CORONERS COURT OF SOUTH AUSTRALIA

INQUEST INTO THE DEATH OF DENNIS CHARLES JACKSON

[2025] SACC 27

Inquest Findings of his Honour Deputy State Coroner White

5 November 2025

CORONIAL INQUEST

Examination of the cause and circumstances of the death of a man who underwent surgery for the removal of the left lung following a CT guided fine needle aspiration biopsy which had returned a malignant result due to contamination. The Inquest explored how the biopsy sample came to be contaminated and why the contamination was not detected, as well as how the subsequent deterioration occurred.

Held:

1. Dennis Charles Jackson, aged 67 years of Broken Hill, New South Wales, died at the Royal Adelaide Hospital on 21 January 2019 as a result of type 2 respiratory failure due to pneumonia.

2. Circumstances of death as set out in these findings.

Recommendations made.

Counsel Assisting: MS E ROPER

Interested Party: CENTRAL ADELAIDE LOCAL HEALTH NETWORK
Counsel: MR M BOISSEAU - Solicitor: CROWN SOLICITOR

Witness: DR S OTTO, PROF P NGUYEN & DR J EDWARDS
Counsel: MR M BOISSEAU - Solicitor: CROWN SOLICITOR

Witness: DR C SMITH
Counsel: MR S POTTS - Solicitor: ILES SELLEY LAWYERS

Hearing Date/s: 02/11/2022, 14/12/2022, 11/01/2023, 07/02/2023-13/02/2023, 16/02/2023, 23/02/2023

Inquest No: 33/2022 **File No/s: 0154/2019**

INQUEST INTO THE DEATH OF
DENNIS CHARLES JACKSON
[2025] SACC 27

Introduction

1 On 29 August 2018, 165 days before his death on 21 January 2019, Dennis Charles Jackson, a lifelong and much-loved resident of Broken Hill, received a formal apology letter from SA Pathology. The letter concerned a biopsy taken from his left lung that had become contaminated with another sample at SA Pathology's laboratory.

2 The contaminated sample falsely indicated that he was suffering from squamous cell carcinoma[1] of his left lung.

3 The letter, reproduced below,[2] sets out in brief the consequences of this error up to the date of the letter, namely 29 August 2018. The consequences of this error continued well beyond this date and ultimately are linked with his death at the Royal Adelaide Hospital[3] on 21 January 2019. He was 67 years old.

SA PATHOLOGY

PRIVATE AND CONFIDENTIAL

29 August 2018

Mr Dennis Jackson

PO Box 14
Rundle Mall
SA 5000
Tel 8222 3000
Fax 82223538
www.sapathology.sa.gov.au

Dear Mr Jackson

I am writing to you to apologise for SA Pathology giving you the incorrect diagnosis of squamous cell carcinoma as identified on 26 July 2018 from an image guided core biopsy performed on the previous day at the Royal Adelaide Hospital. I am aware that this led to a decision made by your treating physician to perform a left upper lobectomy and this occurred on 17 August 2018. I understand that the surgery has caused anguish for you and your family and I am sorry that this has occurred.

Upon investigation, I have found that the error was caused during the processing of the tissue at the tissue embedding stage. The Anatomical Pathology department has confirmed by DNA testing that the Squamous Cell Carcinoma (SCC) in your biopsy represented a tissue contaminant from another confirmed SCC patient.

As discussed at our meeting on 29 August 2018, I described the procedural changes that we have implemented in the laboratory. Errors like this are rare but nonetheless it is critical that we review our practices and implement further changes so that the risk of such an event occurring in the future is further reduced.

Once again, may I offer my sincere apology.

Please do not hesitate to contact me if you require further information.

Yours sincerely

Dr Sophia Otto
Head of Department
Department of Anatomical Pathology
SA Pathology – RAH & WCH

[1] SCC
[2] Apology letter, Exhibit C4 (street address redacted)
[3] RAH

4 Mr Jackson was discharged from the RAH the following day, 30 August 2018. Unfortunately, due to unwanted but known complications of this extensive surgery, Mr Jackson had to be readmitted to the RAH. Mr Jackson's larynx, in particular his vocal cord, was affected. His cough was getting worse and he was unable to eat and drink during his brief time following discharge. He had to be readmitted on 12 September 2018 suffering hospital acquired pneumonia. He was placed in the RAH's Intensive Care Unit[4] on 27 September 2018. At that time he had significant respiratory failure. He spent 63 days in the ICU before being transferred to a ward on 28 November 2018.

5 The complications in his health continued despite extensive invasive treatment. Significantly, he developed ventilator acquired pneumonia due to his reliance on a ventilator, and right great toe necrosis.

6 He was fed by a PEG[5] tube due to his dysphagia.[6] As already stated, he died on 21 January 2019 after such a difficult time battling against these numerous health problems.

7 In summary, he never recovered his health after the operation.

8 His cause of death was determined upon a pathology review conducted by Forensic Science South Australia[7] to be type 2 respiratory failure due to pneumonia.

9 A pathology review is a review of relevant medical history and case notes. This review is usually conducted after a deceased person has died in hospital following treatment which is extensively documented.

