

IN THE CORONERS COURT  
OF VICTORIA  
AT MELBOURNE

Court Reference: COR 2009 4280

**FINDING INTO DEATH WITH INQUEST**

*Form 37 Rule 60(1)*

*Section 67 of the Coroners Act 2008*

<b>Inquest into the Death of:</b>	<b>Susan BOURKE</b>
Delivered On:	18 August 2016
Delivered At:	Coroners Court of Victoria 65 Kavanagh Street Southbank 3006 Victoria
Hearing Date:	5-6 October 2015
Findings of:	IAIN TRELOAR WEST, DEPUTY STATE CORONER
Representation:	Ms Fiona Ellis of Counsel for Northern Hospital Ms Sharon Keeling of Counsel for Dr Daniel Lee Mr Sean Cash of Counsel for Dr Kenneth Chuah
Police Coronial Support Unit:	L/S/C Amanda Maybury

I, IAIN TRELOAR WEST, Deputy State Coroner, having investigated the death of Susan BOURKE

AND having held an inquest in relation to this death on 5-6 October 2015

at MELBOURNE

find that the identity of the deceased was Susan BOURKE

born on 25 September 1959

and the death occurred on 1 September 2009

at The Northern Hospital, 185 Cooper Street, Epping, Victoria 3076

**from:**

1 (a) WIDESPREAD SMALL AND LARGE BOWEL, SPLENIC AND HEPATIC INFARCTION

1 (b) SEVERE AORTIC ATHEROSCLEROSIS

**in the following circumstances:**

**Background:**

1. Susan Bourke was a 49-year-old woman who resided in Reservoir with her husband of eight years, Mr Paul Bourke. At midday on the 26 August 2009, Mrs Bourke presented to the Emergency Department (ED) at The Northern Hospital in the context of several months of intermittent abdominal pain, diarrhoea, vomiting, weight loss of approximately 15kg and intermittent rectal bleeding. She presented to the ED on a number of occasions over that period, with five admissions, and had a number of specialist consultations. The working diagnosis was ulcerative colitis, for which Mrs Bourke was receiving medications.

**Investigations following presentation on 26 August 2009:**

2. Mrs Bourke was seen in the ED at approximately 1.00 pm on 26 August 2009 by the resident medical officer, Dr Hanna Hayes. As a resident, Dr Hayes was reporting to the ED consultant, Dr Julia Ng. Following her examination, Dr Hayes discussed Mrs Bourke with Dr Ng who subsequently reviewed her. Following this initial review, Dr Hayes wrote in the ED clinical notes; 'Impression: (*Imp*) Ongoing abdominal pain with multiple presentations. Hypercalcaemia – no cause identified'.<sup>1</sup> The medical registrar was contacted as was the surgical registrar, with the surgical registrar advising a 'contrast CT abdomen'<sup>2</sup> scan for Mrs Bourke. At this point in time all that was known was that Mrs Bourke had recurrent abdominal pain and hypercalcaemia.
3. The CT request form<sup>3</sup> (expanded from shorthand) stated: *Abdominal pain-generalised sudden onset today. Query ulcerative colitis, leading to multiple presentations to Emergency Department. Five admissions since July. Persistent elevation of calcium, increased lactate to 3.8, in addition 15kg weight loss.*

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<sup>1</sup> Inquest Brief, p256

<sup>2</sup> Ibid

<sup>3</sup> Exhibit 3

4. The request was received by the radiology department at 3.42 pm with one of the CT radiology doctors protocolling it as a CT abdomen and pelvis with oral and intravenous contrast. It was subsequently protocolled and performed as an overview CT of the chest, abdomen and pelvis.<sup>4</sup>
5. The ED observation chart<sup>5</sup> records a nursing entry at 3.45 pm that Mrs Bourke was distressed with pain and awaiting review by the ED consultant, as she had met the clinical instability criteria. Dr Ng again reviewed Mrs Bourke and found her to be in extreme pain that made her suspicious of ischaemic colitis (a subset of mesenteric ischaemia)<sup>6</sup> because of her increased lactate levels and abdominal pain being out of proportion to her clinical presentation. Following her review, Dr Ng's entry made at 5.00 pm in the clinical notes includes the notation:

‘Urgent surg r/v → ? ischaemic colitis’<sup>7</sup>

The surgical team, including a consultant surgeon, reviewed Mrs Bourke, with an entry at 5.30 pm detailing the management plan as:

