarthy, on the other hand, assumed that pathologists were aware of the 10% cut-off and proceeded on the assumption that the written description of

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[198] Evidence of Kara Laing, 09/09/2008, p. 131-133
[199] Evidence of Kara Laing, 09/09/2008, p. 134-153
[200] Evidence of Jehan Siddiqui, 05/09/2008, p. 353-354
[201] Evidence of Kara Laing, 09/09/2008, p. 154-157; Evidence of Joy McCarthy, 19/09/2008, p. 27

positive referred to a result of 10% or greater. [202] The Commission has heard however, that the change to the positivity cut-off was never overtly communicated to the pathology department. Dr. Laing could not recall any formal announcement of the change during tumor board rounds nor was any official memo sent.[203]

218. It has been suggested that patients were potentially overlooked for retesting given the disconnect between the full implementation of the changing 10% cut-off and the parameters set to identify patients for retesting. From January 1, 2001, ER negative was defined as 10% or less for the purpose of identification of patients who required retesting.[204] While Dr. Laing was not consulted on, and had no input into, the decision on the parameters chosen for retesting, she did recall explaining the notion of the changing cut-offs to Drs. Cook and Williams and remembered telling them that ten percent was first considered as far back as 2000 at the San Antonio conference.[205]

219. Dr. Laing fully acknowledged that the use of January 2001 as the changeover point in time could have caused patients to be overlooked during the identification process for retesting. Based on this recognition, she explained that the Newfoundland and Labrador Centre for Health Information has been

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[202] Evidence of Kara Laing, 09/09/2008, p. 157; Evidence of Joy McCarthy, 19/09/2008, p. 27-28
[203] Evidence of Kara Laing, 09/09/2008, p. 138, 146-151
[204] Exhibit P-0590
[205] Evidence of Kara Laing, 09/09/2008, p. 143-144

consulted on devising a means of utilizing the newly created database to help identify if any such patients exist.[206]

(B) What factors may have led to the problem not being detected until 2005?

(1) Lack of Resources – The Revolving Door Syndrome

Dr. Kara Laing

220. From 1999 to 2002/2003, the Cancer Centre lacked a full complement of medical oncologists and suffered from a continuously high rate of staff turnover. When Dr. Laing arrived in 1999, three medical oncologists had just submitted their resignations. Instead of a staff of six, the centre was down to a staff of three, including Dr. Laing. She estimated that between 1999 and 2002, approximately twenty (20) medical and radiation oncologists came and went at the NCTRF.[207] As a result, sub-specialization was not possible as all oncologists were tasked with treating multiple disease sites, due to heavy workloads. These increased workloads also served to create an environment in which multiple people were tasked with review of patient results over different time periods. Under these conditions, the probability that unordinary or peculiar results from ER/PR testing went undetected was greatly increased.[208]

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[206] Evidence of Kara Laing, 09/09/2008, p. 138, 141-143
[207] Evidence of Kara Laing, 08/09/2008, p. 345-349
[208] Evidence of Kara Laing, 18/09/2008, p. 47-48

Drs. Kara Laing / Jehan Siddiqui

221. By 2001, things began to stabilize and a new oncology team began to evolve. Drs. Siddiqui, McCarthy, Rorke, Ahmad, Zulfiqar and Zaidi joined the ranks and to date, only Dr. Zaidi has left. Changes to the compensation package for oncologists in 2003 also made practice in St. John's, NL more attractive which also served to stabilize the previous staff turnover. Today, each medical oncologist has two major disease sites and one minor disease site as his or her primary focus.[209]

(2) Expected ER/PR Results

(i) Lobular Cancers

Drs. Laing, McCarthy and Siddiqui

222. All of the oncology witnesses testified that certain types of cancer were more likely to display a positive ER/PR result, of which lobular, tubular and ductal cancers are examples. With respect to tumor grades, it was known that well differentiated tumors are also more likely to be positive. Drs. Laing, McCarthy and Siddiqui all acknowledged that lobular cancers are more likely to display a positive ER/PR result and testified that lobulars should be positive in a range of anywhere from 75% to 90% of cases. However, none had ever heard of the idea

[209] Evidence of Jehan Siddiqui, 05/09/2008, p. 299-300; Evidence of Kara Laing, 08/09/2008, p. 327, 345-349

that lobulars were 100% positive as described by Dr. Cliff Hudis of Sloan Kettering.[210]

Dr. Diponkar Banerjee / Dr. Adam Brufsky

223. Notwithstanding the fact that the index case was an ER negative lobular, both Drs. Laing and McCarthy testified that they had no reason to question the initial result, despite testimony from Dr. Diponkar Banerjee that suggested both oncology and pathology should have done so.[211] Rather, Ms. Deane presented with metastases and a very aggressive cancer and the tumor was poorly differentiated. Dr. Adam Brufsky agreed that the level of aggressiveness of a cancer decreases the likelihood of ER/PR positivity.[212]

224. Furthermore, in a prior consultation with Dr. Maureen Trudreau of Sunnybrook Hospital in Toronto, Ms. Deane's negative result was also not questioned. More recently, Dr. McCarthy gave an example of a lobular tumor which was tested at Mt. Sinai and was confirmed negative by a pathologist there and later by Dr. Beverley Carter.[213]