10 I accept the findings and opinion of the pathology review by FSSA and enter a cause of death accordingly.

Personal circumstances

11 Mr Jackson was known as Jacko. He was born in Broken Hill and spent his life there working in the mines, at the power station, and as a carpet layer. In his later years he worked as a motel manager. He had one son from his long marriage to his wife Ramonda. Sadly, his son predeceased him.

Events leading to misdiagnosis and development of respiratory issues

May 2018

12 Mr Jackson attended at his general practitioner[8] due to lethargy and weight loss. He had a productive cough and increased shortness of breath upon exertion.

13 His GP arranged for him to have a CT scan of his chest and a chest x-ray.

14 Mr Jackson had the CT scan performed on 14 June 2018. This scan showed an irregularity in his left lung, namely a spiculated nodule of 12mm together with a small satellite nodule.

---

[4] ICU
[5] Percutaneous Endoscopic Gastrostomy tube
[6] Difficulty swallowing
[7] FSSA
[8] GP

15 He was referred to the RAH, in particular the Thoracic Unit, on 21 June 2018. He came under the care of Professor Phan Nguyen[9] due to the finding on the lung being a concern as possibly indicating a carcinoma of a lung with metastases. This was certainly a concern of his GP clinic. Professor Nguyen reviewed Mr Jackson's referral letter from the GP clinic, his chest x-ray report and the CT scan reports on 26 June 2018.

16 Upon this review he was of the opinion that Mr Jackson needed another CT scan at the RAH due to its superior scan quality compared with the one from Broken Hill. He considered Mr Jackson should have a number of other tests and scans in order to investigate the situation.

17 That day, a second CT scan of Mr Jackson's chest was performed. Professor Nguyen reviewed the radiology report.[10] It indicated that there was a 'left upper lobe lesion with characteristics most in favour of primary lung malignancy'.[11] There were other troubling findings reported by the radiologist including possible inflammation of the lymph nodes, which could be due to the suspected cancer metastasising. The inflammation may have been explicable due to Mr Jackson's long smoking history and occasional dust exposure.

18 Professor Nguyen decided to investigate further. Therefore on 27 June 2018 Mr Jackson underwent a number of further tests including a pulmonary function test[12] and a PET scan. The PET scan:

> '… takes up the glucose component and is what we call avid or hot and that increases our suspicion that something might be malignant. Then ultimately despite my PhD, ultimately the biopsy and the tissue is what tells you definitively if something is malignant or not.'[13]

19 The results of the PET scan could not exclude cancer, but favoured a benign situation. The conclusion of the report described the findings as follows:

> 'While malignancy is not entirely excluded the more likely differential for the scan appearance would be a chronic granulomatous condition.'[14]

28 June 2018

20 This was the first outpatient appointment of Mr Jackson with Professor Nguyen at the RAH. The notes of this consultation are found in the hospital records.[15] In essence, Professor Nguyen recommended a bronchoscopy to which Mr Jackson consented. Professor Nguyen was concerned that Mr Jackson's long and significant smoking history, exposure to asbestos dust and mining dust, made him within a high-risk category for lung cancer.

3 July 2018

21 This was the date the bronchoscopy was performed by Professor Nguyen to locate the lesion and obtain a biopsy from it for examination. However, this was not successful.

---

[9] Head of Unit, Department of Thoracic Medicine since 2022 having been a consultant in that department since 2012
[10] Exhibit C7a, page 1
[11] Exhibit C8, Affidavit of Professor Nguyen dated 28 December 2022 at [13]
[12] Also known as lung function test
[13] Transcript, page 136
[14] Exhibit C7a, page 3
[15] Exhibit C2a, page 29

The bronchoscopy did confirm a report of normal findings including the structure of his vocal cords. The bronchoscopy also revealed that Mr Jackson's lymph nodes were negative for cancer. This indicated that if he did suffer cancer in the left upper lobe, it had not spread to his lymph nodes.[16]

22 Based on the failure of the primary purpose being achieved by this bronchoscopy, Professor Nguyen's next recommended procedure was a CT guided lung biopsy.

25 July 2018

23 Mr Jackson underwent a CT guided lung biopsy. It was a success in obtaining the biopsy as required for further analysis.

24 That biopsy specimen was then preserved in the conventional manner and forwarded to the anatomical pathology laboratory of the RAH where it was tested and analysed by SA Pathology in the disastrous circumstances as already set out in the apology letter.

25 In essence, it is accepted that what occurred is that Mr Jackson's specimen did not reveal any evidence of malignancy consistent with the probabilities expressed on 27 June 2018. However, as accepted by SA Pathology, a minute piece of tissue from the sample of another biopsy taken from another patient contaminated Mr Jackson's sample. That patient's biopsy revealed SCC.

26 Mr Jackson's biopsy results were subject to analysis by Dr Caroline Smith in her surgical pathology report dated 26 July 2018. The contaminated fragment of SCC was identified as fragment 3 in evidence. It was reported also as a 'free-floating fragment'[17] of SCC.