‘Consider reports of CT C/A/P. If results normal → ischaemic gut ruled out → for medical management.’<sup>8</sup>

6. The CT scan was initially reviewed by the on-call radiology registrar, Dr Daniel Lee, who dictated his report for typing the next day. Following his review, Dr Lee hand wrote his findings in the interim CT scan book located in the radiology department. In part his entry reported the presence of ‘*likely splenic infarcts.*’<sup>9</sup> A notation dated 26 August appears in the clinical notes, presumably by a doctor from the medical unit, that Mrs Bourke had been or was for review by the surgical team, together with the following entry:

‘Splenic infarct on CT (verbal report) → mild-moderate sized  
No mesenteric artery obstruction’<sup>10</sup>

The identity of who made this entry is unknown, as are the circumstances leading to the notation ‘no mesenteric obstruction’ and the identity of who gave the verbal report.

7. As per protocol the CT was subsequently reviewed the following morning by the CT consultant radiologist, who in this case was Dr Kenneth Chuah. Dr Chuah's review of the report resulted in no significant changes being made, and although he referred to findings ‘*most in keeping with*’<sup>11</sup> splenic infarcts, he did not suggest a cause. (The reported splenic infarcts in the context of there being no definitive diagnosis was a matter of ongoing consideration resulting in further radiological input and review of the CT scan over the course of Mrs Burke's admission.)<sup>12</sup>

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<sup>4</sup> Inquest Brief, p264

<sup>5</sup> Inquest Brief, p258

<sup>6</sup> T 30

<sup>7</sup> Inquest Brief, p267

<sup>8</sup> Inquest Brief, p272

<sup>9</sup> CT scan Interim Report Book, Exhibit 6

<sup>10</sup> Inquest Brief, p269

<sup>11</sup> Imaging Report, Dr Kenneth Chuah

<sup>12</sup> Inquest Brief, p285, Statement of Dr Aboltins

8. The plan was to admit Mrs Bourke to the medical ward, provide analgesia, commence Clexane for the splenic infarcts, to arrange an urgent transthoracic echocardiogram to excluded cardiac thrombus<sup>13</sup> and refer her to gastroenterology and endocrinology.
9. On the 28 August Mrs Bourke continued to complain of pain, despite the use of Fentanyl, and a referral to the Acute Pain Service was made. While on the ward, Mrs Bourke's condition deteriorated and at approximately 5.00pm on the 31 August 2009 a 'MET call' was made following a fall in her blood pressure.<sup>14</sup> An urgent laparotomy was performed which revealed extensive small and large bowel infarction which was not amenable to surgery.<sup>15</sup>
10. Mrs Bourke subsequently died on 1 September 2009, six days after her admission.

**Autopsy examination and CT scan review:**

11. On 7 September 2009, Forensic Pathology Registrar Dr Marian Wang, under the Supervision of Forensic Pathologist Dr Melissa Baker, performed an autopsy at the Victorian Institute of Forensic Medicine and formulated the cause of death as:
  - 1a. Widespread small and large bowel, splenic and hepatic infarction
  - 1b. Severe aortic atherosclerosis
12. The examination revealed unusually severe atherosclerotic changes in the aorta for a women of her age. In her autopsy report, Dr Wang commented:

*“At autopsy, the aorta showed severe atherosclerosis with ulceration and thrombosis of the atheromatous plaques. In association with this, the main arteries (which arise from the aorta) supplying blood to the abdominal viscera were severely stenosed. The coeliac artery (supplying blood to the liver, stomach and spleen) and the inferior mesenteric artery (supplying blood to the descending colon) were severely stenosed at their origins and the superior mesenteric artery (supplying blood to the small bowel, ascending and transverse colon) showed severe (> 90% of the luminal diameter) stenosis by atheroma, 1.5 cm from its origin. As a consequence of this, there were multiple areas of infarction in the liver and spleen, and infarction of the small and large bowel. The areas of infarction in the liver and spleen were most likely due to plaque thrombi arising from the diseased aorta occluding the feeding arteries to the respective organs. The atheromatous occlusion in the superior mesenteric artery was long-standing, but haemorrhage into this atheroma was a relatively acute event, explaining the deceased's rapid clinical deterioration consequent to the development of bowel infarction. This extent of bowel infarction is not compatible with life and the deceased subsequently died of multiorgan failure.”*