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[210] Evidence of Jehan Siddiqui, 05/09/2008, p. 334-335; Evidence of Kara Laing, 09/09/2008, p. 117-118; Evidence of Joy McCarthy, 19/09/2008, p. 36-37
[211] Exhibit P-0046, p. 2; Evidence of Diponkar Banerjee, 30/07/2008, p. 129-130
[212] Evidence of Adam Brufsky, 06/10/2008, p. 63
[213] Evidence of Kara Laing, 09/09/2008, p. 273-275, 310-312; Evidence of Joy McCarthy, 19/09/2008, p. 65-66, 71-73

Dr. Jehan Siddiqui

225. Dr. Siddiqui testified that a lobular ER negative result on a poorly differentiated tumor would not have necessarily raised any red flag in his practice as he would have thought it was merely the exception to the rule. His attention might however have been raised had he seen several negative lobulars in a row. He explained that lobular cancers constitute only five to ten percent of all breast cancer cases. Thus, if a treating oncologist is only seeing forty breast cancer cases each year, this equates to just two to three lobulars over a twelve month period. In all likelihood these would be spread out over the course of the year, further reducing the ability of the reviewing oncologist to notice any particular trend.[214]

(ii) ER Negative, PR Positive Results

Drs. Laing and Siddiqui

226. Dr. Laing acknowledged that it was rare to see tumors that were ER negative but PR positive. Based on her training, she believed this should only occur in 10 to 15% of cases.[215] Drs. Siddiqui and Brufsky testified that this should only occur in 5% of cases.[216] A review of the Tumor Panel results indicate that approximately 130 cases had displayed an initial result of ER negative, PR positive prior to the

[214] Evidence of Jehan Siddiqui, 05/09/2008, p. 390-391
[215] Evidence of Kara Laing, 09/09/2008, p. 179
[216] Evidence of Jehan Siddiqui, 05/09/2008, p. 336; Evidence of Adam Brufsky, 06/10/2008, p. 173

retesting at Mt. Sinai. Dr. Laing acknowledged that neither she nor her colleagues identified this trend from 1999 to 2005. Dr. Laing believes that had the Cancer Centre had a database in place to track results, this would have been identified sooner.[217]

(3) Lack of Communication Between Oncologists

Drs. Kara Laing and Joy McCarthy

227. Several pathology reports entered into evidence at the Commission indicate that over the course of several months in 2003, four repeats of ER/PR testing were requested by oncologists.[218] Drs. McCarthy and Laing had no individual knowledge of these cases and testified that they were never advised of the requests for repeats by the respective oncologists involved or the reasons behind those requests. While one of the cases involved a patient of Dr. Laing's, she was not aware of the other three repeat requests during the same time period.[219]

228. While it is certainly difficult to speculate what the outcome may have been if all oncologists had been aware of these repeat requests, Dr. McCarthy testified that had she been advised, she would have likely discussed the issue further with the group and contacted pathology.[220] Dr. Laing testified that had she known, she

[217] Evidence of Kara Laing, 09/09/2008, p. 180-183
[218] Exhibits C-0174, C-0175,C-0226, C-0228
[219] Evidence of Joy McCarthy, 19/09/2008, p. 54-62; Evidence of Kara Laing, 09/09/2008, p. 242-253
[220] Evidence of Joy McCarthy, 19/09/2008, p. 61-62

likely also would have raised concern due to the short time period spanned by the repeat requests and after consideration of the surrounding circumstances.[221]

(4) Lack of Communication Between Oncologists and Pathologists

(i) Dr. Ejeckam – 2003 Problems with IHC

Drs. Kara Laing, Joy McCarthy and Jehan Siddiqui

229. With the exception of Dr. Siddiqui[222], oncologists were not aware of the problems with IHC testing identified by Dr. Ejeckam in 2003. Nor were they aware of the six week suspension of certain antibodies, including ER/PR. Drs. Laing and McCarthy did not see either of the 2003 memos during the relevant time period and were not even aware of their existence until 2006/2007. Both testified that had they been made aware back in 2003, they would have discussed it with their colleagues and contacted Dr. Ejeckam personally to ascertain the scope of the problem and to satisfy themselves that previous test results were not affected.[223]

230. While Dr. Siddiqui was a sitting member of the Surgical Pathology Review Committee, chaired by Dr. Ejeckam, he did not inform his colleagues of the suspension of ER/PR testing, in part due to his belief that the problem was of a technical nature and was best left to pathology to rectify. He also felt that it was

[221] Evidence of Kara Laing, 09/09/2008, p. 252-253
[222] Exhibit P-1572
[223] Evidence of Kara Laing, 09/09/2008, p. 193-200; Evidence of Joy McCarthy, 19/09/2008, p. 42-46

not his place as a committee member to do so and felt that this was best left to Dr. Ejeckam in his role as committee chair.[224]

(ii) Clarenville ER/PR Testing

Dr. Kara Laing

231. Oncologists also were not aware that Clarenville pathologists had been utilizing Mount Sinai for ER/PR testing.[225] Dr. Laing recalled a 2002 case in which a patient had two specimens sent for ER/PR testing - a biopsy specimen was tested through Clarenville via Mt. Sinai and reported as positive, while a mastectomy specimen was tested through St. John's and reported negative. After noticing what she believed to be an "odd" result, Dr. Laing was prompted to ask for a retest of the mastectomy specimen, however it was subsequently confirmed as negative. The patient however, was treated appropriately with Tamoxifen based on the positive biopsy specimen.[226] Ironically, upon retesting at Mt. Sinai in 2005, the mastectomy specimen converted to a positive result.[227]

232. At the time, Dr. Laing did not notice the Mt. Sinai markings on the Clarenville report and assumed that both specimens had been tested and reported in St. John's. Had she known that two different labs produced two different results, this would have prompted her to make further inquiries.