How did the contamination of Mr Jackson's biopsy relate to Mr Jackson's death?

27 This is a key question concerning a core circumstance of his death. I received expert opinion[18] from Professor Cade, Principal Specialist in Intensive Care at the Royal Melbourne Hospital. He stated that the cause of death was related to the misconceived recent left upper lobectomy which itself was linked to the error by SA Pathology. The death of Mr Jackson followed 'a well-documented and clinically plausible series of downwards steps of relevant declining health'.[19]

28 Further, as he stated:

> 'A late complication of his surgery became material to the patient's inability to recover properly from his pneumonia and hence to his subsequently fatal respiratory decline.'[20]

29 I hasten to note at this point that the surgery, performed at the RAH by Dr Edwards, was not a contributory factor to the death in the sense that no error was made by him in performing this difficult operation. It is simply that the expertly performed operation would never have happened but for the incorrect diagnosis of SCC. Unfortunately,

---

[16] Exhibit C8
[17] Exhibit C8
[18] Exhibit C10, report of Professor Cade dated 27 June 2019
[19] Exhibit C10
[20] Exhibit C10a

Mr Jackson suffered unwanted but well-known complications that follow a well performed operation.

SA Pathology

30 I received extensive evidence as to what happened with Mr Jackson's biopsy sample that led to this most unfortunate contamination. The author of the apology letter, Dr Sophia Otto, provided the clear explanation on this issue. She also gave oral evidence and provided statements as part of the coronial investigation.[21]

31 A subsequent serious incident investigation[22] by SA Pathology conducted into this matter showed that the contamination occurred at 2:50am on 26 July 2018 when the physical handling of the sample began by SA Pathology.[23]

32 As will be seen, the contamination most likely occurred due to inadequate cleaning of instruments used to deal with the sample. It may involve the very human factor of tiredness as Mr Jackson's sample was dealt with at 2:50am on 26 July 2018. That is undoubtedly a speculative comment by me, but one that has continually crossed my mind.

33 The biopsy sample embedded in the slide was examined on 26 July 2018 by Dr Caroline Smith, Senior Consultant Pathologist from SA Pathology.[24] She identified the foreign SCC strand.[25] As is clear from above, this strand was referred to in the singular in her description of the result of her examination, namely:

> 'Diagnosis
> Biopsy lesion, left upper lobe of lung; free-floating fragment of squamous cell carcinoma, please see body of report.'[26] *(my emphasis)*

34 In this report she confirmed that there were six fragments in the slide. The details of her examination are the following:

> 'Microscopic
> Sections show a fragment of squamous cell carcinoma. It comprises large, atypical cells displaying large pleomorphic nuclei, prominent nuclei and abundant cytoplasm. There is an impression of intercellular bridge formation but no definite keratinisation is evident. Mitotic figures are present.
> The cells show positive immunostaining for CK5/6 and p63.
> They are negative for TTF-1.
> There is no attached stroma, such that invasion is not proven.
> There are also fragments of necrotic material, some of which contain anthracotic pigment.
> No fungal elements are identified with a PAS-D stain.
> No granulomas are present.
> Pathologist: Dr Caroline Smith
> Verified: 26/07/2018' [27]

---

[21] See Exhibit C12a, Affidavit of Dr Otto sworn 5 January 2022 including annexures
[22] 'SII'
[23] Exhibit C12, Appendix M, Report dated 3 September 2018
[24] Exhibit C13, Affidavit of Dr Smith sworn 27 January 2023 together with oral evidence at Inquest
[25] Also described in the Inquest as 'fragment'
[26] Exhibit C6b, Volume 4 of RAH Medical Records, page 6
[27] Exhibit C6b, page 6

35 The description of the result in this pathology report has been a significant issue in this Inquest on two bases, namely:

(i) Should the description of a fragment expressed in the singular have alerted SA Pathology, in particular Dr Smith, of an anomaly and caused further scrutiny or re-examination of the sample?

and

(ii) Should those at RAH in charge of his care, in particular the medical specialists, have independently questioned the description in the pathology report prior to Mr Jackson's operation?

Thursday 2 August 2018

36 Mr Jackson's case was discussed at a thoracic multidisciplinary team[28] meeting. The purpose of this meeting was to discuss the plan for Mr Jackson's treatment and care. It recommended 'consideration of surgical resection'.[29]

Friday 17 August 2018

37 Mr Jackson was admitted to the RAH for surgery performed by Dr Edwards, namely a left thoracotomy, where the left upper lobe lobectomy was performed and a tissue section of the lung was taken and received at SA Pathology at RAH at 7:58pm.

Wednesday 22 August 2018

38 A histology report about the specimen taken at the operation was finalised. The report found there was no evidence of any malignancy, and in particular no evidence of SCC. The 12mm lesion previously identified was most compatible with a rheumatoid nodule.

Thursday 23 August 2018

39 Mr Jackson contacted the RAH Consumer Advisor complaining against SA Pathology after having been told by medical staff at the RAH that he may not have had SCC of the left lung as was diagnosed.