13. Following Mrs Bourke's autopsy examination, the CT scans performed on the 26 August 2009 were reviewed by Dr Christopher O'Donnell, consultant radiologist at the Victorian Institute of Forensic Medicine. Dr O'Donnell reported the films showing a high grade stenosis at the origin of the coeliac axis extending over a distance of ~1cm and a high grade stenosis of the superior mesenteric artery at a point ~2cm from its origin. He also reported

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<sup>13</sup> Inquest Brief, p271

<sup>14</sup> Inquest Brief, p291

<sup>15</sup> Inquest Brief, p6 – Dr Wang's autopsy report

that there was probably a significant stenosis at the origin of the inferior mesenteric artery, but was less certain as to that finding.<sup>16</sup>

#### **Coronial investigation including inquest:**

14. As Mrs Bourke's death was unexpected, it was reportable to the Coroner pursuant to s4 *Coroners Act 2008*. Following receipt of the autopsy findings of Dr Wang and the report of Dr O'Donnell, the case was referred to the Coroners Court Health and Medical Investigation Team<sup>17</sup> (HMIT) for review. The HMIT requested additional information regarding Mrs Bourke's management and an expert opinion was requested from vascular surgeon, A/Prof. John Royle. Statements were also obtained from a number of other employees at Northern Health and other medical experts. In addition, a supplementary statement was received from Dr O'Donnell.

15. In his report to the court, A/Prof. Royle explained mesenteric ischaemia and its symptoms:

*“Mesenteric ishaemia is the term applied to a deficiency in the blood supply to the intestines. The stomach, liver, spleen, small intestines and large intestine are supplied with blood by three arteries: the coeliac axis, the superior mesenteric artery and the inferior mesenteric artery. Obstruction to these arteries may be acute or chronic. Acute obstruction may result from thrombosis or embolism. Chronic obstruction is usually due to atheroma.*

*Mesenteric angina is the term applied to chronic episodes of pain in the abdomen resulting from mesenteric ischaemia.*

*Chronic mesenteric ischaemia usually causes abdominal pain and severe weight loss. The condition is quite uncommon, although acute ischaemia is common. Because of the uncommon nature of chronic mesenteric ischaemia it is often diagnosed after considerable time, when multiple investigations have failed to reveal the cause of the abdominal pain and weight loss. The only characteristic physical sign is a bruit heard on auscultation of the abdomen.”<sup>18</sup>*

16. A/Prof. Royle explained that the diagnosis of mesenteric ischaemia can be difficult.<sup>19</sup>In addition, the symptoms of weight loss and abdominal pain are shared by a number of common conditions such as ulcerative colitis.<sup>20</sup>

17. Following a review of the medical history, the reports of Dr Wang and Dr O'Donnell, A/Prof. Royle was critical of the examination undertaken by the Radiology Department at The Northern Hospital. A/Prof. Royle stated:

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<sup>16</sup> Report of Dr O'Donnell dated 10 November 2009

<sup>17</sup> The role of the Health and Medical Investigation Team (HMIT) is to assist the Coroner's investigation into the nature and extent of deaths which occurred during the provision of healthcare, and identify potential system factors in healthcare related deaths. HMIT personnel comprise of practising Physicians and Clinical Research Nurses who draw on their medical, nursing and research experiences, skills and knowledge to independently evaluate clinical evidence for the investigation of reportable healthcare deaths and to assist in identifying remediable factors that may assist in prevention and risk management in health services settings.

<sup>18</sup> A/Prof. Royle's first report; Inquest Brief p 28

<sup>19</sup> Ibid, p 30

<sup>20</sup> T 89 and Inquest Brief, p 30-20

18. *'I have seen the typed report from that examination. It describes multiple splenic infarcts, but there is no mention of the stenosis which Dr O'Donnell saw on those films. Presumably they were not seen. It seemed to me quite surprising that, in view of the splenic infarcts, the coeliac axis was not carefully examined by the radiologist.'* A/Prof Royle went on to state. *'A report such as that of Doctor O'Donnell would have precipitated immediate action. The stenosis would probably have been treated by intraluminal stents. Failing that corrective vascular surgery would have been performed. It is unlikely that the bowel would have been dead at this stage (as it was when a laparotomy was performed 5 days later). It is likely that the patient would have made a full recovery and resumed a normal life.'*<sup>21</sup>
19. An inquest into the circumstances giving rise to Mrs Bourke's death was held at the Coroners Court on 5-6 October 2015. The following witnesses were called and gave evidence:
- Associate Professor (A/Prof.) Alex Pitman, Consultant Radiologist
  - Dr Daniel Lee, Consultant Radiologist (Registrar in radiology, August 2009)
  - Associate Professor (A/Prof.) John Royle, retired Vascular Surgeon
  - Dr Anthony Kam, Consultant Radiologist
  - Dr Kenneth Chuah, Consultant Radiologist