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[224] Evidence of Jehan Siddiqui, 05/09/2008, p. 380, 383-384
[225] Evidence of Kara Laing, 09/09/2008; Evidence of Joy McCarthy, 19/09/2008, p. 51-52
[226] Evidence of Kara Laing, 09/09/2008, p. 221-231
[227] Evidence of Kara Laing, 09/09/2008, p. 221-231

(C) Was there timely and appropriate disclosure and communication to patients and public?

(1) Disclosure to Patients Retested In St. John's

Drs. Laing and McCarthy

233. During June and July 2005, three batches of patients were retested in St. John's. In total, 58 patients had their ER/PR testing repeated.[228] It was decided at a meeting on May 17, 2005 between oncologists and the lab management team, that oncology would take responsibility for notifying any affected patients that required subsequent treatment changes.[229] Dr. Joy McCarthy was appointed as a "point person" and tasked with receipt of results from Drs. Carter and Cook. Her role was to identify the treating oncologist for the affected patient and notify them of the results change so that they in turn could notify the patient. If a particular patient was not followed by the Cancer Centre, Dr. McCarthy notified Dr. Cook that oncologists could not be responsible for such patients. Dr. McCarthy understood that Dr. Cook would subsequently handle notification of these patients.[230] Dr. McCarthy stated that her focus at that time was to identify and arrange for notification to only those patients who required actual treatment changes. There was no disclosure to those patients whose results did not change or to those who, for various reasons, were already taking Tamoxifen.[231]

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[228] Exhibits P-2452, P-0508, P-0535
[229] Exhibit P-0067, p. 3
[230] Exhibits P-2452, P-2602; Evidence of Joy McCarthy, 19/09/2008, p. 148-150
[231] Evidence of Joy McCarthy, 19/09/2008, p. 151

234. Both Drs. Laing and McCarthy would disclose any changed result and subsequent treatment changes to their own patients and had a similar approach to doing so even in the absence of a formal disclosure plan. Affected patients were contacted as soon as possible and invited to set up an appointment as face to face meetings were preferred so as to allow for ample opportunity for questions. Both physicians would briefly explain the index case, and state that retesting had been prompted because of that patient's converted result. Patients were advised of the change in lab testing technology and that the newer technique was thought to be more sensitive. The role of pathology was also discussed. Both Drs. Laing and McCarthy had no explanation at that point in time as to the real cause of the conversions and would both be honest with patients in telling them so.[232]

235. Upon review of the second batch of results on July 18, 2005, concern was raised given the number of conversions from negative to strongly positive. At that time, it was thought that the Ventana may have been over-calling results and disclosure to patients was discontinued for that reason.[233] While it was Dr. McCarthy's practice not to arrange for disclosure to patients that did not require treatment changes or had no change in results, Dr. Laing testified that she would have advised some of her patients with metastases regardless of the result obtained. These patients had been selected for retesting in the hope of finding a new treatment option and had often been told beforehand that they were being

[232] Evidence of Kara Laing, 10/09/2008, p. 58-64; Evidence of Joy McCarthy, 19/09/2008, p. 152-155
[233] Evidence of Kara Laing, 10/09/2008, p. 68-69; Evidence of Dan Boone, 29/10/2008, p. 63-64

retested. In these cases, Dr. Laing would advise of the results even if no change was found.[234]

(2) Dr. Laing's Position on Patient Disclosure

Dr. Kara Laing

236. As the summer of 2005 progressed, the issues of patient and public disclosure were frequently raised. During an August 10th, 2005 meeting of Mr. George Tilley, Dr. Williams, Dr. Cook, Dr. Laing and Ms. Pat Pilgrim, Dr. Laing was asked as to her opinion on disclosure to affected patients and whether it was appropriate to disclose at that time.[235]

237. It was Dr. Laing's position that letters should not be sent to patients at that time. Up to that point, it had been decided that Mt. Sinai would complete the retesting of all negative patients and Dr. Laing had been advised that this process would likely take four to six weeks. Given the relatively short anticipated turnaround time, she felt it was best to wait until they had the patient results in hand before disclosure occurred. That way, all information would be available to patients at the time of disclosure. She believed that sending letters in the absence of the retest results would create undue anxiety for patients and their families as they would be left pondering their fate unnecessarily.[236]

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[234] Evidence of Kara Laing, 10/09/2008, p. 72-73
[235] Evidence of Kara Laing, 10/09/2008, p. 228-231
[236] Evidence of Kara Laing, 10/09/2008, p. 228-231; Exhibit P-0564, p. 5