40 This led to the beginning of the SII by SA Pathology which found that the previous embedded slide from a biopsy from another patient showed SCC. The SII concluded that part of that material must have been transferred to the slide involving Mr Jackson's sample.

Friday 24 August 2018

41 Dr Otto revealed the finding from the SII on 23 August 2018 to Mr Jackson.

Tuesday 28 August 2018

42 By virtue of DNA matching, it was confirmed that the SCC diagnosis was made based on the fragment of the SCC tissue from the previous[30] slide that had contaminated Mr Jackson's biopsy sample.

---

[28] MDT, also known as Lung Cancer Multidisciplinary Team ('LCMT') meeting
[29] MDT notes from RAH Notes, Exhibit C6a, pages 4-5; (Exhibit C13, paragraphs 140-158)
[30] My emphasis

Wednesday 29 August 2018

43 Dr Otto met with Mr Jackson and his family and friends. Mr Jackson demanded an explanation in writing about what happened before he was willing to be discharged.

Thursday 30 August 2018

44 Mr Jackson received the apology letter from Dr Otto prior to discharge.

45 As can be seen from this chain of events described above, the consequences of the contamination were profound, in particular the unnecessary operation from which Mr Jackson's health deteriorated until death.

46 Returning again to the apology letter as a source, I now wish to deal with the key issues, including the finer detail of how the contamination occurred. I will also discuss the key events that followed the contamination, including the key MDT meeting on 2 August 2018 where no-one questioned the finding of the biopsy report based on the finding of a 'free-floating fragment', only of tissue containing SCC.

Contamination of Mr Jackson's biopsy slide

47 I have carefully considered whether it is necessary to go into extensive detail on this topic, given the admission of SA Pathology. I must also note that as a result of this contamination, the procedure concerning the preparation of biopsy samples for analysis was reviewed and improved to reduce the risk of cross contamination.

48 In the apology letter[31] Dr Otto described how the error occurred, namely that:

> 'Upon investigation, I have found that the error was caused during the processing of the tissue at the tissue embedding stage. The Anatomical Pathology department has confirmed by DNA testing the Squamous Cell Carcinoma (SCC) in your biopsy represented a tissue contaminant from another confirmed SCC patient.'

49 Dr Otto further described that 'errors like this are rare'.

50 However, in fairness to the late Mr Jackson's family, in particular Ms Tanya Williams, his niece who was representing them in person by her regular attendance at the Inquest, I will go into some detail based on the uncontested evidence presented to me. In doing so I am substantially relying on the evidence from SA Pathology, namely Dr Caroline Smith,[32] and Dr Otto:[33]

i. Mr Jackson's biopsy specimen was assigned an individual case number when presented to the Anatomical Pathology[34] laboratory at the RAH.

ii. There were two specimens provided from Mr Jackson's biopsy, one contained in formalin and one contained in saline. The saline specimen was sent to the microbiology laboratory. The formalin specimen was retained by the AP laboratory. The saline specimen is considered less optimal for the AP laboratory and thus is generally used for microbiology studies.

---

[31] Exhibit C4 (street address redacted)
[32] Exhibit C13
[33] Exhibits C12 and C12a
[34] AP

iii. The formalin specimen was taken to the 'cut up' area by the laboratory scientist and transferred from the specimen pot[35] into a 'cassette' which is a small plastic container to hold the specimens.

iv. I refer to paragraph 30 of Exhibit C13 which gives illustrations of these two items.

v. The cassette will then be placed in a machine where a series of steps will occur to set the specimen in paraffin wax. This allows for the specimen to be hard enough to cut into sections.

vi. The specimen is then taken to the embedding station where it is embedded in a larger paraffin wax block.

vii. This block will be then cut, by machine, into 12 consecutive sections which is called a ribbon.

viii. Each section is then floated on a water bath and lifted onto an individual glass slide.

ix. The specimen on the glass slide will then be dewaxed.

x. Three of the 12 sections will be stained to allow for microscopic examination.

xi. As is common with this procedure, four other slides of Mr Jackson's specimen were stained for other testing procedures.

xii. Forceps are used at the embedding stage. At that time, SA Pathology's policy was that it was 'highly desirable' that embedding forceps are wiped clean between cases.[36]

xiii. Therefore, as stated, it was not mandatory for forceps to be wiped clean before being reused on the next specimen.

xiv. In evidence, Dr Otto explained that the SCC patient's sample was embedded immediately preceding Mr Jackson's. What is clear is that the forceps necessary for embedding the sample were not sufficiently clean. Dr Otto confirmed in evidence that the accepted practice of flaming the forceps between use in other laboratories was by policy only 'highly desirable' in 2018. Her research showed that at that time it seems about 80% of cleaning of forceps between samples involved flaming. All expert evidence suggested that flaming, even in 2018, should have been set as a mandatory requirement under SA Pathology guidelines. It clearly suggests that the forceps used for the previous patient with SCC were not flamed prior to use concerning Mr Jackson's sample. That follows as a matter of logic.

xv. Dr Otto also accepted the logic in evidence that 'tissue from the previous sample remained stuck in the embedding forceps'[37] and further suggested that 'if the