### **Issues explored at inquest:**

#### CT imaging referral request:

20. In his 'Notes on the Diagnosis of Mesenteric Ischaemia', A/Prof Pitman states, *'The most critical step in diagnosing (or excluding) mesenteric ischaemia with imaging is to communicate mesenteric ischaemia as a diagnostic possibility to the radiologist. If arterial mesenteric ischaemia is a diagnostic consideration, this leads to dedicated imaging protocols and dedicated radiologist reading specifically directed towards finding or excluding mesenteric arterial stenosis (and mesenteric infarction) at a clinically useful level of diagnostic confidence.'*<sup>22</sup>
21. I accept the evidence of A/Prof. Pitman that it is critical for the radiologist to be informed by the clinicians as to what is the suspected diagnosis.<sup>23</sup> Here the query on the request form was ulcerative colitis, directing the radiologist to that particular area and not focusing on the mesenteric system. However, an issue at inquest was whether the scan was further intended to demonstrate or exclude mesenteric ischaemia. Whilst I am satisfied the written request was insufficient to alert the radiologist to assess the mesenteric blood vessels,<sup>24</sup> the issue in doubt was whether the need to do so was conveyed verbally by an ED clinician and if so, to whom.
22. The protocol at the Northern Hospital at the time, required any request for CT scan to be discussed with a radiologist or the radiology registrar, before approval could be given for it to be undertaken. The uncertainty surrounding the request in this case arises because there is

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<sup>21</sup> Inquest Brief p 29

<sup>22</sup> Inquest Brief, p 30-22

<sup>23</sup> T 41

<sup>24</sup> Dr Kam's report 29 September 2015 p2

no documented evidence of what was discussed and hence what additional clinical information, if any, was communicated.

23. It appears the ED clinician involved in the request was Dr Hayes, as the request form is signed by her and it notes that she had a discussion about the CT examination with 'Dr KC.'<sup>25</sup> This reference appears to be to the on-call radiology registrar, Dr Karyn Chan (not consultant radiologist, Dr Kenneth Chuah), who now has no recollection of what was discussed. Further, it is not possible to seek clarification from Dr Hayes, as inquiries made through AHPRA<sup>26</sup> were unsuccessful in locating her either within or outside Australia.

Was mesenteric ischaemia considered a differential diagnosis prior to imaging?

24. The weight of evidence satisfies me that mesenteric ischaemia was not of clinical concern prior to the request for imaging. All witnesses agreed that if it was being considered then a CT chest/abdomen/pelvis with contrast was the wrong test as it would not be directed to look at mesenteric arterial system.
25. The referral request did not identify any working or differential diagnosis with respect to Mrs Bourke and there is no evidence to support a finding that there was sufficient clinical information to give rise to a suspicion of mesenteric ischaemia, at the time the request for CT imaging was made. The wording of the referral request is non-specific with no reference to 'mesenteric, or 'ischaemia'.
26. I am satisfied that the request form contained nothing that should have alerted Dr Lee to consider mesenteric ischaemia and that the request form was the only information provided to him. Dr Lee stated that he was aware of the need for a CT mesenteric angiogram if mesenteric ischaemia was a differential diagnosis for a patient<sup>27</sup> and I accept he would have recommended it be undertaken had a concern regarding mesenteric ischaemia been raised for Mrs Bourke.<sup>28</sup>
27. There is no evidence to support a finding that Dr Hayes communicated mesenteric ischaemia as a diagnostic possibility at the time she spoke to the on-call radiology registrar at 3.46pm, when the CT scan was entered into the radiology computer. The evidence is silent as to their discussion and there is no reference to mesenteric ischaemia in the clinical notes.
28. The clinical notes indicate that the surgical registrar at 3.00pm advised '*contrast CT abdomen*'<sup>29</sup> and that the request was scanned into the radiology department's computer system at 3.46pm.<sup>30</sup> Whilst Dr Ng queried ischaemic colitis following her second<sup>31</sup> examination of Mrs Bourke, the examination took place at or after 4.30pm, with her entry being made in the medical records at 5.00pm, that is, after the request for imaging was put through. (It appears Dr Ng considered ischaemic colitis on the assumption of an elevated