238. Dr. Laing's position was also influenced by the reality that the scope of the problem still remained unknown as of August 2005. There was no appreciation for the magnitude of patients that might be affected as the only predictive indicator they had at that time was the results of the in-house retesting – a biased sample chosen on the basis of histology and the likelihood of converting.[237]

Drs. Kara Laing and Joy McCarthy

239. Dr. Laing had previously discussed her position on patient disclosure with Drs. McCarthy and Ganguly, who both readily agreed with her approach. Like Dr. Laing however, their support for her position was tied to the estimated turnaround time of four to six weeks for receipt of the retesting results. Both Drs. Laing and McCarthy testified that had it been known that the time period would be much longer, their position would not have been to wait until receipt of results before initiating disclosure.[238]

240. Following the August 10th meeting, Dr. Laing was asked by Dr. Williams to attend an August 15th meeting with Minister John Ottenheimer. Dr. Laing testified that when asked to speak to patient disclosure for the Minister's benefit, she related the same position she had put forward previously on August 10th. At that time, Dr. Laing felt that she was speaking on behalf of oncology and not Eastern Health. Upon conclusion of the meeting, she understood that no formal decision

[237] Evidence of Kara Laing, 10/09/2008, p. 245-247
[238] Evidence of Kara Laing, 10/09/2008, p. 233, 266-267; Evidence of Joy McCarthy, 19/09/2008, p. 204-205

had been made and remained unclear as to the weight afforded to her position by Government or Eastern Health. Meeting notes indicate that at the conclusion of the August 15 meeting, Minister Ottenheimer had decided to accept the advice presented to him for now but would reconvene to revisit the issue in two weeks.[239]

Mr. George Tilley / Mr. John Ottenheimer

241. We now know that Dr. Laing's position was afforded great deference by both Government and Eastern Health.[240] John Ottenheimer testified that while his opinion as of August 15, 2005, was to notify patients and the public as soon as possible, he preferred to defer to the advice of Dr. Laing, a clinician who as a result of dealing with cancer patients on a daily basis, was in the best possible position to evaluate the impact of pre-mature disclosure on those patients.[241] Mr. George Tilley testified that like John Ottenheimer, he too wished to effect disclosure sooner rather than later, but admitted that it would have been unacceptable not to give deference to the opinion of health care professionals, like Dr. Laing who deal with patients on a daily basis.[242]

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[239] Evidence of Kara Laing, 10/09/2008, p. 279-280, 297, 310-311; Exhibit P-0138
[240] Evidence of John Ottenheimer, 31/03/2008, p. 57, 156, 183; Evidence of George Tilley, 17/04/2008, p. 123-124
[241] Evidence of John Ottenheimer, 31/03/2008, p. 57, 156, 183; Exhibit P-0138
[242] Evidence of George Tilley, 17/04/2008, p. 123-124

Dr. Kara Laing

242. Throughout the summer of 2005, Dr. Laing felt that she had only spoken to the issue of patient disclosure. She had not been asked to address disclosure to the general public.[243] Furthermore, she emphasized continuously that her opinion was tied to an estimated turnaround time of four to six weeks, a point that she felt was made clear to Dr. Williams, Mr. Tilley, and Government.[244] She also had no knowledge of HIROC and any influence it may have had on Eastern Health's ability to disclose to either patients or the general public.[245]

Mr. Daniel Boone / Mr. John Ottenheimer

243. While criticisms have been leveled at Dr. Laing's position with respect to the disclosure process, it appears that the well-being of patients was first and foremost in her mind at all times. To those who had the benefit of hearing Dr. Laing voice her concerns with respect to premature disclosure, it was apparent that the best interests of patients was her primary concern.[246] Upon review, Mr. John Ottenheimer agreed that her position was in fact consistent with a guideline respecting multi-patient disclosure published by the Canadian Patient Safety Institute in March 2008.[247]

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[243] Evidence of Kara Laing, 10/09/2008, p. 307-308
[244] Evidence of Kara Laing, 10/09/2008, p. 233
[245] Evidence of Kara Laing, 08/09/2008, p. 283-285
[246] Evidence of Dan Boone, 29/10/2008, p. 70; Evidence of John Ottenheimer, 07/04/2008, p. 299-300
[247] Evidence of John Ottenheimer, 07/04/2008, p. 299-300; Exhibit P-0161, p. 25

(3) The Tumor Panel – October 2005

Dr. Kara Laing

244. The Tumor Panel was created at the suggestion of Dr. Alan Kwan who thought it was appropriate to review the retested patients like those patients submitted to tumor board rounds for consultation. Thus, final recommendations for treatment would reflect a consensus of the opinions of surgeons, pathologists and oncologists.[248] The mandate of the Tumor Panel as decided on October 13, 2005 was "to review each patient individually and make a recommendation as a Panel on the most appropriate treatment and follow up for each patient".[249] Dr. Laing explained the role of members as being there to make decisions based on a review of the patient's chart and based on their knowledge of late hormonal therapy. The process was never intended to delve into any possible reasons and/or explanations for the conversions on retesting.[250]

245. It was discussed and agreed among the members that the referring physician would be notified of any result changes and subsequent treatment changes recommended. The primary cancer-treating physician would then be responsible for follow-up of those recommended treatment changes. If the chart review indicated that a patient was still being actively followed by the Cancer Clinic, the letter would be sent to that oncologist. If the patient had been discharged from