---

[35] Small plastic container with sealed lid
[36] See Exhibit C4c, policy document dated 2 April 2015, paragraph 411
[37] Transcript, page 373

forceps had been wiped properly, if the forceps had been rotated properly, then that would have made the likelihood of transfer far less. All I can do is speculate and suggest that those processes were not followed'.[38]

xvi. She confirmed her investigation could not determine whether the forceps were wiped between use, nor rotated between cases, nor flamed. This is the most likely source of the contamination of the free-floating SCC fragment onto Mr Jackson's specimen in the slide.

xvii. As conceded, this leaves the possibility open that policies were followed by the relevant SA Pathology laboratory employee, thus no human error was involved. In that case, it was a clear policy error not to have best practice as occurred in other jurisdictions at that time.

xviii. As already stated, and confirmed by Dr Otto, this has been rectified by a change in the instructions. Understandably, and expectedly, this policy has been upgraded by SA Pathology to read as follows concerning use of forceps in embedding, namely:

> 'It is essential that carryover of tissue fragments from one cassette to another is prevented. **Embedding forceps must be wiped clean after each block** has been embedded and again before the next cassette is opened. **It is imperative the forceps well is also cleaned regularly**.'[39]

51 This improvement was commented on by expert evidence as not going far enough, namely that forceps should be flamed or subject to flaming between use concerning each specimen. Professor Catriona McLean AO, an expert anatomical pathologist, reviewed the new instructions and procedure.

52 I will set out her answer as to why she believed that even the upgraded[40] cleaning procedure is 'suboptimal in two respects':

> 'The bottom line, we don't think that wiping clean the instrument is satisfactory for the purposes of getting rid of extraneous tissue. We think you have to put your forceps into, what we have is a Bacti-Cinerator, and heat the forceps so that any extraneous tissue gets burned off so there's no possibility of contamination. For us and for me this sentence is suboptimal in the grounds that we, and most of my colleagues and scientists who work anywhere in Melbourne, they can't think of anywhere where the forceps aren't put into either a burner or an infrared burner, that's the newest thing, and nowhere is it considered satisfactory just to wipe the embedding forceps clean. It's obviously what they do in South Australia, but it is not the procedure that we do in our lab or in a straw poll of many labs in Melbourne. So I think that the terminology is wrong, it shouldn't be about wiping clean at all. It should be about putting the forceps into some sort of burning and burn off the forceps, and that's in line with the paper that was exhibited at the Court earlier on where it was basically an essential item in embedding that the forceps tips are burnt to get rid of extraneous tissue.' [41]

---

[38] Transcript, page 374
[39] Updated Policy of November 2018, as emphasised by SA Pathology
[40] My emphasis
[41] Transcript, pages 71-72

53 The added bonus to this method of sterilising by the use of intense flame would be that if unwanted biological material from the previous use that was burnt but did not separate from the forceps did make its way onto the next specimen, it would be easily identifiable as not being relevant due to its essentially burnt state. That is, the burnt material could not be mistakenly classified as part of the sample under examination.

54 Professor McLean referred to her own research in the flaming of forceps conducted on an informal basis by her at various hospitals in Melbourne, with the firm opinion being expressed that that is the only satisfactory way to reduce contamination to its lowest possible level.

55 She also referred to international support in an article from the International Journal of Surgical Pathology.[42]

56 In short, I accept Professor McLean's evidence, her extensive experience as set out in her curriculum vitae,[43] and her written report supplied to the State Coroner prior to the Inquest.[44]

57 Her evidence makes sense to me as a person without any scientific expertise.

Despite contamination, should a problem have been identified subsequently with the result?

58 There are two major events to focus on in this topic, namely the analysis of the biopsy slides conducted by extremely experienced anatomical pathologist, Dr Caroline Smith from SA Pathology, and the subsequent MDT meeting where her report was presented for consideration.

59 In doing so, I will also note comments of the Court's expert Professor McLean when relevant.

Dr Caroline Smith

60 I refer back to Dr Smith's evidence. Her curriculum vitae[45] outlines her extensive academic and working career. I note she has qualifications not only in anatomical pathology, but medical oncology.

61 As at 2018, her position was consultant anatomical pathologist at SA Pathology with subspecialty in muscle, brain tumour and lung pathology. She had held this position since 2011.

62 As she explained, anatomical pathology 'involves the diagnosis of disease based on the macroscopic and microscopic examination of tissues and cells, as well as molecular testing and analysis'.[46] Part of her role was to be involved in the RAH neuropathology and lung cancer teams.

---

[42] Exhibit C11b
[43] Exhibit C11
[44] Exhibit C11a
[45] Exhibit C13 (referred to within the affidavit as CLS-1)
[46] Exhibit C13 at [13]

63 As already noted on 26 July 2018, she reviewed the three slides presented to her from the ribbon of Mr Jackson's biopsy sample. She concluded that the cells examined within fragment 3 were carcinoma cells. That same morning she requested that a further three slides be prepared and presented to her to confirm her observation and opinion concerning fragment 3. Those slides were produced that afternoon.