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<sup>25</sup> Exhibit 3

<sup>26</sup> Australian Health Practitioner Regulation Agency

<sup>27</sup> T 107

<sup>28</sup> T 109

<sup>29</sup> Inquest Brief, p 256

<sup>30</sup> Inquest Brief, p 23 and evidence of Dr Lee; T 96

<sup>31</sup> Dr Ng's statement dated 2 December 2015

lactate reading and ‘*pain out of proportion to sign*’.<sup>32</sup> The lactate reading, however, was subsequently shown to be a clerical error after Mrs Bourke’s death.)

29. In the absence of there being sufficient clinical information to give rise to a suspicion of mesenteric ischaemia, the evidence is that a CT abdomen was the appropriate investigation. “*CT abdomen is the most common CT investigation for non-specific abdominal pain, ulcerative colitis and weight loss. A CT angiogram of the mesenteric arteries would have been an inappropriate test for the investigation of non-specific abdominal pain, ulcerative colitis and weight loss, as the examination would not have covered the whole abdomen, missed all or a large part of the colon which may have been affected by ulcerative colitis.*”<sup>33</sup>
30. Whilst it cannot be concluded mesenteric ischaemia was considered prior to the imaging referral, there is clear evidence that mesenteric obstruction was being considered at some point on the 26 August, given the fact that ‘no mesenteric artery obstruction’ is recorded in the notes.

Adequacy of CT scan reading:

31. Dr Lee’s reading of the relevant CT scan on the 26 August 2009, identified splenic infarcts and did not comment on mesenteric artery stenosis. In order to assess the appropriateness of this reading, A/Prof. Pitman undertook a ‘*blind read*’ of the scan, initially without reference to the referral form and subsequently, repeating the exercise with the referral form. In undertaking the blind read he had no hindsight knowledge, thereby eliminating hindsight bias in order to put himself in the position of Dr Lee.
32. With his first blind reading, A/Prof. Pitman identified abnormal biliary dilation which terminated at the level of the ampulla<sup>34</sup> and with his referral guided reading, he stated ‘*I am not identifying secondary signs of bowel ischaemia but I am unable to exclude early small bowel ischaemia*’.<sup>35</sup> Hence, when Professor Pitman was in the position of Dr Lee on the 26 August 2009, he also did not identify Mrs Bourke’s possible coeliac axis stenosis.
33. A/Prof. Pitman stated that after learning of Mrs Bourke’s cause of death, a retrospective targeted viewing of her CT scan enabled him to identify the narrowing of her superior mesenteric artery. He further stated that he did not believe a confident diagnosis of critical mesenteric stenosis could have been reached prospectively.<sup>36</sup>
34. In his report dated 9 September 2015, A/Prof. Pitman evaluated his findings, stating:
- ‘On this non-angiographic, overview chest, abdomen and pelvis CT, the high grade narrowing of the coeliac axis cannot be confidently diagnosed prospectively. Technical artefact is the likely explanation to be proffered for the apparent interruption of contrast shown on some Series of this CT and refuted on other Series. The high grade narrowing of the superior mesenteric artery cannot be diagnosed as high grade with any degree of confidence. The narrowing itself is visible on retrospective, targeted view. It has poor conspicuity and is likely to not be seen prospectively, particularly with the attention of the reader directed away from it by the misleading referral. If seen, it is unlikely to be interpreted as clinically significant in the presence of findings that suggest it is not*

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<sup>32</sup> Inquest Brief p 267

<sup>33</sup> Inquest Brief, p 30.6 Statement of Dr Kam

<sup>34</sup> T 7

<sup>35</sup> T 10

<sup>36</sup> T 32



*haemodynamically significant. The inferior mesenteric artery is not evaluable and so its occlusion cannot be diagnosed.*<sup>37</sup> (A/Prof. Pitman conceded in his evidence that by saying ‘misleading referral’, he was not being critical of the hospital at all, as such terminology could only be ascribed to the referral with the benefit of hindsight.)<sup>38</sup>