[248] Evidence of Kara Laing, 17/09/2008, p. 40-41
[249] Exhibit P-2457, p. 1
[250] Evidence of Kara Laing, 17/09/2008, p. 35, 52-53

the Cancer Center, the letter would be sent to the patient's family physician. If the family physician was not comfortable discussing the information with the patient, then a referral could be given back to the Cancer Centre.[251]

246. The Panel's primary purpose was to review those patients with changed results, however, it did briefly review the results of those patients who did not have a change. In those who were confirmed negative by the Panel, results were passed on to Ms. Nancy Parsons, who was tasked with notifying these patients by telephone. Oncologists did however offer to meet with these patients if they wished to discuss the results further.[252]

(4) Disclosure of Panel Recommendations

Dr. Kara Laing / Dr. Jehan Siddiqui

247. As the treating oncologists for many of the affected patients, Drs. Laing, McCarthy and Siddiqui were tasked with disclosing the retest results and subsequent treatment change recommendations to patients. While Dr. Laing admitted that there was no formal approach adopted and disseminated to those oncologists tasked with disclosure, she believed that based on informal discussions with her colleagues they all shared a similar approach. Drs. Laing and McCarthy testified that their approach was the same one utilized during the

[251] Exhibit P-2457, p. 1
[252] Evidence of Kara Laing, 17/09/2008, p. 135-136

previous disclosure to those patients retested in-house in June and July 2005. Dr. Siddiqui recounted a similar approach to disclosure in his testimony.[253]

(5) Did the Tumor Panel Delay Disclosure?

Drs. Kara Laing, Joy McCarthy and Jehan Siddiqui

248. It has been suggested that the Tumor Panel review process actually created delays in the communication of results and/or subsequent treatment changes to patients for various reasons. The most obvious delays were created when patients failed to receive notification due to confusion as to which physician was responsible for initiating disclosure in the first instance.

249. Dr. Laing testified about the circumstances of a patient who fell into this category. In September 2006, a patient with metastases was admitted under the care of Dr. Jonathan Greenland. Upon review of her chart, Dr. Greenland thought to make inquiries as to her retest results. Contact was made with Dr. McCarthy who confirmed that the pathology report from Mt. Sinai had been received in October 2005 and a Panel letter had been sent to Dr. Laing but no contact had been made with the patient.[254] Once brought to Dr. Laing's attention, she reviewed the Panel letter and realized that she had assumed that the family physician would follow-up with the patient as she had already been discharged from the care of the Cancer Centre. Upon realizing the error, Dr. Laing immediately spoke with

[253] Evidence of Kara Laing, 10/09/2008, p. 84-86; Evidence of Jehan Siddiqui, 05/09/2008, p. 73-76
[254] Evidence of Joy McCarthy, 19/09/2008, p. 310-312; Exhibits P-2569, P-1175

the patient and her family and explained the reasons for the delay. Full responsibility was taken for the mix-up and an apology was given.[255]

250. Delays in notification to patients were also incurred due to the practice of some oncologists to delay disclosure until the patient's next regularly scheduled appointment. Both Dr. McCarthy and Dr. Siddiqui testified that they would not arrange for immediate contact with patients whose results had not changed. If no treatment changes were required, they believed it was appropriate to wait until a patient's next regularly scheduled appointment. Dr. McCarthy testified that this approach was articulated to all oncologists by Dr. Laing in her role as Clinical Chief.[256] While Dr. Laing had no recollection of dictating that approach, she testified that this would have been appropriate in situations where the next regularly scheduled appointment was due to happen sooner rather than later.[257]

251. Finally, delays in patient notification were also attributed to administrative errors. Several examples were put before the Commission in which patient results and/or Panel letters were sent to someone other than the treating physician and simply filed without passing the document on to the correct physician. Dr. Laing fully acknowledged this issue and suggested that a lack of formal policy from Eastern Health as to what to do in those situations may have contributed to the problem in the first instance. Speaking to her own practice, she stated that upon receipt of patient information or results that she knows are not hers, she will

[255] Evidence of Kara Laing, 18/09/2008, p. 32-35
[256] Evidence of Joy McCarthy, 19/09/2008, p. 391; Evidence of Jehan Siddiqui, 05/09/2008, p. 62
[257] Evidence of Kara Laing, 18/09/2008, p. 220

identify the treating oncologist and forward it on to them for action. She would also record the date she had received it and the date she forwarded it on the document. While there is still no formal policy in place as to how to handle such situations, Dr. Laing believes that all oncologists are now using similar practices as she has received patient documentation with similar notations on it from other oncologists.[258]

252. In retrospect, had there been some formal mechanism in place as a means of tracking the progress of communication to patients, it is far less likely that patients would have been missed or been subjected to any delays in the disclosure process, a point that was fully acknowledged by Dr. Laing.[259]

(6) Deceased Patient Results

Dr. Kara Laing

253. At a Panel meeting held on October 20, 2005, it was decided that deceased patient results would not be reviewed. Instead, these results were to be put aside until all living patients had been dealt with.[260] Dr. Laing testified that this decision arose in part due to uncertainty surrounding notification of surviving family members and a desire to focus already sparse resources on those living patients that might still receive some benefit from treatment, albeit delayed. It was never