64 Dr Smith's evidence was that prior to finalising her pathology report she would have reviewed those additional slides. It is from here that her evidence, by necessity, concerns a lot of her reliance on her professional routine and behaviour as she has no independent memory of her work on Mr Jackson's sample and the subsequent discussion about her report with other medical professionals.

65 Her affidavit outlined her detailed routine in viewing, analysing and reporting on the results.

66 She stated that there was no observation of 'anything on Mr Jackson's slides that led me to suspect contamination'.[47] This opinion did not change in the course of her reviewing of the slides in preparation of giving evidence.

67 Therefore, the only sign of contamination that existed can be based on the presence of fragment 3 being the only fragment with SCC. In hindsight she accepted that a better and more accurate description in the pathology report should have been:

> 'Based on my observations of other Anatomical Pathologists in the AP Lab over many years, I am aware that the use of the term *'free-floating'* is used by Anatomical Pathologists in the Department to describe unattached fragments of cancer tissue. With the benefit of hindsight, perhaps a clearer and less contentious description of what I observed is a *'fragment of squamous cell carcinoma with no attached stroma such that a distinction between in situ and invasive disease cannot be made.*'[48]

Hindsight and outcome bias

68 I pause here to reflect on this important topic. This Court does not function to apportion criminal or civil liability for any actions. This Court is also very mindful of the need not to suffer from hindsight bias or outcome bias in its assessment of witnesses and reasoning. This is in addition to acknowledging the principles of assessment of witnesses, especially when an adverse finding or comment is potentially warranted against a witness.[49]

69 I refer to the Australasian Coroner's Manual[50] in describing hindsight bias:

> 'Hindsight bias is the tendency after the event to assume that events are more predictable or foreseeable than they really were. What is clear in hindsight is rarely as clear before the fact. If it were, there would be far fewer mistakes made. It is an obvious point, but one that nonetheless bears repeating, particularly when coroners are considering assigning blame or making adverse comments that may damage a person's reputation.
>
> For example, in medical Inquests doctors are frequently criticised by grieving relatives for misdiagnosing patients whose signs and symptoms were non-specific or ambiguous. In

---

[47] Exhibit C13 at [128]
[48] Exhibit C13 at [63]
[49] *Briginshaw v Briginshaw* (1938) 60 CLR 336; *SJ Berry Pty Ltd v McEntee* (2002) 142 SASR 31
[50] Authored by Mr Hugh Dillon and Ms Marie Hadley – 2015 Edition

> hindsight it may seem obvious that a certain action should have been taken, but at the time it was, in fact, not nearly as clear.
>
> Coroners should attempt first to understand the circumstances as they appeared *at the relevant time* to the people who were there. This is especially so if a coroner is contemplating making adverse comments about people involved in the event in question.
>
> Hindsight, of course, is a very useful tool for learning lessons from an unfortunate event. It is not useful for understanding how the involved people comprehended the situation as it developed. The distinction needs to be understood and rigorously applied.'

70 Outcome bias is related but different. Outcome bias is a known bias that refers to the tendency to judge a decision based on its outcome rather than based on the assessment of the quality of the decision at the time it was made. In other words, I am mindful that I must concentrate on the decisions made by those medical professionals involved in Mr Jackson's care without letting the tragic outcome of his death affect a proper analysis of those decisions.

MDT meeting – 21 August 2018

71 The meeting discussed the pathology report. I acknowledge that all the investigations prior to the biopsy sample being taken tended to indicate the high probability that lung cancer would be the ultimate and correct diagnosis.

72 Professor Nguyen, based on all the medical investigations as already set out, together with Mr Jackson's work and lifestyle history, was led to this assessment by 25 July 2018. He converted this to 85% probability, a figure he told Mr Jackson at that time. He explained that figure during the following exchange:

> 'Q. The 85%, does that mean that that is the risk of cancer in the presence of a spiculated lesion measuring 12mm in size.
>
> A. When you add all factors: occupational exposure, smoking exposure, lobe location, nodule size, spiculation, PET avidity, history of emphysema, we came to that conclusion based on various calculators that you can access, yes.
>
> Q. Independent of Dr Smith's surgical pathology report would it be fair to say that you were reasonably confident of a diagnosis of malignancy being made.
>
> A. I was highly suspicious. If hypothetically the biopsy did not show carcinoma, we would have observed this nodule very closely in terms of options, yes.
>
> Q. In that sense would you agree that Dr Smith's diagnosis of squamous cell carcinoma was not inconsistent with the larger clinical picture.
>
> A. It was not inconsistent.' [51]

73 In other words, the results of the contaminated biopsy sample were absolutely consistent with what was expected by Professor Nguyen.

74 His opinion is also supported by the extensive review conducted by SA Pathology, as outlined by Dr Otto, who noted that SCC was a recognised form of lung cancer and that necrotic material on the slide is consistent also with cancer.