35. The evidence satisfies me that identifying Mrs Bourke’s possible coeliac axis stenosis on the relevant CT scan alone was not achievable, with the three consultant radiologists, A/Prof. Pitman, Dr Chuah and Dr Kam, not identifying it. In these circumstances Dr Lee cannot be criticised. Further, I accept A/Prof. Pitman’s opinion that Dr Lee’s report was “*a very reasonable interpretation*”<sup>39</sup> of the scan. He stated, “*It was a very reasonable report. As always in medicine, there are no absolutes, yet there are reasonable ways of doing things. I think the report was reasonable, appropriate, relevant to the circumstances and answered the clinical question being put to Dr Lee.*”<sup>40</sup>

36. In his report, A/Prof. Royle expressed his surprise that the radiologist did not carefully examine the coeliac axis, having identified the splenic infarcts on the CT scan. However, in A/Prof. Pitman’s opinion, A/Prof. Royle’s criticism of a failure to undertake this examination, is unfounded. He stated,

*‘As I have discussed in my retrospective review of the index imaging, the pattern of splenic contrast enhancement abnormalities favours a shower of emboli rather than coeliac occlusion. The proximal coeliac axis is not demonstrated on some Series yet appears continuous on others; the excellent opacification of the splenic artery and lack of infarction of other organs subtended by the coeliac axis are all evidence against coeliac axis occlusion as the mechanism for the postulated splenic infarcts. I had examined the index imaging very carefully in my retrospective review and there are conflicting findings of the coeliac axis – as to be expected on an overview abdominal CT filmed at 4mm slices. I consider that the findings cannot be confidently diagnosed as coeliac axis occlusion or critical stenosis by a responsible radiologist.’*<sup>41</sup>

37. A/Prof. Royle’s criticism of the coeliac axis not being carefully examined by the radiologist arises from Dr O’Donnell’s report identifying a high grade stenosis in that location. On this matter, A/Prof. Royle, a vascular surgeon, was appropriately deferring to the findings of a consultant radiologist. However, having subsequently read the report of A/Prof. Pitman, Dr O’Connell acknowledges that his reading was made in retrospect, in the full knowledge of the autopsy findings. He agreed it was targeted as he was instructed by the forensic pathologist to direct his attention to the CT findings in the branches of the abdominal aorta, especially the mesenteric vessels.<sup>42</sup> Hence, Dr O’Donnell conceded that his diagnosis of

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<sup>37</sup> Exhibit p 9

<sup>38</sup> T P41

<sup>39</sup> T 31

<sup>40</sup> T 58

<sup>41</sup> Inquest Brief, p30-13

<sup>42</sup> Inquest Brief, p30-33

“*high grade stenosis*” (meaning not trivial)<sup>43</sup> was a clinical interpretation that was ‘*affected by the retrospective, targeted nature of the review and knowledge of the autopsy findings.*’<sup>44</sup>

38. In his evidence to the inquest, A/Prof Royle conceded that on the written information available to Dr Lee on the 26 August, he ought not to have had mesenteric stenosis in mind<sup>45</sup> and that he was not critical of his report given the information Dr Lee had.<sup>46</sup> In his supplementary report dated 25 August 2015, A/Prof Royle stated that whether or not a diagnosis for Mrs Bourke could be reached from the films which were obtained he would not comment on further, as this was a matter for specialist radiology opinion.<sup>47</sup>
39. In regard to Dr Chauh’s reading of the index CT, A/Prof. Pitman stated in his report that his interpretation was of adequate standard and clinical relevance and ‘*was in accordance with widely accepted practice of a consultant radiologist in Australia, in 2009, in a hospital setting.*’<sup>48</sup> Consultant radiologist Dr Kam stated in his report dated the 29 September 2015, that he was ‘*in complete agreement*’ with the report of A/Prof. Pitman.

Consideration of further radiology testing in light of splenic infarcts being reported:

40. Neither Professor Pitman<sup>49</sup> nor Dr Kam<sup>50</sup> suggested that, having reported upon imaging which was ‘*in keeping with splenic infarcts,*’ it would be incumbent upon a radiologist to suggest to the reporting doctor that an alternative investigation could be performed. The consensus of opinion was that the investigation of splenic infarcts identified on a CT scan would start with an echocardiogram to detect or exclude thrombus within the heart that was giving rise to emboli causing the splenic infarcts.
41. Dr Kam’s evidence was that there was no guidance as to the cause of Mrs Bourke’s splenic infarcts in the clinical information provided in the request form,<sup>51</sup> and that statistically an embolic cause for splenic infarction is the most likely.<sup>52</sup> Mrs Bourke had an arterial stenotic cause, not an embolic cause for her splenic infarcts.