[258] Evidence of Kara Laing, 10/09/2008, p.173-184
[259] Evidence of Kara Laing, 18/09/2008, p. 223-224
[260] Exhibit 2552, p. 1

her intention not to complete the retesting of deceased patients and she thought it was important to do so in order to have a full appreciation of the number of patients impacted by the retesting. It was simply her belief that living patients should be given priority.[261]

(i) Ethics Consult – May 2006

Dr. Joy McCarthy / Mr. Daniel Boone

254. In May 2006, an Ethics Consult was held to explore the potential issues raised by the continued retesting of deceased patient results. Dr. McCarthy attended on behalf of oncology and recalled that notification of results to surviving family members was the subject of much discussion. The notion of the right of families not to know versus the right to know was explored and debated in much detail. Upon conclusion, it was the recommendation of those in attendance that deceased patient results would be made available to those families that requested them.[262]

Dr. Kara Laing / Mr. Tom Osborn / Mr. Darrell Hynes

255. At a meeting with Minister Tom Osborne on November 23, 2006, the issue of deceased patient results was once again raised. Dr. Laing recalled the Minister wanting to know the total number of deceased patients involved and how their

[261] Evidence of Kara Laing, 10/09/2008, p. 225-226; Exhibit P-0564, p. 5
[262] Exhibit P-0481; Evidence of Joy McCarthy, 19/09/2008, p. 293-297; Evidence of Dan Boone, 29/10/2008, 170-173

retesting results factored into the overall situation.[263] It was subsequently explained that not all deceased results had been received as testing had been temporarily halted. Minister Osborne and his policy advisor, Darrell Hynes, both testified that the meeting became quite heated from that point onward. According to Eastern Health, 101 deceased patients had been retested up to that time, with 73 further patients being held in abeyance. Both witnesses recalled that Dr. Laing appeared to be more concerned with the living than the dead and was quite emphatic on the issue. [264] Dr. Laing had no recollection of any heated exchange at this meeting and did not leave the meeting with any sense that either the Minister or Mr. Hynes had been dissatisfied with the position she put forth.[265]

(ii) Decision to Retest All Deceased Patients

Dr. Kara Laing

256. In 2007, a decision was made to continue with retesting of deceased patients. While these results were never paneled, oncologists agreed that they would meet with families at their request to discuss the retest results of their loved ones. If a meeting was requested, the patient's chart would be pulled and an assessment made as to what impact the changed result may have had.[266]

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[263] Evidence of Kara Laing, 18/09/2008, p. 63-64
[264] Evidence of Tom Osborne, 09/04/2008, p. 50-53; Evidence of Darryl Hynes, 19/06/2008, p. 43-46
[265] Evidence of Kara Laing, 18/09/2008, p. 65-67
[266] Evidence of Kara Laing, 18/09/2008, p. 138-141

(7) DCIS Patients and False Positives (Retro Convertors)

(i) DCIS Patients

Dr. Kara Laing

257. During the retesting process at Mt. Sinai, it was discovered that several patients had been misdiagnosed as having invasive disease. Mt. Sinai did not retest these patients and issued a new diagnosis of DCIS or ductal carcinoma in situ. In some cases, additional blocks thought to be better representative of the tumor were sent and the original diagnosis was re-confirmed. In at least four cases though, the original diagnosis was deemed to be incorrect.[267] While DCIS patients were not specifically reviewed by the Panel, it is submitted that disclosure was effected in an appropriate manner.

258. Dr. Laing was involved in the four instances that required disclosure to DCIS patients and described it as a joint effort among oncology, pathology and Quality Initiatives. As the original diagnosis had changed, it was thought appropriate to arrange face to face meetings with affected patients. Drs. Laing and Denic along with Ms. Nancy Parsons of QI were present. Pathology's role was to explain the nature of the disease and the difference between that and the earlier diagnosis of invasive disease, oncology would speak to the issue of treatment changes, and the QI representative would fill the role of patient support. Dr. Laing recalled that in all four disclosure meetings, patients were given an opportunity to ask

[267] Evidence of Kara Laing, 18/09/2008, p. 8-9

questions, provided with contact information in the event that follow-up was requested and most importantly, offered an apology.[268]

(ii) False Positives (Retro Convertors)

Dr. Kara Laing

259. The term "retro convertors" was coined throughout the retesting process to describe those patients that had converted from positive to negative. As a result of the original positive result, some patients had received Tamoxifen or an equivalent hormonal treatment and now needed to discontinue it. Others had received the full course of treatment and were now finished. All of these cases were reviewed by the Tumor Panel and recommendations were made. Dr. Laing understood that all patients in this category were disclosed to, whether treatment changes were required or not.[269]

260. Dr. Laing acknowledged the fact that ER/PR testing via IHC had the potential to produce false negative results. She was not aware however of the potential for false positives but did agree that the retro-convertors were technically examples of false positive results. Dr. Laing would not concede though that the discovery of these "false positive" results should have prompted a retesting of all positive ER/PR results due to the low number of patients involved. She further understood that these cases were reviewed by Drs. Carter, Denic and Cook and