---

[51] Transcript, page 165

75 As Dr Otto put it:

> 'In retrospect, the possibility of a contaminant might have been considered. In reality, as I have outlined above, squamous cell carcinoma does occur in lung (sic). Reportedly, the patient had an '*at-risk*' history, concerning imaging features and the tissue in the biopsy was necrotic. A finding of squamous cell carcinoma was not unexpected against this background. The question of whether it might have been identified as a contaminant in that setting becomes more difficult to answer.' [52]

Details and descriptions within the pathology report

76 This became an issue of contention and expert review by Professor McLean.

77 There was large debate about the wording of Dr Smith's report on the contaminated sample. In reviewing Dr Smith's role, and in particular this meeting that discussed her report, I am very mindful of the principles of hindsight bias and outcome bias.

78 As already mentioned, the contaminated SCC fragment was 'free-floating'.[53]

79 Professor McLean criticised the use of the phrase SCC based on the fact that it should have been described as SCC *in situ*.[54] Professor McLean's opinion was that the diagnosis of SCC should be made when tumour cells are 'invading the underlying tissue'. I believe it is important to set out her detailed explanation on this topic to fully understand her expert reasoning:

> 'Q. Is there a process by which the squamous cell gradually becomes atypical.
>
> A. In squamous cells particularly, there is a well-documented process where it can develop from low grade to high grade to carcinoma to invasion. It's just one of those ones where we've been able to follow that sequence of events, not in terms of the lung, but predominantly in terms of the cervix, which has squamous cells as well. So, yes, there is unusually - although we don't always see it, there is probably a progress where the cell make-up changes over time from being low grade to squamous cell carcinoma in situ to invasive squamous cell carcinoma.
>
> Q. At what point would you as an anatomical pathologist be prepared to make a diagnosis of squamous cell carcinoma. How atypical do these cells need to be.
>
> A. On biopsy, I make that diagnosis when I see those tumour cells invading into underlying tissue, that's squamous cell carcinoma.
>
> Q. Why is that feature important, why is invasion important.
>
> A. By invading tissue it tells you - that's the actual definition of a carcinoma of any sort, it's invasion of the tissue. As soon as tissues invade deep to the surface, it has the capacity to get into blood vessels, by getting into blood vessels it has the capacity to spread to other organ sites, that is what a carcinoma is. So, it has to invade tissues and by invading tissues it means there's a risk of going into the bloodstream and the lymphatics and spreading all over the body. Whilst if it's squamous cell carcinoma in situ, it will not invade into blood vessels because it hasn't got into the layers that are required to spread to, to get into blood vessels and lymphatics.' [55]

---

[52] Exhibit C12 at [26]
[53] Exhibit C6b, page 6
[54] Transcript, pages 87-92
[55] Transcript, pages 87-88

80 It is clear that at this MDT meeting on 2 August 2018 no concern was raised about the content of Dr Smith's report.

81 It also seems highly probable that Dr Smith presented the slides at this meeting.[56] Further, it was accepted by Professor Nguyen that he would have recommended surgical dissection even if it had been reported in what he believed was a more technically correct way, in the way Professor McLean advocated of being SCC *in situ*, he would have recommended surgery to Mr Jackson as the best option of treatment.[57]

82 He conceded that he would have explained the further other non-surgical options, but still recommended surgery.

83 In my view it would have followed that Mr Jackson was likely to have accepted Professor Nguyen's advice and recommendations consistent with his prior behaviour as a patient, stating that surgery would have been 'talked about … as a first option'.[58]

84 I have considered this evidence carefully in assessing whether any criticism is warranted of Dr Smith's report. It would have been preferable had the terminology been adopted as discussed by Professor McLean, but in the end I find that it was likely not to have changed the practical option and advice of Professor Nguyen to Mr Jackson to have surgery.

85 Therefore, the primary and overwhelming fault returns a consideration of the contamination itself rather than the report based on it. In coming to that conclusion I am focussing on the state of minds of those considering the report at that time.

86 The significance of the SCC being a free-floating fragment rather than appearing in multiple fragments is the key focus. With classic hindsight bias, this finding should have been queried. However, in light of all the evidence of Mr Jackson's health, care and lifestyle factors, all indicated almost near certainty to his experienced specialist that he had SCC. I therefore do not categorise any actions of those at the MDT meeting in particular as being below proper standards of care and competence. I feel supported by my view on this topic by referring to Professor McLean's own candid opinion about her ability to have recognised this issue namely:

> 'A. … I mean there's so many ifs, and this is so hypothetical because I'd like to think that I'd pick this up as an abnormal fragment that shouldn't have been there but all I know is that I would not have said that this is was a basic, squamous cell carcinoma.
>
> Q. Have you had an opportunity to read the transcript of your evidence.
>
> A. Actually no, I haven't. I did receive it some time the next morning and before this started but I didn't get it. It might have come to me overnight but I did not catch it until this morning so, no. I haven't actually reread it. If you'd like to find what I said exactly that's fine by me. I can tell you that I remember saying that I was being put in a difficult hypothetical situation and I remember saying that I wouldn't have reached a diagnosis of invasive squamous cell carcinoma along those lines and the most likely thing I would have said was squamous cell carcinoma, at least squamous cell carcinoma in situ, I think that's how I prefaced it. But I do remember thinking that it was a difficult situation because I may have assumed this was a contaminant

[56] See paragraph 36 of the written submissions of Dr Smith
[57] Transcript, page 152
[58] Transcript, page 173

at the time. So I think there's a lot of hypotheticals there and it's very difficult to kind of say what would you have thought at the time. Given I might have thought this was a contaminant, the fragment was too big. It shouldn't have been there. It didn't make sense. That's maybe how I would have thought about it to be honest.