Differential diagnosis of mesenteric ischaemia:

42. The evidence does not permit a finding as to what point in time mesenteric ischaemia was considered by the treating team as a differential diagnosis on the 26 August 2009.
43. Despite the entry ‘no mesenteric artery obstruction’, the evidence supports a finding that a possible diagnosis of mesenteric ischaemia continued to be considered by the medical unit after 27 August 2009, as indicated in the statement of A/Prof. Aboltins who first reviewed

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<sup>43</sup> Inquest Brief, p30-34

<sup>44</sup> Inquest Brief, p30-35

<sup>45</sup> T 172

<sup>46</sup> T 173

<sup>47</sup> Inquest Brief, p 30-37

<sup>48</sup> Inquest Brief, p 30-9

<sup>49</sup> T 31

<sup>50</sup> Statement of Dr Antony Kam dated 29 September 2015, Exhibit 10

<sup>51</sup> T 142

<sup>52</sup> T 143

Mrs Bourke on that date following her admission to the general medical ward. He thought Mrs Bourke might have had an obstruction of the coeliac axis which might have been missed on the original CT report and as a result, requested the resident doctor to organise a review of the CT films. Following this further radiological review, A/Prof. Aboltins recalled being told “*nothing was to be added to the CT report.*”<sup>53</sup> The identity of the reviewing radiologist cannot be determined.

44. A/Prof. Aboltins attended a weekly radiology meeting on the 31 August 2009 during which he recalled specifically asking about the diagnosis of coeliac axis obstruction, or if there was any other evidence pointing to mesenteric ischaemia. The films were looked at and he was told by an unidentified radiology consultant that there was no such evidence. “*I also recall asking specifically if we needed to do a mesenteric CT angiogram to exclude the diagnosis of mesenteric ischaemia. I was told by the radiologist that the images we had were good enough and that a mesenteric angiogram was not required.*”<sup>54</sup>

#### Would earlier intervention have changed the outcome ?

45. It is not appropriate to make a finding that had there been earlier intervention, Mrs Bourke’s tragic death would have been prevented. While A/Prof. Royle stated that, “*It is likely that the patient would have made a full recovery and resumed a normal life,*” his comment is speculative, as there is no evidence regarding the condition of the bowel on the 26 August 2009.

#### Was Mrs Bourke’s management appropriate ?

46. The inquest into Mrs Bourke’s death has revealed evidentiary gaps with respect to her management, which makes it impossible to determine the appropriateness of her care whilst a patient at The Northern Hospital. In these circumstances there is no basis for making adverse findings or comments in relation to Dr Lee, Dr Chuah or the treating team.

### COMMENTS

Pursuant to section 67(3) of the **Coroners Act 2008**, I make the following comments connected with the death:

47. The making of appropriate findings of fact in this case has been severely hampered by the treating team failing to maintain a complete and accurate record of management in the clinical notes. The most critical omission concerns the failure to document the discussion between the treating staff member and the radiologist at the time the request for the CT scan was made and the identities of who gave and received the verbal report of the scan.
48. It is essential that health care providers maintain appropriate clinical records in order to fulfil the duty of care owed to their patients and in order to ensure their optimal health care management.

I direct that a copy of this finding be provided to the following:

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<sup>53</sup> Inquest Brief, p 27.3

<sup>54</sup> Inquest Brief, p 27.4

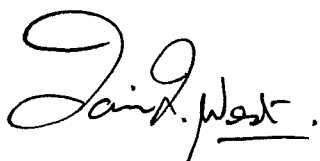
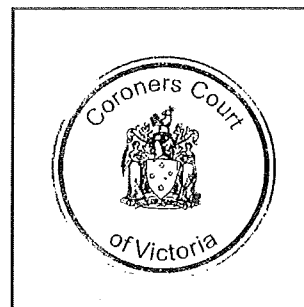
Mr Paul Bourke

Ms Jess Bayley, K&L Gates

Ms Lara Larking, TressCox Lawyers

Ms Sharon Russell, MDA National

Signature:

A handwritten signature in black ink that reads "Iain West". The signature is written in a cursive style with a horizontal line under the name.

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IAIN WEST  
DEPUTY STATE CORONER  
Date: **18 August 2016**