[268] Evidence of Kara Laing, 18/09/2008, p. 10-16; Exhibits C-0233, C-0234, C-0235, C-0237
[269] Evidence of Kara Laing, 18/09/2008, p. 22-24, 30; Exhibits P-2642, P-1373

that background staining was deemed to be the problem. Dr. Denic described it as an interpretation error.[270]

(8) The Evidence of Patient Beverley Green

Ms. Beverly Green / Dr. Jehan Siddiqui

261. Patient Beverly Green testified as to the circumstances surrounding the disclosure of her retesting results and the alleged reaction of Dr. Jehan Siddiqui to her request for a copy of her medical chart. More particularly, she testified that she first learned of her retest results of her mastectomy specimen from her family physician in April 2007, one year after the result had been returned from Mt. Sinai and entered onto her chart.[271] Dr. Siddiqui was surprised at Ms. Green's assertion that she was not told of the retesting results until late 2007 and as such, his testimony was contradictory to hers in that respect.

262. Ms. Green had two specimens previously subjected to ER/PR testing – a needle biopsy and a mastectomy, both of the left breast. Initial testing on both specimens indicated a result of ER negative, PR positive. On that basis, Ms. Green was offered Tamoxifen, but refused.[272] The medical records indicate that Ms. Green's Mt. Sinai results with respect to her mastectomy specimen had been entered as an addendum to her chart on October 20, 2005. On December 22,

[270] Evidence of Kara Laing, 10/09/2008, p. 53-55
[271] Evidence of Beverley Green, 19/03/2008, p. 65-68
[272] Exhibit C-008, p. 1

2005, Ms. Green had a regularly scheduled appointment with Dr. Siddiqui. At that time, he had no knowledge of her retesting results as he had not received a copy of the addendum report. As such, Ms. Green was not advised of her retesting status at that time.[273]

263. Dr. Siddiqui did however receive the retesting results with respect to her biopsy specimen and made a chart notation to that effect on March 26, 2006.[274] As no treatment change was recommended he did not contact Ms. Green further at that time, preferring to wait until her next scheduled appointment with a radiation oncologist in May.[275] On June 14, 2006, Dr. Siddiqui received a Panel letter dated May 8, 2006, with respect to Ms. Green's mastectomy retesting results. No treatment change was recommended at that time and as before, he did not contact her further, preferring to wait until her next scheduled appointment which had been set for November 2006. A progress note dated November 17, 2006 indicates that Ms. Green was advised of the converted result of her mastectomy specimen and Tamoxifen was discussed and offered, but she again refused.[276]

264. Ms. Green also testified as to the circumstances surrounding her request to Dr. Siddiqui for a copy of her medical chart. She described his response to that request as being out of character and stated that he became upset and reiterated to her that there was no cure for her disease. She alleged that he then turned

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[273] Evidence of Jehan Siddiqui, 08/09/2008, p. 155-156
[274] Exhibit C-0013
[275] Evidence of Jehan Siddiqui, 08/09/2008, p. 161-164
[276] Exhibit C-0016

around and threw a copy of her liver biopsy results at her before storming out of the room.[277]

265. Dr. Siddiqui had no recollection of any discussion or incident with Ms. Green surrounding a request for her chart. He explained that he would provide copies of the Cancer Centre chart to patients at their request and would have simply done the same for Ms. Green had she asked. Furthermore, to make the copy complete, he would have arranged for Medical Records to retrieve for the patient those portions of the chart that were unavailable on the Cancer Centre system.[278] He was adamant that he did not at anytime throw anything in Ms. Green's direction. Furthermore, a nurse was present during Ms. Green's appointment and made no notation of any such incident in the chart.[279] Simply put, Dr. Siddiqui had no explanation whatsoever as to why Ms. Green would testify as she did. She has been his patient since 2002 and has continued to remain under his care to date, despite her testimony and his suggestion that she see another oncologist.

(9) Communication with the General Public

(i) The Independent – October 2, 2005

[277] Evidence of Beverley Green, 19/03/2008, p. 73-74
[278] Evidence of Jehan Siddiqui, 08/09/2008, p. 201
[279] Evidence of Jehan Siddiqui, 08/09/2008, p. 205-207

Dr. Kara Laing

266. On October 2, 2005, the first media article relating to the ER/PR issue was released by the Independent newspaper and was loosely based on a telephone interview conducted by reporter Claire Gosse with Dr. Laing. When asked to describe the circumstances leading up to that interview, Dr. Laing recalled that she had been attending a conference in Toronto and had been pulled from a meeting to take an emergency call from Dr. Bob Williams. At that time, he had a request for a media interview back in St. John's and wanted someone to speak from a clinical point of view. Dr. Williams explained that a reporter had somehow been informed of problems with breast cancer testing and wanted to discuss the issue further.[280]

267. Dr. Laing refused at first and told Dr. Williams that she felt it was best for somebody on the ground to do this, but that she had the impression from Dr. Williams that the reporter was very keen to run this story and would likely run it in any event with or without the correct information. Dr. Laing was not comfortable with the telephone interview process. She recalled discussing the in-house re-testing, that there were some changes in results, that a massive re-testing was underway and that they were waiting to inform the patients once they knew more information. The importance of ER/PR test results to oncology was also explained. She recalled emphasizing to Ms. Gosse how concerned she was about printing the story at this point in time because most patients did not even