Q. You're not in a position sitting here today to say that that's what you would have done.

A. I think there's just too much bias and discussion since then. I can't tell you what I would have done. I can't honestly tell you what I've done if it had just arrived at my desk. I'd like to think I would have picked it up as a contaminant.' [59]

87 That candid evidence highlights the complexity of this issue. It was Professor McLean's evidence that she 'would like to think' she would have identified the free-floating fragment of SCC as a contaminant. She explained:

'Q. I'll do my best to repeat it, Professor. You were asked some questions in cross-examination about - I'll start that again actually. Why would you be suspicious of a contaminant if you were reporting on the specimen and giving a diagnosis of at least in situ carcinoma and you also knew that the biopsy was taken from a 12mm lesion.

A. It's because it's not adding up. If I was being really smart, it's just not adding up.[60]

Q. What about it doesn't add up.

A. Well, I don't know what the SCC in situ fragment is doing there, that's what I don't understand, it doesn't make sense to me, because all the rest of the tissue is just this bland necrotic material which could easily come from a non-malignant process, because in it there is just nothing, there's no cells infiltrating. Although squamous cell carcinoma can become centrally necrotic, it's a different kind of necrosis. The type of necrosis that is - this is quite debatable so don't go there too far - but all the other fragments just is very acellular bland necrosis, it could easily be coming from an inflammatory lesion. It would concern me that that is just some sort of the centre of an inflammatory mass, rather than it's got anything to do with anything malignant. Normally if we have got necrotic cancer, it's got cancer everywhere and it's not just strands of this very bland necrosis that we have seen, it's got necrosis and there's atypical cells. It's just not all fitting together this whole process, this doesn't make sense, it looks like bland inflammatory-type necrosis, it doesn't look like malignant necrosis to me; I've got this loose fragment of SCC that looks in situ, doesn't make sense that we've got in situ carcinoma in a mass lesion coming from the centre of the lung, because you only really see in situ carcinoma in the lung in the bronchus, and that's only really uncommon - it's very uncommon to see SCC in situ in fact as a lung biopsy out in the periphery, it just doesn't make sense because the reason you get squamous cell carcinoma in the lung, and this is going to probably be a bit boring for lawyers, but you know, it's a process that starts off usually by transformation of a normal epithelium into a squamous epithelium and then the squamous epithelium can come near plastic with time. All that squamous epithelium is usually in and around the hilum of the lung, the centre of the lung, and to have this lesion which is out more in the periphery, in the left upper lobe, it's well away from the hilum where we start to see this kind of transformation from squamous metaplasia to in situ to malignancy. So it doesn't make sense to have a bit of squamous cell carcinoma sitting on its own, bigger than the core biopsy, in and amongst a mass of bland-looking necrotic material which could easily come from a granuloma; it's just kind

[59] Transcript, pages 487-488
[60] My emphasis

> of that doesn't make sense, that doesn't make sense, that doesn't make sense. So, yes, it just doesn't - the equation is not adding up.' [61]

88 This further highlights the difficulty of detecting the issue at that time as opposed to in review with hindsight, even allowing for her opinion that the SCC fragment was too large to have come from Mr Jackson's biopsy sample.

Recommendations

89 I turn now to one of the core duties under the *Coroners Act 2023*,[62] namely whether any recommendations need to be made from this Inquest to prevent a death occurring in the same manner as Mr Jackson had to suffer.[63] The Act also directs me to consider recommendations concerning public health. I believe SA Pathology's procedures concerning biopsy sampling is within that provision under the Act.

90 A number of recommendations were proposed for my consideration in submissions[64] primarily aimed at ensuring that SA Pathology continues to provide the best possible environment and workspace in which to conduct these vital services concerning biopsies.

91 In the end, I believe there is merit in the proposed recommendations and therefore recommend the following, namely:

1. That the Minister for Health and Wellbeing engage an external scientist to conduct an independent review of SA Pathology's anatomical pathology laboratories and to provide recommendations as to how their procedures and practices can be improved to reduce the risk of cross-contamination. I urge the review to consider the opinion of Professor McLean on the topic of intense instrument flaming between biopsy samples as given in this Inquest.

2. That the Minister for Health and Wellbeing ensure so far as is reasonably practicable that all recommendations made as a result of that review are implemented across all SA Pathology laboratories.

92 I extend my condolences to Mr Jackson's family. I sincerely thank Ms Williams for her dignified presence in the Inquest.

Keywords: *Hospital Treatment; Misdiagnosis; SA Pathology*

---

[61] Transcript, pages 498-499
[62] The Act
[63] See s 25(2) of the Act
[64] See Counsel Assisting's address, pages 546-547