[280] Evidence of Kara Laing, 10/09/2008, p. 325-327

know that a re-testing was underway. She explained that her preference was to hold off on running the story until the patients could be contacted properly. Ms. Gosse indicated that she would be running the story regardless.[281]

268. Overall, Dr. Laing recalled that she ended the interview feeling very upset and not at all content as to the way things had played out. In her opinion, it seemed like the reporter really did not listen to what she had been saying. She described it as a very disconcerting, upsetting experience for her and was dismayed further when the article was actually released as she had been misquoted on several points.[282]

(ii) Media Briefing – December 2006

Dr. Kara Laing

269. In the fall of 2006, a media briefing was organized by Eastern Health to provide the general public with an update as to the status of the ER/PR retesting process. It has since been revealed that only a portion of the information known to Eastern Health at that time was actually released to the media for dissemination.

270. While Dr. Laing was involved in preparatory discussions in the weeks leading up to the media briefing of December 2006, she had no knowledge of a conscious

[281] Evidence of Kara Laing, 10/09/2008, p. 328-333
[282] Evidence of Kara Laing, 10/09/2008, p. 325-339

decision on behalf of Eastern Health to deliberately hold back any information, including the total number of patients affected by changed results. On November 23, 2006, a meeting was held with Minister Tom Osborne to discuss the suggested contents for the upcoming briefing. She recalled that discussions around that time centered on the calculation of a conversion rate or rate of error and much debate ensued as to how to properly calculate such a rate with any level of accuracy. She recalled that Eastern Health was not comfortable releasing any suggested conversion rate at that time and instead preferred to present a breakdown of the numbers, organized into specific categories. A briefing note had been prepared for the Minister that outlined those categories and corresponding numbers.[283]

271. Dr. Laing's understanding based on the November 23, 2006 meeting was that Eastern Health's focus was on the number of patients who actually required a change in treatment. While she had no direct involvement in compiling or computing any numbers for subsequent release to the media, she understood that the number of impacted patients was formulated based on the number of patients who had treatment changes recommended by the Tumor Panel. She believed that this number also included those patients who had treatment changes implemented prior to the Panel process and only realized that this was not the case at a much later date.[284]

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[283] Evidence of Kara Laing, 18/09/2008, p. 53-56; Exhibit P-0314, p. 10
[284] Evidence of Kara Laing, 17/09/2008, p. 242-244, 251-252, 281-285

272. While she agreed that it was appropriate to focus on those patients that required treatment changes, she had no real understanding that she was not to disclose other numbers and categories if specifically asked about them by the media, aside from that of a conversion rate. She had no recollection of anyone telling the Minister that certain numbers would not be disclosed and never heard anyone specifically state that certain numbers would be held back.[285]

(iii) Eastern Health Letter to Patients – August 16, 2007

Dr. Kara Laing

273. As part of the certification process involving in the class action lawsuit against Eastern Health, the Court had ordered that a letter be sent to all patients notifying them of the existence of the class action. Oncology had no input into the content of that letter and were not advised of its existence prior to it being sent to patients.[286]

274. As patients began to receive these letters, they soon came to the attention of Drs. Laing and McCarthy. An incorrect reference to "breast cancer screening" had caused some patients to question their original diagnosis and led to a general state of confusion and anxiety among breast cancer patients. Several patients showed the letter to Drs. Laing and McCarthy during regularly scheduled

[285] Evidence of Kara Laing, 18/09/2008, p. 69-74
[286] Evidence of Kara Laing, 18/09/2008, p. 125-126; Exhibit P-2576

appointments and looked to them for answers. This prompted great concern amongst oncologists, who subsequently met to discuss the issue further. Their response was a joint letter to Ms. Marian Crawley indicating their frustration.[287]

PART V – SUMMARY

275. Like their pathology colleagues, the oncologists who testified before the Commission cited similar factors which may have contributed to their inability to recognize a problem with ER/PR testing prior to 2005.

276. They also share the view that the underlying explanation is one of "a systems failure". As medical practitioners at the "sharp end" they were on the front line when the problem was initially discovered. In fact, oncologists were first on the scene when it came to disclosure of the problem to individual patients.

277. Most of these initial disclosures were conducted by Drs. Kara Laing and Joy McCarthy and the patient reactions they received profoundly impacted their approach to this issue generally, especially when they were asked to express their views to Eastern Health administration and Government officials.

278. As described in the Overview of these submissions, the relevance of hindsight is of particular significance when viewing issues such as disclosure and trend

[287] Evidence of Kara Laing, 18/09/2008, p. 125-132; Evidence of Joy McCarthy, 19/09/2008, p. 338-343; Exhibit P-0730

recognition. In fact, Dr. Laing readily admitted that in hindsight there were a number of things she would have perhaps done differently. However, it is important to remember that when it comes to looking at this in the context of patient safety, authors such as David Woods, PhD and Robert J.Cook, MD, have made the following observation:

> "Hindsight is not foresight. After an accident we know all of the critical information and knowledge needed to understand what happened. But that knowledge is not available to participants before the fact. In looking back, we tend to over-simply the situation with which the actual practitioner is faced and this tends to block our ability to see the deeper story."[288]

All of which is respectfully submitted this 1st day of December, A.D., 2008.

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[288] See Footnote #2

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